



TRUDELL
Environmental Services

September 28, 2016

Vermont Department of Environmental Conservation
Watershed Management
1 National Life
Main Bldg., 2nd Fl.
Montpelier, VT 05620

Subject: Jordan Wyckoff Vermont Wetland Permit Application – TCE Project#14-126

Dear Ms. Morrison:

Trudell Consulting Engineers (TCE) was asked by Jordan Wyckoff (106 Cherry Tree Lane, Cambridge, VT 05444) to prepare a Vermont Wetland Permit Application for Class II wetland buffer impacts associated with construction of his house and garage. This permit is after-the-fact as the construction of these structures has already occurred.

Approximately 7,249 sf of wetland buffer impacts are associated with site grading and fill associated with the original site construction of the two buildings (3-bedroom single family home and a garage with attached apartment). Impacts were calculated based on the classification and guidance email you sent us following our 8/30/2016, following our June 15, 2016 site visit. Restoration in the form of tree plantings, shrub plantings, and a "no mow zones" is proposed. A wooden split rail fence will permanently demarcate the limits of the "no-mow zone". Please refer to the attached Wetland Buffer Restoration Plan for additional details.

Please review the submitted Vermont Individual Wetland Permit Application, and supporting information. Should you have any questions, please do not hesitate to contact me directly.

Regards,

Karina Dailey
Environmental Scientist, PWS

cc: Vermont Land Design and Jordan Wyckoff

Enclosed: Site Plans and Wetland IP Application and supporting information

Vermont Wetlands Program Permit Application Database Form

Under Sections 8 and 9
of the Vermont Wetland Rules



Application Submittal Instructions
<ul style="list-style-type: none"> ■ If submitting via US post, include a check in the correct fee amount made payable to the "State of Vermont," and a CD for applications that contain large files (1 MB or greater). <div style="margin-left: 40px;"> Mail to: Vermont Wetlands Program Watershed Management Division One National Life Drive, Main 2 Montpelier, VT 05620-3522 </div> ■ Applications can also be submitted via email to the following address: anr.wsmdwetlands@vermont.gov <ul style="list-style-type: none"> ■ If submitting via email, please mail a check in the correct fee amount, made payable to the "State of Vermont," and a copy of the Vermont Wetlands Program Application Database Form (this page) to the address provided above. It is not necessary to mail in a copy of the complete application.

Applicant Name: <i>Jordan Wyckoff</i>	Application Preparer Name: <i>Karina Dailey</i>
Town where project is located: <i>Cambridge</i>	County: <i>Lamoille</i>
Span#: <i>13-01-75.01</i>	Vermont Wetlands Project (VWP)# if Known:
Project Location Description: <i>106 and 107 Cherry Tree Lane, Cambridge, VT</i> <i>911 street address or direction from nearest intersection</i>	
Brief Project Summary: <i>After the fact permitting for wetland buffer encroachments associated with house and garage construction.</i>	
Application Type: <input type="checkbox"/> Individual Permit (multiple wetlands) <input type="checkbox"/> After the Fact Permit <input type="checkbox"/> Wetland Determination <input checked="" type="checkbox"/> Individual Permit (single wetland) <input type="checkbox"/> General Permit Coverage Authorization <input type="checkbox"/> Permit Amendment: VWP Project # _____	
Existing Land Use Type(s): <i>(Check all that apply)</i> <input type="checkbox"/> Residential (single family) <input checked="" type="checkbox"/> Residential (subdivision) <input type="checkbox"/> Undeveloped <input type="checkbox"/> Agriculture <input type="checkbox"/> Transportation <input type="checkbox"/> Forestry <input type="checkbox"/> Parks/Rec/Trail <input type="checkbox"/> Institutional <input type="checkbox"/> Industrial/Commercial	
Proposed Land Use Type(s): <i>(Check all that apply)</i> <input type="checkbox"/> Residential (single family) <input checked="" type="checkbox"/> Residential (subdivision) <input type="checkbox"/> Undeveloped <input type="checkbox"/> Agriculture <input type="checkbox"/> Transportation <input type="checkbox"/> Forestry <input type="checkbox"/> Parks/Rec/Trail <input type="checkbox"/> Institutional <input type="checkbox"/> Industrial/Commercial	
Proposed Impact Type(s): <i>(Check all that apply)</i> <input checked="" type="checkbox"/> Buildings <input type="checkbox"/> Utilities <input type="checkbox"/> Parking <input type="checkbox"/> Septic/Well <input type="checkbox"/> Stormwater <input type="checkbox"/> Driveway <input type="checkbox"/> Park/Path <input type="checkbox"/> Agriculture <input type="checkbox"/> Pond <input type="checkbox"/> Lawn <input type="checkbox"/> Dry Hydrant <input type="checkbox"/> Beaver Dam Alteration <input type="checkbox"/> Silviculture <input type="checkbox"/> Road <input type="checkbox"/> Aesthetics <input type="checkbox"/> No Impact <input type="checkbox"/> Other: _____	
Wetland and Buffer Impact Type: <i>(Check all that apply)</i> <input type="checkbox"/> Dredge <input type="checkbox"/> Drain <input checked="" type="checkbox"/> Cut Vegetation <input type="checkbox"/> Stormwater <input checked="" type="checkbox"/> Trench/Fill <input type="checkbox"/> Other: _____	
Wetland Delineation Date(s): <i>5/16/2016</i>	

Wetland Improvements	Buffer Zone Improvements	Reason for Improvements
Restoration: s.f.	Restoration: 6098 s.f.	<input checked="" type="checkbox"/> Correction of Violation
Creation: s.f.	Creation: s.f.	<input type="checkbox"/> To offset permit impacts
Enhancement: s.f.	Enhancement: s.f.	<input type="checkbox"/> Voluntary
Conservation: s.f.	Conservation: s.f.	

Wetland Impact Fee Calculations: <i>Round to the nearest square foot. Fees will auto-calculate.</i>		
Total Wetland Impact (minus linear clear, including ATF)	square feet (s.f.)	Wetland Impact Fee: (\$0.75/sf) \$ 0.00
Total Wetland Clearing (qualified linear projects only)	square feet (s.f.)	Wetland Clearing Fee: (\$0.25/sf) \$ 0.00
After The Fact Wetland Impact (to correct a violation)	square feet (s.f.)	After the Fact Wetland Fee: (0.75/sf) (Required for after the fact permit applications) \$ 0.00

Total Buffer Zone Impacts and Calculations: <i>Round to the nearest square foot</i>		
Total Buffer Zone Impact	7249 square feet (s.f.)	Buffer Impact Fee: (\$0.25/sf) \$ 1,812.25

Additional Fees	
Agricultural Crop Conversion <i>Check here:</i> <input type="checkbox"/> (Flat fee of \$200.00)	\$ 0.00
Minimum Application Fee: (\$50.00) <i>Required when total impact fee is less than \$50.00</i>	\$ 0.00
Administrative Fee:	\$ 240.00

Make Checks Payable to: State of Vermont	Total Check Amount:	\$ 2,052.25
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**Vermont Individual Wetland
Permit Application and
Determination Petition**
Under Sections 8 and 9
of the Vermont Wetland Rules



Applicant Information: <i>If the applicant is someone other than the landowner, the landowner information must be included below</i>			
Applicant Name: <u>Jordan Wyckoff</u>			
Address: <u>106 Cherry Tree Lane</u>		City/Town: <u>Cambridge</u>	State: <u>Vermont</u>
Phone Number: <u>802-299-5828</u>		Email Address: <u>wyckoff.jordan@gmail.com</u>	
Applicant Certification: By signing this application you are certifying that all of the information contained within is true, accurate, and complete to the best of your knowledge. Original signature is required.			
Applicant Signature: <u></u>		Date: <u>9/19/16</u>	

Landowner Information: <i>Landowner must sign the application. If landowner is different from the applicant this section must be filled out</i>			
<input checked="" type="checkbox"/> Check this box if landowner is the same as the applicant			
Landowner Name:			
Address:		City/Town:	State:
Phone Number:		Email Address:	
Landowner Easement: <i>Attach copies of any easements, agreements, or other documents conveying permission, and agreement with the landowner stating who will be responsible for meeting the terms and conditions of the permit. List the attachment for this information in this section. Describe the nature of the agreement or easement in the space provided below:</i>			
Landowner Certification: By signing this application you are certifying that all the information contained within is true, accurate, and complete to the best of your knowledge. Original signature is required.			
Landowner Signature: <u></u>		Date: <u>9/19/16</u>	

Application Preparer Information: <i>Consultant, engineer, or other representative that is responsible for filling out the application, if other than the applicant or landowner.</i>			
Application Preparer Name: <u>Karina Dailey</u>		Organization/Company: <u>TCE</u>	
Address: <u>478 Blair Park Road</u>		City/Town: <u>Williston</u>	State: <u>VT</u>
Phone Number: <u>8028796331</u>		Email Address:	
Application Preparer Certification: By signing this application you are certifying that all of the information contained within is true, accurate, and complete to the best of your knowledge. Original signature is required.			
Application Preparer Signature: <u></u>		Date: <u>9/16/16</u>	

Handwritten signatures are also accepted

<p>1. Location of wetland and project: <i>Location description should include the road the wetland is located on, the compass direction of the wetland in relation to the road, 911 street address if available, and any other distinguishing features.</i></p>

<p>2. Site visit date(s) and attendees: <i>A site visit is required before the application can be called complete</i></p>	
<p>2.1 Date of Visit(s) with State District Wetland Ecologist</p>	<p>2.2. List of people present for site visit(s) including Ecologist, landowner, and representatives.</p>

<p>3. Wetland Classification: <i>For multiple wetlands fill out the multiple wetlands table for sections 1 and 3 through 1</i></p>
<p>3.1. The wetland is a Class II wetland because :</p>
<p>3.2. Section 4.6 Presumption <i>If the wetland meets the Section 4.6 Presumption, it does so primarily because:</i></p>

<p>4. Description of the Entire Wetland: <i>Answer the following questions regarding the entire wetland, which includes all wetland areas connected to the wetland proposed for impact. Answers may be estimates based on desktop review when the wetland extends past the investigation area (parcel boundary). Specific questions about the wetland in the project area will follow. For multiple wetlands , fill out the multiple wetlands table.</i></p>
<p>4.1. Size of Complex in Acres: <i>The size of the complex can be obtained from the Wetland Inventory Map for mapped wetlands, or best estimation based on review of aerial photography or site visit. This is not the size of the of the delineated wetland on the subject property unless the entirety of the wetland is represented in the delineation.</i></p>
<p>4.2. Vegetation Cover Types Present: <i>List all wetland types in the wetland or wetland complex and their percent cover. For example: 50 acres of softwood forested swamp; or 30% scrub swamp, 70% emergent wetland</i></p>
<p>4.3. Landscape Position: <i>Where is the wetland located on the landscape? For example: Bottom of a basin, edge of a stream, shore of a lake, etc.</i></p>
<p>4.4. Hydrology: <i>Describe the main source of water for the entire wetland. List any river, stream, lakes, or ponds</i></p>
<p>4.4.1. Direction of Flow: <i>For example: Stream flows from north to south through the wetland complex, or the wetland drains generally to the southwest.</i></p>
<p>4.4.2. Influence of Hydrology on the Entire Wetland: <i>For example: The river provides floodwater to the wetland in the spring.</i></p>
<p>4.4.3. Relation of Entire Wetland to the Project Area: <i>The distance between the project area and any nearby surface waters</i></p>

