
ADDRESS : NURSERY RD SUBDIV: ROLLING SPRINGS
 CONTRACTOR : WELLCO CONTRACTORS, INC. PHONE : (910) 436-3131
 OWNER : WELLCO CONTRACTORS INC PHONE : (910) 436-3131
 PARCEL : 01-0506- - -0069- - -
 APPL NUMBER: 17-50042145 CP NEW RESIDENTIAL (SFD)
 DIRECTIONS : T/S: 08/25/2017 01:06 PM LLUCAS -----
 LOT 23A - ROLLING SPRINGS
 TAKE 27W - TAKE LEFT ON NURSERY RD -
 RIGHT ONTO CYPRESS DRIVE - LOT ON RIGHT

STRUCTURE: 000 000 60X70 4BDR 2BATH W/GARAGE W/DECK SLAB

FLOOD ZONE : FLOOD ZONE X
 # BEDROOMS : 4.00 PROPOSED USE : SFD
 SEPTIC - EXISTING? : NEW SEPTIC WATER SUPPLY : COUNTY

PERMIT: CPSF 00 CP * SFD

TYP/SQ	REQUESTED COMPLETED	INSP RESULT	DESCRIPTION RESULTS/COMMENTS
A814 01	11/14/17 11/15/17	TW AP	ADDRESS CONFIRMATION TIME: 17:00 VRU #: 003052149 56 Cypress Dr Lot 23A Spring Lake 28390 T/S: 11/15/2017 04:07 PM TWARD -----
B101 02	11/22/17 <i>11-22-17</i>	TI <i>AP TH</i>	R*BLDG FOOTING / TEMP SVC POLE VRU #: 003056389
B101 01	11/22/17 11/20/17	TI CA	R*BLDG FOOTING / TEMP SVC POLE VRU #: 003056070

----- COMMENTS AND NOTES -----



Wellco Contractors
P O Box 766
Spring Lake, NC 28390

11/16/2017

Attention : Jason Wellons

RE: Daily Field Report for 11/15/2017
Lot 23A Hidden Lakes PO 214610 (CMT) Spring Lake, NC
Building & Earth Project No : RD170600

Ladies and Gentlemen:

On this date, representative(s) of Building & Earth were present to perform construction material testing services at this project site. Our testing and observations for this date include the following:

FO-1 : Field Observations made on this date.

- DCPs - Lot 23A Passed
- Project Management Review Passed

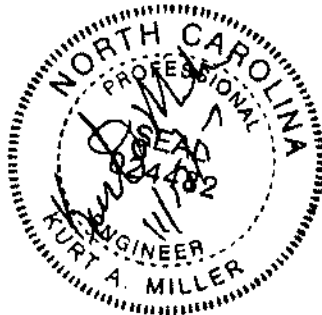
ST-1 : In place field density testing was performed for Finished Subgrade Soils -Building. The field density testing was performed in general accordance with ASTM D1556, using the results of field one-point as compared to the laboratory proctors. One(1) in-place field density test was performed on this date. The testing results indicate that in-place compaction and moisture content at the location and depth tested meet or exceed the specified requirements outlined in the project plans and specifications. For additional details of our testing, please refer to the attached Field Density Test Report.

Closing

The testing and observations identified above have been reviewed by our project manager. If you have questions regarding this information, please do not hesitate to contact us.

Respectfully Submitted,
Building & Earth Sciences, LLP

Enclosures : FO-1, ST-1



Richard Heath
Reviewed By

Field Observations Report

Project Name: **Lot 23A Hidden Lakes PO 214610 (CMT)** Project Number: **RD170600**
Spring Lake, NC
Client Name: **Wellco Contractors** Placement#: **FO-1**
Contractor: **Wellco Contractors** Technician: **Andrew Wilson**
Monitoring: **DCP**

1 : DCPs - Lot 23A

Passed

We arrived onsite to evaluate the building pad area for this residential lot. We understand the residence has been designed to be supported on a monolithic slab foundation. Upon arrival, the contractor had not finished excavating the footings. Our evaluation as documented in this report includes:

- 1) A visual description of the residential lot
- 2) Comments on any improvements that hat affect the foundations of the residence
- 3) Hand rod probing
- 4) Performing Dynamic Cone Penetration (DCP) tests at representative locations
- 5) Soil Density tests on fill, if applicable.

