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Thursday, September 04, 2014

TO: Our Client

RE: Initial Engineering Evaluation – Foundation Performance
Anywhere in North Texas

The following report constitutes the engineering opinion requested on the foundation of the subject residence. This report has been prepared in general accordance with the requirements of a "Level B" survey as defined by the Texas Chapter of the American Society of Civil Engineers (ASCE) and the Texas Board of Professional Engineers (http://texasce.affiniscape.com/associations/10803/files/RepairGuidelines.pdf). This report is provided for the exclusive use of the person or persons this report was prepared for as shown above. We have no contractual relationship with, or obligation to, any party other than the party for whom this report was prepared. The purpose of this inspection was to evaluate the foundation and determine what, if any, foundation repairs are necessary. The foundation was visually inspected and a floor elevation survey was performed. The opinions contained herein are based on the experience and judgment of the writer, as well as conditions observed without taking soil samples, performing plumbing leak tests, removing floor or wall coverings, or performing invasive tests or procedures. The opinions offered herein are based solely on the observations made at the time of the inspection, and do not take into consideration any changes in the condition of the foundation after that date. This report does not predict or warrant the future performance of the subject foundation. You are encouraged to review the "Agreements and Limitations" attached to the end of this report for other important limitations and standard recommendations.

Observations

This structure is a two - story wood framed structure with brick veneer and siding on the exterior. The home has a hip roof and composition shingles. The interior walls are drywall with various finishes over the drywall. The foundation is a concrete slab-on-ground. The home was constructed in 1992 per the Tarrant County Appraisal District Records. All directions in this report are annotated by left, right, front and rear as if looking at the front door.

Observations and Discussions

1. Jason Conklin, Engineer (under the direct supervision of Mike Gandy, PE) physically inspected the above referenced residence to make an evaluation of the current foundation performance and to offer recommendations for repair, if needed. I performed a Level "B" engineering analysis as defined by the Texas Chapter of the ASCE. I made careful observations of the interior and exterior for signs of drainage and foundation distress. I performed an interior elevation survey denoted below and as shown on Drawing No. 1001.
2. This inspection was performed for the prospective buyer of the property. The home is listed on the real estate market.

Photo 1: General view of the front of the home.

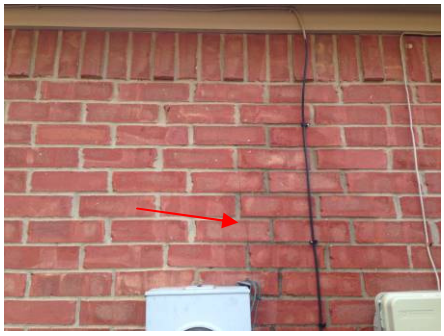
3. This engineer inspected the subject property after a rainfall event. The drainage around the home appeared to be adequate and no standing water was identified.
4. The home is situated on a cut and fill lot with the ground sloping from rear to front and right to left generally.

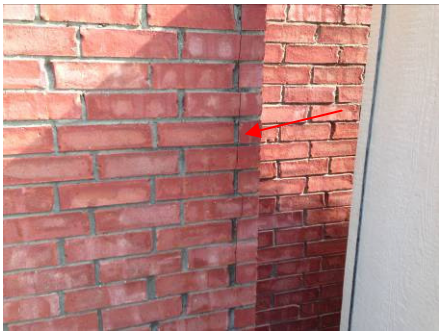
Photo 2: View along the left side of the home.

5. Large mature trees were identified in the front yard. These trees do not appear to be directly affecting the performance of the home's foundation at this time.

Photo 3: Large mature trees identified in the front yard.

6. Minor brickwork separations were identified around the exterior of the home. These separations appeared to be due to thermal expansion in the home's framing and seasonal movement in the home's foundation. These separations are not indicative of significant foundation movement and no structural repairs are recommended at this time.





Photos 4 - 8: Minor brickwork separations identified.

