

**CLIENT:** Ludlow Construction Co., Inc.

19 Carmelina's Circle Ludlow, MA 01056 Attn: Mr. Mike Pio **PROJECT:** Durham Meadows Waterline

Durham, CT

**DATE:** May 11, 2020 **REPORT #:** 19-75-012-057 Page 1 of 10

**General Location:** South Main Street (Route 17), Waterline Trench (Station #184+15- Station #186+90)

Field Rep: Stephen Devlin

**General Contractor:** Ludlow Construction Co., Inc. **Earthwork Contractor:** Ludlow Construction Co., Inc.

Air Temp: 55°F
Weather: Overcast
Soil ID#: 3519-592

Soil Type: Light Gray Gravel w/ Sand & Silt

Proctor Sample Source: Haynes Group

Proctor Value: 141.4 lbs/ft<sup>3</sup> Optimum Moisture: 4.6%

**Gauge Type:** Troxler 3430 **Required Compaction:** 95.0%

TEST	DEPTH/ELEV.	MOISTURE	DRY DENSITY	COMPACTION
NUMBER	(in/ft)	(%)	(pcf)	(%)
1	6"/ 3.5' BFG	3.3%	136.0	96.2%
LOCATION:	Station #184+30			
2	6"/ 2' 8"BFG	3.8%	135.0	95.5%
LOCATION:	Station #184+25			
3	6"/ 2.0' BFG	4.6%	138.8	98.2%
LOCATION:	Station #184+35			
4	6"/ 3.5' BFG	5.2%	137.3	97.1%
LOCATION:	Station #184+55			
5	6"/ 2' 8" BFG	4.7%	136.7	96.7%
LOCATION:	Station #184+60			
6	6"/ 2.0' BFG	4.9%	139.1	98.4%
LOCATION:	Station #184+60			
7	6"/ 3.5' BFG	4.4%	134.7	95.3%
LOCATION:	Station #184+85			
8	6"/ 2' 8" BFG	4.2%	135.7	96.0%
LOCATION:	Station #184+80			



**CLIENT:** Ludlow Construction Co., Inc.

19 Carmelina's Circle Ludlow, MA 01056 Attn: Mr. Mike Pio **PROJECT:** Durham Meadows Waterline

Durham, CT

**DATE:** May 11, 2020 **REPORT #:** 19-75-012-057 Page 2 of 10

**General Location:** South Main Street (Route 17), Waterline Trench (Station #184+15- Station #186+90)

Field Rep: Stephen Devlin

**General Contractor:** Ludlow Construction Co., Inc. **Earthwork Contractor:** Ludlow Construction Co., Inc.

Air Temp: 55°F
Weather: Overcast
Soil ID#: 3519-592

Soil Type: Light Gray Gravel w/ Sand & Silt

Proctor Sample Source: Haynes Group

Proctor Value: 141.4 lbs/ft³ Optimum Moisture: 4.6% Gauge Type: Troxler 3430 Required Compaction: 95.0%

TEST	DEPTH/ELEV.	MOISTURE	DRY DENSITY	COMPACTION
NUMBER	(in/ft)	(%)	(pcf)	(%)
9	6"/ 2.0' BFG	4.3%	134.8	95.3%
LOCATION:	Station #184+90			
10	6"/ 3.5' BFG	4.0%	136.5	96.5%
LOCATION:	Station #185+00			
11	6"/ 2' 8" BFG	4.1%	137.6	97.3%
LOCATION:	Station #185+10			
12	6"/ 2.0' BFG	4.1%	135.1	95.5%
LOCATION:	Station #185+05			
13	6"/ 3.5' BFG	3.6%	135.7	96.0%
LOCATION:	Station #185+30			
14	6"/ 2' 8" BFG	3.5%	137.4	97.2%
LOCATION:	Station #185+35			
15	6"/ 2.0' BFG	4.0%	138.1	97.7%
LOCATION:	Station #185+40			
16	6"/ 3.5' BFG	4.3%	135.3	95.7%
LOCATION:	Station #185+50			



**CLIENT:** Ludlow Construction Co., Inc.

19 Carmelina's Circle Ludlow, MA 01056 Attn: Mr. Mike Pio **PROJECT:** Durham Meadows Waterline

Durham, CT

**DATE:** May 11, 2020 **REPORT #:** 19-75-012-057 Page 3 of 10

**General Location:** South Main Street (Route 17), Waterline Trench (Station #184+15- Station #186+90)

Field Rep: Stephen Devlin

**General Contractor:** Ludlow Construction Co., Inc. **Earthwork Contractor:** Ludlow Construction Co., Inc.

Air Temp: 55°F
Weather: Overcast
Soil ID#: 3519-592

Soil Type: Light Gray Gravel w/ Sand & Silt

Proctor Sample Source: Haynes Group

Proctor Value: 141.4 lbs/ft<sup>3</sup> Optimum Moisture: 4.6%
Gauge Type: Troxler 3430 Required Compaction: 95.0%

