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ADDRESS . . : 10 DOT CT  
CONTRACTOR : ROYAL OAKS BUILDING GROUP LLC  
OWNER . . . : ROYAL OAKS BUILDING GROUP  
PARCEL . . . : 04-0664- - -0020- -39-  
APPL NUMBER: 17-50040976 CP NEW RESIDENTIAL (SFD)  
DIRECTIONS : T/S: 03/21/2017 08:39 AM JBROCK -----  
ATKINS VILLAGE #37  
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SUBDIV: ATKINS VILLAGE PH 3  
PHONE : (919) 233-3886  
PHONE :

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**STRUCTURE: 000 000 45X67 4BDR CRAWL W/ GARAGE & DECK**

FLOOD ZONE . . . . : FLOOD ZONE X  
# BEDROOMS . . . . : 4000000.00  
SEPTIC - EXISTING? . . . . : NEW TANK  
PROPOSED USE . . . . . : SFD  
WATER SUPPLY . . . . . : COUNTY  
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**PERMIT: CPSF 00 CP \* SFD**

TYP/SQ	REQUESTED COMPLETED	INSP RESULT	DESCRIPTION RESULTS/COMMENTS
A814 01	4/27/17	TI	ADDRESS CONFIRMATION TIME: 17:00 VRU #: 002964682 T/S: 04/26/2017 11:28 AM DJOHNSON -----
B101 01	4/27/17	TI <i>Engineer</i>	R*BLDG FOOTING / TEMP SVC POLE TIME: 17:00 VRU #: 002964690 T/S: 04/26/2017 11:28 AM DJOHNSON ----- ENGINEER LETTER ON SITE WOULD LIKE TSP INSPECTED ALSO
B103 01	4/27/17 <i>4.27.17</i>	TI <i>DABS</i>	R*BLDG FOUND & TEMP SVC POLE TIME: 17:00 VRU #: 002964708 T/S: 04/26/2017 11:29 AM DJOHNSON -----

----- COMMENTS AND NOTES -----  
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April 19, 2017

Mr. Rick Sargent  
Royal Oaks Building Group, LLC  
1210 Trinity Road, Suite 102  
Raleigh, North Carolina 27607

**Subject: Summary of Foundation Bearing Material Evaluation  
Lot No. 37 – (10 Dot Court)  
Atkins Village Subdivision  
Fuquay-Varina, North Carolina  
Permit Number: N/A  
SUMMIT Project Number: 1852-10R (13569-00)  
PO No.: 146000037016**

Dear Mr. Sargent:

On April 10, 2017, SUMMIT Engineering, Laboratory and Testing, P.C. (SUMMIT) visited the subject site for the purpose of observing the near surface foundation bearing materials for the proposed residential foundation. The following is a summary of our onsite observations and bearing material evaluation.

We observed the contractor excavate the footings to an approximate depth of 24 to 36 inches below the existing ground elevation and to an approximate width of 17 to 18 inches.

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.

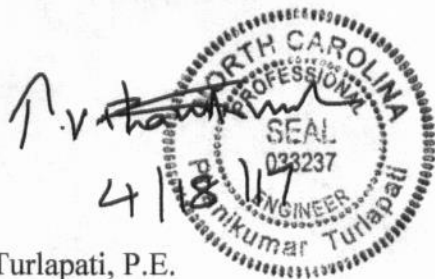
The materials exposed at the bottom of excavations generally consisted of tan, gray and brown, sandy-clay (fill soils). If additional testing for the purpose of estimating volumetric change (shrink/swell) potential or consolidation is desired, SUMMIT can provide these services.

**SUMMIT** tested the four footing corners of the proposed residential foundation and fill soils were encountered to an approximate minimum depth of 3 feet below the residential foundation bearing elevations. Hand auger refusal was encountered at approximately 2 feet below the planned foundation bearing elevation due to rock in fill at the front right exterior wall footing corner. **SUMMIT** assumes that the fill placement was observed and tested to verify that the fill was placed and compacted properly. Based on the results of our DCP testing, once our repair recommendations are completed 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 proposed 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. If it is imminent that inclement weather is forecasted prior to concrete placement, then the footings can be over-excavated (deepened) approximately 2 to 4 inches and a mud-mat (lean concrete) can be placed up to the foundation bearing elevation to help protect the foundation bearing materials from softening.

**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, P.C.



Phanikumar Turlapati, P.E.  
Project Engineer

Jason B. Coble, P.E.  
Raleigh Branch Manager