

REPORT OF FIELD MOISTURE - DENSITY TEST RESULTS

Date: July 1, 2016 Report No.: 41509
 Client: Webb County Contractor: Webb County
 Project: Old County Court in Downtown Technician: R. Hernandez
 Reference: Pavement Section - Fill Material Trans Depth: 8"

TEST NO.	TEST LOCATION	SOIL TYPE	LIFT NO./ ELEVATION	WET DENSITY (PCF)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	PERCENT COMPACTION (%)
1	15'S 15'W of the NEC from Parking Lot	655-001	1 st Lift	122.5	10.2	111.2	95.0 %

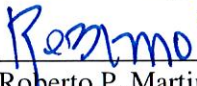
Conforming No.'s: _____ Non-conforming No.'s: 1
 A.S.: 3:30 P.M. D.S.: 3:45 P.M.

PERSON NOTIFIED OF RESULTS: Mr. Oscar Rodriguez with Webb County

REMARKS: Test 1 is non-conforming due to low moisture. Mr. Oscar Rodriguez with Webb County did not approve test results. Proctor used from Carrillo & Associates, Inc.

SOIL TYPE	OPTIMUM MOISTURE (%)	MAXIMUM DENSITY (PCF)	REQUIRED MOISTURE	PROCTOR (%)
655-001, Brown Silty Clayey Sand	16.8	117.0	14.8 - 18.8	95 %

LABORATORY TEST PROCEDURE: Tex-114-E
FIELD TEST PROCEDURE: ASTM D-6938

SUBMITTED BY:
Howland Engineering and Surveying Co.
 TBPE Firm Registration No. F-4097

 Roberto P. Martinez, Jr., P.E.
 Project Engineer



Distribution: (1) Above

REPORT OF FIELD MOISTURE - DENSITY TEST RESULTS

Date: July 7, 2016 Report No.: 41564
 Client: Webb County Contractor: Webb County
 Project: Old County Court in Downtown Technician: R. Hernandez
 Reference: Pavement Section - Fill Material Trans Depth: 8"

TEST NO.	TEST LOCATION	SOIL TYPE	LIFT NO./ ELEVATION	WET DENSITY (PCF)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	PERCENT COMPACTION (%)
1	15'S 15'W of the NEC from Parking Lot, Retest of 1 from Report # 41509 (7-1-2016)	655-001	1 st Lift	129.0	20.0	1078.5	91.9 %

Conforming No.'s: _____ Non-conforming No.'s: 1
 A.S.: 10:00 A.M. D.S.: 10:15 A.M.

PERSON NOTIFIED OF RESULTS: Mr. Oscar Rodriguez with Webb County

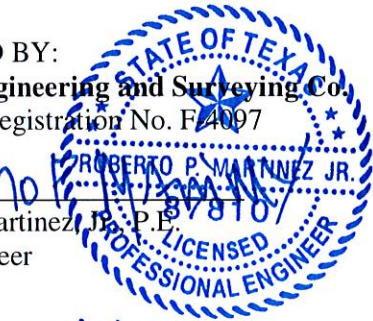
REMARKS: Test 1 is non-conforming due to low moisture. Mr. Oscar Rodriguez with Webb County did not approve test results. Proctor used from Carrillo & Associates, Inc.

SOIL TYPE	OPTIMUM MOISTURE (%)	MAXIMUM DENSITY (PCF)	REQUIRED MOISTURE	PROCTOR (%)
655-001, Brown Silty Clayey Sand	16.8	117.0	14.8 - 18.8	95 %

LABORATORY TEST PROCEDURE: Tex-114-E
FIELD TEST PROCEDURE: ASTM D-6938

SUBMITTED BY:
Howland Engineering and Surveying Co.
 TBPE Firm Registration No. F4097

Roberto P. Martinez Jr.
 Roberto P. Martinez Jr., P.E.
 Project Engineer



07.11.16

Distribution: (1) Above

REPORT OF FIELD MOISTURE - DENSITY TEST RESULTS

Date: July 7, 2016 Report No.: 41570
 Client: Webb County Contractor: Webb County
 Project: Old County Court in Downtown Technician: G. Alaniz
 Reference: Pavement Section - Fill Material Trans Depth: 8"

TEST NO.	TEST LOCATION	SOIL TYPE	LIFT NO./ ELEVATION	WET DENSITY (PCF)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	PERCENT COMPACTION (%)
1	15'S 15'W of the NEC from Parking Lot, Retest of 1 from Report # 41564 (7-7-2016)	655-001	1 st Lift	130.2	15.4	112.8	96.4 %
2	5'N 5' E of the SWC of the Parking Lot	655-001	1 st Lift	133.1	14.8	115.9	99.1 %

Conforming No.'s: 1 & 2 Non-conforming No.'s: _____
 A.S.: 1:30 P.M. D.S.: 1:45 P.M.

