

Inspection Report

Property Address:
28068 Braidwood Dr
Rancho Palos Verdes CA 90275



AAA Inspection Group, Inc.

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Date: 7/23/2018	Time: 02:00 PM	Report ID: 20180723-28068-Braidwood-Dr
Property: 28068 Braidwood Dr Rancho Palos Verdes CA 90275	Customer: [REDACTED]	Real Estate Professional: [REDACTED] Coldwell Banker Wilshire Real Estate

Comment Key or Definitions

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

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

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

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

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

Standards of Practice:

ASHI American Society of Home Inspectors, INACHI National Association of Certified Home Inspectors, CREIA California

In Attendance:

Customer and their agent

Approximate age of building:

Over 30 Years

Type of building:

Single Family (2 story)

Style of Home:

Split Level

Home Faces:

West

Temperature:

Over 100 (F) = 37 (C)

Weather:

Clear

Ground/Soil surface condition:

Dry

Rain in last 3 days:

No

Radon Test:

No

Water Test:

No

1. Built-In Kitchen Appliances

The home inspector shall observe and operate the basic functions of the following kitchen appliances: Permanently installed dishwasher, through its normal cycle; Range, cook top, and permanently installed oven; Trash compactor; Garbage disposal; Ventilation equipment or range hood; and Permanently installed microwave oven. The home inspector is not required to observe: Clocks, timers, self-cleaning oven function, or thermostats for calibration or automatic operation; Non built-in appliances; or Refrigeration units. The home inspector is not required to operate: Appliances in use; or Any appliance that is shut down or otherwise inoperable.

		IN	NI	NP	RR	Styles & Materials
1.0	Dishwasher	•				Dishwasher Brand: FRIGIDAIRE
1.1	Ranges/Ovens/Cooktops	•				Disposer Brand: BADGER
1.2	Range Hood (s)	•				Exhaust/Range hood: JENN AIR
1.3	Trash Compactor			•		Range/Oven: JENN AIR
1.4	Food Waste Disposer	•				Built in Microwave: NONE
1.5	Microwave Cooking Equipment	•				Trash Compactors: NONE
1.6	Kitchen Appliances was Observed as Satisfactory	•				

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IN NI NP RR

The built-in appliances of the home were inspected and reported on with the above information. While the inspector makes every effort to find all areas of concern, some areas can go unnoticed. Please be aware that the inspector has your best interest in mind. Any repair items mentioned in this report should be considered before purchase. It is recommended that qualified contractors be used in your further inspection or repair issues as it relates to the comments in this inspection report.

2. Interiors

The home inspector shall observe: Walls, ceiling, and floors; Steps, stairways, balconies, and railings; Counters and a representative number of installed cabinets; and A representative number of doors and windows. The home inspector shall: Operate a representative number of windows and interior doors; and Report signs of abnormal or harmful water penetration into the building or signs of abnormal or harmful condensation on building components. The home inspector is not required to observe: Paint, wallpaper, and other finish treatments on the interior walls, ceilings, and floors; Carpeting; or Draperies, blinds, or other window treatments.

		IN	NI	NP	RR	Styles & Materials
2.0	Ceilings	•			•	Ceiling Materials: Gypsum Board
2.1	Walls	•				Wall Material: Gypsum Board Tile
2.2	Floors	•				Floor Covering(s): Carpet Laminated T&G Tile
2.3	Steps, Stairways, Balconies and Railings	•				Interior Doors: Hollow core Wood
2.4	Counters and Cabinets (representative number)	•				Window Types: AGED Thermal/Insulated Casement Sliders
2.5	Doors (representative number)	•				Window
2.6	Windows (representative number)	•			•	Manufacturer: UNKNOWN
2.7	Interior Rooms	•				Cabinetry: Wood Countertop: Granite

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Comments:

2.0 The Drywall on the ceiling reveals a light stain which appears from a water leak, possible from a bathroom overflow or leak. Stain appears old between the entryway and the Living Room. This is a cosmetic issue for your information. A qualified person should repair or replace as needed.

2.6 One window is damaged at handle or lock hardware at the Private Bath Den (to downstairs). This is a small repair. A qualified person should repair or replace as needed.



2.6 Item 1(Video)

The interior of the home was inspected and reported on with the above information. While the inspector makes every effort to find all areas of concern, some areas can go unnoticed. The inspection did not involve moving furniture and inspecting behind furniture, area rugs or areas obstructed from view. Please be aware that the inspector has your best interest in mind. Any repair items mentioned in this report should be considered before purchase. It is recommended that qualified contractors be used in your further inspection or repair issues as it relates to the comments in this inspection report.

3. Insulation and Ventilation

The home inspector shall observe: Insulation and vapor retarders in unfinished spaces; Ventilation of attics and foundation areas; Kitchen, bathroom, and laundry venting systems; and the operation of any readily accessible attic ventilation fan, and, when temperature permits, the operation of any readily accessible thermostatic control. The home inspector shall describe: Insulation in unfinished spaces; and Absence of insulation in unfinished space at conditioned surfaces. The home inspector shall: Move insulation where readily visible evidence indicates the need to do so; and Move insulation where chimneys penetrate roofs, where plumbing drain/waste pipes penetrate floors, adjacent to earth filled stoops or porches, and at exterior doors. The home inspector is not required to report on: Concealed insulation and vapor retarders; or Venting equipment that is integral with household appliances.

		IN	NI	NP	RR	Styles & Materials
3.0	Insulation in Attic	•				Attic Insulation: Batt Cellulose
3.1	Insulation Under Floor System			•		Ventilation: Ridge vents Soffit Vents Passive
3.2	Vapor Retarders (in Crawlspace or basement)	•				Exhaust Fans: Fan only Fan/Heat/Light None
3.3	Ventilation of Attic and Foundation Areas	•				Dryer Power Source: Gas Connection
3.4	Venting Systems (Kitchens, Baths and Laundry)	•				Dryer Vent: None
3.5	Ventilation Fans and Thermostatic Controls in Attic	•				Floor System Insulation: NONE

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The insulation and ventilation of the home was inspected and reported on with the above information. While the inspector makes every effort to find all areas of concern, some areas can go unnoticed. Venting of exhaust fans or clothes dryer cannot be fully inspected and bends or obstructions can occur without being accessible or visible (behind wall and ceiling coverings). Only insulation that is visible was inspected. Please be aware that the inspector has your best interest in mind. Any repair items mentioned in this report should be considered before purchase. It is recommended that qualified contractors be used in your further inspection or repair issues as it relates to the comments in this inspection report.

4. Heating / Central Air Conditioning

The home inspector shall observe permanently installed heating and cooling systems including: Heating equipment; Cooling Equipment that is central to home; Normal operating controls; Automatic safety controls; Chimneys, flues, and vents, where readily visible; Solid fuel heating devices; Heat distribution systems including fans, pumps, ducts and piping, with supports, insulation, air filters, registers, radiators, fan coil units, convectors; and the presence of an installed heat source in each room. The home inspector shall describe: Energy source; and Heating equipment and distribution type. The home inspector shall operate the systems using normal operating controls. The home inspector shall open readily openable access panels provided by the manufacturer or installer for routine homeowner maintenance. The home inspector is not required to: Operate heating systems when weather conditions or other circumstances may cause equipment damage; Operate automatic safety controls; Ignite or extinguish solid fuel fires; or Observe: The interior of flues; Fireplace insert flue connections; Humidifiers; Electronic air filters; or The uniformity or adequacy of heat supply to the various rooms.

		IN	NI	NP	RR	Styles & Materials
4.0	Heating Equipment	•				Heat Type: Forced Air
4.1	Normal Operating Controls	•				Heat System Brand: LENNOX
4.2	Automatic Safety Controls	•				Energy Source: Gas
4.3	Distribution Systems (including fans, pumps, ducts and piping, with supports, insulation, air filters, registers, radiators, fan coil units and convectors)	•				Number of Heat Systems (excluding wood): One
4.4	Presence of Installed Heat Source in Each Room	•				Ductwork: Insulated
4.5	Chimneys, Flues and Vents (for fireplaces, gas water heaters or heat systems)	•			•	Filter Type: Disposable
4.6	Solid Fuel Heating Devices (Fireplaces, Woodstove)	•				Filter Size: N/A
4.7	Gas/LP Firelogs and Fireplaces	•				Types of Fireplaces: Gas/LP Log starter
4.8	Cooling and Air Handler Equipment			•		Operable Fireplaces: Two
4.9	Normal Operating Controls			•		Number of Woodstoves: None
4.10	Presence of Installed Cooling Source in Each Room			•		Central Air Manufacturer: NONE
						Number of AC Only Units: None

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Comments:

4.5 The brick chimney has cracks. Recommend a chimney specialist to evaluate and recommend repair.

The heating and cooling system of this home was inspected and reported on with the above information. While the inspector makes every effort to find all areas of concern, some areas can go unnoticed. The inspection is not meant to be technically exhaustive. The inspection does not involve removal and inspection behind service door or dismantling that would otherwise reveal something only a licensed heat contractor would discover. Please be aware that the inspector has your best interest in mind. Any repair items mentioned in this report should be considered before purchase. It is recommended that qualified contractors be used in your further inspection or repair issues as it relates to the comments in this inspection report.

5. Structural Components

The Home Inspector shall observe structural components including foundations, floors, walls, columns or piers, ceilings and roof. The home inspector shall describe the type of Foundation, floor structure, wall structure, columns or piers, ceiling structure, roof structure. The home inspector shall: Probe structural components where deterioration is suspected; Enter under floor crawl spaces, basements, and attic spaces except when access is obstructed, when entry could damage the property, or when dangerous or adverse situations are suspected; Report the methods used to observe under floor crawl spaces and attics; and Report signs of abnormal or harmful water penetration into the building or signs of abnormal or harmful condensation on building components. The home inspector is not required to: Enter any area or perform any procedure that may damage the property or its components or be dangerous to or adversely effect the health of the home inspector or other persons.

		IN	NI	NP	RR	Styles & Materials
5.0	Foundations, Basement and Crawlspaces (Report signs of abnormal or harmful water penetration into the building or signs of abnormal or harmful condensation on building components.)	•				Foundation: Poured concrete Method used to observe Crawlspaces: From entry
5.1	Walls (Structural)	•				Floor Structure: Wood joists Slab Wall Structure: 2 X 4 Wood 2 X 6 Wood
5.3	Floors (Structural)	•				Columns or Piers: Supporting walls Ceiling Structure: 2X4 Roof Structure: Stick-built 2 X 6 Rafters Common board
5.4	Ceilings (Structural)	•				Roof-Type: Gable Method used to observe attic: From entry Attic info: Attic access
5.5	Roof Structure and Attic	•				

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The structure of the home was inspected and reported on with the above information. While the inspector makes every effort to find all areas of concern, some areas can go unnoticed. Please be aware that the inspector has your best interest in mind. Any repair items mentioned in this report should be considered before purchase. It is recommended that qualified contractors be used in your further inspection or repair issues as it relates to the comments in this inspection report.

6. Garage

		IN	NI	NP	RR	Styles & Materials
6.0	Garage Ceilings	•				Garage Door Type: One automatic Garage Door Material: Fiberglass Insulated Auto-opener Manufacturer: GENIE 1/2 HORSEPOWER
6.1	Garage Walls (including Firewall Separation)	•				
6.2	Garage Floor	•				
6.3	Garage Door (s)	•				
6.4	Occupant Door (from garage to inside of home)	•				
6.5	Garage Door Operators (Report whether or not doors will reverse when met with resistance)	•				
6.6	Interior Garage	•				

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IN NI NP RR

8. Electrical System

The home inspector shall observe: Service entrance conductors; Service equipment, grounding equipment, main over current device, and main and distribution panels; Amperage and voltage ratings of the service; Branch circuit conductors, their over current devices, and the compatibility of their ampacities and voltages; The operation of a representative number of installed ceiling fans, lighting fixtures, switches and receptacles located inside the house, garage, and on the dwelling's exterior walls; 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; The operation of ground fault circuit interrupters; and Smoke detectors. The home inspector shall describe: Service amperage and voltage; Service entry conductor materials; Service type as being overhead or underground; and Location of main and distribution panels. The home inspector shall report any observed aluminum branch circuit wiring. The home inspector shall report on presence or absence of smoke detectors, and operate their test function, if accessible, except when detectors are part of a central system. The home inspector is not required to: Insert any tool, probe, or testing device inside the panels; Test or operate any over current device except ground fault circuit interrupters; Dismantle any electrical device or control other than to remove the covers of the main and auxiliary distribution panels; or Observe: Low voltage systems; Security system devices, heat detectors, or carbon monoxide detectors; Telephone, security, cable TV, intercoms, or other ancillary wiring that is not a part of the primary electrical distribution system; or Built-in vacuum equipment.

		IN	NI	NP	RR	Styles & Materials Electrical Service Conductors: Overhead service Panel capacity: 200 AMP Panel Type: Circuit breakers Electric Panel Manufacturer: SQUARE D Branch wire 15 and 20 AMP: Copper Wiring Methods: Romex
8.0	Service Entrance Conductors	•				
8.1	Service and Grounding Equipment, Main Overcurrent Device, Main and Distribution Panels	•			•	
8.2	Branch Circuit Conductors, Overcurrent Devices and Compatability of their Amperage and Voltage	•				
8.3	Connected Devices and Fixtures (Observed from a representative number operation of ceiling fans, lighting fixtures, switches and receptacles located inside the house, garage, and on the dwelling's exterior walls)	•			•	
8.4	Polarity and Grounding of Receptacles within 6 feet of interior plumbing fixtures, all receptacles in garage, carport and exterior walls of inspected structure	•			•	
8.5	Operation of GFCI (Ground Fault Circuit Interrupters)	•				
8.6	Location of Main and Distribution Panels	•				
8.7	Smoke Detectors	•			•	
8.8	Carbon Monoxide Detectors	•				
8.9	Carbon Monoxide Poisoning	•				
8.10	Locations For Carbon Monoxide Detectors	•				

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IN NI NP RR

Comments:

8.1 The dead face panel at the main electrical panel is not labeled and identified. Recommend a license electrician to evaluate and repair.

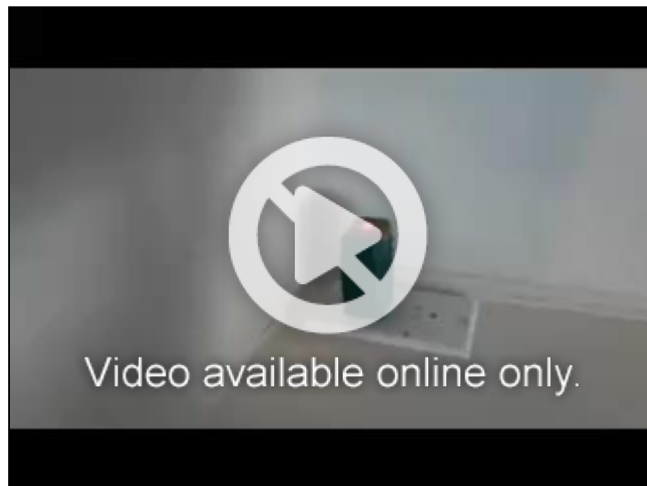


8.1 Item 1(Video)

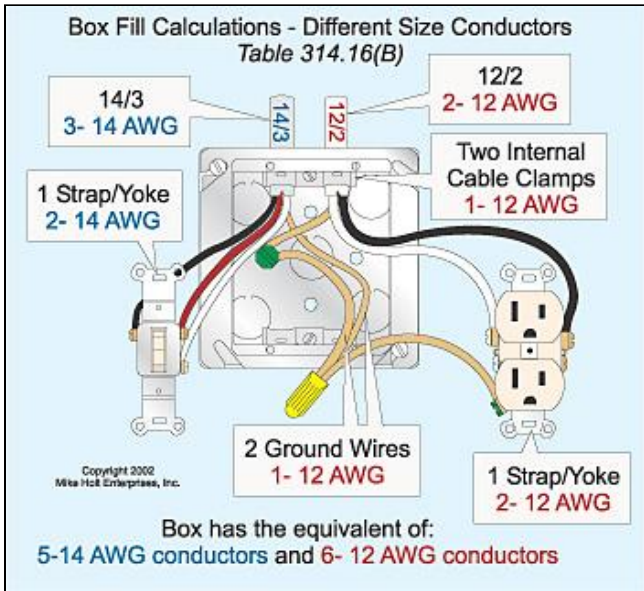
8.3 (1) One "three-prong" outlet is not grounded (at lower level). Electrical issues are considered a hazard until repaired This is a safety issue that needs to be corrected. A qualified licensed electrical contractor should perform repairs that involve wiring.



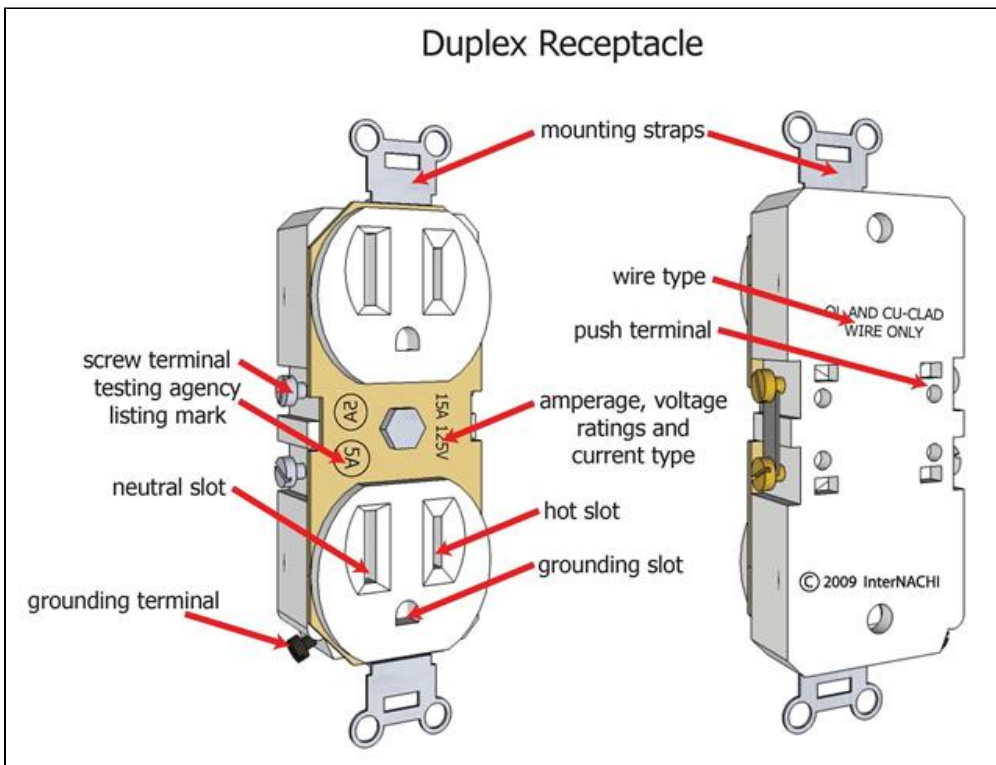
8.3 Item 1(Picture)



8.3 Item 2(Video)



8.3 Item 3(Picture)



8.3 Item 4(Picture)

(2) **The exterior low profile light fixture at the landscape rear patio wall is loose. This is a safety issue that needs to be corrected. A qualified licensed electrical contractor should perform repairs that involve wiring.**



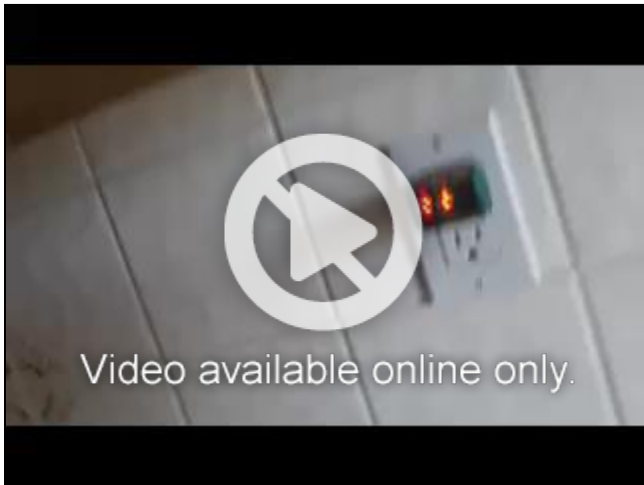
8.3 Item 5(Picture)

8.4 (1) One "three-prong" outlet is incorrect "reverse polarity" and outdated and not a three-prong GFCI (Ground Fault Circuit Interrupt) in the kitchen. Electrical issues are considered a hazard until repaired This is a safety issue that needs to be corrected. A qualified licensed electrical contractor should perform repairs that involve wiring.



