

**HOME INSPECTION  
REPORT**

123 Any Street  
City, State Zip Code

Prepared for:

Our Client

Prepared by:

Criterion - McWilliam Engineers, LLC  
P.O. Box 60131  
Boulder City, NV 89006  
(702) 294-3160

Date

Inspection: 14-xxxx  
Date of Inspection:  
Engineer:



**TABLE OF CONTENTS**

EXECUTIVE SUMMARY OF FINDINGS ..... ii

SUMMARY ..... 2

INTRODUCTION ..... 2

DESCRIPTION ..... 4

STRUCTURE ..... 5

WOOD-DESTROYING INSECTS..... 6

WATER..... 6

VENTILATION..... 6

HEATING AND AIR CONDITIONING..... 7

ENERGY EFFICIENCY ..... 8

PLUMBING..... 9

ELECTRICAL ..... 11

INTERIOR ..... 12

EXTERIOR ..... 13

ROOF ..... 14

ENVIRONMENTAL SCAN..... 15

LIFE AND FIRE SAFETY..... 16

GENERAL ..... 17

SWIMMING POOL..... 18

CONCLUSION ..... 19

- APPENDIX A - MAINTENANCE PLAN
- APPENDIX B - LIST OF ABBREVIATIONS USED ON FIELD NOTES
- APPENDIX C - FIELD NOTES
- APPENDIX D - AGREEMENT FOR SERVICES



## EXECUTIVE SUMMARY OF FINDINGS

To help provide a perspective for the work that we have recommended be complete before moving into this home, we offer the following list of suggested repairs. **This list should not be considered all-inclusive since there will surely be other things you will want to make part of this list.** Please use this list in conjunction with this Report and the Maintenance Plan provided at the end of this report in Appendix A.

### Items to be addressed before moving in:

- Repair plumbing fixtures
  - The drain cleanout at the front yard is full of debris. It should be cleaned out and a permanent screw-type cap installed.
  - The gas line at the back of the house should be capped if not used.
  - There is a loop or trap in the water heater relief valve discharge piping. This can prevent proper discharge and result in an unsafe condition. The piping should be rearranged or adjusted to drain continuously downward from the water heater to the discharge point.
  - The dishwasher air gap valve is plugged.
  - The tub/shower diverter valve in the hall bathroom is not operating properly. It does not seal completely.
  
- Make electrical repairs
  - The circuit breaker for one air conditioning unit is overrated. The amperage rating should not exceed the nameplate rating.
  - There is a missing outlet cover in the sun room.
  
- Repair roofing
  - There are a few loose, slipped out of place, or cracked tiles that should be repaired.
  
- Install additional smoke alarms
- Adjust garage personnel door self-closing mechanism
- Further investigation of building permits



P.O. Box 60131  
Boulder City, NV 89006

Date

Our Client  
789 House Drive  
Las Vegas, NV 89134

Re: Home Inspection – 14-xxxx  
123 Any Street, City, State Zip code

Dear Our Client:

At your request, a structural, electrical, and mechanical inspection of the above property was performed on Date. The report that follows has been prepared based on that inspection.

This inspection was performed by and report written by David Taylor, E.I., Master Inspector, of Criterium - McWilliam Engineers, LLC. Further, this inspection was supervised by, and report reviewed by, Kevin A. Greene, P.E., of Criterium - McWilliam Engineers, LLC. For your interest, a copy of Mr. Taylor's resume is attached.

The report that follows has been prepared from the perspective of what an owner of this property would benefit from knowing. Thus, it discusses many things beyond those which are of immediate concern. Therefore, the report needs to be read in its entirety to understand fully all the information that has been obtained.

For your convenience, we have prepared the following summary of the condition of the major systems of the house. Please refer to the appropriate section of this report for a more detailed discussion of these systems.



## SUMMARY

The structural system is in good condition.

The heating/air conditioning system is operational.

The plumbing system is serviceable.

The electrical system is in good condition, but in need of some repair.

The exterior is in good condition, but in need of some repair.

The roofing is in fair condition.

The swimming pool and equipment are in good condition.

This home has been built using good quality workmanship and materials. It is generally in good condition at this time and, with attention to the items mentioned in our report, should offer many years of relatively trouble-free occupancy.

## INTRODUCTION

Our primary purpose is to provide an understanding of the house. We do, of course, look for problems, particularly those we would consider major deficiencies. Please keep in mind that we generally define a major deficiency as one that would cost approximately \$1,000.00 or more to correct. Any house will have less important items that still deserve attention. Often these are matters of personal preference. It is not the intent of our inspection to detail every lesser defect we might find.

Our inspection and report **do not include** code compliance, mold investigations, indoor air quality analysis, municipal regulatory compliance, subsurface investigation, verification of prior uses, or records research related to this building.

This inspection report is limited to observations made from visual evidence. No destructive or invasive testing was performed. The report is not to be considered a guarantee of condition and no warranty is implied.

Criterion - McWilliam Engineers, LLC, offers two types of residential inspections; the standard inspection and the comprehensive inspection. Essentially, the standard inspection relies on visual evidence available at the time of the inspection, while the comprehensive inspection relies on visual evidence plus analysis, invasive testing, and extended, on-site evaluation to reach

its conclusions. Further detail regarding these two types of inspections can be found in the Agreement for Services in Appendix D of this report.

Based on discussions prior to our inspection, you have chosen the standard visual inspection. Our inspection and the report that follows were conducted in accordance with the standards for this type of inspection.

For your reference while reading the report that follows, the following definitions may be helpful:

- Excellent* - Component or system is in "as new" condition requiring no rehabilitation and should perform in full accordance with expected performance.
- Good* - Component or system is sound and performing its function. Although it may show signs of normal wear and tear, some slight rehabilitation work may be required.
- Fair* - Component or system falls into one or more of the following categories:  
a) Evidence of previous repairs not in compliance with commonly accepted practice, b) Workmanship not in compliance with commonly accepted standards, c) Component or system is obsolete, d) Component or system approaching end of expected performance. Repair or replacement is required to prevent further deterioration or to prolong expected life.
- Poor* - Component or system has either failed or cannot be relied upon to continue performing its original function as a result of having exceeded its expected performance, excessive deferred maintenance, or state of disrepair. Present condition could contribute to or cause the deterioration of other adjoining elements or systems. Repair or replacement is required.

All ratings are determined by comparison to other buildings of similar age and construction type. Further, some details of workmanship and materials will be examined more closely in higher quality homes where such details of workmanship and materials typically become more relevant.

Attached are the inspection field notes and captioned photographs, which contain additional information. These should be considered part of the overall evaluation and report.

In addition to our discussions about the condition of the various systems and components, this report covers repairs and maintenance. To help provide a perspective for the work we have suggested for this home, a **Maintenance Plan** has been included in the Appendix A to this report.

This report is based on an examination of the major systems in this building; specifically the heating, plumbing, electrical, and structural systems. This report is an opinion about the condition of this building. It is based on visual evidence available during a diligent inspection of all reasonably accessible areas. No surface materials were removed, no destructive testing undertaken, nor furnishings moved. This report is **not** an exhaustive technical evaluation. Such an evaluation would cost many times more.

This evaluation is not a geological inspection of the site. No subsurface investigation was made and this inspection is not what might be referred to as a "soils report." We can make no determination of the prior grading activity that may or may not have occurred without more extensive research of public records or subsurface investigation. If you desire a geotechnical evaluation we can provide these services at an added fee.

Owning any building involves some risk. Even the most comprehensive inspection cannot be expected to reveal every condition you may consider relevant to your ownership. Further, without disassembling the building, not everything can be known.

You, as a responsible buyer, should examine the portions of this building for which you are most able to judge acceptability. This includes such things as floor coverings, interior wall finishes, appliances, etc.

It is our responsibility to evaluate available evidence relevant to the major systems in this building. We are not, however, responsible for conditions that could not be seen or were not within the scope of our service at the time of the inspection.

**No home is perfect.** We will be discussing many different subjects in this report as well as offering suggestions for changes and improvements to this home. As you read the report, pay particular attention to our notes regarding the fact that many of our observations and suggestions are typical of many homes we look at. Thus, while it may seem that there is some work to do during the next five to ten years, keep in mind that no home is perfect and all deserve some care, attention and upgrading.

## **DESCRIPTION**

This home is a two-story single-family residence, with stucco on the exterior walls and light-weight concrete Spanish tile roof surfacing. The house is built on a nearly level building pad on a lot that slopes to the street at the front. The home was apparently built in 1991, and is assumed to face north. In addition, there was an attached three-car garage which was included in this evaluation.

For purposes of this report, all directions (left, right, rear, etc.) are taken from the viewpoint of an observer standing in front of the building and facing it.

## STRUCTURE

The basic construction of this building is of the concrete slab foundation type. The upper-level floor joist members and roof framing are supported by interior and exterior bearing walls and beams. This is a standard method of construction. We inspected the walls, door casings, and the fit of the doors and windows for any indication that there was movement ongoing with respect to the foundation. No significant movement was noted.

Where visible, the footers are generally in good condition. There are a few cracks, which is typical for this type of foundation. When floor coverings are changed in this home, expect to find slight cracking of the concrete floor of the house, similar to that noted in the garage floor. This is common and not considered structurally significant.

Drainage of the property and surrounding area was relatively good. We mention this because poor drainage is a frequent contributor to differential movement in the Las Vegas area.

Regrading is needed on the left side of the house to lower the soil grade and eliminate soil/stucco contact. There should be at least 2 inches of exposed foundation between the bottom of the stucco and the soil.

The low overhead areas of the attic were inaccessible, and this limited the extent of our inspection.

The roof framing was inspected by entering the attic via the access panel in the hall. The roof framing in this home consists of prefabricated wood trusses. Where visible, the roof framing members are in good condition. Prefabricated trusses are common building components that are also designed for their specific use. Therefore, if you are considering renovations to this home, keep in mind that these trusses should not be modified or altered without proper design and review.

Our evaluation of much of the structure is derived from many indirect inspection observations. Since we rarely see the wall framing, we look for cracks and bulges in the finish of the walls to determine condition. It is possible that there are shortcomings with the structure of this home that will not be indicated from a visual inspection.

While we saw no visible evidence of any significant rot present in this structure, you should not assume that no rot exists in any of the inaccessible areas. Rot can result from moisture accumulating underneath the siding, behind trim, or within the wall cavities should the normal drying process be restricted by insulation or other obstacles. Therefore, it is possible that you will encounter some rot should you at any time undertake any projects that involve disassembly of the portions of this structure normally inaccessible to visual inspection. This is typical for any home.



For all practical purposes, there has been little or no settlement or movement of the house, and it can be described as structurally sound. The overall structural stability of these premises can be described as good.

Based on visible evidence, no major structural problems are expected in this building well into the foreseeable future. This, of course, assumes proper maintenance and regular inspections.

## **WOOD-DESTROYING INSECTS**

We are not providing a structural pest inspection.

## **WATER**

We found no evidence of moisture or seepage on the concrete slab. You should not assume, however, that water seepage problems cannot and will never occur. Water problems result from a number of sources under a variety of conditions.

## **VENTILATION**

Ventilation is very important for all buildings. Attic ventilation will reduce the amount of heat and moisture that can develop in insulated attics and can increase roof life by reducing heat and condensation. Good ventilation yields a healthier living environment as well, as it reduces the accumulation of offensive and/or toxic fumes and improves energy efficiency.

Attic ventilation is provided by roof and gable vents. The amount of ventilation appears to be adequate, and we found no evidence of excessive moisture in the attic. It is important that the attic ventilation be kept open and clear year-round.

