



COLD SPRING ENVIRONMENTAL CONSULTANTS INC.

- 2IE Site Investigations
- Subsurface Investigations
- Pollution Remediation
- LSP on Staff
- Forensic Septic Investigations

- Percolation Tests
- Septic Designs
- Regulatory Compliance
- Recycling and Solid Waste
- Second Opinions

March 10, 2009

**Mr. Doug Kohl
Kohl Construction
33 Campus Plaza
Hadley, MA 01035**

**RE: Test Pit & Soil Evaluation Results
North Street Property, Northampton, MA
CSEC Reference File #109-3106-0309**

Dear Mr. Kohl:

Background:

Cold Spring Environmental, Inc. was contracted to install test pits and perform soil evaluations (to evaluate development/drainage soil characteristics) at the above referenced property. This work, contracted by you, was to attempt to estimate the suitability of soils at the site for drainage, structural interpretation and review the layout of the parcels relative to the above. A Site Locus Map (Figure I) is attached with your layout. Location map as Attachment I. The approximate test pit locations are pinned on the plot (Figure 2) to be picked up by your surveyor.

On Site Field Investigation:

Test Pit locations were excavated by truck mounted back hoe and track mounted mini excavator at the locations your engineer determined on March 9 & 10, 2009.

Soils were generally either typical lower valley A, B horizons over lacustrine (glacial lake bottom), varved Fine sands and silts or filled areas, stripped of A and B horizons, descending directly into the lacustrine varved fine sands and silts. Soil strata are broken detailed on the Test Pit logs attached with noted Estimated Season High Groundwater (ESHGW) elevations from relative surface datum and summarized for the appropriate locations with some select photos in Attachments II and III.

Please feel free to contact us with any questions you may have.

