Wetland Border Report

Site Locus: Blackstone Street, Bellingham, MA
Prepared for: Wall Street Development Corp.
Prepared by: Goddard Consulting, LLC, 291 Main St, Suite 8, Northborough, MA 01532
Date: 02/12/2025

INTRODUCTION

In November 2022, the wetland resources were delineated for Wall Street Development on land located on or near Blackstone Street in Bellingham, MA 02019 (refer to enclosed locus maps). The wetland border was flagged using the criteria in the most recent edition of MA Wetland Protection Act (WPA) and Regulations 310 CMR 10.00 et al. Hydric soil indicators, vegetation changes, hydrological indicators, and topography were all considered for delineation purposes.

The titles of attached documents are as follows:

- DEP Bordering Vegetated Wetland Determination Form
- USGS of Locus Site, Goddard Consulting LLC, 02/12/2025
- Orthophoto of Locus Site, Goddard Consulting LLC, 02/12/2025
- Orthophoto with FEMA Flood Zones, Goddard Consulting LLC, 02/12/2025
- Orthophoto with NRCS Soil Survey, Goddard Consulting LLC, 02/12/2025
- NRCS Soil Survey Map, Norfolk and Suffolk Counties, Massachusetts; Worcester County, Massachusetts, Southern Part, 02/12/2025

SUMMARY OF FINDINGS

The boundaries of two jurisdictional resource areas, Bordering Vegetated Wetlands (BVW) and Isolated Vegetated Wetlands (IVW), were delineated on and off the locus site. A mapped perennial stream, known as Quick Stream, flows internal to the flagged BVW and discharges into Lake Hiawatha off the locus site. In September 2024, Quick Stream was documented dry for four consecutive days during a non-drought period. In January 2025, the Bellingham Conservation Commission issued a negative determination stating the stream does not meet the criteria for perennial status. Therefore, Quick Stream has a jurisdictional bank with an associated 100-foot Buffer Zone. The bank of the intermittent stream was not flagged due to the channel's presence within the flagged BVW boundary.

The boundary of the Bordering Vegetated Wetland (BVW) partially on and off-site was delineated with flag series GCA1-GCA52, GCB1-GCB70, GCC1-GCC140, and GCAA1-GCAA15. The boundary of seven Isolated Vegetated Wetlands (IVWs) were delineated with flag series GCD1-GCD54, GCE1-GCE25, GCF1-GCF20, GCG1-GCG7, GCH1-GCH7, GCI1-GCI37, and GCJ1-GCJ10. The sampling points for the BVW determination took place near flag GCAA6 and GCC11.

At sampling point GCAA6, vegetation upgradient of the BVW is dominated by Eastern White Pine, Northern White Oak, Northern Red Oak, Green Brier, and Black Huckleberry. Vegetation downgradient of the BVW is dominated by Red Maple, Eastern White Pine, Highbush Blueberry, Sweet Pepperbush, Cinnamon Fern, and Royal Fern. At sampling point GCC11, vegetation upgradient of the BVW is dominated by Northern White Oak, Eastern White Pine, Red Maple, and Hay-scented Fern. Vegetation downgradient of the BVW is dominated by Red Maple, Northern White Oak, Highbush Blueberry, Wool Grass, False Nettle, Cinnamon Fern, Wrinkle-Leaf Goldenrod, and various sedges.

Soils identified on the property include extremely stony sandy loams, loamy sands, and muck. At sample point GCAA6, the wetland soil sample consisted of an organic layer (10YR2/2) found between 0-5" in depth. A B layer with the consistency of fine sandy loam (FSL)(10YR4/2) was found from 5-8" in depth. A C layer with the consistency of FSL (10YR6/4) was found from 8-14" with 10% redox concentrations (7.5YR7/8) in the matrix. A restrictive rock layer was identified at 14" in depth. In the upland soil sample, an A layer with the consistency of FSL (10YR3/4) was found from 0-3" and a B layer with the consistency of FSL (10YR5/6) was found from 3-12". A restrictive rock layer was identified at 12" in depth.

At sample point GCC11, the wetland soil sample consisted of an organic layer (10YR2/1) found between 0-12" in depth. A B layer with the consistency of FSL (10YR5/2) was found from 12-16" in depth. A restrictive rock layer was identified at 16" in depth. In the upland soil sample, an A layer with the consistency of FSL (10YR3/3) was found from 0-6", and a B layer with the consistency of FSL (10YR4/6) was found from 6-14". A restrictive rock layer was identified at 14" in depth. More detailed information about soils is included in the attached NRCS Soil Map and the DEP Bordering Vegetated Wetland Determination Forms.

According to the MassGIS data layers for the Natural Heritage & Endangered Species Program (NHESP), the locus site is partially located within Estimated and/or Priority Habitat of Rare Wildlife. The locus site is not mapped within an Area of Critical Environmental Concern (ACEC). There are two mapped potential vernal pools on the site. There are no certified vernal pools mapped on the site. The site is not located in an Outstanding Resource Waters Area (ORW). The locus site partially falls within a non-jurisdictional 500-year FEMA flood-plain.

The MA Wetlands Protection Act and the Town of Bellingham takes jurisdiction over Bordering Vegetated Wetlands (BVW). The Town of Bellingham's Wetlands Protection Bylaw takes jurisdiction over Isolated Vegetated Wetlands (IVW). All vegetated wetlands have a jurisdictional 100-foot Buffer Zone that cast onto the locus site. Additionally, the Local Bylaw requires additional buffers including a jurisdictional 25-foot No-Disturb Zone and a 50-foot No-Build Zone.

Any work within these resource areas including the 100-foot Buffer Zones requires a Request for Determination (RDA) or Notice of Intent (NOI) to be filed with the Bellingham Conservation Commission.

DESCRIPTION OF REGULATED INLAND RESOURCE AREA

The table below provides the regulatory jurisdiction, flag numbers/colors, and wetland types and locations for the resource areas delineated.

Resource Area	Regulatory Jurisdiction	Flag Numbers and Color	Wetland Types and Locations
Bordering Vegetated Wetland	BVW & 100-foot Buffer Zone	GCA1-GCA52 (Blue flags)	The western boundary of the BVW located off-site (west of the Maddie Way).
Bordering Vegetated Wetland	BVW & 100-foot Buffer Zone	GCB1-GCB70 (Blue flags)	The western boundary of the BVW located on-site (south of Blackstone Street).

Bordering Vegetated Wetland	BVW & 100-foot Buffer Zone	GCC1-GCC140 (Blue flags)	The eastern boundary of the BVW located on-site (south of Blackstone Street).
Bordering Vegetated Wetland	BVW & 100-foot Buffer Zone	GCAA1-GCAA15 (Blue flags)	The eastern boundary of the BVW located off-site (west of Maddie Way).
Isolated Vegetated Wetland D	Bylaw – IVW & 100-foot Buffer Zone	GCD1-GCD54 (Blue flags)	Large IVW located east of flagged BVW and south of IVW J.
Isolated Vegetated Wetland E	Bylaw – IVW & 100-foot Buffer Zone	GCE1-GCE25 (Blue flags)	Large IVW partially located with powerline right of way (near northeastern property boundary).
Isolated Vegetated Wetland F	Bylaw – IVW & 100-foot Buffer Zone	GCF1-GCF20 (Blue flags)	Large IVW located east of BVW and north of IVW I.
Isolated Vegetated Wetland G	Bylaw – IVW & 100-foot Buffer Zone	GCG1-GCG7 (Blue flags)	Small IVW east of flagged BVW.
Isolated Vegetated Wetland H	Bylaw – IVW & 100-foot Buffer Zone	GCH1-GCH7 (Blue flags)	Small IVW east of IVW I.
Isolated Vegetated Wetland I	Bylaw – IVW & 100-foot Buffer Zone	GCI1-GCI37 (Blue flags)	Large IVW located south of IVW F, east of IVW G, and west of IVW H.
Isolated Vegetated Wetland J	Bylaw – IVW & 100-foot Buffer Zone	GCJ1-GCJ10 (Blue flags)	Small IVW located north of IVW D and south of IVW G.

