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1234 Any St.
Orinda, California
February 00, 2011 - 2:00 p.m.
Report Number 11000

This Report Prepared for
Sample report

This report is CONFIDENTIAL.
It was prepared for the below-named
and is not intended for use by any other person.

Inspected by Michael Brady
Member: American Society of Home Inspectors (ASHI)
Member: International Code Council (ICC)

If you are not named above and wish to use this report, we strongly urge that you retain MBrady Inspections LLC or another qualified inspection firm for an on-site review of this building and report. This report is based on information obtained at the site. With time, conditions change and the information may no longer be accurate. We will return to the property and review the report with interested parties for an additional fee upon request. This offer is good for six months from the date of inspection, after which a complete reinspection should be performed.

This inspection was performed and this report produced according to the limitations and exclusions specified in the enclosed contract. In this contract our liability is limited to twice the cost of the inspection..

This report does not provide substitute disclosure for any party.. No part may be used or reproduced in any form or by any means without prior consent. Areas obscured by furnishings were not accessible to inspection. These areas should be examined after the furnishings have been removed.

The terms “not accessible” and “inaccessible” when used in this report indicate uninspected components that may have hidden defects not observed or noted in this report. These areas are beyond the scope of this inspection and should be inspected after access is provided.

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INTRODUCTION

Property Description

We inspected the single-story, single-family residence at 1234 Any St, in Orinda, California on February 00, 2011. This report describes the building as viewed from the street. The building site appears relatively level. The sky was clear at the time of our inspection.

We were informed that the building was constructed in 1912. Several modifications have been made to the building since its original construction. We recommend a permit history be obtained from the local building department to determine if modifications to the building were made with proper permits.



Front view.

The building interior was furnished at the time of our inspection. Areas obscured by furnishings were not accessible to our inspection. These areas should be examined after the furnishings have been removed.

General Comments

This report lists the apparent conditions of items subject to wear from normal use. We typically use five terms to report these conditions: *new* or *relatively new*, *minor wear*, *moderate wear*, *generally worn*, and *poor*.

A *new* or *relatively new* item usually shows no signs of wear. An item reported as showing *moderate wear* appears to be in the mid-range of its anticipated lifespan. The term *poor condition* indicates a system or component that is at, or near, the end of its useful life span. Between these three basic levels we add two intermediate conditions: *minor wear*, which is not quite *new*; and *generally worn*, indicating a component nearing the end of its useful life.

This report is a general overview of the structural components and major systems. It is not intended to be technically exhaustive in any one field. If further information is desired, specialists in the relevant fields should be retained to perform additional inspections.

A determination as to the presence of animal pests, rodents, termites, decay, or other wood destroying organisms is beyond the scope of this inspection. A qualified pest control firm should be contacted with any questions concerning the presence or treatment of these organisms. We are not qualified in these fields. Periodic examinations should be made by a licensed pest control firm as part of routine property maintenance.

We may make recommendations or suggestions in this report that differ from requirements by the local building department. For determinations as to what is permitted in this jurisdiction, the local building department should be consulted.

INTRODUCTION (continued)

This report includes only those areas that are visually accessible and not areas that are made inaccessible by walls, concrete, earth, or any other obstacle to physical access or visual inspection, such as furniture or stored items. Defects in mechanical equipment not disclosed by our functional operation or visual inspection are not included. Items or conditions not mentioned in this report are not within the scope of this inspection. An examination of every window, door, light switch, outlet, water valve, etc., was not made.

At the end of this report we will list the recommendations we believe to be the most important. These recommendations should not be considered the only significant items. You should establish your own priorities after thoroughly studying this report, reviewing all the recommendations in the report, and consulting experts or specialists as desired.

EXTERIOR

Stucco Siding

The building has stucco siding. We observed stucco cracking in several places. Periodic repair of stucco cracking should be expected as part of routine maintenance.

We observed several indications of previous stucco repair and we recommend a history of these repairs be obtained.

Stucco consists of cement and sand plaster, reinforced with wire mesh, and installed over a water-resistant membrane. New stucco is typically pigmented rather than painted, and the surface may show absorption of moisture from rains. Stucco cracking is common and may be caused by movement in the wall framing, foundation settling, seismic activity, or stucco shrinkage. Minor cracks usually do not need repair and are normally filled when the stucco is painted. Cracks large enough to allow water entry should be caulked or patched. The soil surface should be maintained below this edge to prevent moisture and unseen termite entry behind the stucco.

Plywood Siding

There is plywood siding at the garage. This siding shows moderate wear.

Porch

There is a wood-framed porch at the front. The decking and framing are damaged in several places. We recommend repair by a qualified contractor.

Deck

The wood-framed deck at the rear is in generally worn condition. The decking and framing are damaged in several places. We recommend repair by a qualified contractor. Portions of the area beneath this deck were inaccessible to our inspection and defects may be present that were obscured from view. We recommend access be provided and these areas be inspected.

