October 24, 2023



Mr. Shannon Spivey Mattamy Homes 1210 Trinity Road, Suite 102 Raleigh, North Carolina 27607

Subject: Summary of Foundation Bearing Material Evaluation Lot No. 12 – (290 Davinhall Drive) Providence Creek Subdivision Fuquay-Varina, North Carolina Permit Number: N/A SUMMIT Project Number: 1852-10R (39341-00) Order No.: 45773109-000

Dear Mr. Spivey:

On October 18, 2023, 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 for the proposed residential structure. The following is a summary of our onsite observations and evaluation.

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 were 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.

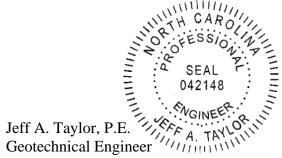
The materials exposed at the bottom of excavations generally consisted of tan-brown, sandy-clay (fill soils) and were free of significant quantities of organics and debris. If additional testing for the purpose of estimating volumetric change (shrink/swell) potential or to estimate consolidation is desired,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

**SUMMIT** 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. **SUMMIT** 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 properly compacted 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**.

ENGINEERING • LABORATORY • TESTING 3070 Hammond Business Place, Suite 171 | Raleigh, NC 27603 | (919) 380 - 9991 | (919) 380 - 9993 (Fax) WWW.SUMMIT-COMPANIES.COM 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.

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

Sincerely, SUMMIT Engineering, Laboratory and Testing, Inc.



Adam D. Perry, E.I. Staff Professional