Abbreviated Notice of Resource Area Delineation

Pursuant to
Massachusetts Wetland Protection Act Regulations
(310 CMR 10.00)
&
Shutesbury General Wetlands Protection Bylaw

Jurisdictional Determination
for
Lot 151, 18.25±AC
Leverett Road,
Shutesbury, Massachusetts

Applicant: **Mark Wightman**
7 Oak Knoll Drive
South Deerfield, MA 01373

November 2020

TABLE OF CONTENTS

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Provided by MassDEP:
MassDEP File #:
eDEP Transaction #:1232226
City/Town:SHUTESBURY

WPA Form 4A
Abbreviated Notice of Resource Area Delineation

Massachusetts Wetlands Protection Act M.G.L. c 131, § 40

A. General Information

1. Project Location:

a. Street Address	LEVERETT ROAD		
b. City/Town	SHUTESBURY	c. Zip Code	01072
d. Latitude	42.45197 N (e.g. 41.01981)	e. Longitude	72.41949 W (e.g. 71.3241)
f. Map/Plat #	16	g. Parcel/Lot #	H-151

2. Applicant:

☑ Individual ☐ Organization

a. First Name	MARK	b. Last Name	WIGHTMAN
c. Organization			
d.Mailing Address	7 OAK KNOLL DRIVE		
e. City/Town	SOUTH DEERFIELD	f. State MA	g. Zip Code 01373
h. Phone Number	413-522-0217	i. Fax	j. Email maw10@comcast.net

3. Property Owner:

☐ More than one owner

a. First Name		b. Last Name	
c. Organization			
d.Mailing Address			
e. City/Town		f. State	g. Zip Code
h. Phone Number		i. Fax	j. Email

4. Representative:

a. First Name		b. Last Name	
c. Organization			
d.Mailing Address			
e. City/Town		f. State	g. Zip Code
h. Phone Number		i. Fax	j. Email

5. Total WPA Fee Paid (Automatically inserted from ANRAD Wetland Fee Transmittal Form):

a. Total Fee Paid $ 200.00 b. State Fee Paid $ 87.50 c. City/Town Fee Paid $ 112.50

B.Area(s) Delineated

1. Bordering Vegetated Wetland (BVW) 2867

Linear Feet of Boundary Delineated

2. Check all methods used to delineate the Bordering Vegetated Wetland (BVW) bound2. Check all methods used to delineate the Bordering Vegetated Wetland (BVW) boundary:

a. ☑ MassDEP BVW Field Data Form (attached)

b. ☐ Other Methods for Determining the BVW boundary (attach documentation):

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1. ☐ 50% or more wetland indicator plants
2. ☐ Saturated/inundated conditions exist
3. ☐ Groundwater indicators
4. ☐ Direct observation
5. ☐ Hydric soil indicators
6. ☐ Credible evidence of conditions prior to disturbance

3. Indicate any other resource area boundaries are delineated:

BVW	2867
a. Resource Area	b. Linear Feet Delineated
c. Resource Area	d. Linear Feet Delineated

C. Additional Information

Application must include the following plans with this Abbreviated Notice of Resource Area Delineation. See instructions for details.

1. ☑ ANRAD (Delineation Plans only)
2. ☑ USGS or other map of the area (along with a narrative description, if necessary) containing sufficient information for the Conservation Commission and the Department to locate the site. (Electronic filters may omit this item.)
3. ☐ Plans identifying the boundaries of the Bordering Vegetated Wetlands (BVW)(and/or other resource areas, if applicable).
4. ☐ List the titles and final revision dates for all plans and other materials submitted with this Abbreviated Notice of Resource Area Delineation.

a. Plan Title:	b. Plan Prepared By:	c. Plan Signed/Stamped By:	c. Revised Final Date:	e. Scale:
RESOURCE DELINEATION PLAN	SVE		Oct 29, 2020	

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
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D. Signatures and Submittal Requirements

I certify under the penalties of perjury that the foregoing Abbreviated Notice of Resource Area Delineation and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I understand that the Conservation Commission will place notification of this Notice in a local newspaper at the expense of the applicant in accordance with the wetlands regulations, 310 CMR 10.05(5)(a).

I further certify under penalties of perjury that all abutters were notified of this application, pursuant to the requirements of M.G.L. c. 131, ? 40. Notice must be made in writing by hand delivery or certified mail (return receipt requested) to all abutters within 100 feet of the property line of the project location.

I hereby grant permission, to the Agent or member of the Conservation Commission and the Department of Environmental Protection, to enter and inspect the area subject to this Notice at reasonable hours to evaluate the wetland resource boundaries subject to this Notice, and to require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.

