

Preliminary Subdivision
Supplemental Submittal Data

FOR

Fifteen Great Road

A

Residential Subdivision of land

IN

Littleton, Mass.

RECEIVED
MAY 13 2011
LITTLETON
PLANNING BOARD

PREPARED FOR:

Fifteen Great Road LLC



Date: May 12, 2011

Places Associates, Inc.

510 King Street, Suite 9, Littleton, Massachusetts 01460
Voice: (978) 486-0334 Fax: (978) 486-0447 E-mail: Places.littleton@verizon.net

**Fifteen Great Road
Preliminary Subdivision
Supplemental Submittal Data**

Table of Contents

1. Copy of Preliminary Subdivision cover letter addressed to the Littleton Planning Board and Board of Health
2. Copy of Original Form B, Application for Approval of a Preliminary Plan;
3. Check in the amount of \$4063.00 (\$1000.00, plus \$1.00 x 3063' of roadway)
4. Project Narrative
5. Preliminary Environmental Analysis
6. Subsurface Testing Records (from previously proposed projects)

Places Associates, Inc.

510 King Street, Suite 9, Littleton, Massachusetts 01460
Voice: (978) 486-0334 Fax: (978) 486-0447 E-mail: Places.littleton@verizon.net



May 12, 2011

Littleton Planning Board
P.O. Box 1305
Littleton, Massachusetts 01460

Via CERTIFIED MAIL, Return Receipt Requested
7004 1350 0002 2879 5904 (documents)
7004 1350 0002 2879 5911 (prints)

Littleton Board of Health
P.O. Box 1305
Littleton, Massachusetts 01460

Via CERTIFIED MAIL, Return Receipt Requested
7004 1350 0002 2879 5829

Re: Application of Fifteen Great Road, LLC for Approval of A Preliminary Subdivision Plan entitled "Preliminary Subdivision, Fifteen Great Road" at 15 Great Road, 70 Grist Mill Road, and Off Great Road, Littleton, Massachusetts prepared for Fifteen Great Road LLC, dated May 2011, Project No. 11-6303, Plan No's: PS-1 to PS- 10 ;

Dear Board Members:

In accordance with G. L. c. 41, §81S, on behalf of our client, Fifteen Great Road, LLC, this office herewith submits materials in application for Approval of a Preliminary Subdivision, in accordance with Section §249-25 of the Town of Littleton's Subdivision Rules and Regulations. The subject site is land situated north of Great Road and to the east of Grist Mill Road, as depicted on the enclosed plans and as Assessor's Map/Parcel U01-2-0, U01-1-56 and U01-6-0.

This application is submitted in accordance with Massachusetts General Laws Chapter 40-A and Chapter 41 and purposefully obtains the protection afforded by those chapters.

The following contents are included in this submission:

- Original Form B, Application for Approval of a Preliminary Plan (Planning);
- Check in the amount of \$4063.00 (\$1000.00, plus \$1.00 x 3063' of roadway) (Planning);
- Eight (8) full size sets of prints and two (2) reduced sets (Planning) and two (2) full size sets (BOH) of plans entitled "Preliminary Subdivision, Fifteen Great Road" at 15 Great Road, 70 Grist Mill Road, and Off Great Road, Littleton, Massachusetts prepared for Fifteen Great Road LLC, Dated May 2011, Project No. 11-6303, Plan No's: PS-1 to PS-10 (ten sheets);
- Ten copies (Planning) two copies (BOH) of a booklet containing the following:
 1. Copy of this cover letter
 2. Copy of Original Form B, Application for Approval of a Preliminary Plan;
 3. Copy of check;
 4. Project Narrative

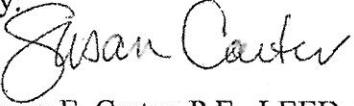
5. Preliminary Environmental Analysis,
6. Subsurface Testing Records (from previously proposed projects)

This office looks forward to cooperating with the Planning Board, Board of Health, their consultants/agents, and other town agencies throughout this project. If either of the boards should have any questions or concerns, or if you should require additional information regarding this matter, please contact the undersigned.

