



OFFICE OF PROCUREMENT SERVICES  
335 FOUR MILE ROAD  
CONWAY, SC 29526-6005

**AMENDMENT/ADDENDUM No. 1**

**Posting Date:** Wednesday, March 31, 2021

**Solicitation Number:** 2021-50MJ

**Description:** Track and Field Phase II

**ADDENDA:** Addenda shall be issued prior to the bid opening date and time for the purposes of modifying or interpreting the Contract Documents through additions, deletions, clarifications or corrections. No addendum shall be issued later than four (4) days prior to the bid opening date except to a) withdraw the Invitation for Bids, or b) to postpone the bid opening date and time. When an addendum is issued for the purposes of postponing the bid opening date and time, the addendum shall establish the new bid opening date and time no earlier than five (5) days after the addendum issue date. Addenda shall be posted on the on-line bidding source(s) stated in the Invitation for Bids. A Bidder shall acknowledge receipt of all addenda issued by identifying the addendum number and the date of issuance with the Bidder's initials in the spaces provided on the Official Bid Form or the bid shall be found non-responsive in accordance with the District's Procurement Code. If this solicitation is amended, then all terms and conditions which are not modified remain unchanged.

**INTERPRETATIONS AND CLARIFICATIONS:** Requests for additional information or questions regarding error, omission or clarification of any portion of the Bid Documents or the Contract Documents or any addendum, shall be submitted in writing to the District Bid Contact Person stated in the Invitation for Bids by e-mail or facsimile no later than five (5) days prior to the bid opening date and time unless an earlier date is stated on the Invitation for Bids or as may be amended. Any interpretations, corrections, or changes to the Bid Documents or the Contract Documents made in any other manner than by a written addendum shall not be binding, and Bidders shall not rely upon them. Any information given a prospective Bidder concerning a solicitation will be furnished promptly to all other prospective bidders as an addendum to the solicitation, if that information is necessary for submitting offers of if the lack of it would be prejudicial to other prospective bidders. See clause entitled "Bidder Representations." We will not identify you in our answer to your question. The District seeks to permit maximum practicable competition. Bidders are urged to advise the Procurement Specialist – as soon as possible – regarding any aspect of this procurement, including any aspect of the solicitation that unnecessarily or inappropriately limits full and open competition.

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A mandatory pre-bid conference was held at HCS District Office on Thursday, March 25, 2021 at 3:00 p.m. Attached is the attendees.

Questions asked during the mandatory pre-bid, non-mandatory site visits and by email:

1. I see in the specs that the track equipment is x3 obviously for the 3 schools. Is that the same for the FG Posts as well?

Answer: **New football goal posts (2) are required at North Myrtle Beach High School only.**

2. Can you please share the Horry Phase 2 cad drawings?

Answer: **AutoCAD files will not be provided for use during bidding. CAD files will be shared with the selected contractor after project award and following receipt of a signed release form.**

3. Can you please provide boring report for clarification of existing stone base under track?

Answer: **Boring logs for each of the track asphalt borings are being provided with Addendum #1.**

4. Sheet C-310, C-320, & C-330 indicates slot drain to be installed in curves, but there is also a 50MM drain indicated as well under asphalt. Please verify the 50MM drain is not needed at this location.  
Answer: 50mm underdrain is to be provided in the D-zone curves as shown in the bid documents.
5. Detail 1&2 on sheet C-600 indicate "Fill gap between new curb and existing concrete or asphalt with 4" thick concrete". Please verify this only refers to additional concrete that may be needed due from sawcut to add 12x12 curb.  
Answer: The 4" thick concrete shall extend out to meet the existing concrete walk/pavement, typical around track where existing concrete/asphalt is within 3' of new outside perimeter curb. This is noted on C-110 Aynor HS Layout Plan.
6. See detail 9/C-602. Please verify if contractor or owner will provide metal shed.  
Answer: Contractor to provide metal shed.
7. Please verify if owner or contractor to provide concrete pad under storage shed.  
Answer: Contractor to provide concrete pad under metal shed.
8. See sheet C-230 for clarification. There appears to be a slope at track perimeter to match existing of existing pavement. Please verify TA elevations noted in curve at concessions building as correct.  
Answer: The entire back/visitors side straightway will be removed and rebuilt. The new outside perimeter concrete safety apron shall match existing where shown on C-230. At other points along this outer perimeter concrete apron, see proposed spot elevations.
9. Can Plexitrac Accelerator be considered for an acceptable substitute for this project?  
Answer: This is a water based polyresin product and therefore is not an approved equivalent to the specified polyurethane-based system.

All other Work required in the Contract Documents to remain as described.

#### **HORRY COUNTY SCHOOLS**

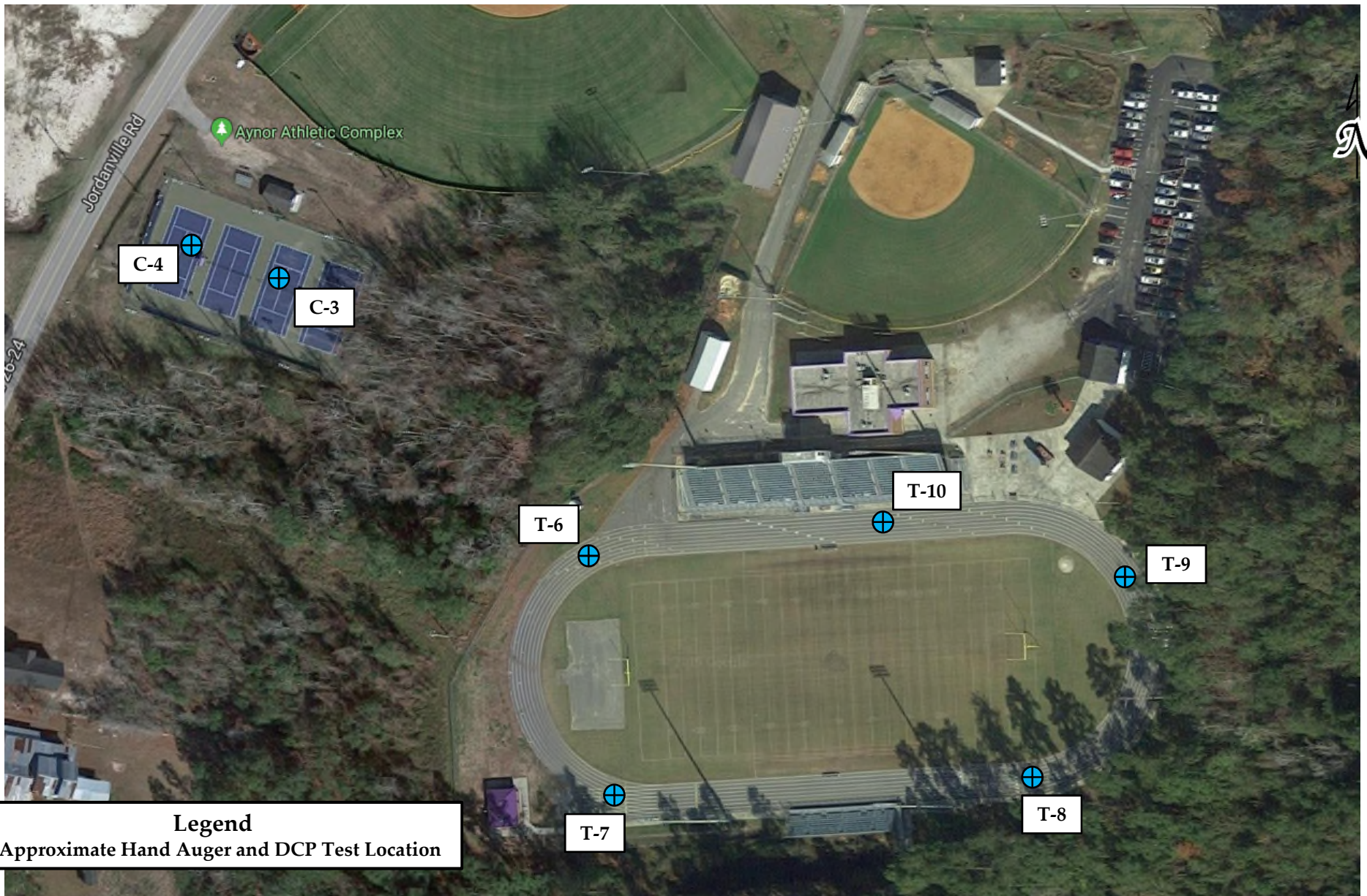
By: \_\_\_\_\_

Robin B. Strickland, CPPB  
Procurement Officer

#### **Attachments:**

1. AHS Track Boring Logs
2. GSFHS Track Boring Logs
3. NMBHS Track Boring Logs
4. Sign-In Sheet from Mandatory Pre-Bid Meeting

## **Appendix III – Aynor High School**



### Test Location Sketch

Horry County High School Tracks and Tennis Courts  
Aynor High School  
Aynor, South Carolina

SCALE:  
AS SHOWN

DATE:  
7-12-19

PROJECT NUMBER  
1463-19-028

FIGURE NO.

3

<b>PROJECT:</b> <b>Horry County High Schools Tracks &amp; Tennis Courts</b> <b>Horry County, South Carolina</b> <b>1463-19-028</b>				<b>HAND AUGER BORING LOG: T-6</b>			
<b>DATE STARTED:</b> <b>6/20/19</b>		<b>DATE FINISHED:</b> <b>6/20/19</b>		<b>NOTES:</b> Elevation unknown.			
<b>SAMPLING METHOD:</b> <b>Grab Sample</b>		<b>PERFORMED BY:</b> <b>K. Fugate</b>					
<b>WATER LEVEL:</b> <b>Not encountered.</b>							
Depth (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION (feet)	WATER LEVEL	DYNAMIC CONE PENETRATION RESISTANCE (blows/1.75 in.)	DCP VALUE	
					10    20    30    60    80		
	ASPHALT	ASPHALT - Approximately 5 inches thick.					
		CLAYEY SAND BASE COURSE - Approximately 3 1/2 inches thick.					
1		FAT CLAY (CH) - Mostly medium to high plasticity fines, trace fine sand, orange, yellow, and gray, moist, firm to stiff.		-	●	7	
2				-	●	8	
3		----- Stiff.		-	●	10	
4		Boring terminated at 4 ft			●	14	



DCP INDEX IS THE DEPTH (IN.) OF PENETRATION PER BLOW OF A 10.1 LB HAMMER FALLING 22.6 IN., DRIVING A 0.79 IN. O.D. 60 DEGREE CONE.

<b>PROJECT:</b> <b>Horry County High Schools Tracks &amp; Tennis Courts</b> Horry County, South Carolina 1463-19-028				<b>HAND AUGER BORING LOG: T-7</b>			
<b>DATE STARTED:</b> <b>6/20/19</b>		<b>DATE FINISHED:</b> <b>6/20/19</b>		<b>NOTES:</b> Elevation unknown.			
<b>SAMPLING METHOD:</b> <b>Grab Sample</b>		<b>PERFORMED BY:</b> <b>K. Fugate</b>					
<b>WATER LEVEL:</b> <b>Not encountered.</b>							
Depth (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION (feet)	WATER LEVEL	DYNAMIC CONE PENETRATION RESISTANCE (blows/1.75 in.)	DCP VALUE	
					10    20    30    60    80		
	ASPHALT	ASPHALT - Approximately 4 1/2 inches thick.					
		CLAYEY SAND BASE COURSE - Approximately 4 inches thick.					
1		POORLY GRADED SAND WITH SILT (SP-SM) - Mostly fine to medium sand, few non plastic fines, gray, moist to wet, medium dense.		-	20	20+	
2				-	20	20+	
3				-	16	16	
Boring terminated at 3.25 ft							



DCP INDEX IS THE DEPTH (IN.) OF PENETRATION PER BLOW OF A 10.1 LB HAMMER FALLING 22.6 IN., DRIVING A 0.79 IN. O.D. 60 DEGREE CONE.

<b>PROJECT:</b> <b>Horry County High Schools Tracks &amp; Tennis Courts</b> Horry County, South Carolina 1463-19-028				<b>HAND AUGER BORING LOG: T-8</b>			
<b>DATE STARTED:</b> <b>6/20/19</b>		<b>DATE FINISHED:</b> <b>6/20/19</b>		<b>NOTES:</b> Elevation unknown.			
<b>SAMPLING METHOD:</b> <b>Grab Sample</b>		<b>PERFORMED BY:</b> <b>K. Fugate</b>					
<b>WATER LEVEL:</b> <b>Not encountered.</b>							
Depth (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION (feet)	WATER LEVEL	DYNAMIC CONE PENETRATION RESISTANCE (blows/1.75 in.)	DCP VALUE	
					10    20    30    60    80		
		<b>ASPHALT</b> - Approximately 5 inches thick.					
		<b>CLAYEY SAND BASE COURSE</b> - Approximately 3 inches thick.					
1		<b>POORLY GRADED SAND WITH CLAY (SP-SC)</b> - Mostly fine to medium sand, few non plastic fines, orange and grey, moist, medium dense.		-			
2				-		20+	
		<b>FAT CLAY (CH)</b> - Mostly medium to high plasticity fines, orange and grey, moist, firm.					
		<b>CLAYEY SAND (SC)</b> - Mostly fine to medium sand, some medium to high plasticity fines, gray, moist, medium dense.				11	
3		<b>FAT CLAY (CH)</b> - Mostly medium to high plasticity fines, trace fine sand, trace organics, gray, moist, firm.		-		8	
4		Boring terminated at 4 ft				5	



DCP INDEX IS THE DEPTH (IN.) OF PENETRATION PER BLOW OF A 10.1 LB HAMMER FALLING 22.6 IN., DRIVING A 0.79 IN. O.D. 60 DEGREE CONE.