Visual Description of the Lot:

The lot generally slopes from left to right. Building locations are referenced from the street looking at the front of the residence. Maximum relief across the lot is approximately 4 feet. Surface water runoff appears to drain to the right of the building pad

Comments on Improvements:

The site has been stripped of surface cover and topsoil. It appears that 8 inches of topsoil has been removed from the building pad area.

Structural fill has been placed at the site to level the building pad. Based on our observations, we understand the pad has been cut or filled according to the following:

Section	Thickness of Cut or Fill
Left Front	4 inches of fill
Left Rear	4 inches of fill
Center	12 inches of fill
Right Front	24 inches of fill
Right Rear	24 inches of fill

Measurements:

- 1) What is the proposed depth of footing? 18"
- 2) What is the distance from the outside edge of footing to top of the slope? 7ft
- 3) What is the distance from the outside edge of footing to the outside edge (toe) of the nearest slope? 12ft
- 4) What is the vertical height of the slope? 3ft

Future Footing Tests

Hand Rod Probing: Our representative performed hand rod probing of the surface of the building pad. Hand rod probing of the bearing material generally showed an average penetration of approximately 1-2 inches.

DCP Testing: Our representative performed Dynamic Cone Penetration (DCP) testing in general accordance with ASTM STP-399 at four representative locations to a depth of 36 inches. Our representative did not observe water within the DCP boreholes as noted below.

The following information provides the results of our hand auger borings and DCP testing:

Field Observations Report

Project Name: **Lot 23A Hidden Lakes PO 214610 (CMT)
Spring Lake, NC** Project Number: **RD170600**
Client Name: **Wellco Contractors** Placement#: **FO-1**
Contractor: **Wellco Contractors** Technician: **Andrew Wilson**
Monitoring: **DCP**

Test 1: Front Right

-- Depth--"N"--Soil Color--USCS-----
-- FSG -- 9.5 -- Light Tan -- SM -----
-- -1' --- 11 --- Orange/Brown --- SM -----
-- -2' --- +15 --- Dark Brown --- SM -----
-- -3' --- 9 --- Light Tan --- SM -----

Test 2: Back Right

-- Depth--"N"--Soil Color--USCS-----
-- FSG -- 10 -- Light Tan -- SM -----
-- -1' --- +15 --- Brown --- SM -----
-- -2' --- 11 --- Dark Brown --- SM -----
-- -3' --- 11.5 --- Dark Brown --- SM -----

Test 3: Back Left

-- Depth--"N"--Soil Color--USCS-----
-- FSG -- 11.5 -- Light Tan -- SM -----
-- -1' --- 13 --- Orange --- SM -----
-- -2' --- +15 --- Light Tan --- SM -----
-- -3' --- +15 --- White --- MH -----

Test 4: Front Left

-- Depth--"N"--Soil Color--USCS-----
-- FSG -- 12 -- Light Tan -- SM -----
-- -1' --- +15 --- Orange --- SM -----
-- -2' --- +15 --- Orange --- SM -----
-- -3' --- +15 --- Light Tan --- SM -----

Soil Density Testing:

Soil density testing was performed using the sand cone method of compaction in general accordance with ASTM D1556. The results of our tests are attached as ST-1.

Results:

Based on our observations and test results, the newly placed fill/existing soils appear to be suitable to provide support for the floor slab and footings, provided the floor slab has a loading of less than 150 pounds per square foot, and the footings have a design bearing capacity of 2,000, or less.