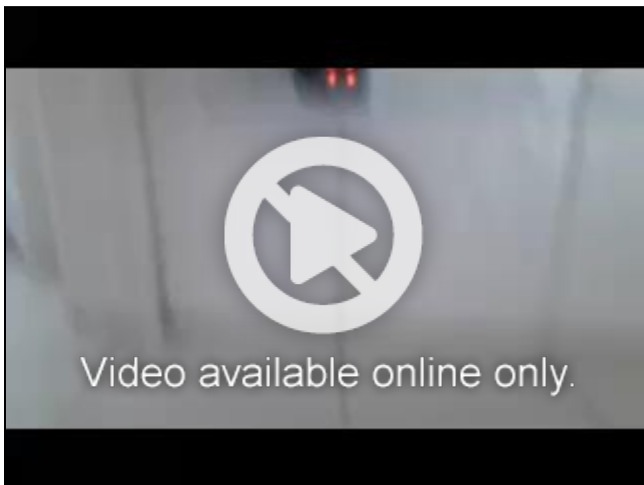
8.4 Item 1(Video)

(2) **One "three-prong" outlet is outdated and not a three-prong GFCI (Ground Fault Circuit Interrupt) in the kitchen. Electrical issues are considered a hazard until repaired This is a safety issue that needs to be corrected. A qualified licensed electrical contractor should perform repairs that involve wiring.**

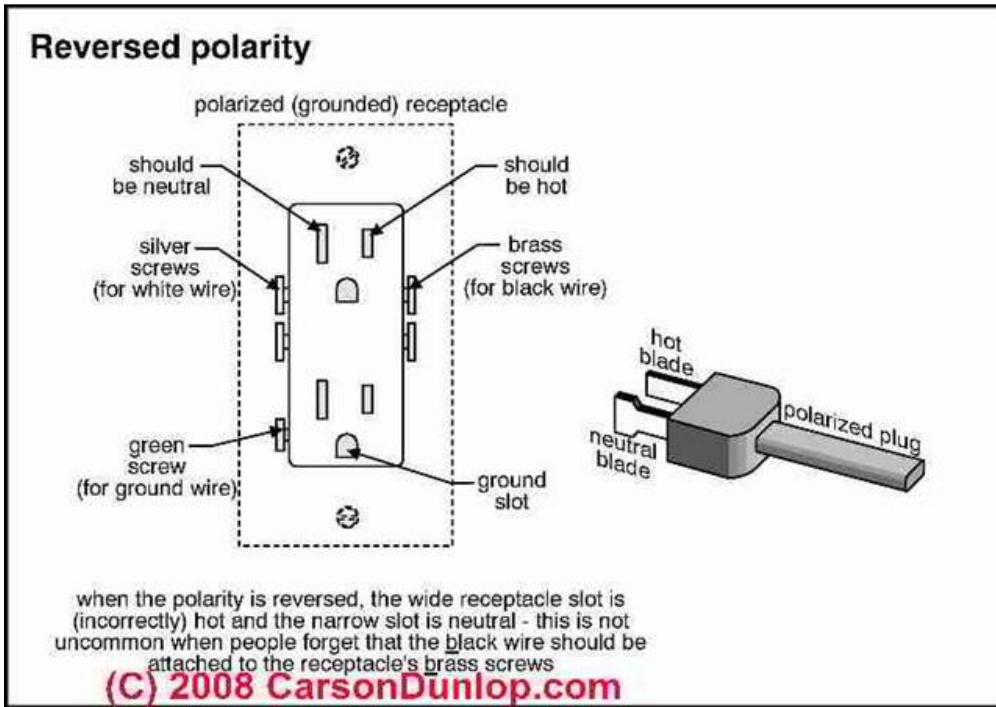


8.4 Item 2(Video)

(3) **One "three-prong" outlet is not grounded in the dining room. Electrical issues are considered a hazard until repaired This is a safety issue that needs to be corrected. A qualified licensed electrical contractor should perform repairs that involve wiring.**



8.4 Item 3(Video)



8.4 Item 4(Picture)

(4) One "three-prong" outlet is outdated and not a three-prong GFCI (Ground Fault Circuit Interrupt) (at lower level). Electrical issues are considered a hazard until repaired This is a safety issue that needs to be corrected. A qualified licensed electrical contractor should perform repairs that involve wiring.



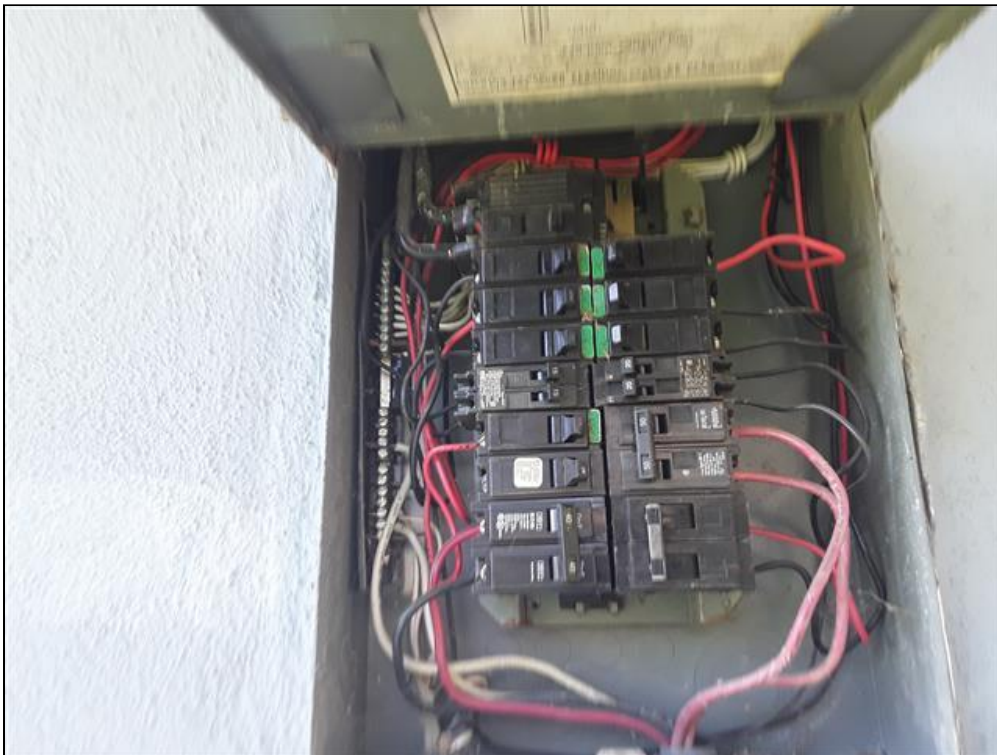
8.4 Item 5(Picture)

(5) **One "three-prong" outlet is outdated and not a three-prong GFCI (Ground Fault Circuit Interrupt) (at lower level). Electrical issues are considered a hazard until repaired This is a safety issue that needs to be corrected. A qualified licensed electrical contractor should perform repairs that involve wiring.**



8.4 Item 6(Video)

8.6 The main panel box is located at the outside.

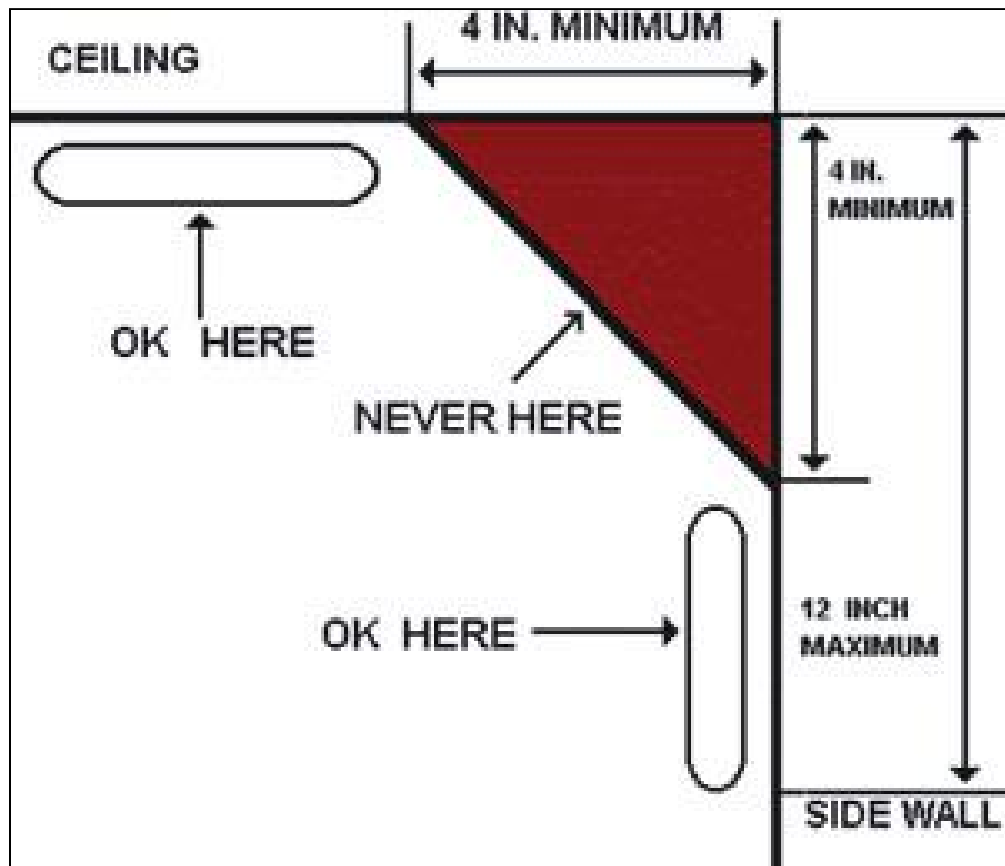


8.6 Item 1(Picture)



8.6 Item 2(Picture)

8.7 (1) The smoke detector needs locating at least 4 inches from ceiling/wall junction and no further than 12 inches away.



8.7 Item 1(Picture)

(2) A 10 year lithium battery smoke detector, approved and listed by the State Fire Marshall, shall be installed, according to the manufacturer's instructions, in each dwelling intended for human occupancy.

Except for new construction, a battery-operated smoke detector satisfies the requirements.

Installation

The owner of each dwelling unit shall supply and install smoke detectors in the locations and in the manner set forth in the manufacturer's instructions, as approved by the State Fire Marshall's regulations. In the case of apartment complexes and other multiple-dwelling complexes, a smoke detector shall also be installed in the common stairwells.

Testing and Maintenance

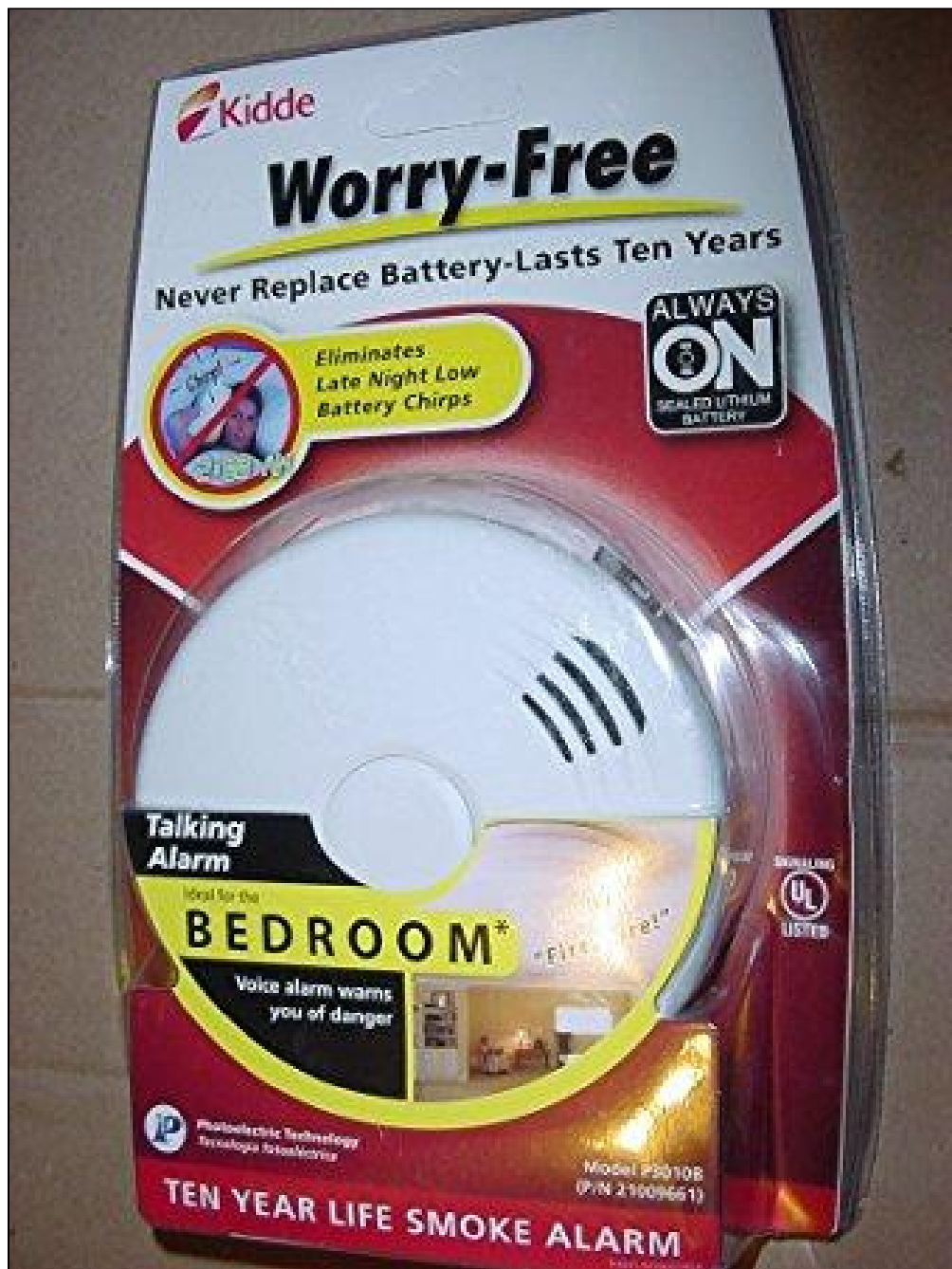
The owner shall be responsible for testing and maintaining detectors in hotels, motels, lodging houses, and common stairwells of apartment complexes and other multiple dwelling complexes.

An owner or the owner's agent may enter any dwelling unit, efficiency dwelling unit, guest room, and suite owned by the owner for the purpose of installing, repairing, testing, and maintaining single station smoke detectors. Except in cases of emergency, the owner or the owner's agent

shall give the tenants of each such unit, room or suite reasonable notice in writing of the intention to enter and shall enter only during normal business hours. Twenty-four hours shall be presumed to be reasonable notice in absence of evidence to the contrary.

Operable

The smoke detector shall be operable at the time that the tenant takes possession. The apartment complex tenant shall be responsible for notifying the manager or owner if the tenant becomes aware of an inoperable smoke detector within his or her unit. The owner or authorized agent shall correct any reported deficiencies in the smoke detector and shall not be in violation for a deficient smoke detector when he or she has not received notice of the deficiency. (H&SC, Sections 13113.7 and 13113.8)



8.7 Item 2(Picture)

8.9 Carbon monoxide poisoning occurs after enough inhalation of [carbon monoxide](#) (CO). Carbon monoxide is a toxic gas, but, being colorless, odorless, tasteless, and initially non-irritating, it is very difficult for people to detect. Carbon monoxide is a product of [incomplete combustion](#) of organic matter due to insufficient [oxygen](#) supply to enable complete oxidation to carbon dioxide (CO₂). It is often produced in domestic or industrial settings by older motor vehicles and other gasoline-powered tools, heaters, and cooking equipment. Exposures at 100 [ppm](#) or greater can be dangerous to human health.

Symptoms of mild acute poisoning include lightheadedness, confusion, [headaches](#), [vertigo](#), and [flu-like](#) effects; larger exposures can lead to significant toxicity of the [central nervous system](#) and [heart](#), and even death. Following acute poisoning, long-term [sequelae](#) often occur. Carbon monoxide can also have severe

effects on the [fetus](#) of a pregnant woman. Chronic exposure to low levels of carbon monoxide can lead to [depression](#) , [confusion](#) , and [memory loss](#) . Carbon monoxide mainly causes adverse effects in humans by combining with [hemoglobin](#) to form [carboxyhemoglobin](#) (HbCO) in the blood. This prevents oxygen binding to hemoglobin, reducing the oxygen-carrying capacity of the blood, leading to [hypoxia](#) . Additionally, [myoglobin](#) and mitochondrial [cytochrome oxidase](#) are thought to be adversely affected. Carboxyhemoglobin can revert to hemoglobin, but the recovery takes time because the HbCO complex is fairly stable.

Treatment of poisoning largely consists of administering 100% oxygen or providing [hyperbaric oxygen](#) therapy, although the optimum treatment remains controversial. Oxygen works as an [antidote](#) as it increases the removal of carbon monoxide from hemoglobin, in turn providing the body with normal levels of oxygen. The prevention of poisoning is a significant public health issue. Domestic carbon monoxide poisoning can be prevented by early detection with the use of household [carbon monoxide detectors](#) . Carbon monoxide poisoning is the most common type of fatal poisoning in many countries. Historically, it was also commonly used as a method to commit [suicide](#) , usually by deliberately inhaling the exhaust fumes of a running car engine. Modern cars with electronically controlled combustion and catalytic converters produce so little carbon monoxide that this is much less viable. Carbon monoxide poisoning has also been implicated as the cause of apparent haunted houses. Symptoms such as delirium and hallucinations have led people suffering poisoning to think they have seen ghosts or to believe their house is haunted.

Signs and symptoms

Carbon monoxide is toxic to all [aerobic](#) forms of [life](#) . It is easily absorbed through the lungs. [5] Carbon monoxide is colorless, odorless, tasteless, and non-irritating, which makes it difficult for humans to detect. [5] Inhaling even relatively small amounts of the gas can lead to [hypoxic injury](#) , [neurological damage](#) , and even [death](#) . Different people and populations may have a different carbon monoxide tolerance level. [6] On average, exposures at 100 [ppm](#) or greater is dangerous to human health. [1] In the [United States](#) , the [OSHA](#) limits long-term workplace exposure levels to less than 50 ppm averaged over an 8-hour period; [7] [8] in addition, employees are to be removed from any [confined space](#) if an upper limit ("ceiling") of 100 ppm is reached. [9] Carbon monoxide exposure may lead to a significantly shorter [life span](#) due to [heart](#) damage. [10] The carbon monoxide tolerance level for any person is altered by several factors, including activity level, [rate of ventilation](#) , a pre-existing [cerebral](#) or [cardiovascular disease](#) , [cardiac output](#) , [anemia](#) , [sickle cell disease](#) and other hematological disorders, [barometric pressure](#) , and [metabolic rate](#) . [11] [12] [13]

The acute effects produced by carbon monoxide in relation to ambient concentration in parts per million are listed below: [14] [15]

Concentration	Symptoms
35 ppm (0.0035%)	Headache and dizziness within six to eight hours of constant exposure
100 ppm (0.01%)	Slight headache in two to three hours
200 ppm (0.02%)	Slight headache within two to three hours; loss of judgment
400 ppm (0.04%)	Frontal headache within one to two hours

800 ppm (0.08%)	Dizziness, nausea, and convulsions within 45 min; insensible within 2 hours
1,600 ppm (0.16%)	Headache, tachycardia , dizziness, and nausea within 20 min; death in less than 2 hours
3,200 ppm (0.32%)	Headache, dizziness and nausea in five to ten minutes. Death within 30 minutes.
6,400 ppm (0.64%)	Headache and dizziness in one to two minutes. Convulsions, respiratory arrest, and death in less than 20 minutes.
12,800 ppm (1.28%)	Unconsciousness after 2-3 breaths. Death in less than three minutes.

Acute poisoning

The main manifestations of poisoning develop in the organ systems most dependent on oxygen use, the [central nervous system](#) and the [heart](#) . [7] The initial symptoms of acute carbon monoxide poisoning include [headache](#) , [nausea](#) , [malaise](#) , and [fatigue](#) . [16] These symptoms are often mistaken for a virus such as [influenza](#) or other illnesses such as [food poisoning](#) or [gastroenteritis](#) . [17] Headache is the most common symptom of acute carbon monoxide poisoning; it is often described as dull, frontal, and continuous. [18] Increasing exposure produces cardiac abnormalities including [fast heart rate](#) , [low blood pressure](#) , and [cardiac arrhythmia](#) ; [19] [20] [central nervous system](#) symptoms include [delirium](#) , [hallucinations](#) , [dizziness](#) , [unsteady gait](#) , [confusion](#) , [seizures](#) , [central nervous system depression](#) , [unconsciousness](#) , [respiratory arrest](#) , and [death](#) . [21] [22] Less common symptoms of acute carbon monoxide poisoning include [myocardial ischemia](#) , [atrial fibrillation](#) , [pneumonia](#) , [pulmonary edema](#) , [high blood sugar](#) , [lactic acidosis](#) , [muscle necrosis](#) , [acute kidney failure](#) , [skin lesions](#) , and visual and auditory problems. [19] [23] [24] [25]

One of the major concerns following acute carbon monoxide poisoning is the severe delayed neurological manifestations that may occur. Problems may include difficulty with higher intellectual functions, [short-term memory loss](#) , [dementia](#) , [amnesia](#) , [psychosis](#) , irritability, a strange [gait](#) , speech disturbances, [Parkinson's disease](#) -like syndromes, [cortical blindness](#) , and a [depressed mood](#) . [17] [26] Depression may even occur in those who did not have pre-existing depression. [27] These delayed neurological [sequelae](#) may occur in up to 50% of poisoned people after 2 to 40 days. [17] It is difficult to predict who will develop delayed sequelae; however, advancing age, loss of consciousness while poisoned, and initial neurological abnormalities may increase the chance of developing delayed symptoms. [28]

One classic sign of carbon monoxide poisoning is more often seen in the dead rather than the living - people have been described as looking pink-cheeked and healthy. However, since this "cherry-red" appearance is common only in the deceased, and is unusual in living people, it is not considered a useful diagnostic sign in clinical medicine. In pathological (autopsy) examination the ruddy appearance of carbon monoxide poisoning is notable because unembalmed dead persons are normally bluish and pale, whereas dead carbon-monoxide poisoned persons may simply appear unusually life-like in coloration. [29] [30] [31] The colorant effect of carbon monoxide in such postmortem circumstances is thus analogous to its use as a red colorant in the commercial meat-packing industry.