PERSON NOTIFIED OF RESULTS: Mr. Oscar Rodriguez with Webb County

REMARKS: Test results comply with specification noted below. Proctor used from Carrillo & Associates, Inc.

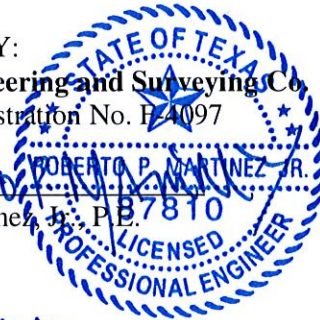
SOIL TYPE	OPTIMUM MOISTURE (%)	MAXIMUM DENSITY (PCF)	REQUIRED MOISTURE	PROCTOR (%)
655-001, Brown Silty Clayey Sand	16.8	117.0	14.8 - 18.8	95 %

LABORATORY TEST PROCEDURE: Tex-114-E

FIELD TEST PROCEDURE: ASTM D-6938

SUBMITTED BY:
Howland Engineering and Surveying Co.
 TBPE Firm Registration No. F-4097

Roberto P. Martinez
 Roberto P. Martinez, Jr. P.E. #7870
 Project Engineer



07.11.16

Distribution: (1) Above

REPORT OF FIELD MOISTURE - DENSITY TEST RESULTS

Date: July 12, 2016 Report No.: 41661
 Client: Webb County Contractor: Webb County
 Project: Old County Court in Downtown Technician: R. Hernandez
 Reference: Pavement Section - Fill Material Trans Depth: 8"

TEST NO.	TEST LOCATION	SOIL TYPE	LIFT NO./ ELEVATION	WET DENSITY (PCF)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	PERCENT COMPACTION (%)
	Parking Lot						
1	15'S 20'W of the NEC from Parking Lot	655-001	2 nd Lift	131.2	16.7	112.4	96.1 %
2	15'S 45'W of the NEC from Parking Lot	655-001	2 nd Lift	133.1	16.0	114.8	98.1 %
3	25'N 20'W of the SWC from Parking Lot	655-001	2 nd Lift	131.5	15.5	113.8	97.3 %

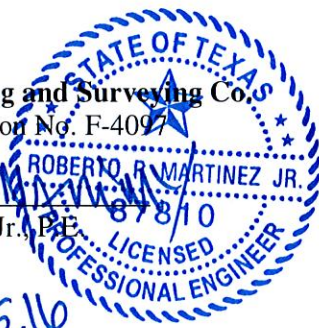
Conforming No.'s: 1 - 3 Non-conforming No.'s: _____
 A.S.: 2:30 P.M. D.S.: 2:45 P.M.

PERSON NOTIFIED OF RESULTS: Mr. Oscar Rodriguez with Webb County

REMARKS: Test results comply with specification noted below. Proctor used from Carrillo & Associates, Inc.

SOIL TYPE	OPTIMUM MOISTURE (%)	MAXIMUM DENSITY (PCF)	REQUIRED MOISTURE	PROCTOR (%)
655-001, Brown Silty Clayey Sand	16.8	117.0	14.8 - 18.8	95 %

LABORATORY TEST PROCEDURE: Tex-114-E
FIELD TEST PROCEDURE: ASTM D-6938

SUBMITTED BY:
Howland Engineering and Surveying Co.
 TBPE Firm Registration No. F-4097

Roberto P. Martinez Jr.
 Roberto P. Martinez, Jr.
 Project Engineer
 07.15.16

Distribution: (1) Above

REPORT OF FIELD MOISTURE - DENSITY TEST RESULTS

Date: July 14, 2016 Report No.: 41714
 Client: Webb County Contractor: Webb County
 Project: Old County Court in Downtown Technician: R. Hernandez
 Reference: Pavement Section - Fill Material Trans Depth: 8"