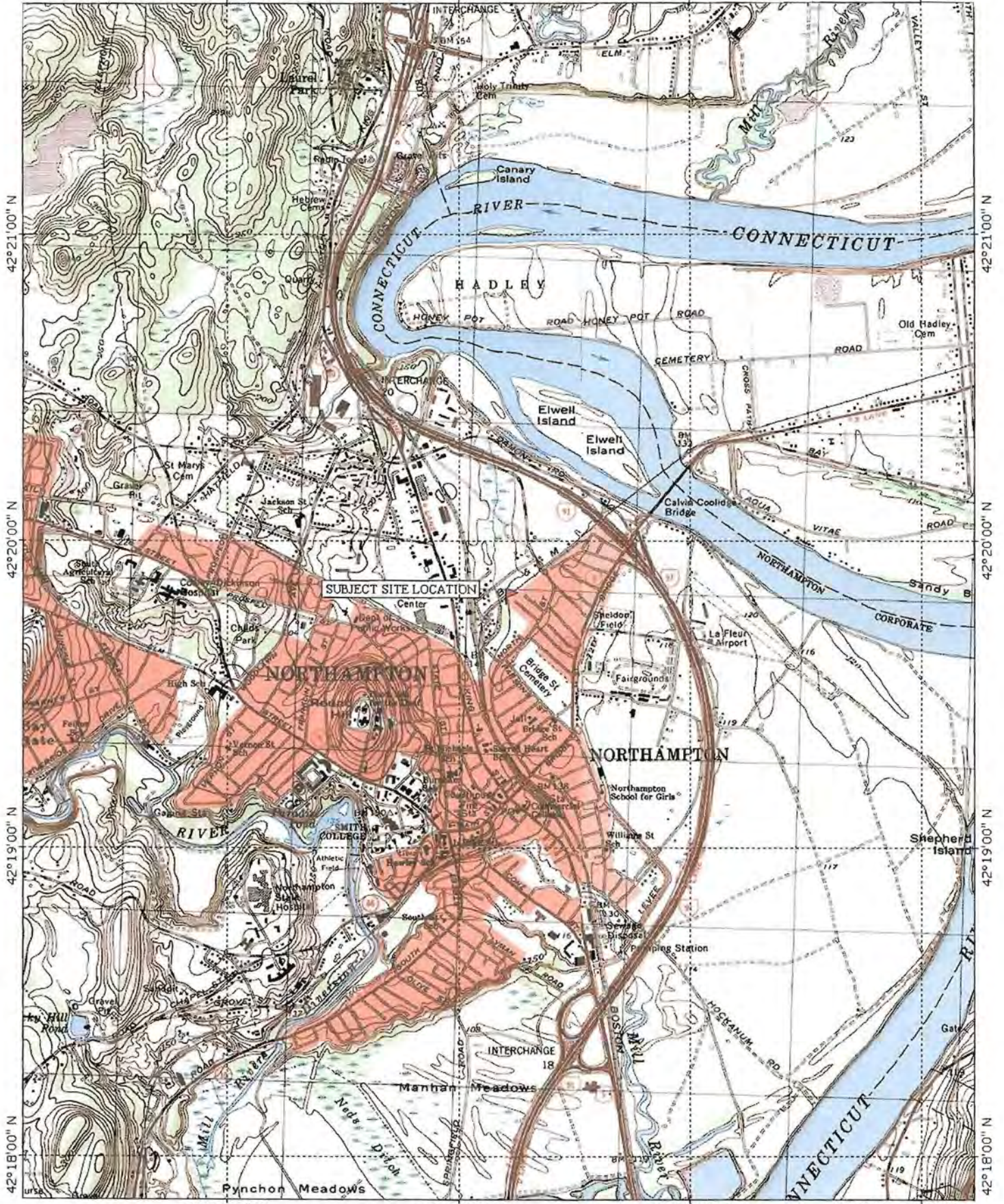
Sincerely,

Cold Spring Environmental Consultants, Inc.

Alan E. Weiss, M.S.,
Principal Hydrogeologist
Licensed Site Professional
Registered Sanitarian
MA Soil Evaluator

ATTACHMENT I

Figure 1 Site Locus (USGS), Figure 2: Site Test Pit Plot



42°21'00" N

42°21'00" N

42°20'00" N

42°20'00" N

42°19'00" N

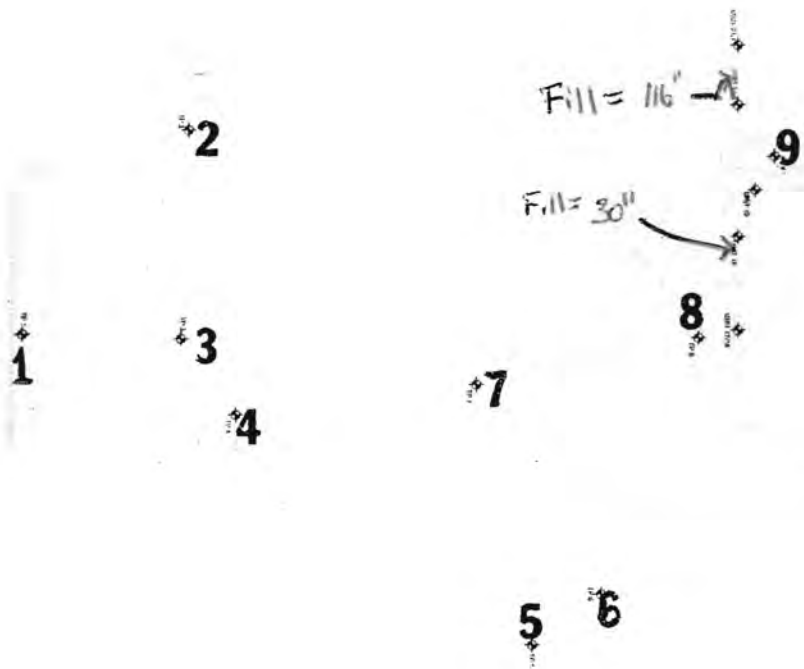
42°19'00" N

42°18'00" N

42°18'00" N

Fill = 92" → **10**

Fill = 120" → **11**



ATTACHMENT II

Test Pit Logs

TEST PIT LOGS,
NORTHERN AVE., NORTHAMPTON
03.09&10.2009, AE Weiss, MA Soil Evaluator, MS Hydrogeology
(In order of excavation)

Test Pit #:

<u>#5</u>	0-8"	Af	Sandy Loam 10 yr 2.2	Friable f. sand, fibrous
	8-22"	Bw	Loamy Sand 2.5 y 5.6	F. sand, mod loose & silt
	22-112"	C1	Loamy Sand 2.5y 4.4	F. sand, Little silt, w. sorted Varved, slightly massive

