Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 4A – Abbreviated Notice of Resource Area Delineation

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

South Hadley
City/Town

A. General Information

1. Project Location (**Note:** electronic filers will click on button for GIS locator):

0 Willimansett Street
a. Street Address

South Hadley
b. City/Town

01075
c. Zip Code

Latitude and Longitude:

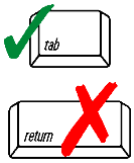
42d13'17.80"
d. Latitude

72d34'04.71"
e. Longitude

Map 14, Block 67
f. Assessors Map/Plat Number

g. Parcel /Lot Number

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



2. Applicant:

Pam
a. First Name

McCarthy
b. Last Name

Big Y Foods, Inc.
c. Organization

2145 Roosevelt Avenue, P.O. Box 7840
d. Mailing Address

Springfield
e. City/Town

MA
f. State

01102-7840
g. Zip Code

413-504-4101
h. Phone Number

i. Fax Number

pam.mccarthy@bigy.com
j. Email Address

3. Property owner (if different from applicant):

☐ Check if more than one owner (attach additional sheet with names and contact information)

a. First Name

b. Last Name

c. Organization

d. Mailing Address

Note: Before completing this form consult your local Conservation Commission regarding any municipal bylaw or ordinance.

e. City/Town

f. State

g. Zip Code

h. Phone Number

i. Fax Number

j. Email Address

4. Representative (if any):

Guy
a. Contact Person First Name

Hesketh
b. Contact Person Last Name

F. A. Hesketh & Associates, Inc.
c. Organization

6 Creamery Brook
d. Mailing Address

East Granby
e. City/Town

CT
f. State

06026
g. Zip Code

860-653-8000
h. Phone Number

860-844-8600
i. Fax Number

ghesketh@fahesketh.com
j. Email Address

Fees will be calculated for online users.

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

$1,696.00
a. Total Fee Paid

$835.50
b. State Fee Paid

$860.50
c. City/Town Fee Paid

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 4A – Abbreviated Notice of Resource Area Delineation

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

South Hadley
City/Town

B. Area(s) Delineated

1. Bordering Vegetated Wetland (BVW) — 848 Linear Feet of Boundary Delineated

2. 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):

      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 that are delineated:

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

C. Additional Information

Applicants must include the following plans with this Abbreviated Notice of Resource Area Delineation. See instructions for details. **Online Users:** Attach the Document Transaction Number (provided on your receipt page) for any of the following information you submit to the Department.

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 filers 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.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 4A – Abbreviated Notice of Resource Area Delineation

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

South Hadley
City/Town

D. Fees

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.

Applicants must submit the following information (in addition to the attached Wetland Fee Transmittal Form) to confirm fee payment:

7356	July 9, 2024
2. Municipal Check Number	3. Check date
7355	July 9, 2024
4. State Check Number	5. Check date
F. A. Hesketh & Associates, Inc.	
6. Payor name on check: First Name	7. Payor name on check: Last Name

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 4A – Abbreviated Notice of Resource Area Delineation

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

South Hadley
City/Town

E. Signatures

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.

1. Signature of Applicant	2. Date: July 8, 2024
3. Signature of Property Owner (if different): Pamela McCarthy Dir. of RE Big Y Foods Inc.	4. Date: July 8, 2024
5. Signature of Representative (if any)	6. Date: July 8, 2024

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.

For MassDEP:
One copy of the completed Abbreviated Notice of Resource Area Delineation (Form 4A), including supporting plans and documents; one copy of the ANRAD Wetland Fee Transmittal Form; and a copy of the state fee payment must be sent to the MassDEP Regional Office (see Instructions) by certified mail or hand delivery. (E-filers may submit these electronically.)

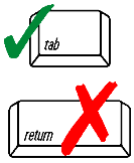
The original and copies must be sent simultaneously. Failure by the applicant to send copies in a timely manner may result in dismissal of the Notice of Intent.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

ANRAD Wetland Fee Transmittal Form

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

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A. Applicant Information

1. Location of Project:

a. Street Address	b. City/Town
0 Willimansett Street	South Hadley
c. Fee amount	**d. Check number**
$1,696.00	$835.50 State check #7355, $860.50 Town check #7356

2. Applicant:

a. First Name	b. Last Name	c. Company
Pam	McCarthy	Big Y Foods, Inc.

d. Mailing Address: 2145 Roosevelt Avenue, P.O. Box 7840

e. City/Town	f. State	g. Zip Code
Springfield	MA	01102-7840

h. Phone Number: 413-504-4101

3. Property Owner (if different):

a. First Name	b. Last Name	c. Company

d. Mailing Address

e. City/Town	f. State	g. Zip Code

h. Phone Number

B. Fees

The fee is calculated as follows for each Resource Area Delineation included in the ANRAD (check applicable project type). The maximum fee for each ANRAD, regardless of the number of Resource Area Delineations, is $200 activities associated with a single-family house and $2,000 for any other activity.

