TYNDALL
ENGINEERING & DESIGN, P.A.

T 919 773-1200 ▪ F 919 773-9658
250 Shipwash Drive, Suite 104 ▪ Garner ▪ North Carolina ▪ 27529
www.tyndallengineering.com

August 8, 2022

Robert Ivey
Ben Stout Construction
P.O. Box 53798
Fayetteville, NC 28314
Email: ivey@benstoutconstruction.com

Reference: Engineering Services
850 Cypress Road
Cameron, NC 28326
TE&D Project No.: 2201-020683

To Whom It May Concern;

As requested by the builder, a representative of Tyndall Engineering & Design, PA (TE&D) made multiple site visits to observe the following items:

1) 3RD party stemwall footing excavation observations.
2) Observe the materials/condition of the stemwall foundation bearing soils.

The following conclusions and recommendations were noted:

1) The existing excavated stemwall footing was visually observed with regard to compliance with the project plans and applicable provisions of the 2018 North Carolina Residential Building Code. Several modifications had to be made at the rear foundation wall footing. The following footing modifications were made:

    a. During our initial visit, the rear foundation wall footing was observed to have underlying bearing soils consisting of large amounts of organic material. The rear foundation wall footing was over-excavated approximately 5'-0" below footing grade before it was decided (by the contractor) that the entire house footing was to be shifted. We understand the entire footing was shifted approximately 12'-0" towards the front of the lot (towards the road) to move away from the underlying highly organic soil and debris. Due to the adjacent soft soil within the proposed backyard, the new rear foundation wall footing was over-excavated an additional 3'-0" below footing grade. TE&D recommended the over-excavated footing be filled solid with concrete.

    b. TE&D recommends the previously excavated footing (now in the backyard) be filled with compacted fill or washed stone. Should stone be used, it is to be held down approximately 24" below final grade with compacted soil. Soil may be compacted using a loaded dump truck or track vehicle.

    c. Per the builder, the back porch footing was to be substituted with a wood-framed deck at a later time; therefore, the back porch foundation footing was not inspected.

    Based on our visual observations and analysis, the existing stemwall footing was prepared in general accordance with the project plans, our instructions as laid-out above, and applicable provisions of the 2018 NC Residential Building Code.

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2) The materials/condition of the stemwall foundation bearing soils were visually observed, qualitatively probed, and subjected to Static Cone Penetrometer (SCP) testing. Where the fireplace foundation footing is located, this area was over-excavated approximately 6'-0" below footing grade to suitable bearing soils. This area was backfilled with #57 light washed stone up to the footing depth as specified in item #1a per our direction. Based on our observations and analysis, and provided that the footing is not exposed to inclement weather after our final inspection on 8/5/2022, the in-situ soils were noted as being adequate to support the anticipated loading conditions (2000 PSF).

We appreciate being able to assist you during this phase of the project. If you need further assistance or require additional information, please do not hesitate to contact us.

Sincerely,
Tyndall Engineering & Design

Tripp Amos
PT III | 2101-020683

Prentice Tyndall Jr., P.E.

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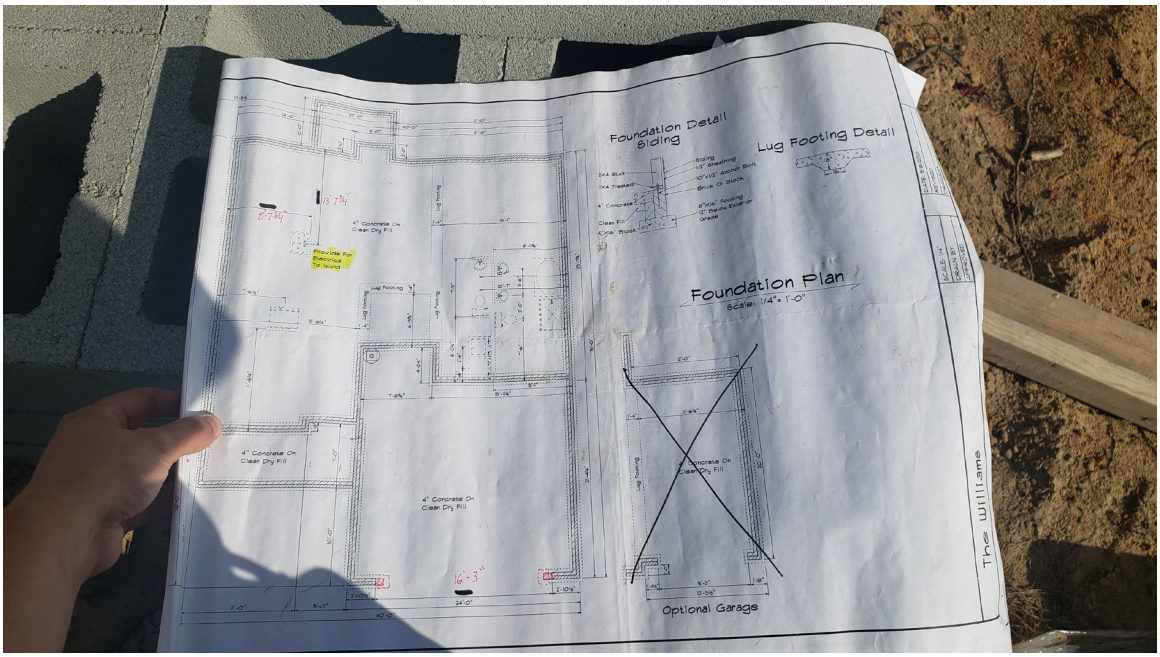