7. There were very minor indications of foundation movement throughout the interior of the home. Most doors were acceptably square in their frames. Most separations appeared to be due to normal seasonal movement in the home's foundation and framing.
8. It is recommended to maintain a "more than normal" watering program in the dry months of the year to prevent the soil around the home from drying and cracking. Especially along the front garage portion of the home's foundation.

Interior Elevation Survey

Interior floor elevations were taken with a Technidea Pro-2000 Ziplevel. Elevations were recorded to the nearest 0.1-inch throughout the home. A benchmark of 0.0 was established in the center of the home and is shown on Drawing No. 1001 with a star. An adjustment was made for floor coverings if they were a different elevation than the floor covering at the benchmark location. Elevation differentials varied by a maximum of 0.4 vertical inches in seven (7) horizontal feet. It should be noted that the elevation measurements include effects of elevation variation in the original construction which normally are 0.6 inches to 1.0 inches. A sketch of the house with the elevations is attached as Drawing No. 1001.

Conclusions

An elevation survey was performed on the home and the cosmetic damage was reviewed to evaluate the performance of the foundation. The soil where the home is located has high shrink swell capacity. This soil can heave or settle depending on the moisture content in the soil. Some minor movement of the exterior driveways and sidewalks should be expected.

Reviewing the elevation survey, the home does not have any slopes in the foundation that are above acceptable tolerances for slope. There are no foundation repairs recommended, at this time. Some minor movement of the foundation has occurred since the home was built. The amount of movement is within acceptable tolerance as foundations are designed to allow for minor movement.

In conclusion, the home does not need any leveling performed on the home as it is within acceptable slope tolerance. The foundation of the home is performing within performance tolerances, no foundation repairs are recommended.

Recommendations

1. Maintain a “more than normal” watering program in the dry months of the year to prevent the soil around the home from drying and cracking. If soaker hoses are used, place the soaker hoses 1’ – 2’ away from the foundation and run for 30 – 60 minutes every other day as needed. Do not over water the foundation; this can be as detrimental as under watering.

Agreements and Limitations

Use of this report for any reason implies consent to all agreements and limitations of this report. This report is the professional opinion of Lighthouse Engineering, LLC and is based upon a limited evaluation of the property. This report is provided for the exclusive use of the addressee. We have no contractual relationship with, or obligation to, any party other than the addressee of this report.

This report does not constitute a structural warranty or performance contract with the purchaser of this report to or with any other party. It only states conditions observed at the time of the inspection. The evaluation of the property included a visual examination of the exposed interior and exterior finishes of the structure and the ground surfaces adjacent to the structure and to the taking of relative floor elevations. The taking and testing of soil samples was not included. Unless written in the report, the original design drawings and any design conditions were not known. Determination of construction to Building Code is best done during the original construction and is not a part of this evaluation. Testing for plumbing leaks was not performed but is recommended after foundation work is performed.

