



# McIntyre & McIntyre Incorporated

Architects + Engineers + Consultants

9807 Brandywine Circle | Austin, Texas 78750-2803

512.219-9200 | [www.mmibuildings.com](http://www.mmibuildings.com) | TBPE #F4730

---

## McMath Residence 2501 Inwood Place Austin, Texas 78703



---

## Condition Observations

MMI Job #: 21031

Report Date: August 19, 2021

---

TABLE OF CONTENTS

1 BACKGROUND ..... 3

2 SCOPE OF REPORT ..... 3

3 EXISTING SITE AND SOIL CONDITONS ..... 3

4 EXISTING CONSTRUCTION ..... 4

5 DISCUSSION OFISSUES ..... 5

5.0 Site..... 5

5.1 Garage..... 6

5.2 House Foundation ..... 6

5.3 House Superstructure..... 7

5.4 Electrical..... 8

5.4 Plumbing ..... 8

5.5 HVAC..... 9

6 CONCLUSIONS ..... 9

8 REPORT LIMITATIONS ..... 10

9 PICTURES ..... 12

---

## 1 BACKGROUND

Address: McMath Residence  
2501 Inwood Place  
Austin, Texas 78703

Legal Lot 9 and E 37.5 Ft. of lot 8  
Description: Inwood Park Subdivision

Prop I.D.: 112823

Jurisdiction: City of Austin / Full Purpose Annexation  
County: Travis County

## 2 SCOPE OF REPORT

It is the intent of this report to provide a summary of observations and evaluations of the conditions of the residence at 2501 Inwood Place, Austin, Texas 78703.

The opinions expressed in this report are derived from site reviews, plans, reports, photographs, reference material, building codes and information provided to McIntyre & McIntyre, Inc. (MMI) as well as professional experience in engineering design and construction.

The opinions in this report are based on readily visible conditions and available information at the time of the site visit. Destructive testing is beyond the scope of this report unless specifically noted otherwise.

## 3 EXISTING SITE AND SOIL CONDITIONS

**Location:** This site is located near the intersection of Exposition and Enfield Roads in central west Austin (photo 0).

**Orientation:** For purposes of this report, the front of the house will be considered as facing Northwest.

---

**Soil present:** The NRCS (USDA Natural Resource Conservation Service) soil maps for this site indicate the site is located in the Fredericksburg Soil Group on shallow soils underlain by limestone, which is confirmed by visible outcroppings throughout the area.

**Geology:** The site is located in the Balcones Fault zone (photo 00), in the transition area between the east/low side of the fault zone (i.e., part of the ancient seashore) and the uplifted west side of the fault zone.

**Topography:** The TCEQ (Texas Commission on Environmental Quality) topographic map indicates that the general terrain slopes toward the Southeast.

**Movement potential:** Anticipated soil movement at this site is low with shallow topsoil over limestone bedrock. Shelf rock is visible at the bottom of the creek under the driveway bridge.

#### 4 EXISTING CONSTRUCTION

The following is a brief description of the construction materials and configurations currently in place:

**Roof:** The existing roof is a blend of modified bitumen (garage and flat portion of house) and shallow slope shingles at rear of house.

**Foundation:** The foundation is a conglomeration of a concrete slab on grade (presumed to be conventionally reinforced because of the age as casting) plus several additions that appear to be composed of (unreinforced) stone rubble masonry (such as under the chimney, for example – photo 15).

**Exterior walls:** The exterior wall assembly (from exterior toward interior) is  $\frac{3}{4}$  lap and gap wood siding, felt paper, 2x4 wood studs and  $\frac{1}{4}$ " wood paneling. The presence or rating of wall reinforcing could not be determined without destructive testing (which was beyond the scope of this report). Stem walls at the NW utility room are CMU at the lower portion.

**Windows:** The windows are all single pane clear glass (photo 20) in metal frames with no thermal breaks (aka "industrial style"). One window and door on the southeast side of the family room are jalouse type slatted operable windows (photo 61).



---

**Interior walls:** Interior walls are drywall or ¼" wood paneling to either side of 2x4 wood studs.

**Flooring:** The interior floors are Saltillo tile throughout, presumably on a thick set mortar bed.

**Ceilings:** Ceilings are drywall to the underside of ceiling joists.

**Fireplace:** The stone masonry fireplace in the front family room appears to have been added sometime after the original construction, although this is not definitive.

## 5 DISCUSSION OF ISSUES

### 5.0 Site

**Bridge:** The surface planking at the wooden driveway bridge entering this property is near the end of its useful lifetime and should be replaced. The stone masonry abutments supporting each end of the driveway bridge has missing mortar and erosion and should be repaired prior to imposing loads on the bridge.

**Steps:** Steps from the garage to the front door are not uniform and the handrail is deteriorated (and very loose). The steps do not conform to code uniformity requirements.

There is no handrail at the four step fight up to the left rear patio from the left front of the house. Badly rusted bolts protruding from the left side of the left rear patio indicate that the guard rail at the patio to grade drop (over 24" in some places) is missing. The existing bolts are so badly deteriorated, they cannot be reused to a new guard attachment.

**Drainage:** The area rises to the back and right of the property. Drainage is routed from the rear right and rear of property, around the back of the property, through two drainage pipes the exit on the left side of the lot (photo 28). These pipes are easily clogged with debris and in the event of overflow, water may rise above finish floor level.

**Patio:** The patio at the left rear side of the house appears composed of square concrete sections that used to have 2x lumber in the section joints (photo 25). There are holes for what appears to have been column anchors (photo 26) that pose a safety hazard. This creates a very uneven and unsafe walk surface.

---

Guardrails around the southeast perimeter drop off are missing (photo 53-54). A column at the left rear of the property has already been patched at the base (photo 29), is rotting again and no longer bears on the ground.

## 5.1 Garage

**Roof:** There is readily visible rot at the center of the garage roof overhang. There was active water ponding in the roof above this rot area. The overhead door is in need of repair as well. From casual observation, it appears that water is ponding at several locations on the garage roof.

**Garage floor/grade separation:** Soil grade is above the finish floor on three sides of the garage (photo 7-8). Water stains on the walls and floor and rot at the base of all walls within the garage (photo 9) indicate long term water infiltration to the garage interior. There is rot at the garage overhead door as well (photo 3).

## 5.2 House Foundation

**Additions:** The foundation is a combination of several additions. There are no plans to indicate the reinforcing and thickness of the slab on grade foundation. There are no permits listed for the various additions on the City of Austin AB+C permit portal. Several of the foundation additions appear to be DIY "old world" stone rubble and mortar style configurations (photo 36).

**Floor Level:** The finish floor was observed to be over 2" out of level by a rough ZipLevel elevation survey. The grades were generally lower at the outside perimeter of the foundation and higher at the middle. Given the numerous foundation additions and the rubble mortar type of construction, it will be very difficult to raise the foundation edges.

**Finish floor grade separation:** The foundation is not 6" above the adjacent finished grade along the rear and right side of the house as required by code. The tops of exterior planters have been constructed too close to the finish floor elevation (photo 12, 18, 20, 41) – to overflow the planter walls, water will be at finish floor.

