

tel. (510) 573-0367 fax (510) 824-8969

# Home Inspection Report

Inspection Date: **01/01/2016** 

Prepared For: Mr. & Mrs. Client

Prepared By: Home Savvy Inspections (510) 573-0367 Main (510) 393-6462 Cell

Report Number: **20160211** 

Inspector: Felix Pena ASHI Certified - 246518 ITA Certified ICC Member

Agent Information: **Jane Doe** Coldwell Banker 39644 Jane Road. Fremont, CA, 94539 Mobil: 510. 555-5555 Inspection Address:

# 1234 Cheery Lane Fremont, CA



### **Table Of Contents**

CLIENT ADVISORY	03
INSPECTION OVERVIEW	04
STRUCTURAL SYSTEM	09
BUILDING EXTERIOR, GARAGE & SITE	11
ROOF SYSTEM	14
PLUMBING SYSTEM	18
WATER HEATER SYSTEM	22
ELECTRICAL SYSTEM	24
HEATING SYSTEM	27
COOLING SYSTEM	30
INTERIOR COMPONENTS	31

## **Client Advisory**

**Please note:** This Advisory is **not** a "summary" of the inspection report. That is why we urge you to **read** the *entire* inspection report *before* you review this section. As an additional service to our Clients and their Real Estate Professionals, we have provided this listing of the items which, in the professional opinion of your Inspector, merit further attention, investigation, or improvement at this time. Some of these conditions may be of such a nature as to require repair or modification by a skilled craftsman, technician or other specialist. A homeowner such as you can easily handle others. In listing these items, your Inspector is not offering any opinion as to who, among the parties to your transaction, should take responsibility for addressing any of these concerns. As with most other facets of your transaction, we recommend consultation with your Real Estate Professional, Attorney or Home Builder for further advice with regards to the items listed below.

Finally, we remind you that following the Inspector's advice will often result in enhanced safety for the occupants of the home or improved performance and/or extended life for the component in question.

Notes which are found in an "Italic" style are items that need attention, but, are not as critical as those found under "Client Advisory". Italicized notes should be repaired within a maintenance type time frame or when budget allows for repair.

#### **Pre-Listing Inspection**

This is a pre-listing inspection report. We strongly recommend that interested buyers of this property *consultation* with the inspection company (once in contract). If the new buyer requires a walk through in person, their will be a return fee, to review and understand the findings (client advisory) of the inspector. Doing so will avoid any possible misinterpretation of the comments included in the report or the findings of the inspector.

### Roof System

#### **Concrete Tile**

One roof tile located in the front of the dwelling was not properly secure. The nail clip was missing, which can allow the tile to fall off during a windy day. We recommend the advice of a licensed Roofing professional, followed by corrective action as needed to improve its current condition.

### **Interior Components**

#### Carbon Monoxide

No carbon monoxide devices were located for each level, as required by industry standards. We recommend installing the missing device for each level nearest the staircase prior to listing this dwelling.

### **Kitchen**

#### The Dishwasher Drain Separation

The dishwasher drain was equipped with an air-gap fitting (the cylinder protruding above the sink). This device assures separation of the supply water from the wastewater. During the functionality of the dishwasher, water was discharging from the drain separation (air gap). The water was dripping underneath the base of the air-gap causing the water to drip into the cabinet.

We recommend the advice of a licensed professional; followed by corrective action to improve its current condition.

#### Garbage Disposal

One section of the garbage disposal casting was noted with a surface crack which was leaking during our inspection. We recommend the advice of a licensed professional; followed by corrective action to improve its current condition.

# **Inspection Overview**

#### **DESCRIPTIVE INFORMATION**

**Inspection Date and Tine:** • 01/01/2016 Time: 09:00 am to 10:45 am

Client Information: • Mr. & Mrs. Client

Weather Conditions: • Clear Day

Rain in last 3 days:

Radon Test:

No
Water Test:

No

Temperature Range: • 55 - 55 Degrees F
Style of the Dwelling: • Contemporary

Orientation of the Dwelling: • The front entrance East

Unofficial Square Footage:
5,184 as reported by the Selling Agent
9 years, as reported by the Selling Agent

Structure Type: • Wood Frame

Main Water Shutoff Location:
Electrical Panel Location:
Exterior Front right
Exterior Front right
Exterior Front right

Site Number Visible:

Structure Occupied:

Furnished:

No

No

Number of Stories: • Two level

Persons in Attendance: • Listing agent • WDO Inspector

**Inspected By:** • Felix Pena

#### ADVICE, PRECAUTIONS & CONDITIONS AFFECTING THE SCOPE OF THE INSPECTION

#### **Location/Direction Conventions Used In This Report**

Over the years, we have found that our clients appreciate information on the location of thermostats, furnace filters, electrical panels, ground fault circuit interrupt devices, and the main water, electricity and gas shutoffs, especially if they are normally hidden or hard to get to.

Specifying these critical locations becomes even more valuable for those of our clients who are not able to accompany the inspector on the inspection. Not only does this information aid you in operating and maintaining your home, but the abundance of information contained in our Report is reassurance that your inspector did, in fact, crawl into all those nasty places and examine all those "nitty-gritty" details.

Here is how we are going to call out locations and directions in your report:

When we talk about the "right" or "left side" of the house, we are assigning direction as we would if we were standing at the street and were looking towards the front door.

For features inside the home, they will be located by imagining that you are standing in the doorway of the main entrance looking towards the center of the house. Then locations will be described as "left" or "right", and "front" or "rear". (For example, "the left rear corner of the right front bedroom"). he floors or levels are referenced from the level which we enter from the front (main) entrance. The level that you walk in on will be called the "Main Level". For the purpose of clarity, we use several abbreviations throughout for the purpose of brevity. HVAC stands for Heating Ventilation Air Conditioning.

WDO stands for Wood Destroying Organism and is the term used to describe the termite inspector or report.

#### Important Information on the Scope of this Inspection

This Overview is intended to provide a convenient and cursory preview of the conditions and components that we have identified within the body of the report as needing further evaluation and or service. The conditions and components in the Overview should not be considered the only significant findings or issues.

This Overview is obviously not intended to be comprehensive, and should never be used as a substitute for reading the entire report, nor is it a tacit endorsement of the condition of components or features that may not appear in this brief overview.

The reader must establish their own priorities after thoroughly studying all the comments/recommendations in the entire report and consulting with other experts and or specialists as the reader may deem necessary. We recommend that any service/repairs, safety upgrades, etc. be completed only by licensed/qualified specialists and only with the benefit of permit. The prospective buyer is specifically cautioned to obtain any further evaluations, information, price quotes, et cetera pertaining to the comments, service and or safety recommendations made in this report before the removal of transaction contingencies. These qualified specialists may well identify additional issues/defects and or recommend additional upgrades, the scope and price of which could affect your evaluation of the property.

**NOTICE TO THIRD PARTIES**: The inspection report was created for the sole benefit and reliance of the Client named in the original report and is nontransferable. The report is issued subject to the terms, conditions and limitations under which the inspection was performed which are attached hereto and incorporated by reference herein. This report is not a substitute for disclosures required by California Civil Code 1102 et. seq.

This report is a work product and is copyrighted as of the date of this report. The inspection report is for the sole benefit and reliance of the Client named in the original report and is nontransferable. The report is a summary of the inspection and all consultation between Inspector and Client and is issued subject to the terms, conditions and limitations under which the inspection was performed. The terms, conditions and limitations are a part of this report and are attached hereto and incorporated by reference herein. Inspector assumes no liability for third party interpretation and or use of the report. Third parties are encouraged to obtain a property inspection from a qualified inspector of their choice.

Unauthorized duplication and/or distribution of, use of or reliance on this report by any party other than the clients has the effect of all parties agreeing to hold harmless, individually, jointly, and/or otherwise, the inspector, the Company, their successors and assigns from any third party claims arising out of unauthorized distribution of the inspection report. Any use or reliance, whether authorized or unauthorized, of the information contained herein, constitutes your ascent to the terms of use and scope of work governing this document and to the scope and limitations of the inspection as described in the terms of use, the written agreement and in the ASHI Standards of Practice.

We recommend that any and all repairs, safety issues or upgrades, be completed only by licensed specialists and only with the benefit of permit. The prospective buyer is specifically cautioned to obtain any further evaluations, information, price quotes, et cetera pertaining to the service and or safety recommendations made in this report well before the close of escrow. These licensed and or qualified specialists may well identify additional defects and or recommend additional upgrades, the scope and price of which could affect your evaluation of the property. We provide an overview of this inspection at the front of the report where we list the recommendations we believe may be important to the client. These recommendations should not be considered the only significant findings or issues. You must establish your own priorities after thoroughly studying this report, reviewing all the recommendations in this report, and consulting with other experts, and or specialists as you may deem necessary.

#### **SCOPE OF WORK**

You have contracted for us to perform a general property inspection in accordance with the ASHI Standards of Practice. A property inspection is not intended to be technically exhaustive. It is limited to the visible and or accessible portions of the dwelling and is non-invasive. It is distinct from a specialist inspection, which requires a person with very specialized knowledge, licensing and/or training.

Specialist inspections can be costly, take days to complete, involve the use of specialized instruments, the dismantling of equipment, video-scanning, destructive testing, and laboratory analysis. By contrast, the general property inspection is completed within a few hours and at a fraction of the cost. Consequently, a general inspection report will not be as comprehensive as that generated by specialists - nor is it intended to be.

Our goal is to identify visible defects or adverse conditions that, in the opinion of the inspector, might result in injury or lead to costs that could have a significant impact on your overall evaluation of the property, and to alert you to the need for a specialist to perform further evaluation.

We evaluate conditions, systems, or components, and report on their condition at the time of inspection, which does not mean that they are ideal but that they are either functional or met a reasonable standard at a given point in time. We do take into consideration when a dwelling was built and allow for the predictable deterioration that would occur naturally through time and use, such as the cracks that appear in concrete and in the plaster around windows and doors, scuffed walls or woodwork, worn or squeaky floors, stiff or stuck windows, and cabinetry that does not function as it did when new. Therefore, we tend to ignore insignificant and predictable issues and may not annotate them - particularly those that would be apparent to the average person and or to someone without any trade/construction experience. This property evaluation and report are not a building code or zoning compliance inspection. Any inference that this is a "Code" inspection would be is incorrect. The observations and recommendations made are based upon a wide variety of standards that were either in place at the time of original construction of the dwelling or may have developed into the standards, trade practices, etc. since the period of installation/construction. The building codes are intended as a minimum standard for construction/safety and local interpretations of the codes varies widely. The building codes may not necessarily reflect the best method of installation. Our evaluation is not intended to determine whether or not an area or component is "Code Compliant", but rather in the opinion of the inspector, that a condition(s) exists, which requires further evaluation and or attention by an appropriate trade specialist.

We are generalists and are not authorized, nor do we have the expertise to test for environmental contaminants, or comment on termite, dry rot, fungus or mold, or pests but we may alert you to indications of their presence if visible to us. Similarly, we do not test the quality of the air within a residence. Any comments made regarding any such environmental or, insect, pest or other related issues are those of a lay person only and should NEVER be considered a substitute for an evaluation by a qualified specialist.

Therefore, interested parties should schedule any such specialized inspections with the appropriate specialist well before the removal of transaction inspection contingencies.

A dwelling and its components are complicated, and because of this and the limitations of a visual inspection, we offer unlimited follow-up consultation via telephone and e-mail. We encourage you to ask questions. In fact, we encourage candid and forthright communication between all parties, because we believe that it is the only way to avoid stressful disputes and costly litigation. Remember, if you were

present at the time of inspection, we can only summarize the report on-site - so it is essential that you read the entire report to obtain full benefit of the information, and that any recommendations that we make for service or further evaluation by specialists should be completed and documented well before the removal of transaction inspection contingencies, because additional defects or issues could be revealed by specialists, and or some upgrades recommended that could potentially affect your evaluation of the property. Our service necessarily cannot include any form of warranty or guarantee. We cannot predict the remaining life of a given system and or component.

This report was produced specifically for the subject dwelling, the site within approximately six feet of the dwelling and the associated primary parking area. This report does not include any other portions and or features of the site except as agreed to by the inspector and client prior to the inspection.

The purpose of this inspection and written report is to provide an unbiased opinion of the material defects and conditions visible at that point in time. Further, it is to describe the physical condition of the selected key systems and components and parking area. We provide an overview of this inspection at the front of the report where we list the recommendations we believe may be important to the client. These recommendations should not be considered the only significant findings or issues. You must establish your own priorities after thoroughly studying this report, reviewing all the recommendations in this report, and consulting with other experts, and or specialists as you may deem necessary.

The inspection of this property was conducted in conformance with the ASHI Standards of Practice and the requirements of the State of California Business and Professions Code 7195-7196.

The evaluation of installed fireplaces and or related systems for the subject property is performed to those standards of practice.

An NFPA Level exhaustive evaluation of these systems was not performed and any such issues are excluded from the scope of work governing this report. Interested parties should consult with a qualified fireplace specialist for further information and or evaluation.

#### **Not Inspecting for Building Code Violations**

The presence or extent of building code violations was not the subject of this inspection, nor was it included in the report. No warranty is offered on the legal use, or uses of the building or property. Information with regard to these issues may be available from the appropriate building and/or zoning agency.

#### A Home Inspection, Not a Pest Inspection

Any observations, which the inspector might make in this report regarding evidence of pests or wood destroying organisms, are not a substitute for inspection by a licensed pest control operator or exterminator.

Your inspector may only report on a *portion* of the currently visible conditions and cannot render an opinion regarding their cause or remediation.

#### We Suggest Review of a Recent Pest Control Inspection Report

We recommend review of a current Pest Control Report for further information concerning pest activity or wood destroying organisms on this property. If such a report is not available, we recommend arranging for a pest control inspection, before close of escrow, to confirm the presence and extent of pest or wood destroying organism activity.

#### **Environmental Issues Are Excluded**

Comments on environmental hazards or conditions, including, but not limited to, toxic, radon, reactive, combustible or corrosive contaminants, wildfire, geologic or flood hazards are specifically excluded from this inspection and report.

#### We Evaluate for Function, Operability and Condition

The purpose of a home inspection is to evaluate the home for function, operability and condition of systems and components. Its purpose is not to list or attempt to address cosmetic flaws. It is assumed that the client will be the final judge of aesthetic issues and not the home inspector, as the inspector's tastes and values will always be different from those of the client.

#### Floor Coverings Are Not Included in a Standard Home Inspection

Floor coverings are not considered a part of a standard home inspection and, in most cases; no comment on their condition will be made. Floor coverings are not lifted for inspection of the underlying finishes, and hidden conditions may be present. We do not represent that cleaning, in and of it; will remove any or all stains or odors. We suggest that if any of these conditions are present, one should consult with the appropriate floor or covering specialist.

#### The Alarm System Not Inspected

Any central alarm system found in this dwelling was not inspected and is not included in this report. Thus, we cannot make any representations as to its present condition or future performance. We recommend evaluation by a qualified technician, if further information on the system's function and condition is desired.

