

**STRUCTURAL
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December 16, 2014

Richard Birdoff
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Subject: **Structural Assessment of House at
1227 NW 4th Ave
Gainesville, FL 32609**

On April 16th, 2014 I visually inspected the house at the above referenced address. The purpose of my visit was to assess the overall structural condition of the building for the purpose of rendering my opinion as to whether the building is a good candidate for being relocated to another lot.

LIMITATIONS OF THE INVESTIGATION

There were several limitations of my investigation that I would like to note at the outset of this report. This was not an all encompassing structural inspection where all components were inspected and documented. Determining whether the building met current code requirements was not part of my scope of work. Thus, no structural calculations have been performed and while many substantial components of the building fall far short of current code requirements, they will not be mentioned in this report.

My inspection was a visual inspection only and was done from the ground for the express purpose of determining the feasibility of relocating this house. I did not perform any means of destructive testing. The walls were not tested for moisture content and I did not walk on top of the roofs. Southard Engineering makes no express or implied warranty of the structural systems nor an opinion regarding the adequacy of the original design. Southard Engineering is providing this report to give the owner an idea with regard to the feasibility of moving the house while trying to note some (probably not all) of the structural issues that any relocation contractor will have to address. Relocation contractors shall be wholly responsible for determining which components need to be upgraded prior to attempting the relocation of the building.

HISTORY AND DESCRIPTION

During my inspection I was not able to gather information regarding the history of the vacant home from either the owner or the tenants. According to the property appraiser's website the home was built in 1933 and measures 1,492 square feet heated and cooled.

The home consists of a shingle roof support by timber rafters. The rafters are supported by what appear to be 2x4 walls. The floor system consists of timber joists and girders supported on brick piers and stem walls. The exterior wall is clad with 4 inch brick veneer. The timber wall system and the brick veneer appear to bear on the same foundation. I did not however dig down to examine the condition of the foundation. It is assumed to be formed out of concrete.

OBSERVATIONS AND DISCUSSION

The house has sustained damage to all of the major building component systems including structural, plumbing, mechanical (HVAC), electrical, and finishing. The house is not economically viable as a restoration housing project and is certainly not a candidate to be relocated in addition to that. All of the finishing components will have to be torn out and replaced. And most of the electrical and mechanical systems will need to be replaced due to moisture damage and vandalism. All plumbing fixtures will need to be replaced as well as some of the rough in plumbing that is damaged and causing ongoing water damage to the floor joist system.

Upon entering the house it had the obvious pungent smell of mold and mildew permeating the air. Major mold remediation is just the first of many operations that would have to be performed on the building in order to make it habitable again. The mechanical system has been vandalized robbed of its wiring and coil and will need to be completely replaced. This would include all of the grills, much of the ductwork, and a new AC unit (see photograph 25). The plumbing system has sustained damage to the toilets, sinks, and showers (see photographs 10, 16, and 29). Plumbing leaks have damaged to several floor joists in the crawl space (see photograph 10). The electrical system has also sustained damage to all receptacles and switches (see photographs 22, 23, 33, and 34). Judging from the vast amount of roof leaks and all of the debris on the roof I'm fairly certain that at a minimum the roof will require reroofing and several significant areas will require new wood planking. Much of the roof is covered with leaves and other tree debris such that the roof shingles can't even be seen.

All of the drywall and ceiling board will need to be completely removed and replaced in their entirety, due to moisture damage from roof leaks and excessive humidity in the house (see photographs 15, 17, 18, 19, 24, 25, 27, 31, and 34). All of the doors and windows show signs of moisture intrusion and other forms of damage (see photographs 14, 21 and 28). All doors and windows will need to be replaced.

Before this house could ever become habitable it will have to be completely gutted with the only remaining elements being part of the structural shell and foundation. And due to water damage large areas of the structure will have to be repaired or replaced. The brick veneer has also sustained damage. And because most of the other damage to the building has been due to water damage it is safe to say that the brick ties that hold the brick on the walls have substantial corrosion damage as well. This makes any possible relocation of the house risky due to bricks or perhaps panels of brick falling when the house is moved.

The common causation of a significant amount of the damage observed, other than outright vandalism is water intrusion and/or long term elevated humidity inside the building.

