



# MEETING NOTICE AND AGENDA

## MANSFIELD INLAND WETLANDS AGENCY

AUDREY P. BECK MUNICIPAL BUILDING ■ 4 SOUTH EAGLEVILLE ROAD ■ COUNCIL CHAMBER

TUESDAY, SEPTEMBER 6, 2016 ■ 6:45 PM

REGULAR MEETING

OR UPON COMPLETION OF PLANNING AND ZONING COMMISSION MEETING

### 1. CALL TO ORDER AND ROLL CALL

### 2. APPROVAL OF MINUTES

- A. August 1, 2016 – SPECIAL MEETING
- B. August 11, 2016 – FIELD TRIP NOTES

### 3. COMMUNICATIONS

- A. CONSERVATION COMMISSION MINUTES
- B. MONTHLY BUSINESS MEMORANDUM

### 4. PUBLIC HEARINGS

- A. 6:45 P.M.

W1564-2 – STORRS LODGES, 218 UNITS, HUNTING LODGE ROAD (PARCEL ID 15.21.3)

*All Reports are available on the Town of Mansfield Website at:*

<http://www.mansfieldct.gov/content/1904/1932/14344.aspx>

*Memo from Inland Wetlands Agent, Public Communications and staff reports are located in the packet*

### 5. OLD BUSINESS

- A. W1574- 122-124 THORNBUSH ROAD LLC, 122-124 THORNBUSH ROAD, SITE WORK  
*Item Tabled*
- B. W1564-2 – STORRS LODGES, 218 UNITS, HUNTING LODGE ROAD (PARCEL ID 15.21.3)  
*All Reports are available on the Town of Mansfield Website at:*  
<http://www.mansfieldct.gov/content/1904/1932/14344.aspx>

### 6. NEW BUSINESS

- A. W1575- WILLARD J. STEARNS & SONS, INC., BROWNS ROAD & COVENTRY ROAD, 9 LOT SUBDIVISION  
*Memo from Inland Wetlands Agent*
- B. W1576- C. & J. RUSSEY-MILNE., 494 WORMWOOD HILL ROAD, 24' X 24' ADDITION  
*Memo from Inland Wetlands Agent*
- C. W1577-M. BENZIE, 1029 STORRS ROAD, SEPTIC SYSTEM AND LEECH FIELD  
*Memo from Inland Wetlands Agent*
- D. J7- T. WOLLEN, 205 PLEASANT VALLEY ROAD, CONSTRUCTION OF A 20' X 30' BARN  
*Memo from Inland Wetlands Agent*
- E. Other

### 7. REPORTS FROM OFFICERS AND COMMITTEES

### 8. OTHER COMMUNICATIONS AND BILLS

### 9. ADJOURNMENT

Charles Ausburger ■ Binu Chandy ■ JoAnn Goodwin ■ Roswell Hall III ■ Gregory Lewis ■ Kenneth Rawn ■ Bonnie Ryan  
Vera Stearns Ward ■ Susan Westa ■ Paul Aho (A) ■ Terry Berthelot (A) ■ Katie Fratoni (A)

**MINUTES**



# MINUTES

## MANSFIELD INLAND WETLANDS AGENCY

AUDREY P. BECK MUNICIPAL BUILDING ■ 4 SOUTH EAGLEVILLE ROAD ■ COUNCIL CHAMBER

MONDAY, AUGUST 1, 2016 ■ SPECIAL MEETING

**MEMBERS PRESENT:** J. Goodwin, C. Ausburger, R. Hall, G. Lewis, K. Rawn, B. Ryan, V. Ward  
**MEMBERS ABSENT:** B. Chandy, S. Westa  
**ALTERNATES PRESENT:** P. Aho, T. Berthelot  
**ALTERNATES ABSENT:** K. Fratoni  
**STAFF PRESENT:** Jennifer Kaufman, Inland Wetlands Agent

Chairman Goodwin called the meeting to order at 6:30 p.m. and appointed Aho and Berthelot to act.

### APPROVAL OF MINUTES:

A. JULY 18, 2016 – REGULAR MEETING

Rawn MOVED, Ryan seconded, to approve the 07-18-2016 minutes as presented. MOTION PASSED UNANIMOUSLY. Hall noted for the record that he listened to the recording.

B. JULY 20, 2016- FIELD TRIP NOTES

Noted.

### COMMUNICATIONS:

The Conservation Commission draft minutes and the Wetlands Agent Report were both noted.

### OLD BUSINESS:

A. W1558-2 - K.MEHRENS, 214 WORMWOOD HILL ROAD, GARAGE

Rawn MOVED, Ryan seconded, to grant an Inland Wetlands License pursuant to the Inland Wetlands and Watercourses Regulations of the Town of Mansfield to K. Mehrens (File W1558-2) to construct a 24 by 32 foot 2-car garage on property owned by the applicant and located at 214 Wormwood Hill Road as shown on plans dated 6/20/2016 and as described in application submissions.

This action is based on a finding of no anticipated significant impact on the wetlands, and is conditioned on the following provisions being met:

1. Appropriate erosion and sedimentation controls shall be in place prior to construction, maintained during construction and removed when disturbed areas are completely stabilized; and
2. All excess soil shall be either removed from the site or spread at least 50 feet from the edge of wetlands.
3. This approval is valid for five years (until August 1, 2021) unless additional time is requested by the applicant and granted by the Inland Wetlands Agency. The applicant shall notify the Wetlands Agent before any work begins and all work shall be completed within one year. Any extension of the activity period shall come before this Agency for further review and comment.

MOTION PASSED UNANIMOUSLY.

B. W1570 – FUNK AND LITTLE, 30 CENTRE STREET, GEOTHERMAL WELLS AND SITE WORK

Chairman Goodwin recused herself and Vice-Chair Ryan was appointed to act as Chair for this item. Rawn noted for the record that the “after the fact” permits are becoming more frequent and a monetary penalty must be adopted and added to the fee schedule to address these situations.

Rawn MOVED, Ward seconded, to grant an Inland Wetlands License pursuant to the Inland Wetlands and Watercourses Regulations of the Town of Mansfield to Funk and Little (File W1570) for installation of 3 geothermal wells and replacement of a waterline on property owned by Matthew Hamill and located at 30

Centre Street as shown on plans dated 6/30/2015, revised through 6/7/2016 and as described in application submissions. This action is based on a finding that no significant impact on the wetlands and watercourses occurred.

MOTION PASSED with all in favor except Goodwin who recused herself.

C. W1571 – C. LOUKAS, 46 JONATHAN LANE, INGROUND POOL

Ryan MOVED, Hall seconded, to grant an Inland Wetlands License pursuant to the Inland Wetlands and Watercourses Regulations of the Town of Mansfield to C. Loukas (File W1571) for installation of an 18 by 36 foot in-ground pool surrounded by a 6 foot deck on property owned by the applicant and located at 46 Jonathan Lane as shown on plans dated 2/22/2016 and as described in application submissions.

This action is based on a finding of no anticipated significant impact on the wetlands, and is conditioned on the following provisions being met:

1. Appropriate erosion and sedimentation controls shall be in place prior to construction, maintained during construction and removed when disturbed areas are completely stabilized; and
2. All excess soil shall be stockpiled at least 50 feet from the edge of wetlands, and any soil remaining on site after construction shall be distributed at least 50 feet from the edge of wetlands.
3. This approval is valid for five years (until August 1, 2021) unless additional time is requested by the applicant and granted by the Inland Wetlands Agency. The applicant shall notify the Wetlands Agent before any work begins and all work shall be completed within one year. Any extension of the activity period shall come before this Agency for further review and comment.

MOTION PASSED UNANIMOUSLY.

D. W1572 – R. BOBB, 840 WORMWOOD HILL ROAD, AQUATICS MANAGEMENT

Aho MOVED, Ryan seconded, to grant an Inland Wetlands License pursuant to the Inland Wetlands and Watercourses Regulations of the Town of Mansfield to R. Bobb (File W1572) for mechanical harvesting of Water Chestnut (*Trapa natans*) on property owned by the applicant and located at 840 Wormwood Hill Road as shown on plans dated 7/7/2016 and as described in application submissions.

This action is based on a finding of no anticipated significant impact on the wetlands and watercourses, and is conditioned on the following provisions being met:

1. Appropriate erosion and sedimentation controls, as described in the application, shall be in place prior to construction, maintained during construction and removed when disturbed areas are completely stabilized;
2. The spoils from the harvesting will be stockpiled and distributed only when fully composted; and
3. To prevent the introduction of new or additional nuisance species to the subject site or another site, all equipment used shall be power washed with a bleach solution and inspected for vegetation, seedlings or nutlings before and after the harvesting of the water chestnut occurs on the subject site.

This approval is valid for five years (until August 1, 2021) unless additional time is requested by the applicant and granted by the Inland Wetlands Agency. The applicant shall notify the Wetlands Agent before any work begins and all work shall be completed within one year. Any extension of the activity period shall come before this Agency for further review and comment.

MOTION PASSED UNANIMOUSLY.

E. W1573 – G. SOTZING, 144 HILLYNDALE ROAD, ABOVE GROUND HOT TUB

Ryan MOVED, Ward seconded, to grant an Inland Wetlands License pursuant to the Inland Wetlands and Watercourses Regulations of the Town of Mansfield to G. Sotzing (File W1573) for installation of a hot tub on property owned by the applicant and located at 144 Hillyndale Road as shown on plans dated 7/14/2016 and as described in application submissions.

This action is based on a finding of no anticipated significant impact on the wetlands, and is conditioned on the following provisions being met:

1. Appropriate erosion and sedimentation controls shall be in place prior to construction, maintained during construction and removed when disturbed areas are completely stabilized.

This approval is valid for five years (until August 1, 2021) unless additional time is requested by the applicant and granted by the Inland Wetlands Agency. The applicant shall notify the Wetlands Agent before any work begins and all work shall be completed within one year. Any extension of the activity period shall come before this Agency for further review and comment.

MOTION PASSED UNANIMOUSLY.

**NEW BUSINESS:**

A. W1574- 122-124 THORNBUSH ROAD LLC., 122-124 THORNBUSH ROAD, SITE WORK

Ausburger MOVED, Rawn seconded, to receive the application submitted by 122-124 Thornbush Road, LLC (IWA File W 1574 ) under the Wetlands and Watercourses Regulations of the Town of Mansfield for site work on property located at 122-124 Thornbush Road as shown on a map dated 7/25/2016 and as described in application submissions, and to refer said application to staff and the Conservation Commission for review and comments. MOTION PASSED UNANIMOUSLY.

B. W1564-2 – STORRS LODGES, 218 UNITS, HUNTING LODGE ROAD (PARCEL ID 15.21.3)

*All Reports are available on the Town of Mansfield Website at:*

<http://www.mansfieldct.gov/content/1904/1932/14344.aspx>

Ward MOVED, Hall seconded, to:

1. Receive the application submitted by Storrs Lodges LLC (IWA File #1564-2) under the Inland Wetlands and Watercourses Regulations of the Town of Mansfield for the construction of a 218-unit apartment complex on property owned by the applicants and located at Hunting Lodge Road (Assessor's Parcel ID 15.21.3) as shown on plans dated 3/18/2016, revised through 6/10/2016 and as described in application submissions, and to refer said application to the staff and Conservation Commission for review and comment.
2. Authorize staff to engage the services of GEI Consultants to provide independent review of the application. Pursuant to section 8.6 of Mansfield's Inland Wetlands and Watercourses Regulations, fees incurred for this review will be the responsibility of the applicants; a deposit in the amount of the estimated cost shall be provided prior to issuance of a notice to proceed.
3. Schedule a public hearing on September 6, 2016. If the public hearing needs to be continued, it will be continued to October 6, 2016, the Agency's next regularly scheduled meeting.

MOTION PASSED UNANIMOUSLY.

C. NOVEMBER MEETING SCHEDULE

Goodwin MOVED, Hall seconded, to change the November 7, 2016 Regular meeting of the Inland Wetlands Agency to Wednesday, November 2, 2016. MOTION PASSED UNANIMOUSLY.

**REPORTS FROM OFFICERS AND COMMITTEES:**

A 3pm Field Trip was set for 8/10/16.

**COMMUNICATIONS AND BILLS:**

Noted.

**ADJOURNMENT:**

The Chair declared the meeting adjourned at 6:59 p.m.

Respectfully submitted,

Vera S. Ward, Secretary



# MEETING NOTICE AND AGENDA

## MANSFIELD INLAND WETLANDS AGENCY CONSERVATION COMMISSION

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### SPECIAL JOINT MEETING ■ FIELD TRIP

#### FIELD TRIP NOTES

THURSDAY, AUGUST 11, 2016

IWA Members present: P. Aho (left at 4:15 p.m.), J. Goodwin, K. Rawn, C. Ausburger  
Conservation Commission: M. Harper, Q. Kessel, N. Facchinetti,  
Staff present: Jennifer Kaufman, Environmental Planner/Inland Wetlands Agent  
Linda Painter, Director of Planning and Development

The field trip began at approximately 3:35 p.m.

#### **W1564-2- Storrs Lodges, 218 Units, Hunting Lodge Road (Parcel I.D. 15.21.3)**

Members were met on site by the applicant's team: Tony Giorgio, Attorney David Sherwood, George Logan, and Dave Ziaks. Members observed current conditions, and site characteristics. No decisions were made.

The field trip ended at approximately 4:25 p.m.

**COMMUNICATIONS**

Town of Mansfield  
**CONSERVATION COMMISSION**  
Meeting of 17 August 2016  
Conference B, Audrey P. Beck Building  
**(draft) MINUTES**

*Members present:* Neil Facchinetti, Mary Harper (Alt.), Quentin Kessel, Scott Lehmann, Grant Meitzler, John Silander, Michael Soares. *Members absent:* Aline Booth (Alt.), Robert Dahn. *Others present:* Ken Feathers, Jim Morrow, Vicky Wetherell (briefly) {Open Space Preservation Committee}; Tom Fahey, Tony Giorgio, Dave Ziaks {Storrs Lodges}; Alison Hilding.

1. The meeting was **called to order** at 7:30p by Chair Quentin Kessel. In the absence of one member, Alternate Mary Harper was entitled to participate fully in the business of the meeting.

2. The **draft minutes** of the 20 July 2016 meeting were approved as written.

3. **IWA referrals: W1564-2 (Storrs Lodges, Hunting Lodge Rd).** W1564 was resubmitted as W1564-2 on 01 August. A public hearing will be held on 06 September and will almost certainly be continued to October and perhaps beyond. Questions:

- The Field Trip on 11 August was interrupted by a thunderstorm, and Kessel asked if Commission members might visit the property on their own. Tony Giorgio replied that he'd prefer to schedule a visit so that any questions could be addressed on site; Kessel will ask Jennifer Kaufman to make the arrangements.
- In a memo dated 12 August 2016 to GEI Consultants (the Town's consultant on W1564), copies of which were distributed at the meeting, Harper seeks assurance that the proposed storm-water management system would be adequate, given the low permeability of soils where many of the infiltration basins are to be sited. She suggested that standpipe monitoring be conducted through the high groundwater season (February through April) to be reasonably confident that soils are capable of absorbing runoff and that infiltration basins will not be overtopped. Mr. Giorgio asked that Harper's memo be made available through Kaufman, so that her concerns can be addressed.
- In response to a question from Kessel, the Commission was informed that roadways would be 24 feet wide, not including a sidewalk on one side and snow-shelves.
- Silander wondered whether the parcel might contain archeological sites. Harper, who did an archeological survey of similar state land west of Northwood Apartments, thought this was unlikely.

{At 8:20p a special concurrent meeting of the Open Space Preservation Committee was called to order by Jim Morrow to discuss the next item.}

4. **Proposed moratorium on multi-family housing.** The PZC is considering a moratorium on applications for multi-family housing so that it has time to write new regulations informed by the goals of the new Plan of Conservation & Development. {A draft motion dated 01 August to amend the zoning regulations to effect this moratorium was included in the packet.} If approved, the moratorium would not affect applications accepted before it goes into effect (in particular, the Storrs Lodges application). After some discussion, a statement drafted by Jim Morrow (with slight revisions) in support of the moratorium was approved unanimously (**motion:** Kessel, Soares):

The town zoning regulations are under review to align the regulations with the new Plan

of Conservation and Development. Because of the changes in the new POCD, it is expected this review will lead to the adoption of significantly revised regulations. As a consequence, the Town now lacks a regulatory framework that reflects current and future land use goals. This situation prevents Town staff, commissions, and committees from properly evaluating and commenting on development proposals, to ensure they address the town's future goals as expressed in the new POCD. The Open Space Preservation Committee and Conservation Commission support the proposed moratorium until the new zoning regulations are adopted.

**5. Adjourned** at 8:52p. Next meeting: 7:30p, Wednesday, 21 September 2016.

Scott Lehmann, Secretary, 22 August 2016.



# TOWN OF MANSFIELD

DEPARTMENT OF PLANNING AND DEVELOPMENT

Date: August 30, 2016  
To: Inland Wetlands Agency  
From: Jennifer S. Kaufman, AICP, Environmental Planner/Inland Wetlands Agent  
Subject: Monthly Business Report

## AGENT APPROVALS

- **A10- Boardman, 330 Wormwood Hill Road-** Construction of 10 x12 foot shed, over 75 feet from the edge of wetlands.
- **A11- Simonu, 96 Middle Turnpike-** Construction of a 40 by 48 foot attached garage, over 75 feet from the edge of wetlands.

# **PUBLIC HEARINGS**



# TOWN OF MANSFIELD

DEPARTMENT OF PLANNING AND DEVELOPMENT

Date: August 31, 2016

To: Mansfield Inland Wetlands Agency

From: Jennifer Kaufman, Inland Wetlands Agent

Subject: Hunting Lodge Road (Assessor's Parcel ID 15.21.3) (IWA File #1564-2)  
Storrs Lodges LLC  
Description of Work: construction of a 218-unit apartment complex  
Map Date: 3/18/2016, revised through 6/10/2016

## PROJECT OVERVIEW

The Conservation Commission has not had the opportunity formally comment on this application. Therefore, I recommend that the Agency keep the public hearing open until the next regularly scheduled meeting on October 6, 2016. The following submittals have been received as of August 31, 2016 and should be incorporated in to the public record for the public hearing held September 6, 2016.

### Applicant Submittals

1. Application
  - 1A. Application Resubmittal July 19, 2016
2. A letter dated February 28, 2016 from CT DEEP Regarding State Species of Concern
3. A March 18, 2016 Wetlands Assessment & Impact Analysis: Summary of Findings
4. An Engineering Design and Drainage Report (Both a Summary and Full Report available on website) Dated March 18, 2016
5. A March 30, 2016 Wetlands Assessment-Supplemental: Vernal Pool Investigation
6. An April 4, 2016 Wetlands Assessment-Supplemental: Water Quality Investigation
7. An April 4, 2016 Wetlands Assessment-Supplemental: Functions and Values Assessment
8. An April 4, 2016 Wetlands Assessment-Supplemental: Wetland Mitigation
9. An April 6, 2016 Wetlands Assessment-Supplemental: Review of Stormwater System
10. An April 14, 2016 Wetlands Assessment-Supplemental: Vernal Pool Investigation
11. FA Hesketh's Responses to the GEI Consultants Revised dated 5/31/2016 and revised through 6/10/2016
12. A June 14, 2016 Wetlands Assessment-Supplemental: Water Quality Investigation
13. A June 14, 2016 Wetlands Assessment-Supplemental: Soil Testing
14. A June 14, 2016 Wetlands Assessment-Supplemental: Vernal Pool Investigation
15. A July 12, 2016 Letter from Attorney Fahey Requesting the Public Hearing not be continued to 8/1/2016
16. July 12, 2016 Response to Intervention and a February 12, 2011 Report from Michael Klemens

17. A July 12, 2016 Memo from Attorney Sherwood re: Prudent and Feasible Alternative Analysis
18. Revised Plans - June 10, 2016
19. Wetland License issued to Pond Place LLC for Phase I well drilling and testing (File W1428).
20. August 29, 2016 response to 8/12/2016 letter from Mary Harper.
21. Application for Wetland Boundary Amendment.

### **Staff Memos**

1. March 29, 2016 memo from Jennifer Kaufman, Wetlands Agent
2. June 2, 2016 memo from Jennifer Kaufman, Wetlands Agent
3. June 13, 2016 memo from Jennifer Kaufman, Wetlands Agent
4. July 14, 2016 memo from Jennifer Kaufman, Wetlands Agent

### **Conservation Commission Minutes**

1. April 20
2. May 18
3. June 15
4. July 20
5. August 17

### **Intervenor Submittals**

1. August 19, 2016 Verified Petition to Intervene re: W1564-2
2. August 23, 2016 Letter from the Law Offices of Keith Ainsworth
3. A letter from Michael Klemens dated June 6, 2016
4. A Vernal Pool Analysis Map of Storrs Lodges Prepared by Michael Klemens dated May 2016
5. Michael Klemens Curriculum Vitae, undated
6. A letter to Cheryl Chase, Director of the Inland Water Resources Division, CT DEEP from Michael Klemens dated September 10, 2013
7. A Report from Connecticut Ecosystems LLC Entitles Wetlands Report Ponde Place, July 5, 2007
8. April 2009 Eastern Connecticut Environmental Review Team Report for Ponde Place
8. A 2002 MCA Technical Paper Series: No. 5 Best Development Practices Conserving Pool-Breeding Amphibians in Residential and Commercial Developments in the Northeastern United States by Calhoun and Klemens

### **GEI, Consultants (IWA's Independent Consultant) Submittals**

1. A Memo from Kimberly Bradley and John McGrane of GEI Consultants to Jennifer Kaufman dated May 12, 2016

2. A Memo from Kimberly Bradley and John McGrane of GEI Consultants to Jennifer Kaufman dated June 29, 2016

### **Comments from the Public**

1. A letter from Kathy and Brian Usher dated May 24, 2016
2. An email response to Kathy Usher from Linda Painter dated May 25, 2016
3. A letter from Susan and Michael Zito, 44 Westgate Lane dated July 9, 2016
4. A letter from Frank Noelker, 491 N. Eagleville Road, dated July 9, 2016
5. A letter from Laurie Sloan, 491 N. Eagleville Road, dated July 9, 2016
6. A letter from Robert & Jennie Talbot, 26 Southwood Road dated July 10, 2016
7. An email from Chris Simon, 17 Silver Falls dated July 12, 2016
8. A letter from Janet Jones, 49 Farrell Road, dated July 15, 2016
9. An email from Priscilla Douglas, 241 Wormwood Hill Road, dated July 16, 2016
10. A letter from Terry Webster, 23 Southwood Road, dated July 16, 2016
11. An email from Martin Mendoza-Botelho, 38 Meadowood Road, dated July 19, 2016
12. An email from Cynthia Hirschorn, 63 Davis Road, dated July 27, 2016
13. A letter from Mary Harper, 129 East Road, dated August 12, 2016 (Mary is a member of the Conservation Commission but submitted this as a resident)

**TOWN OF MANSFIELD  
INLAND WETLAND AGENCY**



Certified Mail Return Receipt  
#91 7108 2133 3934 5228 3682

*04161*

AUDREY P. BECK BUILDING  
FOUR SOUTH EAGLEVILL ROAD  
STORRS, CT 06268  
(860) 429-3330

**COPY**

May 7, 2009

Ponde Place LLC  
56 East Main Street  
Suite 202  
Avon, CT 06001

Re: Mansfield's IWA approval  
IWA file #1428

Dear Mr. Giorgio,

At a meeting held on 5/4/09, the Mansfield Inland Wetlands Agency adopted the following motion:

“to grant an Inland Wetlands License under Section 5 of the Wetlands and Watercourses Regulations of the Town of Mansfield to **Ponde Place LLC** (file no. W1428), for Phase I well drilling and testing, on property owned by the Keystone Companies, LLC, located at Hunting Lodge and Northwood Roads, as shown on plans dated March 31, 2009 and as described in other applications submissions.

This action is based on a finding of no anticipated significant impact on the wetlands, and is conditioned upon the following provisions being met:

1. Appropriate erosion and sedimentation controls (as shown on the plans) shall be in place prior to construction and maintained during construction and removed when disturbed areas are completely stabilized.
2. There shall be no additional work on the access road in the old fill area between the 2 wetlands; however, if using heavy equipment necessitates additional fill, the applicant shall consult with the Wetlands Agent as to the type and placement of said fill.

This approval is valid for a period of five years (until May 4, 2014), unless additional time is requested by the applicant and granted by the Inland Wetlands Agency. The applicant shall notify the Wetlands Agent before any work begins, and all work shall be completed within one year. Any extension of the activity period shall come before this Agency for further review and comment.”

This letter constitutes your license.

If you have any questions regarding this action, please call the Planning Office at 429-3330.

Very truly yours,

A handwritten signature in black ink that reads "Katherine K. Holt".

Katherine K. Holt, Secretary  
Mansfield Inland Wetlands Agency

Cc: Roger Kellman, P.E., Hesketh

April 2, 2009

Mansfield Inland Wetlands Agency  
Audrey P. Beck Municipal Building  
4 South Eagleville Road  
Mansfield, CT 06268

Attn: Grant Meitzler

Re: Ponde Place  
Phase 1 Well Installation and Testing  
Hunting Lodge Road  
IWWC Application  
Our File: 04161.00

Dear Mr. Meitzler:

On behalf of the applicant, Ponde Place, LLC, please find attached a Wetlands Application for the installation and testing of up to four wells on the site of the proposed residential project known as Ponde Place on Hunting Lodge Road. Also attached are the plans and a check for \$155.

If you have any questions, please feel free to contact me.

Very truly yours,

**F. A. Hesketh & Associates, Inc.**



Roger Kellman, P.E.  
Project Engineer

cc: The Keystone Companies, LLC  
Attorney Thomas Fahey

T:prj/04161/gmei4029.doc

**APPLICATION FOR PERMIT  
 MANSFIELD INLAND WETLANDS AGENCY  
 4 SOUTH EAGLEVILLE ROAD, STORRS, CT 06268  
 TEL: 860-429-3334 OR 429-3331  
 FAX: 860-429-6863**

**FOR OFFICE USE ONLY**  
 File # W \_\_\_\_\_  
 Fee Paid \_\_\_\_\_  
 Official Date of Receipt \_\_\_\_\_

*Applicants are referred to the Mansfield Inland Wetlands and Watercourses Regulations for complete requirements, and are obligated to follow them. For assistance, please contact Grant Meitzler, Inland Wetlands Agent at the telephone numbers above.*

Please print or type or use similar format for computer; attach additional pages as necessary.

**Part A - Applicant**

Name Ponde Place LLC

Mailing Address 56 East Main St. Suite 202  
Avon CT Zip 06001

Telephone-Home \_\_\_\_\_ Telephone-Business (860) 677-5555

**Title and Brief Description of Project**  
Ponde Place - Phase I Well Drilling and testing

**Location of Project** Hunting Lodge Road and Northwood Road

**Intended Start Date** Spring 2009

**Part B - Property Owner (if applicant is the owner, just write "same")**

Name The Keystone Companies, LLC

Mailing Address (same as applicant)  
 \_\_\_\_\_ Zip \_\_\_\_\_

Telephone-Home \_\_\_\_\_ Telephone-Business \_\_\_\_\_

Owner's written consent to the filing of this application, if owner is not the applicant:

Signature (same as applicant) date \_\_\_\_\_

Applicant's interest in the land: (if other than owner) \_\_\_\_\_

**Part C - Project Description (attach extra pages, if necessary)**

1) Describe in detail the proposed activity here or on an attached page. (See guidelines at end of application – page 6.)

Please include a description of all activity or construction or disturbance:

- a) **in** the wetland/watercourse
- b) **in** the area **adjacent** to (within 150 feet from the edge of) the wetland/watercourse, even if wetland/watercourse is **off** your property

1) Installation and testing of water supply wells.

a) There will be no activity within wetlands or watercourse

b) There will be minimal activity adjacent to wetlands. This will include minor clearing, grading and filling to create an access path for the well drilling equipment.

2) Describe the amount or area of disturbance (in square feet or cubic yards or acres):

- a) **in** the wetland/watercourse
- b) **in** the area **adjacent** to (within 150 feet from the edge of) the wetland/watercourse, even if wetland/watercourse is off your property

2a) 0 acres.

2b) .2 acres

3) Describe the type of materials you are using for the project:

clean fill for access path

a) include **type** of material used as fill or to be excavated gravel/stone

b) include **volume** of material to be filled or excavated < 50 cu excavation/fill within the regulated area.

4) Describe measures to be taken to minimize or avoid any adverse impacts on the wetlands and regulated areas (silt fence, staked hay bales or other Erosion and Sedimentation control measures).

minimize disturbance just adequate for equipment access.  
 Silt fence, hay bales, stone as needed for SE+SC measures.

**Part D - Site Description**

Describe the general character of the land. (Hilly? Flat? Wooded? Well drained? etc.)

Moderately wooded and somewhat hilly, well drained except for limited areas.

**Part E - Alternatives**

Have you considered any alternatives to your proposal that would meet your needs and might have less impact on the wetland/watercourse? Please list these alternatives.

Other access points were considered but would have a  
greater wetland impact.

**Part F - Map/Site Plan (all applications)**

1) Attach to the application a map or site plan showing **existing conditions** and the **proposed project** in relation to wetland/ watercourses. Scale of map or site plan should be 1" = 40'; if this is not possible, please indicate the scale that you are using. A sketch map may be sufficient for small, minor projects. (See guidelines at end of application - page 6.)

2) Applicant's map date and date of last revision UT-5 03-31-2009

3) Zone Classification RAP-90 changed to DMP

4) Is your property in a flood zone? Yes  No  Don't Know

**Part G - Major Applications Requiring Full Review and a Public Hearing**

See Section 6 of the Mansfield Regulations for additional requirements.

**Part H - Notice to Abutting Property Owners**

1) List the names and addresses of abutting property owners

Name Address

See attached list.

2) **Written Notice to Abutters** . You must notify abutting property owners by certified mail, return receipt requested, stating that a wetland application is in progress, and that abutters may contact the Mansfield Inland Wetlands Agent for more information. Include a brief description of your project. **Postal receipts of your notice to abutters must accompany your application.** (This is not needed for exemptions).

**Part I - Additional Notices, if necessary**

1) Notice to Windham Water Works is attached. If this application is in the public watershed for the Windham Water Works (WWW), you must notify the WWW of your project within 7 days of sending the application to Mansfield—sending it by certified mail, return receipt requested. Contact the Mansfield Inland Wetlands Agent to find out if you are in this watershed.



CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
79 Elm Street  
Hartford, CT 06106-5127

GIS CODE #: \_\_\_\_\_  
For DEP Use Only

Arthur J. Rocque, Jr., Commissioner

### Statewide Inland Wetlands & Watercourses Activity Reporting Form

Please complete this form in accordance with the instructions. Please print or type.

#### PART I: To Be Completed By The Inland Wetlands Agency Only

- 1. DATE ACTION WAS TAKEN: Year \_\_\_\_\_ Month \_\_\_\_\_
- 2. ACTION TAKEN: \_\_\_\_\_
- 3. WAS A PUBLIC HEARING HELD? Yes \_\_\_\_\_ No \_\_\_\_\_
- 4. NAME OF AGENCY OFFICIAL VERIFYING AND COMPLETING THIS FORM:  
(print) \_\_\_\_\_ (signature) \_\_\_\_\_

#### PART II: To Be Completed By The Inland Wetlands Agency Or The Applicant

- 5. TOWN IN WHICH THE ACTION IS OCCURRING: Mansfield  
Does this project cross municipal boundaries? Yes \_\_\_\_\_ No X  
If Yes, list the other town(s) in which the action is occurring: \_\_\_\_\_
- 6. LOCATION: USGS Quad Map Name: Coventry AND Quad Number: 40  
Subregional Drainage Basin Number: 3100-17-2-R1, 3100-19-1
- 7. NAME OF APPLICANT, VIOLATOR OR PETITIONER: Ponde Place LLC
- 8. NAME & ADDRESS/LOCATION OF PROJECT SITE: Hunting Lodge Road / Northwood Road  
Briefly describe the action/project/activity: Well drilling and testing
- 9. ACTIVITY PURPOSE CODE: C
- 10. ACTIVITY TYPE CODE(S): 12, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_
- 11. WETLAND / WATERCOURSE AREA ALTERED [must be provided in acres or linear feet as indicated]:  
Wetlands: 0 acres      Open Water Body: 0 acres      Stream: 0 linear feet
- 12. UPLAND AREA ALTERED [must be provided in acres as indicated]: .2 acres
- 13. AREA OF WETLANDS AND / OR WATERCOURSES RESTORED, ENHANCED OR CREATED: 0 acres  
[must be provided in acres as indicated]

DATE RECEIVED: _____	PART I: To Be Completed By The DEP	DATE RETURNED TO: _____
FORM COMPLETED: YES _____ NO _____	FORM CORRECTLY COMPLETED: YES _____ NO _____	

**Packet in PDF**

**AGENDA**  
Inland Wetland Agency  
Regular Meeting  
Monday, April 6, 2009  
Council Chambers, Audrey Beck Building

**Call to Order: 7:00 PM**

**Review of Minutes of Previous Meetings and Action Thereon:**

- 3.02.09 - Regular Meeting
- 3.16.09 - Field Trip
- 3.16.09 - Special Meeting

**Communications:**

Conservation Commission: W1423 - Schafer- shed  
W1424 - Whispering Glen- 37 units  
GM monthly business memorandum

**Outstanding Enforcement Actions:**

W1400 – Glode – Stafford Rd  
W1419 - Chernushek, 473 Middle Turnpike-violation notice  
(To be tabled pending outcome of related application)

**Old Business:**

1. W1419 - Chernushek, 473 Middle Turnpike-application
2. W1423 - Shafer, 45 Echo Road - shed within 75'
3. W1424 - Whispering Glen, 73 Meadowbrook Road - 37 units  
(Tabled pending May 4, 2009 Public Hearing)

**New Business:**

1. W1425- Town of Mansfield, Stonemill Rd- Bridge Replacement
2. W1426- Hallock, East side of Wormwood Hill Rd - 3 lots
3. W1427- Hartley, 72 Crane Hill Road- gazebo
4. W1428- Ponde Place, Hunting Lodge and Northwood Rd -  
well drilling & testing
5. W1429- Kleinfelder/Exxon, 4 Corners Remediation

**Reports of Officers and Committees:**

**Other Communications and Bills:**

1. DEP Permit Applications for the Use of Pesticides in State Waters: Swan Lake, Mirror Lake, Curtin Pond on Farmstead Rd.
2. DEP Inland Wetlands Reporting Program 2005 Status & Trends Report
3. DEP Training Program 2005 Summary Report
4. Winter 2009 "The Habitat"

**Adjournment:**

04161



**AGENDA**  
**MANSFIELD INLAND WETLAND AGENCY/PLANNING & ZONING COMMISSION**

Special Meeting – Field Trip  
Wednesday, April 15, 2009

The purpose of the field trip is to observe site and neighborhood characteristics. The merits of the proposals will not be discussed and no public comments will be allowed. Times listed are estimated times of arrival. In the event of inclement weather, or if you mentioned previously that you planned to attend but now find you cannot, please contact the Planning Office at 429-3330.

- 1:00 p.m. Meet at the Planning Office if you would like a ride.
- 1:10 p.m. HARTLEY, 72 CRANE HILL ROAD- proposed gazebo  
W1427
- 1:25 p.m. HALLOCK, EAST SIDE OF WORMWOOD HILL RD ( east side about 2500 feet north of Route 89)- proposed 3 lot subdivision W1426, PZC File #1285
- 1:50 p.m. TOWN OF MANSFIELD, STONEMILL RD- proposed bridge replacement  
W1425
- 2:10 p.m. KLEINFELDER/EXXON, ( CVS SITE AT CORNER OF ROUTES 44 AND 195 )-  
proposed ground water remediation W1429, PZC File #1157-2
- 2:30 p.m. PONDE PLACE, HUNTING LODGE AND NORTHWOOD RD - proposed well drilling & testing W1428 ( meet at northerly end of Northwood Rd )

cc: IWA/PZC, Conservation Commission, PAC, OSPC, G. Meitzler, G. Padick, C. Hirsch, Kleinfelder, Merchants Mansfield LLC., K. Hallock, Holmes & Henry Assoc., Hartley, Hesketh, Ponde Place LLC., Town of Mansfield Public Works

View Packet Materials

**AGENDA**  
Inland Wetland Agency  
Regular Meeting  
Monday, May 4, 2009  
Council Chambers, Audrey beck Building

**Call to Order: 7:00 PM**

**Review of Minutes of Previous Meetings and Action Thereon:**

4.06.2009 - Regular Meeting ✓  
4.15.2009 - Field Trip ✓

**Communications:**

Conservation Commission: ✓ W1425 - Town of mansfield - Stone Mill Bridge  
W1426 - Hallock Subdivision  
W1427 - Hartley  
W1428 - Ponde Place  
W1429 - Kleinfelder (CVS)  
GM monthly business memorandum ✓

**Outstanding Enforcement Actions:**

W1400 - Glode - Stafford Rd ✓

**7:15 PM Public Hearing**

W1424 - Whispering Glen Condominiums - Meadowbrook Lane

**Old Business:**

**Consideration of action:**

W1425 - Town of Mansfield - Stone Mill Bridge Replacement *Approval*  
W1426 - Hallock Subdivision - Wormwood Hill Rd *continued*  
W1427 - Hartley - Crane Hill Rd - gazebo in buffer  
W1428 - Ponde Place - well drilling accessway in buffer  
W1429 - Kleinfelder - Rte 44 & 195 - remediation CVS, former Exxon site

**New Business:**

**New Applications:**

W1430 - Block - 8 Hanks Hill Rd - Modification Request  
W1431 - Juliano Pools - 853 Storrs Rd - in-ground pool

**Reports of Officers and Committees:**

**Other Communications and Bills:**

Conn. Federation of Lakes News, April 2009  
Other

**Adjournment:**

August 29, 2016

Jennifer Kaufman  
Inland Wetland Agent  
Town of Mansfield  
4 South Eagleville Road  
Mansfield, CT 06268

Re: The Lodges-- IWA Application W1564  
Response to August 12, 2016 Memo

Dear Ms. Kaufman:

Below, we have provided responses to the four (4) comments/questions raised in the memo addressed to you from Mary Harper, a member of the Conservation Commission, dated August 12, 2016. Our responses are numbered following the order presented in the memo.

Comment No. 1:

The memo raises a number of questions regarding the soil types found on the property and how they have been depicted on the application plan set. Reference is made to Sheet IW-1, the NRCS soils map and a 2007 soils report prepared by John P. Ianni, a certified soil scientist, who previously provided consulting services for the project. Regarding Sheet IW-1, in accordance with the required application items listed in the town wetland regulations, the upland soil types were included on this plan based on an interpretation of the NRCS map and the limits of wetland soils were shown taken from the defined limits included on the recently approved official wetlands map for the property. In order to clear up any confusion on this issue, we have revised Sheet IW-1 to more clearly define the soil type boundaries and have also added the wetland soil types to the soil classification table listed on the plan (see attached Sheet IW-1, revised 8/30/16).

It is widely understood that the USDA-NRCS Soil Survey maps are a coarse-scale representation of soil mapping units in the landscape, with an emphasis on agricultural uses. NRCS soil scientists would map hundreds of acres per day. While the soil survey maps are valuable for planning purposes, they are not accurate enough for final site design. That is why the project team's soil scientist accurately delineated the limits of poorly and very poorly drained soils on the property, which were then surveyed and plotted on the plans. This is also the reason why project team members, including the soil scientist of record, Mr. George Logan, inspected the upland soils within the development envelope, and found them to be generally consistent with the types of soils identified in the NRCS soil survey, even though the limits of the soil series may differ considerably in the field as compared to those seen on the less accurate NRCS soil survey map.

It must be noted that the limits of the different types of soils are a matter of some interpretation since it is not possible to directly translate the limits depicted on the NRCS map, or other similar reference source mapping, to the plan set due to a lack of common mapping scale, loss of

accuracy because of previous reproduction/reprographics inconsistencies and recognition of obvious topographical features found on a specific property that affect the drawing of the limits on the plan. Site planners often refer to the NRCS map and other available soil reference materials as tools during the undertaking of an initial general analysis of soil characteristics in concert with the start of the preliminary planning phase for a given site and generally do not do any type of detailed calculations or final site design based heavily on this data. The only soil types on the property that have been defined precisely are the limits of wetland soils shown which were flagged in the field by the soil scientist and located by the project land surveyors.