<p>4.4.4. Entire Wetland Hydroperiod: <i>Discuss the frequency and duration of flooding, ponding, and/or soil saturation</i></p>
<p>4.5. Surrounding Landuse of the Entire Wetland: <i>For example: Rural residential and forested; Agricultural and undeveloped</i></p>
<p>4.6. Relation of the Entire Wetland to Other Nearby Wetlands: <i>Provide any information on wetlands or wetland complexes that are close enough to contribute to the overall function of the wetland in question.</i></p>
<p>4.7. Pre-project Cumulative Impacts to the Entire Wetland: <i>Identify any cumulative ongoing impacts outside of the proposed project that may influence the wetland. Examples include but are not limited to: Wetland encroachments on and off the subject property, land use management in or surrounding the wetland, or development that influences hydrology or water quality. List any past Vermont Wetland Permits or CUD's related to this property.</i></p>

<p>5. Description of Subject Wetland and Buffer: <i>Subject wetland is defined as the area of wetland in the project vicinity, but not limited to the portion of the wetland to be directly impacted by the project. For the purposes of this application, the subject wetland should encompass any portion of the wetland that could either be directly or indirectly impacted by the project, as defined by chemical, physical, or biological characteristics. This may include the entire wetland area, or wetland area off property. For multiple wetlands, fill out the multiple wetlands table.</i></p>
<p>5.1. Context of Subject Wetland: <i>Describe where the subject wetland is in the context of the entire wetland described in section 4 above. For example: Upslope, narrow eastern "finger", 400 ft. from open water portion.</i></p>
<p>5.2. Subject Wetland Land Use: <i>For example: Mowed lawn, old field, naturally vegetated. Describe any previous and ongoing disturbance in the subject wetland.</i></p>
<p>5.3. Subject Wetland Vegetation: <i>List dominant wetland vegetation cover type and associated dominant plant species.</i></p>
<p>5.4. Subject Wetland Soils: <i>Use the USDA NRCS information where possible and use the ACOE Delineation Manual soil description</i></p>
<p>5.5. Subject Wetland Hydrology: <i>Use the description from the ACOE Delineation Manual</i></p>

5.6. Buffer Zone: <i>Describe the buffer zone of the subject wetland (50 foot envelope of land adjacent to wetland boundary).</i>
5.6.1. Buffer Land Use: <i>For example: Mowed shoulder, forested, old field, paved road, and residential lawns, etc. Describe any previous and ongoing disturbance in the buffer zone.</i>
5.6.2. Buffer Vegetation: <i>List the vegetation cover type and dominant plant species.</i>
5.6.3. Buffer Soils: <i>Use USDA NRCS information where possible, and the ACOE Delineation Manual soil description.</i>

6. Entire Wetland Function and Value Summary (as defined in the Vermont Wetland Rules Section 5): <i>Check which functions are present in the entire wetland</i>	
<input type="checkbox"/> Flood/Storm Storage	<input type="checkbox"/> RTE Species
<input type="checkbox"/> Surface & Groundwater Protection	<input type="checkbox"/> Education & Research
<input type="checkbox"/> Fish Habitat	<input type="checkbox"/> Recreation/Economic
<input type="checkbox"/> Wildlife Habitat	<input type="checkbox"/> Open Space/Aesthetics
<input type="checkbox"/> Exemplary Natural Community	<input type="checkbox"/> Erosion Control

<p>Functions and Values: <i>For each function and value:</i></p> <ol style="list-style-type: none"> 1. Evaluate the entire wetland and check all that apply. Use Wetland Inventory Maps for offsite areas 2. Evaluate how the wetland in the project area contributes to the function. 3. Explain how the project will not result in adverse impacts to the function. <p style="padding-left: 20px;"><i>Include any information on specific avoidance and minimization measures.</i></p> <p style="padding-left: 20px;"><i>If more than one wetland complex is involved, provide a function and value checklist for each wetland complex. In addition fill out the Multiple Wetlands Table.</i></p>

7. Water Storage for Flood Water and Storm Runoff
<p><input type="checkbox"/> Function is present and likely to be significant: Any of the following physical and vegetative characteristics indicate the wetland provides this function</p> <ul style="list-style-type: none"> <input type="checkbox"/> Constricted outlet or no outlet and an unconstructed inlet. <input type="checkbox"/> Physical space for floodwater expansion and dense, persistent, emergent vegetation or dense woody vegetation that slows down flood waters or stormwater runoff during peak flows and facilitates water removal by evaporation and transpiration. <input type="checkbox"/> If a stream is present, it's course is sinuous and there is sufficient woody vegetation to intercept surface flows in the portion of the wetland that floods. <input type="checkbox"/> Physical evidence of seasonal flooding or ponding such as water stained leaves, water marks on trees, drift rows, debris deposits, or standing water. <input type="checkbox"/> Hydrologic or hydraulic study indicates wetland attenuates flooding <p>If any of the above boxes are checked, the wetland provides this function. Complete the following to determine if the wetland provides this function above or below a moderate level. If none of the following apply, the wetland provides this function at a moderate level.</p>

Water Storage for Flood Water and Storm Runoff Continued...

Check this box if any of the following conditions apply that may indicate the wetland provides this function at a **lower** level.

- Significant flood storage capacity upstream of the wetland, and the wetland in question provides this function at a negligible level in comparison to upstream storage (unless the upstream storage is temporary such as a beaver impoundment).
- Wetland is contiguous to a major lake or pond that provides storage benefits independently of the wetland.
- Wetland's storage capacity is created primarily by recent beaver dams or other temporary structures.
- Wetland is very small in size, not contiguous to a stream, and not part of a collection of small wetlands in the landscape that provide this function cumulatively.

Check this box if any of the following conditions apply that may indicate the wetland provides this function at a **higher** level.

- History of downstream flood damage to public or private property.
- Any of the following conditions present downstream of the wetland, but upstream of a major lake or pond, could be impacted by loss or reduction of the water storage function.
 - Developed public or private property
 - Stream banks susceptible to scouring and erosion
 - Important habitat for aquatic life
- The wetland is large in size and naturally vegetated.
- Any of the following conditions present downstream of the wetland, but upstream of a major lake or pond, could be impacted by a loss or reduction of the water storage function.
 - Developed public or private property.
 - Stream banks susceptible to scouring and erosion.
 - Important habitat for aquatic life.
- The wetland is large in size and naturally vegetated
- Any of the following conditions present upstream of the wetland may indicate a large volume of runoff may reach the wetland.
 - A large amount of impervious surface in urbanized areas.
 - Relatively impervious soils.
 - Steep slopes in the adjacent areas.

7.1 Subject Wetland Contribution to Water Storage:

Explain how the subject wetland contributes to the function listed above

7.2 Statement of No Undue Adverse Impact to Water Storage for Flood Water and Storm Runoff:

Explain how the proposed project will not result in any undue, adverse impact to this function. Include any avoidance, minimization, and compensation measures relevant to this function.

8. Surface and Ground Water Protection:

- Function is present and likely to be significant: Any of the following physical and vegetative characteristics indicate the wetland provides this function.
- Constricted or no outlets.
 - Low water velocity through dense, persistent vegetation.
 - Hydroperiod permanently flooded or saturated.
 - Wetlands in depositional environments with persistent vegetation wider than 20 feet.
 - Wetlands with persistent vegetation comprising a defined delta, island, bar or peninsula.
 - Presence of seeps or springs.
 - Wetland contains a high amount of microtopography that helps slow and filter surface water.
 - Position in the landscape indicates the wetland is a headwaters area.
 - Wetland is adjacent to surface waters.
 - Wetland recharges a drinking water source.
 - Water sampling indicates removal of pollutants or nutrients.
 - Water sampling indicates retention of sediments or organic matter.
 - Fine mineral soils and alkalinity not low.
 - The wetland provides an obvious filter between surface water or ground water and land uses that may contribute point or nonpoint sources of sediments, toxic substances or nutrients to the wetland, such as: steep erodible slopes; row crops; dumps; areas of pesticide, herbicide or fertilizer application; feed lots; parking lots or heavily traveled road; and septic systems.

If any of the above boxes are checked, the wetland provides this function. Complete the following to determine if the wetland provides this function above or below a moderate level. If none of the following apply, the wetland provides this function at a moderate level.

- Check this box if any of the following conditions apply that may indicate the wetland provides function at a **lower** level.
- Presence of dead forest or shrub areas in sufficient amounts to result in diminished nutrient uptake.
 - Presence of ditches or channels that confine water and restrict contact of water with vegetation.
 - Wetland is very small in size, not contiguous to a stream, and not part of a collection of small wetlands in the landscape that provide this function cumulatively.
 - Current use in the wetland results in disturbance that compromises this function.
- Check this box if any of the following conditions apply that may indicate the wetland provides function at a **higher** level.
- The wetland is adjacent to a well head or source protection area, and provides ground water recharge.
 - The wetland provides flows to Class A surface water. (Check ANR Atlas)
 - The wetland contributes to the protection or improvement of water quality of any impaired waters.
 - The wetland is large in size and naturally vegetated.

8.1. Subject Wetland Contribution to Water Protection:

Explain how the subject wetland contributes to the function listed above.

8.2. Statement of No Undue Adverse Impact to Surface and Ground Water Protection:

Explain how the proposed project will not result in any undue, adverse impact to this function. Include any avoidance, minimization, or compensation measures relevant to this function.

9. Fish Habitat:

- Function is present and likely to be significant: Any of the following physical and vegetative characteristics indicate the wetland provides this function.
 - Contains woody vegetation that overhangs the banks of a stream or river and provides any of the following: shading that controls summer water temperature; cover including refuges created by overhanging branches or undercut banks; source of terrestrial insects as fish food; or streambank stability.
 - Provides spawning, nursery, feeding or cover habitat for fish (documented or professionally judged). Common habitat includes deep marsh and shallow marsh associates with lakes and streams, and seasonally flooded wetlands associated with streams and rivers.
 - Documented or professionally judged spawning habitat for northern pike.
 - Provides cold spring discharge that lowers the temperature of receiving waters and creates summer habitat for salmonoid species.
 - The wetland is located along a tributary that does not support fish, but contributes to a larger body of water that does support fish. The tributary supports downstream fish by providing cooler water and food sources.

9.1. Subject Wetland Contribution to Fish Habitat:

Explain how the subject wetland contributes to the function listed above.

9.2. Statement of No Undue Adverse Impact to Fish Habitat:

Explain how the proposed project will not result in any undue, adverse impact to this function. Include any avoidance, minimization, or compensation measures relevant to this function.