**Chimney:** There is settlement and cracks in the fireplace and chimney foundation and stone masonry. The fireplace foundation addition appears to have been built over the concrete planter wall that was in place at the time of this (unpermitted) addition.

### 5.3 House Superstructure

**Siding:** The wood siding is in poor condition around the exterior of the house from long term neglect (Photo 55, for example). For example, the siding is rotted at the room addition adjacent to the fireplace (photo 14, 16). There is, additionally, a roof leak at this room corner (photo 69). The bottom edge of siding is rotting where it is not held off the adjacent flatwork (photo 47).

The older siding is oriented vertically and the newer siding is installed horizontally.

**Exterior wood columns:** The wood column at the rear left bedroom corner is not bearing (it is loose) at the base of the column (photo 29).

Left side wood porch columns are bearing directly on concrete without an air space as required by code (photo 27).

**Roof overhang:** The roof overhang on the right side appears to have been extended by scabbing on an additional 3 feet (roughly) to the original overhang (photo 30). The overhang joists are now over-spanned and excessively deflecting (photo 31).

**Walls:** There is rot and a water leak in the room addition next to the chimney (photo 69). There is rot in the wall outside the chimney and there is likely mold present at this location. There is a roof leak at the room to the NW corner of the chimney (photo 69). There are water stains that indicates leaks at the utility/laundry room (photo 63-66) and the hall bathroom (photo 67-68).

Since destructive testing is beyond the scope of this report, we cannot verify if the exterior walls are insulated. If present, however, it would be R-11 and would not conform to current R-15 requirements.

There are several wall penetrations that are improperly flashed (photo 37, 47) and are allowing moisture penetration.

**Windows:** Windows are all single pane clear lites set in metal frames without thermal breaks (photo 59-60). There are jalouse windows and doors at the left side of the house (photo 61). None of the windows conform to current IECC requirements for a conditioned house space.

---

A number of the windows do not meet the minimum 20"x24" opening required for safety exit in case of an emergency.

**Roof / Ceilings:** The 2x6 joists at the flat roofs only allow R-19 batt insulation which does not comply with IECC roof insulation requirements over conditioned spaces.

**Roofs:** The sloped and shingled roof at the rear portion of the house has a very low slope. It is likely that this roof was originally installed as a low slope "tar and gravel" roof that was later shingled. The slope appears minimal for shingle application which typically requires at least a 3:12 pitch or steeper.

## 5.4 Electrical

**Service Entrance:** The electric service enters near the left front corner of the house (photo 43). The overhead service entrance does not comply with current AE requirements and will have to be revised during remodeling (insufficient ground clearance).

**Grounding Electrode:** There is a ground rod and copper wire attached to a hose bibb at the rear of the house (photo 44). This is not in conformance to NEC requirements and can lead to potential energizing of the copper water pipes throughout the house.

**Wiring:** There is much DIY wiring (photo 45-46) and lighting (photo 45, 48) present at the roof soffits that does not conform to NEC requirements. Junction boxes, wiring devices, wiring and fixtures are not damp rated or installed to outdoor conditions (photo 45-48).

An outdoor receptacle at the SE side of the patio is badly rusted and does not conform to current NEC requirements (wrong cover, badly rusted box, not waterproof installation).

There is no arc-fault protection at the living area outlets as required by current code.

## 5.4 Plumbing

**Sanitary Sewer:** It is presumed that the sanitary sewer piping is cast iron as PVC was not used until the mid-1970's. As such, this pipe is at its 50-year service life and may require replacement in the near future.



---

There is some PVC pipe visible at the exterior of the utility room (photo 47) which is part of an addition after the original construction.

**Domestic Water:** The water lines appear to be copper (from visible stub outs at sinks and hose bibbs).

**Natural Gas:** The gas meter is located at the left front corner of the house in a submerged hole that appears to have no drainage (photo 41). The gas meter configuration indicates that the masonry planter was added after original construction (photo 42). The original foundation edge is visible at the hose side of the gas meter recess.

## 5.5 HVAC

Central air conditioning and heating was added at some point after original construction. The present condensing unit (outdoors) is about 10 years old and nearing the end of its service life (typically 10-12 years). The attic ductwork was not readily accessible. No secondary condensate drain was noted on site and the air handler drain pan was not accessible to determine if there was a float switch.

## 6 CONCLUSIONS

The bridge at the drive entrance requires substantial abutment and deck repair to be safe and serviceable for the intended use.

The garage has visible rot at the front side of the roof and fascia as well as at the base of interior walls. The soil around three sides of the perimeter is above finished floor, is not properly waterproofed and had resulted in obvious leaks to the garage interior. In addition, the flat roof is ponding water.

Drainage at the rear of the house is subject to clogging and consequent water infiltration. There are several areas with insufficient grade/finish floor separation.

Columns supporting roof extensions not bear properly or are not bearing at all. The patio has several safety code violations (guardrails, stairs, rough surface and holes), has a very uneven walk surface and expansion joints have rotted away (leaving trip hazards).

---

The exterior of this house has been poorly maintained and will require major renovation to restore integrity. A number of wall penetrations are poorly flashed or missing flashing. Several roof/wall conditions are not properly flashed and are leaking. Siding is not elevated from adjacent flatwork and planters, and is rotting. Siding has suffered from long term neglect and is deteriorating.

The house has had several additions that bear on foundations of dubious quality. The foundation has settled and would require lifting to restore a flat surface to ASIC Guideline<sup>1</sup> recommendations. The problem with leveling operations is that some of the additions are not likely to accept the point support of piers (for example) without causing damage and uneven lifting or increased damage to the various sections. The reinforcement thickness of the original foundation may not be sufficient to withstand jacking forces either.

Much of the exterior electrical work appears to be DIY installations that do not conform to code and present safety/fire hazards. The ground rod assembly at the rear hose bibb does not conform to code and represents a possible shock hazard to the domestic water piping system.

To perform a substantial renovation to this house would require removing most of the house to bare studs to build back to current codes. Many of the water damaged studs would have to be replaced. Windows and doors would have to be removed and replaced. Siding and WRB (Weather Resistant Barrier – like Tyvek or similar) would have to be replaced. Exterior insulation would be needed to meet current wall insulation requirements. Grading a drainage would need revisions to drain properly. The foundation is likely unable to be easily leveled. Exterior wall waterproofing below grade would need to be excavated and re-installed. Roof overhangs would need additional structure or shortening to comply with structural requirements.

In short, there would not be enough of the original structure left to be worth keeping. Our recommendation would be to demolish the existing house and start over with structures of known sound integrity and code compliance.

## **8 REPORT LIMITATIONS**

The opinions expressed in this report are the result of readily visible and observable conditions and available information at the time of this report and represent a reasonable

---

<sup>1</sup> ASIC Guideline for Evaluation and Repair of Residential Structures

---

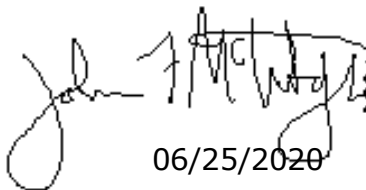
degree of engineering certainty, based on professional engineering experience with design, construction and installation of similar projects.


This report is intended as a general opinion of observations, installations, conditions, consequences and recommendations at the time of the site visit. The opinions are not a guarantee of future performance.