Responding to another question raised, the point at which the referenced cross culvert under Hunting Lodge Road enters the northeast corner of the property is shown on the plan set and is discussed in the various reports presented with the application. The discharge from this culvert does continue to the west in a poorly defined channel which intersects with the significant north-south wetland and intermittent watercourse corridor which exits the site in the southeasterly corner of the property. No development is proposed that would have any effect on this existing condition.

A question is raised as to the likelihood that infiltrated stormwater runoff could possibly break out further downstream after traveling through the soil profile for some distance particularly during high water table seasons. The purpose of installing the infiltrator systems is to replenish the groundwater flow that will be lost with the introduction of upstream impervious cover. Therefore, any breakout that could occur even under the most severe seasonal conditions would only be replicating existing conditions.

Comments No. 2 & 3:

Our responses to Comments No. 2 and 3 have been combined since we believe both comments raise essentially the same concerns and questions regarding the suitability of the on-site soils to allow infiltration to successfully occur from the proposed stormwater infiltrator systems and the bio-retention basins. First, no one is disputing that the underlying soil types do present a challenge to the designers to successfully introduce the concept of infiltration into the overall stormwater management system for the project. This is a design goal for the design of the stormwater management plan for the project to address the issues of water quality treatment and replenishment of current groundwater recharge lost by the installation of impervious surfaces throughout the project site.

It should be noted that the macro stormwater hydrologic analysis completed for the project including all the computer modeling does not include any effects realized by the inclusion of infiltrator units or bio-retention basins in the system. The infiltrators are treated in the calculations as detention devices similar to above ground detention basins or watertight underground chambers or solid pipe systems. Therefore, achieving the design goal for post-development conditions of reducing peak flow rates leaving the developed site to downstream watersheds for all design storm events is not dependent on reducing runoff from the site by retaining and infiltrating the runoff on site. This results in a very conservative design, especially once the positive effects of the infiltrators are factored in.

It is our opinion that the design of the infiltrator systems and the use of the bio-retention basins will prove to be very successful in accomplishing our design goals. Each component of the proposed infiltrator systems has been carefully placed throughout the development based on detailed field inspections and soil testing that included deep hole tests and the conduct of permeability testing for each system location. The proper location for each of the bio-retention basins was determined in the field by our soil scientist George Logan, based on his field observations. As noted in our response to Comment No. 1 above, the use of soil type delineations based on the NRCS soil map or other printed reference materials is simply not accurate enough for any level of detailed analysis or design. A detailed summary of the soil testing completed and the design parameters used was presented in our written responses to GEI comments dated June 17, 2016. A copy of the table included in that response is attached.

The specific location and depth at which the bottom of the proposed infiltrator systems and bio-retention basins are set take into account the detailed soil observations completed in the field at each proposed location. For some of the systems, we will install an underdrain system upstream of the infiltrator field or at the bottom of a bio-retention basin to ensure that the seasonal groundwater elevation is maintained at the assumed design grade. The discharge of flow from these underdrains will be day-lighted to the surface in a conventional manner based on the available topographical conditions. It should be also noted that it is our experience that once the project is completed, the seasonal high groundwater elevation will be permanently dropping in the areas where the systems are located due to the loss of surface infiltration with the installation of upstream impervious surfaces. This will further enhance the performance of the infiltrators in restoring groundwater recharge.

A question was raised in the memo regarding the permeability testing procedure used by SSES, which is the falling head permeability test method. This is an industry standard utilized for this type of soil analysis following standard ASTM protocol. There are basically two types of laboratory tests: falling head and constant head methods. Falling head method is usually used when there will be samples with a wide gradation of fine and coarse soil types as is the case on this site. An interesting article prepared by University of Toledo that presents a rather thorough explanation of the two permeability test methods is attached.

The soil testing completed by George Logan at the location of each of the proposed bio-retention basins was to answer the review question: is the seasonal high groundwater table high enough that an underdrain would be required? For bio-retention basins 1, 2, and 3, the answer was no, since these would be located in well drained soils. For the rest of the basins, to be located in moderately well drained soils, the answer was yes. The distinction between "faint" and "prominent" mottles was the soil scientist's attempt to more carefully record field conditions. Occasionally faint mottles, which typically indicate a high groundwater table for short periods of time during the wettest years, are missed.

Ms. Harper references her experience regarding a proposed 2015 residential subdivision application in Mansfield, Williams Re-subdivision (a.k.a. Williams Heights), to the subject proposal. We believe this reference is not apropos on a number of points, including the fact that the two sites are substantially different. For instance, a substantial portion of the reference re-subdivision site and contributing sub-watersheds had been disturbed in the past, apparently having a significant impact with regards to drainage patterns. The proposed project was for a

large lot single family residential subdivision utilizing septic systems with a very basic stormwater management plan proposed. This is not the case at the subject site. The assertion that "many soil engineers and scientists do not consider mottling to be a reliable indicator of high seasonal water tables" is not supported by common design practice nor the design guidelines included in the Public Health Code. Soil mottling in undisturbed soils, such as those identified throughout the subject site, is a reliable indicator of seasonal high groundwater.

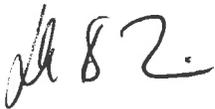
Comment No. 4:

At the request of GEI during the comment review period, a small riprap emergency overflow spillway was added to each of the bio-retention basins rather than relying on surface flow overtopping of the vegetated sides of the basins. The flow from the spillway will be directed to overland flow towards the receiving wetlands. We will add a detail for the spillways on the next revised set of plans. This is a minor addition to the plan details.

In summary, it is our professional opinion that there is no technical reason to conduct any additional testing or monitoring of groundwater or soil conditions on the property at this juncture. This opinion is based on our design team's experience over many years with the successful implementation of these types of infiltrator systems on many projects, combined with the exhaustive field observations and data collection already undertaken by the design professionals over the past 10 years. Further, given the flexibility in the design and installation options available for these types of systems, minor adjustments in the field to enhance performance can be completed at the time of installation based on any unanticipated conditions encountered.

Very truly yours,

**F. A. Hesketh & Associates, Inc.**



David S. Ziaks, P.E.

**The University of Toledo**  
**Soil Mechanics Laboratory**

**Permeability Testing - <sup>1</sup>Constant and Falling Head Tests**

**Introduction**

In 1856 the French engineer Henri D'arcy demonstrated by experiment that it is possible to relate the discharge rate of water flowing from a soil to the hydraulic or total head gradient in the soil and a property of the soil which we refer to as the coefficient of permeability or the hydraulic conductivity (Equation 1). Darcy's Law, as it is called, is a very useful law because it is not possible to derive a theoretical law for the flow of water in soil. Soils samples are tested in the laboratory using constant head or falling head test procedures in order to obtain the coefficient of permeability. The coefficient of permeability is used to compute the quantity of flow for all types of flow problems in soil where laminar flow conditions exist.

**Darcy's Law**

$$q = k \cdot i \cdot A \tag{1}$$

where  $q$  = discharge rate ( $L^3/T$ )  
 $k$  = coefficient of permeability ( $L/T$ )  
 $i$  = hydraulic (total head) gradient =  $h / L$ , ( $L/L$ )  
 $A$  = cross-sectional area of the soil sample ( $L^2$ )

**Apparatus**

1. Funnel
2. Pan
3. Balance
4. Permeameter
5. Constant head tank
6. Manometers
7. Overflow flask
8. Graduated flask
9. Timing Device
10. Thermometer

---

<sup>1</sup> ASTM D 2434 – 1968 (Reapproved 1994)

## Procedure

### A. Preparation

- 1) Obtain the mass of the permeameter.
- 2) Carefully place and compact the dry soil in the permeameter in 3 to 5 layers. Level the top surface of the soil by applying a small pressure to the porous stone.
- 3) Measure the height of the compacted soil. This is equal to  $L$  for the computing the total volume of soil.
- 4) Measure the distance from the top manometer tube to the top of the bottom porous stone. This is the length  $L$  for the falling head test.
- 5) Measure the mass of the permeameter and the dry soil.

### B. Constant Head Permeability Test

- 1) Assemble the permeameter and attach the manometer tubing to the side of the permeameter. Attach the tubing from the constant head supply to the top of the permeameter. Attach the exit tubing to the bottom of the permeameter and place the other end in the overflow flask.
- 2) Open the valves to the permeameter and slowly add water to the constant head tank to saturate the soil sample.
- 3) Open the clamps on the manometer tubes.
- 4) Adjust the rate of flow and allow the flow to reach a stable head condition, i.e. water levels in the manometer remain constant. Record the water levels in the manometers as  $h_1$  (near the top of the soil) and  $h_2$  (near the bottom of the soil).
- 5) Measure and record the discharge  $q$  and the time  $t$ .
- 6) Repeat the steps 3 and 4 two additional times using different values of  $h_1$  and  $h_2$  (total head difference), which can be achieved by adjusting the overflow level of the discharge.

### C. Falling Head Permeability Test

- 1) Close the clamp on the bottom manometer tube.
- 2) Place the overflow flask adjacent to the manometer scale so that the water level can be read on the manometer scale. Record this as the reading of the discharge level,  $R_d$ .
- 3) Close the valve on the bottom of the permeameter cell and allow the top manometer tube to fill with water. Close the valve to the top of the permeameter.
- 4) Obtain the reading on the top manometer scale. Record this reading as  $R_1$ .
- 5) With one person watching the manometer and another person timing, open the valve to the bottom of the permeameter and measure the time for the water to flow from level 1 to level 2. Record these as  $R_2$  and  $t$ .
- 6) Close the valve to the bottom of the permeameter and open the valve to the top of the permeameter in order to add water to the top manometer tube. Repeat the test two additional times (steps 4 and 5) using different water levels ( $R_1$  and  $R_2$ ) in the manometer tubes.

### Calculations

Compute average values of permeability obtained from both the constant and falling head tests using Equations 2 and 3 and Table 1. Compute the void ratio of the soil using Equation 4 and the data in Table 2.

#### Constant Head Test

$$k = \frac{QL}{hAt} \quad (2)$$

Where

Q = total discharge volume ( $L^3$ );

L = length of the soil sample between the manometers (L);

h = total head difference measured on the manometers (L);

A = cross-sectional area of the soil sample ( $L^2$ ).

#### Falling Head Test

$$k = \frac{aL}{At} \ln\left(\frac{h_1}{h_2}\right) \quad (3)$$

Where

a = cross-sectional area of the standpipe ( $L^2$ );

L = length of soil sample measured from the top manometer to the bottom of the soil;

t = time increment for measuring flow for constant head test or time for water to fall from  $h_1$  to  $h_2$  for falling head test (T);

$h_1, h_2$  = total head at time  $t_1$  and  $t_2$  (L).

#### Void Ratio

$$e = \frac{G_s \gamma_w}{\gamma_{dry}} - 1 \quad (4)$$

### Results

For the constant head test, compute the discharge velocity ( $v = Q / A \times t$ ) and total head gradient ( $i = h/L$ ). Plot discharge velocity versus total head gradient for the constant head test using Figure 1. Obtain the slope of the best-fit line.

### Conclusions

Is the permeability representative of the type of soil tested in the laboratory?

Compare the average values of permeability from the two tests.

For the constant head test, compare the average permeability and the slope of the best-fit line from the graph of discharge velocity versus total head gradient.

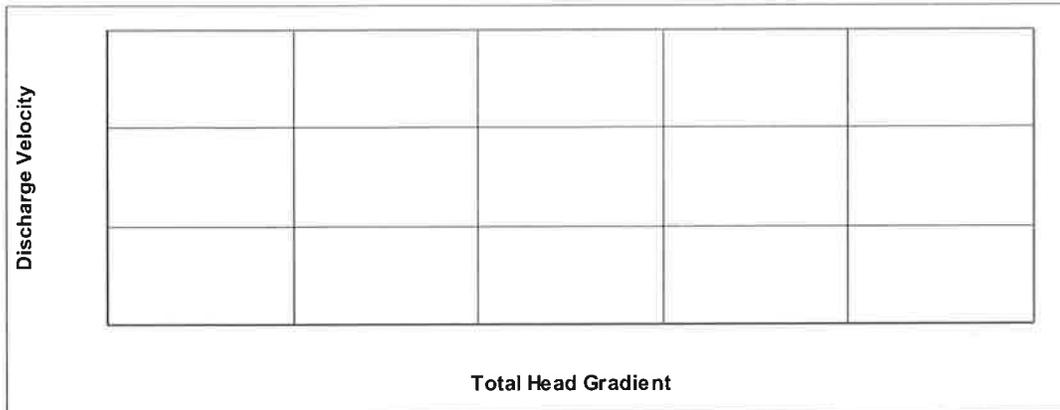
Did laminar flow occur for the test? Explain.

**Table 1- Constant and Falling Head Permeability**

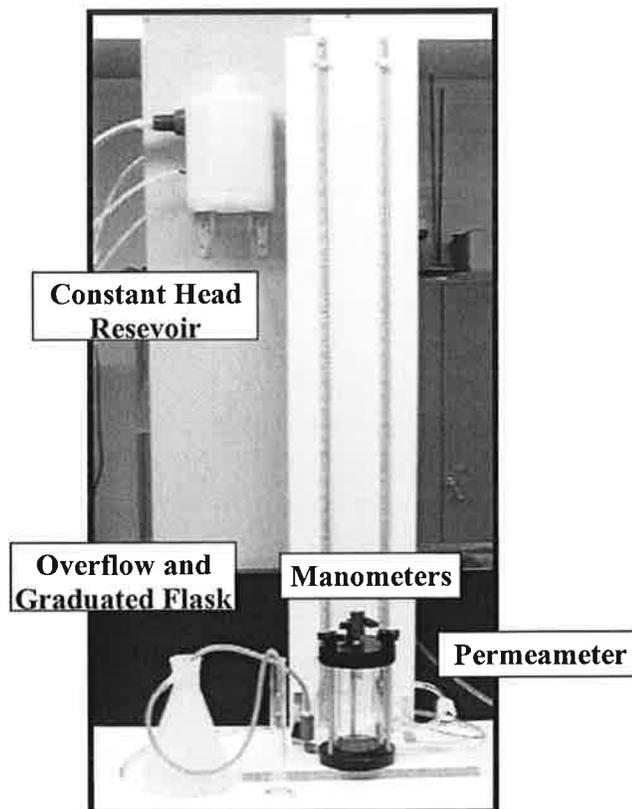
Permeability Test	Group _____	Date _____	
Soil Description			
Weight of Dry Soil	(lb.)		
Diameter of Permeameter	3.0 Inch		
Area of Soil Sample	(Inch) <sup>2</sup>	(cm) <sup>2</sup>	
Total Length of Soil Sample	(Inch)		
Dry Unit Weight	(lb/ft <sup>3</sup> )		
Specific Gravity (Assumed)	2.65	Void Ratio =	
Soil Length for Falling Head Test, L	10.0 (cm)		
Manometer Tube Spacing (= L for CHT)	7.6 (cm)		
<b>Constant Head Test (CHT)</b>	Trial 1	Trial 2	Trial 3
Time, t (sec)			
Discharge, Q (cm <sup>3</sup> )			
Water Level in Manometer, h <sub>1</sub> (cm)			
Water Level in Manometer, h <sub>2</sub> (cm)			
Total Head Difference, h <sub>1</sub> – h <sub>2</sub> (cm)			
Coefficient of Permeability, k (cm/sec)			
Average value of k (cm/sec)			
Discharge Velocity, Q/(Ax t ) (cm/sec)			
Gradient, i = h/L			
Slope of Best-Fit Line (cm/sec)			
<b>Falling Head Test (FHT)</b>	Trial 1	Trial 2	Trial 3
Area of Inlet Tube, a (cm <sup>2</sup> )	0.32	0.32	0.32
Length of Soil Sample, L (cm)			
Elapsed Time, t (sec)			
Reading of discharge level, R <sub>d</sub> (mm)			
Reading at start of test, R <sub>1</sub> (mm)			
Reading at end of test, R <sub>2</sub> (mm)			
h <sub>1</sub> = R <sub>1</sub> - R <sub>d</sub> (mm)			
h <sub>2</sub> = R <sub>2</sub> - R <sub>d</sub> (mm)			
Coefficient of Permeability, k (cm/sec)			
Average value of k (cm/sec)			

**Table 2- Data for Computing Void Ratio**

Cell Number	1	2	3	4
Weight of Dry Soil ( $W_s$ ) (lb)	2.46	2.42	2.41	2.47
Total Length of Soil Sample (inch)	4.74	5.57	5.04	5.13



**Figure 1 – Discharge Velocity Vs. Total Head Gradient (Constant Head Test)**



**Picture 1 – Permeability Apparatus**

Attachment A – Response to GEI Comment # 3:

TAKEN FROM  
JUNE 17 RESPONSES  
BY FAHA

Design Assumptions for Stormwater Infiltrator Systems:

- No credit was taken in the macro model calculations for infiltration or other LID design techniques that are included in the proposed site drainage system design. To be conservative, the drainage model treats all pavement types as impervious. The actual peak rates of runoff generated for all storm events will therefore be actually less than projected in the macro model results.
- The purpose of incorporating infiltrator systems in the site stormwater management design was to provide the opportunity for groundwater recharge to the extent possible. Since the existing soils are mixture of B and C horizons, it appears that this is a prudent design approach. The infiltrator systems combined with the bio-retention basins provide sufficient volume for WQV and GRV as defined by the CTDEEP.
- Based on the field testing recently conducted, it appears that extended period of high groundwater is not a concern where the system units are proposed. In general, permeability rates are more than sufficient throughout the first 3-5 feet of soil and there is no true hardpan cutoff layer of soil but a somewhat compact, complex C horizon comprised of coarse gravelly and sandy loams starting at about 3 feet below existing surface and continuing down to 7-8 feet. Except for one location downstream of Test Pit #1, no ledge was detected in the deep test pits conducted. Given the size of the excavator used for the testing, it was not possible to determine if this was ledge refusal or just a local heavy concentration of compacted very boney material.
- In addition to the infiltration flow from the units to the surrounding soils, the outlets from the systems are regulated by a weir placed in the outlet control structures which is set to allow the units to drain completely between storm events.
- Generally speaking, the GW elevations in developed areas will drop below their historic levels due to cut-off of surface recharge to the underlying groundwater table.
- Below is a summary of the assumed design parameters for placement of the seven (7) infiltrator unit systems.

<u>System #</u>	<u>Average Existing Grade</u>	<u>Assumed GW Elev. (1)</u>	<u>Observed Seepage (1)</u>	<u>Bottom of Units</u>	<u>Avg. Perm Rate (2)</u>
VIII-A	565.0	5.0	8.0	560.0	8.8
II-A	565.5	3.6 (3)	5.0	562.0	6.1
IV-A	553.5	3.0	4.0	552.0	15.6
VI-A	555.0	4.0	n/a	550.0	5.0
VII-A	551.0	4.0	n/a	548.0	9.5
X-A	558.5	3.0	5.5	556.0	6.3
IX-A	553.0	3.0	5.1	551.67	4.5

(1) Based on an interpretation of the data recorded for observed faint to darker mottling, indications of any seepage in the deep hole tests and general field observations.

(2) Feet./Day

(3) Underdrain provided upstream of system to reduce GW below 561.0.

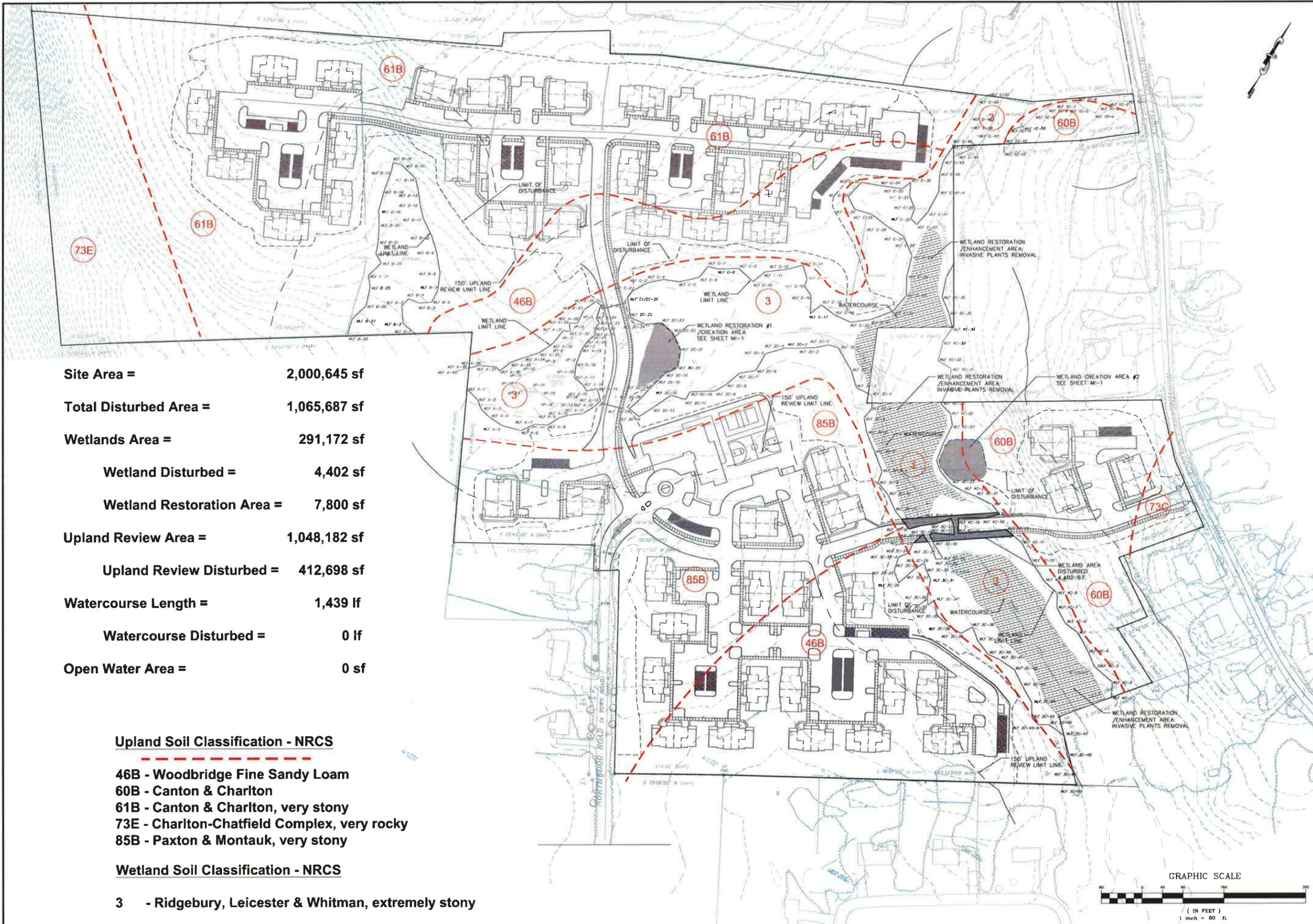
**Site Area = 2,000,645 sf**  
**Total Disturbed Area = 1,065,687 sf**  
**Wetlands Area = 291,172 sf**  
**Wetland Disturbed = 4,402 sf**  
**Wetland Restoration Area = 7,800 sf**  
**Upland Review Area = 1,048,182 sf**  
**Upland Review Disturbed = 412,698 sf**  
**Watercourse Length = 1,439 lf**  
**Watercourse Disturbed = 0 lf**  
**Open Water Area = 0 sf**

**Upland Soil Classification - NRCS**

- 46B - Woodbridge Fine Sandy Loam
- 60B - Canton & Charlton
- 61B - Canton & Charlton, very stony
- 73E - Charlton-Chatfield Complex, very rocky
- 85B - Paxton & Montauk, very stony

**Wetland Soil Classification - NRCS**

- 3 - Ridgebury, Leicester & Whitman, extremely stony



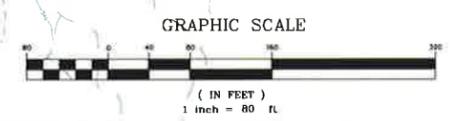
**THE LODGES AT STORRS**

**FAH** F. A. Hesketh & Associates, Inc.  
 6 Creamery Brook, East Granby, CT 06026  
 Civil & Traffic Engineers • Surveyors • Planners • Landscape Architects  
 Phone (860) 650-8000  
 Fax (860) 844-8600  
 e-mail mah@hasketh.com

No.	Date	Description
1	08-10-2016	Town comments
2	08-30-2016	Add Wetland Soil Types

INLAND WETLANDS PLAN  
 PREPARED FOR  
**STORRS LODGES, LLC**  
 HUNTING LODGE ROAD  
 MANSFIELD, CONNECTICUT  
 Date: 03-18-16 Drawn by: CAD Job no: 04161  
 Scale: 1" = 80' Checked by: DSZ Sheet no: 1 OF 1  
 © 2004-2016 F.A.H. Comments: (C:\DWG\02.dwg, W-1 (revised), Aug. 25, 2016 - 11:21:38 AM)

**IW-1**



FILE

## LETTER OF TRANSMITTAL

TO: *MANSHFIELD RANNING DEPT*

DATE: 11/30/2015

OFFICE JOB FILE NO: *04161*

PROJECT NAME: *HUNTING LODGE ROAD*

ATTN:

PROJECT LOCATION:

WE ARE SENDING YOU HEREWITH:

NO OF COPIES	ITEM TITLE	MADE BY	ORIGINALS	PAPER PRINTS	MYLAR COPY	OTHER	REMARKS
<i>15</i>	<i>COUNTY &amp; FIELD LOCATION MAPS / PS-1</i>			<i>X</i>			<i>FULL SIZE</i>
<i>2</i>	<i>SURVEY MAP PS-1</i>			<i>X</i>			<i>FULL SIZE</i>
<i>15</i>	<i>" " "</i>			<i>X</i>			<i>11X17</i>
<i>15</i>							
<i>15</i>	<i>WETLANDS REPORT</i>			<i>X</i>			<i>DATE: 11/25/15</i>
<i>1</i>	<i>COMPLETED APPLICATION</i>		<i>X</i>				
<i>1</i>	<i>CHECK &amp; FWD</i>		<i>X</i>				

**COMMENTS:**

*FOR WETLAND BOUNDARY  
AMENDMENT APPLICATION*

**SENT BY:**

MAIL  
SPECIAL DELIVERY  
FEDEX  
MESSENGER  
OTHER *Drop-off*

C.C: *PANOR PLAZA LLC*

F. A. Hesketh & Associates, Inc.

By:

IF ENCLOSURES LISTED ABOVE ARE NOT RECEIVED KINDLY NOTIFY AT ONCE



# Mansfield Inland Wetlands Agency

## Application to Change or Amend the Inland Wetlands and Watercourses Map, Mansfield, Connecticut

Pursuant to Section 15-217 of the Mansfield Inland Wetlands and Watercourses Regulations, all petitions to amend the Inland Wetlands and Watercourses Regulations shall be subject to a public hearing and payment of the fee (\$500). Any person who submits a petition to amend the Mansfield Inland Wetlands and Watercourses Map, shall bear the burden of proof for all requested map amendments. The Fee Schedule established in Article V, Chapter 122, Section 122-12 of the Mansfield Code of Ordinances, authorizes the Agency to hire independent consultants at the expense of an applicant when the Agency deems it necessary to do so.

- Applicant's Name POND PLACK LLC  
Address 30 CONSET CROSSING SUITE 600 SIMSBURY, CT 06070  
Phone Number 860-217-1700 email teary@thekeystonecompanies.com
- Applicant's interest in the property:  Owner  Lessee  Optionee  Other
- Property Owner(s)' Name SAME AS APPLICANT  
Address \_\_\_\_\_  
Phone Number \_\_\_\_\_ email \_\_\_\_\_
- Location of Property (include street address) and Tax Parcel Id (Map, Block, Lot):  
HUNTING LODGE ROAD PARCEL ID 15.21.3
- Reason for the requested action:  
AMEND TOWN OFFICIAL WETLAND & WATERCOURSES MAP

### The following must be submitted as part of this petition:

- The wetlands and watercourses from the Official Map
- The proposed amendment
- Documentation by a certified soils scientist of the distribution and types of wetland soils and watercourses on subject property. (Please include the Soil Scientist's Certification)
- A Map certified by a Connecticut Licensed Land Surveyor and the Soil Scientist indicating the watercourses and flag locations set by the soil scientist defining the boundaries of wetland soil types
- Map(s) indicating any proposed development of the land in relation to existing and proposed wetland and watercourse boundaries.

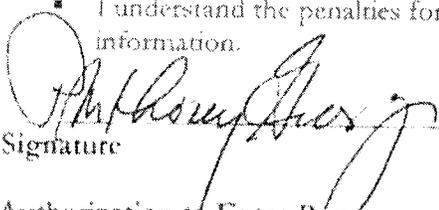
In addition, please provide the following information:

- Total Area of Wetlands on property from Official Map: 15.29 Ac / 666,232 S.F. (Ac/SF)
- Total Length of Watercourse from Official Map: 0 (LF)
- Total Area of Wetlands as Flagged by Soil Scientist: 6.68 Ac / 291,172 S.F. (Ac/SF)
- Total Area of <sup>OPEN WATER BODY</sup> Wetlands as Flagged by Soil Scientist: 0 (Ac/SF)
- Total Length of Watercourse as determined by Survey: 1,439 L.F. (LF)
- Total Area of Open Water as determined by Survey: 0 (Ac/SF)
- Wetland Net Change (exclude wetland to open water): -8.61 Ac / -375,060 S.F. (Ac/SF)
- Watercourse Length Net Change: ADD 1,439 L.F. (LF)
- Open Water Area Net Change: 0 (Ac/SF)
- Total Land Area of the Property: 45.93 Ac / 2,000,645 S.F. (Ac/SF)

**Certification**

I hereby certify that:

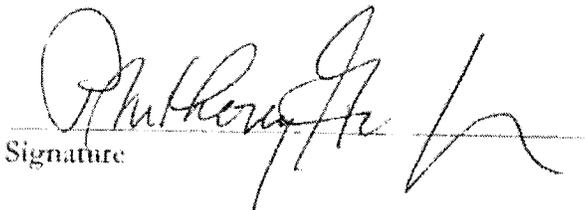
- I am familiar with the information contained in this form and that such information is true and correct to the best of my knowledge.
- I understand the penalties for obtaining a permit through deception or through inaccurate or misleading information.

  
Signature

11-30-15  
Date

**Authorization to Enter Property**

The undersigned hereby consent to necessary and proper inspections of the above-mentioned property by members and agents of the Inland Wetlands Agency at reasonable times, both before and after the permit in question has been issued by the Agency.

  
Signature

11-30-15  
Date

## Property Details

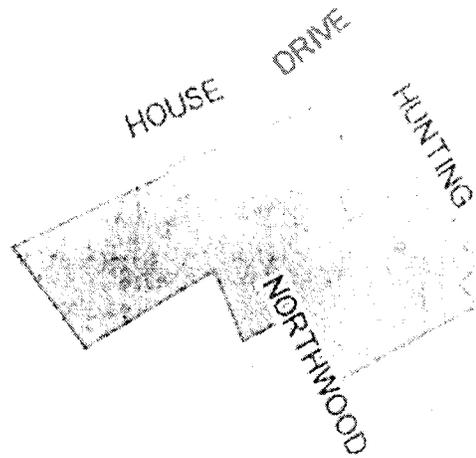
Number of records found: 1

One record is displayed for each address found at the selected property. Multiple addresses may occur in the case of condominiums.

HUNTING LODGE RD  
10 15 21.3[View Property Record Card](#)

PARCEL ID: 15 21.3  
 LOCATION: HUNTING LODGE RD  
 LAST SALE DATE: 2011-07-15  
 CO-OWNER  
 MAILING ADDRESS LINE 2  
 MAILING ADDRESS CITY: SIMSBURY  
 MAILING ADDRESS ZIP: 06070  
 ROOF STRUCTURE:  
 HEAT TYPE:  
 BUILDING STYLE:  
 LANDUSE DESCRIPTION: Res. Vacant Land  
 NEIGHBORHOOD:  
 LAND ASSESSMENT: 76800  
 EXTRA FEATURES ASSESSMENT: 0  
 ROCKY PATCH: 7607405  
 APPROXIMATE YEAR BUILT: 1900  
 NUMBER OF ROOMS:  
 NUMBER FULL BATHS:  
 BUILDING AREA EFFECTIVE: 0

ACCOUNT NUMBER: 15 21.3  
 LAND AREA: 48.9  
 OWNER: PONDE PLACE LLC  
 MAILING ADDRESS LINE 1: 30 CORSET CROSSING DR STE 600  
 MAILING ADDRESS LINE 3  
 MAILING ADDRESS STATE: CT  
 MAILING ADDRESS COUNTRY:  
 ROOF COVERING:  
 HEAT FUEL:  
 LANDUSE CODE: 500  
 ZONING: RAR00  
 BUILDING ASSESSMENT: 0  
 OTHER BUILDING ASSESSMENT: 0  
 TOTAL ASSESSMENT: 76800  
 LAST SALE VALUE: 0  
 NUMBER OF STORIES:  
 NUMBER OF BEDROOMS:  
 NUMBER OF HALF BATHS:  
 BUILDING AREA GROSS: 0



RD

EAGLEVILLE

Owner: PONDE PLACE LLC  
Co-Owner:  
Address: 30 DORSET CROSSING DR STE 800  
SIMSBURY CT 06070

Assessment: Total: 78800  
Building: 0 Land: 76800 Yard: 0

Sales History

<u>Parcel</u>	<u>Book / Page</u>	<u>Sale Date</u>	<u>Sale Price</u>
ASPORTAS ABRAHAM EST ET AL REFERENCE	300/ 192	1990-08-22	
EYSTONE COMPANIES LLC THE	370/ 413	1996-03-06	
PONDE PLACE LLC	563/ 91	2004-12-01	300000
	720/ 296	2012-01-30	
	753/ 405	2013-07-15	



MainStreetGIS, LLC  
[www.mainstreetgis.com](http://www.mainstreetgis.com)

Land Information

Land Area: 45.9 AC Zoning: RAR90  
Land Use: 500 - Res. Vacant Land  
Neighborhood:

Building Information

Style:	Stories:
Year Built: 1900	Heat Fuel:
Rooms: Bedrooms:	Heat Type:
Baths: Half Baths:	AC Type:
Living Area:	Roof Structure:
Gross Area:	Roof Covering:

Extra Features

<u>Description</u>	<u>Area / Units</u>	<u>Assessment</u>
<u>Sub Areas</u>		
<u>Description</u>	<u>Living Area</u>	<u>Gross Area</u>

THE KEYSTONE COMPANIES LLC

OPERATING ACCOUNT  
40 DORSET KING STE 600  
SIMSBURY, CT 06070-1473

UNITED BANK  
61-7031-2111

11/30/2015

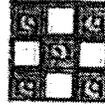
PAY TO THE ORDER OF Town of Mansfield

\$\*\*500.00

Five Hundred and 00/100\*\*\*\*\*

DOLLARS

Town of Mansfield



MEMO

wetlands application - Ponde Place

AUTHORIZED SIGNATURE

⑈001016⑈ ⑆211170318⑆ 40000404837⑈

THE KEYSTONE COMPANIES LLC

Town of Mansfield

11/30/2015

1016

500.00

Cash - United checkin wetlands application - Ponde Place

500.00

THE KEYSTONE COMPANIES LLC

Town of Mansfield

11/30/2015

1016

500.00

Cash - United checkin wetlands application - Ponde Place

500.00

REPORT DATE: November 25, 2015

REMA ECOLOGICAL SERVICES, LLC

PAGE 1 OF 3

164 East Center Street, Suite 8  
Manchester, CT 06040

860.649.REMA (7362)

ON-SITE SOIL INVESTIGATION & WETLAND DELINEATION REPORT

## PROJECT NAME &amp; SITE LOCATION:

+/- 45.93 acresHunting Lodge RoadMansfield, CTREMA Job No.: 15-1860-MNS18Field Investigation Date(s): 10/1, 10/9, 10/10/2015

Field Investigation Method(s):

 Spade and Auger Backhoe Test Pits Other: \_\_\_\_\_

## REPORT PREPARED FOR:

EdR999 South Shady Grove RoadSuite 600Memphis, TN 38120

## Field Conditions:

Weather: Mostly sunny to cloudy, 50s to 70sSoil Moisture: Low-moderateSnow Depth: noneFrost Depth: none

## Purpose of Investigation:

- Wetland Delineation/Flagging in Field  
 Wetland Mapping on Sketch Plan or Topographic Plan  
 High Intensity Soil Mapping by Soil Scientist  
 Medium Intensity Soil Mapping from *The Soil Survey of Connecticut Maps* (USDA-NRCS)  
 Other: \_\_\_\_\_

Base Map Source: CT Soil Survey web (USDA-NRCS) Figure A(attached)Wetland Boundary Marker Series: RES-A-1 to RES-A-40 (open line), RES-B-1 to RES-B-28 (open line), RES-C-1 to RES-C-51 tied to RES-2C-1 to RES-2C-28 tied to RES-3C-1 to 3C-50, RES-1C-1 to RES-1C-13, and RES-4C-1 to RES-4C-36 (all open lines)

General Site Description/Comments: The "study area" or "site" is a roughly 49.93-acre, residentially-zoned parcel, westerly of Hunting Lodge Road, and northerly, easterly, and westerly of the northern terminus of Northwood Road, in Mansfield, CT. The site is predominately wooded and undisturbed, except for historic disturbances associated with filling just northerly of the terminus of Northwood Road, and with a crossing over the site's eastern wetland corridor and stream to connect Hunting Lodge Road with Northwood Road. The soils within the study area are both disturbed and undisturbed in nature, and are derived from glacial till (i.e. unstratified sand, silt & rock), both with and without a hardpan, and with rocky/sandy fill in the areas noted. The disturbed upland soils are identified as the Udorthents (306) soil mapping unit. The undisturbed upland soils are the well drained Paxton and Montauk (85), Canton and Charlton (60), and Charlton and Chatfield (73) soil series complexes, and the moderately well drained Woodbridge (46) soil series, while the undisturbed wetland soils belong to the poorly and very poorly drained Ridgebury, Leicester, and Whitman (3) soil series complex. The site's regulated wetland areas include a seasonally saturated to seasonally flooded eastern forested corridor associated with an intermittent stream, tributary to Eagleville Brook, and western forested wetlands, including a hillside seep and vernal pool habitat, that drain westerly to Cedar Swamp Brook. All of the forested wetlands are red-maple dominated swamps, with typical understory species (e.g. spicebush, highbush blueberry). However, the eastern forested wetland understory is dominated by Japanese barberry, and invasive shrub.

**ON-SITE SOIL INVESTIGATION & WETLAND DELINEATION REPORT (CONTINUED)**

**PROJECT NAME & SITE LOCATION:** +/- 45.93 acres  
Hunting Lodge Road, Mansfield, CT

**SOIL MAP UNITS****Upland Soils**

**Montauk loam (85).** This series consists of very deep, well drained soils formed in till derived primarily from granitic materials. These soils are on upland till plains and moraines. Slope ranges from 0 to 35 percent. Saturated hydraulic conductivity is moderately high or high in the solum and low to moderately high in the substratum. Mean annual temperature is about 49 degrees F, and mean annual precipitation is about 45 inches. Thickness of the solum and depth to the firm till substratum typically ranges from 20 to 38 inches but the range currently includes 18 to 38. Rock fragments range from 3 to 35 percent in the solum and 5 to 50 percent in the C horizon. The soil ranges from extremely acid to moderately acid throughout.

**Paxton fine sandy loam (85).** This series consists of deep, well drained soils formed in a coarse-loamy mantle underlain by firm, compact glacial till on uplands. They are nearly level to very steep soils on till plains, low ridges and drumloidal landforms. The soils formed in acid glacial till derived mainly from schist, gneiss or granite. In tilled areas, these soils have a dark brown fine sandy loam surface layer 8 inches thick. The subsoil from 8 to 26 inches is dark yellowish brown and olive brown fine sandy loam. The substratum from 26 to 60 inches is olive, very firm and brittle gravelly fine sandy loam.

