



114 Edinburgh South Drive
Suite 200
Cary, North Carolina 27511
919.827.0864
www.daa.com

July 28, 2020

Mr. Jason Price
Jason Price Construction, Inc.
2323 Keith Hills Rd
Lillington, NC 27546

**RE: Campbell Pointe Phase 5/6
Main Street, Buies Creek, NC
Segmental Retaining Wall Construction Certification
DAA JN: R14245N-07**

Dear Mr. Price:

Please find attached our reports documenting the observation and testing Draper Aden Associates performed on the segmental retaining wall located at the above referenced site. Site visits were performed July 14, 2020 through July 23, 2020. All testing and observations indicated the wall was constructed in accordance with the project requirements.

Attached to this letter is the following documentation:

1. Site Visit Reports
2. Field testing documentation
3. Laboratory Testing

If you have any questions, please call me at (919) 827-0864.

Sincerely,

DRAPER ADEN ASSOCIATES



C. Tyrus Clayton, Jr., PE
Principal

SITE VISIT REPORT

 Project: Campbell Pointe Phase 5/6

 Page 1 of 5

 Location: Lillington, NC

 Date: 7/14/20

Client Name: _____

 DAA Project #: R14245-07

 Contractor: Vertical Walls

 DAA Rep: Luke Baker

 Weather: Sunny

 Temp Range: 80-93°
TIME & MILEAGE

LEAD INSPECTOR		ALTERNATE INSPECTOR		OTHER	
Onsite Time: <u>6.25</u>	Tech: <input checked="" type="checkbox"/>	Onsite Time: _____	Tech: <input type="checkbox"/>	Onsite Time: _____	Tech: <input type="checkbox"/>
Travel Round Trip: <u>2</u>	PM: <input type="checkbox"/>	Travel Round Trip: _____	PM: <input type="checkbox"/>	Travel Round Trip: _____	PM: <input type="checkbox"/>
Other (Specify): _____	PE: <input type="checkbox"/>	Other (Specify): _____	PE: <input type="checkbox"/>	Other (Specify): _____	PE: <input type="checkbox"/>
Total: <u>8.3</u>	Other: <input type="checkbox"/>	Total: _____	Other: <input type="checkbox"/>	Total: _____	Other: <input type="checkbox"/>
Mileage: <u>86</u>		Mileage: _____		Mileage: _____	
Vehicle: _____		Vehicle: _____		Vehicle: _____	

ADDITIONAL ONSITE PERSONNEL:

Name:	Hours Onsite:	Travel Round Trip & Mileage:
Visitors Name:	Company:	

SOILS	CONCRETE/STEEL	SPECIAL	CQA/CQC
Proofrolling: <input type="checkbox"/>	Concrete Pour: <input type="checkbox"/>	Roofing: <input type="checkbox"/>	Low Perm Soils: <input type="checkbox"/>
Sampling: <input type="checkbox"/>	Footing Inspection: <input type="checkbox"/>	Fireproofing: <input checked="" type="checkbox"/>	Cover Soils: <input type="checkbox"/>
# Samples collected: _____	Cylinder Pickup: <input type="checkbox"/>	EIFS: <input type="checkbox"/>	Closure: <input type="checkbox"/>
Density Testing: <input checked="" type="checkbox"/>	Structural Steel Inspection: <input type="checkbox"/>	Mortar/Grout: <input type="checkbox"/>	Geosynthetic: <input type="checkbox"/>
_____	Other: <input type="checkbox"/>	Other: <input type="checkbox"/>	Structural Fill: <input type="checkbox"/>
_____	Other: <input type="checkbox"/>	Other: <input type="checkbox"/>	Other: <input type="checkbox"/>
Problems/Non-Compliances/Failing Tests: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (if yes, describe below)			

DESCRIPTION OF WORK:

DAA arrived onsite as requested to observe the construction of the retaining wall at Campbell Pointe Phase 5/6.

Autry Grading and Vertical Walls began construction of the wall. The construction of the segmental retaining wall was observed between approximate stations ST 3+00 and 3+75, from an EL of approximately 214.8 to 216.0. Utilizing a trackhoe, Autry Grading removed the wet material at the surface of the reinforced zone. During the wet material stripping, an area of unsuitable soil was encountered. This area was undercut by approximately 10'x6'x3'. The bottom of the excavation was probed and found to be adequately firm. Lifts of soil were placed and compacted using an RC trench roller. Following removal of the wet material, Vertical Walls excavated the footing for the segmental block retaining wall. DAA performed dynamic cone penetrometer (DCP) testing. As

SITE VISIT REPORT

well, DAA performed random probing, utilizing a small diameter steel probe rod, to check for consistency with areas tested. Soil subgrade was observed to meet or exceed require bearing capacity. It was also observed that groundwater was entering the excavation. Vertical Walls removed as much water as feasible and placed a layer of woven geotextile. Following the geotextile, Vertical Walls placed and compacted approximately 6 inches of ABC Stone. Approximately 2-3 inches of #57 stone was placed above the ABC stone to allow leveling of the first blocks. Blocks were then placed and levelled.

Signed: Luke Baker

On-site Person

Attachments: Bearing Capacity Field Data, Field Density Testing, Field Density Test Map

Site Images:



Figure 1: A trackhoe removes wet soil from the wall area.

SITE VISIT REPORT



Figure 2: Undercut area at approximately ST 3+50



Figure 3: An RC trench roller is used to backfill the undercut area.

SITE VISIT REPORT



Figure 4: Excavating the footer for the retaining wall.



Figure 5: The mini excavator removes wet soil and slough prior to ABC Stone placement

SITE VISIT REPORT



Figure 6: Nonwoven geotextile is placed over the footing subgrade prior to ABC Stone



Figure 7: A jumping jack is used to compact the ABC stone base.

SITE VISIT REPORT

 Project: Campbell Pointe Phase 5/6

 Page 1 of 5

 Location: Lillington, NC

 Date: 7/15/20

 Client Name: Winston 104 Group

 DAA Project #: R14245-07

 Contractor: Vertical Walls

 DAA Rep: Luke Baker

 Weather: Sunny

 Temp Range: 80-93°
TIME & MILEAGE

LEAD INSPECTOR			ALTERNATE INSPECTOR			OTHER		
Onsite Time:	<u>10</u>	Tech: <input checked="" type="checkbox"/>	Onsite Time:	_____	Tech: <input type="checkbox"/>	Onsite Time:	_____	Tech: <input type="checkbox"/>
Travel Round Trip:	<u>2</u>	PM: <input type="checkbox"/>	Travel Round Trip:	_____	PM: <input type="checkbox"/>	Travel Round Trip:	_____	PM: <input type="checkbox"/>
Other (Specify):	<u>.5</u>	PE <input type="checkbox"/>	Other (Specify):	_____	PE <input type="checkbox"/>	Other (Specify):	_____	PE <input type="checkbox"/>
Total:	<u>12.5</u>	Other: <input type="checkbox"/>	Total:	_____	Other: <input type="checkbox"/>	Total:	_____	Other: <input type="checkbox"/>
Mileage:	<u>86</u>		Mileage:	_____		Mileage:	_____	
Vehicle:			Vehicle:			Vehicle:		

ADDITIONAL ONSITE PERSONNEL:

Name:	Hours Onsite:	Travel Round Trip & Mileage:
Visitors Name:	Company:	

SOILS	CONCRETE/STEEL	SPECIAL	CQA/CQC
Proofrolling: <input type="checkbox"/>	Concrete Pour: <input type="checkbox"/>	Roofing: <input type="checkbox"/>	Low Perm Soils: <input type="checkbox"/>
Sampling: <input type="checkbox"/>	Footing Inspection: <input type="checkbox"/>	Fireproofing: <input checked="" type="checkbox"/>	Cover Soils: <input type="checkbox"/>
# Samples collected: _____	Cylinder Pickup: <input type="checkbox"/>	EIFS: <input type="checkbox"/>	Closure: <input type="checkbox"/>
Density Testing: <input checked="" type="checkbox"/>	Structural Steel Inspection: <input type="checkbox"/>	Mortar/Grout: <input type="checkbox"/>	Geosynthetic: <input type="checkbox"/>
_____	Other: <input type="checkbox"/>	Other: <input type="checkbox"/>	Structural Fill: <input type="checkbox"/>
			Other: <input type="checkbox"/>
Problems/Non-Compliances/Failing Tests: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (if yes, describe below)			

DESCRIPTION OF WORK:

DAA arrived onsite as requested to observe the construction of the retaining wall at Campbell Pointe Phase 5/6.

Vertical Walls continued construction of the wall. The construction of the segmental retaining wall was observed between approximate stations ST 2+00 and 3+65, from an EL of approximately 214.8 to 218.0. Utilizing a trackhoe, Autry Grading removed the wet material at the surface of the reinforced zone. Vertical Walls extended the footing for the segmental block retaining wall from approximate ST 1+20 to 2+30. DAA performed dynamic cone penetrometer (DCP) testing. As well, DAA performed random probing, utilizing a small diameter steel probe rod, to check for consistency with areas tested. Soil subgrade was observed to meet or exceed require bearing capacity. It was also observed that groundwater was entering the excavation. Due to the excess

SITE VISIT REPORT

groundwater entering, DAA recommended that the leveling pad be switched to a minimum of 6 inches of #57 stone, wrapped in a nonwoven geotextile. This was communicated to Vertical Walls foreman and project manager, onsite.

Following the placement and leveling of initial block courses, a layer of geotextile was placed to separate the reinforced soils and the drainage layer. A minimum of 12 inches #57 stone was placed within and behind the block. Separation fabric was placed between the reinforced soils and the drainage aggregate, with a minimum 2' key into the reinforced soils.

Geogrid was placed at the lengths and elevations indicated. Once placed, geogrid was pulled tight prior to soil placement. Soil was placed and compacted using an RC trench roller within 4 feet of the wall face. A smooth drum roller was used to compact all other soils. DAA performed density testing utilizing the nuclear method. Tests, at the locations and elevations tested, met or exceeded project requirements.

As well, Autry grading installed the 12" CPP through pipe at approximate station ST 3+76.

Signed: Luke Baker

On-site Person

Attachments: Bearing Capacity Field Data, Field Density Testing, Field Density Test Map

Site Images:



Figure 1: Geogrid installation at approximately ST 3+60

SITE VISIT REPORT



Figure 2: Excavated footings at ST 1+50



Figure 3: Approximately ST 3+20



Figure 4: Backfill is compacted utilizing a smooth drum roller.



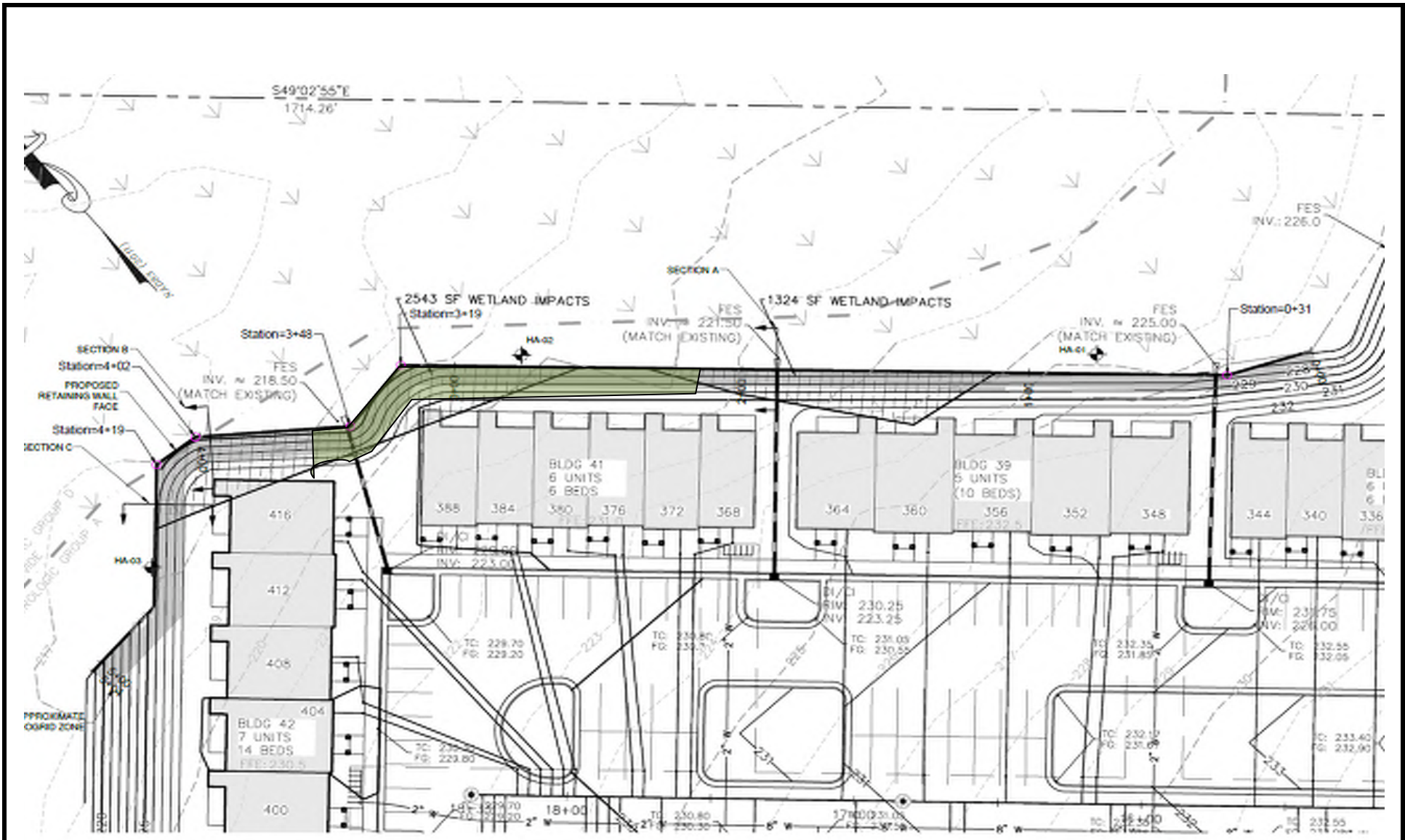
Figure 5: Installing geotextile wrapped #57 stone for the wall footing.



Figure 6: Placing a lift of soil backfill.




Figure 7: Installing drainage layer and the 4" perforated through drains.



RETAINING WALL LOCATION PLAN

LEGEND

 Wall Construction Observed

Daily Site Report Sketch
DATE
7/15/2020

Drawing Sheet #
Campbell Pointe Phase 5/6
Buies Creek, NC
R14245N-07



Draper Aden Associates
Engineering • Surveying • Environmental Services
 BLACKSBURG, VA CHARLOTTESVILLE, VA HAMPTON ROADS, VA RICHMOND, VA

PROJECT: Campbell Pointe SRW
PROJECT #: R14245N-07
DATE: 7/15/2020



Test ID	Station	Lift	Wet Density	Dry Density	Moisture (%)	Proctor (PCF)	Compaction (%)	Optimum Moisture	Deviation from Opt.	Comments DC / ST
1	3+75	1	125.9	110.6	13.8%	116.2	95.2%	13.8%	0.0%	
2	3+25	1	131.0	115.8	13.1%	116.2	99.7%	13.8%	-0.7%	
3	2+00	1	127.4	111.3	14.5%	116.2	95.8%	13.8%	0.7%	
4	2+50	1	129.0	113.1	14.1%	116.2	97.3%	13.8%	0.3%	
5	3+20	2	125.6	111.2	13.0%	116.2	95.7%	13.8%	-0.8%	
6	3+00	3	127.0	113.3	12.1%	116.2	97.5%	13.8%	-1.7%	
7	3+40	4	124.8	111.1	12.3%	116.2	95.6%	13.8%	-1.5%	
8	3+20	3	124.3	110.7	12.3%	116.2	95.3%	13.8%	-1.5%	
9	2+70	4	127.4	110.4	15.4%	116.2	95.0%	13.8%	1.6%	
10	2+90	1	131.2	113.6	15.5%	116.2	97.8%	13.8%	1.7%	
11	3+25	4	130.0	114.1	13.9%	116.2	98.2%	13.8%	0.1%	
12	2+50	1	129.9	112.9	15.1%	116.2	97.1%	13.8%	1.3%	
13	2+50	2	129.3	111.8	15.7%	116.2	96.2%	13.8%	1.9%	
14	2+35	1	132.1	114.5	15.4%	116.2	98.5%	13.8%	1.6%	

DC = Drive Cylinder, ST = Shelby Tube, Opt = Optimum Moisture, PCF = pounds per cubic foot

FIELD DENSITY TEST

SITE VISIT REPORT

 Project: Campbell Pointe Phase 5/6

 Page 1 of 4

 Location: Lillington, NC

 Date: 7/16/20

 Client Name: Winston 104 Group

 DAA Project #: R14245-07

 Contractor: Vertical Walls

 DAA Rep: Kevin Myers

 Weather: Sunny

 Temp Range: 86-98°
TIME & MILEAGE

LEAD INSPECTOR			ALTERNATE INSPECTOR			OTHER		
Onsite Time:	<u>9</u>	Tech: <input checked="" type="checkbox"/>	Onsite Time:	_____	Tech: <input type="checkbox"/>	Onsite Time:	_____	Tech: <input type="checkbox"/>
Travel Round Trip:	<u>3.5</u>	PM: <input type="checkbox"/>	Travel Round Trip:	_____	PM: <input type="checkbox"/>	Travel Round Trip:	_____	PM: <input type="checkbox"/>
Other (Specify):	_____	PE <input type="checkbox"/>	Other (Specify):	_____	PE <input type="checkbox"/>	Other (Specify):	_____	PE <input type="checkbox"/>
Total:	<u>12.5</u>	Other: <input type="checkbox"/>	Total:	_____	Other: <input type="checkbox"/>	Total:	_____	Other: <input type="checkbox"/>
Mileage:	<u>222</u>		Mileage:	_____		Mileage:	_____	
Vehicle:	_____		Vehicle:	_____		Vehicle:	_____	

ADDITIONAL ONSITE PERSONNEL:

Name:	Hours Onsite:	Travel Round Trip & Mileage:
Visitors Name:	Company:	

SOILS	CONCRETE/STEEL	SPECIAL	CQA/CQC
Proofrolling: <input type="checkbox"/>	Concrete Pour: <input type="checkbox"/>	Roofing: <input type="checkbox"/>	Low Perm Soils: <input type="checkbox"/>
Sampling: <input type="checkbox"/>	Footing Inspection: <input type="checkbox"/>	Fireproofing: <input checked="" type="checkbox"/>	Cover Soils: <input type="checkbox"/>
# Samples collected: <input type="checkbox"/>	Cylinder Pickup: <input type="checkbox"/>	EIFS: <input type="checkbox"/>	Closure: <input type="checkbox"/>
Density Testing: <input checked="" type="checkbox"/>	Structural Steel Inspection: <input type="checkbox"/>	Mortar/Grout: <input type="checkbox"/>	Geosynthetic: <input type="checkbox"/>
_____	Other: <input type="checkbox"/>	Other: <input type="checkbox"/>	Structural Fill: <input type="checkbox"/>
_____	Other: <input type="checkbox"/>	Other: <input type="checkbox"/>	Other: <input type="checkbox"/>
Problems/Non-Compliances/Failing Tests: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (if yes, describe below)			

DESCRIPTION OF WORK:

DAA arrived onsite as requested to observe the construction of the retaining wall at Campbell Pointe Phase 5/6.

