

PO 185760

DMS

AGENDA

REC 525602

VISIT OUR WEBSITE AT:
www.rkci.com

INVOICE

INVOICE # :H013076

CONSULTANTS * ENVIRONMENTAL * FACILITIES * INFRASTRUCTURE

BILLING DATE :
12/31/2019
CLIENT :09C04647
Fort Bend County Texas

PROJECT : AHD1913200
Various Roads in Arcola



ACH INSTRUCTIONS for RABA KISTNER, Inc.
Bank: JP Morgan Chase Bank, NA

EMAIL: ar@rkci.com

Fort Bend County Texas
P.O. Box 148
Richmond, TX 77406-0148

REMITTANCE ADDRESS:
RABA KISTNER, INC.
P.O. BOX 971037
DALLAS, TX 75397-1037

PHONE (210) 699-9090

CONSULTING SERVICES

INVOICE SUMMARY INFORMATION
Various Roads in Arcola

FOR PROFESSIONAL SERVICES RENDERED THROUGH: 12/7/2019

DATE	REPORT / ASSIGNMENT	SERVICE	CODE	QUANTITY	RATE	UNIT	AMOUNT
12/03/2019	H19-020336	Liquid and Plastic Limits	901000	1.00	53.00	/EA	53.00
	H19-020336	Sieve Analysis	904000	1.00	57.00	/EA	57.00
	H19-020336	OMD Standard Treated Material	945000	1.00	193.00	/EA	193.00
	H19-020337	OMD Standard Treated Material	945000	1.00	193.00	/EA	193.00
	H19-020338	Liquid and Plastic Limits	901000	1.00	53.00	/EA	53.00
	H19-020338	Percent Passing #200 Sieve	906000	1.00	50.00	/EA	50.00
	H19-020338	OMD Standard Compaction	923000	1.00	175.00	/EA	175.00
	H19-020351	Technician NICET II HMA - 1A	107000	4.00	65.00	/HR	260.00
	H19-020351	Vehicle Charge	150000	4.00	10.00	/HR	40.00
	H19-020370	Support Personnel (Word Processing)	115000	0.25	60.00	/HR	15.00
	H19-020370	Compressive Strength of C.S.S.	941000	4.00	71.00	/EA	284.00

SUBTOTAL INVOICE * **1,373.00**

AMOUNT DUE THIS INVOICE ** **1,373.00**

Authorization Amount	\$	50,778.00
Amount Previously Billed	\$	-
Amount This Invoice	\$	1,373.00
Total Billed to Date	\$	1,373.00
Amount Remaining	\$	49,405.00

Percent Billed **2.70%**

* Invoices are submitted monthly and are due on receipt. * Carrying charges may be assessed on invoices unpaid beyond 30 days from billing date.
AP Dec-19 **PLEASE PAY FROM THIS INVOICE.**

LABORATORY TESTING REPORT**Moisture-Density Relationship, Atterberg Limits, and Sieve Analysis**

ATTN.: MR. A. IKE AKINWANDE, P.E., S.E., MLSE
 TO: FORT BEND COUNTY ENGINEERING DEPARTMENT
 301 JACKSON STREET
 4TH FLOOR
 RICHMOND, TX U.S. 77469
 PROJECT: Various Roads in Arcola



PROJECT NO.: AHD19-132-00
 SAMPLE DATE: 12/03/2019
 REPORT NO.: 3
 REPORT VERSION: A
 TECHNICIAN: GHAZWAN G QASIM
 CERTIFICATION: NICET II SOILS
 CURVE NO.: 3

A sample of the following material was obtained by RKCI for laboratory testing : Tan Crushed Lime Stone Flex. Base (Proposed Flex. Base Material). This material was obtained from the following location : Vulcan Plant Located at 14047 Industrial Rd. Houston Tx. 77015.

This material was obtained from Vulcan Plant and is intended for use as Proposed Flex. Base Material in the following area: Pavement Section.

