

D. ALLEN HUGHES
ENGINEERING, Inc.

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336-578-8634, Firm No. C-2951

April 11, 2022

Choo Choo Homes
5657 Bragg Blvd.
Fayetteville, NC 28303

Attention: Mr. Rodney Dent

Reference: Overheight Foundation Evaluation, Lewis Residence
185 Sherwood Hill Ct., Cameron, NC
Project No. D21mh139, Harnett County Permit No. BRES-2107-0019

Dear Mr. Dent:

Thank you for using D. Allen Hughes Engineering. As requested, the site was visited on November 23, 2021, December 16, 2021, January 6, 2022 and March 24, 2022, April 1, 2022 and April 7, 2022 to evaluate the pier and anchoring system and the subgrade/footing for the modular home.

Initially, the approximate 27 ft. by 72 ft. modular home had been placed on (10) rows of block piers (4 piers per row) on concrete block footings and anchored with (8) pairs and of lateral anchors with 12-in. stabilizer plates, and longitudinal anchors near the corners. Fourteen of the lateral anchors used double straps in a crossed pattern. The rest of the anchors used single straight straps. The pier heights range from about 24 in. to 62 in. The anchors, straps and connectors were found to be adequate to anchor the home.

On March 24, 2022 the subgrade adjacent to about $\frac{1}{4}$ of the footings was tested with a Dynamic Cone Penetrometer (DCP) test and was found to be adequate to support about 1500 psf. Based on a design bearing capacity of 1500 psf, the following was recommended to provide adequate support of the modular home:

- Three rows of 16 in. by 16 in. masonry piers should be added as described below and shown on the attached sketch.
A row of (4) piers should be added between the existing 2nd and 3rd rows from the left, a row of (4) piers should be added between the existing 5th and 6th rows from the left, and a row of (4) piers should be added between the existing 8th and 9th rows from the left. The new piers are drawn in green on the sketch.
- Each pier should have a 20 in. by 20 in. ABS footing or a 20 in. by 20 in by 8 in. concrete footing with the bottom at least 8 in. below the surrounding grade.
- Any issues not addressed in this report should be constructed in accordance with the NC Residential Code, 2018.

On April 7, 2022 the additional piers and footings were observed to have been properly constructed in accordance with the recommendations above.

Based on measuring, observation, evaluation, and implementation of the recommendations, the pier and anchoring system (including footings, piers, anchors, straps and connectors) for the modular home at 185 Sherwood Hill Ct., Cameron, NC is structurally sound and adequate to anchor the modular home against the design horizontal and uplift forces. The foundation and anchoring system is adequate to support the proposed loads of the modular home. Thank you for using D. Allen Hughes Engineering. If you should have any questions pertaining to this report, please call.

Sincerely,



D. Allen Hughes
April 11, 2022

D. Allen Hughes, P.E., President
D. Allen Hughes Engineering, Inc.