#### **Important Information Concerning Mold and Mildew**

We hope that the following facts and considerations regarding mold and mildew, the scope of this home inspection and your family's health, will aid in your understanding of this important and timely topic:

- Mold spores are present in the outside air everywhere, even in the driest of the so-called desert climates. Thus, every home contains mold both inside and on all surfaces. But the mold will remain dormant until the right conditions of moisture and food become present. Accurately identifying those conditions often takes specialized skill and experience.
- Mold generates a number of mold byproducts. Particles include the mold organism, spores and fragments. Chemical byproducts include enzymes, mycotoxins and gasses. Many of these byproducts can affect susceptible people in a variety of ways, and from a health point of view it often makes no difference if the mold is dead or alive.
- Mold spores are present on the surfaces and in the cracks and pores of building materials as they are incorporated into new construction, no matter where in the world a new home is being built.
- While it is true that molds usually do not propagate if removed from a source of moisture, nevertheless they can remain in a dormant state for years waiting for the right conditions to spring into life and fill the atmosphere both inside and outside of a building with their progeny.
- Some molds give off toxic gases as an offensive "weapon". These toxic gases aid them in killing competing molds and expanding their "territory". These same gases can be dangerous to humans as well.
- Human reaction to, and the possible effects of, exposure to specific molds and other fungi can vary widely, even between members of the same family exposed to the same conditions.
- Many experts consider all molds to be potential allergens and irritants, including some toxins. Heath concerns from exposure to mold in humans varies with each individual and can range from simple allergy symptoms to asthma, watery eyes, sneezing, wheezing, difficulty breathing, sinus congestion, blurry vision, sore throat, dry cough, aches/pains, fever, skin irritation, bleeding of the lungs, headaches, and memory loss.
- Searching for environmental hazards of *any* kind, including molds and/or mildew is not a part of this home inspection, or *any* standard home inspection and report.
- Many times, mold infestations occur inside wall cavities or in an under building space or attic where they
  cannot be seen without the destructive disassembly of the building, an activity specifically prohibited by all
  nationally recognized Standards of Practice governing the Home Inspection profession.
- Remember, also, that *you* as the Client would be financially responsible for the repair of any damage resulting from any invasive methods used to find hidden mold growth in a building that you do not yet own!
- Unfortunately, there have been many documented cases of significant and harmful mold growths that were totally concealed and which left absolutely *no* outwardly visible symptoms of their presence.
- During your inspection, if we did come across conditions that, in our opinion, could cause or suggest the presence of these organisms, we have made every effort to note them in the report.
- No matter whether or not we have mentioned any visible evidence or even suspicious symptoms in your report, and whether or not you or any member of your family have been known to have ever had an adverse reaction to possible mold exposure, or if you are concerned at all about these organisms being present in this home, we strongly recommend that you engage the services of a qualified expert that specializes in the identification of these organisms and follow their recommendations.

# Structural System

#### **DESCRIPTIVE INFORMATION**

Foundation Type: • Slab on grade

Foundation Material: • Poured in place concrete

Exterior Wall System:
 Conventionally framed wood stud
 Conventionally framed wood partitions

Floor System: • Concrete slab on grade

**Roof Structure:** • Conventional built trusses (design for this type of dwelling)

**Roof Sheathing:** • Plywood nailed across the top chords of the roof trusses (design for this type of

dwelling)

#### **OBSERVATIONS & RECOMMENDATIONS**

#### **Structural**

Structures are not uniform, and need only meet the standards of the year in which they were built or renovated. We describe and identify the various foundation types, and the floor, wall, ceiling, and roof structures in accordance with ASHI and industry standards of practice. If the foundation is a slab type, we examine the visible portions on the interior surfaces and the exposed portions between grade and the exterior cladding. If it is a raised foundation, we either enter the crawlspace to inspect its structural components, or indicate in what manner it was evaluated. Similarly, we identify the structure of walls and the roof framing. However, we are *generalists and not specialists*. However, in the absence of any major defects, we may not recommend that you consult with a geo-technical or structural engineer, but this should not deter you from seeking the opinion of any such expert.

#### Slab Foundation

No sign of significant settlement or related interior cracking was observed.

Note: It is common for moisture to penetrate garages, because their slabs are on-grade. Evidence of this is typically apparent in the form of efflorescence, or salt crystal formations, that result when moisture penetrates the sidewalls or the slab.

This is also quite common if a garage is below grade, and some sidewalls are even cored to relieve the pressure that can build up behind them, and which actually promotes drainage through the garage. If there is living space above the garage, it may be seismically vulnerable.

Ideally, the columns and beams around the garage door will be made of structural steel, but in many residences these components are made of wood but could include some structural accessories, such as post-straps and hold-downs, and plywood shear paneling. Regardless, we are generalists and not engineers, and we recommend that you read about this in a booklet that should have been given to you by your realtor.

Interested parties desiring further information should consult with a registered design professional. Garage door openings are not standard, and you may wish to measure the opening to ensure that there is sufficient clearance to accommodate your vehicles.

#### **Moisture Considerations**

Although access to the slab was limited, due to the presence of finished flooring. We found no visible evidence of seepage or other moisture related conditions.

#### **Drainage Mode and Conditions**

Drainage is facilitated by hard surfaces, soil percolation and full gutters.

The downspout flow should be directed away from the property. Improper site drainage can be a significant source of moisture infiltration into any structure.

We recommend that exterior grading be adjusted to provide positive slope away from the dwelling for a minimum of six feet. Interested parties are encouraged to discuss this issue further with a qualified drainage and or general contractor who can recommend solutions that are optimum for this particular circumstance.

The property does not have hard surfaces at all areas adjacent to the foundation to facilitate proper drainage. Water may percolate and pond adjacent to the residence, which is not ideal and you may wish to consider upgrading the site by adding hard surfaces with swales or area drains that direct water away from the residence.

There are one or more areas where water will collect at the foundation perimeter instead of draining away from it, as recommended.

This not only allows for the possibility of moisture intrusion but also differential settling, etcetera. We suggest that the site drainage and grading be adjusted to provide a minimum of 1/2" of positive slope per foot for a minimum of six feet away from the dwelling as is recommended.

#### **Seismic Considerations**

Anchor bolts are fasteners that connect the wood framing to the foundation. They limit the ability of the framing to move independently on the foundation in the event of seismic activity.

Because of the design and/or configuration of the structure, we could not verify the presence or condition of anchor bolts. Because of the age of the structure, one might assume that proper bolting was installed, in conformance with the standards in effect at the time.

#### Mudsill

The mudsill is the first wood member of the frame. It rests directly on the slab foundation. Most of the mudsill is inaccessible for inspection. There were no interior or exterior conditions that indicate the need for destructive testing and further inspection, unless otherwise noted.

#### **Wall Framing**

The wall framing was nowhere visible; however no symptoms of non-performance were evident.

#### **Roof Sheathing**

The roof sheathing was visible; however no symptoms of non-performance were evident.

#### **Roof Trusses**

The visible trusses, rafters and joist were visible; however no symptoms of non-performance were evident.

#### **Summary Comments on the Structure**

All the visible structural elements and components in this dwelling were in acceptable condition and were performing as would be expected for a dwelling of this age and type of construction.

#### **Environmental Topics Can be Found in California Guide**

For additional information concerning environmental topics, we suggest obtaining a copy of the State of California publication, "Environmental Hazards: Guide for Homeowners and Buyers", available from your real estate professional.

## **Building Exterior, Garage & Site**

#### **DESCRIPTIVE INFORMATION**

Lot Topography:

Driveway Surface:

Walkway Surface:

Patio Surface:

Primary Exterior Cladding:

• Flat

• Asphalt

• Concrete

• Stone

• Stucco

Secondary Exterior Cladding: • Stone Veneer
Foundation Floor System: • Slab-Concrete
Garage Type: • Aluminum Roll-up

Garage Size: • Three Cars

Property Site I.D.: • Visible street level

#### **OBSERVATIONS & RECOMMENDATIONS**

Structures are not uniform, and need only meet the standards of the year in which they were built or renovated. We describe and identify the various foundation types, and the floor, wall, ceiling, and roof structures in accordance with ASHI and industry standards of practice. If the foundation is a crawl type, we examine the visible portions on the interior surfaces and the exposed portions between grade and the exterior cladding. If it is a raised foundation, we either enter the crawlspace to inspect its structural components, or indicate in what manner it was evaluated. Similarly, we identify the structure of walls and the roof framing. However, we are *generalists and not specialists*. However, in the absence of any major defects, we may not recommend that you consult with a geo- technical or structural engineer, but this should not deter you from seeking the opinion of any such expert.

#### Site ID:

A system-generated code that uniquely identifies each site or dwelling is required by local jurisdictions.

House numbers should be as follow;

- 1-Bigger is better. The number should be at *least four inches* tall if displayed on a house or street curb. On a mailbox, no less than *three inches tall*.
- 2-Numbers should be boldface type. Thick and wide is better.
- 3- Mailbox. Show only your number. We don't need your name and street. Don't get small numbers and cram all that information on the side of your little mailbox. Only your house number is needed.

The site I.D for this property was in serviceable condition.

#### Stucco

Stucco consists of cement and sand plaster mixture reinforced with wire mesh and is installed over a water resistant membrane. Newer stucco installations are typically pigmented rather than painted. These pigmented installations may show stains from moisture absorption from rains, etc. Stucco cracking is common and may be caused by a variety of issues such as movement of the building framing due to temperature/humidity changes, foundation settling, and seismic activity. Minor cracks would not necessarily need repair as they will fill when the stucco is painted. However, cracks large enough to permit water entry should be properly caulked or patched. In newer construction, the bottom of the stucco has a metal drip edge installed called a "weep screed". It is important that proper soil clearances be maintained below this edge to prevent moisture and unseen wood destroying organism entry behind the stucco cladding.

The stucco exterior was found to be in serviceable condition, with exception noted below.



One or more sections of the rear staircase (top railing) wall were noted with surface cracks. We recommend sealing all surface cracks. Doing so will help prevent moisture intrusion within the cavity of the wall.

#### Fascia & Rafter Tail

The fascia (boards nailed across the ends of the rafters at the eaves) and rafter tails were in serviceable condition, no anomies were noted.

#### **Eaves and Soffits**

The eaves or overhangs are comprised of those portions of the roof that extend beyond the exterior walls. The eaves protect the siding, windows and doors from the deteriorating effects of direct rain.

The exterior eaves and soffits were in serviceable condition, with no anomalies noted.

#### **Exterior Trim**

The exterior trims were in serviceable condition, no anomies were noted.

#### **Paint and Stain**

The finish surrounding the dwelling was in satisfactory condition, with no anomalies noted.

#### **Exterior Door**

The exterior doors were in serviceable condition, with no anomalies noted

#### **Exit Door**

For the purposes of the term "exit door" shall mean all doors of those doors or doorways along the path of exit travel anywhere in a mean of egress system. Buildings or structures' used for human occupancy shall have at least one exterior exit door that meets the requirement of section 1003.3.1.3

Exit doors shall be readily distinguishable from the adjacent construction and shall be easily recognizable as exit doors. Mirrors or similar reflecting materials shall not be used on exit doors, and exit doors shall not be concealed by curtains, drapes, decorations and similar materials.

#### **Exterior Windows**

The exterior aspects of the windows were in serviceable condition. The windows on this dwelling were double-glazed windows. This type of window relies on a caulking seal at the edge to prevent water from entering the wall cavity. We recommend monitoring the condition of this caulking seal frequently and resealing the edges when appropriate.

#### **Exterior Window Screens**

The exterior aspects of the window screens were in serviceable condition.

#### **Driveway & Walkways**

The hard surfaces, such as driveways and walkways, etc., appear in serviceable condition.

#### **Exterior Lighting**

Exterior lighting was in serviceable condition, no anomies were noted.

#### **Exterior Patio**

The exterior patio and support post were found to be in serviceable condition, with no anomalies noted.

#### Fences & Gate

The surrounding fencing was in serviceable condition. We recommend regular maintenance to ensure the maximum dependable life of the fencing (staining). When the gate was tested it was functioning as intended. Adjusting the patio gate will improve its functionality.

#### **General Comments about the Exterior**

Exterior features were in serviceable to serviceable condition, no anomalies.

### <u>Garage</u>

#### **Garage Floor**

The garage floor was a concrete slab; it was noted with surface cracks. No anomalies were noted.

#### **Garage Ceiling & Walls**

The wall between the garage and the habitable space was of fire resistive construction as required by today's building standards. The garage ceilings were concealed and were found to be in serviceable condition.

#### Personnel Door serving the Garage

The door between the garage and the living space appeared to be of fire resistive construction, as we could confirm this conclusively, as a label was evident. It did include a functional automatic closer. This was a positive feature that provided a greater margin of safety.

#### **Garage Door**

The garage door and its components were found to be in serviceable condition. No loose bolts or hardware were noted.

#### **Garage Door Opener**

The garage door opener raised and lowered the door; it did stop and reverse when meeting resistance prior to full closure. This is an important safety feature.

#### Wall-Station (push-button)

The wall stations (push button) were properly located and within the required manufacture height. The push button was tested and was found to be in serviceable condition.

#### **Manual Release Location**

The manual release handles was properly located and within the requirement manufacture height. The manual release was tested and was found to be in acceptable condition.

#### **Photoelectric Eyes Location**

The photoelectric eyes should never block the eyes. The garage door opener raised and lowered the door, and it even stopped and reversed when the light beam was interrupted. The height of the photoelectric eyes did meet the DASMA residential requirements.

#### **Garage Ventilations**

The garage was found to be adequately vented for their square footage and time of construction.

#### **General Comments On This Area**

Features associated with this area were in serviceable condition, no anomalies were noted.

# **Roof System**

#### **DESCRIPTIVE INFORMATION**

**Roof Coverage Area:** • The entire dwelling

**Roof Covering Material:** • Concrete Tile (Pan and Cover)

Slope, or Pitch, of the Roof: • Gable & Hip

Number of Layers:

• One

Estimated Age of Covering:

• 9 years

Roof Drainage System: • Gutters and Downspouts

Method of Inspection:

• Inspected from the Ground & Edge

Penetrations Sealed With:

• Sheet metal • Neoprene seal

Valley Sealed With:

• Sheet metal
• Sheet metal

**Roof Structure:**Truss, Joist and RaftersPlywood over Rafters

Attic Insulation Type/R-Value: • Blown Fiberglass (rating unknown)

#### **OBSERVATIONS & RECOMMENDATIONS**

Our evaluation of roof coverings, the components and drainage systems, conforms to ASHI and industry standards of practice. We access every roof in order to examine it, or we indicate our unwillingness or inability to do so. There are many different roof types, and every roof will wear differently relative to its age, the number of its layers, the quality of its material, the method of its application, its exposure to direct sunlight or to other prevalent weather conditions, and its maintenance. However, regardless of its design-life, every roof is only as good as the waterproof membrane beneath it, which is concealed and cannot be examined without removing the roofing material, and this is equally true of almost all roofs. It is always recommended that the installation documentation and permit be obtained as they will indicate the precise age of the roof, any applicable guarantees or warranties that may be transferable.

There are two basic roof types, pitched and flat. Pitched roofs are the most common, and the most dependable. They are variously pitched, and typically finished with composition shingles that have a design life of twenty to twenty-five years, or concrete, composite, Spanish, or metal tiles that have a design-life of forty to fifty years, and gravel roofs that have a lesser pitch and a shorter design-life of ten to fifteen years.

