

June 1, 2022

Valde Guerra, Executive Officer
Attn: Josefina Garces
County of Hidalgo Texas Executive Office
2818 S. Bus. Hwy. 281
Edinburg, Texas 78539

**RE: Professional Engineering Services for Construction Materials Testing
(C-20-184-01-12) Work Authorization No. 2 ~ Construction Materials Testing
Hidalgo County Health Dept. Testing/Bio-Safety Laboratory
PO #847843**

Dear Mr. Guerra:

Attached for your review and approval is our invoice for services rendered under Work Authorization #2 during the month of May 2022 on the subject referenced project.

The following is attached:


- Invoice No. 20335

The following is a narrative of the progress for this period.

	% Complete
Construction Materials Testing	12%
<u>UPDATED:</u> B2Z secured a sample of Select Backfill material for testing on the following item: - Select Backfill - Moisture/Density Standard Proctor, Atterberg Limits of Soils and Percent Passing No. 200 B2Z performed field testing with the use of the nuclear density gauge to measure compaction of Subgrade and Select Backfill Material at 6" Lifts for the Building Pad.	

Should you have any questions regarding this submittal, please do not hesitate to call me at (956) 585-3773.

Sincerely,



Oliver Salgado, P.E.
Project Manager
B2Z Engineering, LLC



P.O. Box 2724
 McAllen, Tx. 78502
 (956) 585-3773

Invoice

Date	Invoice #
6/1/2022	20335

Please send remittance with copy of invoice to:

Attn: Mrs. Aisha Gonzalez
 P.O. Box 2724
 McAllen, Tx. 78502

Bill To:
 County of Hidalgo Texas Executive Office
 2818 S. Bus. Hwy. 281
 Edinburg, TX 78539

Project Info:
 Hidalgo County Bio-Safety Lab Geo & CMT
 Contract # C-20-184-01-12
 Work Authorization #2
 PO# 847843
 B2Z JOB: 4124

Billing Period **May 2022**

Description	Contract	Previous Applications	Current Completed	Total Completed	% Complete
Construction Materials Testing	\$ 64,763.07	\$ 1,642.31	\$ 6,129.26	\$ 7,771.57	12.0%
Total For This Billing Period					\$6,129.26

Work Authorization ~ Summary

<u>WA No.</u>	<u>WA Amount</u>	<u>Previously Inv.</u>	<u>Percent Complete</u>	<u>Remaining Balance</u>
2	\$64,763.07	\$1,642.31	12.0%	\$56,991.50



Aisha Gonzalez - President

Client:

Hidalgo County
100 North Closser
Edinburg, TX 78539

Project:

4124
Hidalgo County Health Dept Testing/Bio-Safety
Laboratory
Various
Edinburg, TX

General Information

Sample Date:	04/28/2022	MF Sample Number:	1735
Sample From:	Stockpile	Material Type:	Select Backfill
Sampled By:	Manuel De Santiago	Location Details:	Filegonia pit Edinburg

Te t Results

Proctor Curve

Preparation	Method
Dry	Mechanical - Circular Face Rammer
Moisture Content (%)	Dry Density (Lbs./Cu.Ft.)
8.44	105.45
12.12	110.61
13.99	111.84
17.41	108.07
Optimum Moisture:	14.3
Maximum Dry Density:	111.9
Specific Gravity (Assumed):	2.65

Atterberg Limits	
Liquid Limit (%):	32
Plastic Limit (%):	13
Plastic Index:	19

Test Completed Date:	05/02/2022	Test Completed By:	Jorge Solis
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Test Results: The test is for informational purposes.