TEST NO.	TEST LOCATION	SOIL TYPE	LIFT NO./ ELEVATION	WET DENSITY (PCF)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	PERCENT COMPACTION (%)
Parking Lot							
1	15'S 10'W of the NEC from Parking Lot	655-001	3 rd Lift	133.9	16.7	114.8	98.1 %
2	35'S 30'W of the NEC from Parking Lot	655-001	3 rd Lift	130.9	17.0	111.9	95.6 %
3	10'S 15'E of the NWC from Parking Lot	655-001	3 rd Lift	131.5	14.9	114.4	97.8 %

Conforming No.'s: 1 - 3 Non-conforming No.'s: _____
 A.S.: 10:30 A.M. D.S.: 10:45 A.M.

PERSON NOTIFIED OF RESULTS: Mr. Oscar Rodriguez with Webb County

REMARKS: Test results comply with specification noted below. Proctor used from Carrillo & Associates, Inc.

SOIL TYPE	OPTIMUM MOISTURE (%)	MAXIMUM DENSITY (PCF)	REQUIRED MOISTURE	PROCTOR (%)
655-001, Brown Silty Clayey Sand	16.8	117.0	14.8 - 18.8	95 %

LABORATORY TEST PROCEDURE: Tex-114-E
FIELD TEST PROCEDURE: ASTM D-6938

SUBMITTED BY: **Howland Engineering and Surveying Co.**
 TBPE Firm Registration No. F-4097
Roberto P. Martinez Jr.
 Roberto P. Martinez Jr.
 Project Engineer
 07.18.16



Distribution: (1) Above

REPORT OF FIELD MOISTURE - DENSITY TEST RESULTS

Date: July 19, 2016 Report No.: 41792
 Client: Webb County Contractor: Webb County
 Project: Old County Court in Downtown Technician: R. Hernandez
 Reference: Pavement Section - Fill Material Trans Depth: 8"

TEST NO.	TEST LOCATION	SOIL TYPE	LIFT NO./ ELEVATION	WET DENSITY (PCF)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	PERCENT COMPACTION (%)
Parking Lot							
1	15'S 10'W of the NEC from Parking Lot	655-001	4 th Lift	122.8	16.8	105.1	89.8 %
2	10'S 35'W of the NEC from Parking Lot	655-001	4 th Lift	129.1	17.1	110.2	94.2 %
3	40'S 30'W of the NEC from Parking Lot	655-001	4 th Lift	113.6	15.4	98.4	84.1 %

Conforming No.'s: _____ Non-conforming No.'s: 1 - 3
 A.S.: 2:30 P.M. D.S.: 2:45 P.M.

PERSON NOTIFIED OF RESULTS: Mr. Oscar Rodriguez with Webb County

REMARKS: Test 1 - 3 are non-conforming due low compaction. Mr. Rodriguez did not approve test results. Proctor used from Carrillo & Associates, Inc.

SOIL TYPE	OPTIMUM MOISTURE (%)	MAXIMUM DENSITY (PCF)	REQUIRED MOISTURE	PROCTOR (%)
655-001, Brown Silty Clayey Sand	16.8	117.0	14.8 - 18.8	95 %

LABORATORY TEST PROCEDURE: Tex-114-E
FIELD TEST PROCEDURE: ASTM D-6938

SUBMITTED BY:
Howland Engineering and Surveying Co
 TBPE Firm Registration No. F-4097

Roberto P. Martinez, Jr.
 Roberto P. Martinez, Jr. P.E.
 Project Engineer

07.25.16

Distribution: (1) Above

REPORT OF FIELD MOISTURE - DENSITY TEST RESULTS

Date: July 19, 2016 Report No.: 41800
 Client: Webb County Contractor: Webb County
 Project: Old County Court in Downtown Technician: R. Hernandez
 Reference: Pavement Section - Fill Material Trans Depth: 8"

TEST NO.	TEST LOCATION	SOIL TYPE	LIFT NO./ ELEVATION	WET DENSITY (PCF)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	PERCENT COMPACTION (%)
	Parking Lot						
1	10'S 10'W of the NEC from Parking Lot, Retest of 1 from Report # 41792 (7-19-2016)	655-001	4 th Lift	126.4	15.9	109.0	93.2 %
2	15'S 30'W of the NEC from Parking Lot, Retest of 2 from Report # 41792 (7-19-2016)	655-001	4 th Lift	131.4	16.1	113.1	96.7 %
3	40'S 35'W of the NWC from Parking Lot, Retest of 3 from Report # 41792 (7-19-2016)	655-001	4 th Lift	122.5	16.5	105.2	89.9 %

Conforming No.'s: 2 Non-conforming No.'s: 1 & 3
 A.S.: 4:30 P.M. D.S.: 4:45 P.M.


