

Date: 08/02/2021

To: **Chad Craft**
KB Home
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Durham, NC 27703
cacraft@kbhome.com
919-426-8313

Re: **Preliminary Subsurface Test**
Location: Lot 32 Highland Grove (395 Windy Farm Drive Fuquay-Varina, NC)
JDS Project No.: RDU2108619
Date of Inspection: 7/6/2021; 7/31/2021

Builder requested a second preliminary subsurface testing for bearing capacity of a cleared lot approximately 7' away from a stormwater easement. The technician hand augured at five locations to 3'-4.5' in depth. We understand that this building pad was regraded since our previous soil testing, where soft soils and groundwater were encountered. During this round of preliminary testing on the regraded building pad, soft soils were encountered within the hand auger borings performed on the left and middle of the building pad between around 4 to 4.5 feet below the existing ground surface. Additionally,

Recommendations

Based on our observations, preliminary testing (Hand Auger, Probe, DCP), and review, the on-site materials and bearing capacity appear suitable for the required 2000 PSF soil bearing capacity for the proposed shallow footings between 1 to 4.5 feet below the existing ground surface. Given the subsurface conditions observed we recommend the following:

- Excavate footings to a suitable bearing material, which JDS Consulting can help confirm if present for the entire footing excavation.
- Excavate several pits at least 12" below the bottom of the footing where groundwater is present and install temporary pumps surrounded by a filter gravel that pump continuously to attempt to keep the groundwater level below the footing surface.
- Slope and/or bench sidewalls at a 1:1 ratio where sidewall stability is an issue.
- If JDS Consulting is onsite fulltime during the footing excavation, we may be able to recommend a pouring parts of the footings once they pass the bearing capacity and footing inspection. The footings should be backfilled up to the bottom of the footing with concrete. Once the entire footing is backfilled, 2 #4 rebar must be installed on top of the backfill material, and the footing should be inspected.

Preliminary subsurface testing is limited in nature. JDS Consulting shall not be held responsible for organics, aggregate, soft soils, or water tables (high or perched) that might be encountered during the excavation. JDS Consulting recommends additional testing once the footings have been excavated for the proposed foundation.

If you have any questions or if I can be of further assistance to you on this project, please contact me at 919-218-4421.

Respectfully Submitted,
Samantha Grygoruk
Field Operations Manager

Project Notes:

This report is an assessment of vertical bearing capacity only. Minimum testing requirements include probe rod testing across the entire excavation and augers (minimum three locations) at multiple depths with Dynamic Cone Penetrometer (DCP) testing. Bearing capacity test results are voided if significant precipitation or water intrusion has occurred within 48 hours of the initial testing. JDS Consulting is not responsible for site conditions that divert water towards the foundation or that prevents drainage away from the foundation, which can lead to soft soils and future settlement problems. It is the contractor's responsibility to ensure that all foundation areas are free of organics, loose material, standing water, and any other deleterious materials prior to placement of stone or concrete. Retaining wall stability nor slope stability analysis has been evaluated. JDS Consulting shall not be held responsible for current or future retaining-wall or slope-related issues.