All interior exhaust fans were checked and found to be operational. All exhaust fans and exhaust ductwork should be cleaned and serviced regularly.

There is no exhaust fan in the stove area of the kitchen. You may want to consider installing one.

We recommend that you consider installing an exhaust fan in the master bathroom to improve ventilation. Any such fan should be vented to the outside.

Indoor air quality is a growing concern. Mold and mildew, fostered by moisture accumulation, can lead to respiratory discomfort and aggravate allergies and other respiratory conditions for some people. While we may comment on readily visible evidence of mold infestations (refer to the "Environmental Scan" section) this inspection and report should not be

considered a mold investigation of any kind. If that type of investigation is desired, individuals specifically trained and qualified for such work should undertake it.

## **HEATING AND AIR CONDITIONING**

Two zones for heating and cooling are provided for these premises. The zones are divided between the first and second floors.

Heating and cooling for these premises is provided by two split system air conditioners and gas furnaces. A split system air conditioning/heating system consists of two basic elements: the compressor/condensing units which are located in the right side yard, and the air handler/evaporator coil/gas furnace units which are located in the garage and attic.

During the hot summer months, the compressor/condensing units, in conjunction with the evaporator coils, remove heat from the house and reject it to the outside. During the cooler winter months, the furnaces heat the inside air. For both the heating and cooling processes the air handlers circulate air through the house.

Because of the low outside temperature, the air conditioners were not run in the cooling mode since this can cause compressor damage. It was, therefore, not possible to check on their ability to deliver conditioned air to the outlets. The heating system is in operating condition, and ran satisfactorily with conditioned air reaching the various outlets.

According to the heating units' nameplates, they are rated at a total of 120,000 B.T.U.H. This should be adequate for this home.

Please be aware that the heat exchangers (which are the central and most critical part of a hot air furnace) could only be viewed to a limited extent. Those areas that were visible appeared to be serviceable. You should understand that this is a very limited examination and not a conclusive evaluation of the heat exchanger. A conclusive evaluation can only be done by a partial dismantling of the furnaces, or by a smoke test or other tests that would identify combustion products in the heated air.

In the cooling mode, these systems, when operating properly, can produce approximately a total of 6-1/2 tons of cooling. This should also be adequate for this size house.

Our visual inspection of the air conditioning system does not check for proper refrigerant charge or test for leaks in the system. Evaporator coils need cleaning and maintenance periodically. The coils should be cleaned, serviced and inspected if the owner's records do not indicate that this service has been performed within the last year.

Keep in mind that the average life of an air conditioner compressor is approximately 12 to 15 years. The air conditioner compressor/condenser units were manufactured in 1991 and 2005. You should determine from the present owner if any compressor system components have been recently repaired or replaced.

This heating and cooling equipment should be cleaned, serviced and adjusted each year prior to the start of the heating and cooling seasons. This servicing should include the compressor, burners, motor-blower units, filters, and all electrical controls and devices for starting and operating, etc.

The cleaning and/or changing of filters at least every 3 to 4 weeks in the heating and cooling seasons is strongly recommended. This will go a long way towards keeping the units running efficiently. Filters are located at the return air grills.

We noted the following specific deficiencies in the heating and air conditioning system:

- There is evidence that the attic air handler primary condensate drain is plugged. This should be investigated further, and repaired as needed.
- The condensate drain is damaged at the garage air handler.

## **ENERGY EFFICIENCY**

In any home in this climate, the three most important areas for enabling optimum energy efficiency are conduction, solar heat gain, and infiltration gains and losses. Conduction (or direct heat gain or loss through the walls and ceiling) is primarily controlled by insulation. Infiltration loss or gain (drafts or air leakage) is controlled by caulking and weather-stripping. Solar heat gain is controlled by the external shading of windows exposed to the sun or reflected sun.

In this house, the infiltration, solar heat gain, and conduction losses and gains are reasonably well controlled and no major additional work is recommended at this time.

Where visible, the attic insulation consisted of 8 to 10 inches of fiberglass batt. There are apparently 4-1/2 inches of wall insulation. This essentially conforms to present standards of heat conservation practice.

Generally, the windows in this home are standard quality "thermal pane" (double glazed) windows. If kept well maintained and tightly closed in the winter, these windows should serve you well. The seal is broken in one of the window sections in the master bedroom, and it should be repaired to reduce heat loss and to improve comfort.

This home is equipped with shade screens, which help to reduce the overall amount of solar heat gain during the summer months. These screens can be removed in the cooler winter months if desired.

The exterior doors were equipped with weather-stripping which was generally in serviceable condition. As it ages, however, it will wear and deteriorate. As this occurs, or if the weather-stripping becomes damaged, you should replace it.

We recommend the following cost effective improvements to this home to improve energy efficiency:

- Replace worn/damaged air conditioning refrigerant line insulation.
- Seal any air leaks in attic ductwork.
- Insulate water heater and exposed hot water pipes.
- Set hot water temperature to 120°F or less.

## **PLUMBING**

A plumbing system consists of three major components, the supply piping, the waste or drain piping, and the fixtures. The distribution piping brings the water to the fixture from a public water main, and the waste piping carries the water from the fixture to a public sewer line.

The distribution piping is smaller diameter piping that operates under pressure. These pipes must be water-tight. The drain or waste piping does not operate under pressure, instead typically uses gravity to drain the water from the fixture to the sewer. Thus, these pipes must slope in order to work properly.

As we understand it, this house is served by both municipal water and municipal sewer and, therefore, little problem need be anticipated in either of those areas. You should confirm these connections with the local water and sewer authorities.

You also should be aware that you are typically responsible for the cost of any repairs related to the portions of that system contained within your property lines. Clarification of this responsibility can be obtained through your local code enforcement official.

We do not operate water shut-off valves as part of our inspection because valves that have been in one position for an extended time may leak when operated. We recommend that you check the condition of the main water shut-off valve after you take possession. You should check any other valves that you may want to use.

Where visible, the plumbing distribution piping in this home is primarily copper. This system was in operating condition at the time of the inspection. However, typical corrosion was noted on several fittings, valves, or fixtures.

Water pressure in the various plumbing fixtures was normal. Most fixtures were tested and found to be in working order.

The water supply system included water softening equipment. This equipment appeared to be operational at the time of our inspection. This equipment normally serves to reduce the mineral content in the water making it "softer"; more compatible with normal, residential needs. However, we do not water test this equipment to evaluate its capability to soften the water. We suggest you discuss the proper operation and maintenance of this equipment with the current owner and obtain any maintenance records and manufacturer's information that might be available.

The drain lines in this home consisted of ABS piping. Where visible, this system was in good condition at the time of the inspection. Plastic waste lines are normally noisier than iron and this may be noticeable in rooms where the lines are located in the wall.

Domestic hot water is provided by a gas water heater. It was in operation at the time of the inspection. According to the nameplate, the water heater has a capacity of 50 gallons. Its size appears adequate for the normal needs of this size house. In general, water heaters can be expected to last 5 to 10 years. You should anticipate replacement of this water heater within the next 5 to 10 years.

The water heater should be flushed every six months or as recommended by the manufacturer to remove sediments that collect at the bottom of the tank. This is done by attaching a hose to the drain valve at the bottom of the tank and turning the valve on. When the water coming out of the hose turns clear, then the process is complete.

The underground lawn sprinkler/irrigation system was operating at the time of inspection. No excavations or diggings were made as part of this inspection; therefore, no comment can be made on the condition of buried pipes.

The following specific deficiencies were noted in the fixtures and related piping:

- The drain cleanout at the front yard is full of debris. It should be cleaned out and a permanent screw-type cap installed.
- The gas line at the back of the house should be capped if not used.
- There is a loop or trap in the water heater relief valve discharge piping. This can prevent proper discharge and result in an unsafe condition. The piping should be rearranged or adjusted to drain continuously downward from the water heater to the discharge point.

- The dishwasher air gap valve is plugged.
- The tub/shower diverter valve in the hall bathroom is not operating properly. It does not seal completely.

## **ELECTRICAL**

A typical electrical system consists of two distinct components: (1) the electric service entrance, and (2) the electric circuits. The service entrance determines the capacity of the electric power available to the home. The electric circuits distribute the power through the home.

Electrical devices in a home typically use either 120 or 240 voltage electricity. The major appliances such as clothes dryers, kitchen ranges, water heaters, air conditioners, and electric heating units require 240 volts. General-purpose circuits (lighting, outlets, etc.) require 120 volts.

The electrical system for this house consists of a three-wire service, 120/240 voltage and has an apparent 200 amperes available. It is adequate to serve the needs of this house as it now stands.

Our investigation of the electrical system is limited to the visible components, the entrance cable, meter box, service panel, outlets and switches, and the visible portions of the wiring. A larger portion of the electrical system is hidden behind walls and ceilings, and, obviously, all the conditions relating to these unseen areas cannot be known. The covers of the service panels were removed to investigate the conditions in them.

While some deficiencies in the system may be readily discernible, not all conditions that can lead to the interruption of electrical service, or that are hazardous, can be identified.

The main electric service cable comes to the house underground. This cable should be checked periodically by an electrician to be sure it is sound and in good condition. No excavation on or near the property should be done unless the electric utility has been consulted.

The main electrical panel is located in the right exterior garage wall. There is also a sub-panel located at the pool equipment. This sub-panel is controlled by a breaker in the main panel.

Where visible, the general condition of the wiring and fixtures is good. We tested a sampling of the accessible outlets for polarity and grounding. We did not disconnect appliances or move furniture to reach outlets. We found those we tested to be wired properly.

Stranded aluminum wiring has been used for major circuits (240 volts) in this house. The use of aluminum wiring in such circuits is accepted by the electrical code. We do, however, recommend that these wires and their connections be checked periodically by a licensed electrician.

This house is equipped with ground fault circuit interrupters (GFCIs) in the kitchen, bathrooms, laundry room, exterior, garage, and at the pool light circuit. The purpose of a GFCI is to provide positive protection against a shock hazard since it will “trip” almost instantaneously, thus protecting you. Should a GFCI trip, simply reset it to continue operation. Periodically, you should test the GFCI for proper operation. There are test buttons at the GFCI outlets in the kitchen, garage, and pool equipment panel. When you push the test button, the GFCI should trip to the *off* position.

Effective January 1, 2002, NFPA 70, the National Electrical Code (NEC), Section 210-12, requires that all branch circuits supplying 125V, single phase, 15- and 20- ampere outlets installed in dwelling unit bedrooms be protected by an arc fault circuit interrupter (AFCI). The 2008 edition of the NEC expanded the AFCI requirements to include essentially all branch circuits in a home. This requirement applies to new homes and major renovations. The purpose of an AFCI circuit is to detect arc faults (essentially loose wires) in electrical circuits that could cause a fire.

For improved safety, we suggest the installation of AFCI protection on the branch circuits in this home. Once installed, the operation of the AFCIs should be tested monthly, using the test button on the devices.

The following repairs to the electrical system are needed:

- The circuit breaker for one air conditioning unit is overrated. The amperage rating should not exceed the nameplate rating.
- There is a missing outlet cover in the sun room.

## **INTERIOR**

As a responsible owner, you are best able to judge the condition of the interior finish of the rooms. In this section of the report, we are concerned with those things that are technically and financially significant. For example, stains which might indicate roof or plumbing leaks, older wall or ceiling material which may require repair/replacement; the use of substandard materials on interior walls or ceilings; or the quality and condition of such items as the doors, windows, and cabinetry are those things which can affect the overall quality and condition of a home.

