

R. W. Gillespie & Associates, Inc.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
200 Int'l Drive, Suite 170, Portsmouth, NH 03801 603-427-0244

LETTER OF TRANSMITTAL

City of Portland, Portland Int. Jetport
1001 Westbrook Street
Portland, Maine 04102

Date:	June 28, 2010	Project No.:	557-14
Attention:	Mr. Cuyler Feagles (cmf@portlandmaine.gov)		
Re:	In-Place Density Testing Terminal Enhancement, Portland Int. Jetport Portland, Maine		

We are sending you attached In-Place Density Test Results.

Date(s) Performed:

June 14 through 19, 2010

Test (s) Performed

In-Place Density Testing - Nuclear Method ASTM D6938



Meets Specification



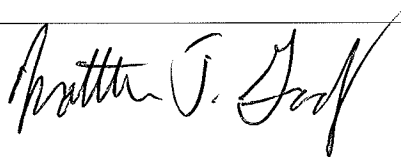
Selected Tests Do Not Meet Specification - Noted with an *

Note: Materials descriptions and maximum laboratory dry density values were transmitted under separate cover and are referenced in the attached summaries by the material number.

Remarks:

Copy To: Roy Williams: rsw@portlandmaine.gov
Jim Stanislaski: jim_stanislaski@gensler.com
Cliff Takara: clifford_takara@gensler.com
Lacey Fogg: Lacey.Fogg@amec.com
Mike Fusco: mfusco@tcco.com
Shaun Winner: swinner@tcco.com
Phil Coleman: pcoleman@tcco.com
Elizabeth O'Toole: eotoole@tcco.com
TMM@portlandmaine.gove
ldobson@portlandmaine.gov
bcybulski@tcco.com
rdixon@tcco.com
Geoff Mitchell: gemitchell@tcco.com

Signed:



SUMMARY OF IN-PLACE DENSITIES - ASTM D6938
 TERMINAL ENHANCEMENT AT THE PORTLAND INTERNATIONAL AIRPORT
 PORTLAND, MAINE
 RWG&A PROJECT NO. 557-14

Lab No.	Soil Description	ASTM D1557 Max Density	ASTM D1557 Opt. Moisture
11177	B-5 Subbase Gravel	134.8	6.4
11194	Poorly Graded Sand	111.0	11

Client: City of Portland
 Test Date: 6/14/2010
 Technician: MJK
 Gauge Model/Serial Number: L 500

JUN 28 2010


Report Issue Date:

Test No.	Location 12" Water Main	Elevation	ASTM D6938 Dry Density (pcf)	ASTM D6938 Water Content (%)	Percent of Max. (%)	Lab. No.
1	STA 5+50	SG -1'	129.5	5	96	11177
2	STA 5+20	SG -1'	133.1	4	99	11177
3	STA 4+90	SG -1'	127.8	4	95	11177
4	STA 5+50	SG -1'	129.3	4	96	11177
5	STA 5+20	SG -1'	131.3	4	97	11177
6	STA 4+90	SG -1'	128.7	5	96	11177

Remarks:

- FG = Finish Grade
- FF = Finish Floor
- FGB = Finish Grade of Base
- FGSB = Finish Grade of Subbase
- FGSG = Finish Grade of Subgrade

- TOW = Top of Foundation Wall
- BOF = Bottom of Footing
- SG = Subgrade

Checked by: 

SUMMARY OF IN-PLACE DENSITIES - ASTM D6938
 TERMINAL ENHANCEMENT AT THE PORTLAND INTERNATIONAL JETPORT
 PORTLAND, MAINE
 RWG&A PROJECT NO. 557-14

Client: City of Portland
 Test Date: 6/15/2010
 Technician: MJK
 Gauge Model/Serial Number: L 500

Lab No.	Soil Description	ASTM D1557 Max Density	ASTM D1557 Opt. Moisture
11177	B-5 Subbase Gravel	134.8	6.4
11194	Poorly Graded Sand	111.0	11

Report Issue Date: **JUN 28 2010**

Test No.	Location	Elevation	ASTM D6938 Dry Density (pcf)	ASTM D6938 Water Content (%)	Percent of Max. (%)	Lab. No.
1	Retaining Wall STA 4+96	BOW +3'	130.4	4	97	11177
2	Retaining Wall STA 5+20	BOW +3'	128.3	3	95	11177
3	Retaining Wall STA 5+20	BOW +1.5'	131.4	4	98	11177
4	WATER MAIN -	FG -5.5'	103.7	5	93	11194
5	WATER MAIN -	FG -5.5'	103.3	4	93	11194
6	DRAIN LINE -	TOP +2'	105.0	3	95	11194
7	DRAIN LINE -	TOP +2'	106.7	5	96	11194
8	Retaining Wall STA 5+50	BOW +1.5'	127.4	4	95	11177
9	WATER MAIN -	FG -5'	102.7	4	93	11194
10	WATER MAIN -	FG -5'	103.5	4	93	11194