The wooden stairs are damaged and have loose treads, and we recommend they be repaired or replaced.

Regular maintenance can substantially extend the life and serviceability of wooden decks and staircases. Debris that accumulates between the deck boards can trap moisture, and should be periodically removed. Treating the deck with a good quality wood preservative may improve its appearance and extend its service life. There are firms that specialize in power washing and treating decks with preservatives and fungicides.

Exterior Railings

The front stairs are not provided with proper handrails and the guardrails are too low by modern standards. We recommend proper railings be installed as needed for safety. We have provided an enclosure at the end of this report describing proper handrail and guardrail design.

EXTERIOR (continued)

For maximum safety, staircases with four or more steps (or risers) should have handrails between one and one-half and two inches wide, shaped so the handrail can be readily grasped. Handrails should be 34 to 38 inches above the leading edge of the stairway tread and should return to the railing, post, or floor without open ends that can catch clothing. Modern standards call for openings less than four inches in diameter as it has been found that a small child can slip through a larger opening. Guardrails should be at least 36 inches high and some jurisdictions now require 42-inch guardrails in new construction at every deck, stair, or landing more than 30 inches above an adjacent surface.

Driveway

There is a concrete driveway at the left. The surface shows typical cracking.

ROOFING

Roof

The building has a composition shingle roof, which is in moderately to generally worn condition.

There are several exposed staple fasteners. We recommend all exposed staples be sealed, removed, covered, or otherwise properly repaired by a qualified roofer. With time, exposed staples will rust and loosen and may cause leakage.

We recommend the need for roof surface replacement within the next few years be anticipated.



Roof in moderately to generally worn condition.

Roof surfaces that are in worn or poor condition may need replacement even if no leakage has occurred. Several factors should be considered when deciding if a roof surface needs replacement. A qualified roofing contractor should be consulted to determine if a roof is repairable and, if so, at what cost. Will the roofer guarantee any proposed repairs? How long will the repairs extend the roof life? Could roof leakage cause significant interior damage? It is usually best to replace roof surfaces that show substantial wear.

Roof Flashings

The roof flashings primarily are sheet metal.

Sheet metal, membrane roofing materials, and sealing compounds such as mastic, are often used to prevent water entry at roofing connections and penetrations. Flashings need periodic maintenance and should be inspected annually.

The chimney-to-roof connections are sealed with mastic instead of proper metal flashings and counter flashings. We recommend these flashings be checked periodically and the connections be resealed as needed.

Mastic has been used at several roof flashing connections.

Mastic is a general term for fibered roofing cement, which is a thick roofing patching compound. Mastic is considered a temporary method to seal connections. Mastic dries out and cracks, typically requiring a new application every two to four years. Painting the mastic can help protect it from the sun and give a better appearance. The best procedure is to replace old metal flashings when a new roof is installed. It is common practice in some areas to leave old flashings in place and to cover them with mastic when applying new roofing over an existing roof surface.

Roof Drainage

The rain gutters are sheet metal. They show moderate wear and are rusty in several places.

Rust forms inside steel gutters as they age and rust spots or holes eventually appear on the undersides and joints of the gutters. Rusting typically indicates the gutters will soon need replacement. Coating or painting the gutter interior can reduce rusting. Holes can be patched with fiberglass mesh tape and asphalt emulsion. It is generally best to replace old gutters when a new roof surface is installed. Gutter joints and other connections should be checked regularly after rains and caulked or repaired as needed.

Sample report

ROOFING (continued)

There is an accumulation of debris in the roof gutterways. We recommend debris be removed periodically as part of routine maintenance.

Downspouts

Several downspouts empty near the foundation walls. We recommend the foundation area be monitored for signs of water entry and the downspouts be modified to direct rainwater away from the foundation if needed. The bottom portion of a downspout at the left is missing and we recommend this downspout be properly installed.

Substantial water will flow from a roof and enter the foundation area unless it is directed away from the building perimeter, which is usually done by installing extensions or splash blocks for the downspouts. Subsurface drain piping may be needed in some areas to provide adequate drainage.

Roofing General

We inspected portions of the roofing system from the top of our ladder. The roof surfaces are too steep to closely inspect with our equipment.

This inspection addresses only the apparent visual condition of roofing materials, and does not include invasive testing or guarantee against present or future leakage. Annual examinations should be made by a qualified roofer for needed periodic maintenance and repair.

Roof surfaces, rain gutters, downspouts, and subsurface drain lines should be checked regularly. Leaves and other debris should be removed as needed. Gutter joints and connections may need periodic caulking or sealing. Screens can be installed at downspout gutter connections to keep debris from blocking the downspouts. We recommend periodic inspections be performed to be sure the roof drainage systems function properly. Observing roof and foundation areas during or shortly after heavy rains is a good way to find deficiencies in the roof and area drainage systems.

ATTIC

Attic

The attic access is in a hall ceiling. We entered the attic by way of a ceiling-mounted pull-down staircase. Our inspection of the attic areas was limited to a visual examination from the area near the access opening.