Generally, the interior walls and ceilings of this home are finished with drywall. Most of the cracks noted in the interior drywall appear to be the result of continued drying and shrinkage of the wood framing. This is common and to be expected in the dry desert environment of southern Nevada. Interior cracking can typically be taken care of when redecorating.

Overall, the materials used throughout the interior of this home are above average. Although normal repairs and maintenance should always be expected, the quality of the doors,

windows, cabinetry, hardware, molding, etc. used indicates that very few serious problems need to be anticipated for at least the next five to ten years.

Bathroom caulking should be inspected regularly and kept in good condition since water leaks can lead to other structural deterioration. Particularly important and often overlooked, is the joint between the tub/shower pan and the ceramic tile.

The stovetop, dishwasher, sink disposal, wall ovens, and refrigerator were in operating condition at the time of the inspection. Unless otherwise noted, none of the other appliances and/or equipment in and about these premises was tested. All that remain should be in operating condition when this property is taken over. Since the condition of this equipment can change unexpectedly, we suggest that you visit this home at least one more time before taking ownership to confirm that everything is operating properly. We have included a *Pre-Title Checklist* for your use during this final visit.

Our "test" is not an evaluation of performance but is only to verify that they "work." It is possible that timers may be defective, garbage disposals may be ineffective, thermostats may be out of calibration, and the appliance can still "pass" our abbreviated test. Appliances can fail at any time without warning. There are insurance policies available to you that may provide some protection. Your agent can supply information on this subject.

We noted the following specific deficiencies in the interior finish:

- There is no secondary latch on the patio sliding glass door.
- There is a missing stovetop control knob.
- The drywall is damaged at the master bedroom window.
- There was evidence of previous leaking at the kitchen ceiling. It appears that this was the result of plumbing leaks. We recommend repairs.

## **EXTERIOR**

The exterior walls are surfaced with stucco and are in good condition. Most of the cracks noted in the exterior stucco appear to be the result of continued drying and shrinkage of the wood framing, and seasonal temperature changes. This is common and to be expected in dry desert environments like Southern Nevada. All cracks need to be patched and sealed to prevent moisture entry when the house is next repainted.

We recommend that an exterior caulking compound be placed in the stucco cracks, around window and door frames, joints between different building materials, etc. This caulking prevents drafts and possible moisture penetration. This is not expensive and is important.



The condition of the paint on the exterior of the house is generally good, but some repainting is needed for example to the exterior wood trim. Repainting is typically needed every five to ten years. This can vary depending on the type of walls or siding, the quality of the paint used, how well the walls were prepared for repainting, the exposure to direct sunlight, the closeness of trees and bushes to the side walls, etc.

The wide ledges outside some of the windows are covered with stucco. Stucco should not be used on horizontal surfaces. It is important that these horizontal surfaces be routinely inspected and maintained to prevent water from entering the walls.

The windows in this house are aluminum framed slider, single-hung and fixed windows, with dual glass pane. They are of standard quality, and are generally in good operating order. While some maintenance and repairs will always be needed, these should be serviceable for many years to come.

Seals in thermal pane windows can break down within ten to fifteen years of their installation. Condensation developing between the panes of such a glass unit is indicative of a broken seal. These conditions are not always visible, however, depending on temperature and humidity conditions.

We noted the following specific deficiencies at the exterior:

- The stucco is damaged at one garage door.
- The exterior door at the garage is damaged and should be replaced.
- There is no dead bolt lock at the exterior garage door.
- There is a broken window in the master bedroom.

## **ROOF**

The roof is a system that must work well together to provide weather protection for the house. The major elements in this system include the roofing or roof covering, the underlayment, flashing, sheathing, and the roof framing. We have not conducted any water tests of this roof and do not know if it will leak, and we make no warranty of its condition. Our evaluation is limited to visual non-destructive testing. A complete roof inspection would require destructive testing which is not included in our standard inspection.

Due to the brittle nature of tile roofs, we examined the roof from the ground using binoculars.

The roof is surfaced with light-weight concrete Spanish tile and is in fair condition. It appears to be 23 years old and another 5 to 10 years is likely before any major resurfacing needs to be considered.

We recommend that every 5 years tile roofs be inspected and maintained by a licensed roofing contractor. The inspection should include all flashing, including any skylights, chimneys, roof vents, or other penetrations, as well as the ridges, valleys, and any wall-to-roof joints. The inspection should also look for any cracked, broken, slipped, or missing tiles; damaged mortar packed at hip points or ridges; and dried or cracked roofing cement. Any needed maintenance should be performed in conjunction with the routine roofing inspection.

This recommended maintenance appears to be due. There are a few loose, slipped out of place, or cracked tiles that should be repaired.

The ridge tiles are not sealed or packed with mortar. This is an area that allows the rain to get under the tile and a source of possible leaks. We recommend that this area be kept under observation and at the first sign of leakage, the voids under the ridge tile be sealed.

With any roof, regardless of age, you should expect slight leakage from time to time. This can occur along the edges of the roof, at joints between different roof surfaces, and around penetrations through the roof. Normally, repairs to correct this leakage are easily accomplished.

## **ENVIRONMENTAL SCAN**

While some references to hazardous materials may be made, our report is not a complete investigation for toxic wastes in the building or adjacent soils, hazardous materials, or public records affecting this property. Such an investigation would be much more costly and is beyond the scope of this inspection.

Essentially, there is no evidence of any hazardous construction materials in this building. This, of course, cannot be guaranteed based on visible evidence alone.

Mold is a growing concern. For some individuals, the presence of mold may aggravate certain respiratory conditions, and, for still a smaller group, may actually be toxic. Organizations like the Environmental Protection Agency (EPA) and the Centers for Disease Control (CDC) have not established any levels considered to be safe or unsafe for mold. This is not for lack of trying; it is a matter of complexity. If you find mold, it often can be removed effectively using a chlorine solution (e.g. diluted Clorox) and then monitoring the area to determine if it returns. Mold is usually the result of moisture. Controlling moisture penetration will typically eliminate the opportunity for mold to survive. For more information about mold, you might want to consider visiting one or more of the following websites:

- [www.iaqa.com](http://www.iaqa.com)
- [www.epa.gov/iaw/mold/index.html](http://www.epa.gov/iaw/mold/index.html)
- [www.cdc.gov](http://www.cdc.gov) (search on mold)

We found no readily visible evidence of mold during our inspection. Further, we noted no visible evidence of significant moisture accumulation or penetration. However, this inspection should not be considered a specific mold investigation.

Our inspection does not make any attempt to know or verify the prior uses of this property and cannot determine whether or not illegal activities have been engaged in, on, or near the property, including but not limited to, the use or manufacture of illegal substances, criminal events, or the presence of substances banned or controlled by federal, state, or local law. If this is of concern to you, we recommend that you make appropriate inquiries into past uses to resolve your concerns.

## **LIFE AND FIRE SAFETY**

While some references to code compliance may be made, our report is not a code compliance investigation. Such an investigation is beyond the scope of this inspection.

A limited investigation of the fireplaces was undertaken, and, to the extent visible, the fireplaces appeared to be in satisfactory condition. Each was equipped with a flue damper which was operating properly. Because there is a gas log installed in these fireplaces, a block is installed on the flue dampers. This prevents the flue from closing completely, thereby maintaining constant ventilation.

Where visible, the metal chimneys appear to be in good condition and structurally stable. Where possible, the interior of these chimneys was examined and found to be sound. You should be aware, however, that our interior examination of the flues is very limited, and that a comprehensive examination can only be made by a qualified and fully-equipped chimney sweep.

There were few smoke alarms in this house. We strongly recommend the installation of additional units, especially in sleeping areas. Further, we suggest installing hard-wired smoke alarms (connected directly to the electrical system) rather than battery powered smoke alarms since they will provide more dependable, long-term service.

There is also a security/fire alarm system in this home. Exactly how well this system is functioning, who has ownership, and what areas it serves are not known at this time. We suggest that you spend some time with the current owner to further understand the operation and ownership of this system and, if possible, to obtain all manufacturer's literature. Also, keep in mind that most of these systems do require regular maintenance to assure proper and dependable operation.

Carbon monoxide can be a by-product of burning oils, natural gasses and other fuels. It is also odorless and colorless, which means that it can go undetected. The symptoms of carbon monoxide poisoning can be easily mistaken for influenza or other common illnesses.

- Automobiles or lawn equipment running in a garage
- Gas, oil or kerosene space heaters
- Gas furnaces, water heaters, ovens, clothes dryers and other gas appliances
- Wood-burning stoves or fireplaces
- Outdoor gas grills leaking fumes into an open window or door
- Charcoal broilers

Proper maintenance of all equipment, including related flues or vents, that use burning oils, natural gasses or other fuels is still the best way to avoid carbon monoxide poisoning.

There were no carbon monoxide detectors installed in this house. We recommend that one be installed near each bedroom in the house.

The garage wall separating the garage from the adjacent living space is equipped with fire-rated sheetrock to isolate these two spaces. The door leading from the house into the garage is equipped with a self-closing mechanism which shuts the door automatically. This device is in need of adjustment.

## **GENERAL**

The following are a few additional comments that may be of interest to you regarding this home:

The porches and patio were generally in good condition with no serious structural problems indicated.

The garage portion of the structure is generally sound. It appears to be built to the same standards as the house and is in good condition. If properly maintained, this portion of the building should remain serviceable for many years to come.

The overhead garage doors are equipped with electric door operators which operated satisfactorily at the inspection. The operators are equipped with a mechanism to reverse the travel of the doors if an object is struck by the door. Despite the presence of this feature, we recommend that you only operate the doors when you have them in full view and all children and pets are a safe distance away.

The trees and shrubs around this house are too close. This can cause premature deterioration of the roof, paint, and stucco. These should be trimmed to provide several inches clearance from the roof and sidewalls.

The land around this home is desert landscaped. We did not evaluate the health and condition of any plantings. You may want to obtain the services of a professional landscaper or nurseryman to determine the condition and maintenance required to protect these plantings.

It appears that the sun room of this home has been added. Such work normally requires that a building permit be issued and the work inspected by your municipality. We recommend that you confirm that the appropriate permits were issued and inspections performed by the local building department.

## **SWIMMING POOL**

The swimming pool consists of an in-ground concrete with plaster pool surrounded by a concrete Kool deck. It is served by a cartridge filtering system. In addition, it has the following equipment:

- Pool light, which was operating
- Pool sweep, which was operating
- An automated fabric cover, which was operating
- Skimmer basket and weir door, which were functional
- Automatic leveling device, which was operating
- Time clock(s), which appeared to be operational

The swimming pool and its related equipment were in operation and appear to be in good condition.

The pool plaster was visible during the inspection from above the water line and appears to be in good condition.

The waterline tile was intact and in good condition except for a liming condition (white scale) above and along the waterline.

The pool decking appeared to be in good condition except for a few hairline cracks, which are to be expected.

Our inspection of the in-ground pool does not include any subsurface investigation or testing of underground piping systems. This inspection should not be considered a certification of the pool as that would require a more extensive inspection. Our pool inspection is limited to those portions above the water line. A complete structural inspection of the pool would require draining the pool.

Our "test" is not an evaluation of performance but is only to verify that the equipment "works." It is possible that time clocks may be defective, thermostats may be out of calibration,

etc., and the equipment can still "pass" our abbreviated test. Equipment can fail at any time without warning. There are insurance policies available to you that may provide some protection. Your agent can supply information on this subject.