STRUCTURAL DAMAGE

As noted above, all of the major components and systems of the building have sustained significant damage due to water intrusion and high humidity levels. This is no different for the structural systems. In five places the roof rafters and planking have sustained significant damage due to roof leaks as seen in photographs #1 through #7. The floor system has also taken on damage due to water intrusion into the crawl space. These leaks are most likely caused by poor grading around the house and build up of debris. Please refer to photographs 9 through 13 for description of the damage.

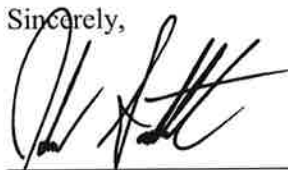
It should also be noted just how bad the efflorescence build up on the brick stem walls and veneer is. This is a sign that the brick has been exposed to lots of trapped water which has traveled through the brick depositing salts on the surface of the brick. It is likely this means the brick ties, which attach the brick to the building, have also been damaged and are probably severely corroded. There are about four to five roof areas and four to five floor areas where structural repairs need to be made just to make the building habitable. And as mentioned before, the rest of this building's components are in worse shape. There is little to none of the building's interior that can be preserved.

SUMMARY OF RECOMMENDATIONS

In summary the cost of bringing this building up to a standard where by which it could be habitable again far exceeds the value of the entire building and most likely the cost of building an entirely new building. I strongly recommend condemnation of the building and that it be torn down. In its current condition the building presents a health hazard to any occupants. This building is not a suitable candidate for building relocation.

If anyone has any questions please do not hesitate to call. Thank you again for the opportunity to provide you with these engineering services.

Sincerely,



John H. Southard, M.S., P.E.

President

Southard Engineering, Inc. (CA#9195)

4566B NW 5th Blvd.

Gainesville, FL 32609



Location:
1227 NW 4th Ave
Gainesville, FL 32609
Interior ceiling on East side

Description:
Roof leak has caused major
damage to ceiling and rafters

PHOTOGRAPH #1



Location:
1227 NW 4th Ave
Gainesville, FL 32609
Rafter end on East side

Description:
Damage to rafters caused by
a roof leak in this area

PHOTOGRAPH #2



Location:
1227 NW 4th Ave
Gainesville, FL 32609
Rafter end on East side

Description:
End of Rafter needs to be
replaced due to damage
caused by roof leak

PHOTOGRAPH #3



Location:
1227 NW 4th Ave
Gainesville, FL 32609
Rafter end on West side

Description:
Roof leak has damaged roof
planks and rafter end

PHOTOGRAPH #4



Location:
1227 NW 4th Ave
Gainesville, FL 32609
Rafter end on West side

Description:
Another location where a
roof leak has damaged the
end of a rafter

PHOTOGRAPH #5



Location:
1227 NW 4th Ave
Gainesville, FL 32609
Opening in roof on West side

Description:
In this location the hole in
the roof is so big daylight
shines through easily and
vegetation has entered the
structure

PHOTOGRAPH #6



Location:
1227 NW 4th Ave
Gainesville, FL 32609
Look leak Southwest area

Description:
There is also a newer roof leak here and the roofing materials are showing signs of damage. Also note the garbage left behind by trespassers and vandalism.

PHOTOGRAPH #7



Location:
1227 NW 4th Ave
Gainesville, FL 32609
West Side Entrance

Description:
Typical of most exterior doors. Lots of moisture intrusion. Large gaps between the door frame and the walls. Algae stains on the brick veneer

PHOTOGRAPH #8



Location:
1227 NW 4th Ave
Gainesville, FL 32609
West side

Description:
Ends of Floor joist damaged by water intrusion into the crawl space and damaged stem wall.

PHOTOGRAPH #9



Location:

1227 NW 4th Ave
Gainesville, FL 32609
Under East side bathroom

Description:

Major damage to two floor joist where the plumbing at the bathroom tub has been leaking

PHOTOGRAPH #10



Location:

1227 NW 4th Ave
Gainesville, FL 32609
East side stem wall

Description:

Another spot where the ends of the floor joist have been damaged due to water intrusion into the crawl space. Mold and efflorescence is on the stem wall.

PHOTOGRAPH #11



Location:

1227 NW 4th Ave
Gainesville, FL 32609
Southeast stem wall

Description:

Here the rim joist has been sustained major damage caused by water intrusion into the crawl space. Efflorescence is on the stem wall.