The attic is framed with 2x (two-inch nominal dimension) rafters and ceiling joists. The rafters are overlaid with plywood sheathing. Several aspects of the attic framing are outdated and the framing appears undersized by modern standards. We recommend the attic framing be examined and reinforced as needed by a qualified contractor before new roofing or other weight is placed on the framing.

There are several stains on the roof framing, which indicate previous or active leakage.

The attic ventilation appears sufficient.

The insulation is loose cellulose. There may be knob and tube wiring below the insulation.

Special procedures should be followed prior to insulating an attic that has knob and tube wiring, including an inspection of the wiring by a qualified electrician who can certify it as safe. A warning notice should be posted stating that live wiring is present beneath the insulation. One method to reduce the risk of wire overheating is to lower the amperage carried by the wiring. This can be done by installing 15-amp fuses or breakers to protect the circuits with knob and tube wiring.

There are several visible connections in the attic wiring at the bathroom fan. All electrical connections should occur inside covered junction boxes. We recommend the unenclosed electrical connections be checked by a qualified electrician and proper junction boxes be installed as needed.

STRUCTURE

Substructure Access

The subfloor access is at the left exterior. We inspected the subfloor areas by crawling beneath the accessible portions of the building floors.

Building Type and Foundation

The building is a wood-framed structure with a raised perimeter concrete foundation and intermediate pier supports. The foundation appears to consist of both relatively modern, steel-reinforced concrete and older, outdated portions. The older concrete does not appear to be steel-reinforced and probably does not have footings that extend deeply into the soil. Foundations of this kind are more susceptible to cracking, settlement, deterioration from moisture entry, and earthquake damage.

Concrete caps have been installed at the tops of all of the foundation walls. The newer concrete forms a cap over the original, old concrete.

Concrete foundation caps are typically installed on top of an existing foundation wall by structural pest control companies to prevent moisture entry and damage in the wood framing above the foundation. Foundation caps are often steel reinforced and should improve the strength of the foundation system. They should not, however, be considered to be as strong as a new foundation.



New caps on old concrete foundation.

The older portions of the foundation show substantial concrete deterioration. Portions or all of the foundation may soon need replacement. We recommend a qualified engineer be consulted to determine the extent of concrete deterioration and which portions of the foundation will need replacement in the reasonably foreseeable future.

Concrete deterioration and surface spalling are usually the result of prolonged moisture penetration. As moisture moves through the concrete and dries on the surface, mineral salts dissolved in the water form crystals that expand and cause surface crumbling or spalling. Minor surface deterioration is common in older foundations. With continued moisture penetration over many years, concrete can deteriorate to the point where replacement becomes necessary.

Framing

The subfloor framing consists of one-inch thick (nominal) decking boards installed over two-inch thick (nominal) joisting.

The subfloor area framing below the bathroom is stained, apparently from previous leakage. There may be moisture-related damage or decay not observed by us. We recommend a qualified structural pest control firm be consulted and repairs be made as needed by a qualified contractor.

Moisture stains indicate previous water penetration. Stains are commonly found around bathroom and kitchen waste piping and at the building perimeter, and may indicate previous leakage that has since been repaired. Any indications of active leakage or moisture-related damage should be promptly repaired by a qualified contractor.

STRUCTURE (continued)

The undersides of the floors are insulated with fiberglass batts with vapor barriers, which can help reduce heating costs. Much of the substructure area framing is obscured by the insulation and was not accessible to our inspection.

The floor insulation is installed with the vapor barrier facing the wrong direction. The facing on the insulation can trap moisture, which may lead to decay in the framing. We recommend the insulation be properly installed or modified to prevent moisture accumulation. Cutting slits or openings in the vapor barrier may be sufficient to allow the escape of trapped moisture.

Floor framing insulation is important over unheated basements or crawlspaces in cold winter areas. In areas with moderate winters, flooring insulation is preferred but not always required. Insulation obscures portions of the floor from inspection, and there may be hidden defects in these areas.

Seismic

Plywood bracing panels have been installed in several places. These panels should help provide additional resistance to movement during an earthquake. Any determination as to whether the panel installation meets modern engineering requirements is beyond the scope of this inspection.

The foundation is equipped with anchor bolts and other seismic reinforcements. Many of the seismic anchor bolts are rusty and may have weakened with age. These bolts are not adequate by modern standards and we recommend new, larger bolts be added as a seismic upgrade. The round washers typically used beneath the nuts on foundation bolts are not generally used in new construction and have been replaced with thicker, square, steel bearing plates, as the plates are less likely to work loose. We recommend upgrading with new, epoxy-type bolts that utilize bearing plates be considered.

Subfloor Area

The subfloor area ventilation is minimal. We recommend subfloor area dampness be monitored periodically to determine if additional ventilation or other corrective measures are needed.