Bordering Vegetated Wetland Delineation Fee:

Online users: check box if fee exempt.

		a. feet of BVW	x $2.00 =	b. Fee for BVW
1. ☐	single family house project			
2. ☑	all other projects	848	X $2.00	$1,696.00

Other Resource Area (e.g., bank, riverfront area, etc.):

		a. linear feet	x $2.00 =	b. Fee
3. ☐	single family house project			
4. ☐	all other projects			

Total Fee for all Resource Areas: Fee $835.50

State share of filing fee: 5. 1/2 of total fee **less** $12.50 $860.50

City/Town share of filing fee: 6. 1/2 of total fee **plus** $12.50

C. Submittal Requirements

a.) Send a copy of this form, with a check or money order for the state share of the fee, payable to the Commonwealth of Massachusetts, to:

Department of Environmental Protection
Box 4062
Boston, MA 02211

b.) **To the Conservation Commission:** Send the Abbreviated Notice of Resource Area Delineation; a **copy** of this form; and the city/town fee payment.

c.) **To DEP Regional Office**: Send one copy of the Abbreviated Notice of Resource Area Delineation (and any additional documentation required as part of a Simplified Review Buffer Zone Project); a **copy** of this form; and a **copy** of the state fee payment. (E-filers of Notices of Intent may submit these electronically.)

June 28, 2024

Wetland Delineation Report

Parcel No. 0014-0067-000
44 Willamansett Street
South Hadley, MA

Introduction

On-site investigations of the 9.38 acre, undeveloped property at **44 Willamansett Street in South Hadley, MA, identified as Map ID 0014-0067-000** were conducted on May 22 and June 4, 2024. The purpose of the site investigations was to identify and delineate Federal and Massachusetts Wetland resources ("resources") on the project site **(Figure 1).**

Regulatory Applicability

The Massachusetts General Law Chapter 131, Section 40 and associated 310 Code of Massachusetts Regulations provides the definitions and procedures for protecting wetlands in Massachusetts. Bogs, swamps, marshes and wet meadows that border on water bodies are defined in the regulations as **Bordering Vegetated Wetlands (BVWs)** and are described as areas where soils are saturated or inundated such that they support plants adapted to tolerate at least periodically saturated conditions. Guidance for the delineation of BVWs is provided in the *Massachusetts Handbook for Delineation of Bordering Vegetated Wetlands, Second Edition, September 2022*.

Section 404 of the Clean Water Act gives the Federal government regulatory jurisdiction of wetlands under the Army Corps of Engineers. Guidance for the delineation of federal jurisdictional wetlands is provided in the *Corps of Engineers Wetlands Delineation Manual* and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (January 2012).* The limits of federal wetlands are determined by the presence of three parameters: the presence of hydric soils, a preponderance of hydrophytic vegetation, and supportive hydrology.

Existing Information Regarding Mapped Resources

According to the Natural Resource Conservation Service (NRCS) web-based soil survey, the soils on the site are mapped as Merrimac fine sandy loam, Windsor loamy sand and Walpole sandy loam **(Figure 2).** The NRCS defines these soils as follows:

> Merrimac fine sandy loam (254A): The Merrimac series consists of very deep, somewhat excessively drained soils formed in outwash. They are nearly level through very steep soils on outwash terraces and plains and other glaciofluvial landforms.
>
> Windsor loamy sand (255A): The Windsor series consists of very deep, excessively drained soils formed in sandy outwash or eolian deposits. They are nearly level through very steep soils on glaciofluvial landforms.
>
> Walpole sandy loam (31A): The Walpole Series consists of very deep, poorly drained sandy soils formed in outwash and stratified drift. They are nearly level to gently sloping soils in low-lying positions on terraces and plains.

The United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) On-line Wetlands Mapper depicts a forested wetland system in the southeast portion of the property **(Figure 3).** Using the Cowardin (1979) Classification System, this Freshwater Forested/Shrub Wetland (PFO1E) is defined by the NWI as follows:

System Palustrine (P): The Palustrine System includes all nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5 ppt. It also includes wetlands lacking such vegetation, but with all of the following four characteristics: (1) area less than 8 ha (20 acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 2.5 m (8.2 ft) at low water; and (4) salinity due to ocean-derived salts less than 0.5 ppt.

Class Forested (FO): Characterized by woody vegetation that is 6 m tall or taller.

Subclass Broad-Leaved Deciduous (1): Woody angiosperms (trees or shrubs) with relatively wide, flat leaves that are shed during the cold or dry season; e.g., black ash (Fraxinus nigra).

Water Regime Seasonally Flooded/Saturated (E): Surface water is present for extended periods (generally for more than a month) during the growing season, but is absent by the end of the season in most years. When surface water is absent, the substrate typically remains saturated at or near the surface.