Should additional information become available that may affect the opinions expressed in this report, we reserve the right to review such information and if warranted, revise or amend the report accordingly.

Should you have additional questions about or require further information concerning this report, please do not hesitate to contact us.

Submitted for McIntyre and McIntyre, Inc. by:

  
06/25/2020



John McIntyre, P.E. #52646 Tx / CBP-PHTA

McIntyre & McIntyre, Inc. / Architects and Engineers / TBPE #F-4730

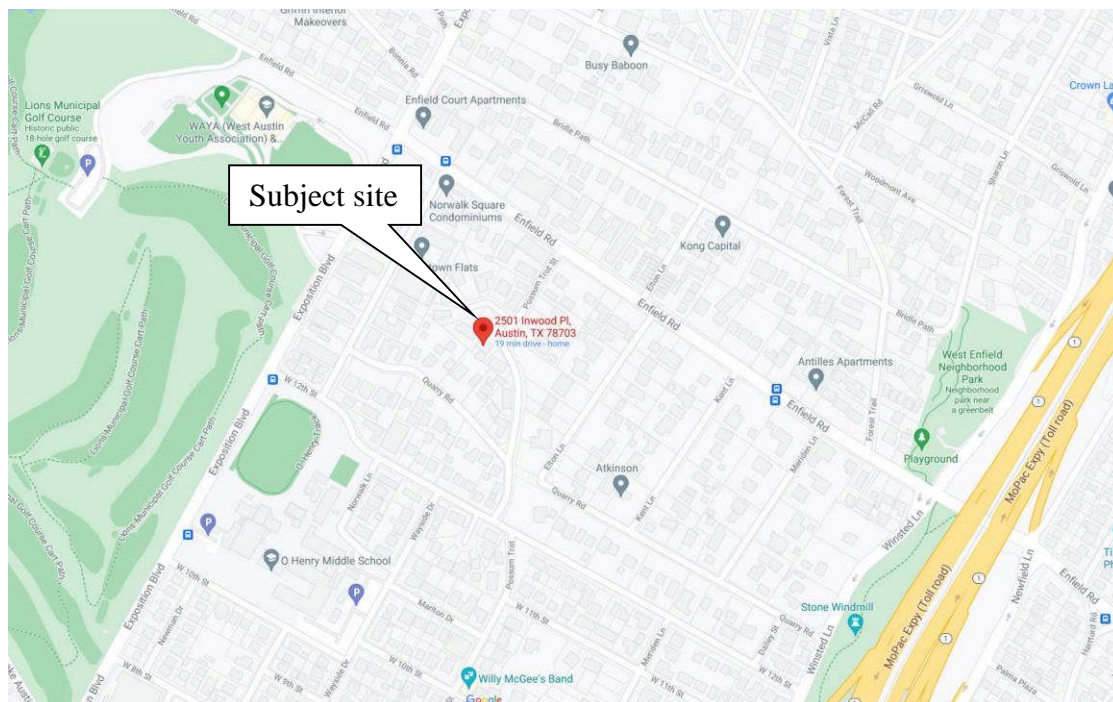
9807 Brandywine Circle / Austin, Texas 78750

T: 512-219-9200 / F: 512-219-9399

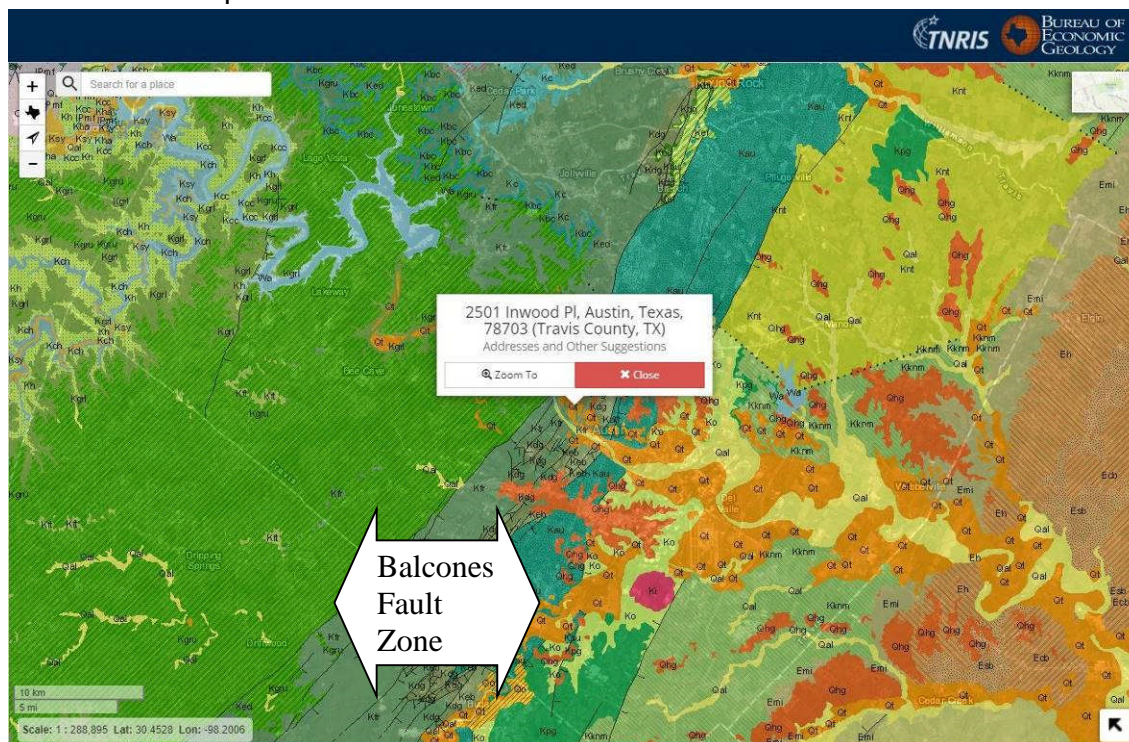
E: [john@mmibuildings.com](mailto:john@mmibuildings.com)