The material on most pitched roofs is not designed to be waterproof only water-resistant. These roofs may be layered, or have one roof installed over another, which is a common practice but one that is never recommended because it reduces the design-life of the new roof by several years, can impede emergency service by fire department personal, and requires a periodical service of the flashings. These are serviced with mastic, which eventually shrinks and cracks and provides a common point of leakage. However, among the pitched roofs, gravel ones are the least dependable, because the low pitch and the gravel prevent them from draining as readily as other roofs. For this reason, they must be conscientiously maintained. In this respect, the least dependable of all roofs are flat or built-up ones. Some flat roofs are adequately sloped toward drains but many are not, and water simply ponds and will only be dispersed by evaporation.

However, the most common cause of leak result when roofs are not serviced, and foliage and other debris blocks the drainage channels.

What remains true of all roofs is that, whereas their condition can be evaluated, it is virtually impossible for anyone to detect a leak except as it is occurring or by specific water tests, which are beyond the scope of our service.

Even water stains on ceilings, or on the framing within attics, will not necessarily confirm an active leak without some corroborative evidence, and such evidence can be deliberately concealed.

Consequently, only installers can credibly guarantee that a roof will not leak, and they do. We cannot, and do not give any such guarantees. We will examine every roof, evaluate it, and even attempt to approximate its age, but we can not predict the remaining life-expectancy of the roof, nor guarantee that it will not leak.

Naturally, the sellers or the occupants of a residence will have the most intimate knowledge of the roof and of its history. We recommend that you inquire of the sellers about history of the roof, and that you either include comprehensive roof coverage in your home insurance policy, or that you obtain a roof certification from an established local roofing company.

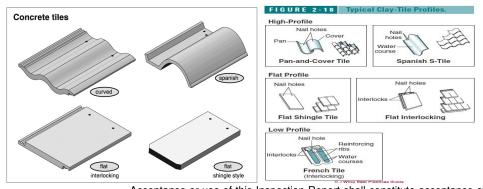
#### **Concrete Tile**

Confusion exists in California regarding the walking of concrete tile roofs by home inspectors during their evaluation. Home builder representatives often verbally explain during a final walk-thru that if the home inspector walks the tile roof, it will void the roof warranty. This announcement is now being repeated on resale home inspections where the seller or seller's agent will attempt to keep the home inspector off the roof using the same statement. Becoming informed is the best way to deal with this important issue.

It is agreed that a tile roof should not be walked unless absolutely necessary, however, the pre-purchase inspection of a home constitutes one of those "absolutely necessary" occasions. Builders and home sellers are quoting a typical tile manufacturers warranty exclusions about damage caused by "roof traffic". If damage were to be caused by a home inspector, it stands to reason that the only warranty that could be voided is the tile integrity section of the warranty related to any individual tiles the home inspector breaks. The installation warranty that the builder must provide would remain in force. The builder cannot avoid their obligation to install the roof properly simply because a home inspector walked the roof to discover the installation defects.

There are a wide variety of concrete tile roofs, the most common of these roofs are typically warranted by manufacturers to last from Thirty to Fifty-five years, and are typically guaranteed against leaks by the installer for three to five years. The actual life of the roof will vary, depending on a number of interrelated factors besides the quality of the material and the method of installation. Poor maintenance is the most common cause of roof failure, but a southern exposure can cause a roof to deteriorate prematurely, as will the practice of layering over another roof. However, the first indication of significant wear occurs when the granules begin to separate and leave pockmarks or dark spots. This is referred to as primary decomposition, which means that the roof is in decline, and therefore susceptible to leakage. This typically begins with the hip and ridge shingles and to the field shingles on the south facing side. This does not mean that the roof is ready to be replaced, but that it should be serviced or monitored. Regular maintenance will certainly extend the life of any roof, and will usually avert most leaks that only become evident after they have caused other damage. This is important, because in accordance with industry standards our inspection service does not include a guarantee against leaks. For such a guarantee, you would need to have a roofing company perform a water test and issue a roof certification.

We recommend that the buyers schedule regular maintenance of the roof, flashings, gutters, etc. This would include cleaning the roof surface and gutters, inspecting the roof for deterioration or damage and using roofing mastic to seal any exposed fasteners, seams, etc.



Acceptance or use of this Inspection Report shall constitute acceptance of and agreement to all of the provisions of the Property Inspection and its Terms and Conditions (ASHI Standards of Practices) which are attached to and form a part of this Inspection Report.

#### We are just a generalist not a specialist, reviewing a recent roof inspection is recommended.

This is important, because in accordance with industry standards our inspection service does not include a guarantee against leaks. For such a guarantee, you would need to have a roofing company perform a water test and issue a roof certification.

The visual roof field surface and ridge was found to be in serviceable condition, with the exception noted below. Several of the roof tiles located toward the front of the dwelling appears to have been replaces several tiles.

One roof tile located in the front of the dwelling was not properly secure. The nail clip was missing, which can allow the tile to fall off during a windy day.



We recommend the advice of a licensed Roofing professional, followed by corrective action as needed to improve its current condition.

#### This item will be found in the Client Advisory

#### **Gutters & Downspouts**

The gutters were found to be in satisfactory condition; however, cleaning the gutters of the debris will prevent drainage clogs.

The internal downspouts surrounding these dwelling were beneath the ground, thus, no opinion can be given of its current condition or functionality. No anomalies were found.

#### **Flashings**

Our ground and edge visible roof flashing was found to be in serviceable condition. No anomalies were found.

#### **Valleys**

Our ground and edge visible of the valley on the roof appear to be serviceable condition; however, cleaning the valleys of the debris will prevent drainage clogs.

#### **Exhaust Ducts**

Our ground and edge visibility of the exhaust ducts appear to be serviceable condition. No anomalies were found.

#### **Plumbers Pipe**

Our ground and edge visibility of the exhaust ducts appear to be serviceable condition. No anomalies were found.

#### **Exterior Fireplace Hoods**

Our ground visible of the exterior chimney and metal crowns appear to be in serviceable condition. The spark arrestor and metal crown is designed to shed rainwater. We recommend monitoring for all deterioration (rust), followed by sealing or serviced to forestall any potential moisture intrusion into the stack walls.

**NOTE:** see additional notes from a recent chimney inspector regarding capping one unused flue.

#### **General Commentary on the Roof**

Our comments do not constitute a warranty that the roof is free of leaks, or will remain free of leaks.

### Attic

#### **Attic Access Entry Information**

The attic was not accessible through a hatch located in master bedroom closet. The attic space was inspected from within, as we needed to inspect the heating system and attic framing. Insulation concealed portions of the framing, limiting access and preventing a complete inspection. However, our examination of the visible and readily accessible components did not reveal any conditions requiring immediate attention.

#### Space Sheathing

The space sheathing where visible (attic), was in appear to be serviceable condition. No anomalies were found No water stains were evident on the roof sheathing. If water staining develops, the source should be identified and necessary repairs performed. Where visible there is an underlayment in the attic and on the roof line.

#### Roof trusses, joist and rafters

The visible roof supports were in acceptable condition and had performed adequately since their installation.

Exposed dry-wall is commonly found underneath the ceiling joist. No anomalies were noted within the attic, with exception noted below.

#### **Collar Tie**

The visible aspects of the collar tie supports were in serviceable condition and had performed adequately since their installation.

#### **Attic Ventilation**

Ventilation in the attic space was adequate according to current trade practices. While several gable or ridge vents and soffits or eave vents were located surrounding the dwelling, vents could be found on the roof surface.

Eye lids and attic vents allow for cross ventilation, which prevent deteriorating of the wood membrane, due to the effects of high temperature levels.

One attic fan was located in the attic near the hatch. It was not tested or active during our inspection. Seeking additional information from the owners of its functionality is recommended.

#### Attic Insulation

The presence of blown insulation was found to be in serviceable condition. The rating of the insulation is currently unknown as several areas of the insulation were thicker than other places.

#### **Attic Not Suitable for Storage**

The attic space was not designed for storage. The load bearing ability of the ceiling framing was obviously limited to the support of its own weight, the weight of the ceiling material and the weight of any insulation installed.

Furthermore, in most climates the temperatures inside the attic can climb to a very high level (150 degrees F, and more) during the warm months and plunge to very low levels in the cold months (equal to the temperatures outside). This wide fluctuation is almost certain to be harmful to personal items stored in this area.

Finally, if the attic is well insulated with blown or batt insulation laid across the ceilings, then any storage must be supported well above the insulation, otherwise the weight of the stored items will compress the insulation, thus negating any beneficial effect that it may have had.

## **Plumbing System**

#### **DESCRIPTIVE INFORMATION**

Domestic Water Source: • Municipal/Community supply

**Landscape Water Source:** • Public, same as domestic water source

Main Supply Line Material:Copper, where visibleCopper, where visible

**Dwelling Level:** • Two Story

Water Pressure:At the mid-range of normal (65 psi)Waste Disposal:Municipal/Community collection system

**D,W,V Pipe Material:** • ABS Plastic and PVC

#### **OBSERVATIONS & RECOMMENDATIONS**

We evaluate plumbing systems and their components in accordance with ASHI and industry standards of practice, which include testing for pressure and functional flow. Plumbing systems have common components but they are not uniform. In addition to fixtures, components typically consist of gas pipes, potable water pipes, drain and vent pipes, shut-off valves, which we do not test, pressure regulators, pressure relief valves, and water-heating devices. The best and most dependable water pipes are copper, because they are not subject to the build-up of minerals that bond to the inside of galvanized pipes and gradually reduce their inner diameter and restrict the volume of water. A water softener will remove most of these minerals, but not once they are bonded within the pipes, for which there would be no remedy other than a re-pipe.

The water pressure within pipes is commonly confused with water volume, but whereas high water volume is good high water pressure is not. In fact, whenever the street pressure exceeds eighty pounds per square inch a regulator is recommended, which typically comes factory preset between forty-five and sixty-five pounds per square inch. However, regardless of the pressure, leaks will occur in any system, and particularly in one with older galvanized pipes, and commonly when the regulator fails and high pressure begins to stress the washers and diaphragms within the various components.

Waste pipes are equally varied and are comprised of older ones, such as those made of clay, or others that are made of a material like cardboard coated with tar, and modern plastic ones referred to as ABS.

Typically, the condition of these pipes is directly related to their age. ABS pipes, for instance, are virtually impervious to deterioration. However, some ABS pipes are alleged to have manufacturing defects.

Regardless, inasmuch as most drainpipes are concealed, we can only infer their condition by observing the draw at drains. Nonetheless, blockages will occur at some point in the life of any system, but blockages in the waste lines, and particularly in a main sewer line, can be costly, and it would be prudent to have the main sewer line video scanned. This would also confirm that the house is connected to the public sewer system, which is important because such systems should be evaluated by a specialist before the close of escrow.

Both the waste drain pipes and water supply pipes for the dwelling are typically concealed. In the case of slab foundations, they may be partially or substantially run under the slab. In all cases, significant portions of these pipes are routinely located inside wall cavities or are otherwise not visible. This can make service on these pipes difficult should an issue arise. It is possible that issues with these pipes may exist and go undetected for some time because they do not visually manifest themselves in any way. While we make every reasonable effort to determine the condition of all systems evaluated, this inspection is a visual inspection and not technically exhaustive.

It would take specialized equipment and a trained specialist to test the hidden portions of these systems, which is beyond the scope of this limited visual inspection.

We would not discourage you from seeking a specialist opinion, particularly on older homes where many of these systems may be nearing or even past what would be considered the typical design life of the materials involved.

This is why it is advisable to obtain prior water usage records for the property. The water consumption for a dwelling will obviously vary with the occupant's usage patterns and types of fixtures or systems installed, but they may give clues to issues that might otherwise go undetected. For example, a sudden significant rise in water usage might indicate a leak in the underground portion of a pipe or it may simply be the result of installing a lawn sprinkler system. This is why it is important to ask the occupants about such issues as they often have the most intimate knowledge of the property and its unique conditions.

#### Water Shut Off Valve Condition

The main water supply shut-off valve was located, but testing the operation of this valve is not within the scope of a home inspection. Operation of the valve from time to time will keep it functional and maximize its useful life.

#### **Main Water Supply**

The main supply to the property appears to be a one and three-quarter inch copper supply pipe. This would be considered the minimum size main water supply for a property of this size. The main water supply shut-off valve was located in the garage and included a water pressure regulator.

#### **Water Pressure**

The water pressure is within what would be considered the normal range for most areas. Water pressure is a function of the pressure that the city feels is adequate and the age/condition of the water supply pipes from and in the street. As well as local demand at the time of the reading. A pressure range of between 40 PSI to 80 PSI is considered within the acceptable range by most people.

The water supply water pressure was 60 PSI (Pounds Per Square Inch) and was measured between 9:30 AM to 11:30 AM. Water pressure may vary with time of day and local demands. The pressure shown is only a snapshot in time and should not be taken as an absolute number. Interested parties desiring further information should consult with a qualified plumbing contractor.

Functional flow of water at the fixtures on the medium level was judged to be adequate, with exception noted below. Several fixtures were operated simultaneously. Minor changes in flow, when other fixtures are turned on or turned off, are considered normal.

#### **Interior Water Supply Piping**

The visible portions of the exposed copper lines were in servable condition. However, the interior wall finishes coverings preclude a complete evaluation of the copper water supply distribution system. No opinions are offered as to the conditions within concealed or inaccessible areas.

Functional flow of water at the fixtures on the medium level was judged to be adequate. Several fixtures were operated simultaneously.

Minor changes in flow, when other fixtures are turned on or turned off, are considered normal. The water supply lines which were accessible were in acceptable condition.

#### **Angle Stops**

Because of the possibility that operating angle stops that have not been exercised for some time may cause them to leak, home inspectors do not operate them during a standard home inspection.

We recommend that before anyone operates angle stops that have not been operated within the past six months, adequate preparations be made to deal with water leaks of any magnitude.

#### **Drain & Waste Lines**

The visible drain & waste piping were found to be serviceable condition.

Based on industry recommended water tests for functional flow, the draw observed at the fixture/drainpipes appeared to be adequate at the time on inspection except as noted elsewhere. However, only a video-scan of the sanitary sewer pipe system can confirm the actual condition of the drain pipes and or system.

No opinions can be offered as to the conditions within concealed and or inaccessible areas.

#### Main Sewer Cleanout

The sewer cleanout provides access to the system if the line is obstructed. Typically, it is a 4-inch ABS or cast iron pipe that is sealed using a threaded or mechanically capped cover. Two clean-outs were located at the left (2/12) and one at the rear (4") of the dwelling.

#### **Hosebibs**

Anti-siphon valves are required in all exterior hose bibs. The anti-siphon valves help to reduce the risk of cross contamination of the potable water supply. We noted no presence of anti-siphon valves at the exterior hose bibs, upgrading is recommended.

We tested a random sampling of the bibs on the exterior and they appear functional. We suggest that all exterior hose bibs be upgraded to include anti-siphon vacuum breaker fittings. These are relatively inexpensive devices that are intended to prevent accidental contamination of the potable water. These are relatively simple to install and inexpensive devices. These fittings would be required on new construction and or installations. We suggest that the existing installations be upgraded to include the feature as a property upgrade. Interested parties should consult with a qualified plumber for service.

#### Gas Piping

The gas piping was found to be in serviceable condition. Pressure testing may reveal leaks, but this procedure would be considered beyond the scope of a home inspection.