Recommendations:

Field Observations Report

Project Name:	Lot 23A Hidden Lakes PO 214610 (CMT) Spring Lake, NC	Project Number:	RD170600
Client Name:	Wellco Contractors	Placement#:	FO-1
Contractor:	Wellco Contractors	Technician:	Andrew Wilson
Monitoring:	DCP		

To minimize the potential for future softening of the bearing materials due to water infiltration, the surface soils should be protected from construction traffic and inclement weather. The construction of the footings and structure should commence without delay. In the event that the subgrade soils become wet, or otherwise compromised from their current condition, should be observed and retested as necessary by Building and Earth Sciences.

We note that our testing was isolated to the upper 3 feet of the soil profile from the finished subgrade elevation as observed on this date. As such, we cannot be aware of any soil or groundwater conditions below this depth that could adversely affect the support of the new construction. If additional information is required, please contact our office.

2 : Project Management Review

Passed

Our client has authorized Building & Earth Sciences to perform an evaluation of the prepared building pad for this project. We understand that the structure will have a monolithic slab-on-grade floor system that will have foundations and a floor slab that will be supported by the newly placed structural fill soils. It appears that between 0 and 2 feet of structural fill soils have been placed to achieve the desired grades. The intent of our testing was to determine if the newly placed structural fill soils are adequate to provide a bearing capacity of 2,000 psf for the foundations, and have been compacted to 95% to support the floor slab for the new structure.

Our evaluation included hand rod probing, advancing hand auger borings with DCPs and performing a density test on the surface. Based upon our hand rod probing the newly placed soils are firm and resistant to significant penetration. Hand auger borings were then advanced at 4 selected location across the building envelope to determine the consistency of the below grade soils. At 12-inch increments in the hand auger boring, to a depth of 3 feet, Dynamic Cone Penetrometer (DCP) Testing was performed in accordance with ASTM STP-399. With proper evaluation, DCP Testing can be correlated to both bearing capacity and percent compaction. Based upon the results of this testing, the below grade soils that will support the foundations and floor slab are acceptable.

While on site, our representative also performed in place density testing to confirm compaction of the surface soils. Our testing was performed using the sand cone method in general accordance with ASTM D-1556. Our results were compared to an in-field proctor that was performed in general accordance with ASTM D-698. Based upon our tests results, the soils have been properly compacted at the surface.

It is important to note that our testing was isolated to the upper 3 feet. As such, we are not able to comment upon the settlement characteristics of deeper soils. Additionally, inclement weather (rain or snow), as well as construction traffic across the pad, can compromise the stability and support characteristics of the surface soils. If the surface soils become compromised, it will be necessary to return to the site for re-testing. This decision should be executed by your onsite Quality Control and Superintendents.



ST-1

Test Date: 11/15/2017
 Field Technician: Andrew Wilson
 Tests requested by: N/R
 Results provided to: N/R

Report of Field Density Testing

Project Name:	Lot 23A Hidden Lakes PO 214610 (CMT) Spring Lake, NC	Ambient Temperature:	50-70
Project Number:	RD170600	Weather:	Clear
Project Location:	Spring Lake, NC	Wind Conditions:	Calm
Client:	Wellco Contractors	Results Provided To:	N/R
Contractor:	Wellco Contractors	Superintendent:	N/R

Notes: 1 Test location by technician
 2 Elevation by Contractor
 3 Fill/backfill placed prior to technician arriving

Design & Specification Data

Area ID	Area Description	Depth (ft)	Test Method	% Compaction	Moisture Range	
					Min	Max
FSG-Bldg	Finished Subgrade Soils -Building	0.0 - 2.0	ASTM D-698	95 %	- 10.0	+ 10.0

Laboratory Proctors

Proctor ID	Description of Material	USCS/AASHTO	Maximum Dry Density (pcf)	Optimum Moisture Content (%)
1-point			114.0	13.0%

Density Test Data

Test #	IDs		Test Type	Location	Elev (ft)	Dry Density(pcf)	% Moisture	% Compaction	Result
	Area	Proctor							
1	FSG-Bldg	1-point	ASTMD1556	Finished Subgrade Soils -Building : Center of building pad	FSG	112.9	11.7	99%	PASS

Equipment Used: Standard Counts: Density:
 Last Calibration: Moisture:

Richard Heath
 Reviewed By