Remarks:

FG = Finish Grade
 FF = Finish Floor
 FGB = Finish Grade of Base
 FGSB = Finish Grade of Subbase
 FGSG = Finish Grade of Subgrade

TOW = Top of Foundation Wall
 BOW = Bottom of Wall
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Checked by: *Arthur J. D'Zup*

SUMMARY OF IN-PLACE DENSITIES - ASTM D6938
 TERMINAL ENHANCEMENT AT THE PORTLAND INTERNATIONAL AIRPORT
 PORTLAND, MAINE
 RWG&A PROJECT NO. 557-14

Client: City of Portland
 Test Date: 6/16/2010
 Technician: MJK
 Gauge Model/Serial Number: L 500

Lab No.	Soil Description	ASTM D1557 Max Density	ASTM D1557 Opt. Moisture
11177	B-5 Subbase Gravel	134.8	6.4
11194	Poorly Graded Sand	111.0	11.4

Report Issue Date: **JUN 28 2010**

Test No.	Location	Elevation	ASTM D6938 Dry Density (pcf)	ASTM D6938 Water Content (%)	Percent of Max. (%)	Lab. No.
1	Retaining Wall STA 5+90	BOW +1.5'	128.8	4	96	11177
2	Retaining Wall STA 5+50	BOW +3'	127.7	3	95	11177
3	5' North of hydrant by electric room	FG -5.5'	102.8	4	93	11194
4	Retaining Wall STA 4+50	BOW +1.5'	128.1	5	95	11177
5	Retaining Wall STA 5+90	BOW +3'	134.8	5	100+	11177
6	12" water main - @ North side of jog in line	FG -5.0'	110.5	8	100	11194
7	Retaining Wall STA 4+55	BOW +3'	134.4	5	100	11177
8	12" Water Main - 20' North of jog in line	FG -6.0'	105.4	11	95	11194
9	12" Water Main - middle of jog in line	FG -4.0'	133.1	5	100+	11280*
10	12" water main - @ North side of jog in line	FG -4.0'	109.1	8	98	11194
11	12" Water Main - 20' North of jog in line	FG -5.0'	104.3	11	94	11194
12	12" Water Main - 40' North of jog in line	FG -6.0'	105.2	5	95	11194

Remarks: * On site material similar to 11280

Tests reflecting Percent of Maximum Density less than 95% were taken on lifts 3 feet or greater below subgrade, and not under building structures.

- FG = Finish Grade
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- FGSG = Finish Grade of Subgrade

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11177	B-5 Subbase Gravel	134.8	6.4
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Client: City of Portland
 Test Date: 6/16/2010
 Technician: MJK
 Gauge Model/Serial Number: L 500

JUN 28 2010

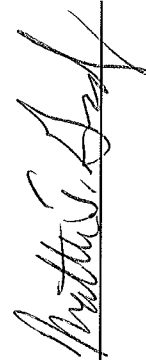
Report Issue Date:

Test No.	Location	Elevation	ASTM D6938 Dry Density (pcf)	ASTM D6938 Water Content (%)	Percent of Max. (%)	Lab. No.
13	12" water main - @ North side of jog in line	SG -3'	102.7	11	93	11194
14	12" Water Main - 20' North of jog in line	SG -3'	104.6	6	94	11194
15	12" Water Main - 40' North of jog in line	SG -5'	107.6	5	97	11194
16	12" Water Main - 40' North of jog in line	SG -4'	109.5	9	99	11194
17	12" Water Main - 60' North of jog in line	SG -4'	107.2	9	97	11194
18	12" Water Main - 80' North of jog in line	SG -5'	102.8	4	93	11194
19	12" Water Main - 20' North of jog in line	SG -2'	114.2	7	100+	11194
20	12" water main - @ North side of jog in line	SG -2'	106.0	12	96	11194
21	12" Water Main - 80' North of jog in line	SG -4'	105.6	7	95	11194
22	12" water main - @ North side of jog in line	SG -1'	105.4	11	95	11194
23	12" Water Main - 20' North of jog in line	SG -1'	105.8	11	95	11194
24	12" Water Main - 40' North of jog in line	SG -1'	107.7	8	97	11194

Remarks: Tests reflecting Percent of Maximum Density less than 95% were taken on lifts 3 feet or greater below subgrade, and not under building structures.