“To vent or not to vent” has become a controversial issue. The standard for new construction is to provide under-floor areas with ventilation openings that have an area not fewer than one square foot for each 150 square feet of under-floor area. Openings are to be provided close to the corners and should provide cross ventilation. The vent openings are to be distributed equally along the length of at least two opposite sides and covered with one-quarter-inch wire mesh. Four by fourteen-inch vents are typically installed every six to eight feet. There are many ways to provide ventilation and the best method should be decided after consulting a qualified contractor or the local building department. If natural cross-circulation is not obtainable with vent openings, it may be necessary to install a mechanical venting system with fans and ducts.

Many experts now believe adding ventilation may actually increase subfloor area dampness, especially in wet weather, and are advising homeowners to reduce or eliminate subfloor area ventilation and seal the exposed soil with plastic sheeting. A symposium on crawl space design organized by the American Society of Heating, Refrigerating, and Air Conditioning Engineers concluded that there is no compelling technical basis for crawl space ventilation requirements. If the under-floor spaces are not ventilated, it is crucial that the soil and exposed concrete be covered with a durable vapor retarder, such as heavyweight polyethylene film, and that they be checked periodically for excessive humidity or dampness.

STRUCTURE (continued)

The subfloor area soils were generally dry at the time of our inspection, with minor dampness in several places.

Wood scraps, which are possible food for termites and are conducive to their growth, are present in the subfloor area. We recommend all wood scraps and other debris be removed.

ELECTRICAL

Electrical Service

The main service panel is fed by overhead wiring, which is typically owned and maintained by the local utility provider.

Main Electrical Panel

The main breaker panel is at the left exterior. We estimate the capacity of the system to be 100 amps at 120/240 volts. This panel has a 100-amp main circuit breaker disconnect.

The panel circuits are not labeled. We recommend the panel be labeled to identify areas served by each individual circuit, for safer and easier system repair.

There are openings in the faceplate of this panel. We recommend the panel cover openings be covered to prevent accidental access to the panel interior and a possible shock.

The inner covers of circuit breaker panels have "twist-out" tabs, which are removed for each breaker location. Extra openings can allow contact with the live electrical components behind the panel cover. Clips can be purchased to fill such openings. A similar danger exists in fuse panels with empty fuse sockets. Empty sockets should be filled with fuses even when not in use.

Wiring

The building is wired primarily with Romex (nonmetallic-sheathed cable or NMC) wiring. It appears that the building has been substantially rewired.

There are several visible improper connections in the attic and subfloor area wiring, and portions of the wiring are not properly secured and staples are missing in several places. All electrical connections should occur inside covered junction boxes and the general rule calls for staples or supports every four and one-half feet, and within twelve inches of each electrical box. We recommend the improper, exposed electrical connections be checked by a qualified electrician, the loose wiring be properly secured, and proper junction boxes be installed as needed.

Fixtures

Several closets have exposed bulb light fixtures. Incandescent light fixtures should be used in closets only when located over the door or on the ceiling and at least twelve inches from storage areas. Exposed bulbs and pendant lights should not be used. We recommend fluorescent lights be used in closets for fire safety, as they are cooler and require less clearance from storage areas.

Receptacles and Switches

The receptacles are primarily the grounded three-hole type.

We found only a few GFCI-protected outlets, as is common in older buildings. GFCIs are relatively inexpensive and provide an important margin of safety. We recommend ground fault circuit interrupter protection be added as necessary to meet modern safety standards.

Ground fault circuit interrupters are breakers or receptacle outlets designed to protect against electrical shocks. In recent years, most jurisdictions have required ground fault protection for outlets in bathrooms, exteriors, basements, and garages (except those in a designated appliance location such as for laundry equipment). Recent regulations require GFCI protection at all kitchen countertop and wet bar receptacles. A single GFCI receptacle may be used to protect other outlets downstream from it on the same circuit. GFCI outlets and breakers have test buttons that should be operated periodically to ensure that the devices are functioning properly.

PLUMBING

Water Supply

The main shutoff valve for the water supply is at the front exterior. The supply piping leading to the main valve appears to be three-quarter-inch diameter copper. It appears that most or all of the original supply piping from the street to the building has been upgraded and the original piping has been replaced with new copper.

The flow at the building water supply fixtures appears adequate and we observed no leaks in the accessible portions of the water supply piping system.

Waste Piping

The drain, waste, and vent piping system is primarily ABS plastic. We observed an outdated lead waste drainpipe, or “toilet bend,” at the main bathroom. This drainpipe is in generally worn condition and may soon need replacement with an approved type.

There is an open waste pipe at the left rear exterior surface sink and we recommend this pipe be capped off to prevent the escape of sewer gas (potentially combustible methane) from the sewer system.

A waste pipe cleanout appears recently added at the right. We recommend a history of any previous waste pipe blockage and/or repairs be obtained.

The underground waste piping that runs from the building to the main sewer may be original, and piping of this age is often worn or damaged in the underground portions. Old sewer piping is often blocked or damaged by roots and other obstructions. We recommend a history of any previous drain blockages be obtained.