**Udorthents (306).** This soil mapping unit consists of well drained to moderately well drained soils that have been altered by cutting, filling, or grading. The areas either have had two feet or more of the upper part of the original soil removed or have more than two feet of fill material on top of the original soil. Udorthents or Made Land soils can be found on any soil parent material but are typically fluvial on glacial till plains and outwash plains and stream terraces.

**Woodbridge fine sandy loam (46).** This series consists of deep, moderately well drained soils formed in a coarse-loamy mantle underlain by firm, compact glacial till on uplands. They are nearly level to moderately steep soils on till plains, low ridges and drumloidal landforms. The soils formed in acid glacial till derived mainly from schist, gneiss or granite. In tilled areas, these soils typically have a very dark grayish brown fine sandy loam surface layer 7 inches thick. The subsoil from 7 to 30 inches is dark yellowish brown and light olive brown fine sandy loam, mottled below 18 inches. The substratum from 30 to 60 inches is light olive brown, very firm and brittle gravelly fine sandy loam.

**Charlton very stony fine sandy loam (73).** This series consists of very deep, well drained coarse-loamy soils formed in friable, glacial till on uplands. They are nearly level to very steep soils on till plains and hills. The soils formed in acid glacial till derived mainly from schist, gneiss or granite. In tilled areas, these soils have a surface layer of dark brown fine sandy loam 8 inches thick. The subsoil from 8 to 26 inches is yellowish brown fine sandy loam and sandy loam. The substratum from 26 to 60 inches or more is grayish brown gravelly fine sandy loam.

**Chatfield loam (73).** This series consists of moderately deep, well drained, and somewhat excessively drained soils formed in till. They are nearly level to very steep soils on glaciated plains, hills, and ridges. Slope ranges from 0 to 70 percent. Crystalline bedrock is at depths of 20 to 40 inches. Permeability is moderate or moderately rapid. In tilled areas, these soils have a surface layer that is very dark to dark grayish brown loam up to 8 inches thick. The subsoil from 8 to 26 inches is brown, flaggy silt loam.

**Canton stony fine sandy loam (61).** This series consists of deep, well drained soils formed in a coarse-loamy mantle underlain by sandy glacial till on uplands. They are nearly level to very steep soils on till plains and hills. The soils formed in acid glacial till derived mainly from schist, gneiss or granite. Typically, these soils have a surface layer of very dark grayish brown fine sandy loam 2 inches thick. The subsoil from 2 to 23 inches is yellowish brown fine sandy loam, gravelly fine sandy loam and gravelly sandy loam. The substratum from 23 to 60 inches is pale brown gravelly loamy sand.

ON-SITE SOIL INVESTIGATION & WETLAND DELINEATION REPORT (CONTINUED)

PROJECT NAME & SITE LOCATION: +/- 45.93 acres  
Hunting Lodge Road, Mansfield, CT

SOIL MAP UNITSWetland Soils

**Ridgebury fine sandy loam (3).** This soil series consists of deep, poorly and somewhat poorly drained soils formed in a coarse-loamy mantle underlain by firm, compact glacial till on uplands. They are nearly level to moderately steep soils on till plains, low ridges and drumloidal landforms. The soils formed in acid glacial till derived mainly from schist, gneiss or granite. Typically these soils have a black sandy loam surface layer 6 inches thick. The mottled subsoil from 6 to 16 inches is olive gray sandy loam. The mottled substratum from 16 to 60 inches is a light olive brown and olive, very firm and brittle gravelly sandy loam.

**Leicester fine sandy loam (3).** This series, which in some Connecticut counties is found only in complex with the Ridgebury and Whitman series, consists of deep, poorly drained loamy soils formed in friable glacial till on uplands. They are nearly level to gently sloping soils in drainage ways and low lying positions on till covered uplands. The soils formed in acid glacial till derived mainly from schist, gneiss or granite. Typically, these soils have a surface layer of black fine sandy loam 6 inches thick. The subsoil from 6 to 23 inches is grayish brown, mottled fine sandy loam. The substratum from 26 to 60 inches or more is dark yellowish brown, mottled, friable, gravelly fine sandy loam.

**Whitman fine sandy loam (3).** This series, which in some Connecticut counties is only mapped in complex with the Ridgebury and Leicester series, consists of deep, very poorly drained soils formed in a coarse-loamy mantle underlain by firm, compact glacial till on uplands. They are nearly level and gently sloping soils on till plains, low ridges and drumloidal landforms. The soils formed in acid glacial till derived mainly from schist, gneiss or granite. Typically these soils have a black fine sandy loam surface layer 8 inches thick. The mottled subsoil from 8 to 15 inches is gray sandy loam. The mottled substratum from 15 to 60 inches is firm, olive gray to gray dense glacial till.

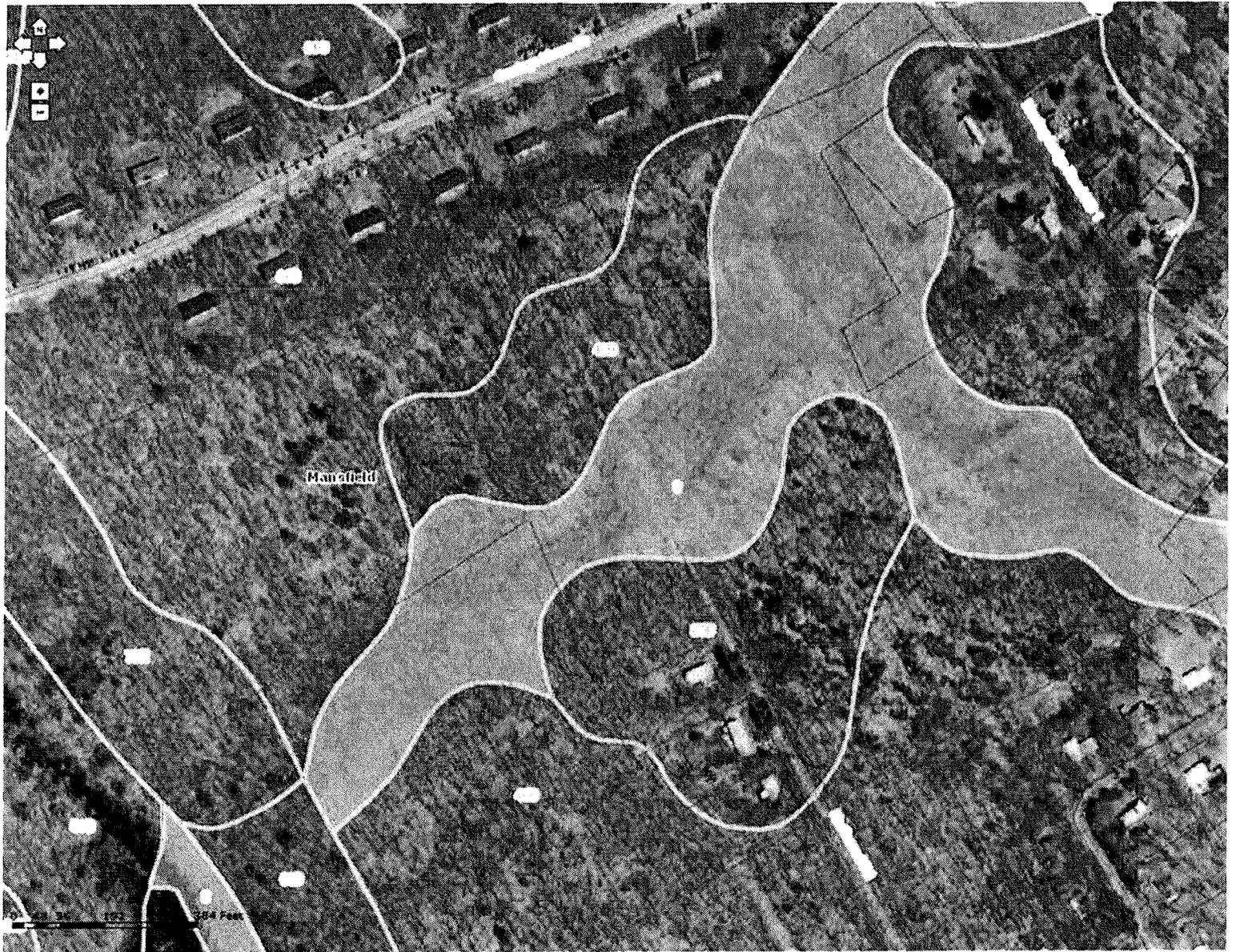
Any accompanying soil logs and soil maps, and the on-site soil investigation narrative are in accordance with the taxonomic classification of the National Cooperative Soil Survey of the USDA Natural Resource Conservation Service, and with the Connecticut Soil Legend (DEP Bulletin No.5, 1983), as amended by USDA-NRCS. Jurisdictional wetland boundaries were delineated pursuant to the Connecticut General Statutes (CGS Sections 22a-36 to 22a-45), as amended. The site investigation was conducted and/or reviewed by the undersigned Registered Soil Scientist(s) [registered with the Society of Soil Scientists of Southern New England (SSSSNE) in accordance with the standards of the Federal Office of Personnel Management].

Respectfully submitted,

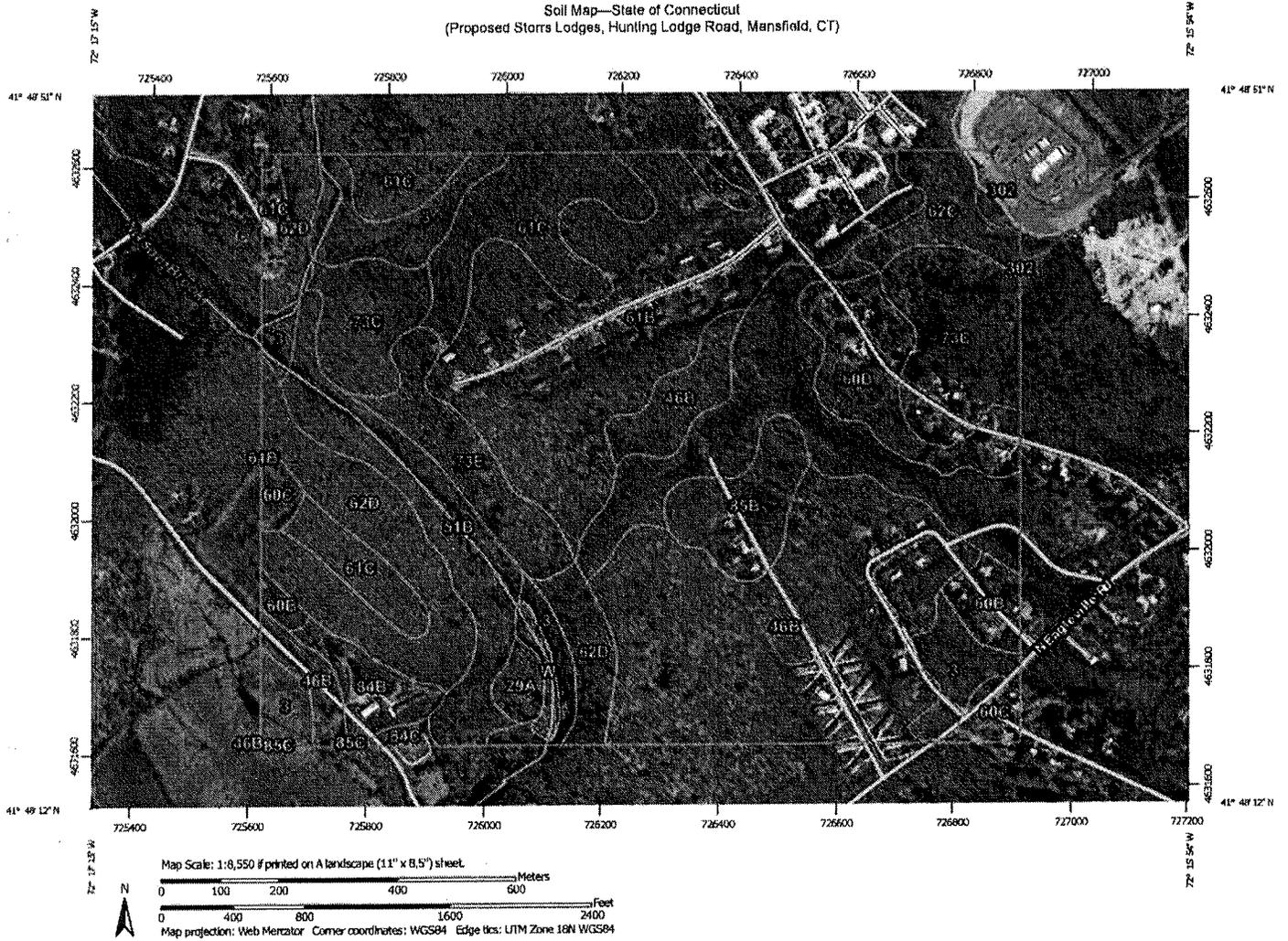
**REMA ECOLOGICAL SERVICES, LLC**



George T. Logan, MS, PWS, CSE  
 Registered Soil Scientist, Professional Wetland Scientist  
 Field Investigator/Senior Reviewer



Soil Map—State of Connecticut  
 (Proposed Storrs Lodges, Hunting Lodge Road, Mansfield, CT)



Soil Map—State of Connecticut  
(Proposed Storrs Lodges, Hunting Lodge Road, Mansfield, CT)

MAP LEGEND	MAP INFORMATION	
<p><b>Area of Interest (AOI)</b></p> <p> Area of Interest (AOI)</p> <p><b>Soils</b></p> <p> Soil Map Unit Polygons</p> <p> Soil Map Unit Lines</p> <p> Soil Map Unit Points</p> <p><b>Special Point Features</b></p> <p> Blowout</p> <p> Borrow Pit</p> <p> Clay Spot</p> <p> Closed Depression</p> <p> Gravel Pit</p> <p> Gravelly Spot</p> <p> Landfill</p> <p> Lava Flow</p> <p> Marsh or swamp</p> <p> Mine or Quarry</p> <p> Miscellaneous Water</p> <p> Perennial Water</p> <p> Rock Outcrop</p> <p> Saline Spot</p> <p> Sandy Spot</p> <p> Severely Eroded Spot</p> <p> Sinkhole</p> <p> Slide or Slip</p> <p> Sodic Spot</p>	<p> Spoil Area</p> <p> Stony Spot</p> <p> Very Stony Spot</p> <p> Wet Spot</p> <p> Other</p> <p> Special Line Features</p> <p><b>Water Features</b></p> <p> Streams and Canals</p> <p><b>Transportation</b></p> <p> Rails</p> <p> Interstate Highways</p> <p> US Routes</p> <p> Major Roads</p> <p> Local Roads</p> <p><b>Background</b></p> <p> Aerial Photography</p>	<p>The soil surveys that comprise your AOI were mapped at 1:12,000. Please rely on the bar scale on each map sheet for map measurements.</p> <p>Source of Map: Natural Resources Conservation Service Web Soil Survey URL: <a href="http://websoilsurvey.nrcs.usda.gov">http://websoilsurvey.nrcs.usda.gov</a> Coordinate System: Web Mercator (EPSG:3857)</p> <p>Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.</p> <p>This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.</p> <p>Soil Survey Area: State of Connecticut Survey Area Data: Version 14, Sep 22, 2015</p> <p>Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.</p> <p>Date(s) aerial images were photographed: Mar 28, 2011—May 12, 2011</p> <p>The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.</p>

## Map Unit Legend

State of Connecticut (CT600)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	46.6	14.4%
29A	Agawam fine sandy loam, 0 to 3 percent slopes	2.2	0.7%
46B	Woodbridge fine sandy loam, 0 to 8 percent slopes, very stony	62.2	19.2%
51B	Sutton fine sandy loam, 2 to 8 percent slopes, very stony	17.9	5.5%
60B	Canton and Charlton soils, 3 to 8 percent slopes	18.0	5.6%
60C	Canton and Charlton soils, 8 to 15 percent slopes	4.1	1.3%
61B	Canton and Charlton soils, 3 to 8 percent slopes, very stony	58.0	17.9%
61C	Canton and Charlton soils, 8 to 15 percent slopes, very stony	25.2	7.8%
62C	Canton and Charlton soils, 3 to 15 percent slopes, extremely stony	7.3	2.2%
62D	Canton and Charlton soils, 15 to 35 percent slopes, extremely stony	28.2	8.7%
73C	Charlton-Chatfield complex, 3 to 15 percent slopes, very rocky	24.0	7.4%
73E	Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky	10.5	3.2%
84B	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes	5.3	1.7%
84C	Paxton and Montauk fine sandy loams, 8 to 15 percent slopes	0.9	0.3%
85B	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes, very stony	9.2	2.9%
85C	Paxton and Montauk fine sandy loams, 8 to 15 percent slopes, very stony	0.1	0.0%
302	Dumps	2.1	0.7%
W	Water	1.8	0.5%
<b>Totals for Area of Interest</b>		<b>323.5</b>	<b>100.0%</b>

# MANSFIELD INLAND WETLAND AGENCY

## ABUTTER NOTIFICATION FORM

to be sent by Certified Mail

<http://www.usps.com/send/waystosendmail/extraservices/certifiedmailservice.htm>

Pursuant to Mansfield's Inland Wetland Agency notification requirements, abutting property owners are hereby notified of a wetland application pending before the Inland Wetland Agency. The complete file for this application is available for review in the Planning Office. Questions regarding the application or application review process may be addressed by calling the Planning Office at (860) 429-3330 or emailing at [www.PlanZoneDept@mansfieldct.org](mailto:www.PlanZoneDept@mansfieldct.org)

**I. Public Hearing/Meeting Dates:**

December 7, 2015

Date/Time of Next Scheduled Meeting

At the above listed scheduled meeting date the Wetland application will be received by the Agency. No presentation by the applicant will be given at this meeting. Public comment (written or verbal) is encouraged to be presented at the next regularly scheduled meeting. For more details (date and time) of the next meeting, please contact the Planning Office at (860)429-3330.

**II. Location of Proposal:** Hunting Lodge Road

**III. Applicant:** Ponde Place LLC

**IV. Owner:** Ponde Place LLC

**V. Proposed Use:** Wetland Map Amendment Application  
(Statement of Use/Statement of Justification to be attached)

**VI. Map:** (Attach 8 1/2x11" or 11x17" map depicting proposal)

\*Notices are to be sent within 7 (seven) days of the receipt of the application by the office staff. To verify that Notice requirements have been met, applicants are required to submit Certified Mailing receipts and one copy of information mailed to property owners to the Planning Office. Failure to meet Notice requirements or to submit return receipts to the Planning Office promptly may necessitate application processing delays.

✓ Parcel ID: 8.23.15  
 UCONN/CELERON SQ ASSOC LLC  
 C/O FLAGSHIP MGT SERVICES INC  
 55 ERIEVIEW PLAZA  
 CLEVELAND OH 44114-1816

✓ Parcel ID: 8.23.16.2  
 UCONN/CELERON SQ ASSOC LLC  
 C/O FLAGSHIP MGT SERVICES INC  
 55 ERIEVIEW PLAZA  
 CLEVELAND OH 44114

✓ Parcel ID: 15.21.UC1036  
 UNIVERSITY OF CONNECTICUT  
 NORTHWOOD APTS BLDG #1636  
 U BOX 3036 FACILITIES MGMT  
 STORRS CT 06269

✓ Parcel ID: 15.23.1  
 GIANOPOULOS GEORGE A  
 2930 SAGEBRUSH DR  
 FORT COLLINS CO 80525

✓ Parcel ID: 15.23.2  
 TAVAR THOMAS A  
 23 OLD FARM HILL RD  
 NEWTOWN CT 06470

✓ Parcel ID: 15.23.3  
 COLES MARTY L  
 4 MIDDLE BUTCHER RD  
 ELLINGTON CT 06029

✓ Parcel ID: 15.23.4  
 GAGEONEA RADU & MARIA E  
 253 HUNTING LODGE RD  
 STORRS MANSFIELD CT 06269

Parcel ID: 14.21.2  
 UNIVERSITY OF CONNECTICUT  
 NORTHWOOD APARTMENTS  
 STORRS CT 06269

✓ Parcel ID: 15.21.1  
 BEHESHTI MORTEZA  
 61 BIRCHWOOD HGHTS  
 STORRS CT 06268

✓ Parcel ID: 15.21.2  
 UNITED SOCIAL & MENTAL HEALTH  
 RESOURCES INC  
 PO BOX 839  
 DAYVILLE CT 06241

✓ Parcel ID: 15.21.3  
 PONDE PLACE LLC  
 30 DORSET CROSSING DR STE 600  
 SIMSBURY CT 06070

✓ Parcel ID: 15.21.4  
 COOPER ROBERT L  
 135 HUNTING LODGE RD  
 STORRS CT 06268

✓ Parcel ID: 15.21.6  
 HIRSCH WALTER A  
 132 HUNTING LODGE RD  
 STORRS CT 06268

✓ Parcel ID: 15.21.23  
 MENDOZA, MARTIN &  
 MENDOZA, VERONICA BARCELONA DE  
 38 MEADOWOOD RD  
 MANSFIELD CT 06268

✓ Parcel ID: 15.21.25  
 COWLES RICHARD S &  
 COWLES ELIZABETH A  
 60 MEADOWOOD ROAD  
 STORRS CT 06268

✓ Parcel ID: 15.21.27  
 MILLER ELIZABETH L EST OF  
 MILLER JOHN K EXECUTOR  
 3 WOODLEDGE DR  
 EAST GRANBY CT 06026

✓ Parcel ID: 15.21.36  
 HILDITCH MARCUS M  
 55 NORTHWOOD RD  
 STORRS CT 06268

✓ Parcel ID: 15.21.37  
 SIMS BEVERLY P  
 61 NORTHWOOD RD  
 STORRS CT 06268

✓ Parcel ID: 15.21.38  
 FRIEDMAN JACOB  
 65 NORTHWOOD ROAD  
 STORRS CT 06268

✓ Parcel ID: 8.21.5  
 UCONN CARRIAGE LLC  
 300 SOUTH OLD WOODWARD  
 BIRMINGHAM MI 48009

✓ Parcel ID: 15.21.5  
 SHIN DONG GUK &  
 SHIN DONG-JU  
 37 MAXFELIX DR  
 STORRS CT 06268

✓ Parcel ID: 15.21.24  
 USHER BRIAN J & KATHY M  
 44 MEADOWOOD RD  
 STORRS CT 06268



Minutes  
Mansfield Inland Wetlands Agency  
Regular Meeting  
Monday, December 7, 2015  
Council Chambers, Audrey P. Beck Municipal Building

Members present: C. Ausburger, B. Chandy, J. Goodwin, R. Hall, G. Lewis (arrived at 7:02 p.m.), K. Rawn, B. Ryan, V. Ward, S. Westa

Members absent:

Alternates present: P. Aho, K. Holt

Staff present: L. Painter, Director of Planning and Development; J. Kaufman, Wetlands Agent

Chairman Goodwin called the meeting to order at 7:00 p.m. and appointed Aho to act in the absence of members.

**Review of Minutes:**

- A. 11-2-15 Regular Meeting: Hall MOVED and Ausberger seconded to approve the 11-2-15 minutes. MOTION PASSED UNANIMOUSLY. Ryan disqualified herself.
- B. 11-16-15 Special Meeting: Chandy MOVED and Ryan seconded to approve the 11-16-15 Special Meeting minutes. MOTION PASSED UNANIMOUSLY.

**Communications:**

The Conservation Committee meeting minutes and Kaufman's monthly business memo were noted.

**Public Hearing:**

- A. **W1557 – C.L. Niarhakos, 101 East Road, 3 lot re-subdivision:** Lewis arrived at 7:02 p.m.; Aho no longer seated. Ryan MOVED and Ward seconded to extend the public hearing on the 3-lot subdivision application of Christopher and Lindsey Niarhakos (File W1557), 101 East Road, Williams Heights subdivision, until January 4, 2016. MOTION PASSED UNANIMOUSLY.

**Old Business:**

- A. **W1557 – C.L. Niarhakos, 101 East Road, 3 lot re-subdivision:** Item tabled. Public hearing continued.

**New Business:**

- A. **W1559 – Storrs Lodges, LLC, Application to Amend Inland Wetlands and Watercourse Map:** Westa MOVED and Hall seconded to:

- Receive the application to change or amend the Inland Wetlands and Watercourses Map, Mansfield, CT, submitted by Storrs Lodges, LLC (IWA File #1559) under the Inland Wetlands and Watercourses Regulations of the Town of Mansfield on property located on the west side of Hunting Lodge Road (parcel ID 15.21.3) as shown on a map dated 2/5/2005 and revised through 11/30/2015 and as described in application submissions;
- Refer said application to staff and the Conservation Commission for review and comments;
- Schedule a Public Hearing for February 1, 2016; and
- Engage the services of Pietras Environmental Group, LLC., to provide independent technical peer review on the application.

Pursuant to Section 8.6 of Mansfield's Inland Wetlands and Watercourses Regulations, all fees incurred for this review will be the responsibility of the applicant. A deposit in the amount of \$1,300.00 shall be provided by the applicant prior to issuance of a notice to proceed. Any unspent funds shall be returned to the applicant.

- B. **W1560 – M. Slowik, 895 Mansfield City Road, Lot Split for Single Family Dwelling:** Kaufman clarified that the property is not located in the public water supply. Chandy MOVED and Ryan seconded to receive the application submitted by M. Slowik (IWA File #1560) under the Wetlands and Watercourses Regulations of the Town of Mansfield for single family dwelling on property located at 895 Mansfield City Road as shown on a map dated 10/23/2015 and as described in application submissions, and to refer said application to staff and the Conservation Commission for review and comments. MOTION PASSED UNANIMOUSLY.
- C. **J-5 Jurisdictional Ruling Dunham Pond Road: Kaufman corrected the motion to state** that the subject land is owned by the Town of Mansfield. Lewis MOVED and Chandy seconded to approve a Jurisdictional Ruling finding that the removal of a root mass caused by an uprooted tree and repair of the stream channel on land owned by the Town of Mansfield (IWA File # J-5) as shown on a map dated 12/1/2015 and as described in the associated attachments is permitted as a non-regulated activity pursuant to Section 4.0 of the Inland Watercourses and Wetlands Regulations of the Town of Mansfield. MOTION PASSED UNANIMOUSLY.

#### **Reports from Officers and Committees:**

A Field Trip to 895 Mansfield City Road was scheduled for 3:00 p.m. 12-16-2015. Inasmuch as the Storrs Lodges, LLC application, on Hunting Lodge Road is a map amendment request, and not a specific application for a project, no field trip is scheduled at this time.

#### **Other Communications:**

Chair called the Agency's attention to the CACIWC communications, stating they provided a good summary of Agency approval parameters and suggested the members review the material.

**Adjournment:**

Chairman Goodwin declared the meeting adjourned at 7:13 p.m.

Respectfully submitted,

Vera S. Ward, Secretary

04161

**MEETING NOTICE AND AGENDA  
MANSFIELD INLAND WETLANDS AGENCY**

**Monday, January 4, 2016 ▪ 6:30 PM**

Audrey P. Beck Municipal Building ▪ 4 South Eagleville Road ▪ Council Chambers

- 1. Call to Order**
- 2. Roll Call**
- 3. Review of Minutes**
  - a. 12/07/2015
  - b. 12/16/2015 – Special Meeting Field Trip
- 4. Communications**
  - a. Conservation Commission Minutes
  - b. Monthly Business Memorandum
- 5. Public Hearing**
  - a. **W1557 – C. L. Niarhakos, 101 East Road, 3 lot re- subdivision**  
Item tabled until 1/19/16.
- 6. Old Business**
  - a. **W1557 – C. L. Niarhakos, 101 East Road, 3 lot re- subdivision**  
Item tabled until 1/19/16.
  - b. **W1559 – Storrs Lodges, LLC, Hunting Lodge Road (Parcel ID 15.21.3), Application to Amend Inland Wetlands and Watercourses Map**  
Item tabled until 2/1/16
  - c. **W1560 – M. Slowik, 895 Mansfield City Road, Lot Split for Single Family Dwelling**  
Memo from Inland Wetland Agent
- 7. New Business**
- 8. Reports from Officers and Committees**
- 9. Other Communications and Bills**
  - a. Society of Soil Scientists of Southern New England
  - b. 2015 Legislation and Regulation Advisory, DEEP
  - c. Connecticut Wildlife, November/December Issue
- 10. Adjournment**

Charles Ausburger ▪ Binu Chandy ▪ JoAnn Goodwin ▪ Roswell Hall III ▪ Gregory Lewis ▪ Kenneth Rawn ▪ Bonnie Ryan  
Vera Stearns Ward ▪ Susan Westa ▪ Paul Aho (A) ▪ Katherine Holt (A)

---

**PIETRAS ENVIRONMENTAL GROUP, LLC**

**WETLANDS INVESTIGATION REPORT**

January 9, 2016

Town of Mansfield, ATTN: Jennifer Kaufman, Inland Wetlands Agent  
10 South Eagleville Road  
Storrs-Mansfield, CT 06268

Re: Storrs Lodges, LLC, (formerly known as Ponde Place, LLC), Hunting Lodge Road,  
Mansfield, CT  
PEG Job # 2015-189

Dear Ms. Kaufman:

In accordance with your request, I conducted a site inspection to the subject property on December 16, 2015. The purpose of the investigation was to verify the proposed wetland boundaries that were previously established by Rema Ecological Services, LLC (RES) in October 2015. An on-site investigation and wetland delineation report, dated November 25, 2015, was prepared by Mr. George T. Logan, RES Soil Scientist and Wetland Scientist. According to the report RES staff conducted site inspections to the subject property on 10/1, 10/9 & 10/10/2015. The wetland boundaries were delineated with consecutively numbered, pink and blue survey tapes. The wetland boundaries were located by survey and plotted onto a property survey map prepared by F.A. Hesketh & Associates, Inc. The survey map is entitled, "Wetland Map Amendment on Property of Ponde Place, LLC., Hunting Lodge Road, Mansfield, CT," (revision date of 11-30-2015).

During the December 16, 2015 inspection I found all of the wetland boundary flags that had been previously established by RES. On 12/16/2015 I dug test holes with a spade and auger for soils identification. Site conditions on 12/16/2015 included: partly sunny and seasonably warm with temperatures in the 50's. The entire property was inspected.

Based on my 12/16/2015 investigation I am in agreement with the wetland boundaries that were previously delineated by RES with the exception of three small areas (refer to Figure 1). I determined that additional poorly drained Ridgebury wetlands are present (1) to the east of wetland flags C-25 thru C-27, (2) to the east of wetland flags C-43 thru C-48 and (3) to the west of C1-10 thru C1-13. In addition, I observed two areas with transitional soils containing a mix of non-wetland Woodbridge and wetland Ridgebury soils. These two transitional areas are labeled with a "T" in Figure 1.

A joint site investigation was conducted on January 4, 2016. Those in attendance at the inspection were Jennifer Kaufman, Tony Giorgio, George Logan and Thomas Pietras. The three areas identified to contain additional wetlands on 12/16/2015 were investigated. Test holes were dug with spade and auger. It was jointly agreed by both Mr. Logan and Mr. Pietras that poorly drained Ridgebury wetlands are present within the three areas. On 1/4/2016 the wetland boundaries were revised in the three areas in order to include the additional wetland soils (refer to Figure 2).

15 Briarwood Lane  
Wallingford, CT 06492  
203-314-6636

EMAIL Tom@pietrasenvironmentalgroup.com  
WEB SITE pietrasenvironmentalgroup.com

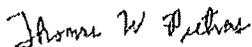
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**Wetlands Investigation Report for Storrs Lodges, LLC, (formerly known as Ponde Place, LLC), Hunting Lodge Road, Mansfield, CT** page 2 of 2

The two areas containing a mix of non-wetland and wetland soils (labeled with a "T" in Figure 1) were also investigated on 1/4/2016. The soils in the two transitional areas were identified as moderately well drained Woodbridge fine sandy loam. A few test holes contained poorly drained soil profiles. However, the poorly drained soil profiles are a very small component of the Woodbridge soil mapping unit and are treated as inclusions. No additional wetlands were identified in the two transitional areas. The ground water table in the two transitional areas of Woodbridge soils was noted to be exceptionally high (within 6 to 12 inches of the soil surface). Even though the transitional areas of Woodbridge soils do not qualify as wetlands, the high water table in this area should be noted. The revised wetland boundary line flags per the 1/4/2016 joint site investigation were located by survey and plotted onto the property survey map entitled, "Ponde Place, LLC., Hunting Lodge Road, Mansfield, CT," as prepared by F.A. Hesketh & Associates, Inc. (revision date of 1-08-16). I have review the revised property survey map (1-08-16) and determined that the wetlands boundary lines shown on the map are substantially correct.

In conclusion, I inspected the property on December 16, 2015. The wetland boundary lines previously established by RES were determined to be substantially correct with the exception of three small areas. I determined that additional wetlands are present in these three areas (refer to Figure 1). On 1/4/2016 a joint site investigation was held. Mr. George Logan and Mr. Thomas Pietras inspected the soils in the three areas identified to contain additional wetlands on 12/16/2015. The wetlands boundaries were revised in the three areas to include the additional wetlands (refer to Figure 2). The survey map prepared by F.A. Hesketh & Associates, Inc. (revision date of 1-08-16) portrays all of the wetlands on the property, including the revised wetland boundary lines per the 1-4-2016 joint site investigation, and this map was determined to be substantially correct.

Respectfully submitted,



Thomas W. Pietras, Professional Wetland and Soil Scientist

cc: George Logan

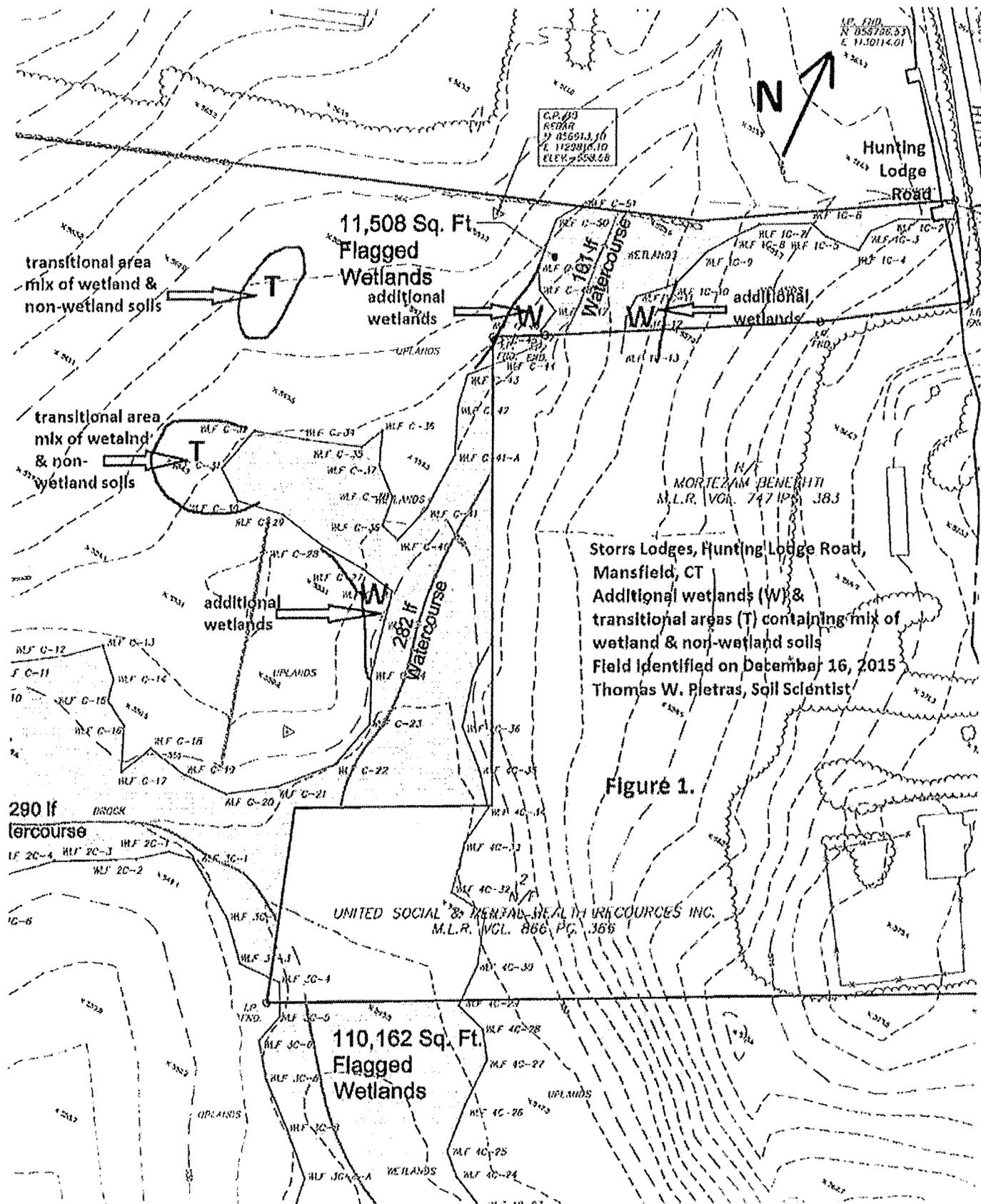


Figure 1.

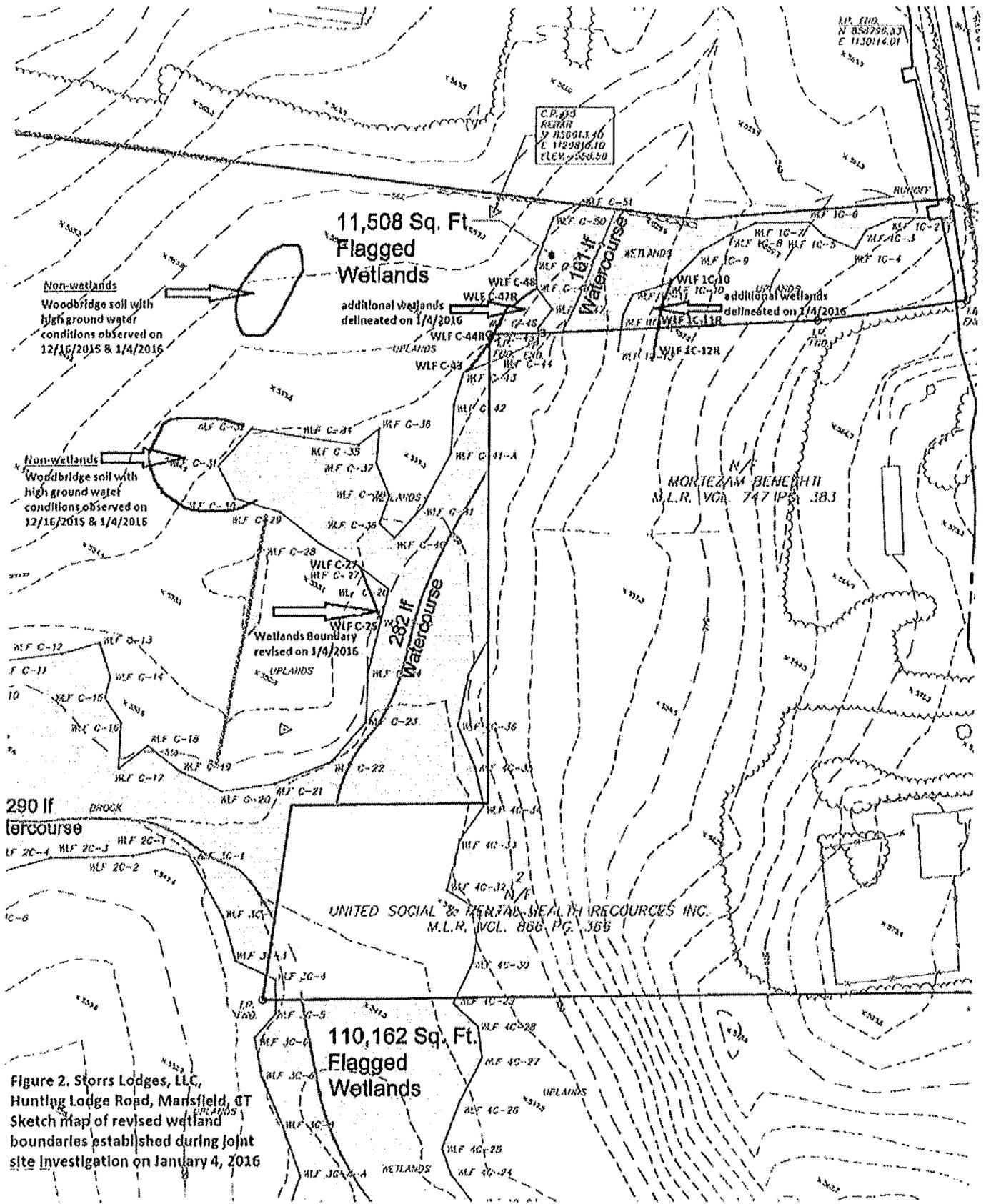


Figure 2. Storrs Lodges, LLC, Hunting Lodge Road, Mansfield, CT Sketch map of revised wetland boundaries established during joint site investigation on January 4, 2016



PS-1

MELAND MAP AMENDMENT  
 ON PROPERTY OF  
**PONDE PLACE, LLC**  
 HUNTING LODGE ROAD,  
 WASHINGTON, DISTRICT OF COLUMBIA

NO.	DATE	REVISION
1	02-23-04	ISSUE
2	04-23-04	REVISION / SEE SHEETS
3	10-06-04	REVISION / SEE SHEETS
4	07-08-04	REVISION / SEE SHEETS

**FAH** F. A. Heskolth & Associates, Inc.  
 8 Greenway Street, East Greeney, CT 06033  
 Tel: 860-228-1100 • Fax: 860-228-1100 • Website: www.fah.com

Phone: 860-657-8300  
 Fax: 860-657-8300  
 E-mail: info@fah.com

DATE: 02-23-04  
 SCALE: 1" = 40'

04161

FILE

**AGENDA**  
**Regular Meeting**  
Mansfield Conservation Commission  
Wednesday, January 20, 2016  
Audrey P. Beck Building  
Conference Room B  
7:30 p.m.