10. Wildlife Habitat

- Function is present and likely to be significant: Any of the following physical and vegetative characteristics indicate the wetland provides this function.
- Provides resting, feeding staging or roosting habitat to support waterfowl migration, and feeding habitat for wading birds. Good habitats for these species include open water wetlands.
 - Habitat to support one or more breeding pairs or broods of waterfowl including all species of ducks, geese, and swans. Good habitats for these species include open water habitats adjacent shallow marsh, deep marsh, shrub wetland, forested wetland, or naturally vegetated buffer zone.
 - Provides a nest site, a buffer for a nest site or feeding habitat for wading birds including but not limited to: great blue heron, black-crowned night heron, green-backed heron, cattle egret, or snowy egret. Good habitats for these species include open water or deep marsh adjacent to forested wetlands, or standing dead trees.
 - Supports or has the habitat to support one or more breeding pairs of any migratory bird that requires wetland habitat for breeding, nesting, rearing of young, feeding, staging roosting, or migration, including: Virginia rail, common snipe, marsh wren, American bittern, northern water thrush, northern harrier, spruce grouse, Cerulean warbler, and common loon.
 - Supports winter habitat for white-tailed deer. Good habitats for this species include softwood swamps. Evidence of use includes browsing, bark stripping, worn trails, or pellet piles.
 - Provides important feeding habitat for black bear, bobcat, or moose based on an assessment of use. Good habitat for these types of species includes wetlands located in a forested mosaic.
 - Has the habitat to support muskrat, otter, or mink. Good habitats for these species include deep marshes, wetlands adjacent to bodies of water including lakes, ponds, rivers, and streams.
 - Supports an active beaver dam, one or more lodges, or evidence of use in two or more consecutive years by an adult beaver population.
 - Provides the following habitats that support the reproduction of uncommon Vermont amphibian species including:
 - Wood frog, Jefferson salamander, blue-spotted salamander, or spotted salamander. Breeding habitat for these species includes vernal pools and small ponds.
 - Northern dusky salamander and the spring salamander. Habitat for these species includes headwater seeps, springs, and streams.
 - The four-toed salamander, Fowler's toad, western or boreal chorus frog, or other amphibians, found in Vermont of similar significance.
 - Supports or has the habitat to support populations of Vermont amphibian species including, but not limited to, pickerel frog, northern leopard frog, mink frog, and others found in Vermont of similar significance. Good habitat for these types of species include large marsh systems with open water components.
 - Supports or has the habitat to support populations of uncommon Vermont reptile species including: wood turtle, northern map turtle, eastern musk turtle, spotted turtle, spiny softshell, eastern ribbonsnake, northern watersnake, and others found in Vermont of similar significance.
 - Supports or has the habitat to support significant populations of Vermont reptile species, including smooth greensnake, DeKay's brownsnake, or other more common wetland-associated species.
 - Meets four or more of the following conditions indicative of wildlife habitat diversity:
 - Three or more wetland vegetation classes (greater than 1/2 acre) present including but not

Wildlife Habitat Continued...

limited to: open water contiguous to, but not necessarily part of, the wetland, deep marsh, shallow marsh, shrub swamp, forested swamp, fen, or bog.

- The dominant vegetation class is one of the following types: deep marsh, shallow marsh, shrub swamp or, forested swamp.
- Located adjacent to a lake, pond, river or stream.
- Fifty percent or more of surrounding habitat type is one or more of the following: forest, agricultural land, old field or open land.
- Emergent or woody vegetation occupies 26 to 75 percent of wetland, the rest is open water.
- One of the following:
 - Hydrologically connected to other wetlands of different dominant classes or open water within 1 mile.
 - Hydrologically connected to other wetlands of same dominant class within 1/2 mile.
 - Within 1/4 mile of other wetlands of different dominant classes or open water, but not hydrologically connected.

Wetland or wetland complex is owned in whole or in part by state or federal government and managed for wildlife and habitat conservation.

Contains evidence that it is used by wetland dependent wildlife species

If any of the above boxes are checked, the wetland provides this function. Complete the following to determine if the wetland provides this function above or below a moderate level. If none of the following apply, the wetland provides this function at a moderate level.

Check box if any of the following conditions apply that may indicate the wetland provides this function at a **lower** level.

- The wetland is small in size for its type and does not represent fugitive habitat in developed areas (vernal pools and seeps are generally small in size, so this does not apply).
- The surrounding land use is densely developed enough to limit use by wildlife species (with the exception of wetlands with open water habitat). Can be negated by evidence of use.
- The current use in the wetland results in frequent cutting, mowing or other disturbance.
- The wetland hydrology and character is at a drier end of the scale and does not support wetland dependent species.

Check box if any of the following conditions apply that may indicate the wetland provides this function at a **higher** level.

- The wetland is large in size and high in quality.
- The habitat has the potential to support several species based on the assessment above.
- Wetland is associated with an important wildlife corridor.
- The wetland has been identified as a locally important wildlife habitat by an ANR Wildlife Biologist.

10.1. Subject Wetland Contribution to Wildlife Habitat Functions:

Explain how the subject wetland contributes to the function listed above.

10.2. Statement of No Undue Adverse Impact to Wildlife Habitat:

Explain how the proposed project will not result in any undue, adverse impact to this function. Include any avoidance, minimization, or compensation measures relevant to this function.

11. Exemplary Wetland Natural Community

Function is present and likely to be significant: Any of the following physical and vegetative characteristics indicate the wetland provides this function.

Wetlands that are identified as high quality examples of Vermont's natural community types recognized by the Natural Heritage Information Project of the Vermont Fish and Wildlife Department, including rare types such as dwarf shrub bogs, rich fens, alpine peatlands, red maple-black gum swamps and the more common types including deep bulrush marshes, cattail marshes, northern white cedar swamps, spruce-fir-tamarack swamps, and red maple-black ash seepage swamps are automatically significant for this function

The wetland is also likely to be significant if any of the following conditions are met:

Is an example of a wetland natural community type that has been identified and mapped by, or meets the ranking and mapping standards of, the Natural Heritage Information Project of the Vermont Fish and Wildlife Department.

Contains ecological features that contribute to Vermont's natural heritage, including, but not limited to:

- Deep peat accumulation reflecting a long history of wetland formation;
- Forested wetlands displaying very old trees and other old growth characteristics;
- A wetland natural community that is at the edge of the normal range for that type;
- A wetland mosaic containing examples of several to many wetland community types; or
- A large wetland complex containing examples of several wetland community types.

List species or communities of concern:

11.1. Subject Wetland Proximity to Exemplary Natural Communities

11.2. Statement of No Undue Adverse Impact to Exemplary Wetland Natural Community:

Explain how the proposed project will not result in any undue, adverse impact to this function. Include any avoidance, minimization, or compensation measures relevant to this function.

12. Rare, Threatened, and Endangered Species Habitat:

Function is present and likely to be significant: Any of the following physical and vegetative characteristics indicate the wetland provides this function.

Wetlands that contain one or more species on the federal or state threatened or endangered lists, as well as species that are rare in Vermont, are automatically significant for this function.

The wetland is also likely to be significant if any of the following apply:

There is credible documentation that the wetland provides important habitat for any species on the federal or state threatened or endangered species lists;

There is credible documentation that threatened or endangered species have been present in past 10 years;

There is credible documentation that the wetland provides important habitat for any species listed as rare in Vermont (S1 or S2 ranks), state historic (SH rank), or rare to uncommon globally (G1, G2, or G3 ranks) by the Natural Heritage Information Project of the Vermont Fish and Wildlife Department;

There is credible documentation that the wetland provides habitat for multiple uncommon species of plants or animals (S3 rank).

List name of species and ranking:

12.1. Subject Wetland Contribution to RTE Habitat:

Explain how the subject wetland contributes to the function listed above.

12.2 Statement of No Undue Adverse Impact to Rare, Threatened, or Endangered Species Habitat:

Explain how the proposed project will not result in any undue, adverse impact to this function. Include any avoidance, minimization, or compensation measures relevant to this function.

13. Education and Research in Natural Sciences:

- Function is present and likely to be significant: Any of the following characteristics indicate the wetland provides this function.
 - Owned by or leased to a public entity dedicated to education or research.
 - History of use for education or research.
 - Has one or more characteristics making it valuable for education or research.

13.1. Subject Wetland Education and Research Potential:

Explain how the subject wetland contributes to the function listed above.

13.2 Statement of No Undue Adverse Impact to Education and Research in Natural Sciences:

Explain how the proposed project will not result in any undue, adverse impact to this value. Include any avoidance, minimization, or compensation measures relevant to this value.

14. Recreational Value and Economic Benefits:

- Function is present and likely to be significant: Any of the following characteristics indicate the wetland provides this function.
 - Used for, or contributes to, recreational activities.
 - Provides economic benefits.
 - Provides important habitat for fish or wildlife which can be fished, hunted or trapped under applicable state law.
 - Used for harvesting of wild foods.

Comments:

14.1. Subject Wetland Recreational and Economic Value:

Explain how the subject wetland contributes to the value listed above.

14.2. Statement of No Undue Adverse Impact to Recreational Value and Economic Benefits:

Explain how the proposed project will not result in any undue, adverse impact to this value. Include any avoidance, minimization, or compensation measures relevant to this value.

15. Open Space and Aesthetics:

Function is present and likely to be significant: Any of the following physical and vegetative characteristics indicate the wetland provides this function.

- Can be readily observed by the public; and
 - Possesses special or unique aesthetic qualities; or
 - Has prominence as a distinct feature in the surrounding landscape;
- Has been identified as important open space in a municipal, regional or state plan.

Comments:

15.1. Subject Wetland Aesthetic Value:

Explain how the subject wetland contributes to the value listed above.

15.2. Statement of No Undue Adverse Impact to Open Space and Aesthetics:

Explain how the proposed project will not result in any undue, adverse impact to this value. Include any avoidance, minimization, or compensation measures relevant to this value.

16. Erosion Control Through Binding and Stabilizing

Function is present and likely to be significant: Any of the following physical and vegetative characteristics indicate the wetland provides this function.

- Erosive forces such as wave or current energy are present and any of the following are present as well:
 - Dense, persistent vegetation along a shoreline or stream bank that reduces an adjacent erosive force.
 - Good interspersion of persistent emergent vegetation and water along course of water flow.
 - Studies show that wetlands of similar size, vegetation type, and hydrology are important for erosion control.

What type of erosive forces are present?

- Lake fetch and waves
- High current velocities:
- Water level influenced by upstream impoundment

Erosion Control Through Binding and Stabilization Continued...

If any of the above boxes are checked, the wetland provides this function. Complete the following to determine if the wetland provides this function above or below a moderate level. If none of the following apply, the wetland provides this function at a moderate level.

- Check box if any of the following conditions apply that may indicate the wetland provides this function at a **lower** level.
 - The stream is artificially channelized and/or lacks vegetation that contributes to controlling the erosive force.
- Check box if any of the following conditions apply that may indicate the wetland provides this function at a **higher** level.
 - The stream contains high sinuosity.
 - Has been identified through fluvial geomorphic assessment to be important in maintaining the natural condition of the stream or river corridor.

16.1. Subject Wetland Contribution to Erosion Control:

Explain how the subject wetland contributes to the function listed above.

16.2. Statement of No Undue Adverse Impact to Erosion Control:

Explain how the proposed project will not result in any undue, adverse impact to this function. include any avoidance, minimization, or compensation measures relevant to this function.

17. Project Description:

17.1. Overall Project Purpose:

Description of the basic project and why it is needed. Partial projects with no clear purpose will not be accepted.

For example: *six-lot residential subdivision; expansion of an existing commercial building, building a single family residence.*

17.2. Description of Project Component Impacting Wetland or Buffer:

Explain in general terms which portions of the project will impact wetlands or buffer zones.

For example: *Cross the wetland with a driveway to construct a residential subdivision, upgrade existing road through buffer to improve access, extend a trail system.*

17.3. Acreage of Parcel(s) or Easements(s): <i>Acreage of subject property.</i>
17.4. Acreage of Project Area: <i>Acreage of area involved in the project.</i>

18. Project Details: <i>Provide details regarding specific impacts to the wetland and buffer zone.</i> For multiple wetlands fill out the multiple wetland table.