#### Water Heater Gas Supply & Drip leg/Sediment trap

We noted that a drip leg/sediment trap is installed at the gas connection for the furnace and water heater. The installation of a drip leg/sediment trap at the appliance is recommended and may be required as part of the manufacturers installation instructions and or by the local jurisdiction.

The drip leg is a small vertical pipe that is installed to catch any debris in the gas stream before it can reach the appliance gas control. Debris that reaches a gas control may damage the control module and or cause it to operate unsafely. Interested parties should consult the manufacturer's installation instruction and the local jurisdiction for the specific requirements for this area and type of appliance.

Although it was not required at the time of construction, a sediment trap shall be installed on the gas line as close to inlet of the equipment as practical. Refer to 2007 California Plumbing Code section 1212.7

Interested parties desiring further information and or service should consult with a qualified plumbing contractor.

#### **Gas Meter Installation**

The gas main shutoff appears serviceable but was not tested. No meter wrench could be located in the vicinity of the gas meter as recommended in areas subject to seismic activity. The wrench should be chained to the meter to provide a convenient means for shutoff in an emergency. The valve can be turned 90 degrees in either direction to shut the gas supply off.

We suggest that the occupants/homeowner become familiar with how to shutoff the gas in case of emergency. You should be aware that gas leaks are not uncommon, particularly after an earthquake or seismic event.

Therefore, we recommend that you keep an emergency gas shutoff wrench in an accessible area and become familiar with how to shutoff gas should an emergency arise.

Specialized equipment is necessary to detect a gas leak. Only the local gas utility or a trained professional should turn service back on after an emergency.

In an emergency, your gas can be turned off at the main gas service shutoff valve normally located near your gas meter. Using a 12 to 15 inch adjustable pipe or crescent-type wrench or other suitable tool, give the valve a quarter turn in either direction; the valve is closed when the tang (the part you put the wrench on) is crosswise to the pipe.

Some insurance companies and municipalities require a gas seismic valve be installed prior to insuring or selling the property. The gas main does not have an automatic seismic gas shut-off valve installed. These devices are designed to automatically shut off the main gas service to the dwelling when an earthquake occurs.

For discount or a low rate, we recommend questioning your insurance carrier regarding this component. The main gas meter CSST pipe entering the dwelling did include a bonding jumper and was connected to a grounding rod (garage) as required by PG&E and uniform plumbing code.

### Irrigation

There are a wide variety of irrigation components, such as pipes that could include old galvanized ones, more dependable copper ones, and modern polyvinyl ones that are commonly referred to as PVC.

However, among the latter, the quality can range from a dependable thick-walled type to a less dependable thin-walled type, and it is not uncommon to find a mixture of them. To complicate things, significant portions of these pipes cannot be examined because they are buried.

Therefore, we identify a system based on what type of pipe that can be seen. We recommend that you have the sellers demonstrate an automatic sprinkler system before the close of escrow and indicate any seasonal changes that they may make to the program.

#### **General Comments About The Plumbing System**

The plumbing system was in serviceable condition and was functioning as designed and intended, with exception noted above.

#### The Central Sprinkler System Was Not Inspected

This building has a fire sprinkler system. An examination if this system or a determination of its adequacy is beyond the scope of this inspection.

Individual fire sprinklers are a spaced throughout the ceiling of a building. The sprinklers are integrated with a network of piping and connected to a water supply. Automatic fire sprinklers are individually heat-activated, and tied into a network of piping with water pressure. When the heat of a fire raises the sprinkler temperature to its operating point (usually 165 F), a solder link will melt or a liquid filled glass bulb will shatter to open that single sprinkler, releasing water directly over the source of heat. Some basic precaution to safeguard the fire sprinkler system, Avoid painting the or otherwise covering the fire sprinkler devices, as that will affect their sensitivity to heat.

Caution should be used when entering the attic as the exposed water pipes (orange color) for the sprinklers can be easily damaged if stepped on or damaged.

Do not hang decoration, plants or other objects from the sprinklers or piping and teach children not to touch or play with the sprinklers. For more information please go to the web site of <a href="http://homefiresprinkler.org/">http://homefiresprinkler.org/</a>

### **Water Heater**

#### **DESCRIPTIVE INFORMATION**

Water Heater Location: • In the Garage

Energy Source:

Storage Capacity:

Water Heater BTU:

• Gas
• 40 Gallons
• 40,000

**Water Heater Age:** • 9 years, from Serial Number

**Vessel Insulation:** • Manufactured with Blanket Insulation

#### **OBSERVATIONS & RECOMMENDATIONS**

#### **Water Heater**

There are a wide variety of residential gas water heaters that range in capacity from forty to one hundred gallons. They can be expected to last at least as long as their warranty which is typically fifteen to twenty years.

Many will last longer. However, few of them last longer and many will eventually leak. It is always wise to have them installed over a drain pan, and preferably one plumbed to the exterior. Also, they can be dangerous if they are not seismically secured and equipped with either a pressure/temperature relief valve and discharge pipe plumbed to the exterior, or a Watts 210 gas shut-off valve.

The water heater does not appear original to the property. We suggest obtaining copies of all relevant installation documentation, manuals and or permit that would indicate the work was completed by a qualified specialist with appropriate jurisdictional oversight. This is important because our inspection does not tacitly approve, endorse, or guarantee the integrity of any work that was done without a permit, and any latent issues that may be present.

No drain pan could be found under the water heater. This is designed to minimize water damage should the water heater leak.

#### **Water Drain Valve**

A drain valve is installed on the water heater. The valve was not tested for proper operation. The water heater should be flushed per the manufacturer's instructions to forestall sediment build-up in the tank.

Flushing the water heater usually involves connecting a garden hose from the drain valve to the exterior or a sink. The system would be flushed by opening the valve for a period of time. This flushes sediment build-up out of the tank. For specific information on recommended service for this particular hot water heater please refer to the manufacturer's instruction booklet. The drain valve did not show any anomalies during our inspection.

#### **Water Connections**

The cold water inlet and hot water outlet connections were properly installed and in serviceable condition.

The electrical bonding connection/jumper was not visible at the water heater. However, it may be hidden by the wall coverings and or installed at another location. Current safety standards require that these systems be electrically bonded and interconnected with a number four gauge wire.

#### **Advanced Safety System**

A quick shut-off valve operated this unit. This valve was not tested during inspection, however, no anomalies during our inspection.

#### Water Heater Gas Supply

The gas supply piping did include a 90-degree shutoff valve in the vicinity of the heater for service personnel and emergency use. The flexible gas supply lines for tank was found to be industry approve type. Testing for leaks Is not within the scope of our inspection.

#### Water Heater Combustion Air Supply

Combustion air provides the oxygen needed for the safe and efficient operation of fuel burning appliances. An adequate supply of fresh air around all fuel burning appliances with open combustion compartments is vital for their safe operation. Years ago, the air could come from inside or outside the building, however, more recent standards prefer for combustion air to come from the outside, only. The combustion air supply for the water heater was adequate.

#### Seismic Restraint For The Water Heater

The seismic restraint for the water heater tank met today's industry standards. Three seismic restraints are now required to be installed for any water tank above 53 gallons. Adding an additional restraint will help limit damage and provide a source of usable domestic water in the event of a major earthquake.

#### Temperature and Pressure Relief Valve

The water heater installation included a temperature and pressure relief valve. This device is an important safety feature and should not be altered or tampered with.

The water heater is equipped with a mandated discharge line that appears to be functional, but not tested. The discharge line was directed to the exterior area.

#### Water Heater Ignition System

The pilot light was controlled by a thermocouple, which ensures that the pilot gas valve will close, if the pilot light is extinguished. No anomalies were noted for this area.

#### The Water Heater Venting System

The water heater draft system was properly installed with a single wall ducting material. The exhaust venting system included a thimble located on the ceiling it was in serviceable condition.

**Note:** The draft hood should not be loose. It should be on-center. View the vent stack for proper rise. There should be at least three screws per connection. View where the water heater vent joins the main vent stack and /or top base. If joined in a horizontal portion of the vent, the connection should be at no more than a 45-degree angle. If joined in a vertical portion of the stack, the higher BTU appliance should be on the bottom.

#### Other Installation Considerations

This water heaters are a in the middle stages of its life span, which was operating satisfactorily. With routine maintenance, it should be reliable for a number of years.

Flammable liquids such as gasoline, benzene, turpentine, paint thinner, naphtha, and cleaning fluids are fire hazards. They are also dangerously explosive.

Never use or store flammable liquids near your gas furnace or water heater. The vapor or fumes from these liquids ignite easily. Fumes can travel invisibly throughout your home and be ignited by a spark or gas appliance.

The vapor trail acts like a wick, and the flames can run back to the flammable liquid with disastrous consequences.

One drip pan was located underneath the water tank; however, the drip line did not terminate to the exterior.

One vehicle barred was located in front of the gas supply line, this is a safety feature.

# **Electrical System**

#### **DESCRIPTIVE INFORMATION**

Service Entry Type: • Underground lateral

Service Voltage Supplied:

• 120-240 V

• 100/200 Amps

Main & Subpanel location:

• Exterior & Garage

**Based Upon:** • The rated capacity of the main distribution panel

System Grounding Source: • Ufer

Circuit Protection:

Conductor Material:

• Circuit breakers
• Copper & Alum

Wiring Type: • Non-metallic sheathed cable ("Romex")

#### **OBSERVATIONS & RECOMMENDATIONS**

We evaluate electrical systems in accordance with ASHI and industry standards of practice, which includes identifying the type and capacity of the service, and evaluating panels, overload conductors, wires, panel grounds, and a representative number of switches and outlets. However, there are a wide variety of electrical systems with an equally wide variety of components, and any one particular system may not conform to current standards or provide the same degree of service and safety. We are generalists and not specialists. In compliance with industry standards, we do not perform load-calculations to determine if the supply meets the demand of the household. It is essential that any service recommendations or upgrades recommendations that we make should be further evaluated by specialist well before the close of escrow.

They may well provide further evaluation, information, price quotes, et cetera and may well identify additional defects and or recommend further upgrades, the scope and price of which could affect your evaluation of the property.

#### The Underground Electrical Supply

The underground portion of the service lateral was not visible and we can not give our opinion of this area.

#### Service Grounding

The electrical system appears grounded, as we were able to visually confirm this contention located in the garage.

#### The Main & Sub Distribution Panel

Wiring Material Visible at Accessible Areas: Copper residence is served by a 200 amp, 120/240 volt panel, located at the rear exterior.

Accepted safety standards require electrical panels to be weatherproof, readily accessible, and have a minimum of thirty-six inches of clear space in front of them for service. They should also have a main disconnect and each circuit within the panel should be clearly labeled. It is beyond the scope of a general property inspection to verify the accuracy of any circuit labeling. Circuit labeling should clearly identify the system or area served in a manner that will not change over time.

The main distribution panel was found to be in serviceable condition with circuitry installed and protected correctly.

Circuitry in the main service panel was labeled. The accuracy of the labeling was not verified. When the opportunity arises, we recommend verifying the accuracy of the labeling by actually operating the breakers.

#### Receptacles; Overall

Based upon the inspection of a representative number, the receptacles were properly grounded, in serviceable condition and operating properly.

#### **Receptacles**; Cover Overall

Based upon the inspection of a representative number, the receptacle covers were in serviceable condition.

#### Switch; Overall

Based upon the inspection of a representative number of wall switches, they were in serviceable condition and operating properly.

#### **Switched Electrical Receptacles**

No ceiling fixtures were present in one area. Building practices require the ability to turn on a light from a switch in every room. In this case, the top receptacles were connected to a switch at the entrance to the room, allowing control of cord connected lamps when they are plugged into the appropriate switched receptacles.

#### **Door Bell: Overall**

The door bell in this dwelling were operational and in serviceable condition.

#### **Lights: Overall**

The light fixtures in this dwelling were operational and in serviceable condition, with the exception one or more dead bulbs. Choosing the right light bulb can help save energy dollars. Deciding between compact fluorescent light bulbs, halogen light bulbs, or LED light bulbs can make more sense when you know what to look for.

http://www.energystar.gov/index.cfm?c=cfls.pr\_cfls

#### What is a GFCI Outlet - How does a GFCI Work?

A GFCI (ground fault circuit interrupter) outlet is a device that adds a greater level of safety by reducing the risk of electric shock. Most building codes now require that a GFCI outlet be used in wet locations such as bathrooms, kitchens, laundry rooms and outdoors.

A GFCI outlet monitors for a current imbalance between the hot and neutral wires and breaks the circuit if that condition occurs.

A circuit breaker usually will trip if you receive a shock, but it may not act fast enough to protect you from harm. A GFCI outlet is more sensitive and acts faster than a circuit breaker or fuse and is thus an important safety feature.

A GFCI outlet may be wired in a branch circuit, which means other outlets and electrical devices may share the same circuit and breaker (or fuse).

When a properly wired GFCI trips, the other devices down the line from it will also lose power. Note that devices on the circuit that come before the GFCI are not protected and are not affected when the GFCI is tripped. If the GFCI outlet is improperly wired, none the other loads, upstream nor downstream are be protected.

If you have an outlet that doesn't work, and the breaker is not tripped, look for a GFCI outlet which may have tripped. The non-working outlet may be down line from a GFCI outlet. Note that the affected outlets may not be located near the GFCI outlet; they may be several rooms away or even on a different floor.

GFCI outlets should be tested periodically, at least once a year. A GFCI outlet has a "Test" and a "Reset" button. Pressing the "Test" button will trip the outlet and break the circuit. Pressing the "Reset" will restore the circuit. If pressing the test button does not work, then replace the GFCI outlet. If the outlet does pop when you press the "Test" button, but the outlet still has power, the outlet is miswired. A miswired outlet is dangerous and it should be fixed immediately.

#### **Ground Fault Circuit Protection**

GFCI (ground fault circuit interrupter) protection is a modern safety feature designed to help prevent shock hazards. GFCI breakers and receptacles function to de-energize a circuit or a portion of a circuit when a hazardous condition exists.

GFCI protection is inexpensive and can provide a substantially increased margin of safety. Required locations for GFCI protected receptacles are defined by the year the building was constructed.

In 1971 all receptacles within 15 feet of interior walls of pools and pool lights were required to be on GFI protected circuits.

In 1974, all exterior outlets were required to be on GFCI circuitry. In 1976, it was required that all bathroom receptacles be on a GFCI protected circuit.

In 1979, garage, spas and hydro-massage tub receptacles were required to have GFI protection.

In 1988, the Kitchen was added as part of the requirement. In 1990, all crawl space outlets were added to the list.

In 1993, receptacles in wet bars were required to be on GFCI protected circuits.

Finally in 1996 all receptacles serving kitchen countertops were required to be protected. If more information regarding the installation of GFCI protection is required.

#### (Exterior)

GFCI's which were found in the exterior, when tested they were in serviceable condition.

#### (Garage Receptacle)

Receptacles found in the garage, was properly protected by a nearby GFCI's, when tested they were in serviceable condition.

#### (Master Washrooms)

Receptacles found in the master washroom, was properly protected by a nearby GFCI's, when tested they were in serviceable condition.

#### (Washrooms)

Receptacles found in the upper and lower hall, were properly protected by a GFCI located in the upper hall washrooms, when tested they were in serviceable condition.