Chronic poisoning

Chronic exposure to relatively low levels of carbon monoxide may cause persistent headaches, lightheadedness, depression, confusion, memory loss, nausea and vomiting. [32] It is unknown whether low-

level chronic exposure may cause permanent neurological damage. [17] Typically, upon removal from exposure to carbon monoxide, symptoms usually resolve themselves, unless there has been an episode of severe acute poisoning. [32] However, one case noted permanent memory loss and learning problems after a 3-year exposure to relatively low levels of carbon monoxide from a faulty furnace. [33] Chronic exposure may worsen cardiovascular symptoms in some people. [32] Chronic carbon monoxide exposure might increase the risk of developing atherosclerosis. [34] [35] Long-term exposures to carbon monoxide present the greatest risk to persons with [coronary heart disease](#) and in females who are pregnant. [36]

Causes

Concentration

Source

0.1 ppm	Natural atmosphere level (MOPITT) [37]
0.5 to 5 ppm	Average level in homes [38]
5 to 15 ppm	Near properly adjusted gas stoves in homes [38]
100 to 200 ppm	Exhaust from automobiles in the Mexico City central area [39]
5,000 ppm	Exhaust from a home wood fire [40]
7,000 ppm	Undiluted warm car exhaust without a catalytic converter [40]

Carbon monoxide is a product of combustion of organic matter under conditions of restricted oxygen supply, which prevents complete [oxidation](#) to [carbon dioxide](#) (CO₂). Sources of carbon monoxide include cigarette smoke, house fires, faulty [furnaces](#) , heaters, [wood-burning stoves](#) , [internal combustion vehicle exhaust](#) , [electrical generators](#) , [propane](#) -fueled equipment such as portable stoves, and gasoline-powered tools such as leaf blowers, lawn mowers, high-pressure washers, concrete cutting saws, power trowels, and welders. [17] [32] [41] [42] [43] [44] [45] Exposure typically occurs when equipment is used in buildings or semi-enclosed spaces. [17] Poisoning may also occur following the use of a self-contained underwater breathing apparatus (SCUBA) due to faulty [diving air compressors](#) . [46] Riding in [pickup trucks](#) has led to poisoning in children. [47] Idling automobiles with the exhaust pipe blocked by snow has led to the poisoning of car occupants. [48] Generators and propulsion engines on boats, especially houseboats, has resulted in fatal carbon monoxide exposures. [49] [50] Another source of poisoning is exposure to the organic solvent [dichloromethane](#) , found in some [paint strippers](#) . [51] Dichloromethane is converted into carbon monoxide by the body. [52] [53] [54] In most light aircraft and some cars the heating system comprises a shroud around the exhaust. Any perforation in the shroud leaches exhaust gas into the cabin. In some caves carbon monoxide can build up in enclosed chambers due to decomposing organic matter. [55]

Pathophysiology

The precise mechanisms by which the effects of carbon monoxide are induced upon bodily systems, are complex and not yet fully understood. [16] Known mechanisms include carbon monoxide binding to [hemoglobin](#) , [myoglobin](#) and [mitochondrial cytochrome oxidase](#) , and carbon monoxide causing [brain lipid peroxidation](#) .

Carbon monoxide has a higher diffusion coefficient compared to oxygen and the only enzyme in the human body that produces carbon monoxide is [heme oxygenase](#) which is located in all cells and breaks down heme. Under normal conditions carbon monoxide levels in the plasma are approximately 0 mmHg because it has a higher diffusion coefficient and the body easily gets rid of any CO made. [57] When CO is not ventilated it binds to hemoglobin, which is the principal oxygen-carrying compound in blood; this produces a compound known as [carboxyhemoglobin](#). The traditional belief is that carbon monoxide toxicity arises from the formation of carboxyhemoglobin, which decreases the oxygen-carrying capacity of the blood and inhibits the transport, delivery, and utilization of oxygen by the body. The affinity between hemoglobin and carbon monoxide is approximately 230 times stronger than the affinity between hemoglobin and oxygen so hemoglobin binds to carbon monoxide in preference to oxygen. [29] [58] [59]

Hemoglobin is a [tetramer](#) with four oxygen binding sites. The binding of carbon monoxide at one of these sites increases the oxygen affinity of the remaining three sites, which causes the hemoglobin molecule to retain oxygen that would otherwise be delivered to the tissue. [56] This situation is described as carbon monoxide shifting the [oxygen dissociation curve](#) to the left. [29] Because of the increased affinity between hemoglobin and oxygen during carbon monoxide poisoning, the blood oxygen content is increased. But because all the oxygen stays in the hemoglobin, none is delivered to the tissues. This causes hypoxic tissue injury. [17] Hemoglobin acquires a bright red color when converted into carboxyhemoglobin, so poisoned cadavers and even commercial meats treated with carbon monoxide acquire an unnatural reddish hue

Hemoglobin

Cytochrome oxidase

Another mechanism involves effects on the mitochondrial respiratory enzyme chain that is responsible for effective tissue utilization of oxygen. Carbon monoxide binds to [cytochrome oxidase](#) with less affinity than oxygen, so it is possible that it requires significant intracellular hypoxia before binding. [60] This binding interferes with aerobic metabolism and efficient [adenosine triphosphate](#) synthesis. Cells respond by switching to [anaerobic metabolism](#), causing [anoxia](#), [lactic acidosis](#), and eventual cell death. [61] The rate of [dissociation](#) between carbon monoxide and cytochrome oxidase is slow, causing a relatively prolonged impairment of [oxidative metabolism](#). [16]

Central nervous system effects

The mechanism that is thought to have a significant influence on delayed effects involves formed blood cells and chemical mediators, which cause brain [lipid peroxidation](#) (degradation of unsaturated fatty acids). Carbon monoxide causes [endothelial](#) cell and platelet release of [nitric oxide](#), and the formation of [oxygen free radicals](#) including [peroxynitrite](#). [16] In the brain this causes further mitochondrial dysfunction, [capillary](#) leakage, [leukocyte](#) sequestration, and [apoptosis](#). [62] The result of these effects is [lipid peroxidation](#), which causes delayed reversible [demyelination](#) of [white matter](#) in the central nervous system known as [Grinker myelinopathy](#), which can lead to [edema](#) and [necrosis](#) within the brain. [56] This brain damage occurs mainly during the recovery period. This may result in cognitive defects, especially affecting memory and learning, and movement disorders. These disorders are typically related to damage to the cerebral [white matter](#) and [basal ganglia](#). [62] [63] Hallmark pathological changes following poisoning are bilateral necrosis of the white matter, [globus pallidus](#), [cerebellum](#), [hippocampus](#) and the [cerebral cortex](#). [1] [17] [64]

Pregnancy

Carbon monoxide poisoning in pregnant women may cause severe adverse [fetal](#) effects. Poisoning causes fetal tissue [hypoxia](#) by decreasing the release of maternal oxygen to the fetus. Carbon monoxide also crosses the [placenta](#) and combines with [fetal hemoglobin](#) , causing more direct fetal tissue hypoxia. Additionally, fetal hemoglobin has a 10 to 15 % higher affinity for carbon monoxide than adult hemoglobin, causing more severe poisoning in the fetus than in the adult. [\[3\]](#) Elimination of carbon monoxide is slower in the fetus, leading to an accumulation of the toxic chemical. [\[65\]](#) The level of fetal morbidity and mortality in acute carbon monoxide poisoning is significant, so despite mild maternal poisoning or following maternal recovery, severe fetal poisoning or death may still occur. [\[66\]](#)

Diagnosis

As many symptoms of carbon monoxide poisoning also occur with many other types of poisonings and infections (such as the flu), the diagnosis is often difficult. [\[54\]](#) [\[67\]](#) A history of potential carbon monoxide exposure, such as being exposed to a residential fire, may suggest poisoning, but the diagnosis is confirmed by measuring the levels of carbon monoxide in the blood. This can be determined by measuring the amount of [carboxyhemoglobin](#) compared to the amount of [hemoglobin](#) in the blood. [\[17\]](#) Carbon monoxide is produced naturally by the body as a byproduct of converting [protoporphyrin](#) into [bilirubin](#) . This carbon monoxide also combines with hemoglobin to make carboxyhemoglobin, but not at toxic levels. [\[17\]](#) The ratio of carboxyhemoglobin to hemoglobin molecules in an average person may be up to 5%, although cigarette smokers who smoke two packs/day may have levels up to 9%. [\[68\]](#)

As people may continue to experience significant symptoms of CO poisoning long after their blood carboxyhemoglobin concentration has returned to normal people arriving late with a normal carboxyhemoglobin level does not rule out poisoning. [\[69\]](#)

A [CO-oximeter](#) is used to determine carboxyhemoglobin levels. [\[70\]](#) [\[71\]](#) Pulse [CO-oximeters](#) estimate carboxyhemoglobin with a non-invasive finger clip similar to a [pulse oximeter](#) . [\[72\]](#) These devices function by passing various wavelengths of light through the fingertip and measuring the light absorption of the different types of hemoglobin in the capillaries. [\[73\]](#)

The use of a regular [pulse oximeter](#) is not effective in the diagnosis of carbon monoxide poisoning as people suffering from carbon monoxide poisoning may have a normal [oxygen saturation](#) level on a pulse oximeter. [\[74\]](#) This is due to the carboxyhemoglobin being misrepresented as oxyhemoglobin. [\[75\]](#)

[Breath CO monitoring](#) offers a viable alternative to pulse CO-oximetry. Carboxyhemoglobin levels have been shown to have a strong correlation with breath CO concentration. [\[76\]](#) [

Differential diagnosis

There are many conditions to be considered in the differential diagnosis of carbon monoxide poisoning. [\[7\]](#) [\[22\]](#) The earliest symptoms, especially from low level exposures, are often non-specific and readily confused with other illnesses, typically [flu-like viral syndromes](#) , [depression](#) , [chronic fatigue syndrome](#) , [chest pain](#) , and [migraine](#) or other headaches. [\[78\]](#) Carbon monoxide has been called a "great mimicker" due to the presentation of poisoning being diverse and nonspecific. [\[7\]](#) Other conditions included in the differential

diagnosis include [acute respiratory distress syndrome](#) , [altitude sickness](#) , [lactic acidosis](#) , [diabetic ketoacidosis](#) , [meningitis](#) , [methemoglobinemia](#) , or [opioid](#) or toxic alcohol poisoning. [22]

Detection in biological specimens

Carbon monoxide may be quantitated in blood using [spectrophotometric](#) methods or [chromatographic techniques](#) in order to confirm a diagnosis of poisoning in a person or to assist in the forensic investigation of a case of fatal exposure. Carboxyhemoglobin blood saturations may range up to 8-10% in heavy smokers or persons extensively exposed to automotive exhaust gases. In symptomatic poisoned people they are often in the 10-30% range, while persons who succumb may have postmortem blood levels of 30-90%. [79]

Carbon monoxide detection

Prevention remains a vital [public health](#) issue, requiring public education on the safe operation of appliances, heaters, fireplaces, and internal-combustion engines, as well as increased emphasis on the installation of [carbon monoxide detectors](#) . [5] Gas organizations will often recommend to get gas appliances serviced at least once a year. [81] In buildings, carbon monoxide detectors are usually installed around heaters and other equipment. If a relatively high level of carbon monoxide is detected, the device sounds an alarm, giving people the chance to evacuate and ventilate the building. [82] [83] Unlike [smoke detectors](#) , carbon monoxide detectors do not need to be placed near ceiling level. [84] The United States [Consumer Product Safety Commission](#) has stated, "carbon monoxide detectors are as important to home safety as smoke detectors are," and recommends each home have at least one carbon monoxide detector, and preferably one on each level of the building. [85] These devices, which are relatively inexpensive [83] and widely available, are either battery- or AC-powered, with or without battery backup. [86] It is also recommended that scuba divers detect for carbon monoxide contamination in breathing air before diving as the effects of carbon monoxide on the body are increased under pressure. Carbon monoxide is tasteless and odourless so can not be detected by smell. [87] Compressor owners should ensure that their mix is CO Clear by using fixed monitors that work in line with the compressor. Divers should use specialised hand held CO analysers specifically designed for testing scuba cylinders prior to diving.

[[edit](#)] Standardization

The use of carbon monoxide detectors has been standardized in many areas. In the USA, NFPA 720-2009, [88] the carbon monoxide detector guidelines published by the [National Fire Protection Association](#) , mandates the placement of carbon monoxide detectors/alarms on every level of the residence, including the basement, in addition to outside sleeping areas. In new homes, AC-powered detectors must have battery backup and be interconnected to ensure early warning of occupants at all levels. [88] NFPA 720-2009 is the first national carbon monoxide standard to address devices in non-residential buildings. These guidelines, which now pertain to schools, healthcare centers, nursing homes and other non-residential buildings, includes three main points: [88]

1. A secondary power supply (battery backup) must operate all carbon monoxide notification appliances for at least 12 hours,
2. Detectors must be on the ceiling in the same room as permanently installed fuel-burning appliances, and
3. Detectors must be located on every habitable level and in every [HVAC](#) zone of the building.

[[edit](#)] Recommended WHO guidelines

The following guideline values (ppm values rounded) and periods of time-weighted average exposures have been determined in such a way that the carboxyhaemoglobin level of 2.5% is not exceeded, even when a normal subject engages in light or moderate exercise:

- 100 mg/m³ (87 ppm) for 15 min
- 60 mg/m³ (52 ppm) for 30 min
- 30 mg/m³ (26 ppm) for 1 h
- 10 mg/m³ (9 ppm) for 8 h

[[edit](#)] Treatment

Initial treatment for carbon monoxide poisoning is to immediately remove the person from the exposure without endangering further people. Those who are unconscious may require [CPR](#) on site. [\[29\]](#) Administering [oxygen](#) via [non-rebreather mask](#) shortens the half life of carbon monoxide to 80 minutes from 320 minutes on normal air. [\[21\]](#) Oxygen hastens the dissociation of carbon monoxide from [carboxyhemoglobin](#) , thus turning it back into [hemoglobin](#) . [\[6\]](#) [\[89\]](#) Due to the possible severe effects in the fetus, pregnant women are treated with oxygen for longer periods of time than non-pregnant people. [\[90\]](#)

Hyperbaric oxygen

[Hyperbaric oxygen](#) is also used in the treatment of carbon monoxide poisoning, as it may hasten dissociation of CO from carboxyhemoglobin and cytochrome oxidase to a greater extent than normal oxygen. Hyperbaric oxygen at three times [atmospheric pressure](#) reduces the half life of carbon monoxide to 23 (~80/3 minutes) minutes, compared to 80 minutes for regular oxygen. It may also enhance oxygen transport to the tissues by plasma, partially bypassing the normal transfer through hemoglobin. However it is controversial whether hyperbaric oxygen actually offers any extra benefits over normal high flow oxygen, in terms of increased survival or improved long-term outcomes. There have been [randomized controlled trials](#) in which the two treatment options have been compared; of the six performed, four found hyperbaric oxygen improved outcome and two found no benefit for hyperbaric oxygen. Some of these trials have been criticized for apparent flaws in their implementation. A review of all the literature on carbon monoxide poisoning treatment concluded that the role of hyperbaric oxygen is unclear and the available evidence neither confirms nor denies a medically meaningful benefit. The authors suggested a large, well designed, externally audited, multicentre trial to compare normal oxygen with hyperbaric oxygen.

Other

Further treatment for other complications such as [seizure](#) , hypotension, cardiac abnormalities, [pulmonary edema](#) , and [acidosis](#) may be required. Increased muscle activity and seizures should be treated with [dantrolene](#) or [diazepam](#) ; diazepam should only be given with appropriate respiratory support. Hypotension requires treatment with intravenous fluids; [vasopressors](#) may be required to treat myocardial depression. [Cardiac dysrhythmias](#) are treated with standard [advanced cardiac life support](#) protocols. If severe, metabolic acidosis is treated with [sodium bicarbonate](#) . Treatment with sodium bicarbonate is controversial as acidosis may increase tissue oxygen availability. Treatment of acidosis may only need to consist of oxygen therapy. The delayed development of neuropsychiatric impairment is one of the most serious

complications of carbon monoxide poisoning. Brain damage is confirmed following [MRI](#) or [CAT](#) scans. Extensive follow up and supportive treatment is often required for delayed neurological damage. Outcomes are often difficult to predict following poisoning, especially people who have symptoms of [cardiac arrest](#) , [coma](#) , [metabolic acidosis](#) , or have high carboxyhemoglobin levels. One study reported that approximately 30% of people with severe carbon monoxide poisoning will have a fatal outcome. It has been reported that electroconvulsive therapy (ECT) may increase the likelihood of delayed neuropsychiatric sequelae (DNS) after carbon monoxide (CO) poisonin

Epidemiology

The true number of incidents of carbon monoxide poisoning is unknown, since many non-lethal exposures go undetected. From the available data, carbon monoxide poisoning is the most common cause of injury and death due to poisoning worldwide. Poisoning is typically more common during the winter months. This thought to be due increased domestic use of gas furnaces, gas or kerosene [space heaters](#) , and kitchen stoves during the winter months, which if faulty and/or are used without adequate ventilation, may produce excessive carbon monoxide. Carbon Monoxide detection and poisoning also increases during power outages.

It has been estimated that more than 40,000 people per year seek medical attention for carbon monoxide poisoning in the United States. In many industrialized countries carbon monoxide is the cause of more than 50% of fatal poisonings] In the United States, approximately 200 people die each year from carbon monoxide poisoning associated with home fuel-burning heating equipment. Carbon monoxide poisoning contributes to the approximately 5613 smoke inhalation deaths each year in the United States. The [CDC](#) reports, "Each year, more than 500 Americans die from unintentional carbon monoxide poisoning, and more than 2,000 commit suicide by intentionally poisoning themselves." For the 10-year period from 1979 to 1988, 56,133 deaths from carbon monoxide poisoning occurred in the United States, with 25,889 of those being suicides, leaving 30,244 unintentional deaths. A report from [New Zealand](#) showed that 206 people died from carbon monoxide poisoning in the years of 2001 and 2002. In total carbon monoxide poisoning was responsible for 43.9% of deaths by poisoning in that country. In [South Korea](#) , 1,950 people had been poisoned by carbon monoxide with 254 deaths from 2001 through 2003. A report from [Jerusalem](#) showed 3.53 per 100,000 people were poisoned annually from 2001 through 2006. in [Hubei](#) , China, 218 deaths from poisoning were reported over a 10 year period with 16.5% being from carbon monoxide exposure.

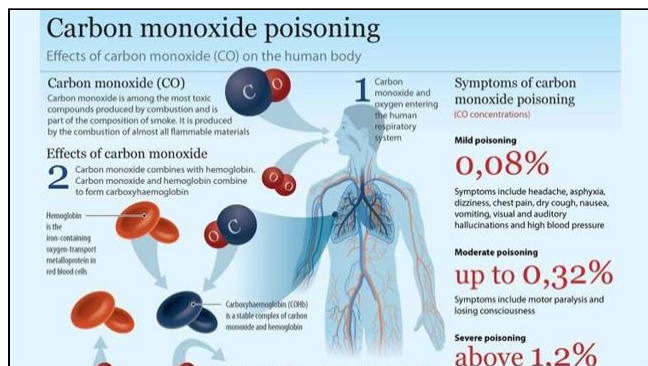
Suicide

Before the 1960s most domestic gas supply in the United Kingdom was [coal gas](#) (alternatively known as town gas), which in its unburned form contained high levels of carbon monoxide. Carbon monoxide poisoning by intentionally inhaling coal gas was a common suicide method, accounting for nearly half of all suicides in the United Kingdom in the late 1950s. After the British government phased out coal gas in favor of natural gas in the 1960s, the suicide rate in Britain fell by almost a third and has not risen since. The use of coal gas as a suicide method has declined as most domestic gas supply worldwide is now [natural gas](#) , which lacks carbon monoxide. Until the invention of [catalytic converters](#) , suicide has been committed by inhaling the exhaust fumes of a running car engine, particularly in an enclosed space such as a garage. Before 1975, [motor car exhaust](#) contained 4-10% carbon monoxide, but newer cars have [catalytic converters](#) that eliminate over 99% of the carbon monoxide produced. However even cars with catalytic converters can produce substantial amounts of carbon monoxide if an idling car is left in an enclosed space such as a closed garage. [\[133\]](#)

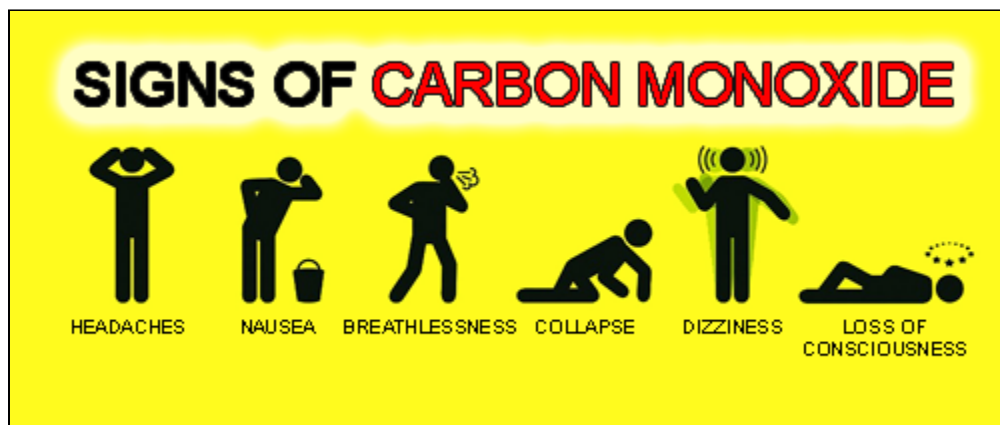
As carbon monoxide poisoning via car exhaust has become less of a suicide option, there has been an increase in new methods of carbon monoxide poisoning such as [burning charcoal](#) ,or fossil fuels, or by combining [formic acid](#) and [sulfuric acid](#) , within a confined space. Such incidents have occurred mostly in connection with group [suicide pacts](#) in Asian countries such as Japan, Taiwan, and Hong Kong, but are starting to occur in western countries as well, such as the 2007 suicide of [Boston](#) lead singer [Brad Delp](#) .



8.9 Item 1(Picture)



8.9 Item 2(Picture)



8.9 Item 3(Picture)

8.10 How To Place Your Carbon Monoxide Detector

There are a few different opinions out there about the best placement. The most important placement procedures seem to have more to do with room location than location on the wall. The International Association of Fire Chiefs recommends a carbon monoxide detector on every floor of your home, including the basement. A detector should be located within 10 feet of each bedroom door (so that you can hear it when you are sleeping) and there should be one near or over any attached garage. Each detector should be replaced every five to six years.