Autry Grading and Vertical Walls continued construction of the wall. The construction of the segmental retaining wall was observed between approximate stations ST 1+50 and 3+75. DAA performed random probing, utilizing a small diameter steel probe rod, to check for consistency with areas tested.

Following the placement and leveling of block courses, a layer of geotextile was placed to separate the reinforced soils and the drainage layer. A minimum of 12 inches #57 stone was placed within and behind the block.

SITE VISIT REPORT

Separation fabric was placed between the reinforced soils and the drainage aggregate, with a minimum 2' key into the reinforced soils.

Geogrid was placed at the lengths and elevations indicated. Once placed, geogrid was pulled tight prior to soil placement. Soil was placed and compacted using an RC trench roller within 4 feet of the wall face. A smooth drum roller was used to compact all other soils. DAA performed density testing utilizing the nuclear method. Tests, at the locations and elevations tested, met or exceeded project requirements.

As well, Autry grading installed the 12" CPP through retaining wall at approximate station ST 3+76.

Signed: Kevin Myers

On-site Person

Attachments: Field Density Testing, Field Density Test Map

Site Images:



Figure 1: 12" storm drain installed with concrete collar at approximately 3+76.

SITE VISIT REPORT



Figure 2: 12" storm drain installed with concrete collar at approximately 1+75.



Figure 3: geogrid installation at approximately 2+25.

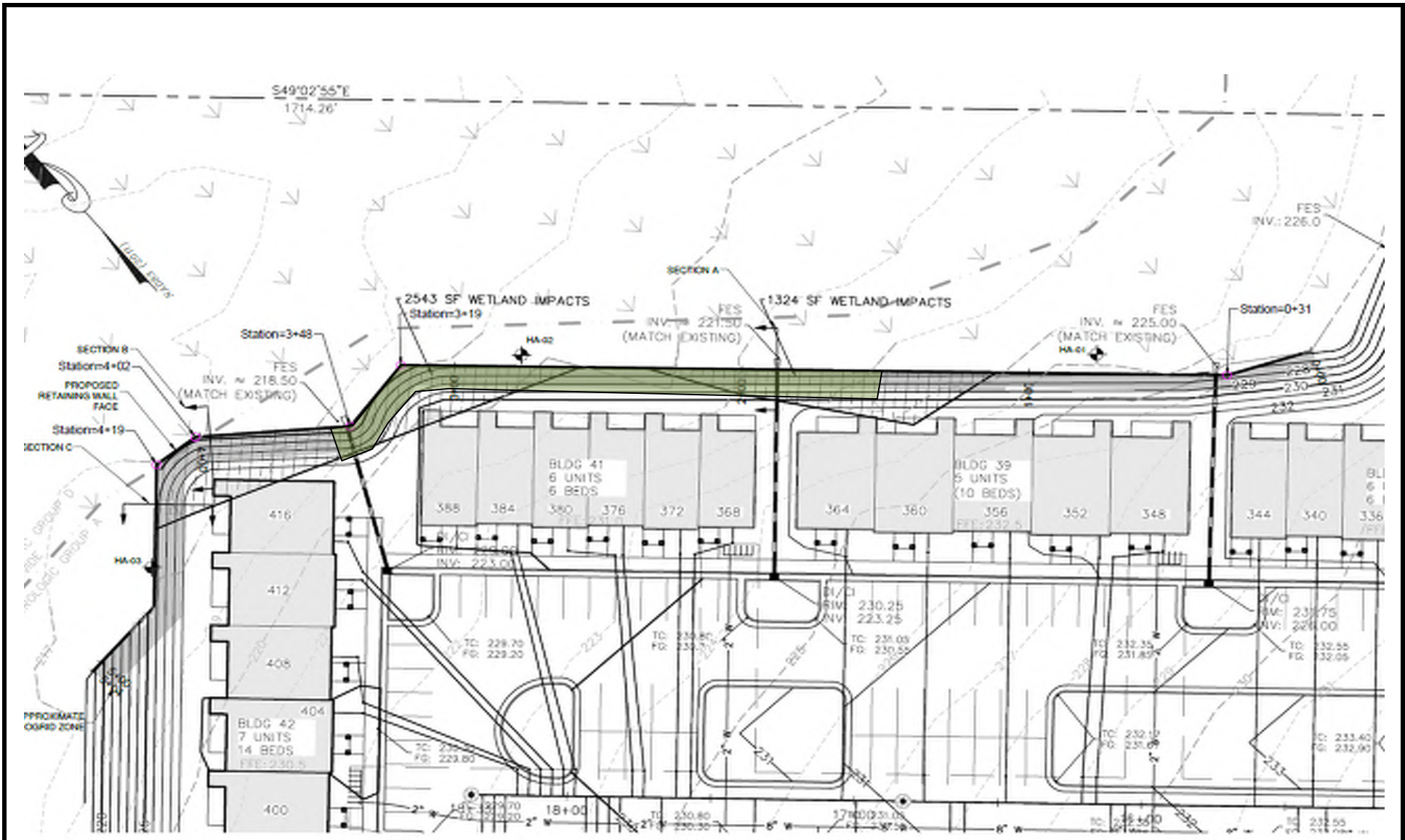
SITE VISIT REPORT



Figure 4. Vertical Walls compacting backfill over geogrid.




Figure 5: 12" CPP at approximately ST 3+76.



RETAINING WALL LOCATION PLAN

LEGEND

 Wall Construction Observed

Daily Site Report Sketch

DATE
7/16/2020

Drawing Sheet #
Campbell Pointe Phase 5/6
Buies Creek, NC
R14245N-07

 **Draper Aden Associates**
Engineering • Surveying • Environmental Services

BLACKSBURG, VA CHARLOTTESVILLE, VA HAMPTON ROADS, VA RICHMOND, VA

PROJECT: Campbell Pointe SRW

PROJECT #: R14245N-07

DATE: 7/16/2020



Draper Aden Associates

Engineering • Surveying • Environmental Services

Test ID	Station	Lift	Wet Density	Dry Density	Moisture (%)	Proctor (PCF)	Compaction (%)	Optimum Moisture	Deviation from Opt.	Comments DC / ST
1	2+00	1	126.0	110.3	14.2%	112.2	98.3%	15.8%	-1.6%	
2	2+50	1	123.4	107.9	14.4%	112.2	96.1%	15.8%	-1.4%	
3	3+00	1	127.2	109.5	16.2%	112.2	97.6%	15.8%	0.4%	
4	3+50	1	127.1	110.3	15.2%	112.2	98.3%	15.8%	-0.6%	
5	2+00	2	125.4	110.1	13.9%	112.2	98.1%	15.8%	-1.9%	
6	2+50	2	126.1	109.5	15.2%	112.2	97.6%	15.8%	-0.6%	
7	3+00	2	122.6	106.6	15.0%	112.2	95.0%	15.8%	-0.8%	
8	3+50	2	125.4	109.5	14.5%	112.2	97.6%	15.8%	-1.3%	
9	1+50	1	127.5	109.4	16.5%	112.2	97.5%	15.8%	0.7%	
10	2+00	3	125.3	106.6	17.5%	112.2	95.0%	15.8%	1.7%	
11	2+50	3	125.3	107.7	16.3%	112.2	96.0%	15.8%	0.5%	
12	3+00	3	125.4	106.6	17.6%	112.2	95.0%	15.8%	1.8%	
13	3+50	3	125.3	107.2	16.9%	112.2	95.5%	15.8%	1.1%	
14	1+50	2	126.5	107.8	17.4%	112.2	96.0%	15.8%	1.6%	

DC = Drive Cylinder, ST = Shelby Tube, Opt = Optimum Moisture, PCF = pounds per cubic foot

FIELD DENSITY TEST

SITE VISIT REPORT

 Project: Campbell Pointe Phase 5/6

 Page 1 of 5

 Location: Lillington, NC

 Date: 7/17/20

 Client Name: Winston 104 Group

 DAA Project #: R14245-07

 Contractor: Vertical Walls

 DAA Rep: Luke Baker

 Weather: Sunny

 Temp Range: 80-93°
TIME & MILEAGE

LEAD INSPECTOR			ALTERNATE INSPECTOR			OTHER		
Onsite Time:	<u>8</u>	Tech: <input checked="" type="checkbox"/>	Onsite Time:	_____	Tech: <input type="checkbox"/>	Onsite Time:	_____	Tech: <input type="checkbox"/>
Travel Round Trip:	<u>2</u>	PM: <input type="checkbox"/>	Travel Round Trip:	_____	PM: <input type="checkbox"/>	Travel Round Trip:	_____	PM: <input type="checkbox"/>
Other (Report):	_____	PE <input type="checkbox"/>	Other (Specify):	_____	PE <input type="checkbox"/>	Other (Specify):	_____	PE <input type="checkbox"/>
Total:	<u>10</u>	Other: <input type="checkbox"/>	Total:	_____	Other: <input type="checkbox"/>	Total:	_____	Other: <input type="checkbox"/>
Mileage:	<u>86</u>		Mileage:	_____		Mileage:	_____	
Vehicle:	_____		Vehicle:	_____		Vehicle:	_____	

ADDITIONAL ONSITE PERSONNEL:

Name:	Hours Onsite:	Travel Round Trip & Mileage:
Visitors Name:	Company:	

SOILS	CONCRETE/STEEL	SPECIAL	CQA/CQC
Proofrolling: <input type="checkbox"/>	Concrete Pour: <input type="checkbox"/>	Roofing: <input type="checkbox"/>	Low Perm Soils: <input type="checkbox"/>
Sampling: <input type="checkbox"/>	Footing Inspection: <input type="checkbox"/>	Fireproofing: <input checked="" type="checkbox"/>	Cover Soils: <input type="checkbox"/>
# Samples collected: _____	Cylinder Pickup: <input type="checkbox"/>	EIFS: <input type="checkbox"/>	Closure: <input type="checkbox"/>
Density Testing: <input checked="" type="checkbox"/>	Structural Steel Inspection: <input type="checkbox"/>	Mortar/Grout: <input type="checkbox"/>	Geosynthetic: <input type="checkbox"/>
_____	Other: <input type="checkbox"/>	Other: <input type="checkbox"/>	Structural Fill: <input type="checkbox"/>
_____	Other: <input type="checkbox"/>	Other: <input type="checkbox"/>	Other: <input type="checkbox"/>
Problems/Non-Compliances/Failing Tests: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (if yes, describe below)			

DESCRIPTION OF WORK:

DAA arrived onsite as requested to observe the construction of the retaining wall at Campbell Pointe Phase 5/6.

Vertical Walls continued construction of the wall. The construction of the segmental retaining wall was observed between approximate stations ST 1+50 and 3+60, from an EL of approximately 220.0 to 224.0. Vertical Walls extended the footing excavation from approximate ST 0+00 to 1+00. DAA performed dynamic cone penetrometer (DCP) testing. As well, DAA performed random probing, utilizing a small diameter steel probe rod, to check for consistency with areas tested. A location of soft soils was identified from approximate ST 0+00 to ST 0+55. This was pointed out to Vertical Walls superintendent. DAA recommended the footing excavation be undercut approximately 2 feet and replaced with geotextile wrapped #57 stone. Approximately 10.2 cy of

unsuitable material was removed. All other soil subgrades observed appeared to meet or exceed required bearing capacity.

Following the placement and leveling of initial block courses, a layer of geotextile was placed to separate the reinforced soils and the drainage layer. A minimum of 12 inches #57 stone was placed within and behind the block. Separation fabric was placed between the reinforced soils and the drainage aggregate, with a minimum 2' key into the reinforced soils.

Geogrid was placed at the lengths and elevations indicated. Once placed, geogrid was pulled tight prior to soil placement. Soil was placed and compacted using an RC trench roller within 4 feet of the wall face. A smooth drum roller was used to compact all other soils. DAA performed density testing utilizing the nuclear method. Tests, at the locations and elevations tested, met or exceeded project requirements.

Signed: Luke Baker

On-site Person

Attachments: Bearing Capacity Field Data, Field Density Testing, Field Density Test Map, Moisture Calibration, One Pointe Proctor

Site Images:



Figure 1: Compacted fill within the reinforced zone.