<b>PROJECT:</b> <b>Horry County High Schools Tracks &amp; Tennis Courts</b> <b>Horry County, South Carolina</b> <b>1463-19-028</b>				<b>HAND AUGER BORING LOG: T-9</b>			
<b>DATE STARTED:</b> <b>6/20/19</b>		<b>DATE FINISHED:</b> <b>6/20/19</b>		<b>NOTES:</b> Elevation unknown.			
<b>SAMPLING METHOD:</b> <b>Grab Sample</b>		<b>PERFORMED BY:</b> <b>K. Fugate</b>					
<b>WATER LEVEL:</b> <b>Not encountered.</b>							
Depth (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION (feet)	WATER LEVEL	DYNAMIC CONE PENETRATION RESISTANCE (blows/1.75 in.) <div style="text-align: right; font-size: small;">10    20    30    60    80</div>	DCP VALUE	
		<b>ASPHALT</b> - Approximately 5 3/4 inches thick.					
		<b>CLAYEY SAND BASE COURSE</b> - Approximately 4 inches thick.					
1		<b>CLAYEY SAND (SC)</b> - Mostly fine to medium sand, some low to medium plasticity fines, orange and grey, moist, medium dense.		-	●	20+	
2				-	●	20+	
3		<b>FAT CLAY (CH)</b> - Mostly medium to high plasticity fines, orange and grey, moist, very stiff.		-	●	20+	
		<b>FAT CLAY WITH SAND (CH)</b> - Mostly medium to high plasticity fines, few fine sands, gray and orange, moist, firm.					
		--- Large root.					
4		Boring terminated at 4 ft			●	6	



DCP INDEX IS THE DEPTH (IN.) OF PENETRATION PER BLOW OF A 10.1 LB HAMMER FALLING 22.6 IN., DRIVING A 0.79 IN. O.D. 60 DEGREE CONE.

<b>PROJECT:</b> <b>Horry County High Schools Tracks &amp; Tennis Courts</b> Horry County, South Carolina 1463-19-028				<b>HAND AUGER BORING LOG: T-10</b>			
<b>DATE STARTED:</b> <b>6/20/19</b>		<b>DATE FINISHED:</b> <b>6/20/19</b>		<b>NOTES:</b> Elevation unknown.			
<b>SAMPLING METHOD:</b> <b>Grab Sample</b>		<b>PERFORMED BY:</b> <b>K. Fugate</b>					
<b>WATER LEVEL:</b> <b>Not encountered.</b>							
Depth (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION (feet)	WATER LEVEL	DYNAMIC CONE PENETRATION RESISTANCE (blows/1.75 in.)	DCP VALUE	
					10    20    30    60    80		
1		<b>ASPHALT</b> - Approximately 4 1/4 inches thick.					
		<b>CLAYEY SAND BASE COURSE</b> - Approximately 5 inches thick.					
		<b>POORLY GRADED SAND WITH SILT (SP-SM)</b> - Mostly fine to medium sand, few non plastic fines, gray, moist, medium dense.		-	20+		
		<b>POORLY GRADED SAND (SP)</b> - Mostly fine sand, trace fines, white, moist, medium dense.		-	20+		
		<b>CLAYEY SAND (SC)</b> - Mostly fine to medium sand, some low to medium plasticity fines, orange and grey, moist, loose.		-	7		
4		<b>SANDY FAT CLAY (CH)</b> - Mostly medium to high plasticity fines, some fine sand, orange and grey, moist, stiff.				10	
Boring terminated at 4 ft							



DCP INDEX IS THE DEPTH (IN.) OF PENETRATION PER BLOW OF A 10.1 LB HAMMER FALLING 22.6 IN., DRIVING A 0.79 IN. O.D. 60 DEGREE CONE.

Revision Date: 08/16/17

[illegible]

### MATERIAL FINER THAN THE #200 SIEVE



ASTM D1140

S&ME, Inc. - Myrtle Beach: 1330 Highway 501 Business, Conway, SC 29526

Project #:	1463-19-028-110	Report Date:	7/2/2019
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Project Name:	Horry County HS Track & Tennis - Aynor	Test Date(s):	7/1/2019
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Client Name: Clough, Harbour & Associates, LLP

Client Address: 110 Traders Cross, Ste 201; Bluffton, SC 29909

Sample by:	K. Fugate	LAB#	4985
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Sample Dates: 6/20/2019

**Method;**    A    ☐                      B    ☒

Soaked	<input checked="" type="checkbox"/>	Soak Time	2 Hrs
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[illegible]

Balance ID.	19608	Calibration Date:	2/28/2018	#200 Sieve	18775	Calibration Date:	2/28/2019
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*Notes / Deviations / References:* ASTM D1140: Amount of Material in Soil Finer Than the No. 200 (75-um) ) Sieve

Ron Forest, P.E.

### Technical Responsibility

RPF

*Signature*

Senior Reviewer

### Position

17-Jul

Date \_\_\_\_\_

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# LIQUID LIMIT, PLASTIC LIMIT, & PLASTIC INDEX



ASTM D 4318 ☒ AASHTO T 89 ☐ AASHTO T 90 ☐

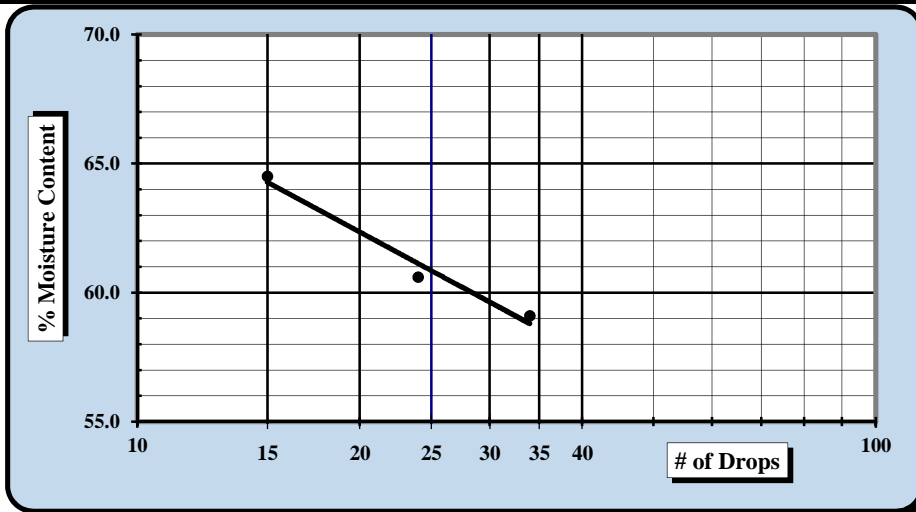
S&ME, Inc. - Myrtle Beach: 1330 Highway 501 Business, Conway, SC 29526

Project #:	1463-19-028-110	Report Date:	7/2/2019
Project Name:	Horry County HS Track & Tennis - Aynor	Test Date(s)	6/28/2019
Client Name:	Clough, Harbour & Associates, LLP		
Client Address:	110 Traders Cross, Ste 201; Bluffton, SC 29909		
Boring #:	T-6, T-8, T-9	Sample #:	Bulk-1
		Sample Date:	6/20/2019
Location:	Track	LAB #:	4985
		Depth:	1'-4'

Sample Description: Mottled Fat Clay with Sand (CH)

Type and Specification	S&ME ID #	Cal Date:	Type and Specification	S&ME ID #	Cal Date:
Balance (0.01 g)	00401	2/28/2018	Grooving tool	11368	9/1/2018
LL Apparatus	18801	9/1/2018			
Oven	17745	4/8/2019			

Pan #		Liquid Limit						Plastic Limit		
Tare #:		104	74	68				27	32	
A	Tare Weight	14.85	14.92	14.24				14.25	14.35	
B	Wet Soil Weight + A	31.87	31.99	31.84				21.88	21.92	
C	Dry Soil Weight + A	25.55	25.55	24.94				20.24	20.28	
D	Water Weight (B-C)	6.32	6.44	6.90				1.64	1.64	
E	Dry Soil Weight (C-A)	10.70	10.63	10.70				5.99	5.93	
F	% Moisture (D/E)*100	59.1%	60.6%	64.5%				27.4%	27.7%	
N	# OF DROPS	34	24	15				Moisture Contents determined by ASTM D 2216		
LL	LL = F * FACTOR									
Ave.	Average							27.6%		



One Point Liquid Limit			
N	Factor	N	Factor
20	0.974	26	1.005
21	0.979	27	1.009
22	0.985	28	1.014
23	0.99	29	1.018
24	0.995	30	1.022
25	1.000		

NP, Non-Plastic	<input type="checkbox"/>
Liquid Limit	61
Plastic Limit	28
Plastic Index	33
Group Symbol	CH

Multipoint Method ☒  
One-point Method ☐

Wet Preparation ☐ Dry Preparation ☒ Air Dried ☒

Notes / Deviations / References:

ASTM D 4318: Liquid Limit, Plastic Limit, & Plastic Index of Soils

<u>Ron Forest, P.E.</u>	<u>RPF</u>	<u>Senior Reviewer</u>	<u>7/17/2019</u>
Technical Responsibility	Signature	Position	Date

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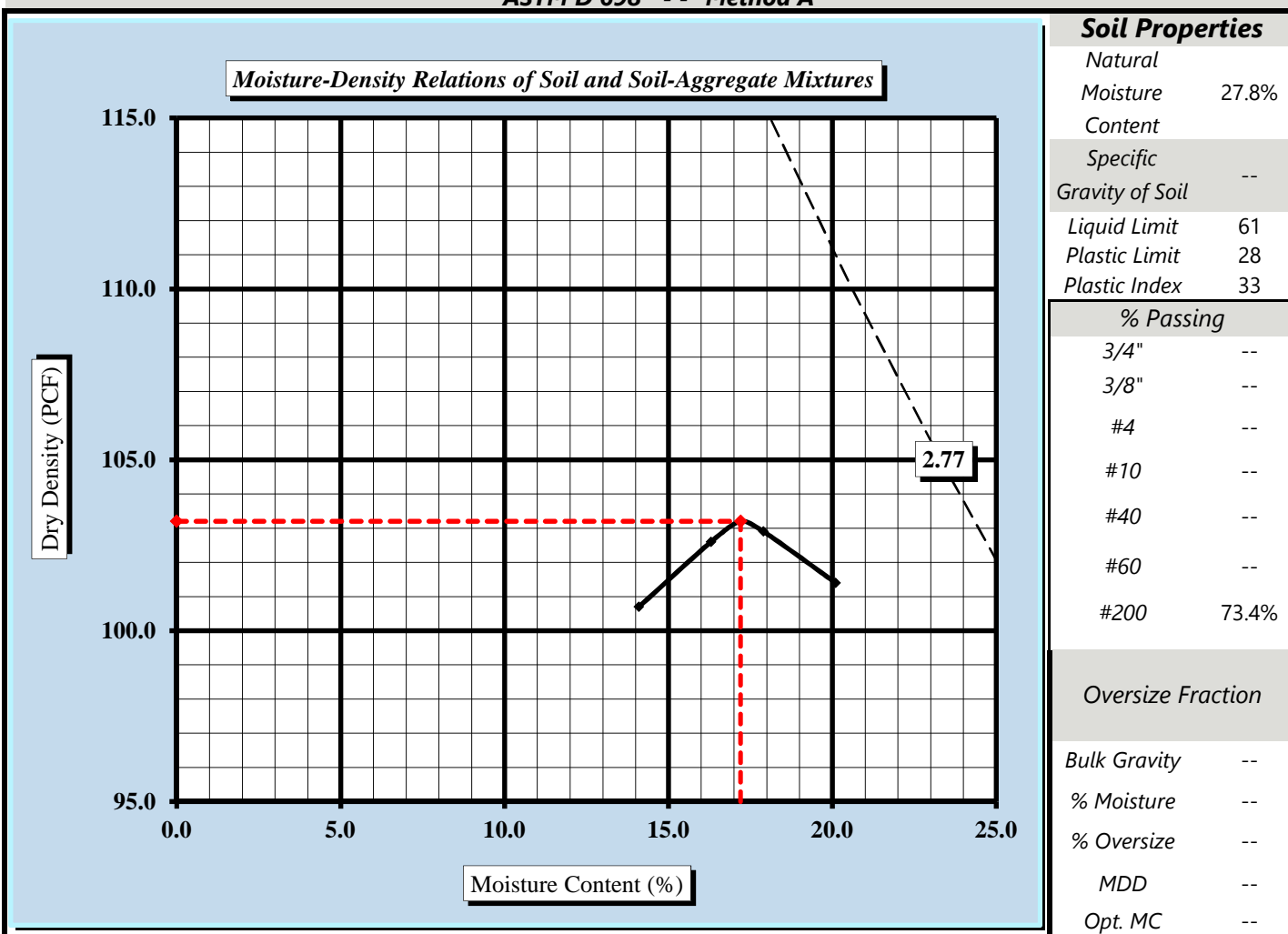
# MOISTURE - DENSITY REPORT