SITE PHOTOS

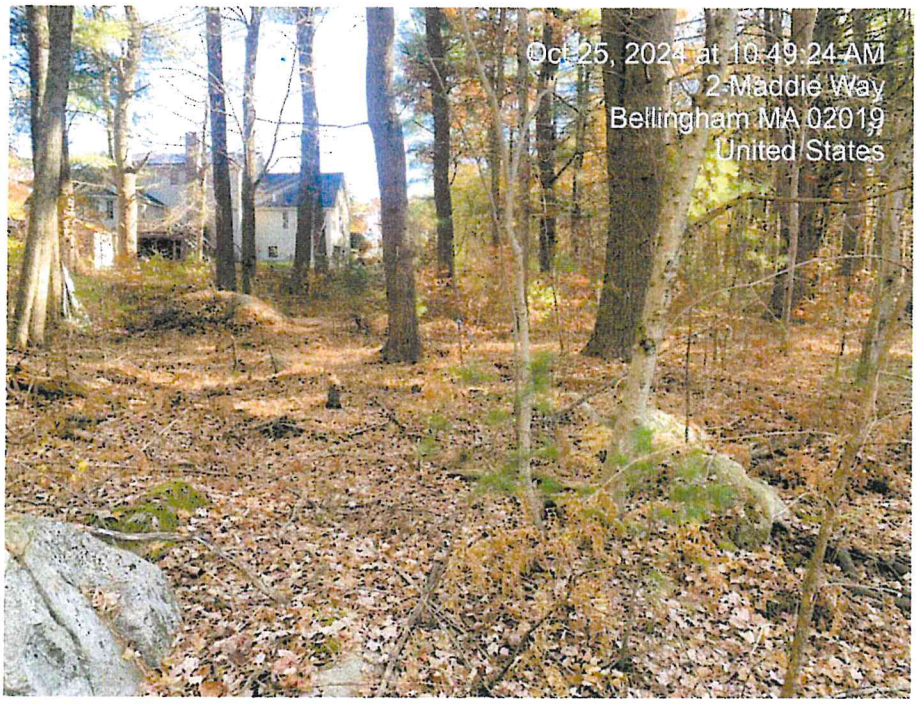


Photo 1. View of area (facing east) downgradient of sample point GCAA6.

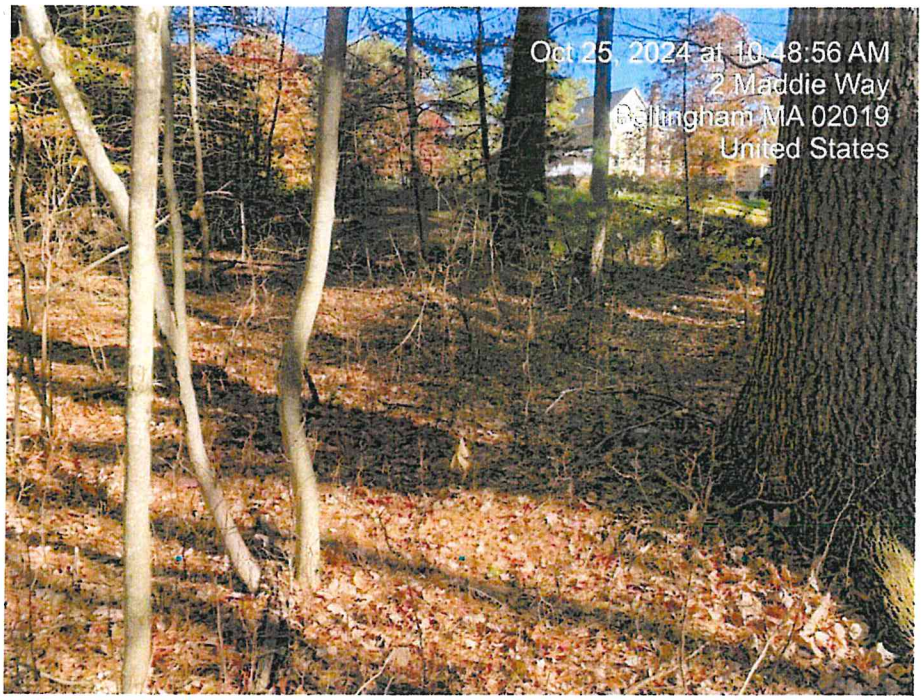


Photo 2. View of area (facing east) upgradient of sample point GCAA6.

Photo 3. View of area (facing southeast) downgradient of sample point GCC11. Note the channel of Quick Stream internal to the flagged BVW.

Photo 4. View of area (facing north) downgradient of sample point GCC11. Note the channel of Quick Stream internal to the flagged BVW.

Please don't hesitate to reach out to our office with questions or concerns.

Sincerely,

Goddard Consulting, LLC

Tom Schutz, WPIT, WSA
Wetland Scientist

Kristina McEvoy
Wetland Scientist

BORDERING VEGETATED WETLAND DETERMINATION FORM

Project/Site:	Blackstone Street	City/Town: Bellingham	Sampling Date: 2/12/2025
Applicant/Owner:	Wall Street Development Corp.	Sampling Point or Zone:	GCAA6
Investigator(s):	Tom Schutz & Kristina McEvoy	Latitude/Longitude:	42.0667, -71.4936
Soil Map Unit Name:	Canton fine sandy loam, 0 to 8 percent slc	NWI or DEP Classification:	Freshwater Emergent Wetland; Deep Marsh

UPGRADIENT

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? (If yes, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If yes, explain in Remarks)

SUMMARY OF FINDINGS – Attach site map and photograph log showing sampling locations, transects, etc

Wetland vegetation criterion met?	Yes _____	No X	Is the Sampled Area within a Wetland?	Yes _____	No X
Hydric Soils criterion met?	Yes _____	No X			
Wetlands hydrology present?	Yes _____	No X			

Remarks, Photo Details, Flagging, etc.:

HYDROLOGY

Field Observations:			
Surface Water Present?	Yes	No X	Depth (in)
Water Table Present?	Yes	No X	Depth (in)
Saturation Present (including capillary fringe)?	Yes	No X	Depth (in)

Wetland Hydrology Indicators

Reliable Indicators of Wetlands Hydrology	Indicators that can be Reliable with Proper Interpretation	Indicators of the Influence of Water
___ Water-stained leaves	___ Hydrological records	___ Direct observation of inundation
___ Evidence of aquatic fauna	___ Free water in a soil test hole	___ Drainage patterns
___ Iron deposits	___ Saturated soil	___ Drift lines
___ Algal mats or crusts	___ Water marks	___ Scoured areas
___ Oxidized rhizospheres/pore linings	___ Moss trim lines	___ Sediment deposits
___ Thin muck surfaces	___ Presence of reduced iron	___ Surface soil cracks
___ Plants with air-filled tissue (aerenchyma)	___ Woody plants with adventitious roots	___ Sparsely vegetated concave surface
___ Plants with polymorphic leaves	___ Trees with shallow root systems	___ Microtopographic relief
___ Plants with floating leaves	___ Woody plants with enlarged lenticels	___ Geographic position (depression, toe of slope, fringing lowland)
___ Hydrogen sulfide odor		

Remarks (describe recorded data from stream gauge, monitoring well, aerial photos, previous inspections, if available):

This form is only for BVW delineations. Other wetland resource areas may be present and should be delineated according to the applicable regulatory provisions.