SITE VISIT REPORT



Figure 2: Wall construction facing towards ST 2+00



Figure 3: Separation geotextile

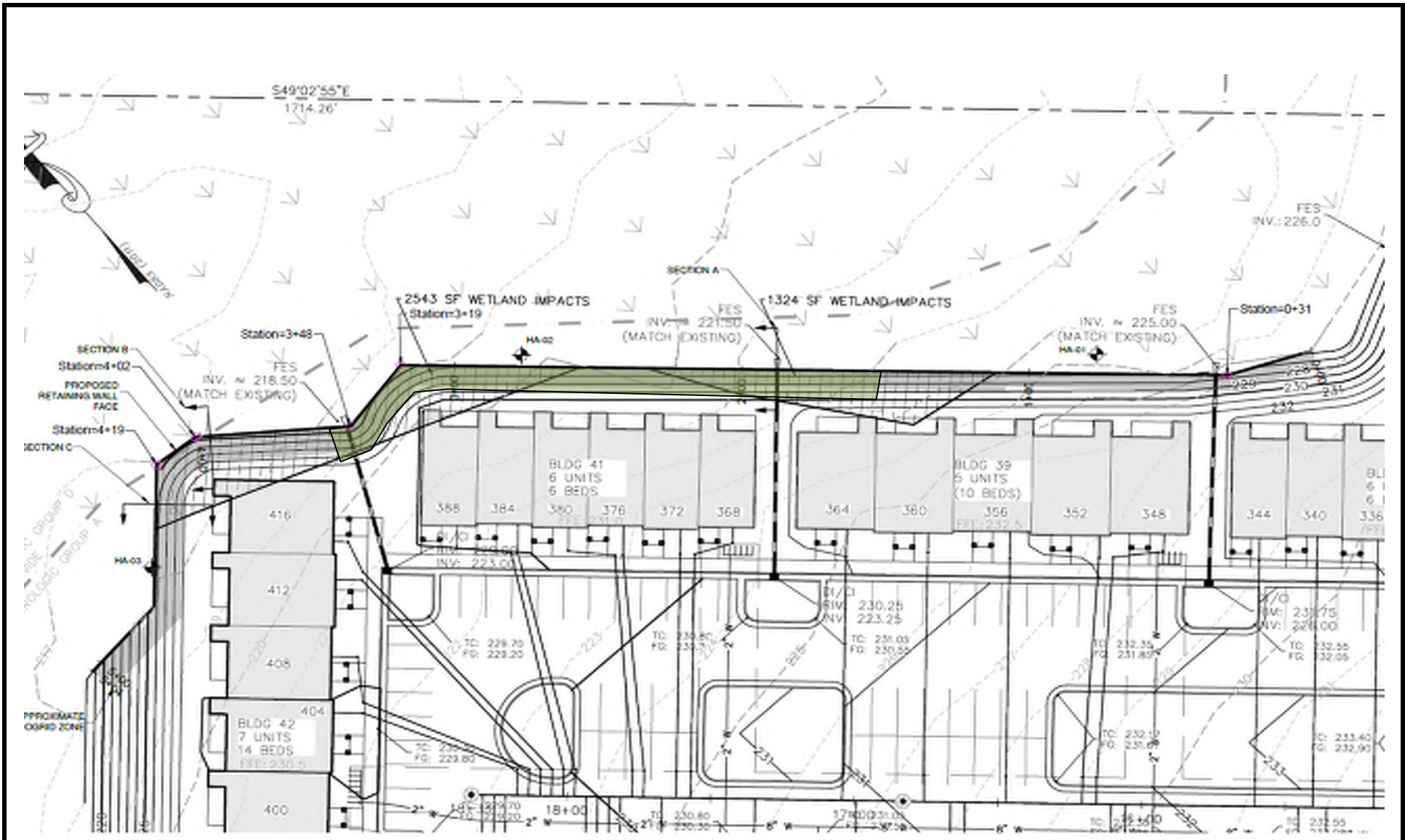
SITE VISIT REPORT



Figure 4: Compacted reinforced zone soils



Figure 5: Geotextile is placed over the fiberglass pins



RETAINING WALL LOCATION PLAN

LEGEND

 Wall Construction Observed

Daily Site Report Sketch
DATE
7/17/2020

Drawing Sheet #
Campbell Pointe Phase 5/6
Buies Creek, NC
R14245N-07

 **Draper Aden Associates**
Engineering • Surveying • Environmental Services
 BLACKSBURG, VA CHARLOTTESVILLE, VA HAMPTON ROADS, VA RICHMOND, VA

PROJECT: Campbell Pointe SRW
PROJECT #: R14245N-07
DATE: 7/17/2020



Test ID	Station	Lift	Wet Density	Dry Density	Moisture (%)	Proctor (PCF)	Compaction (%)	Optimum Moisture	Deviation from Opt.	Comments DC / ST
1	2+25	1	129.1	111.9	15.4%	112.2	99.7%	15.8%	-0.4%	
2	2+75	1	127.5	109.7	16.2%	112.2	97.8%	15.8%	0.4%	
3	3+25	1	133.5	115.9	15.2%	116.2	99.7%	13.8%	1.4%	
4	3+60	1	130.3	110.7	17.7%	112.2	98.7%	15.8%	1.9%	
5	2+30	2	128.6	109.2	17.8%	112.2	97.3%	15.8%	2.0%	
6	2+80	2	129.3	110.7	16.8%	112.2	98.7%	15.8%	1.0%	
7	3+30	2	130.6	111.1	17.5%	112.2	99.1%	15.8%	1.7%	
8	3+55	2	128.5	109.7	17.1%	112.2	97.8%	15.8%	1.3%	
9	3+50	3	130.0	110.6	17.5%	112.2	98.6%	15.8%	1.7%	
10	3+10	3	128.8	109.3	17.8%	112.2	97.4%	15.8%	2.0%	
11	2+25	3	129.9	111.1	16.9%	112.2	99.0%	15.8%	1.1%	
12	2+75	3	128.9	109.8	17.4%	112.2	97.9%	15.8%	1.6%	
13	3+10	3	128.7	110.1	16.9%	112.2	98.1%	15.8%	1.1%	
14	3+50	3	127.9	108.6	17.8%	112.2	96.8%	15.8%	2.0%	

DC = Drive Cylinder, ST = Shelby Tube, Opt = Optimum Moisture, PCF = pounds per cubic foot

FIELD DENSITY TEST

	Oven Moisture					Gauge Moisture	
	Weight P (g)	Weight P+WS (g)	Weight P+DS (g)	Moisture (%)		Test Number	Moisture (%)
K1	123.7	229.2	215.1	15.4%		1	20.9%
K2	123.8	246.7	229.6	16.2%		2	20.1%
K3	123.5	225.2	211.8	15.2%		3	19.7%
K4							
K5							

Average: 15.6%

Average: 20.2%

	OM-GM	100+GM	$(OM-GM)/(100+GM)*1000$
K1	-5.5%	1.209	-45.79
K2	-3.9%	1.201	-32.78
K3	-4.5%	1.197	-37.80
K4			
K5			

Average K: -38.79

P= Pan, WS= Wet Soil, DS= Dry Soil, g= grams, OM=Oven Moisture, GM= Gauge Moisture

MOISTURE CALIBRATION

SITE VISIT REPORT

 Project: Campbell Pointe Phase 5/6

 Page 1 of 5

 Location: Lillington, NC

 Date: 7/20/20

 Client Name: Winston 104 Group

 DAA Project #: R14245-07

 Contractor: Vertical Walls

 DAA Rep: Kevin Myers

 Weather: Sunny

 Temp Range: 85-107°
TIME & MILEAGE

LEAD INSPECTOR			ALTERNATE INSPECTOR			OTHER		
Onsite Time:	<u>9.5</u>	Tech: <input checked="" type="checkbox"/>	Onsite Time:	_____	Tech: <input type="checkbox"/>	Onsite Time:	_____	Tech: <input type="checkbox"/>
Travel Round Trip:	<u>3.25</u>	PM: <input type="checkbox"/>	Travel Round Trip:	_____	PM: <input type="checkbox"/>	Travel Round Trip:	_____	PM: <input type="checkbox"/>
Other (Report):	_____	PE <input type="checkbox"/>	Other (Specify):	_____	PE <input type="checkbox"/>	Other (Specify):	_____	PE <input type="checkbox"/>
Total:	<u>12.75</u>	Other: <input type="checkbox"/>	Total:	_____	Other: <input type="checkbox"/>	Total:	_____	Other: <input type="checkbox"/>
Mileage:	<u>215</u>		Mileage:	_____		Mileage:	_____	
Vehicle:			Vehicle:			Vehicle:		

ADDITIONAL ONSITE PERSONNEL:

Name:	Hours Onsite:	Travel Round Trip & Mileage:
Visitors Name:	Company:	

SOILS	CONCRETE/STEEL	SPECIAL	CQA/CQC
Proofrolling: <input type="checkbox"/>	Concrete Pour: <input type="checkbox"/>	Roofing: <input type="checkbox"/>	Low Perm Soils: <input type="checkbox"/>
Sampling: <input type="checkbox"/>	Footing Inspection: <input type="checkbox"/>	Fireproofing: <input checked="" type="checkbox"/>	Cover Soils: <input type="checkbox"/>
# Samples collected: _____	Cylinder Pickup: <input type="checkbox"/>	EIFS: <input type="checkbox"/>	Closure: <input type="checkbox"/>
Density Testing: <input checked="" type="checkbox"/>	Structural Steel Inspection: <input type="checkbox"/>	Mortar/Grout: <input type="checkbox"/>	Geosynthetic: <input type="checkbox"/>
_____	Other: <input type="checkbox"/>	Other: <input type="checkbox"/>	Structural Fill: <input type="checkbox"/>
			Other: <input type="checkbox"/>
Problems/Non-Compliances/Failing Tests: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (if yes, describe below)			

DESCRIPTION OF WORK:

DAA arrived onsite as requested to observe the construction of the retaining wall at Campbell Pointe Phase 5/6.

Vertical Walls continued construction of the wall. The construction of the segmental retaining wall was observed between approximate stations ST 0+00 and 1+50, from an EL of approximately 220.0 to 224.0. Vertical Walls extended the footing excavation from approximate ST 3+75 to 4+80. DAA performed dynamic cone penetrometer (DCP) testing. As well, DAA performed random probing, utilizing a small diameter steel probe rod, to check for consistency with areas tested. DAA recommended the footing excavation consist of geotextile wrapped #57 stone to stay consistent with the rest of the wall. All soil subgrades observed appeared to meet or exceed required bearing capacity.

Following the placement and leveling of initial block courses, a layer of geotextile was placed to separate the reinforced soils and the drainage layer. A minimum of 12 inches #57 stone was placed within and behind the block. Separation fabric was placed between the reinforced soils and the drainage aggregate, with a minimum 2' key into the reinforced soils.

Geogrid was placed at the lengths and elevations indicated. Once placed, geogrid was pulled tight prior to soil placement. Soil was placed and compacted using an RC trench roller within 4 feet of the wall face. A smooth drum roller was used to compact all other soils. DAA performed density testing utilizing the nuclear method. Tests, at the locations and elevations tested, met or exceeded project requirements.

Signed: Kevin Myers

On-site Person

Attachments: Bearing Capacity Field Data, Field Density Testing, Field Density Test Map

Site Images:



Figure 1: Footer excavation from ST 3+75 – 4+80.

SITE VISIT REPORT



Figure 2: Wall construction at 0+00.



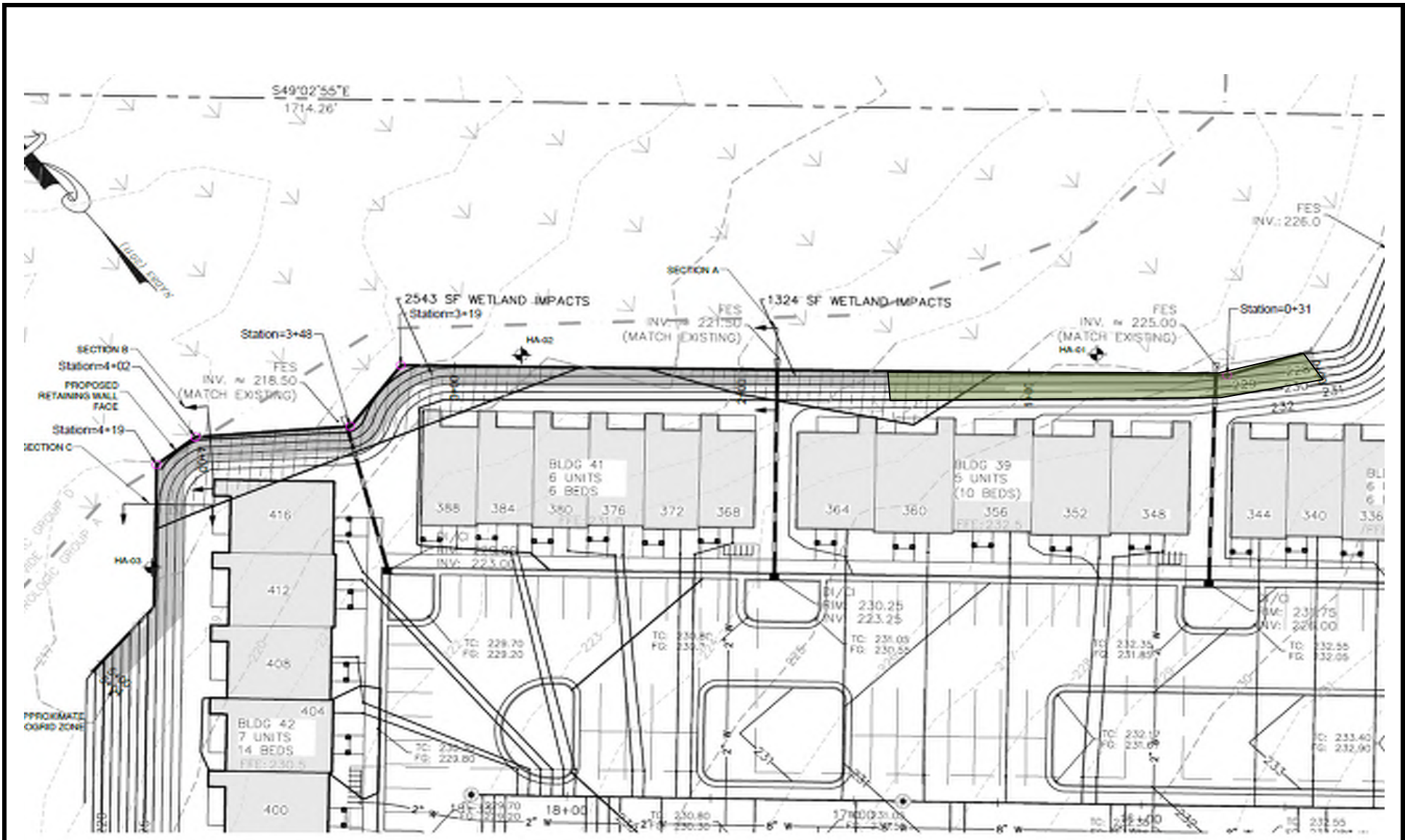
Figure 3: Retaining wall from 1+50 to 0+00.



Figure 4: Separation Geotextile fabric between reinforced soils and drainage layer.




Figure 5: Geogrid is being staged ready for installation.



RETAINING WALL LOCATION PLAN

LEGEND

 Wall Construction Observed

Daily Site Report Sketch
DATE
7/20/2020

Drawing Sheet #
Campbell Pointe Phase 5/6
Buies Creek, NC
R14245N-07

 **Draper Aden Associates**
Engineering • Surveying • Environmental Services
 BLACKSBURG, VA CHARLOTTESVILLE, VA HAMPTON ROADS, VA RICHMOND, VA

PROJECT: Campbell Pointe SRW
PROJECT #: R14245N-07
DATE: 7/20/2020



Test ID	Station	Lift	Wet Density	Dry Density	Moisture (%)	Proctor (PCF)	Compaction (%)	Optimum Moisture	Deviation from Opt.	Comments DC / ST
1	1+50	1	124.2	109.0	13.9%	112.2	97.2%	15.8%	-1.9%	
2	1+00	1	126.6	111.1	14.0%	112.2	99.0%	15.8%	-1.8%	
3	0+50	1	127.3	110.0	15.7%	112.2	98.1%	13.8%	1.9%	
4	0+10	1	128.1	110.8	15.6%	112.2	98.8%	15.8%	-0.2%	
5	1+50	2	125.3	109.9	14.0%	112.2	98.0%	15.8%	-1.8%	
6	1+00	2	125.6	110.3	13.9%	112.2	98.3%	15.8%	-1.9%	
7	0+50	2	126.6	110.1	15.0%	112.2	98.1%	15.8%	-0.8%	
8	0+10	2	126.2	109.9	14.8%	112.2	98.0%	15.8%	-1.0%	
9	1+50	3	124.6	109.5	13.8%	112.2	97.6%	15.8%	-2.0%	
10	1+00	3	125.0	109.5	14.2%	112.2	97.6%	15.8%	-1.6%	
11	0+50	3	125.3	109.0	15.0%	112.2	97.1%	15.8%	-0.8%	
12	0+10	3	124.7	108.7	14.7%	112.2	96.9%	15.8%	-1.1%	

DC = Drive Cylinder, ST = Shelby Tube, Opt = Optimum Moisture, PCF = pounds per cubic foot

FIELD DENSITY TEST

SITE VISIT REPORT

 Project: Campbell Pointe Phase 5/6

 Page 1 of 3

 Location: Lillington, NC

 Date: 7/21/20

 Client Name: Winston 104 Group

 DAA Project #: R14245-07

 Contractor: Vertical Walls

 DAA Rep: Kevin Myers

 Weather: Sunny

 Temp Range: 85-97°
TIME & MILEAGE

LEAD INSPECTOR			ALTERNATE INSPECTOR			OTHER		
Onsite Time:	<u>10.5</u>	Tech: <input checked="" type="checkbox"/>	Onsite Time:	_____	Tech: <input type="checkbox"/>	Onsite Time:	_____	Tech: <input type="checkbox"/>
Travel Round Trip:	<u>0.75</u>	PM: <input type="checkbox"/>	Travel Round Trip:	_____	PM: <input type="checkbox"/>	Travel Round Trip:	_____	PM: <input type="checkbox"/>
Other (Report):	_____	PE <input type="checkbox"/>	Other (Specify):	_____	PE <input type="checkbox"/>	Other (Specify):	_____	PE <input type="checkbox"/>
Total:	<u>11.25</u>	Other: <input type="checkbox"/>	Total:	_____	Other: <input type="checkbox"/>	Total:	_____	Other: <input type="checkbox"/>
Mileage:	<u>45</u>		Mileage:	_____		Mileage:	_____	
Vehicle:			Vehicle:			Vehicle:		

ADDITIONAL ONSITE PERSONNEL:

Name:	Hours Onsite:	Travel Round Trip & Mileage:
Visitors Name:	Company:	

SOILS	CONCRETE/STEEL	SPECIAL	CQA/CQC
Proofrolling: <input type="checkbox"/>	Concrete Pour: <input type="checkbox"/>	Roofing: <input type="checkbox"/>	Low Perm Soils: <input type="checkbox"/>
Sampling: <input type="checkbox"/>	Footing Inspection: <input type="checkbox"/>	Fireproofing: <input type="checkbox"/>	Cover Soils: <input type="checkbox"/>
# Samples collected: _____	Cylinder Pickup: <input type="checkbox"/>	EIFS: <input type="checkbox"/>	Closure: <input type="checkbox"/>
Density Testing: <input checked="" type="checkbox"/>	Structural Steel Inspection: <input type="checkbox"/>	Mortar/Grout: <input type="checkbox"/>	Geosynthetic: <input type="checkbox"/>
_____	Other: <input type="checkbox"/>	Other: <input type="checkbox"/>	Structural Fill: <input type="checkbox"/>
			Other: <input type="checkbox"/>
Problems/Non-Compliances/Failing Tests: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (if yes, describe below)			

DESCRIPTION OF WORK:

DAA arrived onsite as requested to observe the construction of the retaining wall at Campbell Pointe Phase 5/6.