C:\\MMI\\20038\\MMI \_7730 SpicewoodSpringsPool\_U02

## 9 PICTURES

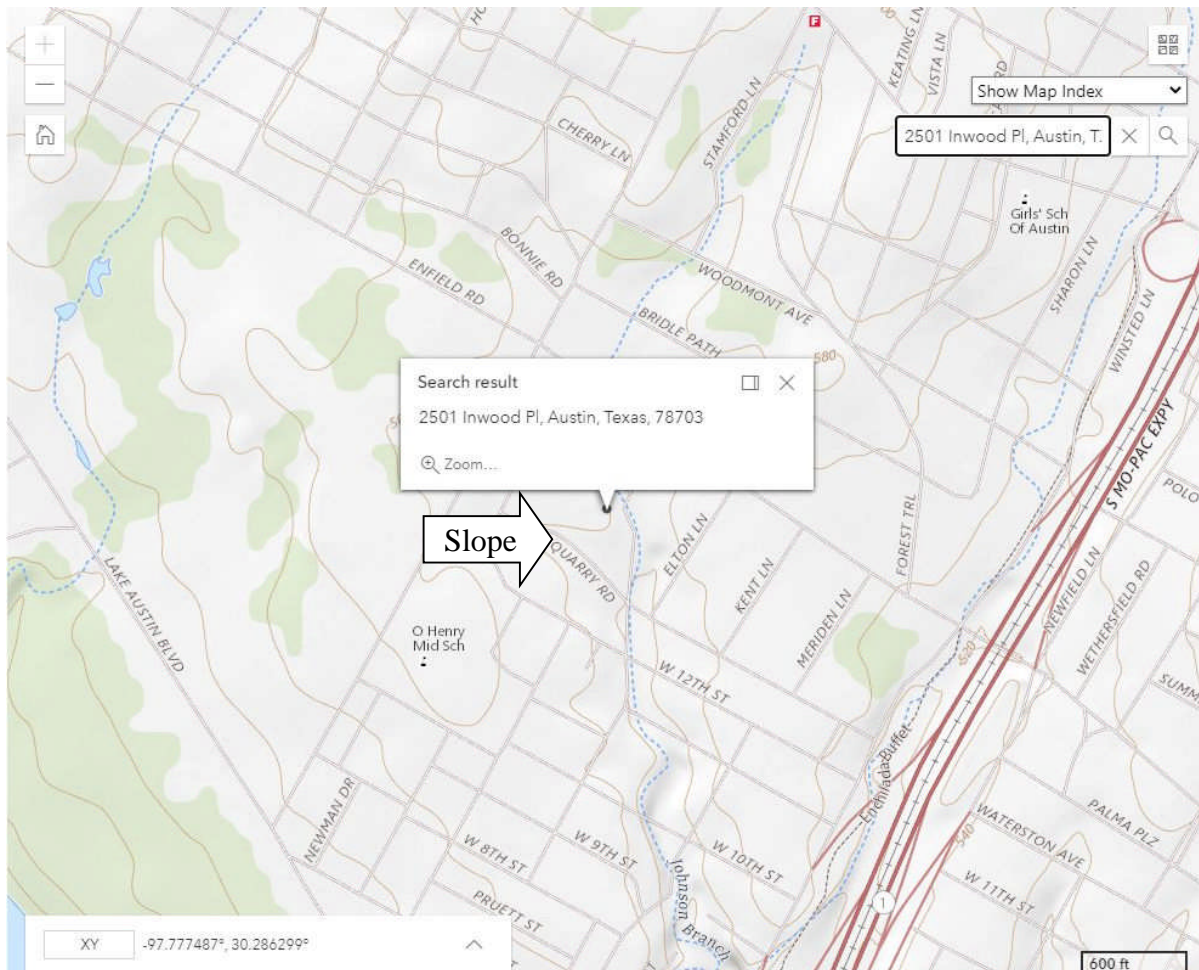


0. Location Map



00. Geologic Map

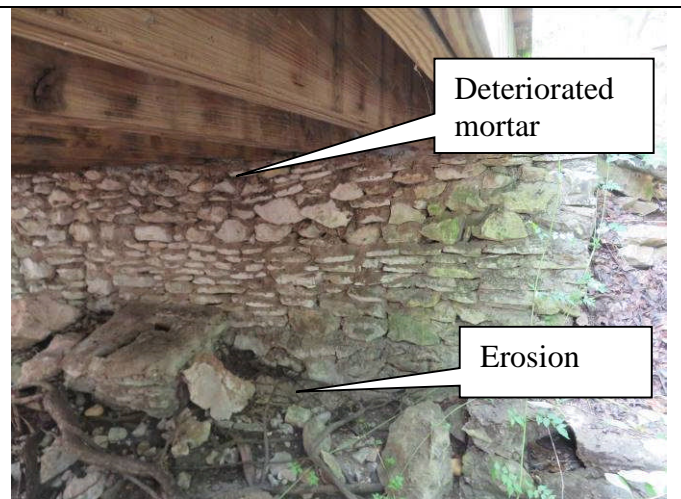




000. Topographic maps



1. Wooden drive bridge



2. Bridge abutment with erosion





3. Rot at garage front



4. Rot at garage front



5. Rot under garage roof overhang



6. Garge roof ponds water



7. Soil above garage floor grade on 3 sides



8. Soil above garage floor / water leaks





9. Rotted garage walls - typical



10. Steps and handrail - garage to house



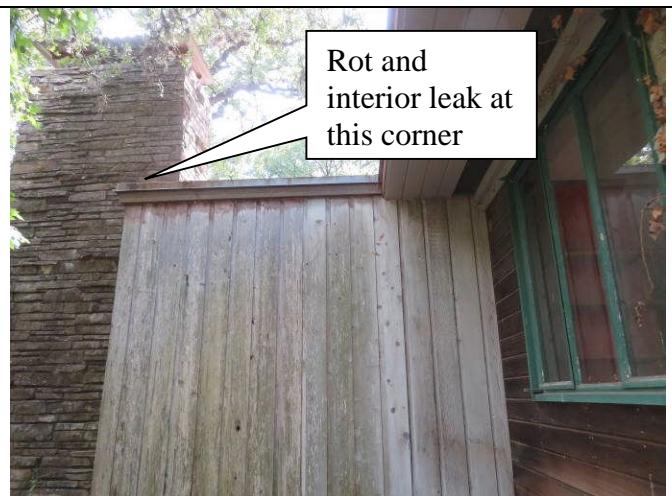
11. Typical stone rubble wall construction