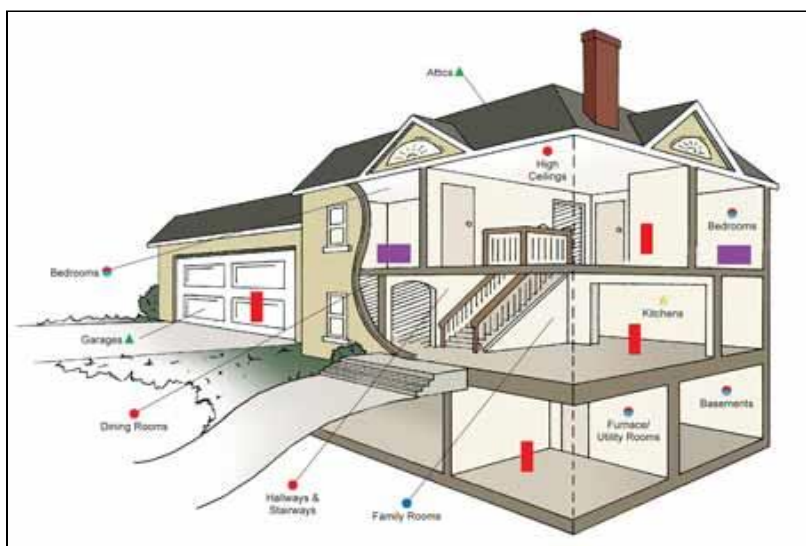
The more common view (and what it states on our carbon monoxide detectors) is to place them around eye level. This allows for easy reading. Additionally, carbon monoxide is roughly the same density as nitrogen gas and less dense than oxygen. Plus, CO coming out of a heat source will generally be warm (and therefore even less dense) and so it is likely to rise up in the air. In practice, the densities are so close, and there is often a lot of convection currents in a room mixing the air, that there is not much difference in CO concentration. Different manufacturers actually recommend different placement based on the studies their specific company has done.

Given that my CO Detectors plug in to an outlet and I don't have any outlets at eye level, that was not an option for me. So I instead focused on thinking about where the best placement was for my detectors. I took another look at the CO detector manual for additional placement instructions:

- place a detector near (but not in) the garage;
- to avoid nuisance alarms, do not place a detector within 5 feet of heating or cooking appliances;
- do not place detectors near windows, doors, fans, forced air registers or returns;
- do not place detectors behind things (including drapes) that may block the air flow.

Oops! I did not have one near the garage, I had one too close to my wood stove, and one behind a sofa outside my bedroom. So I moved my wood stove to the powder room near the garage, and I moved the one from behind the sofa to our master bathroom, since our bedroom outlets are all near forced air registers.

As I thought about the registers, I realized that we all sleep with our bedroom doors closed. If there were a CO problem and the furnace or A/C was on (as it is for most of the year), the CO would most likely enter our rooms through the vents rather than from our open, high-ceiling, vent-less hallway where the Co Detector was. So I moved the hallway detector into one of my children's bedrooms and bought an additional one for my other child's bedroom. The only detector I had gotten right was the one outside our furnace room!



8.10 Item 1(Picture)

The electrical system of the home was inspected and reported on with the above information. While the inspector makes every effort to find all areas of concern, some areas can go unnoticed. Outlets were not removed and the inspection was only visual. Any outlet not accessible (behind the refrigerator for example) was not inspected or accessible. Please be aware that the inspector has your best interest in mind. Any repair items mentioned in this report should be considered before purchase. It is recommended that qualified contractors be used in your further inspection or repair issues as it relates to the comments in this inspection report.

9. Plumbing System

The home inspector shall observe: Interior water supply and distribution system, including: piping materials, supports, and insulation; fixtures and faucets; functional flow; leaks; and cross connections; Interior drain, waste, and vent system, including: traps; drain, waste, and vent piping; piping supports and pipe insulation; leaks; and functional drainage; Hot water systems including: water heating equipment; normal operating controls; automatic safety controls; and chimneys, flues, and vents; Fuel storage and distribution systems including: interior fuel storage equipment, supply piping, venting, and supports; leaks; and Sump pumps. The home inspector shall describe: Water supply and distribution piping materials; Drain, waste, and vent piping materials; Water heating equipment; and Location of main water supply shutoff device. The home inspector shall operate all plumbing fixtures, including their faucets and all exterior faucets attached to the house, except where the flow end of the faucet is connected to an appliance. The home inspector is not required to: State the effectiveness of anti-siphon devices; Determine whether water supply and waste disposal systems are public or private; Operate automatic safety controls; Operate any valve except water closet flush valves, fixture faucets, and hose faucets; Observe: Water conditioning systems; Fire and lawn sprinkler systems; On-site water supply quantity and quality; On-site waste disposal systems; Foundation irrigation systems; Spas, except as to functional flow and functional drainage; Swimming pools; Solar water heating equipment; or Observe the system for proper sizing, design, or use of proper materials.

		IN	NI	NP	RR	Styles & Materials
9.0	Plumbing Drain, Waste and Vent Systems	•			•	Water Source: Public
9.1	Plumbing Water Supply, Distribution System and Fixtures	•				Plumbing Water Supply (into home): Not visible
9.2	Hot Water Systems, Controls, Chimneys, Flues and Vents	•			•	Plumbing Water Distribution (inside home): Copper
9.3	Main Water Shut-off Device (Describe location)	•				Washer Drain Size: 2" Diameter
9.4	Fuel Storage and Distribution Systems (Interior fuel storage, piping, venting, supports, leaks)	•			•	Plumbing Waste: PVC
9.5	Main Fuel Shut-off (Describe Location)	•				Water Heater Power Source: Gas (quick recovery)
9.6	Sump Pump			•		Water Heater Capacity: 40 Gallon (1-2 people) Extra Info : 48 gal
						Manufacturer: RHEEM
						Water Heater Location: Garage
						Age of Water Heater: 2 Years

IN= Inspected, NI= Not Inspected, NP= Not Present, RR= Repair or Replace

Comments:

9.0 The tub drain drains slowly under the hall bath. The sink drains slowly under the lower level powder room sink. Repairs are needed. A qualified licensed plumber should repair or correct as needed.

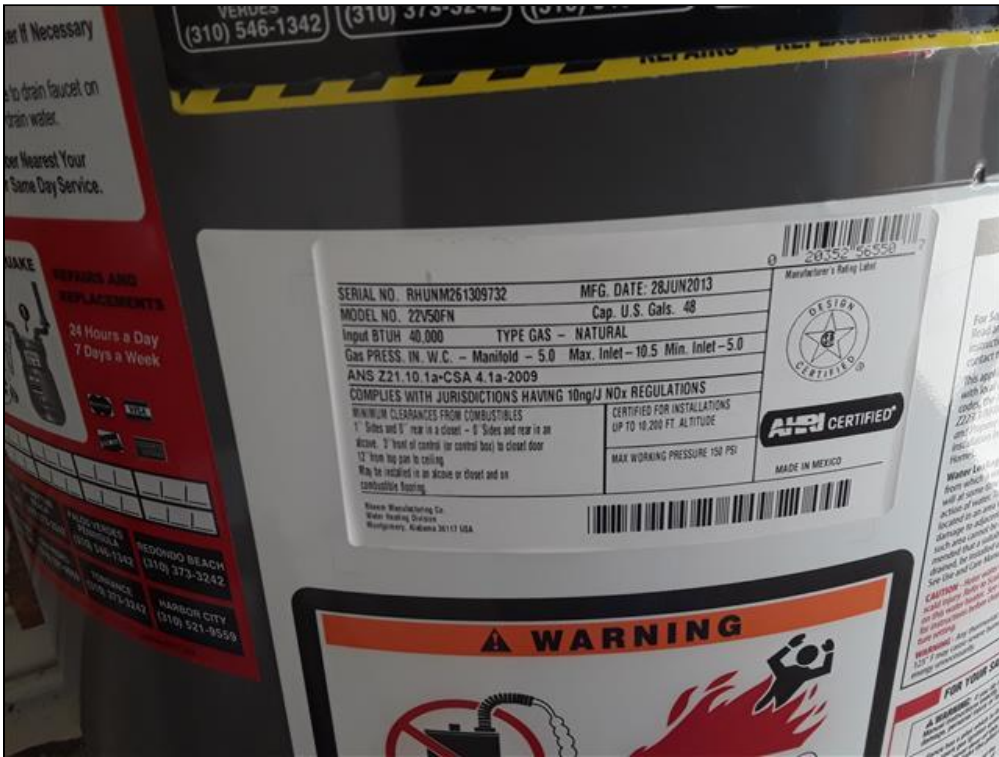


9.0 Item 1(Video)

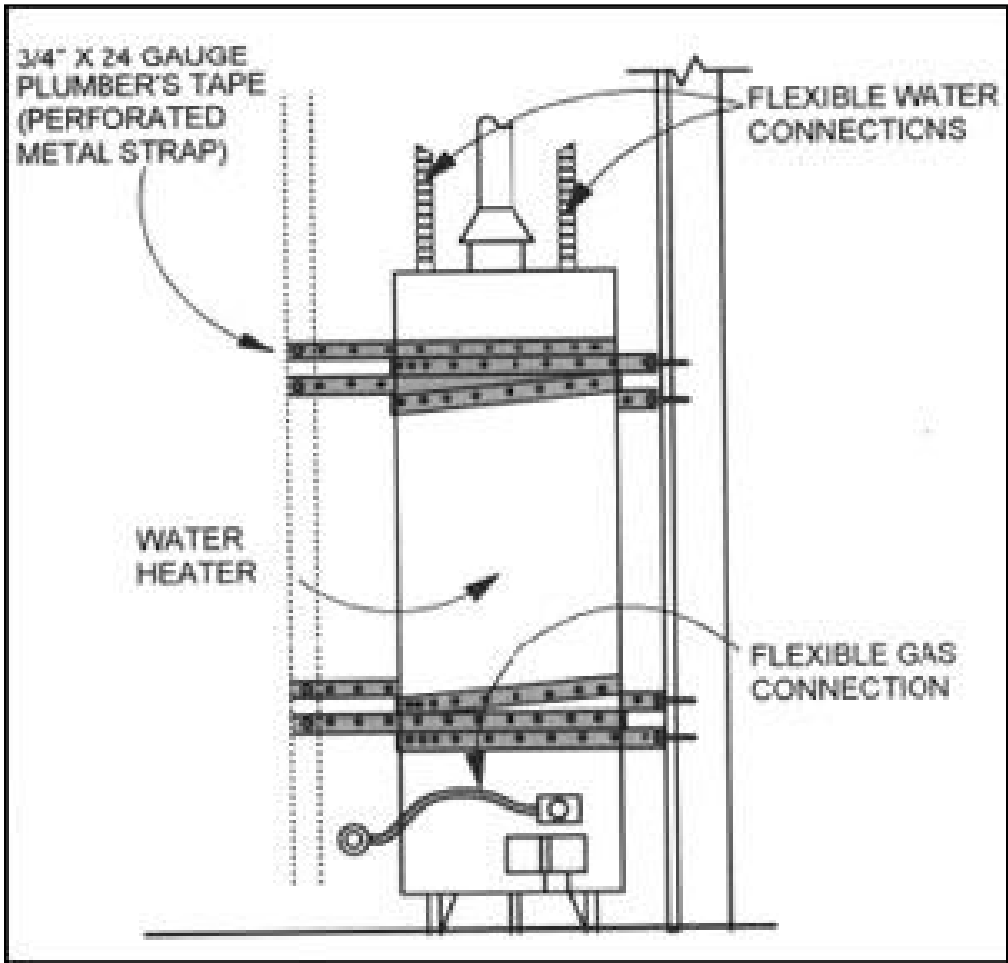


9.0 Item 2(Video)

9.2 The water heater is undersized . This is for your information. No apparent problems were found.



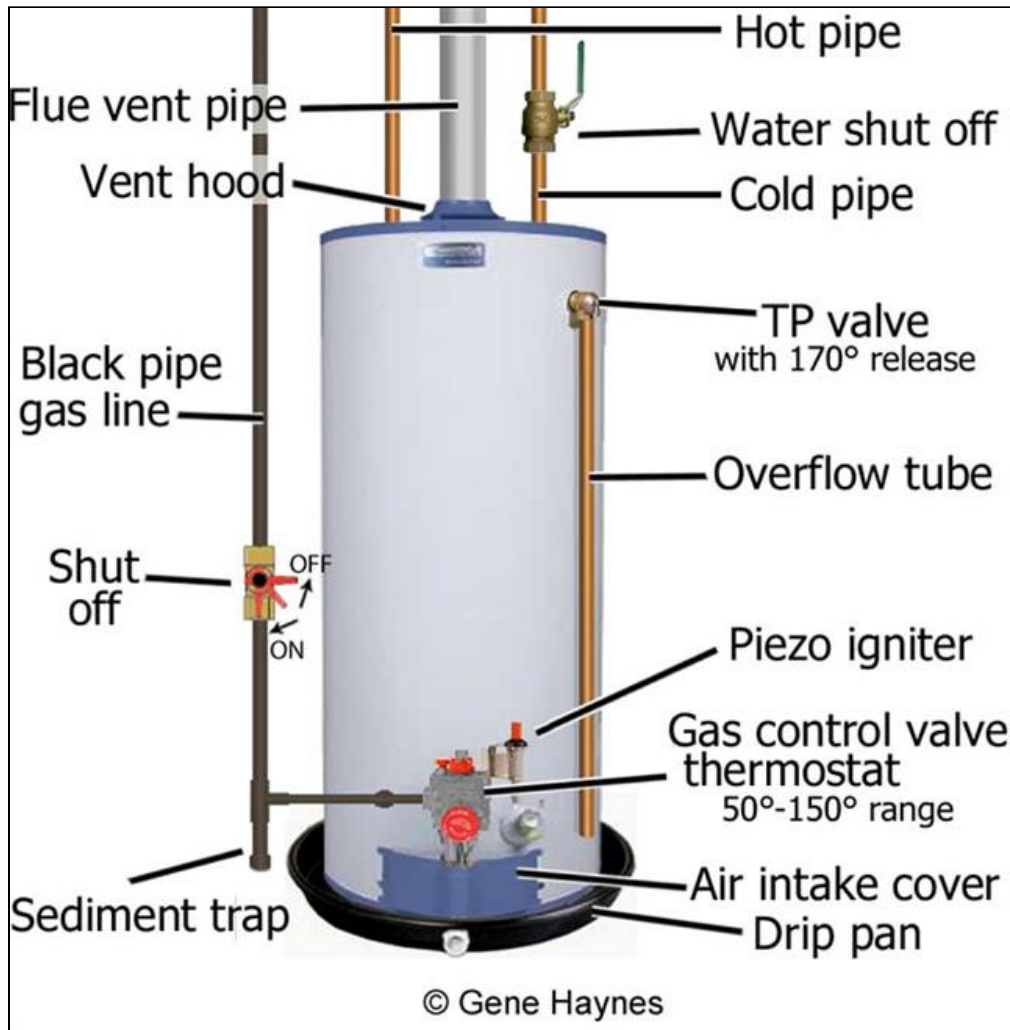
9.2 Item 1(Picture)



9.2 Item 2(Picture)



9.2 Item 3(Picture)



9.2 Item 4(Picture)

9.4 The gas line shut-off valve is missing a cap and can be turned on inadvertently at the dryer. This is a safety issue and should be repaired. A qualified contractor should inspect and repair as needed A qualified contractor should inspect and repair as needed



9.4 Item 1(Picture)

The plumbing in the home was inspected and reported on with the above information. While the inspector makes every effort to find all areas of concern, some areas can go unnoticed. Washing machine drain line for example cannot be checked for leaks or the ability to handle the volume during drain cycle. Older homes with galvanized supply lines or cast iron drain lines can be obstructed and barely working during an inspection but then fails under heavy use. If the water is turned off or not used for periods of time (like a vacant home waiting for closing) rust or deposits within the pipes can further clog the piping system. Please be aware that the inspector has your best interest in mind. Any repair items mentioned in this report should be considered before purchase. It is recommended that qualified contractors be used in your further inspection or repair issues as it relates to the comments in this inspection report.

10. Exterior 

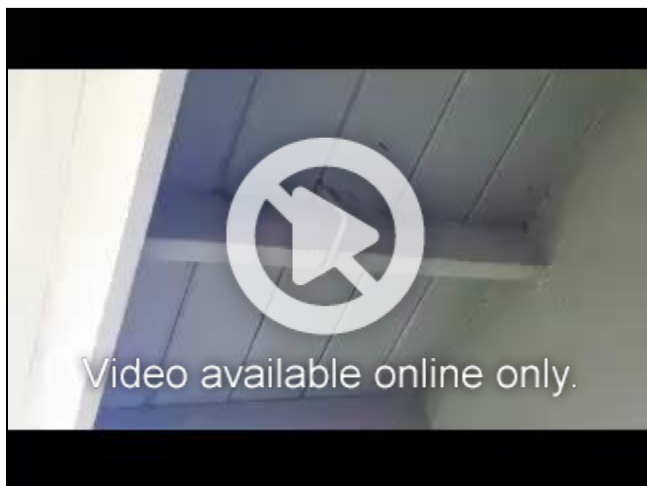
The home inspector shall observe: Wall cladding, flashings, and trim; Entryway doors and a representative number of windows; Garage door operators; Decks, balconies, stoops, steps, areaways, porches and applicable railings; Eaves, soffits, and fascias; and Vegetation, grading, drainage, driveways, patios, walkways, and retaining walls with respect to their effect on the condition of the building. The home inspector shall: Describe wall cladding materials; Operate all entryway doors and a representative number of windows; Operate garage doors manually or by using permanently installed controls for any garage door operator; Report whether or not any garage door operator will automatically reverse or stop when meeting reasonable resistance during closing; and Probe exterior wood components where deterioration is suspected. The home inspector is not required to observe: Storm windows, storm doors, screening, shutters, awnings, and similar seasonal accessories; Fences; Presence of safety glazing in doors and windows; Garage door operator remote control transmitters; Geological conditions; Soil conditions; Recreational facilities (including spas, saunas, steam baths, swimming pools, tennis courts, playground equipment, and other exercise, entertainment, or athletic facilities); Detached buildings or structures; or Presence or condition of buried fuel storage tanks. The home inspector is not required to: Move personal items, panels, furniture, equipment, plant life, soil, snow, ice or debris that obstructs access or visibility.

		IN	NI	NP	RR	Styles & Materials
10.0	Wall Cladding Flashing and Trim	•				Siding Style: Brick Cement stucco
10.1	Doors (Exterior)	•				Siding Material: Cement-Fiber Brick veneer
10.2	Windows	•				Exterior Entry Doors: Wood Insulated glass
10.3	Decks, Balconies, Stoops, Steps, Areaways, Porches, Patio/Cover and Applicable Railings	•				Appurtenance: Deck with steps Balcony Covered porch Sidewalk Patio
10.4	Vegetation, Grading, Drainage, Driveways, Patio Floor, Walkways and Retaining Walls (With respect to their effect on the condition of the building)	•				Driveway: Concrete Street Parking
10.5	Eaves, Soffits and Fascias	•			•	

IN= Inspected, NI= Not Inspected, NP= Not Present, RR= Repair or Replace

Comments:

10.5 The eave boards at eave on the left side (facing front) damaged. Repairs are needed. A qualified contractor should inspect and repair as needed.



10.5 Item 1(Video)

The exterior of the home was inspected and reported on with the above information. While the inspector makes every effort to find all areas of concern, some areas can go unnoticed. Please be aware that the inspector has your best interest in mind. Any repair items mentioned in this report should be considered before purchase. It is recommended that qualified contractors be used in your further inspection or repair issues as it relates to the comments in this inspection report.

11. Roofing

The home inspector shall observe: Roof covering; Roof drainage systems; Flashings; Skylights, chimneys, and roof penetrations; and Signs of leaks or abnormal condensation on building components. The home inspector shall: Describe the type of roof covering materials; and Report the methods used to observe the roofing. The home inspector is not required to: Walk on the roofing; or Observe attached accessories including but not limited to solar systems, antennae, and lightning arrestors.