Respectfully Submitted by B2Z Engineering

Test Method (As Applicable): Tex 114-E / ASTM D-698 Method-A, Method-B or Method-C ;
Tex 104-E, Tex 105-E, Tex 106-E / ASTM D4318 ;
Tex 110-E / ASTM C-136

Hector Cantu
Hector Cantu, Corporate Laboratory Manager

Material in Soils Finer than No. 200 / Tex-111-E

Project :	<u>Bio-Safety Laboratory</u>	B2Z Proj. No :	<u>4124</u>
Client:	<u>Hidalgo County</u>	Work Order No:	<u>BSL-5S</u>
Engineer:	<u></u>	Mat'l. Desc. Or Use:	<u>Select Fill</u>
Architect:	<u></u>	Date Sampled:	<u>4/28/2022</u>
Contractor:	<u>ECON-Enriquez Construction</u>	Sample Location:	<u>Filegonia Pit - Edinburg</u>

Tw = Weight of Tare
Wt = Initial Mass of Oven Dried Sample
Wr = Mass of the Oven Dried sample retained on the sieves
Percent Finer = 100(Wt - Wr) / Wt - Tw

Sample Identification							
Tare ID		Tw		Wt	Wr	Loss	% -200
324		176.6		357.3	277.9	79.4	43.9

Sample Identification							
Tare ID		Tw		Wt	Wr	Loss	% -200

Sample Identification							
Tare ID		Tw		Wt	Wr	Loss	% -200

Remarks: For Information Only

This report applies only to the standards of procedures indicated and to the sample(s) tested and/or observed and are not necessarily indicative of the qualities of apparently identical or similar products or procedures, nor do they represent an ongoing quality assurance program unless so noted. These reports are for the exclusive use of the addressed client and are not to be reproduced without written permission.

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Respectfully Submitted by B2Z Engineering


 Hector Cantu, Corporate Laboratory Manager

Client:Hidalgo County
100 North Clossner
Edinburg, TX 78539**Project:**4124
Hidalgo County Health Dept Testing/Bio-Safety
Laboratory
Various
Edinburg, TX**General Information**

Activity Number: 1	Activity Date: 04/29/2022
Technician: Manuel De Santiago	

Notes

Technician was scheduled for subgrade density testing at 2PM Friday April 29th. Upon arrival the contractor informed the technician that they were not ready for testing. Trip (30mi.) and time (2hr) will be charged.

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Respectfully Submitted by B2Z Engineering



Hector Cantu, Corporate Laboratory Manager

Test Results														
Test #	Retest Of	Test Date	Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)	In Place Moisture (%)	In Place Dry Density (pcf)	In Place Wet Density (pcf)	Probe Depth (in)	Percent Compaction	Min Comp. (%)	Remark
1		05/02/22	Subgrade		CL/CH	18.3	106.0	19.1	103.4	123.2	6	97.5	95	DP/MP
2		05/02/22	Subgrade		CL/CH	18.3	106.0	17.9	101.3	119.4	6	95.6	95	DP/MP
3		05/02/22	Subgrade		CL/CH	18.3	106.0	18.4	106.3	125.8	6	100.3	95	DP/MP
4		05/02/22	Subgrade		CL/CH	18.3	106.0	18.9	100.8	119.8	6	95.1	95	DP/MP
Test Information														
Test #	Test Location	Elevation	Reference	Gauge	Field Technician									
1	Building Pad/Slab: 30'Wx25'N of S.E. corner 1st & Final Lift			Instrotek / 3500 Xplorer / 4015 / 01/25/2022	Rick Garcia									
2	Building Pad/Slab: 30'Wx30'S of N.E. corner 1st & Final Lift			Instrotek / 3500 Xplorer / 4015 / 01/25/2022	Rick Garcia									
3	Building Pad/Slab: 20'Ex20'S of N.W. corner 1st & Final Lift			Instrotek / 3500 Xplorer / 4015 / 01/25/2022	Rick Garcia									
4	Building Pad/Slab: 30'Ex25'N of N.W. corner 1st & Final Lift			Instrotek / 3500 Xplorer / 4015 / 01/25/2022	Rick Garcia									
Remarks		Comments												
DP/MP: Density Pass / Moisture Pass		Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency.												
DP/MPF: Density Pass / Moisture Fail		1: Contractor ECON - Gilbert Enriquez present.												