We request an opportunity to discuss the preliminary plan with the Planning Board and Board of Health. Please advise when this matter will be on the Planning Board's and Board of Health's agenda for review.

Thank you.

Very truly yours,
FIFTEEN GREAT ROAD, LLC
By: Places Associates, Inc.
By:


Susan E. Carter, P.E., LEED-AP
President

cc: Littleton Town Clerk with one full set of enclosures, VIA CERTIFIED MAIL, RETURN RECEIPT REQUESTED 7004 1350 0002 2878 0016

Fifteen Great Road LLC

Louis N. Levine, Esq.

Places Associates, Inc.

510 King Street, Suite 9, Littleton, Massachusetts 01460
Voice: (978) 486-0334 Fax: (978) 486-0447 E-mail: Places.littleton@verizon.net

15 Great Road
Littleton, MA
Project Narrative

15 Great Road Preliminary Subdivision Project Narrative

The project site consists of approximately 49-acres located off of Great Road (Route 2A/119) and Grist Mill Road. The site consists of three parcels: Assessor's Map/Parcel U01-2-0, U01-1-56 and U01-6-0. The site is located in the R-Residential zoning district. The site is currently undeveloped and supports forested uplands, meadows and vegetated wetlands. The site could be characterized as having rolling terrain with the upland woods having slopes of approximately 10-15% and the meadow and wetland areas having slopes approximately 1-3%.

The site is bounded by the Grist Mill Road to the west, Great Road to the South, Nagog Park and the Acton town line to the east and the Westford town line to the north.

There are public water supply, telephone, cable, gas and electric services located within Great Road and Grist Mill Road. Connections and extensions of the existing utilities are proposed as part of this project. The project site does not have sewer service immediately available in either Great Road or Grist Mill Road.

The site is proposed to be developed into a four lot subdivision, as depicted on the enclosed plans with approximately 3,063 linear feet of roadway. The proposed roadway is designed to meet the Littleton Planning Board's standard for a minor road; being 24' wide with a 42' wide right-of-way and a single sidewalk. The proposed Road, "Road A", connects to Great Road, State Route 2A and Grist Mill Road, public ways.

See also the Environmental Analysis, submitted as part of this Preliminary Subdivision which addresses the existing and proposed environmental impacts of the subdivision.

This site has had an extensive regime of soil testing performed on it. Attached as part of this submittal are DEP Soils Logs completed by another firm, which demonstrate the suitability of the soils in this area to support development of on-site sewage disposal systems. The frontage along Grist Mill Road is comprised of Lot 56A (70 Grist Mill Road) which was an existing single family house lot with an approved sewage disposal system permitted. The soils logs and existence of a previously approved subsurface sewage disposal system demonstrates the site's ability to support the development.

Places Associates, Inc.

510 King Street, Suite 9, Littleton, Massachusetts 01460
Voice: (978) 486-0334 Fax: (978) 486-0447 E-mail: Places.littleton@verizon.net

TOWN OF LITTLETON, MA



FORM B:

APPLICATION FOR APPROVAL OF PRELIMINARY PLAN OF A SUBDIVISION

Date: May 11, 2011

File completed form with the Planning Board with 6 copies of the plans, plus original Mylar. File a copy of form and plan with the Town Clerk; and 1 copy with the Board of Health in accordance with the requirements of Chapter 249.

To the Planning Board:

The undersigned Applicant herewith submits the accompanying Preliminary Plan of property located in the Town of Littleton for approval as a Preliminary Subdivision as allowed under the Subdivision Control Law and the Rules and Regulations governing the Subdivision of Land of the Planning Board of the Town of Littleton.