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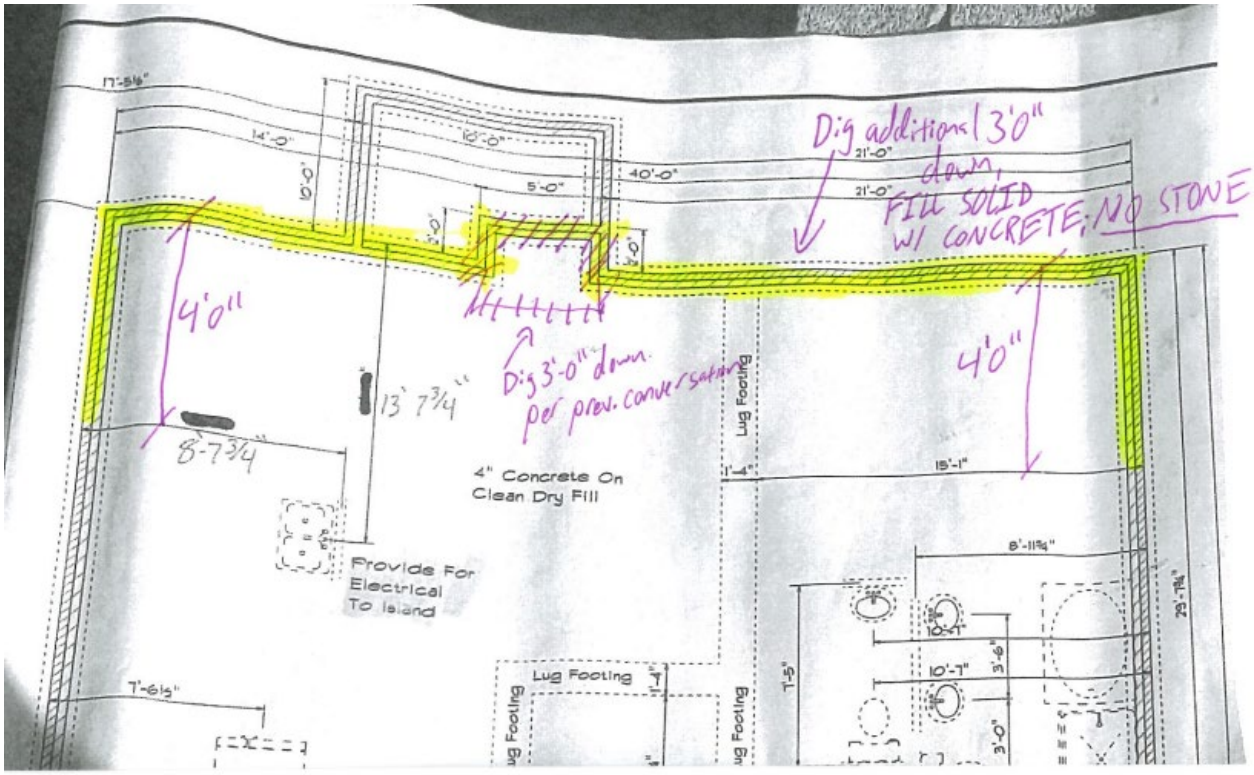

Modifications made to footing after relocation [Items 1a and 2]