## Quality Assurance

S&ME, Inc. - Myrtle Beach: 1330 Highway 501 Business, Conway, SC 29526			
S&ME Project #:	1463-19-028-110	Report Date:	7/2/2019
Project Name:	Horry County HS Track & Tennis - Aynor	Test Date(s):	6/26/2019
Client Name:	Clough, Harbour & Associates, LLP		
Client Address:	110 Traders Cross, Ste 201; Bluffton, SC 29909		
Boring #:	T-6, T-8, T-9	Sample #:	Bulk-1
Location:	Track	Lab #:	4985
Sample Description:	Mottled Fat Clay with Sand (CH)	Sample Date:	6/20/2019
		Depth:	1'-4'

**Maximum Dry Density 103.2 PCF. Optimum Moisture Content 17.2%**  
**ASTM D 698 - - Method A**



Moisture-Density Curve Displayed: Fine Fraction ☒ Corrected for Oversize Fraction (ASTM D 4718) ☐  
Sieve Size used to separate the Oversize Fraction: #4 Sieve ☒ 3/8 inch Sieve ☐ 3/4 inch Sieve ☐  
Mechanical Rammer ☒ Manual Rammer ☐ Moist Preparation ☐ Dry Preparation ☒

## References / Comments / Deviations:

ASTM D 2216: Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass  
ASTM D 698: Laboratory Compaction Characteristics of Soil Using Standard Effort

Ron Forest, P.E.  
Technical Responsibility

RPF  
Signature

Senior Reviewer  
Position

7/17/2019  
Date

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# CBR (CALIFORNIA BEARING RATIO) OF LABORATORY COMPACTED SOIL



ASTM D 1883

S&amp;ME, Inc. - Myrtle Beach: 1330 Highway 501 Business, Conway, SC 29526

Project #: 1463-19-028-110 Report Date: 7/2/2019

Project Name: Horry County HS Track &amp; Tennis - Aynor Test Date(s): 6/27/2019

Client Name: Clough, Harbour &amp; Associates, LLP

Client Address: 110 Traders Cross, Ste 201; Bluffton, SC 29909

Boring #: T-6, T-8, T-9 Sample #: Bulk-1 Sample Date: 6/20/2019

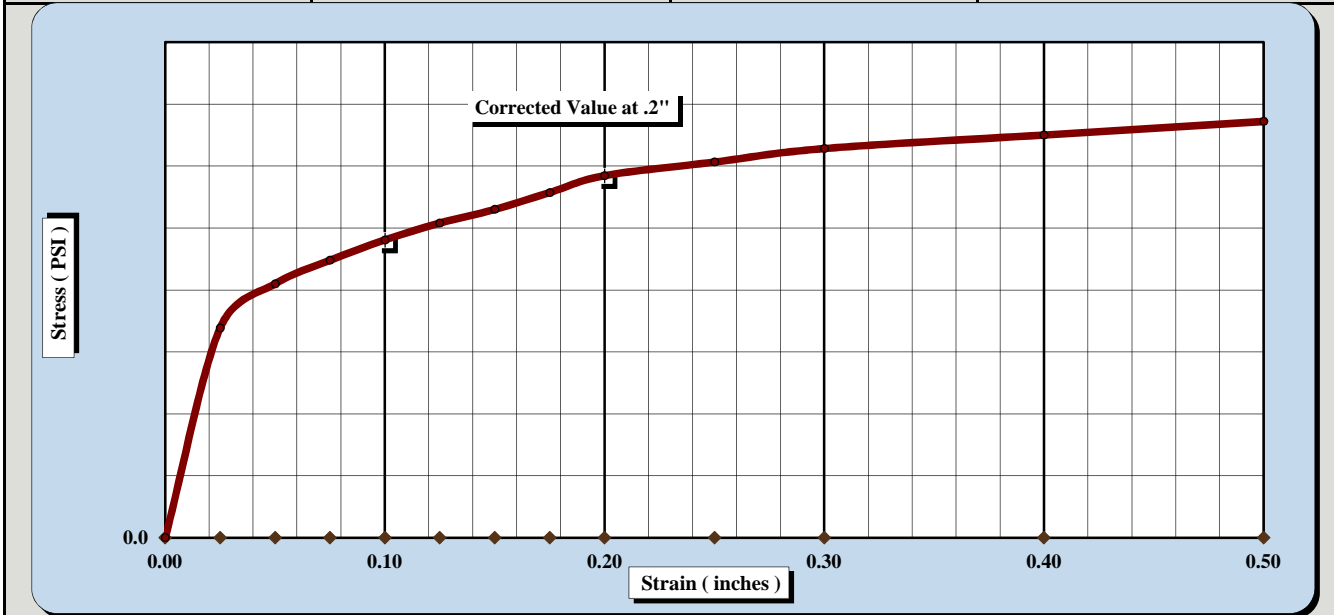
Location: Track LAB #: 4985 Depth: 1'-4'

Sample Description: Mottled Fat Clay with Sand (CH)

ASTM D 698 Method A Maximum Dry Density: 103.2 PCF Optimum Moisture Content: 17.2%

Compaction Test performed on grading complying with CBR spec. % Retained on the 3/4" sieve: 1.0%

Uncorrected CBR Values		Corrected CBR Values	
CBR at 0.1 in.	2.4	CBR at 0.1 in.	2.4
CBR at 0.2 in.	1.9	CBR at 0.2 in.	1.9



CBR Sample Preparation:

The entire gradation was used and compacted in a 6" CBR mold in accordance with ASTM D1883, Section 6.1.1

Before Soaking		After Soaking	
Compactive Effort (Blows per Layer)	45	Final Dry Density (PCF)	99.5
Initial Dry Density (PCF)	101.5	Moisture Content (top 1" after soaking)	26.0%
Moisture Content of the Compacted Specimen	18.9%	Percent Swell	2.1%
Percent Compaction	98.4%		

Soak Time: 96 hrs. Surcharge Weight 20.0 Surcharge Wt. per sq. Ft. 102.0  
 Liquid Limit 61 Plastic Index 33 Apparent Relative Density --

Notes/Deviations/References: Liquid Limit: ASTM D 4318, Specific Gravity: ASTM D 854, Classification: ASTM D 2487

Ron Forest, P.E.

Technical Responsibility

RPF

Signature

Senior Reviewer

Position

7/17/2019

Date

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# LIQUID LIMIT, PLASTIC LIMIT, & PLASTIC INDEX



ASTM D 4318 ☒ AASHTO T 89 ☐ AASHTO T 90 ☐

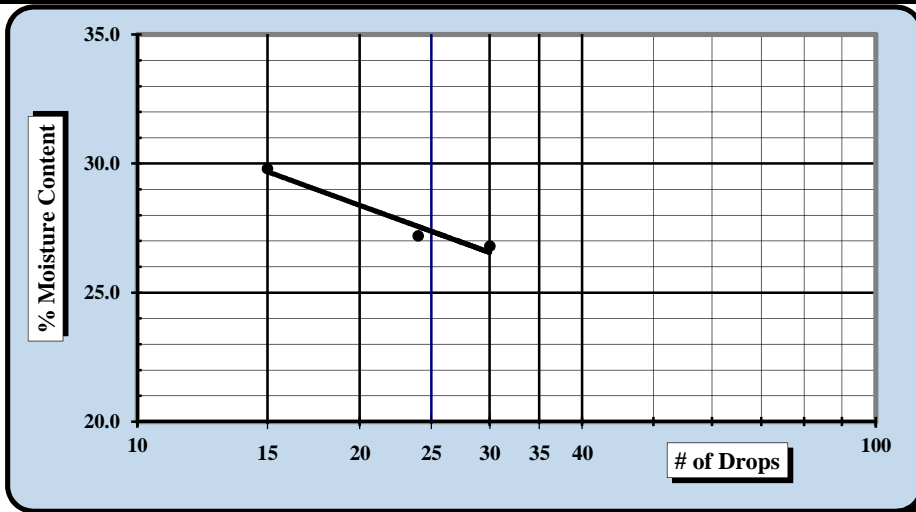
S&ME, Inc. - Myrtle Beach: 1330 Highway 501 Business, Conway, SC 29526

Project #:	1463-19-028-110	Report Date:	7/2/2019
Project Name:	Horry County HS Track & Tennis - Aynor	Test Date(s)	6/28/2019
Client Name:	Clough, Harbour & Associates, LLP		
Client Address:	110 Traders Cross, Ste 201; Bluffton, SC 29909		
Boring #:	T-7, T-9, T-10	Sample #:	Bulk-2
		Sample Date:	6/20/2019
Location:	Track	LAB #:	4985
		Depth:	1'-4'

Sample Description: Gray Clayey Sand (SC)

Type and Specification	S&ME ID #	Cal Date:	Type and Specification	S&ME ID #	Cal Date:
Balance (0.01 g)	00401	2/28/2018	Grooving tool	11368	9/1/2018
LL Apparatus	18801	9/1/2018			
Oven	17745	4/8/2019			

Pan #		Liquid Limit						Plastic Limit		
Tare #:		34	58	67				107	115	
A	Tare Weight	14.87	14.66	14.67				14.58	14.63	
B	Wet Soil Weight + A	31.88	31.74	31.80				21.57	21.55	
C	Dry Soil Weight + A	28.28	28.09	27.87				20.79	20.75	
D	Water Weight (B-C)	3.60	3.65	3.93				0.78	0.80	
E	Dry Soil Weight (C-A)	13.41	13.43	13.20				6.21	6.12	
F	% Moisture (D/E)*100	26.8%	27.2%	29.8%				12.6%	13.1%	
N	# OF DROPS	30	24	15				Moisture Contents determined by ASTM D 2216		
LL	LL = F * FACTOR									
Ave.	Average							12.9%		



One Point Liquid Limit			
N	Factor	N	Factor
20	0.974	26	1.005
21	0.979	27	1.009
22	0.985	28	1.014
23	0.99	29	1.018
24	0.995	30	1.022
25	1.000		

NP, Non-Plastic	<input type="checkbox"/>
Liquid Limit	27
Plastic Limit	13
Plastic Index	14
Group Symbol	SC

Multipoint Method ☒  
One-point Method ☐

Wet Preparation ☐ Dry Preparation ☒ Air Dried ☒

Notes / Deviations / References:

ASTM D 4318: Liquid Limit, Plastic Limit, & Plastic Index of Soils

<u>Ron Forest, P.E.</u>	<u>RPF</u>	<u>Senior Reviewer</u>	<u>7/17/2019</u>
Technical Responsibility	Signature	Position	Date

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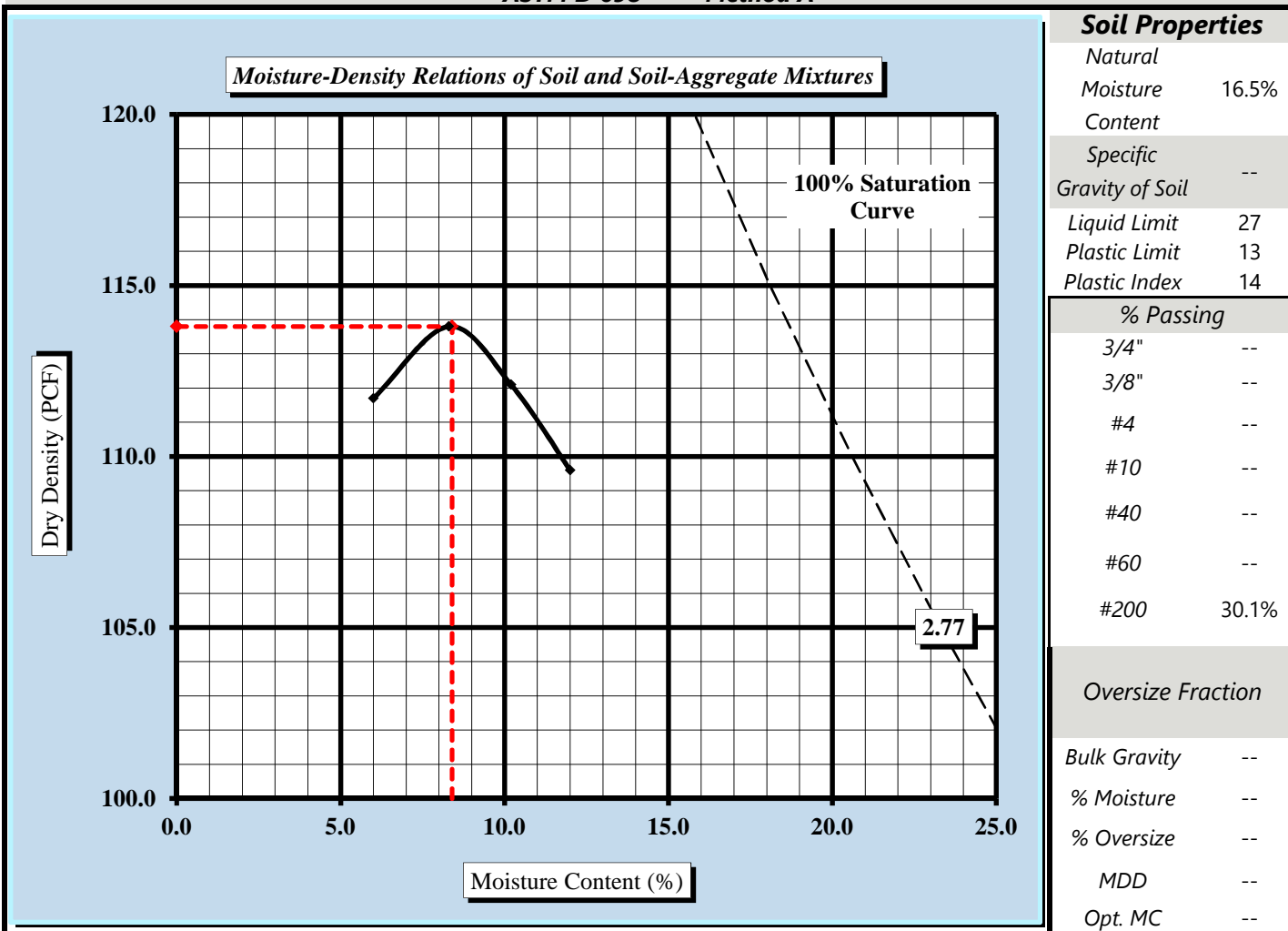
# MOISTURE - DENSITY REPORT