I acknowledge that failure to comply with these certification requirements is grounds for the Conservation Commission or the Department to take enforcement action.

for Mark Wightman	11-3-2020
1. Signature of Applicant	2. Date
3. Signature of Property Owner(if different)	4. Date
	11-3-2020
5. Signature of Representative (if any)	6. Date

For Conservation Commission:

Two copies of the completed Abbreviated Notice of Resource Area Delineation (Form 4A), including supporting plans and documents; two copies of the ANRAD Wetland Fee Transmittal Form; and the city/town fee payment must be sent to the Conservation Commission by certified mail or hand delivery.

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Other:

If the applicant has checked a box in any part of Section C, refer to that section and the Instructions for additional submittal requirements.

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Dan Nutzsche for Mark Wightman	11/4/2020
1. Signature of Applicant	2. Date
3. Signature of Property Owner(if different)	4. Date
Dan Nutzsche	11/4/2020
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The fees for work proposed under each Abbreviated Notice of Resource Area Delineation must be calculated and submitted to the Conservation Commission and the Department (see instructions and Wetland Fee Transmittal Form)

☐ **1. Fee Exempt:** No filing fee shall be assessed for projects of any city, town, county, or district of the Commonwealth, federally recognized Indian tribe housing authority, municipal housing authority, or the Massachusetts Bay Transportation Authority.

Fees

The fee is calculated as follows for each resource area delineation included in the ANRAD (check applicable project type):

Bordering Vegetated Wetland:

1. ☑ Single family house project	2867	2.00	5734.00
	a. linear feet	x $2.00 =	b. Total fee to exceed $200
2. ☐ All other projects			
	a. linear feet	x $2.00 =	b. Total fee to exceed $200

Other resource area (e.g. Bank, Riverfront area, etc.):

3. ☑ Single family house project	2867	$2.00	$5734.00
	a. linear feet	x $2.00 =	b. Total fee to exceed $200
4 ☐ All other projects		$	$
	a. linear feet	x $2.00 =	b. Total fee to exceed $200

Total Project Fee (not to exceed $200 for projects on single-family house lots and not to exceed $2,000 for all other projects): $200.00

5. Total fee

State share of filing fee (*): $87.50

6. 1/2 of total fee less $12.50

City/Town share of filing fee: $112.50

7. 1/2 of total fee plus $12.50

(*) = You may not pay by credit card if the State share of the Fee is $1000 or greater, however you will be able to pay by ACH and Check.

Narrative Description

Wetland Boundary Determination
Lot 151, Leverett Road, Shutesbury, Massachusetts

Introduction

On behalf of the Applicant, Mr. Mark Wightman, this Abbreviated Resource Area Delineation Application (ANRAD) is being filed with the Shutesbury Conservation Commission for the purpose of confirming the wetland resource boundaries delineated on Lot 151 Leverett Road (Site).

A wetland delineation was completed on October 1, 2020 that is consistent with the methodology outlined in the 1995 Massachusetts Department of Environmental Protection *Handbook for Delineated Bordering Vegetated Wetlands Under the Wetlands Protection Act*. The flagged wetland boundary was survey located and an existing conditions plan, titled Resource Delineation Plan was developed from that information and included within this ANRAD application (Appendix D).

Existing Conditions

The Site is located on the north side of Leverett Road and approximately 240 feet east of Pelham Hill Road. The Site consists of a mixed hardwood forest that generally slopes downward in a northwesterly direction with some areas of concentrated flow channels with adjacent areas of Bordering Vegetated Wetland (BVW). The Site has evidence of previous logging activity in the form of obvious skidder trails, cut stumps, and areas that have uniform aged vegetation indicating regrowth from a cleared or altered area.

The upland portion of the Site is principally a mature forested area containing canopy species including red maple (*Acer rubrum*), eastern hemlock (*Tsuga canadensis*), white oak (*Quercus alba*) and white ash (*Fraxinus americanus*) species. The understory is predominately shrub and ground cover species that includes witch hazel (*Hamamelis virginiana)*, black cherry (*Prunus serotina*) , princess pine (*Lycopodium obscurum*), partridgeberry (*Michella repens*), marginal shield fern (*Dryopteris maginalis*), and wood fern (*Dryopteris spinulosa*).

The delineated wetland resource is mainly a Bordering Vegetated Wetland (BVW) that contains a Bank resource. The limits of the Bank were not specifically delineated; however, wetland flags f-4 through f-6 and f-14 through f-16 were placed at the top of Bank because there wasn't a BVW present in these specific areas.