12. Gas meter at original grade



13. Varying soffit materials

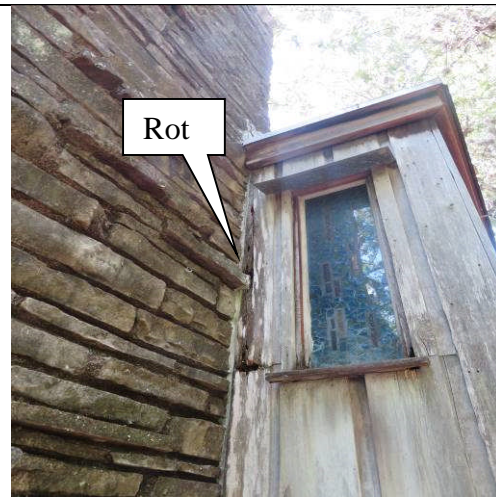


14. Non permitted addition at fireplace





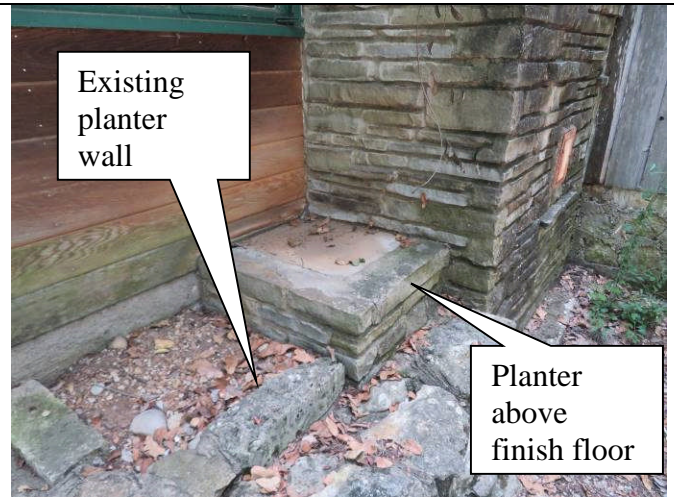
15. Foundation next to chimney



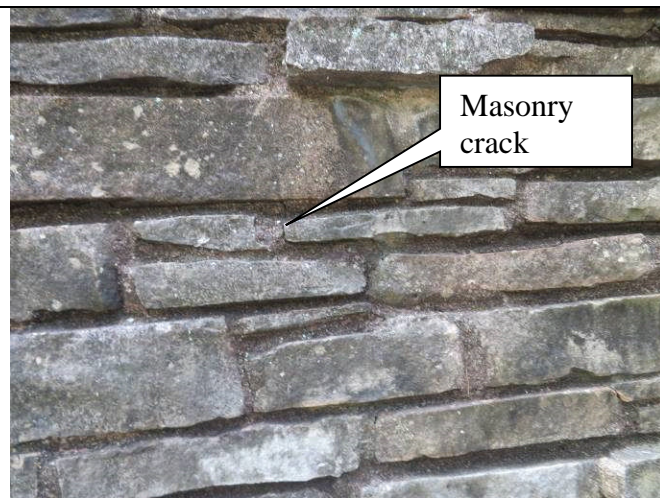
16. Wall rot & leak at "chimney" addition



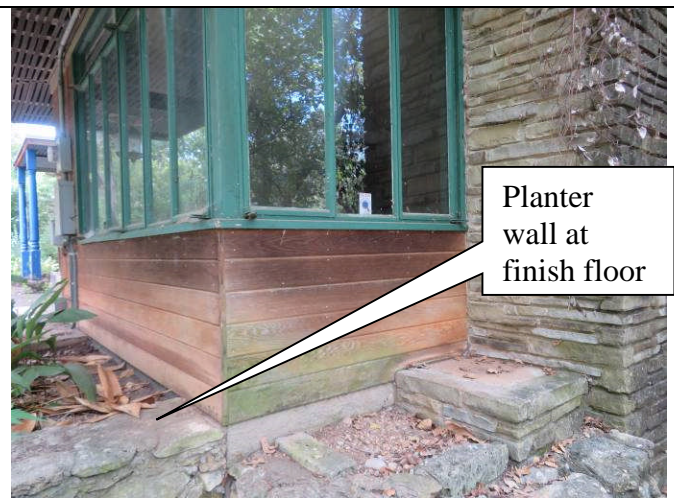
17. Chimney at front left



18. Planter extension at chimney

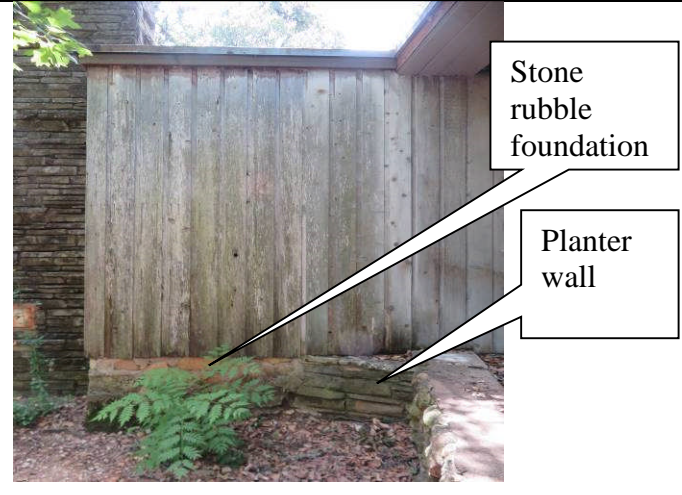



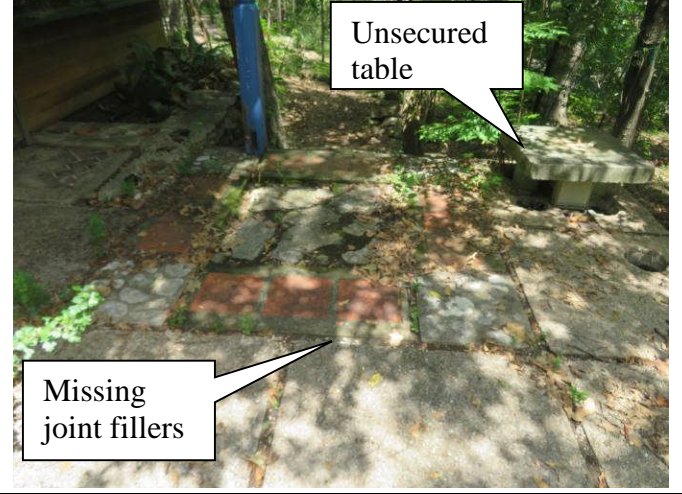



19. Masonry cracks at chimney

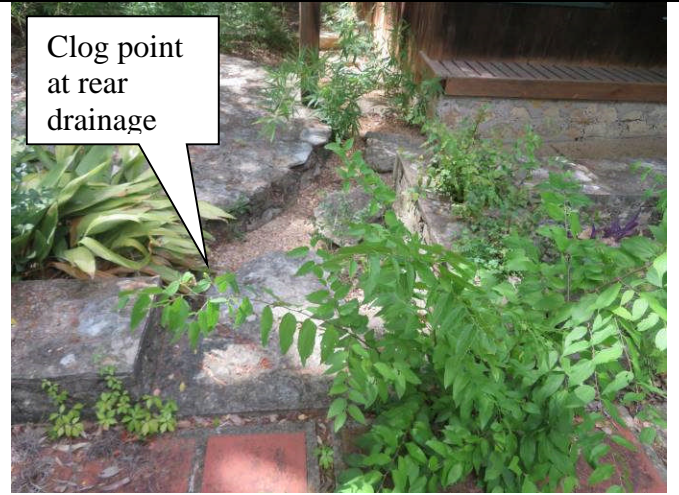
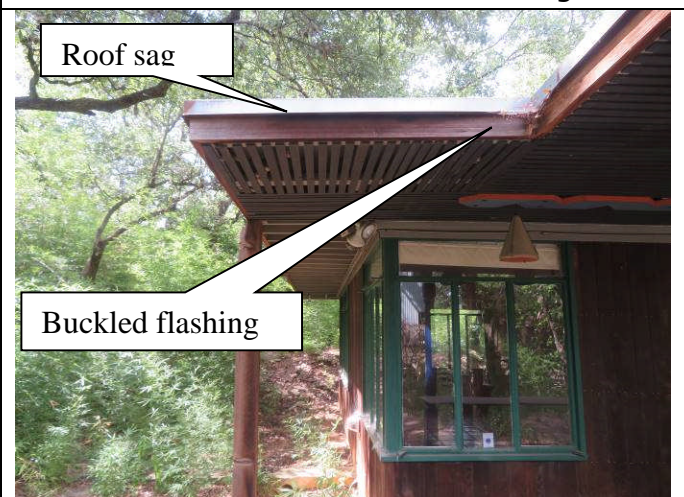



20. Deteriorated siding



	
<p>21. Room addition left of chimney</p>	<p>22. Rotted and falling down left side fence</p>
	