## Quality Assurance

S&ME, Inc. - Myrtle Beach: 1330 Highway 501 Business, Conway, SC 29526			
S&ME Project #:	1463-19-028-110	Report Date:	7/2/2019
Project Name:	Horry County HS Track & Tennis - Aynor	Test Date(s):	6/26/2019
Client Name:	Clough, Harbour & Associates, LLP		
Client Address:	110 Traders Cross, Ste 201; Bluffton, SC 29909		
Boring #:	T-7, T-9, T-10	Sample #:	Bulk-2
Location:	Track	Lab #:	4985
Sample Description:	Gray Clayey Sand (SC)	Sample Date:	6/20/2019
		Depth:	1'-4'

<b>Maximum Dry Density</b>	<b>113.8</b>	<b>PCF.</b>	<b>Optimum Moisture Content</b>	<b>8.4%</b>
<b>ASTM D 698 - - Method A</b>				



Moisture-Density Curve Displayed:	Fine Fraction <input checked="" type="checkbox"/>	Corrected for Oversize Fraction (ASTM D 4718) <input type="checkbox"/>
Sieve Size used to separate the Oversize Fraction:	#4 Sieve <input checked="" type="checkbox"/>	3/8 inch Sieve <input type="checkbox"/>
Mechanical Rammer <input checked="" type="checkbox"/>	Manual Rammer <input type="checkbox"/>	Moist Preparation <input type="checkbox"/>
		Dry Preparation <input checked="" type="checkbox"/>

## References / Comments / Deviations:

ASTM D 2216: Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass  
ASTM D 698: Laboratory Compaction Characteristics of Soil Using Standard Effort

<u>Ron Forest, P.E.</u>	<u>RPF</u>	<u>Senior Reviewer</u>	<u>7/17/2019</u>
Technical Responsibility	Signature	Position	Date

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# CBR (CALIFORNIA BEARING RATIO) OF LABORATORY COMPACTED SOIL



ASTM D 1883

S&amp;ME, Inc. - Myrtle Beach: 1330 Highway 501 Business, Conway, SC 29526

Project #: 1463-19-028-110 Report Date: 7/2/2019

Project Name: Horry County HS Track &amp; Tennis - Aynor Test Date(s): 6/27/2019

Client Name: Clough, Harbour &amp; Associates, LLP

Client Address: 110 Traders Cross, Ste 201; Bluffton, SC 29909

Boring #: T-7, T-9, T-10 Sample #: Bulk-2 Sample Date: 6/20/2019

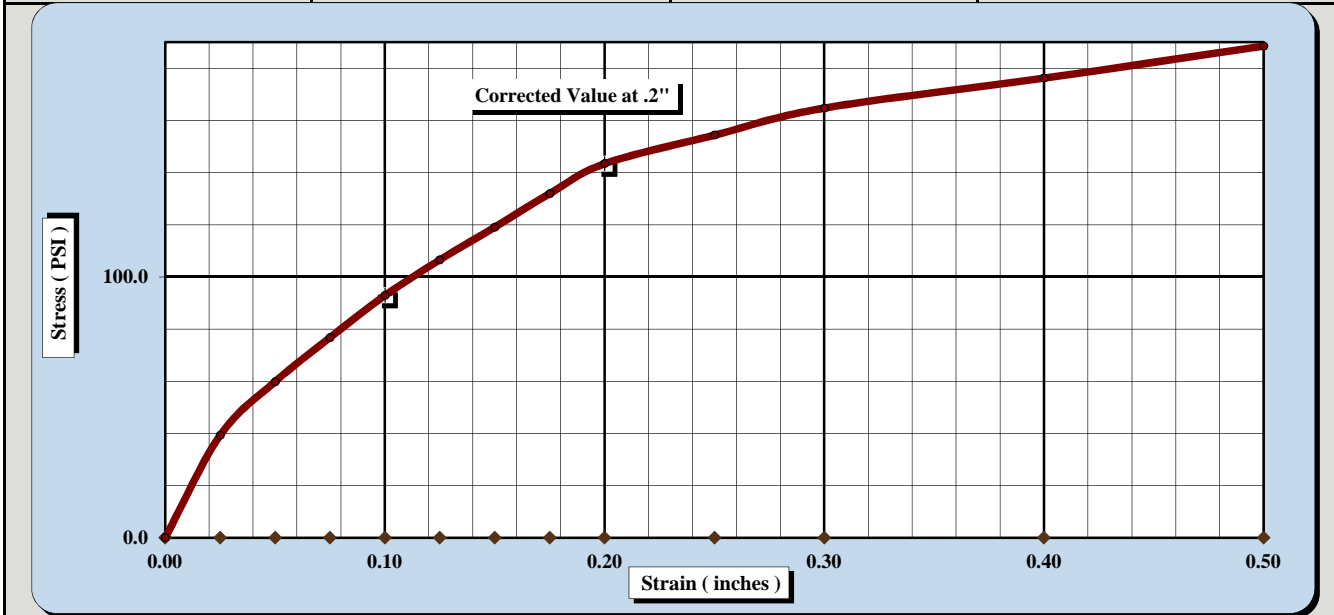
Location: Track LAB #: 4985 Depth: 1'-4'

Sample Description: Gray Clayey Sand (SC)

ASTM D 698 Method A Maximum Dry Density: 113.8 PCF Optimum Moisture Content: 8.4%

Compaction Test performed on grading complying with CBR spec. % Retained on the 3/4" sieve: 1.0%

Uncorrected CBR Values		Corrected CBR Values	
CBR at 0.1 in.	9.3	CBR at 0.1 in.	9.3
CBR at 0.2 in.	9.6	CBR at 0.2 in.	9.6



CBR Sample Preparation:

The entire gradation was used and compacted in a 6" CBR mold in accordance with ASTM D1883, Section 6.1.1

Before Soaking		After Soaking	
Compactive Effort (Blows per Layer)	42	Final Dry Density (PCF)	110.4
Initial Dry Density (PCF)	111.9	Moisture Content (top 1" after soaking)	13.8%
Moisture Content of the Compacted Specimen	9.0%	Percent Swell	1.4%
Percent Compaction	98.4%		

Soak Time: 96 hrs. Surcharge Weight 20.0 Surcharge Wt. per sq. Ft. 101.9  
 Liquid Limit 27 Plastic Index 14 Apparent Relative Density --

Notes/Deviations/References: Liquid Limit: ASTM D 4318, Specific Gravity: ASTM D 854, Classification: ASTM D 2487

Ron Forest, P.E.

Technical Responsibility

RPF

Signature

Senior Reviewer

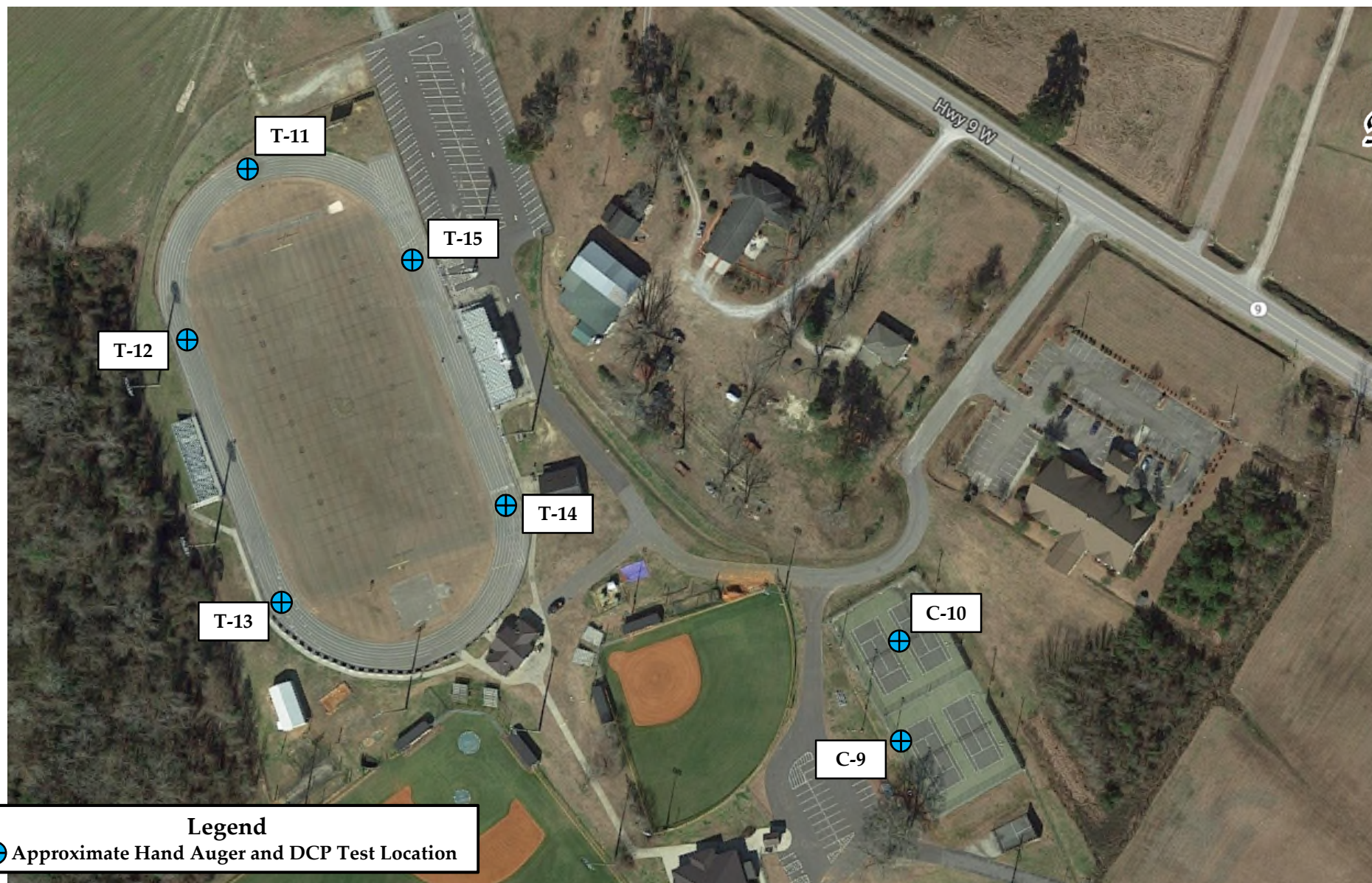
Position

7/17/2019

Date

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## **Appendix V – Green Sea/Floyds High School**



**Legend**  
 ⊕ Approximate Hand Auger and DCP Test Location



### Test Location Sketch

Horry County High School Tracks and Tennis Courts  
 Green Sea Floyd High School  
 Green Sea, South Carolina

SCALE:  
 AS SHOWN

DATE:  
 7-12-19

PROJECT NUMBER  
 1463-19-028

FIGURE NO.

5

<b>PROJECT:</b> <b>Horry County High Schools Tracks &amp; Tennis Courts</b> Horry County, South Carolina 1463-19-028				<b>HAND AUGER BORING LOG: T-11</b>			
<b>DATE STARTED:</b> <b>6/25/19</b>		<b>DATE FINISHED:</b> <b>6/25/19</b>		<b>NOTES:</b> Elevation unknown.			
<b>SAMPLING METHOD:</b> <b>Grab Sample</b>		<b>PERFORMED BY:</b> <b>K. Fugate</b>					
<b>WATER LEVEL:</b> <b>Not encountered.</b>							
Depth (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION (feet)	WATER LEVEL	DYNAMIC CONE PENETRATION RESISTANCE (blows/1.75 in.)	DCP VALUE	
					10    20    30    60    80		
	ASPHALT	ASPHALT - Approximately 2 1/4 inches thick.					
	MARINE LIMESTONE BASE COURSE	MARINE LIMESTONE BASE COURSE - Approximately 6 inches thick.					
1	SANDY FAT CLAY (CH)	SANDY FAT CLAY (CH) - Mostly medium to high plasticity fines, some fine sand, orange, red, and grey, moist, stiff to firm.		-	●	11	
2	SANDY FAT CLAY (CH)			-	●	9	
3	SANDY FAT CLAY (CH)	<p>---- Firm.</p> <p>---- Stiff.</p>		-	●	8	
4	SANDY FAT CLAY (CH)	Boring terminated at 4 ft			●	9	



DCP INDEX IS THE DEPTH (IN.) OF PENETRATION PER BLOW OF A 10.1 LB HAMMER FALLING 22.6 IN., DRIVING A 0.79 IN. O.D. 60 DEGREE CONE.