Vertical Walls continued construction of the wall. The construction of the segmental retaining wall was observed between approximate stations ST 0+00 and 4+80. Vertical Walls began placing and leveling the initial course block foundation of the retaining wall from approximate ST 3+75 to 4+80. A two-man crew finished the last layer of segmental retaining wall from ST 3+00 to 0+00.

Following the placement and leveling of initial block courses, a layer of geotextile was placed to separate the reinforced soils and the drainage layer. A minimum of 12 inches #57 stone was placed within and behind the

SITE VISIT REPORT

block. Separation fabric was placed between the reinforced soils and the drainage aggregate, with a minimum 2' key into the reinforced soils.

Geogrid was placed at the lengths and elevations indicated. Once placed, geogrid was pulled tight prior to soil placement. Soil was placed and compacted using an RC trench roller within 4 feet of the wall face. A smooth drum roller was used to compact all other soils. DAA performed density testing utilizing the nuclear method. Tests, at the locations and elevations tested, met or exceeded project requirements.

Signed: Kevin Myers

On-site Person

Attachments: Field Density Testing, Field Density Test Map

Site Images:



Figure 1: Installing the last lift of drainage layer from ST 0+00 to 3+00.

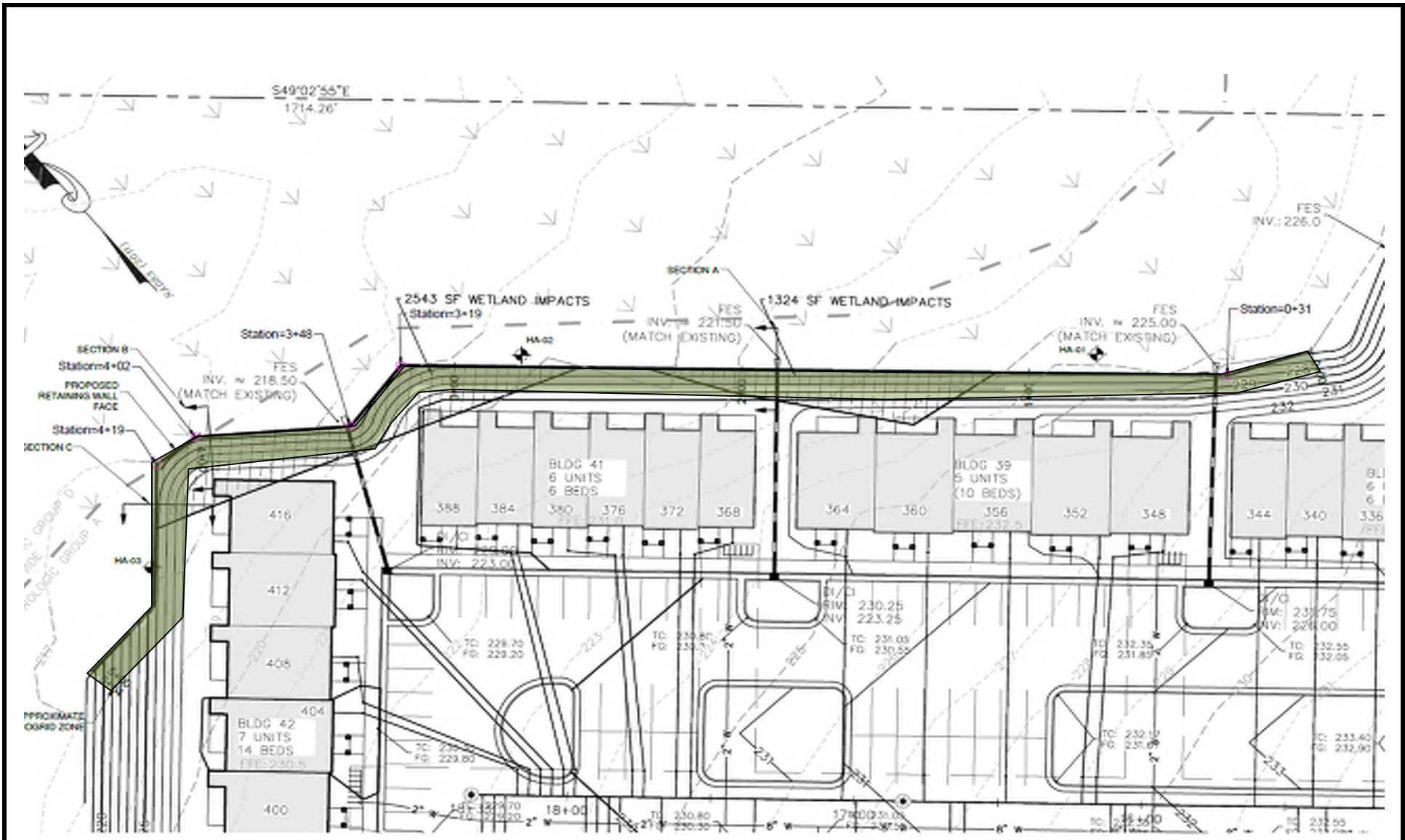
SITE VISIT REPORT



Figure 2: Compacted reinforced soil.




Figure 3: Retaining wall from 3+50 to 4+80.



RETAINING WALL LOCATION PLAN

LEGEND

 Wall Construction Observed

Daily Site Report Sketch

DATE

7/21/2020

Drawing Sheet #
Campbell Pointe Phase 5/6
Buies Creek, NC
R14245N-07

 **Draper Aden Associates**
Engineering • Surveying • Environmental Services

BLACKSBURG, VA CHARLOTTESVILLE, VA HAMPTON ROADS, VA RICHMOND, VA

PROJECT: Campbell Pointe SRW
PROJECT #: R14245N-07
DATE: 7/21/2020



Test ID	Station	Lift	Wet Density	Dry Density	Moisture (%)	Proctor (PCF)	Compaction (%)	Optimum Moisture	Deviation from Opt.	Comments DC / ST
1	3+00	1	125.2	109.4	14.4%	112.2	97.5%	15.8%	-1.4%	
2	2+50	1	127.0	110.7	14.7%	112.2	98.7%	15.8%	-1.1%	
3	2+00	1	126.4	109.2	15.8%	112.2	97.3%	13.8%	2.0%	
4	1+50	1	126.7	110.5	14.7%	112.2	98.5%	15.8%	-1.1%	
5	1+00	1	123.9	108.6	14.1%	112.2	96.8%	15.8%	-1.7%	
6	0+50	1	127.7	111.3	14.7%	112.2	99.2%	15.8%	-1.1%	
7	3+00	2	127.5	111.8	14.0%	112.2	99.7%	15.8%	-1.8%	
8	2+50	2	127.2	110.4	15.2%	112.2	98.4%	15.8%	-0.6%	
9	2+00	2	126.1	110.5	14.1%	112.2	98.5%	15.8%	-1.7%	
10	1+50	2	126.3	110.4	14.4%	112.2	98.4%	15.8%	-1.4%	
11	1+00	2	126.9	110.5	14.8%	112.2	98.5%	15.8%	-1.0%	
12	0+50	2	124.9	109.7	13.9%	112.2	97.7%	15.8%	-1.9%	

DC = Drive Cylinder, ST = Shelby Tube, Opt = Optimum Moisture, PCF = pounds per cubic foot

FIELD DENSITY TEST

SITE VISIT REPORT

 Project: Campbell Pointe Phase 5/6

 Page 1 of 4

 Location: Lillington, NC

 Date: 7/22/20

 Client Name: Winston 104 Group

 DAA Project #: R14245-07

 Contractor: Vertical Walls

 DAA Rep: Kevin Myers

 Weather: Sunny

 Temp Range: 75-95°
TIME & MILEAGE

LEAD INSPECTOR			ALTERNATE INSPECTOR			OTHER		
Onsite Time:	<u>9.5</u>	Tech: <input checked="" type="checkbox"/>	Onsite Time:	_____	Tech: <input type="checkbox"/>	Onsite Time:	_____	Tech: <input type="checkbox"/>
Travel Round Trip:	<u>0.75</u>	PM: <input type="checkbox"/>	Travel Round Trip:	_____	PM: <input type="checkbox"/>	Travel Round Trip:	_____	PM: <input type="checkbox"/>
Other (Report):	_____	PE <input type="checkbox"/>	Other (Specify):	_____	PE <input type="checkbox"/>	Other (Specify):	_____	PE <input type="checkbox"/>
Total:	<u>10.25</u>	Other: <input type="checkbox"/>	Total:	_____	Other: <input type="checkbox"/>	Total:	_____	Other: <input type="checkbox"/>
Mileage:	<u>55</u>		Mileage:	_____		Mileage:	_____	
Vehicle:			Vehicle:			Vehicle:		

ADDITIONAL ONSITE PERSONNEL:

Name:	Hours Onsite:	Travel Round Trip & Mileage:
Visitors Name:	Company:	

SOILS	CONCRETE/STEEL	SPECIAL	CQA/CQC
Proofrolling: <input type="checkbox"/>	Concrete Pour: <input type="checkbox"/>	Roofing: <input type="checkbox"/>	Low Perm Soils: <input type="checkbox"/>
Sampling: <input type="checkbox"/>	Footing Inspection: <input type="checkbox"/>	Fireproofing: <input type="checkbox"/>	Cover Soils: <input type="checkbox"/>
# Samples collected: _____	Cylinder Pickup: <input type="checkbox"/>	EIFS: <input type="checkbox"/>	Closure: <input type="checkbox"/>
Density Testing: <input checked="" type="checkbox"/>	Structural Steel Inspection: <input type="checkbox"/>	Mortar/Grout: <input type="checkbox"/>	Geosynthetic: <input type="checkbox"/>
_____	Other: <input type="checkbox"/>	Other: <input type="checkbox"/>	Structural Fill: <input type="checkbox"/>
			Other: <input type="checkbox"/>
Problems/Non-Compliances/Failing Tests: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (if yes, describe below)			

DESCRIPTION OF WORK:

DAA arrived onsite as requested to observe the construction of the retaining wall at Campbell Pointe Phase 5/6.

Vertical Walls continued construction of the wall. The construction of the segmental retaining wall was observed between approximate stations ST 3+35 and 4+80. Vertical Walls continued placing and leveling SRW units from approximately ST 3+35 to 4+80 from elevation 217.0 to 221.0.

Following the placement and leveling of block courses, a layer of geotextile was placed to separate the reinforced soils and the drainage layer. A minimum of 12 inches #57 stone was placed within and behind the block. Separation fabric was placed with a minimum 2' key into the reinforced soils.

Geogrid was placed at the lengths and elevations indicated. Once placed, geogrid was pulled tight prior to soil placement. Soil was placed and compacted using an RC trench roller within 4 feet of the wall face. A smooth drum roller was used to compact all other soils. DAA performed density testing utilizing the nuclear method. Tests, at the locations and elevations tested, met or exceeded project requirements.

Signed: Kevin Myers

On-site Person

Attachments: Field Density Testing, Field Density Test Map

Site Images:



Figure 1: Installing geogrid from approximately 3+70 – 4+80.

SITE VISIT REPORT



Figure 2: Geotextile fabric showing 2' key into reinforced soil under geogrid.



Figure 3: Retaining wall from 3+50 to 4+80.

SITE VISIT REPORT



Figure 4: Wall construction at approximately 4+50.

PROJECT: Campbell Pointe SRW

PROJECT #: R14245N-07

DATE: 7/22/2020



Draper Aden Associates

Engineering • Surveying • Environmental Services

Test ID	Station	Lift	Wet Density	Dry Density	Moisture (%)	Proctor (PCF)	Compaction (%)	Optimum Moisture	Deviation from Opt.	Comments DC / ST
1	3+75	1	124.9	109.3	14.3%	112.2	97.4%	15.8%	-1.5%	
2	4+25	1	122.0	106.7	14.3%	112.2	95.1%	15.8%	-1.5%	
3	4+75	1	124.0	108.7	14.1%	112.2	96.9%	13.8%	0.3%	
4	3+75	2	124.4	108.0	15.2%	112.2	96.2%	15.8%	-0.6%	
5	4+25	2	126.7	111.0	14.1%	112.2	99.0%	15.8%	-1.7%	
6	4+75	2	128.4	111.5	15.2%	112.2	99.4%	15.8%	-0.6%	
7	3+75	3	124.5	108.6	14.6%	112.2	96.8%	15.8%	-1.2%	
8	4+25	3	122.3	106.9	14.4%	112.2	95.2%	15.8%	-1.4%	
9	4+75	3	122.3	106.7	14.6%	112.2	95.1%	15.8%	-1.2%	
10	3+75	4	122.4	107.0	14.3%	112.2	95.4%	15.8%	-1.5%	
11	4+25	4	125.3	108.7	15.3%	112.2	96.9%	15.8%	-0.5%	
12	4+75	4	125.8	109.2	15.2%	112.2	97.3%	15.8%	-0.6%	
13	3+75	5	125.2	109.5	14.3%	112.2	97.6%	15.8%	-1.5%	
14	4+75	5	122.4	107.0	14.4%	112.2	95.3%	15.8%	-1.4%	

DC = Drive Cylinder, ST = Shelby Tube, Opt = Optimum Moisture, PCF = pounds per cubic foot

FIELD DENSITY TEST

SITE VISIT REPORT

 Project: Campbell Pointe Phase 5/6

 Page 1 of 3

 Location: Lillington, NC

 Date: 7/23/20

 Client Name: Winston 104 Group

 DAA Project #: R14245-07

 Contractor: Vertical Walls

 DAA Rep: Kevin Myers

 Weather: Sunny

 Temp Range: 75-95°
TIME & MILEAGE

LEAD INSPECTOR			ALTERNATE INSPECTOR			OTHER		
Onsite Time:	<u>9.5</u>	Tech: <input checked="" type="checkbox"/>	Onsite Time:	_____	Tech: <input type="checkbox"/>	Onsite Time:	_____	Tech: <input type="checkbox"/>
Travel Round Trip:	<u>3.5</u>	PM: <input type="checkbox"/>	Travel Round Trip:	_____	PM: <input type="checkbox"/>	Travel Round Trip:	_____	PM: <input type="checkbox"/>
Other (Report):	_____	PE <input type="checkbox"/>	Other (Specify):	_____	PE <input type="checkbox"/>	Other (Specify):	_____	PE <input type="checkbox"/>
Total:	<u>13.0</u>	Other: <input type="checkbox"/>	Total:	_____	Other: <input type="checkbox"/>	Total:	_____	Other: <input type="checkbox"/>
Mileage:	<u>250</u>		Mileage:	_____		Mileage:	_____	
Vehicle:			Vehicle:			Vehicle:		

ADDITIONAL ONSITE PERSONNEL:

Name:	Hours Onsite:	Travel Round Trip & Mileage:
Visitors Name:	Company:	

SOILS	CONCRETE/STEEL	SPECIAL	CQA/CQC
Proofrolling: <input type="checkbox"/>	Concrete Pour: <input type="checkbox"/>	Roofing: <input type="checkbox"/>	Low Perm Soils: <input type="checkbox"/>
Sampling: <input type="checkbox"/>	Footing Inspection: <input type="checkbox"/>	Fireproofing: <input type="checkbox"/>	Cover Soils: <input type="checkbox"/>
# Samples collected: <input type="checkbox"/>	Cylinder Pickup: <input type="checkbox"/>	EIFS: <input type="checkbox"/>	Closure: <input type="checkbox"/>
Density Testing: <input checked="" type="checkbox"/>	Structural Steel Inspection: <input type="checkbox"/>	Mortar/Grout: <input type="checkbox"/>	Geosynthetic: <input type="checkbox"/>
_____	Other: <input type="checkbox"/>	Other: <input type="checkbox"/>	Structural Fill: <input type="checkbox"/>
			Other: <input type="checkbox"/>
Problems/Non-Compliances/Failing Tests: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (if yes, describe below)			

DESCRIPTION OF WORK:

DAA arrived onsite as requested to observe the construction of the retaining wall at Campbell Pointe Phase 5/6.

Vertical Walls continued construction of the wall. The construction of the segmental retaining wall was observed between approximate stations ST 3+35 and 4+80. Vertical Walls continued placing and leveling cinderblocks of the retaining wall from approximately ST 3+35 to 4+80 from elevation 221.0 to 225.0(final elevation).