You should note that while there is a fence surrounding the backyard there is no fence around the pool area itself. This allows for unwanted entry into the pool by individuals who need close supervision, especially small children.

The gate leading to the backyard is an oversized type for purposes of allowing a vehicle or boat to pass through. Since these gates are not used very often the installation of a self-closing and self-latching mechanism may prove to be impractical but we still recommend its installation. Also, the gate should be permanently locked and only unlocked when passage is needed. The idea is to prevent unwanted entry into the pool area by children at all times.

## CONCLUSION

In summary, we consider this home to be in good condition in comparison to others of similar age and construction type. While there is work to do, most of it is maintenance related and, thus, is common for most homes.

In general, keep in mind that many of the suggestions we make in this report represent improvements to this home rather than deficiencies. Thus, much of the work we suggest can be handled as time, finances and personal preference dictate. Owning any home can be overwhelming. Thus, keep in mind that not all of the things we recommend must be done immediately.

There is no one way to build, renovate or remodel a home. As a result, you may encounter contractors whose opinions about the condition of this home will differ from ours. We cannot be responsible for any action you may take based on those opinions unless we have the opportunity to review the situation and examine the relevant conditions before any repairs and/or modifications are made.

Additional data concerning this home are noted on the enclosed field notes and photographs. To aid in your understanding of the field notes, we have enclosed a listing of the standard abbreviations that we have used.

This report has been prepared in strict confidence with you as our client. This report is valid for the real estate transaction between our client and the current owner. No reproduction or re-use of this report for the benefit of others is permitted without expressed written consent. As you requested, we have provided a copy of this report to your agent. We will not release this report to anyone else without your permission.

We have also enclosed a ***Glossary*** to help you understand some of the technical terms that are used in this report or in discussions about homes and their component parts.

As noted, the inspection represented by our report focuses on the major systems in this home. While a spot check of things like electrical switches, outlets, appliances and other equipment was made, the condition of these things can change unexpectedly. Therefore, we recommend that you visit this home at least one more time before taking ownership to confirm that everything is in operating order. Enclosed is a ***Pre-Title Checklist*** we have developed for your use during this final visit.

If you have any questions about this report or inspection, please feel free to call our engineer for clarification. There is no additional charge for a reasonable number of phone consultations. Should an additional visit to the home be necessary, however, an additional fee will be charged.

Thank you for the opportunity to be of assistance to you.

Criterion - McWilliam Engineers, LLC

DT/eas

## **PROFESSIONAL QUALIFICATIONS AND EXPERIENCE**

### **DAVID TAYLOR, E.I.**

#### **Area of Expertise**

David Taylor is an engineer with Criterium - McWilliam Engineers, LLC. He has gained experience in the construction industry through his work with major development projects and recent quality evaluations. David has reviewed over 4,000 single-family homes and high-rise condominiums during construction since 2005, and has been responsible for evaluation of existing and new residential construction. As well as doing residential home inspections, David has also done commercial inspections since he began working with this firm in 2005.

#### **Qualifications**

David is a degreed Mechanical Engineer. He has worked with various construction regimens since entering the engineering field in 1983. David was mentored on home inspections by Charles "Chay" McWilliam, P.E., Master Inspector, and earned his State Residential Inspector of Structures License in 2007 and his Inspector of Structures General License in 2012. David having met all the requirements set by the State of Nevada Real Estate Division earned his Master Inspector of Structures License in 2013.

#### **Education**

Mr. Taylor earned his Mechanical Engineering Degree from Virginia Polytechnic Institute in 1983. He has been involved with the Las Vegas construction industry since January 2005. David also has an E.I.F.S. Certification with American Wall Ceiling Institute.



## APPENDIX A

### MAINTENANCE PLAN

Prepared for: Our Client  
Property: 123 Any Street, City, State, Zip code

To help provide a perspective for the work that we have recommended for this home, the following schematic maintenance plan is offered. This list should not be considered all-inclusive since there will surely be other things you will want to make part of this list. Our purpose in providing this list is to help you organize some of the work that we have recommended, with particular emphasis on those things that need attention within the next year or so.

#### Items to be addressed before moving in:

- Repair plumbing fixtures
  - The drain cleanout at the front yard is full of debris. It should be cleaned out and a permanent screw-type cap installed.
  - The gas line at the back of the house should be capped if not used.
  - There is a loop or trap in the water heater relief valve discharge piping. This can prevent proper discharge and result in an unsafe condition. The piping should be rearranged or adjusted to drain continuously downward from the water heater to the discharge point.
  - The dishwasher air gap valve is plugged.
  - The tub/shower diverter valve in the hall bathroom is not operating properly. It does not seal completely.
- Make electrical repairs
  - The circuit breaker for one air conditioning unit is overrated. The amperage rating should not exceed the nameplate rating.
  - There is a missing outlet cover in the sun room.
- Repair roofing
  - There are a few loose, slipped out of place, or cracked tiles that should be repaired.
- Install additional smoke alarms
- Adjust garage personnel door self-closing mechanism
- Further investigation of building permits

## **Routine maintenance/improvement items:**

Within the first few months:

- Lower soil level at sill plates/footer
- Maintain heating/air conditioning equipment
  - There is evidence that the attic air handler primary condensate drain is plugged. This should be investigated further, and repaired as needed.
  - The condensate drain is damaged at the garage air handler.
- Make interior repairs
  - There is no secondary latch on the patio sliding glass door.
  - There is a missing stovetop control knob.
  - The drywall is damaged at the master bedroom window.
  - There was evidence of previous leaking at the kitchen ceiling. It appears that this was the result of plumbing leaks. We recommend repairs.
- Repair exterior
  - The stucco is damaged at one garage door.
  - The exterior door at the garage is damaged and should be replaced.
  - There is no dead bolt lock at the exterior garage door.
  - There is a broken window in the master bedroom.

Within the first year of ownership:

- Possibly replace heating/air conditioning equipment
- Make energy efficiency improvements
  - Replace worn/damaged air conditioning refrigerant line insulation.
  - Seal any air leaks in attic ductwork.
  - Insulate water heater and exposed hot water pipes.
  - Set hot water temperature to 120°F or less.
- Install kitchen and bathroom exhaust fans, vented to exterior
- Install AFCIs
- Install caulking at the exterior
- Paint the exterior trim

- Install carbon monoxide detectors
- Trim trees and shrubs

Within the first five years of ownership:

- Possibly replace water heater
- Install caulking at the exterior
- Paint the exterior sidewall and trim
- Maintain roofing

Within the first ten years of ownership:

- Install caulking at the exterior
- Paint the exterior trim
- Possibly resurface roof

Annual maintenance requirements:

- Continue annual heating/air conditioning equipment maintenance
- Maintain irrigation system
- Test GFCIs
- Test AFCIs (if installed as recommended)
- Test smoke alarms
- Test carbon monoxide detectors
- Maintain the swimming pool and equipment
- Continue general maintenance

**Location:**  
123 Any Street  
City, State

**Photo Taken by:**  
David Taylor, E.I.

**Date:**  
March 24, 2014



**Description:**

The front view of the house.

**Photo Number**

**1**



**Description:**

The soil is in contact with the stucco on the left side.

**Photo Number**

**2**

**Location:**  
123 Any Street  
City, State

**Photo Taken by:**  
David Taylor, E.I.

**Date:**  
March 24, 2014



**Description:**

The primary condensate drain line in the attic is plugged.

**Photo Number**  
**3**



**Description:**

The primary condensate drain line in the attic is plugged.

**Photo Number**  
**4**

**Location:**  
123 Any Street  
City, State

**Photo Taken by:**  
David Taylor, E.I.

**Date:**  
March 24, 2014



**Description:**

The condensate drain line is damaged at the garage air handler.

**Photo Number**  
**5**



**Description:**

The insulation is worn on the AC pipes.

**Photo Number**  
**6**

**Location:**  
123 Any Street  
City, State

**Photo Taken by:**  
David Taylor, E.I.

**Date:**  
March 24, 2014



**Description:**

The insulation is worn on the AC pipes.

**Photo Number**  
**7**



**Description:**

The clean-out at the front of the house should have a permanent screw top cap.

**Photo Number**  
**8**

**Location:**  
123 Any Street  
City, State

**Photo Taken by:**  
David Taylor, E.I.

**Date:**  
March 24, 2014

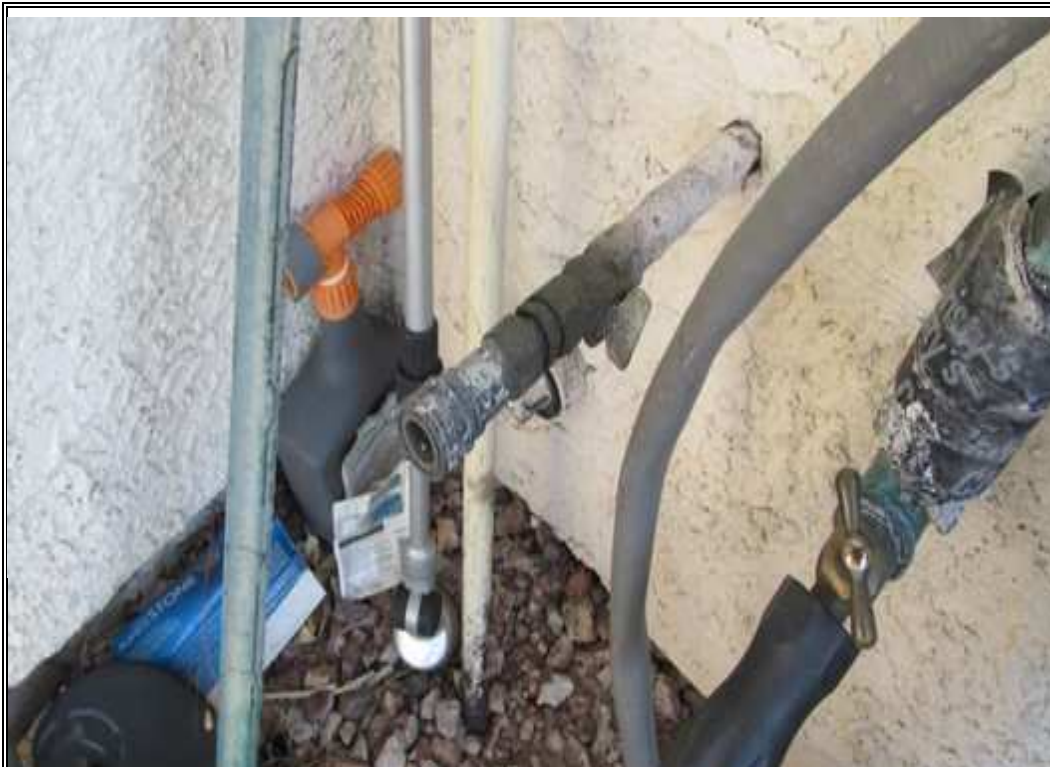


**Description:**

The debris should be removed from the drain clean-out.

**Photo Number**

**9**



**Description:**

The gas line at the back of the house should be capped if not in use.

**Photo Number**

**10**



**Location:**  
123 Any Street  
City, State

**Photo Taken by:**  
David Taylor, E.I.

**Date:**  
March 24, 2014



**Description:**

The drain line for the water heater safety valve is trapped. It should flow downward continuously.

**Photo Number**  
**11**



**Description:**

There is a missing outlet cover in the sunroom.

**Photo Number**  
**12**

**Location:**  
123 Any Street  
City, State

**Photo Taken by:**  
David Taylor, E.I.

**Date:**  
March 24, 2014



**Description:**

A control knob is missing from the stove top.