Respectfully Submitted by BZZ Engineering



Hector Cantu, Corporate Laboratory Manager



Soil Nuclear Gauge

B2Z Report No. BSL-9S
Report Date: 05/03/2022
Test Method: ASTM D 6938

Mission Office
900 S Stewart Rd, Ste. 2
Mission, TX 78572
Phone: 956-585-3773

Client:

Hidalgo County
100 North Closner
Edinburg, TX 78539

Project:

4124
Hidalgo County Health Dept Testing/Bio-Safety
Laboratory
Various
Edinburg, TX

Test Results														
Test #	Retest Of	Test Date	Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)	In Place Moisture (%)	In Place Dry Density (pcf)	In Place Wet Density (pcf)	Probe Depth (in)	Percent Compaction	Min Comp. (%)	Remark
5	2	05/03/22	Subgrade		CL/CH	18.3	106.0	19.5	101.5	121.3	6	95.8	95	DP/MIP
Test Information														
Test #	Test Location	Elevation	Reference	Gauge										
5	Building Pad/Slab: 30'Wx30'S of N.E. corner 1st & Final Lift			Make / Model / SN / Calibrated	Instrotek / 3500 Xplorer / 4015 / 01/25/2022									
Remarks		Comments												
DP/MIP: Density Pass / Moisture Pass		Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. 5: Subcontractor Mario Solis present.												

Respectfully Submitted by B2Z Engineering

Hector Cantu, Corporate Laboratory Manager



Soil Nuclear Gauge

B2Z Report No. BSL-10S
Report Date: 05/04/2022
Test Method: ASTM D 6938

Mission Office
 900 S Stewart Rd, Ste. 2
 Mission, TX 78572
 Phone: 956-585-3773

Client:
 Hidalgo County
 100 North Closner
 Edinburg, TX 78539

Project:
 4124
 Hidalgo County Health Dept Testing/Bio-Safety
 Laboratory
 Various
 Edinburg, TX

Test Results														
Test #	Retest Of	Test Date	Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)	In Place Moisture (%)	In Place Dry Density (pcf)	In Place Wet Density (pcf)	Probe Depth (in)	Percent Compaction	Min Comp. (%)	Remark
6		05/03/22	Select Backfill #2		CL/CH	14.3	111.9	13.8	109.2	124.3	6	97.6	95	DP/MP
7		05/03/22	Select Backfill #2		CL/CH	14.3	111.9	16.1	108.5	126.0	6	97.0	95	DP/MP
8		05/03/22	Select Backfill #2		CL/CH	14.3	111.9	12.6	106.8	120.3	6	95.4	95	DP/MP
9		05/03/22	Select Backfill #2		CL/CH	14.3	111.9	13.8	109.1	124.1	6	97.5	95	DP/MP
Test Information														
Test #	Test Location	Elevation	Reference	Make / Model / SN / Calibrated	Gauge	Field Technician								
6	Building Pad/Slab: 35'Sx20'E of NW corner of Bldg 1st Lift			Instrotek / 3500 Xplorer / 4507 / 01/25/2022		Frank Velez Jr								
7	Building Pad/Slab: 45'Nx20'E of SW corner of Bldg 1st Lift			Instrotek / 3500 Xplorer / 4507 / 01/25/2022		Frank Velez Jr								
8	Building Pad/Slab: 30'Nx35'W of SE corner of Bldg 1st Lift			Instrotek / 3500 Xplorer / 4507 / 01/25/2022		Frank Velez Jr								
9	Building Pad/Slab: 15'Sx20'W of SE corner of Bldg 1st Lift			Instrotek / 3500 Xplorer / 4507 / 01/25/2022		Frank Velez Jr								
Remarks		Comments												
DP/MP: Density Pass / Moisture Pass		Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. 6: Subcontractor Mario Solis present.												

Respectfully Submitted by B2Z Engineering

Hector Cantu, Corporate Laboratory Manager



Soil Nuclear Gauge

BZZ Report No. BSL-11S
 Report Date: 05/05/2022
 Test Method: ASTM D 6938

Mission Office
 900 S Stewart Rd, Ste. 2
 Mission, TX 78572
 Phone: 956-585-3773

Client:
 Hidalgo County
 100 North Closner
 Edinburg, TX 78539

Project:
 4124
 Hidalgo County Health Dept Testing/Bio-Safety
 Laboratory
 Various
 Edinburg, TX