<p>23. No handrail at steps</p>	<p>24. Improper post bearing</p>
	
<p>25. Uneven patio and missing joint fillers</p>	<p>26. Voids at column (?) bases</p>



 <p>Column does not bear at base</p>	 <p>Clog point at rear drainage</p>
<p>27. Improper column bearing</p>	<p>28. Rear drainage channel</p>
 <p>Column base does not bear on ground – base has rotted and been replaced already</p>	 <p>Scabbed on joist extensions</p>
<p>29. Rotted column base – no bearing</p>	<p>30. Extended roof overhang</p>
 <p>Roof sag</p> <p>Buckled flashing</p>	 <p>No seals at window frames</p>
<p>31. Typical casement windows</p>	<p>32. Single un-insulated frame windows -typ</p>

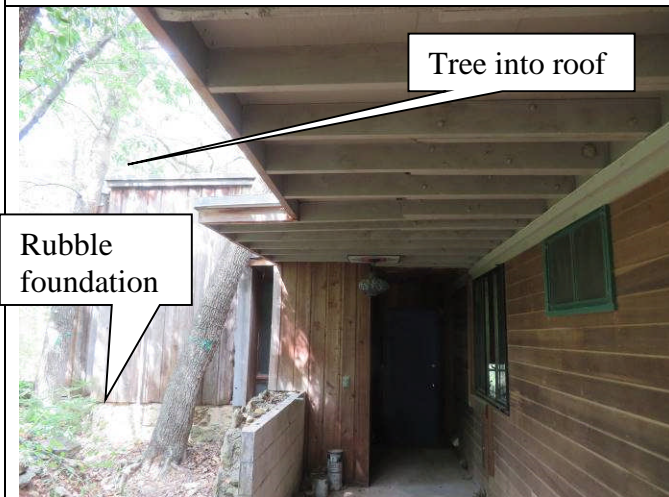




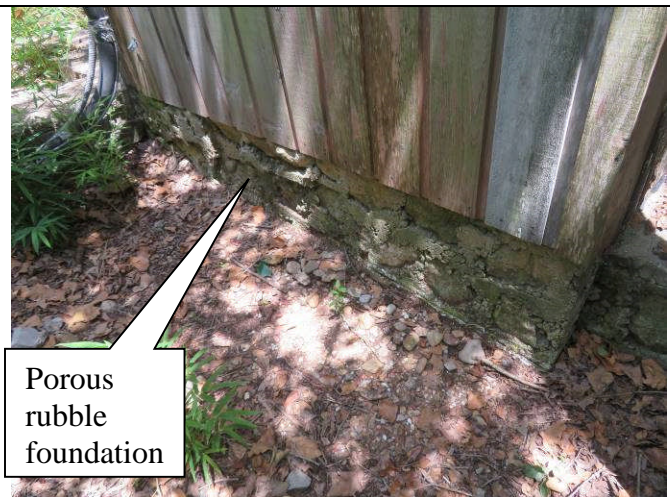
33. Shallow pitch roof at rear



34. Typ rubble filled foundation wall



35. Roof sag at extended overhang



36. Utility room – rubble foundation



37. No flashing at wall penetration

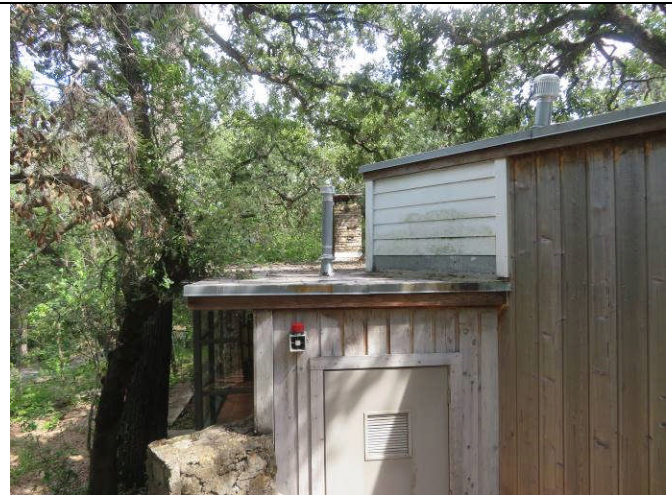


38. Rot / leaks at utility room wall base

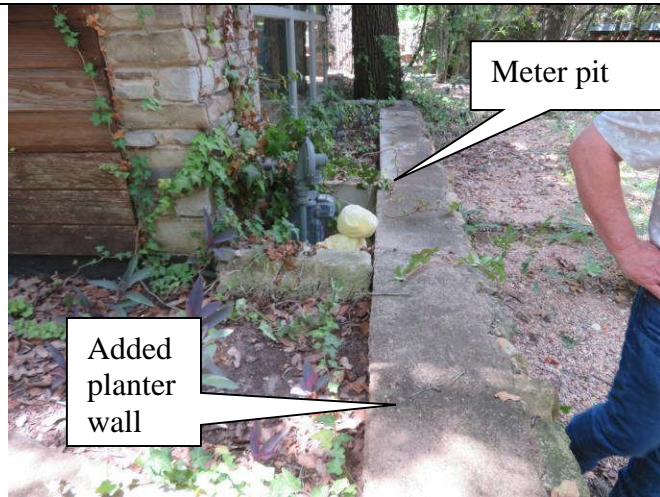




