ATTACHMENT II

Structural and Feasibility Reports

ARBAB ENGINEERING, INC.
CONSULTING ENGINEERS. 3363 NE 163rd STREET, SUITE 701. N.MIAMI BEACH, FL 33160. (305)940-3088. FAX: (305)940-3273

May 6, 2021

City of Hollywood Planning Division
2600 Hollywood Boulevard, Room 315
Hollywood, Florida 33022

Re: **Structural Evaluation Report for:**
Mr. & Mrs. John Goymer
1049 Tyler Street • Hollywood, Florida
Folio 5142 140 18 – 760

To Whom It May Concern:

This report has been prepared for the specific purpose of evaluating the current structural condition of the three buildings associated with the single-family residence located at above referenced property (Lots 3, 4 and half of 2). The descriptions that follow below are our professional opinions based on experience as a result of visual observations of the building on May 4 and 5, 2021.

While there may be latent conditions that have not been fully explored and are not identified such as attic and crawl spaces, this does not impede the fundamental conclusions stated in this report.

Main structure

- The two-story house construction system consists of CMU walls on what appears to be spread footings with 2x wood joist floor framing and wood rafter roof framing.
- CMU stem walls extend up from the foundation at the perimeter and interior to support wood floor joists within the interior of the house.
- Wood floor joists frame both the ground and second level floor systems topped with 1x wood floor decking and finished flooring material.
- Wood roof rafters frame the roof systems topped with 1x wood roof decking and roofing materials. The sloped roofs are covered with barrel tile.
- There are no metal connectors fastening the roof rafters to the CMU exterior walls.

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- The ceilings and walls are finished with plaster throughout the house with wood beams exposed in the living room below the flat roof.

- The ground and second level floors show signs of sagging due to the wood joists spanning too far for their size and because of moisture damage as a result of insufficient crawl space ventilation.

- Several of the interior wood framed, plaster-finished partitions are load-bearing which support the second level floor joists.

- Many of the exterior wood frame doors and windows are rotted due to moisture and termite infestation.

- There are damaged wall and ceiling areas due to moisture and termite infestation.

- Much of the original electrical system is still in place which presents a potential fire hazard due to the use of outdated cloth wiring.

- All of the exterior walls, doors, windows, and roof structures do not meet the current Building Code requirements to protect against hurricane force winds.

- There is evidence of the original cast iron sanitary sewer pipes and galvanized steel water pipes throughout the house.

- The finished floor elevation is marginally above grade (Elev. 3.16' NAVD) and is nearly 3 feet below the minimum FEMA flood elevation criteria.

Cottage

- The one-story cottage construction system consists of partial CMU and partial wood frame walls on what appears to be spread footings with both concrete slab on grade and 2x wood joist floor framing and wood rafter roof framing.

- CMU stem walls extend up from the foundation at the perimeter and interior to support wood floor joists within the interior of the cottage.

- Wood floor joists frame the floor system topped with 1x wood floor decking and finished flooring material.

- Wood roof rafters frame the flat roof system topped with 1x wood roof decking and usual built-up roofing materials. The parapet edge has a detail of barrel tile.

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- There are no metal connectors fastening the roof rafters to the CMU exterior walls.
- The ceilings and walls are finished with both plaster and 1x wood panels throughout the cottage.
- The wood floor shows signs of sagging due to the wood joists spanning too far for their size and because of moisture damage as a result of insufficient crawl space ventilation.
- The exterior doors and windows are rotted due to moisture and termite infestation.
- There are damaged wall and ceiling areas due to moisture and termite infestation.
- Much of the original electrical system is still in place which presents a potential fire hazard due to the use of outdated cloth wiring.
- All of the exterior walls, doors, windows, and roof structure do not meet the current Building Code requirements to protect against hurricane force winds.
- There is evidence of the original cast iron sanitary sewer pipes and galvanized steel water pipes throughout the cottage.
- The finished floor elevation is barely above grade (Elev. 2.75' & 1.63' NAVD) and is roughly 4 feet below the minimum FEMA flood elevation criteria.

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Detached Garage

- The one-story garage construction system consists of CMU walls on what appears to be spread footings and a concrete slab on grade.
- CMU walls extend up from the foundation at the perimeter to support wood roof rafters within the interior of the garage.
- A concrete slab-on-grade is the structural floor system for the garage.
- Exposed wood roof rafters frame the flat roof system topped with 1x wood roof decking and usual built-up roofing materials.
- There are no metal connectors fastening the roof rafters to the CMU exterior walls.
- The walls are finished with stucco throughout the garage.

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City of Hollywood Planning Division

Re: **Structural Evaluation Report for:**
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- The exterior doors are rotted due to moisture and termite infestation.
- There are damaged ceiling areas due to moisture and termite infestation.
- Much of the original electrical system is still in place which, along with exposed wires not meeting Code, presents a potential fire hazard due to the use of outdated cloth wiring.
- All of the exterior walls, doors, windows, and roof structure do not meet the current Building Code requirements to protect against hurricane force winds.
- The finished floor elevation is barely above grade (Elev. 2.09' NAVD).