**Photo Number**  
**13**



**Description:**

The dry wall is damaged at the master bedroom window.

**Photo Number**  
**14**

**Location:**  
123 Any Street  
City, State

**Photo Taken by:**  
David Taylor, E.I.

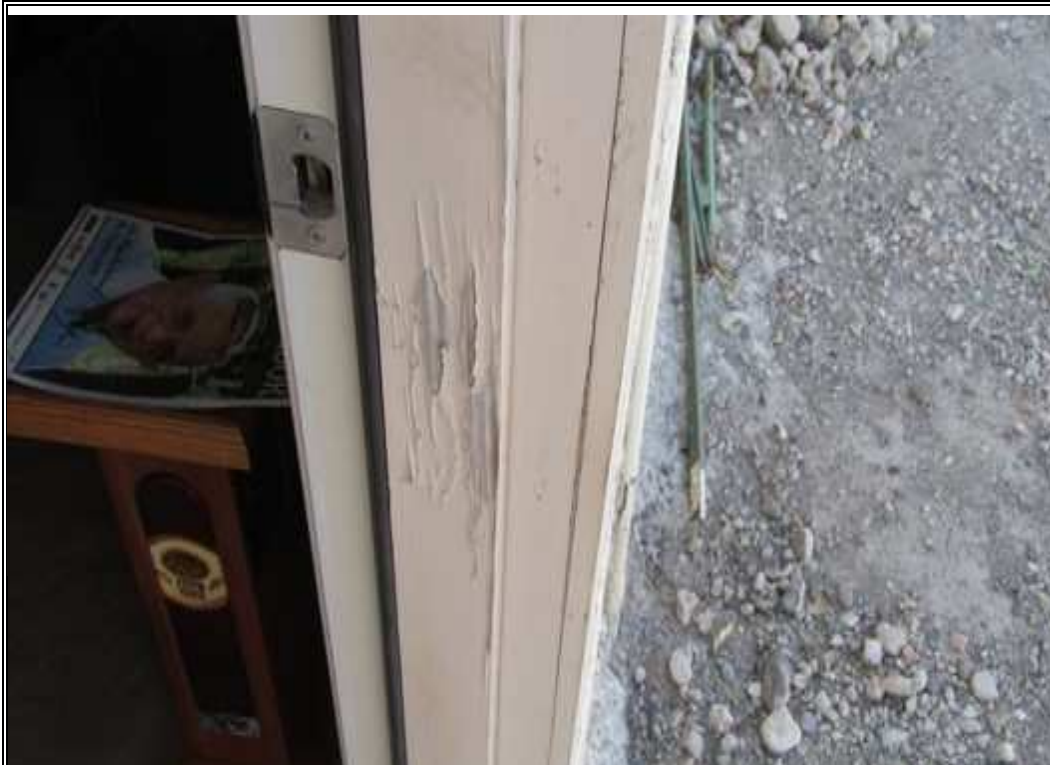
**Date:**  
March 24, 2014



**Description:**

There is water damage at the kitchen ceiling.

**Photo Number**  
**15**



**Description:**

The exterior trim paint is worn.

**Photo Number**  
**16**

**Location:**  
123 Any Street  
City, State

**Photo Taken by:**  
David Taylor, E.I.

**Date:**  
March 24, 2014



**Description:**

There are cracks in the stucco at the pot shelf ledges.

**Photo Number**  
**17**



**Description:**

The stucco is damaged at one garage door.

**Photo Number**  
**18**

**Location:**  
123 Any Street  
City, State

**Photo Taken by:**  
David Taylor, E.I.

**Date:**  
March 24, 2014



**Description:**

The exterior door at the garage is damaged.

**Photo Number**  
**19**



**Description:**

There is no dead bolt lock at the exterior garage door.

**Photo Number**  
**20**

**Location:**  
123 Any Street  
City, State

**Photo Taken by:**  
David Taylor, E.I.

**Date:**  
March 24, 2014



**Description:**

There is a cracked window in the master bedroom.

**Photo Number**  
**21**



**Description:**

There is a missing roof edge tile.

**Photo Number**  
**22**

**Location:**  
123 Any Street  
City, State

**Photo Taken by:**  
David Taylor, E.I.

**Date:**  
March 24, 2014



**Description:**

The shrubs and trees should be trimmed away from the stucco and roof.

**Photo Number**  
**23**



**Description:**

The shrubs and trees should be trimmed away from the stucco and roof.

**Photo Number**  
**24**

## APPENDIX B

### ABBREVIATIONS USED IN THE FIELD NOTES

<i>WALLS</i>		PMP	Pump	<i>CEILING</i>	
WS	Wood siding	FAN	Blower/fan	PL	Plaster
CLAP	Clapboard	TPRV	Temperature/pressure relief valve	DW	Drywall, gypsum board, sheetrock
CS	Cedar shingle			PT	Painted
ASB	Asbestos	PRV	Pressure relief valve	PP	Papered
STCO	Stucco	ASV	Automatic shutoff valve	WP	Wall paper
ST	Stone			AC	Acoustic tile
AL	Aluminum	<i>COOLING</i>		AT	Acoustic tile
VNL	Vinyl	EVAP	Evaporative coil/cooler	PAN	Panelled
BLK	Block	COND	Condensing unit	WD	Wood
BRK	Brick	REF	Refrigerant	TL	Tile
SB	Slump block	RL	Refrigerant line		
VN	Veneer	AH	Air handler		
PLY	Plywood	FAN	Blower/fan		
T111	Texture 1-11				
HB	Hardboard	<i>PIPING</i>			
<i>ROOF</i>		CPR	Copper	<i>WINDOWS</i>	
A/F	Asphalt/fiberglass	CU	Copper	SP	Single pane
CS	Cedar shakes/shingles	GALV	Galvanized steel	1P	Single pane
SL	Slate	CI	Iron	DB	Double (thermal) pane
ASB	Asbestos	BR	Brass	2P	Double (thermal) pane
T&G	Tar and gravel	LD	Lead	IG	Insulating glass
BF	Bituminous felt	PB	Lead	DH	Double hung
RR	Roll roofing	PVC	Polyvinyl Chloride	CSMT	Casement
MTL	Metal	CPVC	Chlorinated polyvinyl chloride	SL	Slider
SS	Standing seam			F	Fixed
BU	Built-up	PBS	Polybutylene styrene	AWN	Awning
MB	Modified bitumen	ABS	Acrylonitrile butadiene styrene	JAL	Jalousie
TD	Torched down				
MEMB	Membrane	<i>ELECTRICAL</i>			
<i>GUTTERS/LEADERS</i>		GFCI	Ground fault circuit interrupter		
CPR	Copper	GFI	Ground fault interrupter		
AL	Aluminum	V	Voltage, volts		
GALV	Galvanized steel	A	Amperage, amps		
WD	Wood	CPR	Copper		
VNL	Vinyl	CU	Copper		
<i>HEATING</i>		AL	Aluminum		
O	Oil	R	Receptacle, outlet		
G	Gas	SW	Switch		
E	Electric resistance	KAT	Knob and tube		
HP	Heat Pump	BX	BX (metal-clad) wiring		
HW	Hot water				
HA	Hot Air	<i>INTERIOR WALLS</i>			
ST	Steam	PL	Plaster		
F	Forced	DW	Drywall, gypsum board, sheetrock		
G	Gravity	PT	Painted		
RAD	Radiator	PP	Papered		
CONV	Convactor	WP	Wall paper		
GR	Grill	PAN	Panelled		
BB	Baseboard	WD	Wood		
RH	Radiant heat	TL	Tile		
PR	Pipe riser				
RA	Return air				



**APPENDIX C**

*Field Notes*

INSPECTION FIELD NOTES

Page 1 of 9

Client Our client Date 3/24/14 Location 123 Any Street
Address Along Y N City state ZIP
Weather CCA Type/Stories 2/5P/NOO
Engineer DAVID TAYLOR Approximate Age 1991

KEY

E = Excellent, G = Good, F = Fair, P = Poor, S = Serviceable, NS = Not Serviceable, NA = Not Applicable
NV = Not Visible, O = Operating, NO = Not Operating, A = Average, BA = Below Average, AA = Above Average
UK = Unknown, NI = Needs Investigation, (\*) = See Report for More Detail

CONDITION

1.0 EXTERIOR

POISSANT

1.1 Exterior Walls: Material/Type Stone
Trim Stone
Caulking GO Pointing NA Other NA
Paint/Stain: Walls GO Trim FA

1.2 Roof: Material/Type W/C SHALU Exp. Life 5-10
Flashing GO
Eaves/Soffits/Fascias GO
Penetrations/Skylights NA
Gutters/Leaders/Downspouts: NA

NOTSASH

SOGR

1.3 Windows: Material/Type Aluminum
Stormsash: None X Not All Material/Type

1.4 Doors: Material/Type METAL W/7
Storm Doors: None X Not All Material/Type

1.5 Grounds: Slope FROM Low Spots NY
Drainage Systems GO
Sprinkler Systems/Hose Bibbs GO / GO
Retaining Walls NA
Driveways/Walkways/Entryway GO
Fences/Gates GO / GO
Shrubs/Plantings (CROSS)

1.6 Decks/Porches/Balconies/Patios:
Type FROM BALU
Material WOODEN WOODEN
Condition GO GO
Railings & Safety NA NA

1.7 Chimney: No./Location
Material/Type/Use
Clearance/Height
Weathertightness
Lining:

1.8 Utilities: Gas Meter/Piping P/SIDE
Elec. Entrance Over/Under Ground P/SIDE Ext. Wiring NA

NOTE: These inspection field notes are used to collect field data and should be considered only in conjunction with your narrative report.

Client our client

Date 3/24/2014

Page 2 of 9

2.0 STRUCTURAL

CONDITION

2.1 Basement/Crawl Space:

Accessible Y N Partial \_\_\_\_\_

Basement Finished Y N Partial \_\_\_\_\_

Walls/Footings/Piers: Material/Type \_\_\_\_\_ Cracks Y N NV \_\_\_\_\_

Bulging/Distortion: Y N NV \_\_\_\_\_

Floor/Slab: Material \_\_\_\_\_ Cracks Y N NV \_\_\_\_\_

Columns: Material/Type \_\_\_\_\_

Girders: Material/Type \_\_\_\_\_

Floor Joists: Material/Type \_\_\_\_\_

Vapor Barrier Y N NV \_\_\_\_\_

Moisture/Water: Y N NV \_\_\_\_\_

Sump Pump Y N Number \_\_\_\_\_ Discharge \_\_\_\_\_

Doors/Access \_\_\_\_\_

Windows/Vents \_\_\_\_\_

2.2 Attic: Accessible Y N Partial

Roof Rafters: Material/Type 2x4

Floor Joists: Material/Type NV

Flooring PARQUET

Leaks/Weathertightness GD

2.3 Other Framing:

Walls NV

Special Structural Systems: NA

2.4 Ventilation

Basement/Crawl Space NA

Attic POP/CASHE

Mechanical Ventilation BATH LAMPS

2.5 Energy Efficiency

Basement Insulation Y N NV Material/Type NA Approx. Amt. \_\_\_\_\_

Floor/Slab Insulation Y N NV Material/Type NA Approx. Amt. \_\_\_\_\_

Wall Insulation Y N NV Material/Type \_\_\_\_\_ Approx. Amt. 4 1/2

Attic Insulation Y NV Material/Type POP Approx. Amt. ETC

Caulking/Weatherstripping Y N NV Material/Type TD

2.6 Wood Boring Insects and Rot:

Evidence of Rot or Other Problems Y NV

Evidence of Termites or Other insects Y NV

**CONDITION** **3.0 AIR CONDITIONING & HEATING SYSTEMS**

3.1 System: A/C: INT Furnace: TRMSTA Heat Pump: \_\_\_\_\_  
 Mfr: KA245 Model No. ED533 Capacity 4 Location PA  
 Mfr: \_\_\_\_\_ Model No. \_\_\_\_\_ Capacity 75,000 Location GA  
 Operating:  Y  N DRN DRN

