SUMMIT
ENGINEERING • LABORATORY • TESTING

August 20, 2020

Mr. David Carter
Dan Ryan Builders – North Carolina, LLC
3131 RDU Center Drive, Suite 120
Morrisville, North Carolina 27560

Subject: **Summary of Foundation Bearing Material Evaluation**
Lot No. 13 – (346 Village Bend Drive)
Olde Mill Village Subdivision
Fuquay-Varina, North Carolina
Permit Number: 2005-0050
SUMMIT Project Number: 3241-14R (29352-00)
Order Number: 5243_001369

Dear Mr. Carter:

On August 19, 2020, a representative of SUMMIT Engineering, Laboratory and Testing, P.C. (**SUMMIT**) visited the subject site for the purpose of observing and evaluating the near surface foundation bearing materials for the proposed residential structure. The following is a summary of our onsite observations and evaluation.

Concrete had been placed for the foundation areas prior to our site visit. Our testing was performed adjacent to the existing foundation.

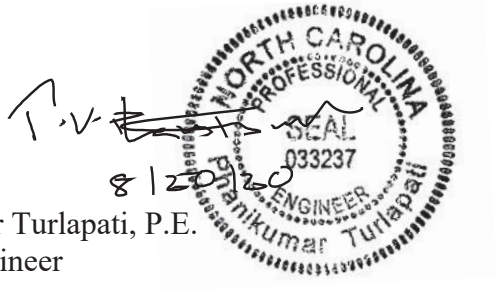
Our work included testing and bearing grade evaluations of the in-place soil adjacent to the existing foundation. Hand auger borings were incrementally advanced by manually twisting a sharpened steel auger into the soil at selected locations adjacent to the existing foundation. The soil consistency adjacent to the existing foundation 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.

The materials exposed adjacent to the existing foundation generally consisted of brown-tan and orange, sandy-silt and sandy-clay (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 of the tested soils 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**. The foundation bearing soils are in accordance with HUD requirements.

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, P.C.



8/20/2020

Phanikumar Turlapati, P.E.
Project Engineer

Adam D. Perry, E.I.
Staff Professional