#### (Kitchen)

Receptacles which were found in the kitchen, were properly protected by a nearby GFCI's, when tested they were in serviceable condition.

#### **Arc Fault Circuit Protection**

An arc-fault circuit interrupter is a device intended to provide protection from the effects of arc faults by recognizing characteristics unique to arcing and by functioning to de-energize the circuit when an arc-fault is detected. Arc-fault protection is now required in new construction for all branch circuits that supply 125-volt, single phase, 15 and 20- amp receptacle outlets installed in dwelling units. If more information regarding the installation of AFCI protection is required, we recommend the advice and services of a C-10 Electrical Contractor

Three arc-fault protections were installed for the bedroom. The arc-fault protection breaker was tested, and found to be in working condition.

#### **General Comments On The Electrical System**

Review of any low voltage electrical devices and their associated wiring, including, telephone, TV antenna, stereo systems, fire and burglar alarm, intercom, yard lighting, landscape water (sprinkler) timers or other water features, is not within the scope of a home inspection.

We recommend consultation with the appropriate service technician for full evaluation of the operating condition of these devices. Any yard light senor system found for this dwelling was not inspected and is not included in this report. Thus, we cannot make any representations as to its present condition or future performance. We recommend evaluation by a technician, if further information on the system's function and condition is desired.

# **Heating System**

#### **DESCRIPTIVE INFORMATION**

Heat Plant Location:In the AtticHeating Fuel:Natural Gas

**BTU Input Rating:**• 100,000 & 45,000 (Upper unit) **Heating Plant Age:**• Age from Data Plate 9 years

The Air Filter Size: • 24 X 20 X 1 (main home) & 10 x 12 X 1 (Upper unit)

Number of Zones: • Single -Zone system

#### **OBSERVATIONS & RECOMMENDATIONS**

We evaluate heating systems in accordance with ASHI and industry standards of practice, which includes identifying, testing, and evaluating systems and their components All operational testing is done using normal user controls - no special tools or devices are employed. However, there are a wide variety of systems, which range from older floor, wall, and gravity furnaces to newer forced-air furnaces. Older ones, such as gravity furnaces and most floor and wall furnaces, are the least energy-efficient and the most dangerous. Therefore, it would be prudent to consider replacing them with more economical and reliable forced-air units. However, if they are not replaced, you should be aware that many of them and their parts may no longer be available, and you should also be aware of common safety concerns associated with their use. We do test and describe each system, but we do not attempt to dismantle any portion of it, nor do we evaluate the following concealed components: the heat exchanger, or firebox, electronic air-cleaners, humidifiers, and in-line duct motors or dampers. Similarly, we do not check every register, at which the airflow may well be uneven and will decrease proportionate to its distance from the furnace. However, the airflow and the efficiency of any system can be compromised by poor maintenance, such as by the filters not being changed regularly, which will contaminate the ducts and have an adverse effect on air quality.

Regardless, the sellers or the occupants of a property are often the best judges of how well a system works, and it would be prudent to ask them about its maintenance history and if they have been satisfied with its performance, or you may wish to have a comprehensive evaluation by a specialist. Most heating systems have a design life of twenty years, but if any system is more than ten years old, or if poor maintenance is suspected, it would be wise to schedule a comprehensive service that includes cleaning motors, fans, and ducts. Then, change the filters every two to three months, and schedule biannual maintenance service.

You should also be aware that we do not evaluate or endorse any heating device that utilizes fossil fuels and is not vented. The presence and use of these within a residence commonly indicates the inadequacy of the primary heating system or of its distribution. However, these and every other fuel burning appliances that are not vented are potentially hazardous. Such appliances include open flames or heated elements, which are capable of igniting any of the myriad flammable materials found in the average home. Also, even the most modern of these appliances can produce carbon monoxide, which in a tightly sealed modern home or a poorly ventilated room can result in sickness, debilitating injury, and even death. We perform a conscientious evaluation of heating systems, but we are not specialists and cannot see inside ducts.

Therefore, it is imperative that any recommendation that we may make for service or a second opinion be scheduled well before the close of escrow, because a specialist could reveal additional defects or recommend further upgrades that could affect your evaluation of the property. Our inspection reflects the operational/installation conditions at the time of inspection and does not constitute of warranty or guarantee as the future functionality of the system.

#### **Forced Hot Air Heating Systems**

The residence is served by a gas-fueled heating system. The heating unit could be identified from its data plate. Per the unit's information label, the system has an input rating of 100,000 & 45,000 BTU's.

This furnace is an induced draft forced air furnace. This type of system is designed to yield approximately eighty to eighty five percent operational efficiency.

This means that for every dollar of gas the system uses, approximately eighty to eighty-five cents of heat is available for heating the dwelling. This would not take into account any heat/air loss from the supply duct system insulation and or leakage. Modern systems are far more efficient. Current designs may yield ninety to ninety-five percent efficiency.

Forced air furnaces operate by heating a stream of air moved by a blower through a system of ducts. Important elements of the system include the heat exchanger; exhaust venting, blower, controls, and ducting.

During on inspection, it was noted that a condensate line, was found entering the air handlers. The condensate drain line had been installed property and did extend to the exterior.

No leakage was observed at the time of the inspection. However, we recommend monitoring theses areas from the primary condensate drip and lines.

#### **Fuel Supply**

The fuel supply piping installation included a 90-degree shutoff valve in the vicinity of the heating plant for service personnel and emergency use. The valve was not operated, but this age and style of valve is normally found to be operable by hand and trouble free. The gas supply line was an approved flexible type, it appears to be in serviceable condition.

#### **Combustion Air**

Combustion air provides the oxygen needed for the safe and efficient operation of fuel burning appliances. An adequate supply of fresh air around all fuel burning appliances with open combustion compartments is vital for their safe operation. Years ago, the air could come from inside or outside the building, however, more recent standards (2001) prefer for combustion air to come from the outside only. The combustion air supply for this heating plant was adequate within the attic.

#### Ignition and Controls

The burners was equipped with an electronic ignition system, which is an energy saving feature that allows operation without the need for a continuously burning pilot light.

The ignition systems were activated during the inspection and were in serviceable condition.

#### Fan Limit Switch

The fan limit switch turns the fan on and off during the heating cycle. The fan typically turns on when the heat exchanger reaches a prescribed temperature and shuts off when the temperature falls below that same level.

This assures that the system distributes warm air as defined by the preset temperature. The function of the switch is tested during the operation of the heater.

A typical setting for the high limit is between 170 and 200 degrees Fahrenheit, a typical "fan off" setting is between 80 and 110°F. A typical "fan on" setting is between 120 and 150 degrees Fahrenheit. The limit fan switches operated normally during the test.

#### Inducer Fan

The inducer fan "induces" or begins the flow of air up the flue. The fan typically starts when the heater is started and shuts off when the heater is shut off. The inducer fans operated normally during the test.

#### **Heating Duct System**

The visible sections of the heating plant's duct system were functional and were in serviceable condition. Measuring the heating BTU and duct size is not within the scope of our inspection.

#### **System Control**

Activation of the user control on the lower level thermostat caused the units to respond. This was a programmable device with many options for setback settings, timed events, etc. Programmable device was tested and the functions of this thermostat were in operable condition.

#### **Distribution System**

The distribution system was found to be in serviceable condition. Measuring the heating BTU and distribution ducting size is not within the scope of our inspection.

#### Air Filter

The return air vent located on the ceilings was installed with dirty air filter, replacing them will improve their functionality.

#### **Advanced Safety System**

Two quick shut-off switches were found within reach of these units. When tested they were in working condition.

#### **General Comments About The Heating System**

The heating equipment system was in the early stage of its life according to industry averages. This unit typically has an average service life of 15 to 25 years. Proper maintenance and cleaning of this equipment will extend its service for years.

Do not storage personal items or flammable liquids surrounding the heating system at anytime.

# **Cooling System**

#### **DESCRIPTIVE INFORMATION**

Cooling Plant Location: • Exterior Rear Left

**Type of Cooling System:** • Central air conditioning system sharing distribution with a gas fired furnace

**Cooling System Age:** • 9 Years, from Serial Number

**Energy Source for Cooling:** • Electricity

**Cooling Capacity:** • Approximately 5.0/2.5 tons

RLA Capacity: • 25.3/16.3

Breaker Capacity: • 60 amps

#### **OBSERVATIONS & RECOMMENDATIONS**

#### Type Of Cooling System

Cooling systems were accomplished by electrically powered refrigerant compression, with the cooling (evaporator) coil mounted adjacent to the gas fired furnace.

#### **Cooling Equipment Compressor/Condenser**

The condenser contains all the equipment necessary to reclaim the refrigerant gas and convert it back to a liquid. It consists of a compressor, condenser, condenser fan, a means of local shutoff, and some accessory components. The manufacturer of the unit suggests that a minimum of six to twelve inches of horizontal clearance to any wall be maintained to allow for the free flow of air. The unit should be level and must have at least three inches of clearance above the surrounding ground.

#### This item will be found in the Client Advisory

COILS - The coils in the condensing unit and air handler were examined and found to be in serviceable condition with no anomalies noted.

LOCAL DISCONNECT - The local disconnect is fused in accordance with the manufacturer's plate and is within line of sight of the compressor.

REFRIGERANT LINES - The accessible refrigerant lines are in serviceable condition with no anomalies noted.

#### **Cooling System**

The condenser unit was adequately secured to its platform to prevent movement during an earthquake.

#### **Cooling System Electrical Wiring**

The control wire conduit to the air conditioning compressor were connected and in acceptable condition.

The function of the main disconnect was provided by a circuit breaker mounted in the distribution panel near the cooling system. The breaker appeared to be in good condition, although it was not tested during this inspection.

The local disconnect is fused in accordance with the manufacturer's plate and is within line of sight of the compressor.

#### **General Comments About The Cooling System**

According to most cooling system manufacturers, operation of an electric-gas compression air conditioning system when outdoor temperatures have not been at least 65 degrees, Fahrenheit for at least 48 hours prior, can result in possible serious damage to the compressor.

Conditions at the time of the inspection were not appropriate for operation of the air conditioning system. The cooling system should be tested for its functionality prior to the COE.

### **Interior Components**

#### **DESCRIPTIVE INFORMATION**

Number of Bedrooms: • Four

Number of Bathrooms: • Three (main) • One (upper init)

Window Glazing:

• Dual pane

• Dual pane

Wall Finish:Gypsum wallboard, commonly called "Drywall"Gypsum wallboard, commonly called "Drywall"

Floor Covering: • Tile • Carpet • Hardwood

#### **OBSERVATIONS & RECOMMENDATIONS**

In accordance with ASHI and industry standards of practice, our inspection of the interior of the living space includes the visually accessible areas of walls, floors, cabinets and closets, and includes the testing of a representative number of windows and doors, switches and outlets. However, we do not evaluate window treatments, nor move furniture, lift carpets or rugs, empty closets or cabinets, and we do not comment on cosmetic deficiencies. We may comment on the cracks that appear around windows and doors, or which follow the lines of framing members and the seams of drywall and plasterboard. These cracks are a consequence of movement, such as wood shrinkage, common settling, and seismic activity, and will often reappear if they are not correctly repaired. Such cracks can become the subject of disputes, and are therefore best evaluated by a geologist or a structural engineer. Similarly, there are a number of environmental pollutants that can contaminate a home, such as asbestos, carbon monoxide, radon, and a variety of molds and fungi that require specialized testing equipment, which is beyond our expertise and the scope of our service. There are also lesser contaminants, such as odors that are typically caused by moisture penetrating concealed slabs, or those caused by household pets. And inasmuch as the sensitivity to such odors is not uniform, we recommend that you make this determination for yourself, and particularly if domestic pets are occupying the premises, and then schedule whatever service may be deemed appropriate before the close of escrow.

#### **Floors**

The floors had a good appearance and were in serviceable condition. Any wear, tear and/or cosmetic issues were commensurate with both age and use.

Carpets found for this dwelling were not pulled up, as it not within the scope of our inspection. However, reviewing a resent pest inspection may reveal moisture condition of termite actively.

#### Interior Walls & Ceilings

The walls and ceiling or the underside of the roof in this dwelling was in serviceable condition, with exception noted below. Any blemishes found on the wall are cosmetic and should be repaired for a better appearance.

#### Interior Railing

The railing was used several times during the inspection. The various components which were installed showed no deficiencies during use.

#### **Interior Stairs**

The stairs were used several times during the inspection. The various components showed no deficiencies during use.

#### **Interior Doors**

The interior doors were properly installed and in serviceable condition. This property may have had multiple occupants over the course of its "life". Additionally, a variety of trades people, etc. may have had access to the property over time.

Consequently, there may be multiple copies of the keys in existence for the property. We recommend that the buyers have all locks re-keyed prior to occupancy. Additionally, all access points should be reviewed for both security and egress. The evaluation of property security issues is outside the scope of this inspection and is specifically disclaimed in the scope of work governing this inspection and the ASHI Standards of Practice. However we may note areas of concern should they become apparent during the course of our inspection. Any comments are made for the convenience of the client only and are not intended to be comprehensive. Interested parties desiring further information should consult with a state licensed locksmith.

#### **Interior Glass Doors**

The interior glass doors was properly installed and in serviceable condition. The glass which installed for the sliding glass doors was noted with a safety label.

#### **Safety Glass Labeling**

Generally speaking, all safety glass should be labeled using either an etching or ceramic-blasting method to produce a permanent emblem in the surface of the glass that must remain visible after it has been installed. During our inspection, we will look for the emblem as evidence that the glass is, indeed, safety glass. However, industry standards do allow for installation of safety glass that does not display the specified emblem, under certain circumstances.

Nevertheless, our policy is to hold to the conservative view that, if no emblem can be found that confirms that a light of glass is, in fact, safety glass, then we will NOT assume that it is.

Finally, experts on the subject of safety glazing advise that the only conclusive way to determine once and for all that a specific piece of glass is safety glass is to break it. Clearly, destructive testing is well outside the scope of nationally recognized standards for a home inspection.

#### **Windows**

All of the windows were functional and in serviceable condition. The windows on this dwelling were double-glazed windows. This type of window relies on a caulking seal at the edge to prevent water from entering the wall cavity. We recommend monitoring the condition of this caulking seal frequently and resealing the edges when appropriate.

All of the windows that were examined during this inspection were adequately weather-stripped, in our judgment.

While we thoroughly inspect all accessible double pane window and door glass for evidence of failed double pane window seals (fogged lenses) we can not warrant that our inspection identified *all* failed double pane window seals in the home.

The symptoms of some failed thermal seals may be visible under certain weather conditions but probably will not be visible under others. Since, during this inspection we could not possibly have experienced all possible weather conditions; we may not have been able to detect *all* failed thermal seals.

#### **Fireplace Note**

Our evaluation of fireplaces, chimneys and the related components are performed in accordance with ASHI Standards of Practice. ASHI compliant inspections are those of a generalist and should not be considered a substitute for a qualified specialist's inspection. There are a wide variety of chimneys, which represent an even wider variety of interrelated components that comprise them. However, there are several basic types of systems found in this area; metal walled with a tile liner, masonry, and pre-fabricated/listed or factory-built assemblies.