39. Rot / leaks at water heater closet



40. Roof flashing at flat roof



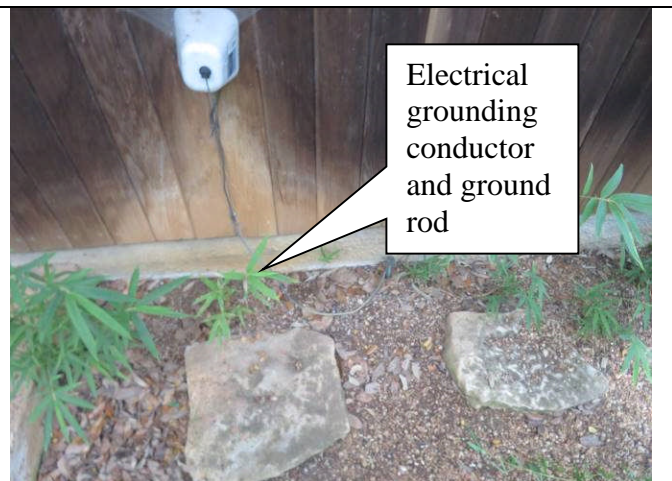
41. Gas meter at added planter



42. Gas meter pit (looking down)



43. Electrical service entrance

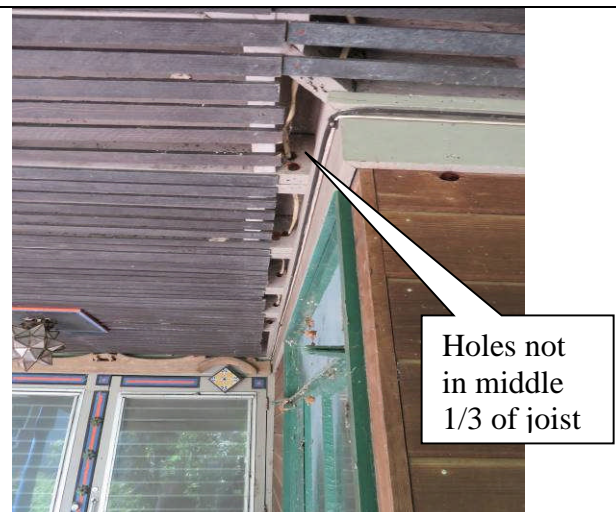


44. Ground rod at rear hose bibb

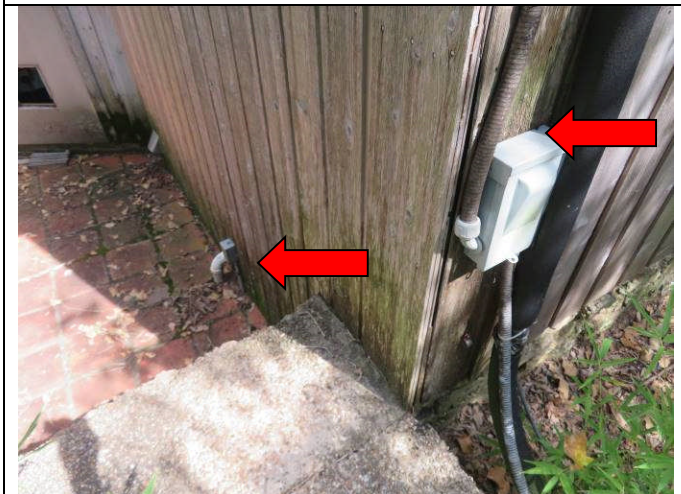




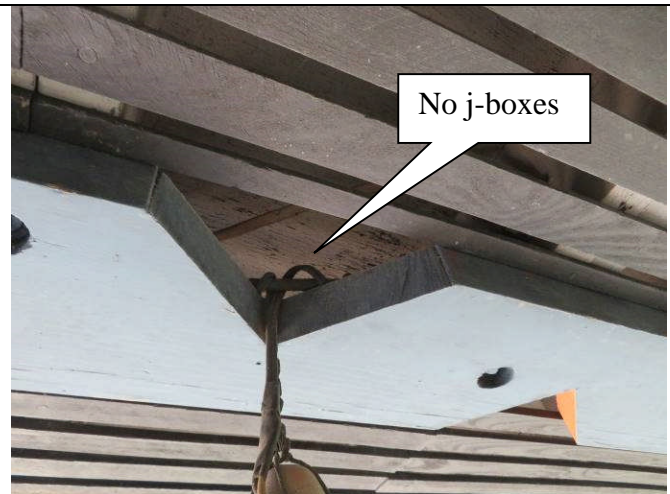
45. DIY electrical wiring and fixtures



46. improper joist boring



47. Improper wall penetrations



48. Improper wiring methods and materials


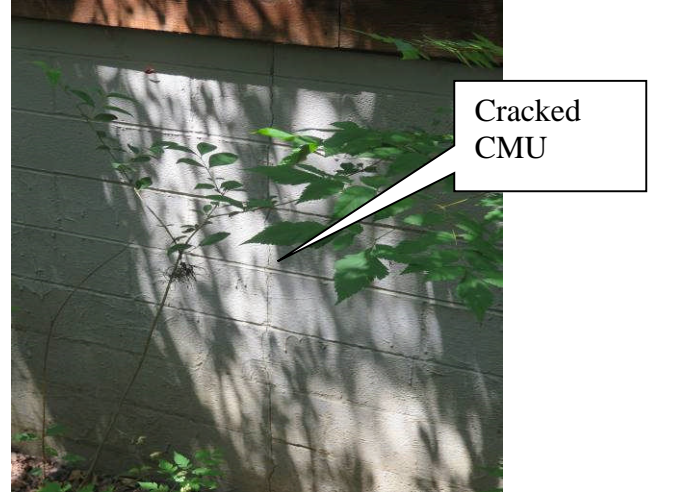


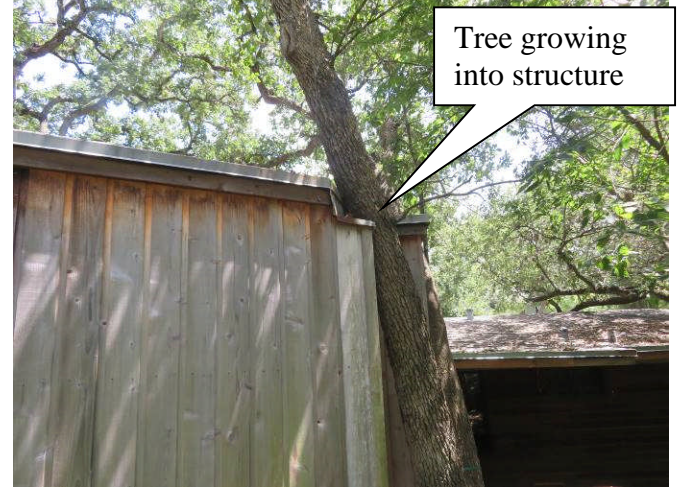



49. Badly rusted j-box at patio edge



50. Kitchen

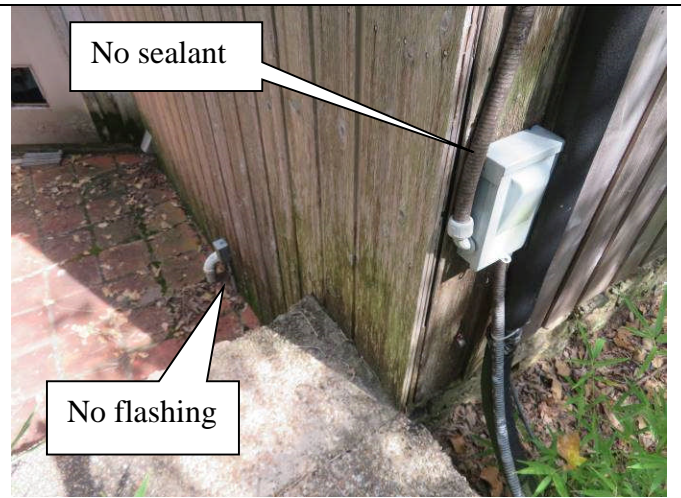


 <p>Windows do not meet 20"x24" opening size</p>	 <p>Cracked CMU</p>
51. No arc fault protection at bedrooms	52. Crack at garage wall
	 <p>Rusted anchor bolts</p>
53. No guardrail at patio edge	54. Rusted anchor bolts at patio edge
 <p>Tree growing into structure</p>	 <p>Tree bearing on roof with rot</p>
55. Tree into roof/wall structure	56. Tree bearing on roof