		IN	NI	NP	RR	Styles & Materials
11.0	Roof Coverings	•			•	Roof Covering: Concrete Tile
11.1	Flashings	•				Viewed roof covering from: Ground
11.2	Skylights, Chimneys and Roof Penetrations	•				
11.3	Roof Drainage Systems	•			•	Sky Light(s): None

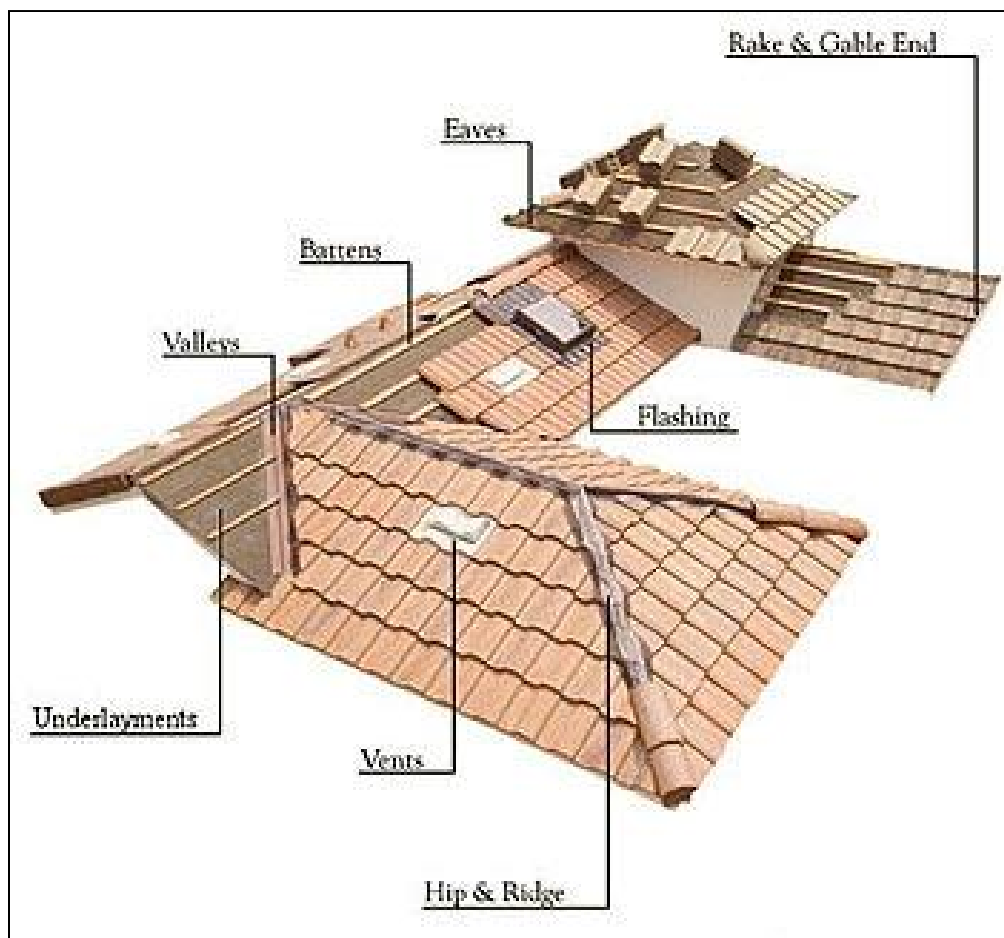
IN= Inspected, NI= Not Inspected, NP= Not Present, RR= Repair or Replace

IN NI NP RR

Chimney (exterior):
Rock
Block

Comments:

11.0 The roof covering has damaged tiles at several areas of the roof. Recommend a roof certification by a reputable licensed roofing company. It should be repaired or replaced as soon as possible. A qualified contractor should inspect and repair as needed. (Actual roof video will be sent on an addendum. Corrupt video file)



11.0 Item 1(Picture)



11.0 Item 2(Picture)

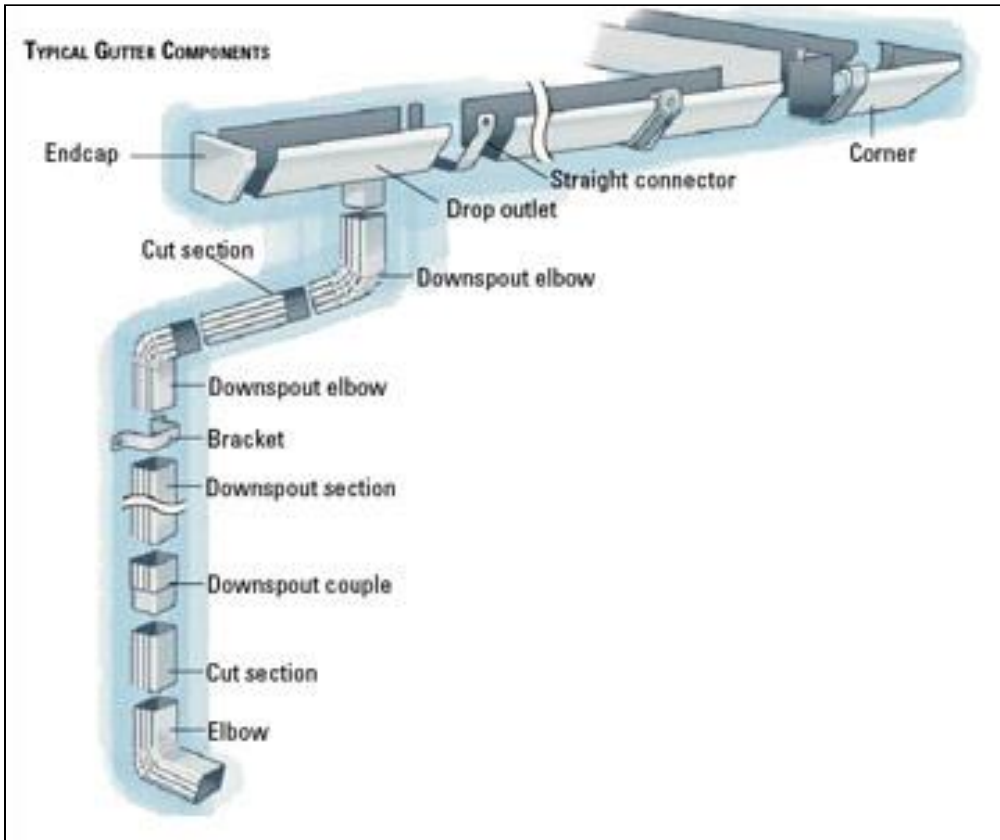


11.0 Item 3(Picture)

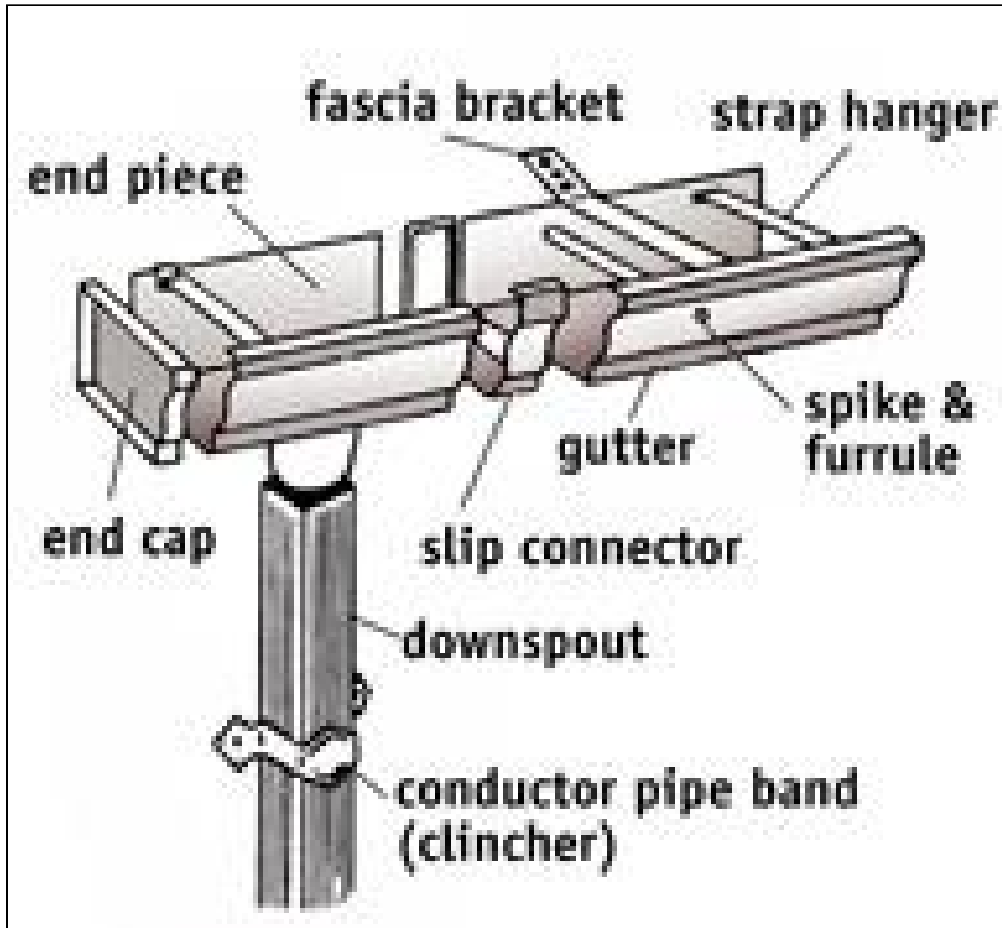
11.3 The downspout needs reconnecting to existing drain line at the front (left of main entry). Erosion can continue or become worse if not corrected. A qualified contractor should inspect and repair as needed.



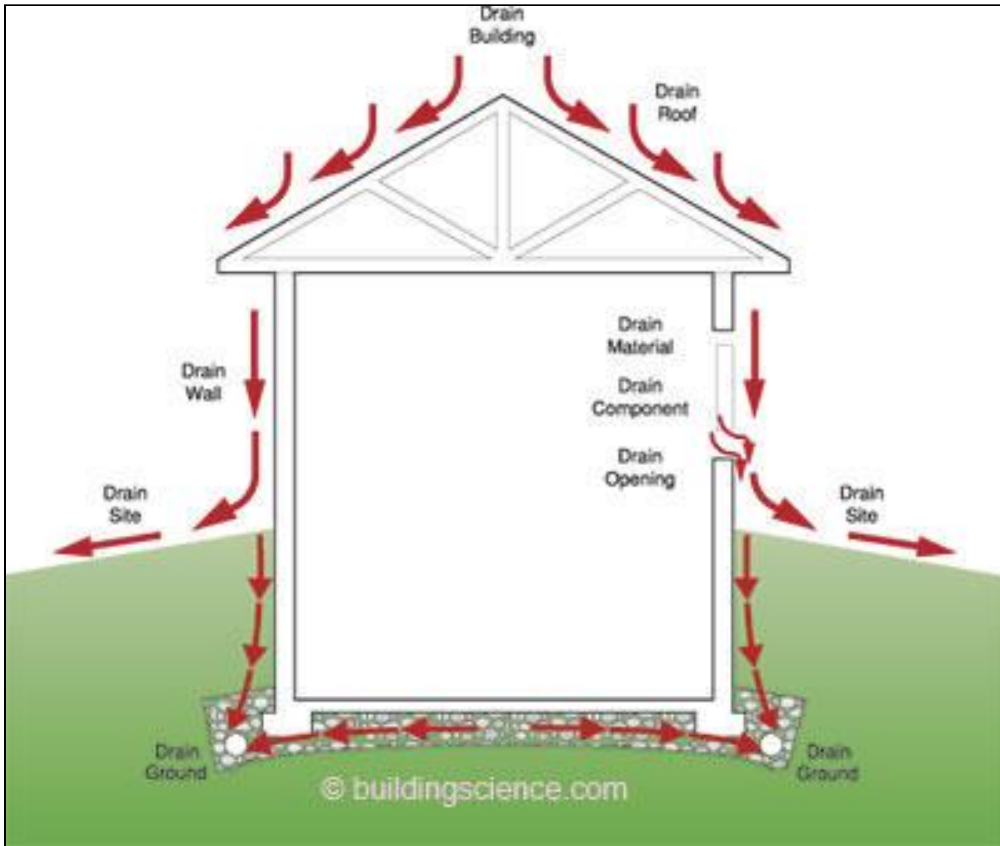
11.3 Item 1(Video)



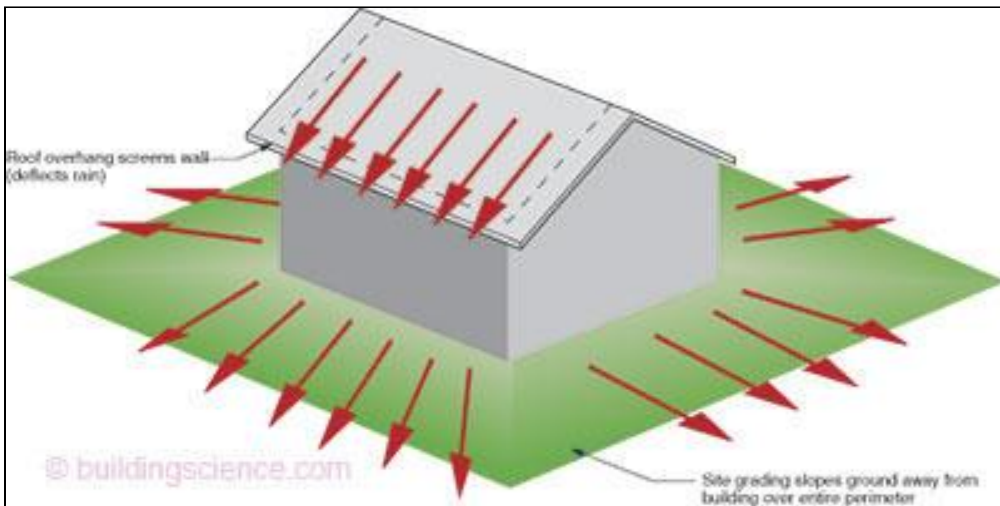
11.3 Item 2(Picture)



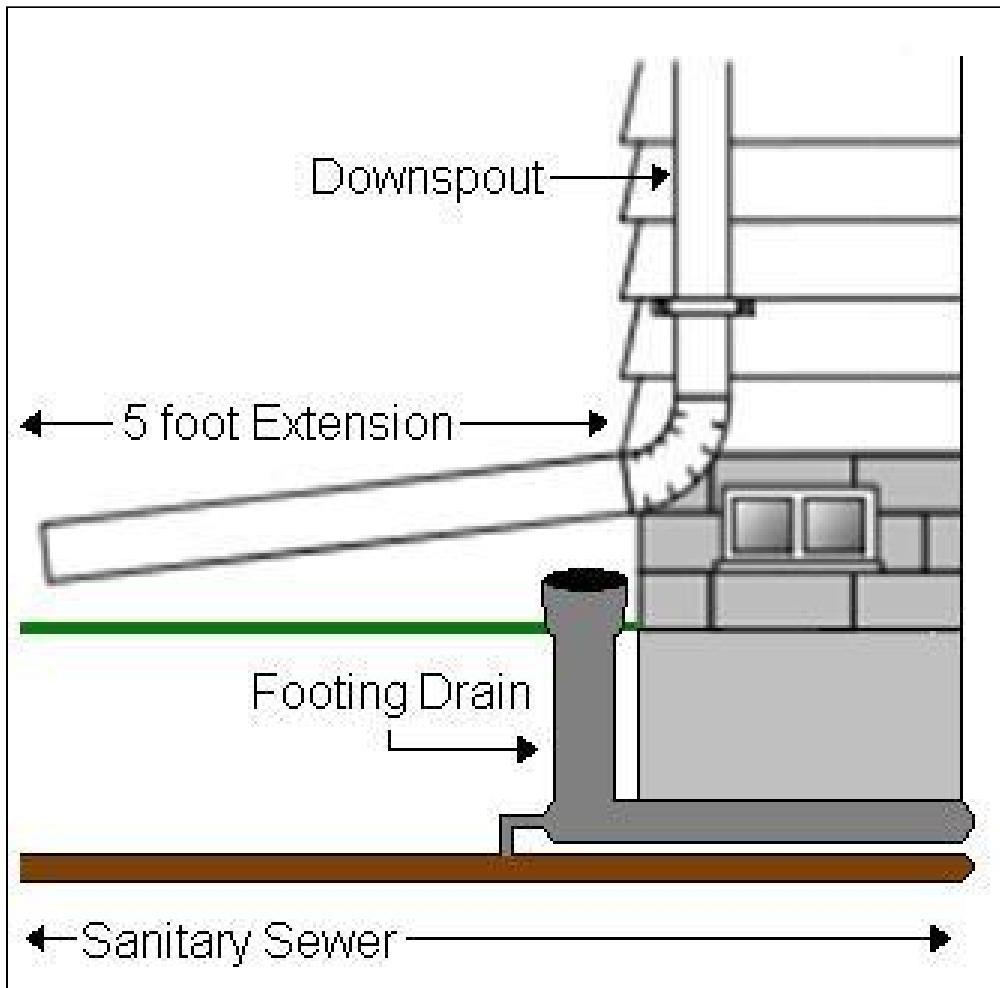
11.3 Item 3(Picture)



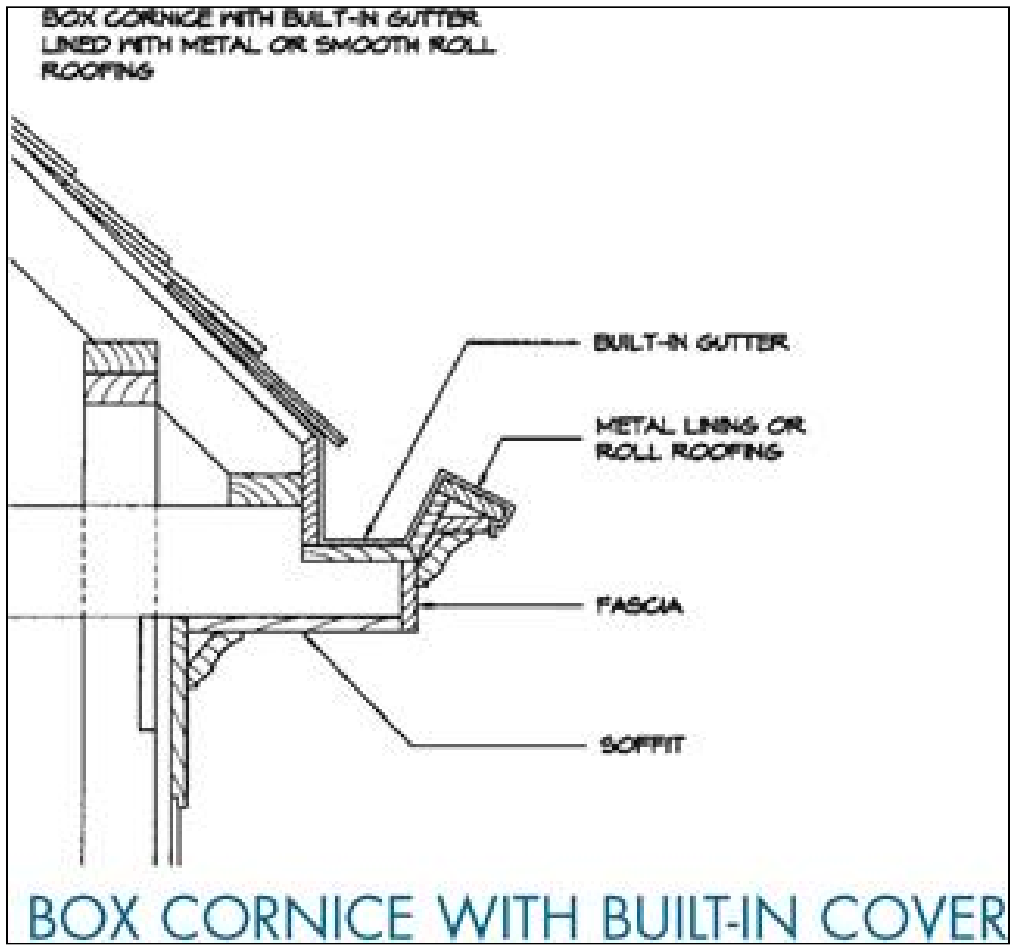
11.3 Item 4(Picture)



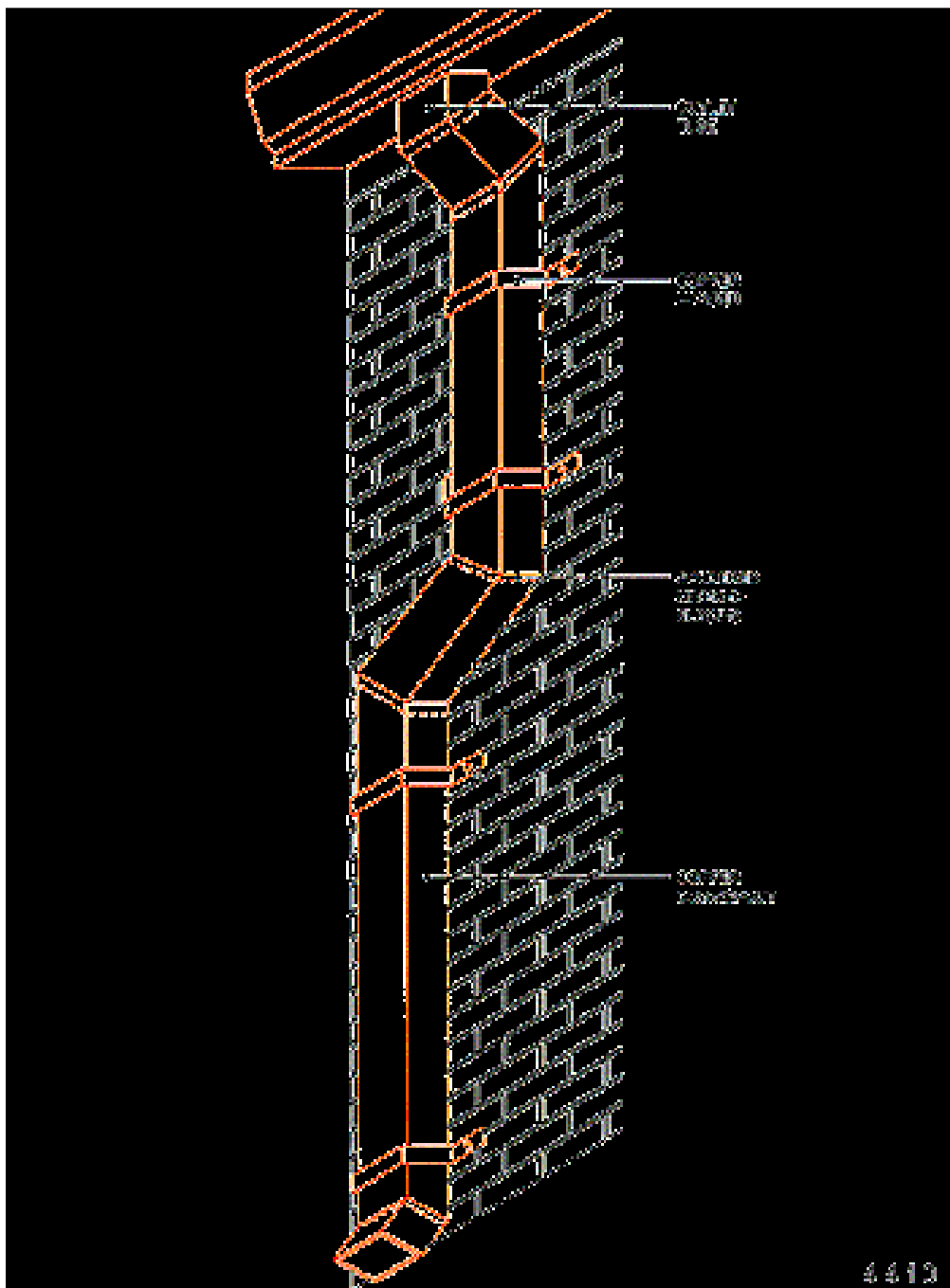
11.3 Item 5(Picture)



11.3 Item 6(Picture)



11.3 Item 7(Picture)



11.3 Item 8(Picture)

The roof of the home was inspected and reported on with the above information. While the inspector makes every effort to find all areas of concern, some areas can go unnoticed. Roof coverings and skylights can appear to be leak proof during inspection and weather conditions. Our inspection makes an attempt to find a leak but sometimes cannot. Please be aware that the inspector has your best interest in mind. Any repair items mentioned in this report should be considered before purchase. It is recommended that qualified contractors be used in your further inspection or repair issues as it relates to the comments in this inspection report.