3.2 System: A/C: RWD Furnace: RWD Heat Pump: \_\_\_\_\_  
 Mfr: UN3030 Model No. 999 Capacity 212 Location PA  
 Mfr: \_\_\_\_\_ Model No. \_\_\_\_\_ Capacity 45000 Location PA  
 Operating:  Y  N

Heat Exchangers: Gas GO Air Handler GO  
 Condenser Pad GO Air Handler Platform GO  
 Refrigerant Line Insulation Typ Condition GOOD  
 Ducts GO Combustion Air GO  
 Air Filters GO Location PA  
 Air Flow GO Temperature GO  
 Gas Line GO Vent Pipe GO  
 Condensate Line GO (DRN) Pump NO Secondary Sump GO

3.3 Evaporative Cooler: Location \_\_\_\_\_ Sump/Panel Condition \_\_\_\_\_  
 Media NO Recirculating Pump \_\_\_\_\_ Fan \_\_\_\_\_  
 Electrical Wiring/Ground \_\_\_\_\_ Damper: Manual Barometric \_\_\_\_\_

**4.0 PLUMBING SYSTEM**

4.1 Water Supply: PUBLIC Pump Type NA Controls/Backflow SYNCH  
 Piping COPR Pressure GO Water Treatment SA Y

4.2 Supply Piping: COPR Support NV Installation NV  
 Conditions Typ

4.3 Waste Disposal: PUBLIC Septic Tank NA Absorption Field NA  
 Drain/Waste Lines ABS Installation/Venting AGD  
 Conditions Typ

4.4 Water Heater: Separate Unit - Integral Heat Exchanger - Separate Heat Exchanger NA  
 Electric / Oil / Solar / Gas GO Insulation/Timer NA Load Controller NA  
 Pressure Relief Valve/Drain TRM Mixing Valve NA  
TRM / 40000 / 2013

**5.0 ELECTRICAL SYSTEM**

5.1 Electric Service: Amps 200 Voltage 120/240 Load Controller NA  
 Entrance Panel GO Main  Y  NV GO Grounding GO Brks/Fuses GO  
 No. Circuits 31 Circuits I.D. GO Circuits Overfused GO  
 Wiring: GO Alum  Y  NV  
BGA WIR 3 APOL

**6.0 SECURITY**

6.1 Alarm System  Y  N  NV NO TEST  
 Window Locks  Y  N Partial \_\_\_\_\_ Door Locks  Y  N Partial \_\_\_\_\_

Client Our client

Date 3/24/2014

Page 4 of 11

**CONDITION**

**7.0 ENVIRONMENTAL SCAN**

NOTE: Limited Scan, Based on Available Visual Evidence Only, of Certain Known Hazardous Materials

Q 7.1 Hazardous Materials:

Evidence of Asbestos Y NV Location/Condition \_\_\_\_\_

Evidence of UFFI Y NV \_\_\_\_\_

Evidence of UST Y NV \_\_\_\_\_

Other \_\_\_\_\_

Further Investigation Required Y OPTIONAL

**8.0 SAFETY**

X 8.1 Smoke Alarms: Type NA Operating Y N \_\_\_\_\_

Location: NA (MBS)

8.2 Other: Glass GO

Woodstoves/Fireplaces GAS

Fire Sprinkler NA

Emergency Egress GO

Handrails/Stairs Q

Evidence of animal/rodent infestations NA

Site Hazards STAIN / POOL

**9.0 POOLS AND WHIRLPOOL BATHS** (Supplementary Check Sheet May Apply)

See Page 5

9.1 Swimming Pools: Lining \_\_\_\_\_ Filters & Equipment \_\_\_\_\_

Decking/Apron \_\_\_\_\_ Safety \_\_\_\_\_

9.2 Whirlpool Baths: Location/Type \_\_\_\_\_

Installation/Ventilation \_\_\_\_\_

**10.0 GARAGES & OUTBUILDINGS**

Q 10.1 Garages & Outbuildings: 3(A)

Type APPOLAND

Foundation CONCRETE

Walls DU-P1

Roof DU-P1

Rot or Insect Activity Y NV

Elec. Gar. Dr. Opener Y N With Auto Rev. Y N

X (ASC)

**OPTIONAL SECTION**

**SUMMARY**

**PRIORITY ITEMS**

- Overall Current Condition is: \_\_\_\_\_ 1. \_\_\_\_\_
- Overall Maintenance Has Been: \_\_\_\_\_ 2. \_\_\_\_\_
- General Quality: \_\_\_\_\_ 3. \_\_\_\_\_
- Restrictions or Obstructions to Inspection: Y N \_\_\_\_\_ 4. \_\_\_\_\_
- Investigate Inaccessible Areas: \_\_\_\_\_ 5. \_\_\_\_\_

**11.A ROOMS WITH PLUMBING**

**CONDITION**

9 11.A Room: Location Laundry Cabinets/Hardware WOOD

Ceiling: Material DW Finish PT Cracks Typ Leaks NV

Walls: Material DW Finish PT Cracks Typ Leaks NV

Floor: Material COM Finish TL Slope Typ

Windows: Material/Type NA Operation NT W'Strip A

Cords/Panes/Seals/Screens NA CAULK

Doors: Material/Type LD

Hardware: Door GD Window NT

Trim: Material/Type WOOD

Heat/AC GD T'stat \_\_\_\_\_

Elec. Outlets GD GFCI CALL Polarity GD Grounded GD

Fixtures: Type Typ Toilet Seal ST Faucets/Valves Leaking GD

Tub/Shower Enclosure Material/Type NA Leaks/Grout/Caulking GD

Water Pressure GD

Exhaust Fan: Y N Vented to Outside Y

**12.A INTERIOR - ROOM BY ROOM**

**CONDITION**

6 12.A Room: Location Family w/office

Ceiling: Material DW Finish PT Cracks Typ Leaks NV

Walls: Material DW Finish PT Cracks Typ Leaks NV

Floor: Material CON Finish TL Slope Typ

Windows: Material/Type GD Operation GD W'Strip GD

Cords/Panes/Seals/Screens GD

Doors: Material/Type NT

Hardware: Door NT Window GD

Trim: Material/Type WOOD

Heat/AC GD FP/Stove CALL T'stat UP

Elec. Outlets GD GFCI NO Polarity GD Grounded GD

w/office

9 12.A Room: Location Living / Dining

Ceiling: Material DW Finish PT Cracks Typ Leaks NV

Walls: Material DW Finish PT Cracks Typ Leaks NV

Floor: Material CON Finish W/S Slope Typ

Windows: Material/Type F/S Operation GD W'Strip GD

Cords/Panes/Seals/Screens GD

Doors: Material/Type WH

Hardware: Door GD Window GD

Trim: Material/Type WOOD

Heat/AC GD FP/Stove \_\_\_\_\_ T'stat GD

Elec. Outlets GD GFCI NO Polarity GD Grounded GD

**CONDITION** **12.0 INTERIOR - ROOM BY ROOM** **Approved**

**12.X Room: Location** BAL

Ceiling: Material DW Finish PT Cracks Typ Leaks NV

Walls: Material DW Finish P Cracks Typ Leaks NV

Floor: Material CON Finish P/K Slope Typ

Windows: Material/Type P Operation NT W'Strip NA

Cords/Panes/Seals/Screens NT / Pano

Doors: Material/Type GD Window NT

Hardware: Door 20

Trim: Material/Type WOOD

Heat/AC GD FP/Stove NA T'stat LPan

Elec. Outlets GD GFCI NA Polarity GD Grounded GD  
Under lock

---

**12.X Room: Location** 1ST

Ceiling: Material DW Finish PT Cracks Typ Leaks NV

Walls: Material DW Finish PT Cracks Typ Leaks NV

Floor: Material CON Finish W/K Slope Typ

Windows: Material/Type SW Operation GD W'Strip S

Cords/Panes/Seals/Screens GD

Doors: Material/Type IP

Hardware: Door GD Window GD

Trim: Material/Type WOOD

Heat/AC GD FP/Stove NA T'stat LPan

Elec. Outlets GD GFCI NA Polarity GD Grounded GD  
W/LOCK

---

**12.X Room: Location** 2nd

Ceiling: Material DW Finish PT Cracks Typ Leaks NV

Walls: Material DW Finish PT Cracks Typ Leaks NV

Floor: Material WOOD Finish CA Slope Typ

Windows: Material/Type SW / P Operation GD W'Strip GD

Cords/Panes/Seals/Screens GD

Doors: Material/Type IP

Hardware: Door GD Window GD

Trim: Material/Type WOOD

Heat/AC GD FP/Stove NA T'stat HALL

Elec. Outlets GD GFCI NA Polarity GD Grounded GD  
W/LOCK

---

**12.X Room: Location** 3rd

Ceiling: Material DW Finish PT Cracks Typ Leaks NV

Walls: Material DW Finish PT Cracks Typ Leaks NV

Floor: Material WOOD Finish CA Slope Typ

Windows: Material/Type P / SW Operation GD W'Strip GD

Cords/Panes/Seals/Screens GD

Doors: Material/Type IP

Hardware: Door GD Window GD

Trim: Material/Type WOOD

Heat/AC GD FP/Stove NA T'stat PL

Elec. Outlets GD GFCI NA Polarity GD Grounded GD  
W/LOCK

**11.A ROOMS WITH PLUMBING**

**CONDITION**

11.A Room: Location Mar Cabinets/Hardware Wood

Ceiling: Material DW Finish PT Cracks Typ Leaks NV

Walls: Material DW Finish PT Cracks Typ Leaks NV

Floor: Material WOOD Finish CA/IV Slope Typ

Windows: Material/Type P/S Operation GO W'Strip GO

Cords/Panes/Seals/Screens GO

Doors: Material/Type IP

Hardware: Door GO Window GO

Trim: Material/Type WOOD

Heat/AC GO T'stat HAW

Elec. Outlets GO GFCI GO Polarity GO Grounded GO

Fixtures: Type FWD Toilet Seal GO Faucets/Valves Leaking GO

Tub/Shower Enclosure Material/Type Tub Ro Leaks/Grout/Caulking GO

Water Pressure GO

Exhaust Fan: (X) N Vented to Outside NA/NA

**12.A INTERIOR - ROOM BY ROOM**

**CONDITION**

12.A Room: Location MOCK

Ceiling: Material DW Finish PT Cracks Typ Leaks NV

Walls: Material DW Finish PT Cracks Typ Leaks NV

Floor: Material WOOD Finish CA Slope Typ

Windows: Material/Type S/D Operation BRUISE W'Strip GO

Cords/Panes/Seals/Screens GO

Doors: Material/Type IP

Hardware: Door GO Window GO

Trim: Material/Type WOOD

Heat/AC GO FP/Stove NA T'stat HAW

Elec. Outlets GO GFCI NA Polarity GO Grounded GO

W/SPAN

12.A Room: Location HALL

Ceiling: Material DW Finish PT Cracks Typ Leaks NV

Walls: Material DW Finish PT Cracks Typ Leaks NV

Floor: Material WOOD Finish WOOD Slope Typ

Windows: Material/Type NA Operation NA W'Strip NA

Cords/Panes/Seals/Screens NA

Doors: Material/Type IP

Hardware: Door GO Window NA

Trim: Material/Type WOOD

Heat/AC GO FP/Stove NA T'stat GO

Elec. Outlets GO GFCI NA Polarity GO Grounded GO



**INSPECTION FIELD NOTES**

Supplemental: Swimming Pools

Page 9/9

Client our client Date 3/24/2014 Location \_\_\_\_\_ In/Outside Outside  
 Address \_\_\_\_\_ Along (Y) N Weather \_\_\_\_\_  
 \_\_\_\_\_ Property Address \_\_\_\_\_  
 \_\_\_\_\_ Engineer Taylor

