



July 30, 2025

Mr. Terrell Land
Glenwood Homes
9220 Fairbanks Drive, Suite 210
Raleigh, North Carolina 27613

**Subject: Summary of Foundation Bearing Material Evaluation & 3rd Party Inspection
Lot No. 1 – (55 Fern Ridge Drive)
Carolina Seasons Subdivision
Cameron, North Carolina
Permit Number: 2505-0001
Project Number: 42942-00**

Dear Mr. Land:

On July 21 and 23, 2025, a representative of UES PROFESSIONAL SOLUTIONS 29, INC. (**UES**) visited the subject site for the purpose of observing and evaluating the near surface foundation bearing materials and to perform a third-party inspection for the proposed residential structure. The following is a summary of our onsite observations and evaluation.

It should be noted that the third-party footing inspection failed during our initial site visit due to loose soils in the excavated footing and the minimum footing widths not being met. The contractor was informed and **UES** recommended removing loose soils and excavating the footings in accordance with the specified plans provided onsite. We returned on July 23, 2025 and observed that the recommended remedial measures had been completed. We observed that the exterior and interior wall foundations, thickened slab sections, and lugs were prepared per the structural plans provided onsite. Additionally, we observed that the vapor barrier was installed on the slab areas and that insulation had been installed on the exterior wall foundations.

Our work included testing and bearing grade evaluations of the in-place soil at the bottom of the foundation excavations. Hand auger borings were incrementally advanced by manually twisting a sharpened steel auger into the soil at selected locations along the footing excavation. The soil consistency in the bottom of the excavation and at selected intervals below the bearing grade were evaluated by Dynamic Cone Penetrometer (DCP) testing. The conical point of the DCP was first seated to penetrate any loose cuttings and then driven three additional 1-3/4 inch increments with blows from a 15-pound hammer falling 20 inches. The soil's strength characteristics and foundation support capability was determined based on the average blows per increment (bpi) over the last two increments to achieve this penetration. Additionally, the entire excavated foundation was evaluated by hand probing using a ½ inch diameter steel probe rod to check for soft areas at the surface intermediate of our hand auger boring locations.

The materials exposed at the bottom of the footing excavations generally consisted of orange, silty-sand (fill soils) and were free of significant quantities of organics and debris. If additional testing for the purpose of estimating volumetric change (shrink/swell) potential or to estimate consolidation is desired, **UES** can provide these services.

UES tested the four exterior wall corners of the residential foundation and fill soils were encountered to a minimum approximate depth of 3 feet below the foundation bearing elevation. **UES** assumes that the fill placement was observed and tested to verify that the fill material was placed and compacted properly. Based on the results of our DCP testing and the assumption that the fill placed throughout the building pad is similar or better than the fill material encountered in the hand auger borings, the soils encountered are suitable for support of the residential structure utilizing a net allowable soil bearing pressure of **2,000 pounds-per-square-foot**.

If foundation bearing materials are exposed to inclement weather or adverse construction activities, **UES** should be contacted to re-evaluate the foundation bearing materials prior to concrete placement.

UES appreciates the opportunity to provide our professional services to you on this project. If you have any questions concerning the information in this report or if we can be of further service, please contact us.

Sincerely,

UES PROFESSIONAL SOLUTIONS 29, INC.

Phanikumar Turlapati, P.E.
Senior Geotechnical Engineer



A handwritten signature in black ink, appearing to read "Adam D. Perry".

Adam D. Perry, E.I.
Staff Professional