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 FGB = Finish Grade of Base
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Report Issue Date:

Lab No.	Soil Description	ASTM D1557 Max Density	ASTM D1557 Opt. Moisture
11177	B-5 Subbase Gravel	134.8	6.4
11194	Poorly Graded Sand	111.0	11

Test No.	Location	Elevation	ASTM D6938 Dry Density (pcf)	ASTM D6938 Water Content (%)	Percent of Max. (%)	Lab. No.
25	12" Water Main - 60' North of jog in line	SG -3'	106.3	9	96	11194
26	12" Water Main - 80' North of jog in line	SG -3'	107.0	8	96	11194
27	12" Water Main - 80' North of jog in line	SG -1'	105.2	11	95	11194
28	12" Water Main - 80' North of jog in line	SG -1'	107.4	7	97	11194
29	15' SE of DHM OA-5	FG -3'	106.2	10	96	11194
30	35' SE of DHM OA-5	FG -3'	106.2	8	96	11194
31	10' SE of DHM OA-5	FG -3'	108.1	7	97	11194
32	30' SE of DHM OA-5	FG -3'	106.8	9	96	11194

Remarks: Tests reflecting Percent of Maximum Density less than 95% were taken on lifts 3 feet or greater below subgrade, and not under building structures.

FG = Finish Grade
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Lab No.	Soil Description	ASTM D1557 Max Density	ASTM D1557 Opt. Moisture
11177	B-5 Subbase Gravel	134.8	6.4
11194	Poorly Graded Sand	111.0	11.4

Client: City of Portland
 Test Date: 6/17/2010
 Technician: MJK
 Gauge Model/Serial Number: L 500

JUN 28 2010

Report Issue Date:

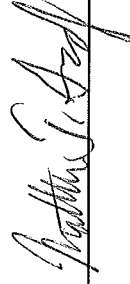
Test No.	Location	Elevation	ASTM D6938 Dry Density (pcf)	ASTM D6938 Water Content (%)	Percent of Max. (%)	Lab. No.
1	Retaining Wall STA 4+80	BOW +4.5'	132.3	4	98	11177
2	Retaining Wall STA 5+00	BOW +4.5'	128.7	5	96	11177
3	Retaining Wall STA 5+50	BOW +4.5'	131.0	3	97	11177
4	Retaining Wall STA 4+80	BOW +6'	128.7	5	96	11177
5	Retaining Wall STA 5+00	BOW +6'	127.7	5	95	11177
6	Retaining Wall STA 5+50	BOW +6'	132.5	4	98	11177
7	12" Water Main - 110' N of jog in line	FG -4.5'	103.0	5	93	11194
8	12" Water Main - 110' N of jog in line	FG -3.5'	104.9	5	95	11194
9	50' SE of DMH OA-5	FG -3'	106.9	4	96	11194
10	12" Water Main - 130' N of jog in line	FG -4'	102.7	4	93	11194
11	12" Water Main - 150' N of jog in line	FG -4'	103.1	4	93	11194
12	12" Water Main - 110' N of jog in line	FG -2.5'	109.9	5	99	11194

Remarks: Tests reflecting Percent of Maximum Density less than 95% were taken on lifts 3 feet or greater below subgrade, and not under building structures.

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Client: City of Portland
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 Technician: MJK
 Gauge Model/Serial Number: L 500

Lab No.	Soil Description	ASTM D1557 Max Density	ASTM D1557 Opt. Moisture
11177	B-5 Subbase Gravel	134.8	6.4
11194	Poorly Graded Sand	111.0	11

Report Issue Date: **JUN 28 2010**

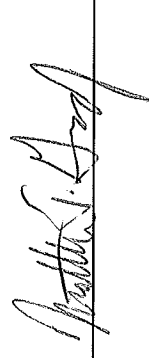
Test No.	Location	Elevation	ASTM D6938 Dry Density (pcf)	ASTM D6938 Water Content (%)	Percent of Max. (%)	Lab. No.
13	12" Water Main - 110' N of jog in line	FG -1'	105.5	6	95	11194
14	12" Water Main - 130' N of jog in line	FG -2'	104.9	5	95	11194
15	12" Water Main - 150' N of jog in line	FG -2'	105.7	5	95	11194
16	60' SE of DMH OA-5	FG -3'	105.8	5	95	11194
17	80' SE of DMH OA-5	FG -3'	108.5	4	98	11194
18	100' SE of DMH OA-5	FG -2'	105.7	4	95	11194
19	12" Water Main - At 6" branch off	FG -5'	105.8	4	95	11194

Remarks: Tests reflecting Percent of Maximum Density less than 95% were taken on lifts 3 feet or greater below subgrade, and not under building structures.