General Summary

AAA Inspection Group, Inc.

**P.O. Box 3833
Vista, CA. 92085**

**For Southern California Call:
1-(877)-201-4846 Ext. 7011**

**For Northern California, Oregon, Washington, Arizona, Nevada and Texas Call:
1-(877) 201-4846**

**For Florida Call:
1-(877) 201-4846**

Customer
Mike and Edis Konner

Address
28068 Braidwood Dr
Rancho Palos Verdes CA 90275

The following items or discoveries indicate that these systems or components **do not function as intended** or **adversely affects the habitability of the dwelling;** or **warrants further investigation by a specialist,** or **requires subsequent observation.** This summary shall not contain recommendations for routine upkeep of a system or component to keep it in proper functioning condition or recommendations to upgrade or enhance the function or efficiency of the home. This Summary is not the entire report. The complete report may include additional information of concern to the customer. It is recommended that the customer read the complete report.

2. Interiors

2.0 Ceilings

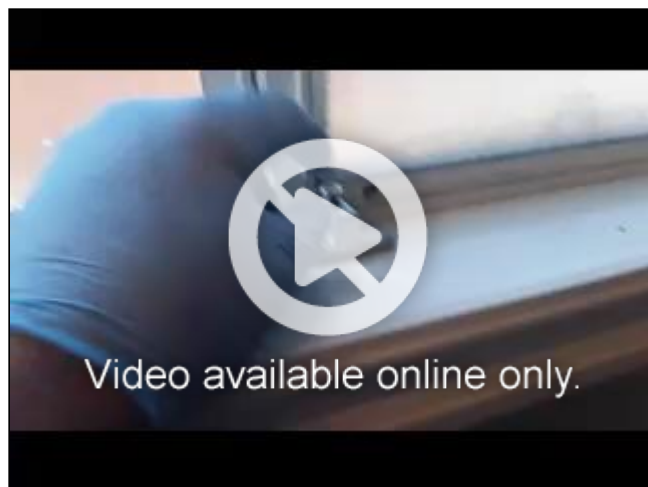
Inspected, Repair or Replace

The Drywall on the ceiling reveals a light stain which appears from a water leak, possible from a bathroom overflow or leak. Stain appears old between the entryway and the Living Room. This is a cosmetic issue for your information. A qualified person should repair or replace as needed.

2.6 Windows (representative number)

Inspected, Repair or Replace

One window is damaged at handle or lock hardware at the Private Bath Den (to downstairs). This is a small repair. A qualified person should repair or replace as needed.



2.6 Item 1(Video)

4. Heating / Central Air Conditioning

4.5 Chimneys, Flues and Vents (for fireplaces, gas water heaters or heat systems)

Inspected, Repair or Replace

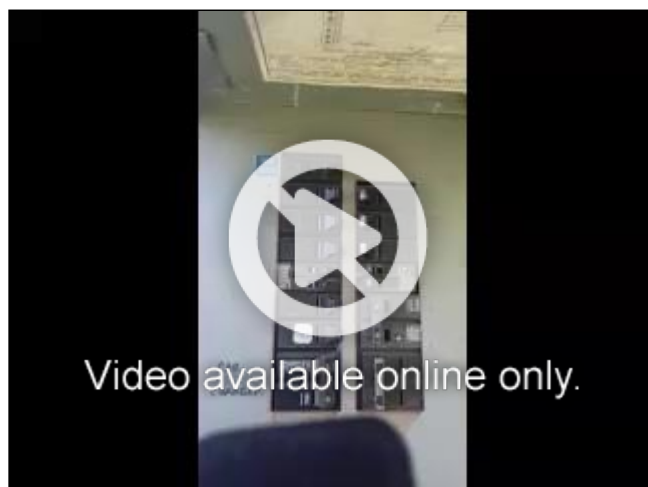
The brick chimney has cracks. Recommend a chimney specialist to evaluate and recommend repair.

8. Electrical System

8.1 Service and Grounding Equipment, Main Overcurrent Device, Main and Distribution Panels

Inspected, Repair or Replace

The dead face panel at the main electrical panel is not labeled and identified. Recommend a license electrician to evaluate and repair.



8.1 Item 1(Video)

8.3 Connected Devices and Fixtures (Observed from a representative number operation of ceiling fans, lighting fixtures, switches and receptacles located inside the house, garage, and on the dwelling's exterior walls)

Inspected, Repair or Replace

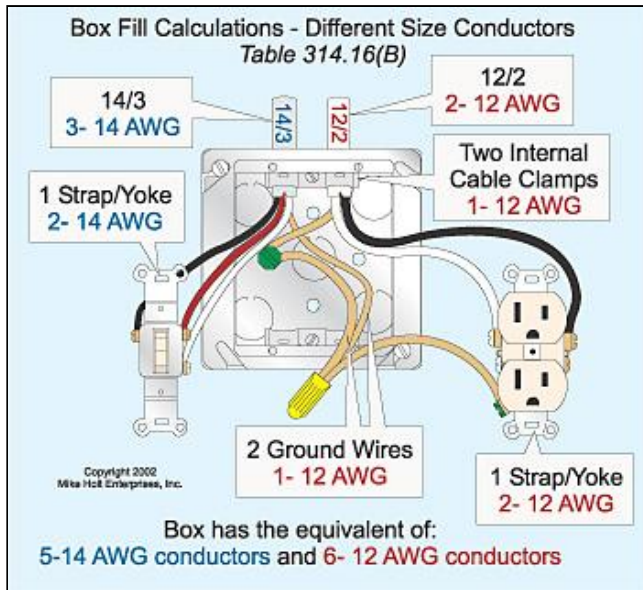
(1) **One "three-prong" outlet is not grounded (at lower level). Electrical issues are considered a hazard until repaired This is a safety issue that needs to be corrected. A qualified licensed electrical contractor should perform repairs that involve wiring.**



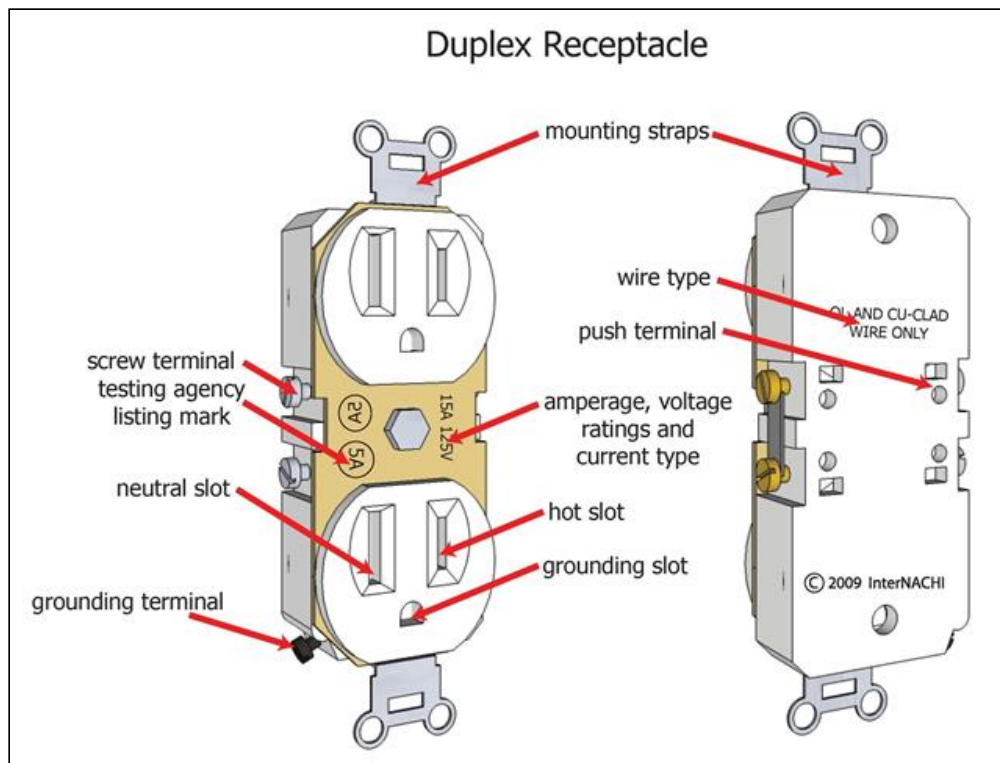
8.3 Item 1(Picture)



8.3 Item 2(Video)

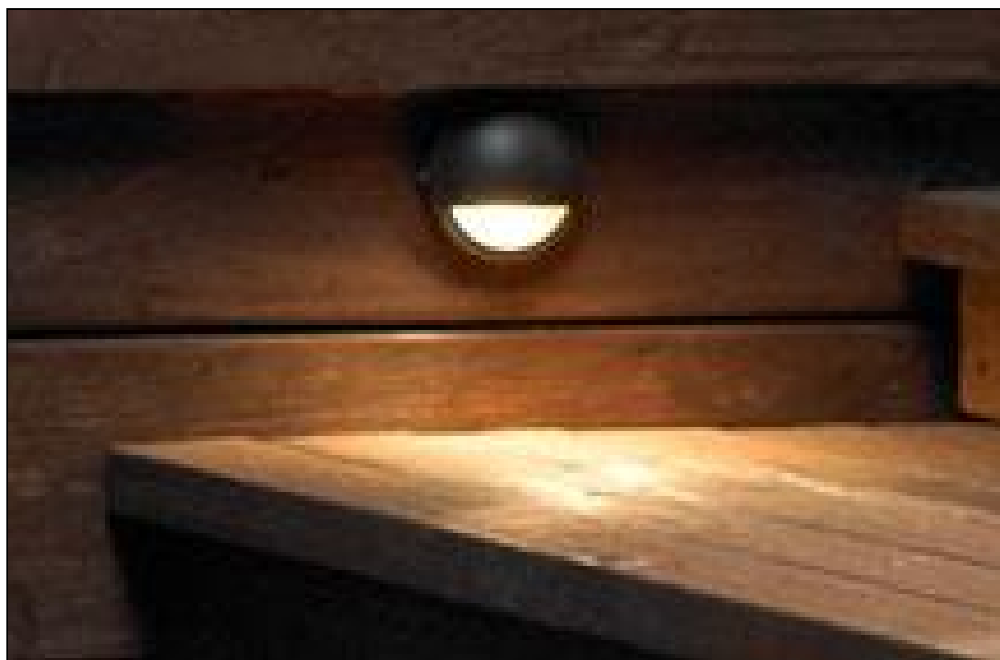


8.3 Item 3(Picture)



8.3 Item 4(Picture)

(2) **The exterior low profile light fixture at the landscape rear patio wall is loose. This is a safety issue that needs to be corrected. A qualified licensed electrical contractor should perform repairs that involve wiring.**



8.3 Item 5(Picture)

8.4 Polarity and Grounding of Receptacles within 6 feet of interior plumbing fixtures, all receptacles in garage, carport and exterior walls of inspected structure

Inspected, Repair or Replace

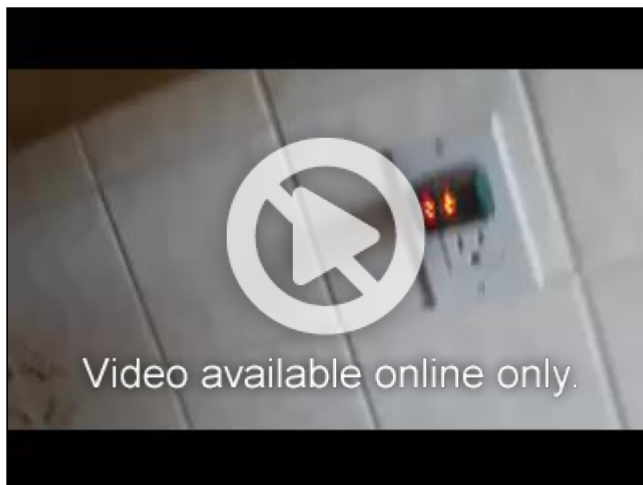
(1) **One "three-prong" outlet is incorrect "reverse polarity" and outdated and not a three-prong GFCI (Ground Fault Circuit Interrupt) in the kitchen. Electrical issues are considered**

a hazard until repaired This is a safety issue that needs to be corrected. A qualified licensed electrical contractor should perform repairs that involve wiring.



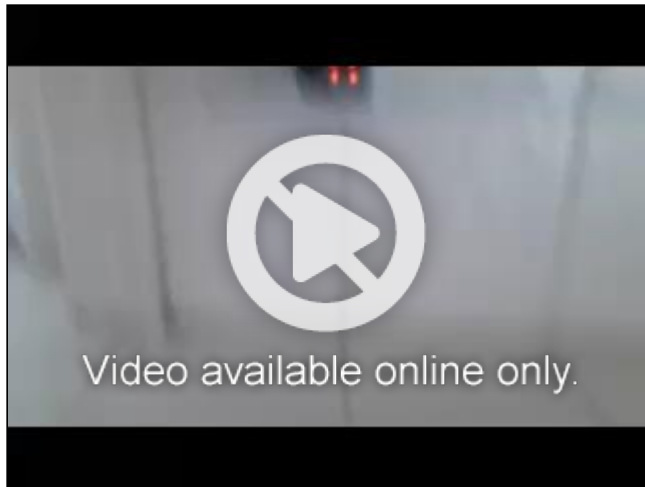
8.4 Item 1(Video)

(2) One "three-prong" outlet is outdated and not a three-prong GFCI (Ground Fault Circuit Interrupt) in the kitchen. Electrical issues are considered a hazard until repaired This is a safety issue that needs to be corrected. A qualified licensed electrical contractor should perform repairs that involve wiring.

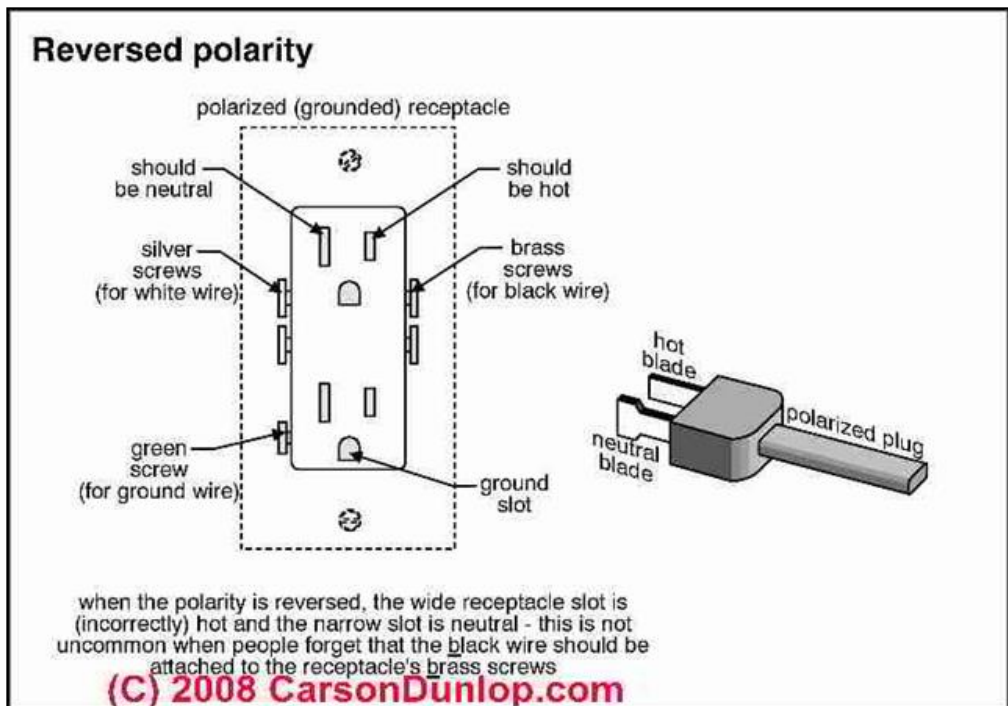


8.4 Item 2(Video)

(3) One "three-prong" outlet is not grounded in the dining room. Electrical issues are considered a hazard until repaired This is a safety issue that needs to be corrected. A qualified licensed electrical contractor should perform repairs that involve wiring.



8.4 Item 3(Video)



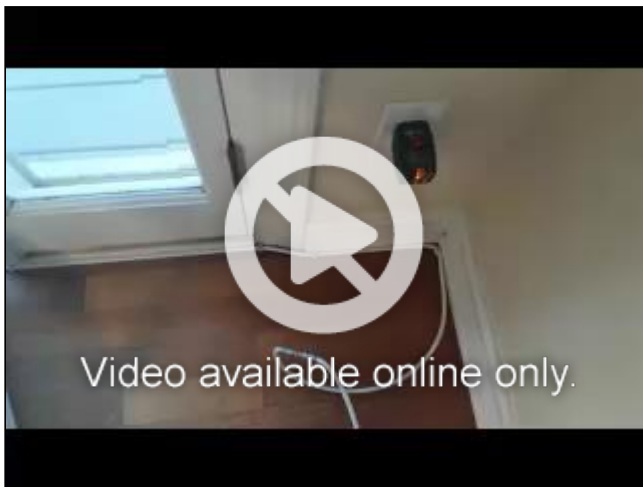
8.4 Item 4(Picture)

(4) **One "three-prong" outlet is outdated and not a three-prong GFCI (Ground Fault Circuit Interrupt) (at lower level). Electrical issues are considered a hazard until repaired This is a safety issue that needs to be corrected. A qualified licensed electrical contractor should perform repairs that involve wiring.**



8.4 Item 5(Picture)

(5) **One "three-prong" outlet is outdated and not a three-prong GFCI (Ground Fault Circuit Interrupt) (at lower level). Electrical issues are considered a hazard until repaired This is a safety issue that needs to be corrected. A qualified licensed electrical contractor should perform repairs that involve wiring.**

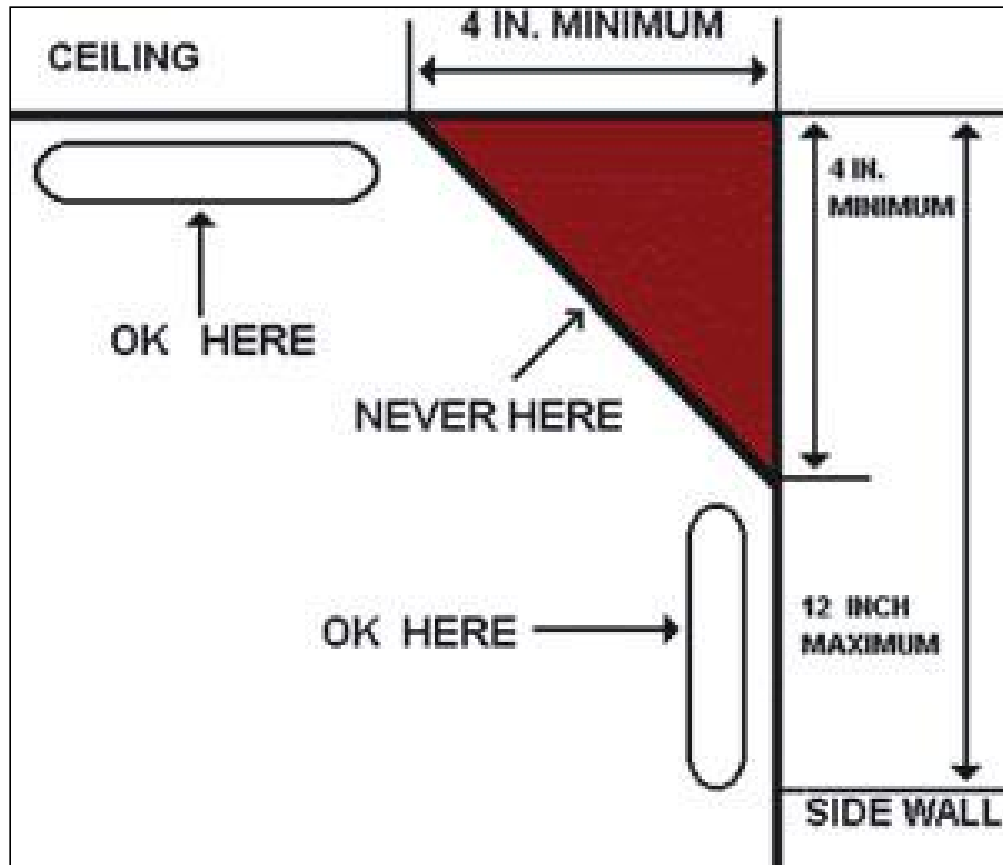


8.4 Item 6(Video)

8.7 Smoke Detectors

Inspected, Repair or Replace

(1) **The smoke detector needs locating at least 4 inches from ceiling/wall junction and no further than 12 inches away.**



8.7 Item 1(Picture)

(2) **A 10 year lithium battery smoke detector, approved and listed by the State Fire Marshall, shall be installed, according to the manufacturer's instructions, in each dwelling intended for human occupancy.**

Except for new construction, a battery-operated smoke detector satisfies the requirements.

Installation

The owner of each dwelling unit shall supply and install smoke detectors in the locations and in the manner set forth in the manufacturer's instructions, as approved by the State Fire Marshall's regulations. In the case of apartment complexes and other multiple-dwelling complexes, a smoke detector shall also be installed in the common stairwells.

