

Town of Thetford, VT

# Subdivision Regulations

*DRAFT revision 11.5.1 (11/09/20)*



Adopted xx XXX 2020

Effective xx XXX 2020



# To the First-Time Applicant

If you are new to the Subdivision Application process in Thetford, please schedule an informal meeting with the Zoning Administrator to discuss the nature and scope of your project. In the long run, this will save time, effort, and possibly money.

Tables 1 and 2 on the very next pages outline the steps involved in applying for a subdivision application and list the documents required at each step. Some of the steps don't apply to every type of subdivision, and some of the documents and diagrams can be waived for some projects. The Development Review Board (DRB) will make the final decisions about which steps apply to your application and which documents will or will not be waived, but the Zoning Administrator can help you determine most of this information ahead of time. Note that you must request these waivers, and the DRB must approve them, but the Zoning Administrator can guide you through the process.

Section 2 provides detailed descriptions of the steps and documents outlined in the two tables.

You can contact the Zoning Administrator at [zoning@thetfordvermont.gov](mailto:zoning@thetfordvermont.gov) or, during the Zoning Office hours, at 802-785-2922 ext 3. The Zoning Office hours are listed on the Thetford Town website at <https://www.thetfordvt.gov/departments/zoning>.

**Table 1 – Subdivision Review Process Outline**

<b>ACTION</b>	<b>RESPONSIBLE PARTY; TIMELINE</b>
<p><b>Step 1: Pre-application Meeting (Available to all potential applicants – Not Required)</b>                      Informal preliminary discussion to be held at next regularly scheduled Development Review Board Meeting. No application required. <i>Strongly recommended.</i></p>	
<p><b>Step 2: Preliminary Plan Review Hearing</b></p>	
Submission of Subdivision Application and preliminary plan as indicated in Table 2. Include any waiver requests.	Applicant; at least 30 days prior to public hearing scheduled before Development Review Board
Development Review Board hearing	Applicant: attendance required
Review of compliance with general and specific standards in Article 3	Development Review Board; issues a Preliminary Plan Review determination within 45 days of close of preliminary plan review hearing
<p><b>Step 3: Final Plan Review Hearing</b></p>	
(1) Submission of final subdivision plan (2 paper copies and 1 Mylar copy), including: <ul style="list-style-type: none"> <li>• compliance with design changes set forth in preliminary plan approval; and</li> <li>• proposed final plat and supporting documentation requested in the preliminary plan review.</li> </ul>	Applicant; within 12 months of date of preliminary plan approval, unless DRB approves extension, and at least 30 days prior to scheduled hearing before Development Review Board.
(2) Final Plan Review Decision	Development Review Board; issues a Final Plan Review Decision within 45 days of the hearing adjournment date. Thereafter the Zoning Administrator will issue a zoning permit with the approved conditions.
(3) Recording of final plat (Mylar copy) in the town records	Applicant; within 180 days of date of subdivision approval.
<p>The DRB reserves the right to combine both the Preliminary and Final Plan Review Hearing into a single hearing. If at the Preliminary Review Hearing the DRB finds that they have sufficient information to approve the final plat, the hearing process will automatically be considered combined once a decision is rendered.</p>	
<p>Note: In accordance with the Act [§4464], a warned public hearing shall be required for final plat review. This warning will occur before any hearing conducted in regard to the subdivision that is not Continued to another date during the Open Public Meeting.</p>	

<b>Table 2 – Subdivision Application Requirements</b>		
Yes = Required information or document		
<b>NOTE: Shaded requirements may be waived at the hearing by majority vote of the DRB, per section 2.1(D)</b>		
<b>(A) Application Information</b>	<b>Preliminary Plan</b>	<b>Final Plan</b>
Application Form [# of copies]	Yes, 1 copy	Yes, 1 copy
Application Fee	Yes	
Name of project, if any	Yes	Yes
Name and address of applicant and landowner	Yes	Yes
Written description of proposed development plans, including number and size of lots; estimated timing of development	Yes	Yes
Waiver requests, in writing	Yes	Yes
Written request for modification of dimensional requirements or other standards contained in the zoning bylaws in instances involving applications for a Planned Unit Development (PUD).	Yes	Yes
<b>(B) Plan/Plat Mapping Requirements</b>	<b>Preliminary</b>	<b>Final Plat</b>
Materials	Paper	Paper & Mylar
Date, North Arrow, Legend	Yes	Yes
Preparer Information, Certifications	Yes	Yes
Plat scale ratios specified in VT Statute (§1403) shall be sufficient to show all pertinent survey data, and each plat shall contain a graphic scale graduated in units of measure used in the body of the plat.	Yes	Yes
Project boundaries and property lines	Surveyed	Surveyed
Existing and proposed lot lines, dimensions	Surveyed	Surveyed
Zoning district designations and boundaries	Yes	Yes
Must comply with the General Standards and the Wetland Buffer Requirements in the Zoning Bylaw	Yes Based on VT State wetland inventory	Yes Delineated in area to be developed
Must comply with the General Standards in the Flood Hazard Bylaw	Yes	Yes
Existing and proposed streets, driveways and parking areas		Yes Surveyed
All rights-of-way or easements		Yes
Digital data as specified by the Zoning Office		Yes

<b>Table 2 – Subdivision Application Requirements</b>		
Soil types – note especially “Primary” and “Statewide” agricultural soils.		Yes
Names and addresses of abutting property owners	Yes	Yes
Subdivisions and buildings within 100 feet of the parcel to be subdivided	Yes	Yes
Intersecting streets and driveways within 200 feet of the parcel to be subdivided	Yes	Yes
Proposed development envelopes		Yes
Survey Monument locations	Yes	Yes
Street profiles; street, intersection and parking area geometry and construction schematics within area to be developed		Yes
Proposed landscaping and screening		Yes
Proposed conservation buffer and/or easement areas		Yes
Utility Corridors		Yes
Notation prepared in accordance with Section 2.6		Yes
Copies of full size plans	Yes, 2 copies	Yes, 3 copies (1 of Mylar)
Reduced (11' x 17') copies of proposed plan	Yes, 6	Yes, 6
<b>(C) Supporting Information &amp; Documentation</b>	<b>Preliminary Plan</b>	<b>Final Plan</b>
Site location map showing proposed subdivision in relation to major roads, drainage ways, and adjoining properties	Yes	Yes
If applicable, all application materials required under Planned Unit Development Review in the Thetford Zoning Bylaw.	Yes	Yes
If applicable, all application materials required under Planned Unit Development Review in the Thetford Zoning Bylaw.	Yes	Yes
Engineering reports (water and wastewater systems)		Yes
Off-site easements (e.g., for water, wastewater, access)		Yes
Proposed phasing schedule and future development		Yes
Proposed road maintenance agreements, covenants and/or Deed restrictions		Yes
Proposed homeowner or tenant association or agreements		Yes
Proposed performance bond or surety		Yes
<b>(D) May be required by the Development Review Board</b>		
Stormwater and erosion control plan		Yes

<b>Table 2 – Subdivision Application Requirements</b>		
Grading plan (showing proposed areas of cut and fill)		Yes
Open space management plan		Yes
Site reclamation plan (for subdivisions involving extraction)		Yes
Traffic impact analysis (current and proposed traffic volumes, capacities, levels of service, proposed improvements)		Yes
Fiscal impact analysis (analysis of fiscal costs and benefits to the town)		Yes





Table of Contents

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**Article 1. Authority & Purpose.....1**

    1.1 *Enactment and Authority*.....1

    1.2 *Purpose*.....1

    1.3 *Adoption & Amendment*.....1

    1.4 *Severability* .....2

**Article 2. Subdivision Application Procedures .....3**

    2.1 *Applicability*.....3

    2.2 *Pre-Application Meeting*.....4

    2.3 *Preliminary Plan Review* .....5

    2.4 *Final Plan Approval*.....6

    2.5 *Performance and Maintenance Bonds*.....7

    2.6 *Plat Recording Requirements*.....7

    2.7 *Coordination with Zoning Permits* .....8

    2.8 *Revisions to an Approved Plat* .....8

**Article 3. Planning and Design Standards.....9**

    3.1 *General Standards* .....9

    3.2 *Lot and Site Layout* .....9

    3.3 *Protection of Natural & Cultural Resources*.....11

    3.4 *Stormwater Management & Erosion Control* .....13

    3.5 *Community Services & Facilities* .....14

    3.6 *Roads, Driveways & Pedestrian Access*.....14

    3.7 *Water and Wastewater Disposal Permits* .....17

    3.8 *Utilities*.....18

    3.9 *Open Space and Common Land* .....18

**Article 4. Administration & Enforcement .....20**

    4.1 *Administration* .....20

    4.2 *Fees*.....20

    4.3 *Hearing Requirements* .....20

    4.4 *Enforcement & Penalties* .....22

    4.5 *Appeals* .....23

4.6 Town Recording Requirements .....24

4.7 Availability of Documents .....24

**Article 5. Definitions .....25**

5.1 Interpretation .....25

5.2 Definitions.....25

# Article 1. Authority & Purpose

## 1.1 Enactment and Authority

(A) In accordance with the Vermont Municipal and Regional Planning and Development Act 24 V.S.A., Chapter 117, [§§4410, 4418], hereinafter referred to as the Act, as most recently amended, there are hereby established subdivision regulations for the Town of Thetford, Vermont. These regulations shall be known and cited as the “Town of Thetford Subdivision Regulations.”