Sampling Point GCAA6

VEGETATION – Use both common and scientific names of plants.

Tree Stratum Plot size 30'

	Common Name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)	% Dominant
1	Eastern White Pine	Pinus strobus	FACU	63.0%	X		85.7%
2	Northern White Oak	Quercus alba	FACU	10.5%			14.3%
3							
4							
5							
6							
7							
8							
9							

73.5% =Total Cover

Shrub/Sapling Stratum Plot size 15'

	Common Name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)	% Dominant
1	Northern White Oak	Quercus alba	FACU	10.5%	X		28.0%
2	Eastern White Pine	Pinus strobus	FACU	10.5%	X		28.0%
3	Black Huckleberry	Gaylussacia baccata	FACU	10.5%	X		28.0%
4	Northern Red Oak	Quercus rubra	FACU	3.0%			8.0%
5	Green brier	Smilax rotundifolia	FAC	3.0%		X	8.0%
6							
7							
8							
9							

37.5% =Total Cover

Herb Stratum Plot size 5'

	Common Name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)	% Dominant
1	Princess-Pine	Dendrolycopodium obscurum	FACU	10.5%	X		63.6%
2	Hay-Scented Fern	Dennstaedtia punctilobula	UPL	3.0%			18.2%
3	Cinnamon Fern	Osmundastrum cinnamomeum	FACW	3.0%		X	18.2%
4							
5							
6							
7							
8							
9							
10							
11							
12							

16.5% =Total Cover

VEGETATION – continued.

Woody Vine Stratum	Plot size 30'						
	Common Name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)	% Dominant
1							
2							
3							
4							
				0.0%	=Total Cover		

Rapid Test:	Do all dominant species have an indicator status of OBL or FACW?			Yes		No	X
Dominance Test:	Number of dominant species	Number of dominant species that are wetland indicator plants		Do wetland indicator plants make up ≥ 50% of dominant plant species?			
	5	0		Yes		No	X
Prevalence Index:		Total % Cover (all strata)	Multiply by:	Result			
	OBL species	0%	x1	=	0%		
	FACW species	3%	x2	=	6%		
	FAC species	3%	x3	=	9%		
	FACU species	119%	x4	=	474%		
	UPL species	3%	x5	=	15%		
	Column Totals (A)	128%		(B)	504%		
	Prevalence Index	B/A=	3.95	Is the Prevalence Index ≤ 3.0?			
				Yes		No	X
Wetland vegetation criterion met?	**Yes**	**No**	**X**				

Definitions of Vegetation Strata

Tree	Woody plants 3 in. (7.62 cm) or more in diameter at breast height (DBH), regardless of height
Shrub/Sapling	Woody plants less than 3 in. (7.62 cm) DBH and greater than or equal to 3.3 ft. (1 m) tall
Herb	All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.3 ft. (1 m) tall
Woody vines	All woody vines greater than 3.3 ft. (1 m) in height

Cover Ranges	
Range	Midpoint
1-5 %	3.00%
6-15 %	10.50%
15-25 %	20.50%
26-50 %	38.00%
51-75 %	63.00%
76-95 %	85.50%
96-100 %	98.00%

Sampling Point GCAA6

SOIL

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]	Location[2]	Texture	Remarks
0-3"	10YR3/4	100					FSL	
3-12"	10YR5/6	100					FSL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators (Check all that apply)

- ___ 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)
- ___ Dark Surface (S7)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F7)
- ___ Depleted Dark Surface (F8)

Indicators for Problematic Hydric Soils

- ___ 2 cm Muck (A10)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Mesic Spodic (A17)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Include Explanation in Remarks)

Restrictive Layer (if observed) Type: Rock Depth (inches): 12

Remarks

Hydric Soils criterion met? Yes No X

DOWNGRADIENT

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? (If yes, explain in Remarks)
Are Vegetation _____ , Soil _____ , or Hydrology _____ naturally problematic? (If yes, explain in Remarks)

SUMMARY OF FINDINGS – Attach site map and photograph log showing sampling locations, transects, etc

Wetland vegetation criterion met?	Yes X	No	Is the Sampled Area within a Wetland?	Yes X	No
Hydric Soils criterion met?	Yes X	No			
Wetlands hydrology present?	Yes X	No			

Remarks, Photo Details, Flagging, etc.:

HYDROLOGY

Field Observations:					
Surface Water Present?	Yes		No X	Depth (in)	
Water Table Present?	Yes X		No	Depth (in)	8"
Saturation Present (including capillary fringe)?	Yes		No X	Depth (in)	

Wetland Hydrology Indicators

Reliable Indicators of Wetlands	Indicators that can be Reliable with	Indicators of the Influence of Water
X Water-stained leaves	X Hydrological records	X Direct observation of inundation
Evidence of aquatic fauna	X Free water in a soil test hole	Drainage patterns
X Iron deposits	X Saturated soil	Drift lines
Algal mats or crusts	X Water marks	Scoured areas
Oxidized rhizospheres/pore linings	X Moss trim lines	Sediment deposits
Thin muck surfaces	X Presence of reduced iron	Surface soil cracks
Plants with air-filled tissue	Woody plants with adventitious	Sparsely vegetated concave
(aerenchyma)	roots	surface
Plants with polymorphic leaves	Trees with shallow root systems	Microtopographic relief
Plants with floating leaves	Woody plants with enlarged lenticels	X Geographic position (depression,
Hydrogen sulfide odor		toe of slope, fringing lowland)

Remarks (describe recorded data from stream gauge, monitoring well, aerial photos, previous inspections, if available):

This form is only for BVW delineations. Other wetland resource areas may be present and should be delineated according to the applicable regulatory provisions.

Sampling Point GCAA6

VEGETATION – Use both common and scientific names of plants.

Tree Stratum Plot size 30'

	Common Name	Scientific name	Indicator	Absolute %	Dominant?	Wetland Indictor?	% Dominant
1	Red Maple	Acer rubrum	FAC	20.5%	X	X	87.2%
2	Eastern White Pine	Pinus strobus	FACU	3.0%			12.8%
3							
4							
5							
6							
7							
8							
9							

23.5% =Total Cover

Shrub/Sapling Stratum Plot size 15'

	Common Name	Scientific name	Indicator	Absolute %	Dominant?	Wetland Indictor?	% Dominant
1	Highbush Blueberry	Vaccinium corymbosum	FACW	38.0%	X	X	65.0%
2	Sweet Pepperbush	Clethra alnifolia	FAC	20.5%	X	X	35.0%
3							
4							
5							
6							
7							
8							
9							

58.5% =Total Cover

Herb Stratum Plot size 5'

	Common Name	Scientific name	Indicator	Absolute %	Dominant?	Wetland Indictor?	% Dominant
1	Cinnamon Fern	Osmundastrum cinnamomeum	FACW	20.5%	X	X	87.2%
2	Royal Fern	Osmunda spectabilis	OBL	3.0%		X	12.8%
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

23.5% =Total Cover

VEGETATION – continued.

