



UNIVERSAL ENGINEERING SCIENCES

Consultants in: Geotechnical Engineering • Environmental Engineering
Construction Materials Testing • Threshold Inspection • Private Provider Inspection

June 27, 2011

O'Steen Brothers
1006 SE 4th Street
Gainesville, Florida 32601

Attn: Mr. Rick Evans

Reference: **Pit Check on Archer Tan Sand**
O'Steen Brothers Archer Pit
Archer, Alachua County, FL
UES Project No: 0210.1000269.0000
UES DOCS No: 905085

Dear Mr. Evans:

As per your request, Universal Engineering Sciences, Inc. (UES) performed testing on a sample of the tan fine sand from a stockpile at O'Steen Brothers' Archer Pit. The sample was subjected to a series of tests including grain size analysis, Atterberg limits, permeability, organic content, and carbonate content. The results from the aforementioned tests should provide the necessary information on the tan fine sand ("Archer Sand") for most projects. A copy of the test results has been attached for your review and use.

We appreciate the opportunity to be of service. If you have any questions, or if we can be of further assistance, please contact us.

Respectfully submitted,
UNIVERSAL ENGINEERING SCIENCES, INC.
Certificate of Authorization Number 549

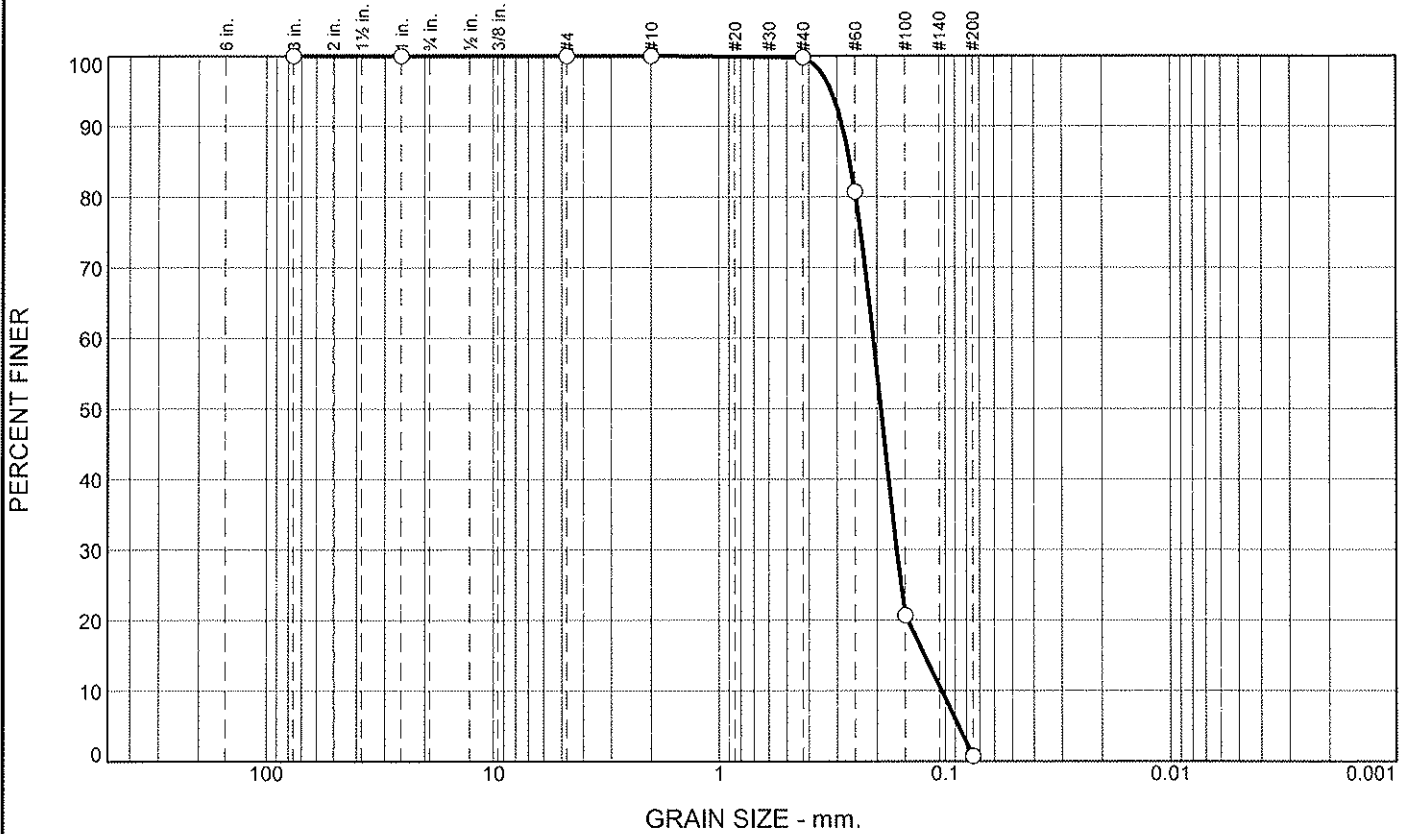
Keith L. Butts, P.E.
Regional Manager
FL Professional Engineer No. 53986



Attachments: Grain Size Distribution (1)

OFFICES IN
• Daytona Beach, FL
• Fort Myers, FL
• Fort Pierce, FL
• Gainesville, FL
• Hollywood, FL
• Jacksonville, FL
• Leesburg, FL
• Norcross, GA
• Ocala, FL
• Orlando, FL
• Palm Coast, FL
• Panama City, FL
• Pensacola, FL
• Rockledge, FL
• Sarasota, FL
• Tampa, FL
• West Palm Beach, FL

Particle Size Distribution Report



	+3"	% GRAVEL	% SAND	% SILT	% CLAY	USCS	LL	PL	PI
○	0.0	0.0	99.3	0.7		SP	NP	NP	NP

SIEVE inches size	PERCENT FINER		
	○		
3	100.0		
1	100.0		
GRAIN SIZE			
D ₆₀	0.2076		
D ₃₀	0.1638		
D ₁₀	0.1034		
COEFFICIENTS			
C _c	1.25		
C _u	2.01		

SIEVE number size	PERCENT FINER		
	○		
#4	100.0		
#10	100.0		
#40	99.8		
#60	80.8		
#100	20.7		
#200	0.7		

Material Description
○ Tan Fine Sand

REMARKS:
○ Hydraulic Conductivity = 0.01 cm/sec
Organic Content = 0.2%
Carbonate Content = 0.0%

○ Location: Pit Stockpile

<h2 style="margin: 0;">Universal Engineering Sciences</h2>	Client: O'Steen Brothers Project: Pit Check Project No.: 0210.1000269.0000
	Figure

Tested By: B. Hrenko Checked By: K. Butts