Following the placement and leveling of block courses, a layer of geotextile was placed to separate the reinforced soils and the drainage layer. A minimum of 12 inches #57 stone was placed within and behind the block.

Separation fabric was placed between the reinforced soils and the drainage aggregate, with a minimum 2' key into the reinforced soils.

Geogrid was placed at the lengths and elevations indicated. Once placed, geogrid was pulled tight prior to soil placement. Soil was placed and compacted using an RC trench roller within 4 feet of the wall face. A smooth drum roller was used to compact all other soils. DAA performed density testing utilizing the nuclear method. Tests, at the locations and elevations tested, met or exceeded project requirements.

Signed: Kevin Myers

On-site Person

Attachments: Field Density Testing, Field Density Test Map

Site Images:



Figure 1: Installing geogrid from approximately 3+50 – 4+80.

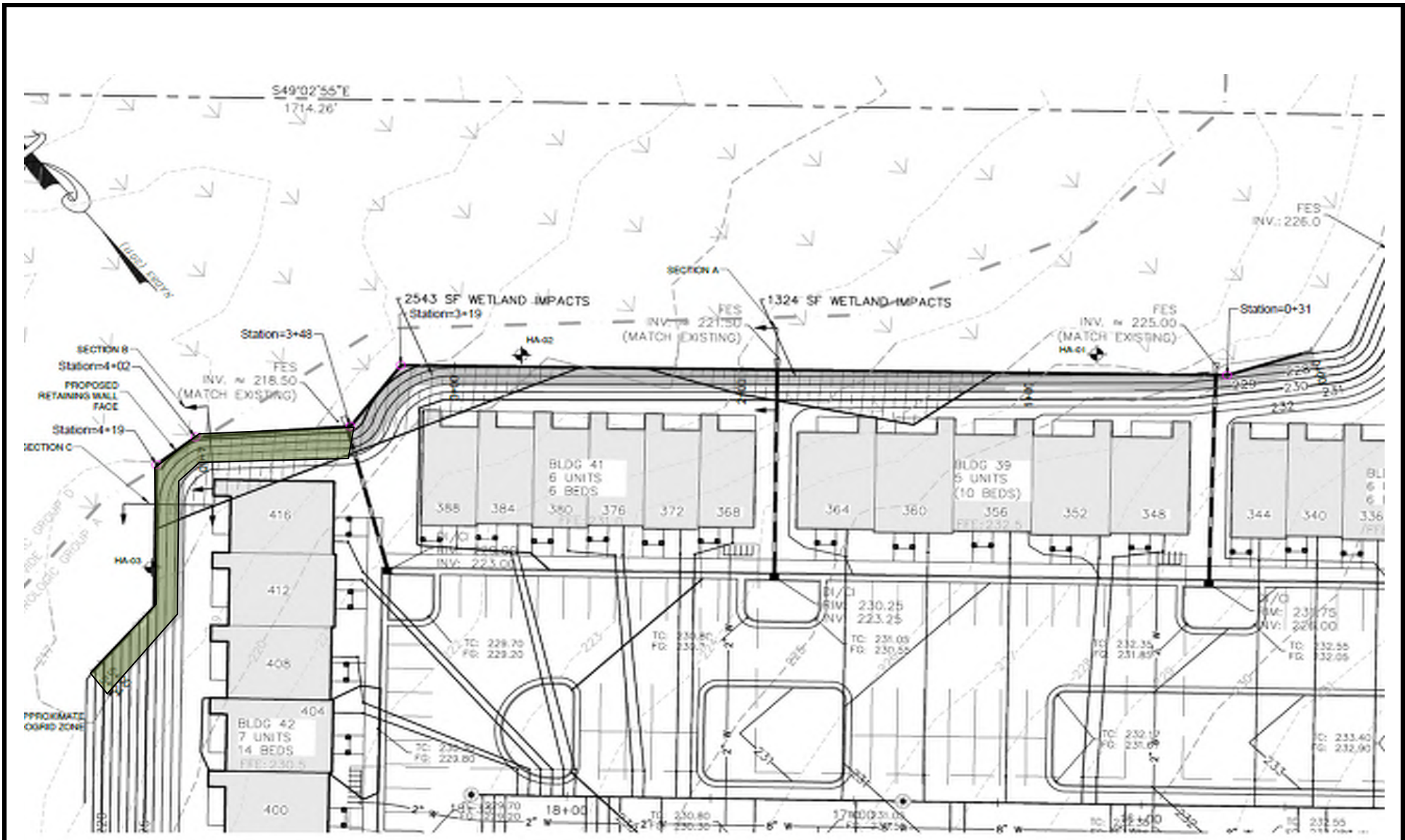
SITE VISIT REPORT



Figure 2: Vertical walls installing the Capstones upon meeting final elevation from 3+35 to 4+80.




Figure 3: Capstones in place from 3+20 facing 0+00.



RETAINING WALL LOCATION PLAN

LEGEND

 Wall Construction Observed

Daily Site Report Sketch
DATE
7/23/2020

Drawing Sheet #
Campbell Pointe Phase 5/6
Buies Creek, NC
R14245N-07



Draper Aden Associates
Engineering • Surveying • Environmental Services
 BLACKSBURG, VA CHARLOTTESVILLE, VA HAMPTON ROADS, VA RICHMOND, VA

PROJECT: Campbell Pointe SRW
PROJECT #: R14245N-07
DATE: 7/22/2020



Test ID	Station	Lift	Wet Density	Dry Density	Moisture (%)	Proctor (PCF)	Compaction (%)	Optimum Moisture	Deviation from Opt.	Comments DC / ST
1	3+75	1	125.2	109.1	14.8%	112.2	97.2%	15.8%	-1.0%	
2	4+25	1	124.9	109.6	14.0%	112.2	97.6%	15.8%	-1.8%	
3	4+75	1	126.3	109.6	15.2%	112.2	97.7%	13.8%	1.4%	
4	3+75	2	127.2	111.2	14.4%	112.2	99.1%	15.8%	-1.4%	
5	4+25	2	123.8	107.2	15.5%	112.2	95.5%	15.8%	-0.3%	
6	4+75	2	126.1	110.2	14.4%	112.2	98.2%	15.8%	-1.4%	
7	3+75	3	126.7	110.8	14.3%	112.2	98.8%	15.8%	-1.5%	
8	4+25	3	126.0	109.3	15.3%	112.2	97.4%	15.8%	-0.5%	
9	4+75	3	124.3	108.0	15.1%	112.2	96.3%	15.8%	-0.7%	
10	3+75	4	127.0	110.1	15.3%	112.2	98.2%	15.8%	-0.5%	
11	4+25	4	122.1	106.6	14.5%	112.2	95.0%	15.8%	-1.3%	
12	4+75	4	124.3	108.1	15.0%	112.2	96.3%	15.8%	-0.8%	

DC = Drive Cylinder, ST = Shelby Tube, Opt = Optimum Moisture, PCF = pounds per cubic foot

FIELD DENSITY TEST

Soil Classification Calculations

Campbell Pointe Ph 5/6

DAA# R14245N-07

Prepared By: LAB

Sample ID TP-1

Sample Depth 1-5'

Visual Sample Description Reddish Brown Sandy Lean CLAY

Sample Received: 7/2/2020

Date Tested: 7/2/2020

Natural Moisture Content: ASTM D 2216

Pan ID	115
Pan Wt	124.03 grams
Pan + Soil (wet)	325.78 grams
Pan + Soil (dry)	292.50 grams
<i>Natural Moisture Content</i>	<i>19.8%</i>

Coarse or Fine Grained: ASTM D 422

Pan + Soil retained on No. 200 sieve	
(dry)	203.56 grams
Percent Passing No. 200 Sieve	52.8%
Pan + Soil retained on No. 4 sieve	
(dry)	124.47 grams
Percent Passing No. 4 Sieve	99.7%

Soil Classifies as Fine-Grained Soil

Atterberg Limits: ASTM D 4318

Date Tested: 7/5/2020

Liquid Limit

No of Blows	15	27	34
Pan ID	N-04	N-12	N-06
Pan Wt	15.02	15.18	15.17
Pan + Soil (wet)	25.76	30.00	28.23
Pan + Soil (dry)	22.67	26.12	25.01
Moisture Content	40.4%	35.5%	32.8%
Liquid Limit	38	36	34
<i>Liquid Limit</i>	<i>36</i>		

Plastic Limit

Pan ID	N-21	N-23
Pan Weight	6.63	6.65
Pan + Soil (wet)	16.06	18.47
Pan + Soil (dry)	14.24	16.18
Moisture Content	23.9%	24.0%
<i>Plastic Limit</i>	<i>24</i>	
<i>Plastic Index</i>	<i>12</i>	

USCS Classification: ASTM D 2487

Group Symbol **CL**

Group Name **Sandy Lean CLAY**

Grain Size Distribution Calculations

Campbell Pointe Ph 5/6

DAA# R14245N-07

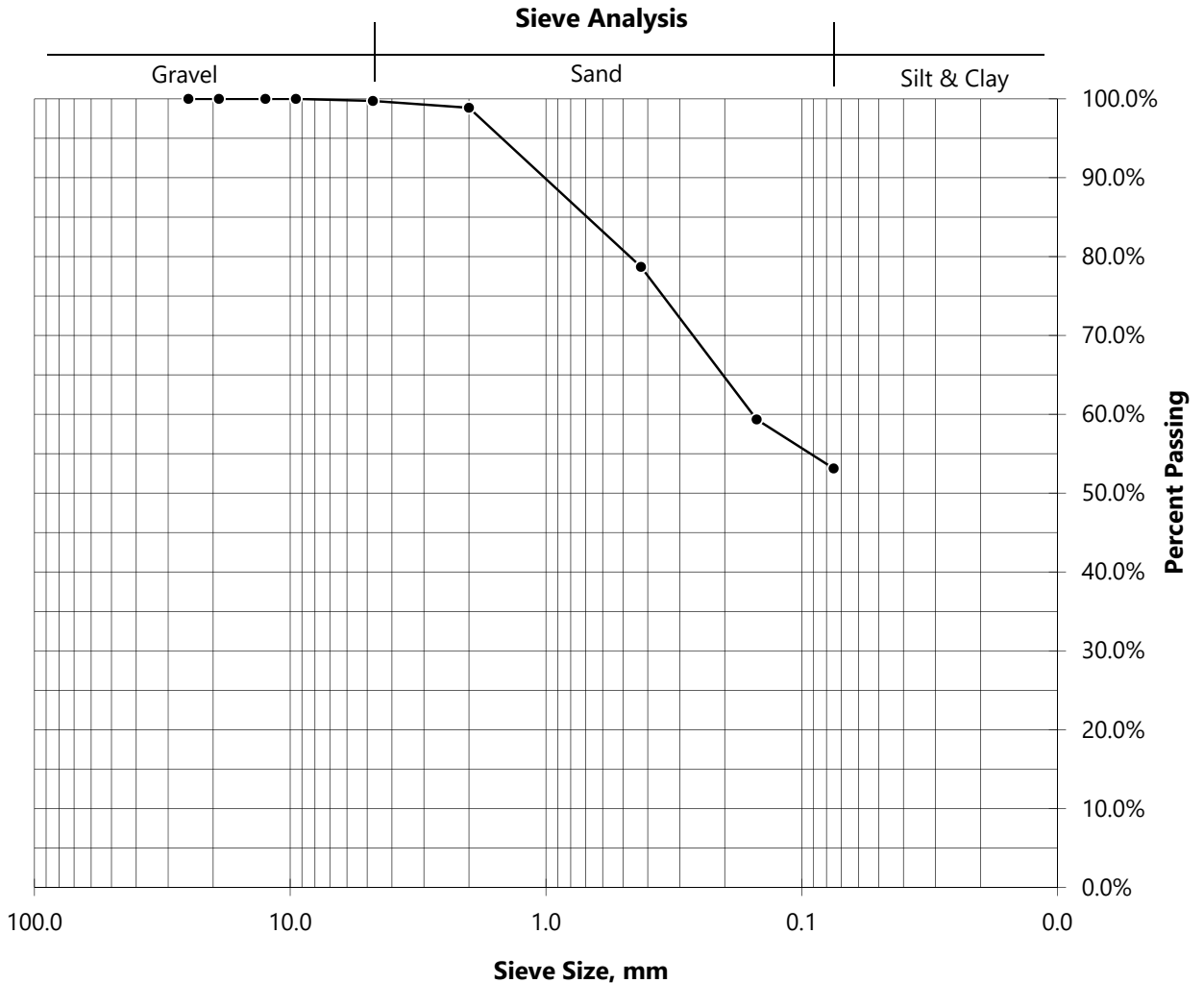
Prepared By: LAB

Sample ID TP-1

Sample Depth 1-5'

Mechanical Sieve Analysis: ASTM D 422

Sieve Size	Weight Retained	Percent Retained	Sieve Size, mm	Percent Passing
1"	0.00	0.0%	25.0	100.0%
3/4"	0.00	0.0%	19.0	100.0%
1/2"	0.00	0.0%	12.5	100.0%
3/8"	0.00	0.0%	9.50	100.0%
No. 4	0.44	0.3%	4.75	99.7%
No. 10	1.46	0.9%	2.00	98.9%
No. 40	34.00	20.2%	0.425	78.7%
No. 100	32.59	19.3%	0.15	59.3%
No. 200	10.48	6.2%	0.075	53.1%
Pan	0.56	0.3%		
Total	79.53	47.2%		



Proctor Test Report
Campbell Pointe Ph 5/6
DAA# R14245N-07
Prepared By: LAB

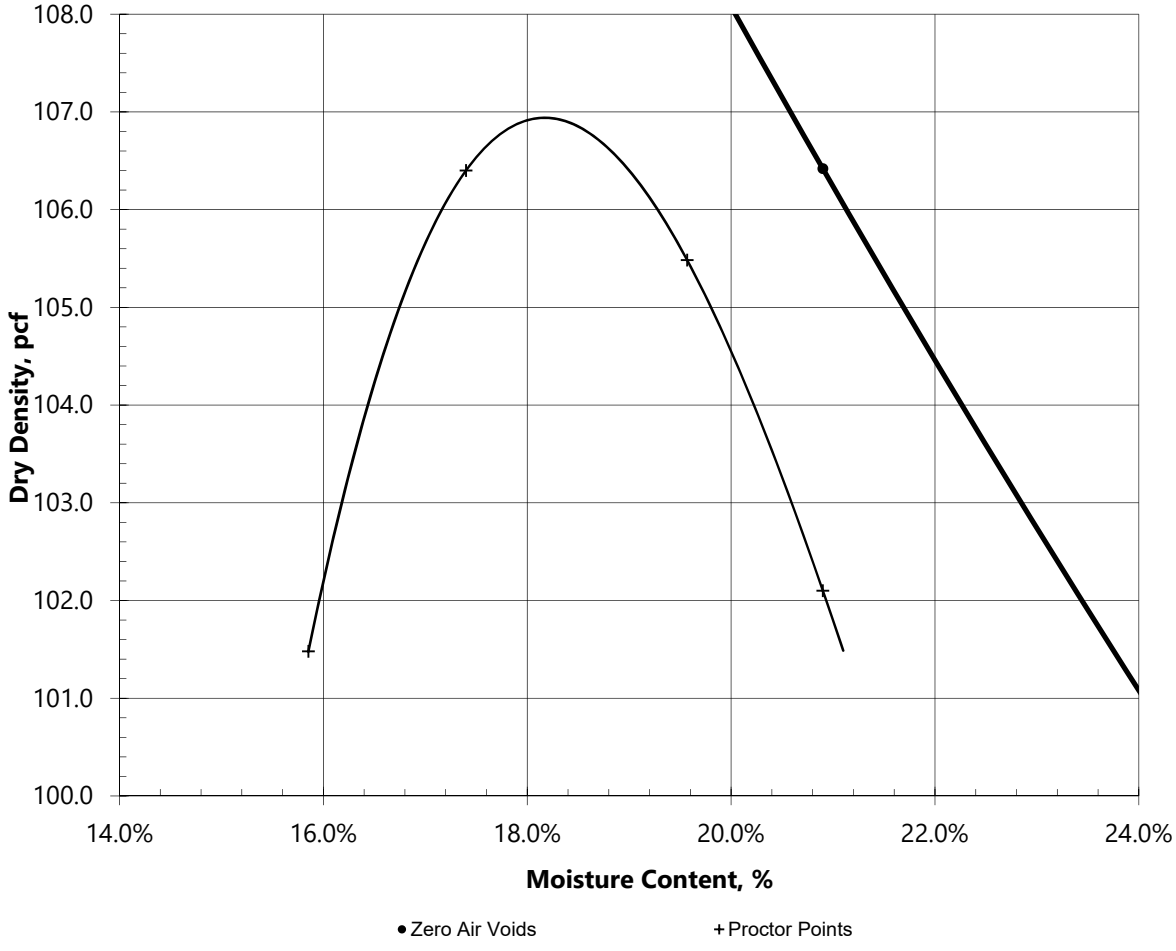
Soil and Test Method Data

Sample ID TP-1
 Sample Depth 1-5'
 Sample Classification Sandy Lean CLAY
 USCS Group Symbol CL
 Test Method ASTM D698, Method B, with mechanical hammer
 Sample Preparation Air dried and sieved through a 3/8" sieve.
 Mold Size, in 4.0
 Assumed Specific Gravity: 2.65