TEST	DEPTH/ELEV.	MOISTURE	DRY DENSITY	COMPACTION
NUMBER	(in/ft)	(%)	(pcf)	(%)
17	6"/ 2' 8" BFG	3.6%	140.8	99.6%
LOCATION:	Station #185+65			
18	6"/ 2.0' BFG	4.1%	139.2	98.4%
LOCATION:	Station #185+55			
19	6"/ 3.5' BFG	3.3%	137.7	97.4%
LOCATION:	Station #185+75			
20	6"/ 2' 8" BFG	3.8%	135.6	95.9%
LOCATION:	Station #185+85			
21	6"/ 2.0' BFG	3.2%	137.0	96.9%
LOCATION:	Station #185+80			
22	6"/ 3.5' BFG	4.0%	137.2	97.0%
LOCATION:	Station #186+05			
23	6"/ 2' 8" BFG	4.2%	134.5	95.1%
LOCATION:	Station #186+10			
24	6"/ 2.0' BFG	3.6%	137.6	97.3%
LOCATION:	Station #186+00			



**CLIENT:** Ludlow Construction Co., Inc.

19 Carmelina's Circle Ludlow, MA 01056 Attn: Mr. Mike Pio **PROJECT:** Durham Meadows Waterline

Durham, CT

**DATE:** May 11, 2020 **REPORT #:** 19-75-012-057 Page 4 of 10

**General Location:** South Main Street (Route 17), Waterline Trench (Station #184+15- Station #186+90)

Field Rep: Stephen Devlin

**General Contractor:** Ludlow Construction Co., Inc. **Earthwork Contractor:** Ludlow Construction Co., Inc.

Air Temp: 55°F
Weather: Overcast
Soil ID#: 3519-592

Soil Type: Light Gray Gravel w/ Sand & Silt

Proctor Sample Source: Haynes Group

Proctor Value: 141.4 lbs/ft³ Optimum Moisture: 4.6% Gauge Type: Troxler 3430 Required Compaction: 95.0%

TEST	DEPTH/ELEV.	MOISTURE	DRY DENSITY	COMPACTION
NUMBER	(in/ft)	(%)	(pcf)	(%)
25	6"/ 3.5' BFG	4.4%	138.8	98.2%
LOCATION:	Station #186+20			
26	6"/ 2' 8" BFG	3.9%	137.8	97.5%
LOCATION:	Station #186+35			
27	6"/ 2.0' BFG	3.3%	136.1	96.3%
LOCATION:	Station #186+15			
28	6"/ 3.5' BFG	4.4%	136.3	96.4%
LOCATION:	Station #186+50			
29	6"/ 2' 8" BFG	4.0%	137.7	97.4%
LOCATION:	Station #186+55			
30	6"/ 2.0' BFG	4.1%	134.7	95.3%
LOCATION:	Station #186+45			
31	6"/ 3.5' BFG	4.5%	135.1	95.5%
LOCATION:	Station #186+70			
32	6"/ 2' 8" BFG	3.9%	136.9	96.8%
LOCATION:	Station #186+75			



**CLIENT:** Ludlow Construction Co., Inc.

19 Carmelina's Circle Ludlow, MA 01056 Attn: Mr. Mike Pio **PROJECT:** Durham Meadows Waterline

Durham, CT

**DATE:** May 11, 2020 **REPORT #:** 19-75-012-057 Page 5 of 10

**General Location:** South Main Street (Route 17), Waterline Trench (Station #184+15- Station #186+90)

Field Rep: Stephen Devlin

**General Contractor:** Ludlow Construction Co., Inc. **Earthwork Contractor:** Ludlow Construction Co., Inc.

Air Temp:55°FWeather:OvercastSoil ID#:3519-592

Soil Type: Light Gray Gravel w/ Sand & Silt

Proctor Sample Source: Haynes Group

Proctor Value: 141.4 lbs/ft<sup>3</sup> Optimum Moisture: 4.6%

Gauge Type: Troxler 3430 Required Compaction: 95.0%

dauge Type.	pe. Required compaction:			33.070
TEST	DEPTH/ELEV.	MOISTURE	DRY DENSITY	COMPACTION
NUMBER	(in/ft)	(%)	(pcf)	(%)
33	6"/ 2.0' BFG	2.6%	141.1	99.8%
LOCATION:	Station #186+80			
LOCATION:				
LOCATION:				
LOCATION:				
LOCATION:				
LOCATION:				
LOCATION:				
LOCATION:				