Moisture-Density Relationship Test, TEX-113-E <i>(The Proctor curve is available upon request.)</i>		
Maximum Dry Density, (pcf):	126.9	
Optimum Moisture Content, (%):	8.9	Tested By: ROBERT DUNN
Atterberg Limits, TEX-104-E, TEX-105-E, TEX-106-E		Specification Limits
Liquid Limit (LL):	Non-Determinable	Max.: 35
Plastic Limit (PL):	Non-Determinable	
Plasticity Index (PI):	Non-Plastic	Max.: 10
Tested By: ROBERT DUNN		
Sieve Analysis, TEX-101-E		
Sieve No.	Cumulative % Retained	Item 247, TxDOT Grade 1 Specification Limits
1-3/4"	0	0 - 0
7/8"	* 7	10 - 35
3/8"	31	30 - 50
No. 4	52	45 - 65
No. 40	79	70 - 85

Tested By: ROBERT DUNN

This material does not conform to the project specifications for Sieve Analysis.

NOTICE: Raba Kistner Consultants, Inc. considers the data and information contained in this report to be proprietary. This information is intended only for the use of the recipient(s) named herein. Test results presented herein relate only to those items tested. This document and any information contained herein shall not be disclosed and shall not be duplicated or used in whole or in part for any purpose other than to validate test results without written approval from Raba Kistner Consultants, Inc.

COPIES TO: Above (1)
 Invoice (1)
 Othon, Inc. (1)
 Binkley Barfield (1)



Depart Lab: _____ Arrive Site: _____ Lunch: 0.00 Hrs
Raba Kistner
 SINCE 1968

Updated By: NMG 12/12/2019 1:22:06PM

H19-020336 Reviewed By: NMG 12/12/2019 1:22:29PM

Austin • Brownsville • Dallas • Houston • McAllen • Mexico • New Braunfels • Salt Lake City • San Antonio

LABORATORY TESTING REPORT**Moisture-Density Relationship**

ATTN.: MR. A. IKE AKINWANDE, P.E., S.E., MLSE
 TO: FORT BEND COUNTY ENGINEERING DEPARTMENT
 301 JACKSON STREET
 4TH FLOOR
 RICHMOND, TX U.S. 77469

RABA KISTNER
 Raba Kistner Consultants Inc.
 3602 Westchase
 Houston, Texas 77042
 (713) 996-8990 • (713) 996-8993

PROJECT NO.: AHD19-132-00
 SAMPLE DATE: 12/03/2019
 REPORT NO.: 2 (H19-020337)
 REPORT VERSION: A
 TECHNICIAN: GHAZWAN G QASIM
 CERTIFICATION: NICET II SOILS
 CURVE NO.: 1

PROJECT: Various Roads in Arcola

A sample of the following material was obtained by RKCI for laboratory testing : Cement Stabilized Sand-CSS (Proposed Backfill Material). This material was obtained from the following location: Borrow Pit Located @ 4635 County Rd., Rosharon Tx..
 This material was obtained from Borrow Pit and is intended for use as Proposed Backfill Material in the following area: Utility Backfill.

Moisture-Density Relationship Test, ASTM D 558 Method B	
Maximum Dry Density, (pcf)	113.4
Optimum Moisture Content, (%)	10.3

The Proctor curve is available upon request.

Tested By: MOHAMMAD SABER DEHQAN

NOTICE: Raba Kistner Consultants, Inc. considers the data and information contained in this report to be proprietary. This information is intended only for the use of the recipient(s) named herein. Test results presented herein relate only to those items tested. This document and any information contained herein shall not be disclosed and shall not be duplicated or used in whole or in part for any purpose other than to validate test results without written approval from Raba Kistner Consultants, Inc.

COPIES TO: Above (1)
 Invoice (1)
 Othon, Inc. (1)
 Binkley Barfield (1)

RABA KISTNER CONSULTANTS, INC.

 BY: *Kaushal K. Jha*
 12/04/2019

Depart Lab: _____ Arrive Site: _____ Lunch: 0.00 Hrs
Raba Kistner
 SINCE 1968
 Updated By: NMG 12/4/2019 4:06:40PM

Depart Site: _____ Arrive Lab: _____ Time: _____
 H19-020337 Reviewed By: NMG 12/4/2019 4:06:51PM

Austin • Brownsville • Dallas • Houston • McAllen • Mexico • New Braunfels • Salt Lake City • San Antonio

LABORATORY TESTING REPORT**Moisture-Density Relationship, Atterberg Limits, and Minus No. 200 Determination**

ATTN.: MR. A. IKE AKINWANDE, P.E., S.E., MLSE
 TO: FORT BEND COUNTY ENGINEERING DEPARTMENT
 301 JACKSON STREET
 4TH FLOOR
 RICHMOND, TX U.S. 77469