The BVW boundary was demarcated with sequentially marked flagging labeled f-1 through f-11; f-12 through f-18; f-23 though f-25; f-34 through f-43, and f-46 through f-58.

The interests of the Wetlands Protection Act outlined at 310 CMR 10.01(2) that are presumed to be supported by the delineated wetland resource includes Flood Control, Protection of Wildlife Habitat, and potentially Groundwater Protection.

Within the wetland the predominant plants include eastern hemlock, red maple, and yellow birch (*Betula alleghaniensis*) canopy species. The dense understory includes winterberry (*Ilex verticillata*), northern arrowwood (*Viburnum recognitum*), jewelweed (*Impatiens capensis*), interrupted fern (*Osmunda claytoniana*), goldthread (*Coptis trifolia*) and sphagnum moss (*Sphagnum sp.*).

Sub-basin Watershed Assessment

To confirm the designation of the stream channel located within the Site, the required analysis was completed in accordance with 310 CMR 10.58(2)(a)(1)(a-c), which requires that the watershed area be of a specific size (min. of 0.5 square miles) to qualify as a perennial stream.

Our analysis of the sub-basin watershed that contributes to stream channel was confirmed to be 0.055 square miles in size, see Exhibit A. Because the stream is not shown on the most recent USGS mapping the watershed size was evaluated and determined to be less than 0.5 square mile. This evidence concludes that the stream is intermittent.

Proposed Work

No work is proposed under this ANRAD application.