On-site Findings and Conclusions

The evaluation for the presence of wetland resources was conducted by walking the property and examining the soil, vegetation and hydrologic features on the site. Observations confirmed the presence of a forested wetland in a slightly depressed area in the southeast portion of the site (**Wetland A**). **(see Figure 1)**. This wetland meets the criteria of a vegetated bordering wetland and federal wetland, having hydric soils, a dominance of hydrophytic vegetation and evidence of seasonally saturated/inundated hydrology. The wetland was delineated with pink flagging labeled as "wetland delineation" with the alpha-numeric labels **WL# A-1 through WL# A-29.**

Available mapping from previous site evaluations show a second wetland area north of the flagged wetland (Wetland B). This area was evaluated and found to have a dominance of hydrophytic vegetation (primarily red maple , a facultative wetland plant), but does not contain hydric soils or evidence of wetland hydrology. Therefore this area does not meet the definition of a vegetated bordering wetland or a federal jurisdictional wetland and was not flagged. Wetland Determination Data Forms for areas A and B are appended and approximate locations of wetland sampling points are shown on Figure 1.

Questions regarding the information contained herein can be directed to the undersigned at cpallan@landtechconsult.com.

Very Truly Yours,
LANDTECH

Christopher Allan
Professional Wetland Scientist / Soil Scientist

Figures

Figure 1 Site Map

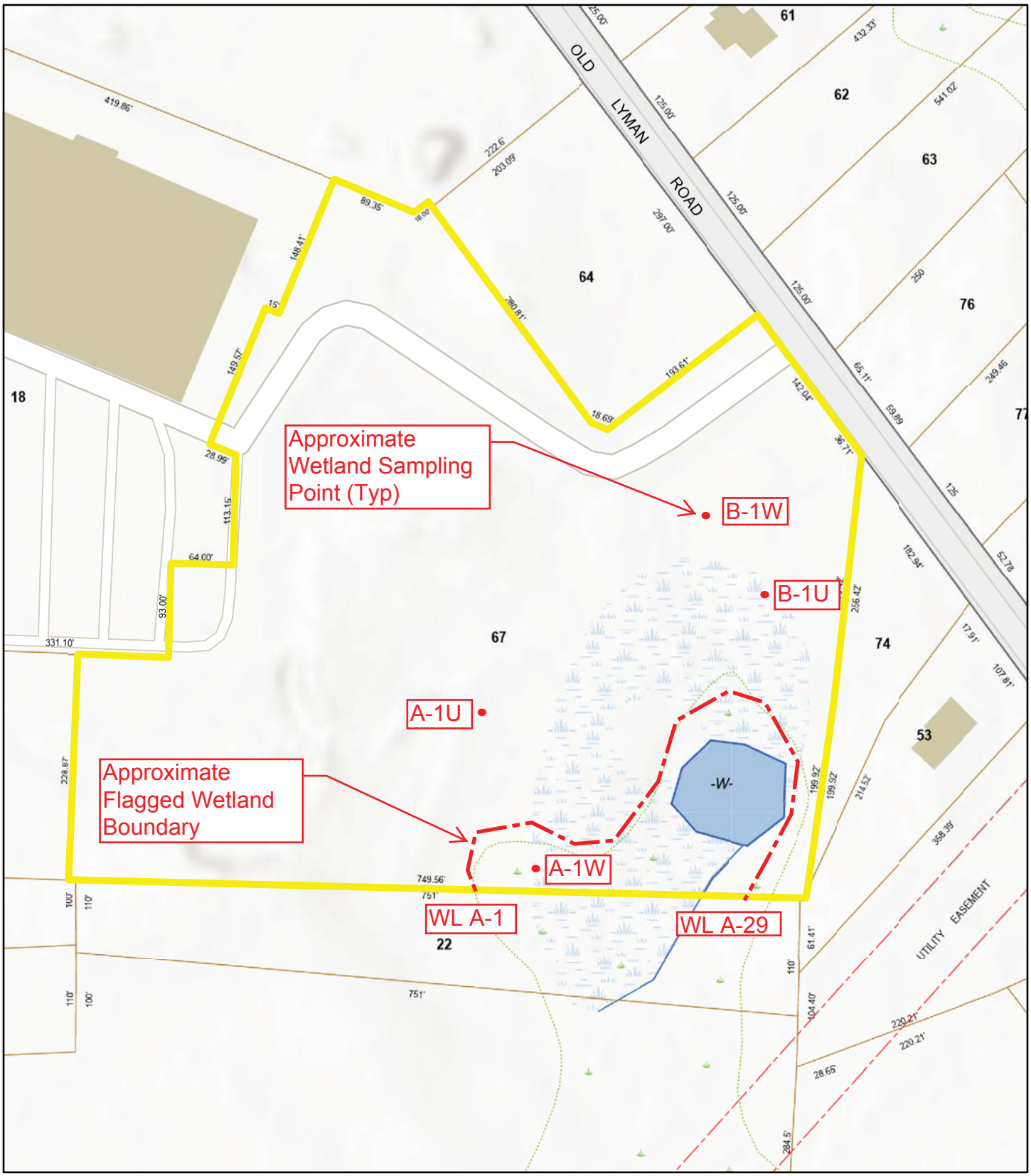
Town of South Hadley, MA

1 inch = 140 Feet

0 140 280 420

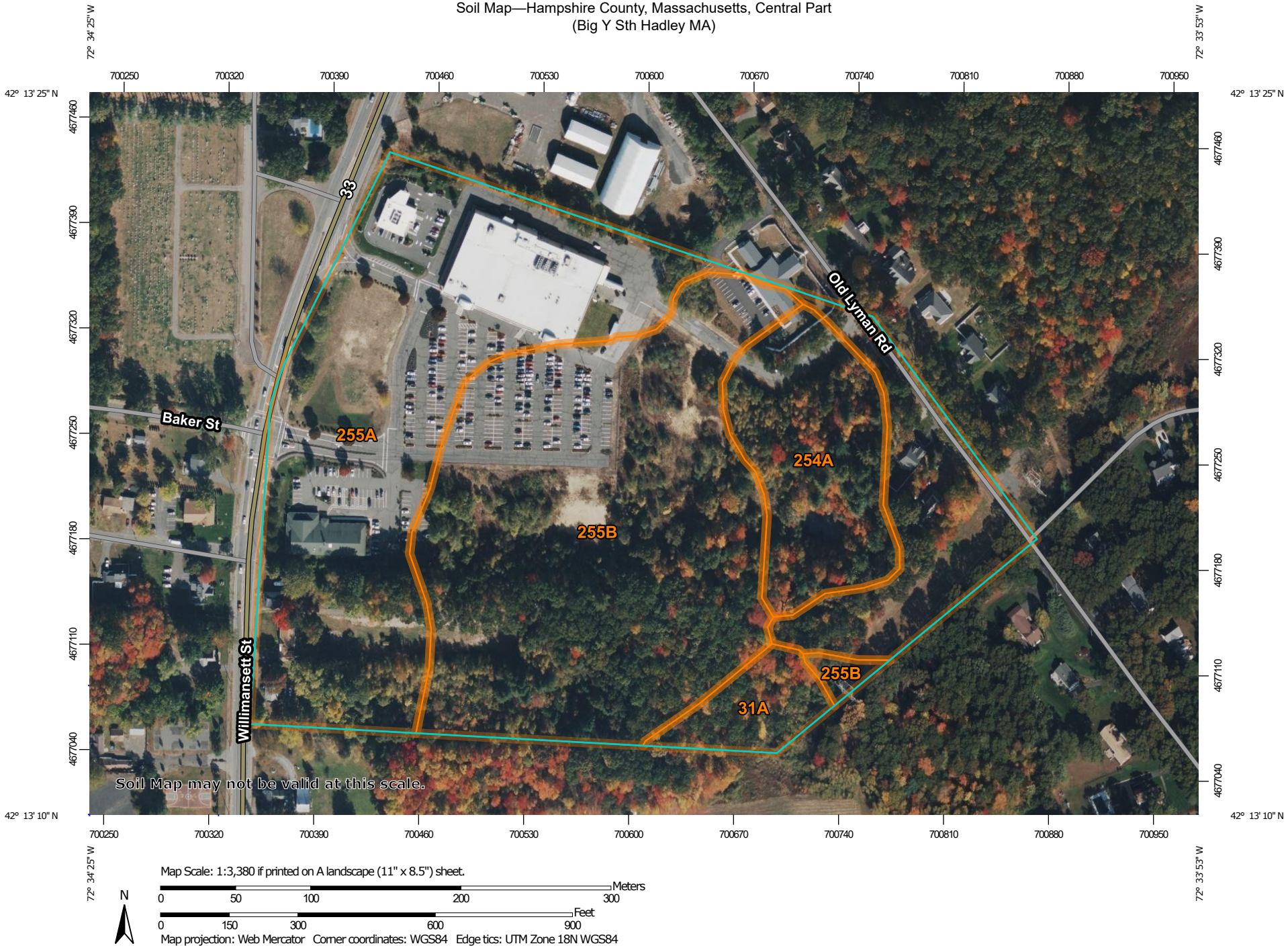
June 21, 2024

CAI Technologies
Precision Mapping. Geospatial Solutions.
www.cai-tech.com



Data shown on this map is provided for planning and informational purposes only. The municipality and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of this map.