RABA KISTNER
 Raba Kistner Consultants Inc.
 3602 Westchase
 Houston, Texas 77042
 (713) 996-8990 • (713) 996-8993

PROJECT NO.: AHD19-132-00
 SAMPLE DATE: 12/03/2019
 REPORT NO.: 1 (H19-020338)
 REPORT VERSION: A
 TECHNICIAN: GHAZWAN G QASIM
 CERTIFICATION: NICET II SOILS
 CURVE NO.: 2

PROJECT: Various Roads in Arcola

A sample of the following material was obtained by RKCI for laboratory testing : Dark Brown Fat Clay w/Sand (Existing Subgrade Material). This material was obtained from the following location: Pavement Section Between STA.: 13+58 and STA.: 18+71.
 This material was obtained from The Project Site and is intended for use as Existing Subgrade Material in the following area: Pavement Section.

On the basis of the testing conducted and in general accordance with ASTM D 2487: Unified Soil Classification System, the material is classified as CH

Moisture-Density Relationship Test, ASTM D 698 Method A	
Maximum Dry Density, (pcf)	99.1
Optimum Moisture Content, (%)	19.3
The Proctor curve is available upon request. Tested By: MOHAMMAD SABER DEHQAN	
Finer Than No. 200 Sieve Determination, ASTM D 1140 Method A	
Finer Than No. 200 Sieve, (%)	74.1
Soaking Time: 12 Hrs Tested By: MOHAMMAD SABER DEHQAN	
Atterberg Limits, ASTM D 4318 Method A	
Average Liquid Limit	58
Average Plastic Limit	18
Average Plasticity Index	40
Tested By: MOHAMMAD SABER DEHQAN	

NOTICE: Raba Kistner Consultants, Inc. considers the data and information contained in this report to be proprietary. This information is intended only for the use of the recipient(s) named herein. Test results presented herein relate only to those items tested. This document and any information contained herein shall not be disclosed and shall not be duplicated or used in whole or in part for any purpose other than to validate test results without written approval from Raba Kistner Consultants, Inc.

COPIES TO: Above (1)
 Invoice (1)
 Othon, Inc. (1)
 Binkley Barfield (1)

RABA KISTNER CONSULTANTS, INC.

 BY: Kaushal K. Jha
 12/05/2019

 KAUSHAL K. JHA
 114339
 LICENSED PROFESSIONAL ENGINEER

Depart Lab: _____ Arrive Site: _____ Lunch: 0.00 Hrs
 Updated By: NMG 12/5/2019 1:12:46PM
Raba Kistner
 SINCE 1968

Depart Site: _____ Arrive Lab: _____ Time: 3.25
 H19-020338 Reviewed By: NMG 12/5/2019 1:12:51PM

Austin • Brownsville • Dallas • Houston • McAllen • Mexico • New Braunfels • Salt Lake City • San Antonio

LABORATORY TEST REPORT**Sand - Cement Test (ASTM D 1633 - COH/HCPID Method)**

Raba Kistner Consultants Inc.
3602 Westchase
Houston, Texas 77042
(713) 996-8990 • (713) 996-8993

ATTN.: MR. A. IKE AKINWANDE, P.E., S.E., MLSE
TO: **FORT BEND COUNTY ENGINEERING DEPARTMENT**
301 JACKSON STREET
4TH FLOOR
RICHMOND, TX U.S. 77469

PROJECT NO.: AHD19-132-00
REPORT NO.: 5 (H19-020370)
DATE: 12/03/2019
TECHNICIAN: GHAZWAN G QASIM
CERTIFICATION: NICET II SOILS

PROJECT: Various Roads in Arcola**CONTRACTOR:** *******Supplier/Plant:** Plant Located at 4635 County Road 418, Rosharon Tx.**Specification:** HC Item 433**Sample Location:** Plant Located at 4635 County Road 418, Rosharon Tx.**Description of Material:** Cement Stabilized Sand (CSS)- Proposed Utility Backfill Material**Specimen Size:** Diameter(in): 4.00 Height(in): 4.584 Area(sq. in): 12.57**Type of Curing:** Sealed in Plastic Bags**Time Batched/Mixed:** 9:30 a.m.**Time Delivered to Lab:** 10:30 a.m.**Time Sampled:** 9:32 a.m.**Time Molded:** 10:45 a.m.