Woody Vine Stratum	Plot size 30'						
	Common Name	Scientific name	Indicator	Absolute %	Dominant?	Wetland Indictor?.	% Dominant
1							
2							
3							
4							
				0.0%	=Total Cover		

Rapid Test:	Do all dominant species have an indicator status of OBL or FACW?			Yes X	No	
Dominance Test:	Number of dominant species	Number of dominant species that are		Do wetland indicator plants make		
	4	4		Yes X	No	
Prevalence Index:		Total % Cover	Multiply by:	Result		
	OBL species	3%	x1	=	3%	
	FACW species	59%	x2	=	117%	
	FAC species	41%	x3	=	123%	
	FACU species	3%	x4	=	12%	
	UPL species	0%	x5	=	0%	
	Column Totals (A)	106%		(B)	255%	
	Prevalence Index	B/A=	2.42	Is the Prevalence Index ≤ 3.0?		
				Yes X	No	
Wetland vegetation criterion met?	**Yes X**	**No**				

Definitions of Vegetation Strata

Tree	Woody plants 3 in. (7.62 cm) or more in diameter at breast height (DBH), regardless of height
Shrub/Sapling	Woody plants less than 3 in. (7.62 cm) DBH and greater than or equal to 3.3 ft. (1 m) tall
Herb	All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.3 ft. (1 m) tall
Woody vines	All woody vines greater than 3.3 ft. (1 m) in height

Cover Ranges	
Range	Midpoint
1-5 %	3.00%
6-15 %	10.50%
15-25 %	20.50%
26-50 %	38.00%
51-75 %	63.00%
76-95 %	85.50%
96-100 %	98.00%

Sampling Point GCAA6

SOIL

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]	Location[2]	Texture	Remarks
0-5"	10YR2/2	100					Organic Muck	
5-8"	10YR4/2	100					FSL	
8-14"	10YR6/4	90	7.5YR7/8	10	C=Concentration	M=Matrix	FSL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators (Check all that apply)		**Indicators for Problematic Hydric Soils**
___ Histosol (A1)	___ Sandy Redox (S5)	___ 2 cm Muck (A10)
___ Histic Epipedon (A2)	___ Stripped Matrix (S6)	___ 5 cm Mucky Peat or Peat (S3)
___ Black Histic (A3)	___ Polyvalue Below Surface (S8)	___ Dark Surface (S7)
___ Hydrogen Sulfide (A4)	___ Thin Dark Surface (S9)	___ Polyvalue Below Surface (S8)
___ Stratified Layers (A5)	___ Loamy Mucky Mineral (F1)	___ Thin Dark Surface (S9)
___ Depleted Below Dark Surface (A11)	___ Loamy Gleyed Matrix (F2)	___ Iron-Manganese Masses (F12)
___ Thick Dark Surface (A12)	___ Depleted Matrix (F3)	___ Mesic Spodic (A17)
___ Sandy Mucky Mineral (S1)	___ Redox Dark Surface (F7)	___ Red Parent Material (F21)
___ Sandy Gleyed Matrix (S4)	___ Depleted Dark Surface (F8)	___ Very Shallow Dark Surface (TF12)
___ Dark Surface (S7)		___ Other (Include Explanation in Remarks)

Restrictive Layer (if observed) Type: Rock Depth (inches): 14"

Remarks

Hydric Soils criterion met? Yes X **No**

BORDERING VEGETATED WETLAND DETERMINATION FORM

Project/Site:	Blackstone Street	City/Town: Bellingham	Sampling Date: 2/12/2025
Applicant/Owner:	Wall Street Development Corp.	Sampling Point or Zone: GCC11	
Investigator(s):	Tom Schutz, Kristina McEvoy	Latitude/Longitude: 42.0650, -71.4934	
Soil Map Unit Name:	Whitman fine sandy loam, 0 to 3 percent :	NWI or DEP Classification: Freshwater Forested/Shrub Wetland; Wooded S	

UPGRADIENT

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? (If yes, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If yes, explain in Remarks)

SUMMARY OF FINDINGS – Attach site map and photograph log showing sampling locations, transects, etc

Wetland vegetation criterion met?	Yes _____	No X	Is the Sampled Area within a Wetland?	Yes _____	No X
Hydric Soils criterion met?	Yes _____	No X			
Wetlands hydrology present?	Yes _____	No X			

Remarks, Photo Details, Flagging, etc.:

HYDROLOGY

Field Observations:				
Surface Water Present?	Yes	No	X	Depth (in)
Water Table Present?	Yes	No	X	Depth (in)
Saturation Present (including capillary fringe)?	Yes	No	X	Depth (in)

Wetland Hydrology Indicators

Reliable Indicators of Wetlands Hydrology	Indicators that can be Reliable with Proper Interpretation	Indicators of the Influence of Water
___ Water-stained leaves	___ Hydrological records	___ Direct observation of inundation
___ Evidence of aquatic fauna	___ Free water in a soil test hole	___ Drainage patterns
___ Iron deposits	___ Saturated soil	___ Drift lines
___ Algal mats or crusts	___ Water marks	___ Scoured areas
___ Oxidized rhizospheres/pore linings	___ Moss trim lines	___ Sediment deposits
___ Thin muck surfaces	___ Presence of reduced iron	___ Surface soil cracks
___ Plants with air-filled tissue (aerenchyma)	___ Woody plants with adventitious roots	___ Sparsely vegetated concave surface
___ Plants with polymorphic leaves	___ Trees with shallow root systems	___ Microtopographic relief
___ Plants with floating leaves	___ Woody plants with enlarged lenticels	___ Geographic position (depression, toe of slope, fringing lowland)
___ Hydrogen sulfide odor		

Remarks (describe recorded data from stream gauge, monitoring well, aerial photos, previous inspections, if available):

This form is only for BVW delineations. Other wetland resource areas may be present and should be delineated according to the applicable regulatory provisions.

Sampling Point GCC11

VEGETATION – Use both common and scientific names of plants.

Tree Stratum Plot size 30'

	Common Name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)	% Dominant
1	Eastern White Pine	Pinus strobus	FACU	20.5%	X		60.3%
2	Northern White Oak	Quercus alba	FACU	10.5%	X		30.9%
3	Red Maple	Acer rubrum	FAC	3.0%		X	8.8%
4							
5							
6							
7							
8							
9							

34.0% =Total Cover

Shrub/Sapling Stratum Plot size 15'

	Common Name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)	% Dominant
1	Eastern White Pine	Pinus strobus	FACU	20.5%	X		100.0%
2							
3							
4							
5							
6							
7							
8							
9							

20.5% =Total Cover

Herb Stratum Plot size 5'

	Common Name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)	% Dominant
1	Hay-Scented Fern	Dennstaedtia punctilobula	UPL	63.0%	X		85.7%
2	Eastern White Pine	Pinus strobus	FACU	10.5%			14.3%
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

73.5% =Total Cover

VEGETATION – continued.