PHOTOGRAPH #12



Location:
1227 NW 4th Ave
Gainesville, FL 32609
Southeast stem wall

Description:
Efflorescence stains as bad as I've ever seen on brick veneer. Signs of major water intrusion area into crawl space

PHOTOGRAPH #13



Location:
1227 NW 4th Ave
Gainesville, FL 32609
West exterior door

Description:
Here there is a major gap between the walls and the door entry frame

PHOTOGRAPH #14



Location:
1227 NW 4th Ave
Gainesville, FL 32609

Description:
Ceiling damage due to water intrusion into the building.

PHOTOGRAPH #15



Location:
1227 NW 4th Ave
Gainesville, FL 32609
Kitchen

Description:
All appliances, sinks, toilets,
interior doors, etc... have
sustained major damage due to
was vandalism.

PHOTOGRAPH #16



Location:
1227 NW 4th Ave
Gainesville, FL 32609
Kitchen ceiling

Description:
Damaged ceiling in Kitchen
due to water intrusion into
building from roof

PHOTOGRAPH #17



Location:
1227 NW 4th Ave
Gainesville, FL 32609
Kitchen ceiling

Description:
Another damaged ceiling
area due to water intrusion
into the building.

PHOTOGRAPH #18



Location:
1227 NW 4th Ave
Gainesville, FL 32609
Kitchen ceiling

Description:
Close up of damage to ceiling.

PHOTOGRAPH #19



Location:
1227 NW 4th Ave
Gainesville, FL 32609
Front entrance closet

Description:
Closet door next to front entrance will not close. Most likely due to settlement of the foundation

PHOTOGRAPH #20



Location:
1227 NW 4th Ave
Gainesville, FL 32609
Northeast window

Description:
Typical damages sustained to windows

PHOTOGRAPH #21



Location:
1227 NW 4th Ave
Gainesville, FL 32609
Northeast corner

Description:
Damage to electrical system. This could be the door bell chime.

PHOTOGRAPH #22



Location:
1227 NW 4th Ave
Gainesville, FL 32609

Description:
More damage to electrical system

PHOTOGRAPH #23



Location:
1227 NW 4th Ave
Gainesville, FL 32609
Kitchen ceiling overall

Description:
Overall photo of damage to ceiling in the kitchen area due to water intrusion and long periods of excessive humidity in the building

PHOTOGRAPH #24



Location:
1227 NW 4th Ave
Gainesville, FL 32609

Description:
Typical of damage sustained to air vents of the mechanical system. Mold and paint and stucco over spray.

PHOTOGRAPH #25



Location:
1227 NW 4th Ave
Gainesville, FL 32609

Description:
Typical example of how each room as been literally trashed

PHOTOGRAPH #26



Location:
1227 NW 4th Ave
Gainesville, FL 32609

Description:
More ceiling damage

PHOTOGRAPH #27



Location:
1227 NW 4th Ave
Gainesville, FL 32609

Description:
More window damage

PHOTOGRAPH #28



Location:
1227 NW 4th Ave
Gainesville, FL 32609
Interior bathroom

Description:
This is the bathroom that has been leaking causing damage to the floor system. Here the bathtub surround has been destroyed.

PHOTOGRAPH #29



Location:
1227 NW 4th Ave
Gainesville, FL 32609

Description:
Blinds and electrical outlet have sustained major damage

PHOTOGRAPH #30



Location:
1227 NW 4th Ave
Gainesville, FL 32609

Description:
Beginnings of a new roof leak causing damage to the ceiling

PHOTOGRAPH #31



Location:
1227 NW 4th Ave
Gainesville, FL 32609
Living room

Description:
Floor has been stained most likely from the formation of a new roof leak or perhaps urination.

PHOTOGRAPH #32



Location:
1227 NW 4th Ave
Gainesville, FL 32609
Corridor 6-004

Description:
Damage to phone outlet due to excessive humidity and moisture.

PHOTOGRAPH #33



Location:

1227 NW 4th Ave
Gainesville, FL 32609
North Exterior Wall

Description:

Typical of damage to light fixtures due to excessive humidity and moisture.

PHOTOGRAPH #34



Location:

1227 NW 4th Ave
Gainesville, FL 32609
North Exterior Wall

Description:

The flooring planking in this area feels a bit soft. Most likely cause be degradation due to moisture related damage

PHOTOGRAPH #35