18.1. Specific Impacts to Wetland and Buffer Zone Dimensions: <i>List portions of the project that will specifically impact the wetland or buffer zone and their dimensions. For example: driveway crossing with 16' wide fill; installation of buried sewer force main with 5' trench including fill footprint; addition of Stormwater outfall which directs flow to northern portion of wetland</i>
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18.2. Bridges and Culverts: <i>Culvert circumference, length, placement and shapes, or bridge details. List any stream alteration permits that are required or obtained where perennial streams or rivers are involved.</i>

--

18.3. Construction Sequence: <i>Describe any details pertaining to the work planned in the wetland and buffer in terms of sequence or phasing that is relevant. Describe the construction limits of disturbance, how those will be marked, and check to ensure these are shown on the site plans as well.</i>

--

18.4. Stormwater Design** <i>List any stormwater permits obtained or applied for. Describe stormwater and/or erosion controls proposed. ** Erosion prevention is <u>required</u> in order to prevent sediment from entering the wetland.</i>

--

18.5. Permanent Demarcation of Limit of Impacts** <i>Describe any boulders, fencing, signage, or other memorialization that provides permanent on-the-ground boundaries for the limits of disturbance for ongoing uses. **Permanent demarcations are <u>required</u> for projects with ongoing activities in or near wetlands or buffer zones such as houses, yards, woody clearing or parking areas, and needs to be depicted on the site plans.</i>
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19. Wetland and Buffer Zone Impacts:

For multiple wetlands provide narrative overview for each section below, and fill out the Multiple Wetland Tables

19.1. Wetland Impacts:

*Summarize the square footage of impact in the appropriate category. Add After-the-Fact impacts here too. **Round to the nearest square foot***

Permanent Wetland Fill	s.f.
Temporary Wetland Impact	s.f.
Other Permanent Wetland Impact <i>(this number includes clearing of woody vegetation, dredging, and does not include fill)</i>	s.f.
Total Wetland Impact:	s.f.

Describe in detail the proposed impact to wetlands

For example: Fill for road crossing, temporary impacts for trench and fill related to utility installation.

General narrative required here even for projects with multiple wetlands and impacts

19.2. Buffer Zone Impacts:

Summarize the square footage of impact in the appropriate category.

Temporary Buffer Impact	s.f.
Permanent Buffer Impact	s.f.
Total Buffer Impact:	s.f.

Describe in detail the proposed impact to buffer zones

For example: Addition of fill along roadway embankment extending into buffer zone.

General narrative required here even for projects with multiple wetlands and impacts.

19.3. Cumulative Impacts:

List any potential cumulative or ongoing, direct and indirect impacts on the functions of the wetland.

For example: Increased noise from parking lot, vegetation management, inputs from stormwater pond outlet, reduction in flood storage volume from the addition of fill from the project.

20. Mitigation Sequence:

Before you begin, please read all of Section 20 to respond most appropriately to specific questions. Questions specifically related to Section 9.5b of the Vermont Wetland Rules.

20.1. Avoidance of Wetland Impacts:

20.1.1. Can the activity be located on another site owned or controlled by the applicant, or reasonably available to satisfy the basic project purpose? If not, indicate why. Cite any alternative sites and explain why they were not chosen.

20.1.2. Can the proposed activity be practicably located outside the wetland/buffer zone? If not, indicate why. Explain the alternatives you have explored for avoiding the wetland and buffer onsite, And why they are not feasible.

20.2. Avoidance to the Impact to Functions and Values:

20.2.1. If the proposed activity cannot be practicably located outside the wetland/buffer zone, have all practicable measures been taken to avoid adverse impacts on protected functions? Yes No

20.2.2. What design alternatives were examined to avoid impacts to wetland function? *For example: Use of matting, relocation of footprint, etc.*

20.2.3. What steps have been taken to minimize the size and scope of the project to avoid impacts to wetland functions and values? Include information on project size reduction and relocation.

20.2.4. Explain how the proposed project represents the least impact alternative design. Explain why other alternatives, which you described above, were not chosen.

20.3. Minimization and Restoration:

20.3.1. If avoidance of adverse effects on protected functions cannot be practically achieved, has the proposed activity been planned to minimize adverse impacts on the protected function? Yes No N/A

20.3.2. What measures will be used during construction and on an ongoing basis to protect the wetland and buffer zone? *For example: Stormwater treatment, signs, fencing, etc.*

Minimization and Restoration Continued...

20.3.3. Has a plan been developed for the prompt restoration of any adverse impacts on protected functions? Yes No N/A

Restoration Narrative:

For example: Planting along the stream.

Quantification of Restoration:

Wetland Area (sqft)	Buffer Area (sqft)	Functions/Value s Addressed

20.4. Compensation:

*Please refer to Section 9.5c of the Vermont Wetland Rules for compensation, which is required when the project will result in net adverse impact to wetland function. Not all functions are presumed to be compensable. **All projects requiring compensation need prior consultation with the Vermont Wetlands Program.***

If compensation is proposed please include a summary here. Also list any supporting documents you may have attached to the application including In-Lieu-Fee proposal or detailed compensation plan.

21. Wetland Determination:

If the application involves a wetland determination please answer the following. For multiple wetlands provide narrative overview for each section below, and fill out the Multiple Wetland Tables.

- Wetland is mapped or contiguous to the Vermont Significant Wetland Inventory Map
- Wetland is not mapped on or contiguous to the Vermont Significant Wetland Inventory Map

21.1. Reason for Petition:

Please choose one from the dropdown menu.

21.2. Determination Narrative:

Please provide any narrative to support the petition for a wetland determination here, including previous decisions by the Secretary or Water Board.

22. Supporting Materials:

****ADDITIONAL MATERIAL REQUIRED TO CALL APPLICATION COMPLETE**

22.1. **Location Map:

Provide a location map that is 8 ½” x 11” and separate from any site plans.
The Vermont Natural Resources Atlas is appropriate using USGS topography map base layer, roads, and VSWI wetlands at a minimum.

Date	Title

22.2. **Site Plan(s):

List as specified below. Plans must be legible and include wetland delineation and buffer zones, limits of disturbance, erosion controls, building envelopes, and any permanent memorialization.

Title	Author	Date	Date of Last Revision

22.3. **U.S. Army Corps of Engineer Wetland Delineation Forms:

List attachment names, dates data was collected, cover types sampled, and number of paired plots included

Attachment #/Title	Range of Collection Dates	Vegetation Cover Types	# of Paired Plots

22.4. Other Supporting Documents:

Provide any other documentation that supports the application.
Examples include but are not limited to: Photographs, easements, agreements, restoration/plan, GIS shapefiles, additional ACOE forms.

Date	Last Revision	Author	Title

23. Abutting Landowners

Please provide abutting landowner information so that all persons owning property within, or adjacent to, the affected wetland area of buffer zone can be notified during the public notice period. **Please use additional sheets if necessary.**

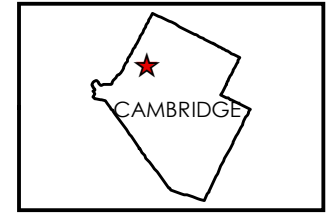
23.1. Abutting Land Owner Information: Please list as first names first followed by last name

1. Name: Street/Road: City/State/Zip:	16. Name: Street/Road: City/State/Zip:
2. Name: Street/Road: City/State/Zip:	17. Name: Street/Road: City/State/Zip:
3. Name: Street/Road: City/State/Zip:	18. Name: Street/Road: City/State/Zip:
4. Name: Street/Road: City/State/Zip:	19. Name: Street/Road: City/State/Zip:
5. Name: Street/Road: City/State/Zip:	20. Name: Street/Road: City/State/Zip:
6. Name: Street/Road: City/State/Zip:	21. Name: Street/Road: City/State/Zip:
7. Name: Street/Road: City/State/Zip:	22. Name: Street/Road: City/State/Zip:
8. Name: Street/Road: City/State/Zip:	23. Name: Street/Road: City/State/Zip:
9. Name: Street/Road: City/State/Zip:	24. Name: Street/Road: City/State/Zip:
10. Name: Street/Road: City/State/Zip:	25. Name: Street/Road: City/State/Zip:
11. Name: Street/Road: City/State/Zip:	26. Name: Street/Road: City/State/Zip:
12. Name: Street/Road: City/State/Zip:	27. Name: Street/Road: City/State/Zip:
13. Name: Street/Road: City/State/Zip:	28. Name: Street/Road: City/State/Zip:
14. Name: Street/Road: City/State/Zip:	29. Name: Street/Road: City/State/Zip:
15. Name: Street/Road: City/State/Zip:	30. Name: Street/Road: City/State/Zip:

24. Modified Distribution (Newspaper Notification): In situations where there is an application within a large wetland or buffer zone that has a large number of landowners, applicants can choose to limit the distribution list with a supplemental newspaper notification. At a minimum the applicant must 1) provide notice to immediate abutters, 2) provide notice to all persons owning property containing the wetland or buffer within 500 ft. of the project area, and 3) shall have the VWP publish notice of the application in a local newspaper generally circulating in the area where the wetland is located. *****The applicant will be billed directly by the newspaper listed. Use of newspaper notification may extend the notice period, depending on when the notice posts in the newspaper*****

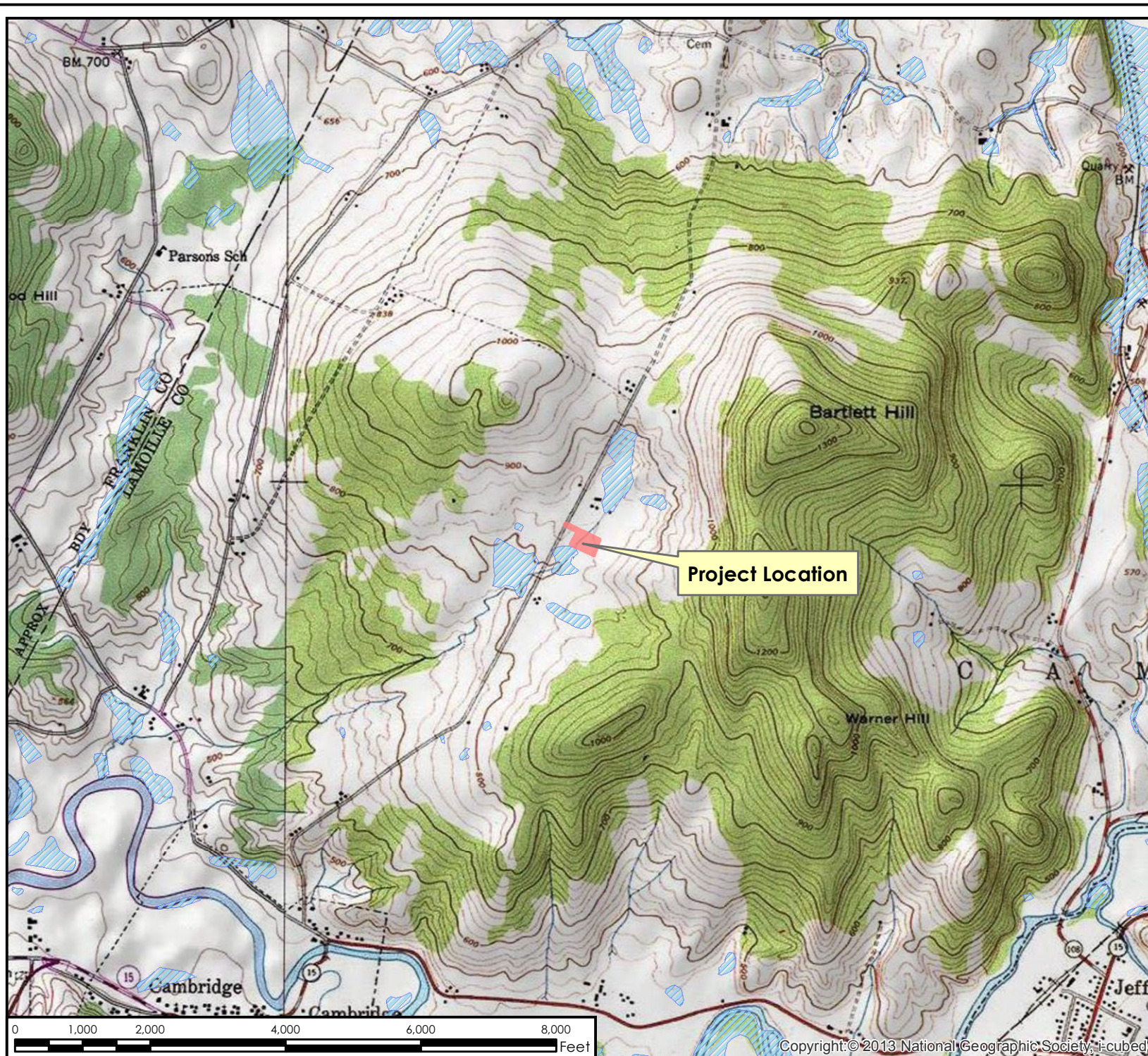
Name of Newspaper(s)

Location



Legend

- Project Parcel (2.65 acres)
- VT Significant Wetland



Sources: USGS 24k Topographic Maps;
 Project Area by TCE (2015); VT Significant
 Wetland by ANR (2010).

Disclaimer: The accuracy of information
 presented is determined by its sources. TCE
 is not responsible for any errors or omissions that
 may exist. Questions of on-the-ground location
 can be resolved by site inspections and/or
 surveys by a registered surveyor. This map is
 not a replacement for surveyed information or
 engineering studies.

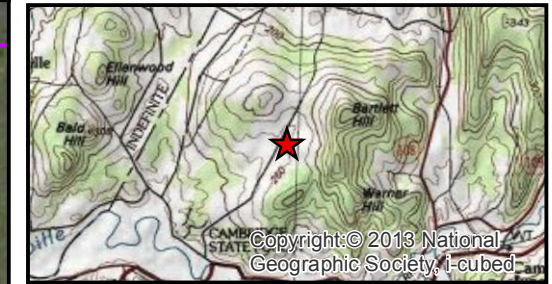
Jordan Wyckoff
 Cherry Tree Lane
 Cambridge, VT

Project Location Map

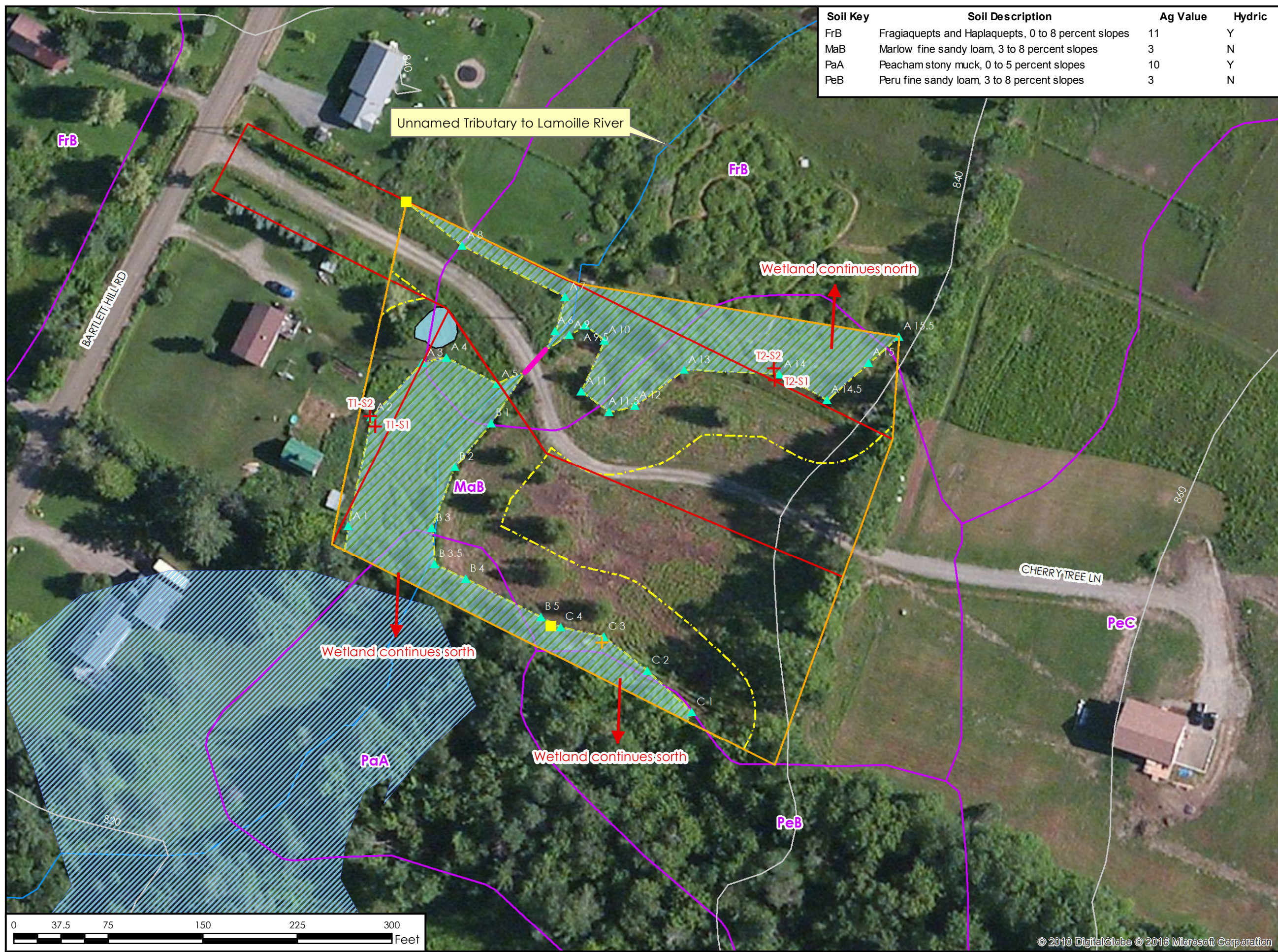
Project: 14-126
 Prepared By: ALD
 09/22/2016
 1 inch = 2,000 feet

















Location



Soil Key	Soil Description	Ag Value	Hydric
FrB	Fragiaquepts and Haplaquepts, 0 to 8 percent slopes	11	Y
MaB	Marlow fine sandy loam, 3 to 8 percent slopes	3	N
PaA	Peacham stony muck, 0 to 5 percent slopes	10	Y
PeB	Peru fine sandy loam, 3 to 8 percent slopes	3	N



Legend

-  Drain Pipe
-  Auger Hole
-  Culvert (72 in)
-  Delineation Extent (2.8 acres)
-  Proposed Parcel Boundaries (2.65 acres)
-  Sample Points
-  Wetland Points
-  Class II Delineated Wetland (0.78 acres)
-  Class II Wetland Buffer (50')
-  Contour (20')
-  Soil
-  State Significant Wetland
-  VHD Open Water
-  VHD Stream

The Wetland Delineation shown on this plan was performed on May 16, 2016, according to the standards of the 1987 US Army Corps of Engineers Regional Supplement. This delineation was performed by Karina Dailey, P.W.S. and Lindsay Willson.

Sources: Bing Basemap Imagery (2015); Streams by VHD (2013); Project Area by TCE (2016); VT E911 Roads (2015); VT Significant Wetland by ANR (2010); Soils by NRCS (2011); Contours by VCGI (2012).

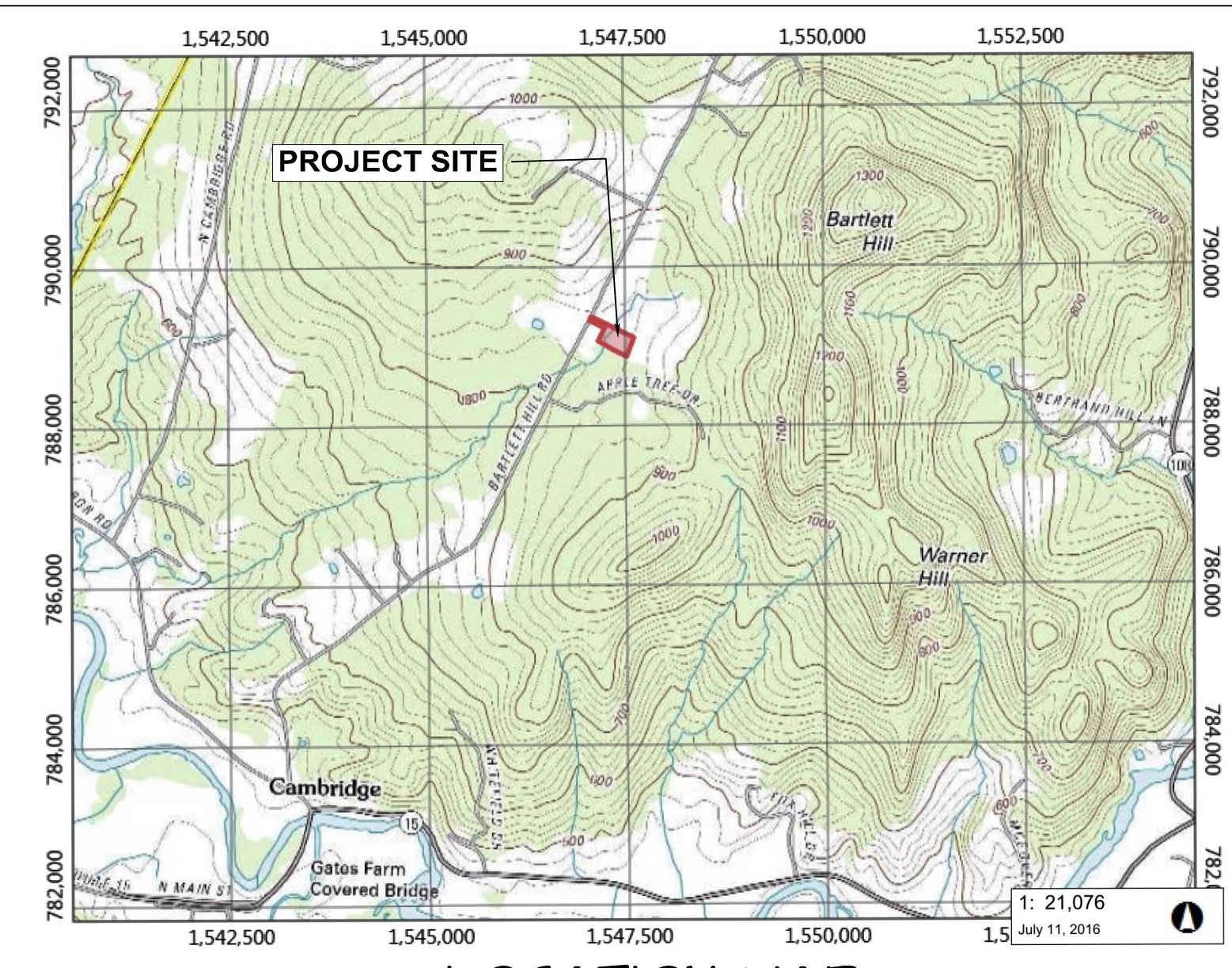
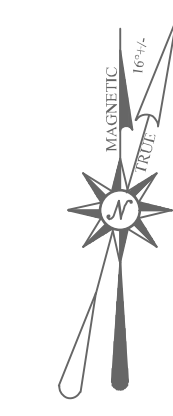
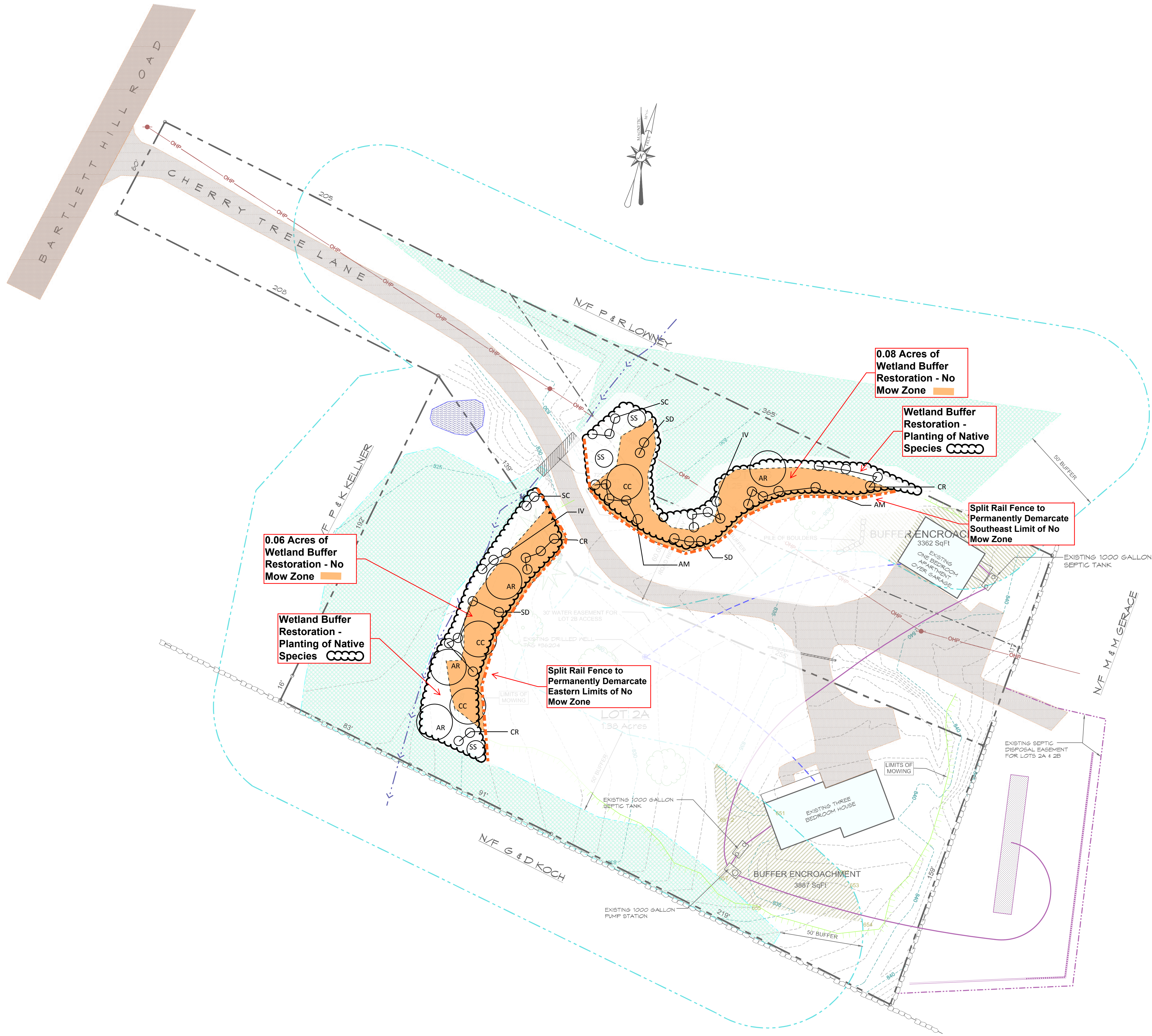
Disclaimer: The accuracy of information presented is determined by its sources. TCE is not responsible for any errors or omissions that may exist. Questions of on-the-ground location can be resolved by site inspections and/or surveys by a registered surveyor. This map is not a replacement for surveyed information or engineering studies.

Jordan Wyckoff
Cherry Tree Lane
Cambridge, VT

Wetland Delineation Map

Project: 14-126
 Prepared By: LJW
 05/17/2016
 1 inch = 75 feet

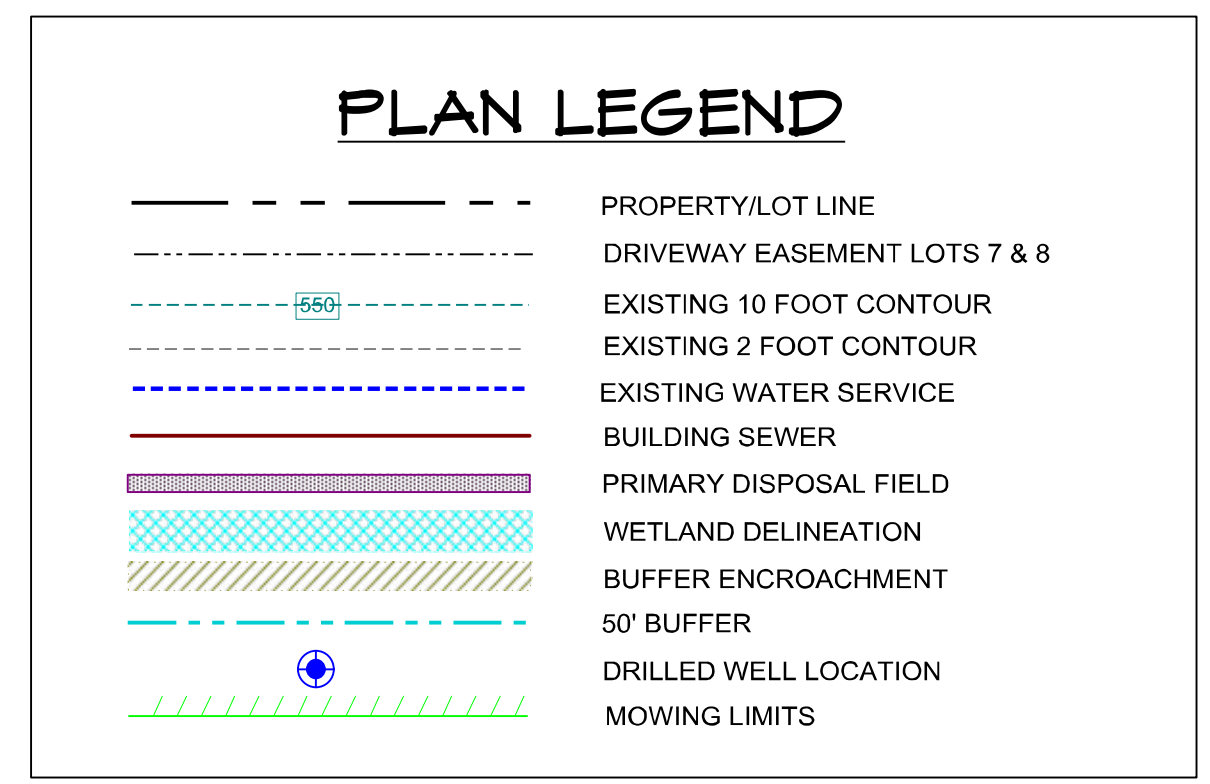




LOCATION MAP

PLANT LIST

KEY	SCIENTIFIC NAME	COMMON NAME	WETLAND INDICATOR STATUS	QUAN.	SIZE
Wetland Buffer Plantings					
AR	<i>Acer rubrum</i>	Red Maple	FAC	4	6'-7' 2-3 gal.
AM	<i>Aronia melanocarpa</i>	Black Chokeberry	FAC	10	2 gal.
CR	<i>Cornus racemosa</i>	Gray Dogwood	FAC	10	2 gal.
CC	<i>Carpinus caroliniana</i>	American Hornbeam	FAC	3	6'-7' 2-3 gal.
IV	<i>Ilex verticillata</i>	Winterberry	FACW+	8	2 gal.
SD	<i>Salix discolor</i>	Pussy Willow	FACW	10	2 gal.
SS	<i>Salix sericea</i>	Silky Willow	FACW	3	2 gal.
SC	<i>Sambucus canadensis</i>	Elderberry	FACW	5	2 gal.



PROJECT INFORMATION

- OWNER OF RECORD = JORDAN WYCKOFF
106 CHERRY TREE LANE
CAMBRIDGE, VERMONT
- FARCEL I.D. NUMBER = 0010034-03.20
- PHYSICAL ADDRESS = 106 CHERRY TREE LANE
CAMBRIDGE, VERMONT
- FARCEL SIZE = 2.6 ACRES
- ZONING DISTRICT = NO ZONING BI-LANS
- BOUNDARY SURVEY CONDUCTED BY SCOTT TAYLOR LS #488 AND TWO-LOT SUBDIVISION PLAT, DATED 8/20/14. DEED RECORDED IN BOOK 372, PAGES 1-2. LOCATION AND TOPO SURVEY DONE BY VERMONT LAND DESIGN REVISED ON JUNE 28, 2016
- 2-LOT SUBDIVISION WHERE THE EXISTING PARCEL AT 2.3 ACRES HAS A THREE BEDROOM HOUSE AND A ONE BEDROOM APARTMENT ABOVE THE EXISTING GARAGE. BOTH STRUCTURES SHARE THE EXISTING DRILLED WELL AND WASTEWATER DISPOSAL FIELD. REFER TO THE LATEST WASTEWATER PERMIT AMENDMENT (VV-5-5703-2) NOVEMBER 6, 2013 THAT HAS A DESIGN FLOW = 560 GPD.
- THE TWO LOTS WILL CONSIST OF LOT 2A = 1.38 ACRES WITH THE THREE BED ROOM HOUSE. LOT 2B = 1.25 ACRES WITH THE ONE BEDROOM APARTMENT.
- THE PURPOSE OF THIS SITE PLAN C1-01 DATED 7-11-2016 TO DEPICT ALL EXISTING CONDITIONS INCLUDING LIMITS OF MOWED AREA AND CLASS-2 WETLAND DELINEATION CONDUCTED BY KARINA DAILEY. SITE INSPECTION WAS DONE ON JUNE 15, 2016. PRESENT WERE KARINA DAILEY, SHANNON MORRISON, RYAN MCGALL, JORDAN WYCKOFF AND THOMAS WAWZENIAK.



Use of These Drawings

- Unless otherwise noted, these Drawings are intended for preliminary planning. Coordination with other disciplines or utilities, and/or approval from the regulatory authorities. They are not intended as construction drawings unless noted as such.
- Only drawings specifically marked "For Construction" are intended to be used in conjunction with contract documents, specifications, owner/contractor agreements and to be fully coordinated with other disciplines, including but not limited to, the Architect, if applicable. These Drawings shall not be used for construction layout. Contact VLD for any construction surveying services or to obtain electronic data suitable for construction layout.
- These Drawings are specific to the Project and are not transferable. As instruments of service, these drawings, and copies thereof, furnished by VLD are its exclusive property. Changes to the drawings may only be made by VLD. If errors or omissions are discovered, they shall be brought to the attention of VLD immediately.
- By use of these drawings for construction of the Project, the Owner represents that they have reviewed, approved, and accepted the drawings and have met with all applicable parties/disciplines to insure these plans are properly coordinated with other aspects of the Project. The Owner and Architect, are responsible for any buildings shown, including an area measured a minimum five (5) feet around any building.
- It is the User's responsibility to ensure this copy contains the most current revisions.

Revisions:

Project Title
**JORDAN WYCKOFF
2 LOT SUBDIVISION**
**106 CHERRY TREE LANE
CAMBRIDGE, VERMONT**

Sheet Title
**Wetland Buffer
Restoration Plan**

Drawn by Ben Oxender at
Scale TCE on 9/22/2016

C1-10



TRUDELL
Environmental Services

Wetland Delineation Photographic Documentation

Cherry Tree Lane, Cambridge, Vermont

May 16, 2016



Photo 1: Photograph depicts wetland sample pit T1-S1. Photograph taken facing north.



Photo 2: Photograph depicts wetland sample point T1-S2. Photo taken facing north toward Cherry Tree Lane.



Photo 3: Photograph depicts wetland line near T2-S1 and T2-S2. Photo taken facing east.



Photo 4: Photograph depicts wetland line near wetland flag C-2. Photo taken facing west.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 14-126 - VLD - Jordan Wyckoff City/County: Cambridge Sampling Date: 05/16/2016
 Applicant/Owner: Jordan Wyckoff State: Vermont Sampling Point: T1-S1
 Investigator(s): Karina Dailey, Andrea Dotolo and Lindsay Willson Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none
 Slope (%): 3 Lat.: 44.6644 Long.: -72.8583 Datum: VT State Plane
 Soil Map Unit Name: Marlow fine sandy loam, 3 to 8 percent slopes NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Wetland hydrology present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <div style="height: 40px;"></div>	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living _____ Drift Deposits (B3) _____ Roots (C3) _____ Algal Mat or Crust (B4) _____ Presence of Reduced Iron (C4) _____ Iron Deposits (B5) _____ Recent Iron Reduction in Tilled _____ Inundation Visible on Aerial _____ Soils (C6) Imagery (B7) _____ Thin Muck Surface (C7) _____ Sparsely Vegetated Concave _____ Other (Explain in Remarks) Surface (B8)	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) _____ FAC-Neutral Test (D5) _____ Microtopographic Relief (D4)
Field Observations: Surface water present? Yes <u>X</u> No _____ Depth (inches): _____ Water table present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation present? Yes <u>X</u> No _____ Depth (inches): <u>Surface</u> (includes capillary fringe)	Wetland hydrology present? <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <div style="height: 40px;"></div>	
Remarks:	

VEGETATION - Use scientific names of plants

Sampling Point: T1-S1

Tree Stratum	Plot Size ()	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
		0 = Total Cover		
Sapling/Shrub Stratum	Plot Size ()	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
		0 = Total Cover		
Herb Stratum	Plot Size ()	Absolute % Cover	Dominant Species	Indicator Staus
1	<i>Phalaris arundinacea</i>	100	Y	FACW
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		100 = Total Cover		
Woody Vine Stratum	Plot Size ()	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
		0 = Total Cover		

50/20 Thresholds

	20%	50%
Tree Stratum	0	0
Sapling/Shrub Stratum	0	0
Herb Stratum	20	50
Woody Vine Stratum	0	0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across all Strata: 1 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0	
FACW species	100	x 2 =	200	
FAC species	0	x 3 =	0	
FACU species	0	x 4 =	0	
UPL species	0	x 5 =	0	
Column totals	100	(A)	200	(B)
Prevalence Index = B/A =	<u>2.00</u>			

Hydrophytic Vegetation Indicators:

Rapid test for hydrophytic vegetation

Dominance test is >50%

Prevalence index is ≤3.0*

Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation* (explain)

*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 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? Y

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

SOIL

Sampling Point: T1-S1

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-3	10YR 3/3	100					Sandy loam	
3-8	10YR 3/2	95	10YR 5/6	5			sandy loam	
8-16	2.5Y 4/3	70	2.5 Y 4/2	25			Clay loam	
			10YR 4/6	5				

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histisol (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) (LRR R, MLRA 149B)
- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- 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)

Indicators for Problematic Hydric Soils:

- 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)
- Dark Surface (S7) (LRR K, L)
- 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 (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric soil present? Y

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 14-126 - VLD/Jordan Wyckoff City/County: Cambridge Sampling Date: T1-S2
 Applicant/Owner: Jordan Wyckoff State: _____ Sampling Point: _____
 Investigator(s): Karina Dailey, Lindsay Willson, Andrea Dotolo Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): None
 Slope (%): 3 Lat.: 44.6644 Long.: -72.8583 Datum: VT State Plane
 Soil Map Unit Name: Marlow fine sandy loam, 3 to 8 percent slopes NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u> N </u> Hydric soil present? <u> N </u> Wetland hydrology present? <u> Y </u>	<p align="center">Is the sampled area within a wetland? <u> N </u></p> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living <input type="checkbox"/> Drift Deposits (B3) <input checked="" type="checkbox"/> Roots (C3) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) <input type="checkbox"/> Saturation Visible on Aerial Imagery <input type="checkbox"/> Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> (C9) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Surface (B8) <input type="checkbox"/> Microtopographic Relief (D4) 	Secondary Indicators (minimum of two required)
Field Observations: Surface water present? Yes <u> </u> No <u> </u> Depth (inches): _____ Water table present? Yes <u> </u> No <u> </u> Depth (inches): _____ Saturation present? Yes <u> </u> No <u> </u> Depth (inches): _____ (includes capillary fringe)	<p align="center">Wetland hydrology present? <u> Y </u></p>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks:	

VEGETATION - Use scientific names of plants

Sampling Point: 0

Tree Stratum	Plot Size ()	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
		0 = Total Cover		
Sapling/Shurb Stratum	Plot Size ()	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
		0 = Total Cover		
Herb Stratum	Plot Size ()	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		85 = Total Cover		
Woody Vine Stratum	Plot Size ()	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
		0 = Total Cover		

50/20 Thresholds

	20%	50%
Tree Stratum	0	0
Sapling/Shrub Stratum	0	0
Herb Stratum	17	43
Woody Vine Stratum	0	0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across all Strata: 2 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 50.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	40	x 3 =	120
FACU species	35	x 4 =	140
UPL species	0	x 5 =	0
Column totals	85 (A)		280 (B)
Prevalence Index = B/A =			3.29

Hydrophytic Vegetation Indicators:

Rapid test for hydrophytic vegetation

Dominance test is >50%

Prevalence index is ≤3.0*

Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation* (explain)

*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 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? N

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

SOIL

Sampling Point: 0

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-14	10YR 3/3	90	7.5YR 4/6				Sandy loam	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histisol (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) (**LRR R, MLRA 149B**)
- Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- 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)

Indicators for Problematic Hydric Soils:

- 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**)
- Dark Surface (S7) (**LRR K, L**)
- 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 (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 14-126 - VLD/Jordan Wyckoff City/County: Cambridge Sampling Date: 5/16/16
 Applicant/Owner: Jordan Wyckoff State: _____ Sampling Point: T2-S1
 Investigator(s): Karina Dailey, Andrea Dotolo, Lindsay Willson Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None
 Slope (%): 0 Lat.: 44.6645 Long.: -72.8571 Datum: VT State Plane
 Soil Map Unit Name: Marlow fine sandy loam, 3 to 8 percent slopes NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u> N </u> Hydric soil present? <u> N </u> Wetland hydrology present? <u> Y </u>	Is the sampled area within a wetland? <u> N </u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <div style="border: 1px solid black; height: 40px; width: 100%;"></div>	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) <input type="checkbox"/> Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery <input type="checkbox"/> (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes <u> </u> No <u> </u> Depth (inches): _____ Water table present? Yes <u> </u> No <u> </u> Depth (inches): _____ Saturation present? Yes <u> X </u> No <u> </u> Depth (inches): <u> 4 inches </u> (includes capillary fringe)	Wetland hydrology present? <u> Y </u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <div style="border: 1px solid black; height: 40px; width: 100%;"></div>	
Remarks: <div style="border: 1px solid black; height: 40px; width: 100%;"></div>	

SOIL

Sampling Point: T2-S1

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-12	10YR 3/3	70	10YR 5/4	20			Sandy loam	
			10YR 5/6	10			Sandy loam	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histisol (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) (LRR R, MLRA 149B)
- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- 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)

Indicators for Problematic Hydric Soils:

- 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)
- Dark Surface (S7) (LRR K, L)
- 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 (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 14-126 - VLD/Jordan Wyckoff City/County: Cambridge Sampling Date: 5/16/16
 Applicant/Owner: Jordan Wyckoff State: _____ Sampling Point: T2-S2
 Investigator(s): Karina Dailey, Andrea Dotolo, Lindsay Willson Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None
 Slope (%): 0 Lat.: 44.6645 Long.: -72.8571 Datum: VT State Plane
 Soil Map Unit Name: Marlow fine sandy loam, 3 to 8 percent slopes NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Wetland hydrology present? <u>Y</u>	<p align="center">Is the sampled area within a wetland? <u>Y</u></p> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes _____ No _____ Depth (inches): _____ Water table present? Yes _____ No _____ Depth (inches): _____ Saturation present? Yes <u>X</u> No _____ Depth (inches): <u>42inches</u> (includes capillary fringe)		<p align="center">Wetland hydrology present? <u>Y</u></p>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION - Use scientific names of plants

Sampling Point: T2-S2

Tree Stratum	Plot Size ()	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
		<u>0</u> = Total Cover		
Sapling/Shrub Stratum	Plot Size ()	Absolute % Cover	Dominant Species	Indicator Staus
1	<i>Salix spp.</i>	60	Y	FACW
2				
3				
4				
5				
6				
7				
8				
9				
10				
		<u>60</u> = Total Cover		
Herb Stratum	Plot Size ()	Absolute % Cover	Dominant Species	Indicator Staus
1	<i>Phalaris arundinacea</i>	35	Y	FACW
2	<i>Onoclea sensibilis</i>	5	N	FACW
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		<u>40</u> = Total Cover		
Woody Vine Stratum	Plot Size ()	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
		<u>0</u> = Total Cover		

50/20 Thresholds

	20%	50%
Tree Stratum	0	0
Sapling/Shrub Stratum	12	30
Herb Stratum	8	20
Woody Vine Stratum	0	0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across all Strata: 2 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	<u>0</u> x 1 =	<u>0</u>
FACW species	<u>100</u> x 2 =	<u>200</u>
FAC species	<u>0</u> x 3 =	<u>0</u>
FACU species	<u>0</u> x 4 =	<u>0</u>
UPL species	<u>0</u> x 5 =	<u>0</u>
Column totals	<u>100</u> (A)	<u>200</u> (B)
Prevalence Index = B/A =	<u>2.00</u>	

Hydrophytic Vegetation Indicators:

Rapid test for hydrophytic vegetation

Dominance test is >50%

Prevalence index is ≤3.0*

Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation* (explain)

*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.