1. Location of Property:

15 Great Road, 70 Grist Mill Road and Off Great Road
Littleton, MA

2. Name(s) and Address(es) of Applicant:

Fifteen Great Road LLC
200 Baker Avenue - Suite 303
Concord, MA 01742

3. Name(s) and Address(es) of Record Owner(s):

Mayel Development Inc Leslie French, Trustee
One Intercontinental Way-3rd Floor JFM Realty Trust
Peabody, MA 01930 P.O. Box 1472
 Littleton, MA 01460

4. Name and Address of Engineer or Surveyor:

Places Assocaites, Inc.
510 King Street, Suite 9
Littleton, MA 01460

5. Title of Plan: Preliminary Subdivision "Fifteen Great Road"

6. Date of Plan: May 2011 Mayel Development Inc 03/07/2007
7. Owner's Title Reference: Deed of JFM Realty Trust dated 03/01/2005,
[recorded at Middlesex South Registry of Deeds in Book 49092, Page 359], [filed
at the Middlesex South Registry District of the Land Court as Document No. N/A
and noted on Certificate of Title no. N/A, in Registration Book N/A,
Page N/A].

TOWN OF LITTLETON, MA

8. Zoning District: R-Residential

9. Assessor's Map and Parcel Number: U01-2-0, U01-1-56 & U01-6-0

10. Number of Lots on the Plan: 4

DJS/Al

Signature of Applicant

5-18-11

Date

Signature of Applicant

Date

Thomas M. Ellin
Signature of Record Owner

Date

(if other than Applicant)

May 12, 2011

John, Trustee
Signature of Record Owner

Date

(if other than Applicant)

May 12, 2011

Filing Fee: (\$1,000 plus \$1.00 per linear foot of road.) \$4,063.00

Received by Town Clerk:

Date/Time: _____

Form Updated September 2008

JFM VGL d/b/a		1001	1001
Village Green Littleton			
200 Baker Ave.			
Concord, MA 01742			
TOWN OF LITTLETON			
FOUR THOUSAND AND SIXTY THREE DOLLARS		4063.00	4063.00
Pay To The Order Of			
 MEMO FEE GREAT RD FILING FEE 1408896921 1139182501			



Places Associates, Inc.

Planning, Landscape Architecture, Civil Engineering and Surveying
Certified WBE

Planning Board
Town of Littleton
Room 303, 37 Shattuck Street
Shattuck Street Municipal Building
PO Box 1305
Littleton, MA 01460

**RE: 15 Great Road Preliminary Subdivision
Environmental Analysis**

May 11, 2011

Dear Members of the Board,

Places Associates, Inc., on behalf of Fifteen Great Road LLC, submits the following Environmental Analysis pursuant to the Code of the Town of Littleton, Massachusetts, Chapter 249 Subdivision of Land Regulations. This Environmental Analysis is intended to satisfy the requirements for the filing of a Preliminary Subdivision and the findings in this analysis should be considered preliminary. The plan set titled "Preliminary Subdivision, Fifteen Great Road, Planned Residential Development at 15 Great Road, 70 Grist Mill Road and Off Great Road, Littleton, Massachusetts" (Plans), dated May 2011 and prepared by Places Associates, Inc. is hereby incorporated as part of this Environmental Analysis.

Project Overview

Existing Conditions

The project site consists of approximately 49-acres located off of Great Road (Route 2A/119) and Grist Mill Road. The site consists of three parcels: Assessor's Map/Parcel U01-2-0, U01-1-56 and U01-6-0. The site is located in the R-Residential zoning district. The site is currently undeveloped and supports forested uplands, meadows and vegetated wetlands. The site could be characterized as having rolling terrain with the upland woods having slopes of approximately 10-15% and the meadow and wetland areas having slopes approximately 1-3%.

There are public water supply, telephone, cable, gas and electric services located within Great Road and Grist Mill Road. The project site does not have sewer service immediately available in either Great Road or Grist Mill Road.

The site is bounded by the Grist Mill Road single-family house residential development to the west, Great Road to the South, Nagog Park Drive and the Acton town line to the east and the Westford town line to the north.