PROJECT: <b>Horry County High Schools Tracks &amp; Tennis Courts</b> Horry County, South Carolina 1463-19-028				<b>HAND AUGER BORING LOG: T-12</b>			
DATE STARTED: <b>6/25/19</b>		DATE FINISHED: <b>6/25/19</b>		NOTES: Elevation unknown.			
SAMPLING METHOD: <b>Grab Sample</b>		PERFORMED BY: <b>K. Fugate</b>					
WATER LEVEL: <b>Not encountered.</b>							
Depth (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION (feet)	WATER LEVEL	DYNAMIC CONE PENETRATION RESISTANCE (blows/1.75 in.)	DCP VALUE	
					<div style="display: flex; justify-content: space-around; font-size: 0.8em;"> <span>10</span><span>20</span><span>30</span><span>60</span><span>80</span> </div>		
		<b>ASPHALT</b> - Approximately 2 1/4 inches thick.					
		<b>MARINE LIMESTONE BASE COURSE</b> - Approximately 4 inches thick.					
1		<b>SANDY FAT CLAY (CH)</b> - Mostly medium to high plasticity fines, some fine sand, orange, red and grey, moist, stiff to firm.		-	●	10	
2		---- Firm.		-	●	8	
3		---- Stiff.		-	●	9	
4		Boring terminated at 4 ft			●	9	



DCP INDEX IS THE DEPTH (IN.) OF PENETRATION PER BLOW OF A 10.1 LB HAMMER FALLING 22.6 IN., DRIVING A 0.79 IN. O.D. 60 DEGREE CONE.

<b>PROJECT:</b> <b>Horry County High Schools Tracks &amp; Tennis Courts</b> Horry County, South Carolina 1463-19-028				<b>HAND AUGER BORING LOG: T-13</b>			
<b>DATE STARTED:</b> <b>6/25/19</b>		<b>DATE FINISHED:</b> <b>6/25/19</b>		<b>NOTES:</b> Elevation unknown.			
<b>SAMPLING METHOD:</b> <b>Grab Sample</b>		<b>PERFORMED BY:</b> <b>K. Fugate</b>					
<b>WATER LEVEL:</b> <b>Not encountered.</b>							
Depth (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION (feet)	WATER LEVEL	DYNAMIC CONE PENETRATION RESISTANCE (blows/1.75 in.)	DCP VALUE	
					10    20    30    60    80		
	ASPHALT	ASPHALT - Approximately 2 3/4 inches thick.					
		MARINE LIMESTONE BASE COURSE - Approximately 5 inches thick.					
1		SILTY SAND (SM) - Mostly fine to medium sand, some non plastic fines, brown and black, moist, medium dense.		-		20+	
2				-		20+	
3		SANDY FAT CLAY (CH) - Mostly medium to high plasticity fines, some fine to medium sand, orange and red, moist, firm.		-		5	
4		Boring terminated at 4 ft				5	



DCP INDEX IS THE DEPTH (IN.) OF PENETRATION PER BLOW OF A 10.1 LB  
HAMMER FALLING 22.6 IN., DRIVING A 0.79 IN. O.D. 60 DEGREE CONE.

<b>PROJECT:</b> <b>Horry County High Schools Tracks &amp; Tennis Courts</b> <b>Horry County, South Carolina</b> <b>1463-19-028</b>				<b>HAND AUGER BORING LOG: T-14</b>			
<b>DATE STARTED:</b> <b>6/25/19</b>		<b>DATE FINISHED:</b> <b>6/25/19</b>		<b>NOTES:</b> Elevation unknown.			
<b>SAMPLING METHOD:</b> <b>Grab Sample</b>		<b>PERFORMED BY:</b> <b>K. Fugate</b>					
<b>WATER LEVEL:</b> <b>Not encountered.</b>							
Depth (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION (feet)	WATER LEVEL	DYNAMIC CONE PENETRATION RESISTANCE (blows/1.75 in.)	DCP VALUE	
					10    20    30    60    80		
	ASPHALT	ASPHALT - Approximately 3 1/4 inches thick.					
		MARINE LIMESTONE BASE COURSE - Approximately 5 3/4 inches thick.					
1		SANDY FAT CLAY (CH) - Mostly medium to high plasticity fines, some fine sand, orange and red, moist, firm to very stiff.		-	●	9	
		---- Stiff.					
2				-	●	9	
		---- Firm.					
3				-	●	8	
		---- Very stiff.					
4		Boring terminated at 4 ft			●	20+	



DCP INDEX IS THE DEPTH (IN.) OF PENETRATION PER BLOW OF A 10.1 LB HAMMER FALLING 22.6 IN., DRIVING A 0.79 IN. O.D. 60 DEGREE CONE.

<b>PROJECT:</b> <b>Horry County High Schools Tracks &amp; Tennis Courts</b> <b>Horry County, South Carolina</b> <b>1463-19-028</b>				<b>HAND AUGER BORING LOG: T-15</b>			
<b>DATE STARTED:</b> <b>6/25/19</b>		<b>DATE FINISHED:</b> <b>6/25/19</b>		<b>NOTES:</b> Elevation unknown.			
<b>SAMPLING METHOD:</b> <b>Grab Sample</b>		<b>PERFORMED BY:</b> <b>K. Fugate</b>					
<b>WATER LEVEL:</b> <b>Not encountered.</b>							
Depth (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION (feet)	WATER LEVEL	DYNAMIC CONE PENETRATION RESISTANCE (blows/1.75 in.) <div style="text-align: right; font-size: small;">10    20    30    60    80</div>	DCP VALUE	
1		<b>ASPHALT</b> - Approximately 2 1/4 inches thick.					
		<b>MARINE LIMESTONE BASE COURSE</b> - Approximately 5 3/4 inches thick.					
2		<b>SANDY FAT CLAY (CH)</b> - Mostly medium to high plasticity fines, some fine sand, orange, grey and red, moist, stiff to firm.		-	●	9	
				-	●	9	
3		---- Firm.		-	●	6	
		---- Stiff.					
4		Boring terminated at 4 ft			●	11	



DCP INDEX IS THE DEPTH (IN.) OF PENETRATION PER BLOW OF A 10.1 LB HAMMER FALLING 22.6 IN., DRIVING A 0.79 IN. O.D. 60 DEGREE CONE.

Form No: TR-D2216-T265-1  
Revision No. 1  
Revision Date: 08/16/17

# LABORATORY DETERMINATION OF WATER CONTENT



ASTM D 2216 ☒ AASHTO T 265 ☐

S&ME, Inc. - Myrtle Beach: 1330 Highway 501 Business, Conway, SC 29526

Project #:	1463-19-028-110	Report Date:	7/3/2019
Project Name:	Horry County HS Track & Tennis - Green Sea	Test Date(s):	7/1/2019
Client Name:	Clough, Harbour & Associates, LLP		
Client Address:	110 Traders Cross, Ste 201; Bluffton, SC 29909		
Sample by:	K. Fugate	Sample Date(s):	6/26/2019

<b>Method:</b>	<b>A (1%)</b> <input type="checkbox"/>	<b>B (0.1%)</b> <input checked="" type="checkbox"/>	Balance ID.	19608	Calibration Date:	2/28/19
			Oven ID.	17745	Calibration Date:	4/8/19

Boring No.	Sample No.	Sample Depth	Tare #	Tare Weight	Tare Wt. + Wet Wt	Tare Wt. + Dry Wt	Water Weight	Percent Moisture	N o t e
		ft. or m.		grams	grams	grams	grams	%	
T-11 - T-15	Bulk-1	1'-4'	Blue	83.20	178.80	162.70	16.10	20.3%	
C-9, C-10	Bulk-2	1'-4'	MNO	82.60	332.10	307.90	24.20	10.7%	

Notes / Deviations / References

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ASTM D 2216: Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass

Ron Forest, P.E.  
Technical Responsibility

RPF  
Signature

Senior Reviewer  
Position

12-Jul  
Date

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### MATERIAL FINER THAN THE #200 SIEVE



ASTM D1140

S&ME, Inc. - Myrtle Beach: 1330 Highway 501 Business, Conway, SC 29526

Project #:	1463-19-028-110	Report Date:	7/3/2019
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Project Name:	Horry County HS Track & Tennis - Green Sea	Test Date(s):	7/1/2019
---------------	--	---------------	----------

Client Name: Clough, Harbour & Associates, LLP

Client Address: 110 Traders Cross, Ste 201; Bluffton, SC 29909

Sample by:	K. Fugate	LAB#	4987
------------	-----------	------	------

Sample Dates: 6/26/2019

**Method;**    **A**    ☐                      **B**    ☒

Soaked	<input checked="" type="checkbox"/>	Soak Time	2 Hrs
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[illegible]

Balance ID.	19608	Calibration Date:	2/28/2018	#200 Sieve	18775	Calibration Date:	2/28/2019
-------------	-------	-------------------	-----------	------------	-------	-------------------	-----------

*Notes / Deviations / References:* ASTM D1140: Amount of Material in Soil Finer Than the No. 200 (75-um) ) Sieve

Ron Forest, P.E.

### Technical Responsibility

*RPF*

*Signature*

Senior Reviewer

*Position*

12-Jul

Date \_\_\_\_\_

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# LIQUID LIMIT, PLASTIC LIMIT, & PLASTIC INDEX



ASTM D 4318 ☒ AASHTO T 89 ☐ AASHTO T 90 ☐

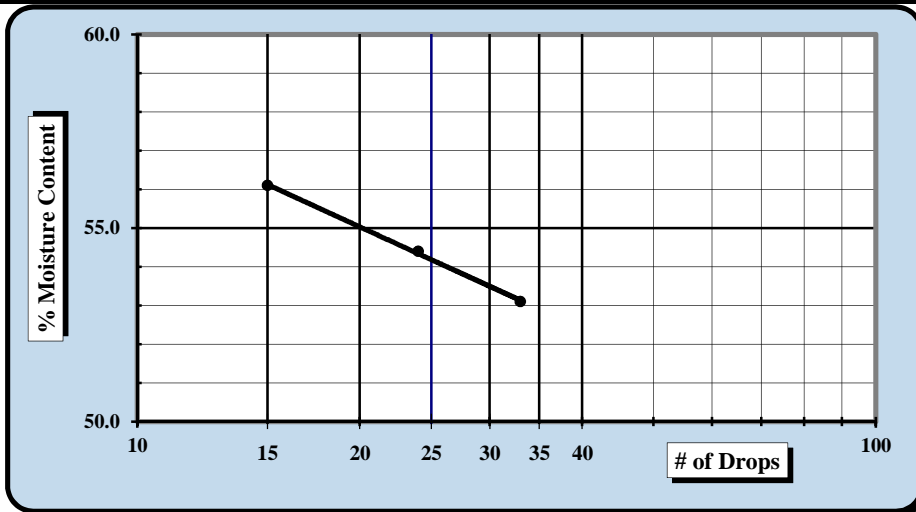
S&ME, Inc. - Myrtle Beach: 1330 Highway 501 Business, Conway, SC 29526

Project #:	1463-19-028-110	Report Date:	7/3/2019
Project Name:	Horry County HS Track & Tennis - Green Sea	Test Date(s)	6/28/2019
Client Name:	Clough, Harbour & Associates, LLP		
Client Address:	110 Traders Cross, Ste 201; Bluffton, SC 29909		
Boring #:	T-11 - T-15	Sample #:	Bulk-1
		Sample Date:	6/26/2019
Location:	Track	LAB #:	4987
		Depth:	1'-4'

Sample Description: Mottled Sandy Fat Clay (CH)

Type and Specification	S&ME ID #	Cal Date:	Type and Specification	S&ME ID #	Cal Date:
Balance (0.01 g)	00401	2/28/2018	Grooving tool	11368	9/1/2018
LL Apparatus	18801	9/1/2018			
Oven	17745	4/8/2019			

Pan #		Liquid Limit						Plastic Limit		
Tare #:		81	96	107				25	67	
A	Tare Weight	14.77	14.69	14.67				14.87	14.93	
B	Wet Soil Weight + A	31.47	31.55	31.68				21.87	21.92	
C	Dry Soil Weight + A	25.68	25.61	25.57				20.42	20.48	
D	Water Weight (B-C)	5.79	5.94	6.11				1.45	1.44	
E	Dry Soil Weight (C-A)	10.91	10.92	10.90				5.55	5.55	
F	% Moisture (D/E)*100	53.1%	54.4%	56.1%				26.1%	25.9%	
N	# OF DROPS	33	24	15				Moisture Contents determined by ASTM D 2216		
LL	LL = F * FACTOR									
Ave.	Average							26.0%		



One Point Liquid Limit			
N	Factor	N	Factor
20	0.974	26	1.005
21	0.979	27	1.009
22	0.985	28	1.014
23	0.99	29	1.018
24	0.995	30	1.022
25	1.000		

NP, Non-Plastic	<input type="checkbox"/>
Liquid Limit	54
Plastic Limit	26
Plastic Index	28
Group Symbol	CH

Multipoint Method ☒  
One-point Method ☐

Wet Preparation ☐ Dry Preparation ☒ Air Dried ☒

Notes / Deviations / References:

ASTM D 4318: Liquid Limit, Plastic Limit, & Plastic Index of Soils

<u>Ron Forest, P.E.</u>	<u>RPF</u>	<u>Senior Reviewer</u>	<u>7/12/2019</u>
Technical Responsibility	Signature	Position	Date

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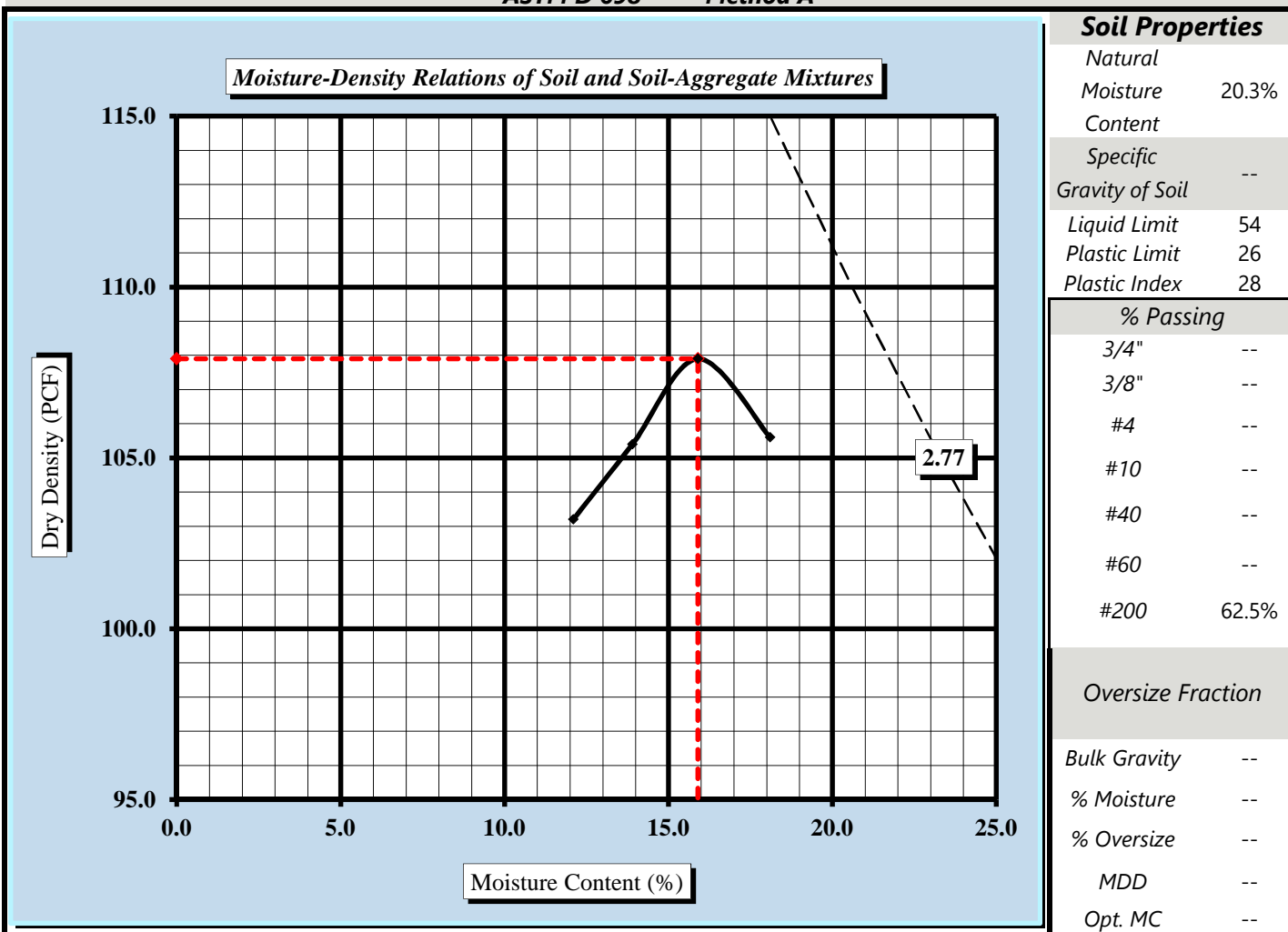
# MOISTURE - DENSITY REPORT



## Quality Assurance

S&ME, Inc. - Myrtle Beach: 1330 Highway 501 Business, Conway, SC 29526			
S&ME Project #:	1463-19-028-110	Report Date:	7/3/2019
Project Name:	Horry County HS Track & Tennis - Green Sea	Test Date(s):	6/28/2019
Client Name:	Clough, Harbour & Associates, LLP		
Client Address:	110 Traders Cross, Ste 201; Bluffton, SC 29909		
Boring #:	T-11 - T-15	Sample #:	Bulk-1
Location:	Track	Lab #:	4987
Sample Description:	Mottled Sandy Fat Clay (CH)	Sample Date:	6/26/2019
		Depth:	1'-4'

**Maximum Dry Density 107.9 PCF. Optimum Moisture Content 15.9%**  
**ASTM D 698 - - Method A**



Moisture-Density Curve Displayed: Fine Fraction ☒ Corrected for Oversize Fraction (ASTM D 4718) ☐  
Sieve Size used to separate the Oversize Fraction: #4 Sieve ☒ 3/8 inch Sieve ☐ 3/4 inch Sieve ☐  
Mechanical Rammer ☒ Manual Rammer ☐ Moist Preparation ☐ Dry Preparation ☒

## References / Comments / Deviations:

ASTM D 2216: Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass  
ASTM D 698: Laboratory Compaction Characteristics of Soil Using Standard Effort

<u>Ron Forest, P.E.</u>	<u>RPF</u>	<u>Senior Reviewer</u>	<u>7/12/2019</u>
Technical Responsibility	Signature	Position	Date

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# CBR (CALIFORNIA BEARING RATIO) OF LABORATORY COMPACTED SOIL

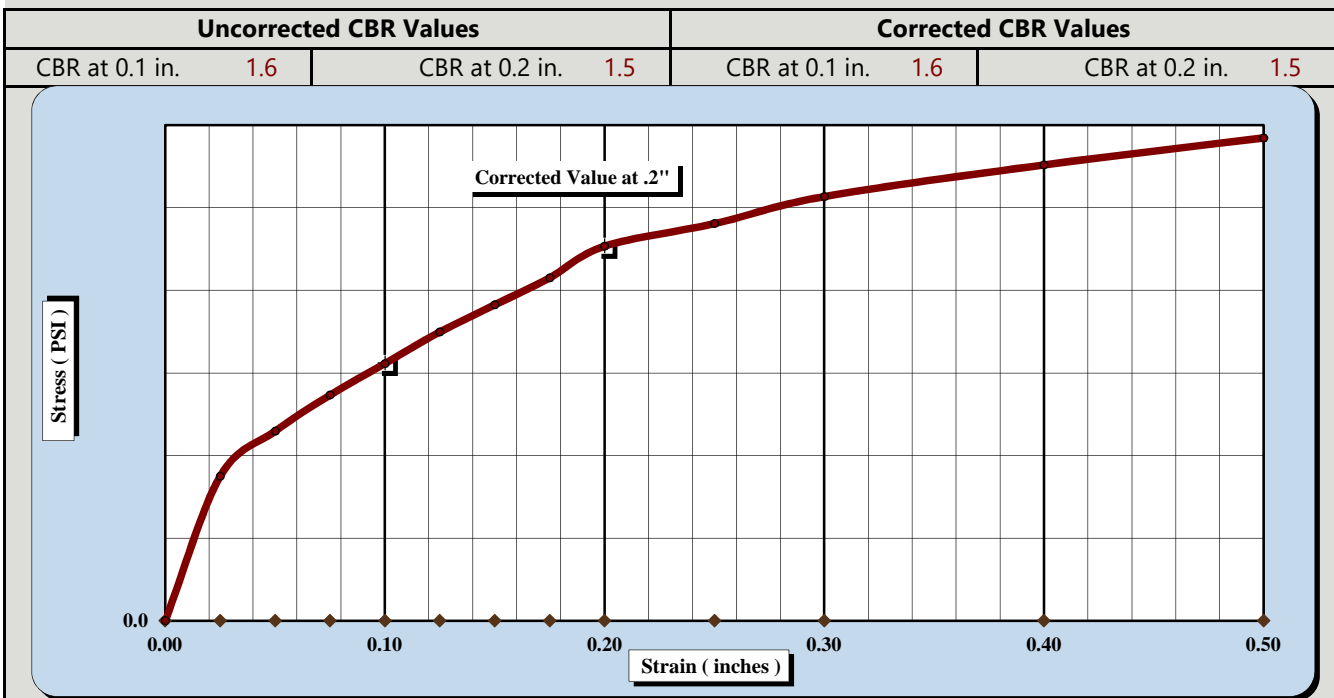


ASTM D 1883

S&amp;ME, Inc. - Myrtle Beach: 1330 Highway 501 Business, Conway, SC 29526

Project #:	1463-19-028-110	Report Date:	7/3/2019
Project Name:	Horry County HS Track & Tennis - Green Sea	Test Date(s)	6/28/2019
Client Name:	Clough, Harbour & Associates, LLP		
Client Address:	110 Traders Cross, Ste 201; Bluffton, SC 29909		
Boring #:	T-11, T-12, T-13, T-14, T-15	Sample #:	Bulk-1
Location:	Track	Sample Date:	6/26/2019
	LAB #: 4986	Depth:	1'-4'
Sample Description: Mottled Sandy Fat Clay (CH)			

ASTM D 698 Method A	Maximum Dry Density:	107.9 PCF	Optimum Moisture Content:	15.9%
Compaction Test performed on grading complying with CBR spec.			% Retained on the 3/4" sieve:	1.0%



CBR Sample Preparation:

The entire gradation was used and compacted in a 6" CBR mold in accordance with ASTM D1883, Section 6.1.1

Before Soaking		After Soaking	
Compactive Effort (Blows per Layer)	44	Final Dry Density (PCF)	103.8
Initial Dry Density (PCF)	105.5	Moisture Content (top 1" after soaking)	20.6%
Moisture Content of the Compacted Specimen	17.7%	Percent Swell	1.6%
Percent Compaction	97.8%		

Soak Time:	96 hrs.	Surcharge Weight	20.0	Surcharge Wt. per sq. Ft.	101.9
Liquid Limit	54	Plastic Index	28	Apparent Relative Density	--

Notes/Deviations/References: Liquid Limit: ASTM D 4318, Specific Gravity: ASTM D 854, Classification: ASTM D 2487

Ron Forest, P.E.

Technical Responsibility

RPF

Signature

Senior Reviewer

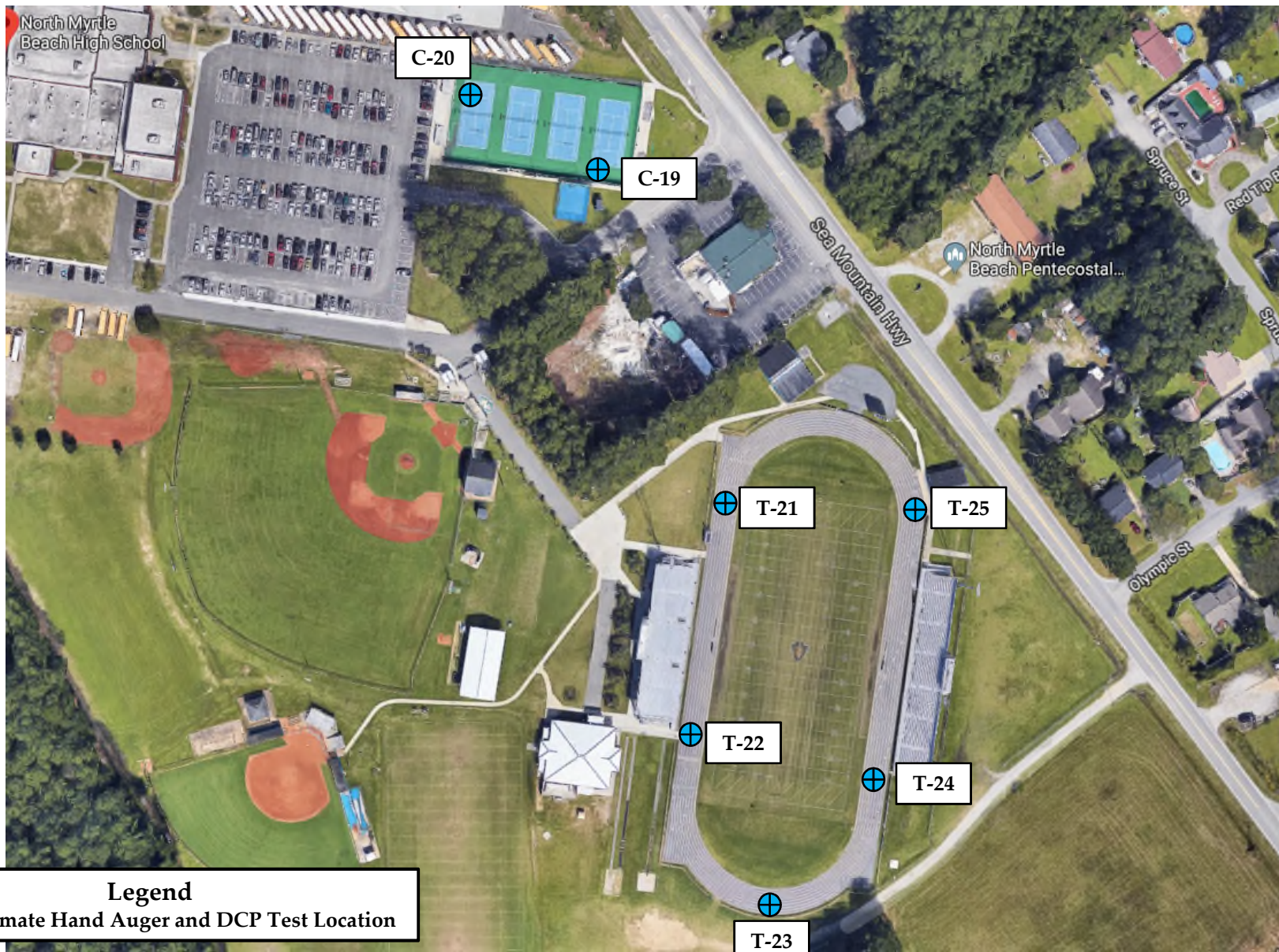
Position

7/12/2019

Date

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## **Appendix VIII – North Myrtle Beach High School**



### Test Location Sketch

Horry County High School Tracks and Tennis Courts  
 North Myrtle Beach High School  
 North Myrtle Beach, South Carolina

SCALE:  
AS SHOWN

DATE:  
7-12-19

PROJECT NUMBER  
1463-19-028

FIGURE NO.