PERSON NOTIFIED OF RESULTS: Mr. Oscar Rodriguez with Webb County

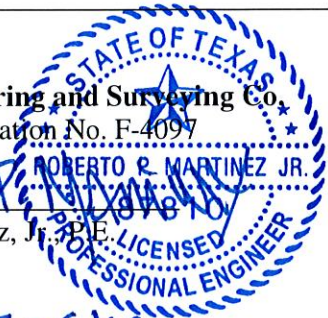
REMARKS: Test 1 & 3 are non-conforming due to low compaction. Mr. Rodriguez did not approve test results. Proctor used from Carrillo & Associates, Inc.

SOIL TYPE	OPTIMUM MOISTURE (%)	MAXIMUM DENSITY (PCF)	REQUIRED MOISTURE	PROCTOR (%)
655-001, Brown Silty Clayey Sand	16.8	117.0	14.8 - 18.8	95 %

LABORATORY TEST PROCEDURE: Tex-114-E

FIELD TEST PROCEDURE: ASTM D-6938

SUBMITTED BY:
Howland Engineering and Surveying Co.
 TBPE Firm Registration No. F-4097

 Roberto P. Martinez, Jr., P.E.
 Project Engineer



07.25.16

Distribution: (1) Above

REPORT OF FIELD MOISTURE - DENSITY TEST RESULTS

Date: August 4, 2016 Report No.: 42092
 Client: Webb County Contractor: Webb County
 Project: Old County Court in Downtown Technician: C. Narvaez
 Reference: Pavement Section - Fill Material Trans Depth: 8"

TEST NO.	TEST LOCATION	SOIL TYPE	LIFT NO./ ELEVATION	WET DENSITY (PCF)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	PERCENT COMPACTION (%)
Parking Lot							
1	18'S 10'W of the NEC from Parking Lot	1	4 th Lift	129.2	16.0	111.4	102.1 %
2	12'S 33'W of the NEC from Parking Lot	1	4 th Lift	128.9	15.4	111.7	102.4 %
3	42'S 30'W of the NEC from Parking Lot	1	4 th Lift	129.9	15.5	112.5	103.1 %

Conforming No.'s: 1 - 3 Non-conforming No.'s: _____
 A.S.: 11:30 A.M. D.S.: 12:00 P.M.

PERSON NOTIFIED OF RESULTS: Mr. Oscar Rodriguez with Webb County

REMARKS: Test results comply with specification noted below.

SOIL TYPE	OPTIMUM MOISTURE (%)	MAXIMUM DENSITY (PCF)	REQUIRED MOISTURE	PROCTOR (%)
1. Light Brown, Sandy Lean Clay	14.6	109.1	12.6 - 16.6	95 %

LABORATORY TEST PROCEDURE: ASTM D-698 Method A, Standard

FIELD TEST PROCEDURE: ASTM D-6938

SUBMITTED BY:
Howland Engineering and Surveying Co.
 TBPE Firm Registration No. F-4097
Roberto P. Martinez Jr.
 Roberto P. Martinez, Jr.
 Project Engineer



08.05.16

Distribution: (1) Above

REPORT OF FIELD MOISTURE - DENSITY TEST RESULTS

Date: August 9, 2016 Report No.: 42201
 Client: Webb County Contractor: Webb County
 Project: Old County Court in Downtown Technician: G. Alaniz
 Reference: Pavement Section - Fill Material Trans Depth: 8"

TEST NO.	TEST LOCATION	SOIL TYPE	LIFT NO./ ELEVATION	WET DENSITY (PCF)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	PERCENT COMPACTION (%)
Parking Lot							
1	18'S 6'W of the NEC from Parking Lot	1	5 th Lift	125.9	15.3	109.2	100.1 %
2	12'S 30'W of the NEC from Parking Lot	1	5 th Lift	119.5	14.7	104.2	95.5 %
3	33'S 35'W of the NEC from Parking Lot	1	5 th Lift	121.1	15.6	104.7	96.0 %

Conforming No.'s: 1 - 3 Non-conforming No.'s: _____
 A.S.: 10:30 A.M. D.S.: 11:00 A.M.