Conclusion:

It is clear that the foundation, floor joists, roof rafters, floor & roof decking, plumbing system, and electrical systems are damaged and continue to deteriorate for reasons previously stated, the first floor of all three structures are between 3' to 4'.0" below flood level and structure is supported by spread footing and not by piles and grade beams. The lack of reinforced masonry walls and steel connectors to fasten the roof structure to the exterior walls and foundation make the buildings unsafe and suspect to catastrophic failure and potential collapse during a hurricane or other strong wind event. The considerable cost to repair, reinforce, replace, and reconstruct the structural and MEP systems to provide buildings that meet the current Florida Building Code and allow for the safe & healthy human habitation would lead to a Substantial Improvement condition. That would mandate that the buildings be brought into full compliance with current FEMA regulations and the 2020 Florida Building Code. In my professional opinion based on knowledge and experience, due to the extent of damage to all three structures that is visibly evident, as well as the latent damage and deterioration that is festering below the ground and behind finishes, the three buildings should be demolished since rehabilitation is not a feasible option.

If you have any questions regarding this structural evaluation report, feel free to contact me in my office at 305-940-3088 during office hours.

Sincerely,

Ali Arbab, P.E.
For Arbab Engineering, Inc.
FL lic # PE 35460

Attachments
AA/aa Z:\Drive Z\Z Drive\2021 PROJECTS\JOHN GOYMER RES (R Piper)

ARBAB ENGINEERING, INC.
CONSULTING ENGINEERS. 3363 NE 163rd STREET, SUITE 701. N.MIAMI BEACH, FL 33160. (305)940-3088. FAX: (305)940-3273

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Re: **Structural Evaluation Report for:**
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May 6, 2021

Materials to reuse:

Newel post to be incorporated at new stairwell.

Medallion to be relocated to new chimney.

(Continued on Page 2)

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City of Hollywood Planning Division

Re: **Structural Evaluation Report for:**
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Exposed Wood Beams in Living Room

(Continued on Page 3)

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Re: **Structural Evaluation Report for:**
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May 6, 2021

Main Residence – Water Intrusion – Termite Infestation – Wood Rot

(Continued on Page 4)

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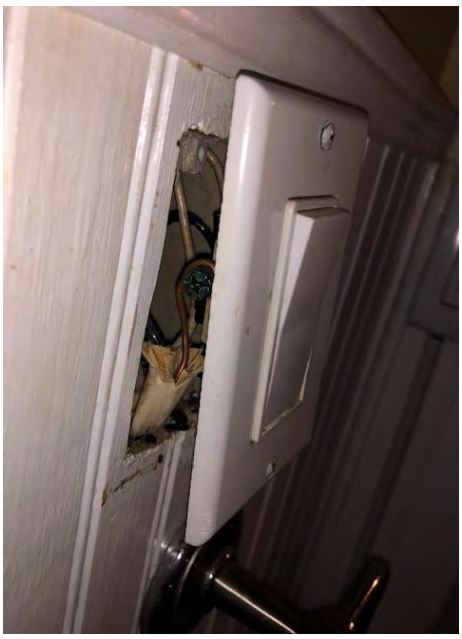
Re: **Structural Evaluation Report for:**
Mr. & Mrs. John Goymer

Main Residence – Water Intrusion – Termite Infestation – Wood Rot – Cloth Wiring – Water Intrusion



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May 6, 2021

Main Residence – Water Intrusion – Termite Infestation – Wood Rot – Cloth Wiring – Water Intrusion

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Re: **Structural Evaluation Report for:**
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May 6, 2021

Cottage Building – Foliage impacting foundation – Non-Impact Windows & Doors – Inefficient Mechanical System

(Continued on Page 7)

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Re: **Structural Evaluation Report for:**
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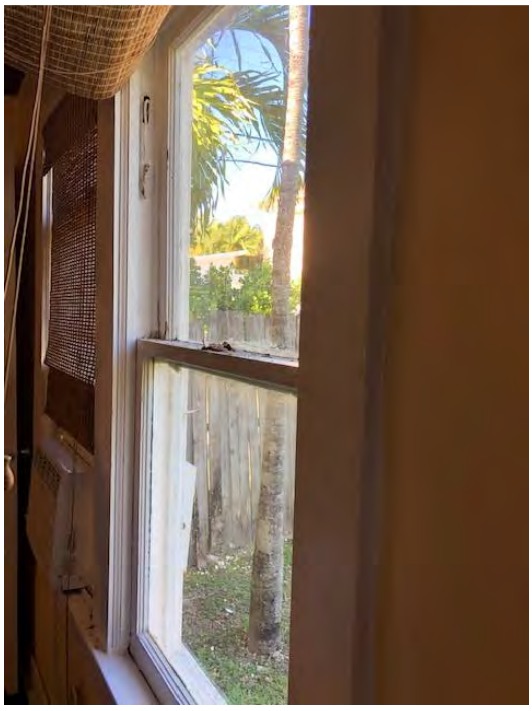
Cottage Building – Termite Infestation – Non-impact Windows



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Re: **Structural Evaluation Report for:**
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May 6, 2021