Soil Map—Hampshire County, Massachusetts, Central Part
(Big Y Sth Hadley MA)



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Hampshire County, Massachusetts, Central Part
Survey Area Data: Version 18, Sep 10, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 15, 2020—Oct 31, 2020

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.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
31A	Walpole sandy loam, 0 to 3 percent slopes	1.2	3.4%
254A	Merrimac fine sandy loam, 0 to 3 percent slopes	4.1	11.2%
255A	Windsor loamy sand, 0 to 3 percent slopes	16.5	45.6%
255B	Windsor loamy sand, 3 to 8 percent slopes	14.4	39.8%
Totals for Area of Interest		**36.2**	**100.0%**

U.S. Fish and Wildlife Service
National Wetlands Inventory

Big Y, South Hadley, MA

June 21, 2024

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: South Hadley Big Y City/County: South Hadley, MA Sampling Date: 4June2024

Applicant/Owner: Big Y Foods State: MA Sampling Point: A1-U

Investigator(s): Anthony Zemba / Chris Allan Section, Township, Range:

Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): slightly concave Slope (%): 0-5

Subregion (LRR or MLRA): LRR R Lat: 42.22133 Long: -72.56879 Datum: gps

Soil Map Unit Name: Windsor NWI classification: none

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

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

Are Vegetation N , Soil N , or Hydrology N 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	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: A1-U

Tree Stratum (Plot size: 2872ft2)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus vellutina*	40	Yes	UPL
2. *Acer rubrum*	20	Yes	FAC
3. *Betula populifolia*	20	Yes	FAC
4. *Pinus strobus*	10	No	FACU
5. *Prunus serotina*	5	No	FACU
6.			
7.			
	95	=Total Cover	

Sapling/Shrub Stratum (Plot size: 707ft2)			
1. *Frangula alnus*	50	Yes	FAC
2. *Betula populifolia*	10	No	FAC
3. *Quercus rubra*	10	No	FACU
4. *Pinus strobus*	10	No	FACU
5. *Prunus serotina*	5	No	FACU
6.			
7.			
	85	=Total Cover	

Herb Stratum (Plot size: 78.5 ft2)			
1. *Frangula alnus*	5	Yes	FAC
2. *Onoclea sensibilis*	5	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	10	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 83.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	105	x 3 =	315
FACU species	40	x 4 =	160
UPL species	40	x 5 =	200
Column Totals:	190 (A)		685 (B)

Prevalence Index = B/A = 3.61

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 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** X **No** ___

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

SOIL

Sampling Point: A1-U

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
0-15	10YR 2/2						Sandy	loamy sand
15-26	7.5YR 4/4		5YR 3/4				Sandy	loamy sand

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 (TF12)
- ___ 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 reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: South Hadley Big Y City/County: South Hadley Sampling Date: 4June2024

Applicant/Owner: Big Y Foods State: MA Sampling Point: A1-W

Investigator(s): Anthony Zemba, Chris Allan Section, Township, Range:

Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): slightly concave Slope (%): 0-5

Subregion (LRR or MLRA): LRR R Lat: 42.22113 Long: -72.56881 Datum: gps

Soil Map Unit Name: Walpole NWI classification: none

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

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

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

Secondary Indicators (minimum of two required)

Surface Soil Cracks (B6)	Drainage Patterns (B10)	x 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): 10"	**Wetland Hydrology Present?** **Yes** X **No**

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: A1-W

Tree Stratum (Plot size: 2827ft2)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	30	Yes	FAC
2. *Quercus velutina*	20	Yes	UPL
3. *Pinus strobus*	15	Yes	FACU
4.			
5.			
6.			
7.			
	65	=Total Cover	
Sapling/Shrub Stratum (Plot size: 707 ft2)			
1. *Frangula alnus*	30	Yes	FAC
2. *Vaccinium corymbosum*	5	No	FACW
3. *Acer rubrum*	5	No	FAC
4. *Quercus rubra*	5	No	FACU
5.			
6.			
7.			
	45	=Total Cover	
Herb Stratum (Plot size: 78.5ft 2)			
1. *Frangula alnus*	5	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	5	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	70	x 3 =	210
FACU species	20	x 4 =	80
UPL species	20	x 5 =	100
Column Totals:	115	(A)	400 (B)

Prevalence Index = B/A = 3.48

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 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** X **No** ___

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

SOIL

Sampling Point: A1-W

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
0-7	10YR 2/1						Loamy/Clayey	sandy loam
7-10	10YR 4/4						Loamy/Clayey	sandy loam
10-23	10YR 4/2	90	5YR 3/4	10	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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)
- X 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 (TF12)
- ___ 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** X **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: South Hadley Big Y City/County: South Hadley, MA Sampling Date: 22May2024

Applicant/Owner: Big Y Foods State: MA Sampling Point: B-1U

Investigator(s): Anthony Zemba / Chris Allan Section, Township, Range:

Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): slightly concave Slope (%): 0-5

Subregion (LRR or MLRA): LRR R Lat: 42.221878 Long: -72.567992 Datum: google earth

Soil Map Unit Name: Merrimac NWI classification: none

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

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

Are Vegetation N , Soil N , or Hydrology N 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: B-1U