Woody Vine Stratum Plot size 30'

	Common Name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)	% Dominant
1							
2							
3							
4							
				0.0%	=Total Cover		

Rapid Test:	Do all dominant species have an indicator status of OBL or FACW?			Yes		No	X
Dominance Test:	Number of dominant species	Number of dominant species that are wetland indicator plants		Do wetland indicator plants make up ≥ 50% of dominant plant species?			
	4	0		Yes		No	X
Prevalence Index:		Total % Cover (all strata)	Multiply by:	Result			
	OBL species	0%	x1	=	0%		
	FACW species	0%	x2	=	0%		
	FAC species	3%	x3	=	9%		
	FACU species	62%	x4	=	248%		
	UPL species	63%	x5	=	315%		
	Column Totals (A)	128%		(B)	572%		
	Prevalence Index	B/A=	4.47	Is the Prevalence Index ≤ 3.0?			
				Yes		No	X
Wetland vegetation criterion met?	**Yes**	**No**	X				

Definitions of Vegetation Strata

Tree	Woody plants 3 in. (7.62 cm) or more in diameter at breast height (DBH), regardless of height
Shrub/Sapling	Woody plants less than 3 in. (7.62 cm) DBH and greater than or equal to 3.3 ft. (1 m) tall
Herb	All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.3 ft. (1 m) tall
Woody vines	All woody vines greater than 3.3 ft. (1 m) in height

Cover Ranges	
Range	Midpoint
1-5 %	3.00%
6-15 %	10.50%
15-25 %	20.50%
26-50 %	38.00%
51-75 %	63.00%
76-95 %	85.50%
96-100 %	98.00%

Sampling Point GCC11

SOIL

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]	Location[2]	Texture	Remarks
0-6"	10YR3/3	100					FSL	
6-14"	10YR4/6	100					FSL	Mixed with Gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators (Check all that apply)

- ___ 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)
- ___ Dark Surface (S7)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F7)
- ___ Depleted Dark Surface (F8)

Indicators for Problematic Hydric Soils

- ___ 2 cm Muck (A10)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Mesic Spodic (A17)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Include Explanation in Remarks)

Restrictive Layer (if observed) Type: Rock Depth (inches): 14

Remarks

Hydric Soils criterion met? Yes No X

DOWNGRADIENT

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? (If yes, explain in Remarks)
Are Vegetation _____ , Soil _____ , or Hydrology _____ naturally problematic? (If yes, explain in Remarks)

SUMMARY OF FINDINGS – Attach site map and photograph log showing sampling locations, transects, etc

Wetland vegetation criterion met?	Yes X	No	Is the Sampled Area within a Wetland?	Yes X	No
Hydric Soils criterion met?	Yes X	No			
Wetlands hydrology present?	Yes X	No			

Remarks, Photo Details, Flagging, etc.:

HYDROLOGY

Field Observations:			
Surface Water Present?	Yes	No X	Depth (in)
Water Table Present?	Yes	No X	Depth (in)
Saturation Present (including capillary fringe)?	Yes	No X	Depth (in)

Wetland Hydrology Indicators		
Reliable Indicators of Wetlands	Indicators that can be Reliable with	Indicators of the Influence of Water
X Water-stained leaves	Hydrological records	Direct observation of inundation
Evidence of aquatic fauna	Free water in a soil test hole	Drainage patterns
Iron deposits	X Saturated soil	Drift lines
Algal mats or crusts	X Water marks	Scoured areas
Oxidized rhizospheres/pore linings	X Moss trim lines	Sediment deposits
Thin muck surfaces	Presence of reduced iron	Surface soil cracks
Plants with air-filled tissue	X Woody plants with adventitious	Sparsely vegetated concave
(aerenchyma)	roots	surface
Plants with polymorphic leaves	Trees with shallow root systems	Microtopographic relief
Plants with floating leaves	Woody plants with enlarged lenticels	X Geographic position (depression,
Hydrogen sulfide odor		toe of slope, fringing lowland)

Remarks (describe recorded data from stream gauge, monitoring well, aerial photos, previous inspections, if available):

This form is only for BVW delineations. Other wetland resource areas may be present and should be delineated according to the applicable regulatory provisions.

Sampling Point GCC11

VEGETATION – Use both common and scientific names of plants.

Tree Stratum Plot size 30'

	Common Name	Scientific name	Indicator	Absolute %	Dominant?	Wetland Indictor?	% Dominant
1	Red Maple	Acer rubrum	FAC	10.5%	X	X	77.8%
2	Northern White Oak	Quercus alba	FACU	3.0%	X		22.2%
3							
4							
5							
6							
7							
8							
9							

13.5% =Total Cover

Shrub/Sapling Stratum Plot size 15'

	Common Name	Scientific name	Indicator	Absolute %	Dominant?	Wetland Indictor?	% Dominant
1	Highbush Blueberry	Vaccinium corymbosum	FACW	10.5%	X	X	100.0%
2							
3							
4							
5							
6							
7							
8							
9							

10.5% =Total Cover

Herb Stratum Plot size 5'

	Common Name	Scientific name	Indicator	Absolute %	Dominant?	Wetland Indictor?	% Dominant
1	Sedges	Carex spp.	FACW	20.5%	X	X	51.3%
2	Cottongrass Bulrush	Scirpus cyperinus	OBL	10.5%	X	X	26.3%
3	False Nettle	Boehmeria cylindrica	OBL	3.0%		X	7.5%
4	Cinnamon Fern	Osmundastrum cinnamomeum	FACW	3.0%		X	7.5%
5	Wrinkle-Leaf Goldenrod	Solidago rugosa	FAC	3.0%		X	7.5%
6							
7							
8							
9							
10							
11							
12							

40.0% =Total Cover

VEGETATION – continued.

Woody Vine Stratum	Plot size 30'						
	Common Name	Scientific name	Indicator	Absolute %	Dominant?	Wetland Indictor?	% Dominant
1							
2							
3							
4							
				0.0%	=Total Cover		

Rapid Test:	Do all dominant species have an indicator status of OBL or FACW?			Yes		No	X
Dominance Test:	Number of dominant species	Number of dominant species that are		Do wetland indicator plants make			
	5	4		Yes X No			
Prevalence Index:		Total % Cover	Multiply by:	Result			
	OBL species	14%	x1	=	14%		
	FACW species	34%	x2	=	68%		
	FAC species	14%	x3	=	41%		
	FACU species	3%	x4	=	12%		
	UPL species	0%	x5	=	0%		
	Column Totals (A)	64%		(B)	134%		
	Prevalence Index	B/A=	2.09	Is the Prevalence Index ≤ 3.0?			
				Yes X No			
Wetland vegetation criterion met?	**Yes X No**						

Definitions of Vegetation Strata

Tree	Woody plants 3 in. (7.62 cm) or more in diameter at breast height (DBH), regardless of height
Shrub/Sapling	Woody plants less than 3 in. (7.62 cm) DBH and greater than or equal to 3.3 ft. (1 m) tall
Herb	All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.3 ft. (1 m) tall
Woody vines	All woody vines greater than 3.3 ft. (1 m) in height