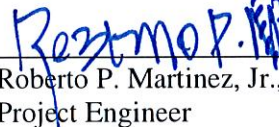
PERSON NOTIFIED OF RESULTS: Mr. Oscar Rodriguez with Webb County

REMARKS: Test results comply with specification noted below.

SOIL TYPE	OPTIMUM MOISTURE (%)	MAXIMUM DENSITY (PCF)	REQUIRED MOISTURE	PROCTOR (%)
1. Light Brown, Sandy Lean Clay	14.6	109.1	12.6 - 16.6	95 %

LABORATORY TEST PROCEDURE: ASTM D-698 Method A, Standard

FIELD TEST PROCEDURE: ASTM D-6938

SUBMITTED BY:
Howland Engineering and Surveying Co.
 TBPE Firm Registration No. F-4097

 Roberto P. Martinez, Jr., P.E.
 Project Engineer



08.11.16

Distribution: (1) Above

REPORT OF FIELD MOISTURE - DENSITY TEST RESULTS

Date: August 11, 2016 Report No.: 42252
 Client: Webb County Contractor: Webb County
 Project: Old County Court in Downtown Technician: M. Diaz
 Reference: Pavement Section - Fill Material Trans Depth: 8"

TEST NO.	TEST LOCATION	SOIL TYPE	LIFT NO./ ELEVATION	WET DENSITY (PCF)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	PERCENT COMPACTION (%)
Parking Lot							
1	20'S 6'W of the NEC from Parking Lot	1	6 th Lift	125.0	15.3	108.4	99.4 %
2	15'S 30'W of the NEC from Parking Lot	1	6 th Lift	122.2	15.7	105.6	96.8 %
3	30'S 35'W of the NEC from Parking Lot	1	6 th Lift	122.9	14.8	107.0	98.1 %

Conforming No.'s: 1 - 3 Non-conforming No.'s: _____
 A.S.: 10:30 A.M. D.S.: 10:45 A.M.

PERSON NOTIFIED OF RESULTS: Mr. Oscar Rodriguez with Webb County

REMARKS: Test results comply with specification noted below.

SOIL TYPE	OPTIMUM MOISTURE (%)	MAXIMUM DENSITY (PCF)	REQUIRED MOISTURE	PROCTOR (%)
1. Light Brown, Sandy Lean Clay	14.6	109.1	12.6 - 16.6	95 %

LABORATORY TEST PROCEDURE: ASTM D-698 Method A, Standard

FIELD TEST PROCEDURE: ASTM D-6938

SUBMITTED BY:
Howland Engineering and Surveying Co
 TBPE Firm Registration No. F-4097

Roberto P. Martinez Jr.
 Roberto P. Martinez, Jr. P.E. 87870
 Project Engineer



08.15.16

Distribution: (1) Above

REPORT OF FIELD MOISTURE - DENSITY TEST RESULTS

Date: August 30, 2016 Report No.: 42469
 Client: Webb County Contractor: Webb County
 Project: Old County Court in Downtown Technician: G. Alaniz
 Reference: Pavement Section - Fill Material Trans Depth: 8"

TEST NO.	TEST LOCATION	SOIL TYPE	LIFT NO./ ELEVATION	WET DENSITY (PCF)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	PERCENT COMPACTION (%)
Parking Lot							
1	21'S 7'W of the NEC from Parking Lot	1	7 th Lift	126.8	15.6	109.6	100.5 %
2	12'S 30'W of the NEC from Parking Lot	1	7 th Lift	129.6	15.4	112.3	102.9 %
3	33'S 34'W of the NEC from Parking Lot	1	7 th Lift	126.1	15.0	109.6	100.5 %

Conforming No.'s: 1 - 3 Non-conforming No.'s: _____
 A.S.: 10:30 A.M. D.S.: 10:45 A.M.

PERSON NOTIFIED OF RESULTS: Mr. Oscar Rodriguez with Webb County

REMARKS: Test results comply with specification noted below.