**KEY**

E = Excellent, G = Good, F = Fair, P = Poor, S = Serviceable, NA = Not Applicable  
 NV = Not Visible, O = Operating, NO = Not Operating, A = Average, BA = Below Average, AA = Above Average  
 UK = Unknown, NI = Needs Investigation, (\*) = See Report for More Detail

**P.1 POOL/SPA EQUIPMENT**

(G) Filter STABTE CAEM  
(G) Pump WHA VALV B Motor ZHD  
(G) Pump Seal/Gasket CS Pump Basket CS  
(G) Back Wash Valve NA Air Relief Valve G  
(G) Pool Sweep Pump/Motor NA  
(G) Plumbing Header CS  
(G) Gate Valves CS  
(G) ~~Whip Filter/Pressure Gauges~~ CS  
(G) Gyro/Turbo Water Valve NA  
(G) Gyro/Turbo Heads NA  
 Heater \_\_\_\_\_ Temp/Pressure Valve \_\_\_\_\_ Fuel \_\_\_\_\_  
(G) Anode NA  
(G) GFCIs NA

**P.2 POOL/SPA**

(G) Plaster/Any/Other CO  
(G) Stains CS  
(G) Tile CS  
(G) Liner NA  
(G) Light CS  
(G) Diving Board NA  
(G) Pool Sweep Head or Hoses CS  
(G) Skimmer Float or Basket CS  
(G) Skimmer Weir Door CS  
(G) Auto Leveler CS  
(G) Whip Hoses CS  
(G) Time Clock CS  
(G) Chlorinator/Blower NA  
(G) Cover CS

**P.3 SURROUNDING AREA, ENCLOSURES, AND SECURITY**

(G) Decking/ Apron NA  
(G) Fences NO  
(G) Gates CS  
(G) Lighting NA  
(G) Pool Alarms NA  
(G) Ventilation NA

**APPENDIX D**

*Agreement for Services*

Residential Inspection Agreement

This is the complete agreement regarding inspection services to be provided by Criterion-McWilliam Engineers, LLC (CME) related to the property described below. This is intended to be a legally binding agreement between the client and CME. Please read it carefully.

CLIENT:

DATE OF INSPECTION: \_\_\_\_\_

LOCATION OF PROPERTY: \_\_\_\_\_

The fee is based on the following information:

Approx Sq. Ft. _	<u>3311</u>	Travel	<u>No</u>
Year Built	<u>1991</u>	Crawlspace	<u>No</u>
Add'l. Buildings__	<u>No</u>	Moisture	<u>No</u>
Pool/Spa	<u>Yes</u>	Photos	<u>Yes</u>

The fee for this XX Standard Inspection or \_\_\_\_\_ Exhaustive Inspection (choose one; described below) is \$\_\_\_\_\_ to be paid at or before the inspection. A \$50.00 fee will be added for any payment past due over 30 days. A 24-hour notice of cancellation is requested. Otherwise, a \$50.00 cancellation fee may apply. All inspections are performed in accordance with established standards of the National Academy of Building Inspection Engineers.

*After reviewing the descriptions below, both the client and CME should initial where noted, to indicate the type of inspection chosen. As our client, you are making a choice of services to be provided. If you have any questions, please contact us immediately.*

<p><u>          </u> Client (int'l)</p> <p><u>          </u> CME (int'l)</p>	<p><b>A standard, visual inspection</b> to identify significant deficiencies and/or repairs needed in the major systems (structural, heating, air conditioning, plumbing, electrical, roof, exterior), as well as provide a general understanding of the property. This is a limited inspection based on visual evidence readily available during the inspection (without moving furnishings, etc.), and is the opinion of the engineer performing the inspection. <b>It is not a code, mold, environmental, radon, or pest inspection.</b> Typical report preparation time is 1 to 2 business days.</p>
<p><u>          </u> Client (int'l)</p> <p><u>          </u> CME (int'l)</p>	<p><b>An exhaustive inspection</b> to identify significant deficiencies and/or repairs needed as well as provide a general understanding of the property. This inspection is specifically not limited to readily visible evidence and requires invasive testing which may include moving furnishings, removing wall coverings and/or drilling into wall cavities (to check for structural damage, for example), and requires the current owner's written permission. Unlike the Standard or Limited Inspection, <b>our maximum liability for loss suffered by the CLIENT due to any cause is limited to our inspection fee or \$10,000.00, whichever is greater.</b> Typical report preparation time is 7 to 10 business days.</p>

**Residential Inspection**

**MOLD EXCLUSION:** This inspection is not for the specific purpose of determining the presence of organic substances in the building. If, however, during the inspection, we knowingly encounter such substances, we will notify you of the presence of these substances without accepting any liability whatsoever for any damage or harm caused by the substances. It is your responsibility to determine if further testing is required and to retain an independent, qualified professional to perform such tests.

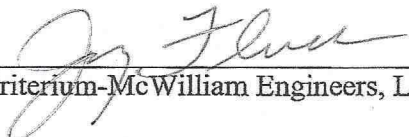
You are encouraged to be at the inspection to discuss your questions and concerns. However, **the written report is the exclusive source of information regarding our observations and conclusions.** All discussions that occur at the inspection are preliminary in nature and should not be the basis for any final decisions regarding this property. Further, owning any property involves some risk. Please understand that no inspection can reveal everything that might be of interest or significance to you regarding this property.

**Our inspections are not a guarantee or warranty regarding the condition of this building. Except as otherwise noted herein, our maximum liability relating to services rendered under this agreement for loss suffered by the client due to any cause is limited to our inspection fee.** If you bring an action against CME and CME prevails, CME shall be entitled to recover costs and expenses, including reasonable attorney fees.

The above is understood and accepted. (Your agent may not sign for you unless s/he has Power of Attorney.)

\_\_\_\_\_  
Client signature (one signature binds all parties)

\_\_\_\_\_  
(Date)

  
\_\_\_\_\_  
Criterium-McWilliam Engineers, LLC

  
\_\_\_\_\_  
(Date)

# CRITERIUM<sup>®</sup>

## GLOSSARY

**ALLIGATORING:** Square-patterned grain cracking of paint surface often caused by too many layers.

**AMPERAGE:** An ampere is a measure of the "volume" of electrical current available. The more amperage available, the more electrical devices can be connected to the system.

**ANCHOR BOLT:** L-shaped bolt with threaded end that connects the wooden sill to the top of the foundation wall.

**AQUASTAT:** A device to regulate the hot water temperature.

**ARMORED CABLE:** Commonly called BX; a moderately flexible metal sheathed cable.

**ARTESIAN WELL:** A well that penetrates a confined subsurface water source that is under sufficient pressure to cause the water to rise in the well casing itself.

**BACKFILL:** Loose fill graded against masonry walls in an open excavation, covered with top-soil.

**BEARING WALL:** Walls that transfer structural loads from building components above them.

**BLEEDING:** 1) Removing trapped air from radiators, convectors, or 2) the appearance of discoloration or stains under a finished, surface coat.

**BLISTERING:** Bubbles in paint. These are often caused by excessive moisture working through the wall from the inside.

**BLOCK:** Generally, any masonry unit larger than a brick; usually set in mortar as in a block wall.

**BOILER:** A heating unit in which hot water or steam is produced.

**BOWED:** Unsatisfactory timber (specifically framing members) that has been stored or dried unevenly, resulting in a natural curve along its length.

**BRIDGING:** Stiffeners fitted between floor joists; common bridging is an X-pattern, solid bridging is a short length of same-size floor joist timber.

**BROWN COAT:** The rough coat of plaster or stucco.

**BTU:** British Thermal Unit: a heat measurement.

**BUILDING PAPER:** Thick, pinkish paper used between plywood subfloor and finished flooring.

**BUILT-UP ROOFING:** Layers of asphalt-based roofing overlapped, sealed and bonded with hot tar; applied to flat roof decks.

**BX:** Common term for semi-flexible, metal-encased electrical wiring. (See Armored Cable.)

**CESSPOOL:** A subsurface wastewater disposal chamber with no attached drainage field (leach bed).

**CHECKING:** A short, narrow crack along the grain of structural timbers. Different from a split that goes through the full thickness of the wood.

**CHECK VALVE:** Fitting that prevents the reverse flow of water in piping; commonly used on sump pump installations or floor drains.

**CHLORDANE:** Poisonous chemical used for eradicating termites.

**CIRCUIT BREAKER:** Switches mounted in the main electrical panel that trip automatically to prevent overloading the circuit.

**CIRCULATOR:** Pump and motor mounted on hot water furnace that pushes heated water through the piping system.

**CLEAR LUMBER:** The highest grades of lumber; free from visible defects and knots.

**CLOSED VALLEY:** Pattern of overlapping, inter-laced shingles across the intersection of two sloping roofs. An open valley uses metal flashing.

**COMBUSTION EFFICIENCY:** A measure of the amount of fuel burned that actually produces heat. For example, 75% combustion efficiency means 75% of the fuel burned is producing heat.

**COMPACTNESS:** As it relates to energy efficiency and interior traffic flow, compactness suggests the maximum amount of interior space for the minimum amount of exterior wall area. A sphere (while impractical) would represent the most compact shape and floor plan a home could have.

**COMPRESSOR:** Mechanical heart of a cooling system that forces refrigerant through the system.

**COUNTER FLASHING:** A metal strip that covers the top edge of conventional flashing (frequently used around chimneys); allows for expansion and contraction between different building materials without breaking the flashing seal against the weather.

**COURSE:** One row of shingles, bricks or masonry block placed horizontally.

**CRAWL SPACE:** Area between the floor joists and the ground surrounded by the foundation wall.

**CREOSOTE:** Liquid chemical applied to raw timber that protects it from the weather.

**CRICKET:** Metal flashing placed on the "up-roof" side of the chimney to deflect roof water to either side of the chimney.

**DEFLECTION:** Downward force on rafters, joists and girders, causing the center of the timber to bow downward over the center of the span.

**DRIP BEAD:** Common form of capillary break groove cut under window sills.

**DRIP EDGE:** Lengths of L-shaped metal flashing placed along the edges of a roof to seal the space between the shingles and the roof deck from the weather.

**DRY ROT:** Timber decay characterized by sponginess and crumbling; caused by dampness and spread by a bacteria.

**DRYWALL:** Common form for paper-finished gypsum wallboard; also called sheetrock.

**DRY WELL:** Rock-filled hole in the ground to collect and distribute roof water or excessive ground water.

**DUG WELL:** A dug well is usually not more than ten or twenty feet deep and penetrates a subsurface water source (ground water) close to the surface.