1. **Call to Order**
2. **Roll Call**
3. **Opportunity for Public Comment**
4. **Minutes**
  - December 16, 2015 Regular Meeting
5. **New Business**
  - a. Enabling Legislation to Create a Local Conservation Fund "Project Green Space"
  - b. Other
6. **Continuing Business**
  - W1559 (Storrs Lodges, LLC), west side of Hunting Lodge Road, Application to Amend Inland Wetlands and Watercourses Map
  - Monitoring Procedures for Town-Owned Easements
  - Mansfield Tomorrow | Our Plan ▶ Our Future
  - Town of Coventry/ Mansfield Control of Fanwort in Eagleville Lake
  - UConn Agronomy Farm Irrigation Project
  - Status of UConn's Hazardous Waste Transfer Station
  - Other
7. **Communications**
  - Minutes
    - Open Space: 12/15/15
    - PZC: 1/4/15
    - IWA: 1/4/15
8. **Other**
9. **Future Agendas**
10. **Adjournment**

**MEETING NOTICE AND AGENDA**  
**MANSFIELD INLAND WETLANDS AGENCY**

**Monday, February 1, 2016 ■ 6:30 PM**

Audrey P. Beck Municipal Building ■ 4 South Eagleville Road ■ Council Chambers

- 1. Call to Order**
- 2. Roll Call**
- 3. Review of Minutes**
  - a. 1-04-16– Meeting Minutes
- 4. Communications**
  - a. Conservation Commission Minutes
  - b. Monthly Business Memorandum
- 5. Public Hearing**
  - a. **W1557 – C. L. Niarhakos, 101 East Road, 3 lot re- subdivision**  
Memo from Wetlands Agent
  - b. **W1559 – Storrs Lodges, LLC, Application to Amend Inland Wetlands and Watercourses Map**  
Memo from Wetlands Agent
- 6. Old Business**
  - a. **W1557 – C. L. Niarhakos, 101 East Road, 3 lot re- subdivision**
  - b. **W1559 – Storrs Lodges, LLC, Application to Amend Inland Wetlands and Watercourses Map**
- 7. New Business**
  - a. **W1561– H. Raphaelson, Dog Lane, 2 lot subdivision**  
Memo from Wetlands Agent
- 8. Reports from Officers and Committees**
- 9. Other Communications and Bills**
  - a. DEEP- 2015 Aquatic Plant Control at Swam and Mirror Lake
  - b. DEEP- Grants to Municipalities for the control of Aquatic Invasive Species
- 10. Adjournment**

Minutes  
Mansfield Inland Wetlands Agency  
Regular Meeting  
Monday, February 1, 2016  
Council Chambers, Audrey P. Beck Municipal Building

Members present: J. Goodwin, C. Ausburger, R. Hall, G. Lewis, K. Rawn, B. Ryan, V. Ward, S. Westa  
Members absent: B. Chandy  
Alternates present: P. Aho, T. Berthelot, K. Holt (6:33 p.m.)  
Staff present: J. Kaufman, Wetlands Agent  
L. Painter, Director of Planning and Development;

Chairman Goodwin called the meeting to order at 6:30 p.m. and appointed alternate Aho to act in Chandy's absence.

**Approval of Minutes:**

**a. 1/04/2016 Regular Meeting:**

Rawn MOVED and Ryan seconded to approve the 1/4/2016 minutes as corrected. MOTION PASSED UNANIMOUSLY.

**Communications:**

The Conservation Commission meeting minutes and Kaufman's monthly business memo were noted.

**Public Hearing:**

**a. W1557 – C.L. Niarhakos, 101 East Road, 3 lot re-subdivision**

Goodwin opened the continued Public Hearing at 6:35 p.m. Members present were Goodwin, Ausburger, Hall, Lewis, Rawn, Ryan, Ward, Westa, and alternates Aho, Berthelot and Holt. Aho was appointed to act. Kaufman noted an email request from the applicant to withdraw his application. Noting no further comments or questions, Hall MOVED, Ryan seconded, to close the Public Hearing at 6:36 p.m. MOTION PASSED UNANIMOUSLY.

Westa MOVED, Hall seconded to accept the applicant's January 15, 2016, request to withdraw the application. MOTION PASSED UNANIMOUSLY.

**b. W1559 – Storrs Lodges, LLC, Application to Amend Inland Wetlands and Watercourses Map**

Goodwin opened the Public Hearing at 6:37 p.m. Members present were Goodwin, Ausburger, Hall, Lewis, Rawn, Ryan, Ward, Westa, and alternates Aho, Berthelot and Holt. Aho was appointed to act. Wetlands Agent Kaufman read the Legal Notice into the record as it appeared in The Chronicle on 1/19/16 and 1/27/16 and noted 1/20/16 comments from the Conservation Commission, a 1/27/16 memo from Kaufman and a 1/9/16 Wetlands Investigation Report from Thomas W. Pietras, Professional Wetland and Soil Scientist, Pietras Environmental Group, LLC.

P. Anthony Giorgio, Ph.D., Managing Director of The Keystone Companies, LLC, introduced his team and reviewed the request for an amendment to the Inland Wetlands and Watercourses Map of the Town of Mansfield.

David Ziaks, President, F.A. Hesketh and Associates, Inc., explained why the applicant's wetlands flagging differed from the Town Wetlands Map.

George T. Logan, Registered Soil Scientist, Professional Wetland Scientist, REMA Ecological Services, LLC, recited his qualifications and then reviewed his methodology and conclusions. He explained the characteristics of the soils on the site as presented in his 11-25-15 Delineation Report. In response to a question about how or if weather conditions and/or the season when the sampling is done affects results, he explained that soils do not change composition from season to season or in various weather conditions unless there is a severe drought. He further reported that there were minor flag adjustments that slightly expanded the area of wetlands made after consultation with Mr. Pietras. He contrasted the current wetlands boundary as depicted on the Town's Wetland Map with the flagging that he conducted, showing the difference.

Thomas W. Pietras, Professional Wetland and Soil Scientist, Pietras Environmental Group, LLC., is the independent expert contracted by the Mansfield Inland Wetlands Agent to review and critique the applicant's report. He reviewed his credentials and presented his findings. He stated that he was in substantial agreement with the applicant's work except for three small areas where he was of the opinion wetland soils existed but were not depicted on the applicant's map. After consultation with the applicant, however, the applicant agreed to include those areas. With these revisions he stated that he was satisfied that the wetlands were properly depicted and mapped.

Brian Usher, 44 Meadowood Road, stated that he has lived at his property since 1985 and is very concerned about the possibility of construction on the subject site behind his property. He reports that his property and that of his neighbors are already extremely wet. The Chairman informed Mr. Usher that this is an issue that should be raised when/if any future application is brought before the IWA and PZC regarding developing the property because if not, the information he presented this evening will not be part of the public record of any future application.

Rawn MOVED, Ryan seconded, to close the Public Hearing at 7:29 p.m. MOTION PASSED UNANIMOUSLY.

#### **Old Business:**

**a. W1557 – C.L. Niarhakos, 101 East Road, 3 lot re-subdivision**

Item withdrawn.

**b. W1559 – Storrs Lodges, LLC, Hunting Lodge Road (Parcel ID 15.21.3), Application to Amend Inland Wetlands and Watercourses Map**

Ryan MOVED, Ward seconded, to amend the Inland Wetlands and Water Courses Map, Mansfield, CT pursuant to section 15.0 of the Mansfield Inland Wetlands and Watercourses Regulations to reflect the wetland delineation on a parcel located on the west side of Hunting Lodge Road (assessor's parcel id 15.21.3) conducted by REMA Ecological Services and reviewed by Pietras Environmental Group and depicted on a map dated 2/8/2007 revised through 1/8/2016 (File # W1559). MOTION PASSED UNANIMOUSLY.

#### **New Business:**

**a. W1561– H. Raphaelson, Dog Lane, 2 lot subdivision**

Ryan MOVED, Rawn seconded, to receive the application submitted by H. Raphaelson (IWA File #1561) under the Wetlands and Watercourses Regulations of the Town of Mansfield for 2-lot subdivision- Raphaelson Estates on property located on the east side of Dog Lane (assessor's parcel id 16.41.23) as shown on a map dated 1/12/2016 and as described in application submissions, and to refer said application to staff and the Conservation Commission for review and comments and to schedule a public hearing for 3/7/16. MOTION PASSED UNANIMOUSLY. A field trip is scheduled for February 10, 2016, at 3 p.m.

**Reports from Officers and Committees:**

None.

**Other Communications:**

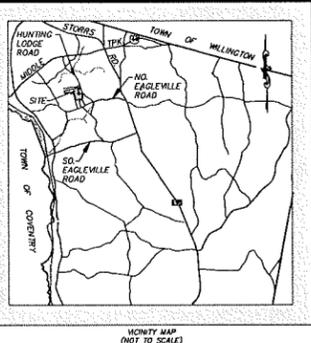
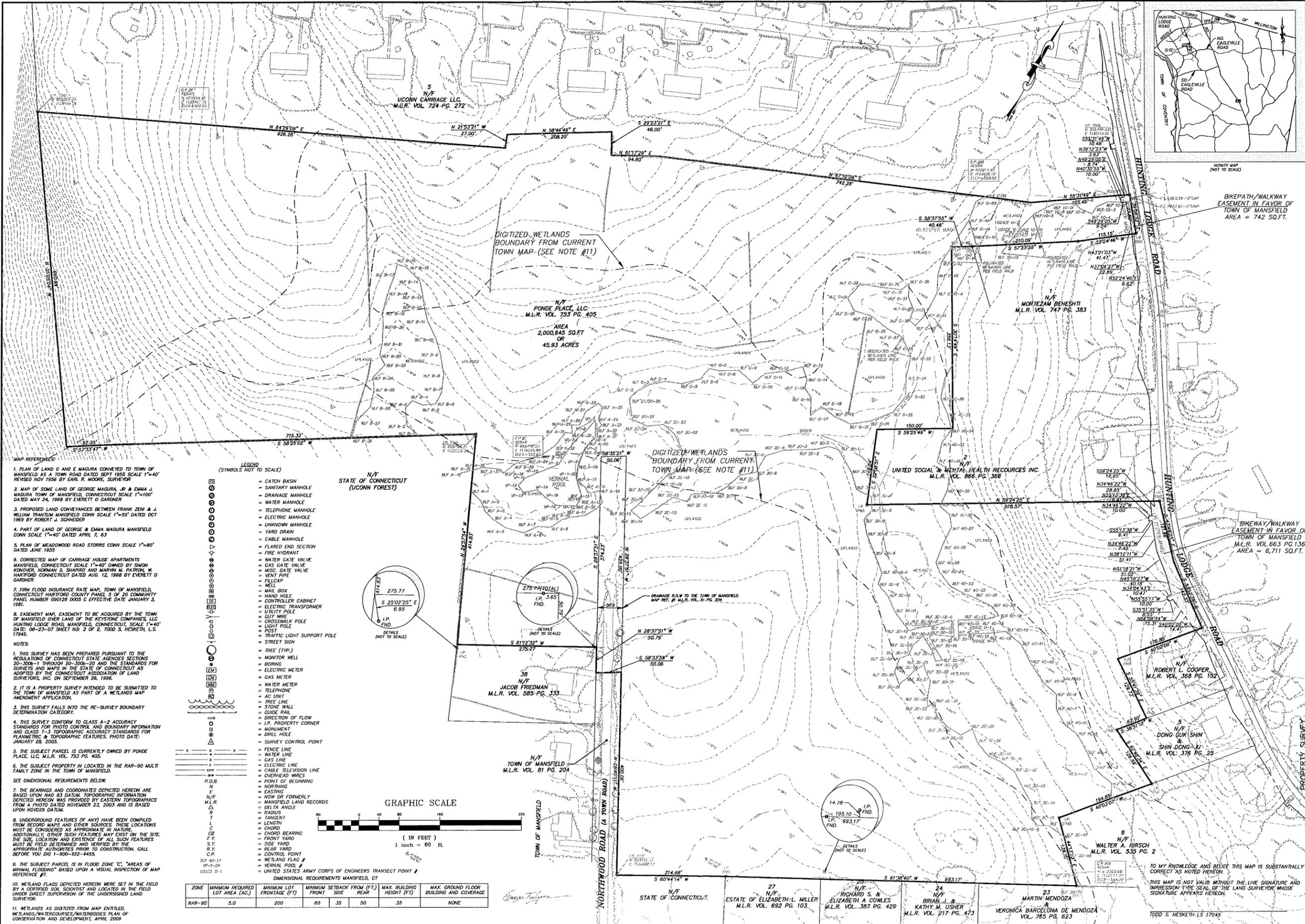
Noted.

**Adjournment:**

Chairman Goodwin declared the meeting adjourned at 7:35 p.m.

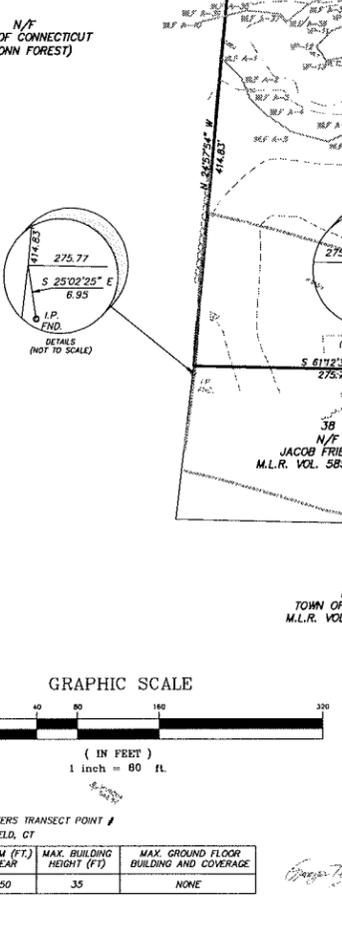
Respectfully submitted,

Vera S. Ward, Secretary



- MAP REFERENCES:**
- PLAN OF LAND C AND E MAGURA CONVEYED TO TOWN OF MANSFIELD AS TOWN ROAD DATED SEP 1955 SCALE 1"=40' REVISED NOV 1955 BY CARL R. MOORE, SURVEYOR
  - MAP OF SOME LAND OF GEORGE MAGURA, JR & EMMA J. MAGURA TOWN OF MANSFIELD, CONNECTICUT SCALE 1"=100' DATED MAY 24, 1969 BY EVERETT O GARDNER
  - PROPOSED LAND CONVEYANCES BETWEEN FRANK ZENI & J. WILLIAM TRANIUM MANSFIELD CONN SCALE 1"=50' DATED OCT 1969 BY ROBERT A. SCHNEIDER
  - PART OF LAND OF GEORGE & EMMA MAGURA MANSFIELD CONN SCALE 1"=40' DATED APRIL 7, 63
  - PLAN OF MEADOWWOOD ROAD STORRS CONN SCALE 1"=80' DATED JUNE 1955
  - CORRECTED MAP OF CARRIAGE HOUSE APARTMENTS MANSFIELD, CONNECTICUT SCALE 1"=40' OWNED BY SIMON KNOXER, NORMAN S. SHAPIRO AND MARVIN M. PATRON, W. HARTFORD CONNECTICUT DATED AUG. 12, 1966 BY EVERETT O GARDNER
  - FIRM FLOOD INSURANCE RATE MAP, TOWN OF MANSFIELD, CONNECTICUT HARTFORD COUNTY PANEL 5 OF 20 COMMUNITY PANEL NUMBER 000128 0003 G EFFECTIVE DATE JANUARY 2, 1981.
  - EASEMENT MAP, EASEMENT TO BE ACQUIRED BY THE TOWN OF MANSFIELD OVER LAND OF THE KEYSTONE COMPANIES, LLC HUNTING LODGE ROAD, MANSFIELD, CONNECTICUT, SCALE 1"=40' DATE: 08-23-07 SHEET NO. 2 OF 2, TOWN S. HESKETH, L.S. 17945.
- NOTES:**
- THIS SURVEY HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300a-1 THROUGH 20-300a-20 AND THE STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT AS ADOPTED BY THE SURVEYING ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996.
  - IT IS A PROPERTY SURVEY INTENDED TO BE SUBMITTED TO THE TOWN OF MANSFIELD AS PART OF A WETLANDS MAP AMENDMENT APPLICATION.
  - THIS SURVEY FALLS INTO THE RE-SURVEY BOUNDARY DETERMINATION CATEGORY.
  - THIS SURVEY CONFORMS TO CLASS A-3 ACCURACY STANDARDS FOR PHOTO CONTROL AND BOUNDARY INFORMATION AND CLASS 1-3 TOPOGRAPHIC ACCURACY STANDARDS FOR PLANIMETRIC & TOPOGRAPHIC FEATURES. PHOTO DATE: JANUARY 28, 2005.
  - THE SUBJECT PARCEL IS CURRENTLY OWNED BY PONDE PLACE, LLC, M.L.R. VOL. 753 PG. 405.
  - THE SUBJECT PROPERTY IS LOCATED IN THE RAR-90 MULTI FAMILY ZONE IN THE TOWN OF MANSFIELD. SEE DIMENSIONAL REQUIREMENTS BELOW.
  - THE BEARINGS AND COORDINATES DEPICTED HEREON ARE BASED UPON NAD 83 DATUM. TOPOGRAPHIC INFORMATION DEPICTED HEREON WAS PROVIDED BY EASTERN TOPOGRAPHICS FROM A PHOTO DATED NOVEMBER 23, 2003 AND IS BASED UPON NAD83 DATUM.
  - UNDERGROUND FEATURES (IF ANY) HAVE BEEN COMPILED FROM RECORD MAPS AND OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED AS APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.
  - THE SUBJECT PARCEL IS IN FLOOD ZONE "C". AREAS OF MINIMAL FLOODING BASED UPON A VISUAL INSPECTION OF MAP REFERENCE #7.
  - WETLANDS AS DIGITIZED FROM MAP ENTITLED, WETLANDS/WATERCOURSES/WATERBODIES PLAN OF CONSERVATION AND DEVELOPMENT, APRIL 2005
  - WETLANDS AS DIGITIZED FROM MAP ENTITLED,

- LEGEND (SYMBOLS NOT TO SCALE)**
- CATCH BASIN
  - SANITARY MANHOLE
  - DRAINAGE MANHOLE
  - WATER MANHOLE
  - TELEPHONE MANHOLE
  - ELECTRIC MANHOLE
  - UNKNOWN MANHOLE
  - YARD DRAIN
  - CABLE MANHOLE
  - FLARED END SECTION
  - FIRE HYDRANT
  - WATER GATE VALVE
  - GAS GATE VALVE
  - MISC. GATE VALVE
  - VENT PIPE
  - FILL CAP
  - MAIL BOX
  - HAND HOLE
  - CONTROLLER CABINET
  - ELECTRIC TRANSFORMER
  - UTILITY POLE
  - WIRE
  - CROSSWALK POLE
  - LIGHT POLE
  - POST
  - TRAFFIC LIGHT SUPPORT POLE
  - STREET SIGN
  - TREE (TYP.)
  - MONITOR WELL
  - BORING
  - ELECTRIC METER
  - GAS METER
  - WATER METER
  - TELEPHONE
  - AC UNIT
  - TREE LINE
  - STONE WALL
  - CLUSE RAIL
  - DIRECTION OF FLOW
  - I.P. PROPERTY CORNER
  - MONUMENT
  - DRILL HOLE
  - SURVEY CONTROL POINT
  - FENCE LINE
  - WATER LINE
  - GAS LINE
  - ELECTRIC LINE
  - CABLE TELEVISION LINE
  - OVERHEAD WIRES
  - POINT OF BEGINNING
  - NORTHING
  - EASTING
  - NOW OR FORMERLY
  - MANSFIELD LAND RECORDS
  - DELTA ANGLE
  - RADIUS
  - TANGENT
  - LENGTH
  - CHORD
  - CHORD BEARING
  - FRONT YARD
  - SIDE YARD
  - REAR YARD
  - CONTROL POINT
  - WETLAND FLAG #
  - VERNAL POOL #
  - UNITED STATES ARMY CORPS OF ENGINEERS TRANSECT POINT #



ZONE	MINIMUM REQUIRED LOT AREA (AC.)	MINIMUM LOT FRONTAGE (FT)	MINIMUM SETBACK FROM FRONT SIDE REAR	MAX. BUILDING HEIGHT (FT)	MAX. GROUND FLOOR BUILDING AND COVERAGE
RAR-90	5.0	200	60 35 50	35	NONE

**WETLAND MAP AMENDMENT ON PROPERTY OF**  
**PONDE PLACE, LLC.**  
 HUNTING LODGE ROAD  
 MANSFIELD, CONNECTICUT

**PROPERTY SURVEY**

Date: 02-07-08 Drawn by: RM Job no: 04161  
 Scale: 1" = 80' Checked by: TSH Sheet no: 1 OF 1

TO MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.  
 THIS MAP IS NOT VALID WITHOUT THE LIVE SIGNATURE AND IMPRESSION OF THE SEAL OF THE LAND SURVEYOR WHOSE SIGNATURE APPEARS HEREON.

FOOD S. HESKETH LS 17945

**FAH** F. A. Hesketh & Associates, Inc.  
 6 Creamery Brook, East Granby, CT 06028  
 Civil & Traffic Engineers • Surveyors • Planners • Landscape Architects

Phone (860) 653-8000  
 Fax (860) 344-9000  
 e-mail: fah@fahinc.com

**REVISIONS:**

No.	Date	Description
1	06-27-07	MISC
2	10-27-15	WETLANDS / TITLE UPDATED
3	11-30-2015	WETLANDS MAP AMENDMENT/TITLE
4	01-08-16	REVISED WETLAND LINE PER FIELD WALK

Mary Harper submitted this document as a resident. She is also a member of the Conservation Commission.

TO: Jennifer Kaufman  
Inland Wetland Agent  
Mansfield, CT

FROM: Mary G. Harper  
Conservation Commission

Re: IWA Application W1564  
The Lodges at Storrs (Storrs Lodges, LLC)

Date: August 12, 2016

At the July 20, 2016, meeting of the Conservation Commission, the above-referenced application was discussed briefly. The Town's third-party consultant reviewer, GEI, is expected to attend the September meeting of the Conservation Commission. Concerns were raised at the July 20, 2016 Conservation Commission meeting regarding the functionality of the proposed stormwater infiltration basins proposed for the development given the soils on the property. As agreed at the July 20, 2016 Conservation Commission meeting, questions regarding the soils and proposed infiltration basins are raised here, to be directed to GEI to address so that we can better understand the stormwater management plans proposed.

1. Soils maps on the June 10, 2016 revised plans (Sheet IW-1) are not clear defined and do not appear to match the current NRCS soils map. The NRCS depicts 33.4% (14.2 acres) of the property including, apparently, five of the ten proposed Bioretention infiltration basins (Basins 5, 6, 7, 9, and 10), as composed of (3) Ridgebury, Leicester and Whitman soils, 0-8% slopes, and extremely stony. The applicant's soil consultant report (John P. Ianni, M.S. Highland Soils LLC, to David Ziaks, F.A. Hesketh, and Associates, Inc., June 28, 2007), describes these as "wetland soils ... rang[ing] from poorly drained to very poorly drained ... formed over a compact to friable glacial till."

Approximately 9.7 acres, or 22.7%, are classified as (46B) Woodbridge fine sandy loams, 0-8% slopes, very stony. Two of the proposed basins (#3 and #4) are slated for these soils, which the 2007 soil report describes thus: "The soils of the Woodbridge series formed from a compact glacial till that gives rise to a seasonally perched high water table."

The 2007 soil report also noted that the upland soils in the project area included the Sutton series in addition to the Woodbridge series, and that "the Sutton series also have a high water table and overlay a friable and sandy glacial till. The main difference between the two soils (Sutton and Woodbridge) is the parent material or underlying glacial till."

The "final series" identified on the property in 2007 "include well drained soils of the Charlton series. These soils also overlay a friable and sandy glacial till and are deeper to the seasonal water table."

The NRCS map identifies approximately 3.3 acres (7.7%) of the property as Canton and Charlton soils (60B) on 3-8% slopes; Bioretention Basin #8 is proposed in these soils. Canton and Charlton, 3-8% slopes, very stony soils (61B) comprise 10.5 acres (24.7%) and are proposed to house Bioretention Basins #1 and #2.

Based on the NRCS map, the remaining soils include Charlton-Chatfield complex, 3-15% slopes, very rocky (73C), Charlton-Chatfield complex, 15-45% slopes, very rocky (73E), the two soils making up only .2 acres.

In the 2007 soils report, specific mention was made of seasonal and occasional surface water flow:

An existing culvert discharges onto the property along Hunting Lodge Road. The cross culvert conveys surface water from a seasonally ponded area on the east side of the road. The surface flow was not classified as a regulated seasonal watercourse due to the lack of

a defined channel with banks. It should be noted that surface water is conveyed from the cross culvert toward the wetlands. Although this area is not classified as a regulated wetland, it should be noted as an area of occasional surface flow.

Questions for GEI:

- What is the precise delineation of the soil types across the property?
  - Does the seasonal and/or occasional surface water flow onto the property, combined with the large amount of high-perched-water table soils, suggest a propensity for excessive surface runoff as well as poor surface water infiltration (because soils above the dense till becomes saturated to the surface, resulting in standing water)?
  - Where the dense layer is exposed by excavation, will excess water, in high-water-table seasons, and in storms, flow out to the surface because it cannot infiltrate down fast enough?
2. GEI, in Item 3 of its June 29, 2016 memo (from Kimberly Bradley and John McGrane, GEI, to Jennifer Kaufman, IWA, June 29, 2016), noted that “The entire design is dependent on the permeability of the existing soils and ground water levels,” and that “Geotechnical borings and laboratory permeability tests, or in-place permeability tests may be needed to verify whether the infiltration systems are viable.”

In response, the applicant reported that “Additional deep test pits and permeability tests have been completed in the field” included in a report by Soil Science and Environmental Services, Inc. (SSES), dated June 6, 2016.

Questions for GEI:

- What are the SSES-related “revisions to the subsurface infiltrator designs ... incorporated or the plans revised 6/10/16”? How are they supposed to work?
3. GEI Item #4 in June 29, 2016 memo (ibid) noted that “Accurate groundwater readings should be taken to determine year-round water levels in the areas of the proposed infiltration and the BioRetention Basins. If high groundwater levels are present, *even just seasonally* (emphasis mine), then the infiltration will not function as designed.” GEI continued, indicating the basins “will not properly function if they are partially filled with groundwater. If the designed storage volume is occupied with groundwater, they will not have the capacity to store surface runoff, and may overtop the basins.” The applicant’s response was that “Additional groundwater measurements were taken in the field at each proposed bioretention basin location.” But GEI noted that

It should be clarified that direct seasonal groundwater level readings were not collected for the site; rather, field evaluation of soil mottling and redoximorphic features as indicators of seasonal high groundwater levels were used. These, along with seepage or standing water observations, were collected via the Soil Science and Environmental Services, Inc. Report included in Attachment A of the FAHA Comment Response Memorandum, in addition to the Soil Testing completed by REMA Ecological Services, LLC (on May 25, 2016, reported in 6/14/16 letter).

The results indicate that groundwater is very close to the surface (i.e., within 16 to 22 inches below ground surface for most locations). Based on these readings, it will be imperative that a functional underdrain system be installed so that the basins and infiltrator system drain completely between storms. The plans have been updated to show a conceptual underdrain at the location specified. Generally, this seems acceptable and should address the problem, however, further construction detail should be provided perhaps as a condition of approval.”

GEI’s response to the data submitted by applicants is “Generally, these lines of evidence and revisions to basin design are acceptable.”

#### Questions for GEI:

- Please explain how the test hole (bioretention area) data in the 6/14/16 REMA supplemental wetlands assessment soil testing is reconciled with the mapped soil types: How, for example, can the Ridgebury, Leicester, Whitman (3) soils, which are classified as extremely stony, possess a subsoil of fine sandy loam? Likewise, the Woodbridge (46B) very stony, very poorly drained soils in Bioretention Basins #3 and #4 be classified as well and moderately well drained?
- SSES's test pits were dug with an excavator (12 pits) as follows: "undisturbed soil cores ... were extracted ... from selected soil horizons ... for permeability analyses ... which were tested for saturated hydraulic conductivities using a falling head permeability test method." What is that method?
- SSES and REMA, as noted in the GEI memo, used "depths to soil mottling and/or other redoximorphic indicators of a seasonal high groundwater table along with depths to hardpan, seepage and/or standing water were recorded for each deep test pit." How can seepage and standing water be observed in summer in a moderate drought year, which follows the drought year of 2015? Please explain/interpret the variability between "depth to faint mottles" and "depth to prominent mottles" by REMA. These two mottling types appear to have marked differences in depth.
- Why is mottling used as a reliable indicator of high seasonal water tables? Although I am not a soil scientist, I do have some experience in evaluating soil profiles in my work as an archaeologist, and also direct experience relative to the formerly proposed Williams Resubdivision in Mansfield, which has soils that are strikingly similar to the Storrs Lodges property. Many soil scientists and engineers do not consider mottling to be a reliable indicator of high seasonal water tables. In the Williams Resubdivision, soil scientists determined that Ridgebury, Leicester, and Whitman (3) soils exhibited a high seasonal water table from 0 to 10 inches below the surface from fall to spring; Basins #5, #6, #7, #9 and #10 are proposed in these soils at Storrs Lodges. Woodbridge soils (46B) exhibit a seasonal high water table at an average depth of 20 inches; Basins #3 and #4 are planned in these soils. However, soil scientists and an engineer familiar with Mansfield's geology and hydrology observed in the proposed Williams Resubdivision water flow paths, eroded areas, and exposed tree roots, which indicated surface water runoff in relatively large quantities. As noted in Item #1, above, at least some seasonal surface flow was observed by soil scientist John Ianni in the Storrs Lodges project. The observations of water flow and erosion evidence in the Williams Resubdivision area prompted a closer study of soil conditions and drainage, with standpipe monitoring in the seasonal high water period. That monitoring with standpipes proved that the mottling in the Williams Resubdivision was *not* an accurate representation of high groundwater. In areas of supposed 16 to 22-inch high groundwater depth based on mottling, the actual confirmed heights were near-surface, an average of 8 inches, and within 4 inches of the ground surface or higher, for sustained periods. These levels of water would make infiltration basins nonfunctional for much of the year, and in danger of overtopping, if they are present on the Storrs Lodges property.

I would like to understand better how the groundwater and surface water behaves on the Storrs Lodges property. I wonder, perhaps, whether a project of this magnitude warrants seasonal standpipe monitoring so that the Town can be sure that the proposed basins will work as designed and not impact wetlands or watercourses. I also think that an extremely close walkover of the entire project by GEI is perhaps warranted, if not already conducted, to make and record observations of surface flow paths, eroded tree roots, wetland-favoring vegetation, and other signs of high seasonal water runoff issues, if present. During the IWA walkover on August 11, 2016, which was aborted due to thunderstorms, some erosion and tree root exposure was observed along the western mounded edge of the "intermittent" watercourse in the eastern part of the property, near proposed crossing. LiDar imagery shows wetlands and flow paths and anomalous features that should be identified in the field, however difficult to discern

in a summer and drought period. What is GEI's opinion on a detailed project-wide walkover and/or standpipe monitoring?

4. GEI Item #5 in June 29, 2016 memo (ibid). It appears that GEI is still looking for construction detail of the Bioretention Basin Spillways. Where does overflow go? And to where do the planned underdrains egress water?

# **NEW BUSINESS**



# TOWN OF MANSFIELD

DEPARTMENT OF PLANNING AND DEVELOPMENT

Date: August 30, 2016

To: Mansfield Inland Wetlands Agency

From: Jennifer Kaufman, Inland Wetlands Agent

Subject: Street Address (File W1575)  
Willard J. Stearns and Sons, Inc.  
Description of Work: 9-lot subdivision-Mountain View Acres  
Map Date: 12/15/2015

## PROJECT OVERVIEW

The applicants propose to subdivide an approximately 36-acre parcel located on the corner of Coventry and Browns Road into 9 lots for single family homes. There will be approximately 80,000 square feet of disturbance in the upland review area and approximately 4,800 square feet of disturbance associated with a wetland crossing for a driveway to access a lot on the western portion of the parcel. The lots will be served by subsurface sewage disposal systems and private wells. The site is mainly wooded but the land along Coventry Road was logged within the last 10 years. The site drains primarily from Coventry Road to the south where surface flow is collected in a wetland that drains from the west to the east under Browns Road through an 18 inch culvert located in the southwestern portion of the parcel.

Because the applicants are proposing direct impacts to the wetlands, I recommend that the Agency hold a public hearing pursuant to section 9.0 of the regulations.

- The project includes work in wetlands.
- The project includes work in the 150 foot upland review area.

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## APPLICATION FEES AND NOTIFICATIONS

- The applicant has paid the required application fee.
- The applicant has submitted copies of the notice mailed to neighbors and a list of abutters to be notified. Certified mail receipts must be submitted prior to action on the application.

## RECEIPT MOTION

\_\_\_\_\_ MOVE to receive the application submitted by Willard J. Stearns and Sons, Inc. (IWA File 1575) under the Wetlands and Watercourses Regulations of the Town of Mansfield for a 9-lot subdivision on property located at 522 Browns Road as shown on a map dated 12/15/2015 and as described in application submissions, to refer said application to staff and the Conservation Commission for review and comments, and to schedule a public hearing on November 2, 2016.



**Part C - Project Description (attach extra pages, if necessary)**

- 1) Describe in detail the proposed activity here or on an attached page. (See guidelines at end of application)

Please include a description of all activity or construction or disturbance:

- a) in the wetland/watercourse
- b) in the area **adjacent** to (within 150 feet from the edge of) the wetland/watercourse, even if wetland/watercourse is **off** your property

There will be one proposed wetland crossing associated with the development of the nine lots. The proposed driveway for lot #1 will cross the wetland in the same location as an existing crossing. Site work will be performed by an excavator during a dry time of the year.

Abutting the wetlands, within the 150' regulated area, typical development associated with single family lots is proposed such as clearing and construction of houses, driveways and septic systems.

- 2) Describe the amount or area of disturbance (in square feet or cubic yards or acres):

- a) in the wetland/watercourse
- b) in the area **adjacent** to (within 150 feet from the edge of) the wetland/watercourse, even if wetland/watercourse is **off** your property

The proposed wetland crossing will disturb 4,800 s.f. of wetlands though much of it was disturbed previously due to logging activities.

The 150' upland review area will have 80,000 s.f. of disturbance.

- 3) Describe the type of materials you are using for the project: \_\_\_\_\_

Clean fill for the proposed driveways and select sand for leaching systems.

- a) include **type** of material used as fill or to be excavated Processed and bank run gravel.
- b) include **volume** of material to be filled or excavated Remove 70 c.y. of topsoil at driveway crossing and provide 140 c.y. of fill.

- 4) Describe measures to be taken to minimize or avoid any adverse impacts on the wetlands and regulated areas (silt fence, staked hay bales or other Erosion and Sedimentation control measures).

Siltfence will be used downgrade of site disturbance and around stockpile areas. In general, the site is relatively flat which helps minimize the risk of erosion.

**Part D - Site Description**

Describe the general character of the land. (Hilly? Flat? Wooded? Well drained? etc.)

The site generally has a uniform flat slope. The parcel is wooded except for the field on lot #9, though it has been logged.

**Part E - Alternatives**

Have you considered any alternatives to your proposal that would meet your needs and might have less impact on the wetland/watercourse? Please list these alternatives.

Other alternatives would require a longer wetland crossing and not utilize an existing crossing.

**Part F - Map/Site Plan (all applications)**

1) Attach to the application a map or site plan showing **existing conditions** and the **proposed project** in relation to wetland/ watercourses. Scale of map or site plan should be 1" = 40'; if this is not possible, please indicate the scale that you are using. A sketch map may be sufficient for small, minor projects. **(See guidelines at end of application)**

2) Applicant's map date and date of last revision 12-15-2015, revised 01-27-2016

3) Zone Classification RAR-90

4) Is your property in a flood zone?      Yes   XX   No      Don't Know

**Part G - Major Applications Requiring Full Review and a Public Hearing**

See Section 6 of the Mansfield Regulations for additional requirements.

**Part H - Notice to Abutting Property Owners**

1) Attach list of abutters, name, and address

2) **Proof of Written Notice to Abutters.** You must notify abutting (neighboring) property owners (any property immediately contiguous with the subject property, including those across the street) by certified mail, return receipt requested, stating that a wetland application is in progress, and that abutters may contact the Mansfield Inland Wetlands Agent for more information. Include a brief description of your project. **Postal receipts of your notice to abutters must accompany your application.** To generate an abutters list go to <http://www.mainstreetmaps.com/CT/Mansfield/>

**Part I - Additional Notices, if necessary**

Notice to Windham Water Works and CT Department of Public Health is attached. If this application is in the public watershed for the Windham Water Works (WWW), you must notify the WWW and the Department of Public Health of your project within 7 days of sending the application to Mansfield--sending it by certified mail, return receipt requested. Contact the Mansfield Inland Wetlands Agent to find out if you are in this watershed.

Notice to Adjoining Town. If your property is within 500 feet of an adjoining town, you must also send a copy of the application, on the same day you sent one to Mansfield, to the Inland Wetlands Agency of the adjoining town, by certified mail, return receipt requested.

The Statewide Reporting Form shall be part of the application and specified parts must be completed and returned with this application.

**Part J - Other Impacts To Adjoining Towns, if applicable**

- 1) Will a significant portion of the traffic to the completed project on the site use streets within the adjoining municipality to enter or exit the site? \_\_\_ Yes XX No \_\_\_ Don't Know
  
- 2) Will sewer or water drainage from the project site flow through and impact the sewage or drainage system within the adjoining municipality? \_\_\_ Yes XX No \_\_\_ Don't Know
  
- 3) Will water run-off from the improved site impact streets or other municipal or private property within the adjoining municipality? \_\_\_ Yes XX No \_\_\_ Don't Know

**Part K - Additional Information from the Applicant**

Set forth (or attach) any other information which would assist the Agency in evaluating your application. (*Please provide extra copies of any lengthy documents or reports, and extra copies of maps larger than 8.5" x 11", which are not easily copied.*)

**Part L - Filing Fee**

Application fees shall be in accordance with the current Mansfield Code of Ordinance fee Schedule, pursuant to Section 8-1c of the Connecticut General Statutes. The fee schedule includes provisions for applicant-funded consultant studies and reports. The current fee schedule is available in the Planning and Zoning office.