The metal with tile liners are found in certain areas on homes built in the 1940-1960 time frame and should not be confused with factory-built metal ones. Masonry and factory-built ones are a commonplace with the factory-built systems being used widely in new construction.

In all cases, significant areas of all chimney flues cannot be adequately viewed during a limited field inspection, as has been documented by the Chimney Safety Institute of America, which reported in 1992: "The inner reaches of a flue are relatively inaccessible, and it should not be expected that the distant oblique view from the top or bottom is adequate to fully document damage even with a strong light." Our inspection of chimneys is limited to those areas that can be viewed without dismantling any portion of system, and does not include the use of specialized equipment.

In keeping with ASHI and recognized industry standards, we do not stress test/"push" masonry chimney systems - those tests are of limited value and are not conclusive.

We cannot guarantee the structural integrity and or operational safety of a given system. No opinions are offered as to the conditions within concealed or inaccessible areas. It is recommended that the flue system be video-scanned as part of an NFPA Level II inspection as that is the only proven method of inspection. Any further evaluation of the system should be scheduled prior to the removal of transaction inspection contingencies.

#### **Fireplace**

Gas burning fireplace were found in the living room. The visible fireplace was equipped with gas log accessories. Our visual of the gas fireplace from the exterior was found to be in acceptable condition, as this appliance is a zero clearance unit. The gas burning firebox was tested, by a wall control switch. It was functioning as intended at the time of our inspection.

#### The Fireplace Inserts

Components shared by most types of fireplaces include the interior, exterior and a fire burning area. Individual fireplaces may have a foundation, flue, firebox, mantel, hearth, and damper, smoke shelf, lintel, cap, wash, gas log and/or gas log lighter. Accessible fireplace components are visually inspected for signs of significant malfunction, excessive or unusual wear and general state of repair. However, portions of a standard fireplace configuration are always, by their nature and location, inaccessible for a home inspection.

A complete view of the chimney flue is not possible. We recommend that the flue and or fireplace system be fully inspected and video scanned as part of an NFPA Level II or equivalent inspection prior to removal of transaction contingencies by a qualified fireplace specialist.

#### The Fireplace Protection

The fireplace was installed with glass door panels; they were found to be in serviceable condition.

**NOTE:** Caution should be even after the fireplace is turned-off. The glass pane can still radiant a high temperature which can burn when touch.

#### **Alarm Specifications**

Section 310.9.1.3 states that all smoke alarms installed in California should appear on the approved list of the State Fire Marshal. There is no specific stipulation regarding the particular smoke detection technology. However, virtually all commercially available smoke alarms marketed today use either photoelectric or photoionization technology to detect smoke. In new residences, the smoke alarms must be hardwired into the home's electrical system plus incorporate a battery backup in the event of power failure. Smoke alarms retrofitted into existing residences may be solely battery powered.

#### **How Many Alarms?**

The number and location of smoke alarms is specified in section 310.9.1.4 of the California Building Code. One smoke alarm should be placed on each floor in non-sleeping areas. In addition, one smoke alarm must be installed in each room where sleeping occurs and one smoke alarm should be located in each hallway that leads directly to sleeping rooms.

#### **Interconnectivity**

Interconnected smoke detectors all sound an alarm when smoke is detected by any one of the detectors anywhere in the home. This helps alert sleepers and other occupants in diverse areas of the home where smoke has not yet reached. Wherever more than one smoke alarm is required in new construction, the California Building Code requires that all smoke alarms shall be interconnected.

#### **Smoke Detectors**

Smoke detector was located in the bedrooms and hallways. When tested they were found to be in working condition. Testing of the smoke detectors was provided by the manufacture test button <u>only</u>.

We can not guarantee that the detectors will active during a smoky environment. See additional notes regarding the two types of smoke detectors which are used today. Replacing the smoke detector batteries annually is recommended.

**Note:** There are two main types of smoke detectors: ionization detectors and photoelectric detectors. A smoke alarm uses one or both methods, sometimes plus a heat detector, to warn of a fire. The devices may be powered by a 9-volt battery, lithium battery, or 120-volt house wiring. Replacing the smoke detector batteries annually is recommended.

The devices may be powered by a 9-volt battery, lithium battery, or 120-volt house wiring.

#### **Ionization Detectors**

Ionization detectors have an ionization chamber and a source of ionizing radiation. The source of ionizing radiation is a minute quantity of americium-241 (perhaps 1/5000th of a gram), which is a source of alpha particles (helium nuclei). The ionization chamber consists of two plates separated by about a centimeter. The battery applies a voltage to the plates, charging one plate positive and the other plate negative.

Alpha particles constantly released by the americium knock electrons off of the atoms in the air, ionizing the oxygen and nitrogen atoms in the chamber. The positively-charged oxygen and nitrogen atoms are attracted to the negative plate and the electrons are attracted to the positive plate, generating a small, continuous electric current.

When smoke enters the ionization chamber, the smoke particles attach to the ions and neutralize them, so they do not reach the plate. The drop in current between the plates triggers the alarm.

#### **Photoelectric Detectors**

In one type of photoelectric device, smoke can block a light beam. In this case, the reduction in light reaching a photocell sets off the alarm. In the most common type of photoelectric unit, however, light is scattered by smoke particles onto a photocell, initiating an alarm.

In this type of detector there is a T-shaped chamber with a light-emitting diode (LED) that shoots a beam of light across the horizontal bar of the T. A photocell, positioned at the bottom of the vertical base of the T, generates a current when it is exposed to light.

Under smoke-free conditions, the light beam crosses the top of the T in an uninterrupted straight line, not striking the photocell positioned at a right angle below the beam. When smoke is present, the light is scattered by smoke particles, and some of the light is directed down the vertical part of the T to strike the photocell. When sufficient light hits the cell, the current triggers the alarm.

#### Which Method is Better?

Both ionization and photoelectric detectors are effective smoke sensors (see note below). Both types of smoke detectors must pass the same test to be certified as UL smoke detectors. *Ionization detectors respond more quickly to flaming fires with smaller combustion particles; photoelectric detectors respond more quickly to smoldering (smoke) fires. In either type of detector, steam or high humidity can lead to condensation on the circuit board and sensor, causing the alarm to sound.* 

Ionization detectors are less expensive than photoelectric detectors, but some users purposely disable them because they are more likely to sound an alarm from normal cooking due to their sensitivity to minute smoke particles.

However, ionization detectors have a degree of built-in security not inherent to photoelectric detectors. When the battery starts to fail in an ionization detector, the ion current falls and the alarm sounds, warning that it is time to change the battery before the detector becomes ineffective. Back-up batteries may be used for photoelectric detectors.

Note: As of January 1, 2011 photoelectric detectors are now being required in several cities. However, your city (jurisdiction) has yet to adopt this requirement. To improve the fire- prevention for this dwelling, replacing the found ionization to photoelectric detectors is our recommendation.

#### **Details of SB 183**

This bill requires that a carbon monoxide device be installed in existing dwellings intended for human occupancy that have a fossil fuel burning appliance, fireplace, or an attached garage, provides that the exclusive remedy for failure to install a device is actual damages not to exceed \$100, exclusive of any court costs and attorney's fees, revises the statutory Real Estate Transfer Disclosure Statement to require the seller of a one-to-four residential property or manufactured home to make certain disclosures regarding carbon monoxide devices, smoke detectors, and water heaters, and requires the owner of a rental dwelling unit to maintain carbon monoxide devices in the unit.

This bill revises the statutory transfer disclosure statement as follows:

- 1. Requires the seller to check off whether or not the property has one or more carbon monoxide devices.
- 2. Adds a footnote to the statement advising buyers that installation of a carbon monoxide device is not a precondition of sale.
- 3. Requires a *seller* to certify, as opposed to checking off as under existing law, which the property is in compliance with laws requiring smoke detectors and the bracing of water heaters.

This bill requires that a carbon monoxide device be installed in existing dwellings intended for human occupancy that have a fossil fuel burning appliance, fireplace, or an attached garage beginning *January 1*, *2011* for single-family dwelling units and January 1, 2012 for all other units.

This bill provides that failure to install a carbon monoxide device is an infraction.

Under the bill, an owner must first be given a 30-day notice to correct the violation and, if it is not corrected within that time period, the owner is subject to a fine of \$200 for each offense.

This bill requires a property owner to maintain carbon monoxide devices in a rental dwelling unit and would require that the devices be operable at the time the tenant takes possession of the unit.

This bill requires a tenant to notify the landlord if the tenant becomes aware that the device is inoperable or deficient and would require the landlord to correct the reported inoperability or deficiency. This bill provides that a landlord is not in violation if he/she has not received the notification from the tenant.

This bill provides that a landlord may enter the dwelling unit for the purpose of installing, repairing, testing, and maintaining carbon monoxide devices pursuant to the requirements of Civil Code Section 1954.

Most Carbon Monoxide detectors cost \$30 or less and can be purchased at local supply stores

#### **Carbon Monoxide**

The cooking appliance in this home was installed with a gas fire component

Carbon monoxide weighs about the same as air and distributes evenly throughout the room/house. When you decide where to install a carbon monoxide detector, choose a location where the CO2 alarm will stay clean and out of the way of children or pets.

It is important to refer to your user's manual for specific installation requirements as to where to install your carbon monoxide detector.

Effective July 1, 2011, there is a phased requirement for carbon monoxide alarms in ALL dwellings.

These are relatively inexpensive but important safety devices. In general, CO alarm should be installed adjacent to sleeping areas and at least ne per level. Each alarm should provide coverage for approximately 400 - 1,000 square feet.

Please consult with the Authority Having Jurisdiction and the manufactures installation instruction for specific recommendations. The units should be replaced periodically as indicted by the manufactures to ensure proper function.

No carbon monoxide devices were located for each level, as required by industry standards. We recommend installing the missing device for each level nearest the staircase prior to listing this dwelling.

This item will be found in the Client Advisory.

#### **Washrooms**

Our evaluation of bathrooms conforms to ASHI and industry standards of practice. We do not comment on cosmetic deficiencies, and we do not evaluate window treatments, steam showers and saunas, nor do we leak-test shower pans, which is the responsibility of the pest control inspector.

However, because of the possibility of water damage, most pest control inspectors will not leak-test second floor shower pans without the written consent of the owners.

### **Master Washroom**

#### Washbasin

The washbasin overflow drain and water supply lines when operated, were fully functional and in serviceable condition.

#### **Shower and Tub Surround**

The shower and tub surround was found to be in serviceable condition. The area around the spigot, handles and or shower head etc. should be properly sealed to forestall moisture intrusion.

The water supply lines (diverter valve) when operated, were fully functional and in serviceable condition.

#### **Glass Shower Enclosure**

The shower glass enclosure was found to be in serviceable condition. Installing fresh caulk surrounding the shower base in the near future will help prevent potential leaking to the near flooring.

#### **Toilet**

The toilet was found to be properly installed. They were fully functional and in serviceable condition. We recommend monitoring this component for movement, followed by repairs as needed to restore its functionality.

The bases should be properly sealed/caulked at the base/floor seam.

A caulk seal at the base will help prevent the toilet from loosening up and potentially leaking. Interested parties should consult with a qualified trade's person for further information and or service.

#### **Bathroom Ventilation**

A nearby exhaust fan and window were found in this area providing exterior ventilation. When tested it was found to be in working condition at the time of this inspection. Cleaning the exhaust fan will improve its functionality.

#### Cabinet & Countertop

The cabinets and countertop were in serviceable condition. We recommend sealing (caulking) around the washbasin and countertop to prevent water entry to the lower wood membrane.

#### **General Comments On This Area**

Features associated with this area were in serviceable condition, no anomalies were noted.

# Upper Hall (near stairs) - Washroom

# Washbasin

The washbasin, overflow drain and water supply lines when operated, were fully functional and in serviceable condition.

# **Shower & Tub Surround**

The shower and tub surround was found to be in serviceable condition. The area around the spigot, handles and or shower head etc. should be properly sealed to forestall moisture intrusion.

The water supply lines (diverter valve) when operated, were fully functional and in serviceable condition.

# **Shower Enclosure**

The shower surround did not include a glass enclosure or curtain, installing one of the mention components is recommended.

#### **Toilet**

The toilet was properly installed. They were fully functional and in serviceable condition. We recommend monitoring this component for movement, followed by repairs as needed to restore its functionality.

The toilet base should be properly sealed/caulked at the base/floor seam. A caulk seal at the base will help prevent the toilet from loosening up and potentially leaking.

#### **Bathroom Ventilation**

A nearby exhaust fan and window were found in this area providing exterior ventilation. When tested it was found to be in working condition at the time of this inspection. Cleaning the exhaust fan will improve its functionality.

# **Cabinet & Countertop**

The cabinets and countertop were in serviceable condition. We recommend sealing (caulking) around the washbasin and countertop to prevent water entry to the lower wood membrane.

# **General Comments On This Area**

Features associated with this area were in serviceable condition, no anomalies were noted.

# **Upper Hall - Washroom**

#### Washbasin

The washbasin, overflow drain and water supply lines when operated, were fully functional and in serviceable condition.

### **Shower & Wall Surround**

The shower and wall surround was found to be in serviceable condition. The area around the spigot, handles and or shower head etc. should be properly sealed to forestall moisture intrusion.

The water supply lines (diverter valve) when operated, were fully functional and in serviceable condition.

# **Shower Enclosure**

The shower surround did not include a glass enclosure or curtain, installing one of the mention components is recommended.

#### **Toilet**

The toilet was properly installed. They were fully functional and in serviceable condition. We recommend monitoring this component for movement, followed by repairs as needed to restore its functionality.

The toilet base should be properly sealed/caulked at the base/floor seam. A caulk seal at the base will help prevent the toilet from loosening up and potentially leaking.

#### **Bathroom Ventilation**

A nearby exhaust fan and window were found in this area providing exterior ventilation. When tested it was found to be in working condition at the time of this inspection. Cleaning the exhaust fan will improve its functionality.

# Cabinet & Countertop

The cabinets and countertop were in serviceable condition. We recommend sealing (caulking) around the washbasin and countertop to prevent water entry to the lower wood membrane.

# **General Comments On This Area**

Features associated with this area were in serviceable condition, no anomalies were noted.

# **Lower - Washroom**

#### Washbasin

The washbasin overflow drain and water supply lines when operated, were fully functional and in serviceable condition.

# **Shower Surround**

The shower surround was found to be in serviceable condition. The area around the spigot, handles and or shower head etc. should be properly sealed to forestall moisture intrusion.

The water supply lines (diverter valve) when operated, were fully functional and in serviceable condition.

### **Glass Shower Enclosure**

The shower glass enclosure was found to be in serviceable condition. Installing fresh caulk surrounding the shower base in the near future will help prevent potential leaking to the near flooring.

# **Toilet**

The toilet was found to be properly installed. They were fully functional and in serviceable condition. We recommend monitoring this component for movement, followed by repairs as needed to restore its functionality.

The bases should be properly sealed/caulked at the base/floor seam.

A caulk seal at the base will help prevent the toilet from loosening up and potentially leaking. Interested parties should consult with a qualified trade's person for further information and or service.

# **Bathroom Ventilation**

A nearby exhaust fan and window were found in this area providing exterior ventilation. When tested it was found to be in working condition at the time of this inspection. Cleaning the exhaust fan will improve its functionality.