Cover Ranges	
Range	Midpoint
1-5 %	3.00%
6-15 %	10.50%
15-25 %	20.50%
26-50 %	38.00%
51-75 %	63.00%
76-95 %	85.50%
96-100 %	98.00%

Sampling Point GCC11

SOIL

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]	Location[2]	Texture	Remarks
0-12"	10YR2/1	100					Muck	Organic
12-16"	10YR5/2	100					FSL	Mixed with Gravel

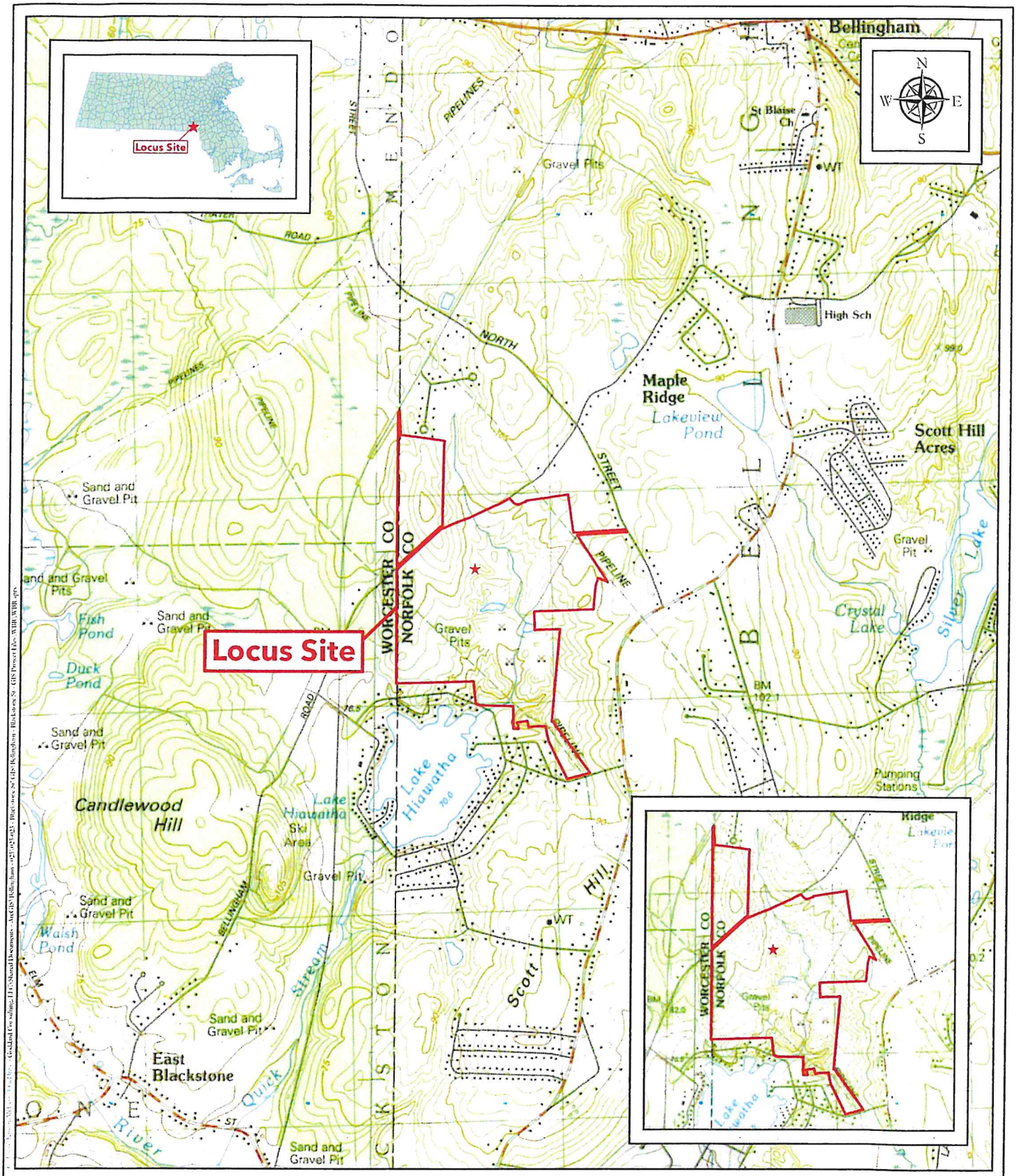
[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators (Check all that apply)		**Indicators for Problematic Hydric Soils**
___ Histosol (A1)	___ Sandy Redox (S5)	___ 2 cm Muck (A10)
___ Histic Epipedon (A2)	___ Stripped Matrix (S6)	___ 5 cm Mucky Peat or Peat (S3)
___ Black Histic (A3)	___ Polyvalue Below Surface (S8)	___ Dark Surface (S7)
___ Hydrogen Sulfide (A4)	___ Thin Dark Surface (S9)	___ Polyvalue Below Surface (S8)
___ Stratified Layers (A5)	___ Loamy Mucky Mineral (F1)	___ Thin Dark Surface (S9)
X Depleted Below Dark Surface (A11)	___ Loamy Gleyed Matrix (F2)	___ Iron-Manganese Masses (F12)
X Thick Dark Surface (A12)	X Depleted Matrix (F3)	___ Mesic Spodic (A17)
___ Sandy Mucky Mineral (S1)	___ Redox Dark Surface (F7)	___ Red Parent Material (F21)
___ Sandy Gleyed Matrix (S4)	___ Depleted Dark Surface (F8)	___ Very Shallow Dark Surface (TF12)
___ Dark Surface (S7)		___ Other (Include Explanation in Remarks)

Restrictive Layer (if observed) Type: Rock Depth (inches): 16

Remarks

Hydric Soils criterion met? **Yes** X **No**



GODDARD CONSULTING
Strategic Ecological Consulting

USGS of Locus Site

0 1,000 2,000 Feet 1" = 2,000'