*Note: The Agency may require additional information about the upland review area or about wetlands or watercourses affected by the regulated activity. If the Agency, upon review of your application, finds the activity proposed may involve a "significant activity" as defined in the Regulations, additional information and/or a public hearing may be required.*

**Certification**

I hereby certify that:

- I am familiar with the information contained in this form and that such information is true and correct to the best of my knowledge.
- I understand the penalties for obtaining a permit through deception or through inaccurate or misleading information.

  
\_\_\_\_\_  
Signature *PAUL J. BROWN, PRESIDENT*

*8/10/16*  
\_\_\_\_\_  
Date

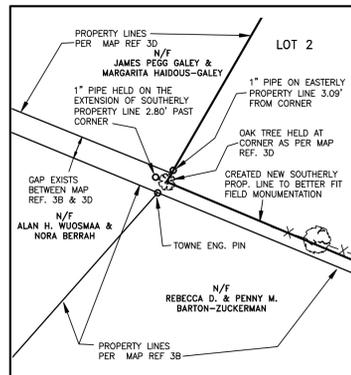
**Authorization to Enter Property**

The undersigned hereby consent to necessary and proper inspections of the above-mentioned property by members and agents of the Inland Wetlands Agency at reasonable times, both before and after the permit in question has been issued by the Agency.

  
\_\_\_\_\_  
Signature *PAUL J. BROWN, PRESIDENT*

*8/10/16*  
\_\_\_\_\_  
Date

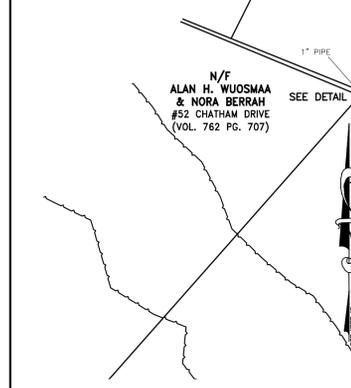




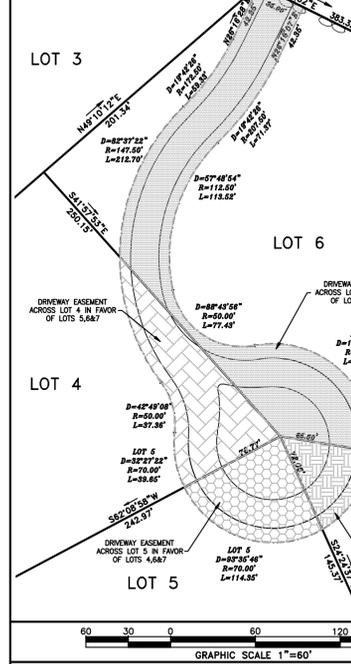
CORNER DETAIL 1"=20'

**BUILDABLE AREA:**

LOT #1	44,000+S.F.
LOT #2	40,000+S.F.
LOT #3	40,800+S.F.
LOT #4	43,000+S.F.
LOT #5	40,100+S.F.
LOT #6	56,000+S.F.
LOT #7	43,000+S.F.
LOT #8	42,800+S.F.
LOT #9	40,000+S.F.



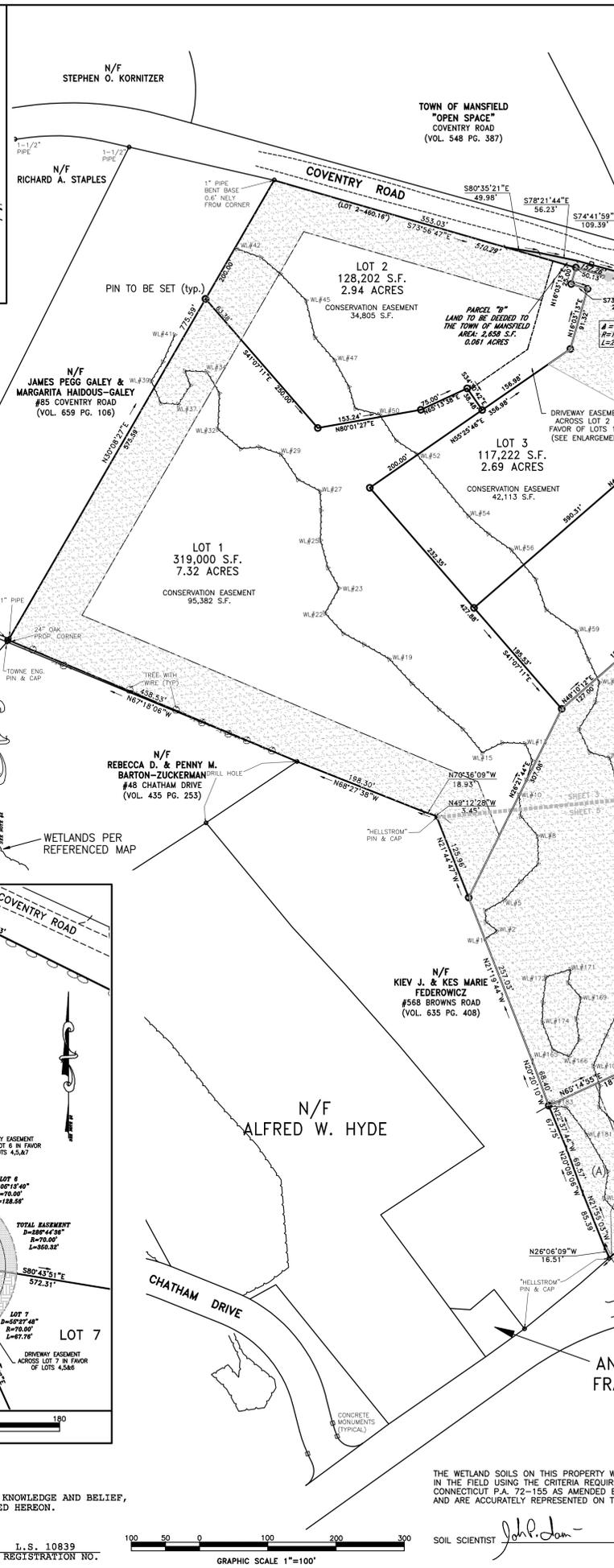
CORNER DETAIL 1"=20'



GRAPHIC SCALE 1"=60'

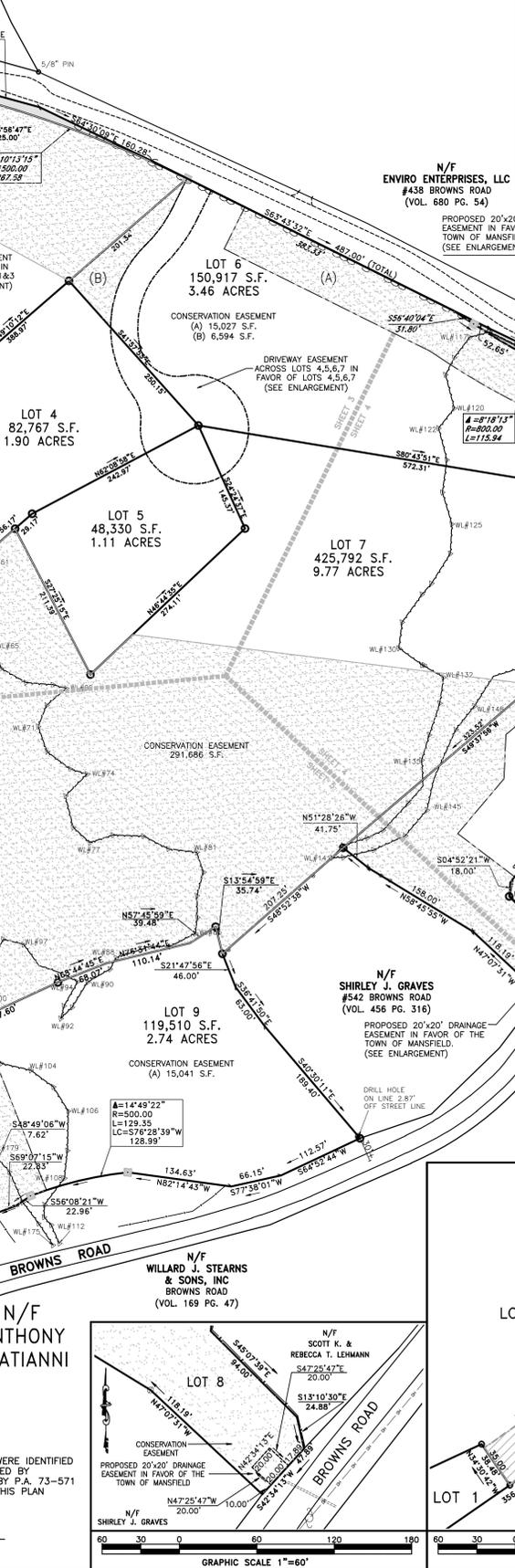
I HEREBY DECLARE THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

*Kenneth K. Peterson*  
KENNETH K. PETERSON  
1. S. 10839  
REGISTRATION NO.

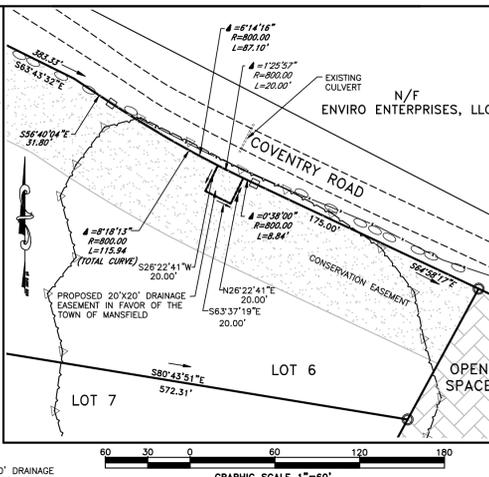


GRAPHIC SCALE 1"=100'

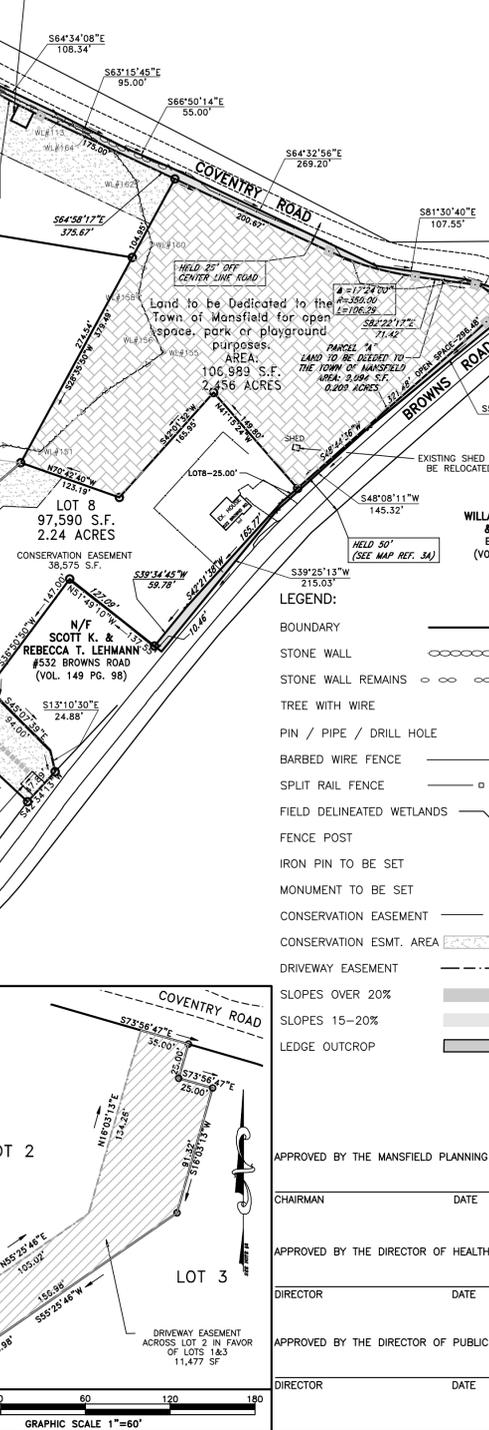
**OPEN SPACE COMPUTATIONS:**  
 PARCEL AREA: 36.647 ACRES  
 AREA OF WETLANDS: 9.397 ACRES  
 AREA OF LEDGE OUTCROPS & SLOPES OVER 20%: 0.90 ACRES  
 UPLAND AREA: 26.35 ACRES  
 UPLAND PERCENTAGE: 71.9%  
 UP TO 40% (14.659 ACRES)  
 UPLAND OPEN SPACE AREA REQUIRED: 10.54 ACRES  
 PROP. OPEN SPACE CONSISTS OF LAND DEDICATED TO TOWN OF MANSFIELD & CONSERVATION ESMTS.: 2.456 ACRES (6.70%)  
 DEDICATED OPEN SPACE: 13.049 ACRES (35.61%)  
 CONSERVATION EASEMENT (CE): 15.505 ACRES (42.31%)  
 TOTAL PROVIDED: 1.881 ACRES  
 UPLAND PROVIDED IN OPEN SPACE: 8.868 ACRES  
 UPLAND PROVIDED IN CONSERVATION EASEMENTS THEREFORE: 10.54 AC. PROVIDED > 10.54 AC. REQUIRED  
 ZONE: RAR-90



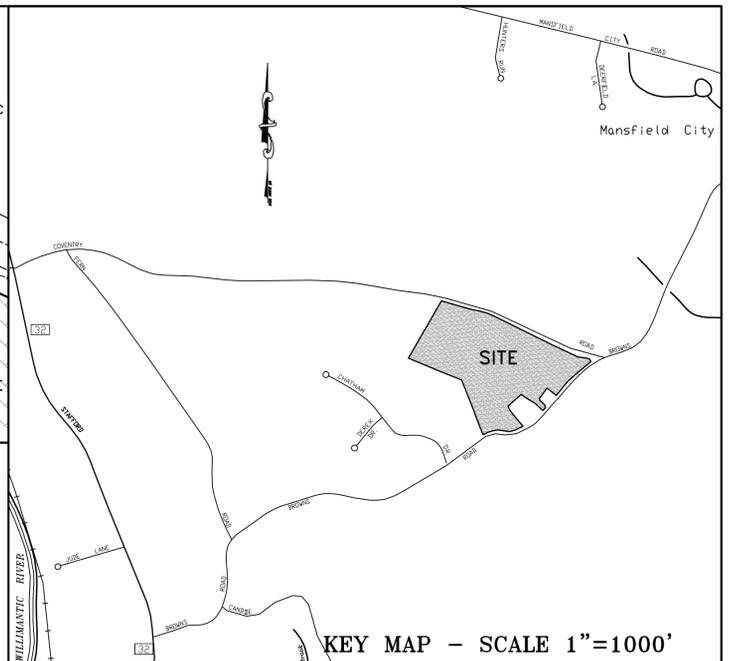
GRAPHIC SCALE 1"=60'



KEY MAP - SCALE 1"=1000'



GRAPHIC SCALE 1"=60'



KEY MAP - SCALE 1"=1000'

**NOTES:**

- THIS MAP AND SURVEY HAVE BEEN PREPARED IN ACCORDANCE WITH THE REGULATIONS OF CONNECTICUT STATE AGENCIES, SECTIONS 20-300b-1 THROUGH 20-300b-20. THIS IS A SUBDIVISION PLAN, AND IS A FIRST SURVEY OF THE PERIMETER BOUNDARY AND AN ORIGINAL SURVEY OF THE PROPOSED LOT LINES CONFORMING TO HORIZONTAL ACCURACY CLASS A-2.
- BEARINGS DEPICTED ON THIS PLAN ARE BASED UPON NAD 83/87 (CONNECTICUT STATE PLANE COORDINATES) BASED ON COORDINATES FROM MAP REFERENCE 3A.
- MAP REFERENCES:
  - A. "PROPERTY SURVEY CERTAIN PROPERTY OF WILLARD J. STEARNS & SONS, INC IDENTIFIED AS FARM 1, FARM 2 AND FARM 3 BROWNS RD., STEARNS RD., MANSFIELD CITY RD., PLEASANT VALLEY RD. MANSFIELD, CONNECTICUT DATED 9-11-2014 SCALE: 1"=200' BY: F.A. HESKETH & ASSOCIATES, INC
  - B. "BOUNDARY SURVEY FOR SUBDIVISION ENTITLED CHATHAM HILL BROWNS ROAD MANSFIELD, CONNECTICUT OWNER & SUBDIVIDER MICHAEL DILAJ TRUSTEE SCALE: 1"=100' DATED 1-1-98 REV. 6-15-98 BY: DATUM ENG.
  - C. "BOUNDARY & TOPOGRAPHIC SURVEY PREPARED FOR KIEV FEDEROWICZ PROPOSED HOUSE ADDITION & PROPOSED BARN/STUDIO 568 BROWNS ROAD MANSFIELD CONNECTICUT SCALE: 1"=30' DATED 4-9-13 REV. THROUGH 1-28-15 BY: ROB HELLSTROM LAND SURVEYING LLC
  - D. "CORRECTIONAL MAP LAND OF DANIEL B AND ANN L. COSTELLO AND PATRICIA E. AND JAMES V. LETA SITUATED ON THE SOUTHERLY LINE OF COVENTRY ROAD IN THE TOWN OF MANSFIELD, THE COUNTY OF TOLLAND AND THE STATE OF CONNECTICUT" SCALE 1"=40' DATED 8-14-65 BY: JOHN R. GRIFFIN
  - E. "PROPERTY OF RUSSELL W. & PHYLLIS MARTIN COVENTRY ROAD, BROWNS ROAD MANSFIELD CONNECTICUT SCALE: 1"=100' DATED 2-7-88 BY: KARHU & PRONOVOST ASSOCIATES, INC.
  - F. "SUBDIVISION PLAN SMITH FARMS PREPARED FOR: REJA ACQUISITION CORP. COVENTRY ROAD MANSFIELD, CONNECTICUT" SCALE: 1"=100' DATED: FEB. 2003 REV. THROUGH 4-20-04 BY: MESSIER & ASSOCIATES, INC.
- UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING, OR OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE, THE EXISTENCE OF WHICH ARE UNKNOWN TO GARDNER & PETERSON ASSOCIATES, LLC. THE EXISTENCE, SIZE AND LOCATION OF ALL SUCH FEATURES MUST BE DETERMINED AND VERIFIED IN THE FIELD BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.
- WETLANDS DEPICTED HEREON WERE FIELD DELINEATED BY SOIL SCIENTIST JOHN IANNI.
- SITE AND ADJUTING PARCELS ARE IN RAR-90 ZONE.
- PARCEL IS LOCATED IN FLOOD ZONE C, AREAS OF MINIMAL FLOODING, PER FIRM FLOOD INSURANCE RATE MAP TOWN OF MANSFIELD, CONNECTICUT TOLLAND COUNTY PANEL 15 OF 20 COMMUNITY-PANEL NUMBER 090129 0015C EFFECTIVE DATE: JANUARY 2, 1981.
- PARCEL IS NOT LOCATED WITHIN AN AQUIFER AREA BASED ON "SURFACES AND GROUNDWATER RESOURCES" MAP BY PLAN OF CONSERVATION AND DEVELOPMENT APRIL 2006.
- PARCEL IS NOT LOCATED WITHIN AN ARCHAEOLOGICAL AREA BASED ON "ARCHAEOLOGICAL ASSESSMENT" MAP BY PLAN OF CONSERVATION AND DEVELOPMENT APRIL 2006.
- PARCEL IS NOT LOCATED IN AN AREA OF STATE AND FEDERAL LISTED SPECIES & SIGNIFICANT NATURAL COMMUNITIES BASED ON THE CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION NATURAL DIVERSITY DATA BASE AREA MAP FOR MANSFIELD, CT DATED DECEMBER 2014.
- SPEED LIMIT ON BROWNS ROAD (COLLECTOR RD) IS 30 MPH AND 25 MPH ALONG COVENTRY ROAD (NEIGHBORHOOD ROAD).
- THE PROPOSED TREELINES ARE CONCEPTUAL AND MAY BE MODIFIED BY THE DEVELOPER. CLEARING LIMITS ARE NOT SHOWN FOR THE FOOTING DRAIN DISCHARGES.

**BOUNDARY PLAN**  
**MOUNTAIN VIEW ACRES**  
**#522 BROWNS ROAD**  
**& COVENTRY ROAD**  
**MANSFIELD, CONNECTICUT**  
**GARDNER & PETERSON ASSOCIATES, LLC**  
 178 HARTFORD TURNPIKE  
 TOLLAND, CONNECTICUT

APPROVED BY THE MANSFIELD PLANNING & ZONING COMMISSION  
 CHAIRMAN \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED BY THE DIRECTOR OF HEALTH  
 DIRECTOR \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED BY THE DIRECTOR OF PUBLIC WORKS  
 DIRECTOR \_\_\_\_\_ DATE \_\_\_\_\_

REVISIONS  
 01-27-2016

BY	SCALE	DATE	SHEET NO.	MAP NO.
B.D.C.	1"=100' OR AS SHOWN	12-15-2015	2 OF 7	105905

THE WETLAND SOILS ON THIS PROPERTY WERE IDENTIFIED IN THE FIELD USING THE CRITERIA REQUIRED BY CONNECTICUT P.A. 72-155 AS AMENDED BY P.A. 73-571 AND ARE ACCURATELY REPRESENTED ON THIS PLAN

SOIL SCIENTIST *John Jan*

N/F JAMES PEGG GALEY & MARGARITA HAIKOUS-GALEY #85 COVENTRY ROAD (VOL. 659 PG. 106)

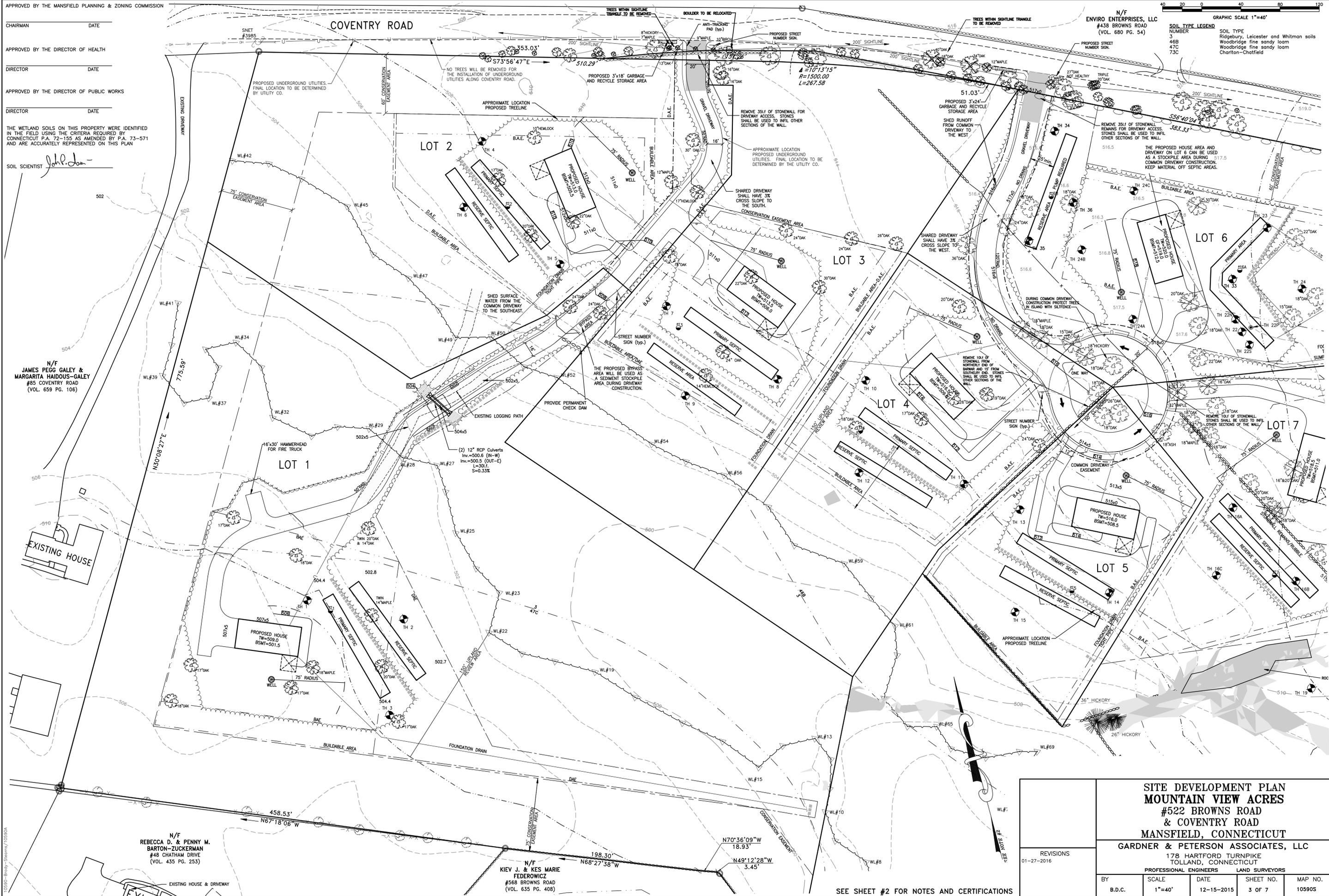
N/F REBECCA D. & PENNY M. BARTON-ZUCKERMAN #48 CHATHAM DRIVE (VOL. 435 PG. 253)

N/F KIEV J. & KES MARIE FEDEROWICZ #568 BROWNS ROAD (VOL. 635 PG. 408)

N/F ENVIRO ENTERPRISES, LLC #438 BROWNS ROAD (VOL. 680 PG. 54)

SOIL TYPE LEGEND  
NUMBER  
46B  
47C  
73C  
SOIL TYPE  
Ridgebury, Leicester and Whitman soils  
Woodbridge fine sandy loam  
Woodbridge fine sandy loam  
Charlton-Chatfield

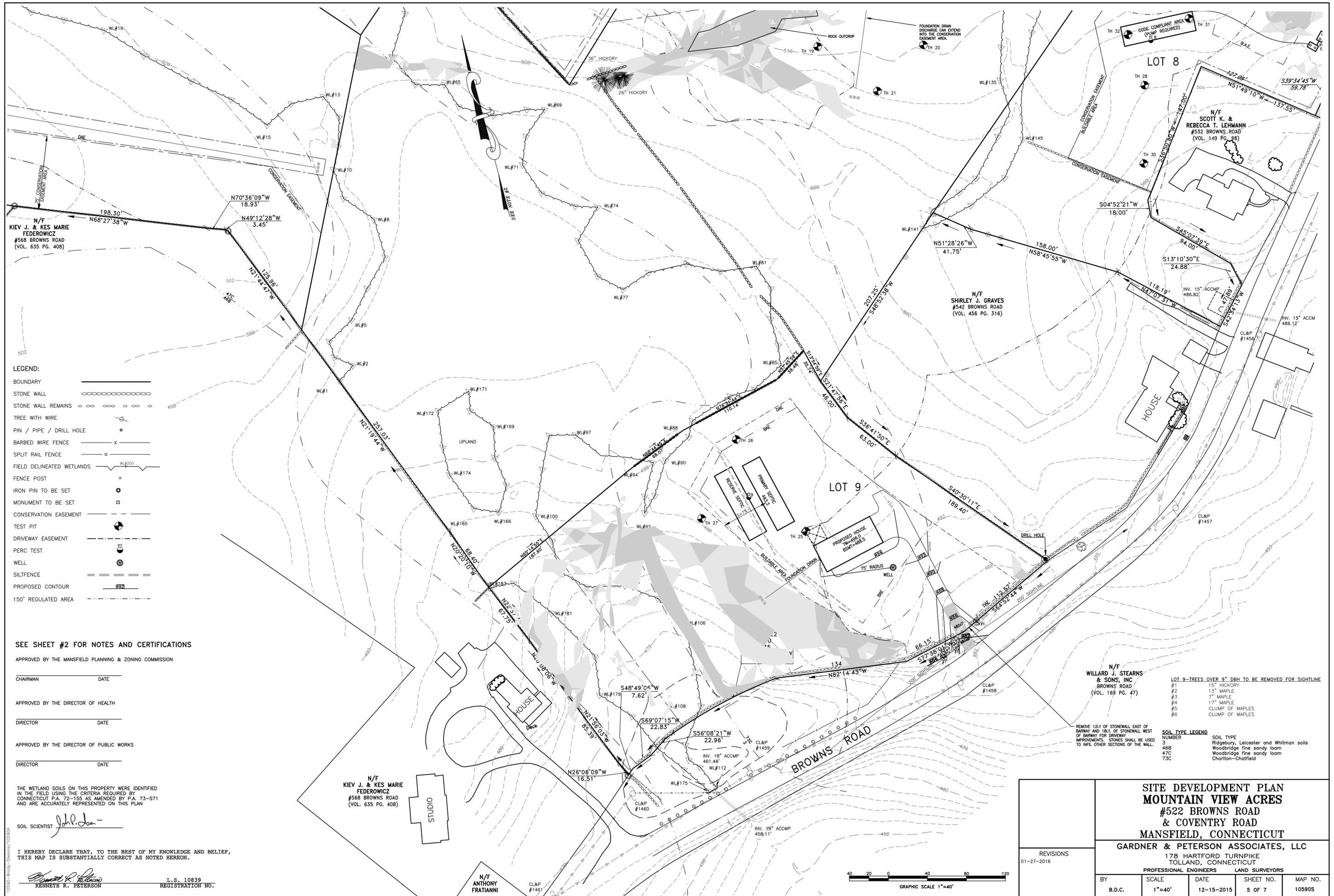
GRAPHIC SCALE 1"=40'



<b>SITE DEVELOPMENT PLAN MOUNTAIN VIEW ACRES #522 BROWNS ROAD &amp; COVENTRY ROAD MANSFIELD, CONNECTICUT</b>				
<b>GARDNER &amp; PETERSON ASSOCIATES, LLC</b> 178 HARTFORD TURNPIKE TOLLAND, CONNECTICUT				
PROFESSIONAL ENGINEERS		LAND SURVEYORS		
REVISIONS 01-27-2016	SCALE 1"=40'	DATE 12-15-2015	SHEET NO. 3 OF 7	MAP NO. 105905
BY B.D.C.				

SEE SHEET #2 FOR NOTES AND CERTIFICATIONS





- LEGEND:**
- BOUNDARY ————
  - STONE WALL ————
  - STONE WALL REMAINS ————
  - TREE WITH WIRE ————
  - PIN / PIPE / DRILL HOLE ●
  - BARBED WIRE FENCE ————
  - SPLIT RAIL FENCE ————
  - FIELD DELINEATED WETLANDS ————
  - FENCE POST ————
  - IRON PIN TO BE SET ●
  - MONUMENT TO BE SET □
  - CONSERVATION EASEMENT ————
  - TEST PIT ————
  - DRIVEWAY EASEMENT ————
  - PERC TEST ————
  - WELL ————
  - SILTFENCE ————
  - PROPOSED CONTOUR ————
  - 150' REGULATED AREA ————

SEE SHEET #2 FOR NOTES AND CERTIFICATIONS

APPROVED BY THE MANSFIELD PLANNING & ZONING COMMISSION

CHAIRMAN \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED BY THE DIRECTOR OF HEALTH

DIRECTOR \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED BY THE DIRECTOR OF PUBLIC WORKS

DIRECTOR \_\_\_\_\_ DATE \_\_\_\_\_

THE WETLAND SOILS ON THIS PROPERTY WERE IDENTIFIED IN THE FIELD USING THE CRITERIA REQUIRED BY CONNECTICUT P.A. 72-155 AS AMENDED BY P.A. 73-571 AND ARE ACCURATELY REPRESENTED ON THIS PLAN

SOIL SCIENTIST *John Jan*

I HEREBY DECLARE THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

*Kenneth R. Peterson*  
KENNETH R. PETERSON L.S. 10839  
REGISTRATION NO.

- LOT 9-TREES OVER 8" DBH TO BE REMOVED FOR SIGHTLINE
- #1 15" HICKORY
  - #2 13" MAPLE
  - #3 7" MAPLE
  - #4 17" MAPLE
  - #5 CLUMP OF MAPLES
  - #6 CLUMP OF MAPLES

- SOIL TYPE LEGEND**
- | NUMBER | SOIL TYPE                              |
|--------|--|
| 3      | Ridgebury, Leicester and Whitman soils |
| 46B    | Woodbridge fine sandy loam             |
| 47C    | Woodbridge fine sandy loam             |
| 75C    | Chariton-Chotfield                     |

REMOVE 12L OF STONEMASS EAST OF BARWAY AND 18L OF STONEMASS WEST OF BARWAY FOR DRIVEWAY IMPROVEMENTS. STONES SHALL BE USED TO INFILL OTHER SECTIONS OF THE WALL.

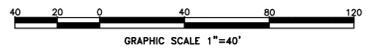
**SITE DEVELOPMENT PLAN  
MOUNTAIN VIEW ACRES  
#522 BROWNS ROAD  
& COVENTRY ROAD  
MANSFIELD, CONNECTICUT**

**GARDNER & PETERSON ASSOCIATES, LLC**

178 HARTFORD TURNPIKE  
TOLLAND, CONNECTICUT

PROFESSIONAL ENGINEERS LAND SURVEYORS

REVISIONS 01-27-2016		SCALE 1"=40'	DATE 12-15-2015	SHEET NO. 5 OF 7	MAP NO. 105905
BY B.D.C.	SCALE 1"=40'	DATE 12-15-2015	SHEET NO. 5 OF 7	MAP NO. 105905	



MINIMUM LEACHING SYSTEM SPREAD (MLSS)

HYDRAULIC FACTOR (HF) X FLOW FACTOR (FF) X PERCOLATION FACTOR (PF)

MLSS = HF X FF X PF SAMPLE

HYDRAULIC FACTOR (HF)

TO DEPTH	HYDRAULIC GRADIENT (% OF SLOPE)									
	<1	1.1-2	2.1-3	3.1-4	4.1-6	6.1-8	8.1-10	10.1-15	>15	
<17.9	SEE	NOTE	#1							
18-22	72	62	54	48	42	34	30	28	26	
22-26	66	56	48	42	34	30	28	26	24	
26-30	56	49	42	34	30	28	26	24	20	
30-36	48	42	34	30	28	26	24	20	18	
36-42	42	36	30	28	26	24	20	18	16	
42-48	36	32	28	26	24	20	18	16	14	
48-60	30	28	24	22	20	18	16	14	10	
>60	MLSS NEED NOT BE CONSIDERED									

#1-CANNOT BE APPROVED UNLESS HYDRAULIC ANALYSIS DEMONSTRATES SUITABILITY

FLOW FACTOR (FF) = DESIGN FLOW / 300 SO: 3 BEDROOMS = 450 / 300 = 1.5

4 BEDROOMS = 600 / 300 = 2.0

PERCOLATION FACTOR (PF) LESS THAN 5 MIN/IN = 1.0

5.1 - 10	= 1.2
10.1 - 20	= 1.5
20.1 - 30	= 2.0
30.1 - 45	= 3.0
45.1 - 60	= 5.0

MLSS CALCULATIONS

**LOT 1**  
Avg. Depth to restrictive layer: 22.3"  
Hydraulic Gradient: 2.1-3%  
HF= 48  
4 Bedrooms, FF= 2.0  
Perc Rate 5.1-10 min/in.  
PF= 1.2  
MLSS= 48 x 2.0 x 1.2 = 116

**LOT 2**  
Avg. Depth to restrictive layer: 25.6"  
Hydraulic Gradient: 2.1-3%  
HF= 48  
4 Bedrooms, FF= 2.0  
Perc Rate 1-5 min/in.  
PF= 1.0  
MLSS= 48 x 2.0 x 1.0 = 96

**LOT 3**  
Avg. Depth to restrictive layer: 25.3"  
Hydraulic Gradient: 3.1-4%  
HF= 42  
4 Bedrooms, FF= 2.0  
Perc Rate 5.1-10 min/in.  
PF= 1.2  
MLSS= 42 x 2.0 x 1.2 = 101

**LOT 4**  
Avg. Depth to restrictive layer: 25"  
Hydraulic Gradient: 4.1-6%  
HF= 34  
4 Bedrooms, FF= 2.0  
Perc Rate 5.1-10 min/in.  
PF= 1.2  
MLSS= 34 x 2.0 x 1.2 = 82

**LOT 5**  
Avg. Depth to restrictive layer: 22.3"  
Hydraulic Gradient: 4.1-6%  
HF= 34  
4 Bedrooms, FF= 2.0  
Perc Rate 5.1-10 min/in.  
PF= 1.2  
MLSS= 34 x 2.0 x 1.2 = 82

**LOT 6**  
Avg. Depth to restrictive layer: 26.16"  
(TH's 22,22N,22S,23,24,33)  
Hydraulic Gradient: 2.1-3%  
HF= 60  
4 Bedrooms, FF= 2.0  
Perc Rate 5.1-10 min/in.  
PF= 1.2  
MLSS= 60 x 2.0 x 1.2 = 101

**LOT 7**  
Avg. Depth to restrictive layer: 26"  
Hydraulic Gradient: 1.1-2%  
HF= 56  
4 Bedrooms, FF= 2.0  
Perc Rate 5.1-10 min/in.  
PF= 1.2  
MLSS= 56 x 2.0 x 1.2 = 135

**LOT 8-Existing House**  
Avg. Depth to restrictive layer: 26"  
Hydraulic Gradient: 6.1-8%  
HF= 60  
3 Bedrooms, FF= 1.5  
Perc Rate 1-5 min/in.  
PF= 1.0  
MLSS= 30 x 1.5 x 1.0 = 45

**LOT 9**  
Avg. Depth to restrictive layer: 25.3"  
Hydraulic Gradient: 6.1-8%  
HF= 30  
4 Bedrooms, FF= 2.0  
Perc Rate 5.1-10 min/in.  
PF= 1.2  
MLSS= 30 x 2.0 x 1.2 = 72

Soil Testing Results

Observed By: Eastern Highlands Health District  
Others Present: Gardner & Peterson Associates, LLC  
and Highland Soils  
Date Tested: September 3, 2015

TH 1  
0-8" Topsoil  
8-30" Orange Brown Fine Sandy Loom  
30-80" Compact Glacial Till  
Mottling @ 27"  
Roots to 30"  
No groundwater  
No ledge

TH 2  
0-5" Topsoil  
5-18" Orange Brown Fine Sandy Loom  
18-78" Compact Glacial Till  
Mottling @ 18"  
Roots to 18"  
No groundwater  
No ledge

TH 3  
0-5" Topsoil  
4-22" Orange Brown Fine Sandy Loom  
22-80" Compact Glacial Till  
Mottling @ 22"  
Roots to 22"  
No groundwater  
No ledge

TH 4  
0-5" Topsoil  
5-26" Orange Brown Fine Sandy Loom  
26-80" Compact Glacial Till  
Mottling @ 26"  
Roots to 26"  
No groundwater  
No ledge

TH 5  
0-4" Topsoil  
4-24" Orange Brown Fine Sandy Loom  
24-81" Compact Glacial Till  
Mottling @ 24"  
Roots to 24"  
No groundwater  
No ledge

TH 6  
0-3" Topsoil  
3-27" Orange Brown Fine Sandy Loom  
27-78" Compact Glacial Till  
Mottling @ 27"  
Roots to 27"  
No groundwater  
No ledge

TH 7  
0-7" Topsoil  
7-30" Orange Brown Fine Sandy Loom  
30-81" Compact Glacial Till  
Mottling @ 30"  
Roots to 30"  
No groundwater  
No ledge

TH 8  
0-5" Topsoil  
5-26" Orange Brown Fine Sandy Loom  
26-80" Compact Glacial Till  
Mottling @ 26"  
Roots to 26"  
No groundwater  
No ledge