ESHWT = 26" (10% prominent, 2.5y 4.1&7.5 yr 5.8) Weeping=45"-48"

<u>#6</u>	0-7"	Af	Sandy Loam 10 yr 2.2	Friable f. sand, fibrous
	7-20"	Bw	Loamy Sand 2.5 y 5.6	F. sand, mod loose & silt
	20-116"	C1	Loamy Sand 2.5y 4.4	F. sand, Little silt, w. sorted Varved, slightly massive

ESHWT = 26" (10% strong, 2.5y 4.1&7.5 yr 5.8) Weeping=45"-48"

<u>#7</u>	0-6"	Af	Sandy Loam 10 yr 2.2	Friable f. sand, fibrous
<u>Photo</u>	6-20"	Bw	Loamy Sand 2.5 y 5.6	F. sand, mod loose & silt
	20-110"	C1	Loamy Sand 2.5y 4.4	F. sand, Little silt, w. sorted Varved, slightly massive
	110-120"	C2	C. Sand 2.5y 4.6	C. Sand, lense, well sorted.

ESHWT = 26" (>10% strong, 2.5y 4.1&7.5 yr 5.8) Weeping=30"

<u>#4</u>	0-4"	A	Fine Sandy Loam 10 yr 2.2	Friable f. sand, fibrous
	4-14"	Bw	Loamy Sand 2.5 y 5.6	F. sand, mod loose & silt
	14-60+"	C1	Loamy Sand 2.5y 4.3	F. sand, little silt, varved slightly massive

ESHWT = 14-16" (>10% strong, 2.5y 4.1&7.5 yr 5.8) Weeping=30"

<u>#3</u>	0-16"	A	Fine Sandy Loam 10 yr 2.2	Moist, fibrous
<u>photo</u>	16-29"	Bw	Loamy Sand 2.5 y 4.3	F. sand, & silt, massive
	29-100"	Cg	Silt Loam 5Gy 5.1	Silt, Little Clay Varved, massive

ESHWT = 16" (>10% strong, 5Gy 5.1& 7.5 yr 5.8) Weeping=30"

#1 0-10 A Fine Sandy Loam 10 yr 2.2 Moist f. sandy, fibrous
 10-16" Bw Loamy Sand 2.5 y 4.3 F. sand, & silt
 16-40" CI Loamy Sand 2.5y 4.4 F. sand & silt,
 Varved, massive
 40-80" Cg Fine Silt Loam 5Gy 5.1 Silt, Massive.Varved
 ESHWT = 16" (>10%,strong.5Gy5.1 & 7.5 yr 5.8) Weeping=30"

#9 0-90" Af Fill, sandy, Loose Mixed gravel, brick asphalt
 90"-100" Cg Fine Silt Loam 5Gy 5.1 Silt, Massive.Varved
 ESHWT =86" (strong, 5 Gy 4.1& 7.5 yr 5.8) Weeping=90"

#8 0-24" Af Fill, sandy, Loose Mixed gravel, brick asphalt
 24"-106" Cg L. Sand 5Gy 5.1 F. Sand, trace Silt, Varved
 ESHWT =36" (strong,2.5 y .4.2& 7.5 yr 5.8) Weeping=90"

#11 0-142" Af Fill, Loose, caving Mixed gravel, brick asphalt
 142"+ Cg Fine Silt Loam 5Gy 5.1 Silt, Massive.Varved
 ESHWT =86",. Weeping=90"

#10 0-70" Af Fill, loose caving Mixed gravel, brick asphalt
 photo 70"-110" CI L. Sand 2.4 y 3.2 F. Sand, Well Sorted Varved
 ESHWT =36" (strong, 5 Gy 4.1& 7.5 yr 5.8) Weeping=48"

#2 0-10 A Fine Sandy Loam 10 yr 2.2 Moist f. sandy, fibrous
 10-14" Bw Loamy Sand 2.5 y 4.3 F. sand, & silt
 16-40" CI Loamy Sand 2.5y 4.1 F. sand & Little silt, Varved
 Somewhat massive
 ESHWT =14-16" (10% prominent, 2.5 y 4.1& 7.5 yr 5.8) Weeping=30"

ATTACHMENT III

Excavation Photos



Test Pit #7
march 9, 2009
North street
Northampton, MA



Test Pit #3
march 9, 2009
North street
Northampton, MA