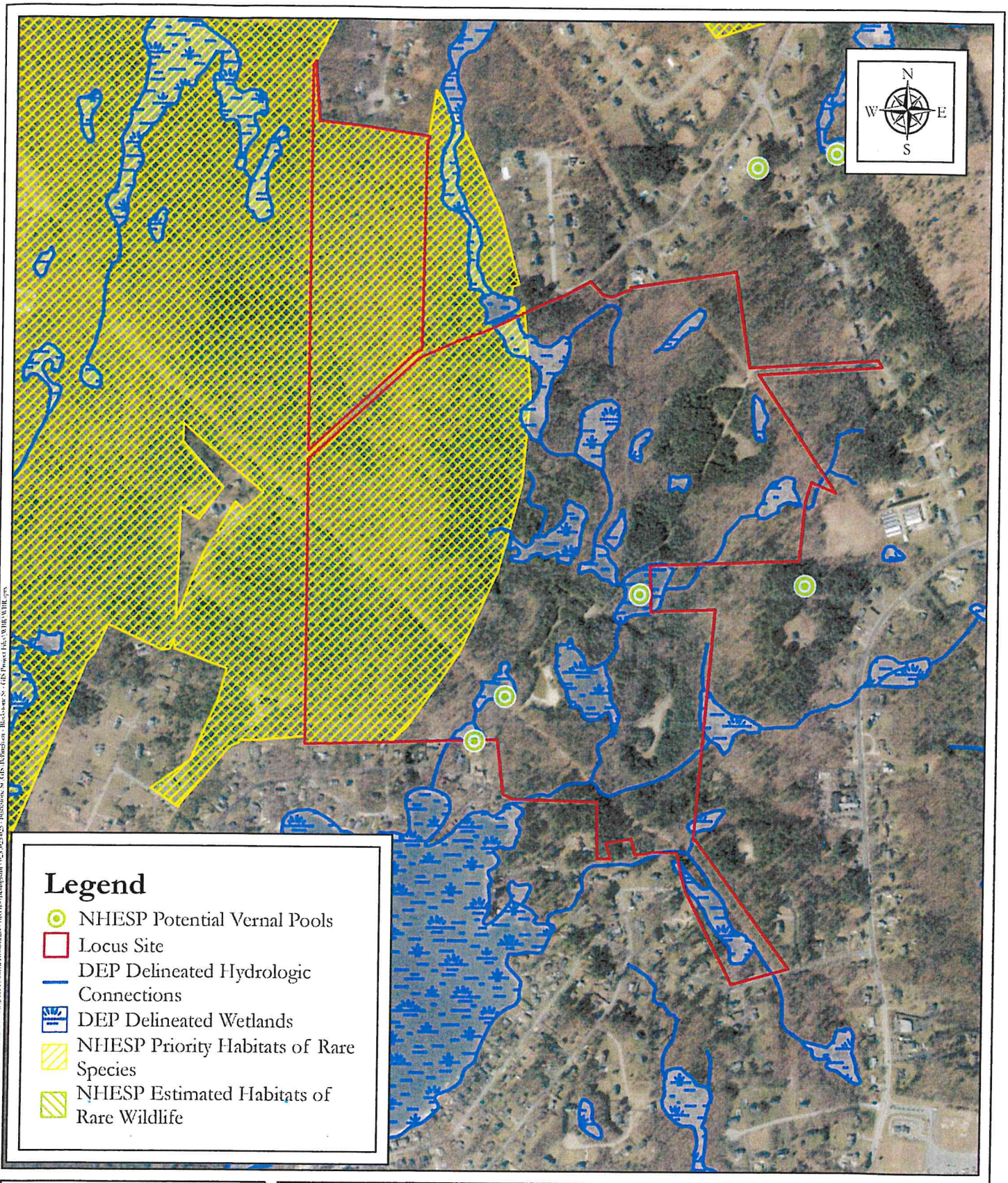
71.4915522°W, 42.0625708°N

Date: 02/12/2025

Blackstone Street
Bellingham, MA 02019

Parcel ID: 62-1, 62-5, 66-1, 19-7

Figure 1



GODDARD CONSULTING
Strategic Ecological Consulting

Orthophoto of Locus Site

0 400 800 Feet 1" = 800'