TH 9  
0-5" Topsoil  
5-20" Orange Brown Fine Sandy Loom  
20-77" Compact Glacial Till  
Mottling @ 20"  
Roots to 20"  
No groundwater  
No ledge

TH 10  
0-5" Topsoil  
5-26" Orange Brown Fine Sandy Loom  
26-85" Compact Glacial Till  
Mottling @ 26"  
Roots to 26"  
No groundwater  
No ledge

TH 11  
0-4" Topsoil  
4-20" Orange Brown Fine Sandy Loom  
20-72" Compact Glacial Till  
Mottling @ 20"  
Roots to 20"  
No groundwater  
No ledge

TH 12  
0-5" Topsoil  
5-29" Orange Brown Fine Sandy Loom  
29-77" Compact Glacial Till  
Mottling @ 29"  
Roots to 29"  
No groundwater  
No ledge

TH 13  
0-5" Topsoil  
5-19" Orange Brown Fine Sandy Loom  
19-70" Compact Glacial Till  
Mottling @ 19"  
Roots to 19"  
No groundwater  
No ledge

Soil Testing Results

Observed By: Eastern Highlands Health District  
Others Present: Gardner & Peterson Associates, LLC  
and Highland Soils  
Date Tested: September 3, 2015

TH 14  
0-4" Topsoil  
4-25" Orange Brown Fine Sandy Loom  
25-80" Compact Glacial Till  
Mottling @ 24"  
Roots to 24"  
No groundwater  
No ledge

TH 15  
0-5" Topsoil  
5-24" Orange Brown Fine Sandy Loom  
24-78" Compact Glacial Till  
Mottling @ 24"  
Roots to 24"  
No groundwater  
No ledge

TH 16  
0-5" Topsoil  
5-40" Orange Brown Fine Sandy Loom  
40-65" Compact Glacial Till  
Mottling @ 40"  
Roots to 40"  
No groundwater  
No ledge

TH 16A  
0-5" Topsoil  
5-26" Orange Brown Fine Sandy Loom  
26-80" Compact Glacial Till  
Mottling @ 26"  
Roots to 26"  
No groundwater  
No ledge

TH 16B  
0-4" Topsoil  
4-24" Orange Brown Fine Sandy Loom  
24-81" Compact Glacial Till  
Mottling @ 24"  
Roots to 24"  
No groundwater  
No ledge

TH 16C  
0-5" Topsoil  
5-31" Orange Brown Fine Sandy Loom  
31-84" Compact Glacial Till  
Mottling @ 31"  
Roots to 31"  
No groundwater  
No ledge

TH 17-not dug

TH 18  
0-5" Topsoil  
5-26" Orange Brown Fine Sandy Loom  
26-90" Compact Glacial Till  
Mottling @ 26"  
Roots to 26"  
No groundwater  
No ledge

TH 19  
0-5" Topsoil  
5-26" Orange Brown Fine Sandy Loom  
26-50" Compact Glacial Till  
Mottling @ 26"  
Roots to 26"  
No groundwater  
No ledge

TH 20  
0-5" Topsoil  
5-30" Orange Brown Fine Sandy Loom  
30-90" Compact Glacial Till  
Mottling @ 30"  
Roots to 30"  
No groundwater  
No ledge

TH 21  
0-5" Topsoil  
5-31" Orange Brown Fine Sandy Loom  
31-84" Compact Glacial Till  
Mottling @ 31"  
Roots to 31"  
No groundwater  
No ledge

TH 22  
0-6" Topsoil  
6-30" Orange Brown Fine Sandy Loom  
30-43" Compact Glacial Till  
Mottling @ 30"  
Roots to 30"  
No groundwater  
No ledge

TH 23  
0-5" Topsoil  
5-24" Orange Brown Fine Sandy Loom  
24-84" Compact Glacial Till  
Mottling @ 24"  
Roots to 24"  
No groundwater  
No ledge

Soil Testing Results

Observed By: Eastern Highlands Health District  
Others Present: Gardner & Peterson Associates, LLC  
and Highland Soils  
Date Tested: September 3, 2015

TH 22N  
0-7" Topsoil  
7-30" Orange Brown Fine Sandy Loom  
30-93" Compact Glacial Till  
Mottling @ 36"  
Roots to 29"  
Restrictive @ 30"  
No groundwater  
No ledge

TH 22A  
0-5" Topsoil  
5-24" Orange Brown Fine Sandy Loom  
24-78" Compact Glacial Till  
Mottling @ 24"  
Roots to 25"  
No groundwater  
No ledge

TH 24B  
0-5" Topsoil  
5-24" Orange Brown Fine Sandy Loom  
24-89" Compact Glacial Till  
Mottling @ 24"  
Roots to 24"  
No groundwater  
No ledge

TH 24C  
0-6" Topsoil  
6-23" Orange Brown Fine Sandy Loom  
23-82" Compact Glacial Till  
Mottling @ 23"  
Roots to 23"  
No groundwater  
No ledge

TH 25  
0-7" Topsoil  
7-25" Orange Brown Fine Sandy Loom  
25-90" Compact Glacial Till  
Mottling @ 25"  
Roots to 25"  
No groundwater  
No ledge

TH 26  
0-7" Topsoil  
7-26" Orange Brown Fine Sandy Loom  
26-92" Compact Glacial Till  
Mottling @ 26"  
Roots to 26"  
No groundwater  
No ledge

TH 27  
0-5" Topsoil  
5-30" Orange Brown Fine Sandy Loom  
30-81" Compact Glacial Till  
Mottling @ 25"  
Roots to 25"  
No groundwater  
No ledge

TH 28  
Ledge @ 24"  
TH 29-not dug

TH 30  
0-5" Topsoil  
5-30" Orange Brown Fine Sandy Loom  
30-84" Compact Glacial Till  
Mottling @ 30"  
Roots to 30"  
No groundwater  
No ledge

TH 31  
0-7" Topsoil  
7-26" Orange Brown Fine Sandy Loom  
26-50" Compact Glacial Till  
Mottling @ 24"  
Roots to 24"  
No groundwater  
No ledge

TH 32  
0-6" Topsoil  
6-30" Orange Brown Fine Sandy Loom  
30-64" Compact Glacial Till  
Mottling @ 30"  
Roots to 30"  
No groundwater  
No ledge

TH 33  
0-5" Topsoil  
5-29" Orange Brown Fine Sandy Loom  
29-77" Compact Glacial Till  
Mottling @ 29"  
Roots to 29"  
No groundwater  
No ledge

TH 34  
0-5" Topsoil  
5-24" Orange Brown Fine Sandy Loom  
24-84" Compact Glacial Till  
Mottling @ 24"  
Roots to 24"  
No groundwater  
No ledge

Soil Testing Results

Observed By: Eastern Highlands Health District  
Others Present: Gardner & Peterson Associates, LLC  
and Highland Soils  
Date Tested: October 1, 2015

TH 22N  
0-7" Topsoil  
7-30" Orange Brown Fine Sandy Loom  
30-93" Compact Glacial Till  
Mottling @ 36"  
Roots to 29"  
Restrictive @ 30"  
No groundwater  
No ledge

TH 22A  
0-5" Topsoil  
5-24" Orange Brown Fine Sandy Loom  
24-78" Compact Glacial Till  
Mottling @ 24"  
Roots to 25"  
No groundwater  
No ledge

TH 24B  
0-5" Topsoil  
5-24" Orange Brown Fine Sandy Loom  
24-89" Compact Glacial Till  
Mottling @ 24"  
Roots to 24"  
No groundwater  
No ledge

TH 24C  
0-6" Topsoil  
6-23" Orange Brown Fine Sandy Loom  
23-82" Compact Glacial Till  
Mottling @ 23"  
Roots to 23"  
No groundwater  
No ledge

TH 25  
0-7" Topsoil  
7-25" Orange Brown Fine Sandy Loom  
25-90" Compact Glacial Till  
Mottling @ 25"  
Roots to 25"  
No groundwater  
No ledge

TH 26  
0-7" Topsoil  
7-26" Orange Brown Fine Sandy Loom  
26-92" Compact Glacial Till  
Mottling @ 26"  
Roots to 26"  
No groundwater  
No ledge

TH 27  
0-5" Topsoil  
5-30" Orange Brown Fine Sandy Loom  
30-81" Compact Glacial Till  
Mottling @ 25"  
Roots to 25"  
No groundwater  
No ledge

TH 28  
Ledge @ 24"  
TH 29-not dug

TH 30  
0-5" Topsoil  
5-30" Orange Brown Fine Sandy Loom  
30-84" Compact Glacial Till  
Mottling @ 30"  
Roots to 30"  
No groundwater  
No ledge

TH 31  
0-7" Topsoil  
7-26" Orange Brown Fine Sandy Loom  
26-50" Compact Glacial Till  
Mottling @ 24"  
Roots to 24"  
No groundwater  
No ledge

TH 32  
0-6" Topsoil  
6-30" Orange Brown Fine Sandy Loom  
30-64" Compact Glacial Till  
Mottling @ 30"  
Roots to 30"  
No groundwater  
No ledge

TH 33  
0-5" Topsoil  
5-29" Orange Brown Fine Sandy Loom  
29-77" Compact Glacial Till  
Mottling @ 29"  
Roots to 29"  
No groundwater  
No ledge

TH 34  
0-5" Topsoil  
5-24" Orange Brown Fine Sandy Loom  
24-84" Compact Glacial Till  
Mottling @ 24"  
Roots to 24"  
No groundwater  
No ledge

Percolation Tests

Observed By: Eastern Highlands Health District  
Others Present: Gardner & Peterson Associates, LLC  
Heavy Rain on September 30, 2015

**Perc #1**  
Presoaked 9/21/15 at 2:47  
Presoaked 9/22/15 at 12:40  
Depth=20"  
Mark Down 0"  
TIME DEPTH  
1:21 8"  
1:31 11 1/2"  
1:41 14 1/2"  
1:51 15 3/4"  
2:01 16 3/4"  
2:11 17 3/4"  
2:16 18 1/2"  
2:21 Dry  
Rate: 10 min/in

**Perc #2**  
Presoaked 9/21/15 at 2:33  
Presoaked 9/22/15 at 10:49  
Depth=20"  
Mark Down 0"  
TIME DEPTH  
1:18 8"  
1:27 13"  
1:37 16 1/2"  
1:47 19 1/2"  
Dry  
Rate: 1-5 min/in

**Perc #3**  
Presoaked 9/21/15 at 3:07  
Presoaked 9/22/15 at 10:46  
Depth=20"  
Mark Down 0"  
TIME DEPTH  
1:15 8"  
1:25 11 1/2"  
1:35 13 1/2"  
1:45 15 1/2"  
1:55 16 3/4"  
2:05 18"  
Dry  
Rate: 5.1-10 min/in

**Perc #4**  
Presoaked 9/21/15 at 3:30  
Presoaked 9/22/15 at 10:43  
Depth=18"  
Mark Down 2"  
TIME DEPTH  
11:55 3 1/2"  
12:05 6"  
12:15 7 1/2"  
12:25 9"  
12:35 10"  
12:45 11"  
12:55 12"  
1:05 13"  
Rate: 10 min/in

**Perc #5**  
Presoaked 9/21/15 at 3:45  
Presoaked 9/22/15 at 10:40  
Depth=18"  
Mark Down 1 1/2"  
TIME DEPTH  
11:40 4 1/2"  
11:50 8 1/2"  
12:00 10 1/2"  
12:10 13"  
12:20 14"  
Rate: 5.1-10 min/in

**Perc #6A**  
Presoaked 10/01/15 at 8:48  
Depth=18"  
Mark Down 0"  
TIME DEPTH  
10:50 6"  
11:00 9 1/2"  
11:10 11 1/2"  
11:20 13 1/2"  
11:30 14 1/2"  
11:40 15 3/4"  
Rate: 5.1-10 min/in

**Perc #6B**  
Presoaked 10/01/15 at 8:30  
Depth=17"  
Mark Down 0"  
TIME DEPTH  
10:53 5"  
11:03 10"  
11:13 13"  
11:18 13 3/4"  
11:23 14 3/4"  
11:28 15 3/4"  
11:33 16 1/2"  
11:38 DRY  
Rate: 5.1-10 min/in

**Perc #7**  
Presoaked 10/01/15 at 10:10  
Depth=19"  
Mark Down 2"  
TIME DEPTH  
11:45 3 1/2"  
11:50 7"  
11:55 9 1/2"  
12:00 10 1/2"  
12:05 11 1/2"  
12:10 12 1/2"  
12:15 13"  
12:20 13 1/2"  
12:25 14"  
12:30 14 1/2"  
12:35 DRY  
Rate: 10 min/in

**Perc #8**  
Presoaked 10/01/15 at 10:44  
Depth=19"  
Mark Down 1"  
TIME DEPTH  
12:08 6"  
12:13 10"  
12:18 12"  
12:23 13 1/2"  
12:28 15"  
12:33 16 1/2"  
12:38 18" DRY  
Rate: 1-5 min/in

**Perc #9**  
Presoaked 9/21/15 at 4:20  
Presoaked 9/22/15 at 10:24  
Depth=19"  
Mark Down 0"  
TIME DEPTH  
10:56 7 1/2"  
11:05 10"  
11:02 11 1/2"  
11:05 12 1/2"  
11:08 13 3/4"  
11:11 14 3/4"  
11:14 15 3/4"  
11:17 16 1/2"  
11:20 16 3/4"  
11:23 17 1/2"  
11:26 18"  
Dry  
Rate: 5.1-10 min/in

GENERAL EROSION AND SEDIMENT CONTROL NOTES

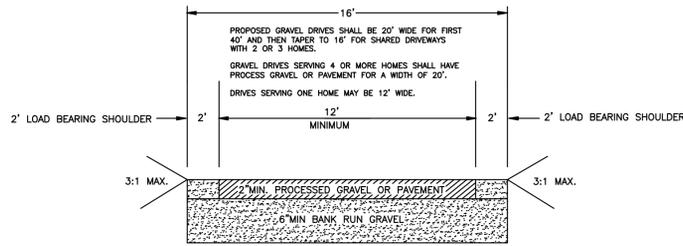
- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL BY THE CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION.
- ALL SEDIMENT CONTROL PRACTICES AND MEASURES SHALL BE CONSTRUCTED, APPLIED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION PLAN.
- TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED IN THE AMOUNT NECESSARY TO COMPLETE THE FINISHED GRADING OF ALL EXPOSED AREAS.
- AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS OR OTHER OBJECTIONABLE MATERIAL.
- ALL FILLS SHALL BE COMPACTED AS REQUIRED TO MINIMIZE EROSION, SURFACE, AND SETTLEMENT. FILL INTENDED TO SUPPORT STRUCTURES, DRAINAGE, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH THE APPROPRIATE STATE AND/OR LOCAL SPECIFICATIONS.
- FILL MATERIAL SHALL BE FREE OF BRUSH, RUBBISH, LARGE ROCKS, LOGS, STUMPS, BUILDING MATERIAL, COMPRESSIBLE MATERIAL, AND OTHER MATERIALS WHICH MAY INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
- FROZEN MATERIAL OR SOFT MUDGY OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.
- FILL SHALL NOT BE PLACED ON A FROZEN FOUNDATION.
- ALL BENCHES SHALL BE KEPT FREE OF SEDIMENT DURING ALL PHASES OF DEVELOPMENT.
- SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH SOUND CONSTRUCTION PRACTICE.
- ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING FINISH GRADING. IF FINISH GRADING IS TO BE DELAYED FOR MORE THAN 30 DAYS AFTER DISTURBANCE IS COMPLETED, TEMPORARY SOIL STABILIZATION MEASURES SHALL BE APPLIED. AREAS LEFT OVER 30 DAYS SHALL BE CONSIDERED "LONG TERM" AND SHALL RECEIVE TEMPORARY SEEDING WITHIN THE FIRST 15 DAYS.
- SITE IS TO BE GRADED TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCHING, AND MAINTENANCE UNLESS OTHERWISE SPECIFIED IN THE PLANS.
- CUT AND FILL SLOPES SHALL NOT BE STEEPER THAN 2:1. TOPSOIL SHALL BE SPREAD TO A MINIMUM DEPTH OF 4". ADDITIONAL TOPSOIL MAY BE REQUIRED TO MEET MINIMUM DEPTHS. NO TOPSOIL SHALL BE REMOVED FROM THIS SITE.
- APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTRIPACKER TYPE SEEDER, OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILIZER). NORMAL SEEDING DEPTH IS FROM 1/4" TO 1/2" INCH. HYDROSEEDING WHICH IS MULCHED MAY BE LEFT ON THE SOIL SURFACE.
- WHERE FEASIBLE EXCEPT WHERE EITHER A CULTRIPACKER TYPE SEEDER OR HYDROSEEDER IS USED, THE SEEDBED SHOULD BE FIRMED FOLLOWING SEEDING WITH A ROLLER OR LIGHT DRAG.
- FERTILIZER AND LIME ARE TO BE WORKED INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING TOOTH HARROW OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISC OPERATION SHOULD BE ALONG THE CONTOUR.
- REMOVE FROM THE SURFACE ALL STONES TWO INCHES OR LARGER. REMOVE ALL OTHER DEBRIS SUCH AS WIRE, TREE ROOTS, PIECES OF CONCRETE, OR OTHER UNSUITABLE MATERIALS.
- INSPECT SEEDBED BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RETILLED BEFORE SEEDING, THEN FIRMED AS DESCRIBED ABOVE.
- WHERE GRASSES PREDOMINATE, FERTILIZE ACCORDING TO SOIL ANALYSIS, OR SPREAD 300 POUNDS OF 10-10-10 OR EQUIVALENT PER ACRE (7.5 POUNDS PER 1000 S.F.). CALCIUM CHLORIDE WILL BE AVAILABLE FOR DUST CONTROL ON GRAVEL TRAVEL SURFACES.

CONSTRUCTION SCHEDULE & EROSION & SEDIMENT CONTROL CHECKLIST

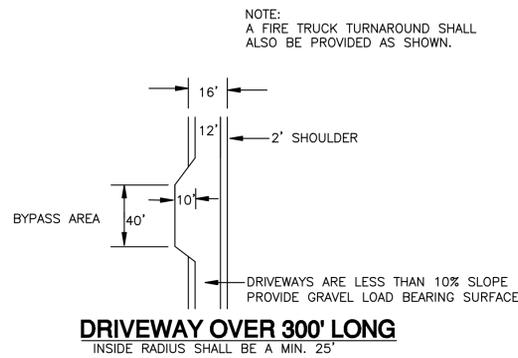
WORK DESCRIPTION	EROSION & SEDIMENT CONTROL MEASURES	DATE INSTALLED	INITIALS
PROJECT NAME: MOUNTAIN VIEW ACRES LOCATION: BROWN & COVENTRY ROADS PROJECT DESCRIPTION: RESIDENTIAL SUBDIVISION PARCEL AREA: 36.6 ACRES RESPONSIBLE PERSONNEL: MR. PAUL BRODY			
SUBDIVIDER IS REQUIRED TO CONSTRUCT COMMON DRIVEWAYS. LAND SURVEYOR SHALL FLAG LIMIT OF CLEARING. CUT TREES. INSTALL EROSION CONTROLS. REMOVE STUMPS. STRIP TOPSOIL AND STOCKPILE. CONSTRUCT COMMON DRIVEWAY. FINAL GRADE AND SEED ALL DISTURBED AREAS.			
PERMIT PLAN SHALL BE PREPARED FOR DEVELOPMENT OF EACH LOT FOR LOT OWNER/BUILDER.			

PROJECT DATES:  
DATE OF CONSTRUCTION START PER APPROVAL TIMELINES  
DATE OF CONSTRUCTION COMPLETION PER APPROVAL TIMELINES

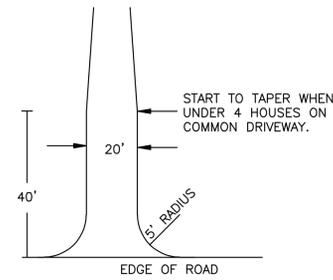
EROSION AND



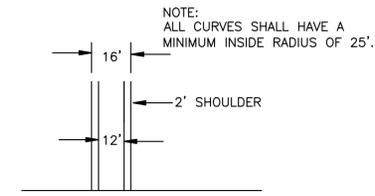
**TYPICAL SHARED DRIVEWAY SECTION**



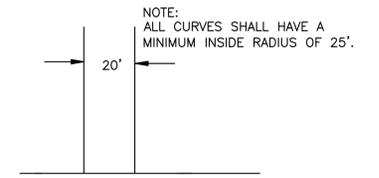
**DRIVEWAY OVER 300' LONG**



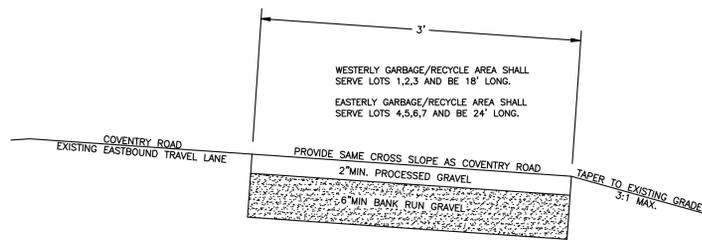
**SHARED DRIVEWAY INTERSECTS COVENTRY ROAD**



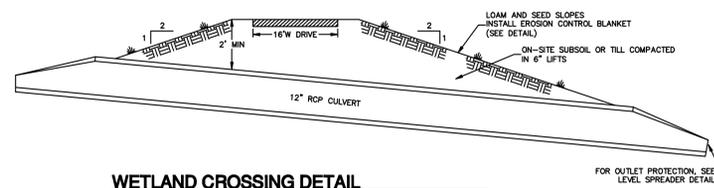
**SHARED DRIVEWAY DETAIL WHEN SERVING 2 or 3 HOUSES**



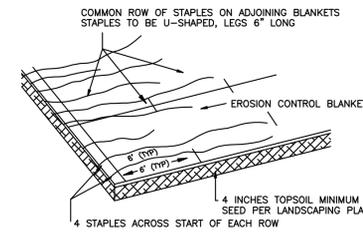
**SHARED DRIVEWAY DETAIL WHEN SERVING 4 or MORE HOUSES**



**TYPICAL GARBAGE/RECYCLE AREA SECTION**

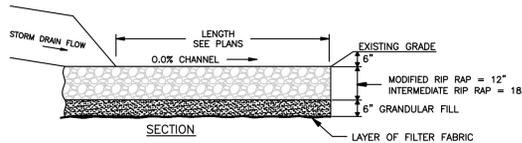


**WETLAND CROSSING DETAIL**



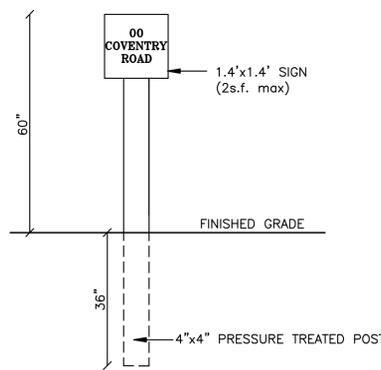
NOTES:  
1. APPLY ON SLOPES 2:1 OR GREATER, BUT LESS THAN 3:1.  
2. EROSION CONTROL BLANKET TO BE NORTH AMERICAN GREEN S 150 DOUBLE NET STRAW BLANKET OR EQUAL.  
3. INSTALL ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

**EROSION CONTROL BLANKET**



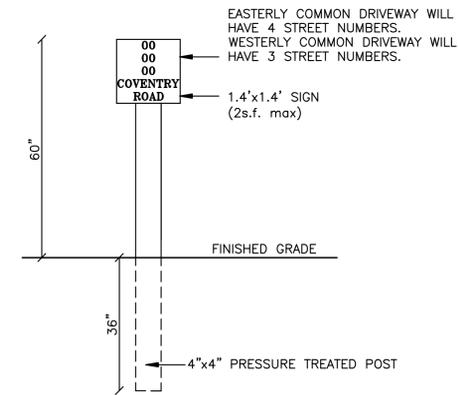
NOTES:  
1. WHERE POSSIBLE LEVEL SPREADER TO BE CONSTRUCTED ON UNDISTURBED SOIL.  
2. SHAPE THE ENTRANCE TO THE SPREADER IN SUCH A MANNER AS TO INSURE THAT RUNOFF ENTERS DIRECTLY ONTO THE 0.0% CHANNEL.  
3. RIP TO BE CONSTRUCTED LEVEL AT 0.0% GRADE TO INSURE UNIFORM SPREADING OF STORM WATER RUNOFF.

**LEVEL SPREADER DETAIL**



**STREET NUMBER SIGN AT INTERSECTION OF COMMON & SINGLE FAMILY DRIVEWAY**

N.T.S.



**STREET NUMBER SIGN AT COVENTRY ROAD**

N.T.S.

APPROVED BY THE MANSFIELD PLANNING & ZONING COMMISSION

CHAIRMAN \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED BY THE DIRECTOR OF HEALTH

DIRECTOR \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED BY THE DIRECTOR OF PUBLIC WORKS

DIRECTOR \_\_\_\_\_ DATE \_\_\_\_\_

<b>CONSTRUCTION DETAILS</b>				
<b>MOUNTAIN VIEW ACRES</b>				
<b>#522 BROWNS ROAD</b>				
<b>&amp; COVENTRY ROAD</b>				
<b>MANSFIELD, CONNECTICUT</b>				
<b>GARDNER &amp; PETERSON ASSOCIATES, LLC</b>				
178 HARTFORD TURNPIKE TOLLAND, CONNECTICUT				
PROFESSIONAL ENGINEERS		LAND SURVEYORS		
BY	SCALE	DATE	SHEET NO.	MAP NO.
B.D.C.	N.T.S.	12-15-2015	7 OF 7	105905

REVISIONS  
01-27-2016

**MOUNTAIN VIEW ACRES**

**522 Browns Road &  
Coventry Road  
Mansfield, Connecticut**

**STORMWATER MANAGEMENT REPORT**

July 1, 2016

PREPARED FOR: Willard J. Stearns & Sons, Inc.  
50 Stearns Road  
Mansfield, Connecticut

PREPARED BY: Gardner & Peterson Associates, LLC  
178 Hartford Turnpike  
Tolland, CT 06084

## Mountain View Acres

### Summary:

This project proposes to subdivide approximately 36 acres of land located in the RAR-90 Zone on the south side of Coventry Road and west side of Browns Road into nine building lots. The lots will be served by subsurface sewage disposal systems and private wells while protecting over 7.5 acres of land with conservation easements and dedicating nearly 2.5 acres to the Town of Mansfield.

### Existing Conditions:

The site contains one house that fronts on Browns Road which will be located on Lot #8 of the subdivision. The site is mainly wooded, though the land along Coventry Road was logged within the past ten years. The site primarily drains from Coventry Road to the south where surface flow is collected in a wetland which drains from west to east and under Browns Road through an 18" culvert which is at the bottom of the watershed analyzed in this report. The soils in the upland areas are primarily a Woodbridge Fine Sandy Loam per the Natural Resources Conservation Service, Web Soil Survey.

Based on the Flood Insurance Rate Map (FIRM) the site is located in Flood Zone C, area of minimal flooding. Test pits were excavated on site with the Eastern Highlands Health Department to determine septic suitability. Suitable areas were found on all lots and restrictive soil layers average approximately 24" below grade.

In addition, the site is not located in an aquifer area based on "Surfaces and Groundwater Resources" map by plan of conservation and development, April 2006 and the parcel is not located within an archaeological area based on "Archaeological Assessment" map by plan of conservation and development April 2006.

### Stormwater Management:

Based on reviews by various town committees and town staff the applicant has been advised to provide an Open Space Subdivision to avoid a traditional layout and minimize the number of curb cuts. Common driveways are provided and stormwater runoff will sheet flow from disturbed areas in the direction it is headed today. This report includes the design of a cross culvert to convey the limited flow under the proposed driveway on Lot #1 and an overall site analysis to evaluate pre-development and post-development flows.

*Hydraflow Hydrographs Extension* was used to determine the peak flows mentioned above. The twin 12" culverts under the proposed driveway on Lot 1 has been designed to convey the flow from a 10 year storm. When comparing the existing and proposed flow rates from the overall site, there is no change in the watershed area or

travel time. Due to the proposed improvements, the runoff coefficient will increase which results in a small increase in the flow rate off site from 47.3cfs to 52.5 cfs for a 25 year storm frequency. The runoff will shed through an undisturbed, vegetated buffer over relatively flat slopes before reaching the wetland corridor. The wetland corridor consists of a flat area that will provide flood storage and potential reduction the rate of runoff and a defined channel for water conveyance at the easterly end of the wetland.

**Erosion & Sediment Control:**

The erosion & sediment control plan for this site consists of the use of soil stockpile areas, silt fence and/or hay bales down gradient of all disturbed areas and seeding schedules. An undisturbed vegetated area down gradient of the proposed developed areas will also remain. An anti-tracking pad will be installed at both entrances to the site though it may be unnecessary due the existing and proposed gravel surfaces.

---

Mark A. Peterson, P.E. 20905

# Watershed Model Schematic

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

1 - Ex. Watershed



3 - Prop. Watershed



5 - Subwatershed to proposed culvert



# Hydrograph Return Period Recap

Hydroflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Hyd. No.	Hydrograph type (origin)	Inflow Hyd(s)	Peak Outflow (cfs)								Hydrograph description
			1-Yr	2-Yr	3-Yr	5-Yr	10-Yr	25-Yr	50-Yr	100-Yr	
1	Rational	-----	-----	27.10	-----	-----	40.12	47.28	-----	-----	Ex. Watershed
3	Rational	-----	-----	30.11	-----	-----	44.58	52.53	-----	-----	Prop. Watershed
5	Rational	-----	-----	4.063	-----	-----	5.970	7.035	-----	-----	Subwatershed to proposed culvert

# Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph description
1	Rational	27.10	1	34	55,280	-----	-----	-----	Ex. Watershed
3	Rational	30.11	1	34	61,422	-----	-----	-----	Prop. Watershed
5	Rational	4.063	1	28	6,825	-----	-----	-----	Subwatershed to proposed culvert
Flow off Site.gpw					Return Period: 2 Year			Friday, Aug 26, 2016	

# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Friday, Aug 26, 2016

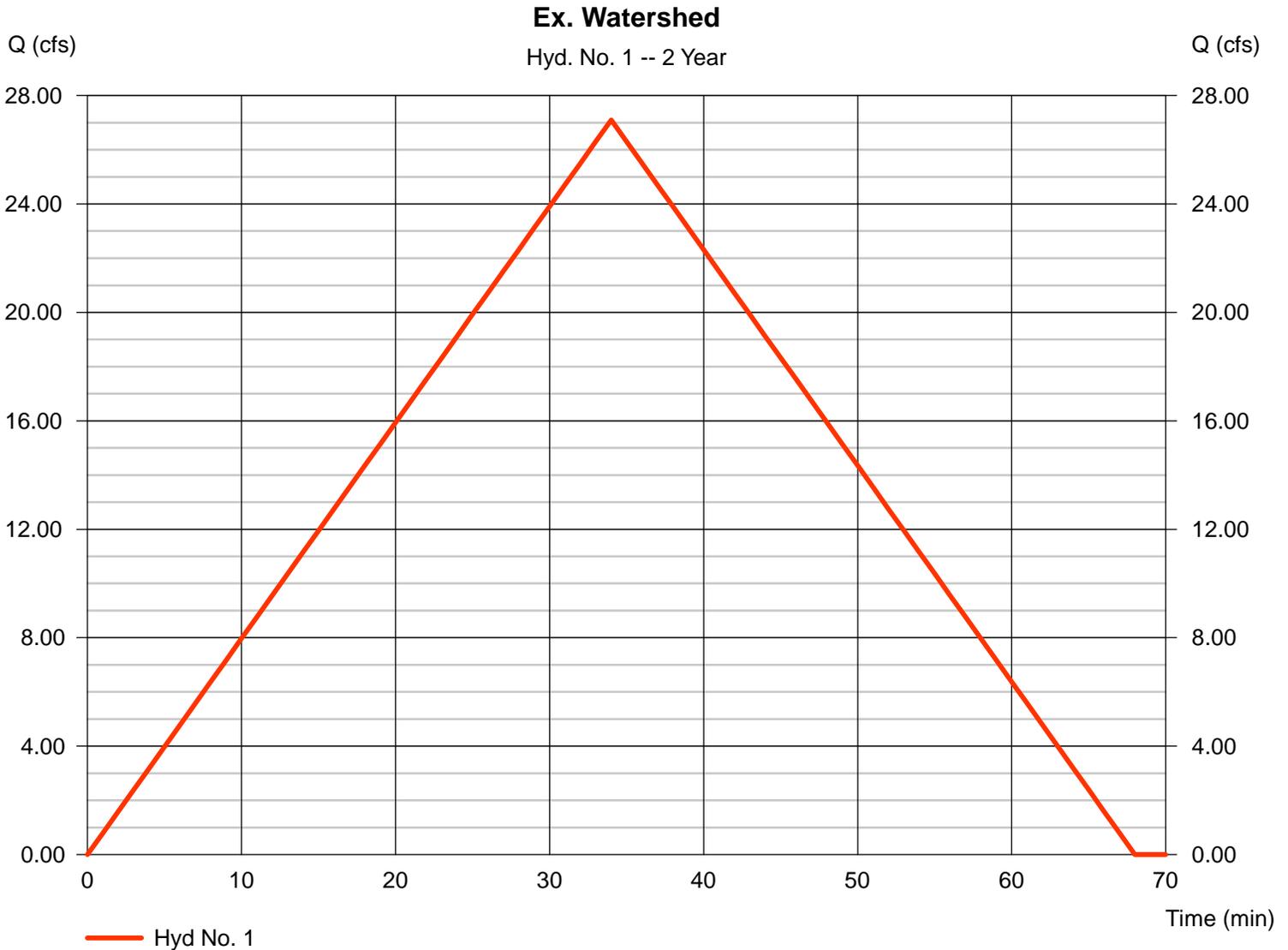
## Hyd. No. 1

Ex. Watershed

Hydrograph type = Rational  
 Storm frequency = 2 yrs  
 Time interval = 1 min  
 Drainage area = 57.200 ac  
 Intensity = 1.755 in/hr  
 IDF Curve = CT-DOT.IDF

Peak discharge = 27.10 cfs  
 Time to peak = 34 min  
 Hyd. volume = 55,280 cuft  
 Runoff coeff. = 0.27\*  
 Tc by User = 34.00 min  
 Asc/Rec limb fact = 1/1

\* Composite (Area/C) = [(0.420 x 0.90) + (0.920 x 0.85) + (2.200 x 0.40) + (53.660 x 0.25)] / 57.200



# Hydrograph Report

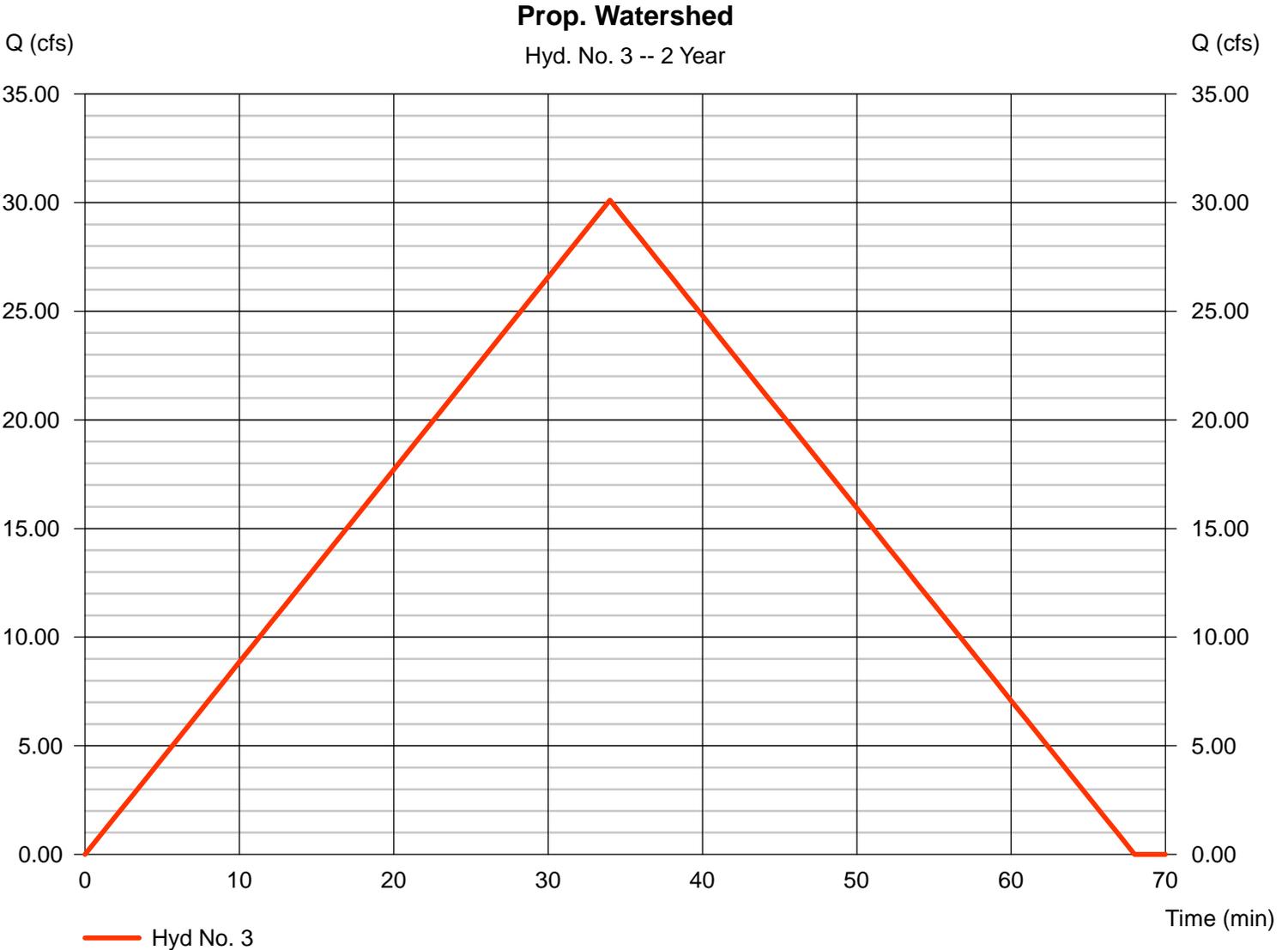
## Hyd. No. 3

### Prop. Watershed

Hydrograph type = Rational  
Storm frequency = 2 yrs  
Time interval = 1 min  
Drainage area = 57.200 ac  
Intensity = 1.755 in/hr  
IDF Curve = CT-DOT.IDF

Peak discharge = 30.11 cfs  
Time to peak = 34 min  
Hyd. volume = 61,422 cuft  
Runoff coeff. = 0.3\*  
Tc by User = 34.00 min  
Asc/Rec limb fact = 1/1

\* Composite (Area/C) = [(0.850 x 0.90) + (1.880 x 0.85) + (6.330 x 0.40) + (48.140 x 0.25)] / 57.200



# Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph description	
1	Rational	40.12	1	34	81,844	-----	-----	-----	Ex. Watershed	
3	Rational	44.58	1	34	90,938	-----	-----	-----	Prop. Watershed	
5	Rational	5.970	1	28	10,030	-----	-----	-----	Subwatershed to proposed culvert	
Flow off Site.gpw					Return Period: 10 Year			Friday, Aug 26, 2016		

# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Friday, Aug 26, 2016

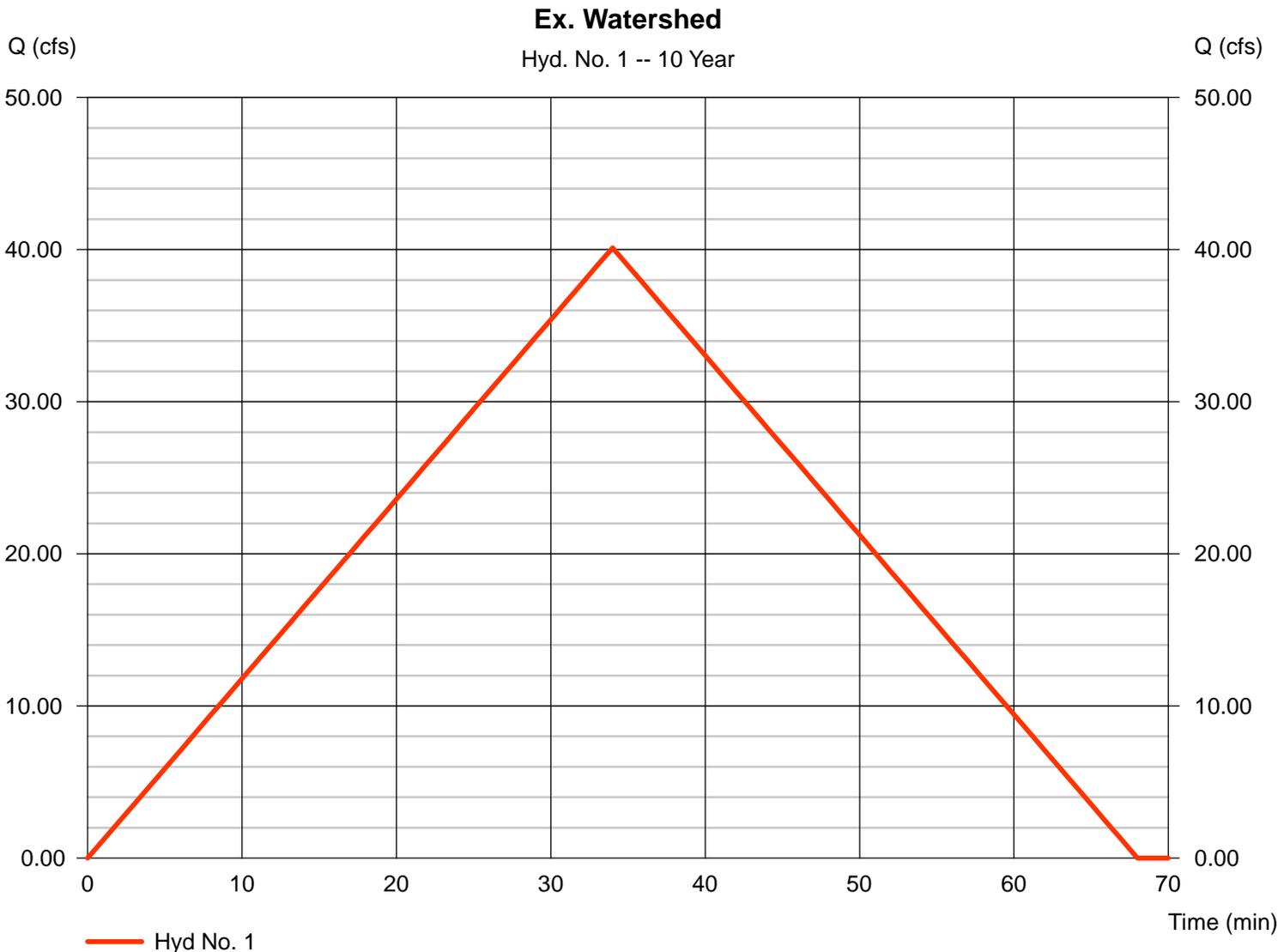
## Hyd. No. 1

Ex. Watershed

Hydrograph type = Rational  
 Storm frequency = 10 yrs  
 Time interval = 1 min  
 Drainage area = 57.200 ac  
 Intensity = 2.598 in/hr  
 IDF Curve = CT-DOT.IDF

Peak discharge = 40.12 cfs  
 Time to peak = 34 min  
 Hyd. volume = 81,844 cuft  
 Runoff coeff. = 0.27\*  
 Tc by User = 34.00 min  
 Asc/Rec limb fact = 1/1

\* Composite (Area/C) = [(0.420 x 0.90) + (0.920 x 0.85) + (2.200 x 0.40) + (53.660 x 0.25)] / 57.200



# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Friday, Aug 26, 2016

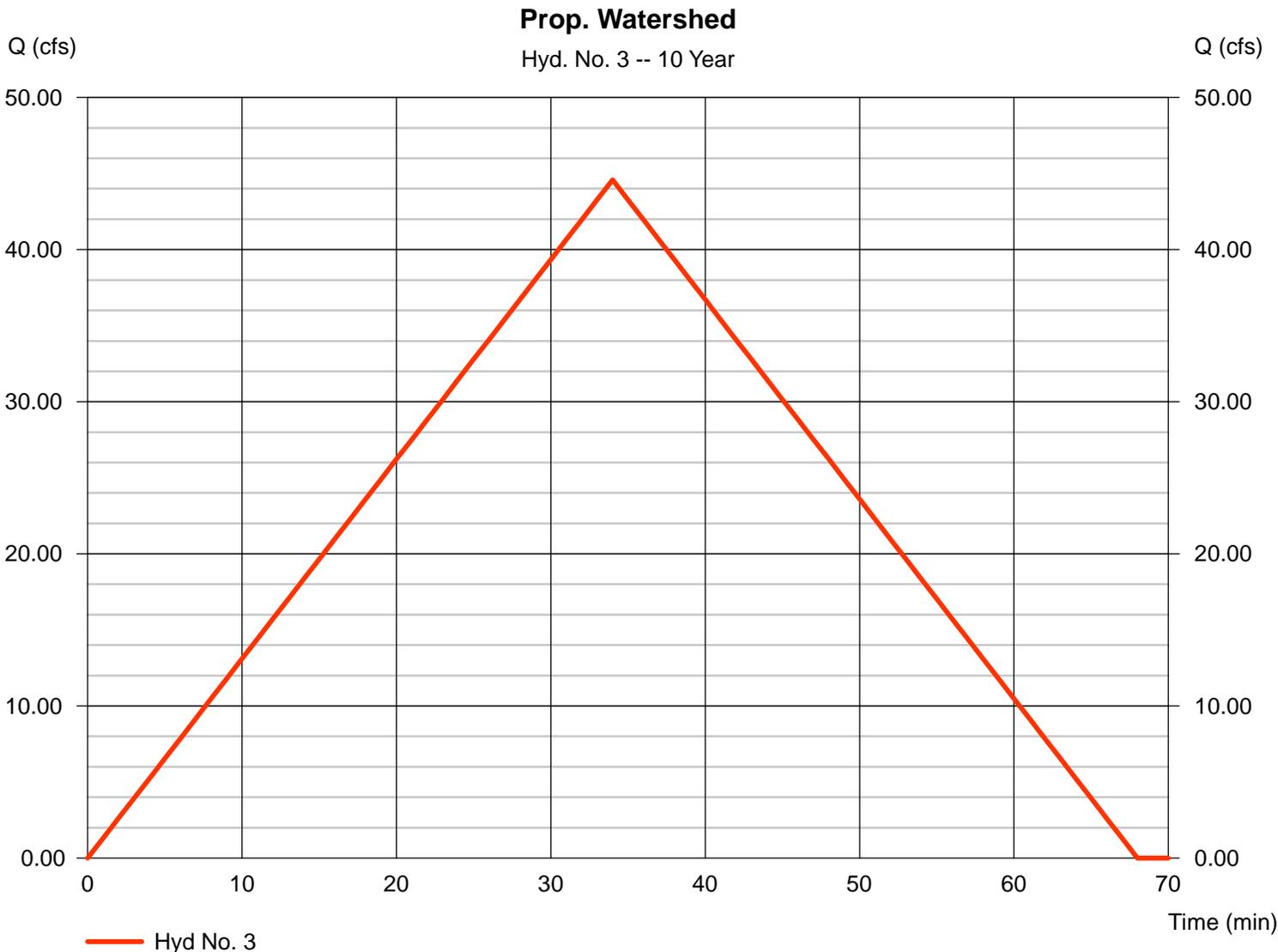
## Hyd. No. 3

### Prop. Watershed

Hydrograph type = Rational  
Storm frequency = 10 yrs  
Time interval = 1 min  
Drainage area = 57.200 ac  
Intensity = 2.598 in/hr  
IDF Curve = CT-DOT.IDF

Peak discharge = 44.58 cfs  
Time to peak = 34 min  
Hyd. volume = 90,938 cuft  
Runoff coeff. = 0.3\*  
Tc by User = 34.00 min  
Asc/Rec limb fact = 1/1

\* Composite (Area/C) = [(0.850 x 0.90) + (1.880 x 0.85) + (6.330 x 0.40) + (48.140 x 0.25)] / 57.200



# Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph description
1	Rational	47.28	1	34	96,445	-----	-----	-----	Ex. Watershed
3	Rational	52.53	1	34	107,161	-----	-----	-----	Prop. Watershed
5	Rational	7.035	1	28	11,818	-----	-----	-----	Subwatershed to proposed culvert
Flow off Site.gpw					Return Period: 25 Year			Friday, Aug 26, 2016	

# Hydrograph Report

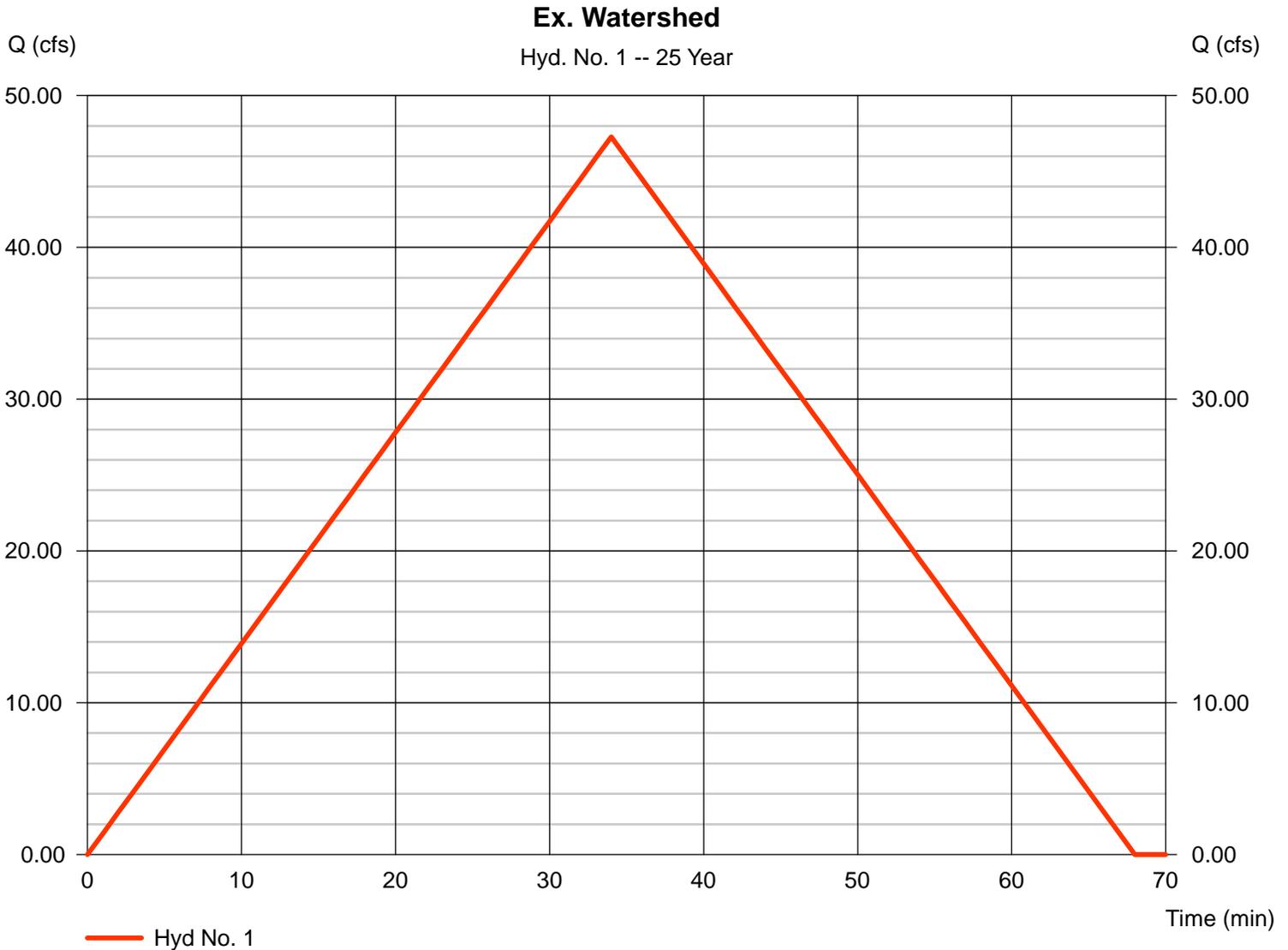
## Hyd. No. 1

### Ex. Watershed

Hydrograph type = Rational  
Storm frequency = 25 yrs  
Time interval = 1 min  
Drainage area = 57.200 ac  
Intensity = 3.061 in/hr  
IDF Curve = CT-DOT.IDF

Peak discharge = 47.28 cfs  
Time to peak = 34 min  
Hyd. volume = 96,445 cuft  
Runoff coeff. = 0.27\*  
Tc by User = 34.00 min  
Asc/Rec limb fact = 1/1

\* Composite (Area/C) = [(0.420 x 0.90) + (0.920 x 0.85) + (2.200 x 0.40) + (53.660 x 0.25)] / 57.200



# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Friday, Aug 26, 2016

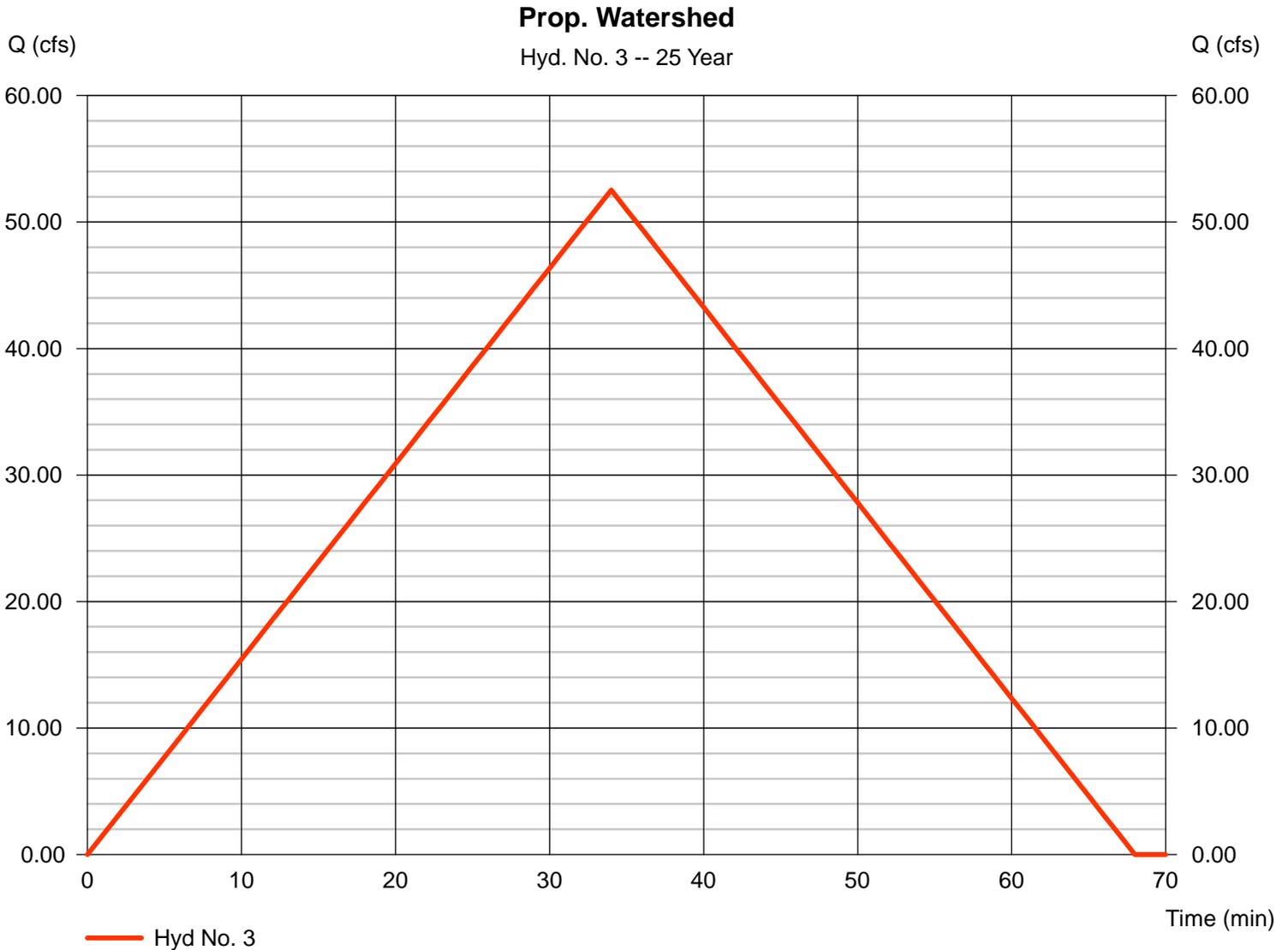
## Hyd. No. 3

Prop. Watershed

Hydrograph type = Rational  
 Storm frequency = 25 yrs  
 Time interval = 1 min  
 Drainage area = 57.200 ac  
 Intensity = 3.061 in/hr  
 IDF Curve = CT-DOT.IDF

Peak discharge = 52.53 cfs  
 Time to peak = 34 min  
 Hyd. volume = 107,161 cuft  
 Runoff coeff. = 0.3\*  
 Tc by User = 34.00 min  
 Asc/Rec limb fact = 1/1

\* Composite (Area/C) = [(0.850 x 0.90) + (1.880 x 0.85) + (6.330 x 0.40) + (48.140 x 0.25)] / 57.200



# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Friday, Aug 26, 2016

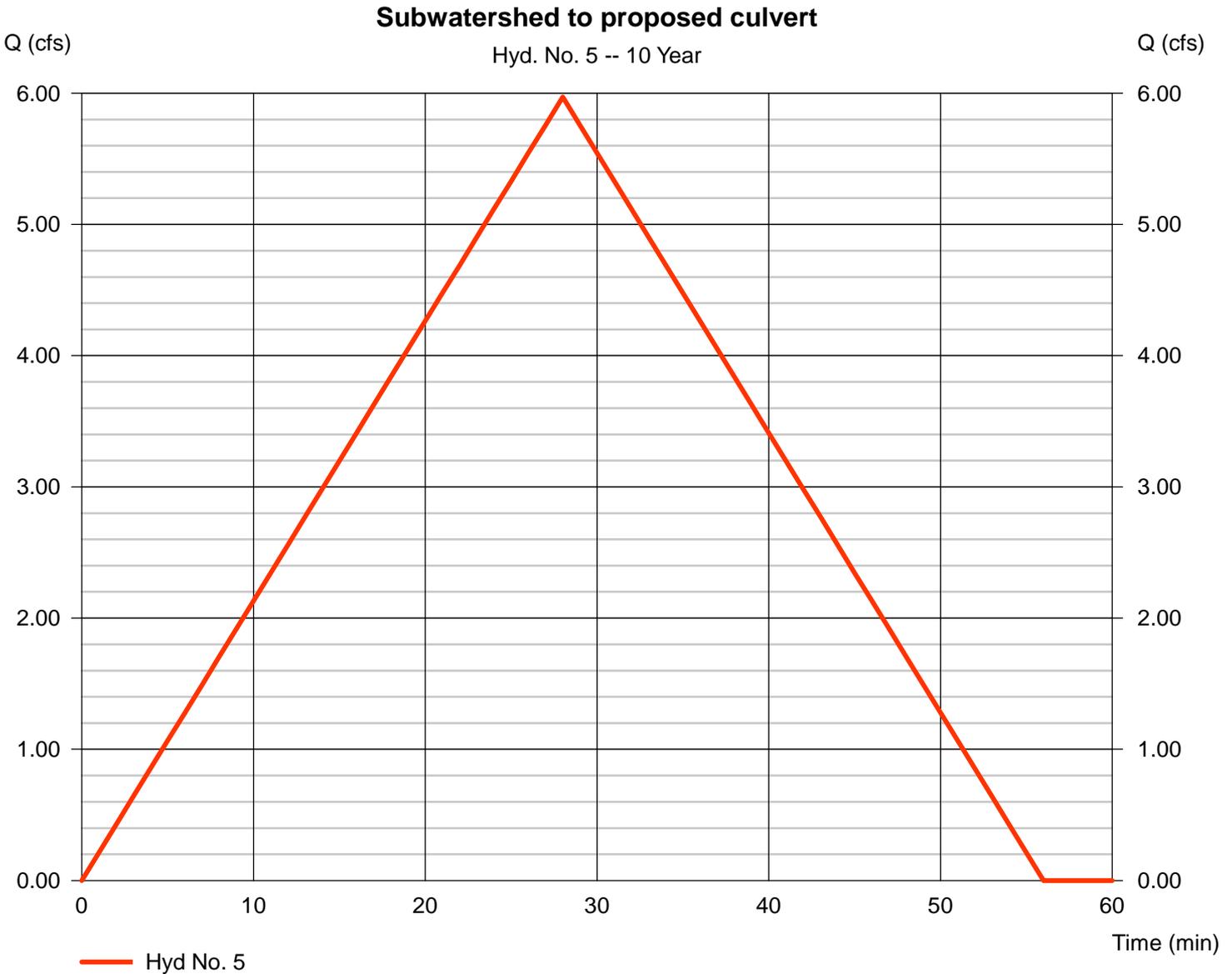
## Hyd. No. 5

Subwatershed to proposed culvert

Hydrograph type = Rational  
 Storm frequency = 10 yrs  
 Time interval = 1 min  
 Drainage area = 5.120 ac  
 Intensity = 2.915 in/hr  
 IDF Curve = CT-DOT.IDF

Peak discharge = 5.970 cfs  
 Time to peak = 28 min  
 Hyd. volume = 10,030 cuft  
 Runoff coeff. = 0.4\*  
 Tc by TR55 = 28.00 min  
 Asc/Rec limb fact = 1/1

\* Composite (Area/C) = [(0.300 x 0.75) + (0.060 x 0.90) + (1.000 x 0.24) + (3.760 x 0.40)] / 5.120



# TR55 Tc Worksheet

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

## Hyd. No. 5

Subwatershed to proposed culvert

<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>
<b>Sheet Flow</b>				
Manning's n-value	= 0.400	0.011	0.011	
Flow length (ft)	= 100.0	0.0	0.0	
Two-year 24-hr precip. (in)	= 3.20	0.00	0.00	
Land slope (%)	= 3.00	0.00	0.00	
<b>Travel Time (min)</b>	<b>= 18.26</b>	<b>+</b> <b>0.00</b>	<b>+</b> <b>0.00</b>	<b>= 18.26</b>
<b>Shallow Concentrated Flow</b>				
Flow length (ft)	= 460.00	360.00	0.00	
Watercourse slope (%)	= 1.70	0.40	0.00	
Surface description	= Unpaved	Unpaved	Paved	
Average velocity (ft/s)	= 2.10	1.02	0.00	
<b>Travel Time (min)</b>	<b>= 3.64</b>	<b>+</b> <b>5.88</b>	<b>+</b> <b>0.00</b>	<b>= 9.52</b>
<b>Channel Flow</b>				
X sectional flow area (sqft)	= 0.00	0.00	0.00	
Wetted perimeter (ft)	= 0.00	0.00	0.00	
Channel slope (%)	= 0.00	0.00	0.00	
Manning's n-value	= 0.015	0.015	0.015	
Velocity (ft/s)	= 0.00	0.00	0.00	
Flow length (ft)	= 0.0	0.0	0.0	
<b>Travel Time (min)</b>	<b>= 0.00</b>	<b>+</b> <b>0.00</b>	<b>+</b> <b>0.00</b>	<b>= 0.00</b>
<b>Total Travel Time, Tc .....</b>				<b>28.00 min</b>



# Culvert Report

## Cir Culvert

Invert Elev Dn (ft) = 500.50  
Pipe Length (ft) = 30.00  
Slope (%) = 0.33  
Invert Elev Up (ft) = 500.60  
Rise (in) = 12.0  
Shape = Cir  
Span (in) = 12.0  
No. Barrels = 2  
n-Value = 0.013  
Inlet Edge = Projecting  
Coeff. K,M,c,Y,k = 0.0045, 2, 0.0317, 0.69, 0.5

### Embankment

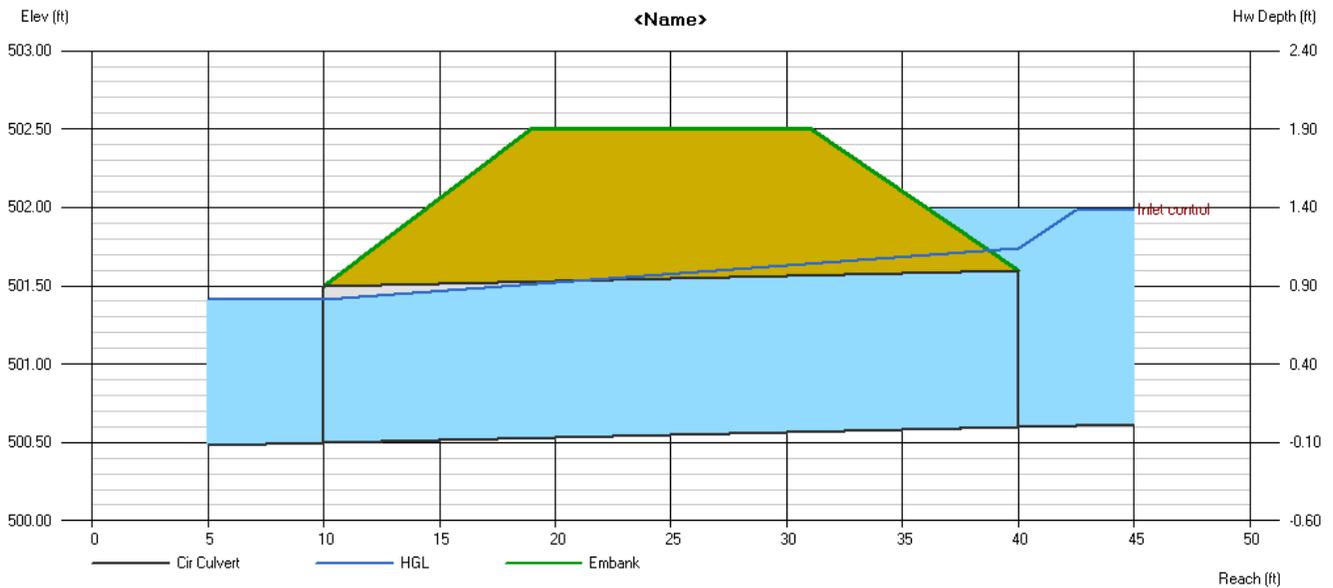
Top Elevation (ft) = 502.50  
Top Width (ft) = 12.00  
Crest Width (ft) = 110.00

### Calculations

Qmin (cfs) = 7.36  
Qmax (cfs) = 7.36  
Tailwater Elev (ft) = (dc+D)/2

### Highlighted

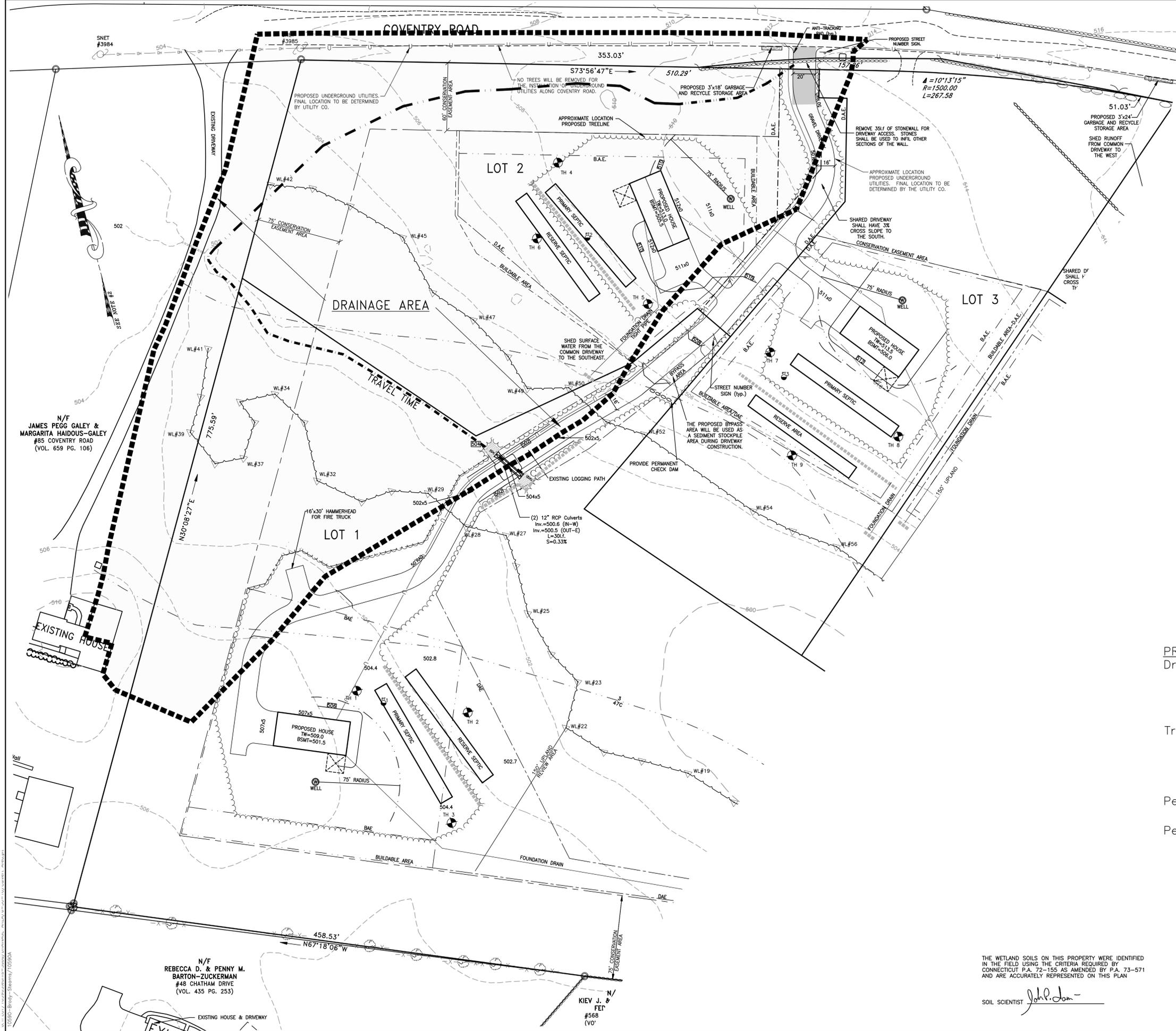
Qtotal (cfs) = 7.36  
Qpipe (cfs) = 7.36  
Qovertop (cfs) = 0.00  
Veloc Dn (ft/s) = 4.90  
Veloc Up (ft/s) = 4.69  
HGL Dn (ft) = 501.41  
HGL Up (ft) = 501.74  
Hw Elev (ft) = 501.98  
Hw/D (ft) = 1.38  
Flow Regime = Inlet Control





**SOIL TYPE LEGEND**

NUMBER	SOIL TYPE
3	Ridgebury, Leicester and Whitman soils
46B	Woodbridge fine sandy loam
47C	Woodbridge fine sandy loam
73C	Charlton-Chatfield



N/F  
 JAMES PEGG GALEY &  
 MARGARITA HAIDOUS-GALEY  
 #85 COVENTRY ROAD  
 (VOL. 659 PG. 106)

N/F  
 REBECCA D. & PENNY M.  
 BARTON-ZUCKERMAN  
 #48 CHATHAM DRIVE  
 (VOL. 435 PG. 253)

N/  
 KIEV J. &  
 FET  
 #568  
 (VO)

**PROPOSED CULVERT CROSSING - LOT 1**

Drainage Area:	5.12 acres
gravel	0.30 acres
impervious	0.06 acres
woods	3.76 acres
grass	1.00 acres
Travel Time:	
overland	100' @ 3%
shallow concentrated	460' @ 1.7%
shallow concentrated	360' @ 0.4%

Per Hydraflow Hydragrap Extension -  $Q_{10} = 5.97\text{cfs}$   
 (see output)  
 Per Hydraflow Express Extension: Provide (2) 12" culverts  
 (see output)

THE WETLAND SOILS ON THIS PROPERTY WERE IDENTIFIED IN THE FIELD USING THE CRITERIA REQUIRED BY CONNECTICUT P.A. 72-155 AS AMENDED BY P.A. 73-571 AND ARE ACCURATELY REPRESENTED ON THIS PLAN

SOIL SCIENTIST *John Dan*

**CULVERT DRAINAGE AREA MAP**

PREPARED FOR <b>MOUNTAIN VIEW ESTATES</b> #522 BROWNS ROAD & COVENTRY ROAD MANSFIELD, CONNECTICUT <b>GARDNER &amp; PETERSON ASSOCIATES, LLC</b> 178 HARTFORD TURNPIKE TOLLAND, CONNECTICUT PROFESSIONAL ENGINEERS      LAND SURVEYORS				
REVISIONS				
BY	SCALE	DATE	SHEET NO.	MAP NO.
M.A.P.	1"=40'	6-30-2016	1 OF 1	10590D



# TOWN OF MANSFIELD

DEPARTMENT OF PLANNING AND DEVELOPMENT

Date: August 31, 2016  
To: Mansfield Inland Wetlands Agency  
From: Jennifer Kaufman, Inland Wetlands Agent  
Subject: 494 Wormwood Hill Road (File W1576)  
C. and J. Russer-Milne  
Description of Work: Addition  
Map Date: 8/30/2016

## PROJECT OVERVIEW

- The project includes work in wetlands.
- The project includes work in the 150 foot upland review area.
- The project is located in a Public Water Supply watershed.

The applicants propose to construct a 24 by 24 foot garage/workshop addition approximately 43 feet from the edge of a stream located on the north side of the property. The existing driveway will be widened and graded to access the garage. Approximately 900 square feet will be disturbed in the upland review area and no more than 200 cubic yards of material will be excavated for the garage foundation.

---

## APPLICATION FEES AND NOTIFICATIONS

- The applicant has paid the required application fee.
- The applicant has submitted copies of the notice mailed to neighbors and a list of abutters to be notified. Certified mail receipts must be submitted prior to action on the application.
- The applicant has submitted copies of notices provided to the Connecticut DPH and Windham Water Works. Certified mail receipts must be submitted prior to action on the application.

## RECEIPT MOTION

\_\_\_\_\_ MOVE to receive the application submitted by C and J Russer-Milne (IWA File 1576) under the Inland Wetlands and Watercourses Regulations of the Town of Mansfield for construction of a garage/work shop and associated site work on property located at 494 Wormwood Hill Rd.as shown on

a map dated 8/30/2016 and as described in application submissions, and to refer said application to staff and the Conservation Commission for review and comments.

APPLICATION FOR PERMIT  
MANSFIELD INLAND WETLANDS AGENCY  
4 SOUTH EAGLEVILLE ROAD, STORRS, CT 06268  
860-429-3015x6204 (DIRECT) TEL: 860-429-3330 OR  
FAX: 860-429-6863

FOR OFFICE USE ONLY  
File # W1576  
W  
Fee Paid \$185-  
Official Date of Receipt 8-30-16

Applicants are referred to the Mansfield Inland Wetlands and Watercourses Regulations for complete requirements, and are obligated to follow them. For assistance, please contact the Inland Wetlands Agent at the telephone numbers above.

Please print or type or use similar format for computer; attach additional pages as necessary.

**Part A - Applicant**

Name CRISTY & JESSICA ROSSER-MILNE  
Mailing Address 494 Wormwood Hill Rd.  
MANSFIELD Zip 06250  
Phone 802 552 8112 Email CRISSERMILNE@GMAIL.COM

**Title and Brief Description of Project**

Attached 24'x24' Addition - Two FLOORS plus WALKOUT BSMT LEVEL. GARAGE  
1st FLOOR, WORK AREA SECOND FLOOR, TRACTOR STORAGE & SUPPLIES IN BSMT.

Location of Project 494 WORMWOOD HILL RD. MANSFIELD CT.  
Intended Start Date OCTOBER 2016

**Part B - Property Owner (if applicant is the owner, just write "same")**

Name SAME  
Mailing Address \_\_\_\_\_  
Zip \_\_\_\_\_  
Phone \_\_\_\_\_ Email \_\_\_\_\_

Owner's written consent to the filing of this application, if owner is not the applicant:  
Signature \_\_\_\_\_ date \_\_\_\_\_

Applicant's interest in the land: (if other than owner) \_\_\_\_\_

**Part C - Project Description (attach extra pages, if necessary)**

1) Describe in detail the proposed activity here or on an attached page. (See guidelines at end of application)

Please include a description of all activity or construction or disturbance:

a) in the wetland/watercourse NONE

b) in the area **adjacent** to (within 150 feet from the edge of) the wetland/watercourse, even if wetland/watercourse is **off** your property

b) EXCAVATION OF AREA ADJACENT TO NORTH END OF EXIST. HOUSE FOR 24'x24' ADDITION W/ EITHER OR NEAR FULL BSMT (DEPENDS ON WHAT IS FOUND DURING EXCAVATION). EXISTING DRIVEWAY WILL BE WIDENED. IT WILL REMAIN UNPAVED. AREA AROUND FOUNDATION AND DRIVEWAY TO BE REGRADED AS NEEDED. TWO LARGE HARDWOODS NEAR ROAD WILL BE TAKEN DOWN. ONLY HEAVY EQUIPMENT WILL BE MACHINERY USED TO EXCAVATE FOUNDATION HOLE.

DRAINAGE WILL BE TO EAST AWAY FROM STREAM.

2) Describe the amount or area of disturbance (in square feet or cubic yards or acres):

a) in the wetland/watercourse NONE

b) in the area **adjacent** to (within 150 feet from the edge of) the wetland/watercourse, even if wetland/watercourse is **off** your property

b) NO MORE THAN 200 yds<sup>3</sup>

3) Describe the type of materials you are using for the project: CONCRETE, ENGINEERED LUMBER, FIBERGLASS ROOFING SHINGLES, LIQUID MEMBRANE FOUND. WATERPROOFING

a) include **type** of material used as fill or to be excavated SAND AROUND FOUND. W CRUSH STONE

b) include **volume** of material to be filled or excavated NO MORE THAN 200 yds<sup>3</sup> ON TOP.

4) Describe measures to be taken to minimize or avoid any adverse impacts on the wetlands and regulated areas (silt fence, staked hay bales or other Erosion and Sedimentation control measures).

SEDIMENTATION FENCE BETWEEN PROJECT AND STREAM FROM ROAD TO DOWNGRADE (DOWNSLOPE) OF PROJECT

**Part D - Site Description**

Describe the general character of the land. (Hilly? Flat? Wooded? Well drained? etc.)

PITCHES FROM ROAD TO POND 170' EAST OF ROAD. AREA ADJACENT TO HOUSE LESS THAN 10° SLOPE, FOLLOWING BY QUICK DROP IN ELEVATION, FOLLOWED BY FLAT AREA AROUND POND.

### Part E - Alternatives

Have you considered any alternatives to your proposal that would meet your needs and might have less impact on the wetland/watercourse? Please list these alternatives.

YES. Addition on south side of house - REJECTED - too close to well  
& destroys PRIME GARDENING AREA.  
UN ATTACHED bldg 25' from house - MORE IMPACT.

### Part F - Map/Site Plan (all applications)

1) Attach to the application a map or site plan showing **existing conditions** and the **proposed project** in relation to wetland/ watercourses. Scale of map or site plan should be 1" = 40'; if this is not possible, please indicate the scale that you are using. A sketch map may be sufficient for small, minor projects. **(See guidelines at end of application)**

2) Applicant's map date and date of last revision Aug 30 2016

3) Zone Classification RAR 90

4) Is your property in a flood zone?  Yes  No  Don't Know

### Part G - Major Applications Requiring Full Review and a Public Hearing

See Section 6 of the Mansfield Regulations for additional requirements.