8

<b>PROJECT:</b> <b>Horry County High Schools Tracks &amp; Tennis Courts</b> <b>Horry County, South Carolina</b> <b>1463-19-028</b>				<b>HAND AUGER BORING LOG: T-21</b>			
<b>DATE STARTED:</b> <b>6/26/19</b>		<b>DATE FINISHED:</b> <b>6/26/19</b>		<b>NOTES:</b> Elevation unknown.			
<b>SAMPLING METHOD:</b> <b>Grab Sample</b>		<b>PERFORMED BY:</b> <b>K. Fugate</b>					
<b>WATER LEVEL:</b> <b>Not encountered.</b>							
Depth (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION (feet)	WATER LEVEL	DYNAMIC CONE PENETRATION RESISTANCE (blows/1.75 in.)	DCP VALUE	
					10    20    30    60    80		
	ASPHALT	ASPHALT - Approximately 4 1/2 inches thick.					
	CLAYEY SAND	CLAYEY SAND BASE COURSE - Approximately 2 1/2 inches thick.					
1		SANDY FAT CLAY (CH) - Mostly medium to high plasticity fines, some fine sand, orange and gray, moist, firm to soft.		-	●	7	
2				-	●	6	
3				-	●	5	
4		---- Soft.  Boring terminated at 4 ft			●	4	



DCP INDEX IS THE DEPTH (IN.) OF PENETRATION PER BLOW OF A 10.1 LB HAMMER FALLING 22.6 IN., DRIVING A 0.79 IN. O.D. 60 DEGREE CONE.

<b>PROJECT:</b> <b>Horry County High Schools Tracks &amp; Tennis Courts</b> Horry County, South Carolina 1463-19-028				<b>HAND AUGER BORING LOG: T-22</b>			
<b>DATE STARTED:</b> <b>6/26/19</b>		<b>DATE FINISHED:</b> <b>6/26/19</b>		<b>NOTES:</b> Elevation unknown.			
<b>SAMPLING METHOD:</b> <b>Grab Sample</b>		<b>PERFORMED BY:</b> <b>K. Fugate</b>					
<b>WATER LEVEL:</b> <b>Not encountered.</b>							
Depth (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION (feet)	WATER LEVEL	DYNAMIC CONE PENETRATION RESISTANCE (blows/1.75 in.)	DCP VALUE	
					10    20    30    60    80		
	ASPHALT	ASPHALT - Approximately 4 1/4 inches thick.					
	CLAYEY SAND	CLAYEY SAND BASE COURSE - Approximately 2 3/4 inches thick.					
1	SANDY FAT CLAY	SANDY FAT CLAY (CH) - Mostly medium to high medium plasticity fines, some fine sand, orange and red, moist, stiff to firm.		-		9	
2		----- Firm.		-		6	
3				-		7	
4		Boring terminated at 4 ft				6	



DCP INDEX IS THE DEPTH (IN.) OF PENETRATION PER BLOW OF A 10.1 LB HAMMER FALLING 22.6 IN., DRIVING A 0.79 IN. O.D. 60 DEGREE CONE.

PROJECT: <b>Horry County High Schools Tracks &amp; Tennis Courts</b> Horry County, South Carolina 1463-19-028				<b>HAND AUGER BORING LOG: T-23</b>			
DATE STARTED: <b>6/26/19</b>		DATE FINISHED: <b>6/26/19</b>		NOTES: Elevation unknown.			
SAMPLING METHOD: <b>Grab Sample</b>		PERFORMED BY: <b>K. Fugate</b>					
WATER LEVEL: <b>Not encountered.</b>							
Depth (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION (feet)	WATER LEVEL	DYNAMIC CONE PENETRATION RESISTANCE (blows/1.75 in.)	DCP VALUE	
					10    20    30    60    80		
	ASPHALT	ASPHALT - Approximately 3 1/4 inches thick.					
	CLAYEY SAND BASE COURSE	CLAYEY SAND BASE COURSE - Approximately 1 3/4 inches thick.					
1		SANDY FAT CLAY (CH) - Mostly medium to high plasticity fines, some fine sand, orange and grey, wet, very stiff.				20+	
2		SILTY SAND (SM) - Mostly fine to medium sand, some non plastic fines, gray, moist to wet, very loose to loose.				4	
3		---- Loose.				5	
4		Boring terminated at 4 ft				6	



DCP INDEX IS THE DEPTH (IN.) OF PENETRATION PER BLOW OF A 10.1 LB HAMMER FALLING 22.6 IN., DRIVING A 0.79 IN. O.D. 60 DEGREE CONE.

PROJECT: <b>Horry County High Schools Tracks &amp; Tennis Courts</b> <b>Horry County, South Carolina</b> <b>1463-19-028</b>				<b>HAND AUGER BORING LOG: T-24</b>			
DATE STARTED: <b>6/26/19</b>		DATE FINISHED: <b>6/26/19</b>		NOTES: Elevation unknown.			
SAMPLING METHOD: <b>Grab Sample</b>		PERFORMED BY: <b>K. Fugate</b>					
WATER LEVEL: <b>Not encountered.</b>							
Depth (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION (feet)	WATER LEVEL	DYNAMIC CONE PENETRATION RESISTANCE (blows/1.75 in.)	DCP VALUE	
					<div style="display: flex; justify-content: space-around; font-size: 0.8em;"> <span>10</span><span>20</span><span>30</span><span>60</span><span>80</span> </div>		
	ASPHALT	ASPHALT - Approximately 3 1/2 inches thick.					
		CLAYEY SAND BASE COURSE - Approximately 4 1/2 inches thick.					
1		SANDY FAT CLAY (CH) - Mostly medium to high plasticity fines, some fine sand, orange, red, and gray, moist, stiff to firm.  ---- Firm.		-	●	10	
2				-	●	8	
3				-	●	6	
4					●	5	
Boring terminated at 4 ft							



DCP INDEX IS THE DEPTH (IN.) OF PENETRATION PER BLOW OF A 10.1 LB HAMMER FALLING 22.6 IN., DRIVING A 0.79 IN. O.D. 60 DEGREE CONE.

<b>PROJECT:</b> <b>Horry County High Schools Tracks &amp; Tennis Courts</b> <b>Horry County, South Carolina</b> <b>1463-19-028</b>				<b>HAND AUGER BORING LOG: T-25</b>			
<b>DATE STARTED:</b> <b>6/26/19</b>		<b>DATE FINISHED:</b> <b>6/26/19</b>		<b>NOTES:</b> Elevation unknown.			
<b>SAMPLING METHOD:</b> <b>Grab Sample</b>		<b>PERFORMED BY:</b> <b>K. Fugate</b>					
<b>WATER LEVEL:</b> <b>Not encountered.</b>							
Depth (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION (feet)	WATER LEVEL	DYNAMIC CONE PENETRATION RESISTANCE (blows/1.75 in.)	DCP VALUE	
					10    20    30    60    80		
	ASPHALT	ASPHALT - Approximately 4 1/4 inches thick.					
		CLAYEY SAND BASE COURSE - Approximately 3 3/4 inches thick.					
1		SANDY FAT CLAY (CH) - Mostly medium to high plasticity fines, some fine sand, orange and tan, moist, firm to soft.		-		8	
2				-		5	
3		---- Soft.		-		3	
4		Boring terminated at 4 ft				4	



DCP INDEX IS THE DEPTH (IN.) OF PENETRATION PER BLOW OF A 10.1 LB HAMMER FALLING 22.6 IN., DRIVING A 0.79 IN. O.D. 60 DEGREE CONE.

Revision Date: 08/16/17

## LABORATORY DETERMINATION OF WATER CONTENT



*ASTM D 2216*



AASHTO T 265



S&ME, Inc. - Myrtle Beach: 1330 Highway 501 Business, Conway, SC 29526

Project #: 1463-19-028-110

Report Date: 7/17/2019

Project Name: Horry County HS Track & Tennis - NMB

Test Date(s): 7/12/2019

Client Name: Clough, Harbour & Associates, LLP

Client Address: 110 Traders Cross, Ste 201; Bluffton, SC 29909

Sample by: K. Fugate

Sample Date(s): 7/1/2019

### Method:

**A (1%)**



**B (0.1%)**



Balance ID.	19608
-------------	-------

Calibration Date: 2/28/19

Oven ID. 17745

Calibration Date: 4/8/19

[illegible]

Notes / Deviations / References

Ron Forest, P.E.

### Technical Responsibility

RPF

*Signature*

Senior Reviewer

*Position*

17-Jul

Date \_\_\_\_\_

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**MATERIAL FINER THAN THE #200 SIEVE**



ASTM D1140

S&ME, Inc. - Myrtle Beach: 1330 Highway 501 Business, Conway, SC 29526

Project #: 1463-19-028-110 Report Date: 7/17/2019

Project Name:	Horry County HS Track & Tennis - NMB	Test Date(s):	7/12/2019
---------------	--------------------------------------	---------------	-----------

Client Name: Clough, Harbour & Associates, LLP

Client Address: 110 Traders Cross, Ste 201; Bluffton, SC 29909

Sample by:	K. Fugate	<b>LAB#</b>	4996
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Sample Dates: 7/1/2019

**Method;**    **A**    ☐                      **B**    ☒

Soaked	<input checked="" type="checkbox"/>	Soak Time	2 Hrs
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[illegible]

Balance ID.	19608	Calibration Date:	2/28/2018	#200 Sieve	18775	Calibration Date:	2/28/2019
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*Notes / Deviations / References:* ASTM D1140: Amount of Material in Soil Finer Than the No. 200 (75-um ) Sieve

Ron Forest, P.E.

### Technical Responsibility

RPF

*Signature*

Senior Reviewer

*Position*

17-Jul

Date \_\_\_\_\_

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# LIQUID LIMIT, PLASTIC LIMIT, & PLASTIC INDEX



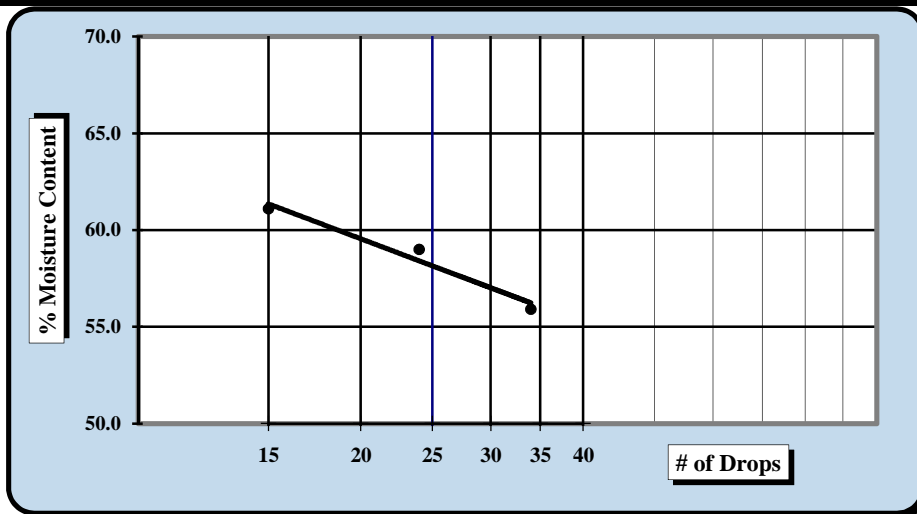
ASTM D 4318 ☒ AASHTO T 89 ☐ AASHTO T 90 ☐

S&ME, Inc. - Myrtle Beach: 1330 Highway 501 Business, Conway, SC 29526

Project #:	1463-19-028-110	Report Date:	7/17/2019
Project Name:	Horry County HS Track & Tennis - NMB	Test Date(s)	7/12/2019
Client Name:	Clough, Harbour & Associates, LLP		
Client Address:	110 Traders Cross, Ste 201; Bluffton, SC 29909		
Boring #:	T-21 - T-25	Sample #:	Bulk-1
		Sample Date:	7/1/2019
Location:	Track	LAB #:	4996
		Depth:	1'-4'