APPENDIX A

Project Location: Lot 151, Leverett Road Shutesbury, MA

Exhibit A: Locus Map

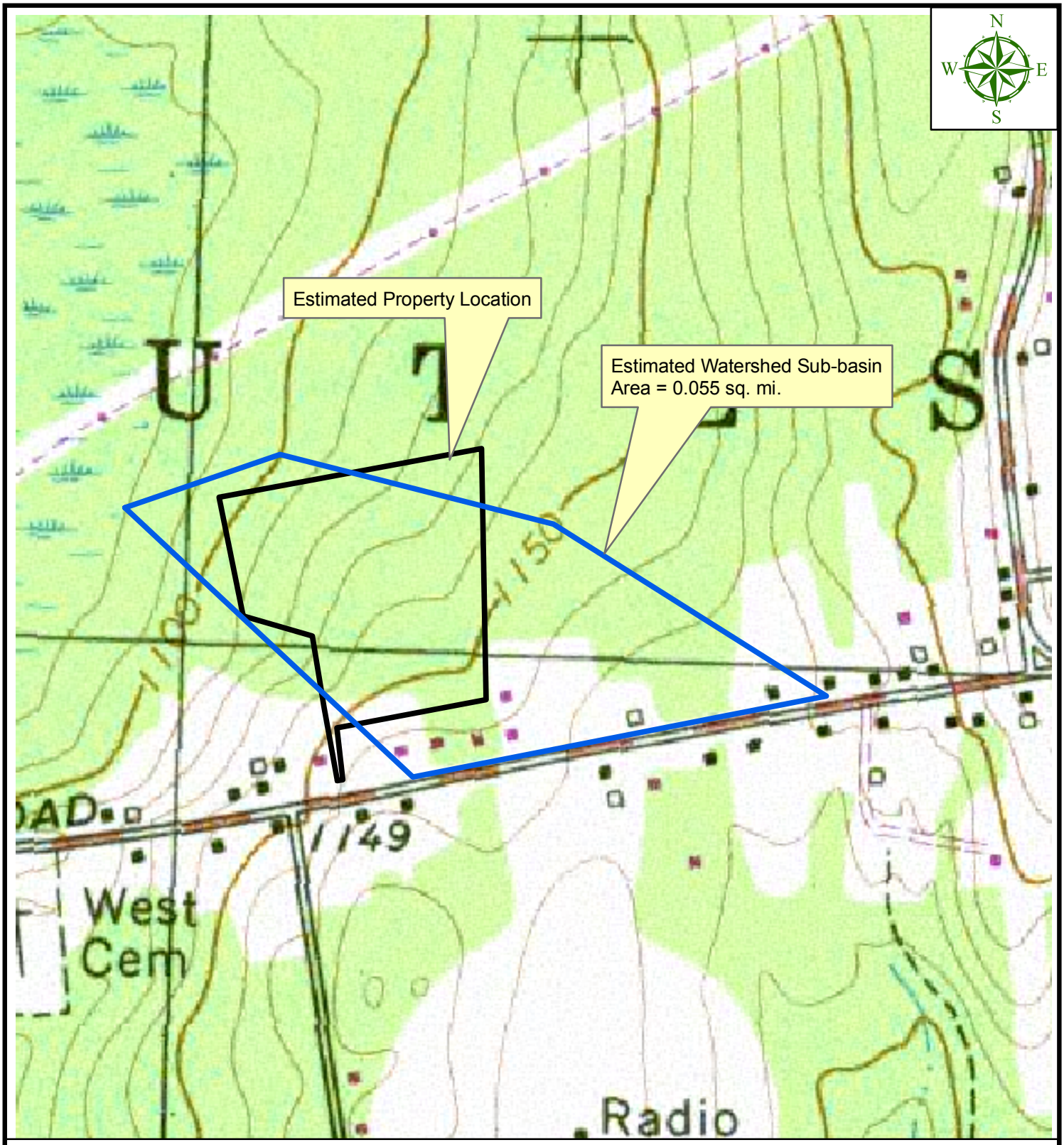


Exhibit A: Sub-basin Assessment

Lot 151 Leverett Road
Shutesbury, Massachusetts

USGS TOPOGRAPHIC QUADRANGLE MAP
SHUTESBURY, MASS., 1990

Data obtained from MASS GIS, Commowealth of Massachusetts
Executive Office of Environmental Affairs (EOEA)

APPENDIX B – SUB-WATERSHED ASSESSMENT

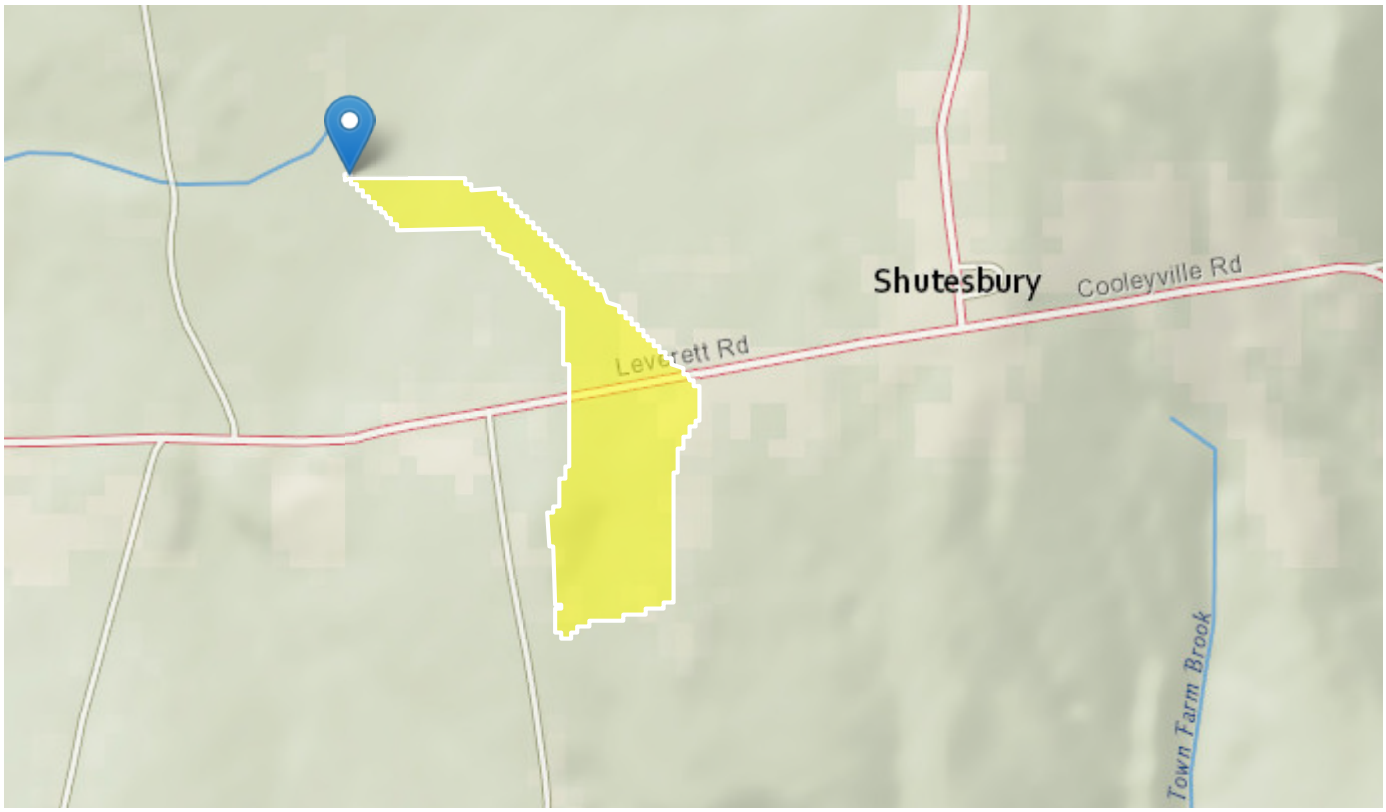
Project Location: Lot 151, Leverett Road Shutesbury, MA