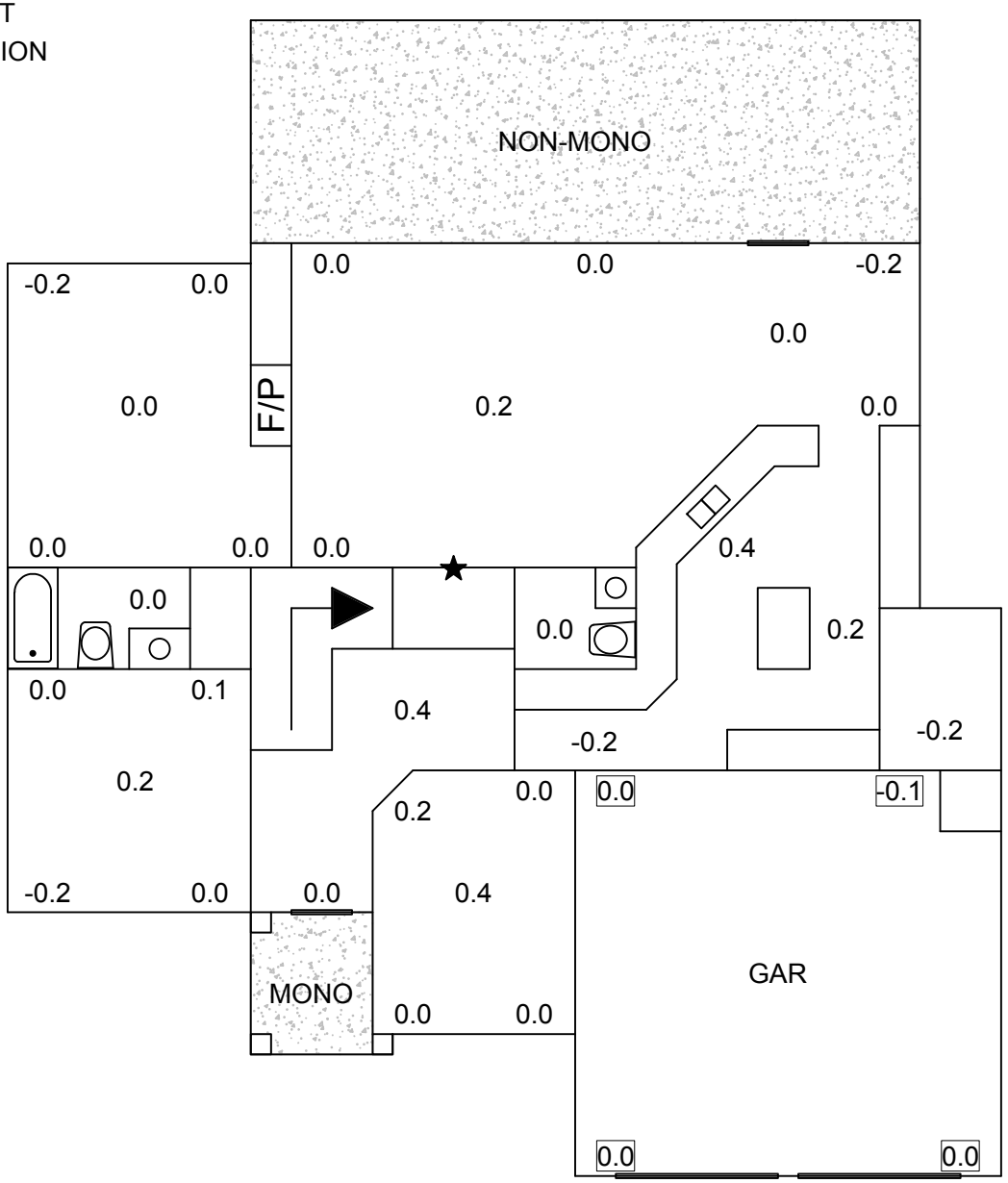
It is possible that future repairs could be required for the subject foundation. This evaluation only addresses the current condition of the foundation. Lighthouse Engineering, LLC does not offer or imply any warranty for the repairs or for the repair company's acts or omissions or for any other person conducting the repairs.

The fee collected is for this inspection only. Additional engineering services are available at an additional cost. Requests for these services must be made in a timely manner before commencement of work. Please contact this office for additional inspection scheduling and fee arrangements.

Sincerely,

Michael Gandy, P.E.
9/4/2014
Registered Engineering Firm F-9334

THIS REPORT DOES NOT PREDICT OR WARRANT
THE FUTURE PERFORMANCE OF THE FOUNDATION



STATE OF TEXAS
MICHAEL D. GANDY
95672
LICENSED
PROFESSIONAL ENGINEER

Michael Gandy

DATE

APPROX. SCALE 1" = 10'

★ BENCHMARK ELEVATION 0 INCHES
ELEVATIONS ARE SHOWN IN TENTHS OF AN INCH

ELEVATION SURVEY DRAWING

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ADDRESS:	ANYWHERE IN NORTH TEXAS	FILE NO.:	XXXX2014	DATE:	DATE	DRAWING NO.	1001