Test Results														
Test #	Retest Of	Test Date	Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)	In Place Moisture (%)	In Place Dry Density (pcf)	In Place Wet Density (pcf)	Probe Depth (in)	Percent Compaction	Min Comp. (%)	Remark
10		05/04/22	Select Backfill #2		CL/CH	14.3	111.9	13.0	111.0	125.4	6	99.2	95	DP/MP
11		05/04/22	Select Backfill #2		CL/CH	14.3	111.9	14.2	110.1	125.7	6	98.4	95	DP/MP
12		05/04/22	Select Backfill #2		CL/CH	14.3	111.9	12.2	106.3	119.3	6	95.0	95	DP/MP
13		05/04/22	Select Backfill #2		CL/CH	14.3	111.9	12.4	106.3	119.5	6	95.0	95	DP/MP
Test Information														
Test #	Test Location	Elevation	Reference	Make / Model / SN / Calibrated	Gauge	Field Technician								
10	Building Pad/Slab: 20'Ex30'S of N.W. corner 2nd Lift			Instrotek / 3500 Xplorer / 4015 / 01/25/2022		Manuel De Santiago								
11	Building Pad/Slab: 20'Ex30'1 of S.W. corner 2nd Lift			Instrotek / 3500 Xplorer / 4015 / 01/25/2022		Manuel De Santiago								
12	Building Pad/Slab: 30'Wx15'N of S.E. corner 2nd Lift			Instrotek / 3500 Xplorer / 4015 / 01/25/2022		Manuel De Santiago								
13	Building Pad/Slab: 30'Wx15'S of N.E. corner 2nd Lift			Instrotek / 3500 Xplorer / 4015 / 01/25/2022		Manuel De Santiago								
Remarks		Comments												
DP/MP: Density Pass / Moisture Pass DP/MP: Density Pass / Moisture Fail		Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. 10: Inspector Gio Mares present. 12: Moisture pass as per Inspector Gio Mares.												

Respectfully Submitted by BZZ Engineering

Hector Cantu, Corporate Laboratory Manager



Soil Nuclear Gauge

B2Z Report No. BSL-12S
Report Date: 05/06/2022
Test Method: ASTM D 6938

Mission Office
900 S Stewart Rd, Ste. 2
Mission, TX 78572
Phone: 956-565-3773

Client:

Hidalgo County
100 North Closner
Edinburg, TX 78539

Project:

4124
Hidalgo County Health Dept Testing/Bio-Safety
Laboratory
Various
Edinburg, TX

Test Results														
Test #	Retest Of	Test Date	Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)	In Place Moisture (%)	In Place Dry Density (pcf)	In Place Wet Density (pcf)	Probe Depth (in)	Percent Compaction	Min Comp. (%)	Remark
14		05/05/22	Select Backfill #2		CL/CH	14.3	111.9	13.2	100.9	114.2	6	90.2	95	DF/MP
Test Information														
Test #	Test Location	Elevation	Reference	Gauge	Make / Model / SN / Calibrated	Field Technician								
14	Building Pad/Slab: 20'Ex30'N of S.W. corner 3rd Lift				Instron / 3500 Xplorer / 3727 / 01/25/2022	Jorge Gallardo								
Comments														
Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. 14: Subcontractor Mario Solis present.														
Remarks														
DF/MP: Density Fail / Moisture Pass														

Respectfully Submitted by B2Z Engineering

Hector Cantu, Corporate Laboratory Manager



Soil Nuclear Gauge

B2Z Report No. BSL-13S
 Report Date: 05/09/2022
 Test Method: ASTM D 6938

Mission Office
 900 S Stewart Rd, Ste. 2
 Mission, TX 78572
 Phone: 956-585-3773

Client:
 Hidalgo County
 100 North Closner
 Edinburg, TX 78539

Project:
 4124
 Hidalgo County Health Dept Testing/Bio-Safety
 Laboratory
 Various
 Edinburg, TX

Test Results														
Test #	Retest Of	Test Date	Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)	In Place Moisture (%)	In Place Dry Density (pcf)	In Place Wet Density (pcf)	Probe Depth (In)	Percent Compaction	Min Comp. (%)	Remark
15	14	05/06/22	Select Backfill #2		CL/CH	14.3	111.9	16.3	109.6	127.5	6	97.9	95	DP/MP
Test Information														
Test #	Test Location	Elevation	Reference	Make / Model / SN / Calibrated	Gauge	Field Technician								
15	Building Pad/Slab: 20'Ex30'N of S.W. corner 3rd Lift			Instrotek / 3500 Xplorer / 4600 / 02/20/2022		Frank Velez Jr								
Remarks		Comments												
DP/MP: Density Pass / Moisture Pass		Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. 15: Subcontractor Mario Solis present.												