**CLIENT:** Ludlow Construction Co., Inc.

19 Carmelina's Circle Ludlow, MA 01056 Attn: Mr. Mike Pio **PROJECT:** Durham Meadows Waterline

Durham, CT

**DATE:** May 11, 2020 **REPORT #:** 19-75-012-057 Page 6 of 10

**General Location:** South Main Street (Route 17), Waterline Trench (Station #184+15- Station #186+90)

Field Rep: Stephen Devlin

**General Contractor:** Ludlow Construction Co., Inc. **Earthwork Contractor:** Ludlow Construction Co., Inc.

Air Temp: 55°F
Weather: Overcast
Soil ID#: 3519-608

Soil Type: Light Gray Gravel w/ Silt & Sand (1.5" Gravel)

Proctor Sample Source: Haynes Group

Proctor Value: 138.9 lbs/ft<sup>3</sup> Optimum Moisture: 7.8%

Gauge Type: Troxler 3430 Required Compaction: 95.0%

dauge Type.	110/161 3430	Required compaction. 93.0%		
TEST	DEPTH/ELEV.	MOISTURE	DRY DENSITY	COMPACTION
NUMBER	(in/ft)	(%)	(pcf)	(%)
34	6"/ 18" BFG	2.2%	135.8	97.8%
LOCATION:	Station #184+30			
35	6"/ 4" BFG	3.2%	134.8	97.0%
LOCATION:	Station #184+40			
36	6"/ 18" BFG	2.4%	134.5	96.8%
LOCATION:	Station #184+50			
37	6"/ 4" BFG	3.6%	137.4	98.9%
LOCATION:	Station #184+55			
38	6"/ 18" BFG	3.7%	136.1	98.0%
LOCATION:	Station #184+70			
39	6"/ 4" BFG	2.9%	137.6	99.1%
LOCATION:	Station #184+80			
40	6"/ 18" BFG	3.4%	136.7	98.4%
LOCATION:	Station #185+00			
41	6"/ 4" BFG	3.2%	135.5	97.6%
LOCATION:	Station #185+05			



**CLIENT:** Ludlow Construction Co., Inc.

19 Carmelina's Circle Ludlow, MA 01056 Attn: Mr. Mike Pio **PROJECT:** Durham Meadows Waterline

Durham, CT

**DATE:** May 11, 2020 **REPORT #:** 19-75-012-057 Page 7 of 10

**General Location:** South Main Street (Route 17), Waterline Trench (Station #184+15- Station #186+90)

Field Rep: Stephen Devlin

**General Contractor:** Ludlow Construction Co., Inc. **Earthwork Contractor:** Ludlow Construction Co., Inc.

Air Temp: 55°F
Weather: Overcast
Soil ID#: 3519-608

Soil Type: Light Gray Gravel w/ Silt & Sand (1.5" Gravel)

Proctor Sample Source: Haynes Group

Proctor Value: 138.9 lbs/ft³ Optimum Moisture: 7.8% Gauge Type: Troxler 3430 Required Compaction: 95.0%

dauge Type.	Troxici 5450	Required compaction.		
TEST	DEPTH/ELEV.	MOISTURE	DRY DENSITY	COMPACTION
NUMBER	(in/ft)	(%)	(pcf)	(%)
42	6"/ 18" BFG	3.0%	136.8	98.5%
LOCATION:	Station #185+40			
43	6"/ 4" BFG	3.1%	138.9	100.0%
LOCATION:	Station #185+35			
44	6"/ 18" BFG	2.8%	138.2	99.5%
LOCATION:	Station #185+45			
45	6"/ 4" BFG	2.4%	133.2	95.9%
LOCATION:	Station #185+50			
46	6"/ 18" BFG	3.6%	136.0	97.9%
LOCATION:	Station #185+70			
47	6"/ 4" BFG	3.4%	134.3	96.7%
LOCATION:	Station #185+75			
48	6"/ 18" BFG	2.8%	136.4	98.2%
LOCATION:	Station #186+15			
49	6"/ 4" BFG	3.7%	138.0	99.4%
LOCATION:	Station #185+95			



