H & H Homes
2919 Breezewood Avenue
Suite 400
Fayetteville, NC 28303

10/31/2022

Attention : Blake Dickerhoff
Eric Baxley
Tim Adams

RE: Daily Field Report for 10/27/2022
Lot 682 Manor @ Lexington MLP (CMT) Cameron, NC
Building & Earth Project No : RD220219

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-2 : Field Observations made on this date.

• Observations of undercut and backfill testing	For Information Only
• Project Management Review	Passed

ST-2 : In place field density testing was performed for Finished Subgrade Soils -Building. The field density testing was performed in general accordance with ASTMD1556 and ASTMD6938, using the results of field one-point as compared to the laboratory proctors. A total of 8 in-place field density tests were 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-2, ST-2

NORTH CAROLINA PROFESSIONAL SEAL 024482 ENGINEER KURT A. MILLER

610 Spring Branch Road
Dunn, NC 28334
Phone 910-292-2085 Fax 910-292-2192
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Rachael Heath
Reviewed By

Field Observations Report

Project Name:	**Lot 682 Manor @ Lexington MLP (CMT) Cameron, NC**	Project Number:	**RD220219**
Client Name:	**H & H Homes**	Placement#:	**FO-2**
Contractor:	**H & H Homes**	Technician:	**Kyra Mueller**
Monitoring:	**Hand-rod Probing**		

1 : Observations of undercut and backfill testing

Building and Earth representative arrived on site to observe the undercut of the monolithic slab house lot. See FO-1 for details. Upon hand rod probing on today's date, the front left corner was still loose/soft. Hand rod probe penetrated approximately 18 inches. The remainder of the lot had hand rod probe penetration of approximately 2.5 inches. Upon speaking with the contractor and our office staff, it was decided that two more feet would be undercut in the front left corner and filter fabric and stone would be placed (approximately 15'X15' area). Density testing of backfill will then be performed.

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 2.5 and 3.5 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 and performing density testing on backfill placement in lifts. Based upon our hand rod probing and density testing results, the newly placed soils are firm and resistant to significant penetration. 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.

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.

Field Observations Report

Project Name:	**Lot 682 Manor @ Lexington MLP (CMT) Cameron, NC**	Project Number:	**RD220219**
Client Name:	**H & H Homes**	Placement#:	**FO-2**
Contractor:	**H & H Homes**	Technician:	**Kyra Mueller**
Monitoring:	**Hand-rod Probing**		

Photographs

Picture ID	Compacting with steel drum roller
48501	

Picture ID	Placing fabric
48503	

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Rachael Heath
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BUILDING & EARTH
Geotechnical, Environmental, and Materials Engineers

ST-2

Test Date: 10/27/2022
Field Technician: Kyra Mueller
Tests requested by: N/R
Results provided to: N/R

Report of Field Density Testing

Project Name:	Lot 682 Manor @ Lexington MLP (CMT) Cameron, NC	Ambient Temperature:	45-65
Project Number:	RD220219	Weather:	Clear
Project Location:	Cameron, NC	Wind Conditions:	Calm
Client:	H & H Homes	Results Provided To:	N/R
Contractor:	H & H Homes	Superintendent:	N/R

Notes:
1 Test location by technician
2 Elevation by Contractor
3 Fill/backfill monitored by technician

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			123.9	11.2%

Density Test Data

Test #	IDs		Test Type	Location	Probe Depth (in)	Elev. (ft)	Dry Density(pcf)	% Moisture	% Compaction	Result
	Area	Proctor								
1	FSG-Bldg	1-point	ASTMD1556	Finished Subgrade Soils -Building : Front left corner 3' East : 3' North		-2.5	119.7	3.7	97%	PASS
2	FSG-Bldg	1-point	ASTMD6938	Finished Subgrade Soils -Building : Correlation test :	6	-2.5	120.3	2.6	97%	PASS
3	FSG-Bldg	1-point	ASTMD6938	Finished Subgrade Soils -Building : Front left corner 3' East : 3' North	6	-2.5	125.5	3.5	100+	PASS
4	FSG-Bldg	1-point	ASTMD6938	Finished Subgrade Soils -Building : Back right corner 3' West : 3' South	6	-2.5	126.3	2.0	100+	PASS
5	FSG-Bldg	1-point	ASTMD6938	Finished Subgrade Soils -Building : Front right corner 3' North : 3' West	6	-2	125.8	2.3	100+	PASS
6	FSG-Bldg	1-point	ASTMD6938	Finished Subgrade Soils -Building : Back left corner 3' South : 3' East	6	-2	126.0	2.7	100+	PASS
7	FSG-Bldg	1-point	ASTMD6938	Finished Subgrade Soils -Building : Front left corner 4' North : 4' East	6	-1.5	124.7	2.5	100+	PASS
8	FSG-Bldg	1-point	ASTMD6938	Finished Subgrade Soils -Building : Front left corner 4' North : 4' East	6	-1.5	125.1	4.2	100+	PASS

Equipment Used: 33548-Troxler3430
Last Calibration: 00/00/0000

Standard Counts: Density: 2134
Moisture: 675

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Rachael Heath
Reviewed By

BUILDING & EARTH
Geotechnical, Environmental, and Materials Engineers

ST-2

Test Date: 10/27/2022
Field Technician: Kyra Mueller
Tests requested by: N/R
Results provided to: N/R

Photographs

Picture ID	Placing fill screenings
48521	

Picture ID	Compacting fill with steel drum roller
48531	

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10/31/2022

Attention : Blake Dickerhoff
Eric Baxley
Tim Adams

RE: Daily Field Report for 10/28/2022
Lot 682 Manor @ Lexington MLP (CMT) Cameron, NC
Building & Earth Project No : RD220219

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:

ST-3 : In place field density testing was performed for Finished Subgrade Soils -Building. The field density testing was performed in general accordance with ASTMD6938, using values from 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 : ST-3

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Rachael Heath
Reviewed By

BUILDING & EARTH
Geotechnical, Environmental, and Materials Engineers

ST-3

Test Date: 10/28/2022
Field Technician: James Johnson
Tests requested by: N/R
Results provided to: N/R

Report of Field Density Testing

Project Name:	Lot 682 Manor @ Lexington MLP (CMT) Cameron, NC	Ambient Temperature:	50-70
Project Number:	RD220219	Weather:	Clear
Project Location:	Cameron, NC	Wind Conditions:	Calm
Client:	H & H Homes	Results Provided To:	N/R
Contractor:	H & H Homes	Superintendent:	N/R

Notes:
1 Test location by technician
2 Elevation by Technician
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			123.9	11.2%

Density Test Data

Test #	IDs		Test Type	Location	Probe Depth (in)	Elev. (ft)	Dry Density(pcf)	% Moisture	% Compaction	Result
	Area	Proctor								
1	FSG-Bldg	1-point	ASTMD6938	Finished Subgrade Soils -Building : Front left corner 15' East : 24' North	6	FSG	125.0	2.1	100+	PASS

Equipment Used: 60150-Troxler3430
Last Calibration: 00/00/0000

Standard Counts: Density: 1957
Moisture: 694

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