

November 21, 2017

Attn: Christine Ellison  
Southwest Funding  
902 Cm Fagan Dr  
Hammond, LA 70403  
985-956-7555  
cellison@southwestfunding.com



Digitally signed by  
EdselR\_Harrison,PE on  
11-21-2017 @ 12:11:36



**RE: Engineer's Report**  
**Owner: Jonathon Colombini, 504-256-6180**  
**Site: 117 Rooks Dr, Slidell, LA 70458**  
**Case or Loan #: 21 - 21 - 6 - 0438882**

To Whom It May Concern:

The above referenced property was physically examined. This report reflects my assessment.

### **Purpose & Scope of Report**

The main purpose of our observations and our scope of work for Jonathon Colombini was to assess and report on:

Foundation (Crack Evaluation (in foundation or walls)) : "Appraiser has noted the following

"Hairline crack under rear box window"

"Hairline crack exterior BV side of house"

Client wants an engineer to assess if the foundation is structurally sound due to the hairline cracks found in the wall.", (as noted by the Client)

### **Observations**

There was slight sloping in the front right bedroom and adjoining bath toward the right exterior wall. 5 quarters were placed under the 2' level to achieve the bubble level.

Outside - found vertical brick mortar crack on front right side of the dwelling measuring approx 1/32" width or less. placed a penny in one brick crack. The brick crack from the top of the slab upward approx half way up the wall for 16 bricks runs. Could not locate any cracks in the concrete slab. There is a 10" diameter Tallow tree with surface roots approx. 4.5' from the house near this bedroom and bath.

A smaller amount of settlement was noted at the rear of the dwelling along the den wall with no evidence of cracks in the brick or slab. A tree had been cut near the rear door close to this low area in the den.

Could not locate any cracks or separations inside the dwelling that corresponded to the affected areas. The inside and outside

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of the dwelling has been recently painted, make visibility more difficult.

Evidence of 1/16" vertical brick cracks in the dwelling to the left of this house approx the same distance from the front of the house, also.

There were no gutters installed at this address or adjoining properties.

The did not appear to be any 'pooling' or drainage issues. All the dwellings in this area have less than 6" of slab visibility.

### Opinion(s):

Based on the evidence it is my opinion that the soil under the foundation is subsiding causing the foundation to begin to settle. It is very likely that the trees adjacent to the home, as discussed, are contributing to this subsidence.

Based on the evidence, it is my professional opinion that there are some remediations that need to take place; these are outlined below. Please note that the following recommendations are not necessarily an exhaustive list, but are, in my opinion, a list of issues needing attention that we observed. Also note that the following recommendations are not to be misinterpreted as "design details and/or specifications" but rather a general course of action. If "design details and/or specifications" are desired (or required by the local building official) for any of the recommendations below, then a Licensed Professional Engineer should be consulted. If a "cost-to-cure" is given, it is for general "order of magnitude" budgeting purposes only and not to be construed as a construction estimate or quote.

It is my opinion that the foundation needs underpinning to help stabilize the foundation from further settlement and movement. Several underpinning options may be implemented, such as: new poured concrete piers, helical augured piers, hand dug concrete piers, driven friction piers, or the like. Stacked piers that are non-monolithic and non-continuous are not recommended because they do not provide adequate uplift resistance for swelling soils. Whatever underpinning method is chosen, the piers should support the foundation properly and be installed below the active (shrink/swell) zone of the expansive soil to disallow movement of the pier or foundation. The minimum area which I believe needs underpinning is the right rear and the right side, both areas near the adjacent tree. See Picture #15 in Appendix. It is my opinion that the possible cost to cure may be between \$4000 to \$8000.

**It is recommended that the contractor document each stage of work (before, during, and after) of each remediation item with digital photographs.** Please have your contractor read this report. If there are any engineering-specific questions about this report, please do not call, instead **email the question** to "Submittals@EngineeringReports.pro" and I will review the question or submittal. Note, the submittal must reference the address/city/zip of this home, or JobCode # LALACOMB17004.

**After the remediations have been completed, as recommended above, please email "Order@EngineeringReports.pro" or call our office so that we can verify if all requirements have been satisfied so that a satisfactory compliance report may be issued.**

Respectfully,



Harrison Engineering LLC  
3867 Plaza Tower Drive, 1st Floor  
Baton Rouge, La 70816  
Tel: 877-736-7327  
COA Firm #: EF.0004726

Ed Harrison, PE

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**APPENDIX**

**Picture #1, left front**



**Picture #2, right front - affect area**



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**Picture #3, rear yard - large pine tree approx 10' from the right corner.**



**Picture #4, rear yard**



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**Picture #5, view of Tallow tree near brick crack**



**Picture #6, exposed tree root approx 4.5' from the brick crack**



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**Picture #7, slab view - no cracks found**



**Picture #8, affected area**



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**Picture #9, affected area**



**Picture #10, penny in widest brick crack**



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**Picture #11, bath floor**



**Picture #12, bathroom bubble - sloped toward exterior wall**



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**Picture #13, BRM affected area.**



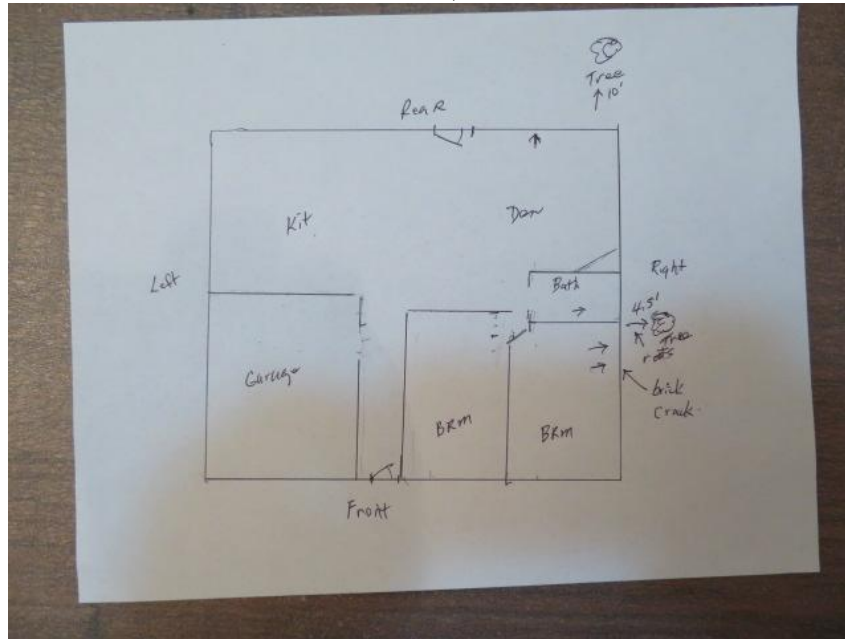
**Picture #14, front-right BRM - 5 quarters under level to achieve level.**



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**Picture #15, Sketch**



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