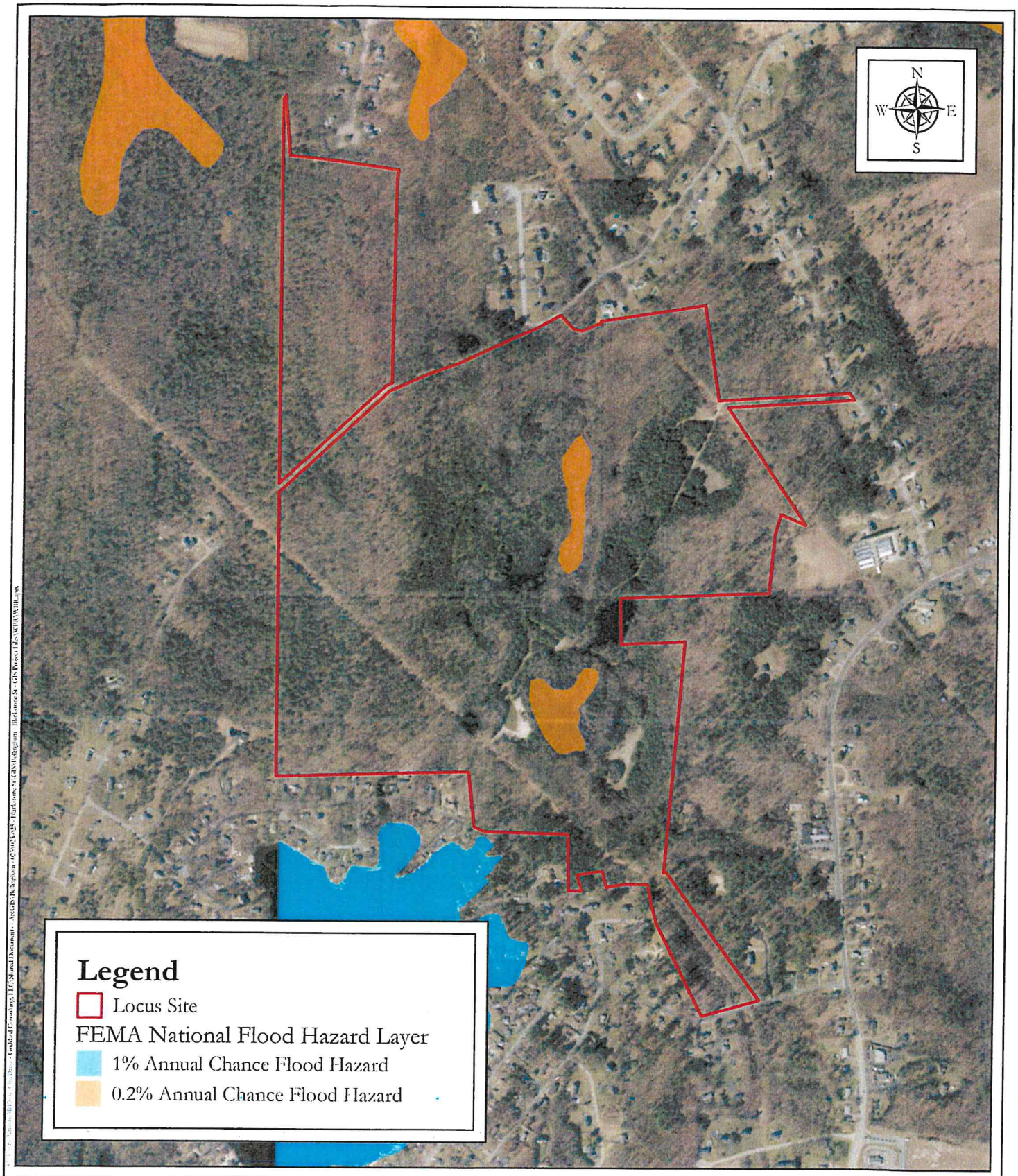
71.4937286°W, 42.0613118°N

Date: 02/12/2025

Blackstone Street
Bellingham, MA 02019

Parcel ID: 62-1, 62-5, 66-1, 19-7

Figure 2



GODDARD CONSULTING
Strategic Ecological Consulting

FEMA Flood Map of Locus Site

Blackstone Street
Bellingham, MA 02019

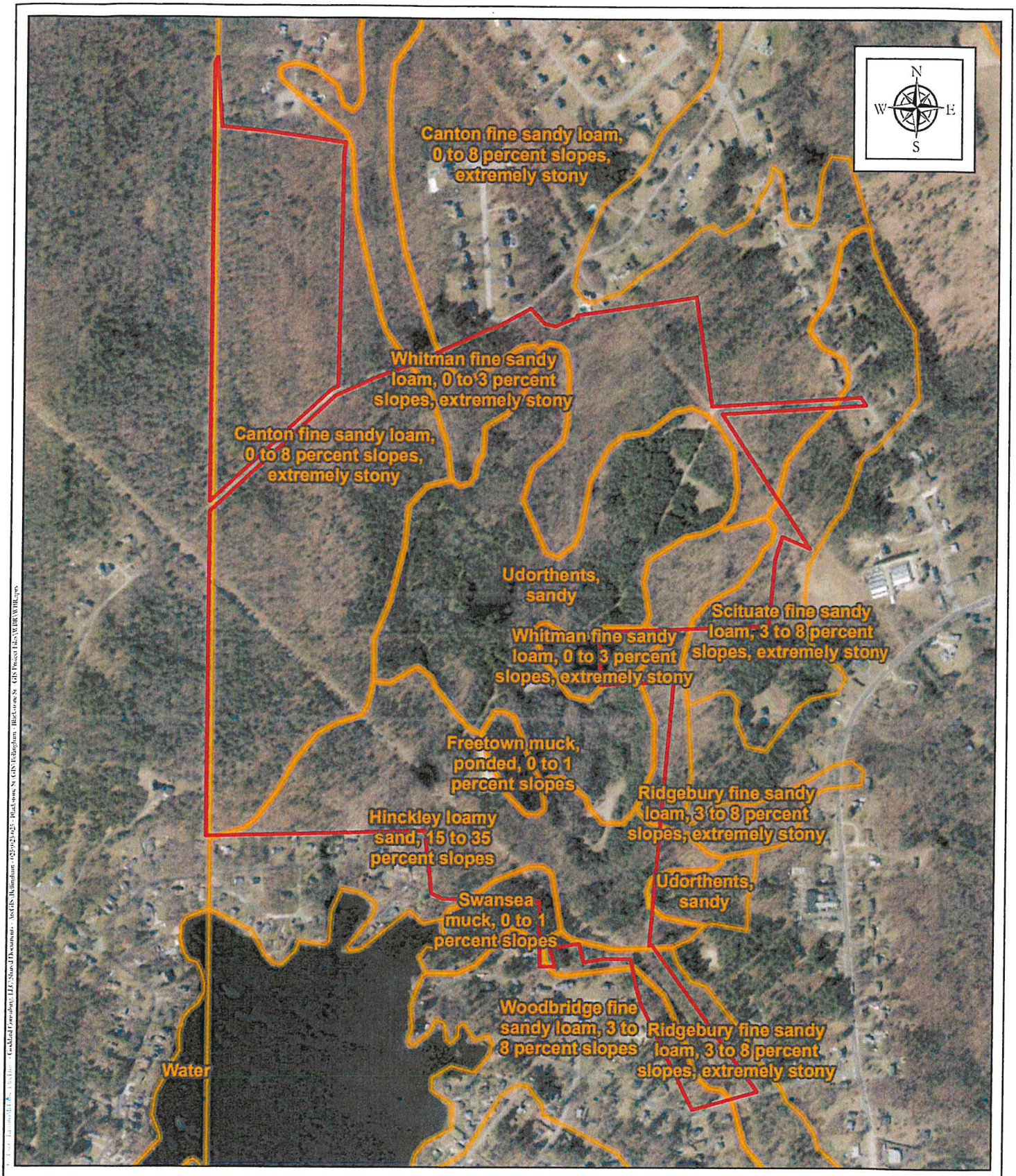
Date: 02/12/2025

0 400 800 Feet 1" = 800'

71.4927789°W, 42.0619128°N

Parcel ID: 62-1, 62-5, 66-1, 19-7

Figure 3



GODDARD CONSULTING
Strategic Ecological Consulting

NRCS Soil Survey of Locus Site

Blackstone Street
Bellingham, MA 02019

Date: 02/12/2025

0 350 700 Feet 1" = 700'

71.4920552°W, 42.0624315°N

Parcel ID: 62-1, 62-5, 66-1, 19-7

Figure 4

Soil Map—Norfolk and Suffolk Counties, Massachusetts; and Worcester County, Massachusetts, Southern Part

Map Scale: 1:11,300 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 150 300 600 900

Feet: 0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

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 1:25,000.

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: Norfolk and Suffolk Counties, Massachusetts
Survey Area Data: Version 20, Aug 27, 2024

Soil Survey Area: Worcester County, Massachusetts, Southern Part
Survey Area Data: Version 17, Aug 27, 2024

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

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

Date(s) aerial images were photographed: May 22, 2022—Jun 5, 2022

MAP LEGEND

MAP INFORMATION

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
1	Water	34.8	5.5%
10	Scarboro and Birdsall soils, 0 to 3 percent slopes	3.9	0.6%
51	Swansea muck, 0 to 1 percent slopes	5.5	0.9%
53	Freetown muck, ponded, 0 to 1 percent slopes	2.5	0.4%
71B	Ridgebury fine sandy loam, 3 to 8 percent slopes, extremely stony	28.4	4.5%
73A	Whitman fine sandy loam, 0 to 3 percent slopes, extremely stony	19.5	3.1%
245C	Hinckley loamy sand, 8 to 15 percent slopes	5.1	0.8%
253D	Hinckley loamy sand, 15 to 35 percent slopes	51.1	8.0%
254B	Merrimac fine sandy loam, 3 to 8 percent slopes	3.5	0.5%
300B	Montauk fine sandy loam, 3 to 8 percent slopes	11.6	1.8%
302B	Montauk fine sandy loam, 0 to 8 percent slopes, extremely stony	3.0	0.5%
302C	Montauk fine sandy loam, 8 to 15 percent slopes, extremely stony	25.8	4.1%
310B	Woodbridge fine sandy loam, 3 to 8 percent slopes	29.5	4.6%
315B	Scituate fine sandy loam, 3 to 8 percent slopes	2.7	0.4%
317B	Scituate fine sandy loam, 3 to 8 percent slopes, extremely stony	32.2	5.1%
420B	Canton fine sandy loam, 3 to 8 percent slopes	19.3	3.0%
422B	Canton fine sandy loam, 0 to 8 percent slopes, extremely stony	164.1	25.8%
653	Udorthents, sandy	59.0	9.3%
Subtotals for Soil Survey Area		**501.6**	**78.8%**
Totals for Area of Interest		**636.5**	**100.0%**

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1	Water	4.7	0.7%
73A	Whitman fine sandy loam, 0 to 3 percent slopes, extremely stony	3.9	0.6%
245B	Hinckley loamy sand, 3 to 8 percent slopes	16.6	2.6%
245E	Hinckley loamy sand, 15 to 35 percent slopes	9.4	1.5%
420B	Canton fine sandy loam, 3 to 8 percent slopes	0.0	0.0%
422B	Canton fine sandy loam, 0 to 8 percent slopes, extremely stony	84.5	13.3%
600	Pits, gravel	15.7	2.5%
Subtotals for Soil Survey Area		**134.8**	**21.2%**
Totals for Area of Interest		**636.5**	**100.0%**