(B) Definition of **Subdivision**: (1) The division of a lot, tract, or parcel of land into two or more lots, tracts, sites, or other division of land for the purpose, whether immediate or future, of sale or of building development; or (2) a change of recorded subdivision plat if such change affects any street layout on such plat, or area reserved thereon for public use, or any change of a boundary (lot) line, or any such change if it affects any map or plan legally recorded.

(C) It is the policy of the Town of Thetford to regulate all subdivision of land, and subsequent development of subdivided plats in accordance with these regulations. No subdivision of land shall be made and no land in any proposed subdivision shall be sold, transferred, or leased until a final plat prepared in accordance with the requirements of these Regulations has been approved by the Development Review Board (DRB) and recorded in the Thetford Land Records.

## 1.2 Purpose

(A) These regulations are adopted to further the following objectives:

- (1) to ensure that all subdivisions in the Town of Thetford shall be in conformance with the *Thetford Town Plan* and shall be in conformance with the *Thetford Zoning Bylaw* and all other applicable State and local by-laws, ordinances, and regulations;
- (2) to protect and provide for the public health, safety, environment, and general welfare of the Town of Thetford;
- (3) to preserve the character of Thetford as set forth in the Town Plan;
- (4) to further the purposes contained in the Act as set forth in §4302.

## 1.3 Adoption & Amendment

(A) In accordance with the Act [§4442], these regulations shall take effect 21 days after the date of their adoption by the Thetford Selectboard. The subdivision regulations for the Town of Thetford in effect prior to the adoption of these regulations are hereby repealed as of the effective date of these regulations.

(B) Amendments to these regulations shall be enacted in accordance with the provisions of the Act [§§4441, 4442]. If a proposed amendment is supported by a petition signed by not less than five percent (5%) of registered Thetford voters, the Planning Commission shall make only technical corrections to the proposed amendment and shall prepare a written report as required under the Act [§4441(c)].

(C) As provided in the Act [§4449(d)], after a public hearing of the Selectboard has been warned to consider adoption of these regulations in accordance with this Section, or an amendment to these regulations subsequent to their adoption, applications for subdivision approval shall be reviewed in accordance with the procedures and standards set forth in both the proposed regulations or amendment and the subdivision regulations then in effect. In the event of a conflict between the proposed regulations or amendment and the regulations then in effect, the most restrictive provision shall apply. Review under both current and proposed regulations shall occur for a period of 150 days from the date of the first warning or until the proposed regulations or amendment are adopted or rejected by the Selectboard, whichever occurs first. An application that has been denied under a proposed amendment that has been rejected or not adopted within the 150-day period shall be reviewed again, at no cost, under the existing regulations, upon the request of the applicant.

#### 1.4 Severability

(A) If any provision of these regulations or the application thereof to any person or circumstance is held invalid, the invalidity shall not affect or invalidate other provisions or applications.

# Article 2. Subdivision Application Procedures

NOTE: See Table 1 for an outline of the steps in the application process, and Table 2 for a list of information, plans, and documents required at each step. These tables are printed at the front of this document.

## 2.1 Applicability

(A) **Subdivision Approval Required.** Whenever any subdivision of land is proposed, the subdivider or authorized agent shall apply for and secure approval of the proposed subdivision in accordance with the procedures set forth in these regulations prior to:

- commencing any construction, land development or land clearing (excluding forestry or agriculture and activities exempted from zoning permit requirements under Section 1.04 of the *Thetford Zoning Bylaw*);
- the granting of any permit for the erection of any building in the proposed subdivision;
- the sale, transfer or lease of any portion of a property intended to be subdivided; and/or
- the filing of a subdivision plat with the Thetford Town Clerk.

(B) **Boundary Line Adjustments.** In accordance with the Act [§4464(c)], the Zoning Administrator may review and approve an application for a boundary line adjustment to previously approved development that would otherwise require review by the Development Review Board. The Zoning Administrator may classify an application as eligible for administrative review if the boundary line adjustment:

- will not result in a substantial impact under any of the standards set forth in these regulations or in the *Thetford Zoning Bylaw*; and
- will not have the effect of substantively altering any of the findings of fact of the most recent approval.

For an application that is eligible for administrative review, the Zoning Administrator shall approve the filing with the Town of a final plat for recording, in substantially the same manner as final plats for approved subdivisions under Section 2.6, if the boundary line adjustment:

- combines two contiguous lots into one or will not change substantially the nature of any previously approved subdivision; and
- will not increase the number of parcels of land; and
- will not impair access to any parcel; and
- will not impact adversely any significant natural resource or result in fragmentation of agricultural or forest resources and will conform to the general and specific standards in the *Thetford Zoning Bylaw*; and
- will not create a nonconforming lot or nonconforming structure, or increase the degree of nonconformity of a preexisting nonconforming lot or structure.

For the purposes of this regulation, the terms “nonconforming lot” and “nonconforming structure” have the meanings defined in the Thetford Zoning Bylaw.

Any decision by Zoning Administrator under this subsection may be appealed as provided in Section 4.5.

(C) **Coordination with Planned Unit Development Review.** Subdivision applications for Planned Unit Developments (PUDs) shall be reviewed as subdivisions in accordance with this Article. The application procedures and review processes set forth in the Development Review article, Planned Unit Development section of the *Thetford Zoning Bylaw* shall apply. PUDs shall meet the standards set forth in the Development Review article of the *Thetford Zoning Bylaw*, as well as subdivision standards included in Article 3, unless otherwise waived by the Development Review Board.

(D) **Waiver Authority.** In accordance with the Act [§4418(2)], the Development Review Board may 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. The request for a waiver shall be submitted in writing by the applicant at the time of the subdivision application, and it shall be the responsibility of the applicant to provide sufficient information to justify the waiver and to enable the Board to reach a decision.

During the course of the hearing, the DRB at its discretion may waive some of the subdivision application requirements by majority vote, as set forth in Table 2.2.

In granting a waiver the Development Review Board shall require such reasonable conditions as will, in its judgment, secure substantially the objectives of the requirements so waived. No such waiver may be granted if it would have the effect of nullifying the intent and purpose of the Town Zoning Ordinance, Town Plan, or these Regulations. Such waivers and their justification shall be recorded in the hearing minutes and included in the permit file.

## 2.2 Pre-Application Meeting

(A) **Any person** who is considering submitting an application for subdivision in accordance with these regulations is strongly encouraged to meet with the Development Review Board before applying in order to discuss preliminary conceptual plans, the subdivision review process, and to review the standards set forth in Article 3. The pre-application meeting is intended to be an informal, preliminary discussion. As such, a person seeking a pre-application meeting will be placed on a duly posted agenda for the first available regularly scheduled meeting of the commission.

(B) **Information.** The applicant may present any information that he or she deems appropriate at the pre-application meeting, including site information and/or conceptual subdivision design.

(C) **Action of the Development Review Board.** The Development Review Board will not take formal action of any kind at the pre-application meeting. Board members may provide guidance as to the application and review process, and/or comment on the intent of specific planning and design standards relative to the potential subdivision of the applicant’s parcel(s). No comments made at the pre-application meeting will be binding upon any future review of a subdivision application.

(D) **Meeting with the Zoning Administrator.** As an alternative, or in addition, to a pre-application meeting with the Development Review Board, all applicants are encouraged to meet with the Town of

Thetford Zoning Administrator prior to preparing an application for subdivision approval to receive guidance regarding the application and review process and the subdivision standards in effect.

(E) **Notification of Abutters.** All applicants for subdivision review are strongly encouraged to notify abutting landowners and other potentially interested persons prior to submitting an application to ensure that legitimate concerns of neighbors are addressed early in the subdivision design process. The Town will provide official notification to abutters as part of the application review process.

## 2.3 Preliminary Plan Review

(A) **All applicants** for subdivision approval are required to submit a Subdivision Application and preliminary plan for the Development Review Board to review at the Preliminary Plan Review Hearing. Subject to Section 2.4 (B) final plan approval may happen at this hearing if the materials submitted meet the Final Plan requirements outlined in Table 2, at the front of this document.

(B) **Application Requirements.** The applicant shall submit to the Zoning Administrator a Subdivision Application, Preliminary Plan, and associated fee. The application shall include a survey by a surveyor licensed by the State of Vermont, along with associated materials that include the information for Preliminary Plan Review specified in Table 2.

(C) **Preliminary Plan Review Hearing.** The applicant and/or an authorized representative are required to attend a Preliminary Plan Review Hearing with the Development Review Board to review the subdivision application and proposed preliminary plan. Prior to the Preliminary Plan Review Hearing, The Zoning Office will provide Public Notice in accordance with Article 4, Section 4.3 of these rules. The Board may request any additional information as needed to act on the preliminary plan.

(D) **Phasing.** The Development Review Board may impose conditions as the Board deems necessary to ensure the orderly development, or phasing, of the subdivision to be in conformity with the Town Plan and avoid overburdening town facilities and services.

(E) **Action on Preliminary Plan.** The Development Review Board, based on the information provided, shall record in the meeting minutes the following:

- (1) a preliminary determination of whether or not the proposed subdivision plan conforms to applicable subdivision review standards under Article 3, and with other municipal regulations currently in effect;
- (2) recommendations for proposed changes in subsequent submissions, including any requests for additional studies or supporting documentation;
- (3) the granting or denial of requested waiver provisions; and
- (4) conditions proposed to be included in the final decision.

(F) **Effect and Period of Preliminary Plan Review Determinations.** Preliminary Plan Review Determinations shall remain in effect for 12 months from the date of approval, unless otherwise extended by the approval of a waiver request to extend the effective date by not more than an additional 12 months. Waiver requests shall be submitted by the applicant prior to the end of the initial 12-month period. Waivers may be granted at the discretion of the Board where there is evidence of an ongoing effort by the applicant to meet recommendations in the Preliminary Plan Determination or to obtain additional permits from other jurisdictions.

Prior to the expiration of the 12 months or extended period, the applicant shall submit to the Zoning Administrator the application materials required for the Final Plan and Plat, as listed in Table 2. Otherwise, the Preliminary Plan Review Determination shall expire and a new Preliminary Plan Review application will be required, based on the subdivision and zoning regulations in effect at the time of the new application.

## 2.4 Final Plan Approval

(A) **All applicants** for subdivision approval are required to submit materials that meet the Final Plan requirements in Table 2. If Final Plan Review and Approval is not granted at the Preliminary Plan Review Hearing, the hearing will be continued to a future date(s) where approval may take place. If a future date cannot be established at the Preliminary Plan Review Hearing, the applicant will need to request a Final Plan Review Hearing. Any subsequent hearing will be warned in accordance with the Act [§4464].

(B) **Application Requirements.** Within 12 months of the date of Preliminary Plan Decision the applicant shall submit to the Zoning Administrator the application materials required for the Final Plan and Plat as listed in Table 2. If the applicant fails to do so, the applicant will be required to submit a new preliminary plan for approval subject to zoning and subdivision regulations effective at the time of the new application.

Unless otherwise specified or waived by the Development Review Board under 2.1(D), the application for Final Plan and Plat Approval shall include associated fees, plans, and documents for Final Plan and Plat review specified in Table 2. This approval may be combined with the Preliminary Plan Approval so that there is a single application and hearing for approval of a subdivision.

(C) **Public Hearing.** The Board shall hold a public hearing on the final plan and associated plat, warned in accordance with Section 4.3. If the Preliminary Plan Review is to be held in conjunction with the Final Plan Approval, then the Hearing shall be warned as such.

(D) **Final Plan Approval.** In accordance with the Act [§4464], within the 45 days following the date of the close of the public hearing, the Development Review Board shall issue a decision to approve, approve with conditions, or disapprove the final subdivision plan, based on a determination of whether or not the plan and associated plat conform to subdivision review standards under Article 3. Failure to act within this 45-day period will result in deemed approval of the application and shall be effective on the 46<sup>th</sup> day.

Approval, conditions of approval, or grounds for disapproval and provisions for appeal under Section 4.5 shall be set forth in a written notice of decision. Copies of the notice of decision shall be sent by first class mail to the applicant, all abutting landowners, and any other interested persons. The decision signature date shall be considered the date of approval. (See section 4.3 (C), **Decisions**, for more details.)

(E) **Effect of Final Plan Approval.** Approval by the Development Review Board 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 may be accomplished only by a formal resolution of the Selectboard, in accordance with state statute. The applicant must apply to the Selectboard for such acceptance.



The Development Review Board may impose a time limit for the start and completion of site improvements, such as roads, erosion control measures, and bridges that are an integral part of the subdivision approval.

## 2.5 Performance and Maintenance Bonds

(A) In accordance with the Act [§4464(b)(4),(6)],The Development Review Board may, as a condition of subdivision approval, require from the applicant a performance bond or comparable security in a form approved by the Thetford Selectboard in an amount sufficient to cover the full costs of new streets and/ or other required improvements and their maintenance for a period of not more than 3 years from the date of completion. With the mutual written consent of the Development Review Board and applicant, such bond or security may be extended. If any required improvements have not been installed or maintained as provided within the term of the performance bond or other security, such bond or other security shall be forfeited to the Town. The Town shall, if necessary, install or maintain such improvements to the extent of the proceeds from such bond or other security.

## 2.6 Plat Recording Requirements

(A) In accordance with the Act [§ 4463(b)], within 180 days of the date of receipt of final plan and plat approval under Section 2.4 (E), the applicant shall file two (2) paper copies and one (1) Mylar copy of the final subdivision plat for recording with the Town in conformance with the requirements of 27 V.S.A., Chapter 17. Approved plats not filed and recorded within this 180-day period shall expire.

(B) Prior to plat recording, all three copies of the plat must be signed by the Development Review Board Chair or Vice-Chair. Only the Mylar plat will be recorded. All three copies of the final plat must include a notation to include the following statement:

*The subdivision depicted on this plat was duly approved, as conditioned, by the Thetford Development Review Board in accordance with the Thetford Subdivision Regulations and all other applicable laws and regulations on the \_\_\_ day of \_\_\_\_\_ 2\_\_.*

*Subdivision Permit#\_\_\_\_\_.*

*Signed:\_\_\_\_\_ [Development Review Board Chair or Vice-Chair].*

(C) For Boundary Line Adjustments, prior to plat recording, the plat must be signed by the Zoning Administrator. All final plats will include a notation to include the following statement:

*This plan shows a division of land for the purpose of a boundary line adjustment as defined in Article 2 of the Town of Thetford Subdivision Regulations. Any further subdivision of these parcels or lots must be approved by the Thetford Development Review Board. This boundary line adjustment has been approved on the \_\_\_ day of \_\_\_\_\_ 2\_\_.*

*Subdivision Permit#\_\_\_\_\_.*

*Signed:\_\_\_\_\_ [Zoning Administrator].*

(D) The Board 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.

(E) Every subdivision plat shall show all proposed rights-of-way and easements as required under these regulations. Documentation and assurances shall be provided that all required improvements and associated rights-of-way, easements, and other common lands or facilities will be maintained either by the subdivider, a homeowners' association, or through other accepted legal mechanism. Such documentation shall be in a form approved by the Development Review Board and filed in the Thetford Land Records.

(F) The municipality shall meet all recording requirements for final subdivision plan approval as specified for municipal land use permits under Section 4.6.

## 2.7 Coordination with Zoning Permits

Prior to the issuance of a zoning permit for development on any subdivided lot approved under these regulations, the Zoning Administrator shall determine whether the lot and the proposed development are in compliance with all conditions of subdivision approval. The Zoning Administrator shall not issue a zoning permit for any development that is not in compliance with such approval, or for any lot that is in violation of a condition of approval.

## 2.8 Revisions to an Approved Plat

Except for boundary line adjustments that are approved by the Zoning Administrator in accordance with Section 2.1(B), no changes, modifications, or other revisions that alter the plat or conditions attached to an approved subdivision plan shall be made unless the proposed revisions are resubmitted to the Development Review Board first, and the Board approves such revisions after public hearing. In the event that such subdivision plan revisions are recorded without complying with this requirement, the revisions shall be considered null and void.

# Article 3. Planning and Design Standards

## 3.1 General Standards

(A) **Conformance with the Town Plan & Other Regulations.** Subdivisions shall conform to the Thetford Town Plan, Thetford Zoning Bylaw, and all other bylaws, ordinances and regulations of the Town of Thetford currently in effect. In particular, the General Standards in the Development Review article of the Zoning Bylaw; the Wetland Buffer Requirements in the Zoning Bylaw; and the Flood Hazard Bylaw apply to all subdivisions.

The intended use of one or more of the parcels to be created by a subdivision may, additionally, require Site Plan Approval, Conditional Use Approval, or Planned Unit Development Approval, in accordance with the Thetford Zoning Bylaw, or review under the Thetford Flood Hazard Area Zoning Bylaw. The Development Review Board shall determine which of these additional standards may be applied to the subdivision review.

(B) **Suitability for Subdivision.** Prior to the approval of a subdivision, the applicant shall satisfy the Board that the land to be subdivided is of such a character that it can be used for the intended purpose(s) and density of use, as stated in the application, without undue adverse impact on public health and safety, the environment, and neighboring properties. Land unsuitable for subdivision due to rock formations; flood conditions; undue adverse impact on surface waters or neighboring properties; undue adverse impact on natural or cultural resources; or other prohibitive circumstances including but not limited to inadequate access for emergency vehicles; or any other conditions constituting a danger to health, life, property, or the natural environment shall not be approved for subdivision unless the applicant presents evidence satisfactory to the Development Review Board establishing that the methods proposed are adequate to address such conditions.

(C) **Disclosure of Subsequent Development Plans.** Whenever an applicant submits a proposal for development on a minor portion of a parcel the Board may require a general indication of the intended uses of the remaining portion of land. Such an indication should include access, type of use, intensity of use, and phasing.

## 3.2 Lot and Site Layout

(A) **Purpose.** The lot and site layout standards are intended to further the objectives of the Town Plan, the *Thetford Zoning Bylaw* and all other applicable State and local by-laws, ordinances, and regulations, including but not limited to consideration of: house siting that preserves the character and working landscape of Thetford; low and medium cost housing options; business growth within the village centers; ridesharing, public transit, bicycling, and walking; to prevent undue expenditure of public funds for municipal services; and to ensure adequate fire protection.

(B) **Standards.** The layout of lots shall conform to the Zoning Bylaw. The following standards shall apply to all subdivisions:

- (1) The lot size, width, depth, shape, orientation, and the minimum building setback lines shall be appropriate for the location of the subdivision and for the type of development and use contemplated.

- (2) All lots shown on the final plat must conform to the minimum area and dimension requirements of the Zoning Bylaw. However, a subdivision plat may be designed for cluster or planned unit development, provided all requirements of Thetford's zoning regulations are met.
- (3) All lots or sites shall abut a street or road built to Town specifications or have access to said street or road via a deeded right-of-way at least thirty (30) feet wide. The width of the right-of-way may be waived if the Development Review Board finds that a reduction in right-of-way width results in neither unsafe nor inadequate access for future uses of the lot or site.
- (4) Corner lots shall have extra width sufficient to permit a setback on each street.
- (5) Where the Development Review Board raises a question as to the suitability of a lot or lots for their intended use due to factors such as rock formations; flood conditions; undue adverse impact on surface waters, neighboring properties, or natural and cultural resources; or other circumstances including but not limited to inadequate access for emergency vehicles, the applicant shall present evidence satisfactory to the Development Review Board establishing that the methods proposed are adequate to address such conditions. In the absence of satisfactory evidence, the Development Review Board may, after adequate investigation, require modification of such lots.
- (6) The width of a lot measured along its road frontage shall not be less than twenty-five percent (25%) of the lot length measured perpendicularly to the straight line best approximating the road frontage.
- (7) In zoning districts where the minimum lot size is 20,000 square feet, wetlands must be delineated and the area of wetlands may not be included in the calculation of lot size when determining that a lot meets the minimum size requirement, with this exception: If a lot size would equal or exceed 80,000 square feet, the standard for zoning districts where the minimum lot size is 80,000 square feet shall apply. In zoning districts where the minimum lot size is 80,000 square feet, the size of wetlands may be estimated rather than delineated, and the area of wetlands shall be considered when calculating lot size: (a) If the wetland area is less than or equal to one-quarter of the lot size, it may be included in the calculation of the minimum lot size, so long as there is sufficient buildable land remaining outside the wetland area to follow setback, buffer, and all other standards for subdivision and zoning. (b) If the wetland area is more than one-quarter of the lot size, it may not be included in the calculation of lot size when determining that a lot meets the minimum size requirement.
- (8) In the case of Planned Unit Developments, wetlands must be delineated and the area of wetlands may not be included in the calculation of allowable density.
- (9) No new slopes may be created with a grade (slope ratio) greater than 3:1. In determining the location or size of lots, or when calculating allowable density for a Planned Unit Development, disturbance of very steep slopes (4:1 slope ratio/25% or greater) shall be minimized. Subdivisions where the area of disturbance includes slopes greater than 25% shall require a licensed engineer to certify that such disturbances do not pose a landslide or erosion risk. Subdivisions shall be designed in reasonable conformity with existing topography to minimize grading, to reduce cuts and fills, and to retain, insofar as reasonable, natural contours, land cover, and soil. The Development Review Board may require a program of landscaping, soil stabilization and the establishment of appropriate, permanent vegetative cover following excavation or grading.

(C) **Establishment of Development Envelopes.** All lots shall have one or more designated development envelopes, unless waived by the Board in the case of small lots. Development envelopes shall be designated to identify and limit the location of principal and accessory structures, parking areas, and associated site development (excluding road and utility rights-of-way or easements) on one or more portions of a lot. The maximum size and shape of the development envelope shall be determined by zoning district setback requirements unless otherwise specified in these regulations. The Board may require the identification of specific building footprints if, in its judgment, such information is required to meet the standards set forth in these regulations. Where the Board deems it appropriate to do so for the purposes of these regulations, the Board may consider features of immediately adjacent properties that are relevant to the Board's evaluation of the proposed development envelope.

(D) **Siting for energy efficiency.** Because all new building construction must at a minimum comply with Vermont residential (RBES) and commercial (CBES) building energy standards, the Board will encourage developers to:

- (1) exceed minimum energy standards by adopting advanced building and construction techniques that result in higher energy savings and more sustainable building environments;
- (2) site and orient new structures for optimum solar gain and to protect solar access for existing buildings from shadows cast by new structures; and/or
- (3) minimize energy usage by concentrating development envelopes close to existing roads and sites with solar access. (Refer to Section 6 in the Zoning Bylaw for information about density bonuses applicable to energy standards and designated open space.)

### 3.3 Protection of Natural & Cultural Resources

(A) **Purpose.** The standards in this section are intended to further the following objectives:

- to direct development away from the most sensitive and/or rare natural areas and integrate it with less fragile or unique natural areas;
- to protect important agricultural lands from development that would destroy their future use for crops;
- to insulate rare plants and animals from disruptive land use;
- to prevent the decimation of wildlife and vegetation habitat through the cumulative effects of incremental development;
- to restrict development that would have undue adverse impacts on the waters of Lake Fairlee and other bodies;
- to ensure that building construction shall not occur in flood prone areas; and
- to protect cultural, historic and archeological resources.

(B) **Protection of Wetlands.** The intent of these requirements is to minimize adverse impacts caused by human activity on mapped and unmapped wetlands in the town of Thetford and to ensure the continuing well-being and functionality of these sensitive ecological areas by establishing vegetated buffer zones. Any subdivision of land that contains a mapped or unmapped wetland, as the terms are

used in the Zoning Bylaw, shall meet the Wetland Buffer Requirements in the Zoning Bylaw. Where appropriate, the Development Review Board shall designate or approve development envelopes to ensure that these requirements are met.

(C) **Protection of Floodplains.** Any subdivision that affects any land within an area of special flood hazard, identified in the most current flood insurance studies and maps published by the Department of Homeland Security (DHS), Federal Emergency Management Agency (FEMA), National Flood Insurance Program (NFIP), as provided by the Secretary of the Agency of Natural Resources pursuant to 10 V.S.A. § 753, shall meet the requirements of the Flood Hazard Area Zoning Bylaw. Except for uses permitted by statute, no use that poses a potential for water contamination in flood hazard areas will be permitted. Where appropriate, the Development Review Board shall designate or approve development envelopes to ensure that these requirements are met.

(D) **Protection of Surface Waters.** These requirements are intended to (a) reduce the likelihood of fluvial erosion damage to structures and other investments by allowing streams the room to naturally change course; (b) encourage the establishment of heavy growth native vegetation and trees along Thetford's lakes and streams to filter excess nutrients and sediment in runoff, prevent soil erosion, shade the stream, improve wildlife habitat and fisheries, and maintain water quality; (c) slow down the siltation of Lake Fairlee and other lakes, which is a major threat to lakes, and reduce the amount of pollutants such as pet waste, pesticides, fertilizers and car oil that enter the lakes. For any subdivision of land that is adjacent to a lake or a stream, the Development Review Board shall designate development envelopes to ensure that the Riparian and Shoreline setbacks in the Zoning Bylaw are met.

(E) **Protection of Significant Wildlife Habitat and Forest Resources.** Where there is evidence that a subdivision will affect significant wildlife habitat or forest resources, as the terms are used in the Zoning Bylaw, the Development Review Board shall designate development envelopes to ensure that the relevant standards in the Zoning Bylaw are met.

(F) **Protection of Farm Land.** Any subdivision of land that contains agricultural land, as the term is defined in the Zoning Bylaw, or that contains farmland soil map units with a rating of prime, statewide, or local importance as defined by the Natural Resources Conservation Service (N.R.C.S.) of the United States Department of Agriculture (U.S.D.A.) shall meet the standards for Protection of Agricultural land in the Zoning Bylaw. Where appropriate, the Development Review Board shall designate development envelopes to ensure that these requirements are met.

(G) **Protection of Historic & Cultural Resources.** Development envelopes shall be located and configured to mitigate adverse impacts to historic and archaeological sites and resources identified in Thetford historical and archeological resource inventories, by the Vermont Division for Historic Preservation, or through site investigation. Methods to minimize adverse impacts include, but may not be limited to, the following:

- (1) To the extent practical, historic features, including stone walls and cellar holes, should be preserved and integrated into the subdivision design (e.g., driveways may follow stone walls).
- (2) Prior to development on sites that have been identified as being archaeologically sensitive in town or state inventories, or through site investigation, the Board may require a site assessment to identify the presence and relative value of archaeological resources on the site, and to document the archaeological resource and/or recommend strategies for its protection.

- (3) The subdivision of land shall be designed to maintain the historic context of the site, as defined by historic structures located on the property and in the immediate vicinity of the site, and to minimize the impact of new development on the historic and architectural integrity of historic resources.

### 3.4 Stormwater Management & Erosion Control

The standards in this section are intended to further the following objectives:

- to ensure that site development, including excavation, road and driveway construction and site clearing and grading, will not unduly impact neighboring properties or surface waters;
- to discourage development in those areas where the slope makes Town services expensive and seepage and erosion damage severe.
- To be consistent with the Stormwater Management & Erosion Control standards as set forth in the Thetford Zoning regulations.

(A) Guidance for compliance with the standards in this section can be found in the document “2017 Vermont Stormwater Management Manual Rule and Design Guidance,” to be found at the following webpage address: [https://dec.vermont.gov/sites/dec/files/wsm/stormwater/docs/Permitinformation/2017%20VSMR\\_Rule\\_and\\_Design\\_Guidance\\_04172017.pdf](https://dec.vermont.gov/sites/dec/files/wsm/stormwater/docs/Permitinformation/2017%20VSMR_Rule_and_Design_Guidance_04172017.pdf). Compliance with the Vermont Stormwater Regulations, as evidenced by an approved state stormwater permit, will indicate compliance with this section.

(B) Temporary and permanent stormwater management and erosion control measures shall be incorporated into subdivision design and layout to control surface runoff, sedimentation and water pollution on-site and downstream from the proposed subdivision. Factors to be considered in determining the types of controls necessary shall include size and terrain of watershed draining onto the development envelope, pre-development site and runoff conditions, vegetation and ground cover, slope and drainage patterns, soil types (e.g. hydric soils), the percentage of land covered in impermeable surfaces, types of pollutants generated, distances to streams and other surface waters, and impact on adjoining properties.

(C) The Board may require the preparation and implementation of stormwater management and/or sedimentation and erosion control plans and associated analyses to ensure that site improvements, including excavation, road and driveway construction and site clearing and grading, will not unduly impact neighboring properties or surface waters. Such plans, if required, shall be prepared by a licensed Vermont engineer, be based upon Best Management Practices (BMPs) for managing stormwater and controlling erosion, as defined by the Vermont Agency of Natural Resources and the U.S. Department of Agriculture Natural Resource Conservation Service (see document referenced above in 3.4(A)), and include provisions for the inspection and long-term maintenance of stormwater management and erosion control facilities.

(D) Control of stormwater runoff to protect downstream channels shall be accomplished by providing 12 to 24 hours of extended detention storage for the one-year storm event.

(E) If a subdivision will result in changes in stage frequency, discharge frequency or flooding in areas not owned or controlled by the applicant, the applicant must secure appropriately sized easements for all

areas of flow or flooding on affected properties. Suitable land use restrictions must be included in easements to prevent any activity that may affect drainage across the area.

(F) Areas exposed during construction shall be protected in accordance with standards of the Vermont Department of Environmental Conservation or other appropriate standards approved by the Board. Permanent vegetation and erosion control measures shall be established according to a schedule as required by the Board. The Board also may require the phasing of construction to reduce the amount of land disturbed at any one time, and may stipulate deadlines for the installation of temporary and permanent erosion control or stabilization measures.

### 3.5 Community Services & Facilities

(A) The standards in this section are intended to further the following objectives:

- to support the continued vitality of the community by maintaining and growing shared utilities and facilities without unnecessarily burdening the taxpayers and fiscal resources of the Town;
- to ensure adequate water supply for fire service;

(B) **Municipal Facilities & Services.** The proposed subdivision shall not create an undue burden on municipal facilities or create an unreasonable demand for public services. The Development Review Board may require the phasing of development to coordinate the anticipated demand for municipal facilities and services. In determining whether a subdivision will place an undue burden on facilities or services, the Board may consult with the appropriate municipal body (e.g., Public Works Department, School Board).

(C) **Emergency Service Facilities.** Adequate water storage or distribution facilities for fire protection within the subdivision may be required to the satisfaction of the Development Review Board. Where required by the Board, fire hydrants, dry hydrants, or ponds shall be installed by the subdivider. The Board may require documentation from the Thetford Fire Department and/or other emergency service providers as to the adequacy of emergency access and fire protection facilities.

### 3.6 Roads, Driveways & Pedestrian Access

(A) **Applicability of Road Standards.** The following standards shall apply to all proposed public roads, to private roads serving three or more lots, and to driveways. (When two lots use the same driveway, it is considered a shared driveway rather than a private road.)

(B) **Driveways.** A driveway serves one or two lots and shall comply with driveway standards pursuant to Zoning Bylaw 3.13 or any subsequently adopted driveway ordinance. In addition, driveways should be laid out to follow existing linear features, such as utility corridors, tree lines, hedgerows, and fence lines, to avoid the fragmentation of fragile features and natural and cultural resources described above in Section 3.3.

(C) **Design and Acceptance of Private Roads.**

- (1) All private development roads serving three or more lots should be designed in accordance with Town Road and Bridge Standards as most recently certified by the Selectboard.



- (2) Assumption of private roads as public roads by the Town is subject to the approval of the Thetford Selectboard pursuant to state law for laying out public rights-of-way. Construction of roads to the adopted standards does not ensure such acceptance.

(D) **Intersections.** A new or relocated road, and any driveway, shall be located so that a safe sight stopping distance is provided, as determined by probable traffic speed, terrain, alignments and inclement weather. The current road standards referenced in (C)(1) should be considered in review of any new intersection.

(E) **Drainage & Stormwater.** A stormwater drainage system shall be provided that is designed to control and accommodate stormwater collected on all proposed roads and/or parking areas in accordance with Section 3.4 of these regulations. Generally, traveled lanes, shoulders, ditches, and culverts shall be designed and maintained in conformance with the *Vermont Better Roads Manual*, as most recently amended, and as described in Thetford's currently adopted road standards.

(F) **Coordination with Adjoining Properties.** The arrangement of roads within the subdivision shall provide for the continuation of roads of adjoining subdivisions and for proper projection of roads through adjoining properties which are not yet subdivided, in order to make possible necessary fire protection, movement of traffic and construction or extension, presently or when later required of needed utilities and public services. Where, in the opinion of the Development Review Board, topographic or other conditions make such continuance undesirable or impractical, the above conditions may be modified.

(G) **Access Management.** To better manage traffic flow and safety, avoid congestion and frequent turning movements, preserve the carrying capacity of important travel corridors, and to avoid strip development, the following access management standards shall apply to all subdivisions:

- (1) All road access shall be subject to the approval of the Vermont Agency of Transportation in the case of state highways and the Thetford Selectboard in the case of town roads. Access to all lots created by subdivision of any such parcel and to all buildings or other land development located thereon shall be only from such permitted access road or driveway.
- (2) As much as is possible, subdivisions shall make use of shared driveways and/or internal development roads providing access to multiple lots. Such driveways and roads shall comply with the currently adopted standards.
- (3) If a subdivision has frontage on primary and secondary roads, access shall be from the secondary road, unless the Board determines that topographic or traffic safety conditions make such an access impractical.
- (4) Where extensions of new roads could provide future access to adjoining parcels, rights-of-way shall be provided.
- (5) The creation of reserved strips shall not be permitted adjacent to a proposed road in such a manner as to deny access from adjacent property to such road.

(I) **Traffic & Road Capacity.** Traffic generated by the proposed subdivision shall not result in unreasonable traffic congestion or exceed the capacity of roads and intersections in the vicinity of the subdivision.

- (1) The Development Review Board will rely on accepted transportation standards in evaluating traffic impacts, and shall not approve a project that would result in the creation of conditions less safe than existing conditions for pedestrians, bicyclists, or motorists, unless such conditions can be mitigated by the applicant through physical improvements to the road network and/or traffic management strategies or improvements in public transportation.
- (2) The Board may require a traffic impact study, the cost of which will be borne by the applicant, which will evaluate existing and projected traffic conditions and determine the level of service both for existing conditions and for conditions as they are projected after the development.
- (3) The Board may require traffic mitigation measures, including required road improvements necessitated by the subdivision, which shall be the responsibility of the applicant as follows:
  - (a) Where an existing access road is inadequate or unsafe, the Development Review Board may require the applicant to upgrade the access road to the extent necessary to serve additional traffic resulting from the subdivision and to conform to these standards. Such mitigation shall be done without widening or re-grading the road and without cutting significant trees within the right of way, except as provided below and in paragraph (K).
  - (b) In situations where a development may require the realignment, widening, or an increase in the capacity of an existing road, or where the town plan or capital program indicates that such improvements may be required in the future, the applicant may be required to reserve land for such improvements.
  - (c) Where a subdivision requires expenditures by the town to improve existing roads to conform to these standards, the Development Review Board may disapprove such subdivision until the Selectboard certifies that funds for the improvements have been ensured. The applicant may be required to contribute part or all of the expenses involved with road improvements necessitated by the project.
  - (d) Any improvements to highways or intersections shall use context-sensitive road design.
  - (e) In the case where the land use requires Conditional Use Review, the Development Review Board and applicant will follow the additional process and standards for Conditional Use Review as defined in the Thetford Zoning Bylaw then applicable, which may require consideration and approval by the Selectboard.

(J) **Road Names & Signs.** Roads shall be named in accordance with Thetford road naming ordinance, as approved by the Selectboard. Names shall be identified on signs designed and located in accordance with the town policy, and shall be clearly depicted on the final plat. The Town, at its sole discretion, may assume responsibility for providing and installing road name signs.

(K) **Modification of Road Standards.** In the case of unusual topographic conditions or other circumstances which would make the strict adherence to these standards a substantial hardship, the

Board may modify the strict application of one or more of these standards providing the applicant can demonstrate that the proposed road:

- (1) is accessible by emergency response vehicles;
- (2) does not pose any threat to the safety of motorists, bicyclists or pedestrians;
- (3) will not result in unreasonable maintenance requirements for landowners; and
- (4) is designed in a manner that is consistent with other applicable standards of these regulations.

**(L) Parking & Transit Stops.** For subdivisions located on existing or proposed public transit routes, sheltered transit stops, which may include centrally located park and ride areas and bike racks to serve the development, will be incorporated in subdivision design. Large residential subdivisions shall also incorporate one or more sheltered school bus stops as appropriate.

**(M) Pedestrian Access.** The Development Review Board may require pedestrian rights-of-way to facilitate pedestrian circulation within the subdivision and to ensure access to adjoining properties or uses or public facilities. The Board may require, in order to facilitate pedestrian access from a subdivision to schools, parks, playgrounds, or other nearby roads, perpetual unobstructed easements indicated on the plat.

**(N) Legal Requirements.**

- (1) Every subdivision plat shall show all proposed road and pedestrian rights-of-way, as required under these regulations, regardless of whether the proposed right-of way is intended to be accepted by the town. In the event that the right-of-way is not intended for acceptance by the town, the mechanism by which the right-of-way is to be maintained, owned and/or conveyed shall be clearly documented.
- (2) Documentation and assurance shall be provided that all proposed roads and rights-of-way will be adequately maintained either by the applicant, a homeowners' association, or other legal mechanisms. Such documentation shall be in a form approved by the Board and filed in the Thetford Land Records.

### 3.7 Water and Wastewater Disposal Permits

**(A) Water Supply.** Water supply systems shall be designed and built to meet all applicable state requirements. Applicants must obtain a state permit. The Development Review Board may require evidence that adequate water supply is available through an existing or proposed system prior to granting final approval. The Board may require as a condition of approval, or as a condition of issuing zoning permits, that the subdivider provide any results of water samples tested by the Vermont Health Department in conjunction with the application.

**(B) Individual Wastewater Disposal System.** On-site sewage disposal systems shall be designed and installed in accordance with all applicable state regulations and standards. Applicants must obtain a state

permit. If an off-site disposal system is proposed, such system shall be secured through an easement or other form of legal conveyance.

(C) **Connection to Existing Water or Wastewater Systems.** Where connection to an existing water or wastewater system is proposed, the subdivider shall provide evidence as to the adequacy of the system to meet the needs of the proposed development. The subdivider will be required to provide such pumping and other facilities as may be necessary to serve the proposed development. The Board also may require that the subdivider provide, or have installed, at his expense, larger lines, pumping, storage and other facilities outside of the subdivision, if required specifically to meet the requirements of the proposed development. Any such systems must be designed and installed in accordance with all applicable state regulations and standards.

(D) **Community Systems.** Proposed development may be serviced by private, community water and/or wastewater systems, which shall be designed and installed in accordance with all applicable state regulations and standards.

(E) **Waivers.** In the event that the subdivider is proposing the creation of a lot(s) not requiring water or wastewater systems, the Board may waive the provisions of these regulations pertaining to water and wastewater disposal, providing that the plat recorded with the Town Clerk clearly indicates that the intended use of the lot(s) will not require water or wastewater disposal systems, and the subdivider submits an affidavit to the Board stating his/her intent, which will be incorporated as a condition of subdivision approval.

### 3.8 Utilities

(A) **Location:** All utilities, existing and proposed as part of the subdivision, shall be shown on the final plat, and be located as follows, unless waived by the Development Review Board:

- (1) All utility systems, which may include but not be limited to electric, gas, telephone, fiber optics and television cable, should be located underground throughout the subdivision, unless deemed by the Development Review Board to be unreasonable and prohibitively expensive.
- (2) The applicant shall coordinate subdivision design with the utility companies to ensure adequate and suitable areas for installation, both for the proposed subdivision and anticipated development on lands adjacent to the subdivision.
- (3) Utility corridors shall be shared with other utility and/or transportation corridors, and be located to minimize site disturbance, the fragmentation of farmland, and any adverse impacts to natural, cultural or scenic resources and public health.

### 3.9 Open Space and Common Land

(A) **Open Space Shown on the Town Plan.** Where a proposed park, playground, or other open space shown on the Town Plan's Land Use map is located in whole or in part in a proposed subdivision, the Board shall require substantial compliance with such Town Plan. As a condition of approval of the final plat, the Board may require that the area shown thereon as open space be offered for dedication to the Town. The Board shall not require such dedication in excess of 15 percent of the total area of the subdivision without reasonable compensation. If the Town does not take steps within a period of one year from the date of approval of the subdivision plat to acquire the portion of the open space in excess

of said 15 percent, the subdivider may submit to the Board a plan for subdivision of such portion, provided such additional subdivision does not exceed the total number of family dwelling units permitted by the zoning regulations for the applicable district, and meets all requirements of these subdivision regulations.

(B) **Other Open Space.** If no such open space, park, or playground is shown on the Town Plan's Land Use map within the boundaries of a proposed subdivision, the Board may, where it deems essential, require that the plat show one or more sites of character, size, shape, and location suitable to be used as community open space or park, in area not to exceed 15 percent of the total area of the subdivision. The subdivider may of his own volition exceed the above area requirements. In the case of cluster subdivision or planned unit development, open space shall be not less in area than as provided in the zoning regulations; such areas of open space, whether privately or publicly owned, shall have a sufficient legal restriction recorded in the Town land records to assure permanence of use as open space. (Refer to Section 6 in the Zoning Bylaw for information about density bonuses applicable to designated open space.) Open space land in private ownership shall be deeded in such a way that will assure operation or maintenance of the land in an orderly manner suitable for the purpose intended.

In the event that the Development Review Board determines that suitable park, playground, or other open space cannot be properly located in a proposed subdivision, it may require as a condition of final plat approval that a payment be made by the subdivider to the Town and placed in a fund for acquisition and/or improvement of park and recreation land. Such payment shall be determined by the Board of Selectmen in accordance with an equitable and standard fee schedule related to either the gross area of the subdivision or number of dwelling units proposed.

Where a development composed of one or more plats will accommodate a total of more than ten (10) dwellings, the Development Review Board may also require the designation of necessary public school sites or a payment towards expanding existing public school capacity consistent with 24 V.S.A. § 5203.

(C) **Development of Open Space.** On land to be used as active recreation open space, undesirable growth and debris shall be removed. Wooded and brook areas shall be left natural; active recreation open spaces shall be graded properly to dispose of surface water, and shall be seeded with lawn grass. There shall be no depositing, dumping, or storage of waste, or other natural or manmade material, supplies, or equipment, on any subdivision land designated as open space. No work, removal, or filling shall be done, nor shall the existing natural characteristics of open space land be altered from the original condition, until the subdivider's plans for recreational development of said open space have been reviewed and approved by the Development Review Board as part of the final plat submission.

# Article 4. Administration & Enforcement

## 4.1 Administration

These regulations shall be administered by the Thetford Development Review Board, as authorized by the Act [§ 4460].

## 4.2 Fees

(A) Application fees shall be established by the Selectboard in accordance with the Act [§4440]. Such fee(s) shall include the costs for publishing hearing notices, and conducting public hearings, administrative review and for periodic inspections by town retained consultants during the installation of public improvements, if deemed necessary.

(B) The Selectboard shall also establish procedures and standards for requiring an applicant to pay for reasonable costs of an independent technical review of an application. Should the Development Review Board deem it necessary to employ an engineer, attorney, design professional, or other consultant to review any subdivision plans or portion thereof, and/or any associated legal documentation, and/or to conduct inspections to ensure compliance with approved plans, all reasonable costs of such review shall be paid by the subdivider/applicant.

## 4.3 Hearing Requirements

(A) **Public Notice.** All public hearings required under these regulations shall be warned in accordance with the Act [§4464(a) (1), 4463]. Public notice for a warned public hearing shall be given not less than 15 days prior to the hearing date, in accordance with the following:-

- (1) the publication of the date, place and purpose of the hearing in the Newspaper of Record designated by the Selectboard;
- (2) the posting of the date, place and purpose of the hearing in three or more public places within the town, including posting within view from the public right-of-way nearest to the property for which the application is being made; and
- (3) written notification to the applicant and to owners of all properties adjoining the property subject to subdivision, without regard to any public right-of-way. The notification shall include a description of the proposed project and shall be accompanied by information that clearly informs the recipient where additional information may be obtained, and that participation in the local proceeding is a pre-requisite to the right to take any subsequent appeal.
- (4) For a plat located within 500 feet of a municipal boundary, a copy of the notice also shall be sent to the municipal clerk of the adjoining municipality.
- (5) The Zoning Office will notify adjoining landowners either by certified mail, return receipt requested, or by written notice hand delivered or mailed to the last known address supported by a sworn certificate of service.

- (6) In the event that the hearing is cancelled due to inclement weather or some other unanticipated cause, a notice of cancellation shall be posted on the door of the municipal building (or other meeting location, as appropriate). No other notice is required for cancellation. The notice of cancellation may include the date, time and location that the postponed hearing will be convened.
- (7) No defect in the form of substance of any requirements in Subsections (A)(1)–(A)(3) shall invalidate the action of the Development Review Board where reasonable efforts are made to provide adequate posting and notice. However, the action shall be invalid when the defective notice or posting or notice was materially misleading in content.

(B) **Hearings.** In accordance with the Act [§§4461, 4463, 4464], all meetings and hearings of the Development Review Board, except for deliberative and executive sessions, shall be open to the public. In addition:

- (1) For the conduct of any hearing 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 in the Town Office as public records and posted in accordance with Vermont’s Open Meeting Law.
- (3) In any regulatory hearing of the Development Review Board there shall be an opportunity for each person wishing to achieve status as an interested person, for purposes of participation or appeal under Section 4.5, 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 pending submission of additional information, but should close evidence promptly after all parties have submitted requested information.

(C) **Decisions.** In accordance with the Act [§4464(b)], 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 46<sup>th</sup> day, as certified by the Town Clerk. The certificate of the Town Clerk shall be attached to, filed, and recorded with the subdivision plat.

- (1) 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 record. Conclusions of law 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 4.5(C).

- (2) In rendering a decision in favor of the applicant, the Board may attach additional reasonable conditions and safeguards as it deems necessary to implement the purposes of the Act, these regulations, and the *Thetford Town Plan* currently in effect.
- (3) 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.
- (4) In accordance with the Act [§4464(c)], any decision issued by the Development Review Board may authorize that subsequent changes or amendments to an approved subdivision 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:
  - (a) The decision shall clearly specify the thresholds and conditions under which administrative review and approval shall be allowed.
  - (b) The thresholds and conditions shall be structured such that no new subdivision or 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.
  - (c) No amendment issued as an administrative review shall have the effect of substantially altering the findings of fact of any Board approval in effect.
  - (d) Any decision of the Zoning Administrator authorized in this manner may be appealed to the Board in accordance with Section 6.5(A).

#### 4.4 Enforcement & Penalties

(A) The enforcement of these regulations shall be the responsibility of the Zoning Administrator, in accordance with the Act [§4451,4452]. Pursuant to the Act [§4451], no action may be brought under this section unless the alleged offender has had at least seven (7) days' notice by certified mail that a violation exists. The notice of alleged violation (NOAV) shall state that a violation exists, that the alleged offender has an opportunity to cure the violation within the seven days, and that the alleged offender will not be entitled to an additional warning notice for a violation occurring after the seven days. The issuance of a notice of violation may be appealed in accordance with Section 4.3(A). Action may be brought without notice and opportunity to cure if the alleged offender repeats the violation of the bylaw after the original seven-day notice period, and within the next succeeding twelve (12) months.

(B) Any person who violates any of the provisions of these regulations shall be fined pursuant to the Act [§ 4451] for each offense, and each day that a violation continues shall constitute a separate offense.

(C) Any person who sells or transfers any land in a subdivision or land development or erects any structure thereon without first having recorded a duly approved final plat under these regulations shall be fined pursuant to the Act [§4451]; and each lot, parcel, or unit so sold or transferred shall be deemed a separate violation.

(D) Nothing herein contained shall be deemed to bar any other legal or equitable remedy provided in the Act [§4452] as presently enacted and as hereinafter amended, or otherwise to restrain, correct or prevent any violations of these regulations or prosecute violators thereof, except as provided below.



(E) The Town shall observe the 15-year limitations on enforcement proceedings relating to municipal permits and approvals as set forth in the Act [§ 4454].

## 4.5 Appeals

(A) **Decisions of the Zoning Administrator.** In accordance with the Act [§§4465, 4466], any **interested person** may appeal a decision or act of the Zoning Administrator under these regulations by filing a notice of appeal with the Secretary of the Development Review Board, or the Town Clerk if no Secretary has been elected, within fifteen (15) days of the date of such decision or act. A copy of the notice of appeal shall also be filed with the Zoning Administrator.

- (1) The notice of appeal shall include the name and address of the appellant, a brief description of the property with respect to which the appeal is taken, a reference to the regulatory provisions applicable to the appeal, the relief requested by the appellant, and the alleged grounds why the relief is believed proper under the circumstances.
- (2) Pursuant to the Act [§4468], the Development Review Board shall hold a public hearing on a notice of appeal within sixty (60) days of its filing. The Board shall give public notice of the hearing under Section 6.4(A) and mail a copy of the hearing notice to the appellant at least fifteen (15) days prior to the hearing date.
- (3) Any interested person empowered to take an appeal with respect to the property at issue may appear and be heard in person or represented by an agent or attorney at the hearing.
- (4) 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 3 V.S.A. 810.
- (5) In accordance with the Act [§4470], the Development Review Board may reject an appeal without hearing, and render a decision within ten (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.

(B) **Decisions of the Board.** Any **interested person** who has participated in a hearing of the Development Review Board may appeal a decision rendered in that proceeding within 30 days of such decision to the Vermont Environmental Court, in accordance with the Act [§§4471, 4472].

- (1) "Participation" shall consist of offering, through oral or written testimony, evidence or a statement of concern related to the subject of the proceeding.

**Interested Person.** In accordance with the Act [§4465], the definition of an interested person includes the following:

- (1) A person owning title to a property, or a municipality or solid waste management district empowered to condemn it or an interest in it, affected by this bylaw, who alleges that this 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 Thetford or an adjoining municipality.
- (3) A person owning or occupying property in the immediate neighborhood of a property that is the subject of a decision or act taken under this bylaw, 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 the Town.
- (4) Any ten persons who may be any combination of voters or real property owners within the Town or an adjoining municipality who, by signed petition to the Development Review Board, allege that any relief requested by a person under this section, if granted, will not be in accord with the policies, purposes, or terms of the plan or bylaw of the Town. The petition must designate one person to serve as the representative of the petitioners regarding all matters related to the appeal.
- (5) Any department or administrative subdivision of the State owning property or any interest therein within the Town or adjoining municipality, and the Vermont Agency of Commerce and Community Development.

- (2) A notice of appeal shall be filed by certified mailing, with fees, to the environmental court and by mailing a copy to the Town Clerk or the Zoning Administrator, if so designated, who shall supply a list of interested persons 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 listed.

#### 4.6 Town Recording Requirements

Pursuant to the Act [§4449(c)], within 30 days after a municipal land use permit including any final approval for land subdivision, has been issued, or within thirty (30) days of the issuance of a notice of violation, the Zoning Administrator or other appropriate municipal official 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 recording fees.

#### 4.7 Availability 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.

# Article 5. Definitions

## 5.1 Interpretation

(A) Unless otherwise defined herein, the definitions contained in the Act and the *Thetford Zoning Bylaw* shall apply to these regulations.

(B) Words, phrases and terms neither defined herein nor elsewhere in these regulations shall have their usual and customary meanings except where the context clearly indicates a different meaning.

(C) Any interpretation or clarification of words, phrases or terms contained herein by the Thetford Development Review Board or other jurisdiction shall be based on the following definitions, state statute, and the need for reasonable and effective implementation of these regulations.

## 5.2 Definitions

For the purposes of these regulations, the following words shall be defined as follows:

**Act:** The Vermont Municipal and Regional Planning and Development Act, Title 24, Chapter 117, Vermont Statutes Annotated.

**Abutter:** The owner of record of a parcel of land which is contiguous at any point to the parcel being subdivided by having a common border, or being separated from such a common border by a right-of-way, alley, or easement.

**Approval:** A decision by the Development Review Board, certified by written endorsement on the Plat, that the final plan meets the requirements of these regulations. Such approval may include conditions to be met by the applicant, which shall run with the land and be applicable to future owners, and which shall be forwarded to the applicant in writing.

**Authorized Agent:** A person or group of persons who have been duly authorized, in writing filed with the Board, by the owner of record to act on his or her behalf.

**Board:** The Development Review Board of the Town of Thetford.

**Boundary Line Adjustment:** Adjustments of boundary lines in which there is a sale, conveyance or exchange of land from adjacent lots that does not increase the number of parcels of land.

**Buffer:** A designated strip or area of land intended to visibly and/or functionally separate one use from another; to shield or block noise, lights or other nuisance from neighboring properties; and/or to lessen visual or physical impacts of development on surface waters, wetlands and other natural and scenic areas.

**Common Land:** Land within a development or subdivision that is not individually owned or dedicated for public use, but which is intended to be held in common, for use, enjoyment, management and maintenance by the residents of the development or subdivision. Such land may include but not be limited to open space areas, parking lots, pedestrian walkways, utility and road rights-of way.

**Conformance with the Town Plan:** A proposal that (1) makes progress toward attaining, or at least does not interfere with the goals and policies contained in the Thetford Town Plan, (2) provides for future proposed land uses, densities and intensities of development contained in the town plan; and (3) carries out, as applicable, any specific proposals for community facilities, or other proposed actions contained in the town plan.

**Development Envelope:** A specific area of land delineated on a lot within which all or specified structures and other designated site improvements (e.g., parking area) are to be located, and outside of which no structures, or only specified structures, are to be located. As a condition(s) of plat approval, other site development activities, such as the installation of septic systems, grading or clearing, may also be restricted outside of a development envelope.

**Driveway:** An area located on a lot, tract, or parcel of land, and built for access to a dwelling or garage or off-street parking space, serving not more than two (2) lots, sites or dwelling units.

**Erosion Control:** Measures to prevent the detachment and movement of soil or rock fragments or the wearing away of the land surface by water, wind, ice and gravity.

**Final Plat:** The final drawing or drawings on which the subdivision is presented to the Development Review Board for approval and which, if approved, shall be filed for record with the Town Clerk.

**Flood Hazard Bylaw:** The Flood Hazard Area Zoning Bylaw for the Town of Thetford.

**Lot:** Any parcel of land whose boundaries are separately described in a recorded deed or filed plat. A town or state highway right-of-way constitutes a lot boundary.

**Municipal Land Use Permit:** As defined in the Act [§4303] for purposes of recording and enforcement, a municipal land use permit includes the following as may be issued by the Town: (1) a zoning, subdivision, site plan or building permit or approval, any of which relate to subdivision and land development which has received final approval from the Zoning Administrator, Development Review Board, or other applicable town official; (2) a wastewater system permit issued under a municipal wastewater ordinance; (3) final official minutes of a meeting which relate to the above listed permits or approvals and serve as the sole evidence of such permits or approvals; (4) a certificates of occupancy, compliance or similar certificate as required by the Town; and (5) any amendments to the previously listed, permits, approvals and/or certificates.

**One-Year Storm:** (Also "One-year Storm Event) A storm event that has a one-year recurrence interval or statistically has a 100% chance on average of occurring in a given year. (A one-year, 24-hour storm event refers to rainfall or drainage flow over any 24-hour period during a one-year storm event.)

**Open Space:** Open space: an area of land or water that either remains in its natural state or is used for agriculture, or recreation, free from development for residential, commercial, industrial or institutional use. It includes agricultural and forest land, undeveloped scenic lands, public parks and preserves and water bodies such as lakes and bays. Open space can be publicly or privately owned. Open space includes any land provided or preserved for any of the following reasons:

- Preservation of areas of particular scenic beauty, cultural value and historic significance
- Room for production of food and forest products

- Room for outdoor recreation
- Green infrastructure to shape urban growth and provide a more livable and efficient urban environment
- Protection or restoration of ecological functions
- Protection of wildlife diversity and habitat for endangered plant and animal species
- Protection of fisheries, viewsheds, public access and ecotourism potential
- Mitigation of natural hazards, such as flooding, and protection of water supplies

**Phasing:** Development undertaken in a logical time and geographical sequence, typically to ensure that development is coordinated with the provision of services and facilities and will not result in adverse environmental impacts (e.g., erosion).

**Preliminary Plan:** The preliminary drawings for a major subdivision indicating the proposed layout of the subdivision to be submitted to the Development Review Board or Zoning Administrator for consideration.

**Primary Agricultural Soils:** Soil types designated as prime or statewide by the United States Natural Resource Conservation Service.

**Planned Unit Development (PUD):** One or more lots, tracts, or parcels of land to be developed as a single entity, the plan for which may propose any authorized combination of density or intensity transfers or increases, as well as the mixing of land uses. This plan, as authorized, may deviate from bylaw requirements that are otherwise applicable to the area in which it is located with respect to lot size, bulk, or type of dwelling or building, use, density, intensity, lot coverage, parking, required common open space, or other standards.

**Sketch Plan:** An informal sketch of the proposed subdivision. The purpose of the sketch plan is to enable the applicant to reach general agreement with the Development Review Board at the Discussion Phase with regard to the form of the subdivision and objective and requirements of these regulations.

**Slope:** Steepness of terrain, calculated as rise over run. For example, a stretch of land 100 feet long that rises three feet in elevation has a slope of three over 100 (3/100), or three percent. Slope can also be expressed as a ratio, (3:100), in degrees, or in inches per foot. (See the Slope Conversion Tables at the end of this document.) The Town Plan defines three slope percentage categories: 0-15%, 15- 25% (Steep), and greater than 25% (Very Steep).

**Stormwater Management:** The collecting, conveyance, channeling, holding, retaining, detaining, infiltrating, diverting, treating or filtering of surface water and/or runoff, together with applicable non-structural management techniques.

**Street:** Any road, highway, avenue, street, land or other way between right-of-way lines, commonly used for vehicular traffic and serving four or more lots.

**Subdivider:** The owner of record of the land to be subdivided, including any subsequent owner of record making any subdivision of such land or any part thereof, or the authorized agent of any such owner.

**Subdivision:** (1) The division of a lot, tract, or parcel of land into two or more lots, tracts, sites, or other division of land for the purpose, whether immediate or future, of sale or of building development; or (2) a change of recorded subdivision plat if such change affects any street layout on such plat, or area reserved thereon for public use, or any change of a boundary (lot) line, or any such change if it affects any map or plan legally recorded. When appropriate to the context, the term means the process of subdividing or the land or territory subdivided. The division of a parcel of land held in common and subsequently divided into parts among the several owners shall be deemed a subdivision. The placement of a second dwelling unit on a lot may require a subdivision permit, unless approved pursuant to the exceptions noted in the Zoning Bylaws.

**Town Plan:** The *Thetford Town Plan* as most recently adopted.

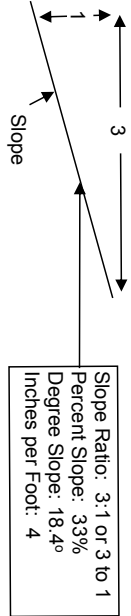
**Waivers:** The modification of one or more requirement of these regulations by the Development Review Board in accordance with the authority granted under Article 2. Such waiver authority shall be exercised solely at the discretion of the Development Review Board upon positive findings that, because of the special circumstances of a particular subdivision application, the waived or modified requirement(s) are not requisite in the interest of public health, safety and general welfare, or are inappropriate due to the inadequacy of connecting facilities adjacent or in proximity to the subdivision.

**Wetlands:** All wetlands identified on Vermont Wetlands Inventory maps as provided by the Vermont Agency of Natural Resources and/ or wetland areas identified through site analysis to be 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 pursuant to the Vermont Wetland Rules.

**Zoning Administrator:** The Zoning Administrative Officer for the Town of Thetford.

**Zoning Bylaw:** The Zoning Bylaw of the Town of Thetford.

Slope Conversion Tables



		Horizontal to Vertical Slope Ratio ( to 1)																																	
		1/4	1/2	3/4	1	1-1/4	1-1/2	1-3/4	2	2-1/2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18									
Percent Slope	400	200	133	100	80	67	57	50	44	33	25	20	16.7	14.3	12.5	11.1	10	9.1	8.3	7.7	7.1	6.7	6.3	5.9	5.6	5.3	5.0	4.8	4.5	4.3	4.2	4.0			
Degrees Slope	76.0	63.4	53.1	45.0	38.7	33.7	29.7	26.6	24.0	18.4	14.0	11.3	9.5	8.1	7.1	6.3	5.7	5.2	4.8	4.4	4.1	3.8	3.6	3.4	3.2	3.0	2.8	2.6	2.5	2.4	2.3	2.2	2.1		
Inches per Foot	48	24	16	12	9.6	8	6.9	6	5.3	4	3	2.4	2.0	1.7	1.5	1.3	1.2	1.1	1.0	0.92	0.86	0.80	0.75	0.71	0.67	0.63	0.59	0.56	0.53	0.50	0.48	0.45	0.43	0.42	0.40

		Percent Slope																								
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Horizontal/Vertical	100	50	33.3	25	20	16.7	14.3	12.5	11.1	10	9.1	8.3	7.7	7.1	6.7	6.3	5.9	5.6	5.3	5.0	4.8	4.5	4.3	4.2	4.0	
Degrees Slope	0.6	1.1	1.7	2.3	2.9	3.4	4.0	4.6	5.1	5.7	6.3	6.8	7.4	8.0	8.5	9.1	9.6	10.2	10.8	11.3	11.9	12.4	13.0	13.5	14.0	
Inches per Foot	0.1	0.2	0.4	0.5	0.6	0.7	0.8	1.0	1.1	1.2	1.3	1.4	1.6	1.7	1.8	1.9	2.0	2.2	2.3	2.4	2.5	2.6	2.8	2.9	3.0	

		Degrees Slope																								
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Percent Slope	1.7	3.5	5.2	7.0	8.7	10.5	12.3	14.1	15.8	17.6	19.4	21	23	25	27	29	31	32	34	36	38	40	42	45	47	
Horizontal/Vertical	57	29	19	14	11	9.5	8.1	7.1	6.3	5.7	5.1	4.7	4.3	4.0	3.7	3.5	3.3	3.1	2.9	2.7	2.6	2.5	2.4	2.2	2.1	
Inches per Foot	0.2	0.4	0.6	0.8	1.0	1.3	1.5	1.7	1.9	2.1	2.3	2.6	2.8	3.0	3.2	3.4	3.7	3.9	4.1	4.4	4.6	4.8	5.1	5.3	5.6	

		Inches per Foot																								
		1/8	1/4	3/8	1/2	5/8	3/4	7/8	1	1-1/8	1-1/4	1-3/8	1-1/2	1-5/8	1-3/4	1-7/8	2	2-1/8	2-1/4	2-3/8	2-1/2	2-5/8	2-3/4	2-7/8	3	3-1/8
Percent Slope	1.0	2.1	3.1	4.2	5.2	6.3	7.3	8.3	9.4	10.4	11.5	12.5	13.5	14.6	15.6	16.7	17.7	18.8	19.8	20.8	21.9	22.9	24	25	26	
Degrees Slope	0.6	1.2	1.8	2.4	3.0	3.6	4.2	4.8	5.4	5.9	6.5	7.1	7.7	8.3	8.9	9.5	10.0	10.6	11.2	11.8	12.3	12.9	13.5	14.0	14.6	
Horizontal/Vertical	96	48	32	24	19	16	14	12	10.7	9.6	8.7	8.0	7.4	6.9	6.4	6.0	5.6	5.3	5.1	4.8	4.6	4.4	4.2	4.0	3.8	

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