Sample Received: 7/2/2020
 Date Tested: 7/4/2020

Test Data	#1	#2	#3	#4
Moisture Content	15.9%	17.4%	19.6%	20.9%
Dry Density, pcf	101.5	106.4	105.5	102.1

Moisture-Density Curve
 Maximum Dry Density, pcf = 107.0 Optimum Moisture, % = 18.2



Soil Classification Calculations

Campbell Pointe Ph 5/6

DAA# R14245N-07

Prepared By: LAB

Sample ID TP-2

Sample Depth 1-4'

Visual Sample Description Reddish Brown Sandy Lean CLAY

Sample Received: 7/2/2020

Date Tested: 7/2/2020

Natural Moisture Content: ASTM D 2216

Pan ID	103
Pan Wt	123.63 grams
Pan + Soil (wet)	357.07 grams
Pan + Soil (dry)	315.34 grams
<i>Natural Moisture Content</i>	21.8%

Coarse or Fine Grained: ASTM D 422

Pan + Soil retained on No. 200 sieve	
(dry)	208.77 grams
Percent Passing No. 200 Sieve	55.6%
Pan + Soil retained on No. 4 sieve	
(dry)	123.77 grams
Percent Passing No. 4 Sieve	99.9%

Soil Classifies as Fine-Grained Soil

Atterberg Limits: ASTM D 4318

Date Tested: 7/5/2020

Liquid Limit

No of Blows	15	27	34
Pan ID	N-01	N-07	N-11
Pan Wt	15.15	15.07	15.01
Pan + Soil (wet)	25.13	27.93	24.89
Pan + Soil (dry)	22.00	24.23	22.19
Moisture Content	45.7%	40.4%	37.6%
Liquid Limit	43	41	39
<i>Liquid Limit</i>	41		

Plastic Limit

Pan ID	N-19	N-16
Pan Weight	6.63	6.72
Pan + Soil (wet)	16.82	16.32
Pan + Soil (dry)	14.84	14.45
Moisture Content	24.1%	24.2%
<i>Plastic Limit</i>	24	
<i>Plastic Index</i>	17	

USCS Classification: ASTM D 2487

Group Symbol **CL**

Group Name **Sandy Lean CLAY**

Grain Size Distribution Calculations

Campbell Pointe Ph 5/6

DAA# R14245N-07

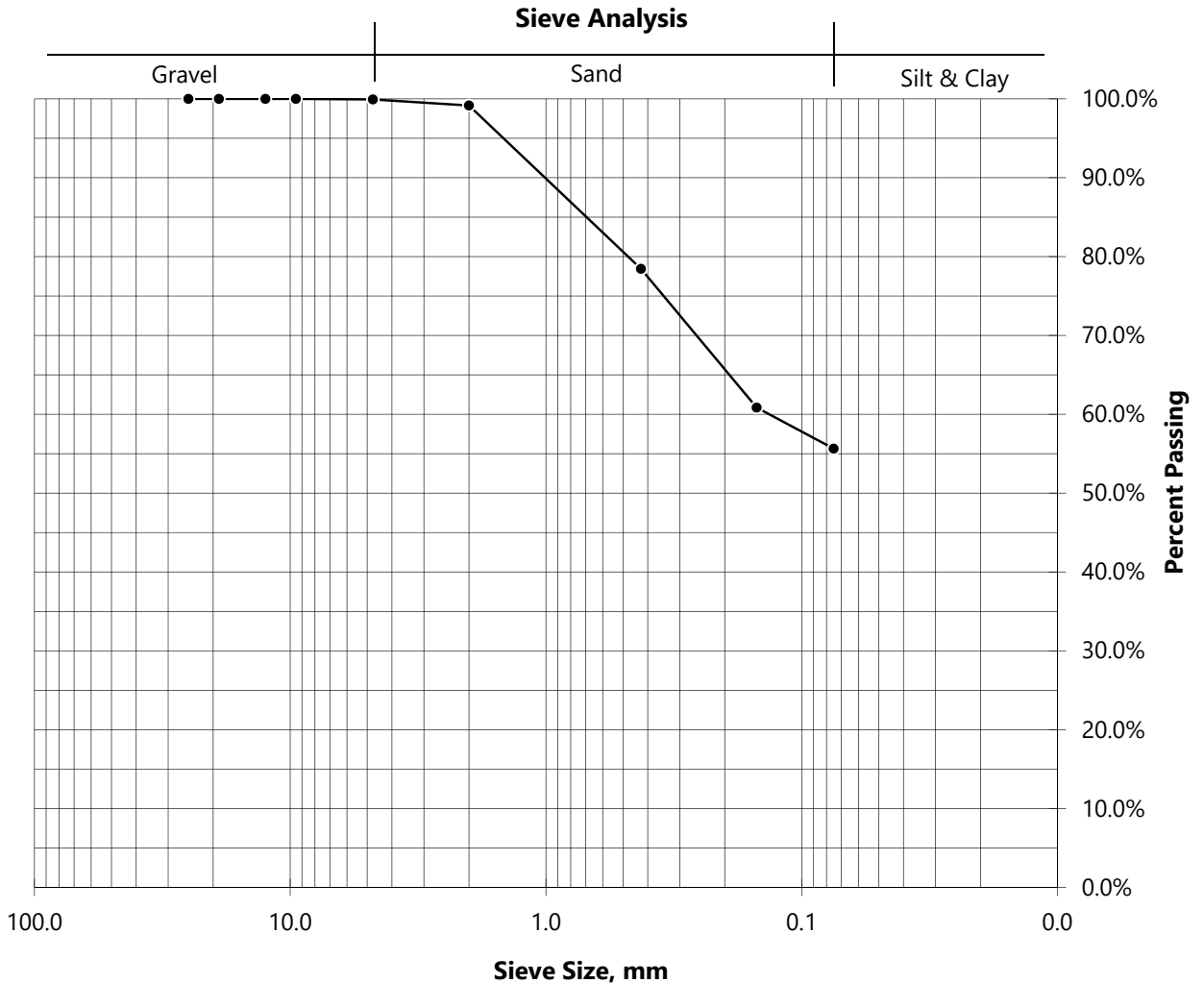
Prepared By: LAB

Sample ID TP-2

Sample Depth 1-4'

Mechanical Sieve Analysis: ASTM D 422

Sieve Size	Weight Retained	Percent Retained	Sieve Size, mm	Percent Passing
1"	0.00	0.0%	25.0	100.0%
3/4"	0.00	0.0%	19.0	100.0%
1/2"	0.00	0.0%	12.5	100.0%
3/8"	0.00	0.0%	9.50	100.0%
No. 4	0.14	0.1%	4.75	99.9%
No. 10	1.47	0.8%	2.00	99.2%
No. 40	39.71	20.7%	0.425	78.4%
No. 100	33.74	17.6%	0.15	60.8%
No. 200	9.98	5.2%	0.075	55.6%
Pan	0.10	0.1%		
Total	85.14	44.4%		



Proctor Test Report
Campbell Pointe Ph 5/6
DAA# R14245N-07
Prepared By: LAB

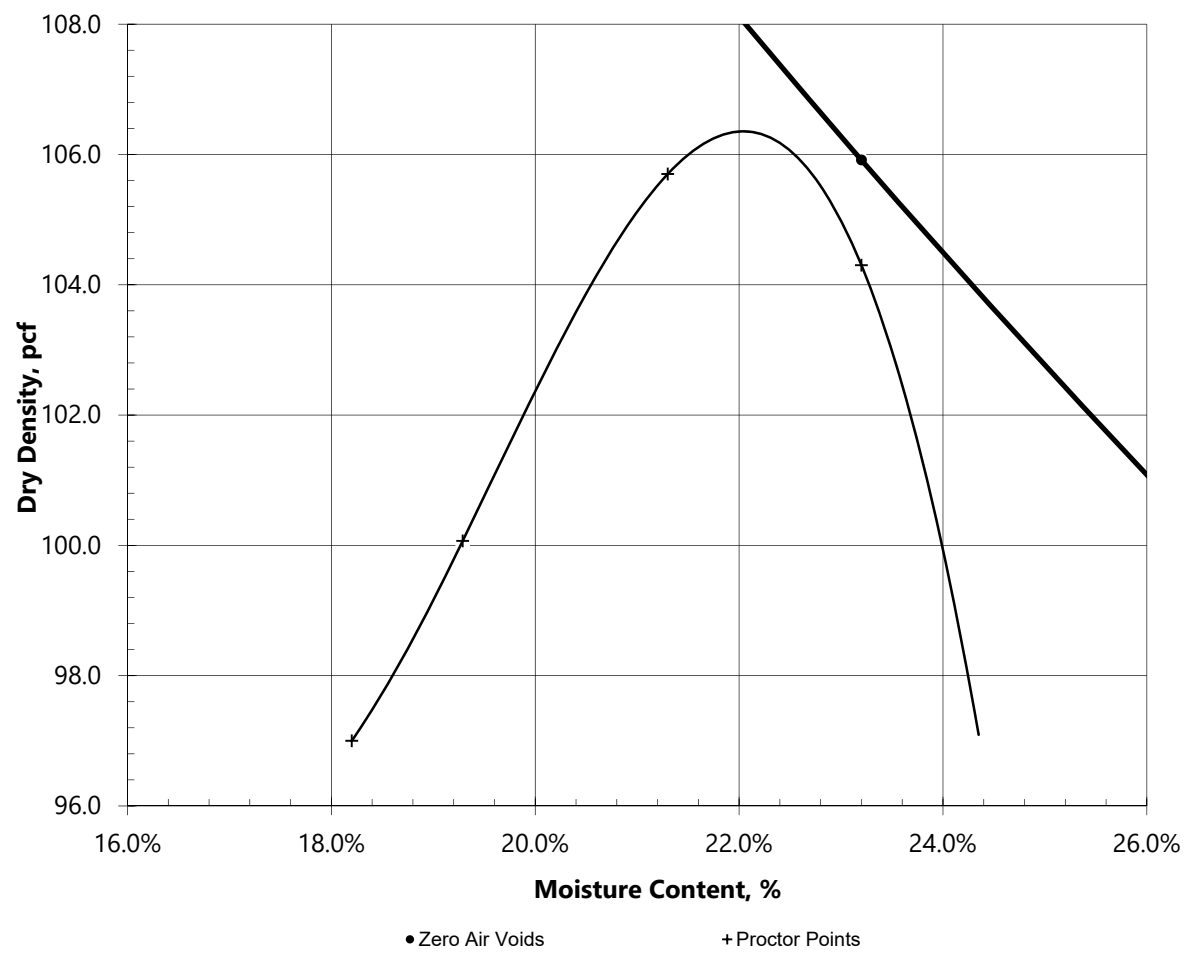
Soil and Test Method Data

Sample ID TP-2	Sample Received: 7/2/2020
Sample Depth 1-4'	Date Tested: 7/4/2020
Sample Classification Sandy Lean CLAY	
USCS Group Symbol CL	
Test Method ASTM D698, Method B, with mechanical hammer	
Sample Preparation Air dried and sieved through a 3/8" sieve.	
Mold Size, in 4.0	
Assumed Specific Gravity: 2.80	

Test Data	#1	#2	#3	#4
Moisture Content	18.2%	19.3%	21.3%	23.2%
Dry Density, pcf	97.0	100.1	105.7	104.3

Moisture-Density Curve

Maximum Dry Density, pcf = 106.5, Optimum Moisture, % = 22.0



Soil Classification Calculations

Campbell Pointe Ph 5/6

DAA# R14245N-07

Prepared By: LAB

Sample ID TP-3

Sample Depth 1-2.5'

Visual Sample Description Brown Silty SAND

Sample Received: 7/2/2020

Date Tested: 7/2/2020

Natural Moisture Content: ASTM D 2216

Pan ID	106
Pan Wt	123.73 grams
Pan + Soil (wet)	409.10 grams
Pan + Soil (dry)	392.14 grams
<i>Natural Moisture Content</i>	6.3%

Coarse or Fine Grained: ASTM D 422

Pan + Soil retained on No. 200 sieve	
(dry)	332.32 grams
Percent Passing No. 200 Sieve	22.3%
Pan + Soil retained on No. 4 sieve	
(dry)	129.38 grams
Percent Passing No. 4 Sieve	97.9%
<i>Soil Classifies as</i>	<i>Coarse-Grained Soil</i>

Atterberg Limits: ASTM D 4318

Date Tested: 7/5/2020

Liquid Limit

No of Blows	Non-plastic	Non-plastic	Non-plastic
Pan ID			
Pan Wt			
Pan + Soil (wet)			
Pan + Soil (dry)			
Moisture Content			
Liquid Limit			
<i>Liquid Limit</i>			

Plastic Limit

Pan ID	Non-plastic	Non-plastic
Pan Weight		
Pan + Soil (wet)		
Pan + Soil (dry)		
Moisture Content		
<i>Plastic Limit</i>		
<i>Plastic Index</i>		

USCS Classification: ASTM D 2487

Group Symbol **SM**

Group Name **Silty SAND**

Grain Size Distribution Calculations

Campbell Pointe Ph 5/6

DAA# R14245N-07

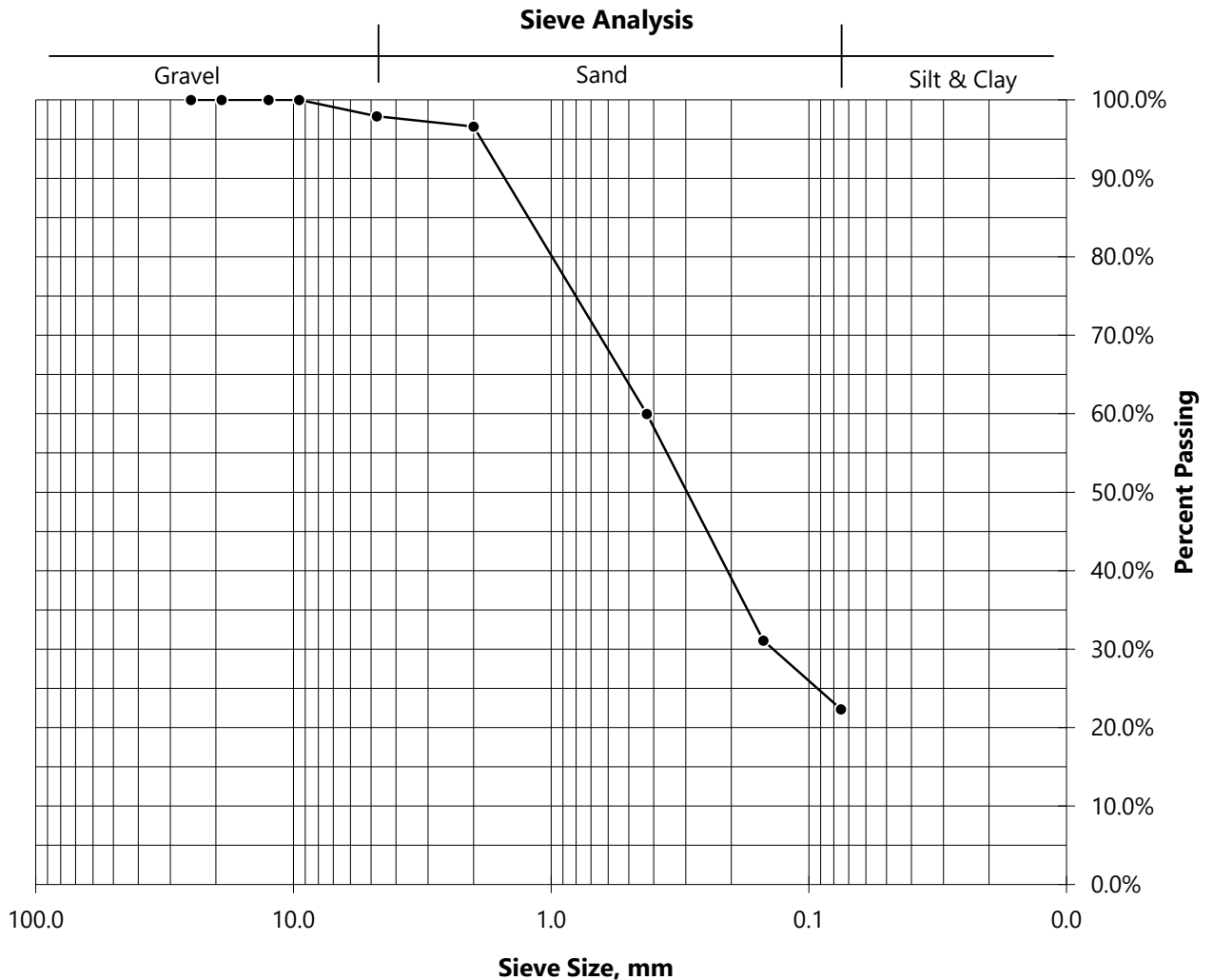
Prepared By: LAB

Sample ID TP-3

Sample Depth 1-2.5'