Sample Description: Gray with Red Sandy Fat Clay (CH)					
Type and Specification	S&ME ID #	Cal Date:	Type and Specification	S&ME ID #	Cal Date:
Balance (0.01 g)	00401	2/28/2018	Grooving tool	11368	9/1/2018
LL Apparatus	18801	9/1/2018			
Oven	17745	4/8/2019			

Pan #		Liquid Limit						Plastic Limit		
Tare #:		103	14	28				48	39	
A	Tare Weight	14.77	14.93	14.58				14.66	14.72	
B	Wet Soil Weight + A	31.47	31.58	31.66				21.54	21.62	
C	Dry Soil Weight + A	25.48	25.40	25.18				20.54	20.61	
D	Water Weight (B-C)	5.99	6.18	6.48				1.00	1.01	
E	Dry Soil Weight (C-A)	10.71	10.47	10.60				5.88	5.89	
F	% Moisture (D/E)*100	55.9%	59.0%	61.1%				17.0%	17.1%	
N	# OF DROPS	34	24	15				Moisture Contents determined by ASTM D 2216		
LL	LL = F * FACTOR									
Ave.	Average							17.1%		



One Point Liquid Limit			
N	Factor	N	Factor
20	0.974	26	1.005
21	0.979	27	1.009
22	0.985	28	1.014
23	0.99	29	1.018
24	0.995	30	1.022
25	1.000		

NP, Non-Plastic	<input type="checkbox"/>
Liquid Limit	59
Plastic Limit	17
Plastic Index	42
Group Symbol	CH

Multipoint Method ☒  
One-point Method ☐

Wet Preparation ☐ Dry Preparation ☒ Air Dried ☒

Notes / Deviations / References:

ASTM D 4318: Liquid Limit, Plastic Limit, & Plastic Index of Soils

<u>Ron Forest, P.E.</u>	<u>RPF</u>	<u>Senior Reviewer</u>	<u>7/17/2019</u>
Technical Responsibility	Signature	Position	Date

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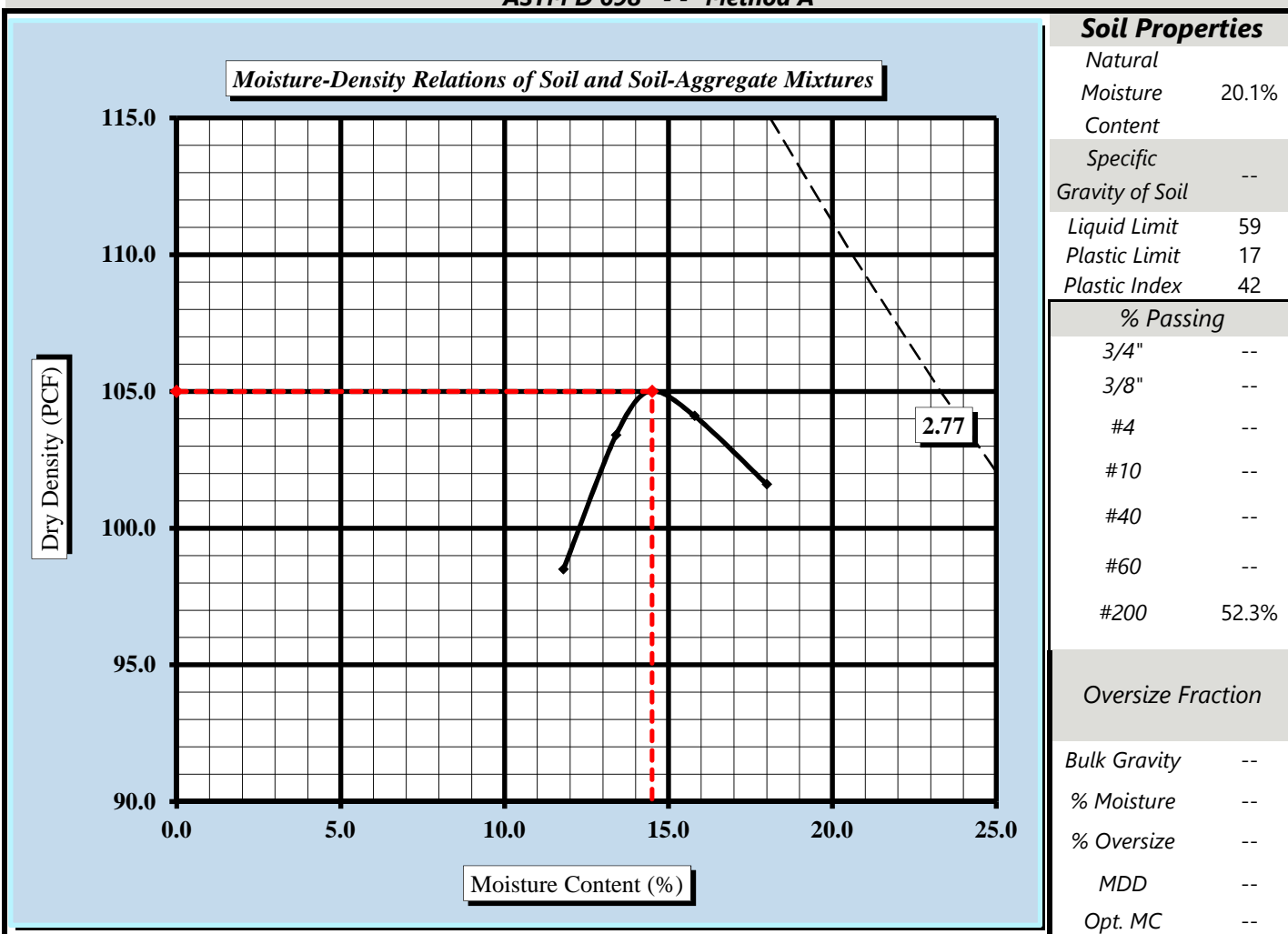
# MOISTURE - DENSITY REPORT



## Quality Assurance

S&ME, Inc. - Myrtle Beach: 1330 Highway 501 Business, Conway, SC 29526			
S&ME Project #:	1463-19-028-110	Report Date:	7/17/2019
Project Name:	Horry County HS Track & Tennis - NMB	Test Date(s):	7/11/2019
Client Name:	Clough, Harbour & Associates, LLP		
Client Address:	110 Traders Cross, Ste 201; Bluffton, SC 29909		
Boring #:	T-21 - T-25	Sample #:	Bulk-1
Location:	Track	Lab #:	4996
		Sample Date:	7/1/2019
		Depth:	1'-4'
Sample Description: Gray with Red Sandy Fat Clay (CH)			

**Maximum Dry Density 105.0 PCF. Optimum Moisture Content 14.5%**  
**ASTM D 698 - - Method A**



Moisture-Density Curve Displayed: Fine Fraction ☒ Corrected for Oversize Fraction (ASTM D 4718) ☐  
Sieve Size used to separate the Oversize Fraction: #4 Sieve ☒ 3/8 inch Sieve ☐ 3/4 inch Sieve ☐  
Mechanical Rammer ☒ Manual Rammer ☐ Moist Preparation ☐ Dry Preparation ☒

## References / Comments / Deviations:

ASTM D 2216: Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass  
ASTM D 698: Laboratory Compaction Characteristics of Soil Using Standard Effort

<u>Ron Forest, P.E.</u>	<u>RPF</u>	<u>Senior Reviewer</u>	<u>7/17/2019</u>
Technical Responsibility	Signature	Position	Date

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# CBR (CALIFORNIA BEARING RATIO) OF LABORATORY COMPACTED SOIL



ASTM D 1883

S&amp;ME, Inc. - Myrtle Beach: 1330 Highway 501 Business, Conway, SC 29526

Project #: 1463-19-028-110 Report Date: 7/17/2019

Project Name: Horry County HS Track &amp; Tennis - NMB Test Date(s): 7/12/2019

Client Name: Clough, Harbour &amp; Associates, LLP

Client Address: 110 Traders Cross, Ste 201; Bluffton, SC 29909

Boring #: T-21 - T-25 Sample #: Bulk-1 Sample Date: 7/1/2019

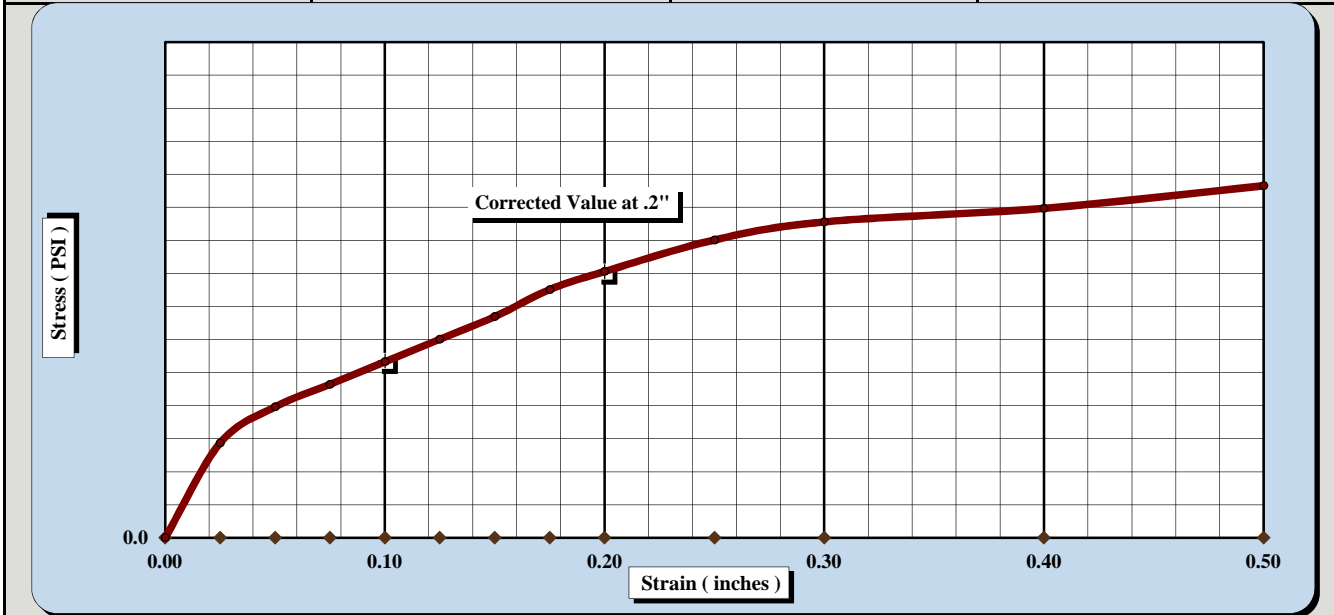
Location: Track LAB #: 4996 Depth: 1'-4'

Sample Description: Gray with Red Sandy Fat Clay (CH)

ASTM D 698 Method A Maximum Dry Density: 105.0 PCF Optimum Moisture Content: 14.5%

Compaction Test performed on grading complying with CBR spec. % Retained on the 3/4" sieve: 1.0%

Uncorrected CBR Values		Corrected CBR Values	
CBR at 0.1 in.	1.1	CBR at 0.1 in.	1.1
CBR at 0.2 in.	1.1	CBR at 0.2 in.	1.1



CBR Sample Preparation:

The entire gradation was used and compacted in a 6" CBR mold in accordance with ASTM D1883, Section 6.1.1

Before Soaking		After Soaking	
Compactive Effort (Blows per Layer)	43	Final Dry Density (PCF)	100.5
Initial Dry Density (PCF)	103.1	Moisture Content (top 1" after soaking)	22.0%
Moisture Content of the Compacted Specimen	14.5%	Percent Swell	2.6%
Percent Compaction	98.2%		

Soak Time: 96 hrs. Surcharge Weight 20.0 Surcharge Wt. per sq. Ft. 101.8  
 Liquid Limit 59 Plastic Index 42 Apparent Relative Density --

Notes/Deviations/References: Liquid Limit: ASTM D 4318, Specific Gravity: ASTM D 854, Classification: ASTM D 2487

Ron Forest, P.E.

Technical Responsibility

RPF

Signature

Senior Reviewer

Position

7/17/2019

Date

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## Pre-Bid Meeting

### IFB # 2021-50MJ

The following persons attended the MANDATORY pre-bid meeting for the project: Track and Field Improvements-Phase II

Date: March 25, 2021      Time: 3:00 pm      Location: Horry County Schools District Office 335 Four Mile Rd. Conway, SC 29526

NAME OF PERSON ATTENDING	NAME OF FIRM REPRESENTED	EMAIL	PHONE #
Bud Godfriaux	Field Turt/Senbelt	bgodfriaux0865@gmail	770-318-3512
Luke Brown	CONICA	LUKE.BROWN@CONICA.COM	615-499-3624
Kenny Smith	Geo Surfaces	ke.smith@geosurfaces.com	336-848-9112
SCOTT LIVENUS	GREENWALL CONST SERV, INC	VICKIE@GREENWALLCONST.COM	(843) 236-7800
John Nelson	Proform / Peacock	john@peacockpride.com	609-354-2829
KENNY R SIKILES	GREENWALL CONST. SERV, INC	KENNY@GREENWALLCONST.COM	843-236-7800
JEFF BURCH	HCS		
ROGER DIXON	HCS		
SCOTT CUNNINGHAM	PALMETTO CORP	scunningham@palmetto corp.com	843-840-0609

[illegible]