We observed indications that portions of the exterior sewer piping or “lateral” may have been replaced. We recommend a history of any blockage or sewer piping replacements be obtained, and a video scan of the sewer piping be made if necessary to determine the extent of piping replacement.

We observed Apache-brand ABS plastic waste piping. There has been a history of failure in some batches of certain brands of ABS plastic piping manufactured between 1984 and 1990. These brands include Centaur, Gable, Polaris, Apache, and Phoenix. We observed no damage or failures at the glued plastic connections. We recommend the ABS piping be monitored periodically for leaks. Additional information can be obtained at www.abspipes.com and www.abspipes.com/id.html.

Gas Piping

The gas meter is at the front exterior. The gas shutoff valve is on the vertical pipe to the left of the meter. The meter and gas piping are located adjacent to the driveway and are not protected from vehicle impact. We recommend proper barriers or bollards (concrete-filled steel pipes) be installed to provide adequate protection.

The gas piping does not appear to be provided with an automatic seismic gas shutoff valve, which are now required by many local jurisdictions and some insurance companies. Several kinds of valves are available. Some are triggered by movement and others by variations in gas flow. The local building department should be consulted to determine the appropriate type for each installation. We recommend an automatic seismic shutoff valve be installed as a safety upgrade.

PLUMBING (continued)

Plumbing General

Angle stops are shutoff valves normally found beneath sinks and toilets in modern construction. They provide a convenient disconnect in case of leakage and facilitate repairs. These shutoff valves are rarely used, and may "freeze" in place or leak when operated. Angle stops should be operated periodically to keep the valves functional. We do not normally turn these valves during an inspection as this may cause them to leak.

Waste piping should be cleaned out periodically to remove any accumulation of grease, hair, or dirt, and to help prevent future debris blockage and subsequent drainage failure. We do not inspect buried, or otherwise inaccessible, supply or waste piping.

The gas and water piping was not fully accessible and an examination of each connection was not made. The standard test for gas leakage is to have the piping pressure tested. This is sometimes required before the gas can be turned on after it has been disconnected. With testing and a close examination of all the piping, leaking or other defects may be found.

We recommend storing a large wrench near the main gas valve so the gas can be shut off quickly in an emergency. To shut off the gas, turn the valve 90 degrees so the handle is at a right angle to the pipe. Gas valves are often difficult to turn and the small earthquake wrenches sold at hardware stores may be too small to operate these valves easily. We recommend testing the valve periodically by turning it slightly to see if it moves. A plumber or the local utility company could adjust or lubricate this valve if necessary to allow for easy operation.

WATER HEATING

Water Heater

There is a gas-fired water heater in an exterior compartment. The label is obstructed and we were unable to note the size of the water heater in gallons. This water heater is approximately ten years old; it is in generally worn condition.

We do not know if this water heater provides adequate hot water for its use. We recommend the manual be reviewed or a qualified plumber be retained to determine if the unit capacity is adequate to meet present or anticipated needs.

The water heater has a temperature and pressure relief (TPR) valve.

A temperature and pressure relief (TPR) valve is a safety valve that releases excess pressure from the water heater in the event the regulator fails. It is an important safety device that can prevent a dangerous explosion. Hot water may occasionally drip or spray from the valve discharge pipe, triggered by changes in water pressure. Leaky valves may fail from encrusted mineral residue, and should be replaced. Most TPR valve manufacturers recommend the valve be tested once a year.

The seismic straps, meant to prevent movement during an earthquake, have been improperly installed over the blanket, instead of directly on the water heater. These seismic straps are not rigid and the water heater is not secured in place. We recommend the blanket be removed and proper straps be installed or that blocking or rigid braces be installed. We are enclosing a diagram at the end of this report that shows modern seismic strapping techniques.

Adequate water heater strapping or bracing can significantly reduce damage that can occur from water heater movement. The best braces are rigid and support the water heater at both the top and bottom. "Plumber's tape" alone is no longer considered an adequate restraint according to the guidelines of the California Seismic Safety Commission. As of January 1, 1997, home sellers in California are required to certify that their water heater complies with current guidelines upon transfer of the property.

Water Heater Maintenance

It is important to avoid storing combustible items near water heaters and other gas-fired appliances.

The life of a water heater may be extended by periodically removing the sediment that builds up in the tank. Attach a garden hose to the drain valve at the bottom and open the valve until the water runs clear. Drain valves commonly drip, and can be repaired by installing a plastic cap. The temperature adjustment control should be kept in the middle range; the water temperature should never be set hot enough to scald someone accidentally. The life of a water heater may also be extended by replacement of the sacrificial anode. These are generally designed to last only five years. Replacement anodes can be obtained at plumbing supply stores.

CENTRAL HEATING

Furnace

There is a gas-fired furnace in the subfloor area. This is a forced-air unit with a blower to distribute conditioned air through a ducting system. The furnace shows moderate wear.

The heat exchanger in the furnace was not accessible to visual inspection.