Mechanical Sieve Analysis: ASTM D 422

Sieve Size	Weight Retained	Percent Retained	Sieve Size, mm	Percent Passing
1"	0.00	0.0%	25.0	100.0%
3/4"	0.00	0.0%	19.0	100.0%
1/2"	0.00	0.0%	12.5	100.0%
3/8"	0.00	0.0%	9.50	100.0%
No. 4	5.65	2.1%	4.75	97.9%
No. 10	3.47	1.3%	2.00	96.6%
No. 40	98.26	36.6%	0.425	60.0%
No. 100	77.59	28.9%	0.15	31.1%
No. 200	23.49	8.8%	0.075	22.3%
Pan	0.13	0.0%		
Total	208.59	77.7%		



Proctor Test Report
Campbell Pointe Ph 5/6
DAA# R14245N-07
Prepared By: LAB

Soil and Test Method Data

Sample ID TP-3
 Sample Depth 1-2.5'
 Sample Classification Silty SAND
 UCS Group Symbol SM
 Test Method ASTM D698, Method B, with mechanical hammer
 Sample Preparation Air dried and sieved through a 3/8" sieve.
 Mold Size, in 4.0
 Assumed Specific Gravity: 2.65

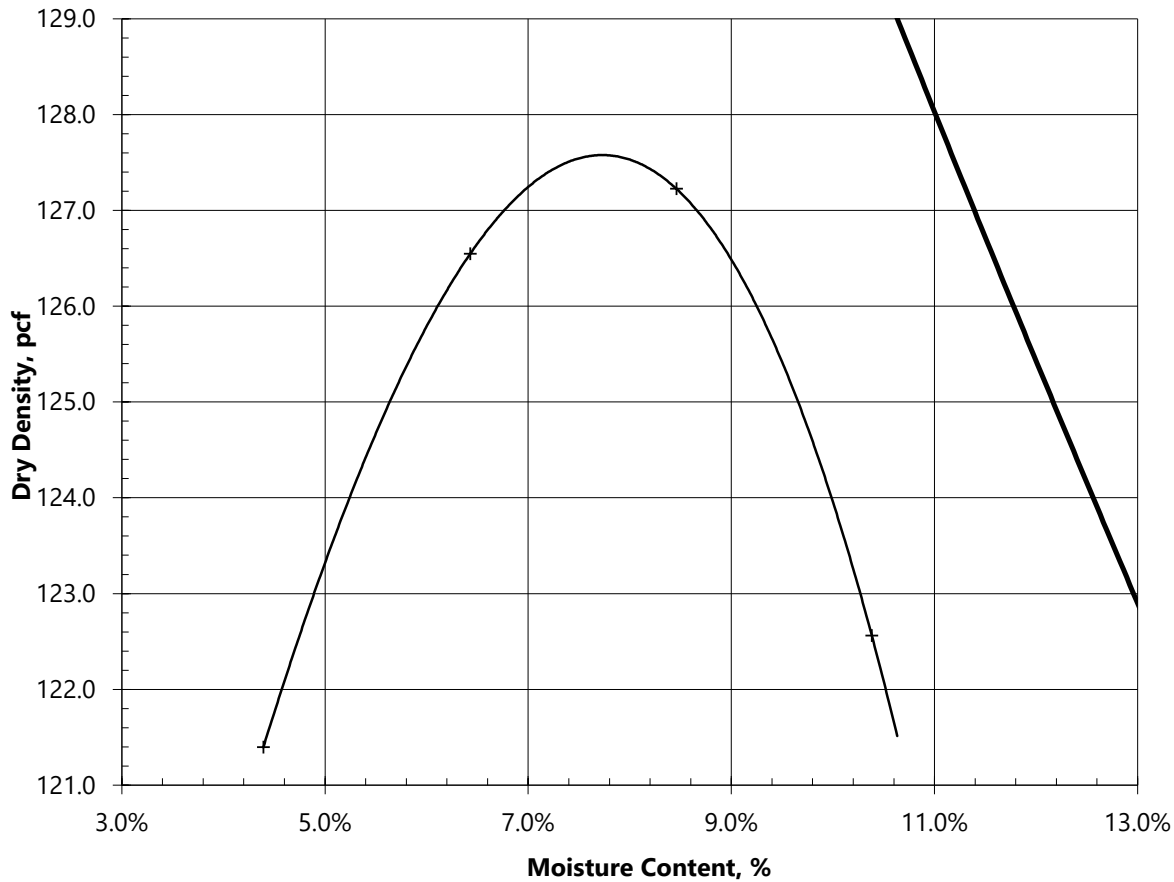
Sample Received: 7/2/2020

Date Tested: 7/7/2020

Test Data	#1	#2	#3	#4
Moisture Content	4.4%	6.4%	8.5%	10.4%
Dry Density, pcf	121.4	126.5	127.2	122.6

Moisture-Density Curve

Maximum Dry Density, pcf = 127.6. Optimum Moisture, % = 7.7



• Zero Air Voids + Proctor Points

Soil Classification Calculations

Campbell Pointe Ph 5/6

DAA# R14245N-07

Prepared By: LAB

Sample ID TP-3

Sample Depth 2.5-6'

Visual Sample Description Reddish Pink Clayey SAND

Sample Received: 7/2/2020

Date Tested: 7/2/2020

Natural Moisture Content: ASTM D 2216

Pan ID	119
Pan Wt	123.76 grams
Pan + Soil (wet)	336.24 grams
Pan + Soil (dry)	311.67 grams
<i>Natural Moisture Content</i>	13.1%

Coarse or Fine Grained: ASTM D 422

Pan + Soil retained on No. 200 sieve	
(dry)	256.24 grams
Percent Passing No. 200 Sieve	29.5%
Pan + Soil retained on No. 4 sieve	
(dry)	129.12 grams
Percent Passing No. 4 Sieve	97.1%
<i>Soil Classifies as</i>	<i>Coarse-Grained Soil</i>

Atterberg Limits: ASTM D 4318

Date Tested: 7/5/2020

Liquid Limit

No of Blows	16	24	33
Pan ID	N-05	N-08	N-09
Pan Wt	15.08	15.23	15.08
Pan + Soil (wet)	25.16	27.58	25.07
Pan + Soil (dry)	22.17	24.17	22.49
Moisture Content	42.2%	38.1%	34.8%
Liquid Limit	40	38	36
<i>Liquid Limit</i>	38		

Plastic Limit

Pan ID	N-22	N-24
Pan Weight	6.67	6.63
Pan + Soil (wet)	16.43	14.14
Pan + Soil (dry)	14.72	12.83
Moisture Content	21.2%	21.1%
<i>Plastic Limit</i>	21	
<i>Plastic Index</i>	17	

USCS Classification: ASTM D 2487

Group Symbol **SC**

Group Name **Clayey SAND**

Grain Size Distribution Calculations

Campbell Pointe Ph 5/6

DAA# R14245N-07

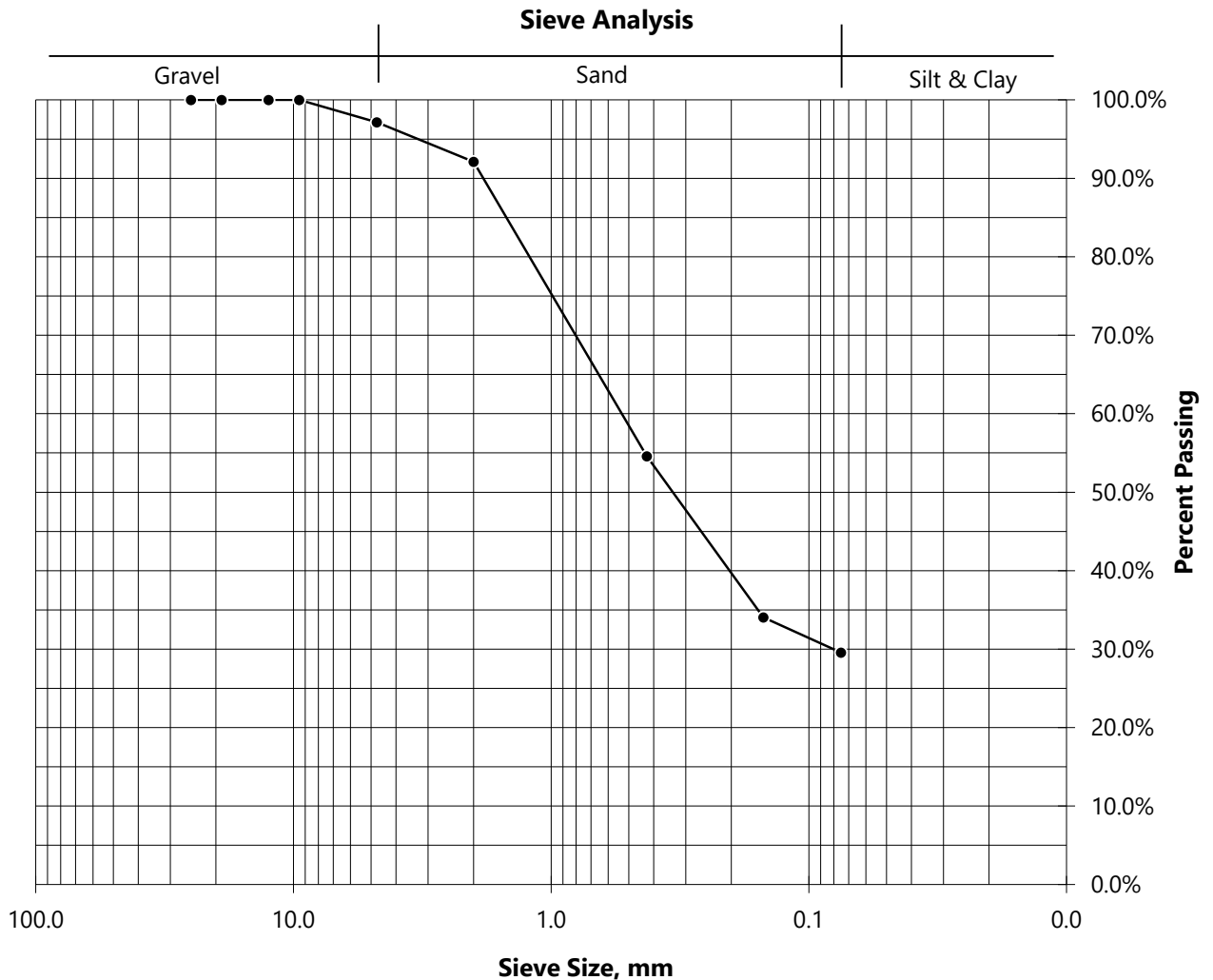
Prepared By: LAB

Sample ID TP-3

Sample Depth 2.5-6'

Mechanical Sieve Analysis: ASTM D 422

Sieve Size	Weight Retained	Percent Retained	Sieve Size, mm	Percent Passing
1"	0.00	0.0%	25.0	100.0%
3/4"	0.00	0.0%	19.0	100.0%
1/2"	0.00	0.0%	12.5	100.0%
3/8"	0.00	0.0%	9.50	100.0%
No. 4	5.36	2.9%	4.75	97.1%
No. 10	9.50	5.1%	2.00	92.1%
No. 40	70.46	37.5%	0.425	54.6%
No. 100	38.61	20.5%	0.15	34.0%
No. 200	8.44	4.5%	0.075	29.6%
Pan	0.11	0.1%		
Total	132.48	70.5%		



Proctor Test Report
Campbell Pointe Ph 5/6
DAA# R14245N-07
Prepared By: LAB

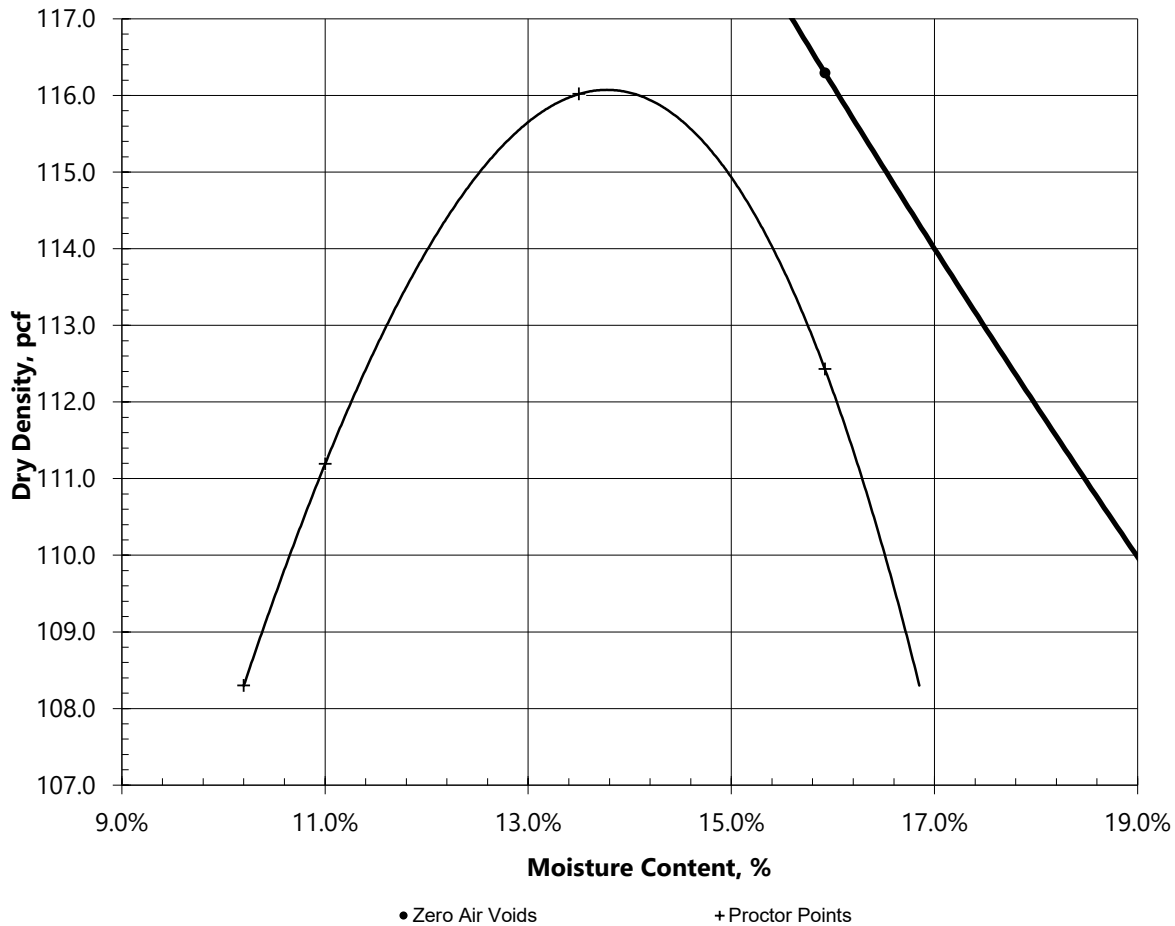
Soil and Test Method Data

Sample ID TP-3	Sample Received: 7/2/2020
Sample Depth 2.5-6'	Date Tested: 7/7/2020
Sample Classification Clayey SAND	
USCS Group Symbol SC	
Test Method ASTM D698, Method B, with mechanical hammer	
Sample Preparation Air dried and sieved through a 3/8" sieve.	
Mold Size, in 4.0	
Assumed Specific Gravity: 2.65	

Test Data	#1	#2	#3	#4
Moisture Content	10.2%	11.0%	13.5%	15.9%
Dry Density, pcf	108.3	111.2	116.0	112.4

Moisture-Density Curve

Maximum Dry Density, pcf = 116.2, Optimum Moisture, % = 13.8



Soil Classification Calculations

Campbell Pointe Ph 5/6

DAA# R14245N-07

Prepared By: LAB

Sample ID TP-3

Sample Depth 6.5-8'

Visual Sample Description Reddish Pink Clayey SAND

Sample Received: 7/2/2020

Date Tested: 7/2/2020

Natural Moisture Content: ASTM D 2216

Pan ID	120
Pan Wt	125.06 grams
Pan + Soil (wet)	308.96 grams
Pan + Soil (dry)	284.75 grams
<i>Natural Moisture Content</i>	15.2%

Coarse or Fine Grained: ASTM D 422

Pan + Soil retained on No. 200 sieve	
(dry)	220.29 grams
Percent Passing No. 200 Sieve	40.4%
Pan + Soil retained on No. 4 sieve	
(dry)	125.06 grams
Percent Passing No. 4 Sieve	100.0%
<i>Soil Classifies as</i>	<i>Coarse-Grained Soil</i>