Respectfully Submitted by B2Z Engineering

Hector Cantu, Corporate Laboratory Manager



Soil Nuclear Gauge

B2Z Report No. BSL-14S
Report Date: 05/09/2022
Test Method: ASTM D 6938

Mission Office
900 S Stewart Rd, Ste. 2
Mission, TX 78572
Phone: 956-585-3773

Client:
Hidalgo County
100 North Closner
Edinburg, TX 78539

Project:
4124
Hidalgo County Health Dept Testing/Bio-Safety
Laboratory
Various
Edinburg, TX

Test Results														
Test #	Retest Of	Test Date	Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)	In Place Moisture (%)	In Place Dry Density (pcf)	In Place Wet Density (pcf)	Probe Depth (in)	Percent Compaction	Min Comp. (%)	Remark
16		05/06/22	Select Backfill #2		CL/CH	14.3	111.9	15.8	108.5	125.7	6	97.0	95	DP/MP
17		05/06/22	Select Backfill #2		CL/CH	14.3	111.9	15.9	109.1	126.4	6	97.5	95	DP/MP
18		05/06/22	Select Backfill #2		CL/CH	14.3	111.9	15.5	110.3	127.4	6	98.6	95	DP/MP
Test Information														
Test #	Test Location	Elevation	Reference	Gauge Make / Model / SN / Calibrated	Field Technician									
16	Building Pad/Slab: 75'Nx85'E of S.W. corner 3rd Lift			Instrotek / 3500 Xplorer / 4600 / 02/20/2022	Frank Velez Jr									
17	Building Pad/Slab: 60'Sx100'W of N.E. corner 3rd Lift			Instrotek / 3500 Xplorer / 4600 / 02/20/2022	Frank Velez Jr									
18	Building Pad/Slab: 35'Sx40'W of N.E. corner 3rd Lift			Instrotek / 3500 Xplorer / 4600 / 02/20/2022	Frank Velez Jr									
Remarks		Comments												
DP/MP: Density Pass / Moisture Pass		<small>Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency.</small>												

Respectfully Submitted by B2Z Engineering

Hector Cantu, Corporate Laboratory Manager



Soil Nuclear Gauge

B2Z Report No. BSL-15S
 Report Date: 05/09/2022
 Test Method: ASTM D 6938

Mission Office
 900 S Stewart Rd, Ste. 2
 Mission, TX 78572
 Phone: 956-585-3773

Client:

Hidalgo County
 100 North Closner
 Edinburg, TX 78539

Project:

4124
 Hidalgo County Health Dept Testing/Bio-Safety
 Laboratory
 Various
 Edinburg, TX

Test Results														
Test #	Retest Of	Test Date	Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)	In Place Moisture (%)	In Place Dry Density (pcf)	In Place Wet Density (pcf)	Probe Depth (In)	Percent Compaction	Min Comp. (%)	Remark
19		05/06/22	Select Backfill #2		CL/CH	14.3	111.9	14.8	111.1	127.5	6	99.3	95	DP/MP
20		05/06/22	Select Backfill #2		CL/CH	14.3	111.9	13.0	112.9	127.6	6	100.9	95	DP/MP
21		05/06/22	Select Backfill #2		CL/CH	14.3	111.9	12.4	108.8	122.3	6	97.2	95	DP/MP
22		05/06/22	Select Backfill #2		CL/CH	14.3	111.9	13.4	109.0	123.6	6	97.4	95	DP/MP
Test Information														
Test #	Test Location	Elevation	Reference	Make / Model / SN / Calibrated	Gauge	Field Technician								
19	Building Pad/Slab: 30'wx15'N of S.E. corner 4th Lift			Instrotek / 3500 Xplorer / 4600 / 02/20/2022		Sergio Navarro								
20	Building Pad/Slab: 25'Ex25'N of S.W. corner 4th Lift			Instrotek / 3500 Xplorer / 4600 / 02/20/2022		Sergio Navarro								
21	Building Pad/Slab: 45'Ex50'S of N.W. corner 4th Lift			Instrotek / 3500 Xplorer / 4600 / 02/20/2022		Sergio Navarro								
22	Building Pad/Slab: 30'Wx35'S of N.E. corner 4th Lift			Instrotek / 3500 Xplorer / 4600 / 02/20/2022		Sergio Navarro								
Remarks		Comments												
DP/MP: Density Pass / Moisture Pass		Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency.												