**EAVES:** The overhanging section of a sloping roof.

**EFFLORESCENCE:** White powder residue on concrete masonry, usually indicates moisture migration through concrete.

**FASCIA:** A wide vertical board running horizontally across the ends of the rafters.

**FELT PAPER:** Common term for asphalt-impregnated building paper applied between wood roof decking and shingles.

**FLASHING:** Metal stripping to seal seams between sections of roofing or between roofing and other materials or metal caps sealing the joint between upper door and window frames and exterior siding.

**FLOOR ZONES:** Areas of a floor plan that can be distinguished by their function. For example, garage, workshop, hobby area, kitchen, family area, etc.

**FOOTING:** Enlargement at the base of a foundation wall to support and distribute the load.

**FORCED AIR:** An air conditioning or heating system that relies on a motor-driven fan for distribution.

**FOUNDATION:** Lower part of the building that supports the superstructure.

**FRAME:** The skeleton of a home including the major framing members such as rafters, studs and joists.

**FURNACE:** A heating unit in which hot air is produced.

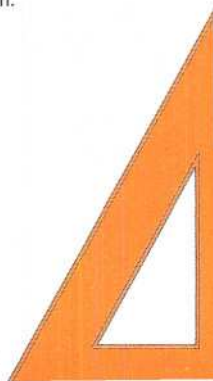
**GABLE:** Triangular section of the end wall of a building with a sloping roof.

**G.F.C.I. (or G.F.L.):** Ground Fault Circuit Interrupter, a quick-tripping circuit breaker that can cut off power 25 milliseconds after detecting current leakage. NOTE: The National Electrical Code requires these circuit breakers in all newly built bathrooms, exterior outlets and kitchens.

**GHOSTING:** Darkening and discoloration of wallboard nailheads and compound-filled wallboard joints caused by unequal temperature and moisture transmission through the wall.

**GIRDER:** Timber (sometimes a steel I-beam) that supports beams and floor joists.

**GRAVITY DISTRIBUTED:** In heating systems, hot water and hot air are sometimes distributed by the natural thermal currents within the air or water. This is referred to as gravity distribution.



**GRAVITY DRAIN:** A drain which slopes from the house to any ground level nearby which is lower, allowing for the natural or "gravity" downward flow of water.

**GROUND WIRE:** Electrical wire that protects against shock hazards by transferring leaking or abnormal current back through the grounding system into the earth.

**HARD WATER:** Water with a high mineral content.

**HEADER:** Timber across an opening in the framing system that supports framing members interrupted by the opening.

**HEAT PUMP:** A year-round heating and cooling plant best suited to moderate climates; technically a compressor-driven, refrigerant cooling system that functions as a heater when the cooling cycle is reversed.

**HEAVING:** Upward pressure of earth caused by frost action.

**INSULATION:** Any material that effectively restricts the flow of heat (thermal transmission) through it. Fiber-glass, cellulose, foam, etc. are common examples.

**JACK STUD:** Part-height support stud placed beneath the ends of a header across an opening, nailed to a full-length stud that extends above the header.

**JOIST:** Wood or steel framing member directly supporting a floor or ceiling.

**K.D.:** Short for kiln-dried, signifying lumber with extreme dimensional stability due to low moisture content.

**LEACHING FIELD:** Elongated, buried piping or chamber system placed beyond the septic tank in a waste disposal system which gradually filters liquid wastes into the earth.

**LEADER:** Vertical pipe running between the gutter and the ground or an underground piping system.

**LEDGER:** Timber nailed flush with the bottom of a beam or joist, used to support a timber butting at right angles.

**LIGHT:** Individual panel of glass; describing the design of a double-hung window as in 8 over 8 lights.

**LINTEL:** Structural member across the top of an opening; commonly a stone or masonry equivalent to a wood frame header.

**LOOP:** Self-contained circuit of a hot water heating system.

**MITERING:** Joining two boards by cutting an equal angle at the end of each one.

**NOSING:** Rounded extension of a stair tread that projects beyond the vertical riser.

**PVC:** Polyvinylchloride - a type of "plastic" pipe used commonly for drain lines and less commonly for water distribution lines.

**PENTACHLOROPHENAL:** Chemical impregnated into timbers under pressure to protect them from deterioration.

**PERIMETER DRAIN:** A common reference for a system of drain pipes located at the base of the foundation wall to collect and carry water away from a basement space.

**PERMEABILITY:** A measure of the ability for vapor (moisture, air, etc.) to pass through a substance. For example, a window pane is less permeable than a screen.

**PIER:** Masonry load-bearing support independent of the main foundation.

**PITCH:** Commonly the angle of a sloping roof; the ratio of height to the span (as in 4 on 12).

**PLATE:** Single or double layer of 2 x 4 or 2 x 6 along the top of a stud wall.

**PLENUM:** Enclosed air chamber.

**PLUMB:** Perfectly vertical; at right angles to a perfectly level line.

**POINTING:** Cleaning loose mortar from joints between masonry (also called raking the joints) and refilling with fresh mortar.

**POST FOUNDATION:** A system of posts (most commonly concrete or wood) set into the ground at regular intervals to support the frame of a home above it.

**PRESSURE-TREATED:** Wood timbers treated with chemical preservatives under enough pressure to force the treatment deeply into the wood. The purpose is to prevent deterioration.

**RAFTERS:** Sloping timbers extending from the eaves to the roof ridge.

**RECOVERY RATE:** The rate at which a water heater will recover from the use of hot water by producing more.

**R FACTOR:** Measurement of a material's resistance to heat transmission; displayed on insulation; higher numbers give more insulating protection.

**RIDGE:** The horizontal line along the highest part of the roof.

**RISER:** Vertical board set between stair treads.

**ROLL ROOFING:** Continuous strips of asphalt roofing applied with an overlap along the horizontal seam, particularly on low roofs.

**ROMEX:** Plastic-sheathed, flexible wire cable.

**ROOF CEMENT:** Heavy, pudding-consistency asphalt tar used to seal roll roofing seams, embed flashing and make repairs.

**ROUGH LUMBER:** Unfinished, untrimmed raw lumber.

**SASH:** Framework that supports glass in a window.

**SEPTIC TANK:** A subsurface tank (most commonly of concrete) which allows solids to settle out of wastewater before the water flows to a drainage bed or leaching field.

**SERVICE ENTRANCE:** The point where the utility company's line enters the main electrical fuse or breaker box.

**SHEATHING:** Primary covering over framing.

**SHIM:** Small piece of material used to support adjustments in materials to achieve level or plumb surfaces.

**SITE:** The lot (property, land, ground, etc.) on which a home or building is located.

**SLAB-ON-GRADE:** A concrete floor slab placed directly on the ground.

**SLEEPERS:** Timbers usually laid flat, resting on the ground or concrete slab to support flooring.

**SLOPE:** A steep or gradual change (up or down) in the ground level.

**SOFFIT:** Surface under roof eaves overhanging an exterior wall.

**STUD:** Vertical, structural timber used to frame a wall.

**SUBFLOOR:** Structural flooring laid directly over the floor joists; covered by finished flooring or underlayment.

**SUMP:** A chamber (most typically a hole in the basement floor) into which water (from perimeter drain, etc.) can flow from which it is discharged either by a sump pump or a gravity drain.

**SWALE:** Shallow depression to collect and transfer water. A type of surface drainage.

**TAPING:** Process of applying joint compound, perforated tape and successive coats of joint compound to conceal the seams between gypsum wallboard panels.

**TERMITE SHIELD:** Metal strip fastened over the top of the foundation and angled a short distance down each side or a barrier to separate masonry and wood components of the structure.

**THERMAL BUFFER ZONE:** A space (not heated or air conditioned) that separates a heated or air-conditioned space from the outside (ambient) climate. Garages, enclosed porches and breezeways are examples of thermal buffer zones.

**T AND G:** Short form for tongue and groove pattern; a ridge extending along one edge of a board that fits into a matching groove of another.

**TOENAILING:** Practice of driving nails at an angle through the sides of a stud or other timber near the end where it butts another timber.

**TO THE WEATHER:** Describes the portion of a material, usually siding, exposed to the elements.

**TRAP:** U- or S-shaped pipe fitted beneath fixtures so that a water seal prevents septic odor from entering the house.

**TREAD:** Flat, horizontal stair step.

**TRUSS:** Triangular, reinforced rafter.

**UNDERLAYMENT:** Thin, smooth plywood or particle board applied over a rough sub-floor; covered with carpeting, vinyl tile or other material requiring a smooth base.

**VALLEY:** Intersection created by two sloping roofs, generally meeting at right angles.

**VAPOR BARRIER:** Thin sheathing to prevent the transmission of moisture through a wall; typically overlapped sheets of polyethylene film.

**VENTILATION:** Air flow through basements, wall cavities, attics, etc. to prevent accumulation of moisture.

**VENTS:** The openings (typically louvered or weather-proof) to allow ventilation.

**VOLTAGE:** (official) One volt is the voltage between two points of a conducting wire carrying a constant current of 1 ampere, when the power dissipated between these two points is 1 watt. (unofficial) A volt is a measure of the "pressure" of an electrical service.

**WALLBOARD:** Commonly, paper-covered gypsum panels.

**WARP:** Bending along the flat, wide surface of a board or door.

**WEEP HOLES:** Small holes drilled in sills or window frames through which condensation escapes; also short sections of pipe placed at the base of retaining walls to release hydrostatic pressure and groundwater.

**WET ROT:** Timber decay characterized by a charred appearance; caused by a fungus that flourishes in dark, wet areas.

**WRINKLING:** Ridges and furrows that develop in paint that is applied too thickly.

**ZONE:** Independently controlled section of a heating system (typically hot water).

# CRITERIUM®

## PRE-TITLE CHECKLIST

The attached report is intended to focus on the major engineering systems (structure, heating, plumbing and electric) in the building you're considering. While spot checks of many components (such as switches, outlets, fixtures, etc.) were made during the inspection and any significant deficiencies noted in this report, it's important to understand that the condition of these components can change at any time. Therefore, we highly recommend at least one more visit to these premises be made before taking title. This checklist is offered as a guide for this final visit.

Allow sufficient time to comfortably complete this list. Please note that not all of these items will apply to every building.

Property Address \_\_\_\_\_ Date Completed \_\_\_\_\_  
 \_\_\_\_\_ By \_\_\_\_\_

	<i>OK</i>	<i>Not OK</i>		<i>OK</i>	<i>Not OK</i>
DISHWASHER	___	___	WINDOW LOCKS	___	___
GARBAGE DISPOSER	___	___	LAWN SPRINKLER SYSTEM	___	___
KITCHEN STOVE	___	___	SWIMMING POOL EQUIPMENT	___	___
REFRIGERATOR	___	___	SIDEWALKS	___	___
CLOTHES WASHER	___	___	DRIVEWAY	___	___
CLOTHES DRYER	___	___	SEPTIC / WASTE SYSTEM	___	___
WATER PUMP	___	___	AIR CONDITIONING	___	___
WATER HEATER	___	___	GARAGE DOOR OPENER	___	___
LIGHT FIXTURES	___	___	ELECTRICAL OUTLETS	___	___
PLUMBING FIXTURES	___	___	SUMP PUMP	___	___
FIREPLACE/WOODSTOVE	___	___	HEATING SYSTEM	___	___
ALL WINDOW SCREENS AVAILABLE	___	___	DOOR LOCKS & LATCHES (ALL KEYS AVAILABLE)	___	___

MISCELLANEOUS ITEMS AND NOTES \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Often weeks and months pass between our initial inspection and your closing on the property. Your involvement in making this final inspection will help assure you of the home you deserve.

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