Exhibit B: USGS Stream Stats Analysis

EXHIBIT B

StreamStats Report for Lot 151 Leverett Road, Shutesbury, MA

Region ID: MA
Workspace ID: MA20201102003332057000
Clicked Point (Latitude, Longitude): 42.45454, -72.42318
Time: 2020-11-01 19:33:49 -0500



Watershed is less than 0.5 square mile. Stream is confirmed as Intermittent

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.0554	square miles
DRFTPERSTR	Area of stratified drift per unit of stream length	-100000	square mile per mile
MAREGION	Region of Massachusetts 0 for Eastern 1 for Western	1	dimensionless

Parameter Code	Parameter Description	Value	Unit
BSLDEM250	Mean basin slope computed from 1:250K DEM	2.27	percent
ACRSDFT	Area underlain by stratified drift	0	square miles

Flow-Duration Statistics Parameters[Statewide Low Flow WRIR00 4135]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.0554	square miles	1.61	149
DRFTPERSTR	Stratified Drift per Stream Length	-100000	square mile per mile	0	1.29
MAREGION	Massachusetts Region	1	dimensionless	0	1
BSLDEM250	Mean Basin Slope from 250K DEM	2.27	percent	0.32	24.6

Flow-Duration Statistics Flow Report[Statewide Low Flow WRIR00 4135]

Statistic	Value	Unit

Flow-Duration Statistics Citations

Sauer, Vernon B.; Thomas, W. O., Jr.; Stricker, V. A.; Wilson, K. V.,1983, Flood characteristics of urban watersheds in the United States: U.S. Geological Survey Water-Supply Paper 2207, 63 p. (http://pubs.er.usgs.gov/publication/wsp2207)

Anderson, B.T.,2020, Magnitude and frequency of floods in Alabama, 2015: U.S. Geological Survey Scientific Investigations Report 2020–5032, 148 p. (https://doi.org/10.3133/sir20205032)

Hedgecock, T.S.,2004, Magnitude and Frequency of Floods on Small Rural Streams in Alabama: U. S. Geological Survey Scientific Investigations Report 2004-5135, 10 p. (http://pubs.usgs.gov/sir/2004/5135/)

Hedgecock, T.S.,2010, Magnitude and Frequency of Floods for Urban Streams in Alabama, 2007: U.S Geological Survey Scientific Investigations Report 2010-5012, 17p. (https://pubs.usgs.gov/sir/2010/5012/)

Feaster, T.D., Kolb, K.R., Painter, J.A., and Clark, J.M.2020, Methods for estimating selected low-flow frequency statistics and mean annual flow for ungaged locations on Streams in Alabama: U.S. Geological Survey Scientific Investigations Report 2020–5099, 21 p. (https://doi.org/10.3133/sir20205099)

Wiley, J.B., and Curran, J.H.,2003, Estimating annual high-flow statistics and monthly and seasonal low-flow statistics for ungaged sites on streams in Alaska and conterminous

APPENDIX C – WETLAND DATA FORMS

Project Location: Lot 151, Leverett Road Shutesbury, MA

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Lot 151 Leverett Road City/County: Shutesbury Sampling Date: 10/01/2020

Applicant/Owner: Mark Wightman State: MA Sampling Point: F-15 UP

Investigator(s): Dan Nitzsche Section, Township, Range:

Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): concave Slope %: 2-5

Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 42.45197 Long: -72.41949 Datum:

Soil Map Unit Name: Metacomet fine sandy loam NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: F-15 UP