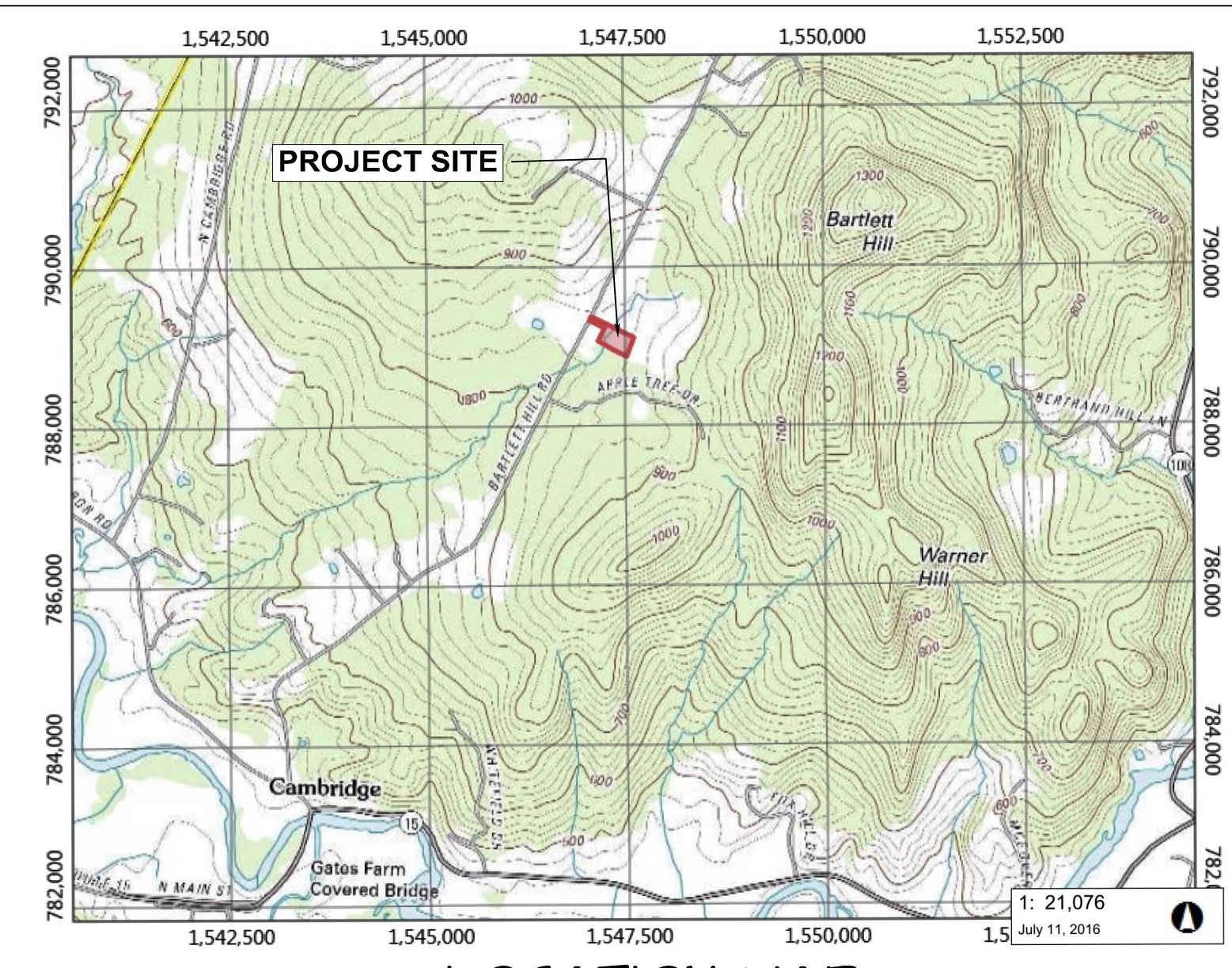
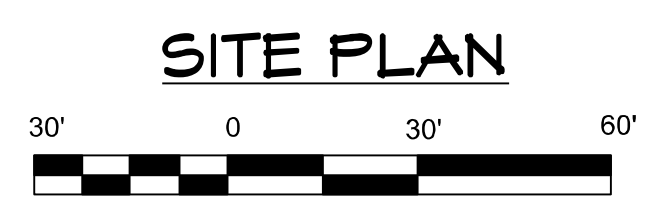
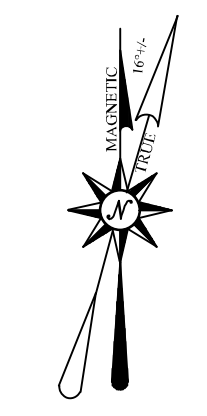
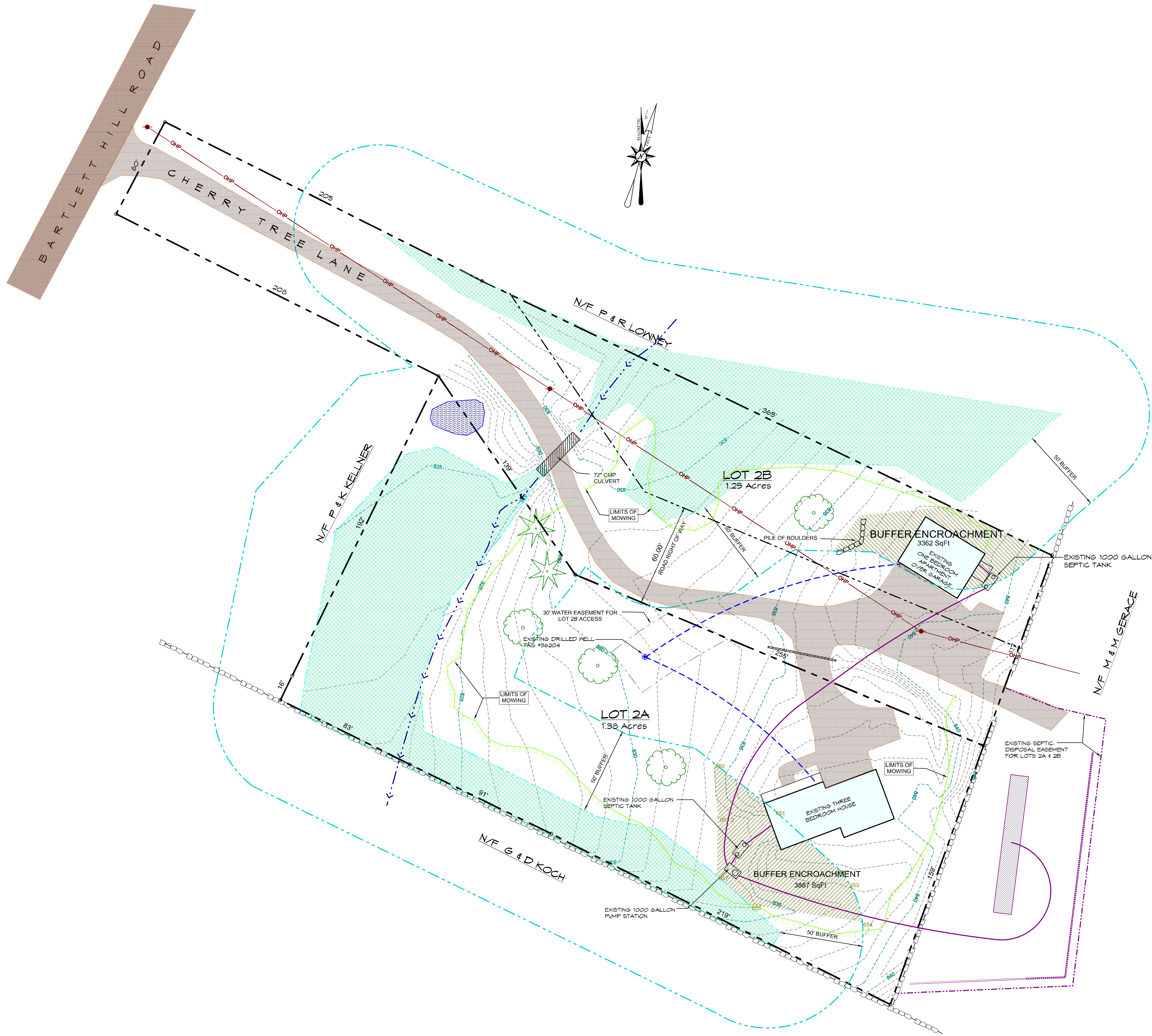
Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

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? Y

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



LOCATION MAP



SITE CIVIL ENGINEERING
 1229 CENTER ROAD
 HYDE PARK, VERMONT 05655
 802-730-3443 - www.vermontlanddesign.com

- Use of These Drawings
1. Unless otherwise noted, these Drawings are intended for preliminary planning. Coordination with other disciplines or utilities, and/or approval from the regulatory authorities. They are not intended as construction drawings unless noted as such.
 2. Only drawings specifically marked "For Construction" are intended to be used in conjunction with contract documents, specifications, owner/contractor agreements and to be fully coordinated with other disciplines, including but not limited to, the Architect, if applicable. These Drawings shall not be used for construction layout. Contact VLD for any construction surveying services or to obtain electronic data suitable for construction layout.
 3. These Drawings are specific to the Project and are not transferable. As instruments of service, these drawings, and copies thereof, furnished by VLD are its exclusive property. Changes to the drawings may only be made by VLD. If errors or omissions are discovered, they shall be brought to the attention of VLD immediately.
 4. By use of these drawings for construction of the Project, the Owner represents that they have reviewed, approved, and accepted the drawings and have met with all applicable parties/disciplines to insure these plans are properly coordinated with other aspects of the Project. The Owner and Architect, are responsible for any buildings shown, including an area measured a minimum five (5) feet around any building.
 5. It is the User's responsibility to ensure this copy contains the most current revisions.

Revisions:

PLAN LEGEND	
	PROPERTY/LOT LINE
	DRIVEWAY EASEMENT LOTS 7 & 8
	EXISTING 10 FOOT CONTOUR
	EXISTING 2 FOOT CONTOUR
	EXISTING WATER SERVICE
	BUILDING SEWER
	PRIMARY DISPOSAL FIELD
	WETLAND DELINEATION
	BUFFER ENCROACHMENT
	50' BUFFER
	DRILLED WELL LOCATION
	MOWING LIMITS

PROJECT INFORMATION

1. OWNER OF RECORD = JORDAN WYCKOFF
106 CHERRY TREE LANE
CAMBRIDGE, VERMONT
2. PARCEL I.D. NUMBER = 0010034-03.20
3. PHYSICAL ADDRESS = 106 CHERRY TREE LANE
CAMBRIDGE, VERMONT
4. PARCEL SIZE = 2.6 ACRES
5. ZONING DISTRICT = NO ZONING BI-LANS
6. BOUNDARY SURVEY CONDUCTED BY SCOTT TAYLOR LS #488 AND TWO-LOT SUBDIVISION PLAT, DATED 8/20/14. DEED RECORDED IN BOOK 372, PAGES 1-2. LOCATION AND TOPO SURVEY DONE BY VERMONT LAND DESIGN REVISED ON JUNE 28, 2016
7. 2-LOT SUBDIVISION WHERE THE EXISTING PARCEL AT 2.3 ACRES HAS A THREE BEDROOM HOUSE AND A ONE BEDROOM APARTMENT ABOVE THE EXISTING GARAGE. BOTH STRUCTURES SHARE THE EXISTING DRILLED WELL AND WASTEWATER DISPOSAL FIELD. REFER TO THE LATEST WASTEWATER PERMIT AMENDMENT (WW-5-5703-2) NOVEMBER 6, 2013 THAT HAS A DESIGN FLOW = 560 GPD.
8. THE TWO LOTS WILL CONSIST OF LOT 2A = 1.38 ACRES WITH THE THREE BED ROOM HOUSE. LOT 2B = 1.25 ACRES WITH THE ONE BEDROOM APARTMENT.
9. THE PURPOSE OF THIS SITE PLAN C1-01 DATED 7-11-2016 TO DEPICT ALL EXISTING CONDITIONS INCLUDING LIMITS OF MOWED AREA AND CLASS-2 WETLAND DELINEATION CONDUCTED BY KARINA DAILEY. SITE INSPECTION WAS DONE ON JUNE 15, 2016. PRESENT WERE KARINA DAILEY, SHANNON MORRISON, RYAN McCALL, JORDAN WYCKOFF AND THOMAS WAWZENIAK.

Project Title

**JORDAN WYCKOFF
2 LOT SUBDIVISION**

**106 CHERRY TREE LANE
CAMBRIDGE, VERMONT**

Sheet Title

**OVERALL
WORKSHEET**

Date: 07-12-2016
 Scale: AS SHOWN
 Project Number: 16-398
 Drawn By: TJW
 Project Engineer:
 Approved By:

C1-01