# **Cabinet & Countertop**

The cabinets and countertop were in serviceable condition. We recommend sealing (caulking) around the washbasin and countertop to prevent water entry to the lower wood membrane.

# **General Comments On This Area**

Features associated with this area were in serviceable condition, no anomalies were noted.

# **Upper Unit - Washroom**

### Washbasin

The washbasin overflow drain and water supply lines when operated, were fully functional and in serviceable condition.

#### Shower and Tub Surround

The shower and tub surround was found to be in serviceable condition. The area around the spigot, handles and or shower head etc. should be properly sealed to forestall moisture intrusion.

The water supply lines (diverter valve) when operated, were fully functional and in serviceable condition.

#### Glass Shower Enclosure

The shower glass enclosure was found to be in serviceable condition. Installing fresh caulk surrounding the shower base in the near future will help prevent potential leaking to the near flooring.

# **Toilet**

The toilet was found to be properly installed. They were fully functional and in serviceable condition. We recommend monitoring this component for movement, followed by repairs as needed to restore its functionality.

The bases should be properly sealed/caulked at the base/floor seam.

A caulk seal at the base will help prevent the toilet from loosening up and potentially leaking. Interested parties should consult with a qualified trade's person for further information and or service.

#### **Bathroom Ventilation**

A nearby exhaust fan and window were found in this area providing exterior ventilation. When tested it was found to be in working condition at the time of this inspection. Cleaning the exhaust fan will improve its functionality.

# Cabinet & Countertop

The cabinets and countertop were in serviceable condition. We recommend sealing (caulking) around the washbasin and countertop to prevent water entry to the lower wood membrane.

# **General Comments On This Area**

Features associated with this area were in serviceable condition, no anomalies were noted.

# **Laundry**

# **Clothes Washer and Dryer**

The utility connections (water) and water line discharge (stand-pipe) for the clothes washer were accessible. They appear to be in serviceable condition. The clothes washer and clothes dryer appear to be the only electric and gas.

One catch drip pan was located underneath the washer, as required by industry standard. The pan is required when the washer is located within the dwelling or on the upper level.

# **Dryer Vent**

The clothes dryer was vented to the exterior and found to be in serviceable condition.

NOTE: One of the ways that dryers can start household fires is by igniting the excess lint that accumulates around the motor, burner shroud (for gas dryers) and cabinet interior. Slick, lint is composed of very small, dry clothing particles which includes cotton and polyesters--both very good fires starters. Polyesters are particularly pernicious fires starters and are very difficult to extinguish once they ignite. Polyesters, vinyl in particular, pose another fire hazard when used as vent hoses, which we'll talk more about later in this article.

# **Laundry Ventilation**

A nearby exhaust fan was found in this area providing exterior ventilation. When tested it was found to be in working condition at the time of this inspection.

# **Laundry Sink**

When the sinks were operated, they were fully functional and in serviceable condition, no leaks were noted.

The faucets and hand sprayer when tested were fully functional and in serviceable condition.

# Kitchen

The heat source used for cooking was Gas and Electrical.

#### The Kitchen Sink

When the sinks were operated, they were fully functional and in serviceable condition, no leaks were noted.

The faucets and hand sprayer when tested were fully functional and in serviceable condition.

#### Kitchen Exhaust

The cooktop exhaust was installed above the cooking surface. When tested it was serviceable condition and provided rear exterior ventilation as required by industry standards.

# Cook top/Oven

The gas cook-top and electrical ovens when tested were functioning as intended and were in serviceable condition. One gas regulator was found underneath the gas cooktop as required by industry standards.

The oven door gasket was in good condition, allowing the door to closing tightly for efficient baking.

#### The Dishwasher

The dishwasher when tested was found to be in serviceable condition, with exception noted below under drain separation.

# The Dishwasher Drain Separation

The dishwasher drain was equipped with an air-gap fitting (the cylinder protruding above the sink). This device assures separation of the supply water from the wastewater. During the functionality of the dishwasher, water was discharging from the drain separation (air gap). The water was dripping underneath the base of the air-gap causing the water to drip into the cabinet.



We recommend the advice of a licensed professional; followed by corrective action to improve its current condition.

This item will be found in the Client Advisory.

# **Garbage Disposal**

The garbage disposal when tested was found to be in serviceable condition, with exception noted below.

One section of the garbage disposal casting was noted with a surface crack which was leaking during our inspection.



We recommend the advice of a licensed professional; followed by corrective action to improve its current condition.

This item will be found in the Client Advisory.

# Cabinets & Countertops

The countertops and cabinets were in serviceable condition. Our inspection was slightly limited to the readily accessible and or visible portions of the dwelling.

# **Appliances in General**

We test most built-in appliances for their basic functionality. We cannot evaluate them for their performance nor for the variety of their settings or cycles. However, if they are older than ten years, they may well exhibit decreased efficiency.

All systems and components have a finite life span; it is not possible to predict what that may be for given system. We do not inspect the following items: free-standing appliances, refrigerators, built-in toasters, coffee-makers, canopeners, blenders, water-purifiers, barbecues, grills, or rotisseries, timers, clocks, thermostats, the self-cleaning capacity of ovens, and concealed or countertop lighting, which is convenient but often installed after the initial construction and powered by extension cords or ungrounded conduits.

The inspection of an appliance or system does not constitute a guarantee or warranty as to their future operation or remaining life. Rather our inspection simply reflects the appliances basic functionality at the time of inspection.

There are one or more appliances that are older and may be approaching or even beyond the normally anticipated average life span for similar systems. All systems and components have a finite life span. It is not possible to predict what the remaining life may be for given system.

We test the systems and or built-in appliances for their basic functionality - we do not test them in all modes of operation. The inspection of an appliance does not constitute a guarantee or warranty as to its future operation and or remaining life. Rather our inspection simply reflects the systems basic functionality at the time of inspection. If you desire an insurance policy on these types of systems they are available from your Realtor or other sources through a Home Warranty policy. These policies are available at the time of purchase for a nominal fee.

# Senate Bill No. 407

This bill would require, on or before January 1, 2017, that all noncompliant plumbing fixtures in any single-family residential real property shall be replaced by the *property owner* with water-conserving plumbing fixtures. Please check with your Realtor or licensed professional for details.

- "Noncompliant plumbing fixture" means any of the following:
- (1) Any toilet manufactured to use more than 1.28 gallons of water per flush.
- (2) Any urinal manufactured to use more than one gallon of water per flush.
- (3) Any showerhead manufactured to have a flow capacity of more than 2.5 gallons of water per minute.
- (4) Any interior faucet Residential faucets from 2.2 gpm to 1.2 gallons of water per minute.

# **Fix Leaks**

You can significantly reduce hot water use by simply repairing leaks in fixtures—faucets and showerheads—or pipes. A leak of one drip per second can cost \$1 per month.

# **Install Low-Flow Fixtures**

Federal regulations mandate that new showerhead flow rates can't exceed more than 2.5 gallons per minute (gpm) at a water pressure of 80 pounds per square inch (psi). New faucet flow rates can't exceed 2.5 gpm at 80 psi or 2.2 gpm at 60 psi. You can purchase some quality, low-flow fixtures for around \$10 to \$20 a piece and achieve water savings of 25%–60%.

# **Showerheads**

For maximum water efficiency, select a shower head with a flow rate of less than 2.5 gallons of water per minute. There are two basic types of low-flow showerheads: aerating and laminar-flow. Aerating showerheads mix air with water, forming a misty spray. Laminar-flow showerheads form individual streams of water. If you live in a humid climate, you might want to use a laminar-flow showerhead because it won't create as much steam and moisture as an aerating one.

Before 1992, some showerheads had flow rates of 5.5 gpm. Therefore, if you have fixtures that pre-date 1992, you might want to replace them if you're not sure of their flow rates.

#### **Faucets**

The aerator—the screw-on tip of the faucet—ultimately determines the maximum flow rate of a faucet. Typically, new kitchen faucets come equipped with aerators that restrict flow rates to 2.2 gallons of water per minute, while new bathroom faucets have ones that restrict flow rates from 1.5 to 0.5 gpm.

Aerators are inexpensive to replace and they can be one of the most cost-effective water conservation measures. For maximum water efficiency, purchase aerators that have flow rates of no more than 1.0 gpm.

Some aerators even come with shut-off valves that allow you to stop the flow of water without affecting the temperature. When replacing an aerator, bring the one you're replacing to the store with you to ensure a proper fit.

Purchase Energy-Efficient Dishwashers and Clothes Washers. The biggest cost of washing dishes and clothes comes from the energy required to heat the water. You'll significantly reduce your energy costs if you purchase and use an energy-efficient dishwasher and clothes washer.

# 1.6 Gallon, Low-consumption Toilets

The need to conserve water has pushed governments everywhere to look for every means possible to reduce the amount of water used by the customers of municipal water companies. Since toilets account for a major amount of the water used year round, many of the municipal programs and new laws have focused on how to make a toilet flush with less water. Before the 1950s, toilets typically used 7 gallons or more for each flush. By the end of the 1960s, toilets were designed to flush with only 5.5 gallons, and in the 1980s the new toilets being installed were using only 3.5 gallons. Today, a new toilet uses no more than 1.6 gallons of water in the U.S.

While some states mandated the 1.6 gallon toilet standard some years ago, in 1995 the National Energy Policy Act (H.R. 776) went into effect and mandated 1.6 toilets for the entire U.S. In addition to dealing with radioactive waste disposal and metallurgical coal development, the federal law also determined in an obscure part of the Act what kind of toilet you can have in your bathroom. By U.S. federal decree, new toilets must flush with no more than 1.6 gallons of water, less than half the amount they used in the '80s.

# **EnergyGuide label**

# Dishwasher

It's commonly assumed that washing dishes by hand saves hot water. However, washing dishes by hand several time a day can be more expensive than operating an energy-efficient dishwasher. You can consume less energy with an energy-efficient dishwasher when properly used and when only operating it with full loads.

When purchasing a new dishwasher, check the EnergyGuide label to see how much energy it uses. Dishwashers fall into one of two categories: compact capacity and standard capacity. Although compact-capacity dishwashers may appear to be more energy efficient on the EnergyGuide Label, they hold fewer dishes, which may force you to use it more frequently. In this case, your energy costs could be higher than with a standard-capacity dishwasher.

One feature that makes a dishwasher more energy efficient is a booster heater. A booster heater increases the temperature of the water entering the dishwasher to the 140°F recommended for cleaning. Some dishwashers have built-in boosters, while others require manual selection before the wash cycle begins. Some also only activate the booster during the heavy-duty cycle. Dishwashers with booster heaters typically cost more, but they pay for themselves with energy savings in about 1 year if you also lower the <u>water temperature</u> on your water heater.

Another dishwasher feature that reduces hot water use is the availability of cycle selections. Shorter cycles require less water, thereby reducing energy cost. If you want to ensure that your new dishwasher is energy efficient, purchase one with an ENERGY STAR® label.

# **Clothes Washers**

Unlike dishwashers, clothes washers don't require a minimum temperature for optimum cleaning. Therefore, to reduce energy costs, you can use either cold or warm water for most laundry loads. Cold water is always sufficient for rinsing. Inefficient clothes washers can cost three times as much to operate than energy-efficient ones. Select a new machine that allows you to adjust the water temperature and levels for different loads. Efficient clothes washers spin-dry your clothes more effectively too, saving energy when drying as well. Also, front-loading machines use less water and, consequently, less energy than top loaders.

Small-capacity clothes washers often have better EnergyGuide label ratings. However, a reduced capacity might increase the number of loads you need to run, which could increase your energy costs.

If you want to ensure that your new clothes washer is energy efficient, purchase one with an **ENERGY STAR** label.

# <u>American Society of Home Inspectors</u> STANDARDS OF PRACTICE AND CODE OF ETHICS

#### **Home Inspection**

Home inspection began as a consumer service in the early 1970's in direct response to the growing demand by home buyers to learn about the condition of a house prior to purchase. It is a unique discipline, distinct from construction, engineering, architecture, or municipal building inspection, and as such requires its own set of professional guidelines and qualifications. It was for this reason that the American Society of Home Inspectors (ASHI®) was formed in 1976. A home inspection in accordance with ASHI's® Standards of Practice helps buyers to make a sound purchasing decision based on accurate, objective information.

# **American Society of Home Inspectors**

ASHI® is the oldest and most respected professional organization of home inspectors in North America. Its purpose is to build public awareness of home inspection and enhance the technical and ethical performance of professional home inspectors.

#### **Standards of Practice**

The ASHI® Standards of Practice guide home inspectors in the performance of their inspections. They are the most widely accepted home inspection guidelines in use, and include all of the home's major systems and components. The ASHI® Standards of Practice and Code of Ethics are recognized by many government, professional, and legal authorities as the definitive standard for professional performance.

#### Code of Ethics

The American Society of Home Inspectors' Code of Ethics stresses the home inspector's responsibility to act in a strictly fair, impartial, and professional manner, and protects consumers from conflicts of interest.

#### **Inspector Qualifications**

Selecting the right home inspector can be as important as finding the right home. Members of ASHI® have demonstrated their proficiency by performing no fewer that 250 fee-paid home inspections in accordance with the ASHI® Standards of Practice; they have also passed a series of written examinations testing their knowledge of residential construction, inspection techniques, report-writing, and ASHI's® Standards of Practice and Code of Ethics. Membership in the American Society of Home Inspectors is an earned credential, and the best evidence of an inspector's competence and professionalism.

#### 1.0 INTRODUCTION

- 1.1 The American Society of Home Inspectors, Inc. (ASHI) is a not-for-profit professional society established in 1976 whose volunteer membership consists of private, fee-paid home inspectors. ASHI's objectives include promotion of excellence within the profession and continual improvement of its member's inspection services to the public.
- 1.2 These Standards of Practice:
- A. provide inspection guidelines
- B. make public the services provided by private fee-paid inspectors
- C. define certain terms relating to these inspections

#### 2.0 PURPOSE AND SCOPE

- 2.1 Inspections performed to these guidelines are intended to provide the client with a better understanding of the property conditions, as observed at the time of the inspection.
- 2.2 Inspectors shall:
- A. observe readily accessible installed systems and components listed in these Standards.
- B. submit a written report to the client which shall:

- 1. describe those components specified to be described in sections 4-12 of these Standards
- 2. state which systems and components designated for inspection in these Standards have been inspected
- 3. state any systems and components so inspected which were found to be in need of immediate major repair
- 2.3 These Standards are not intended to limit inspectors from:
- A. reporting observations and conditions in addition to those required in Section 2.2
- B. excluding systems and components from the inspection if requested by the client

#### 3.0 GENERAL LIMITATIONS AND EXCLUSIONS

- 3.1 General limitations:
- A. Inspections done in accordance with these Standards are visual and are not technically exhaustive.
- B. These Standards are applicable to buildings with four or less dwelling units and their garages or carports.
- 3.2 General exclusions:
- A. Inspectors are NOT required to report on:
- 1. life expectancy of any component or system
- 2. the causes of the need for a major repair
- 3. the methods, materials and costs of corrections
- 4. the suitability of the property for any specialized use
- 5. compliance or non-compliance with applicable regulatory requirements
- 6. the market value of the property or its marketability
- 7. the advisability or inadvisability of purchase of the property
- 8. any component or system which was not observed
- 9. the presence or absence of pests such as wood damaging organisms, rodents, or insects
- 10. cosmetic items, underground items, or items not permanently installed
- B. Inspectors are NOT required to:
- 1. offer or perform any act or service contrary to law
- 2. offer warranties or guarantees of any kind
- 3. offer or perform engineering, architectural, plumbing, or any other job function requiring an occupational

license in the jurisdiction where the inspection is taking place, unless the inspector holds a valid occupational license, in which case he/she may inform the client that he/she is so licensed, and is therefore qualified to go beyond the ASHI Standards of Practice, and for an additional fee, perform

additional inspections beyond those within the scope of the basic ASHI inspection

- 4. calculate the strength, adequacy, or efficiency of any system or component
- 5. enter any area or perform any procedure which may damage the property or its components or be dangerous to the inspector or other persons
- 6. operate any system or component which is shut down or otherwise inoperable
- 7. operate any system or component which does not respond to normal operating controls
- 8. disturb insulation, move personal items, furniture, equipment, plant life, soil, snow, ice, or debris which obstructs access or visibility
- 9. determine the presence or absence of any suspected hazardous substance including but not limited to toxins, carcinogens, noise, contaminants in soil, water, and air
- 10. determine the effectiveness of any system installed to control or remove suspected hazardous substances
- 11. predict future conditions, including but not limited to failure of components
- 12. project operating costs of components
- 13. evaluate acoustical characteristics of any system or component
- 3.3 Limitations and exclusions specific to individual systems are listed in the following sections.