SOIL TYPE	OPTIMUM MOISTURE (%)	MAXIMUM DENSITY (PCF)	REQUIRED MOISTURE	PROCTOR (%)
1. Light Brown, Sandy Lean Clay	14.6	109.1	12.6 - 16.6	95 %

LABORATORY TEST PROCEDURE: ASTM D-698 Method A, Standard

FIELD TEST PROCEDURE: ASTM D-6938

SUBMITTED BY:
Howland Engineering and Surveying Co.
 TBPE Firm Registration No. F-4097

Roberto P. Martinez Jr.
 ROBERTO P. MARTINEZ JR.
 Roberto P. Martinez, Jr., P.E. 810
 Project Engineer



Distribution: (1) Above

REPORT OF FIELD MOISTURE - DENSITY TEST RESULTS

Date: August 31, 2016 Report No.: 42491
 Client: Webb County Contractor: Webb County
 Project: Old County Court in Downtown Technician: R. Hernandez
 Reference: Pavement Section - Fill Material Trans Depth: 8"

TEST NO.	TEST LOCATION	SOIL TYPE	LIFT NO./ ELEVATION	WET DENSITY (PCF)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	PERCENT COMPACTION (%)
	Parking Lot						
1	10'S 15'E of the NWC from Parking Lot	1	8 th Final	126.0	16.2	108.4	99.4 %
2	15'S 45"E of the NWC from Parking Lot	1	8 th Final	126.8	16.0	109.3	100.2 %
3	60'S 35'E of the NWC from Parking Lot	1	8 th Final	120.5	14.3	105.4	96.6 %

Conforming No.'s: 1 - 3 Non-conforming No.'s: _____
 A.S.: 2:30 P.M. D.S.: 2:45 P.M.


PERSON NOTIFIED OF RESULTS: Mr. Oscar Rodriguez with Webb County

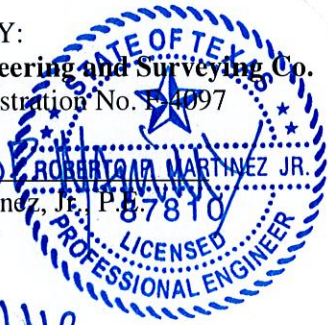
REMARKS: Test results comply with specification noted below.

SOIL TYPE	OPTIMUM MOISTURE (%)	MAXIMUM DENSITY (PCF)	REQUIRED MOISTURE	PROCTOR (%)
1. Light Brown, Sandy Lean Clay	14.6	109.1	12.6 - 16.6	95 %

LABORATORY TEST PROCEDURE: ASTM D-698 Method A, Standard

FIELD TEST PROCEDURE: ASTM D-6938

SUBMITTED BY:
Howland Engineering and Surveying Co.
 TBPE Firm Registration No. F-4097

ROBERTO P. MARTINEZ JR.
 Roberto P. Martinez, Jr., P.E.
 Project Engineer



08.31.16

Distribution: (1) Above

MOISTURE-DENSITY RELATIONSHIP, ATTERBERG LIMITS & SIEVE ANALYSIS

Date:	July 25, 2016	Report No.:	41856
Client:	Webb County	Project:	Old County Court in Downtown
Attn:	Mr. Jose Luis Rodriguez, Road and Bridge Superintendent	Location:	Laredo, Texas
Contractor:	Webb County	Technician:	J. Reyes

The sample description below was obtained for laboratory Moisture-Density Relationship (Proctor) Atterberg Limits & Sieve Analysis determination.

Sample Description:	Light Brown, Sandy Lean Clay
USCS Classification:	CL
Sample Location:	Sample #1 – Stockpile at the Customs and Border Patrol Ranch on HWY 59. Material imported from Los Altos Subdivision on Hwy 359. Material to be used as fill material. Sampled 07-21-16.

The above material was tested in general accordance with ASTM D-698 Method A, Standard. The results of the test procedure are shown below. The Moisture-Density curve is available upon request.

Maximum Dry Density:	109.1 pcf
Optimum Moisture Content:	14.6 %

The Atterberg Limits of this material were determined in general accordance with ASTM D-4318 test procedures. The test results are shown below.

Liquid Limit:	34
Plastic Limit:	17
Plasticity Index:	17

The Percent Passing the No. 200 Sieve was conducted in general accordance with ASTM D-1140 laboratory test procedures and the test result is shown below.

Percent Passing the No. 200 Sieve:	59.8 %
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Submitted By:
Howland Engineering and Surveying Co.
TBPE Firm Registration No. F-4097

Roberto P. Martinez Jr.
Roberto P. Martinez, Jr., P.E.
Project Engineer



07.26.16

Distribution: (1) Above