Garage Building – Structural Cracks at Parapet – Wood Rot – Water Intrusion

(Continued on Page 9)

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Re: **Structural Evaluation Report for:**
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May 6, 2021

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Re: **Structural Evaluation Report for:**
Mr. & Mrs. John Goymer

Wall crack

(Continued on Page 11)

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Re: **Structural Evaluation Report for:**
Mr. & Mrs. John Goymer

May 6, 2021

Wall crack

(Continued on Page 12)

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City of Hollywood Planning Division

Re: **Structural Evaluation Report for:**
Mr. & Mrs. John Goymer

May 6, 2021

Deterioration of exterior wall

(Continued on Page 13)

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City of Hollywood Planning Division

Re: **Structural Evaluation Report for:**
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May 6, 2021

Moisture penetration and deterioration of wood joist

(Continued on Page 14)

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City of Hollywood Planning Division

Re: **Structural Evaluation Report for:**
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Deflection of the floor members

(Continued on Page 15)

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City of Hollywood Planning Division

Re: **Structural Evaluation Report for:**
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May 6, 2021

Exterior wall with horizontal and vertical cracks and window in poor condition

(Continued on Page 16)

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Re: **Structural Evaluation Report for:**
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May 6, 2021

Damaged exterior wall at base.

(Continued on Page 17)

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Re: **Structural Evaluation Report for:**
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May 6, 2021

Erosion adjacent to footing

(Continued on Page 18)

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City of Hollywood Planning Division

Re: **Structural Evaluation Report for:**
Mr. & Mrs. John Goymer

May 6, 2021

Deteriorated wood members

ALLIGATOR CONSTRUCTION, INC.

BUILDING & REMODELING SPECIALISTS

August 3rd, 2021

Mr. & Mrs. John Goymer
1049 Tyler Street
Hollywood, Florida 33019

Dear Mr. & Mrs. Goymer,

At the request of your architect, Roger Piper, I have reviewed the existing drawings of your two-story Mediterranean Revival style home, the photographs of the main house, detached cottage, and detached 2- car garage, and the Structural Evaluation Report prepared by Arbab Engineering, Inc. It is clear that all three structures are in very poor condition with numerous structural and MEP system issues; most of them due to construction methods & materials deterioration which naturally occurred over the course of nearly 100 years. Unfortunately, the report describes the structures as being suspect to "catastrophic failure" and "potential collapse during a hurricane or other strong wind event". The report states that every structural system shows signs of severe deterioration including the foundations of the buildings. I concur with the architect and structural engineer that attempting rehabilitation of the buildings is not a feasible option. The extraordinary challenges of trying to save original building materials while at the same time repairing, reinforcing, and replacing structural & aesthetic elements while simultaneously meeting the current Florida Building Code and FEMA regulations would be a monumental endeavor to achieve. This would include raising the ground level floor elevation over 3 feet to meet the FEMA flood criteria which in turn would create a domino effect of having to raise the second level floor system, all roof structures, all windows & doors, all interior partitions, and the electrical, mechanical, and plumbing systems. The grade surrounding the elevated structures would have to be raised & sloped along with additional steps & landings designed accordingly. Without going into further detail, I'm sure you can see how impractical it would be to rehabilitate the existing buildings and why reconstructing the buildings would be a much more practical and cost-effective way to restore your property to a safe and habitable condition suitable for modern-day living.

Giving consideration to my experience as a Florida licensed general contractor, and per the request of the Historic Preservation Board at the recent July 13, 2021 meeting, I have calculated the cost to both rehabilitate and reconstruct your main house, detached cottage, and detached 2- car garage in order to correct all the severely deteriorated structural and MEP issues. Due to the age of the buildings and only being able to see the "tip of the iceberg", there will surely be a great number of unforeseen conditions to address once the demolition phase is underway.

A: 12100 S.W. 132nd Court, Suite 101, Miami, Florida 33186 | **O:** (305) 509-7590 | **M:** (305) 345-9768
E: rob@alligatorconstruction.com | **W:** www.alligatorconstruction.com

ALLIGATOR CONSTRUCTION, INC.

BUILDING & REMODELING SPECIALISTS

The cost to demolish your main house, detached cottage, and detached 2- car garage and then build three new structures to replace the existing using similar materials and finishes on the exterior and the interior of each structure will cost approximately **$ 800,000.00**.

The cost to rehabilitate your existing main house, detached cottage, and detached 2- car garage using extreme care and extraordinary means & methods to both save and repurpose as much of the original exterior & interior materials and finishes as possible will cost approximately **$ 1,300,000.00**.

Please note that these are preliminary construction cost estimates based on the drawings, documents, and information provided. The actual cost can vary; it can be somewhat higher or lower which can only be determined once the construction documents have been approved for permit.

Feel free to contact me if you have any questions regarding the construction cost comparison above for this single-family residence and its two accessory structures.

Sincerely,

Robert Vallejo, President
for Alligator Construction, Inc.

A: 12100 S.W. 132nd Court, Suite 101, Miami, Florida 33186 | **O:** (305) 509-7590 | **M:** (305) 345-9768
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