Respectfully Submitted by B2Z Engineering

Hector Cantu, Corporate Laboratory Manager



Soil Nuclear Gauge

B2Z Report No. BSL-16S
Report Date: 05/09/2022
Test Method: ASTM D 6938

Mission Office
 900 S Stewart Rd, Ste. 2
 Mission, TX 78572
 Phone: 956-585-3773

Client:
 Hidalgo County
 100 North Closner
 Edinburg, TX 78539

Project:
 4124
 Hidalgo County Health Dept Testing/Bio-Safety
 Laboratory
 Various
 Edinburg, TX

Test Results														
Test #	Retest Of	Test Date	Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)	In Place Moisture (%)	In Place Dry Density (pcf)	In Place Wet Density (pcf)	Probe Depth (in)	Percent Compaction	Min Comp. (%)	Remark
23		05/07/22	Select Backfill #2		CL/CH	14.3	111.9	13.6	108.8	123.6	6	97.2	95	DP/MP
24		05/07/22	Select Backfill #2		CL/CH	14.3	111.9	13.0	111.2	125.6	6	99.4	95	DP/MP
25		05/07/22	Select Backfill #2		CL/CH	14.3	111.9	14.7	106.8	122.5	6	95.4	95	DP/MP
26		05/07/22	Select Backfill #2		CL/CH	14.3	111.9	12.7	109.4	123.3	6	97.8	95	DP/MP
Test Information														
Test #	Test Location	Elevation	Reference	Gauge	Field Technician									
23	Building Pad/Slab: 50'Wx30'S of N.E. corner 5th Lift			Instrotek / 3500 Xplorer / 4507 / 01/25/2022	Sergio Navarro									
24	Building Pad/Slab: 40'Wx40'N of S.E. corner 5th Lift			Instrotek / 3500 Xplorer / 4507 / 01/25/2022	Sergio Navarro									
25	Building Pad/Slab: 40'Ex35'N of S.W. corner 5th Lift			Instrotek / 3500 Xplorer / 4507 / 01/25/2022	Sergio Navarro									
26	Building Pad/Slab: 55'Ex45'S of N.W. corner 5th Lift			Instrotek / 3500 Xplorer / 4507 / 01/25/2022	Sergio Navarro									
Remarks		Comments												
DP/MP: Density Pass / Moisture Pass		<small>Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency.</small>												

Respectfully Submitted by B2Z Engineering

Hector Cantu, Corporate Laboratory Manager

Test Results														
Test #	Retest Of	Test Date	Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)	In Place Moisture (%)	In Place Dry Density (pcf)	In Place Wet Density (pcf)	Probe Depth (in)	Percent Compaction	Min Comp. (%)	Remark
27		05/09/22	Select Backfill #2		CL/CH	14.3	111.9	15.6	108.8	125.8	6	97.2	95	DP/MP
28		05/09/22	Select Backfill #2		CL/CH	14.3	111.9	15.9	108.9	126.2	6	97.3	95	DP/MP
29		05/09/22	Select Backfill #2		CL/CH	14.3	111.9	12.6	106.3	119.7	6	95.0	95	DP/MP
30		05/09/22	Select Backfill #2		CL/CH	14.3	111.9	12.5	108.4	122.0	6	96.9	95	DP/MP
Test Information														
Test #	Test Location	Elevation	Reference	Gauge	Make / Model / SN / Calibrated	Field Technician								
27	Building Pad/Slab: 65°Sx70°W of N.W. corner 6th Lift			Instron	Instron / 3500 Xplorer / 4507 / 01/25/2022	Frank Velez Jr								
28	Building Pad/Slab: 40°N x 85°E of S.W. corner 6th Lift			Instron	Instron / 3500 Xplorer / 4507 / 01/25/2022	Frank Velez Jr								
29	Building Pad/Slab: 10°N x 30°W of S.E. corner 6th Lift			Instron	Instron / 3500 Xplorer / 4507 / 01/25/2022	Frank Velez Jr								
30	Building Pad/Slab: 25°S x 55°W of N.E. corner 6th Lift			Instron	Instron / 3500 Xplorer / 4507 / 01/25/2022	Frank Velez Jr								
Remarks		Comments												
DP/MP: Density Pass / Moisture Pass		Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency.												