The heat exchanger is a metal chamber that encloses the flame and transmits heat to the circulating air. With age and use, cracks or rust holes can develop in heat exchangers. Fumes from the burners may flow through the exchanger wall and enter the living area. We advise installing carbon monoxide detectors in several interior rooms to warn occupants if the exchanger produces hazardous gases. Heat exchangers should be carefully examined as part of routine servicing. Only a small portion of a typical heat exchanger is accessible to visual inspection and unobserved holes or cracks may be present.

The furnace is equipped with a fan-powered, induced-draft, venting system.

The purpose of the inducer, or fan, is to draw the exhaust fumes through a complex heat exchanger, increasing furnace efficiency. Induced-draft furnaces of this kind are typically rated in the plus 80% efficiency range, and are often referred to as "Plus-80" systems. The heat from burning natural gas and the noncombusted gases, or fumes, are drawn through tube-like, or serpentine, heat exchangers that have a large surface area. More efficient furnaces tend to operate at higher internal temperatures and the heat exchangers are exposed to moisture created by natural gas combustion. These conditions have led to premature heat exchanger failure in some older furnaces after only five or ten years of use. These heat exchangers are almost completely inaccessible to inspection without furnace disassembly. We recommend annual inspections of these furnaces be made by a qualified heating contractor. Some manufacturers are covering the cost of heat exchanger replacement and we suggest copies of any warranties be obtained for future reference.

The disposable furnace filter is behind the air return grill. We recommend the filter be checked monthly and replaced at least twice annually for efficient furnace operation.

Air filters prevent the accumulation of dust and dirt on the blower fan blades, which can significantly reduce efficiency. Air filters should be checked monthly and changed or cleaned, depending on type, as necessary. A clogged air filter can lead to reduced airflow over a furnace heat exchanger, resulting in premature heat exchanger cracking or failure.

Warm air is distributed to the conditioned spaces through a ducting system, which shows moderate wear. A determination as to whether adequate heating is provided to all the interior spaces is beyond the scope of this inspection.

The heating equipment does not appear to have been recently serviced. We recommend a qualified firm be retained to examine and service this equipment. Servicing should be performed annually as part of routine maintenance. Significant defects may be found in this equipment during proper servicing.

FIREPLACE AND CHIMNEY

Fireplace

There is a masonry fireplace in the living room. The brick firebox shows minor wear.

The fireplace damper is installed at the top of the chimney and operated from the fireplace opening by a cable that runs up through the chimney.

The purpose of a damper is to block the flow of warm room air up the chimney when the fireplace is not in use. An open flue is comparable to an open window and will substantially reduce heating system efficiency. Dampers should be kept closed when fireplaces are not in use. Glass doors can also be used to serve the same function.

Chimney

The fireplace has a stucco-sided brick chimney. We did not check the chimney for looseness, as it was not safely accessible with our equipment. We recommend it be checked when next serviced.

Modern brick or concrete block chimneys or flues are typically lined with clay tile or concrete sections mortared together. The purpose of the liner is to contain a potential chimney fire. Liners and the mortar that join them together may deteriorate with age and use, reducing their effectiveness. Flue liners are not typically accessible to visual examination. Tall chimneys that extend above the roofline may need to be braced to prevent movement, which can break the mortar, bricks, or liner. All older chimneys should be carefully checked by a qualified chimney contractor before building a fire (or before the close of escrow). Any flue that is inaccessible may contain a defective flue liner or the liner may have been omitted.

The chimney brick mortar at the attic shows softness and deterioration. The mortar between chimney bricks may become soft from age and moisture penetration. The standard repair method is to repoint the brickwork by scraping away old mortar and replacing it with new. Repointing is best performed by a qualified masonry contractor. We recommend the damaged brick mortar be repaired as needed.

The flue has a rain cap and spark arrester screen.

Fireplace and Chimney General

We recommend a qualified fireplace contractor be retained to perform a safety inspection of the fireplace and chimney.

Fireplaces that are used regularly should be checked annually by a licensed chimney sweep or qualified chimney contractor. Fireplaces and chimneys should also be inspected after any indications of movement from settling or earthquake activity. Determinations as to whether fireplaces or chimneys have adequate draw, or are subject to smoking, or as to the soundness of chimney flue tiles, brickwork, or sheet metal are beyond the scope of our inspection.

INTERIOR

Walls, Ceilings, and Floors

The building interiors have both plaster and sheet rock (gypsum board) surfaces. There are several cracks in the interior surfaces. Surface cracking is common and periodic repair should be expected as part of routine maintenance.

We observed no unusual sloping in the building floors.

Windows

The building has primarily aluminum-framed, sliding-glass windows. There are also several wood-framed windows. The windows we operated functioned properly.

Doors

We operated all or almost all of the doors and they functioned properly.

Fire Safety

We recommend additional smoke detectors be installed as needed to comply with modern fire safety standards.