The site is comprised of a variety of natural conditions: Portions of the site contain bordering vegetated wetlands, as identified on the site plans. The wetlands lines and areas are as field delineated

by Oxbow Associates, Inc. of Acton, MA. They are the result of a field delineation conducted in March and April of this year, 2011 and were survey established in April.

Wetlands: These areas act to collect the runoff from the existing site areas and ultimately discharge to the periphery of the site. One wetlands system discharges to the south of the site to an adjacent farm pond on the land of Lundgren. The larger wetlands system discharges to the north of the site, into Westford. The wetlands are comprised of shrub-swamp species.

Vegetation: The site has a variety of vegetative communities as is typical of former farm fields and open spaces adjacent to residential and commercial developments. The western side of the site is a mature (40' to 60+'), second growth forest of mixed hard and softwoods (Maples, Oaks and White Pine), which grow along the property line adjacent to Grist Mill Road. The Central areas (as oriented north to south) are existing meadow areas featuring low, pioneering shrub species and grasslands.

Other portions of the site are altered by previous construction and soils exploration activities conducted for other potential development projects. The area immediately to the north of Great Road is impacted by construction and filling activities.

Proposed Conditions

The project proposes the construction of an approximately 3,063-foot roadway (as measured from the sidelines of the intersecting streets), from Great Road to Grist Mill Road, and the creation of four (4) lots. The roadway is proposed to be 24-feet wide, made of bituminous concrete with bituminous curbing and centered on a 42-foot wide right-of-way. A 4-foot bituminous sidewalk is proposed on the eastern side of the roadway. The roadway layout has been designed as a minor road.

The project proposes looping water, telephone, cable, gas and electric services from Great Road to Grist Mill Road. The lots are proposed to be serviced by individual on-site subsurface sewage disposal systems. Soil testing has been included as an attachment to demonstrate the feasibility of the site to support on-site sewage disposal.

A wetland crossing is required to bring the roadway from Great Road to Grist Mill Road. The project proposes replicating the disturbed wetland area at a 2:1 ratio. A stormwater management system has been shown schematically on the Plans to illustrate there is sufficient area and elevations to mitigate stormwater impacts. The stormwater management system will be developed in accordance with Best Management Practices and in accordance with the Town of Littleton requirements. These practices include Low Impact Development standards.

Impact Upon Surface Water Quality and Level

The project proposes to mitigate impacts on surface water quality through the implementation of stormwater Best Management Practices. A schematic stormwater management system has been illustrated on the plans and generally consists of collecting stormwater runoff in deep sump hooded catch basins, transmitting stormwater via an underground pipe network to a water quality structure and detaining stormwater runoff in an above ground detention basin. Groundwater recharge will be provided within the detention basins as the soil conditions allow. Additional soil testing will be performed within the footprint of the areas proposed for groundwater recharge. All components of the

Places Associates, Inc.

510 King Street, Suite 9, Littleton, Massachusetts 01460

Voice: (978) 486-0334 Fax: (978) 486-0447 E-mail: Places.littleton@verizon.net

stormwater management system will be designed in accordance with applicable local, state and federal requirements and guidance.

Impact Upon Groundwater Quality and Level

The project proposes on-site subsurface sewage disposal systems compliant with State DEP Title V regulations and Littleton Board of Health regulations. The nature of the project as a residential development does not present any expected higher pollutant loads than is typical for this type of development. It is the presumption that compliance with state and local health regulations is sufficient to ensure there are not negative impacts on groundwater quality.

The project proposes to recharge groundwater collected in the stormwater management system according to state standards and good engineering practice; thereby maintaining the groundwater levels at their current conditions. The stormwater management system will be designed in accordance with state and local requirements to ensure that stormwater runoff receives treatment for water quality prior to being recharged to the groundwater.