Atterberg Limits: ASTM D 4318

Date Tested: 7/5/2020

Liquid Limit

No of Blows	19	25	35
Pan ID	N-10	N-02	N-03
Pan Wt	15.15	15.06	15.17
Pan + Soil (wet)	25.14	25.55	25.63
Pan + Soil (dry)	21.97	22.42	22.68
Moisture Content	46.5%	42.5%	39.3%
Liquid Limit	45	43	41
<i>Liquid Limit</i>	43		

Plastic Limit

Pan ID	N-20	N-18
Pan Weight	6.64	6.61
Pan + Soil (wet)	17.60	18.11
Pan + Soil (dry)	15.68	16.09
Moisture Content	21.2%	21.3%
<i>Plastic Limit</i>	21	
<i>Plastic Index</i>	22	

USCS Classification: ASTM D 2487

Group Symbol **SC**

Group Name **Clayey SAND**

Grain Size Distribution Calculations

Campbell Pointe Ph 5/6

DAA# R14245N-07

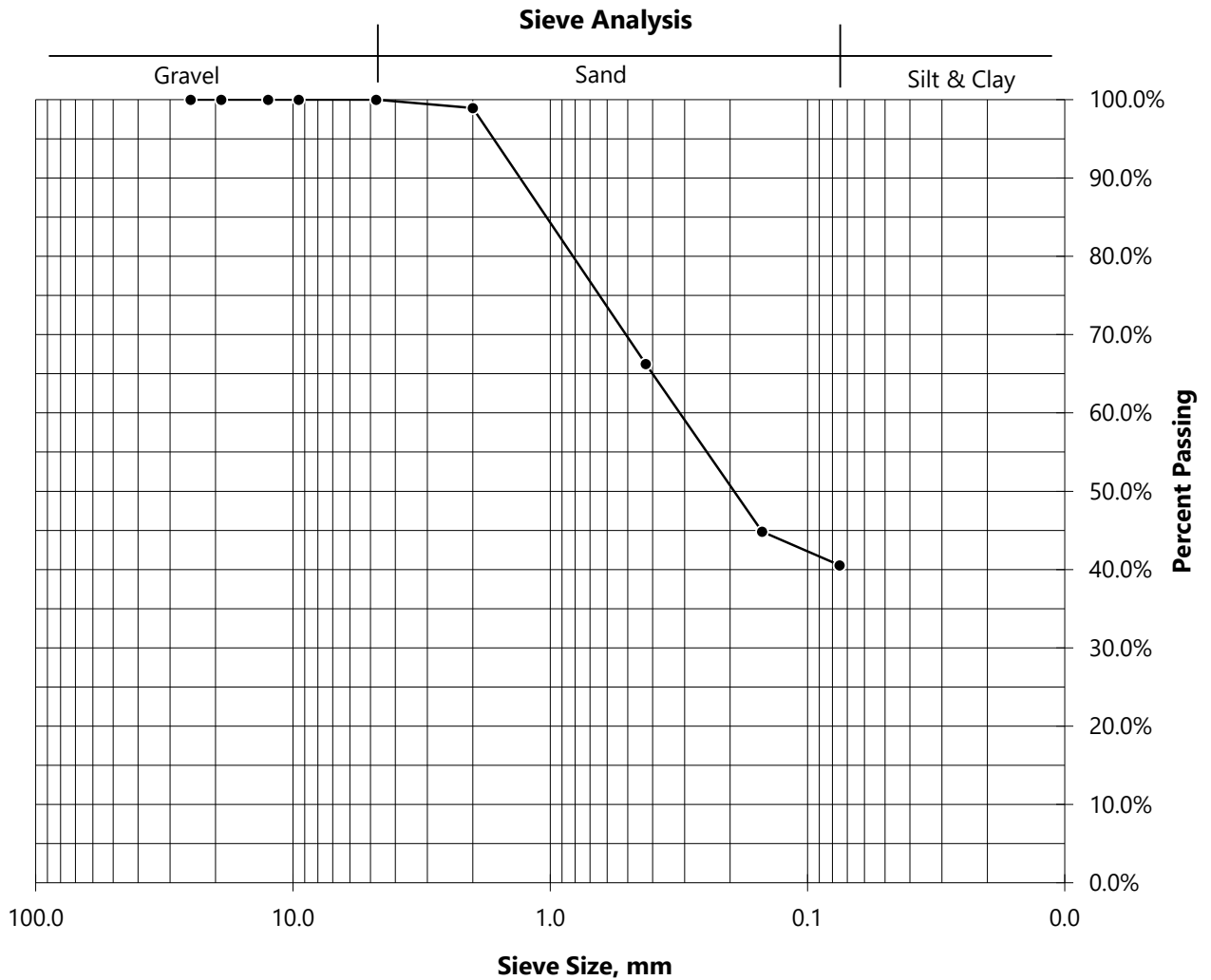
Prepared By: LAB

Sample ID TP-3

Sample Depth 6.5-8'

Mechanical Sieve Analysis: ASTM D 422

Sieve Size	Weight Retained	Percent Retained	Sieve Size, mm	Percent Passing
1"	0.00	0.0%	25.0	100.0%
3/4"	0.00	0.0%	19.0	100.0%
1/2"	0.00	0.0%	12.5	100.0%
3/8"	0.00	0.0%	9.50	100.0%
No. 4	0.00	0.0%	4.75	100.0%
No. 10	1.72	1.1%	2.00	98.9%
No. 40	52.17	32.7%	0.425	66.3%
No. 100	34.21	21.4%	0.15	44.8%
No. 200	6.84	4.3%	0.075	40.5%
Pan	0.29	0.2%		
Total	95.23	59.6%		



Proctor Test Report
Campbell Pointe Ph 5/6
DAA# R14245N-07
Prepared By: LAB

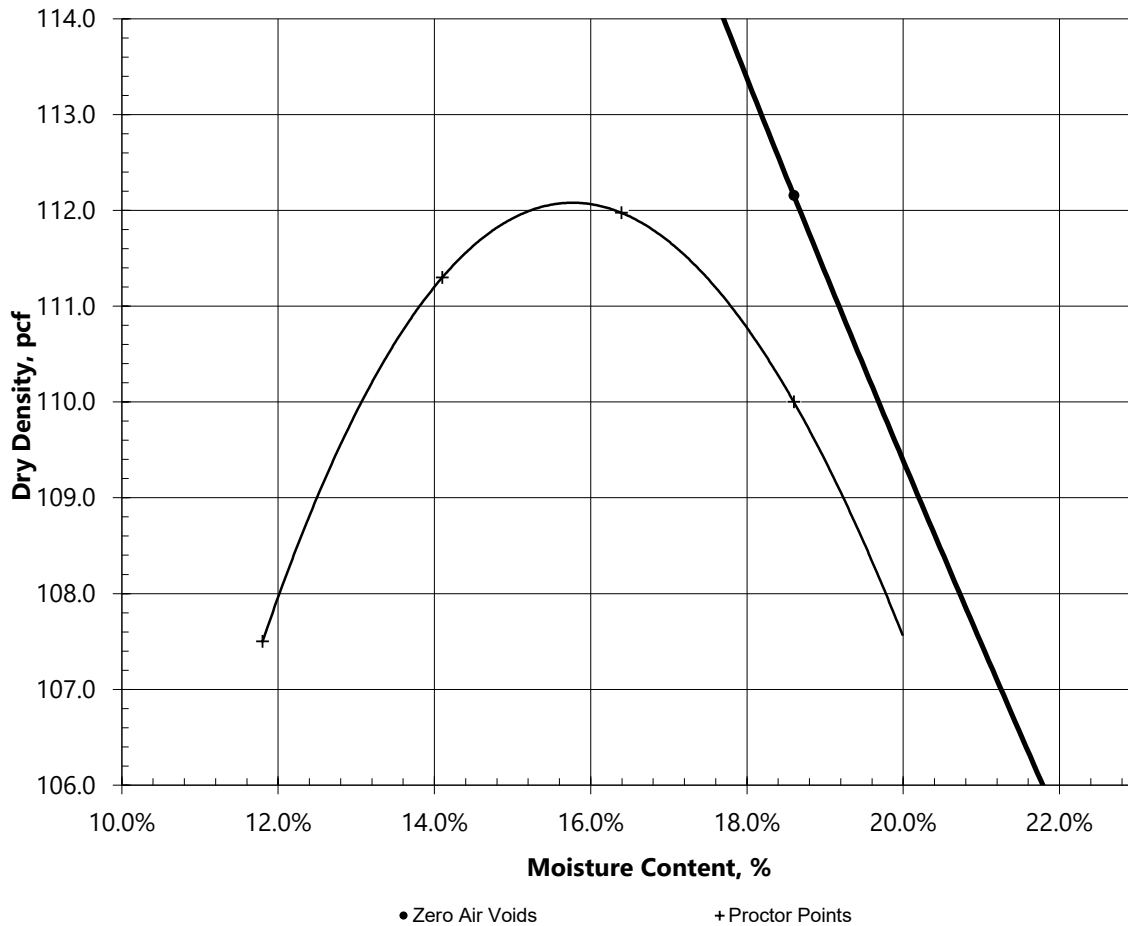
Soil and Test Method Data

Sample ID TP-3	Sample Received: 7/2/2020
Sample Depth 6.5-8'	Date Tested: 7/7/2020
Sample Classification Clayey SAND	
USCS Group Symbol SC	
Test Method ASTM D698, Method B, with mechanical hammer	
Sample Preparation Air dried and sieved through a 3/8" sieve.	
Mold Size, in 4.0	
Assumed Specific Gravity: 2.70	

Test Data	#1	#2	#3	#4
Moisture Content	11.8%	14.1%	16.4%	18.6%
Dry Density, pcf	107.5	111.3	112.0	110.0

Moisture-Density Curve

Maximum Dry Density, pcf = 112.2, Optimum Moisture, % = 15.8



Soil Classification Calculations

Campbell Pointe Ph 5/6

DAA# R14245N-07

Prepared By: LAB

Sample ID TP-3, Composite

Sample Depth 1-6'

Visual Sample Description Pinkish Brown Clayey SAND

Sample Received: 7/2/2020

Date Tested: 7/2/2020

Natural Moisture Content: ASTM D 2216

Pan ID	113
Pan Wt	122.94 grams
Pan + Soil (wet)	484.26 grams
Pan + Soil (dry)	451.57 grams
<i>Natural Moisture Content</i>	9.9%

Coarse or Fine Grained: ASTM D 422

Pan + Soil retained on No. 200 sieve	
(dry)	361.26 grams
Percent Passing No. 200 Sieve	27.5%
Pan + Soil retained on No. 4 sieve	
(dry)	127.99 grams
Percent Passing No. 4 Sieve	98.5%
<i>Soil Classifies as</i>	<i>Coarse-Grained Soil</i>

Atterberg Limits: ASTM D 4318

Date Tested: 7/5/2020

Liquid Limit

No of Blows	16	24	31
Pan ID	N-27	N-29	N-25
Pan Wt	15.01	15.07	14.72
Pan + Soil (wet)	27.16	27.80	29.43
Pan + Soil (dry)	24.61	25.31	26.83
Moisture Content	26.6%	24.3%	21.4%
Liquid Limit	25	24	22
<i>Liquid Limit</i>	24		

Plastic Limit

Pan ID	N-28	N-26
Pan Weight	6.59	6.65
Pan + Soil (wet)	18.60	17.75
Pan + Soil (dry)	17.03	16.29
Moisture Content	15.0%	15.1%
<i>Plastic Limit</i>	15	
<i>Plastic Index</i>	9	

USCS Classification: ASTM D 2487

Group Symbol **SC**

Group Name **Clayey SAND**

Grain Size Distribution Calculations

Campbell Pointe Ph 5/6

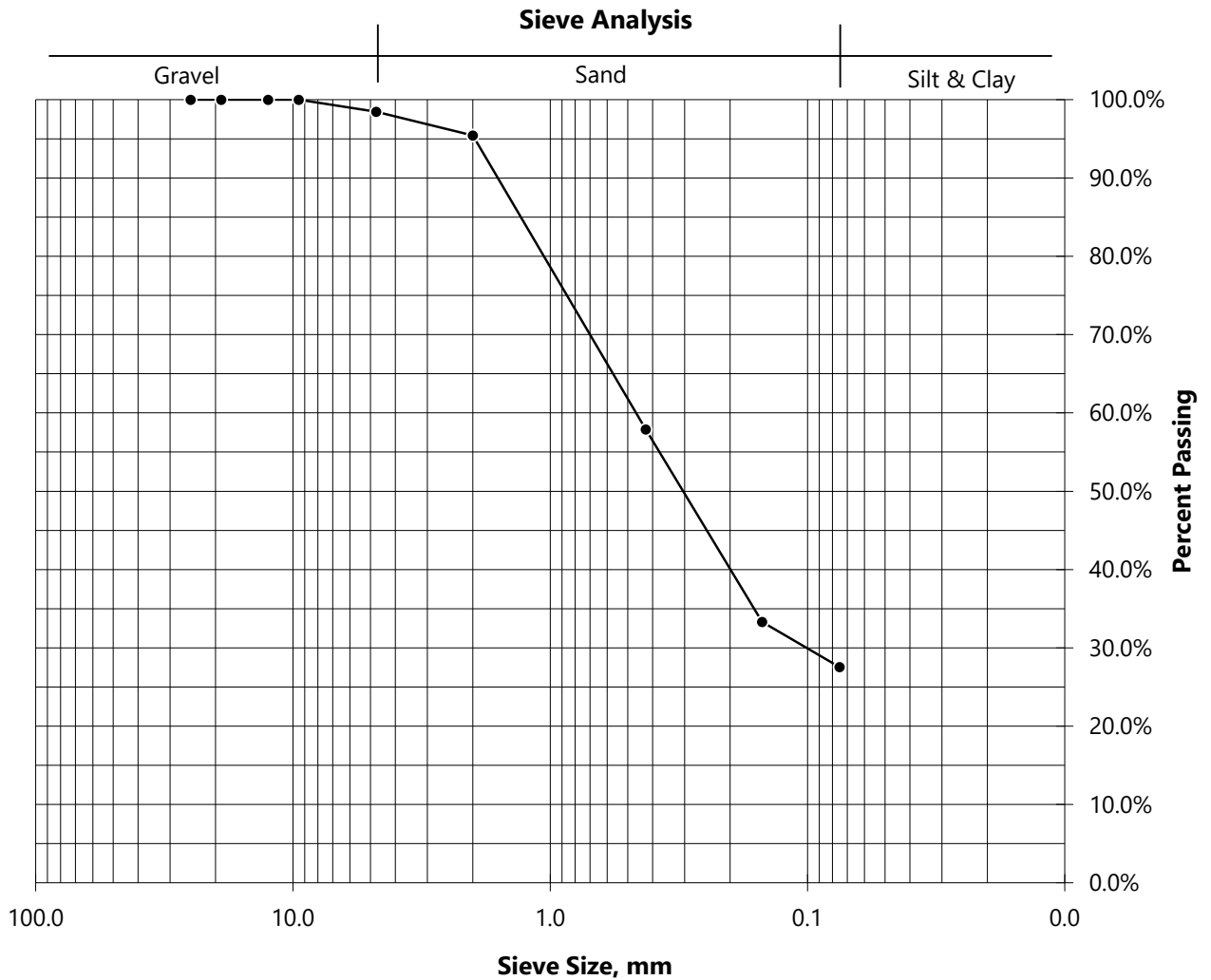
DAA# R14245N-07

Prepared By: LAB

Sample ID TP-3, Composite
 Sample Depth 1-6'

Mechanical Sieve Analysis: ASTM D 422

Sieve Size	Weight Retained	Percent Retained	Sieve Size, mm	Percent Passing
1"	0.00	0.0%	25.0	100.0%
3/4"	0.00	0.0%	19.0	100.0%
1/2"	0.00	0.0%	12.5	100.0%
3/8"	0.00	0.0%	9.50	100.0%
No. 4	5.05	1.5%	4.75	98.5%
No. 10	9.97	3.0%	2.00	95.4%
No. 40	123.32	37.5%	0.425	57.9%
No. 100	80.83	24.6%	0.15	33.3%
No. 200	18.97	5.8%	0.075	27.5%
Pan	0.18	0.1%		
Total	238.32	72.5%		



Proctor Test Report
Campbell Pointe Ph 5/6
DAA# R14245N-07
Prepared By: LAB

Soil and Test Method Data

Sample ID TP-3, Composite	Sample Received: 7/2/2020
Sample Depth 1-6'	Date Tested: 7/7/2020
Sample Classification Clayey SAND	
USCS Group Symbol SC	
Test Method ASTM D698, Method B, with mechanical hammer	
Sample Preparation Air dried and sieved through a 3/8" sieve.	
Mold Size, in 4.0	
Assumed Specific Gravity: 2.65	

Test Data	#1	#2	#3	#4
Moisture Content	7.9%	10.2%	11.8%	13.8%
Dry Density, pcf	117.6	124.6	122.9	117.1

Moisture-Density Curve

Maximum Dry Density, pcf = 124.7, Optimum Moisture, % = 10.3