#### 4.0 SYSTEM: STRUCTURAL COMPONENTS

4.1 The inspector shall observe:

A. structural components including:

- 1. foundation
- 2. floors
- 3. walls
- 4. columns
- 5. ceilings
- 6. roofs
- 4.2 The inspector shall:
- A. describe the type of:
- 1. foundation
- 2. floor structure
- 3. wall structure
- 4. columns
- 5. ceiling structure
- 6. roof structure

B. probe structural components where deterioration is suspected. However, probing is NOT required when probing would damage any finished surface

C. enter under floor crawl spaces and attic spaces except when access is obstructed, when entry could damage the property, or when dangerous or adverse situations are suspected.

D. report the methods used to observe under floor crawl spaces and attics

E. report signs of water penetration into the building or signs of abnormal or harmful condensation on building components.

#### 5.0 SYSTEM: EXTERIOR

- 5.1 The inspector shall observe:
- A. wall cladding, flashings and trim
- B. entryway doors and representative number of windows
- C. garage door operators
- D. decks, balconies, stoops, steps, areaways, and porches including railings
- E. eaves, soffits, and fascias

F. vegetation, grading, drainage, driveways, patios, walkways and retaining walls with respect to their effect on the condition of the building

- 5.2 The inspector shall:
- A. describe wall cladding materials

B. operate all entryway doors and representative number of windows, including garage doors, manually or by using permanently installed controls of any garage door operator.

C. report whether or not any garage door operator will automatically reverse or stop when meeting reasonable resistance during closing

# 5.3 The inspector is NOT required to observe:

A. storm windows, storm doors, screening, shutters, awnings and similar seasonal accessories

- B. fences
- C. safety glazing
- D. garage door operator remote control transmitters
- E. geological conditions
- F. soil conditions
- G. recreational facilities
- H. outbuildings other than garages and carports

#### 6.0 SYSTEM: ROOFING

- 6.1 The inspector shall observe:
- A. roof coverings
- B. roof drainage systems
- C. flashings
- D. skylights, chimneys and roof penetrations
- E. signs of leaks or abnormal condensation on building components
- 6.2 The inspector shall:
- A. describe the type of roof covering materials
- B. report the methods used to observe the roofing
- 6.3 The inspector is NOT required to:
- A. walk on the roofing
- B. observe attached accessories including but not limited to solar systems, antennae, and lightning arrestors

# 7.0 SYSTEM: PLUMBING

- 7.1 The inspector shall observe:
- A. interior water supply and distribution system including:
- 1. piping materials, including supports and insulation
- 2. fixtures and faucets
- 3. functional flow
- 4. leaks
- 5. cross connections
- B. interior drain, waste and vent system including:
- 1. traps; drain, waste, and vent piping; piping supports and pipe insulation
- 2. leaks
- 3. functional drainage.
- C. hot water systems including:

- 1. water heating equipment
- 2. normal operating controls
- 3. automatic safety controls
- 4. chimneys, flues, and vents
- D. fuel storage and distribution systems including:
- 1. interior fuel storage equipment, supply piping, venting, and supports
- 2. leaks
- E. sump pump
- 7.2 The inspector shall:
- A. describe:
- 1. water supply and distribution piping materials
- 2. drain, waste, and vent piping materials
- 3. water heating equipment
- B. operate all plumbing fixtures, including their faucets and all exterior faucets attached to the house.
- 7.3 The inspector is NOT required to:
- A. state the effectiveness of anti-siphon devices
- B. determine whether water supply and waste disposal systems are public or private
- C. operate automatic safety controls
- D. operate any valve except water closet flush valves, fixture faucets and hose faucets
- E. observe:
- 1. water conditioning systems
- 2. fire and lawn sprinkler systems
- 3. on-site water supply quantity and quality
- 4. on-site waste disposal systems
- 5. foundation irrigation systems
- 6. spas, except as to functional flow and functional drainage

# 8.0 SYSTEM: ELECTRICAL

- 8.1 The inspector shall observe:
- A. service entrance conductors
- B. service equipment, grounding equipment, main over current device, main and distribution panels
- C. amperage and voltage ratings of the service
- D. branch circuit conductors, their over current devices, and the compatibility of their ampacities and voltages
- E. the operation of a representative number of installed lighting fixtures, switches and receptacles located inside the house, garage, and on its exterior walls
- F. the polarity and grounding of all receptacles within six feet of interior plumbing fixtures, and all receptacles in the garage or carport, and on the exterior of inspected structures
- G. the operation of Ground Fault Circuit Interrupters.
- 8.2 The inspector shall:

	•		
Α	d	escri	he:

- 1. service amperage and voltage
- 2. service entry conductor materials
- 3. service type as being overhead or underground
- 4. location of main and distribution panels
- B. report any observed aluminum branch circuit wiring
- 8.3 The inspector is NOT required to:
- A. insert any tool, probe, or testing device inside the panels
- B. test or operate any over current device except Ground Fault Circuit Interrupters
- C. dismantle any electrical device or control other than to remove the covers of the main and auxiliary distribution panels
- D. observe:
- 1. low voltage systems
- 2. smoke detectors
- 3. telephone, security, cable TV, intercoms, or other ancillary wiring that is not a part of the primary electrical distribution system

#### 9.0 SYSTEM: HEATING

- 9.1 The inspector shall observe:
- A. Permanently installed heating systems including:
- 1. heating equipment
- 2. normal operating controls
- 3. automatic safety controls
- 4. chimneys, flues, and vents
- 5. solid fuel heating devices
- 6. heat distribution systems including fans, pumps, ducts and piping, with supports,

dampers, insulation, air filters, registers, radiators, fan-coil units, convectors

- 7. the presence of an installed heat source in each room
- 9.2 The inspector shall:
- A. describe:
- 1. energy source
- 2. heating equipment and distribution type
- B. operate the systems using normal operating controls
- C. open readily open able access panels provided by the manufacturer or installer for routine homeowner maintenance
- 9.3 The inspector is NOT required to:
- A. operate heating systems when weather conditions or other circumstances may cause equipment damage
- B. operate automatic safety controls.
- C. ignite or extinguish solid fuel fires.
- D. observe:
- 1. the interior of flues

- 2. fireplace insert flue connections
- 3. humidifiers
- 4. electronic air filters
- 5. the uniformity or adequacy of heat supply to the various rooms

# 10.0 SYSTEM: CENTRAL AIR CONDITIONING

- 10.1 The inspector shall observe:
- A. Central Air Conditioning including:
- 1. cooling and air handling equipment
- 2. normal operating controls
- B. distribution systems including:
- 1. fans, pumps, ducts and piping, with supports, dampers, insulation, air filters, registers and fan-coil units
- 2. the presence of an installed cooling source in each room
- 10.2 The inspector shall:
- A. describe:
- 1. energy sources.
- 2. cooling equipment type.
- B. operate the systems using normal operating controls.
- C. open readily open able access panels provided by the manufacturer or installer for routine homeowner maintenance
- 10.3 The inspector is NOT required to:
- A. operate cooling systems when weather conditions or other circumstances may cause equipment damage.
- B. observe non-central air conditioners
- C. observe the uniformity or adequacy of cool-air supply to the various rooms

# 11.0 SYSTEM: INTERIORS

- 11.1 The inspector shall observe:
- A. walls, ceilings, and floors
- B. steps, stairways, balconies, and railings
- C. counters and a representative number of cabinets
- D. a representative number of doors and windows
- E. separation walls, ceilings, and doors between a dwelling unit and an attached garage or another dwelling unit
- F. sumps
- 11.2 The inspector shall:
- A. operate a representative number of primary windows and interior doors
- B. report signs of water penetration into the building or signs of abnormal or harmful condensation on building components
- 11.3 The inspector is NOT required to observe:

- A. paint, wallpaper, and other finish treatments on the interior walls, ceilings, and floors
- B. carpeting
- C. draperies, blinds, or other window treatments
- D. household appliances
- E. recreational facilities or another dwelling unit

#### 12.0 SYSTEM: INSULATION & VENTILATION

- 12.1 The inspector shall observe:
- A. insulation and vapor retarders in unfinished spaces
- B. ventilation of attics and foundation areas
- C. kitchens, bathroom, and laundry venting system
- 12.2 The inspector shall describe:
- A. insulation and vapor retarders in unfinished spaces
- B. absence of same in unfinished space at conditioned surfaces
- 12.3 The inspector is NOT required to report on:
- A. concealed insulation and vapor retarders
- B. venting equipment which is integral with household appliances

#### Glossary

# Automatic Safety Controls:

Devices designed and installed to protect systems and components from excessively high or low pressures and temperatures, excessive electrical current, loss of water, loss of ignition, fuel leaks, fire, freezing, or other unsafe conditions.

#### Central Air Conditioning:

A system which uses ducts to distribute cooled and/or dehumidified air to more than one room or uses pipes to distribute chilled water to heat exchangers in more than one room, and which is not plugged into an electrical convenience outlet.

#### Component:

A readily accessible and observable aspect of a system, such as a floor, or a wall, but not individual pieces such as boards or nails where many similar pieces make up the component.

# Cross Connection:

Any physical connection or arrangement between potable water and any source of contamination.

### Dangerous or Adverse Situations:

Situations which pose a threat of injury to the inspector, and those situations which require use of special protective clothing or safety equipment.

#### Describe:

Report in writing a system or component by its type, or other observed characteristics, to distinguish it from other components used for the same purpose.

#### Dismantle:

To take apart of remove any component, device or piece of equipment that is bolted, screwed, or fastened by other means and that would not be dismantled by a homeowner in the course of normal household maintenance.

# Engineering:

Analysis or design work requiring extensive preparation and experience in the use of mathematics, chemistry, physics, and the engineering sciences.

#### Enter:

To go into an area to observe all visible components.

#### Functional Drainage:

A drain is functional when it empties in a reasonable amount of time and does not overflow when another fixture is drained simultaneously.

#### Functional Flow:

A reasonable flow at the highest fixture in a dwelling when another fixture is operated simultaneously.

### Household Appliances:

Kitchen and laundry appliances, room air conditioners, and similar appliances.

#### Inspector

Any person who examines any component of a building, through visual means and through normal user controls, without the use of mathematical sciences.

#### Installed:

Attached or connected such that the installed item requires tools for removal.

#### Normal Operating Controls:

Homeowner operated devices such as a thermostat, wall switch, or safety switch.

#### Observe:

The act of making a visual examination.

#### On-site Water Supply Quality:

Water quality is based on the bacterial, chemical, mineral, and solids content of the water.

#### On-site Water Supply Quantity:

Water quantity is the rate of flow of water.

#### Operate:

To cause systems or equipment to function.

#### Readily Openable Access Panel:

A panel provided for homeowner inspection and maintenance which has removable or operable fasteners or latch devices in order to be lifted off, swung open, or otherwise removed by one person, and its edges and fasteners are not painted in place. Limited to those panels within normal reach or from a 4-foot stepladder, and which are not blocked by stored items, furniture, or building components.

#### Recreational Facilities:

Spas, saunas, steam baths, swimming pools, tennis courts, playground equipment, and other exercise, entertainment, or athletic facilities.

# Representative Number:

For multiple identical components such as windows and electric outlets -- one such component per room. For multiple identical exterior components -- one such component on each side of the building.

#### Roof Drainage Systems:

Gutters, downspouts, leaders, splash blocks, and similar components used to carry water off a roof and away from a building.

#### Safety Glazing:

Tempered glass, laminated glass, or rigid plastic.

#### Shut Down

A piece of equipment or a system is shut down when it cannot be operated by the device or control which a homeowner should normally use to operate it. If its safety switch or circuit breaker is in the "off" position, or its fuse is missing or blown, the inspector is not required to reestablish the circuit for the purpose of operating the equipment or system.

#### Solid Fuel Heating Device:

Any wood, coal, or other similar organic fuel burning device, including but not limited to fireplaces whether masonry or factory built, fireplace inserts and stoves, wood stoves (room heaters), central furnaces, and combination of these devices.

#### Structural Component:

A component which supports non-variable forces or weights (dead loads) and variable forces or weights (live loads).

#### System

A combination of interacting or interdependent components, assembled to carry out one or more functions.

#### Technically Exhaustive:

An inspection is technically exhaustive when it involves the extensive use of measurements, instruments, testing, calculations, and other means to develop scientific or engineering findings, conclusions, and recommendations.

#### Underfloor Crawl Space:

The area within the confines of the foundation and between the ground and the underside of the lowest floor structural component.

#### CODE OF ETHICS

Honesty, justice and courtesy form a moral philosophy which, associated with mutual interest among people constitutes the foundation of ethics. The members should recognize such a standard, not in passive observance, but as a set of dynamic principles guiding their conduct. It is their duty to practice their profession according to this code of ethics.

As the keystone of professional conduct is integrity, the members will discharge their duties with fidelity to the public, their clients and with fairness and impartiality to all. They should uphold the honor and dignity of their profession and avoid association with any enterprise of questionable character, or apparent conflict of interest.

- 1. The member will express an opinion only when it is based on practical experience and honest conviction.
- 2. The member will always act in good faith toward each client.
- 3. The member will not disclose any information concerning the results of the inspection without the approval of the clients or their representatives.
- 4. The member will not accept compensation, financial or otherwise, from more than one interested party for the same service without the consent of all interested parties.
- 5. The member will not accept nor offer commissions or allowances, directly, from other parties dealing with their client in connection with work for which the member is responsible.
- 6. The member will promptly disclose to his client any interest in a business which may affect the client. The member will not allow an interest in any business to affect the quality or results of their inspection work which they may be called upon to perform. The inspection work may not be used as a vehicle by the inspector to deliberately obtain additional work in another field. An inspector shall make every effort to uphold, maintain and improve the professional integrity, reputation and

practice of the home inspection industry. He will report all such relevant information, including violations of this Code by other members, to the Association for possible remedial action.

© Copyright American Society of Home Inspectors, Inc. All Rights reserved