Material Effects Upon Important Wildlife Habitats, Outstanding Botanical Features and Scenic or Historic Environs

A portion of the project site is located within Priority Habitat and Estimated Habit as mapped by the Massachusetts Natural Heritage and Endangered Species Program. The Applicant has retained the services of Oxbow Associates, Inc. to assess the site for potential impacts of development on species and habitat areas. The site can be developed as depicted on the Site Plans, without undue harm to such species or habitat.

The site is not located in a Historic District and does not contain any structures listed on the State Register of Historic Structures. Portions of the site have been used in the past as pasture, previously disturbed meadow areas and other uses common to New England second growth forests adjacent to commercial and residential development.

As indicated by the site plans, the site slopes principally from the west to the east with a ridge line being coincident with the residential development of the Grist Mill Subdivision. This ridge line contains mature (40 – 60'+) height trees of oak, maple and white pine, which form a visual screen from the subdivision into the site. The associated down-slopes of this ridge line is also screened by existing tree and shrub growth along the perimeter of the site. As such, there are no extensive or prominent visual characteristics into the site from its perimeter.

Capability of Soils, Vegetative Cover and Proposed Erosion-Control Efforts to Support Proposed Development Without Danger of Erosion, Silting or Other Instability

The predominant soils found on site are well drained loamy sands of the Hinckley and Deerfield series, which are typically formed in glacial outwash terraces. Other soils present to a lesser degree include Scarboro mucky soils found in wetlands areas and Charlton-Hollis-Rock outcrops complexes in the areas nearest to Great Road.

Places Associates, Inc.

510 King Street, Suite 9, Littleton, Massachusetts 01460

Voice: (978) 486-0334 Fax: (978) 486-0447 E-mail: Places.littleton@verizon.net

15 Great Road
Littleton, MA
Environmental Analysis

The site is currently vegetated and during construction activities the area of disturbance will be minimized to the extent practicable. Disturbed areas will be stabilized by means of hardscape, structures, pavement or will be re-vegetated as soon as is practicable. Sedimentation and erosion control measures will be prepared in accordance with local, state and federal guidelines. A Stormwater Pollution Prevention Plan will be prepared in preparation for filing for coverage under the EPA NPDES Construction General Permit. Design and implementation of proper erosion and sedimentation controls will ensure the project does not result in negative impacts to the site or its surrounding during and post construction.

Relationship to the Requirements of the Wetlands Protection Act (MGL C. 131, §§ 40 and 40A)

The project site supports bordering vegetated wetlands. The Applicant will be filing an Abbreviated Notice of Resource Area Delineation (ANRAD) to definitively establish the limits of the wetlands. The Applicant anticipates filing a Notice of Intent (NOI) with the Littleton Conservation Commission in conjunction with a Definitive Subdivision filing with the Planning Board. The project will be designed in accordance with the provisions of the Wetlands Protection Act and, as applicable, to the requirements of the Town of Littleton's Wetlands Bylaws.

List of Attachments

- On-site Soil Analysis

Places Associates, Inc.

510 King Street, Suite 9, Littleton, Massachusetts 01460
Voice: (978) 486-0334 Fax: (978) 486-0447 E-mail: Places.littleton@verizon.net

FORM 11 - SOIL EVALUATOR FORM

Page 2

On-site Review

Deep Hole Number 701-A Date: 7/24/01 Time 11:00 am Weather: Sunny 70's

Location (identify on site plan) Littleton

Land Use None **Slope (%)** < 2% **Surface Stone** Few

Vegetation Meadow

Landform Outwash Plain

Position on landscape see sketch

Distances from:

Open Water Body _____ feet

Braincase = foot

Possible Wet Area -- feet

Proprietary Lines >25 feet

Drinking Water Well — sec 1

Other —

DEEP OBSERVATION HOLE LOG

Parent Material (geologic) Glacial Outwash Depth to Bedrock: NA

Depth to Bedrock: NA

Depth to Groundwater: Standing Water in the Hole: NA Weeping from Pit Face: NA

Standing Water in the Hole: NA Weeping from Pit Face: NA

Estimated Seasonal Ground Water: Not Determined

On-site Review

Deep Hole Number 701-b Date: 7/24/01 Time 11:00am Weather Sunny

Location (identify on site plan) Nagog Park

Land Use None Size 1000-52% Farm

Vegetation Meadow Slope (%) 2-5 Surface Stones few

Landform Outwash Plain

Position on landscape

Distances from:

Open Water Body _____ feet

Possible Wet Area _____ feet

Brachyptelia

Drinking Water Well

Gibson

DEEP OBSERVATION HOLE LOG

Parent Material (geologic) Glacial Outwash Depth to Bedrock: NA

Depth to Bedrock: NA

Depth to Groundwater: Standing Water in the Hole: NA Weeping from Pit Face: NA

Standing Water in the Hole: NA Weeping from Pit Face: NA

Estimated Seasonal Ground Water: Not Determined

On-site Review

Deep Hole Number 701-C Date: 7/24/01 Time 11:00am Weather: Sunny

Location (identify on site plan) Nagog Park

Land Use None Slope (%) <2% Surface Stones Few

Vegetation Meadow

Landform Outwash Plain

Position on landscape _____

Distances from:

Open Water Body _____ feet Drainageway _____ feet
Possible Wet Area _____ feet Property Line _____ feet
Drinking Water Well _____ feet Other _____

DEEP OBSERVATION HOLE LOG

Parent Material (geologic) Glacial Outwash Depth to Bedrock: NA

Depth to Groundwater: Standing Water in the Hole: **NA** **Weeping from Pit Face:** **NA**

Estimated Seasonal Ground Water: Not Determined

FORM 11 - SOIL EVALUATOR FORM

Page 2

On-site Review

Deep Hole Number 701-D Date: 7/24/01 Time 11:00am Weather: Sunny

Location (identify on site plan) Nagog Park

Land Use: None

Vegetation Meadow Slope (%) 2-7% Surface Stones few

Landform: Outwash Plain

Position on landscape

Answers from:

Open Water Body

Review of Books 1

Possible Wet Areas

Document 11

Drinking Water Well

81

DEEP OBSERVATION HOLE LOG

Parent Material (geologic) Glacial Outwash Depth to Bedrock: NA

Depth to Bedrock: NA

Depth to Groundwater: NA Standing Water in the Hole: NA Weeping from Pit Face: NA

Standing Water in the Hole: NA Weeping from Pit Face: NA

Estimated Seasonal Ground Water: Not Determined

On-site Review

Deep Hole Number 701-E Date: 7/24/01 Time 11:00am Weather: Sunny

Location (identify on site plan) Nagog Park

Land Use **None** Status **Open** **72%** Date **2023-07-01** **End**

Vegetation Meadow Slope (%) 2% Surface Stones few

Landform: Outwash Plain

Position on landscape

Distances from:

Open Water Body _____ feet

Drainageway _____ feet

Possible Wet Area _____ feet

Drinking Water Well _____ feet

Other

DEEP OBSERVATION HOLE LOG

Parent Material (geologic) Glacial Outwash Depth to Bedrock: Not Determined

Depth to Bedrock: Not Determined

Depth to Groundwater: Standing Water in the Hole: None Weeping from Pit Face: None

Wooing from Pit Face: None

Estimated Seasonal Ground Water: Not Determined

FORM 11 - SOIL EVALUATOR FORM

Page 2

On-site Review

Deep Hole Number 701-F Date: 7/24/01 Time 11:00am Weather: Sunny

Location (Identify on site plan) Nagog Park

Land Use None **Slope (%)** <2% **Surface Stones** Few

Vegetation Meadow

Landform Outwash

Position on landscape _____

Distances from:

Open Water Body _____ feet Drainageway _____ feet

Possible Wet Area _____ feet Property Line _____ feet

Drinking Water Well _____ feet Other _____

DEEP OBSERVATION HOLE LOG

Parent Material (geologic) Glacial Outwash Depth to Bedrock: NA

Depth to Bedrock: NA

Depth to Groundwater: Standing Water in the Hole: 49" Weeping from Pit Face: 49"

Standing Water in the Hole: 49" Weeping from Pit Face: 49"

Weeping from Pit Face: 49"

Estimated Seasonal Ground Water: 49"

FORM 11 - SOIL EVALUATOR FORM

Page 2

On-site Review

Deep Hole Number 701-G Date: 7/24/01 Time 11:00am Weather Sunny

Location (identify on site plan) Nagog Park

Land Use None Slope (%) <2% Surface Stones Few

Vegetation Meadow

Landform Outwash Plain

1. **What is the landscape?** _____

Distances from:

Open Water Body _____ feet Drainageway _____ feet

Possible Wet Area _____ feet Property Line _____ feet

Drinking Water Well _____ feet Other _____

DEEP OBSERVATION HOLE LOG

Parent Material (geologic) Glacial Outwash Depth to Bedrock: 54"

Depth to Bedrock: 54"

Depth to Groundwater: Standing Water in the Hole: NA Weeping from Pit Face: NA

Standing Water in the Hole: NA Weeping from Pit Face: NA

Estimated Seasonal Ground Water: Not Determined

FORM 12 - PERCOLATION TEST

COMMONWEALTH OF MASSACHUSETTS

Littleton, Massachusetts

Percolation Test		
Date:	7/24/01	Time: 10:00
Observation Hole #	701-01	701-02
Depth of Perc	52"	42"
Start Pre-soak	3:00	3:00
End Pre-soak	Applied	Applied
Time at 12"	24 Gal.	24 Gal.
Time at 9"	<15 min.	<15 min.
Time at 6"	_____	_____
Time (9"-6")	_____	_____
Rate Min./Inch	<2 mpi	<2 mpi

Site Passed Site Failed

Performed By: Scott Hayes, P.E.

Witnessed By: Ira Grossman

Comments: _____

FORM 12 - PERCOLATION TEST

COMMONWEALTH OF MASSACHUSETTS

Littleton, Massachusetts

Percolation Test

Date:	7/24/01	Time:	10:00
Observation Hole #	701-03	701-04	
Depth of Perc	46"	40"	
Start Pre-soak	3:00	3:00	
End Pre-soak	Applied	Applied	
Time at 12"	24 gal.	24 gal.	
Time at 9"	<15 min.	<15 min.	
Time at 6"			
Time (9"-6")			
Rate Min./Inch	<2 mpi	<2 mpi	

Site Passed Site Failed:

Performed By: _____

Witnessed By: _____

Comments: _____

FORM 12 - PERCOLATION TEST

COMMONWEALTH OF MASSACHUSETTS

Littleton, Massachusetts

Percolation Test

Date: 7/24/01		Time: 10:00
Observation Hole #	701-05	701-06
Depth of Perc	56"	42"
Start Pre-soak	3:00	3:00
End Pre-soak	Applied	Applied
Time at 12"	24 gal.	24 gal.
Time at 9"	<15 min.	<15 min.
Time at 6"		
Time (9"-6")		
Rate Min./Inch	<2 mpi	<2 mpi

Site Passed Site Failed

Performed By: Scott Hayes, P.E.

Witnessed By: Ira Grossman

Comments: _____

COMMONWEALTH OF MASSACHUSETTS

Littleton, Massachusetts

Percolation Test		
Date:	7/24/01	Time: 10:00
Observation Hole #	701-07	701-08
Depth of Perc	40"	39"
Start Pre-soak	3:00	3:00
End Pre-soak	Applied	Applied
Time at 12"	24 gal.	24 gal.
Time at 9"	<15 min.	<15 min.
Time at 6"		
Time (9"-6")		
Rate Min./Inch	<2 mpi	<2 mpi

Site Passed Site Failed

Performed By: Scott Hayes, P.E.