Tree Stratum (Plot size: 2800 sf)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Tsuga canadensis*	20	Yes	FACU
2. *Acer rubrum*	20	Yes	FAC
3. *Prunus serotina*	10	No	FACU
4. *Betula alleghaniensis*	10	No	FAC
5. *Pinus strobus*	10	No	FACU
6.			
7.			
	70	=Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sf)			
1. *Hamamelis virginiana*	10	Yes	FACU
2. *Kalmia latifolia*	10	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	20	=Total Cover	
Herb Stratum (Plot size: 80 sf)			
1. *Dryopteris spinulosa*	40	Yes	FACW
2. *Mitchella repens*	20	Yes	FACU
3. *Osmunda claytoniana*	10	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	70	=Total Cover	
Woody Vine Stratum (Plot size: 2800 sf)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	40	x 2 =	80
FAC species	40	x 3 =	120
FACU species	80	x 4 =	320
UPL species	0	x 5 =	0
Column Totals	160 (A)		520 (B)

Prevalence Index = B/A = 3.25

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point F-15 UP

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/2	100					Loamy/Clayey	Fine Sandy Loam
8-16	10YR 5/6	100					Loamy/Clayey	Sandy Loam
16-20	10YR 5/3	100					Loamy/Clayey	Sandy Loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

Soil was unable to stay in hand auger due to standing/flowing water.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Lot 151 Leverett Road City/County: Shutesbury Sampling Date: 10/01/2020

Applicant/Owner: Mark Wightman State: MA Sampling Point: F-15 Wet

Investigator(s): Dan Nitzsche Section, Township, Range:

Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope %: 0

Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 42.45201 Long: -72.41949 Datum:

Soil Map Unit Name: Metacomet, fine sandy loam NWI classification: PFO1B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No	**within a Wetland?** **Yes** X **No**
Wetland Hydrology Present?	Yes X	No	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches):
Water Table Present?	Yes X	No	Depth (inches): 12
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches):

Wetland Hydrology Present? **Yes** X **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Water table evidence was soil charaterisitics, drought so no visible water table.

VEGETATION – Use scientific names of plants. Sampling Point: F-15 Wet

Tree Stratum (Plot size: 2800 sf)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	40	Yes	FAC
2. *Tsuga canadensis*	30	Yes	FAC
3. *Betula alleghaniensis*	20	Yes	FAC
4.			
5.			
6.			
7.			
	90	=Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sf)			
1. *Tsuga canadensis*	10	Yes	FAC
2. *Kalmia latifolia*	3	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	13	=Total Cover	
Herb Stratum (Plot size: 80 sf)			
1. *Sphagnum spp*	70	Yes	OBL
2. *Osmunda claytoniana*	35	Yes	FAC
3. *Coptis trifolia*	20	No	FAC
4. *Maianthemum canadense*	3	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	128	=Total Cover	
Woody Vine Stratum (Plot size: 2800 sf)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 85.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	70	x 1 =	70
FACW species	0	x 2 =	0
FAC species	155	x 3 =	465
FACU species	6	x 4 =	24
UPL species	0	x 5 =	0
Column Totals	231 (A)		559 (B)

Prevalence Index = B/A = 2.42

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point F-15 Wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 2/2	100					Loamy/Clayey	Fine Sandy Loam
6-15	10YR 4/2	90	10YR 5/6	10	C	M	Loamy/Clayey	Fine Sandy Loam
15-20	2.5Y 5/1	80	10YR 5/6	10	C	M	Loamy/Clayey	Sandy Loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
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- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
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- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** ____

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

Soil was unable to stay in hand auger due to standing/flowing water.

APPENDIX D – SITE PLAN

Project Location: Lot 151, Leverett Road Shutesbury, MA

BENCHMARK DATA

(2) BENCHMARK EXISTS ON THE SITE; IT IS BASED ON AN **NAVD 88.**

BENCHMARK #1
LOCATION DESCRIPTION: **TOP IRON PIN LOCATED APPROXIMATELY 314 FEET OFF OF THE RIGHT-A-WAY ALONG THE PROPERTY LINE OF RICHARD D. STRANGMAN JR. AND GERALDINE L. STRANGMAN..**
POINT DESCRIPTION: **TBM - TOP IP**.
ELEVATION: **1151.51**

BENCHMARK #2
LOCATION DESCRIPTION: **SPIKE SET IN THE SOUTHEASTERN SIDE OF A 12" MAPLE TREE.**
POINT DESCRIPTION: **TBM**
ELEVATION: **1141.77**

BOUNDARY INFORMATION

EXISTING BOUNDARY IS BASED OFF PLAN ENTITLED, "PLAN OF LAND PREPARED FOR MARK A. WIGHTMAN, LOCATED IN SHUTESBURY, MA," PREPARED BY DAN L. WERNER, P.L.S., DATED SEPTEMBER 1, 2008.

