

**Date:** 07/15/2022

**To:** **Anthony Benore**  
Gemstone Homes LLC  
1304 Green Oaks Parkway  
Holly Springs, NC 27540  
anthony@gemstonehomesnc.com  
919-756-1506

**Re:** **Soil Suitability for Foundation Installation**  
Location: Lot 15 Purfoy Place (342 Lambert Lane Fuquay-Varina, NC)  
JDS Project No.: RDU2207188  
Date of Inspection: 7/13/2022; 7/14/2022  
Foundation Type: Rear Deck

### Observations

Foundation excavation observation (sub-surface testing with respect to bearing capacity).

### Recommendations

The exposed soils have been observed and tested for adequate bearing capacity (Probe and DCP). Based on our review and testing, the soil and conditions for the foundation are suitable for the minimum required bearing pressure of 2000 psf. Additionally, the over-excavated areas (rear deck, 5 ft to 6 ft) may be back-filled with clean-washed #57 stone, placed, and tamped in 1 ft lifts.

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 Lux  
Field Operations Manager



Reviewing Engineer:  
Qiao Ping Wang, PE

### 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 before concrete placement. 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.