Specimen I.D. No.	Date Tested	Age	Required Strength @ 48 Hrs, psi:	
			Maximum Load, lbs	100 Compressive Strength, (psi)
1	12/05/2019	48 Hrs	2,630	210
2	12/05/2019	48 Hrs	2,690	215
3	12/10/2019	7 Days	3,650	290
4	12/10/2019	7 Days	3,570	285

* - Indicates noncompliance with specifications.

Average at 48 Hrs : 210 psi

Moisture Content at time of molding: 10.30 %

REMARKS: C.S.S is 1.5SK based on the ticket provided by the contractor.

COPIES TO: Above (1)

Invoice(1)

Othon, Inc.(1)

Binkley Barfield(1)

RABA KISTNER CONSULTANTS, INC.

Kaushal K. Jha
BY: _____
12/11/2019

STATE OF TEXAS
KAUSHAL K. JHA
114339
LICENSED PROFESSIONAL ENGINEER

Depart Lab: 11:00 am Arrive Site: 11:45 am Lunch: 0.00

Depart Site: 12:30 pm Arrive Lab: 1:00 pm Time: 2.00

NOTICE: Raba Kistner Consultants, Inc. considers the data and information contained in this report to be proprietary. This information is intended only for the use of the recipient(s) named herein. Test results presented herein relate only to those items tested. This document and any information contained herein shall not be disclosed and shall not be duplicated or used in whole or in part for any purpose other than to validate test results without written approval from Raba Kistner Consultants, Inc.

**Raba
Kistner**
SINCE
1968

Updated By: RD 12/10/2019 3:43:51PM

H19-020370

Reviewed By: NMG 12/6/2019 8:41:17AM

Austin • Brownsville • Dallas • Houston • McAllen • Mexico • New Braunfels • Salt Lake City • San Antonio

OBSERVATION REPORT**Proof Rolling**

Raba Kistner Consultants Inc.
3602 Westchase
Houston, Texas 77042
(713) 996-8980 • (713) 996-8993

ATTN.: MR. A. IKE AKINWANDE, P.E., S.E., MLSE
TO: FORT BEND COUNTY ENGINEERING DEPARTMENT
301 JACKSON STREET
4TH FLOOR
RICHMOND, TX U.S. 77469

PROJECT NO.: AHD19-132-00
DATE OF OBSERVATION: 12/03/2019
REPORT NO.: 4, Page 1 of 1 (H19-020351)
REPORT VERSION: A
CERTIFICATION: NICET II SOILS
TECHNICIAN: GHAZWAN G QASIM

PROJECT: Various Roads in Arcola

On this date, a member of our technical staff observed proof rolling operations at the following location: **Pavement Section Located Between STA.: 13+58 and STA.: 18+71.82.**

Prior to proof rolling, the area was stripped of vegetation.

A dump truck was utilized for proof rolling operations. Visual signs of weakness, pumping, or heaving were not noted following multiple passes over the area that was observed.

Remarks: The proofrolling activities observed on this day were in general conformance with the project documents.

Mr. Woodford Lusk w/Otho was verbally notified of field observations.

Depart Lab:	<u>2:45 pm</u>	Arrive Site:	<u>3:30 pm</u>	Lunch:	<u>—</u>	Hrs
Depart Site:	<u>5:00 pm</u>	Arrive Lab:	<u>5:45 pm</u>	Time:	<u>3.00</u>	Hrs

NOTICE: Raba Kistner Consultants, Inc. considers the data and information contained in this report to be proprietary. This information is intended only for the use of the recipient(s) named herein. Test results presented herein relate only to those items tested. This document and any information contained herein shall not be disclosed and shall not be duplicated or used in whole or in part for any purpose other than to validate test results without written approval from Raba Kistner Consultants, Inc.

COPIES TO: Above (1)
Invoice(1)
Othon, Inc.(1)
Binkley Barfield(1)

RABA KISTNER CONSULTANTS, INC.

Kaushal K. Jha
BY: 12/04/2019

Raba Kistner
SINCE
1968

Updated By: NMG 12/4/2019 2:17:38PM

H19-020351

Reviewed By: NMG 12/4/2019 2:17:42PM

Austin • Brownsville • Dallas • Houston • McAllen • Mexico • New Braunfels • Salt Lake City • San Antonio