FG = Finish Grade
 FF = Finish Floor
 FGB = Finish Grade of Base
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SUMMARY OF IN-PLACE DENSITIES - ASTM D6938
 TERMINAL ENHANCEMENT AT THE PORTLAND INTERNATIONAL JETPORT
 PORTLAND, MAINE
 RWG&A PROJECT NO. 557-14

Page 1 of 2

Client: City of Portland
 Test Date: 6/18/2010
 Technician: MJK
 Gauge Model/Serial Number: L 500

Report Issue Date: **JUN 28 2010**

Lab No.	Soil Description	ASTM D1557 Max Density	ASTM D1557 Opt. Moisture
11177	B-5 Subbase Gravel	134.8	6.4
11194	Poorly Graded Sand	111.0	11

Test No.	Location	Elevation	ASTM D6938 Dry Density (pcf)	ASTM D6938 Water Content (%)	Percent of Max. (%)	Lab. No.
1	12" water main at 6" branch	FG -4'	106.3	4	96	11194
2	100' SE of DMH OA-5	FG -3'	103.7	4	95	11194
3	120' SE of DMH OA-5	FG -3'	106.1	4	96	11194
4	6" Line off of water main - 30' south of junction	FG -4'	107.2	5	97	11194
5	140' SE of DMH OA-5	FG -3'	106.0	4	95	11194
6	6" Line off of water main - 30' south of junction	FG -3'	107.3	4	97	11194
7	160' SE of DMH OA-5	FG -3'	105.2	3	95	11194
8	6" Line off of water main - 30' south of junction	FG -2'	107.2	5	97	11194
9	180' SE of DMH OA-5	FG -3'	104.9	5	95	11194
10	200' SE of DMH OA-5	FG -3'	105.4	4	95	11194
11	50' south of 6" junction with 12" main	FG -4'	106.5	4	96	11194
12	50' south of 6" junction with 12" main	FG -2'	106.2	4	96	11194
13	At junction of 12" water main and 6" line	FG -1'	106.3	5	96	11194

Remarks:

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 FF = Finish Floor
 FGB = Finish Grade of Base
 FGSB = Finish Grade of Subbase
 FGSG = Finish Grade of Subgrade

TOW = Top of Foundation Wall
 BOW = Bottom of Wall
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Checked by:



R. W. Gillespie Associates, Inc.
 Corporate Office 86 Industrial Park Road, Ste. 4, Saco, ME 04072
 Branch Office 200 International Drive, Ste. 170, Portsmouth, NH 03801

SUMMARY OF IN-PLACE DENSITIES - ASTM D6938
 TERMINAL ENHANCEMENT AT THE PORTLAND INTERNATIONAL JETPORT
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Client: City of Portland
 Test Date: 6/18/2010
 Technician: MJK
 Gauge Model/Serial Number: L 500

Lab No.	Soil Description	ASTM D1557 Max Density	ASTM D1557 Opt. Moisture
11177	B-5 Subbase Gravel	134.8	6.4
11194	Poorly Graded Sand	111.0	11

Report Issue Date: **JUN 28 2010**

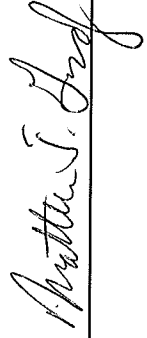
Test No.	Location	Elevation	ASTM D6938 Dry Density (pcf)	ASTM D6938 Water Content (%)	Percent of Max. (%)	Lab. No.
14	12" water main intersection with 3" & 4" force main	SG -3'	103.7	4	93	11194
15	12" water main intersection with 3" & 4" force main	SG -1'	106.1	4	96	11194
16	Midway between DMH OA-22 and CB OA-9	TOP +2'	107.2	2	97	11194
17	20' NW of 6" branch off of 12" water main	FG -5'	106.0	4	96	11194
18	40' NW of CB OA-13	SG -2'	107.3	3	97	11194
19	20' NW of CB OA-13	SG -2'	105.2	3	95	11194
20	20' NW of 6" branch off of 12" water main	FG -4'	107.2	4	97	11194
21	50 yd. NW of CB OA-13	SG	104.9	5	95	11194
22	40 yd. NW of CB OA-13	SG	105.4	4	95	11194
23	30 yd. NW of CB OA-13	SG	106.5	4	96	11194
24	20 yd. NW of CB OA-13	SG	106.2	4	96	11194
25	20' NW of 6" branch off of 12" water main	FG -3'	106.4	3	96	11194
26	10' NW of 6" branch off of 12" water main	FG -2'	105.0	4	95	11194