**CLIENT:** Ludlow Construction Co., Inc.

> 19 Carmelina's Circle Ludlow, MA 01056 Attn: Mr. Mike Pio

PROJECT: **Durham Meadows Waterline** 

Durham, CT

DATE: May 11, 2020

REPORT #: 19-75-012-057 Page 8 of 10

**General Location:** South Main Street (Route 17), Waterline Trench (Station #184+15- Station #186+90)

Field Rep: Stephen Devlin

**General Contractor:** Ludlow Construction Co., Inc. Ludlow Construction Co., Inc. **Earthwork Contractor:** 

Air Temp: 55°F Weather: Overcast Soil ID#: 3519-608

Soil Type: Light Gray Gravel w/ Silt & Sand (1.5" Gravel)

**Proctor Sample Source:** Haynes Group

lbs/ft<sup>3</sup> **Proctor Value:** 138.9 **Optimum Moisture:** 7.8%

Troxler 3430 **Gauge Type: Required Compaction:** 95.0%

TEST	DEPTH/ELEV.	MOISTURE	DRY DENSITY	COMPACTION
NUMBER	(in/ft)	(%)	(pcf)	(%)
50	6"/ 18" BFG	4.1%	135.9	97.8%
LOCATION:	Station #186+25			
51	6"/ 4" BFG	3.4%	134.8	97.0%
LOCATION:	Station #186+30			
52	6"/ 18" BFG	2.9%	134.0	96.5%
LOCATION:	Station #186+60			
53	6"/ 4" BFG	3.3%	137.0	98.6%
LOCATION:	Station #186+50			
54	6"/ 18" BFG	2.5%	137.3	98.8%
LOCATION:	Station #186+70			
55	6"/ 4" BFG	3.2%	136.6	98.3%
LOCATION:	Station #186+85			
LOCATION:				
LOCATION:				



**CLIENT:** Ludlow Construction Co., Inc.

19 Carmelina's Circle Ludlow, MA 01056 Attn: Mr. Mike Pio **PROJECT:** Durham Meadows Waterline

Durham, CT

**DATE:** May 11, 2020 **REPORT #:** 19-75-012-057 Page 9 of 10

**General Location:** Picket Lane, Waterline service extension

Field Rep: Stephen Devlin

**General Contractor:** Ludlow Construction Co., Inc. **Earthwork Contractor:** Ludlow Construction Co., Inc.

Air Temp:55°FWeather:OvercastSoil ID#:3520-218

Soil Type: Dark Brown Clayey Sand w/ Gravel (Bankroll Clay/Silt)

**Proctor Sample Source:** On-Site

Proctor Value: 131.3 lbs/ft<sup>3</sup> Optimum Moisture: 8.7%

Gauge Type: Troxler 3430 Required Compaction: 95.0%

dauge Type.	e. Hoxiel 5450 Required compaction.			93.070
TEST	DEPTH/ELEV.	MOISTURE	DRY DENSITY	COMPACTION
NUMBER	(in/ft)	(%)	(pcf)	(%)
56	6"/ 1.75" BFG	9.4%	127.8	97.3%
LOCATION:	Station #501+65			
LOCATION:				
LOCATION:				
LOCATION:				
LOCATION:				
LOCATION:				
LOCATION:				
LOCATION:				



**CLIENT:** Ludlow Construction Co., Inc.

19 Carmelina's Circle Ludlow, MA 01056 Attn: Mr. Mike Pio **PROJECT:** Durham Meadows Waterline

Durham, CT

**DATE:** May 11, 2020 **REPORT #:** 19-75-012-057 Page 10 of 10

**General Location:** Picket Lane, Waterline service extension

Field Rep: Stephen Devlin

**General Contractor:** Ludlow Construction Co., Inc. **Earthwork Contractor:** Ludlow Construction Co., Inc.

Air Temp: 55°F
Weather: Overcast
Soil ID#: 3520-608

Soil Type: Light Gray Gravel w/ Silt & Sand (1.5" Gravel)

Proctor Sample Source: Haynes Group

Proctor Value: 138.9 lbs/ft<sup>3</sup> Optimum Moisture: 7.8%

Gauge Type: Troxler 3430 Required Compaction: 95.0%

Gauge Type:	Troxier 3430		Required Compaction:	95.0%
TEST	DEPTH/ELEV.	MOISTURE	DRY DENSITY	COMPACTION
NUMBER	(in/ft)	(%)	(pcf)	(%)
57	6"/ Finish Grade	2.7%	135.0	97.2%
LOCATION:	Station #501+80			
LOCATION:				
LOCATION:				
LOCATION:				
LOCATION:				
LOCATION:				
LOCATION:				
LOCATION:				