Tree Stratum (Plot size: 2872ft2)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus strobus*	80	Yes	FACU
2. *Acer rubrum*	30	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	110	=Total Cover	
Sapling/Shrub Stratum (Plot size: 707ft2)			
1. *Acer rubrum*	10	Yes	FAC
2. *Viburnum acerifolium*	10	Yes	UPL
3. *Quercus rubra*	10	Yes	FACU
4. *Juniperus virginiana*	5	No	FACU
5. *Ilex verticillata*	5	No	FACW
6. *Prunus serotina*	5	No	FACU
7.			
	45	=Total Cover	
Herb Stratum (Plot size: 78.5ft 2)			
1. *Maianthemum canadense*	20	Yes	FACU
2. *Lycopodium clavatum*	15	Yes	FAC
3. *Vaccinium pallidum*	10	Yes	UPL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	45	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 37.5% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	55	x 3 =	165
FACU species	120	x 4 =	480
UPL species	20	x 5 =	100
Column Totals:	200 (A)		755 (B)
Prevalence Index = B/A =			3.78

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: B-1U

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 2/1						Loamy/Clayey	fine sandy loam
8-24	10YR 4/4						Loamy/Clayey	fine sandy loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 (TF12)
- ___ 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 reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: South Hadley Big Y City/County: South Hadley Sampling Date: 22May2024

Applicant/Owner: Big Y Foods State: MA Sampling Point: B1-W

Investigator(s): Anthony Zemba, Chris Allan Section, Township, Range:

Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): slightly concave Slope (%): 0-5

Subregion (LRR or MLRA): LRR R Lat: 42.221947 Long: -72.567958 Datum: google earth

Soil Map Unit Name: Merrimac NWI classification: none

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

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

Are Vegetation N, Soil N, or Hydrology N 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	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): 26"

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

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

Remarks:
Hydrophytic vegetation present based upon dominance test (Red Maple)

VEGETATION – Use scientific names of plants. Sampling Point: B1-W

Tree Stratum (Plot size: 2827ft2)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	75	Yes	FAC
2. *Quercus velutina*	10	No	UPL
3. *Nyssa sylvatica*	5	No	FAC
4. *Betula alleghaniensis*	5	No	FAC
5. *Quercus palustris*	5	No	FACW
6.			
7.			
	100	=Total Cover	
Sapling/Shrub Stratum (Plot size: 707 ft2)			
1. *Vaccinium corymbosum*	20	Yes	FACW
2. *Frangula alnus*	10	Yes	FAC
3. *Quercus velutina*	10	Yes	UPL
4. *Pinus strobus*	5	No	FACU
5. *Acer rubrum*	3	No	FAC
6. *Nyssa sylvatica*	3	No	FAC
7.			
	51	=Total Cover	
Herb Stratum (Plot size: 78.5ft 2)			
1. *Maianthemum canadense*	85	Yes	FACU
2. *Osmundastrum cinnamomeum*	3	No	FACW
3. *Gaultheria procumbens*	3	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	91	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	28	x 2 =	56
FAC species	101	x 3 =	303
FACU species	93	x 4 =	372
UPL species	20	x 5 =	100
Column Totals:	242 (A)		831 (B)

Prevalence Index = B/A = 3.43

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 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** X **No** ___

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

SOIL

Sampling Point: B1-W

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
0-9	10YR 2/1						Loamy/Clayey	fine sandy loam
9-15	10YR 3/4						Loamy/Clayey	fine sandy loam
15-21	10YR 4/3	90	5YR 3/4	10	C	M	Loamy/Clayey	Distinct redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