TOPOGRAPHY SOURCE

EXISTING TOPOGRAPHY SHOWN IS BASED A COMBINATION OF NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION LIDAR CONTOURS AND TOPOGRAPHIC SURVEY BY SVE ASSOCIATES CONDUCTED IN JUNE AND JULY 2020.

FLOOD PLAIN INFORMATION

PROPERTY AS SHOWN LIES WITHIN FLOOD INSURANCE RATE MAP REFERENCED DIRECTLY BELOW AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA):

NUMBER **2501580020A**, DATED **JUNE 18, 1980**.

THE SUBJECT PROPERTY IS LOCATED WITHIN ZONE "**C**."

WETLAND AND RESOURCE DELINEATION

WETLAND DELINEATED BY DAN NITZSCHE OF GZA GEOENVIRONMENTAL ENGINEERING IN 2008. ORIGINALLY SURVEYED BY DAN WARNER IN 2008 AND RE-STAKED BY SVE ASSOCIATES JUNE, 2020.

WETLAND DELINEATED RE-DELINEATED (FLAGS F31-F40) BY DAN NITZSCHE OF GZA GEOENVIRONMENTAL ENGINEERING IN SEPTEMBER 2020. SURVEYED BY SVE ASSOCIATES IN SEPTEMBER 2020.

GENERAL PROPERTY INFORMATION

OWNER: MARK A. WIGHTMAN
7 OAK KNOLL DR
SOUTH DEERFIELD, MA 01373

LEGAL DESCRIPTION(S): BOOK **3302**, PAGE **127**

ASSESSOR PARCEL NUMBER(S): **MAP: 16, PARCEL: H-151**

ZONING DESIGNATION: **TOWN CENTER DISTRICT (TC)**
FOUREST CONSERVATION (FC)

TC DISTRICT REQUIREMENTS		*FC DISTRICT REQUIREMENTS*	
MIN. LOT AREA	**90,000 SF**	MIN. LOT AREA	**VARIABLE[1]**
MIN. FRONTAGE	**250'**	MIN. FRONTAGE	**250'**
FRONT SETBACK	**75'**	FRONT SETBACK	**20'**
SIDE SETBACK	**25'**	SIDE SETBACK	**20'**
REAR SETBACK	**25'**	REAR SETBACK	**20'**
MAX. HEIGHT	**35'**	MAX. HEIGHT	**35'**
MAX. FLOOR AREA FOR NON-RESIDENTIAL STRUCTURES	**20,000 SF**	MAX. FLOOR AREA FOR NON-RESIDENTIAL STRUCTURES	**10,000 SF**

1.) NO MINIMUM LOT AREA REQUIRED IN THE FC DISTRICT EXCEPT WHERE AN FC LOT HAS EXISTING ROAD FRONTAGE (SEE SUBSECTION 4.2-2C).