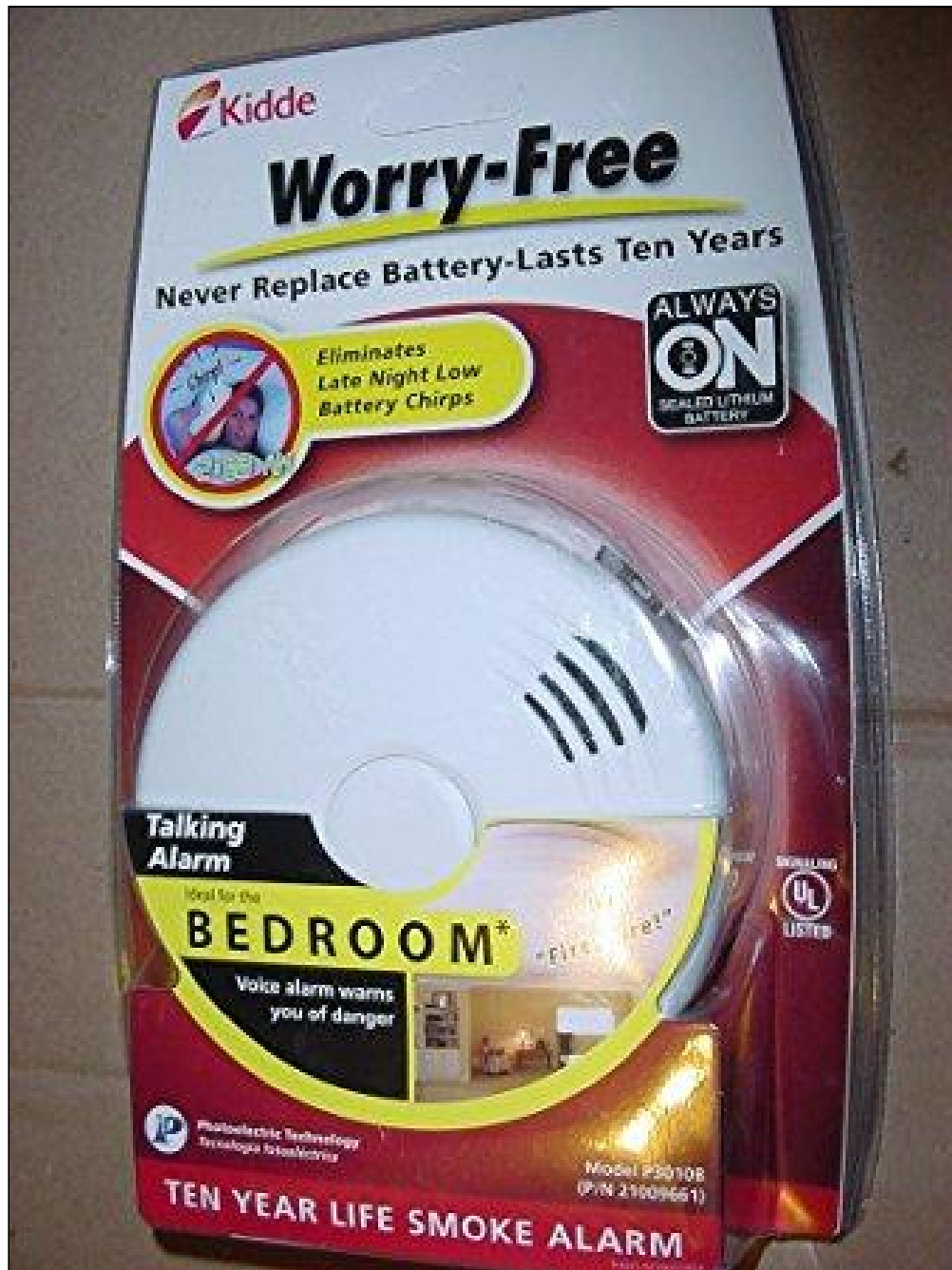
Testing and Maintenance

The owner shall be responsible for testing and maintaining detectors in hotels, motels, lodging houses, and common stairwells of apartment complexes and other multiple dwelling complexes.

An owner or the owner's agent may enter any dwelling unit, efficiency dwelling unit, guest room, and suite owned by the owner for the purpose of installing, repairing, testing, and maintaining single station smoke detectors. Except in cases of emergency, the owner or the owner's agent shall give the tenants of each such unit, room or suite reasonable notice in writing of the intention to enter and shall enter only during normal business hours. Twenty-four hours shall be presumed to be reasonable notice in absence of evidence to the contrary.

Operable

The smoke detector shall be operable at the time that the tenant takes possession. The apartment complex tenant shall be responsible for notifying the manager or owner if the tenant becomes aware of an inoperable smoke detector within his or her unit. The owner or authorized agent shall correct any reported deficiencies in the smoke detector and shall not be in violation for a deficient smoke detector when he or she has not received notice of the deficiency. (H&SC, Sections 13113.7 and 13113.8)



8.7 Item 2(Picture)

9. Plumbing System

- 9.0 Plumbing Drain, Waste and Vent Systems
Inspected, Repair or Replace

The tub drain drains slowly under the hall bath. The sink drains slowly under the lower level powder room sink. Repairs are needed. A qualified licensed plumber should repair or correct as needed.



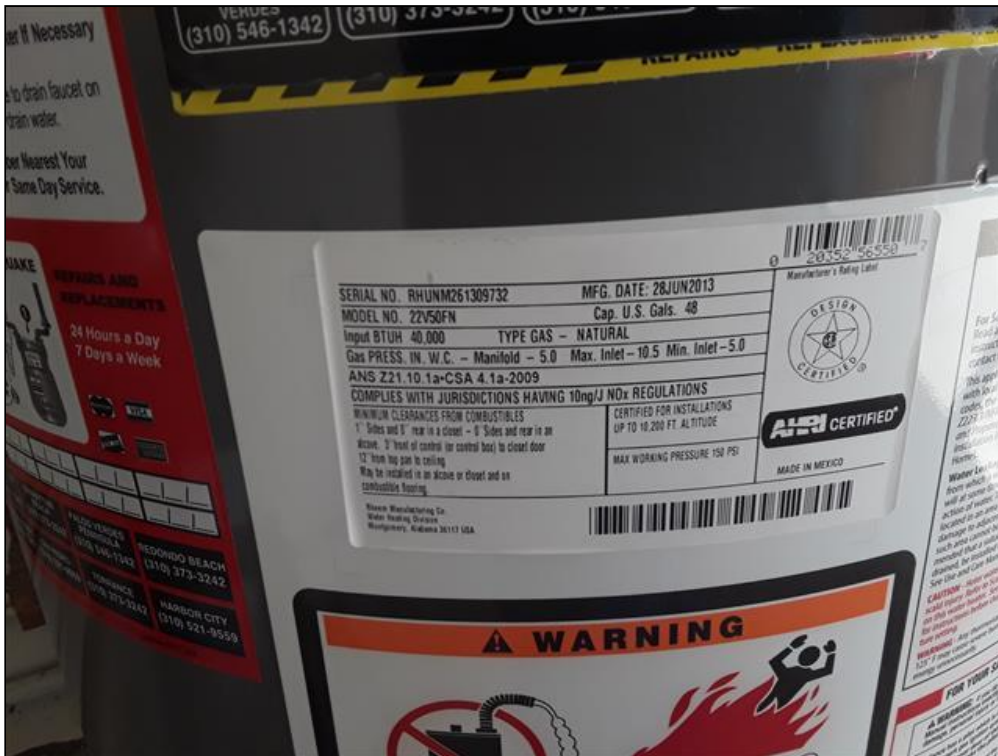
9.0 Item 1 (Video)



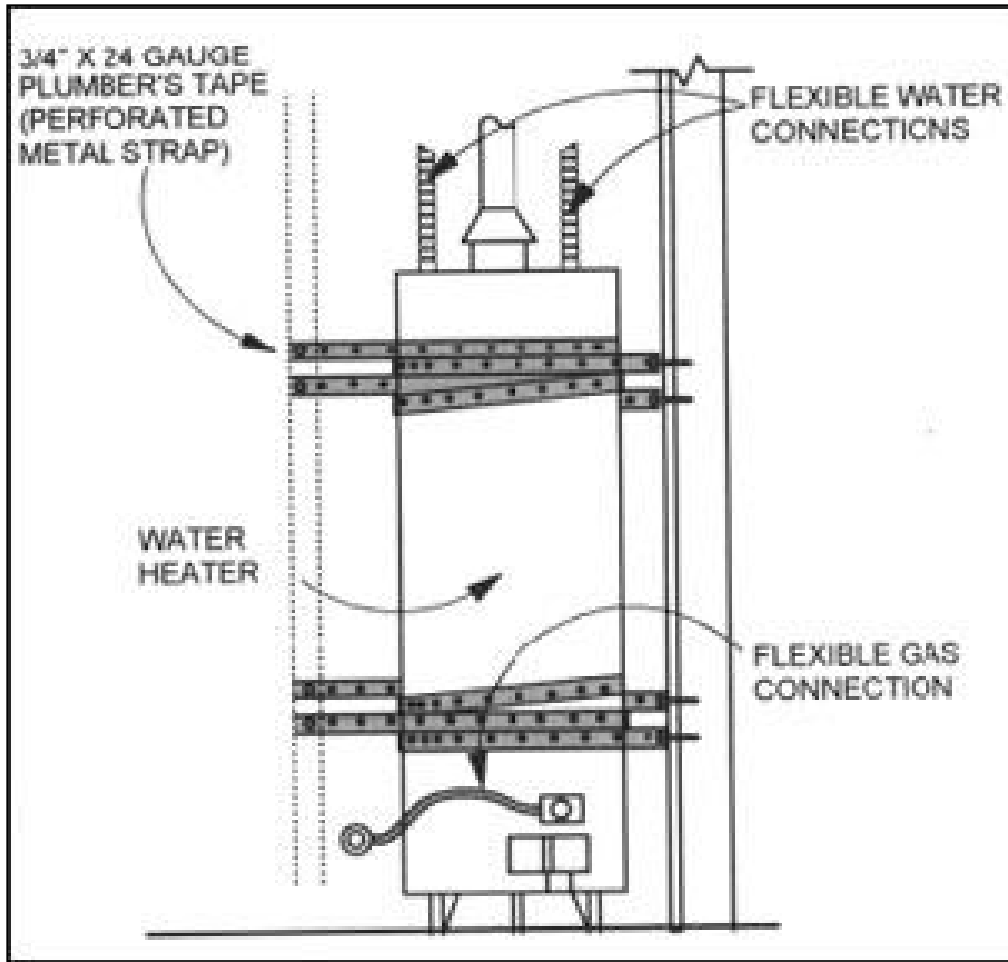
9.0 Item 2 (Video)

9.2 Hot Water Systems, Controls, Chimneys, Flues and Vents Inspected, Repair or Replace

The water heater is undersized . This is for your information. No apparent problems were found.



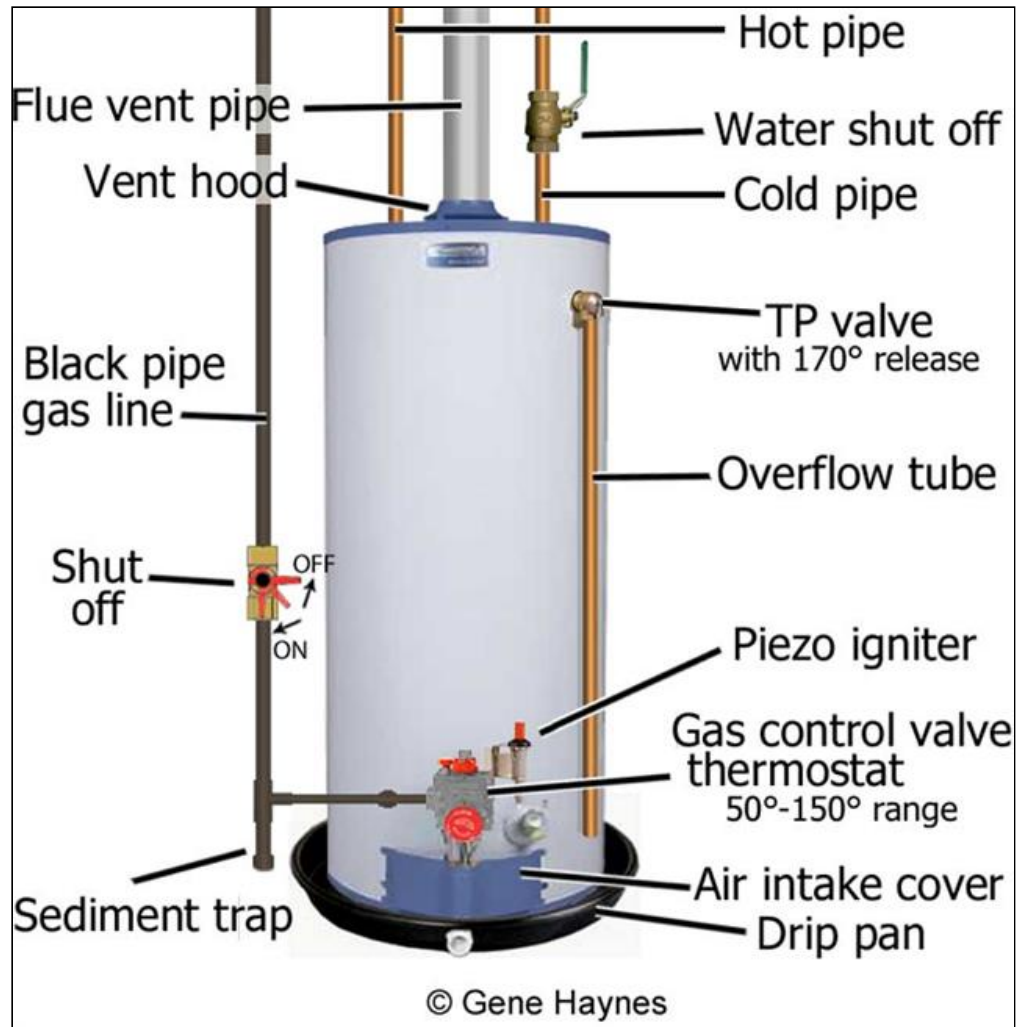
9.2 Item 1 (Picture)



9.2 Item 2(Picture)



9.2 Item 3(Picture)



9.2 Item 4(Picture)

9.4 Fuel Storage and Distribution Systems (Interior fuel storage, piping, venting, supports, leaks)

Inspected, Repair or Replace

The gas line shut-off valve is missing a cap and can be turned on inadvertently at the dryer. This is a safety issue and should be repaired. A qualified contractor should inspect and repair as needed A qualified contractor should inspect and repair as needed



9.4 Item 1(Picture)

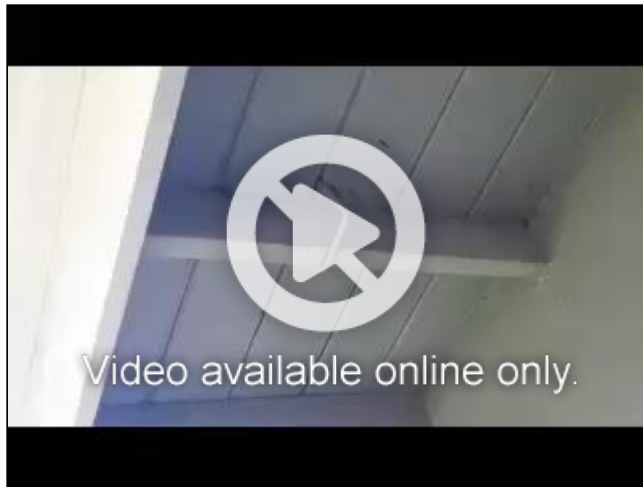
10. Exterior



10.5 Eaves, Soffits and Fascias

Inspected, Repair or Replace

The eave boards at eave on the left side (facing front) damaged. Repairs are needed. A qualified contractor should inspect and repair as needed.



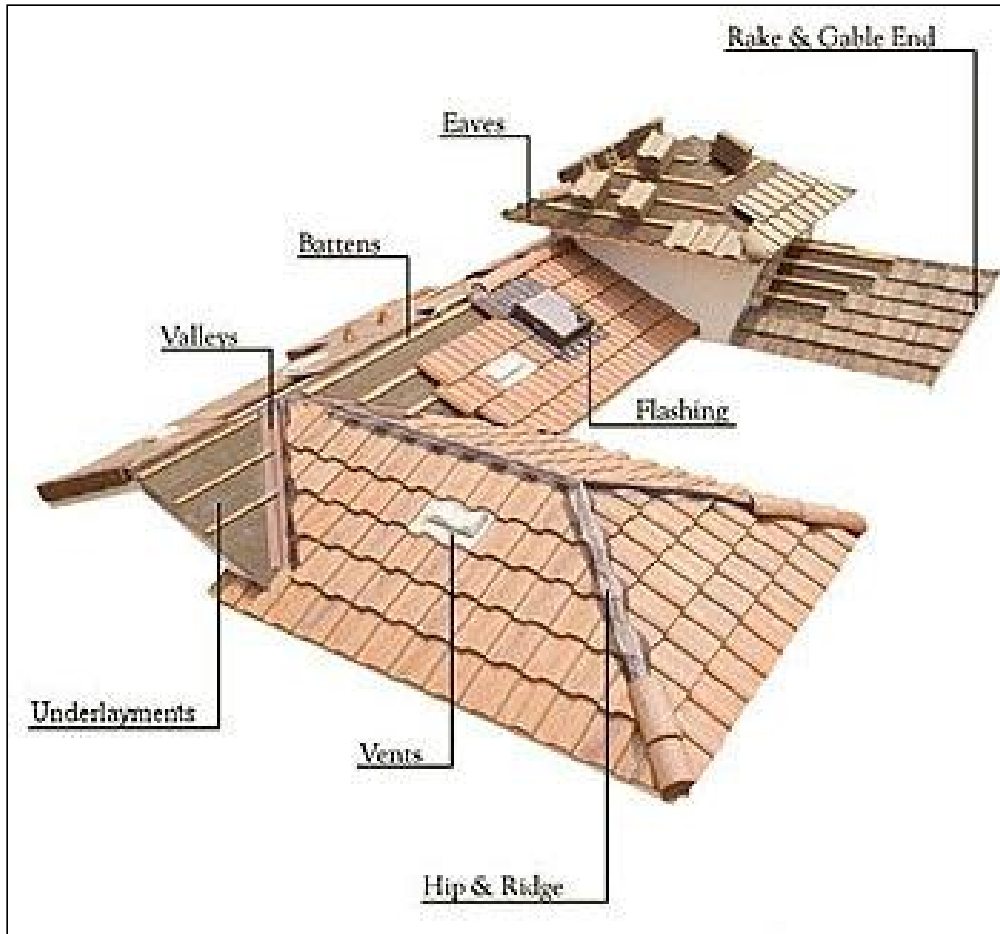
10.5 Item 1(Video)

11. Roofing

11.0 Roof Coverings

Inspected, Repair or Replace

The roof covering has damaged tiles at several areas of the roof. Recommend a roof certification by a reputable licensed roofing company. It should be repaired or replaced as soon as possible. A qualified contractor should inspect and repair as needed. (Actual roof video will be sent on an addendum. Corrupt video file)