Remarks:

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 TERMINAL ENHANCEMENT AT THE PORTLAND INTERNATIONAL JETPORT
 PORTLAND, MAINE
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Client: City of Portland
 Test Date: 6/19/2010
 Technician: MJK
 Gauge Model/Serial Number: L 500

Lab No.	Soil Description	ASTM D1557 Max Density	ASTM D1557 Opt. Moisture
11151		133.0	7.3
11194	Poorly Graded Sand	111.0	11.4

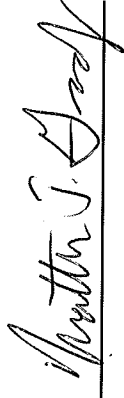
Report Issue Date: **JUN 28 2010**

Test No.	Location	Elevation	ASTM D6938 Dry Density (pcf)	ASTM D6938 Water Content (%)	Percent of Max. (%)	Lab. No.
1	Drain line - 10' NW of CB OA-13	SG -1'	112.7	9	100+	11194
2	Drain line - 10' NW of CB OA-13	SG	112.6	7	100+	11194
3	Water Main -	FG -5'	103.1	11	93	11194
4	Water Main -	FG -4'	108.1	6	97	11194
5	Water Main -	FG -5'	105.1	7	95	11194
6	North corner of footing at XD.7/Y8.5	TOF	129.2	4	97	11151
7	Water Main -	FG -4.5'	105.1	10	95	11194
8	NW side of footing at XD.7/Y7.5	TOF +1'	126.4	4	95	11151
9	East corner of footing at XD.7/Y7.5	TOF +1'	126.1	4	95	11151
10	NE side of footing at XD.7/Y6.5	TOF +1'	126.3	4	95	11151
11	Water Main -	FG -4.5'	105.8	9	95	11194
12	East side of footing at XD.7/Y8.5	TOF +1'	130.9	4	98	11151
13	10' East of 1st elbow in 6" water line	FG -4.5	103.1	9	93	11194
14	25' East of 1st elbow in 6" water line	FG -2'	107.5	11	97	11194

Remarks: Tests reflecting Percent of Maximum Density less than 95% were taken on lifts 3 feet or greater below subgrade, and not under building structures.

FG = Finish Grade
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 PORTLAND, MAINE
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Client: City of Portland
 Test Date: 6/19/2010
 Technician: MJK
 Gauge Model/Serial Number: L 500

Lab No.	Soil Description	ASTM D1557 Max Density	ASTM D1557 Opt. Moisture
11177	B-5 Subbase Gravel	134.8	6.4
11194	Poorly Graded Sand	111.0	11

Report Issue Date: **JUN 28 2010**

Test No.	Location	Elevation	ASTM D6938 Dry Density (pcf)	ASTM D6938 Water Content (%)	Percent of Max. (%)	Lab. No.
15	50' east of 1st elbow in 6" water line	FG -2'	110.6	11	100	11194
16	10' east of 1st elbow in 6" water line	FG -2'	106.3	7	96	11194
17	SE corner of footing at XD.7/Y8.5	TOF +1'	126.4	5	95	11151
18	East side of footing at XD.7/Y7.5	TOF +2'	128.9	6	97	11151
19	North corner of footing at XD.7/Y6.5	TOF +2'	126.3	6	95	11151
20	North corner of footing at XD.7/Y8.5	TOF +2'	125.7	5	95	11151
21	East corner of footing at XD.7/Y6.5	TOF +2'	128.0	6	96	11151
22	50' east of 1st elbow in 6" water line	SG	105.4	8	95	11194
23	25' east of 1st elbow in 6" water line	SG	106.4	6	96	11194
24	10' east of 1st elbow in 6" water line	SG	107.2	8	97	11194
25	North corner of footing at XD.7/Y5.5	TOF +1'	126.4	5	95	11151
26	East corner of footing at XD.7/Y5.5	TOF +2'	127.1	4	96	11151
27	East corner of footing at XD.7/Y8.5	TOF +2'	133.8	6	100	11151

Remarks: Tests reflecting Percent of Maximum Density less than 95% were taken on lifts 3 feet or greater below subgrade, and not under building structures.

FG = Finish Grade
 FF = Finish Floor
 FGB = Finish Grade of Base
 FGSB = Finish Grade of Subbase
 FGSG = Finish Grade of Subgrade

TOW = Top of Foundation Wall
 BOW = Bottom of Wall
 BOF = Bottom of Footing
 SG = Subgrade

Matthew J. Jay
 Checked by: