Town of Reading Zoning Ordinance

Developed by the Reading Planning Commission with assistance from the Southern Windsor County Regional Planning Commission. Funded in part by a Municipal Planning Grant from the Vermont Department of Housing and Community Development

Adopted by Vote of the Selectboard: July 8, 2019

Adopted: June 19, 1973

Amended: March 2, 1976

June 19, 1978 March 4, 1980 November 6, 1990 March 1, 1994

March 4, 2000 (major rewrite)

April 29, 2003 August 15, 2005 July 16, 2007 July 8, 2019

Town of Reading – Zoning Ordinance

TABLE OF CONTENTS

ARTICLE I – A	uthority and Purpose	
Section 1.0	ENACTMENT	4
Section 1.1	PURPOSE	
Section 1.2	APPLICATION OF REGULATIONS	4
Section 1.3	INTERPRETATION	4
Section 1.4	AMENDMENTS	4
Section 1.5	SEPARABILITY	4
Section 1.6	EFFECTIVE DATE	4
Article 2 – ZONI	NG DISTRICTS AND MAPS	5
Section 2.0	ESTABLISHMENT OF ZONING DISTRICTS	5
Section 2.1	ZONING MAP	5
Section 2.2	INTERPRETATION OF ZONING DISTRICT BOUNDARIES	5
Section 2.3	PARCEL IN MORE THAN ONE DISTRICT	6
Section 2.4	DISTRICT USES AND STANDARDS	6
2.4.1 RES	SIDENTIAL/CONSERVATION DISTRICT (RC-25)	7
2.4.2 RURA	AL RESIDENTIAL DISTRICT (RR-10)	8
	AL RESIDENTIAL DISTRICT (RR-5)	
2.4.4 RESII	DENTIAL DISTRICT (R-1) (SOUTH READING)	10
2.4.5 RESII	DENTIAL/COMMERCIAL (RC-A) (HAMMONDSVILLE)	11
2.4.6 RESII	DENTIAL/COMMERCIAL (RC-B) (FELCHVILLE)	12
2.4.7 INDU	STRIAL MINING DISTRICT (IM)	13
	ELINE PROTECTION OVERLAY DISTRICT (RPO)	
	NIFICANT WILDLIFE HABITAT OVERLAY DISTRICT (SWHOD)	
Article 3 – GENI	ERAL REGULATIONS	20
Section 3.0	APPLICABILITY	
Section 3.1	ACCESS AND FRONTAGE REQUIREMENTS	
Section 3.2	EXISTING SMALL LOTS	
Section 3.3	FILLING OF LAND	20
Section 3.4	HEIGHT LIMITATIONS	20
Section 3.5	LOT REQUIREMENTS	
Section 3.6	NONCONFORMITIES	
Section 3.7	PARKING AND LOADING	
Section 3.8	SIGNS	22
Section 3.9	STORAGE OF FLAMMABLE FLUIDS AND GASES	24
Section 3.10	SURFACE WATERS AND WETLANDS	
Article 4 – SPEC	IFIC USE STANDARDS	
Section 4.0	APPLICABILITY	25
Section 4.1	ACCESSORY APARTMENTS	
Section 4.2	ACCESSORY STRUCTURES AND USES	25
Section 4.3	BED AND BREAKFAST	25
Section 4.4	ESSENTIAL SERVICES	26
Section 4.5	EXTRACTION OF MINERAL RESOURCES	
Section 4.6	FAMILY CHILD CARE HOME OR FACILITY	
Section 4.7	GROUP HOMES OR RESIDENTIAL CARE HOMES	28
Section 4.8	HOME OCCUPATIONS	28
Section 4.9	HOME-BASED BUSINESS	29
Section 4.10	MOBILE HOMES	29

Section 4.11	MOBILE HOME PARKS	29
Section 4.12	MULTIPLE USE STRUCTURE	31
Section 4.13	PONDS	
Section 4.14	TEMPORARY USES AND STRUCTURES	
		page
Section 4.15	WIRELESS COMMUNICATION FACILITIES	
Article 5 – DEV	ELOPMENT REVIEW	
Section 5.0	GENERAL	
Section 5.1	PERMITTED USES	
	mitations	
	emptions	
Section 5.2	CONDITIONAL USES	
	neral Standards	
-	ecific Standards	
Section 5.3	SITE PLAN REVIEW	
1.1	ication	
	ew Procedure	
	eral Standards	
	ct and Use Recommendations	
	quirementsINED UNIT DEVELOPMENT (hereinafter called P.U.D.)	
	OSE	
	ose eral	
	w Procedure	
	neral Development Standards	
Section 5.5	•	
	tory Authorization and Effect	
	ment of Purpose	
	r Provisions	
	s to Which these Regulations Apply	
	nary Table: Development Review in Hazard Areas	
	lopment Review in Hazard Areas	
	elopment Standards	
5.5.8 Adm	inistration	54
5.5.9 Certif	icate of Occupancy	55
5.5.10	Enforcement and Penalties	55
Section 5.6	SUBDIVISION REVIEW	55
5.6.1 Ap	pplication & Review Procedures	56
5.6.2 Sul	bdivision Design Standards	58
Article 6 – ADM	IINISTRATION, ENFORCEMENT, AND APPEALS	61
Section 6.0	Permit Requirements	61
Section 6.1	ENFORCEMENT	62
Section 6.2	APPEALS	62
6.2.1 Interes	ested Persons	63
6.2.2 Notice	e of Appeal to Zoning Board of Adjustment	64
6.2.3 Ap	peals to Environmental Court	64
Section 6.3	VARIANCES	
Section 6.4	Administrative Requirements	
Section 6.5	RECORDS	
	SSARY	
Section 7.0	CLARIFICATION OF WORD MEANINGS	

Section 7.1	DEFINITIONS	70
APPENDIX		
Appendix A	Noxious Weeds and List of Species to Watch	71
Appendix B	Measuring the Size and Volume of Ponds	73

page

ARTICLE 1 – Authority and Purpose

Section 1.0 ENACTMENT

In accordance with the Vermont Planning and Development Act 24 V.S.A., Chapter 117, Subchapter 6, Sections 4401, 4411, 4441, and 4442 (hereinafter referred to as the "Act") there is established the Town of Reading Zoning Ordinance as set forth in its entirety in the following text and map, and which became effective upon adoption by vote of the Reading Selectboard on July 29, 2017. This Ordinance shall repeal the Town of Reading Zoning Ordinance adopted on June 19, 1973, and amended on March 2, 1976, June 19, 1978, March 4, 1980, November 6, 1990, March 1, 1994, April 29, 2003, August 15, 2005, and July 16, 2007.

Section 1.1 PURPOSE

It is the purpose of this Ordinance to implement the Reading Town Plan by providing for the appropriate use of all lands in the Town in a manner which will promote and protect the health, safety, welfare, and prosperity of the Town of Reading.

Section 1.2 APPLICATION OF REGULATIONS

A zoning permit issued by the Zoning Administrator shall be required for any land development as defined in the Act §4303 except for development which is specifically exempted from these regulations under Section 5.1.2. Such permit may be issued only in conformance with these regulations and other Town ordinances, as provided in the Act §4449. Any use not permitted by these regulations shall be deemed prohibited.

"Land Development" means the division of a parcel into two or more parcels; the construction, reconstruction, conversion, structural alteration, relocation, or enlargement of any building or other structure, or of any mining, excavation, or landfill, and any change in the use of any building or other structure, or land, or extension of use of land.

-- T. 24 §4303 (10)

Section 1.3 INTERPRETATION

In their interpretation and application, the provisions of these regulations shall be held to be minimum requirements adopted for the promotion of the public health, safety, comfort, convenience, and general welfare.

Except where, in these regulations, it is specifically provided to the contrary, it is not intended that these regulations repeal, annul or in any way impair any permits previously adopted or issued. However, where these regulations impose a greater restriction upon the use of a structure or land than is required by any other statute, ordinance, rule, regulation, permit, easement, or agreement, the provisions of these regulations shall control.

Section 1.4 AMENDMENTS

These regulations may only be amended in accordance with the requirements and procedures established in Sections 4441 and 4442 of the Act.

Section 1.5 SEPARABILITY

The invalidity of any provision of these regulations shall not invalidate any other provision.

Section 1.6 EFFECTIVE DATE

These regulations shall take effect in accordance with the procedures contained in Sections 4441 and 4442 of the Act.

Article 2 - ZONING DISTRICTS AND MAPS

Section 2.0 ESTABLISHMENT OF ZONING DISTRICTS

For the purpose of these regulations, the Town of Reading is divided into the following districts as shown on the Zoning Map:

RR-25 - Residential/Conservation 25

RR-10 - Rural Residential 10

RR-5 - Rural Residential 5

R-1 - Residential 1 (South Reading)

RC-A - Residential/Commercial (Hammondsville area)

RC-B - Residential/Commercial (Felchville area)

IM - Industrial/Mining

RPO - Ridgeline Protection Overlay District

SWHOD - Significant Wildlife Habitat Overlay District

Section 2.1 ZONING MAP

The boundaries of these districts are hereby established as shown on the Zoning Map of the Town of Reading. This map is hereby declared a part of these regulations and incorporated herein by reference. Regardless of the existence of copies of the map which may be made or published, the official Zoning Map located in the Town Office shall be the final authority as to the current status of zoning district boundaries.

Section 2.2 INTERPRETATION OF ZONING DISTRICT BOUNDARIES

Utilizing the following guidelines, the Zoning Administrator shall determine the boundaries of the Zoning Districts. Upon appeal from the decision of the Zoning Administrator as to a boundary location, the Zoning Board of Adjustment shall make the necessary interpretation.

- 1. Where District Boundaries are indicated as approximately following streets or highways, the center lines of such street or highway right-of-ways shall be construed to be the boundaries.
- 2. Where District Boundaries are so indicated that they approximately follow lot lines, such lot lines shall be construed to be the boundaries.
- 3. Where District Boundaries are shown as paralleling streets or highways, such boundaries shall be construed as running parallel to the center lines of the right-of-ways of such streets or highways at such distance there from as is indicated on the zoning map. If no distance is given, such dimension shall be determined by the use of the scale shown on the zoning map.

4. Where the Boundary of a District follows a river, stream, lake, or pond, the boundary shall be construed to be the normal high-water mark of the river, stream, lake, or pond.

Section 2.3 PARCEL IN MORE THAN ONE DISTRICT

Where a district boundary line divides a parcel into two or more pieces and the portion of the parcel in one of the districts does not meet the minimum lot size for the district but exceeds oneeighth (1/8) of an acre, the regulations for the district shall be extended into the adjoining district the minimum distance necessary to provide for conforming lots in both districts, if development of the small portion is proposed. If conforming lots cannot be so created, the Zoning Board of Adjustment shall, after public hearing, establish an appropriate boundary location and may, in accordance with Section 6.3, grant a Variance for development of a small lot if necessary. In no case, however, shall any use allowed in one district be extended more than thirty (30) feet into the abutting zoning district if it would not ordinarily be allowed therein.

Section 2.4 DISTRICT USES AND STANDARDS

The following pages list the permitted and conditional uses allowed in each district and the lot and building requirements for each of these uses and structures. Definitions are given in the Glossary, Article 7. Refer to Section 4413 of the Act for additions and limitations.

ZONING ORDINANCE, ADOPTED JULY 8, 2019

2.4.1 RESIDENTIAL/CONSERVATION DISTRICT (RC-25)

The purpose of the RR-25 district is to limit growth on certain undeveloped lands in Reading which, because of their size and resource value, are better suited for forestry, wildlife management and other, similar low-intensity uses.

PERMITTED USES	CONDITIONAL USES
Forestry and Agricultural Uses	Two-family Dwelling Unit
Camp (Seasonal)	Forestry and Agricultural Product Processing*
Single-family Dwelling Unit	Bed & Breakfast (more than 3 bedrooms)*
Accessory Structures and Uses	Inn*
Accessory Apartment	
Bed & Breakfast (up to 3 bedrooms)	Home-based Business
Home Occupation	Small Business*
Family Child Care Home (serving 6 or fewer children full time and 4 or fewer part time)	Nursery - Commercial Greenhouse*
	Essential Services
	Mineral Resource Extraction* 1
	Family Child Care Facility (serving more than 6 children full time and more than 4 part time)*
	Group Home (serving more than 8 people)*

^{*}Site Plan approval required

Lot Requirements For Each Use

Building Requirements

Minimum Setbacks
Minimum Lot Size 25 acres Front** Side Rear
Minimum Frontage 400 feet 50 ft 25 ft 25 ft

Max. Building Height 35 feet

Note: For purposes of enrollment in the Vermont's Current Use Program, lots must be at least 27 acres in size.

Handicap accessibility ramps require a permit but are exempt from setback requirements. If a ramp violates a property line setback, it must be removed as soon as it is no longer needed.

¹ Blasting, drilling and crushing prohibited in this district.

^{**}Front yard setbacks are measured from the center of the traveled portion of the roadway.

2.4.2 RURAL RESIDENTIAL DISTRICT (RR-10)

The purpose of the RR-10 district is to limit growth on certain undeveloped lands in Reading which, because of their size and resource value, are better suited for forestry, wildlife management and other, similar low-intensity uses.

PERMITTED USES	
PERMITTED USES	CONDITIONAL USES
Forestry and Agricultural Uses	Two-family Dwelling Unit
Camp (Seasonal)	Forestry and Agricultural Product Processing*
Single-family Dwelling Unit	Bed & Breakfast (more than 3 bedrooms)*
Accessory Structures and Uses	Inn*
Accessory Apartment	Restaurant*
Bed & Breakfast (up to 3 bedrooms)	Small Business*
Home Occupation	Nursery - Commercial Greenhouse*
Family Child Care Home (serving 6 or fewer children full time and 4 or fewer part time)	Essential Services
	Mineral Resource Extraction ¹
	Mobile Home Park*
	Family Child Care Facility (serving more than 6 children full time and more than 4 part time)*
	Group Home (serving more than 8 people)*

^{*}Site Plan approval required

Lot Requirements For Each Use

Building Requirements

		M	Iinimum	Setbacks
Minimum Lot Size	10 acres	Front**	Side	Rear
Minimum Frontage	200 feet	50 ft	25 ft	25 ft

Max. Building Height 35 feet

¹Blasting, drilling and crushing prohibited in this district

Handicap accessibility ramps require a permit but are exempt from setback requirements. If a ramp violates a property line setback, it must be removed as soon as it is no longer needed.

**Front yard setbacks are measured from the center of the traveled portion of the roadway.

2.4.3 RURAL RESIDENTIAL DISTRICT (RR-5)

The purpose of the Rural Residential District is to provide for low-density rural development on lands which may have resource value and are serviced by public roads and are generally suitable for low density residential uses.

PERMITTED USES	CONDITIONAL USES
Forestry and Agricultural Uses	Two Family Dwelling Unit
Camp (Seasonal)	Multi-Family Dwelling Unit*, **
Single Family Dwelling Unit	Bed & Breakfast (more than 3 bedrooms)
Accessory Structures and Uses	Inn*
Accessory Apartment	Restaurant*
Bed & Breakfast (up to 3 bedrooms)	Home Based Business
Home Occupation	Small Business*
Family Child Care Home (serving 6 or fewer children full time and 4 or fewer part time)	Nursery - Commercial Greenhouse*
	Clubhouse
	Boarding House
	Mobile Home Park*
	Family Child Care Facility (serving more than 6 children full time and more than 4 part time)*
	Group Home (serving more than 8 people)*
	Forestry and Agricultural Product Processing*
	Cultural Facility*

^{*} Site Plan approval required

Lot Requirements For Each Use

Building Requirements

Minimum Setbacks
Front*** Side Rear
40 ft 25 ft 25 ft Minimum

Minimum Lot Size: 5 acres

** Minimum Lot Size per Dwelling Unit: 2.5 acres

Frontage: 150 feet

Max. Building Height 35 feet

it must be remo	eved as soon as	it is no longer	needed.			
***Front yard s	setbacks are me	asured from the	he center of th	e traveled por	ion of the road	way.

2.4.4 DISTRICT (R-1) (SOUTH READING)

The purpose of the Residential District is to provide for small-lot residential growth near existing settlements on land generally suitable for on-site sewage disposal and water and serviced by improved public roads.

PERMITTED USES	CONDITIONAL USES
Forestry and Agricultural Uses	Multi-Family Dwelling Unit *. **
Camp (Seasonal)	Bed & Breakfast (more than 3 bedrooms)
Single Family Dwelling Unit	Inn*
Two Family Dwelling Unit	Restaurant*
Accessory Structures and Uses	Home Based Business
Accessory Apartment	Small Business*
Home Occupation	Nursery - Commercial Greenhouse*
Bed & Breakfast (up to 3 bedrooms)	Clubhouse
Church	Municipal/Governmental Building*
Family Child Care Home (serving 6 or fewer children full time and 4 or fewer part time)	Family Child Care Facility (serving more than 6 children full time and more than 4 part time)*
	Group Home (serving more than 8 people)*
	Boarding House
	Cultural Facility*

^{*} Site Plan approval required

Lot Requirements

Building Requirements

Minimum Setbacks
Minimum Lot Size: 1 acre

** Minimum Lot Size per Dwelling Unit: .5 acre

Minimum Setbacks
Front*** Side Rear

** Minimum Lot Size per Dwelling Unit: .5 acre

35 ft 15 ft Minimum

Frontage: 100 feet

Max. Building Height 35 feet

Handicap accessibility ramps are exempt from setback requirements. If a ramp violates a property line setback, it must be removed as soon as it is no longer needed.

^{***}Front yard setbacks are measured from the center of the traveled portion of the roadway.

2.4.5 /COMMERCIAL (RC-A) (HAMMONDSVILLE)

The purpose of the Residential-Commercial District (Hammondsville area) is to provide for development in a rural village setting of compatible residential and commercial uses at a density which will not result in the need for municipal sewage facilities.

PERMITTED USES	CONDITIONAL USES
Single Family Dwelling Unit	Multi-Family Dwelling*. **
Two Family Dwelling Unit	Bed & Breakfast (more than 3 bedrooms)
Accessory Structures and Uses	Multiple Use Structure*
Accessory Apartment	Inn*
Home Occupation	Restaurant*
Bed & Breakfast (up to 3 bedrooms)	Home Based Business
Church	Small Business*
Family Child Care Home (serving 6 or fewer children full time and 4 or fewer part time)	Nursery - Commercial Greenhouse*
	Clubhouse
Forestry and Agricultural Uses	Municipal/Governmental Building*
	Boarding House
	Retail Store / Service*
	Auto Service Station*
	Professional or Business Office*
	Essential Services
	Family Child Care Facility (serving more than 6 children full time and more than four part time)*
	Group Home (serving more than 8 people)*
	Cultural Facility*

^{*} Site Plan approval required

Lot Requirements

Building Requirements

Minimum Setbacks

Minimum Lot Size: 1 acre

** Minimum Lot Size per Dwelling Unit: .5 acre

Minimum Setbacks

Front*** Side Rear

35 ft 15 ft 15 ft Minimum

Frontage: 100 feet

Max. Building Height 35 feet

Handicap accessibility ramps are exempt from setback requirements. If a ramp violates a property line setback, it must be removed as soon as it is no longer needed.

***Front yard setbacks are measured from the center of the traveled portion of the roadway.

2.4.6 /COMMERCIAL (RC-B) (FELCHVILLE)

The purpose of the Residential/Commercial District in the Felchville area is to provide for development in a rural village setting of compatible residential and commercial uses at a density that will not result in the need for municipal sewage and water facilities.

PERMITTED USES	CONDITIONAL USES
Single Family Dwelling Unit	Multi-Family Dwelling Unit*, **
Two Family Dwelling Unit	Bed & Breakfast (more than 3 bedrooms)
Accessory Structures and Uses	Multiple Use Structure
Accessory Apartment	Inn*
Home Occupation	Restaurant*
Bed & Breakfast (up to 3 bedrooms)	Home Based Business
Church	Small Business*
Family Child Care Home (serving 6 or fewer children full time and 4 or fewer part time)	Nursery - Commercial Greenhouse*
	Clubhouse
Forestry and Agricultural Uses	Municipal/Governmental Building*
	Boarding House
	Retail Store/Service*
	Auto Service Station*
	Professional or Business Office*
	Family Child Care Facility (serving more than 6 children full time and more than four part time)*

Group Home (serving more than 8 people)*
Essential Services
Cultural Facility*

^{*} Site Plan approval required

Minimum Lot Size: .5 acre

Lot Requirements

** Minimum Lot Size per Dwelling Unit: .5 acre

Building Requirements

Minimum Setbacks
Front*** Side Rear

35 ft 5 ft 5 ft Minimum

Frontage: 75 feet

Max. structure height 35 feet

Handicap accessibility ramps are exempt from setback requirements. If a ramp violates a property line setback, it must be removed as soon as it is no longer needed.

***Front yard setbacks are measured from the center of the traveled portion of the roadway.

2.4.7 INDUSTRIAL MINING DISTRICT (IM)

The purpose of the Industrial Mining District is to provide for major industrial operations for the extraction and processing of mineral resources.

PERMITTED USES	CONDITIONAL USES
Home Occupation	Essential Services *
Accessory Apartment**	Home-Based Business
Accessory Structures and Uses	Emergency Management Services*
	Clubhouse *
	Mineral Resource processing* 1
	Extraction of Mineral Resources*
	Forestry and Agricultural Product Processing*

^{*} Site Plan approval required

Lot Requirements

Building Requirements

	M ₁	nimum S	etbacks
Minimum Lot Size: 5 acres	Front**	* Side	Rear
Minimum Frontage: 200 feet	75 ft	50 ft	50 ft

Max. structure height 35 ft

Handicap accessibility ramps are exempt from setback requirements. If a ramp violates a property line setback, it must be removed as soon as it is no longer needed.

2.4.8 RIDGELINE PROTECTION OVERLAY DISTRICT (RPO)

The purpose of the Ridgeline Protection Overlay District is to protect Reading's rural character and scenic landscape by ensuring that development is located and designed in a

^{**} Allowed in existing owner-occupied single-family homes.

¹ Smelting or refining are not permitted. Other forms of processing that are necessary in order to give value to the mineral and make it transportable may be permitted after conditional use review by the Zoning Board of Adjustment (ZBA) (see Section 4.5).

^{***}Front yard setbacks are measured from the center of the traveled portion of the roadway.

manner that protects the uninterrupted skyline and minimizes adverse visual impact on designated ridgelines and adjacent slopes.

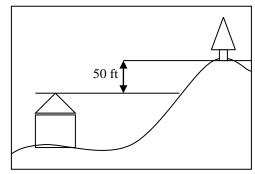
PERMITTED USES	CONDITIONAL USES
Structures and uses specifically exempted under subsection (1), below, are allowed with approval of the Zoning Administrator in accordance with Section 6.0	Uses allowed as a permitted or conditional use in the underlying zoning district, unless specifically exempted under subsection (1) below, require the approval of the Planning Commission in accordance with Section 5.3 and the standards set forth below.

- **1. Exemptions.** The following uses are exempted from review under the Ridgeline Protection Overlay District:
 - a. Agriculture and Forestry, excluding landscaping and/or screening or clearing associated with any other uses or development and provided forestry activities are in compliance with Acceptable Management Practices for Maintaining Water Quality on Logging Jobs in Vermont, published by the Vermont Department of Forests, Parks & Recreation.
 - b. Uncovered decks attached to a one or two-unit dwelling.
 - c. Accessory structures with a footprint of less than 120 square feet (total accumulated in any 10 year period) and a height of less than 12 feet.
 - d. Changes in use that do not involve any exterior alterations to a structure.
 - e. Additions, exterior alterations, accessory structures, and additions to accessory structures that the Zoning Administrator determines will not be visible from a town road due to screening by an existing structure on the same property or by topography, regardless of vegetation and/or forest cover.
- **2. Dimensional Standards.** All dimensional standards shall be as set forth for the underlying district.
- **3. Supplemental District Standards.** In addition to the standards set forth in Section 5.3 (Site Plan Review) development within the RPO District shall not have an undue adverse visual impact on the scenic and natural beauty of the site as viewed from town or state highways. To this end, development shall comply with the following:
 - a. <u>Forest Cover.</u> On wooded sites, forest cover shall be maintained or established adjacent to proposed structures to interrupt the facade of buildings, provide a forested backdrop to structures, and/or soften the visual impact of new development as viewed from public roads. The Commission shall consider the location of proposed structures relative to existing vegetation, and may require additional planting and/or limit the amount of clearing adjacent to proposed development to provide screening and maintain a forested backdrop. A tree

cutting, landscaping and/or forest management plan may be required to ensure that ridges and hill tops remain wooded, and to ensure that trees remain standing immediately adjacent to buildings to visually interrupt facades and reduce reflective glare, as viewed from off site. Such a plan shall address specific measures to be taken to ensure the survival and, if necessary, replacement of designated trees during or after site development and the installation of all site improvements.

b. <u>Placement of Structures.</u> Development shall be as minimally visible from public roads and properties as possible given site conditions and topography, and shall not stand in contrast to the surrounding Structure Placement in Ridgeline District

landscape patterns and features or serve as a visual focal point. The top of the highest feature of all structures shall be located a minimum of 50 feet in elevation below the nearest identifiable ridgeline (as measured from the top of the peak at ground level) unless the Board determines that an alternative location on the parcel would be less visible and better comply with these standards. Structures shall, however, be



situated so that the height of any structure will not visually exceed the height of the adjacent tree canopy serving as the visual backdrop to the structure.

Wireless telecommunication facilities are exempt from this RPO height standard, but such structures are subject to the provisions in Section 4.15, including height limitations for all wireless telecommunication facilities.

- c. <u>Landscaping & Screening.</u> In instances where existing forest cover or topography will not adequately conceal proposed development or mitigate the adverse visual impacts of a project, a landscaping plan shall be submitted and approved by the Commission. Such plan shall be designed to use native species to minimize the visibility of the structure as viewed from public roads and visually integrate the development site into the surrounding landscape. Please see Appendix B for a list of invasive species that should not be included in landscaping plans.
- d. <u>Glare and Lighting.</u> Exterior building materials of all structures shall be of a type and design to minimize reflective glare and avoid undue adverse visual impact. Exterior lighting shall be shielded and downcast.
- e. <u>Determination of Visual Impacts.</u> Development shall not result in an undue adverse impact on the scenic character of the RPO District. To help achieve this goal, the Planning Commission recommends the use of natural colors for roofing and building exteriors. An undue adverse impact may result from development which stands in contrast to the surrounding area, serves as a focal point, is visible from multiple points along a road, or for an extensive distance along a road

segment, and/or which is highly visible from several vantage points within one mile of the development site. In determining whether a specific development would result in an undue adverse visual impact, the Board shall consider the following:

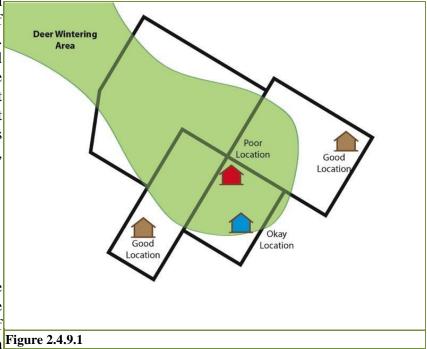
- i. Degree to which view of development is screened by existing vegetation, topography, and existing structures at all times of day or night.
- ii. Contributing and detracting background features in the view of the proposed development.
- iii. Distance to development from vantage point.
- f. <u>Pre-application Site Development.</u> Forest management activities designed as predevelopment site preparation shall be reviewed by the Planning Commission to determine compliance with the standards set forth in this section. Such activities include, but are not limited to, road and driveway construction, excavation related to the upgrade and conversion of logging roads to development roads or driveways, clearing and/or grading for house-sites and septic systems, or related work. Where a landowner fails to submit pre-development plans for review, the Board may direct the manner in which the site will be restored or re-vegetated prior to development and/or limit development to a portion of the property which best meets the standards of this district.

2.4.9 SIGNIFICANT WILDLIFE HABITAT OVERLAY DISTRICT (SWHOD)

The purpose of the Significant Wildlife Habitat Overlay District is to protect Reading's Wildlife Travel Corridors (WTC) and Deer Wintering Habitat (DWH) by regulating the location and layout of development on these lands. It is not the Town's intention to prevent development in these areas but rather to encourage development that will minimize and mitigate the impacts on the significant wildlife resources.

Wildlife Travel Corridors are physical connections between discrete habitats used by wildlife, such as deer, moose, bear and bobcat, to access resources important to their survival and procreation. Humans can modify or disrupt established travel corridors through the creation of large expanses of open land for agricultural activities or the construction of buildings and roads. This can result in wildlife abandoning critical habitats or being subjected to new

hazards, such as increased incidences vehiclewildlife encounters. The Wildlife Travel Corridor included within the Significant Wildlife Habitat Overlay District connect habitats in the Arthur Davis Wildlife Management Area, habitats located easterly to Mount Ascutney, and lands consisting of the Alps, immediately south of the **Arthur Davis** Wildlife Management Maintaining these Area. corridors is critical to the abundance and health of wildlife populations within Figure 2.4.9.1



the town of Reading as well as the surrounding region and the public's enjoyment of these wildlife resources.

Deer Wintering Habitat is defined as "areas of mature or maturing softwood cover, with aspects tending towards the south, southeast, southwest, or even westerly and easterly facing slopes". This habitat is regarded as critical to the health and survival of white-tailed deer subject to severe winter conditions, i.e. deep snow and prolonged sub-freezing temperatures. The Vermont Fish and Wildlife Department identifies the Deer Wintering Habitat identified in Reading's Significant Wildlife Habitat Overlay District as being regionally significant providing the deer population with high value, irreplaceable winter cover. Habitat quality and deer use of this Deer Wintering Habitat may be negatively impacted by poor road and

TOWN OF READING, VERMONT

¹ Conserving Vermont's Natural Heritage (VT ANR and VT FWD, 2004)

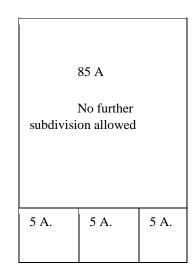
housing/building placement and construction as well as human activities that disturb or stress wintering deer.

1. Dimensional Standards. All dimensional standards shall be as set forth for the underlying district, except as modified below. To provide development flexibility, subdivisions in the Wildlife Travel Corridor are subject to a maximum density standard, rather than the minimum lot size standard that applies to the rest of the town. In the conventional example below, a 100-acre lot can be subdivided into four 25-acre lots. In the WTC, subject to a maximum density standard, the same 100-acre lot can be subdivided into four lots, three of which could be (much) smaller if desired, as long as the overall density meets the standard. The two examples below suggest subdivision possibilities. Please note that the large lot in examples #2 and #3 cannot be further subdivided.

Lot Requirements For Each Use

Maximum density 1 lot/25 acres
Minimum Lot Size 5 acres

25 A	25 A
25 A.	25 A



40 A N further subdivi n allow	sio	50 A No further subdiv. allowed
5 A	5 A	

Example of minimum lot size zoning,

Example of 25 acre /lot, maximum density zoning.

2nd example of 25 acre /lot, maximum density zoning.

2. Supplemental District Standards

- a. <u>Subdivisions</u> within the Significant Wildlife Habitat Overlay District, including both the Wildlife Travel Corridors and Deer Wintering Habitat, shall comply with the following standards:
 - 1. Development shall be located to the edge of the Significant Wildlife Habitat Overlay District. See Figure 2.4.9.1.
 - 2. Development shall be clustered to avoid or minimize encroachment and fragmentation of land within the Significant Wildlife Habitat Overlay District.
 - 3. Development (for example: house, accessory structures, driveway, leach field, lawn, gardens, etc.) shall not exceed a maximum lot coverage of 15%.
 - 4. Proposals for development of parcels in the Significant Wildlife Habitat Overlay District shall be based on consultation with and the recommendations of representatives of the Vermont Fish and Wildlife Department and the applicant shall provide evidence of such consultation as part of the subdivision application. A critical part of the consultation shall include ensuring the continued viability of the Deer Wintering Habitat and Wildlife Travel Corridor and a list of measures the applicant can take to support that viability.
- b. All other development within the Significant Wildlife Habitat Overlay District is encouraged to comply with the above standards.

Article 3 – GENERAL REGULATIONS

Section 3.0 APPLICABILITY

The following general standards, including provisions required under the Act [§4406, §4409], apply to all uses and structures within the Town of Reading.

Section 3.1 ACCESS AND FRONTAGE REQUIREMENTS

- 1. No land development may be permitted on Lots which do not either have frontage on a public road or public waters or, with the approval of the Planning Commission, access to such a road or waters by a permanent easement or right-of-way at least twenty (20) feet in width.
 - Where Planning Commission approval of access is necessary, an applicant shall submit a site plan that identifies topography, slope, sight distances, and other necessary characteristics within the proposed right-of-way, as deemed necessary by the Commission. The easement or right-of-way shall be surveyed and identified in a recorded deed.
- 2. Lots at an intersection of streets shall have the required frontage on both streets, and any yard adjoining a street shall be considered a front yard and shall meet front yard requirements.
- 3. No driveway or highway access point shall be located within fifty (50) feet of a street line intersection. Driveways serving individual lots generally shall comply with the Vermont Agency of Transportation's *Standard B-71* for residential and commercial driveways, as most recently amended, and curb cuts must be approved by the Selectmen of the Town of Reading and/or the State of Vermont.

Section 3.2 EXISTING SMALL LOTS

- 1. Any lot in existence on the effective date of these regulations in individual, separate and non-affiliated ownership from surrounding properties, may be developed for the purposes permitted in the district in which it is located, even though not conforming to the minimum lot size requirements, if such lot is not less than one-eighth (1/8) acre in area with a minimum width or depth dimension of 40 feet. Notwithstanding the above, the existing Small Lot may only be developed if it meets all local and state health regulations for water supply and sewage disposal and otherwise meets the requirements for development within the district in which it is located.
- 2. If an existing small lot subsequently comes under common ownership with one or more contiguous lots, the nonconforming lot may be separately conveyed if the lots are conveyed in their preexisting, nonconforming configuration and the lot meets the requirements of this section (3.2) and Section 3.6.

Section 3.3 FILLING OF LAND

In all districts, the dumping of refuse or non-organic waste material is prohibited. Permits shall not be issued under this Ordinance for the filling of wetland areas. The filling of wetland areas is regulated by the Vermont Wetlands Office through the Vermont Wetland Rules, and by the U.S. EPA and Army Corps of Engineers through the Clean Water Act.

Section 3.4 HEIGHT LIMITATIONS

A structure in any district shall not exceed the maximum height specified for that district, unless otherwise specified in these bylaws. Height limitations do not apply to spires, cupolas, or similar architectural features of a building associated with a public (municipal, state or federal) use, occupying in the aggregate not more than 10 percent of the footprint of such building, and not used for any human occupancy, nor to residential chimneys, farm silos, municipal water storage tanks, radio or television aerials, exempt wireless telecommunication towers under Section 4.15, electrical transmission towers, windmills, solar collectors, or similar structures.

Section 3.5 LOT REQUIREMENTS

A Lot is land capable of being occupied by one principal structure and the accessory structures or uses customarily incidental to it, including such yards and open spaces that are required by this Ordinance.

- 1. No Lot shall be so reduced in area as to violate any of the zoning regulations of the district it is in. The provisions of this section shall not apply when part of a Lot is taken for public purposes.
- 2. Space required under these regulations to satisfy yard, area or other open space requirements in relation to one building shall not be counted as part of a required open space for any other building.
- 3. There shall be only one principal structure on a Lot.

Section 3.6 NONCONFORMITIES

For the purposes of these regulations a "Non-Conforming Use" shall mean a use of land or use of a structure which does not comply with all current zoning regulations where such use conformed to all applicable laws, ordinances and regulations in effect at the time it was started. A "NonConforming Structure" shall mean a structure or part thereof not in conformance with the current zoning regulations covering building bulk, dimensions, height, area, yards, density or off-street parking or loading requirements where such structure conformed to all applicable laws, ordinances and regulations in effect at the time it was built. A Non-Conforming Use or a Non-Complying Structure may be continued subject to the following conditions:

- 1. A Non-Conforming Use may be changed to another Non-Conforming Use upon the approval of the Zoning Board of Adjustment, but only if the Board finds that the degree of nonconformity of the new use is not greater than the original Non-Conforming Use and such use shall: (a) not have an undue adverse effect upon the character of the area or district in which it is located; and, (b) complies with the general standards set forth in Section 2.4.
- 2. A Non-Conforming Use that has been discontinued may be re-established within six (6) months of the date of its last use. A Non-Conforming Use which has been discontinued for a period greater than six (6) months but less than twelve (12) months may only be reestablished with the approval of the Zoning Board of Adjustment. In approving or disapproving the re-establishment of a discontinued Non-Conforming Use, the Zoning Board of Adjustment shall apply the standards and impose such conditions as are collectively set forth in Section 5.2 of these regulations. A Non-Conforming Use shall not be re-established

- if discontinued for a continuous period of one (1) year, regardless of intent, except as in Subsection (5), below.
- 3. A nonconforming structure that is devoted to a conforming use may be reconstructed, structurally altered, restored or repaired, in whole or in part, with the provision that the degree of nonconformance shall not be increased.
- 4. A nonconforming structure, or part thereof, shall be maintained, repaired, or restored to a safe condition as required by the zoning administrator.
- 5. A pre-existing Non-Conforming Structure shall not be restored for other than a conforming use after damage from any cause, unless the Non-Conforming Use is reinstated within three years of such damage. If the restoration of such structure is not completed within three years, the Non-Conforming Use of such structure shall be deemed to have been discontinued. Prior to the start of restoration, the applicant shall obtain a permit from the zoning administrator, in accordance with Section 6.0 of this Ordinance.

Section 3.7 PARKING AND LOADING

A parking space is defined as a space which is at least nine (9) feet wide and eighteen (18) feet long. A parking space shall be outside the right of way or driveway. A parking space shall be graveled or paved to permit year-round use.

<u>3.7.1 Parking Requirements</u> 1. Two parking spaces per dwelling unit.

- 2. Restaurants:
 - One parking space for every three seats.
- 3. Small Business:
 - One parking space for every 400 square feet of floor area.
- 4. Professional Office or Business Office:
 - One space for every 250 square feet of office floor area.
- 5. Guest House, Bed and Breakfast, Inn:
 - One parking space for each room available for lodging plus two parking spaces for the family dwelling unit.
- 6. Libraries and Museums:
 - One space for every 1,000 square feet of gross exhibit area, and one space per employee.
- 7. Theaters and Places of Public Assembly:
 - One space per every four seats, and one space per employee.

Parking requirements may be altered only as allowed under Site Plan review and Conditional Use review.

Section 3.8 SIGNS

Except for signs necessary for public safety and those signs as exempted by these regulations, no person shall construct, erect, display, or change the location or size of an outdoor sign without first obtaining a zoning permit from the Zoning Administrator. Signs shall be considered as permitted uses in all districts, and shall conform to the following requirements:

- 1. All signs shall be constructed of durable materials and shall be maintained in good condition and repair at all times.
- 2. The sign may state only the owner, the name of the business, the products sold, prices and the business or activity conducted on the premises.
- 3. Signs on buildings shall not extend above the roof or parapet of the building. The height of a free-standing sign shall not exceed twelve (12) feet from finished grade. Either type shall be located so as not to be hazardous to pedestrians and vehicles.
- 4. Illuminated signs shall be shielded in such a way as to not produce glare, distraction, or hazard to the surrounding area or to vehicular traffic. Illumination shall be properly focused upon and not come from within the sign itself.
- 5. Signs which are animated, flashing or with intermittent illumination are prohibited.
- 6. No sign shall be erected, attached or maintained upon trees or drawn or painted on rocks or other natural features.
- 7. Residential/Commercial and Industrial/Mining Districts
 - a. Two (2) signs maximum.
 - b. No sign shall be larger than twenty-five (25) square feet on one side.
- 8. Residential Districts
 - a. One sign.
 - b. No sign shall be larger than six (6) square feet on one side.
- 9. Municipal Signs
 - a. Municipal signs such as, "Welcome to Reading", shall be no larger than twenty-five (25) square feet on one side.
 - b. Not more than two (2) such signs may be erected and maintained readable by traffic proceeding in any one direction on any one highway.
- 10. Location of Signs
 - a. Signs shall be located outside all rights of way for public roads.
 - b. Side and rear setback shall be ten (10) feet.
- 11. Exceptions: The following types of signs do not require permits:

- a. Temporary real estate signs not larger than six (6) square feet or temporary construction signs not larger than twenty-five (25) square feet on the property being sold, leased or developed. These signs shall be removed within thirty (30) days after the sale or development has been completed.
- b. Temporary signs for such irregularly scheduled public events as auctions, suppers, and meetings on or off the premises. They shall be placed not more than two weeks in advance of the event, and shall be removed not later than one week following the cessation of the event.
- c. Such signs as "No Hunting" or "No Trespassing" posted in the manner normally prescribed for their use.
- d. A bulletin board not larger than fifteen (15) square feet in connection with a church, school, or public use.
- e. Small direction signs such as "Entrance," none of which exceed two (2) square feet.
- f. Signs not exceeding six (6) square feet advertising agricultural products grown or processed on the premises that meet the standards of Section 3.8.

Section 3.9 STORAGE OF FLAMMABLE FLUIDS AND GASES

The Storage of Flammable Fluids and Gases and the equipment in which they are stored are controlled under the Fire Code of Vermont (NFPA Code) as administered by the State Fire Marshal. Storage of Flammable Fluids (other than bulk storage for commercial distribution) which is accessory to another use and is consistent with this code shall be a permitted use in any district, and will require a zoning permit if the storage capacity is over five hundred (500) gallons. Procedures for abandoning storage tanks for flammable fluids and gases must also be approved by the Fire Marshal's Office.

Section 3.10 SURFACE WATERS AND WETLANDS

To prevent soil erosion and sedimentation of surface waters, maintain water quality and protect wildlife habitat, an undisturbed, vegetated buffer strip shall be maintained for a minimum of fifty (50) feet from all wetlands, streams and rivers, and public ponds. The fifty-foot buffer strip shall be measured from the top of bank (for rivers), the mean water mark (for lakes and ponds), or delineated wetland boundary. This provision applies to rivers and streams that drain 0.5 square miles or greater in land area (see the River Corridor Map). No development, excavation, filling, clearing or grading shall occur within the buffer strip, with the exception of clearing and associated site development necessary to accommodate the following:

- 1. Road, driveway and utility crossings.
- 2. Streambank stabilization and restoration projects, in accordance with applicable state and federal regulations
- 3. Hiking trails.

Article 4 - SPECIFIC USE STANDARDS

Section 4.0 APPLICABILITY

The following standards shall apply in all districts, for permitted and conditional uses:

Section 4.1 ACCESSORY APARTMENTS

One accessory apartment is permitted on any lot containing a single family dwelling as provided in Section 4412(1)(E) of the Act.

4.1.1 Attached Accessory Apartment

- 1. An attached accessory apartment shall be within or attached to an owner-occupied, primary single-family residence and may share a common entrance with it.
- 2. There shall not be more than one attached apartment per lot; no lot shall contain both an attached and a detached apartment.
- 3. The total floor area of the attached apartment shall be no more than 1000 square feet, or 40% of the total living space, whichever is greater. Additional off-street parking shall be provided for each unit.
- 4. An apartment shall comply with all local and state health regulations for water supply and sewage disposal, and all applicable requirements for the zoning district in which it is located.

4.1.2 Detached Accessory Apartment

- 1. A detached accessory apartment shall consist of, or be located within, an accessory structure built on a permanent foundation, on a lot containing a single-family residence.
- 2. There shall not be more than one detached apartment per lot; no lot shall contain both an attached and a detached apartment.
- 3. The total floor area shall be not more than 1,000 square feet, or 40% of the total living space of the single-family dwelling, whichever is greater.
- 4. Additional off-street parking shall be provided.
- 5. A detached apartment shall comply with all local and state health regulations for water supply and sewage disposal, and all applicable requirements for the zoning district in which it is located.

Section 4.2 ACCESSORY STRUCTURES AND USES

- 1. Accessory Structures and Uses do not require separate lots.
- 2. All Accessory Structures, whether built on a permanent foundation or movable, will require a zoning permit and conform to all applicable requirements of the district. See Section 5.1.2 for exemptions.

Section 4.3 BED AND BREAKFAST

1. Off street parking shall be provided for each guest room.

2. A Bed & Breakfast shall comply with all local and state health regulations for water supply and sewage disposal.

Section 4.4 ESSENTIAL SERVICES

Essential services shall be subject to site plan review as indicated in Section 5.3, except when accessory to another use. Structures shall stay within established utility corridors and follow common right-of-ways whenever possible. They shall also be screened and landscaped. All such facilities shall conform to pertinent local and state construction standards.

Section 4.5 EXTRACTION OF MINERAL RESOURCES

4.5.1 Applicability

The extraction, quarrying or removal of topsoil, sand, gravel, rock, minerals or other similar earth resource materials, and the on-site storage and processing of such materials, may be allowed in the Industrial, RR-25 and RR-10 districts subject to review by the Zoning Board of Adjustment (ZBA), and the requirements of this section. The following are specifically exempted from these provisions:

- 1. Driveway, yard, and gardening activities;
- 2. The extraction of materials for use in agricultural and forestry operations (e.g. Farm and logging roads);
- 3. Site and excavation work incidental to a use for which a zoning permit or subdivision approval has been issued (e.g. for building foundations, driveways, access roads, internments, etc.),
- 4. Extraction and quarrying operations in lawful existence as of the effective date of these regulations, which maintain existing rates of extraction and do not expand onto adjoining parcels of land or another district.

4.5.2 Application Requirements

The application for review by the Zoning Board of Adjustment (ZBA) under Section 5.2 shall also include site, erosion control and reclamation plans which show the following: 1. Existing grades, drainage, and depths to bedrock and the seasonal high water table;

- 2. The extent and magnitude of the proposed operation, including proposed phasing schedules,
- 3. Areas for the on-site storage and/or processing of materials;
- 4. A description, including specifications, for all extraction and processing equipment to be used on-site;
- 5. The location and a description of stormwater management and erosion control measures to be used during extraction or quarrying operations;
- 6. A description of site reclamation measures to be used following the conclusion of operations, including finished grades and drainage patterns; and
- 7. Any other materials the Zoning Board of Adjustment (ZBA) finds necessary to determine compliance with the review criteria under subsection 4.5.3, below.

4.5.3 Review Criteria

In granting approval, the Zoning Board of Adjustment (ZBA) shall find that the proposed extraction or quarrying operation meets the following criteria:

- 1. The extraction operation shall not:
 - a. Create a hazard to public health and safety;
 - b. Have an undue adverse impact on neighboring properties, property values; public facilities and services; drainage, surface and groundwater supplies; or other natural, cultural, historic or scenic features in the vicinity of the operation; or
 - c. Eliminate any subsequent use of the site.
- 2. Proper drainage and stormwater management shall be provided during and after the completion of operations.
- 3. No bank shall exceed a slope of one foot of vertical rise to two feet of horizontal distance, except in ledge or bedrock.
- 4. No removal of materials is allowed within 50 feet of a property line, except that where the grade from a property line rises toward the lot where the extraction is to occur, material lying above the grade at the property line may be removed.
- 5. No blasting, or stationary power-activated crushing or sorting machinery or equipment shall be located within 300 feet of any occupied building without written and filed consent of the occupants, or within 100 feet of any public road or stream, lake, pond, wetland or within 100 feet of any property line without written and filed consent of the abutting property owner.
- 6. No excavation or stockpiling of materials shall be located within 50 feet of any public road, stream, or abutting property line unless a satisfactory written agreement has been reached with the abutting property owner and filed with the Zoning Administrator.
- 7. At the conclusion of the operation, or each phase of the operation, the entire area of operation, except where bedrock is exposed, shall be graded, covered with not less than four inches of top soil, and seeded with a suitable cover crop in accordance with the reclamation plan approved by the Zoning Board of Adjustment.
- 8. In order to avoid or mitigate undue adverse impacts associated with extraction and quarrying operations, and/or to allow adequate reclamation and potential redevelopment of the site, the Zoning Board of Adjustment in granting approval may also consider and impose conditions with regard to any or all of the following as it deems appropriate:
 - a. The depth of excavation or quarrying,
 - b. Slopes created by the removal of materials,
 - c. The storage of equipment and stockpiling of materials on-site,
 - d. Potential impacts to surface drainage, on and off-site,

- e. Potential impacts to ground and surface water quality, and drinking water supplies,
- f. Potential impacts to traffic and road conditions, including potential damage to public roads,
- g. Potential impact to other properties in the vicinity due to noise, dust, or vibration,
- h. Potential impacts to natural, cultural, historic or scenic resources on-site, or within the vicinity of the project, including wildlife habitat and migratory corridors,
- i. Hours of operation for blasting, trucking, and processing operations,
- j. Landscaping and screening requirements for safety and aesthetics,
- k. Temporary and permanent erosion control and site reclamation measures,
- 1. Potential impacts to view sheds.
- 9. A performance bond, escrow account, or other form of surety acceptable to the Selectboard shall be required as a condition of approval to cover the cost of any regrading, reseeding, reforestation or other required site reclamation activity.

Section 4.6 FAMILY CHILD CARE HOME OR FACILITY

A "family child care home or facility" as used in this section means a home or facility where the owner or operator is licensed or registered by the State of Vermont for child care. A family child care home serving six or fewer children full-time and 4 or fewer part-time shall be considered a permitted single family residential use of property. A family child care facility serving more than six full-time and four part-time children will be subject to conditional use approval.

Section 4.7 GROUP HOMES OR RESIDENTIAL CARE HOMES

- 1. A residential care home or group home, to be operated under Vermont licensing or registration, serving not more than eight persons who have a handicap or disability as defined in 9 V.S.A. § 4501, shall be considered a permitted single family residential use of property, except that no such residential care or group home shall be so considered if it locates within 1,000 feet of another existing or permitted residential care or group home. a. To establish a group home or residential care home in a legally existing single-family dwelling does not require a permit. However, before this change of use occurs, a letter shall be submitted to the Zoning Administrator attesting to conformance with the statutory criteria.
- 2. A residential care home or group home, to be operated under State licensing or registration, serving nine or more who have a handicap or disability as defined in 9 V.S.A. § 4501, shall be reviewed as a multi-family dwelling and shall be subject to conditional use and site plan review.

Section 4.8 HOME OCCUPATIONS

A Home Occupation shall be considered as an accessory use. Nothing in these regulations shall prevent a resident from using a minor portion (less than 30% of the total living space) of his dwelling for an occupation which is "customary" in residential areas and will have no undue adverse effect on the character of the area in which the dwelling is located. A Home Occupation shall also be permitted in an accessory building/structure. A Home Occupation shall:

- 1. Be carried on only by residents of the premises.
- 2. Provide a service or a product produced by these residents which is not used or consumed on the premises.
- 3. Be operated entirely within a principal or accessory structure.
- 4. Result in no external evidence of the enterprise except for permitted signs and required parking.
- 5. Be incidental to the use of the premises for dwelling purposes.

Section 4.9 HOME-BASED BUSINESS

A Home-based Business shall:

- 1. Be carried on by the owner of the residence, with not more than three (3) additional onpremise employees.
- Not have external storage of supplies or equipment visible from any adjacent highway or dwelling unit, except for outdoor parking of two business vehicles and employees' vehicles.3. Provide off-street parking for all vehicles.

Section 4.10 MOBILE HOMES

Mobile homes, modular housing, and other forms of prefabricated housing shall be considered the same as conventional housing in these regulations [§4412(1)(B)].

A mobile home shall comply with all zoning regulations pertaining to single-family dwellings in the district in which it is located. A mobile home shall be secured to a permanent foundation. This foundation shall, at a minimum, consist of a 4-inch concrete slab matching the footprint of the mobile home.

Recreational vehicles, campers, motor homes, etc. may be parked or stored on the owner's property without a zoning permit, but shall not be used for residential purposes. Refer to Section 4.14, Temporary Uses and Structures, for the one exception to this regulation.

Section 4.11 MOBILE HOME PARKS

4.11.1 Applicability

- 1. It shall be unlawful to park, place, maintain, or permit more than two mobile homes on any one parcel except in conformance with these provisions. Mobile home parks are allowed as a conditional use in the RR-5 and RR-10 Rural Residential Districts. No person shall construct, expand, or alter a mobile home park without site plan approval and conditional use approval.
- 2. In accordance with the Act [§4412(1),(7)], no standards under these regulations shall have the effect of prohibiting the replacement of a mobile home on an existing lot within a mobile home park. In the event that an existing mobile home park is determined to be a nonconformity under these regulations, that determination shall apply to the park in its entirety, and not to individual mobile home lots within the park. An individual mobile

home lot that is vacated shall not be considered a discontinuance or abandonment of a nonconformity.

4.11.2 Specific Use Standards

All mobile home parks shall conform to the following standards:

- 1. A mobile home park shall have a contiguous area not less than the minimum required lot size in the district in which it is located (5 acres in RR-5 and 10 acres in RR-10).
- 2. Overall density of mobile home parks may be up to one mobile home per acre up to a maximum of ten mobile homes in a park. The minimum mobile home lot size shall be 10,000 square feet (i.e., there may be 5 mobile homes on a five-acre lot in the 5-acre district, but they may be clustered on the property on 10,000 square foot lots).
- 3. Mobile home parks may include a maximum of ten (10) mobile homes.
- 4. Mobile home parks shall comply with Vermont Wastewater System and Potable Water Supply Rules.
- 5. Each mobile home lot shall have side yard setbacks of at least 15 feet and at least 30 feet of frontage on a mobile home park road. The Planning Commission may vary this requirement as needed to meet particular site requirements.
- 6. Setbacks shall be followed for the district in which a mobile home park is located and shall be maintained as a landscaped area abutting all mobile home park boundary lines. No mobile home unit, office, utility, or service building may be placed in this buffer area. The Planning Commission may increase this setback in order to provide privacy for adjacent property owners or for aesthetic considerations from public roadways.
- 7. Access roads shall be well drained, and at least eighteen feet in width. They shall be graveled, hard surfaced, or paved, and maintained in good condition throughout the year. Access roads shall have a minimum right-of-way width of 50 feet.
- 8. The park shall be located on a site graded to ensure adequate drainage of surface waters.
- 9. Appropriate underground utility service shall be provided for each mobile home by the owner of the park unless the applicant can demonstrate that due to utility company standards or pricing procedures, an unreasonable financial hardship will be created. Even where utilities lines are proposed to remain above ground, utility lines servicing each trailer shall be underground.
- 10. Provision shall be made for proper and adequate trash and garbage collection and disposal. All trash and garbage cans shall be concealed within an enclosure at all times and shall be properly painted if siding is not used.
- 11. Each mobile home shall be anchored to a foundation that consists of, at a minimum, a 4-inch concrete slab matching the footprint of the mobile home.

4.11.3 Operation and Maintenance

The mobile home park owner, or designated operator shall, as a condition of Board approval:

- 1. Maintain all park buildings, roads, parking areas, paths, utilities, infrastructure, landscaping, open space and common areas in good condition, and must provide for the regular collection and removal of recyclables, waste and garbage;
- 2. Remove snow from all park roads, parking and service areas;
- 3. Plant and provide a plan for maintaining a minimum of two trees (minimum 2.0" diameter at chest height or greater) on each mobile home site; and
- 4. Not engage in the sale of mobile homes in connection with the operation of the park.

Failure to meet these operation and maintenance requirements will constitute a violation of permit conditions and these regulations, subject to enforcement actions under Section 6.1.

Section 4.12 MULTIPLE USE STRUCTURE

- 1. A multiple use structure shall have a total of not more than two dwelling units.
- 2. A multiple use structure shall comply with all local and Vermont health regulations for water supply and sewage disposal, and all applicable requirements for the zoning district in which it is located.
- 3. Parking shall be provided for each commercial and dwelling unit; an applicant may request, as part of Site Plan review, that the Planning Commission reduce the total number of parking spaces required if it can be demonstrated that different uses within the structure can effectively share parking facilities.

Section 4.13 PONDS

4.13.1 Purpose

To protect the lives and property of citizens, the infrastructure of the community, and the health of the natural environment, the construction of ponds shall require a zoning permit.

The purpose of regulating said construction is to reduce the possibility of failure from improper design or construction, to minimize potential flood damages incurred to upstream properties by the storage of flood waters, and to minimize the damages caused by the sudden release of stored waters from a failure of the dam or intentional rapid draining of the impoundment.

4.13.2 General Requirements

The creation of a pond or other water impoundment is an accessory use and must meet setback requirements of the district in which it is located as well as those required by Vermont Health Regulations for onsite septic systems. Creation of a pond requires a zoning permit, and a pond larger than 1500 square feet in surface area shall be designed by an engineer licensed in Vermont and must meet the following requirements:

- 1. Any pond that will impound, or be capable of impounding more than 500,000 cubic feet of water must receive a permit from the Vermont Department of Environmental Conservation in accordance with 10 V.S.A. Chapter 43.
- 2. If the project necessitates any work in a stream, a stream alteration permit or other approval is required from the Vermont Department of Environmental Conservation in accordance with 10 V.S.A. Chapter 41 and/or the Vermont Department of Fish and Wildlife in accordance with 10 V.S.A. Chapter 111..
- 3. If the project has an effect on wetlands; rare, threatened, or endangered species; or the passage of fish; permits from other Vermont or federal authorities may be required.
- 4. Any pond involving the impoundment of water through the creation of an embankment, berm or other structure that exceeds the natural grade must provide documentation from a licensed engineer of the likely results of catastrophic failure of the impoundment. This exercise is not to evaluate the likelihood of failure but to examine worst case scenarios (terrorism, major accident, extreme negligence, etc.).
- 5. All impoundments must have an emergency spillway capable of passing flows that exceed what the control structure is capable of handling.
- 6. Any pond, impoundment of a pond or portion of a pond or impoundment, located within an area of special flood hazard, is subject to Section 5.5 of this bylaw.
- 7. Upon issuance of approval, the ZA shall advise the owner of the property is responsible for the pond's safety and liable for its failure if he or she does not maintain, repair, or operate the pond in a safe and proper manner.

Section 4.14 TEMPORARY USES AND STRUCTURES

Temporary permits may be issued by the Zoning Administrator, for a period not to exceed six (6) months, for non-conforming uses and structures incidental to the construction of permanent projects. Such permits are conditioned upon the agreement of the applicant to discontinue the use and remove the structures upon the expiration of the permit. Such permits may be renewed for an additional period of six (6) months, upon application to the Zoning Administrator.

Recreational vehicles, campers, mobile homes, etc. may be used temporarily as residences under the conditions of this section.

Section 4.15 WIRELESS COMMUNICATION FACILITIES

- 1. **Purpose**. It is the purpose of this section to regulate wireless telecommunication facilities in order to provide the benefits of an integrated and modern communications network for residents, businesses and travelers in the Town of Reading, while minimizing the associated economic, environmental, and cultural impacts.
- 2. **Applicability**. Wireless telecommunications facilities are allowed throughout the Town of Reading subject to conditional use approval by the Zoning Board of Adjustment in accordance with Section 5.2 and all other applicable provisions of these bylaws, except as specifically exempted under Subsection 3 or allowed under the de minimis review procedures in Subsection 4.

- 3. **Exemptions**. The following types of telecommunication facilities are exempt from review under the provisions of this Section:
 - a. An antenna used to transmit, receive, or transmit and receive communications signals on a developed lot if the area of the largest face of the antenna is not more than 15 square feet, and if the antenna and any mast support do not extend more than 12 feet above the roof of that portion of the building to which the mast is attached.
 - (i) Notwithstanding, antennas of that size to be mounted on historic landmarks or structures listed on the Vermont or National Register of Historic Places require conditional use approval by the Zoning Board of Adjustment in accordance with Section 5.2 and all other applicable provisions of these bylaws.
 - b. The regulation of a telecommunications facility, as defined in 30 V.S.A. § 248a, are exempt from municipal approval under this chapter when and to the extent jurisdiction is assumed by the Public Service Board according to the provisions of that section.

4. **De Minimis Impacts**.

- a. Upon request of the applicant, the ZA will review wireless telecommunication facility applications to determine if the application will impose no impact or de minimis impact. A de minimis impact exists if the project meets the following criteria:
 - (i) The project consists of either co-location on a legally existing tower, upgrades to legally existing equipment, or similar projects; and,
 - (ii) The project does not involve the construction of new towers, extending the height of existing towers, new access roads or expansions of existing access roads, or similar projects.
- b. Upon a determination that the above de minimis criteria are met, the ZA will approve the application in accordance with Section 6.0.5 provided that it meets all applicable criteria in Section 4.15.4.
- c. If the ZA determines that an application will have more than a de minimis impact under the criteria established in this Section, the ZA will refer the application to the Zoning Board of Adjustment for conditional use review.

5. Application Requirements.

- a. In addition to information otherwise required under this ordinance for conditional use review, all applications for wireless communications facilities shall include the following supplemental information:
 - (i) The name and address of the applicant, the record landowners, and any duly appointed agents of the landowners or applicants. If the applicant is not a natural person, the name of the business and the state in which it is registered shall be provided.
 - (ii) The name, address, and telephone number of the person to be contacted and authorized to act in the event of an emergency.

- (iii) The names and addresses of the record owners of all abutting property.
- b. An application for a telecommunications tower or facility shall include the signature of both the landowner and the telecommunications provider or the applicant shall provide a copy of its lease/contract with an existing telecommunications provider. A permit shall not be granted for a tower to be built on speculation.

6. General Standards.

- a. Before receiving a permit an applicant shall demonstrate, through certification by a qualified Radio Frequency (RF) engineer, that the proposed facility will comply with all applicable Federal Communications Commission (FCC) rules governing RF radiation and interference. The Board may require post-construction monitoring to ensure compliance.
- b. Siting and design of communications facilities (including any support and maintenance structures, necessary access corridors, and utility lines) shall avoid or minimize impacts on wildlife habitat and travel corridors, wetlands, rivers and streams, and other natural, scenic, and historic resources of the Town to the fullest extent possible.

The height limit for antennae, towers, and similar facilities shall not exceed:

- i. Twenty-five (25) feet above the average height of the trees within fifty (50) feet of the base of the tower in wooded or forested areas; or
- ii. Twenty-five (25) feet above the average height of surrounding buildings within five hundred (500) feet of the base of the tower:
- iii. Unless the proposed elevation is necessary to provide adequate wireless telecommunication service capacity or coverage or to facilitate collocation of facilities.

Lighting shall not be allowed unless specifically required by the Federal Aviation Administration (FAA), and, if required, shall be shielded from surrounding properties to the greatest extent possible.

- c. In the event that the use of a tower or other equipment is discontinued, the site shall be restored to its natural condition, or to the condition that existed prior to construction or installation, as appropriate, within 180 days of discontinuance; the Board shall require an applicant to secure a bond ensuring removal and site rehabilitation.
- d. If feasible, wireless communications facilities shall be located on existing structures, including but not limited to buildings, water towers, existing communications

- facilities, and utility poles and towers. An applicant for a new tower or support structure has the burden of demonstrating, to the satisfaction of the Board, that there are no existing structures on which it is feasible to locate. This demonstration shall include, at a minimum:
- i. A map showing other FCC-licensed wireless communications facilities within the town and within ten miles of the proposed site;
- ii. A propagation study, showing why available structures cannot be used to attain the coverage necessary for the

- applicant to provide service to the town;
- iii. Collocating on or at an existing facility will result in a significant reduction of the area to be served or the capacity to be provided by the proposed facility or substantially impede coverage or capacity objectives for the proposed facility;
- iv. The proposed antennas and equipment will exceed the structural or spatial capacity of the existing or approved tower or facility, and the existing or approved tower or





Figure 4.16.1: These photographs illustrate acceptable forms of stealth design. Note that the "monopine" towers in these two photos blend in with the surrounding trees and do not stick up above the tree line.

facility cannot be reinforced, modified, or replaced to accommodate planned or equivalent equipment, at a reasonable cost, to provide coverage and capacity comparable to that of the proposed facility;

- v. The owner of the existing facility will not provide space for the applicant's proposed telecommunications equipment on or at that facility on commercially reasonable terms; or
- vi. The proposed antennas and equipment will cause radio frequency interference that will materially impact the usefulness of other existing or permitted equipment at the existing or approved tower or facility and such interference cannot be mitigated at a reasonable cost.
- e. Stealth design may be incorporated into the siting, construction and maintenance of all new or replacement wireless telecommunication towers. Wireless telecommunication towers that are designed to look like the types of pine tree species that are native to New England are the only acceptable forms of stealth design in order to fit into Reading's landscape (see Figure 4.16.1). The Zoning Board of Adjustment shall impose a permit condition to require appropriate stealth tower maintenance in perpetuity.
- f. If a wireless communications facility is proposed for installation on an existing structure, other than on an existing wireless telecommunications tower, the application must demonstrate the following to the satisfaction of the Board under conditional use review:
 - a. That there will be no undue impact to significant historical, cultural, or scenic resources, and that any alterations made to a Vermont- or locally-designated historic structure to accommodate the facility are fully reversible;
 - b. That the siting of the facility shall not endanger the lives, health, or property of surrounding landowners.
- g. The applicant shall request a letter from all emergency responders from Reading and adjacent towns stating whether or not they need space on the proposed tower and/or support structure at the base of the tower. If they do need space, then the applicant shall state in writing that it will provide antenna and equipment space at no cost.

Article 5 – DEVELOPMENT REVIEW

Section 5.0 GENERAL

After the effective date of this Ordinance, no land development, building, or structure shall be erected, moved, raised, enlarged, or substantially improved or new uses initiated or constructed until a permit for such activity has been issued by the Zoning Administrator (also known as the Administrative Officer) as provided in Sections 4448 and 4449 of the Act. A permit shall only authorize the activity as described in the application submitted to the Zoning Administrator. Any changes in any plans or representations submitted in accordance with an application for a permit shall require either a new permit or a permit amendment.

If any application is denied, the applicant may appeal this decision to the Zoning Board of Adjustment within fifteen (15) days. Appeals are handled in accordance with Sections 6.2 of these regulations.

Section 5.1 PERMITTED USES

A permit for a Permitted Use may be granted by the Zoning Administrator, provided that it complies with all applicable General Regulations in Article 3 and Specific Use Standards in Article 4, and in accordance with the Act §4449 and the following provisions:

- 1. Within thirty (30) days of receipt of a complete application, including all application materials and fees (see Section 6.0), the Zoning Administrator shall act to either issue or deny a zoning permit in writing, or to refer the application to the Planning Commission, Zoning Board of Adjustment (ZBA) and/or Vermont for consideration. In accordance with the Act §4448, 4449, if the Zoning Administrator fails to act within the 30-day period, a permit shall be deemed issued on the 31st day.
- 2. No zoning permit shall be issued by the Zoning Administrator for any use or structure which requires the approval of the Planning Commission, Zoning Board of Adjustment, or Select Board until such approval has been obtained. For permit applications that must be referred to a Vermont agency for review, no zoning permit shall be issued until a response has been received from Vermont, or the expiration of 30 days following the submission of the application to Vermont.
- 3. If public notice has been issued by the Select Board for their first public hearing on a proposed amendment to these regulations, for a period of 150 days following that notice the Zoning Administrator shall review any new application for compliance with the proposed amendment and applicable existing bylaws. If the new bylaw or amendment has not been adopted by the conclusion of the 150-day period, or if the proposed bylaw or amendment is rejected, the permit shall be reviewed under all applicable provisions of the existing bylaw §4449(d).
- 4. A zoning permit shall include a statement of the time within which appeals may be taken under Section 6.2; and shall require posting of a notice of permit, on a form prescribed by the municipality, within view of the nearest public right-of-way until the time for appeal has expired.
- 5. The Zoning Administrator, within three (3) days of the date of issuance, shall deliver a copy of the zoning permit to the Listers; and shall post a copy of the permit in the municipal offices or other designated public place within the municipality for a period of fifteen (15) days from the date of issuance.
- 6. Development of a Permitted Use may begin on the sixteenth (16th) day after the permit is issued if no appeal has been filed, and other required local permits have been received. An interested party may appeal the decision of the Zoning Administrator to the Zoning Board of Adjustment in the manner described in Section 6.2 of this Ordinance.

5.1.1 Limitations

The following uses are allowed in all districts subject to Site Plan Approval (Section 5.3):

1. Vermont- or community-owned and operated institutions and facilities;

- 2. Public and private schools and other educational institutions certified by the Vermont department of education;
- 3. Churches and other places of worship, convents, and parish houses;
- 4. Public and private hospitals;
- 5. Regional solid waste management facilities certified under 10 V.S.A. Chapter 159;
- 6. Hazardous waste management facilities for which a notice of intent to construct has been received under 10 V.S.A. Section 6606a.

5.1.2 Exemptions

Except as provided in Section 5.5 of this bylaw, no zoning permit shall be required for the following activities:

- 1. Required agricultural practices (RAPs), including the construction of farm structures, as those practices are defined by the Secretary of Agriculture, Food and Markets, in accordance with the Act [§4413(d)]. Written notification, including a sketch plan showing structure setback distances from road rights-of-way, property lines, and surface waters shall be submitted to the Zoning Administrator prior to any construction, as required for RAPs. Such structures shall meet all setback requirements under these regulations, unless specifically waived by the Secretary.
- 2. Accepted management practices (AMPs) for silviculture (forestry) as those practices are defined by the Commissioner of Forests, Parks and Recreation, in accordance with the Act [§4413(d)].
- 3. Power generation and transmission facilities, which are regulated under 30 V.S.A. §248 by the Vermont Public Service Board. Such facilities, however, should conform to policies and objectives specified for such development in the Municipal Plan.
- 4. Hunting, fishing, and trapping as specified under 24 V.S.A §2295 on private or public land.
- 5. Garage sales, yard sales, auctions, weddings and similar uses which do not exceed three (3) consecutive days per event, nor more than twelve (12) total days per calendar year. It is expected that these uses will operate in such a way that they will not have an undue adverse impact on parking, traffic or public safety.
- 6. Residential accessory structures that are less than or equal to 120 square feet in footprint area, 14 feet in height, detached from the primary structure and are set back from property lines according to the requirements of the district in which they are located, and no more than one (1) per lot.
- 7. Swimming pools with total water surface of less than 120 square feet.
- 8. A group home or residential care home in a legally existing single-family dwelling (see Section 4.7).

- 9. Monuments that have a footprint smaller than 25 square feet and are no taller than 10 feet do not require zoning permits but must follow setbacks for the zone where they are located. Otherwise they are considered to be "accessory structures" and require a permit. Lighting of a monument requires Site Plan Review.
- 10. Sculptures that have a footprint smaller than 25 square feet and are no taller than 10 feet do not require zoning permits but must follow setbacks for the zone where they are located. Otherwise they are considered to be "accessory structures" and require a permit. Lighting of a sculpture requires Site Plan Review.

Section 5.2 CONDITIONAL USES

An application for Conditional Use Review is subject to approval by the Zoning Board of Adjustment. The applicant shall submit an application to the Zoning Administrator, who shall notify the Zoning Board of Adjustment when a completed application is received. The Board shall schedule a public hearing in accordance with Section 6.4, and shall render a final decision within forty-five (45) days of the adjournment of the final public hearing. Failure of the Board to issue a decision act within forty-five (45) days of the date of the adjournment of the final public hearing shall be deemed approval, and shall be effective on the 46th day. All decisions, whether to approve, approve with conditions, or disapprove an application for a Conditional Use shall be based upon the general and specific standards in these regulations. All Conditional Uses shall conform to the area and dimension requirements applicable to the district in which such use will be located unless these requirements are duly modified according to Conditional Use or Site Plan review procedures. The Zoning Board of Adjustment shall issue a written decision to include findings of fact, any conditions, and procedures for appeal. Appeals of the decisions of the Zoning Board of Adjustment shall be to the Environmental Court in accordance with the Act.

5.2.1 General Standards

Before voting to approve a Conditional Use in any district the Board must determine that such use shall not adversely affect:

- 1. The capacity of existing or planned community facilities;
- 2. The character of the area affected;
- 3. Traffic on roads and highways in the vicinity; 4. The utilization of renewable energy resources; and
- 5. The Zoning Ordinance then in effect.

5.2.2 Specific Standards

In addition to the General Standards, the following Specific Standards shall also apply: Any Conditional Use:

- 1. Shall not unreasonably interfere with access to, or use and enjoyment of, adjacent properties;
- 2. Shall not deny neighboring properties reasonable and adequate access to light and air (including existing significant views, where appropriate);

3. Shall allow for construction or maintenance of public utilities and infrastructure, where appropriate.

In permitting a Conditional Use, the Board may impose such reasonable conditions as it finds necessary to ensure conformance with the General and Specific standards, and to implement the purposes of the Act and this Zoning Ordinance. These conditions may include, but are not limited to, the following:

- 1. Enlarging the required yard dimensions;
- 2. Limiting the coverage or height of buildings;
- 3. Controlling the location and the number of vehicular access points to the property;
- 4. Controlling the number and location of parking or loading facilities;
- 5. Requiring suitable landscaping where necessary to reduce noise and glare and to maintain the property in the character of and in keeping with the surrounding area;
- 6. Specifying a time limit for the construction, alteration or enlargement of a structure which houses a conditional use;
- 7. Requiring adequate access to the site for emergency vehicles.

Section 5.3 SITE PLAN REVIEW

Site Plan Review is generally required for commercial and development type applications excluding day care, group homes, agricultural activities, and one- and two-family homes. Site Plan Review is also required for any Conditional Use and where indicated in Section 2.4.

5.3.1 Application

An application for Site Plan Review, including a site development plan prepared in accordance with Section 5.3.5, below, shall be submitted to the Zoning Administrator for consideration at the next available regularly scheduled meeting of the Planning Commission.

5.3.2 Review Procedure

An application for Site Plan Review is subject to approval by the Planning Commission. The applicant shall submit an application to the Zoning Administrator, who shall notify the Planning Commission when a completed application is received. The Commission shall schedule a public hearing in accordance with Section 6.4, and shall render a final decision within forty-five (45) days of the adjournment of the final public hearing. Failure of the Commission to issue a decision act within forty-five (45) days of the date of the adjournment of the final public hearing shall be deemed approval, and shall be effective on the 46th day. All decisions, whether to approve, approve with conditions, or disapprove an application for Site Plan Review shall be based upon the general and specific standards in these regulations. The Planning Commission shall issue a written decision to include findings of fact, any conditions, and procedures for appeal. Appeals of the decisions of the Planning Commission shall be to the Environmental Court in accordance with the Act.

5.3.3 General Standards

In reviewing site plans, the Commission may impose appropriate conditions and safeguards with respect to adequacy of traffic access, circulation and parking; landscaping and screening; compatibility with surrounding development; noise, vibration, erosion, and dust; and protection of natural resources. Consideration shall be given to traffic mobility and safety on affected streets, impacts on surrounding uses, and to desired land use patterns as encouraged by the Municipal Plan and the zoning regulations of the affected district(s). Conditions may include, but are not limited to, the following:

- 1. **Compatibility with surrounding development:** The Commission may require the design and placement of structures to conform with the existing relationship of surrounding buildings to the street, the landscape, and to each other, including setback distances, physical orientation, construction materials, and architectural design. Design shall not be limited to any particular style or period, but should be consistent with established trends and patterns in the surrounding area.
- 2. **Traffic access and circulation:** Among other appropriate safeguards and conditions, the Commission may:
 - a. Require the installation of frontage roads, speed change lanes, or other highway design elements on a street or adjacent to any access or connecting roads, if deemed necessary based on current or anticipated conditions.
 - b. Limit the number and width of access drives; require consolidation of existing access points.
 - c. Limit access to a property to a side street or secondary road in order to avoid access to heavily traveled streets and highways.
 - d. Require shared access and/or parking for adjoining properties or for future users of the remainder of a parcel; require the reservation of shared rights-of-way for future roads, parking areas, and pedestrian facilities; allow for consolidation or shared use of required parking spaces between uses.
 - e. Require an applicant to commission a traffic impact study from a qualified consultant.
 - f. Require the location or relocation of access points on one side of a street or highway directly across from existing access points on the opposite side.
 - g. Prohibit the location of parking facilities between the front line of building(s) and the street.
 - h. Accommodate existing or future facilities for non-vehicular travel.
- 3. **Protection of natural resources:** The Commission may require that structures, parking facilities and other development be located so as to avoid impacts to surface waters, wetlands, significant wildlife habitat, agricultural land, important scenic resources, and significant natural and cultural features. These requirements may include modification of the minimum setback distances of the district.
- 4. **Historic Resources.** Consideration should be given to the impact of the proposed development on historic structures, on site or on adjacent properties. To the extent

- feasible, continued use of historic structures should be encouraged and the appearance of historic structures encouraged.
- 5. **Character of the neighborhood.** The Commission may consider if the scale and appearance of the proposed development adversely affects the character of the neighborhood.
- 6. **Forest Management & Pre-application Site Development**. Forest management activities designed as pre-development site preparation shall be reviewed by the Planning Commission to determine compliance with the standards set forth in this section. Such activities include, but are not limited to, road and driveway construction, excavation related to the upgrade and conversion of logging roads to development roads or driveways, clearing and/or grading for house sites and septic systems, or related work. Where a landowner fails to submit pre-development plans for review, the Commission may direct the manner in which the site will be restored or re-vegetated prior to development and/or limit development to a portion of the property which best meets the standards of this district.

5.3.4 District and Use Recommendations

To sustain the Town's goals of maintaining its rural character and heritage of compact village centers surrounded by rural countryside, development in the different zoning districts should complement each other, foster the Town's goals, and may be considered in Site Plan Review.

- 1. **Village Districts.** Within these districts, site plans should reinforce a traditional, compact village development pattern characterized by pedestrian scale, functional and visual integration of neighboring properties, and a mix of uses. To help achieve these objectives, the following suggestions may be considered:
 - a. Buildings should be oriented to define a streetscape through a consistent building line and setbacks. Buildings may be clustered around a common focal point, such as a green or public courtyard, while maintaining an appropriate visual and functional relationship with public roads.
 - b. Consideration should be given to the layout and design of development located at village edges, including entrances or gateways along public roads. Structures should be clustered and integrated within the traditional village pattern, present a well-defined edge between the built environment and surrounding open space, and visually enhance village entrances.
- 2. **Rural Residential Districts.** Within rural districts, site plans should be designed to maintain the rural character of the Town's working landscape and to avoid undue adverse impacts on farmland, forestry, scenic and natural areas. To help achieve these objectives, the following suggestions may be considered:
 - a. The siting of structures, driveways and parking areas should be compatible with existing site features and topography. Structures should be clustered and/or sited to preserve the rural and scenic character of the site and avoid the development or fragmentation of open meadows and productive farm and forest land.

b. Building design should be compatible with the rural landscape through scale and orientation of the buildings, and design elements characteristic of Vermont's historic rural landscape.

5.3.5 Requirements

Site plans shall show or designate the following:

1. All site plans

- a. The location, height, and spacing of existing and proposed structures.
- b. Open spaces and their landscaping. c. Streets.
- d. Driveways.
- e. Off-street parking spaces.
- f. All other physical features, including surface waters and wetlands, stone walls and fences, and elevations and contours.
- g. Acreage of entire parcel, with existing and proposed lot boundaries.
- h. Areas designated by the Vermont Agency of Natural Resources as critical wildlife habitat or as known locations of endangered or threatened species.

2. Wireless communications facilities

- a. A report from a qualified and licensed professional engineer that describes the tower height and design including a cross section and elevation.
- b. A written five-year plan for use of the proposed facility, including reasons for seeking capacity in excess of immediate needs, as well as plans for further developments and coverage within the Town.
- c. For all commercial wireless telecommunication service towers, a letter of intent committing the tower owner and his or her successors to permit shared use of the tower if the additional user agrees to meet reasonable terms and conditions for shared use.
- d. Vicinity Map showing the entire vicinity within a 2500-foot radius of the tower site, including the topography, public and private roads and driveways, buildings and structures, water bodies, wetlands, landscape features, historic sites, and areas designated by the Vermont Agency of Natural Resources as critical wildlife habitat or as known locations of endangered or threatened species. It shall indicate the property lines of the proposed tower site parcel and all easements or rights of way needed for access from a public way to the tower.
- e. Proposed plans of entire development indicating all improvements including landscaping, screening, power lines, storage and maintenance buildings, and roads.
- f. Elevations showing all facades and indicating all exterior materials and color of towers.

Hearings for Conditional Use and Site Plan approval may be consolidated, at the discretion of the Zoning Board of Adjustment.

5.4 PLANNED UNIT DEVELOPMENT (hereinafter called P.U.D.)

5.4.1 Purpose

The purpose of a P.U.D. is:

- 1. To provide for conservation of open space, e.g. agricultural land, forest land, trails, critical and sensitive natural areas, scenic resources, and flood hazard areas;
- 2. To encourage any development in the countryside to be compatible with the use and character of surrounding rural lands;
- 3. To encourage and enable flexibility of design and development of land and to promote the most appropriate use of the land as articulated in the Town Plan and zoning bylaws;
- 4. To facilitate the adequate and economical provisions of streets and utilities.
- 5. To encourage the provision of affordable housing; and
- 6. To encourage and preserve opportunities for energy-efficient development and redevelopment.

5.4.2 General

In zoning districts R1, RC-A, RR-5, RR-10 and RC-25, but excluding parcels in the Significant Wildlife Habitat Overlay District and Ridgeline Protection Overlay District, for the permitted and conditional uses allowed in those districts, an owner of a tract of land, or his duly authorized agent may in connection with the subdivision of his/her tract request that the Planning Commission modify the zoning regulations. Modification of the zoning regulations may be permitted by the Planning Commission and Zoning Board of Adjustment after approval of the subdivision plat through combined Conditional Use and Site Plan Review. The combined boards may, as a condition of granting said modifications, impose such restrictions and conditions as it deems necessary to assure the proper development of the tract as a P.U.D.

5.4.3 Review Procedure

- 1. **Pre-Application Meeting.** A pre-application meeting shall be held with the applicant, Planning Commission, and town officials to discuss the nature and scope of the proposed PUD. Prior to the meeting, the applicant shall provide a brief description and sketches of the PUD including basic site data, proposed uses, density and treatment of open spaces and other resources. Within thirty days after the Pre-Application Meeting, the Planning Commission shall provide the applicant with written comments and recommendations on the proposal to guide the applicant in preparing the PUD application.
- 2. Application. The applicant shall file an application with the Planning Commission and Zoning Board of Adjustment (ZBA) and include materials required for site plan approval (see Section 5.3). Also, applicant shall include a description of the PUD and rational for it, response to the Planning Commission's prior comments, description of buildings, open spaces and resource protection plans, and supporting information that the Planning Commission may deem necessary to determine if the PUD meets town standards.

- 3. **Public Hearing and combined ZBA/Planning Commission Action.** Within 30 days of receipt of completed application, the Zoning Board of Adjustment (ZBA) and Planning Commission shall hold a joint public hearing per Section 6.4. Within 45 days after the public hearing, the ZBA and Planning Commission shall provide a written ruling on the PUD including conditions, modifications, and/or reasons for approval or disapproval. Copies of the decision shall be sent to the applicant and interested parties appearing at the hearing.
- 4. Any modifications of the zoning regulations approved under this section shall specifically set forth the conditions and criteria for the number, the bulk, and the spacing of buildings and/or lots and the limitations on subsequent subdivision thereto. These shall be noted as amendments to the plat. Once approved, the plat, with amendments, shall be recorded in the Reading Land Records. This shall be done prior to the sale or development of any of the lands described thereon. This plat shall also be referred to and incorporated by reference in any deed or other instrument conveying an interest in all or a portion of said lands.

5.4.4 General Development Standards

PUDs, including any modifications of the zoning bylaw to be approved by the Zoning Board of Adjustment (ZBA) and Planning Commission, are subject to the following conditions and standards:

- 1. The PUD shall meet Subdivision and Site Plan Review standards under Section 5.6 and 5.3, respectively and be consistent with the Reading Town Plan.
- 2. The PUD shall be a unified treatment of the possibilities of the site, making provision for the preservation of surface and groundwaters, stream banks, slopes with gradient in excess of 25 percent, wetlands, soils unsuitable for development due to shallow depth to bedrock or high water table, limitations for on-site sewage disposal, agricultural lands, historic or archeological sites, natural areas, wildlife habitat, ridgelines and hilltops, flood plains, and scenic views and vistas. Predominant uses of the site may include those permitted and/or conditional uses allowed within the district where the project is proposed.
- 3. The overall density of the project shall not exceed 125 percent of the number of dwelling units permitted if the land were subdivided into lots in accordance with the standards for the district(s) in which the land is situated, except where specifically permitted in these regulations and as permitted below:
 - a. An additional density bonus of up to 25% of the permitted overall density may be permitted in any district in instances in which not less than 50% of the total acreage involved is set aside as open space in accordance with Subsection 9, below; or
 - b. An additional density bonus of 25% of the permitted overall density may be permitted in instances in which not less than 20% of the total number of dwelling units created are affordable housing units, as defined in Article 7.

- 4. Where a district boundary line divides a parcel, the Zoning Board of Adjustment (ZBA) and Planning Commission may allow the development of a single PUD with a total density based on the allowable density of each district. Contiguous parcels under the ownership or control of the applicant may be combined for review as a PUD. The permitted density on one parcel may be increased as long as the overall density for the combined parcels does not exceed that which could be permitted if the land were subdivided into lots in conformance with district regulations.
- 5. A greater concentration or intensity of residential development may be located within some portion(s) of the site provided there is an offset by a lesser concentration in another portion(s) or an appropriate reservation of open space on the remaining land in accordance with Subsection 9, below.
- 6. The dwelling units permitted may, at the discretion of the ZBA and Planning Commission, be of varied types including one-family, two-family, and multi-family.
- 7. The minimum front, side and rear yard setbacks at the periphery of the PUD must be as required for the district unless specified by the Zoning Board of Adjustment (ZBA) and Planning Commission. The ZBA/Planning Commission may consider other setback standards, such as zero lot lines as part of its review. The ZBA/Planning Commission may impose restrictions on the height and spacing of buildings; greater setback and screening requirements for structures and parking areas and other development along the perimeter of the project, and between development areas and common open space areas.
- 8. The minimum size of any subdivided lot shall be one (1) acre. Each such lot shall comply with all existing regulations for one-acre residential lots, and shall meet all local and Vermont health regulations for water supply and sewage disposal.
- 9. Provision for preserved open space shall be made and dedicated, either in fee or through a conservation easement approved by the Zoning Board of Adjustment (ZBA)/Planning Commission to the Town, a community association comprising all of the present and future owners of lots in the subdivision, or a nonprofit land conservation organization. Land held in common shall be subject to appropriate deed restrictions stipulating the permitted and restricted use of such lot, and establishing the person or entity responsible for maintenance and long-term stewardship. The location, size and shape of lands set aside to be preserved for open space shall be approved by the ZBA/Planning Commission, in accordance with the following:
 - a. Open space shall provide for the protection of identified resources, including farmland, productive forest, significant wildlife habitat, natural areas, aquifer protection areas, surface waters, stream banks, historic and archeological sites, and scenic views and vistas. Generally open space shall be at least 50% of the total area.
 - b. Open space shall be suitably improved and/or maintained for its intended use, except for open space containing natural or cultural resources worthy of preservation which may be required to be left unimproved.

- c. Sewage disposal areas and utility and road rights-of-way or easements, access and parking areas shall not be counted as open space areas, except where the applicant can show that they will not detract from the values for which the open space is to be protected.
- 10. Roads developed in a P.U.D shall be built to Town of Reading specifications. A road which is a "dead end" shall have a minimum turn-around area with a radius of 100 feet, in which no parking is allowed.
- 11. Principle buildings and mixed uses (where permitted) shall be arranged to be compatible, and buffered as appropriate to ensure visual and acoustical privacy for residents of the development and for adjacent properties.
- 12. The development shall not exceed, in the Zoning Board of Adjustment (ZBA)/Planning Commission's judgment the Town's capacity for services and facilities. If the ZBA/Planning Commission finds an excessive burden will be placed on town services, it can require the developer to provide comparable private services or share the cost with the Town.

Section 5.5 FLOOD HAZARD REGULATIONS

5.5.1 Statutory Authorization and Effect

In accordance with 10 V.S.A. Chapter 32, and 24 V.S.A. Chapter 117 §4424, §4411 §4414, and 24 VSA Chapter 59, there is hereby established a bylaw for areas at risk of flood damage in the Town of Reading, Vermont. Except as additionally described below, all administrative procedures follow municipal procedures under 24 VSA Chapter 117.

5.5.2 Statement of Purpose

It is the purpose of this bylaw to:

- 1. Implement the goals, policies, and recommendations in the current Town Plan;
- 2. Avoid and minimize the loss of life and property, the disruption of commerce, the impairment of the tax base, and the extraordinary public expenditures and demands on public services that result from flooding related inundation and erosion;
- 3. Ensure that the selection, design, creation, and use of development in hazard areas is reasonably safe and accomplished in a manner that is consistent with public wellbeing, does not impair stream equilibrium, flood plain services, or the stream corridor,
- 4. Manage all flood hazard areas designated pursuant to 10 V.S.A. Chapter 32 § 753, the municipal hazard mitigation plan; and make the Town of Reading, its citizens, and businesses eligible for federal flood insurance, federal disaster recovery funds, and hazard mitigation funds as may be available.

5.5.3 Other Provisions

1. Precedence of Bylaw

The provisions of these flood hazard bylaws shall not in any way impair or remove the necessity of compliance with any other local, state, or federal laws or regulations. Where

this flood hazard regulation imposes a greater restriction the provisions here shall take precedence.

2. Validity and Severability

If any portion of this bylaw is held unconstitutional or invalid by a competent court, the remainder of this bylaw shall not be affected.

3. Warning of Disclaimer of Liability

This bylaw does not imply that land outside of the areas covered by this bylaw will be free from flood or erosion damages. This regulation shall not create liability on the part of the Town of Reading, or any municipal official or employee thereof, for any flood or erosion damages that result from reliance on this regulation, or any administrative decision lawfully made hereunder.

5.5.4 Lands to Which these Regulations Apply

1. Regulated Flood Hazard Areas

These regulations shall apply to the River Corridors and Special Flood Hazard Areas (hereafter called "hazard areas") in the Town of Reading, Vermont as described below. These hazard areas overlay any other existing zoning districts and the regulations herein are the minimum standards that must be met before meeting the additional standards applicable in the underlying district. These hazard areas include:

- a. The River Corridors as published by the Vermont Agency of Natural Resources including the Statewide River Corridors and refinements to that data based on fieldbased assessments which are hereby adopted by reference. Where River Corridors are not mapped, the standards in 5.5.7 (3) shall apply to the area measured as fifty (50) feet from the top of the stream bank or slope for streams draining between 0.5 and 2 square miles (see the River Corridor Map).
- b. The Special Flood Hazard Area in and on the most current flood insurance studies and maps published by the Department of Homeland Security, Federal Emergency Management Agency, National Flood Insurance Program, as provided by the Secretary of the Agency of Natural Resources pursuant to 10 V.S.A. Chapter 32 § 753, which are hereby adopted by reference and declared to be part of these regulations.

2. Base Flood Elevations and Floodway Limits in Special Flood Hazard Areas

Where available, base flood elevations and floodway limits provided by the National Flood Insurance Program and in the Flood Insurance Study and accompanying maps shall be used to administer and enforce these regulations. In Special Flood Hazard Areas where base flood elevations and/or floodway limits *have not* been provided by the National Flood Insurance Program in the Flood Insurance Study and accompanying maps, it is the applicant's responsibility to develop the necessary data. Where available, the applicant shall use data provided by FEMA, or Vermont, or Federal agencies.

3. Interpretation

The information presented on any maps, or contained in any studies, adopted by reference, is presumed accurate.

- a. If uncertainty exists with respect to the boundaries of the Special Flood Hazard Area or the floodway, the location of the boundary shall be determined by the Zoning Administrator (ZA). If the applicant disagrees with the determination made by the ZA, a Letter of Map Amendment from FEMA shall *constitute proof*.
- b. If uncertainty exists with respect to the boundaries of the River Corridor, the location of the boundary shall be determined by the ZA. If the applicant disagrees with the determination made by the ZA, a letter of determination from the Vermont Agency of Natural Resources shall *constitute proof*.

5.5.5 Summary Table: Development Review in Hazard Areas

The hazard areas are not appropriate sites for new structures nor for development that increases the elevation of the base flood or obstructs the ability of streams to establish and maintain geomorphic equilibrium.

#	Activity	Hazard	Zone	
	P Permitted C Conditional Use Review X Prohibited A Exempted	Special Flood Hazard Area	Floodway	River Corridors
1	New Structures	Х	Х	Х
2	Storage	Х	Х	Х
3	Improvements to Existing Structures	P, C	С	С
4	Small Accessory Structures	Р	Х	С
5	At Grade Parking	Р	С	С
6	Replacement water supply or septic systems	С	С	С
8	Fill as needed to elevate existing structures	С	С	С
9	Fill	Х	Х	Х
12	Grading	С	С	С
13	Road maintenance	А	А	А

14	Road improvements	С	С	С
15	Bridges and culverts	С	С	С
16	Channel management	С	С	С
17	Recreational vehicles	Р	Р	Р
18	Open space, recreation	А	А	А
19	Forestry	А	А	А
20	Agriculture	А	А	А

5.5.6 Development Review in Hazard Areas

1. Permit

A permit is required from the Zoning Administrator for all development in all areas defined in Section 5.5.4. Development that requires conditional use approval, nonconforming use approval, or a variance from the Zoning Board of Adjustment (ZBA) under these flood hazard regulations, must have such approvals prior to the issuance of a permit by the ZA. Any development subject to municipal jurisdiction in the designated hazard areas shall meet the criteria in Section 5.5.6 and 5.5.7. Any permit issued will require that all other necessary permits from Vermont or Federal Agencies have been received before work may begin.

2. Permitted Development

For the purposes of review under these regulations, the following development activities in the Special Flood Hazard area where outside of the floodway and outside of the River Corridors, and meeting the Development Standards in Section 5.5.7, require only an administrative permit from the ZA:

- a. Non-substantial improvements;
- b. Accessory structures;
- c. Development related to on-site septic or water supply systems;
- d. Building utilities;
- e. At-grade parking for existing buildings; and,
- f. Recreational vehicles.

3. Prohibited Development in Special Flood Hazard Area and River Corridors

a. New residential or non-residential structures (including the placement of manufactured homes);

- b. Storage or junk yards;
- c. New fill except as necessary to elevate structures above the base flood elevation;
- d. Accessory structures in the floodway;
- e. Critical facilities are prohibited in all areas affected by mapped flood hazards; and,
- f. All development not exempted, permitted, or conditionally permitted.

4. Conditional Use Review

Conditional use review and approval by the Zoning Board of Adjustment (ZBA), is required prior to the issuance of a permit by the ZA for the following proposed development:

- a. Substantial improvement, elevation, relocation, or flood proofing of existing structures;
- b. New or replacement storage tanks for existing structures;
- c. Improvements to existing structures in the floodway;
- d. Grading, excavation; or the creation of a pond;
- e. Improvements to existing roads;
- f. Bridges, culverts, channel management activities, or public projects which are functionally dependent on stream access or stream crossing;
- g. Public utilities;
- h. Improvements to existing primary structures in the River Corridors that do not expand the footprint of the existing structure more than 500 square feet;
- i. Accessory structures in the River Corridors, of 500 square feet or less, that represent a minimal investment
- j. Building utilities in the River Corridors; and,
- k. At-grade parking for existing buildings in the River Corridors.

5. Exempted Activities

The following are exempt from regulation under this bylaw:

- a. The removal of a building or other structure in whole or in part;
- b. Maintenance of existing roads and storm water drainage;
- c. Silvicultural (forestry) activities conducted in accordance with the Vermont Department of Forests and Parks Acceptable Management Practices; and,
- d. Agricultural activities conducted in accordance with the Vermont Department of Agriculture's Required Agricultural Practices (RAP). Prior to the construction of farm structures the farmer must notify the ZA in writing of the proposed activity. The notice must contain a sketch of the proposed structure including setbacks.

6. Variances

Variances may be granted in writing by the Zoning Board of Adjustment (ZBA) only in accordance with all the criteria in 24 V.S.A. § 4469, § 4424 (E), and 44 CFR Section 60.6, after a public hearing noticed as described in Section 5.5.8.

- a. A variance for development within the River Corridors may be allowed if, based on a review by VT ANR, it is determined that the proposed development will not obstruct the establishment and maintenance of fluvial geomorphic equilibrium for the watercourse.
- b. Any variance issued in the Special Flood Hazard Area will not increase flood heights, and will inform the applicant in writing over the signature of a community official that the issuance of a variance to construct a structure below the base flood elevation increases risk to life and property and will result in increased flood insurance premiums up to amounts as high as \$25 for \$100 of coverage. Such notification shall be maintained with a record of all variance actions.

7. Nonconforming Structures and Uses

The Zoning Board of Adjustment (ZBA) may, after public notice and hearing, approve the repair, relocation, replacement, or enlargement of a nonconforming structure within a flood hazard area provided that:

- a. The proposed development is in compliance with all the Development Standards in Section 5.5.7 of this bylaw;
- b. A nonconforming structure that is substantially damaged or destroyed may be reconstructed only in circumstances when the structure cannot be relocated to a less hazardous location on the parcel. The lowest floor of the reconstructed structure must be rebuilt to one foot or more above the base flood elevation, and the structure must otherwise comply with all requirements of the National Flood Insurance Program;
- c. Nonconforming structures or uses shall be considered abandoned where such structures or uses are discontinued for more than 12 months; and
- d. An individual manufactured home lot in an existing manufactured home park that is vacated shall not be considered a discontinuance or abandonment of nonconformity. Replacement manufactured homes must be placed so as to meet the development standards in this bylaw.

5.5.7 Development Standards

The criteria below are the minimum standards for development in the flood hazard areas. Where more than one zone or area is involved, the most restrictive standard shall take precedence.

1. Special Flood Hazard Area

- a. All development shall be:
 - 1) Reasonably safe from flooding;

- 2) Designed, operated, maintained, modified, and adequately anchored to prevent flotation, collapse, release, or lateral movement of the structure;
- 3) Constructed with materials resistant to flood damage;
- 4) Constructed by methods and practices that minimize flood damage;
- Constructed with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding;
- 6) Adequately drained to reduce exposure to flood hazards;
- 7) Located so as to minimize conflict with changes in channel location over time and the need to intervene with such changes; and,
- 8) Required to locate any fuel storage tanks (as needed to serve an existing building in the Special Flood Hazard Zone) a minimum of one foot above the base flood elevation and be securely anchored to prevent flotation; or storage tanks may be placed underground, if securely anchored as certified by a qualified professional.
- b. In Zones AE, AH, and A1 A30 where base flood elevations and/or floodway limits have not been determined, development shall not be permitted unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated encroachment, will not increase the base flood elevation more than 1.00 foot at any point within the community. The demonstration must be supported by technical data that conforms to standard hydraulic engineering principles and certified by a licensed professional engineer.
- c. Structures to be substantially improved in Zones A, A1-30, AE, and AH shall be located such that the lowest floor is at least one foot above base flood elevation, this must be documented, in as-built condition, with a FEMA Elevation Certificate;
- d. Non-residential structures to be substantially improved shall:
 - 1) Meet the standards in 5.5.7(1)(c); or,
 - 2) Have the lowest floor, including basement, together with attendant utility and sanitary facilities be designed so that two feet above the base flood elevation the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; A permit for flood proofing shall not be issued until a licensed professional engineer or architect has reviewed the structural design, specifications and plans, and has certified that the design and proposed methods of construction are in accordance with accepted standards of practice for meeting the provisions of this subsection.
- e. Fully enclosed areas below grade on all sides (including below grade crawlspaces and basements) are prohibited.

- f. Fully enclosed areas that are above grade, below the lowest floor, below BFE and subject to flooding, shall
 - 1) Be solely used for parking of vehicles, storage, or building access, and such a condition shall clearly be stated on any permits; and,
 - 2) Be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Such designs must be certified by a licensed professional engineer or architect, or meet or exceed the following minimum criteria: A minimum of two openings on two walls having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.
- g. Recreational vehicles must be fully licensed and ready for highway use;
- h. A small accessory structure of 500 square feet or less that represents a minimal investment need not be elevated to the base flood elevation in this area, provided the structure is placed on the building site so as to offer the minimum resistance to the flow of floodwaters and shall meet the criteria in 5.5.7 (1)(f) (above).
- i. Water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the systems.
- j. Sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters.
- k. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.
- 1. The flood carrying and sediment transport capacity within the altered or relocated portion of any watercourse shall be maintained, and any alteration or relocation shall not result in any decrease of stream stability;
- m. Bridges and culverts, which by their nature must be placed in or over the stream, must have a stream alteration permit from the Agency of Natural Resources where applicable.
- n. Subdivisions and Planned Unit Developments must be accessible by dry land access outside the special flood hazard area.
- o. Existing buildings, including manufactured homes, to be substantially improved in Zone AO shall have the lowest floor, including basement, elevated above the highest adjacent grade, at least as high as the depth number specified on the community's FIRM, or at least two feet if no depth number is specified.

2. Floodway Areas

- a. Encroachments or development above grade and less than one foot above the base flood elevation, are prohibited unless hydrologic and hydraulic analyses are performed in accordance with standard engineering practice, by a licensed professional engineer, certifying that the proposed development will:
 - 1) Not result in any increase in flood levels (0.00 feet) during the occurrence of the base flood:
 - 2) Not increase any risk to surrounding properties, facilities, or structures from erosion or flooding.
- b. Public utilities may be placed underground, and the analyses may be waived, where a licensed professional engineer certifies that there will be no change in grade and the utilities will be adequately protected from scour.

3. River Corridors

- a. Improvements to existing structures, and any associated fill as needed to comply with elevation requirements in the Special Flood Hazard Area shall not decrease the distance between the existing primary building and the top of bank.
- b. Accessory structures may be located within 50 feet of the existing primary building provided that the location does not decrease the distance between the existing primary structure and the top of bank.
- c. Development shall not increase the susceptibility of that or other properties to fluvial erosion damage.
- d. Development shall not increase the potential of materials being swept onto other lands or into the stream and causing damage to other properties from fluvial erosion.
- e. Development shall not cause an undue burden on public services and facilities including roads, bridges, culverts, and emergency service providers during and after fluvial erosion events.
- f. Bridge and culvert projects must have a Stream Alteration Permit.
- g. Channel management activities must be authorized by the Agency of Natural Resources.

5.5.8 Administration

1. Application Submission Requirements. Applications

for development shall include:

a. Where applicable, a site plan that depicts the proposed development, all water bodies, Special Flood Hazard Areas, floodways, River Corridors, the shortest horizontal distance from the proposed development to the top of bank of any stream, any existing and proposed drainage, any proposed fill, and pre and post development grades, and the

- elevation of the proposed lowest floor, as referenced to the same vertical datum as the elevation on the current Flood Insurance Rate Maps.
- b. A Vermont Agency of Natural Resources Project Review Sheet for the proposal. The Project Review Sheet shall identify all Vermont and Federal agencies from which permit approval is required for the proposal, and shall be filed as a required attachment to the municipal permit application. The identified permits, or letters indicating that such permits are not required, shall be submitted to the Zoning Administrator (ZA) and attached to the permit before work can begin.

2. Referrals

- a. Upon receipt of a complete application for a substantial improvement or new construction the ZA shall submit a copy of the application and supporting information to the State National Flood Insurance Program (NFIP) Coordinator at the Vermont Agency of Natural Resources, in accordance with 24 V.S.A. § 4424. A permit may be issued only following receipt of comments from the Agency, or the expiration of 30 days from the date the application was mailed to the Agency, whichever is sooner.
- b. If the applicant is seeking a permit for the alteration or relocation of a watercourse, copies of the application shall also be submitted to the adjacent communities, the Stream Alteration Engineer at the Vermont Agency of Natural Resources, and the Army Corps of Engineers. Copies of such notice shall be provided to the State National Flood Insurance Program (NFIP) Coordinator at the Vermont Agency of Natural Resources, Department of Environmental Conservation. A permit may be issued only following receipt of comments from the Vermont Agency of Natural Resources, or the expiration of 30 days from the date the application was mailed to the Vermont Agency of Natural Resources, whichever is sooner. The Board should consider comments from the NFIP Coordinator at ANR.

3. Decisions

The Zoning Board of Adjustment (ZBA) shall consider comments from the NFIP Coordinator at ANR. The ZBA may recess the proceedings on any application pending submission of additional information.

4. Records

The Zoning Administrator shall properly file and maintain a record of: a.

All permits issued in areas covered by this bylaw.

- b. An Elevation Certificate with the as-built elevation (consistent with the datum of the elevation on the current Flood Insurance Rate Maps for the community) of the lowest floor, including basement, of all new, substantially improved, or flood proofed buildings (not including accessory buildings) in the Special Flood Hazard Area.
- c. All flood proofing and other certifications required under this regulation.

d. All decisions of the Zoning Board of Adjustment (ZBA) (including variances and violations) and all supporting findings of fact, conclusions and conditions.

5.5.9 Certificate of Occupancy

In accordance with Chapter 117 §4449, it shall be unlawful to use or occupy, or permit the use or occupancy of any land or structure, or part thereof, created, erected, changed, converted, or wholly or partly altered or enlarged in its use or structure within Special Flood Hazard Area or River Corridors until a certificate of occupancy is issued therefore by the Zoning Administrator, stating that the proposed use of the structure or land conforms to the requirements of these bylaws. A certificate of occupancy is not required for structures that were built in compliance with the bylaws at the time of construction and have not been improved since the adoption of this bylaw. Within 14 days of the receipt of the application for a certificate of occupancy, the ZA shall inspect the premises to ensure that all permits identified on the Project Review Sheet have been acquired and that all work has been completed in conformance with the zoning permit and associated approvals. If the ZA fails to grant or deny the certificate of occupancy within 14 days of the submission of the application, the certificate shall be deemed issued on the 15th day. If a Certificate of Occupancy cannot be issued, notice will be sent to the owner and copied to the lender.

5.5.10 Enforcement and Penalties

- 1. This bylaw shall be enforced under the municipal zoning bylaw in accordance with 24 VSA Chapter 117 § 4451, § 4452 and 24 VSA Chapter 59 §1974a. A copy of the notice of violation will be mailed the Vermont NFIP Coordinator.
- 2. If any appeals have been resolved, but the violation remains, the ZA shall submit a declaration to the Administrator of the National Flood Insurance Program requesting a denial of flood insurance to the property pursuant to Section 1316 of the National Flood Insurance Act of 1968, as amended.
- 3. Violations of the Required Agricultural Practices shall be enforced under this Section as violations of this bylaw. Such violations shall also be immediately reported to the Secretary of Agriculture for enforcement under 6 V.S.A. Section 4812.

Section 5.6 SUBDIVISION REVIEW

Any proposed subdivision of land is subject to approval in accordance with 24 V.S.A. §4418, §4463 and the standards and procedures set forth in this Section:

5.6.1 Application & Review Procedures

1. Lot Line Adjustments.

- a. Purpose. These provisions for lot line adjustments provide for an abbreviated review and approval process for the realignment or relocation of lot boundary lines between existing adjacent lots.
- b. Application Submission Requirements. An applicant shall submit a complete application, a new survey of the lands subject to the boundary adjustment and associated fee.

- c. Criteria. The realignment or relocation of lot lines between existing adjacent lots is subject to approval by the Zoning Administrator under Section 6.0.5 if the following criteria are met:
 - 1) The sale or exchange of parcels of land is between adjacent property owners.
 - 2) No new lots are created by the proposed lot line adjustments.
 - 3) The relocation of the lot line does not result in the creation of a new non-conforming lot, structure or use.
 - 4) The proposed change does not violate any conditions imposed by the Planning Commission or the Zoning Board of Adjustment (ZBA) from prior approvals.
- d. If criteria 1-4 above are not met, then the application shall be reviewed by the Planning Commission with notice and decision procedures as for subdivision review.
- e. Filing Requirements for Lot Line Adjustments. Within 180 days of approval by the Zoning Administrator or Planning Commission, the applicant shall submit a survey plat to the Zoning Administrator with the required filing fee for recording in the Town's Land Records. The following language must be printed on the plat:
 - "Approval of this lot line adjustment does not constitute creation of a separate parcel or lot. It simply adjusts the physical location of the common boundary of the adjoining parcels or lots. Any future subdivision of these parcels or lots shall be approved by the Planning Commission. This lot line adjustment has been approved pursuant to Section 5.6.1.1 of the Town of Reading Zoning Regulations."
- f. The plat shall meet all of the requirements of 27 V.S.A. Chapter 17, clearly indicating the metes, bounds and ties of each of the affected lots.
- g. Appeals of administratively issued lot line adjustment decisions are subject to the applicable requirements under Article 6.

2. Subdivisions.

- a. Purpose. Final subdivision and plat review is intended to guide community settlement patterns and to ensure the efficient extension of services, utilities and facilities as land is developed.
- b. Application Submission Requirements. An applicant shall submit the following materials, unless otherwise waived by the Planning Commission in accordance with Section 5.6.1.2.d:
 - 1) Completed application form.
 - 2) All applicable application fees.
 - 3) A subdivision plan/plat that shows all of the detail required under Section 5.3.5.1 for Site Plan Review. Final subdivision plats shall be consistent with the requirements of 27 V.S.A. Chapter 17.

- 4) A written request for any waivers in accordance with Section 5.6.1.2.d.
- 5) The Subdivider shall apply for all municipal, Vermont and federal permits required of the proposed subdivision, and shall submit all necessary municipal permits or a Letter of Intent for a Vermont Access Permit to complete an application. A complete application shall also include a Vermont Agency of Natural Resources Project Review Sheet.
- 6) For subdivisions in the Wildlife Travel Corridor Overlay District, the applicant shall complete a chart, provided by the Planning Commission and with the help of the Planning Commission, that tracks parcel development to ensure the 25 acre maximum density condition is met now and in the future.
- c. Review Procedures. An application for Subdivision Review shall be submitted to the Zoning Administrator for consideration by the Planning Commission at their next available regularly scheduled meeting. A public hearing will be scheduled in accordance with Section 6.4 and 24 V.S.A. §4463 and §4464. Note that land clearing activities designed as pre-development site preparation are subject to Site Plan Review under Section 5.3.3.6.
- d. Waivers. The Planning Commission can waive or modify, subject to appropriate conditions, the provision of any or all improvements and requirements as in its judgment of the special circumstances of a particular plat or plats are not requisite in the interest of the public health, safety, and general welfare, or are inappropriate because of inadequacy or lack of connecting facilities adjacent or in proximity to the subdivision.
- e. Final Subdivision and Plat Approval. In accordance with Section 6.4, within 45 days after the closing of the hearing, the Planning Commission shall approve, approve with conditions, or disapprove the final subdivision and plat. This determination shall be based on whether or not the subdivision plan and associated plat conform to the subdivision design standards. Failure to act within 45 days shall be deemed as approval. Approval, conditions of approval, or grounds for disapproval and the provisions for appeal under Section 6.2, must be set forth in a written notice of decision. Copies of the notice of decision must be sent within the 45-day period to the applicant and any other interested persons in accordance with §4464.
- f. Effect of Final Subdivision and Plat Approval. Each approval for a final subdivision plan and associated plat shall contain a time limit within which all required improvements (e.g. new roads, road improvements, drainage systems, utilities) shall be completed, not to exceed one (1) year unless otherwise required or extended by the Planning Commission. The subdivision approval is not final until the written decision and signed mylar plat are recorded in the Reading Land Records. Planning Commission approval of a final subdivision plan and associated plat shall not be construed to constitute acceptance by the Town of any street, easement, utility, park, recreation area, or other open space shown on the final plat. Such acceptance can be accomplished only by formal resolution of the Selectboard in accordance with Vermont statute.
- g. Plat Recording Requirements. Within 180 days of the date of final subdivision approval by the Planning Commission, the applicant shall file two copies of a final subdivision plat,

- for recording with the Town in accordance with the requirements of 27 V.S.A., Chapter 17. Approved plats not filed and recorded within this 180 day period will expire. Prior to plat recording, the plat shall be signed by the Planning Commission Chair. The Commission may, as a condition of final plat approval, require that other notations pertaining to conditions of subdivision approval also be included on the final plat.
- h. Extension of Plat Recording Date. An applicant may request an extension of the date for filing the plat by an additional 90 days, if final local or Vermont permits or approvals are still pending. Such a request is subject to Administrative Review by the Zoning Administrator in accordance with Section 6.0.5.
- i. Appeals of subdivision decisions are subject to the applicable requirements under Article6.

5.6.2 Subdivision Design Standards

- 1. In addition to the subdivision review standards set form in Section 5.6, all proposed lots shall be surveyed and shall meet the minimum dimensional standards for the district within which the lot is located. New lots shall be designed to meet their intended purpose; elongated lots and lots with irregular shapes (curves, jogs, dog-legs, etc.) should not be created unless warranted by conditions of topography, the location of natural features or existing road conditions. Corner lots shall have sufficient width to permit a front yard setback on each street while side lot lines shall generally be at right angles to straight streets, or radial to curved street lines.
- 2. Existing features, including but not limited to water courses and drainage ways, pathways, historic sites and structures, stone walls, cellar holes/stone foundations, stonelined wells, shorelands, fence and tree lines, wetlands, significant wildlife habitat, areas characterized by shallow soils or steep slopes, prominent geologic features, scenic views or any other unique features which have been identified in the Reading Town Plan and/or which in the Commission's judgment are an asset to the site and/or community, shall be identified and preserved insofar as possible through careful placement of buildings, establishment of development envelopes and appropriate lot configuration.
- 3. Subdivision boundaries, lot layout, development envelopes, and building sites shall be located and configured to avoid the undue fragmentation of productive farmland (i.e. prime agricultural soils and soils of statewide significance), forest, and significant wildlife habitat. Methods of avoiding undue fragmentation include but may not be limited to the following:
 - a. Building sites shall be located at the edges of prime agricultural soils and agricultural soils of statewide significance or, in the event that no other land is practical for development, on the least fertile soils in order to minimize the use of productive agricultural land, impacts on existing farm operations, and disruption to the scenic qualities of the site.
 - b. Where development of forest threatens significant wildlife habitat and other biologically sensitive areas, building sites shall be located to the periphery in order to avoid undue fragmentation of those forests.

- c. Access roads, driveways and utility corridors shall be shared to the extent feasible and, where sites include linear features such as existing roads, tree lines, stone walls, and/or fence lines, shall follow these in order to minimize the fragmentation of productive agricultural land and minimize visual impacts.
- d. Subdivisions within the Significant Wildlife Habitat Overlay District shall, in addition, comply with the standards in the Significant Wildlife Habitat Overlay District (Section 2.4.9).
- 4. Land shall be subdivided and improved so as to retain, insofar as possible, the natural contours and to conserve the natural cover and soil. The Planning Commission may require the preparation of a sedimentation and erosion control plan to ensure that site improvements, including excavation, road and driveway construction and site clearing and grading, avoid unduly impacting neighboring properties or surface waters. If a plan is required by the Planning Commission, a licensed Vermont Engineer shall prepare the plan.
- 5. The proposed subdivision shall not create an undue burden on public facilities or create an unreasonable demand for public services, including but not limited to fire and police protection, schools and area roads and highways. In determining whether a subdivision will place an undue burden on facilities or services, the Planning Commission may consult with the appropriate municipal body or staff. The applicant can satisfy this provision by providing letters from the following entities:
 - a. Highways: A letter from the road foreman certifying that the capacity of local roads, intersections and bridges in the immediate vicinity of the proposed subdivision are sufficient to accommodate additional traffic generated by the proposed subdivision. If new roads or road upgrades are required, the standards for road improvements in Section 5.6.2.6 apply. Where upgrades to town-maintained roads will be required, the applicant shall secure and provide the written approval of the Selectboard in addition to a letter from the road foreman.
 - b. Emergency Services: A letter from the Reading Volunteer Fire Department confirming that the proposed subdivision is designed to provide sufficient access for emergency response vehicles, that they have the ability to provide adequate service to the proposed facility, and listing any additional measures that are necessary to ensure the health, welfare and safety of residents of the proposed development.
 - c. School Services: A letter from an official at the Reading Elementary School certifying that the proposed subdivision will not unduly impact the school by causing the student population to exceed the capacity of the existing facility.
- 6. Access roads, driveways, and utility corridors shall meet the applicable standards set forth in the table below. Compliance with these standards does not infer any obligation on the part of the Town to assume future responsibility for road maintenance or upgrade.

Road Size/Type	Applicable Standard
----------------	---------------------

Road serving 2 or more lots	Section 3.1 of these bylaws and Reading Town Highway Standards (as most recently amended).
Driveway serving an individual lot	Vermont Agency of Transportation's <i>Standard B-71</i> , as most recently amended.

- 7. Driveways shall be accessible by emergency service vehicles, and shall relate to topography to ensure reasonable grades and safe intersections with public or private roads. For driveways in excess of 500 feet in length, a 10' X 30'turnout may be required.
- 8. Proposed building lots shall be served by adequate water supply and wastewater disposal systems. The Planning Commission may require documentation that adequate water supply and wastewater capacity is available to serve the proposed development, and that a Wastewater System and Potable Water Supply permit has been issued by Vermont.
- 9. The Planning Commission retains the right to waive a development requirement if in its judgment of the special circumstances of a particular plat, the strict adherence to the requirement is not in the interest of the public health, safety, or general welfare.
- 10. Formation of a homeowners association or similar legal arrangement prior to the sale of the first lot is required as a condition of approval for development that includes private roads, common open space and/or common buildings, or common infrastructure or facilities in order to ensure their ongoing maintenance. The obligations to maintain the common improvements shall be clearly outlined in the property deeds of all affected owners. Specifically, each deed shall have a clause stating the town is not responsible for maintenance or improvements of private roads or common land, buildings or infrastructure. Costs incurred by the town because of default on the part of the association or an owner shall be a lien on the property of the association or owner(s).

Article 6 - ADMINISTRATION, ENFORCEMENT, AND APPEALS

Section 6.0 Permit Requirements

- 1. **Zoning Permit**. In accordance with the Act [§4449], the application for and receipt of a zoning permit issued by the Zoning Administrator shall precede any initiation of development as defined herein, except for development which is specifically exempted from these regulations under Section 5.1.2. Additionally any development may require a Vermont permit for a new or altered on site waste disposal system. Renovations or alterations of any commercial, retail, or rental unit may also require a construction permit from Vermont to be obtained from the Division of Fire Safety (contact a Permit Specialist at 802 885 8850). Compliance with any property specific restrictions or covenants is the responsibility of the applicant or property owner. For other business licenses contact the Town Clerk.
- 2. **Application Requirements**. Applications for zoning permits shall be submitted to the Zoning Administrator on approved application forms available at the Town Offices, with the

correct application fee as established by the Selectboard. In addition, the following information shall be required as applicable:

- a. **Permitted Uses**. The application for a permitted use shall include a sketch of the lot which clearly and accurately depicts:
 - 1) The dimensions of the lot, including existing and proposed lot lines;
 - 2) The location, footprint and height of existing and proposed structures and additions;
 - 3) The location of existing and proposed easements, rights-of-way, and utilities;
 - 4) Setback distances from property lines, rights-of-way, surface waters and wetlands; and
 - 5) Additional information as requested to determine project conformance with these regulations.
- b. **Other Uses**. In addition to the above permit application requirements, an application for development requiring approval under conditional use, site plan, flood hazard area, subdivision and/or planned unit or planned residential development review shall include a site development plan prepared in accordance with Article 5.
- 3. **Issuance of Zoning Permits.** No zoning permit shall be issued by the Zoning Administrator until a complete application, including all forms, materials, and fees, has been received, and all applicable approvals have been obtained in accordance with the following provisions:
 - a. No zoning permit shall be issued by the Zoning Administrator for any use or structure which requires approval of the Planning Commission, Zoning Board of Adjustment, Selectboard, Sewage Officer, and/or Health Officer until such approval has been obtained.
 - b. For uses within the Flood Hazard Area Overlay District requiring Vermont agency referral, no zoning permit shall be issued until the expiration of 30 days following the submission of a report to the Vermont Department of Environmental Conservation in accordance with the Act §4424(2)(D).
 - c. If public notice is issued with respect to amendment of these regulations, the Zoning Administrator shall continue to issue any zoning permit for a development affected by the amendment, until the effective date of adoption of the amendment.
 - d. Within 30 days of receipt of a completed application, including all application materials, fees and approvals, the Zoning Administrator shall act to either issue or deny a permit in writing, or to refer the complete application to the Planning Commission or Zoning Board of Adjustment (ZBA), pursuant to the Act [§§4448, 4449]. If the Zoning Administrator fails to act within the 30-day period, a permit shall be deemed issued on the 31st day. Decisions shall be sent by certified mail to the applicant explaining any conditions of approval or reasons for denial, and include a statement of the time in which an appeal may be made under Section 6.2.

- e. Each permit issued shall require the applicant to post a notice of permit, on a form prescribed by the Town, within view from the public right-of-way nearest to the subject property until the time for appeal has passed.
- f. Within three (3) days of issuance, the Zoning Administrator shall deliver a copy of the permit to the Listers, and post, for a period of 15 days from issuance, a copy at the Town Office.
- 4. **Effective Dates**. No zoning permit shall take effect until the time for appeal under Section 6.2 has passed or, in the event that a notice of appeal has been properly filed, until final adjudication of the appeal. A zoning permit shall remain in effect for a period of one (1) year from the date of issuance. If the work described therein is not commenced and diligently prosecuted within this one-year period, the zoning permit shall become void. All associated approvals (conditional use, site plan, etc.) shall expire with the zoning permit
- 5. **Administrative Review.** In accordance with the Act [§ 4464] the Zoning Administrator may review and approve new development and amendments to previously approved development.
 - a. The Zoning Administrator may approve amendments to previously approved development providing it shall not have the effect of substantively altering any impact under any of the standards set forth in the bylaw or have the effect of substantively altering any of the findings of fact or conditions of the most recent approval.
 - b. The Zoning Administrator may approve a one year extension of the permit expiration date after written request and explanation of the reason for the extension by the applicant and signed by the property owner.
 - c. The Zoning Administrator may approve applications for wireless telecommunication facilities that have no or de minimis impacts in accordance with Section 4.15.4.
 - d. The Zoning Administrator may approve applications for lot line adjustments in accordance with Section 5.6.1.1.
 - e. The Zoning Administrator may approve an extension of the plat recording date in accordance with Section 5.6.1.2.h.

Section 6.1 ENFORCEMENT

Penalties and remedies for violations of these regulations shall be as prescribed in Sections 4444 and 4445 of the Act.

Section 6.2 APPEALS

Any interested person as defined under §4464(b) of the Act may appeal a decision or act of the Zoning Administrator within 15 days of the date of the decision or act by filing a notice of appeal with the Secretary of the Zoning Board of Adjustment, or the Municipal Clerk if no Secretary has been elected, and by filing a copy of the notice with the Zoning Administrator.

1. The Board shall hold a public hearing on a notice of appeal within 60 days of its filing, as required under §4467. The Board shall give public notice of the hearing under §4467, and mail a copy of the hearing notice to the appellant not less than 15 days prior to the hearing date.

- 2. The Board may reject an appeal or request for reconsideration without hearing, and render a decision which shall include findings of fact within 10 days of the filing of a notice of appeal, if the Board determines that the issues raised by the appellant have been decided in an earlier appeal or are based on substantially or materially the same facts by or on behalf of the appellant §4470.
- 3. In accordance with the §4467, all appeal hearings shall be open to the public and the rules of evidence applicable at these hearings shall be the same as the rules of evidence applicable in contested cases in hearings before administrative agencies as set forth in Vermont statutes 3 V.S.A. §810. Any interested person or body may appear and be heard in person or be represented by an agent or attorney at the hearing. The hearing may be adjourned by the Board from time to time, provided that the date and place of the adjourned hearing shall be announced at the hearing.
- 4. A decision on appeal shall be rendered within 45 days after the final adjournment of the hearing, as required under the Act §4470. The decision shall be sent by certified mail to the appellant within the 45 day period. Copies of the decision shall be mailed to every person or body appearing and having been heard at the hearing, and filed with the Zoning Administrator and the Municipal Clerk as part of the public records of the municipality, in accordance with §4470. Failure of the Board to issue a decision within this 45 day period shall be deemed approval and shall be effective on the 46th day.

6.2.1 Interested Persons

The definition of an interested person under the Act §4464(b) includes the following:

- 1. A person owning title to property, or a municipality or solid waste management district empowered to condemn it or an interest in it, affected by a bylaw, who alleges that the bylaw imposes on the property unreasonable or inappropriate restrictions of present or potential use under the particular circumstances of the case.
- 2. The Town of Reading or any adjoining municipality.
- 3. A person owning or occupying property in the immediate neighborhood of a property which is the subject of a decision or act taken under these regulations, who can demonstrate a physical or environmental impact on the person's interest under the criteria reviewed, and who alleges that the decision or act, if confirmed, will not be in accord with the policies, purposes or terms of the plan or bylaw of that municipality.
- 4. Any ten (10) voters or property owners within the municipality who, by signed petition to the Zoning Board of Adjustment, allege that any relief requested by a person under this section, if granted, will not be in compliance with the policies, purposes or terms of the plan or regulations of the municipality.
- 5. Any department or administrative subdivision of Vermont owning property or any interest therein within the municipality or adjoining municipality, and the Vermont Agency of Commerce and Community Development.

6.2.2 Notice of Appeal to Zoning Board of Adjustment

A notice of appeal filed under this section shall be in writing and include the following information, in accordance with the Act §4466:

- 1. The name and address of the appellant.
- 2. A brief description of the property with respect to which the appeal is taken.
- 3. A reference to applicable provisions of these regulations.
- 4. The relief requested by the appellant, including any request for a variance from one or more provisions of these regulations.
- 5. The alleged grounds why such relief is believed proper under the circumstances.

6.2.3 Appeals to Environmental Court

In accordance with the Act §4471, an interested person who has participated in a regulatory proceeding of the Zoning Board of Adjustment may appeal a decision rendered by the Zoning Board of Adjustment under the Act §4468, within 30 days of such decision, to the Vermont Environmental Court. Appeals to Environmental Court shall also meet the following requirements:

- 1. "Participation" in a Zoning Board of Adjustment (ZBA) proceeding shall consist of offering, through oral or written testimony, evidence of a statement of concern related to the subject of the proceeding.
- 2. The notice of appeal shall be filed by certified mailing, with fees, to the Environmental Court and by mailing a copy to the Municipal Clerk, or the Zoning Administrator if so designated, who shall supply a list of interested persons (including the applicant if not the appellant), to the appellant within five (5) working days. Upon receipt of the list of interested persons, the appellant shall, by certified mail, provide a copy of the notice of appeal to every interested person. If any one or more of those persons are not then parties to the appeal, upon motion they shall be granted leave by the court to intervene.

Section 6.3 VARIANCES

The Zoning Board of Adjustment shall hear and decide requests for variances as required by the Act §4468(a) and appeal procedures under §4467. In granting a variance, the Board may impose conditions it deems necessary and appropriate under the circumstances to implement the purposes of these regulations and the municipal plan currently in effect. The Board may grant a variance and render a decision in favor of the appellant only if *all* of the following facts are found, and the findings are specified in its written decision:

- 1. There are unique physical circumstances or conditions, including irregularity, narrowness, or shallowness of lot size or shape, or exceptional topographical or other physical conditions peculiar to the particular property, and that unnecessary hardship is due to these conditions and not the circumstances or conditions generally created by the provisions of these regulations in the neighborhood or district in which the property is located.
- 2. Because of these physical circumstances or conditions, there is no possibility that the property can be developed in strict conformity with the provisions of these regulations and that the authorization of a variance is necessary to enable the reasonable use of the property.
- 3. The unnecessary hardship has not been created by the appellant.

- 4. The variance, if authorized, shall not alter the essential character of the neighborhood or district in which the property is located, substantially or permanently impair the appropriate use or development of adjacent property, reduce access to renewable energy resources, or be detrimental to the public welfare.
- 5. The variance, if authorized, shall represent the minimum that will afford relief and shall represent the least deviation possible from these regulations and from the plan.

6.3.1 Renewable Energy Structures

Where a variance is requested for a structure that is primarily a renewable energy resource structure, in accordance with the Act §4469(b), the Board may grant such variance only if *all* of the following facts are found in the affirmative and specified in its written decision:

- 1. It is unusually difficult or unduly expensive for the appellant to build a suitable renewable energy resource structure in conformance with these regulations.
- 2. The hardship was not created by the appellant.
- 3. The variance, if authorized, shall not alter the essential character of the neighborhood or district in which the property is located, substantially or permanently impair the appropriate use or development of adjacent property, reduce access to renewable energy resources, nor be detrimental to the public welfare.
- 4. The variance, if authorized, shall represent the minimum that will afford relief and will represent the least deviation possible from these regulations and from the plan.

In granting a variance, the Board may impose conditions it deems necessary and appropriate under the circumstances to implement the purposes of these regulations and the municipal plan currently in effect.

Section 6.4 Administrative Requirements

- 1. **Appointments**. The following appointments shall be made in association with the administration and enforcement of these regulations as provided for in the Act:
 - a. **Zoning Administrator**. The Selectboard shall appoint a Zoning Administrator (also referred to as Administrative Officer), from nominations received from the Planning Commission, for a term of three (3) years in accordance with the Act [§4448]. In the absence of the Zoning Administrator, the Selectboard may also appoint an Acting Zoning Administrator from nominations submitted by the Planning Commission. The Zoning Administrator shall administer these regulations literally, and shall not have the power to permit any development that is not in conformance with them. The Zoning Administrator shall also be responsible for providing municipal permit information to applicants, coordinating associated permitting and approval processes, and maintaining permit records.
 - b. **Zoning Board of Adjustment.** Members of the Zoning Board of Adjustment, which may consist of the members of the Planning Commission, shall be appointed by the Selectboard in accordance with the Act [§4460]. One or more alternates also may be appointed by the Selectboard to serve for members in the event of an absence or conflict of interest. The Board shall adopt rules of procedure and rules of ethics with

regard to conflicts of interest to guide its official conduct in accordance with the requirements of the Act [§§4461, 4464] and Vermont's Open Meeting Law [1 V.S.A., §310-314]; and shall have powers and duties as set forth in the Act to administer the provisions of this bylaw, including but not limited to the power to hear and decide:

- 1) Appeals from any decision or act of the Zoning Administrator under Section 6.2;
- 2) Variance requests under Section 6.3;
- 3) Applications for conditional use approval under Section 5.2; and 4) Applications for flood hazard review under Section 5.5.
- c. **Planning Commission**. The Selectboard appoints members of the Planning Commission in accordance with the Act [§§4321, 4323]. The Planning Commission must adopt rules of procedure to guide its official conduct in accordance with the requirements of the Act [§4323] and Vermont's Open Meeting Law [1 V.S.A., §310-314]; and has the powers and duties as set forth in the Act [§§4325, 4441], including the powers to:
 - Prepare a town plan in accordance with Subchapter 5 of the Act.
 - Prepare and review proposed amendments to these regulations.
 - Prepare reports documenting the conformance of proposed bylaw amendments to the reading town plan in effect.
 - Review applications for site plan approval under section 5.3.
 - Review applications for planned unit development under section 5.4.
 - Review applications for subdivision of land under section 5.6.
 - Prepare and submit to the Selectboard a capital budget and program.
 - Hold warned public hearings on proposed amendments to these regulations.
 - Participate as statutory party under act 250 review procedures.
- 2. **Fee Schedule**. In accordance with the Act [§4440], the Selectboard shall establish a schedule of fees to be charged in administering these regulations, with the intent of covering the town's administrative costs. The Selectboard may also establish procedures and standards for requiring an applicant to pay for the reasonable costs of an independent technical review of an application.

3. Hearing Notice Requirements.

- a. Pursuant to the Act [§4464], a warned public hearing is required for conditional use review (Section 5.2), planned unit development applications (Section 5.4), flood hazard review (Section 5.5), subdivision review (Section 5.6), and appeals and variances (Sections 6.2 and 6.3). Any public notice for a warned public hearing must be given not less than 15 days prior to the date of the public hearing by *all* of the following:
 - 1) Publication of the date, place and purpose of the hearing in a newspaper of general circulation in the town.

- Posting of the same information in three (3) or more public places within the municipality in conformance with the requirements of Vermont statute [1 V.S.A., §312(c)(2)], including the posting of a hearing notice within view from the public right-of-way nearest to the property for which the application is being made.
- 3) Written notification to the applicant and to owners of all properties adjoining the property subject to development, without regard to public rights-of-way, which includes a description of the proposed project, information that clearly informs the recipient where additional information may be obtained, and that participation in the local proceeding is a prerequisite to the right to take any subsequent appeal.
- 4) For hearings on Planned Unit Developments and subdivision plats located within 500 feet of a municipal boundary, written notification to the clerk of the adjoining municipality.
- b. Public notice of all other types of quasi-judicial development review proceedings, including site plan review hearings (Section 5.3), must be given not less than seven (7) days prior to the date of the public hearing, and include at minimum the following:
 - 1) Posting of the date, place and purpose of the hearing in three (3) or more public places within the municipality in conformance with the requirements of state statute [1 V.S.A., §312(c)(2)].
 - 2) Written notification to the applicant and to owners of all properties adjoining the property subject to development, without regard to public rights-of-way, which includes a description of the proposed project, information that clearly informs the recipient where additional information may be obtained, and that participation in the local proceeding is a prerequisite to the right to take any subsequent appeal.
- c. No defect in the form or substance of any required public notice under this section shall invalidate the action of the Planning Commission or Zoning Board of Adjustment (ZBA) where reasonable efforts have been made to provide adequate posting and notice. However, the action shall be invalid when the defective posting or notice was materially misleading in content. If an action is ruled to be invalid by the Planning Commission or ZBA or the Environmental Court, the action shall be remanded to the Board to provide new posting and notice, hold a new hearing, and take a new action.
- d. Public hearings concerning proposed amendments to these regulations shall be noticed and warned in accordance with the Act [§§ 4441, 4444].

4. Meeting & Hearing Requirements.

- a. **Zoning Board of Adjustment**. In accordance with the Act [§§4461, 4464], all meetings and hearings of the Zoning Board of Adjustment, except for deliberative and executive sessions, shall be open to the public. In addition:
 - 1) For the conduct of any meeting and the taking of any action a quorum shall be not less than a majority of the members of the Board, and any action shall be taken by a concurrence of the majority of the Board.

- 2) The Board shall keep minutes of its proceedings, showing the vote of each member upon each question or, if absent or failing to vote, indicating this, and shall keep records of its examinations and other official actions which shall be filed immediately in the Town Office as public records.
- Public hearings shall be noticed and warned in accordance with Section 6.4 (1). In any regulatory hearing of the Zoning Board of Adjustment (ZBA) there shall be an opportunity for each person wishing to achieve status as an interested person, for purposes of participation or appeal under Section 6.2 to demonstrate that the criteria for achieving such status are met. The Board shall keep a written record of the name, address, and participation of each of these persons.
- 4) The officers of the Board may administer oaths and compel the attendance of witnesses and the production of material germane to any issue under review.
- 5) The Board may recess a public hearing on any application or appeal pending submission of additional information, but should close evidence promptly after all parties have submitted requested information.
- 5. **Decisions.** In accordance with the Act [§4464(b)], the Planning Commission or Zoning Board of Adjustment (ZBA) may recess proceedings on any application pending the submission of additional information. The Board will close evidence promptly after all parties have submitted requested information, and shall issue a decision within 45 days after the adjournment of the hearing. Failure to issue a decision within the 45-day period shall be deemed approval and shall be effective the 46th day.
 - a. All decisions shall be issued in writing and shall separately state findings of fact and conclusions of law. Findings of fact shall explicitly and concisely restate the underlying facts that support the decision, based exclusively on evidence of the record. Conclusions shall be based on the findings of fact. The decision shall also include a statement of the time within which appeals may be taken under Section 6.2.
 - b. In rendering a decision in favor of the applicant, the Planning Commission or Zoning Board of Adjustment (ZBA) may attach additional reasonable conditions and safeguards as it deems necessary to implement the purposes of the Act, these regulations, and the Town Plan currently in effect. This may include, as a condition of approval the submission of a three (3)-year performance bond, escrow account, or other form or surety acceptable to the Reading Selectboard, which may be extended for an additional three (3)-year period with the consent of the owner, to assure the completion of a project, adequate stabilization, or protection of public facilities that may be affected by a project.
 - c. All decisions shall be sent by certified mail, within the required 45-day period, to the applicant or to the appellant on matters of appeal. Copies of the decision also shall be mailed to every person or body appearing and having been heard at the hearing, and filed with the Zoning Administrator and Town Clerk as part of the public record of the municipality, in accordance with Section 6.4 (6).

- d. In accordance with the Act [§4464(c)], any decision issued by the Planning Commission or Zoning Board of Adjustment (ZBA) may authorize that subsequent changes or amendments to an approved project may be allowed subject to administrative review by the Zoning Administrator, rather than Board review, in accordance with the following, which shall be specified in the Board's decision:
 - 1) The decision shall clearly specify the thresholds and conditions under which administrative review and approval shall be allowed.
 - 2) The thresholds and conditions shall be structured such that no new development shall be approved that results in substantial impact under the requirements of these regulations, or any of the thresholds or conditions set forth in the decision.
 - 3) No amendment issued as an administrative review shall have the effect of substantially altering the findings of fact of any Board approval in effect.
 - 4) Any decision of the Zoning Administrator authorized in this manner may be appealed to the Zoning Board of Adjustment (ZBA) in accordance with Section 6.2.
- 6. **Recording Requirements**. The Zoning Administrator shall maintain a complete record of all applications, reviews, decisions, appeals, and variances made under these regulations, and any administrative actions taken pursuant thereto.
 - a. In accordance with the Act [§) 4449(c)], within thirty (30) days after a municipal land use permit, including but not limited to a zoning permit and associated approvals, has been issued, or within thirty (30) days of the issuance of a notice of violation, the Zoning Administrator shall deliver the original or a legible copy of the municipal land use permit or notice of violation, or a notice of the municipal land use permit generally in the form set forth in 24 V.S.A. subsection 1154(c), to the Town Clerk for recording as provided in 24 V.S.A. subsections 1154(a). The applicant may be charged the cost of recording fees.
- 8. **Availability & Distribution of Documents**. In accordance with the Act [§4445], copies of these regulations, other related municipal regulations and ordinances, and the Town Plan shall be made available to the public during normal business hours in the Town Clerk's Office.

Section 6.5 RECORDS

The Zoning Administrator shall maintain a complete Record of all the applications, reviews, decisions, appeals and variances made under these regulations and any administrative actions taken pursuant thereto.

Article 7 - GLOSSARY

Section 7.0 CLARIFICATION OF WORD MEANINGS

Doubt as to the precise meaning of any word used in these regulations shall be clarified by the

Zoning Board of Adjustment. The definitions established in the Town of Reading Health Ordinance and the Vermont Planning and Development Act shall apply to these Regulations unless a different definition is provided herein.

Section 7.1 DEFINITIONS

For the purpose of these regulations, words used in the present tense include the future, the singular includes the plural and vice versa. The word "shall" is mandatory. The word "applicant" includes an individual, partnership, association, corporation or other organization. The word "structure" includes "building."

- ACCESSORY STRUCTURE A structure which is: 1) detached from and clearly incidental and subordinate to the principal use of or structure on a lot, 2) located on the same lot as the principal structure or use, and 3) clearly and customarily related to the principal structure or use. For residential uses these include, but may not be limited to garages, garden and tool sheds, and playhouses.
- ACCESSORY USE A use that is incidental and subordinate to the principal use, located on the same lot, and operated and maintained under the same ownership.
- ACCESSORY APARTMENT, ATTACHED An Attached Accessory Apartment is a single, self-contained, dwelling unit with its own sleeping, cooking and sanitary facilities, located within, or attached to, a primary single-family residence occupied by the owner.
- ACCESSORY APARTMENT, DETACHED A Detached Accessory Apartment is a single, self-contained dwelling unit with its own sleeping, cooking, and sanitary facilities, on a lot containing a single-family residence.
- ADMINISTRATIVE OFFICER (AO) means the person appointed by the Selectboard to administer and implement the provisions of these regulations, who is also referred to at the Zoning Administrator (ZA).
- AFFORDABLE HOUSING Housing that is either (1) owned by its inhabitants, whose gross annual household income does not exceed 80 percent of the county median income, as defined by the United States Department of Housing and Urban Development, and the total annual cost of the housing, including principal, interest, taxes, insurance and condominium association fees, is not more than 30 percent of the household's gross annual income; or (2) rented by its inhabitants whose gross annual household income does not exceed 80 percent of the county median income, as defined by the United States Department of Housing and Urban Development, and the total annual cost of the housing, including rent, utilities, and condominium association fees, is not more than 30 percent of the household's gross annual income.
- AFFORDABLE HOUSING DEVELOPMENT A housing development of which at least 20 percent of the units or five (5) units, whichever is greater, are affordable units. Affordable units shall be subject to covenants or restrictions that preserve their affordability for a minimum of 15 years, or as otherwise provided in these zoning regulations.
- AGRICULTURAL USE The use of one or more acres of land for farming, dairying, pasturage, horticulture, floriculture, viticulture, silviculture, or animal or poultry husbandry, including incidental farm structures and storage of machinery and agricultural produce.

- AGRICULTURE AND FORESTRY PRODUCT PROCESSING The processing of agricultural or forestry products for sale to or consumption by others.
- AREA OF SPECIAL FLOOD HAZARD Is synonymous in meaning with the phrase "Special Flood Hazard Area" for the purposes of these regulations.
- BASE FLOOD The flood having a one percent chance of being equaled or exceeded in any given year (commonly referred to as the "100-year flood").
- BASE FLOOD ELEVATION (BFE) The elevation of the water surface elevation resulting from a flood that has a 1 percent chance of equaling or exceeding that level in any given year. On the Flood Insurance Rate Map the elevation is usually in feet, in relation to the National Geodetic Vertical Datum of 1929, the North American Vertical Datum of 1988, or other datum referenced in the Flood Insurance Study report, or the average depth of the base flood, usually in feet, above the ground surface.
- BASEMENT Any area of the building having its floor subgraded (below ground level) on all sides.
- BED AND BREAKFAST An owner-occupied dwelling in any zoning district that provides overnight or short stay accommodations and breakfast.
- BFE See Base Flood Elevation
- BOARDING HOUSE A dwelling in which people are sheltered or fed, or both, for profit.
- BUFFER An undisturbed area consisting of trees, shrubs, ground cover plants, duff layer, and generally uneven ground surface that extends a specified distance horizontally across the surface of the land from the mean water level of an adjacent lake or from the top of the bank of an adjacent river or stream.
- BUILDING A structure having a roof supported by columns or walls that is intended for the shelter or enclosure of persons, animals, or tangible property.
- CAMP, SEASONAL A building used for temporary and/or seasonal living quarters that is typically rustic in nature.
- CHANNEL An area that contains continuously or periodic flowing water that is confined by banks and a streambed.
- CHANNEL WIDTH (or bankfull width) The width of a stream channel when flowing at a bankfull discharge. The bankfull discharge is the flow of water that first overtops the natural banks. This flow occurs, on average, about once every 1 to 2 years.
- COMMON PLAN OF DEVELOPMENT Where a structure will be refurbished over a period of time. Such work might be planned unit by unit.
- COVERAGE The percentage of the lot area covered by any and all buildings.
- CLUBHOUSE A building to house only a duly organized or incorporated club; not organized or conducted for profit, and which is used exclusively for such membership purposes.
- CRITICAL FACILITIES Include police stations, fire and rescue facilities, hospitals, shelters, schools, nursing homes, water supply and waste treatment facilities, and other structures the

- community identifies as essential to the health and welfare of the population and that are especially important following a disaster. For example, the type and location of a business may raise its status to a Critical Facility, such as a grocery or gas station.
- CULTURAL FACILITY Establishments including libraries, museums, theaters for live stage presentations, art galleries, and interpretive centers, which are of historic, educational or cultural interest and their support services.
- DEVELOPMENT The division of a parcel into two (2) or more parcels, the construction, reconstruction, conversion, structural alteration, relocation, or enlargement of any building or other structure, or any mining, dredging, filling, grading, paving, excavation or drilling operations, storage of equipment or materials, and any change in the use of any building or other structure, or land, or extension of use of land.
- DEVELOPMENT within SPECIAL FLOOD HAZARD AREAS (SFHA) Any human-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials.
- DEVELOPMENT ENVELOPE A specific area delineated on a lot within which all structures are to be located, and outside of which no structures are to be located.
- DRIVEWAY Private-way for vehicular traffic which affords the principal means of access to a lot from a road.
- DWELLING UNIT A dwelling unit is a building or part thereof providing complete, independent living facilities for one or more persons including permanent provisions for living, sleeping, eating, cooking, and sanitation.
- DWELLING UNIT, SINGLE FAMILY A dwelling unit for one family.
- DWELLING UNIT, TWO FAMILY A dwelling unit with independent living quarters for two families. Both living quarters shall have primary ground floor access to the outside and be attached to each other by party walls without openings.
- DWELLING UNIT, MULTI-FAMILY A dwelling unit with independent living quarters for more than two families. Each of the dwelling units shall have primary ground floor access to the outside and be attached to each other by party walls without openings.
- EMERGENCY MANAGEMENT SERVICES A structure and the use of a structure for the Fire, Ambulance, Police, and/or Rescue services of either the Town of Reading or the County of Windsor or the State of Vermont and the structures in which they are located.
- ESSENTIAL SERVICES The structures of public utilities or governmental agencies necessary for the provision of sewage, water, and electrical, gas or cable television services, etc.
- EXISTING MANUFACTURED HOME PARK OR SUBDIVISION means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the floodplain management regulations adopted by a community.

EXPANSION TO AN EXISTING MANUFACTURED HOME PARK OR SUBDIVISION means

the preparation of additional sites by the construction of facilities for servicing the lots on which the manufacturing homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

- FAMILY An individual, or two or more persons related by blood, marriage, or legal adoption, or those placed in a home for adoption, and foster children, or a group of not more than five (5) persons not related by blood or marriage, living together as a single housekeeping unit.
- FARM STRUCTURE means a silo, a building for housing livestock, raising horticultural or agronomic plants, or for carrying out other required agricultural practices as defined in the Required Agricultural Practice Rules. It also means a barnyard or waste management system, either of which is created from an assembly of materials, but excludes a dwelling for human habitation.
- FILL Any placed material that changes the natural grade, increases the elevation, or diminishes the flood storage capacity at the site.

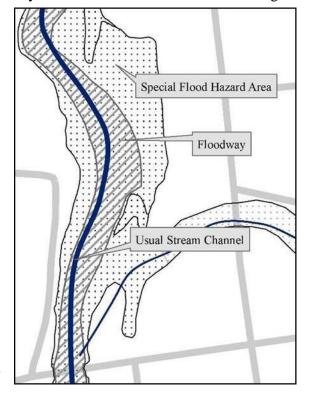
FIRM - See FLOOD INSURANCE RATE MAP

FLOOD - (a) A general and temporary condition of partial or complete inundation of normally dry land areas from: the overflow of inland or tidal waters; the unusual and rapid accumulation or runoff of surface waters from any source; and mudslides which are proximately caused by flooding and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current. (b) The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding

anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as flash flood or abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding.

FLOOD INSURANCE RATE MAP (FIRM) - An official map of a community, on which the Federal Insurance Administrator has delineated both the special flood hazard areas and the risk premium zones applicable to the community. In some communities the hazard boundaries are available in paper, pdf, or Geographic Information System formats as a Digital Flood Insurance Rate Map (DFIRM).

FLOOD INSURANCE STUDY – An examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface



elevations or an examination, evaluation and determination of mudslide (i.e., mudflow) and /or flood related erosion hazards.

- FLOODPLAIN OR FLOOD-PRONE AREA Any land area susceptible to being inundated by water from any source (see definition of "flood").
- FLOOD PROOFING Any combination of structural and non-structural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures, and their contents.
- FLOODWAY The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot at any point. Please note that Special Flood Hazard Areas and floodways may be shown on a separate map panels.
- FLOODWAY, REGULATORY IN TOWN OF READING Means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot at any point.
- FLOODWAY FRINGE That area of the Special Flood Hazard Area on either side of the regulatory floodway where encroachment may be permitted without additional hydraulic and/or hydrologic analysis.
- FLUVIAL EROSION Erosion caused by streams and rivers. Fluvial erosion can be catastrophic when a flood event causes a rapid adjustment of the stream channel size and/or location.
- FUNCTIONALLY DEPENDENT USE A use which cannot perform its intended purpose unless it is located or carried out in close proximity to water.
- FOREST Means an ecosystem characterized by a more or less dense and extensive tree cover, consisting of one or more stands that vary in characteristics such as species composition, structure, age class, and associated processes and that often include small open areas, wetlands, streams, access roads, and trails.
- FORESTRY USE Any management, including logging, of a forest or woodland, including the maintenance, construction or alteration of woods roads, skidways, landings, fences and forest drainage systems. This includes portable sawmills for short term processing.
- FRONTAGE The distance along the lot line that separates a lot from a street, road, or highway measured along the right-of-way of that road or highway.
- GROUP HOME Any residential facility operating under a license or registration granted or recognized by a Vermont agency, that serves not more than eight unrelated persons, who have a handicap or disability as defined in 9 V.S.A. § 4501, and who live together as a single housekeeping unit. In addition to room, board and supervision, residents of a group home may receive other services at the group home meeting their health, developmental or educational needs.

HEIGHT - See STRUCTURE HEIGHT.

- HISTORIC STRUCTURE Means any structure that is: (a) Listed individually in the National Register of Historic Places (a listing maintained by the Department of the Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register; (b) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district; (c) Individually listed on a Vermont inventory of historic places in states with historic preservation programs which have been approved by the Secretary of the Interior; or (d) Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either: (i) By an approved state program as determined by the Secretary of the Interior or (ii) Directly by the Secretary of the Interior in states without approved programs.
- HOME-BASED BUSINESS A business carried out by the property owner, who resides at the site, in a principal or accessory structure.
- HOME OCCUPATION Any occupation customary in residential areas, carried on by a resident at his residence, provided that the use occupies a minor portion of the dwelling/accessory structure, does not materially change the character of the area and is clearly incidental to the principal use as a residence.
- HYDROLOGIC AND HYDRAULIC ENGINEERING ANALYSIS means an analysis performed by a professional engineer, registered in Vermont in accordance with standard engineering practices as accepted by FEMA, used to determine flood elevations and / or floodway boundaries.
- INN An establishment providing lodging and meals for travelers and so designed that normal access and egress are from a central point.
- INTERPRETIVE CENTER An institution for dissemination of knowledge of natural or cultural heritage.
- LAND DEVELOPMENT The division of a parcel into two or more parcels, the construction, reconstruction, conversion, structural alteration, relocation or enlargement of any building or other structure, or of any mining, excavation or landfill, and any change in the use of any building or other structure, or land, or extension of use of land.
- LEGISLATIVE BODY Means the Selectboard in the case of a town, the trustees in the case of an incorporated village, and the mayor, alderpersons, and city council members in the case of a city, and the supervisor in the case of an unorganized town or gore.
- LETTER OF MAP AMENDMENT (LOMA) A letter issued by the Federal Emergency Management Agency officially removing a structure or lot from the flood hazard zone based on information provided by a licensed engineer or surveyor. This is used where structures or lots are located above the base flood elevation and have been inadvertently included in the mapped special flood hazard area.
- LOT Land occupied by or capable of being occupied by one principal structure and the accessory structures or uses customarily incidental to it, including such yards and open spaces as required herein.

- LOT LINE The established division line between lots or between a lot and the right-of-way of a road or highway.
- LOWEST FLOOR The lowest floor of the lowest enclosed area, including basement. An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage in an area other than a basement area is not considered a building's lowest floor; provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of 44 CFR 60.3.
- MANUFACTURED HOME A structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term "manufactured home" does not include a "recreational vehicle".
- MANUFACTURED HOME PARK a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.
- MEAN SEA LEVEL Means, for purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929 or other datum, to which base flood elevations shown on a community's Flood Insurance Rate Map are referenced.
- MINERAL RESOURCES Substances obtained from the ground for use such as sand, gravel, stone, talc, or the like.
- MOBILE HOME: A structure or type of manufactured home that is built on a permanent chassis and is designed to be used as a dwelling with or without a permanent foundation, includes plumbing, heating, cooling, and electrical systems, and is:
 - Transportable in one or more sections; and
 - at least eight feet wide or 40 feet long or when erected has at least 320 square feet or if the structure was constructed prior to June 15, 1976, at least eight feet wide or 32 feet long; or
 - any structure that meets all the requirements of this subdivision except for size and for which the manufacturer voluntarily files a certification required by the U.S. Department of Housing and Urban Development and complies with the standards established under Title 42 of the U.S. Code. 10 V.S.A. § 6201(1).
- MOBILE HOME PARK A parcel of land which contains, or is designed, laid out, or adapted to accommodate three or more mobile homes.
- MONUMENT A type of usually three-dimensional structure that is explicitly created to commemorate a person or event or which has become relevant to an individual or to a social group as a part of their remembrance of historic times or cultural heritage.
- MULTIPLE USE STRUCTURE A building of two or more stories, with a commercial use in the ground floor and one or more dwelling units in the upper floor(s).
- MUNICIPAL/GOVERNMENTAL BUILDING Any building owned by any governmental unit for public use.

- NATIONAL FLOOD INSURANCE PROGRAM (NFIP) is the federal program that makes flood insurance available to owners of property in participating communities nationwide through the cooperative efforts of the Federal Government and the private insurance industry.
- NEW CONSTRUCTION For floodplain management purposes, *new construction* means structures for which the *start of construction* commenced on or after the effective date of the floodplain management regulation adopted by a community and includes any subsequent improvements to such structures.
- NEW MANUFACTURED HOME PARK OR SUBDIVISION Means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of the floodplain management regulations adopted by a community. NONCONFORMING LOTS OR PARCELS: Lots or parcels that do not conform to the present bylaws covering dimensional requirements but were in conformance with all applicable laws, ordinances, and regulations prior to the enactment of the present bylaws, including a lot or parcel improperly authorized as a result of error by the administrative officer. 24 V.S.A. § 4303(13).
- NONCONFORMING STRUCTURE A structure or part of a structure that does not conform to the present bylaws but was in conformance with all applicable laws, ordinances, and regulations prior to the enactment of the present bylaws, including a structure improperly authorized as a result of error by the administrative officer. 24 V.S.A. § 4303(14). Structures that were in violation of the flood hazard regulations at the time of their creation, and remain so, remain violations and are not nonconforming structures.
- NONCONFORMING USE Use of land that does not conform to the present bylaws but did conform to all applicable laws, ordinances, and regulations prior to the enactment of the present bylaws, including a use improperly authorized as a result of error by the administrative officer. 24 V.S.A. § 4303(15).
- NONCONFORMITY A nonconforming use, structure, lot, or parcel.
- NON-RESIDENTIAL Includes, but is not limited to: small business concerns, churches, schools, nursing homes, farm buildings (including grain bins and silos), pool houses, clubhouses, recreational buildings, government buildings, mercantile structures, agricultural and industrial structures, and warehouses.
- PLANNED UNIT DEVELOPMENT An area of land, controlled by an applicant to be developed as a single entity for a number of dwelling units and commercial and/or industrial uses, in which the design and development promotes the most appropriate use of the land, to facilitate the adequate and economic provision of streets, utilities, buildings, open spaces, and other site features and improvements.
- RECREATIONAL VEHICLE Means a vehicle which is: (a) Built on a single chassis; (b) 400 square feet or less when measured at the largest horizontal projection; (c) Designed to be self-propelled or permanently towable by a light duty truck; and (d) Designed primarily not

- for use as a permanent dwelling but as a temporary living quarters for recreational, camping, travel, or seasonal use.
- RESIDENTIAL CARE HOME A place, however named, excluding a licensed foster home, which provides, for profit or otherwise, room, board and personal care to three or more residents unrelated to the home operator. 33 V.S.A. § 7102(1).
- RETAIL An establishment engaged in selling merchandise for personal or household consumption and rendering services incidental to the sale of the goods.
- RIVER CORRIDOR The land area adjacent to a river that is required to accommodate the dimensions, slope, planform, and buffer of the naturally stable channel and that is necessary for the natural maintenance or natural restoration of a dynamic equilibrium condition, as that term is defined in 10 V.S.A. §1422, and for minimization of fluvial erosion hazards, as delineated by the Agency in accordance with the ANR River Corridor Protection Guide. See the ANR website for more information:

 http://dec.vermont.gov/watershed/rivers/rivercorridor-and-floodplain-protection/planning.
- ROAD A public or private way for vehicular traffic which affords the principal means of access to abutting properties. For the purpose of Subdivision Review, the road standards shall apply for all access that serve two or more lots.
- SCULPTURE Three-dimensional art made by carving, modeling, casting, or constructing.
- SERVICE STATION, AUTO An Auto Service Station is property used for the resale of motor fuel, oil and motor vehicle accessories and for lubrication, washing, or servicing motor vehicles.
- SET-BACK The shortest distance between a building and each boundary of the building lot, measured perpendicularly to the lot line. This measurement is not to be made along the slope of the land, but is to be made on the horizontal. Front yard set-backs are measured from the center of the traveled portion of the roadway.
- SIGN A Sign shall be defined as any logo, illustration, emblem, structure or building, or part thereof, that is placed in view of the general public for the purpose of attracting attention to a business, industry, profession, product or service.
- SIGNIFICANT WILDLIFE HABITAT This includes critical deer wintering habitat and travel corridors that are important to populations of deer, black bear, moose, bobcat and other wildlife inhabiting the town and surrounding region.
- SMALL BUSINESS A use or structure dedicated to retail, communications (other than transmission and receiving equipment), or light commercial or manufacturing purposes.
- SPECIAL FLOOD HAZARD AREA (SFHA) The floodplain within a community subject to a 1 percent or greater chance of flooding in any given year. For purposes of these regulations, the term "area of special flood hazard" is synonymous in meaning with the phrase "special flood hazard area". This area is usually labeled Zone A, AE, AO, AH, or A1-30 in the most current flood insurance studies and on the maps published by the Federal Emergency Management Agency. Maps of this area are available for viewing in the municipal office or online from the FEMA Map Service Center: msc.fema.gov. Base flood elevations have not

- been determined in Zone A where the flood risk has been mapped by approximate methods. Base flood elevations are shown at selected intervals on maps of Special Flood Hazard Areas that are determined by detailed methods. Please note, where floodways have been determined they may be shown on separate map panels from the Flood Insurance Rate Maps. See the figure on pages 83 and 86.
- START OF CONSTRUCTION Includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footing, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, regardless whether that alteration affects the external dimensions of the building.
- STRUCTURE That which is built or constructed, an edifice or building of any kind, or any piece of work artificially built up or composed of parts joined together in some definite manner. For floodplain management purposes, a walled and roofed building, as well as a manufactured home, and any related built systems, including gas or liquid storage tanks.
- STRUCTURE HEIGHT The vertical distance measured from the average finished grade at the front of the building to the highest point of the roof, in the case of a building, or to the top of structure.
- SUBDIVISION Means the division of a lot or parcel of land into two or more lots, parcels, sites or other divisions of land for the purpose, whether immediate or future, of sale, development or lease. It includes resubdivision, amendments to subdivisions, amendments to conditions of plat approval, and/or the division of a lot or parcel held in common ownership and subsequently divided into parts among the owners. Property under common ownership that is divided by a state highway or a class 1, 2, or 3 town road will be considered as separate parcels. A subdivision also includes lot line adjustments.
- SUBSTANTIAL DAMAGE Means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged conditions would equal or exceed 50 percent of the market value of the structure before the damage occurred.
- SUBSTANTIAL IMPROVEMENT Means any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage", regardless of the actual repair work performed. The term does not, however, include either: (a) Any project for improvement of a structure to correct existing violations of Vermont or local health, sanitary, or safety code specification which have been identified by the local code

- enforcement official and which are the minimum necessary to assure safe living conditions or (b) Any alteration of a "historic structure", provided that the alteration will not preclude the structure's continued designation as a "historic structure". For the purposes of determining
- "substantial improvement" value and exceptions in (a) only and for no other purpose, the Administrative Officer is "the local code enforcement official."
- SURFACE WATER Means all rivers, streams, brooks, reservoirs, ponds, lakes, springs and all bodies of surface waters, artificial or natural, which are contained within, flow through or border the town or any portion of it.
- TOP OF BANK That vertical point along a stream bank where an abrupt change in slope is evident. For streams in wider valleys it is the point where the stream is generally able to overflow the banks and enter the floodplain. For steep and narrow valleys, it will generally be the same as the top of slope. See illustrations of these terms in Appendix C of the *Riparian Management Guidelines for Agency of Natural Resources Lands*.
- VIOLATION Means the failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in 44 CFR 60.3 is presumed to be in violation until such time as that documentation is provided.
- WETLANDS Those areas of the Town of Reading which are inundated by surface or groundwater with a frequency sufficient to support vegetation or aquatic life that depend on saturated or seasonally saturated soil conditions for growth and reproduction. These shall include, but may not be limited to, wetlands shown on the most recent Vermont Significant Wetland Inventory maps (VSWI maps) issued by Vermont, or National Wetland Inventory (NWI) maps as most recently modified by Vermont, which are classified as, or contiguous to, Class One or Class Two wetlands.
- WIRELESS COMMUNICATIONS FACILITY Any tower, support structure, antenna, or related equipment, used to transmit or receive communications signals for commercial, industrial, municipal, county, or state purposes, including access roads, storage and maintenance buildings, power lines, and other supporting infrastructure.
- YARD Space on a lot not occupied by a structure. Minimum yard dimensions are the minimum perpendicular set-back of a structure from a lot line.
- ZONE Means a geographical area shown on a Flood Hazard Boundary Map or a Flood Insurance Rate Map that reflects the severity or type of flooding in the area.
- ZONING ADMINISTRATOR (ZA) See ADMINISTRATIVE OFFICER (AO).



APPENDIX A

Noxious Weeds and list of Species to Watch Vermont Department of Agriculture, Food & Markets, March 2012

Vermont noxious weed quarantine was created in order to regulate the importation, movement, sale, possession, cultivation and/or distribution of certain invasive plants. These plants either pose a threat the Vermont environment or are already negatively impacting waterways and natural areas in the state. Many of these plants are becoming such a problem that there is no alternate prevention method. This rule will also prevent plants not yet found in Vermont from being introduced, and will protect the state from the many environmental, agricultural, recreational, and/or economical problems associated with their presence.

For questions and comments related to Vermont's Noxious Weed Quarantine Rule go to http://agriculture.vermont.gov/plant_pest/plant_weed/invasive_noxious_weeds, or contact: Vermont Agency of Agriculture, Food and Markets, Plant Industry Section; 103 South Main Street; Waterbury VT 05671-0101; (802) 828-1317.

Designated Noxious Weeds

(A) Class A Noxious Weeds.

- (1) All weeds listed in 7 C.F.R. 360.200 as amended, which is hereby incorporated by reference including subsequent amendments and editions.
- (2) Cabomba caroliniana (fanwort)
- (3) Egeria densa (Brazalian elodea)
- (4) Hydrilla verticillata (hydrilla)
- (5) Hygrophila polysperma (east Indian hygrophila)
- (6) Myriophyllum aquaticum (parrot feather)
- (7) Myriophyllum heterophyllum (variableleaved milfoil)
- (8) Salvinia auriculata (giant salvinia)
- (9) Salvinia biloba (giant salvinia)
- (10) Salvinia herzogii (giant salvinia)
- (11) Salvinia molesta (giant salvinia) (12) Vincetoxicum hirundinaria (syn: Cynanchum rossicum) (pale swallow-wort)
 - Cynanchum rossicum) (pale swanow-wor

(B) Class B Noxious Weeds.

- (1) Aegopodium podagraria (goutweed/bishopsweed/snow-onthemountain)
- (2) Ailanthus altissima (tree-of-heaven)
- (3) Alliaria petiolata (A. officinalis) (garlic mustard)
- (4) Butomus umbellatus (flowering rush)
- (5) Celastrus orbiculatus (oriental bittersweet)

- (6) Fallopia japonica (syn: Polygonum cuspidatum) (Japanese knotweed)
- (7) Hydrocharis morsus-ranae (frogbit)
- (8) Lonicera x bella (bell honeysuckle)
- (9) Lonicera japonica (Japanese honeysuckle)
- (10) Lonicera maackii (amur honeysuckle)
- (11) Lonicera morrowii (Morrow honeysuckle)
- (12) Lonicera tatarica (Tatarian honeysuckle)
- (13) Lythrum salicaria (purple loosestrife)
- (14) Myriophyllum spicatum (Eurasian watermilfoil)
- (15) Nymphoides peltata (yellow floating heart)
- (16) Phragmites australis ssp. australis (common reed)
- (17) Potamogeton crispus (curly leaf pondweed)

- (18) Rhamnus cathartica (common buckthorn)
- (19) Rhamnus frangula (syn: Frangula alnus) (glossy buckthorn)
- (20) Trapa natans (water chestnut)
- (21) Vincetoxicum nigrum (syn: Cynanchum louiseae) (black swallow-wort)
- (22) Acer platanoides (Norway maple)*
- (23) Berberis vulgaris (common barberry)*
- (24) Berberis thunbergii (Japanese barberry)*
- (25) Euonymous alatus (burningbush)*
- (26) Iris pseudacorus (yellow flag iris)*
- (27) Acer ginnala (Amur maple)*
- (28) Najas minor (European naiad)*

List of Watch Species in Vermont

Scientific Name	Common Name
Acer ginnala Maxim.	Amur maple
Acer f)/alanoides L.	Norway maple
Alnus glulinosa (L.) Gaertner	European black al der
Amorf)ha frulicosa L.	False indiqo
Ampelopsis brevipeduncufala (Maxim.) Trautv.	Porcelainberry
Anthriscus svlveslris (L.IHoffm.	Wild chervil
Berberis thunbergii DC.	Japanese barberry
Berberis vulqaris L.	Common barberry
Callilriche stagnalis Scop.	Pond water-starwort
Cardamine imf)atiens L.	Narrowleaf bittercress
Centaurea maculosa L.	Spotted knapweed
Syn.: Centaurea biebersleinii DC	
Elaeagnus anguslifolia L.	Russian olive
Elaeaonus umbel/ala Thunb.	Autumn olive
Euonymus a/ala (Thunb.) Sieb.	Winged euonymus
Euphorbia cyf)arissias L.	Cypress spuroe
Glyceria maxima (Hartman) Holmberg	Reed mannagrass
Hesf)eris matronalis L.	Dame's rocket
Iris pseudacorus L.	Yellow iris
Lioustrum oblusifolium Sieb.& Zucc.	Border Privet
Lonicera xylosteum L.	Dwarf honeysuckle
Lvsimachia vulqaris L.	Garden Loosestrife
Marsilea quadrifolia L.	European waterclover
Microsteqium vimineum (Trin.IA. Camus	Japanese stilt orass
Najas minor Allioni	Brittle waternymph
Paufownia tomentosa (Thunb.) Sieb & Zucc.Ex Ste.	Princess tree
Phalaris arundinacea L.	Reed canary orass
Polygonum perfolialum L.	Mile-a-minute vine
Polygonum sachalinense F.Schmidt ex Maxim. Syn:	Giant knotweed
Fallof)ia sachalinensis (F.Schmidt ex Maxim.) Dcne.	
Populus alba L.	White poplar
Robinia f)Seudoacacia L.	Black locust
Rorripa nasturtium-aqualicum (L.) Hayek Syn:	Watercress
Nasturtium officinale Ait. f.	
Rosa multiflora Thunb.ex Murr.	Multiflora rose

APPENDIX B

Measuring the Size and Volume of Ponds

(Reprinted with permission of the University of West Virginia Cooperative Extension)

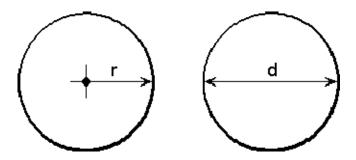
Estimating surface areas of ponds with different shapes:

Circular Ponds:

The surface area of a circular pond can be estimated by measuring either the radius or the diameter of the pond (Figure 1). The radius is the distance measured from a point in the center of the pond to a point on the bank. The diameter is the distance measured all the way across

the pond, from one bank to the opposite bank, passing through the center of the pond as illustrated below.

Figure 1. Radius and diameter of a circle



If the radius is measured, the area of the pond is determined by the equation: area = 3.14 x radius x radius

where 3.14 is actually the number "Pi" Because the radius is measured in feet, the units of area will be square feet.

Example when using the radius of a pond:

A circular pond has a radius of 50 feet.

The area of the pond = 3.14×50 ft x 50 ft = 7,850 square feet

Now convert the area in square feet to acres:

1 acre = 43,560 square feet

For the example above: $7,850 \text{ sq. ft} \div 43,560 \text{ sq. ft/acre} = .18 \text{ acre}$

If the diameter of the pond is measured, the area of the pond is determined as: $area = (3.14 \text{ x diameter x diameter}) \div 4$

where 3.14 is the number "Pi"

Because the diameter of the pond is measured in feet and then this measurement is squared, the unit of area for a circular pond is square feet.

Example when using the diameter of a pond:

A circular pond has a diameter of 90 feet.

The area of the pond = $(3.14 \times 90 \text{ ft } \times 90 \text{ ft}) / 4 = 6,358 \text{ square feet}$

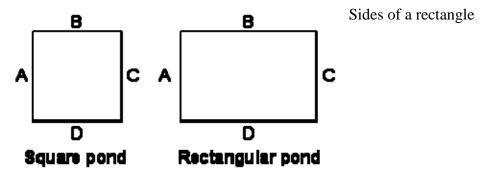
Now convert the area in square feet to acres:

1 acre = 43,560 square feet

For the example above: 6,358 sq. ft $\div 43,560$ sq. ft/acre = .146 acre

Square or Rectangular Ponds:

The area of a square or rectangular pond can be determined by measuring the length (in feet) of the four sides of the pond (Figure 2) and using the following equation: Figure 2.



Area (in square feet) =
$$((A + C) \div 2) \times ((B + D) \div 2)$$

Example for a rectangular pond:

The figure below represents measurements of a pond.

The area of the pond is calculated as:

Area =
$$((50 + 45) \div 2)$$
) x $((500 + 495) \div 2)$)
= $(95 / 2)$ x $(995 / 2)$
= 47.5 x 497.5
= $23,631$ square feet

Now convert the area in square feet to acres:

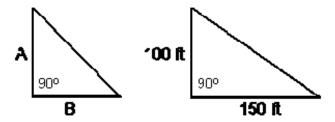
$$1 \text{ acre} = 43,560 \text{ ft} 2$$

For the example above: 23,631 sq. ft \div 43,560 sq. ft / acre = **.54 acre**

Triangular ponds with one 90% angle:

Use the equation: area = $(A \times B) \div 2$

Measure the pond and calculate as follows:



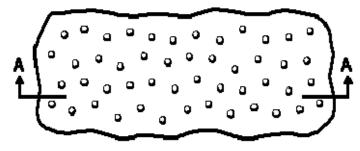
To calculate the pond area for the example above:

Convert to acres: $7500 \text{ sq. ft} \div 43,560 = .17 \text{ acre}$

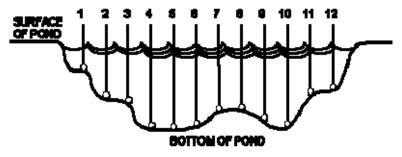
Average depth of ponds:

Most existing farm ponds are relatively shallow, reaching eight to ten feet in their deepest sections. On average, a pond which is eight feet at its deepest point will have an average depth of six feet. A pond that is six feet deep at its deepest point will average about four feet in depth. Exceptions to these estimated depths occur when ponds are constructed in hollows with extremely steep banks (greater average depth) or when the pond banks have an extremely shallow slope so that there is a great deal of shallow surface area. If the pond is over 10 years old or if the pond owner has no knowledge of the depth of the pond, multiple measurements of depth should be taken over the surface of the pond and the values averaged for an estimation of the average depth (Figure 5). Measurements of depth can be made by simply dropping a weight tied to a rope tagged in increments of one foot into the water and noting the feet of rope required for the weight to hit the pond bottom. Please note that many of these measurements should be taken across the entire pond surface to give an accurate estimation of pond depth.

Figure 5. A sampling scheme to determine average depth of a pond.



TOP VIEW OF POND - @ Indicates a measurement



SIDE VIEW OF POND - SECTION A-A Figure 5

The last step in determining the potential of the pond for use in aquaculture is to determine the volume of the pond. The pond volume is calculated by multiplying the pond surface acreage by the average depth in feet. The units for this value are acre-feet. For the example of the triangular pond given earlier, the surface acreage of the pond was determined to be 0.17 acres. Assuming that the pond is an average of 6 feet deep, the volume of the pond in acre-feet is calculated as:

0.17 acres x 6 feet = 1.02 acre-feet

The volume of the pond in gallons of water can now calculated with the conversion factor of 1 acre-foot of water = 325,850 gallons of water. For our example,

1.02 acre-feet x 325,850 gallons per acre-foot = 332,367 gallons of water in the pond

This may sound like a great deal of water but if a pond is used as a reservoir to feed fresh water to a separate fish production pond of 1 surface acre in size, the recommended rate of flow that the production pond should receive is 12 gallons per minute. Over a 24 hour period, this production pond requires 17,280 gallons of water. The triangular pond in the example above could supply this production pond for only 19 days if no rainfall is received to recharge the pond!

Due to inherent format limitations of HTML, this document cannot display the standard mathematical equations for pond calculations. Equations used in this document are mathematically correct, but are presented in unconventional formats.

Written by: Agnes V. Spicer, West Virginia University Extension Service, Aquaculture Specialist. 1997