Respectfully Submitted by BZZ Engineering



Hector Cantu, Corporate Laboratory Manager



Soil Nuclear Gauge

B2Z Report No. BSL-18S
 Report Date: 05/11/2022
 Test Method: ASTM D 6938

Mission Office
 900 S Stewart Rd, Ste. 2
 Mission, TX 78572
 Phone: 956-585-3773

Client:

Hidalgo County
 100 North Closner
 Edinburg, TX 78539

Project:

4124
 Hidalgo County Health Dept Testing/Bio-Safety
 Laboratory
 Various
 Edinburg, TX

Test Results														
Test #	Retest Of	Test Date	Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)	In Place Moisture (%)	In Place Dry Density (pcf)	In Place Wet Density (pcf)	Probe Depth (in)	Percent Compaction	Min Comp. (%)	Remark
31		05/10/22	Select Backfill #2		CL/CH	14.3	111.9	12.9	107.3	121.1	6	95.9	95	DP/MP
32		05/10/22	Select Backfill #2		CL/CH	14.3	111.9	13.9	108.7	123.8	6	97.1	95	DP/MP
33		05/10/22	Select Backfill #2		CL/CH	14.3	111.9	12.8	110.6	124.8	6	98.8	95	DP/MP
34		05/10/22	Select Backfill #2		CL/CH	14.3	111.9	12.6	109.7	123.5	6	98.0	95	DP/MP
Test Information														
Test #	Test Location	Elevation	Reference	Gauge	Field Technician									
31	Building Pad/Slab: 40'Nx90'E of S.W. corner 7th Final Lift			Instronk / 3500 Xplorer / 3727 / 01/25/2022	Frank Velez Jr									
32	Building Pad/Slab: 75'Sx55'E of N.W. corner 7th Final Lift			Instronk / 3500 Xplorer / 3727 / 01/25/2022	Frank Velez Jr									
33	Building Pad/Slab: 45'Sx45'W of N.E. corner 7th Final Lift			Instronk / 3500 Xplorer / 3727 / 01/25/2022	Frank Velez Jr									
34	Building Pad/Slab: 65'Nx70'W of S.E. corner 7th Final Lift			Instronk / 3500 Xplorer / 3727 / 01/25/2022	Frank Velez Jr									
Remarks		Comments												
DP/MP: Density Pass / Moisture Pass		Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. 31: Subcontractor Mario Solis present.												

Respectfully Submitted by B2Z Engineering

Hector Cantu, Corporate Laboratory Manager



Soil Nuclear Gauge

B2Z Report No. BSL-19S
 Report Date: 05/18/2022
 Test Method: ASTM D 6938

Mission Office
 900 S Stewart Rd, Ste. 2
 Mission, TX 78572
 Phone: 956-585-3773

Client:

Hidalgo County
 100 North Closner
 Edinburg, TX 78539

Project:

4124
 Hidalgo County Health Dept Testing/Bio-Safety
 Laboratory
 Various
 Edinburg, TX

Test Results														
Test #	Retest Of	Test Date	Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)	In Place Moisture (%)	In Place Dry Density (pcf)	In Place Wet Density (pcf)	Probe Depth (in)	Percent Compaction	Min Comp. (%)	Remark
35		05/18/22	Select Backfill #2		CL/CH	14.3	111.9	14.2	110.1	125.7	6	98.4	95	DP/MP
36		05/18/22	Select Backfill #2		CL/CH	14.3	111.9	13.6	110.0	125.0	6	98.3	95	DP/MP
Test Information											Gauge			
Test #	Test Location	Elevation	Reference	Make / Model / SN / Calibrated	Field Technician									
35	Utility Trench Backfill - Sanitary Sewer: 4" 16'Wx45'S of NE corner of Bldg. 1st Lift			Instrotek / 3500 Xplorer / 4015 / 01/25/2022	Manuel De Santiago									
36	Utility Trench Backfill - Sanitary Sewer: 4" 33'Wx22'S of NE corner of Bldg. 1st Lift			Instrotek / 3500 Xplorer / 4015 / 01/25/2022	Manuel De Santiago									
Remarks		Comments												
DP/MP: Density Pass / Moisture Pass		Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency.												

Respectfully Submitted by B2Z Engineering

Hector Cantu, Corporate Laboratory Manager

This report applies only to the standards or procedures indicated and to the sample(s) tested and/or observed and are not necessarily indicative of the qualities of apparently identical or similar products or procedures, nor do they represent an ongoing quality assurance program unless so noted. These reports are for the exclusive use of the addressed client and are not to be reproduced without written permission.



Soil Nuclear Gauge

BZZ Report No. BSL-20S
Report Date: 05/19/2022
Test Method: ASTM D 6938

Mission Office
900 S Stewart Rd, Ste. 2
Mission, TX 78572
Phone: 956-585-3773

Client:
Hidalgo County
100 North Closner
Edinburg, TX 78539

Project:
4124
Hidalgo County Health Dept Testing/Bio-Safety
Laboratory
Various
Edinburg, TX

Test Results														
Test #	Retest Of	Test Date	Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)	In Place Moisture (%)	In Place Dry Density (pcf)	In Place Wet Density (pcf)	Probe Depth (In)	Percent Compaction	Min Comp. (%)	Remark
37		05/19/22	Select Backfill #2		CL/CH	14.3	111.9	10.8	113.2	125.4	6	101.2	95	DP/MF
Test Information														
Test #	Test Location	Elevation	Reference	Make / Model / SN / Calibrated	Field Technician									
37	Utility Trench Backfill - Sanitary Sewer: 4" 16"Wx50"S of NE corner of Bldg. 2nd & Final Lift			Instrotek / 3500 Xplorer / 4015 / 01/25/2022	Manuel De Santiago									
Remarks														
DP/MF: Density Pass / Moisture Fail														
Comments														
Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency.														

Respectfully Submitted by BZZ Engineering

Hector Cantu, Corporate Laboratory Manager



Soil Nuclear Gauge

BZZ Report No. BSL-21S
Report Date: 05/19/2022
Test Method: ASTM D 6938

Mission Office
900 S Stewart Rd, Ste. 2
Mission, TX 78572
Phone: 956-585-3773

Client:

Hidalgo County
100 North Closner
Edinburg, TX 78539

Project:

4124
Hidalgo County Health Dept Testing/Bio-Safety
Laboratory
Various
Edinburg, TX

Test Results														
Test #	Retest Of	Test Date	Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)	In Place Moisture (%)	In Place Dry Density (pcf)	In Place Wet Density (pcf)	Probe Depth (in)	Percent Compaction	Min Comp. (%)	Remark
38	37	05/19/22	Select Backfill #2		CL/CH	14.3	111.9	12.4	114.7	128.9	6	102.5	95	DP/MP
39		05/19/22	Select Backfill #2		CL/CH	14.3	111.9	12.4	114.8	129.0	6	102.6	95	DP/MP
Test Information														
Test #	Test Location	Elevation	Reference	Gauge	Field Technician									
38	Utility Trench Backfill - Sanitary Sewer: 4" 16"Wx50"S of NE corner of Bldg. 2nd & Final Lift			Instrotek / 3500 Xplorer / 4015 / 01/25/2022	Manuel De Santiago									
39	Utility Trench Backfill - Sanitary Sewer: 4" 33"Wx35"S of NE corner of Bldg. 2nd & Final Lift			Instrotek / 3500 Xplorer / 4015 / 01/25/2022	Manuel De Santiago									
Remarks		Comments												
DP/MP: Density Pass / Moisture Pass		Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency.												

Respectfully Submitted by BZZ Engineering

Hector Cantu, Corporate Laboratory Manager