11.0 Item 1(Picture)



11.0 Item 2(Picture)

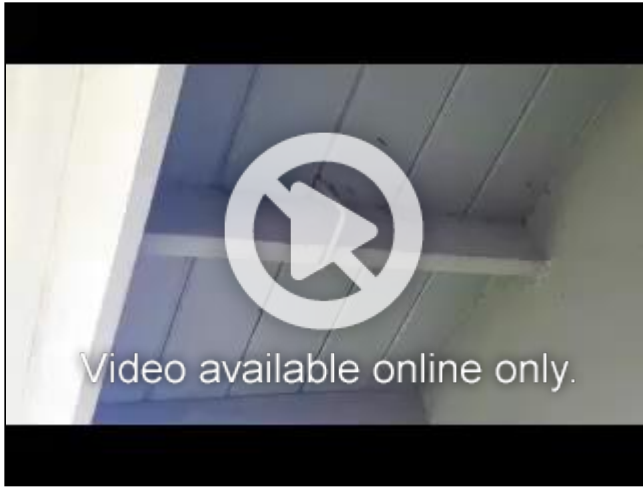


11.0 Item 3(Picture)

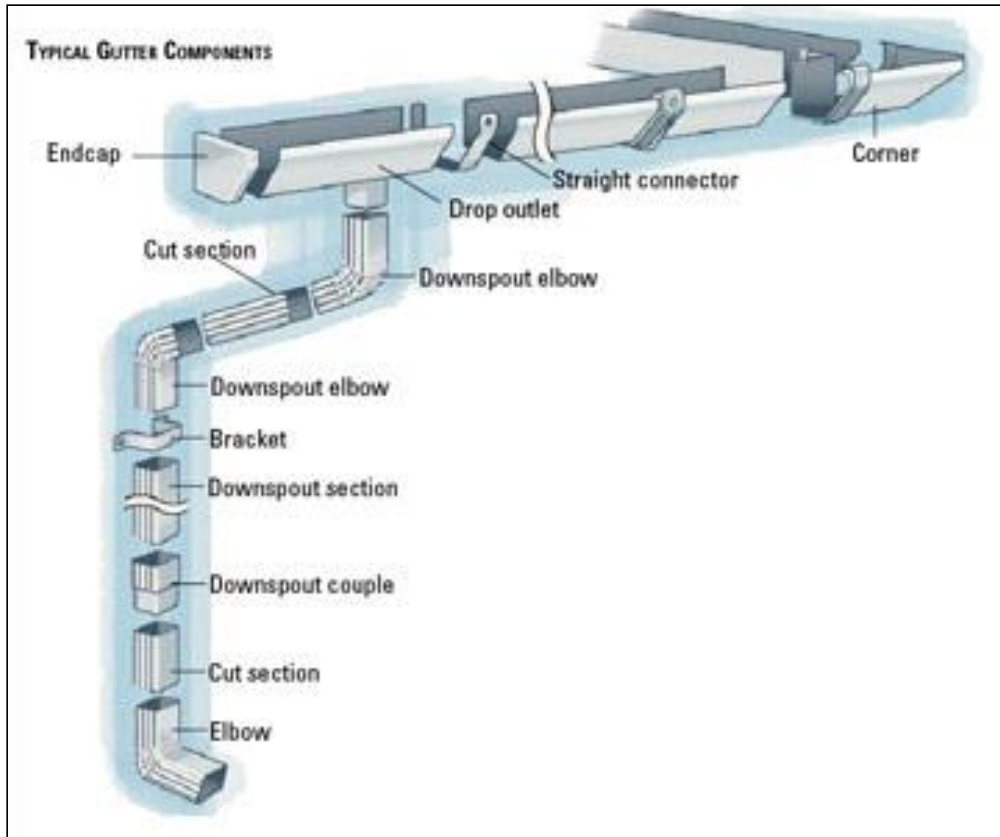
11.3 Roof Drainage Systems

Inspected, Repair or Replace

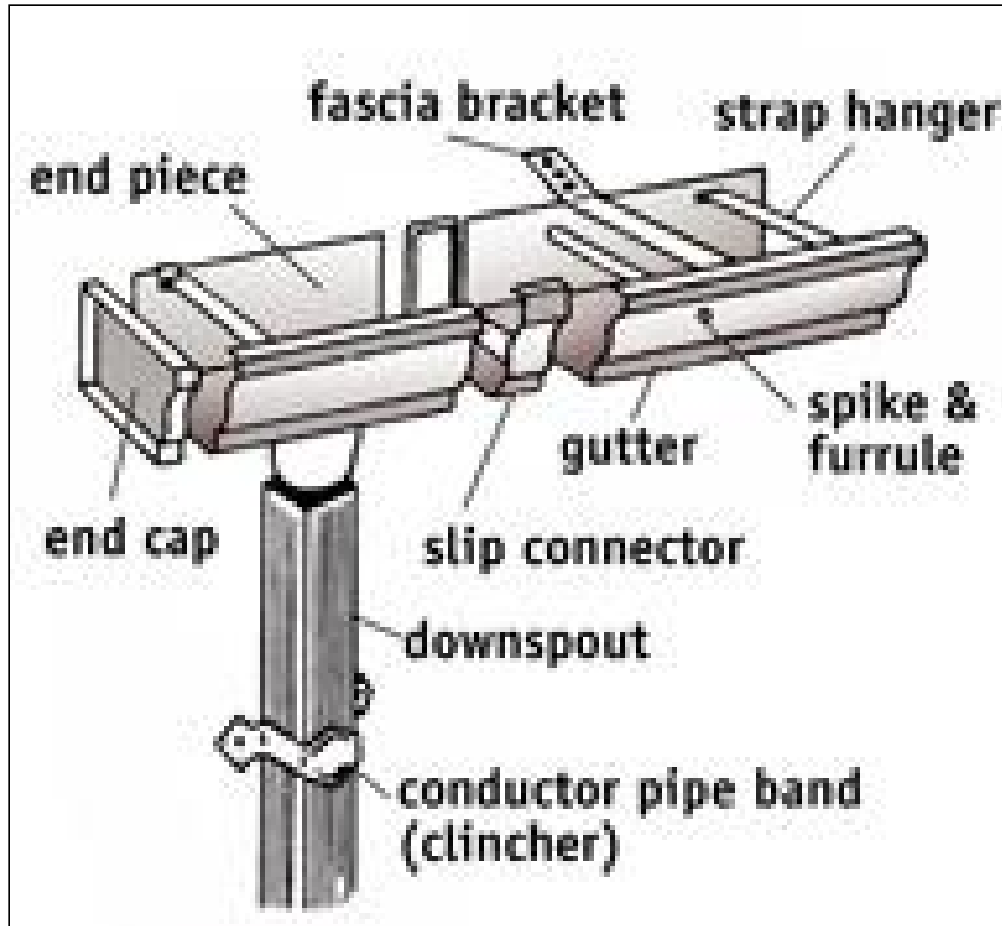
The downspout needs reconnecting to existing drain line at the front (left of main entry). Erosion can continue or become worse if not corrected. A qualified contractor should inspect and repair as needed.



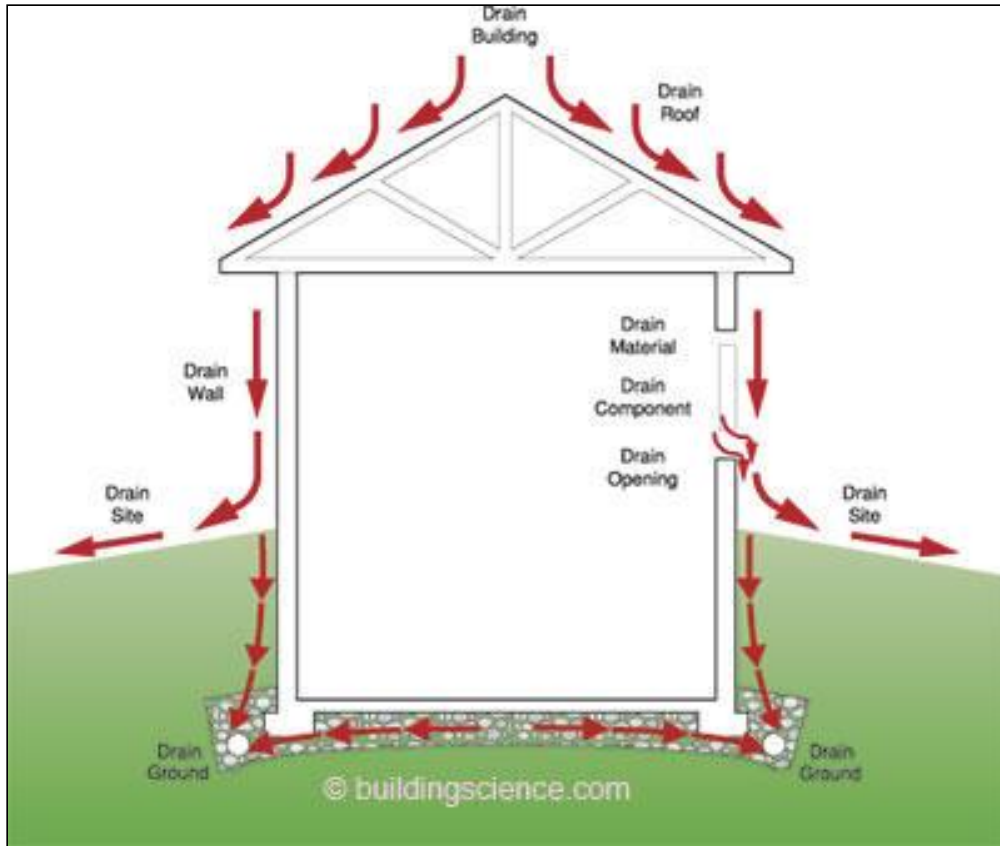
11.3 Item 1(Video)



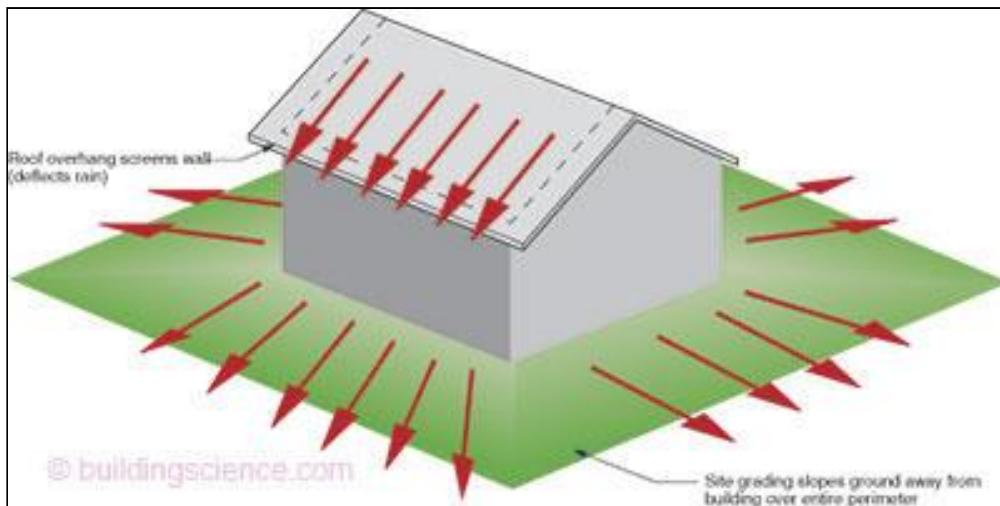
11.3 Item 2(Picture)



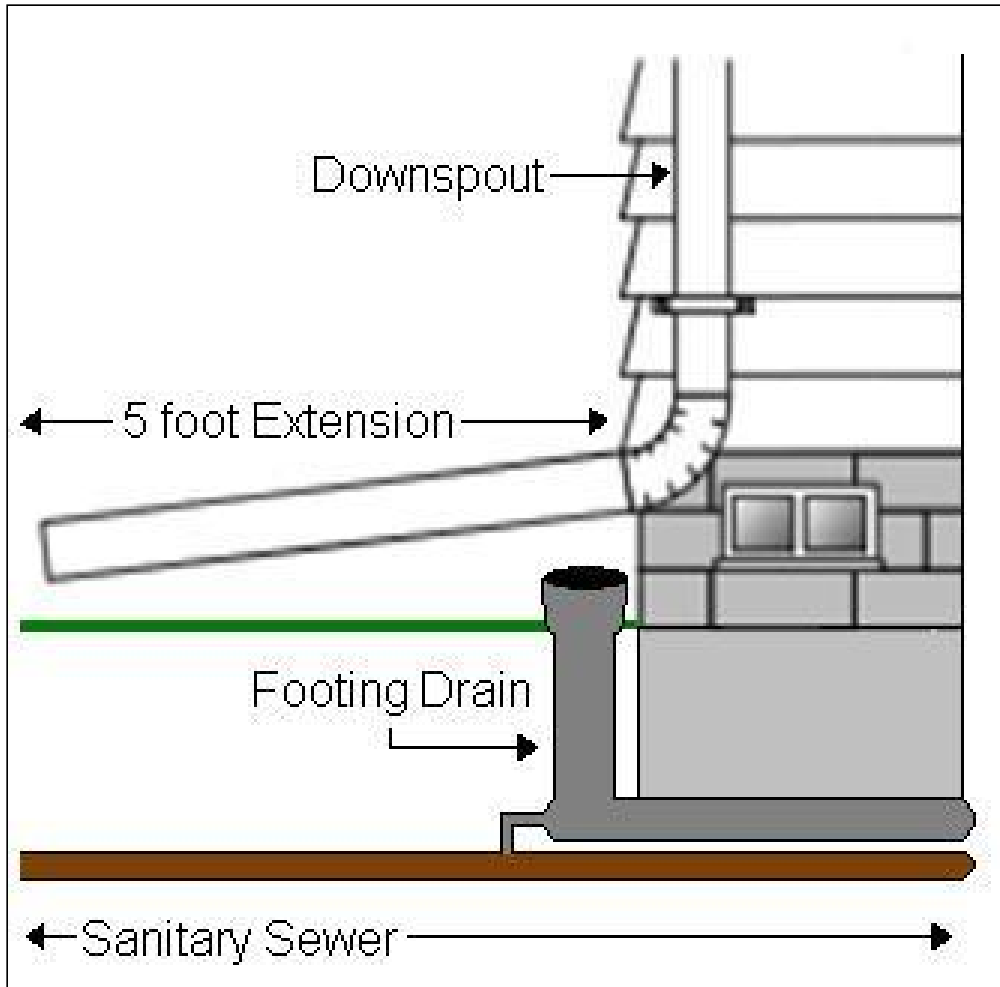
11.3 Item 3(Picture)



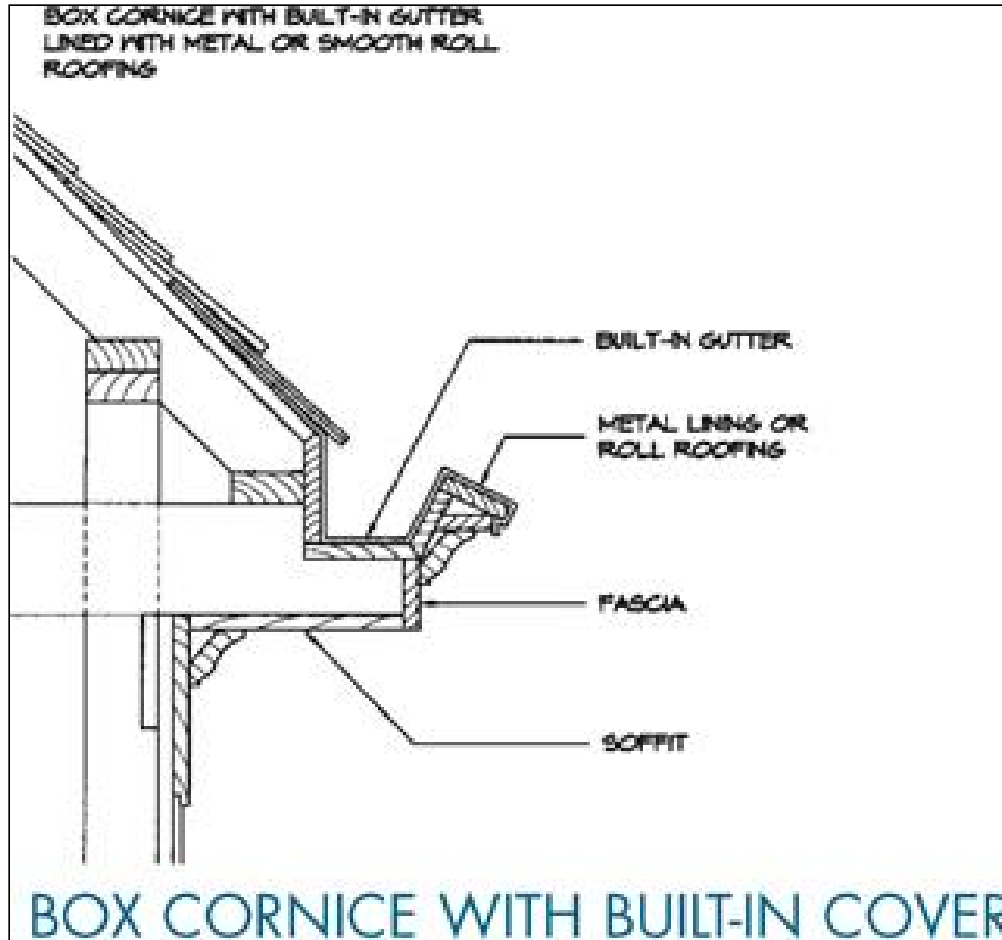
11.3 Item 4(Picture)



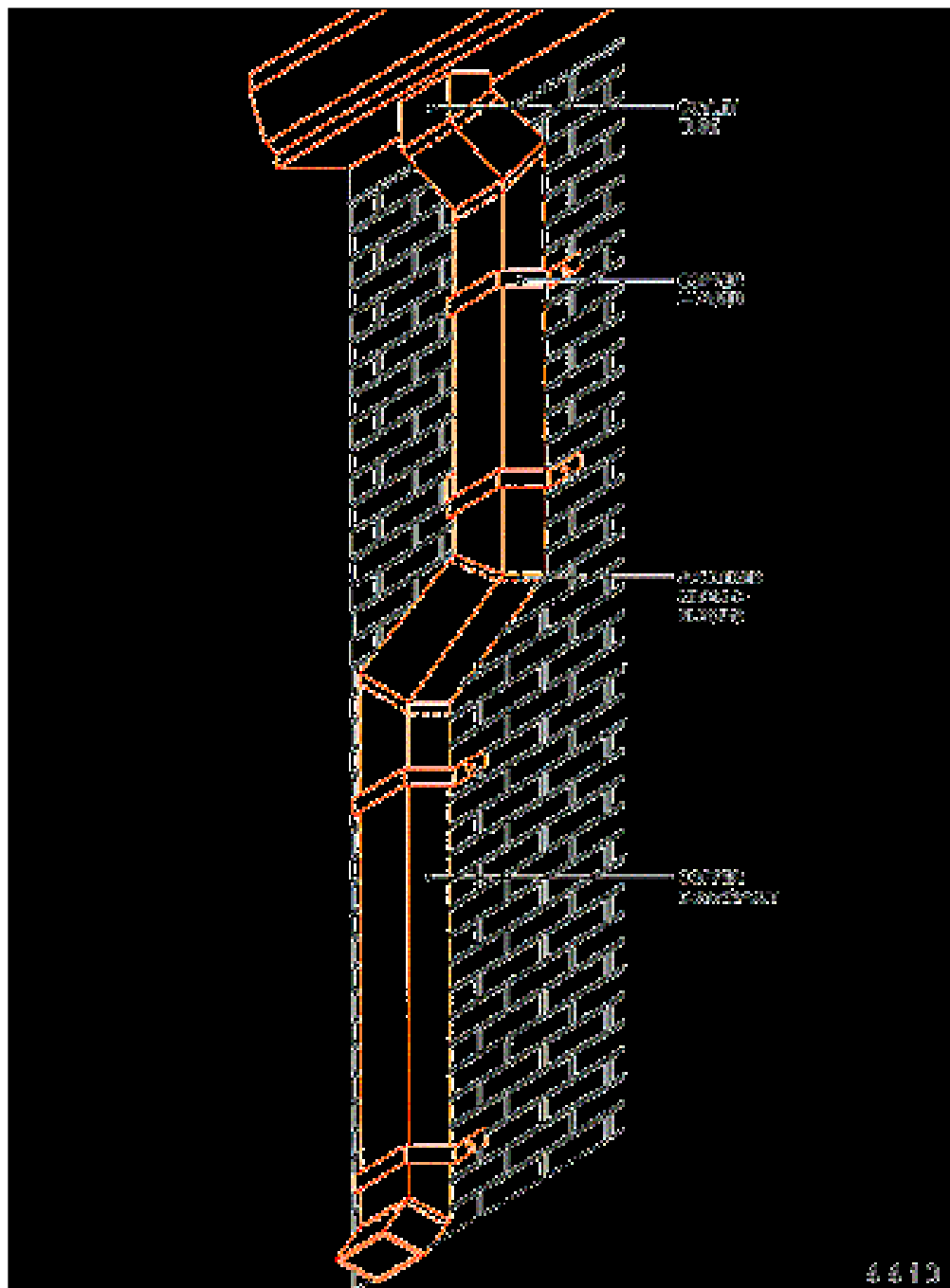
11.3 Item 5(Picture)



11.3 Item 6(Picture)



11.3 Item 7(Picture)



11.3 Item 8(Picture)

Home inspectors are not required to report on the following: Life expectancy of any component or system; The causes of the need for a repair; The methods, materials, and costs of corrections; The suitability of the property for any specialized use; Compliance or non-compliance with codes, ordinances, statutes, regulatory requirements or restrictions; The market value of the property or its marketability; The advisability or inadvisability of purchase of the property; Any component or system that was not observed; The presence or absence of pests such as wood damaging organisms, rodents, or insects; or Cosmetic items, underground items, or items not permanently installed. Home inspectors are not required to: Offer warranties or guarantees of any kind; Calculate the strength, adequacy, or efficiency of any system or component; Enter any area or perform any procedure that may damage the property or its components or be dangerous to the home inspector or other persons; Operate any system or component that is shut down or otherwise inoperable; Operate any system or component that does not respond to normal operating controls; Disturb

insulation, move personal items, panels, furniture, equipment, plant life, soil, snow, ice, or debris that obstructs access or visibility; Determine the presence or absence of any suspected adverse environmental condition or hazardous substance, including but not limited to mold, toxins, carcinogens, noise, contaminants in the building or in soil, water, and air; Determine the effectiveness of any system installed to control or remove suspected hazardous substances; Predict future condition, including but not limited to failure of components; Since this report is provided for the specific benefit of the customer(s), secondary readers of this information should hire a licensed inspector to perform an inspection to meet their specific needs and to obtain current information concerning this property.

Prepared Using HomeGauge <http://www.HomeGauge.com> : Licensed To James Canino

INVOICE

AAA Inspection Group, Inc.
 P.O. Box 3833
 Vista, CA. 92085

For Southern California Call:
 1-(877)-201-4846 Ext. 7011

For Northern California, Oregon,
 Washington, Arizona, Nevada and Texas
 Call:
 1-(877) 201-4846

Inspection Date: 7/23/2018
 Report ID: 20180723-28068-Braidwood-Dr

For Florida Call:
 1-(877) 201-4846
 Inspected By: James Canino

Customer Info:	Inspection Property:
Mike and Edis Konner Customer's Real Estate Professional: Glenn D. Thompson Coldwell Banker Wilshire Real Estate	28068 Braidwood Dr Rancho Palos Verdes CA 90275

Inspection Fee:

Service	Price	Amount	Sub-Total
Residential S.F.R. Inspection	285.00	1	285.00
Three to Four Levels SFR	100.00	1	100.00
Credit Card Administrative Fee	15.00	1	15.00
Asdbestos Test Duct Wrap	150.00	1	150.00

Tax \$0.00

Total Price \$550.00

Payment Method:
Payment Status:
Note:

AAA Inspection Group, Inc.

**P.O. Box 3833
Vista, CA. 92085**

**For Southern California Call:
1-(877)-201-4846 Ext. 7011**

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**For Florida Call:
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Report Attachments

ATTENTION: This inspection report is incomplete without reading the information included herein at these links/attachments. Note If you received a printed version of this page and did not receive a copy of the report through the internet please contact your inspector for a printed copy of the attachments.

[ASBESTOS RESULTS](#)

[Life Expectancy Chart](#)

[Inspector's Standards and Practices](#)

[Inspector Code of Ethics](#)

[How to Test Water Pressure](#)

[Plumbing Basics The How To](#)

[Go Tankless and Save](#)

[Never Draino Do This Safe Method Instead](#)

[How A Water Heater Works](#)

[Garbage Disposal Get To Know How It Works](#)

[How To Caulk The Right Way](#)

[Killing and Removing Mold](#)

[Testing Your Homes Water Pressure](#)

[Basic Electrical Projects](#)

[Shaving Cream The Many Uses To Get Stains Out](#)