LEGEND

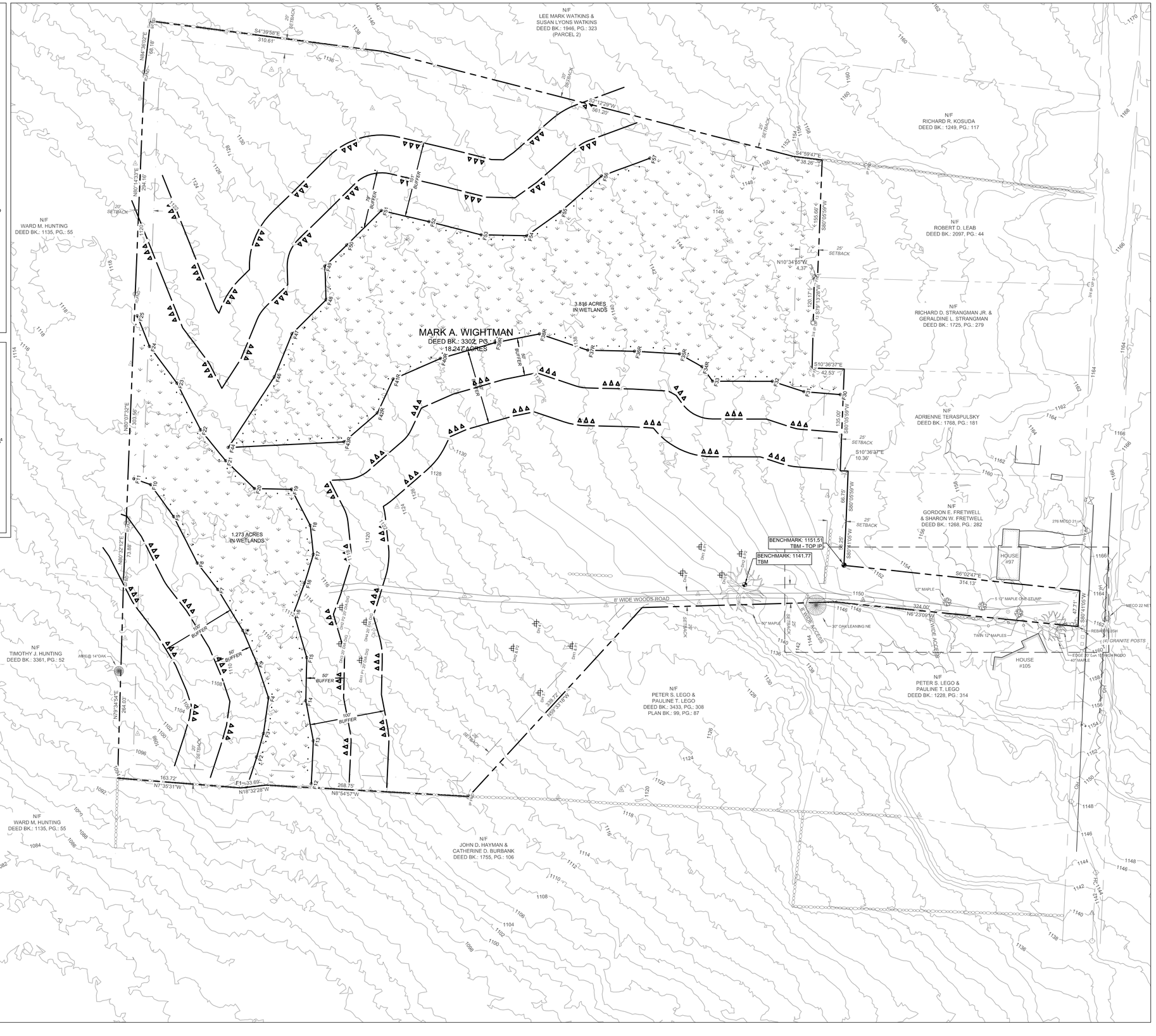
EXISTING MAJOR CONTOUR — 100
EXISTING MINOR CONTOUR
PROPERTY LINE
PROPERTY LINE SETBACK
ABUTTER PROPERTY LINE
EDGE OF WETLAND
RESOURCE SETBACK
EDGE OF WOODS
EXISTING OVERHEAD UTILITIES — OH
EXISTING STONE WALL
EXISTING CURB
EXISTING CHAINLINK FENCE

SYMBOLS

BENCHMARK · UTILITY POLE · GUY WIRE
SURVEY STATION · IRON PIN FOUND · WETLAND FLAG
WETLAND FLAG STAKED BY SVE · CONCRETE BOUND FOUND

ABBREVIATIONS

BM	BENCHMARK
IP	IRON PIN
ST BND	STONE BOUND



RESOURCE DELINEATION QUANTITIES

FLAG GROUP	LENGTH
F1 TO F11	472.7 FT
F12 TO F25	732.5 FT
F30 TO F57	1,661.9 FT
TOTAL =	2,867.1 FT
BVW AREA =	5.089 Ac

DRAFT

COMMONWEALTH OF MASSACHUSETTS
ANTHONY WONSESKI JR.
CIVIL
No. 46615
REGISTERED PROFESSIONAL ENGINEER

NO SIGNATURE

ANTHONY WONSESKI, JR. DATE
R.C.E. NUMBER: 46615

NOT FOR CONSTRUCTION

NO.	REVISION	DATE	DWN	CHK

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Engineering
Planning
Landscape Architecture
Surveying

SVE Associates
P.O. Box 1818
439 West River Road
Brattleboro, VT 05302
T 802.257.0561
F 802.257.0721
www.sveassoc.com

RESOURCE DELINEATION PLAN

18 LEVERETT RD,
SHUTESBURY, MA

MARK WIGHTMAN
123 MAIN ST,
GREENFIELD, MASSACHUSETTS

0 30 60 120
GRAPHIC SCALE 1" = 60'

N

PROJ. #: G2023

DATE: 29 - OCT - 20

DESIGN: MJS
DRAWN: MJS
CHECKED: AW

SHEET X/X

Drawing name: P:\Project\MA PROJECTS\G2023 Wightman, Mark\Dwg\Concepts\G2023_Conc 2_10-21-20.dwg Nov 03, 2020 - 9:14am