### Part H - Notice to Abutting Property Owners

1) Attach list of abutters, name, and address

2) **Proof of Written Notice to Abutters.** You must notify abutting (neighboring) property owners (any property immediately contiguous with the subject property, including those across the street) by certified mail, return receipt requested, stating that a wetland application is in progress, and that abutters may contact the Mansfield Inland Wetlands Agent for more information. Include a brief description of your project. **Postal receipts of your notice to abutters must accompany your application.** To generate an abutters list go to <http://www.mainstreetmaps.com/CT/Mansfield/>

### Part I - Additional Notices, if necessary

Notice to Windham Water Works and CT Department of Public Health is attached. If this application is in the public watershed for the Windham Water Works (WWW), you must notify the WWW and the Department of Public Health of your project within 7 days of sending the application to Mansfield--sending it by certified mail, return receipt requested. Contact the Mansfield Inland Wetlands Agent to find out if you are in this watershed.

Notice to Adjoining Town. If your property is within 500 feet of an adjoining town, you must also send a copy of the application, on the same day you sent one to Mansfield, to the Inland Wetlands Agency of the adjoining town, by certified mail, return receipt requested.

The Statewide Reporting Form shall be part of the application and specified parts must be completed and returned with this application.

**Part J - Other Impacts To Adjoining Towns, if applicable**

- 1) Will a significant portion of the traffic to the completed project on the site use streets within the adjoining municipality to enter or exit the site? \_\_\_ Yes  No \_\_\_ Don't Know
  
- 2) Will sewer or water drainage from the project site flow through and impact the sewage or drainage system within the adjoining municipality? \_\_\_ Yes  No \_\_\_ Don't Know
  
- 3) Will water run-off from the improved site impact streets or other municipal or private property within the adjoining municipality? \_\_\_ Yes  No \_\_\_ Don't Know

**Part K - Additional Information from the Applicant**

Set forth (or attach) any other information which would assist the Agency in evaluating your application. *(Please provide extra copies of any lengthy documents or reports, and extra copies of maps larger than 8.5" x 11", which are not easily copied.)*

**Part L - Filing Fee**

Application fees shall be in accordance with the current Mansfield Code of Ordinance fee Schedule, pursuant to Section 8-1c of the Connecticut General Statutes. The fee schedule includes provisions for applicant-funded consultant studies and reports. The current fee schedule is available in the Planning and Zoning office.

*Note: The Agency may require additional information about the upland review area or about wetlands or watercourses affected by the regulated activity. If the Agency, upon review of your application, finds the activity proposed may involve a "significant activity" as defined in the Regulations, additional information and/or a public hearing may be required.*

**Certification**

I hereby certify that:

- I am familiar with the information contained in this form and that such information is true and correct to the best of my knowledge.
- I understand the penalties for obtaining a permit through deception or through inaccurate or misleading information.

  
\_\_\_\_\_  
Signature

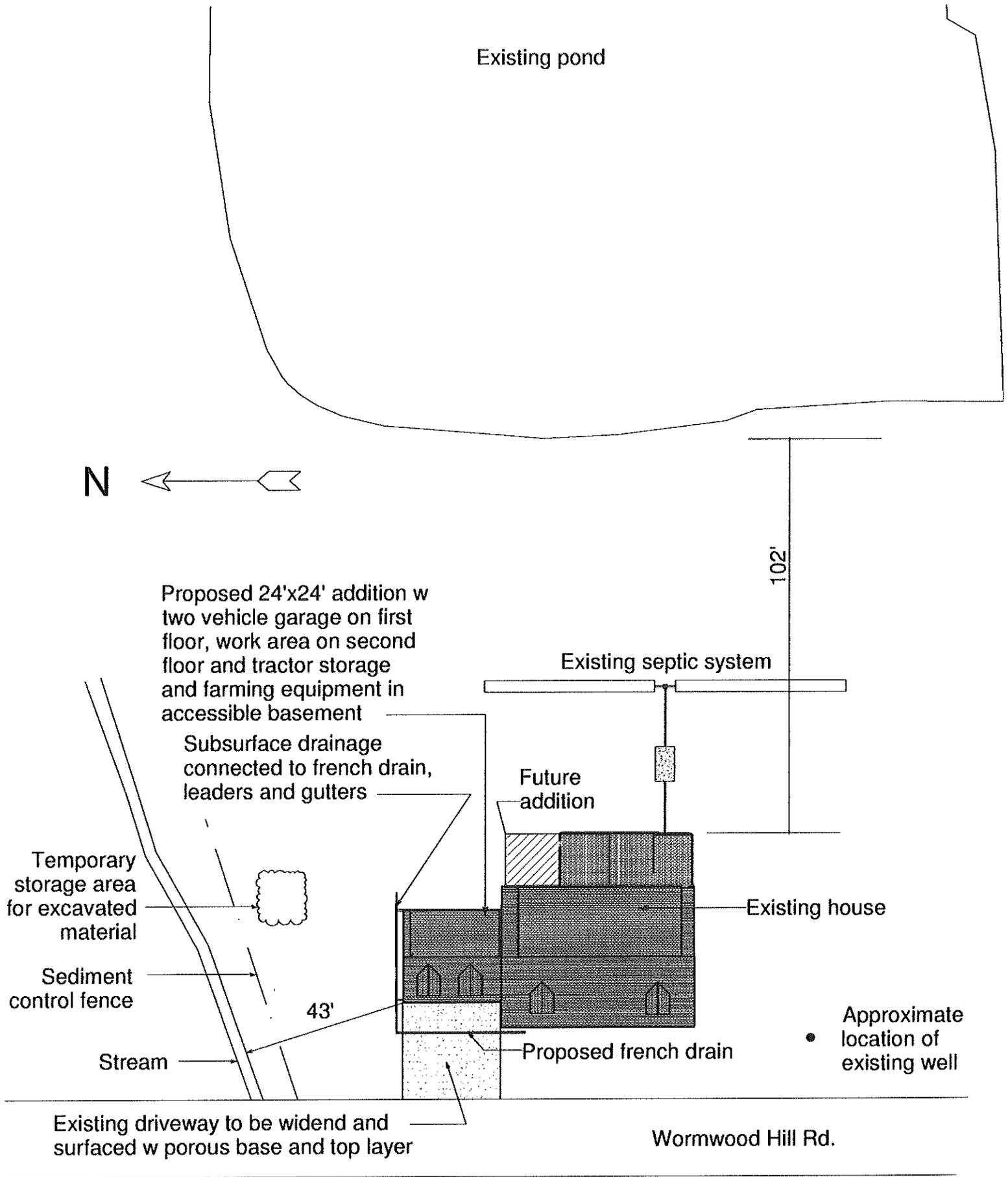
30 Aug 16  
\_\_\_\_\_  
Date

**Authorization to Enter Property**

The undersigned hereby consent to necessary and proper inspections of the above-mentioned property by members and agents of the Inland Wetlands Agency at reasonable times, both before and after the permit in question has been issued by the Agency.

  
\_\_\_\_\_  
Signature

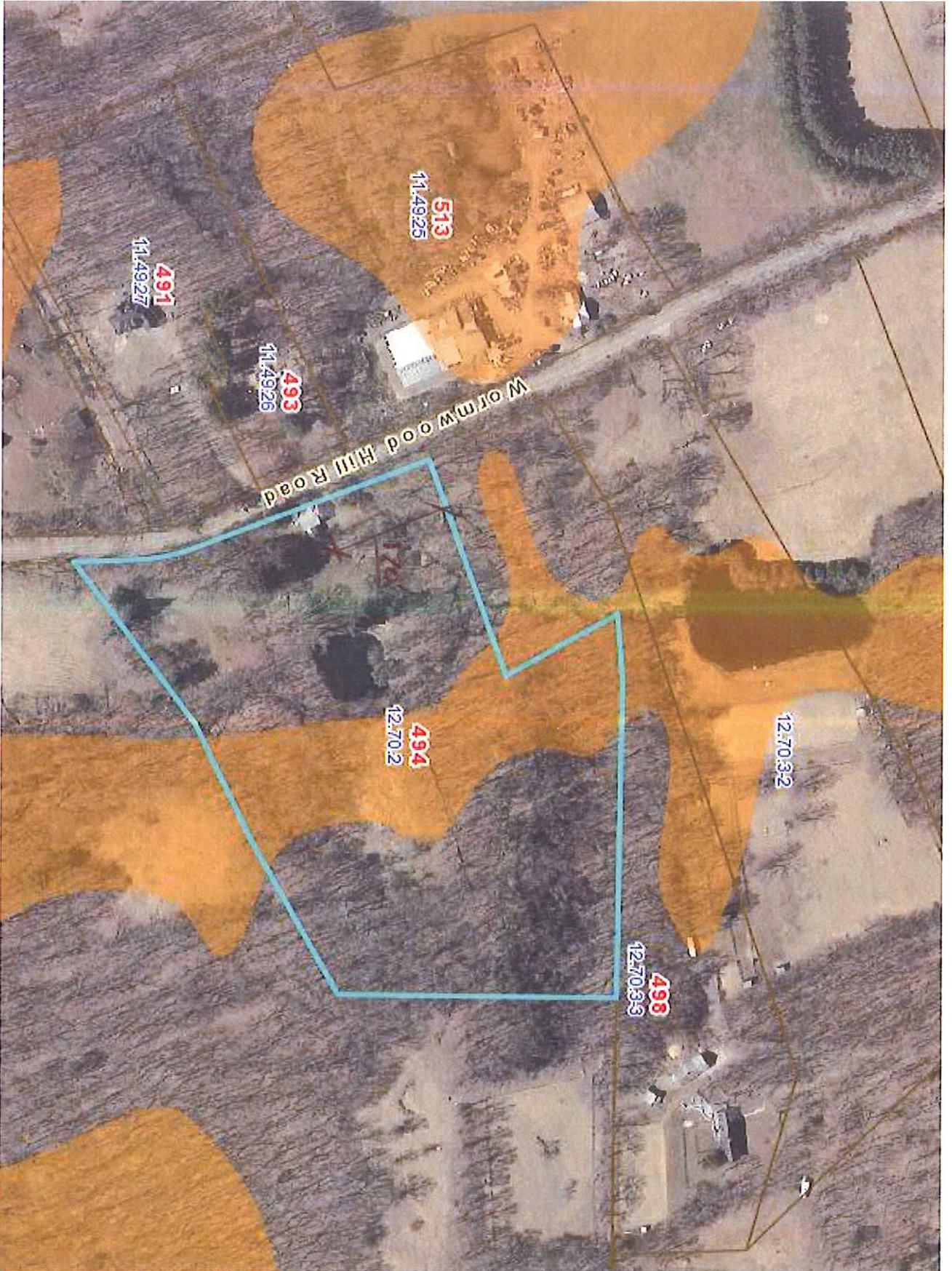
30 Aug 16  
\_\_\_\_\_  
Date



SITE PLAN  
 PROPOSED ADDITION TO RUSSEY-MILNE RESIDENCE  
 494 WORMWOOD HILL RD.

Scale: 1"=32"

Aug. 30.2016



513  
114925

491  
114927

493  
114926

W of M Wood Hill Road

494  
12702

127032

498  
127033



# TOWN OF MANSFIELD

DEPARTMENT OF PLANNING AND DEVELOPMENT

Date: August 31, 2016

To: Mansfield Inland Wetlands Agency

From: Jennifer Kaufman, Inland Wetlands Agent

Subject: 1029 Storrs Rd (File W1577)  
M. Benzie  
Description of Work: Installation of a Septic System  
Map Date: 7/19/2016, revised through 8/31/2016

## PROJECT OVERVIEW

- The project includes work in wetlands.
- The project includes work in the 150 foot upland review area.
- The project is located in a Public Water Supply watershed.

The applicants propose to install a new onsite sewage treatment system to accommodate the addition of a restaurant at 1029 Storrs Rd. The applicants have completed test pits and the only suitable location for the new system is on the western edge of the property, approximately 30 feet from the edge wetlands. Approximately 2800 square feet in the upland review area will be disturbed for the installation of the system and approximately 50 cubic yard of material will be removed and replaced with septic sand and clean fill. The site will be stabilized upon installation of the system. Silt fence will be installed down gradient of the activity.

---

## APPLICATION FEES AND NOTIFICATIONS

- The applicant has paid the required application fee.
- The applicant has submitted copies of the notice mailed to neighbors and a list of abutters to be notified. Certified mail receipts must be submitted prior to action on the application.
- The applicant has submitted copies of notices provided to the Connecticut DPH and Windham Water Works. Certified mail receipts must be submitted prior to action on the application.

## RECEIPT MOTION

\_\_\_\_\_ MOVE to receive the application submitted by M. Benzie (IWA File W1577) under the Wetlands and Watercourses Regulations of the Town of Mansfield for the installation of new onsite sewage treatment system on property located at 1029 Storrs Road as shown on a map dated 7/19/2016, revised through 8/31/2016, and as described in application submissions, and to refer said application to staff and the Conservation Commission for review and comments.

**APPLICATION FOR PERMIT  
MANSFIELD INLAND WETLANDS AGENCY  
4 SOUTH EAGLEVILLE ROAD, STORRS, CT 06268  
860-429-3015x6204 (DIRECT) TEL: 860-429-3330 OR  
FAX: 860-429-6863**

FOR OFFICE USE ONLY

File # \_\_\_\_\_  
W \_\_\_\_\_  
Fee Paid \_\_\_\_\_  
Official Date of Receipt \_\_\_\_\_

*Applicants are referred to the Mansfield Inland Wetlands and Watercourses Regulations for complete requirements, and are obligated to follow them. For assistance, please contact the Inland Wetlands Agent at the telephone numbers above.*

Please print or type or use similar format for computer; attach additional pages as necessary.

**Part A - Applicant**

Name Matthew Benzie

Mailing Address 147 Bassetts Bridge Road  
Mansfield Center, CT Zip 06250

Phone 860-377-0194 Email benziem@rocketmail.com

**Title and Brief Description of Project**

SPRING HILL CAFE: CHANGE OF USE, IN AN EXISTING  
BUILDING, FOR THE CONSTRUCTION OF A RESTAURANT WITH A NEW  
SEPTIC LEECHING FIELD.

Location of Project 1029 STORRS ROAD

Intended Start Date October, 2016

**Part B - Property Owner** (if applicant is the owner, just write "same")

Name Michael McDonald

Mailing Address P.O. Box 371  
Mansfield Center, CT Zip 06250

Phone 860-559-1227 Email stixnstonesct@yahoo.com

Owner's written consent to the filing of this application, if owner is not the applicant:

Signature \_\_\_\_\_ date \_\_\_\_\_

Applicant's interest in the land: (if other than owner) Rental for cafe

**Part C - Project Description (attach extra pages, if necessary)**

1) Describe in detail the proposed activity here or on an attached page. (See guidelines at end of application)

Please include a description of all activity or construction or disturbance:

- a) **in** the wetland/watercourse
- b) **in** the area **adjacent** to (within 150 feet from the edge of) the wetland/watercourse, even if wetland/watercourse is **off** your property

The project will include the installation of a new leeching system located a minimum of 30 feet from the wetlands in the upland area.

2) Describe the amount or area of disturbance (in square feet or cubic yards or acres):

- a) **in** the wetland/watercourse
- b) **in** the area **adjacent** to (within 150 feet from the edge of) the wetland/watercourse, even if wetland/watercourse is **off** your property

There will be no disturbance in the wetlands.  
The upland disturbance will be approximately 2800 SF with 50 CY of material removed.

3) Describe the type of materials you are using for the project:

The Mantis leeching system including septic sand, clean fill and topsoil will be installed.

- a) include **type** of material used as fill or to be excavated sand & topsoil
- b) include **volume** of material to be filled or excavated Approximately 50 CY of existing material will be removed.

4) Describe measures to be taken to minimize or avoid any adverse impacts on the wetlands and regulated areas (silt fence, staked hay bales or other Erosion and Sedimentation control measures).

SILT FENCE WILL BE INSTALLED, AS SHOWN ON THE PLAN PRIOR TO DISTURBANCE.

**Part D - Site Description**

Describe the general character of the land. (Hilly? Flat? Wooded? Well drained? etc.)

The existing building and parking area area fairly flat  
draining to the west, away from the road to a steeper hill  
and then to a flatter wetland area below.

### Part E - Alternatives

Have you considered any alternatives to your proposal that would meet your needs and might have less impact on the wetland/watercourse? Please list these alternatives.

Test pits closer to the building were not suitable for  
a leeching system.

---

---

### Part F - Map/Site Plan (all applications)

1) Attach to the application a map or site plan showing **existing conditions** and the **proposed project** in relation to wetland/ watercourses. Scale of map or site plan should be 1" = 40'; if this is not possible, please indicate the scale that you are using. A sketch map may be sufficient for small, minor projects. **(See guidelines at end of application)**

2) Applicant's map date and date of last revision 7/19/2016 Rev 8/31/2016

3) Zone Classification RAR-90

4) Is your property in a flood zone?  Yes  No  Don't Know

### Part G - Major Applications Requiring Full Review and a Public Hearing

See Section 6 of the Mansfield Regulations for additional requirements.

### Part H - Notice to Abutting Property Owners

1) Attach list of abutters, name, and address

2) **Proof of Written Notice to Abutters.** You must notify abutting (neighboring) property owners (any property immediately contiguous with the subject property, including those across the street) by certified mail, return receipt requested, stating that a wetland application is in progress, and that abutters may contact the Mansfield Inland Wetlands Agent for more information. Include a brief description of your project. **Postal receipts of your notice to abutters must accompany your application.** To generate an abutters list go to <http://www.mainstreetmaps.com/CT/Mansfield/>

### Part I - Additional Notices, if necessary

Notice to Windham Water Works and CT Department of Public Health is attached. If this application is in the public watershed for the Windham Water Works (WWW), you must notify the WWW and the Department of Public Health of your project within 7 days of sending the application to Mansfield--sending it by certified mail, return receipt requested. Contact the Mansfield Inland Wetlands Agent to find out if you are in this watershed.

Notice to Adjoining Town. If your property is within 500 feet of an adjoining town, you must also send a copy of the application, on the same day you sent one to Mansfield, to the Inland Wetlands Agency of the adjoining town, by certified mail, return receipt requested.

The Statewide Reporting Form shall be part of the application and specified parts must be completed and returned with this application.

**Part J - Other Impacts To Adjoining Towns, if applicable**

- 1) Will a significant portion of the traffic to the completed project on the site use streets within the adjoining municipality to enter or exit the site? \_\_\_ Yes  No \_\_\_ Don't Know
- 2) Will sewer or water drainage from the project site flow through and impact the sewage or drainage system within the adjoining municipality? \_\_\_ Yes  No \_\_\_ Don't Know
- 3) Will water run-off from the improved site impact streets or other municipal or private property within the adjoining municipality? \_\_\_ Yes  No \_\_\_ Don't Know

**Part K - Additional Information from the Applicant**

Set forth (or attach) any other information which would assist the Agency in evaluating your application. *(Please provide extra copies of any lengthy documents or reports, and extra copies of maps larger than 8.5" x 11", which are not easily copied.)*

**Part L - Filing Fee**

Application fees shall be in accordance with the current Mansfield Code of Ordinance fee Schedule, pursuant to Section 8-1c of the Connecticut General Statutes. The fee schedule includes provisions for applicant-funded consultant studies and reports. The current fee schedule is available in the Planning and Zoning office.

*Note: The Agency may require additional information about the upland review area or about wetlands or watercourses affected by the regulated activity. If the Agency, upon review of your application, finds the activity proposed may involve a "significant activity" as defined in the Regulations, additional information and/or a public hearing may be required.*

**Certification**

I hereby certify that:

- I am familiar with the information contained in this form and that such information is true and correct to the best of my knowledge.
- I understand the penalties for obtaining a permit through deception or through inaccurate or misleading information.

\_\_\_\_\_  
Signature

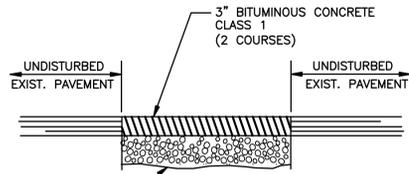
\_\_\_\_\_  
Date

**Authorization to Enter Property**

The undersigned hereby consent to necessary and proper inspections of the above-mentioned property by members and agents of the Inland Wetlands Agency at reasonable times, both before and after the permit in question has been issued by the Agency.

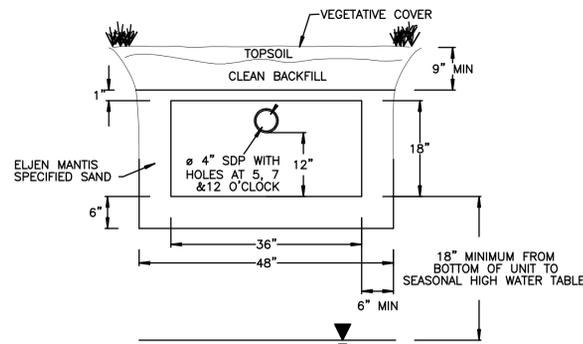
\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date



**PERMANENT PAVEMENT**

NOT TO SCALE



NOTE: VENTING REQUIRED WHEN MORE THAN 18" OF COVER AS MEASURED FROM THE TOP OF THE UNIT TO FINISHED GRADE

**TYPICAL ELJEN MANTIS 536-8 SECTION**

NOT TO SCALE

**LEGEND:**

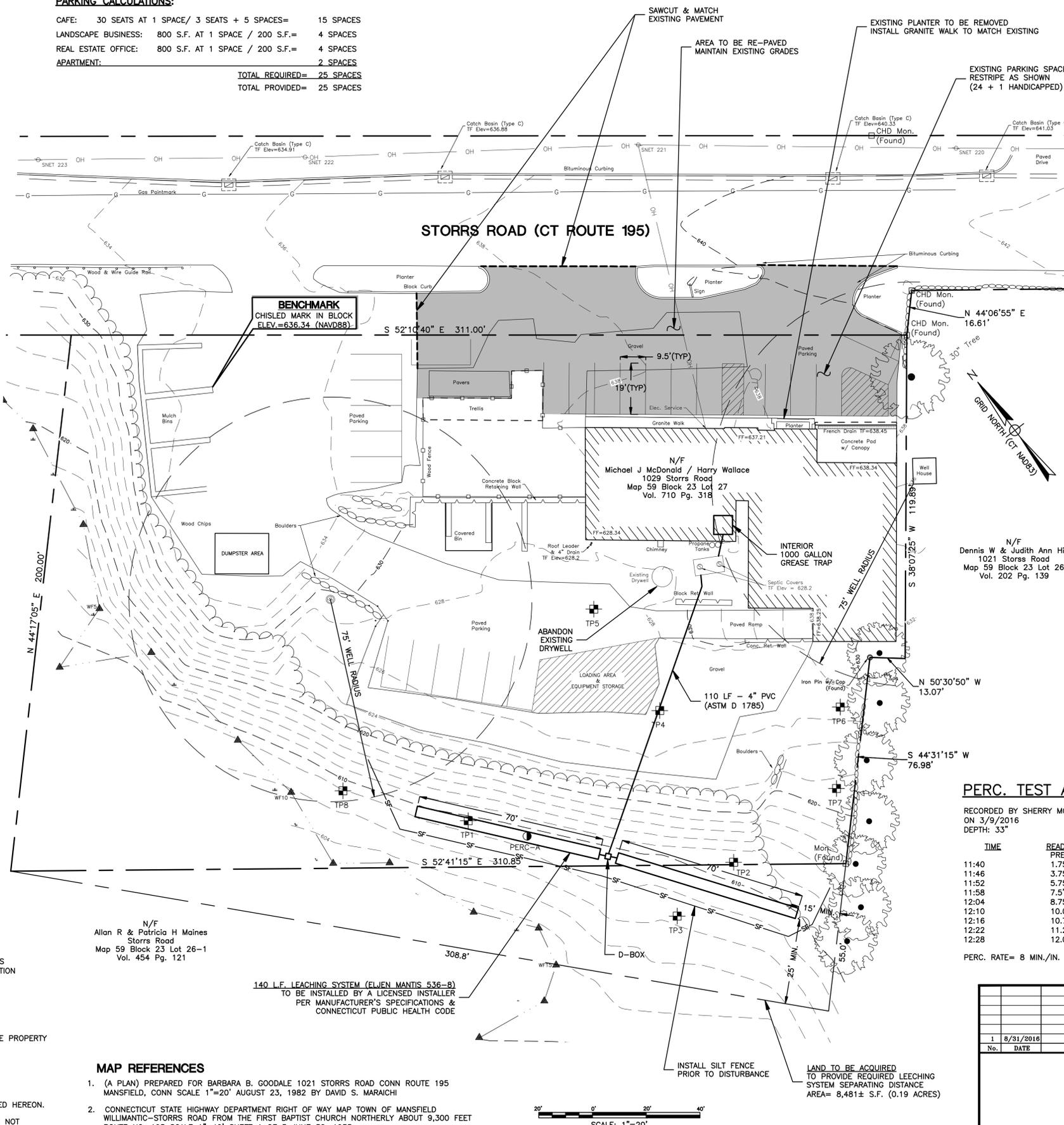
- PROPERTY LINE
- DRAINAGE
- G GAS
- OH OVERHEAD WIRE
- 21- CONTOUR
- GUIDERAIL
- RETAINING WALL
- WOODED AREA
- STONE WALL
- ☐ CATCH BASIN
- IRON PIN, IRON PIPE
- MS, CHD, MON MERESTONE, CONNECTICUT HIGHWAY DEPARTMENT MONUMENT, MONUMENT
- ☐ TREE
- SWAMP OR WET AREA
- SEPTIC COVER
- N/F NOW OR FORMALLY
- Vol. Pg. DEED VOLUME & PAGE
- WETLAND FLAG
- UTILITY POLE

**SURVEY NOTES**

- THIS SURVEY AND MAP HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 20-300b-1 THRU 20-300b-20 OF THE REGULATIONS FOR STATE AGENCIES "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ENDORSED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC.
  - A. TYPE OF SURVEY: PROPERTY AND TOPOGRAPHIC SURVEY
  - B. BOUNDARY DETERMINATION CATEGORY: DEPENDENT RESURVEY
  - C. HORIZONTAL ACCURACY: CLASS A-2
  - VERTICAL ACCURACY: V-2
  - TOPOGRAPHIC ACCURACY: T-2
  - D. INTENT: TO DEPICT THE BOUNDARY, EXISTING CONDITIONS AND TOPOGRAPHY OF THE PROPERTY
- LATEST DATE OF FIELD WORK: 07-05-16
- SUBJECT PROPERTY IS DEPICTED AS LOT 27 OF ASSESSOR'S MAP 59, BLOCK 23.
- VERTICAL DATUM IS NAVD88 BASED ON GPS OBSERVATIONS.
- NO UNDERGROUND UTILITIES, OTHER THAN DRAINAGE PIPES AND STRUCTURES, ARE DEPICTED HEREON.
- SUBSURFACE AND ENVIRONMENTAL CONDITIONS, OTHER THAN WETLANDS DELINEATION, WERE NOT EXAMINED OR CONSIDERED AS A PART OF THIS SURVEY.

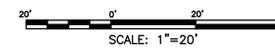
**PARKING CALCULATIONS:**

CAFE: 30 SEATS AT 1 SPACE / 3 SEATS + 5 SPACES = 15 SPACES  
 LANDSCAPE BUSINESS: 800 S.F. AT 1 SPACE / 200 S.F. = 4 SPACES  
 REAL ESTATE OFFICE: 800 S.F. AT 1 SPACE / 200 S.F. = 4 SPACES  
 APARTMENT: 2 SPACES  
**TOTAL REQUIRED = 25 SPACES**  
**TOTAL PROVIDED = 25 SPACES**



**MAP REFERENCES**

- (A PLAN) PREPARED FOR BARBARA B. GOODALE 1021 STORRS ROAD CONN ROUTE 195 MANSFIELD, CONN SCALE 1"=20' AUGUST 23, 1982 BY DAVID S. MARAICHI
- CONNECTICUT STATE HIGHWAY DEPARTMENT RIGHT OF WAY MAP TOWN OF MANSFIELD WILLMANTIC-STORRS ROAD FROM THE FIRST BAPTIST CHURCH NORTHERLY ABOUT 9,300 FEET ROUTE NO. 195 SCALE 1"=40' SHEET 1 OF 3 JUNE 30, 1933



**TEST PIT LOGS**

OBSERVED BY: SHERRY MCGANN, SANITARIAN  
3/8/2016

TP-1  
TOTAL DEPTH - 86"  
LEDGE - NONE  
MOTTLES - 31"  
WATER - NONE  
0-18" TOPSOIL  
18-31" OB FINE SANDY LOAM W/GRAVEL  
31-83" MOTTLED GREY SANDY LOAM TILL  
83-86" GROUNDWATER

TP-2  
TOTAL DEPTH - 64"  
LEDGE - NONE  
MOTTLES - 25"  
WATER - 41"  
0-14" TOPSOIL  
14-25" OB FINE SANDY LOAM W/GRAVEL  
25-54" MOTTLED GREY SANDY LOAM TILL  
54-64" GROUNDWATER

TP-3  
TOTAL DEPTH - 72"  
LEDGE - NONE  
MOTTLES - 28"  
WATER - 47"  
0-18" TOPSOIL  
18-28" OB FINE SANDY LOAM W/GRAVEL  
28-63" MOTTLED GREY SANDY LOAM TILL  
63-72" GROUNDWATER

OBSERVED BY: SHERRY MCGANN, SANITARIAN & JEFF POLHEMUS, CHIEF SANITARIAN  
3/8/2016

TP-4  
TOTAL DEPTH - 80"  
LEDGE - NONE  
MOTTLES - NONE  
WATER - NONE  
0-57" DISTURBED MIXED GRAVEL FILL / ASPHALT  
57-80" GREY/BR. LOAMY FILL  
\*UNSUITABLE

TP-5  
TOTAL DEPTH - 74"  
LEDGE - NONE  
MOTTLES - NONE  
WATER - NONE  
0-23" DISTURBED MIXED GRAVEL FILL  
23-74" GREY/TN LOAMY FILL  
\*UNSUITABLE

TP-6  
TOTAL DEPTH - 87"  
LEDGE - NONE  
MOTTLES - 57"  
WATER - NONE  
0-44" FILL  
44-50" ORIGINAL TOPSOIL  
50-57" FINE SANDY LOAM  
57-87" MOTTLED GREY LOAMY TILL  
\*UNSUITABLE

TP-7  
TOTAL DEPTH - 75"  
LEDGE - NONE  
MOTTLES - 56"  
WATER - NONE  
0-36" FILL  
36-44" BURIED TOPSOIL  
44-56" OB SANDY LOAM  
56-75" MOTTLED GREY/BR LOAMY TILL

TP-8  
TOTAL DEPTH - 80"  
LEDGE - NONE  
MOTTLES - 61"  
WATER - NONE  
0-23" FILL  
23-38" ORIGINAL TOPSOIL  
38-61" OB FINE SANDY LOAM  
61-80" MOTTLED GREY SANDY LOAM TILL

**SEPTIC SYSTEM REPAIR**

REPAIR SYSTEM:  
COMMERCIAL MIXED USE BUILDING W FOOD SERVICE  
DESIGN FLOW 1660 GPD  
PERCOLATION RATE: 8.0 MIN./INCH  
MAX DEPTH INTO EX. GRADE: 7 INCHES  
EFFECTIVE LEACHING AREA REQUIRED= 1500 SF  
SLOPE= 4.6%  
MLSS= HFxFFxPF= 20x5.53x1.2= 133 FT  
USING: ELJEN MANTIS 536-8  
EFFECTIVE LEACHING AREA OF TRENCH= 11.0 SF/LF  
LENGTH OF TRENCH REQUIRED=(1500 SF)/(11.0 SF/LF)= 137 LF  
USE ONE ROW OF 140'  
LEACHING AREA PROVIDED= 1540 SF  
\*1,000 GALLON GREASE TRAP REQUIRED FOR CAFE

**PERC. TEST A**

RECORDED BY SHERRY MCGANN, SANITARIAN  
ON 3/9/2016  
DEPTH: 33"

TIME	READING
	PRESOAK
11:40	1.75"
11:46	3.75"
11:52	5.75"
11:58	7.5"
12:04	8.75"
12:10	10.0"
12:16	10.75"
12:22	11.25"
12:28	12.0"

PERC. RATE= 8 MIN./IN.

<b>CLA Engineers, Inc.</b> CIVIL • STRUCTURAL • SURVEYING		317 Main Street Norwich, CT 06360 (860) 886-1966 Fax (860) 886-9165
1 8/31/2016 No. DATE	MISC. REVISIONS REVISION	Project No. CLA-5708 Proj. Engineer B.R.L. Date: 7/19/2016 Sheet No. 1
MATTHEW BENZIE		<b>SPRING HILL CAFE</b> 1029 STORRS ROAD, MANSFIELD, CT
<b>SITE PLAN</b>		<b>1</b>



# TOWN OF MANSFIELD

DEPARTMENT OF PLANNING AND DEVELOPMENT

Date: August 30, 2016

To: Mansfield Inland Wetlands Agency

From: Jennifer Kaufman, Inland Wetlands Agent

Subject: 205 Pleasant Valley Road (File J-7)  
T. Wollen  
Description of Work: Construction of a barn  
Map Date: 8/24/2016

## PROJECT OVERVIEW AND ANALYSIS

The applicant is requesting a jurisdictional ruling to construct a 20 foot by 30 foot barn approximately 110 feet from a pond. The barn will be used exclusively for agriculture, specifically to house livestock. Pursuant to section 4.1 of the Regulations, the following operations and uses shall be permitted in inland wetlands and watercourses and upland review areas, as of right: "Grazing, farming, nurseries, gardening and harvesting of crops and farm ponds of three acres or less essential to the farming operation." The regulations further state, "the provisions of this subdivision shall not be construed to include road construction or the erection of buildings not directly related to the farming operation."

The Regulations state that farming shall be consistent with Section 1-1(q) of the Connecticut General Statutes, which states, "except as otherwise specifically defined, the words "agriculture" and "farming" shall include cultivation of the soil, dairying, forestry, raising or harvesting any agricultural or horticultural commodity, including the raising, shearing, feeding, caring for, training and management of livestock..."

I have discussed this issue with two other Wetland Agents in the state and in their towns the construction of a barn that is exclusively used for agriculture is permitted as of right. Because the barn will be used exclusively for farming, it is also my opinion that this is a permitted as of right activity.

## RECOMMENDATION/SUGGESTED MOTION

**If the IWA concurs with my conclusion that this is a permitted as of right activity pursuant to section 4.1 of the Regulations, the following motion for a jurisdictional ruling would be in order:**

\_\_\_\_\_ MOVES, \_\_\_\_\_ seconds to approve a Jurisdictional Ruling finding that the construction of a 20 foot by 30 foot barn used exclusively for farming (IWA File # J-7) on

property owned by the located at 205 Pleasant Valley Road as shown on a map dated 8/24/2016 and as described in the associated attachments is permitted as of right pursuant to Section 4.1 of the Mansfield Inland Wetlands and Watercourses Regulations of the Town of Mansfield.

***Receipt Motion***

**Alternatively, if the IWA believes that the proposed regulated activity, the following motion to receive an Inland Wetlands application would be in order:**

\_\_\_\_\_ MOVE to receive the application submitted by T. Wollen (IWA File 1578) under the Wetlands and Watercourses Regulations of the Town of Mansfield for construction of a 20 foot by 30 foot barn on property located at 205 Pleasant Valley Road as shown on a map dated 8/24/2016 and as described in application submissions, and to refer said application to staff and the Conservation Commission for review and comments.

**Request for Jurisdictional Ruling**  
**MANSFIELD INLAND WETLANDS AGENCY**  
4 SOUTH EAGLEVILLE ROAD, STORRS, CT 06268  
860-429-3015x6204 (DIRECT) TEL: 860-429-3330 OR  
FAX: 860-429-6863

FOR OFFICE USE ONLY

File # J \_\_\_\_\_  
Official Date of Receipt \_\_\_\_\_

Please print or type or use similar format for computer; attach additional pages as necessary.

**Part A - Applicant**

Name Terry Wollen  
Mailing Address 205 Pleasant Valley Road  
Mansfield, Connecticut Zip 06250  
Phone 202 460 7275 Email terry @ wollen.com

Title and Brief Description of Project

Wood frame barn (20' x 30') on concrete slabs.  
Loft with 4' sides. Rear 15' w/understory

Location of Project 205 Pleasant Valley Road. Adjacent to house

Intended Start Date Fall 2016

**Part B - Property Owner** (if applicant is the owner, just write "same")

Name same

Mailing Address \_\_\_\_\_

\_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_ Email \_\_\_\_\_

Owner's written consent to the filing of this application, if owner is not the applicant:

Signature \_\_\_\_\_ date \_\_\_\_\_

Applicant's interest in the land: (if other than owner) \_\_\_\_\_

### Part C - Project Description (attach extra pages, if necessary)

1) Describe in detail the proposed activity here or on an attached page. (See guidelines at end of application)

Please include a description of all activity or construction or disturbance:

- in** the wetland/watercourse
- in** the area **adjacent** to (within 150 feet from the edge of) the wetland/watercourse, even if wetland/watercourse is **off** your property

The frame barn will be constructed on a cement slab. The rear 1/2 of the construction is on a slope so that an understory (e.g. basement) will be constructed as a 1/2 basement for the structure. This will be used as additional storage or for feeding of livestock (e.g. goats) eventually.

- The barn is within ~110 feet of a pond; however there is a rise of natural ground between the pond and proposed barn. There is no drainage between the pond location and the proposed barn location.

The proposed barn footprint is 600 sqft. with some minor excavation for the 15' x 20' understory.

2) Describe the amount or area of disturbance (in square feet or cubic yards or acres):

- in** the wetland/watercourse
- in** the area **adjacent** to (within 150 feet from the edge of) the wetland/watercourse, even if wetland/watercourse is **off** your property

3) Describe the type of materials you are using for the project: Proposed barn is pine wood frame; metal roof; exterior siding; cement ~~slab~~ and cement walls for understory section.

- include **type** of material used as fill or to be excavated local dirt for fill around edges.
- include **volume** of material to be filled or excavated Several yards of local rocks and dirt to fill in around edges of finished barn.

4) Describe measures to be taken to minimize or avoid any adverse impacts on the wetlands and regulated areas (silt fence, staked hay bales or other Erosion and Sedimentation control measures).

no impact on adjacent pond.

### Part D - Site Description

Describe the general character of the land. (Hilly? Flat? Wooded? Well drained? etc.)

Wooded area with trees removed for construction. Area is on a slope so that front door is on upper grade and understory opens to lower grade.

**Part E - Alternatives**

Have you considered any alternatives to your proposal that would meet your needs and might have less impact on the wetland/watercourse? Please list these alternatives.

None

**Part F - Map/Site Plan (all applications)**

1) Attach to the application a map or site plan showing **existing conditions** and the **proposed project** in relation to wetland/ watercourses.

*Note: The Agency may require additional information about the upland review area or about wetlands or watercourses affected by the regulated activity. If the Agency, upon review of your application, finds the activity proposed may involve a "significant activity" as defined in the Regulations, additional information and/or a public hearing may be required.*

**Certification**

I hereby certify that:

- I am familiar with the information contained in this form and that such information is true and correct to the best of my knowledge.
- I understand the penalties for obtaining a permit through deception or through inaccurate or misleading information.

Jerry S. Stollen

Signature

8-24-2016

Date

**Authorization to Enter Property**

The undersigned hereby consent to necessary and proper inspections of the above-mentioned property by members and agents of the Inland Wetlands Agency at reasonable times, both before and after the permit in question has been issued by the Agency.

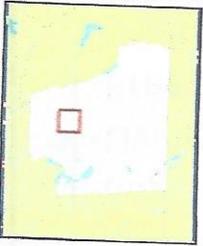
Jerry S. Stollen

Signature

8-24-2016

Date

© MainStreetGIS



1 in = 105.27 ft

Printed on 1/20/2015  
 Last update: Property Information Daily, GIS parcel lines 7/1/2014

This map is for informational purposes only. It is not for appraisal of, description of, or conveyance of land. The Town of Mansfield, Connecticut and MainStreetGIS assume no legal responsibility for the information contained herein.



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[www.mainstreetgis.com](http://www.mainstreetgis.com)