Recent news articles (see www.theworldfiresafetyfoundation.org/sfc) report that qualified fire protection experts now believe that ionization-type smoke alarms are not reliable and that their failures have resulted in many home-fire related deaths. We understand that over 90% of all home-installed smoke alarms are the potentially hazardous type. Photoelectric-type smoke alarms are considered much safer and we strongly recommend each alarm device be checked and replaced as needed.

Ionization-type smoke alarms often have a label showing the letter I or the radiation symbol. Photoelectric alarms are typically labeled with the letter P. It may be necessary to dismantle the alarms to identify which type has been installed. We do not test nor dismantle smoke detectors/alarms during our inspections. We do not believe that combination alarms that use both detection systems are safer because the ionization feature tends to be activated by cooking activities and many are found to have been disconnected as a nuisance.

We strongly urge residents to test smoke alarms by pressing the test button as soon they move into a new property and again each month. Most standard batteries should be changed at least once a year and batteries with a 10-year life span are now available.

Smoke detectors should be installed in all living areas, including basements and garages. They should be kept at least 20 feet from appliances like furnaces and ovens, which produce combustion particles, and at least 10 feet from high humidity areas like showers and laundry rooms, and at least three feet from heat/cooling registers whenever possible to reduce "unwanted" alarms.

Furnace ducting often contains dirt, drywall dust, and construction debris, especially after remodeling. First use of a furnace after a remodel can cause nuisance alarms caused by fine particles blown through the house. Dust covers should be installed or the alarms should be removed entirely to keep them clean during remodeling. Alarms may look clean, but dust can accumulate inside the cover. Gently vacuum smoke alarms regularly using a soft brush attachment.

Fire extinguishers should be provided in kitchens and garages for emergency use. We also recommend carbon monoxide detectors be installed in buildings with gas-fired heating systems.

INTERIOR (continued)

Interior General

We operated a representative sampling of the windows. All windows were not checked for proper functioning, cracked or broken glass, or for the presence or condition of screens. This inspection does not include areas that are obscured by furniture, carpets, coverings, or any other items.

We do not perform a survey of the floors for slope or uniform elevation as part of our standard inspection.

KITCHEN AND LAUNDRY

Kitchen

The kitchen fixtures and surfaces show moderate wear. The kitchen has vinyl flooring, a sink equipped with a disposer, a gas range, a dishwasher, and three-hole receptacles. We recommend GFCI protection be added for greater electrical safety.

Several of the countertop tiles near the sink are loose. The finish on the cabinets is worn and we suggest refinishing for a better appearance. There are stains on the cabinet beneath the sink, indicating previous leakage. This area should be monitored for possible future leaks.

Laundry

There is a laundry area in the garage. Gas piping is provided for the clothes dryer. Operation and inspection of laundry equipment is beyond the scope of our inspection.

We recommend the airflow at the exterior clothes dryer hood be checked periodically. Any significant reduction in airflow may indicate clogged vent piping, which is a potential fire hazard.

BATHROOMS

Hall Bathroom

The fixtures and surfaces in this bathroom show moderate wear.

This bathroom both three-hole receptacles and a GFCI-protected receptacle, both a window and a fan for ventilation, ceramic tile flooring, a cast polymer countertop and sink, and a combination shower and cast iron bathtub. The shower walls are cast polymer. The paint above the shower is peeling in several places and we recommend it be resurfaced for a better appearance.

Cast polymer countertops, sinks, and shower wall materials are made of solid plastic and include cultured marble, cultured onyx, cultured granite, and various solid surfacing materials.

There are openings in the wall below the countertop and we recommend repair by a qualified contractor.

Several of the floor tiles near the bathtub are loose and sound hollow when tapped. These tiles may soon need replacement.

Half Bath

The fixtures and surfaces in this half bathroom show moderate wear.

This bathroom has a GFCI-protected receptacle, a window for ventilation, a toilet, and a sink.

Bathrooms General

Caulked joints should be checked frequently and recaulked as necessary. Proper caulking prevents water penetration and damage to walls and floors. Before caulk is applied, the surfaces should be cleaned carefully and any loose caulk should be removed. A good quality bathroom caulk, such as silicone, should be used. Bathrooms are areas of high humidity and special care should be exercised to keep them well ventilated. Windows should be left open when showering or bathing, and fan-powered vents should be used when available.

GARAGE

Garage

There is a detached garage at the rear. The garage has been rebuilt in recent years. The rear and left portions of the garage exterior were not accessible to our inspection.

The garage has two manually-operated, swinging-type vehicle doors. These doors are damaged and we recommend they be repaired.

The soil level is too high in relation to the garage foundation, creating a faulty grade condition and wood-soil contact. We recommend the perimeter grading at the garage walls be modified to provide adequate separation between the framing and adjacent soil.

