

May 4, 2022

Mr. Austin Brown  
Capital City Homes  
5711 Six Forks Road, Suite #200  
Raleigh, North Carolina 27609



**Subject: Summary of Foundation Bearing Material Evaluation & 3<sup>rd</sup> Party Inspection  
Lot Nos. 15-20 – (58, 62, 66, 70, 74, and 78 Hawk Ridge Drive)  
Anderson Creek Villas Subdivision  
Spring Lake, North Carolina  
Permit Numbers: 2111-0011; 2111-0013; 2111-0012; 2111-0016;  
2111-0015; 2111-0014  
Project Number: 6033.500 (35585-00)**

Dear Mr. Brown:

On April 28, 2022, a representative of SUMMIT Engineering, Laboratory and Testing, Inc. (SUMMIT) visited the subject site for the purpose of observing the near surface foundation bearing materials and to perform a third-party footing inspection for the proposed residential (townhome) structures. The following is a summary of our onsite observations and evaluation.

The residential foundations were excavated approximately 20 inches wide and approximately 20 inches below the existing ground surface. The exterior and interior wall foundations, thickened slab sections, and lugs were prepared per the onsite structural plans. Based on our measurements, the footings are in compliance with the signed and sealed project structural foundation plans provided onsite and Chapter 4 of the 2018 North Carolina Residential code. Additionally, we observed that the vapor barrier was installed in the slab areas and that the foundation insulation had been placed along 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 was 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 1/2 inch diameter steel probe rod to check for soft areas at the surface intermediate of our hand auger boring locations.

The materials encountered in our hand auger borings generally consisted of orange-tan, silty-sand (residual 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, **SUMMIT** can provide these services.

Based on the results of our DCP testing, hand probing, and our site observations, 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, **SUMMIT** should be contacted to re-evaluate the foundation bearing materials prior to concrete placement.

**SUMMIT** 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,  
**SUMMIT** Engineering, Laboratory and Testing, Inc.



Jeff A. Taylor, P.E.  
Geotechnical Engineer

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

Adam D. Perry, E.I.  
Staff Professional