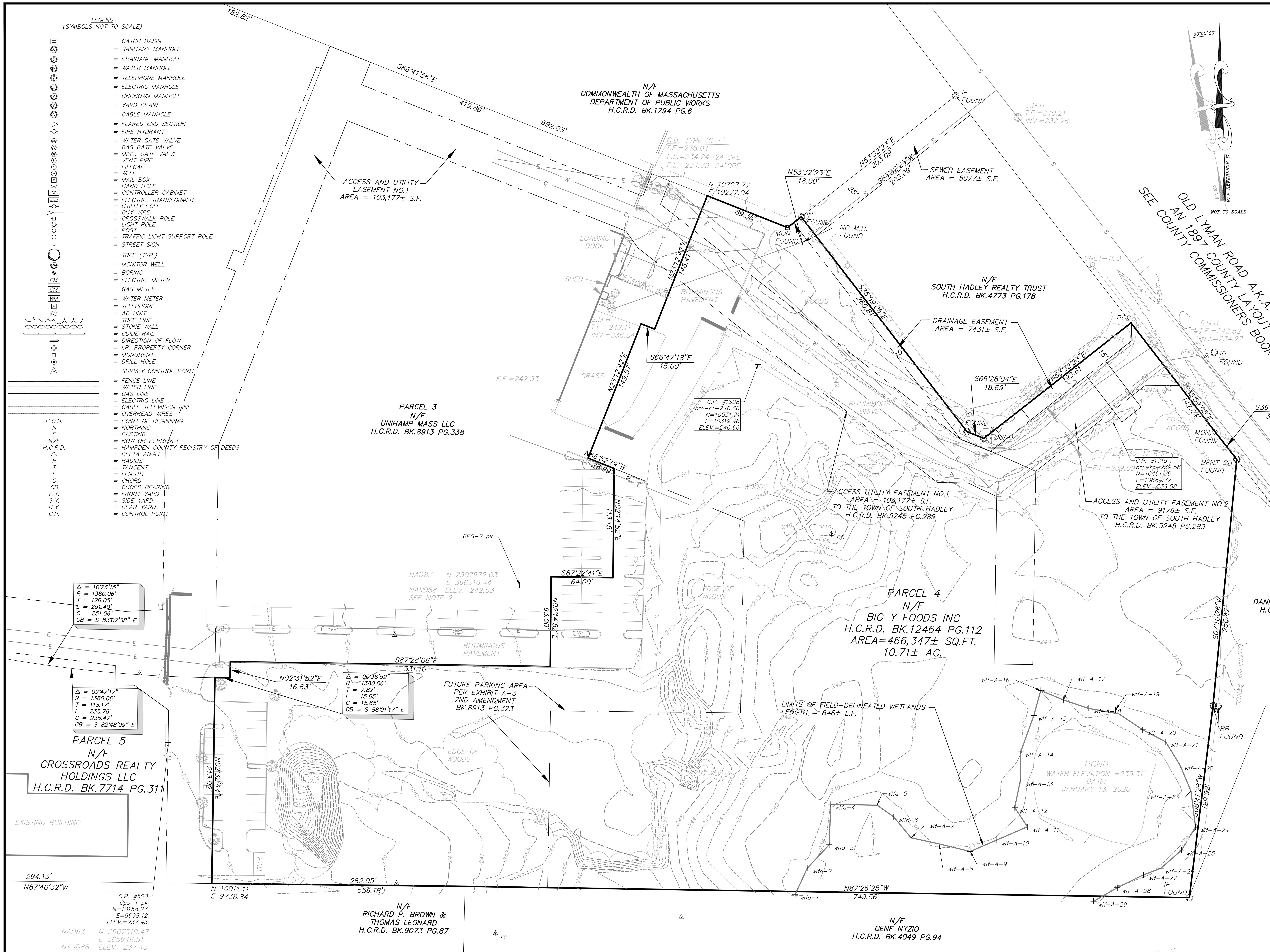
Type: _____

Depth (inches): _____

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

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)



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
= FILLCAP
= WELL
= MAIL BOX
= HAND HOLE
= CONTROLLER CABINET
= ELECTRIC TRANSFORMER
= UTILITY POLE
= GUY 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
= GUIDE 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
P.O.B. = POINT OF BEGINNING
N = NORTHING
E = EASTING
N/F = NOW OR FORMERLY
H.C.R.D. = HAMPDEN COUNTY REGISTRY OF DEEDS
Δ = DELTA ANGLE
R = RADIUS
T = TANGENT
L = LENGTH
C = CHORD
CB = CHORD BEARING
F.Y. = FRONT YARD
S.Y. = SIDE YARD
R.Y. = REAR YARD
C.P. = CONTROL POINT
N/F COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS H.C.R.D. BK.1794 PG.6
ACCESS AND UTILITY EASEMENT NO.1 AREA = 103,177± S.F.
SEWER EASEMENT AREA = 5077± S.F.
N/F SOUTH HADLEY REALTY TRUST H.C.R.D. BK.4773 PG.178
DRAINAGE EASEMENT AREA = 7431± S.F.
OLD LYMAN ROAD A.K.A. LYMAN STREET AN 1897 COUNTY LAYOUT 49.50' WIDE SEE COUNTY COMMISSIONERS BOOK 14, PAGE 172
PARCEL 3 N/F UNIHAMP MASS LLC H.C.R.D. BK.8913 PG.338
ACCESS UTILITY EASEMENT NO.1 AREA = 103,177± S.F. TO THE TOWN OF SOUTH HADLEY H.C.R.D. BK.5245 PG.289
ACCESS AND UTILITY EASEMENT NO.2 AREA = 9176± S.F. TO THE TOWN OF SOUTH HADLEY H.C.R.D. BK.5245 PG.289
PARCEL 4 N/F BIG Y FOODS INC H.C.R.D. BK.12464 PG.112 AREA=466,347± SQ.FT. 10.71± AC.
N/F DANIEL W & CAROL A GOBLE H.C.R.D. BK.12497 PG.232
FUTURE PARKING AREA PER EXHIBIT A-3 2ND AMENDMENT BK.8913 PG.323
LIMITS OF FIELD-DELINEATED WETLANDS LENGTH = 848± L.F.
POND WATER ELEVATION =235.31' DATE: JANUARY 13, 2020
PARCEL 5 N/F CROSSROADS REALTY HOLDINGS LLC H.C.R.D. BK.7714 PG.311
EXISTING BUILDING
N/F RICHARD P. BROWN & THOMAS LEONARD H.C.R.D. BK.9073 PG.87
N/F GENE NYZIO H.C.R.D. BK.4049 PG.94
N87°26'25"W 749.56'
N87°40'32"W 294.13'
262.05' 556.18'
N 10011.11 E 9738.84
N 10707.77 E 10272.04
C.P. #500 Gps-1 pk N=10158.27 E=9698.12 ELEV.=237.43
NAD83 N 2907519.47 E 365948.51 NAVD88 ELEV.=237.43 SEE NOTE 2
NAD83 N 2907672.03 E 366316.44 NAVD88 ELEV.=242.63 SEE NOTE 2
C.P. #1898 bm-rc-240.66 N=10531.71 E=10319.46 ELEV.=240.66
NOT TO SCALE