A faulty grade (where the exterior soil level is above the top of the concrete or masonry foundation) can allow moisture penetration, leading to decay and termite infestation. The standard in new construction is for the top of the foundation to be at least six inches above the soil level. Removal of soil adjacent to the foundation can eliminate a faulty grade condition, but it may also direct surface water toward the foundation. Typical repair methods include: a concrete cap on top of the foundation to raise it above the exterior soil level, a concrete curb outside the foundation to act as a moisture barrier, or a low concrete or wood retaining wall to hold soil away from the foundation. A qualified contractor should be consulted as to the appropriate repair method.

Adequate clearance between soil and wood siding (typically six inches in new construction) should be maintained to prevent moisture or insect damage to wood siding and framing. It is important to avoid raising the soil level too close to the siding when gardening adjacent to the structure. Fence posts should be separated from wood siding by an air space or flashing. Areas of potential wood-soil contact should be checked periodically as part of routine maintenance.

The concrete floor shows typical minor cracking.

ENVIRONMENTAL

Asbestos

There are apparent asbestos materials inside a compartment at the left exterior, which appears to have been used previously to house an electrical panel.

Asbestos is found on most gas heating systems installed before 1978, in older vinyl tile flooring, in some acoustic ceiling tiles, in sprayed acoustic ceilings, and in various other locations. Exposure to asbestos may be a health hazard and should be avoided. It may be possible to significantly reduce or eliminate the dispersal of asbestos fibers by painting the material. Removal or containment of these materials should only be done by properly trained and equipped professionals. Contractors in various trades such as flooring, roofing, heating, plumbing, or electrical may require asbestos abatement at additional expense prior to performing repairs, replacements, or modifications. For a determination as to the need for or cost of abatement, a qualified asbestos abatement contractor should be retained. The presence of asbestos can only be determined by laboratory analysis, which is beyond the scope of our inspection.

Hazardous Materials

Various potentially hazardous materials have been used in the construction of buildings over the years. Many naturally occurring materials and man-made building materials have been found to be hazardous or to have adverse environmental impact. These include but are not limited to asbestos, formaldehyde, molds, lead paint, electromagnetic radiation, and radon. Buried fuel tanks may pose an environmental hazard. Hazardous materials, product liability, and environmental hazards are not included in the scope of our inspection. For information about hazardous materials, call the Environmental Protection Agency in San Francisco at (415) 744-1500.

PRIMARY RECOMMENDATIONS

Property General

1. We recommend a permit history be obtained from the local building department to determine if modifications to the building were made with proper permits.

Front Porch

2. The decking and framing are damaged in several places. We recommend repair by a qualified contractor.

Rear Deck

3. The decking and framing are damaged in several places. We recommend repair by a qualified contractor.

4. The wooden stairs are damaged and have loose treads, and we recommend they be repaired or replaced.

Exterior Railings

5. We recommend proper railings be installed as needed.

Roof

6. We recommend all exposed staples be sealed, removed, covered, or otherwise properly repaired by a qualified roofer.

Attic

7. There are several visible connections in the attic wiring at the bathroom fan. We recommend the unenclosed electrical connections be checked by a qualified electrician and proper junction boxes be installed as needed.

Building Type and Foundation

8. The older portions of the foundation show substantial concrete deterioration. Portions or all of the foundation may soon need replacement. We recommend a qualified engineer be consulted to determine the extent of concrete deterioration and which portions of the foundation will need replacement in the reasonably foreseeable future.

Main Electrical Panel

9. We recommend the panel cover openings be covered to prevent accidental access to the panel interior and a possible shock.

Wiring

10. There are several visible improper connections in the attic and subfloor area wiring, and portions of the wiring are not properly secured and staples are missing in several places. We recommend the improper, exposed electrical connections be checked by a qualified electrician, the loose wiring be properly secured, and proper junction boxes be installed as needed.

Waste Piping

11. We recommend a history of any blockage or sewer piping replacements be obtained, and a video scan of the sewer piping be made if necessary to determine the extent of piping replacement.

Gas Piping

12. The meter and gas piping are located adjacent to the driveway and are not protected from vehicle impact. We recommend proper barriers or bollards (concrete-filled steel pipes) be installed to provide adequate protection.

13. We recommend an automatic seismic shutoff valve be installed as a safety upgrade.

PRIMARY RECOMMENDATIONS (continued)

Water Heater

14. The seismic straps are not rigid and the water heater is not secured in place. We recommend the blanket be removed and proper straps be installed or that blocking or rigid braces be installed.

Furnace

15. The heating equipment does not appear to have been recently serviced. We recommend a qualified firm be retained to examine and service this equipment.

Fireplace and Chimney General

16. We recommend a qualified fireplace contractor be retained to perform a safety inspection of the fireplace and chimney.

Fire Safety

17. We recommend additional smoke detectors be installed as needed to comply with modern fire safety standards.

Garage

18. The soil level is too high in relation to the garage foundation, creating a faulty grade condition and wood-soil contact. We recommend the perimeter grading at the garage walls be modified to provide adequate separation between the framing and adjacent soil.

ENCLOSURES

**For additional information, please visit our website at
www.MBradyinspections.com**