Witnessed By: Ira Grossman

Comments: _____

FORM 12 - PERCOLATION TEST

COMMONWEALTH OF MASSACHUSETTS

Littleton, Massachusetts

Percolation Test

Date: <u>7/24/01</u>		Time: <u>10:00</u>
Observation Hole #	<u>701-09</u>	<u>701-10</u>
Depth of Perc	<u>36"</u>	<u>72"</u>
Start Pre-soak	<u>3:00</u>	<u>3:00</u>
End Pre-soak	<u>Applied</u>	<u>Applied</u>
Time at 12"	<u>24 gal.</u>	<u>24 gal.</u>
Time at 9"	<u><15 min.</u>	<u><15 min.</u>
Time at 6"	<u> </u>	<u> </u>
Time (9"-6")	<u> </u>	<u> </u>
Rate Min./Inch	<u><2 mpi</u>	<u><2 mpi</u>

Site Passed Site Failed Performed By: Scott Hayes, P.E.Witnessed By: Ira Grossman

Comments: _____

COMMONWEALTH OF MASSACHUSETTS

Littletown, Massachusetts

Percolation Test

Date:	7/24/01	Time:	10:00
Observation Hole #	701-11	701-12	
Depth of Perc	57"	53"	
Start Pre-soak	3:00	3:00	
End Pre-soak	Applied	Applied	
Time at 12"	24 gal.	24 gal.	
Time at 9"	<15 min.	<15 min.	
Time at 6"			
Time (9"-6")			
Rate Min./Inch	<2 mpi	<2 mpi	

Site Passed Site Failed

Performed By: Scott Hayes, P.E.

Witnessed By: Ira Grossman

Comments: _____

COMMONWEALTH OF MASSACHUSETTS

Littleton, Massachusetts

Percolation Test

Date: <u>7/24/01</u>		Time: <u>10:00</u>
Observation Hole #	<u>701-13</u>	<u>701-14</u>
Depth of Perc	<u>56"</u>	<u>63"</u>
Start Pre-soak	<u>3:00</u>	<u>3:00</u>
End Pre-soak	<u>Applied</u>	<u>Applied</u>
Time at 12"	<u>24 gal.</u>	<u>24 gal.</u>
Time at 9"	<u><15 min.</u>	<u><15 min.</u>
Time at 6"	_____	_____
Time (9"-6")	_____	_____
Rate Min./Inch	<u><2 mpi</u>	<u><2 mpi</u>

Site Passed Site Failed Performed By: Scott Hayes, P.E.Witnessed By: Ira Grossman

Comments: _____

COMMONWEALTH OF MASSACHUSETTS

Littleton, Massachusetts

Percolation Test			
Date:	7/24/01	Time:	10:00
Observation Hole #	701-15	701-16	
Depth of Perc	52"	49"	
Start Pre-soak	3:00	3:00	
End Pre-soak	Applied	Applied	
Time at 12"	24 gal.	24 gal.	
Time at 9"	<15 min.	<15 min.	
Time at 6"	—	—	
Time (9"-6")	—	—	
Rate Min./Inch	<2 mpi	<2 mpi	

Site Passed Site Failed

Performed By: Scott Hayes, P.E.

Witnessed By: Ira Grossman

Comments: _____

COMMONWEALTH OF MASSACHUSETTS

Littleton, Massachusetts

Percolation Test			
Date:	7/24/01	Time:	10:00
Observation Hole #	701-17	701-18	
Depth of Perc	44"	59"	
Start Pre-soak	3:00	3:00	
End Pre-soak	Applied	Applied	
Time at 12"	24 gal.	24 gal.	
Time at 9"	<15 min.	<15 min.	
Time at 6"			
Time (9"-6")			
Rate Min./Inch	<2 mpi	<2 mpi	

Site Passed Site Failed

Performed By: Scott Hayes, P.E.

Witnessed By: Ira Grossman

Comments: _____