VICINITY MAP (NOT TO SCALE)

NOTES:

1. THIS IS A PROPERTY/TOPOGRAPHIC SURVEY INTENDED TO BE USED FOR A WETLAND BOUNDARY DETERMINATION.
2. BEARINGS DEPICTED HEREON ARE BASED UPON MAP REFERENCE #1. COORDINATES ARE ASSUMED. EQUIVALENT COORDINATES AND ELEVATIONS DEPICTED HEREON REFER TO NAVD88 AND NAD83 AND WERE DETERMINED USING OPUS RAPID STATIC GPS OBSERVATIONS CONDUCTED ON JANUARY 13 AND 14, 2020 RESULTED IN COORDINATES FOR CONTROL POINT 500 OF N=2907519.47, E=365948.51, ELEV.237.43 AND CONTROL POINT 502 OF N=2907672.03, E=366316.44, ELEV.242.63.
3. WETLAND FLAGS WERE SET IN THE FIELD BY A CERTIFIED SOIL SCIENTIST, CHRISTOPHER ALLAN, AND WERE FIELD LOCATED UNDER THE SUPERVISION OF THE UNDERSIGNED ENGINEER.

MAP REFERENCES:

1. PLAN OF LAND IN SOUTH HADLEY, MASSACHUSETTS HAMPSHIRE REGISTRY PREPARED FOR ALVERO ACQUISITION CORP. SCALE 1"=50' DATED 07-20-06 BY HUNTLEY ASSOCIATES, P.C.
2. EASEMENT PLAN FOR THE SOUTH HADLEY SQUARE ON WILLIMANSETT ST. (ROUTE 33) & OLD LYMAN RD. SOUTH HADLEY, MASSACHUSETTS SCALE 1"=60' DATED 10-25-96 BY ALMER HUNTLEY, JR. & ASSOCIATES, INC.
3. PLAN OF LAND IN SOUTH HADLEY, MASSACHUSETTS HAMPSHIRE COUNTY PREPARED FOR CROSSROADS REALTY TRUST SCALE 1"=60' DATED 10/31/2002 BY HUNTLEY ASSOCIATES, P.C.
4. THE COMMONWEALTH OF MASSACHUSETTS PLAN OF LAND IN THE TOWN OF SOUTH HADLEY HAMPSHIRE COUNTY TAKEN FOR MAINTENANCE AREA BY THE DEPARTMENT OF PUBLIC WORKS AUGUST 1, 1974 SCALE: 40 FEET TO THE INCH PLAN BOOK 92 PAGE 91
5. SUBDIVISION APPROVAL NOT REQUIRED PLAN OF LAND IN SOUTH HADLEY, MASSACHUSETTS SURVEYED FOR S-H-R TRUST SCALE: 1"=40' DATED AUGUST 11, 2010 BY HERITAGE SURVEYS, INC.

THE WETLAND BOUNDARY LINES AS SHOWN HEREON ARE SUBSTANTIALLY CORRECT

JULY 1, 2024

CHRISTOPHER P. ALLAN
PROFESSIONAL SOIL SCIENTIST

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

PARCEL LOCATION: 42° 13' 17.80" N 72° 34' 04.71" W

F. A. Hesketh & Associates, Inc.
3 Creamery Brook East Granby, CT 06026
Phone (860) 653-8000 Fax (860) 844-8600
www.fahesketh.com · mail@fahesketh.com
Civil & Traffic Engineers · Surveyors · Planners · Landscape Architects

Revisions:

No.	Date	Description

RESOURCE AREA DELINEATION PLAN
PREPARED FOR
BIG Y FOODS, INC
WILLIMANSETT STREET, MAP 14, BLK 67
PARCEL NUMBER: 0014-0067-000
SOUTH HADLEY, MASSACHUSETTS

Date: 06-28-2024	Drawn by: CAD	Job no: 19187
Scale: 1" = 60'	Checked by: GAH	Sheet no: 1 OF 1

RED-1

Q:\2019\19187 - Big Y S. Hadley\19187 BIG Y WETLANDS 2024-06-28.dwg, Layout1, Jun. 28, 2024 - 3:26:40 PM