# Project Application Land Use Department

<del></del>	Project Name: Drew Pond LL	Date 3-26-19
	Staff Signature required PRIOR to	submittel
PRELIMINARY APPI	ICATION: Preliminary Conceptual Review Des	
PODMAT Approx	Des	sign Review Development of Regional Impact
		•
Site Plan Review: M	ajor Minor Conventional	Conservation
C	ajor × Minor paditional Use Permit Sign Permit Be	
C/1	IGHING III I INC. Hartonaria a C. C. C. T.	oundary Line Adjustment Special Permit
Aı	UCHUMENI to Subdivision/Cita plant 4	ion Completion
D	The state of the s	A+
Project Address:	w Pond LLC V.H. Route 9 strict(s): Village District N	Area (Acres or S.F) 18.02
Current Zoning Di	strict(s): Village Dietwich	
Request:	M. ATTENDED DISCITLE M.	Iap(s) 238 Lot(s) 16
ne property owner shall designed	mate an agent for the project. This person (the applicant) shall attend	d wa application of
, recommendations, and	nate an agent for the project. This person (the applicant) shall attend case reports, and will communicate all case information to other particles and contacts for this project will be sent at the contacts for this project will be sent at the contacts for this project will be sent at the contacts for this project will be sent at the contacts for this project will be sent at the contacts for this project.	a pre-approcation conferences and public hearings, will receive the
	the contacts for this project will be made through th	e Applicant listed below
wner: Drew Pond,	ITC	
ompany	THE CONTRACTOR OF THE CONTRACT	
ione;	Fax: 1 Avenue, Dover, NH 03820	7. 14
udress: <u>242 Centra</u>	1 Avenue, Dover, NH 03820	E-mail:
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Application Checklist		Barrington, Subdivisi	on Regulations
Applicant Drew Pond LLC	Core #	new Pono	UZZC

# Subdivision, Site Review, and Lot Line Adjustment Application Checklist Barrington Planning Board Adopted January 20, 2009

This checklist is intended to assist applicants in preparing a complete application for subdivision as required by the Barrington Subdivision Regulations and must be submitted along with all subdivision applications. An applicant seeking subdivision approval shall be responsible for all requirements specified in the Barrington. Subdivision Regulations even if said requirements are omitted from this checklist.

An applicant seeking subdivision approval shall be responsible for providing all the information listed in the column below entitled "Subdivision" and should place an "x" in each box to indicate that this information has been provided. If an item is considered unnecessary for certain applications the "NA" box should be marked instead Indicating "Not Applicable". Only certain checklist items are required for lot line adjustments, as noted by the applicable check boxes below.

Check The Appropriate Box or Boxes Below:  Lot Line Relocation  Site Plan  Subdivision Plan	
Lot Line Relocation 🗵 Site Plan 📗 Subdivision Plan	
Lot Line Relocation X Site Plan Subdivision Plan See Section I & II See Sections I, II, III, IV & V	
Good Good of the Control of the Cont	
3	
Provided	.
Section I.	
General Requirements	]
1. Completed Application Form	
2. Complete abutters list	<del> </del>
3. Payment of all required fees	•
4. Five (6) full size sets of plans and six /2 sets of plans 11" by 17" submitted with all	
required information in accordance with the subdivision regulations and this	ĺ
checklist -	1'
5. Copies of any proposed easement deeds, protective covenants or other legal	·
documents	-
6. Any waiver request(s) submitted with justification in writing	
7. Technical reports and supporting documents (see Sections IX & X of this checklist)	
8. Completed Application Checklist	·
Section II.	
General Plan Information	
1. Size and presentation of sheet(s) per registry requirements and the subdivision 图 日	
regulations	
2. Title block information:	
a. Drawing title	
b. Name of subdivision	
c. Location of subdivision	.
d. Tax map & lot numbers of subject parcel(s)	

(date of adoption)

e. Name & address of owner(s)	X		T	Т.
f. Date of plan	<u> </u>	15	├	
g. Soale of plan	X X	듐	<del> </del>	-
h. Sheet number				-
l. Name, address, & telephone number of design firm	X		1—	-
. J. Name and address of applicant	<u> </u>	Ī	<del> </del>	1
Revision block with provision for amendment dates	<b>X</b>			1-
4. Planning Board approval blook provided on each sheet to be recorded	X	F		<del> </del>
6. Certification block (for engineer or surveyor)	<u> </u>	6	<u> </u>	-
6. Match lines (if any)	X	0	<del> </del>	-
7. Zoning designation of subject parcel(s) including overlay districts	<u> </u>	7		
6. Wilnimum lot area, frontages & setback dimensions required for district(s)	<u> </u>	o	<u> </u>	1
1 9. List Federal Emergency Management Agency (FPMA) sheet/s) used to	<u>X</u>	6		
Lidentity 100-year flood elevation, locate the elevation		_		i i
10. Note the following: "If, during construction, it becomes apparent that deficiencies	⊠.			
exist in the approved design grawings, the Contractor shall be required to correct		-		
the deficiencies to meet the requirements of the regulations at no expense to the		1		] [
11. Note the following: "Required erosion control measures shall be installed prior to		<u> </u>		
dily disturbance of the site's stirface area and shall he mainteined through the	X			
completion of all construction activities. If, during construction, it becomes				
apparent that adultional elosion control measures are required to stop any exector				
on the construction site due to actual site conditions, the Owner shall be required				
to tristall the necessary erosion protection at no expense to the Town"				
12. Note Identifying which plans are to be recorded and which are on file at the town.	X			
13. Note the following: "All materials and methods of construction shall conform to	Ø			
Town of Barrington Subdivision Regulations and the latest edition of the New Hampshire Department of Transportation's Standard Specifications for Road &		•	•	
Bridge Construction."				
14. North arrow	Ø			
15. Location & elevation(s) of 100-year flood zone per FEMA Flood insurance Study	<u> </u>		<u> </u>	
16. Plan and deed references	X	님		
17. The following notes shall be provided:	<u>A</u>	늠		
, a. Purpose of plan	<u>[3</u>	5		
b. Existing and proposed use	<u> </u>			
c. Water supply source (name of provider (company) if offsite)		ᆸ		
d. Zoning variances/special exceptions with conditions		X		
e. List of required permits and permit approval numbers	<u> </u>			
Vicinity sketch showing 1,000 feet surrounding the site	[2]	급		
Plan Index indicating all sheets		급		
18. Boundary of entire property to be subdivided		<u></u>		
19. Boundary monuments	X			
a. Monuments found	2	6		
b. Map number and lot number, name addresses, and zoning of all abutting land	<u>X</u>	님		
Owlleis	, 523	ابر ا	.	
c. Monuments to be set	口	図		
20. Existing streets:	Ø			
a. Name abeled	<u>X</u>		•	<del></del>
b. Status noted or labeled	<b>Z</b> .			
c. Right-of-way dimensioned	· · · · · · · · · · · · · · · · · · ·			
	<u> X</u>		i	
d. Pavement width dimensioned	<u>図</u>			
d. Pavement width dimensioned  21. Municipal boundaries (if any)				

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22. Existing easements (Identified by type)		X	
A) Drainage easement(s)		図	
B) Slope easements(s)		X	
C) Utility easement(s)		X	
D) Temporary easement(s) (Such as temporary turneround		X	
E) No-out zone(s) along streams & wetlands ( as may be requested by the		×	
F) Conservation Commission)     O) Vehicular & pedestrian access easement(s)	Ø		
H) Visibility easement(s) i) Fire pond/cistern(s)			
		X	
J) Roadway widening easement(s)		図	
K) Walking trail easement(s)		X)	
a) Other easement(s) Note type(s)		(A)	
23. Designation of each proposed lot (by map & lot numbers as provided by the assessor)			
24. Area of each lot (in acres & square feet):	X		
a. Existing lot(s)	図		
b. Contiguous upland(s)	図		
25. Wetland delineation (including Prime Wetlands):	X		
a. Limits of wetlands	Ø		
b. Wetland delineation criteria	X		
c. Wetland Scientist certification	· 🛛		
26. Owner(s) signature(s)	X		
27. All required setbacks	X		
28. Physical features	X		
a. Buildings	区		
b. Wells	X		
c. Septic systems	X		
d: Stone walls	区		. ,
e. Paved drives	X		
f. Gravel drives	X		
29. Location & name (if any) of any streams or water bodies	X		
30. Location of existing overhead utility lines, poles, towers, etc.	Ø		
31. Two-foot contour interval topography shown over all subject parcels	X		
32. Map and lot numbers, name, addresses, and zoning of all abutting land owners	X		
Section III Proposed Site Conditions Plan (Use Sections I General Requirements & Section II General Plan Information)			
Surveyor's stamp and signature by Licensed Land Surveyor	X		
2. Proposed lot configuration defined by metes and bounds	区		
Proposed easements defined by metes & bounds. Check each type of proposed easement applicable to this application:		Ø	-
a. Drainage easement(s)	. 0	X	
b. Slope easement(s)		X	
c. Utility easement(s)	ı D	Ø	
d. Temporary easement(s) (such as temporary turnaround)		. 🗵	
e. Roadway widening easement(s)			<del></del>
f. Walking trail easement(s)		X	
g. Other easement(s) Note type(s)			
4. Area of each lot (in acres & square feet):	3		
a, Total upland(s)		10	
The state of the s			<del></del>

b. Contiguous uplands(s)	X			7	_
5. Proposed streets:	<u>                                    </u>	H		-	_
a. Name(s) labeled	X X			╁	_
b. Width of right-of-way dimensioned					-
c. Pavement width dimensioned		凒		┼-	-
6. Source and datum of topographic information (USGS required)	X	H		╄	4
7. Show at least one benchmark per sheet (min.) and per 5 acres (min.) of total site			<del> </del>	┼	-
alta					ı
Soli Conservation Service (SCS) soli survey information	X			+-	┨
9. Location, type, size & inverts of the following (as applicable):	×		-	┼	┥
a. Existing water systems	X		<del> </del>	┼	┥
b. Existing drainage systems	XI	ī	<del> </del>	+-	1
c. Existing utilities	X		<u> </u>	╁	1
10. 4K affluent areas with 2 test pit locations shown with sulfable leaching areas	X	5	├-	╁	┨
I I. Location of all water wells with protective radii as required by the NH Department	XI	0		<del> </del> -	╬
L Of Elivironmental Services (meeting Town and NHDES sethack requirements)	12.29	🖰	ľ	1	I
Liz. Existing free lines	X			1	1
13. Existing ledge outoroppings & other significant natural features	×				1
14. Drainage, Erosion and Sediment Control Plan(s) containing all of the requirements	図		-	1	1
specified in Section 16.3.2 (Final Pian Regulrements) of the Subdivision Regulations		_	ĺ		١
Section IV					
Construction Detail Drawings					1
Note: Construction details to conform with NHDOT Standards & Specifications for	erin .	-	<u> </u>		4
1 Vaus & Diluyes, 10Wii Of Barrington Highway Denatiment requirements and	X	0	ŀ		1
Subdivision Regulations		:	ĺ		Ì
Typical orpss-section of roadway	X		<del> </del>	-	┨
Typical driveway apron detail	<b>Z</b> J	늄	<del></del>		┨
3. Curbing detail	<u> </u>				1
4. Guardrail detail		X			1
5. Sidewalk detail		K			1
6. Traffic signs and pavement markings	[X]			ļ	1
7. Drainage structure(s):					ł
8. Outlet protection riprap apron	<u> </u>				1
9. Level spreader	X	5	<del></del>		4
10. Treatment swale					ł
11. Typical section at detention basin	XI	一		<del></del>	ł
12. Typical pipe trench	<u> </u>		<u> </u>	<del></del>	ł
13. Fire protection details	<u> </u>			·	ł
14. Erosion control details:	<b>3</b>			<u> </u>	ł
15. Construction Notes	<b>X</b>				1
a. Construction sequence	<u> </u>	급		<u> </u>	ł
b. Erosion control notes	図	6			l
c. Landscaping notes	<b>X</b>				ł
d. Water system construction notes	· 🔯				l
e. Sewage system construction notes	<u>図</u>	님	<del></del>		
f. Existing & finish centerline grades	· 🔯				ł
g. Froposed pavement - Typical cross-section	<u>·                                      </u>				
h. Right-of-way and easement limits		님			
i. Embankment slopes	N N	님			
j. Utilitjes					í

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#### APPLICATION AGREEMENT

I hereby apply for Subdivision Plan Review and acknowledge I will comply with all of the ordinances of the Town Of Barrington, New Hampshire State Laws, as well as any stipulations of the Planning Board, in development and construction of this project. I understand that if any of the subdivision Plan or Application specifications are incomplete, the Application will be considered rejected.

In consideration for approval and the privileges accruing thereto, the subdivider thereby agrees:

- .E. To carry out the improvements agreed upon and as shown and intended by said plat, including any work made necessary by unforeseen conditions which become apparent during construction of the subdivision.
- E. To post all streets "Private" until accepted by the Town and to provide and install street signs as approved by the Selectmen of the Town for all street intersections.
- E. To give the Town on demand, proper deeds for land or rights-of-way reserved on the plat for streets, drainage, or other purposes as agreed upon.
- E. To save the Town harmless from any obligation it may incur or repairs it may make, because of my failure to carry out any of the foregoing provisions.

Ε.	E. Mr/Mrs of DREW YOLD		to whom all
	communications to the subdivider may be addressed	with any pr	oceedings arising out of
	the agreement herein.		and and the control of the CT
	Signature of Owner: Ruch Bolan		
	Signature of Developer:	·	
	Technical Review Signatures;		
Гоз	Town Engineer/Planner Approval Signature:		The owners, by the
ĭli	iling of this application as indicated above, hereby give	permission	for any member of the
Jai	Sarrington Planning Board, the Town Engineer. The C	Conservation	Commission and such
ige	igents of employees of the Town or other persons as the	e Planning i	Board may authorize to
nt	enter upon the property which is the subject of this applica-	cation at all	reasonable times for the
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Barrington Subdivision Regulations

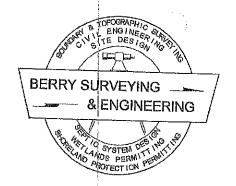
S	ection V	1		<u> </u>	
S	upporting Documentation If Required	1.			
1.	Calculation of permitted housing density (for Conservation Subdivisions only as		X	•	
ļ	required in Article 6 of the Barrington Zoning Ordinance)	l			
2	Stormwater management report	X			
	Traffic Impact analysis	X			
4.	. Environmental impact assessment	X			
5	Hydrogeologic study	Ø			
6.	The state of the s	図			
7.			X		
	reguired in Article 6 of the Barrington Zoning Ordinance)	'		:	•
8.	Site inventory and Conceptual Development Plan (from preliminary Conservation		X	·	
	Subdivision review only)			•	
-		<u></u>	lI		

(Refrisal to sign this permission form does not invalidate an application, but the Planning Board may not be able to make an informed decision regarding unseen lands with potential areas of concerns).

Signature of Owner:

Note: The developer/individual in charge must have control over all project work and be available to the Road Agent and Code Enforcement Officer during the construction phase of the project. The Road Agent and Code Enforcement Officer must be notified within two (2) working days of any change by the individual in charge of the project.

#### ADMINISTRATIVE AND REVIEW FEES



# **BERRY SURVEYING & ENGINEERING**

335 Second Crown Point Road Barrington, NH 03825 Phone: (603) 332-2863 Fax: (603) 335-4623 www.BerrySurveying.Com

March 26, 2019

Barrington Planning Board Attention: Marcia Gasses Town Planner PO Box 660 333 Calef Highway Barrington, NH 03825

RE:

Site Plan Review Drew Pond, LLC Tax Map 238, Lot 16

Mr. Chairman and Members of the Barrington Planning Board

# **Background and General Narrative:**

Drew Pond LLC owns a parcel off N.H. Route 9 (Tax Map 238, Lot 16). Berry Surveying and Engineering has conducted an onsite survey as well as a full topographical analysis. A wetland analysis has also been conducted. All wetlands on site have been flagged and denoted on the plans. The lot is mostly wooded with no existing structures on site. A 50' wide easement exists between lots 15 and 16-1.

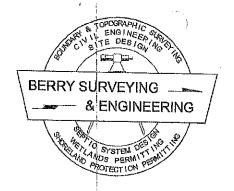
### The Proposal:

The proposal is to construct two private roads off N.H. Route 9. One of the roads will be constructed on the eastern side of the lot, this road will be called Oldenburg Drive. This road is proposed to be 450 feet long and will provide access to 20 townhouse units. The second road will be constructed in between lots 15 & 16-1, in the existing easement. This road will be called Hanovarian Drive. This road is proposed to be 980 feet long and will provide access to an additional 20 units. Both roads will have a hammerhead turn around to allow emergency vehicles the ability to access and leave the site safely and efficiently. Both roads will have additional parking for guests and dumpster pads for solid waste removal.

As part of the site design, an intensive drainage design will also be implemented to capture treat and re-infiltrate the runoff generated from the proposed site. As part of this drainage design, 3 rain gardens and dry swale will be constructed and serve as the primary treatment cells for the project. The site will also be serviced by on site septics and a community well. A water doghouse will be built at the end of each building to connect the proposed fire line and domestic line to the building, the buildings will be sprinkled.

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## **BERRY SURVEYING & ENGINEERING**

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March 26, 2019

Barrington Planning Board Attention: Marcia Gasses Town Planner PO Box 660

333 Calef Highway Barrington, NH 03825

RE:

Site Plan Review Drew Pond, LLC Tax Map 238, Lot 16

Mr. Chairman and Members of the Barrington Planning Board

In accordance with the Town of Barrington's Subdivision Regulations, the applicant requests the following waivers:

1. Identification of Waiver Request: 12.2.1 Table one of the Subdivision Regulations, maximum of 9% road grade for a private roadway.

Proposed roadway with sections greater than 9%, at 9.25% max.

The applicant is proposing to construct two private roads off N.H. Route 9 in order to provide access to 40 proposed units. These units will be serviced by onsite septic systems and a community well. As part of this site design, an intensive drainage design is proposed in order to capture, treat and re-infiltrate the runoff generated from the proposed roadways and units. One road will be constructed on the eastern side of the lot, called Oldenburg Drive. The second will be constructed within the existing easement between lots 15 & 16-1, called Hanovarian Drive. A portion of Hanovarian Drive will have a road grade of 9.25%. The road was designed so that it would conform to the existing topography of the site in order to limit disturbance, and in less than the driveway at a maximum of 10%.

### 2. Waiver Justification:

a. Granting the waiver will properly carry out the purpose and intent of the regulations.

The purpose and intent of regulation 12.2.1 with regard to maximum road grade is to allow for safe vehicular traffic. Road grade was deemed appropriate given the relatively low VPD generated from the development, given the short length of the tangent. The 9.25% road grade would provide for a more effective design and road layout, without compromising safety, and conforms to the driveway requirements of less than 10%.

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# b. Strict conformity to the regulations would pose an unnecessary hardship to the applicant.

Strict conformity to the regulations will pose an unnecessary hardship on the applicant and. The road was designed so that there would be the least amount of disturbance possible. Requiring the applicant to conform to the maximum of 9% would greatly increase the amount of fill required for the road construction, thus increasing the overall disturbance. Given the close proximity of a wetland, this would be undesirable.

- 1. Identification of Waiver Request: 12.2.1 Table one of the Subdivision Regulations, minimum tangent of 100' between reverse curves.
  - Proposed roadway with no tangent between reverse curves.

Hanovarian Drive will be constructed off N.H. Route 9 over the existing driveway that provides access to lots 15 & 16-1. An existing access easement is in place between these two lots. This easement will allow the applicant to construct Hanovarian Drive in the proposed location.

#### 2. Waiver Justification:

# a. Granting the waiver will properly carry out the purpose and intent of the regulations.

The purpose and intent of the minimum tangent length between reverse curves is to allow for safe vehicular traffic. Although the proposed roadway does not meet the minimum of 100' between reverse curves, safety will not be impeded due to the low traffic volume of the road.

# b. Strict conformity to the regulations would pose an unnecessary hardship to the applicant.

Strict conformity to the regulations will pose an unnecessary hardship on the applicant. The proposed road location was designed around an existing wetland and proposed well. Given the close proximity of the wetland and the required location for the well, the road had to be designed as shown. Adding a 100' tangent to Hanovarian Drive would require the applicant to move the well and cause the proposed disturbance to encroach closer to the existing wetlands.

- 1. Identification of Waiver Request: 12.2.1 Table 1 of the Subdivision Regulations, shoulder width of 6 feet in a cut and 3 feet in fill.
  - Proposed roadway with shoulders of 2 feet throughout.

The applicant is proposing to construct 2, 20 feet wide private roadways, each with a 4' at grade sidewalk. The proposed roadways will have a 2 foot gravel shoulder throughout. The roads were designed so that they would conform to the natural topography of the site in order to limit the disturbance generated by the construction of the roads.



### **BERRY SURVEYING & ENGINEERING**

335 Second Crown Pt. Rd., Barrington, NH 03825 (603) 332-2863 / (603) 335-4623 FAX www.BerrySurveying.Com

### 2. Waiver Justification:

a. Granting the waiver will properly carry out the purpose and intent of the regulations.

The purpose and intent of the minimum shoulder width in fill slopes is to provide vehicles with ample room to pull off the road if necessary and provide snow storage in cut slopes. The majority of the road construction will be in fill sections, which will eliminate the need for snow storage on the shoulders because the plows can push the snow off the road and down the fill slope. Given the low proposed traffic volume generated from each road, vehicles will have ample room to pull over, if needed.

The purpose and intent of the minimum shoulder width in cut slopes is to provide vehicles with ample room to pull off the road if necessary and provide snow storage in cut slopes. There is a combined 450 feet of roadway in a cut section but the cut generated is minor and is on average +/- 1.5'. Given the relatively low cut, 2' shoulders were deemed sufficient for snow storage. Given the low proposed traffic volume generated from each road, vehicles will have ample room to pull over.

b. Strict conformity to the regulations would pose an unnecessary hardship to the applicant.

Strict conformity to these regulations would pose an unnecessary hardship on the applicant. The roadway is designed so that there will be the least amount of disturbance possible for the road construction. Requiring the applicant to maintain the minimum shoulder widths would increase the road footprint and greatly increase the overall disturbance generated from the road.

- 1. Identification of Waiver Request: 12.7 Table 2, maximum of 2% of a road grade within 100 feet of an intersection.
  - Proposed roadway with a platform of 3% or less for 75' and 4% for 25' at Oldenburg Drive.

N.H. Route 9 is a NHDOT controlled roadway. The proposed entrance design was done in order to conform to the regulations of NHDOT which require a road grade of -4% off a DOT controlled roadway, or a continuation of the existing shoulder grade. The proposed roadway was designed at a -3% road grade in order to match the grade coming off the existing shoulder. From there the road will transition into a positive road grade that will not exceed 4% within 100' of the intersection. This proposed sag curve will allow vehicles to come to a natural SEP OFFICE approach N.H. Route 9.

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#### 2. Waiver Justification:

a. Granting the waiver will properly carry out the purpose and intent of the regulations.

The intent of the maximum road grade of 2% within an intersection is to allow for the safe approach of vehicles to an intersections. The proposed intersection design will only exceed the maximum road grade by 1% for 75' and 2% for 25'. Although the proposed roadway grade is more than the maximum required, it will have no adverse effect on vehicular safety.

b. Strict conformity to the regulations would pose an unnecessary hardship to the applicant.

Strict conformity to these regulations would pose an unnecessary hardship on the applicant and Town. The intersection of proposed Oldenburg Drive and N.H. Route 9 was designed so that it would conform to the NHDOT regulations. Furthermore, the steeper road grade limits the amount of disturbance generated from the proposed road.

- 1. Identification of Waiver Request: 12.8.8(4) & 12.8.9, No ditches at grades above 8%, which require curbing, culverts and basins, or at grades above 6% when the developed length exceeds 250 feet.
  - Proposed roadway without curbing above 8% grade and ditches with a 9.25% grade for a 100 feet.

The applicant is proposing to construct two private roadways off N.H. Route 9, Oldenburg Drive and Hanovarian Drive. Hanovarian Drive was designed so that it would generate the least amount of disturbance as possible. Given the existing topography of the site, there is a portion of Hanovarian Drive that has a 9.25% road grade with an adjacent swale for less than +/- 250 feet.

#### 2. Waiver Justification:

a. Granting the waiver will properly carry out the purpose and intent of the regulations.

The intent of regulation 12.8.8 & 12.8.9 is to limit the use of swales along steep slopes in order to achieve stabilization and prevent washouts.

The proposed swales adjacent to Hanovarian Drive will be rip-rap lined so that they are protected from erosion. Furthermore, the adjacent uphill slopes of the swale will lined with a form of rolled erosion control blanket, in order to stabilize the uphill slopes.

The proposed road design does not include any curbing along the steep portion of the road. This was done as part of the drainage design so that the runoff generated from the road will sheet off into the adjacent swales. These swales will be constructed with bio-media and stone as part of their drainage design, so that the runoff can be treated as it is directed to adjacent rain gardens and treatment cells.



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# b. Strict conformity to the regulations would pose an unnecessary hardship to the applicant.

Strict conformity to these regulations would pose an unnecessary hardship on the applicant and Town. Due to the existing topography and layout of the road, the design options were limited. Requiring the applicant to install curbing and remove the section of the swale in the 9.25% road, would drastically change the proposed drainage design and will require larger treatment cells and generate more disturbance.

- 1. Identification of Waiver Request: 4.7.7(1) minimum pipe diameter of 15" in any drain system.
  - Proposed drain system with 12" culverts.

As part of the construction of the two private roadways, an integral drainage system has also been designed in order to capture, treat and re-infiltrate the runoff generated from the roads and town house units. The proposed drainage system was sized so that it could accommodate the rain falls from the design storm events.

### 2. Waiver Justification:

a. Granting the waiver will properly carry out the purpose and intent of the regulations.

The intent of regulation 4.7.7(1) with regard to pipe size is to ensure that the proposed drainage system can accommodate the runoff generated from the proposed development. As part of the site design an intensive drainage analysis was conducted in order to determine the runoff that will be generated from the proposed development. The proposed drainage system was sized so that it would be able to contain the runoff generated from the site. Based on this drainage analysis it was determined that 12" culverts would be more than sufficient to contain the runoff from the required storm events.

b. Strict conformity to the regulations would pose an unnecessary hardship to the applicant.

Strict conformity to these regulations would pose an unnecessary hardship on the applicant. Requiring the applicant to increase the pipe size to 15" would require the applicant to change portions of the drainage design. It would also require the applicant to regrade the site in order to obtain the necessary cover over the pipes.

Respectfully submitted,

BERRY SURVEYING & ENGINEERING

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<sup>(</sup>Éngineering Technician

Christopher R Berry Principal, President

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#### Introduction

The proposal is to construct two private roadways off N.H. Route 9 to provide access to 40 town house units. These units will be serviced by onsite septic systems and a community well. Parking areas are proposed in order to provide ample room for guest parking. A lighting plan is also included in the plan set to show the proposed lamps and how they will illuminate the units, parking areas and the roadway entrances of N.H. Route 9. The units proposed are drive under townhouses, are 2 bedrooms, with garage and 1 space out front.

**Attendance at Public Schools:** In a study published in 2004 by New Hampshire Housing Finance Authority (NHHFA) the average rate derived for child per household in a single family attached dwelling was 0.31 and is on average declining in the state of New Hampshire. The site design proposes 40 units which fall into the single family attached category.

There are no outside forces due to marketing, demographic or the surrounding neighborhood to influence a higher or lower rate than provided in the NHHFA study.

Given the anticipated end user as mentioned above, offset by the known increase in enrollment specific to Barrington, a rate of .15 was used in this analysis. This rate is on par with the single family average published in the NHHFA study.

$$|0.15 \times 40 = 6|$$

It should be noted that this number would be dispersed over entire school age system.

**Increase in Vehicular Traffic:** While it is anticipated that at some point all of the units will be individually owned, to account for both homeowner and tenant possibilities, we have averaged ITE Code 224 & 230. 224 are listed as Townhouse rental while 230 is Townhouse ownership. AM Peak rate  $\sim 0.50 \times 40$  units = **20.0T**. 25% entering & 75% exiting. 50%/50% left-right split. PM Peak rate  $\sim 0.65 \times 40$  units = **26.0T**. 62% entering & 38% exiting. 50%/50% left-right split.

Change in Number of Legal Residents: It is anticipated that all occupants would be residents with two people per unit. 80 resident increases. (86 if children are included)

Increases in Municipal Costs: As mentioned above, they are proposed to be a private roadways. The Department of Public Works will not have the responsibility of winter or summer maintenance, or general maintenance typically required as long term expense. Expenses related to the Fire department and Police department are proposed to be the same as any typical development project. The project site will be on septic and well. A fire cistern will also be installed.

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Harmony with Surrounding Developments: The proposed density sits within the Village District which allows for a denser placement of units based on the zoning. The proposed town house units will conform to the types of development desired within the Village District.

Location of Utilities: All utilities required for this project will be installed underground.

Respectfully submitted,

Berry Surveying & Engineering

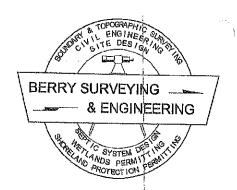
James Hayden

Engineering Technician

Christopher R. Berry Principal, President

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# **BERRY SURVEYING & ENGINEERING**

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# **Fiscal Impact Analysis**

For

Drew Pond, LLC Tax Map 238, Lot #16

> Drew Pond, LLC N.H. Route 9 Barrington, NH

Prepared By

Berry Surveying & Engineering 335 Second Crown Point Road Barrington, NH 03825 603-332-2863

> File Number DB2017-075

Load on Public Utilities or future demand for them: As noted above, the proposed units will be serviced by on site septics and a community well.

**Public Safety:** The project will not have an adverse effect on public safety. Normal residential uses, identical to those of the surrounding neighborhood are anticipated. Auto traffic safety is enhanced by limiting access to the property to two entrances and one exits, far fewer than a comparable number of units in the surrounding neighborhood. The existing house driveways will also be adjusted so that they tie into Hanovarian Drive.

**Changes in Tax Revenue:** The existing tax rate is 24.78 dollars per thousand of value. The estimated cost of improvements is in excess of \$5,000,000. Generating tax revenue of at least \$123,900. Currently the assessment of the property is limited to raw land.

**Changes in Surface Drainage:** A full drainage analysis has been submitted with the application. Several drainage best management practices such as rain gardens and swales will be constructed in order to mitigate and treat the runoff generated from the proposed road construction and units.

**Increased Consumption of Ground Water:** Wells are proposed to service the proposed units but given the lack of existing use on this lot, the proposed development should not have an adverse effect on the groundwater, and is subject to NHDES subsurface review. Onsite septic allows for re-infiltration. The total withdrawal is estimated to be 12,000 GPD.

Increased Refuse Disposal: Refuse disposal is to be handled via private pickup and disposal.

**Pollution of Water or Air:** Given the detention system and advanced treatment systems proposed for the storm water system, there are no known air quality issues related with normal single family uses. Therefore, there will be no impact to air and water.

**Land Erosion and Loss of Tree Cover:** A robust landscaping plan is proposed so that the area around the proposed units can be re-vegetated.

**Disturbance** to other aspects of the natural ecology: The units are proposed to be built in upland areas, away from existing wetlands. This is done to preserve the natural features on site and promote development in desirable areas.

**Blocking Views:** The proposed units will be constructed towards the rear of the parcel and away from existing houses. This will keep a buffer between the proposed units and the abutting parcels.

The proposed project will be broken up into two phases. The first phase will involve the construction of Oldenburg Drive, the community well, fire cistern, rain garden 102, rain garden 103, the dry swale and the relating units. Phase two will be the construction of Hanovarian Drive, rain garden 101 and the units associated with Hanovarian Drive.

As part of the design, a full traffic analysis and drainage design have been conducted to demonstrate that the proposed road design and drainage design can accommodate the proposed traffic flows and runoff. Copies of both have been submitted with the application.

Respectfully submitted,

BERRY SURVEYING & ENGINEERING

James Hayden

Engineering Technician

Christopher R. Berry Principal, President