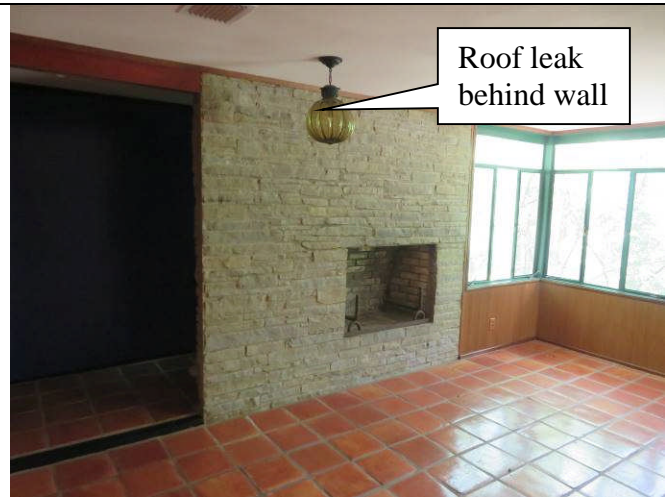




57. Light fixtures not rated for outdoor use



58. improper wall penetrations



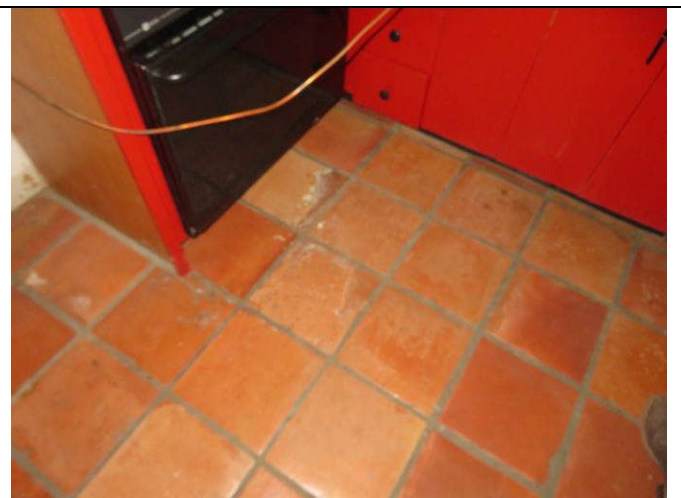
59. Settlement at fireplace



60. Single pane uninsulated window

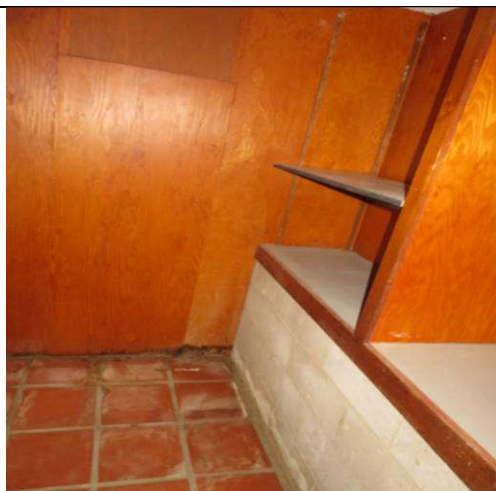


61. Jalouse window and door

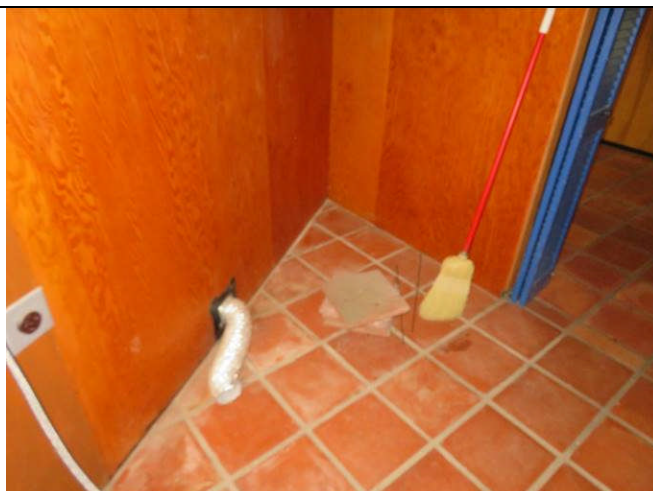


62. Water stain in kitchen





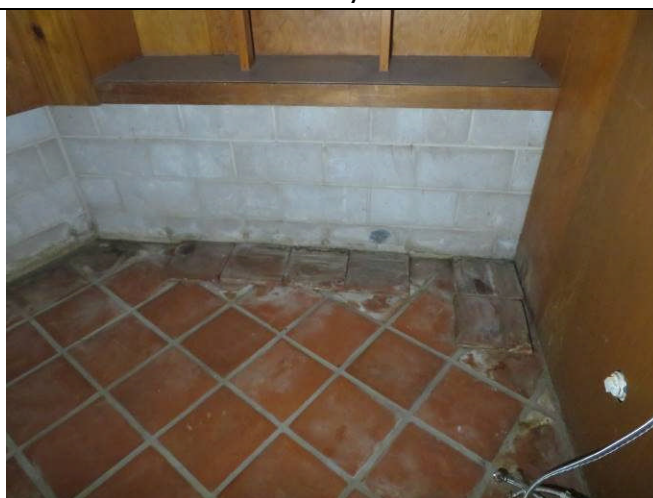
63. Water stain in utility



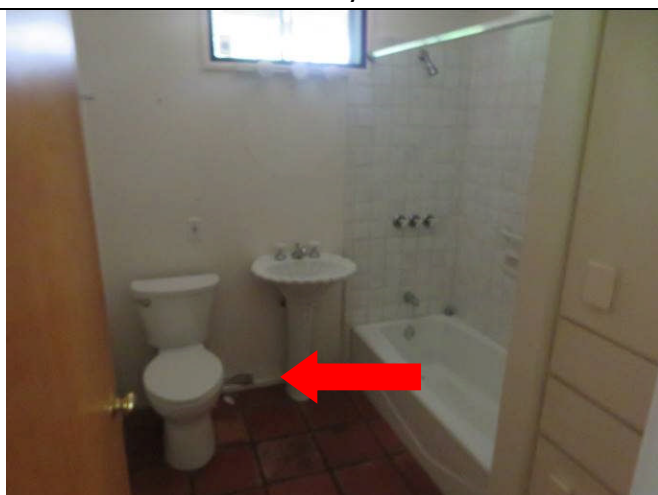
64. Water stain in utility



65. Water stain in utility



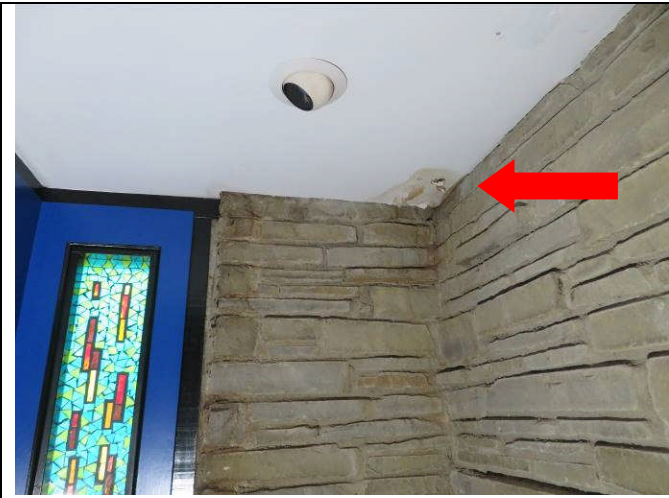
66. Water leaks at exterior wall - utility



67. Water leak at bathroom ext'r wall



68. Water damage at bathroom ext'r wall



69. Water leak at room next to chimney

70.