

**D. ALLEN HUGHES
ENGINEERING, Inc.**

1669 Jemie Kerr Rd., Haw River, NC 27258
336-516-8634, Firm No. C-2951

February 20, 2025

A Plus Construction
425 Cranes Creek Rd.
Cameron, NC

Attention: Carl Gallimore

Reference: Review of Foundation Plan for Proposed 23'-4" by 64' Scale House
Heidelberg Materials Gardner Quarry, 3155 NC 210, Bunnlevel, NC
Project No. D25ms42

Dear Mr. Gallimore:

Thank you for using D. Allen Hughes Engineering. Our scope of service is to evaluate the Foundation Plan for the proposed modular scale house in light of the February 17, 2025 report by Geotechnologies sealed by Conrad. E. Harris, PE. The foundation plan is titled "Foundation", by First String Space, Serial No. FSSI-10911AB. Our evaluation pertains to recommending alternate footings in accordance with the Foundation Plan. We have made no site visits.

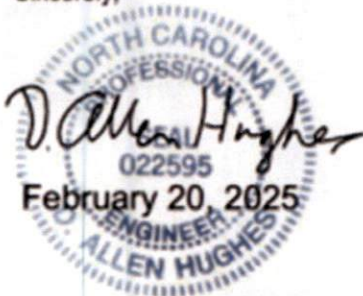
Based on the 3,000 psf bearing capacity from the above referenced Geotechnologies report, uniform loads prescribed by the NCBC, 2018 NC Building Code, and review of the Foundation Plan, the following are recommended as alternate footings. See NOTE about Alternate Foundation Plans on the Foundation Plan:

- The Foundation Plan by First String Space should be used unless recommended otherwise in the following recommendations.
- Our evaluation is based on an assumed bearing capacity of 2,500 psf to increase the factor of safety and reduce the chance of repairing areas relatively softer than the recommended 3,000 psf bearing.
- It is recommended that the marriage line piers be located as shown on the Foundation Plan by First String Space.
- It is recommended that the anchoring be installed according to the Foundation Plan by First String Space.
- The chassis beam pier footings may be 20"x20"x8" concrete footings and the marriage footings should be at least 30"x30"x10" concrete footings. As long as the footing thickness is greater than the footing projection, no steel reinforcing is required.
- The chassis beam piers and footings should be spaced at 9 ft. along the chassis beams with the end piers being within 2 ft. of each end of each chassis beam.
- The marriage line piers should be 16"x16" masonry piers.
- The chassis beam piers may be 8"x16" masonry piers up to heights of 36 in. Higher than 36 in. should be 16"x16" masonry piers.

- As an alternate to using mortar at the joints in the masonry piers, they may be coated from the footing with a 1/8 in. layer of surface bonding cement mixed and applied according to the manufacturer's specifications.
- Any issues not addressed in this report should be constructed in accordance with the Foundation Plan, NC Building Code, 2018 and the Geotechnologies report.
- The local inspections department or D. Allen Hughes Engineering should observe the completed foundation and anchoring system once the recommendations have been implemented.

If you should have any questions pertaining to this report, please call.

Sincerely,



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