



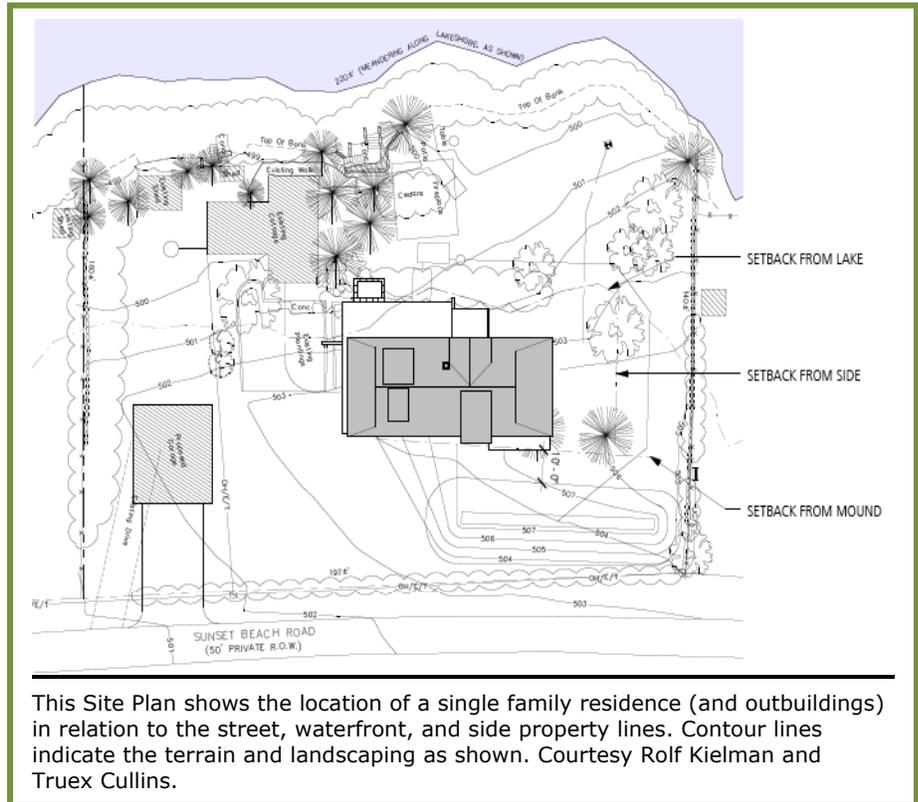
Reading Subdivision Plats and Site Plans

Definitions:

An *Appropriate Municipal Panel (AMP)* is a Planning Commission exercising development review, Zoning Board of Adjustment, or Development Review Board.

A *sketch plan* or *concept plan* may be used during the preliminary phase of the subdivision permitting process. This plan gives a rough overview of the proposed development, so that the viability of the project may be assessed prior to hiring a surveyor and incurring the substantial cost of more formal drawings.

A *plat* is defined by statute as a “map or plan drawn to scale of one or more parcels, tracts or subdivisions of land, showing, but **not limited to**, boundaries, corners, markers, monuments, easements and other rights”. The AMP must ensure that it meets the requirements detailed in the municipal subdivision regulations. The “final” and approved plat is the plan of the subdivision that will be recorded in the municipal land records. A complete package of subdivision plans will contain other information in addition to the plat. A site plan package can include: information relative to roads, lighting, landscaping, natural features, access, soil erosion control, and stormwater management. Subdivision plats must be completed by a licensed surveyor and meet the survey plat recording requirements of 27 V.S.A. § 1401.



This Site Plan shows the location of a single family residence (and outbuildings) in relation to the street, waterfront, and side property lines. Contour lines indicate the terrain and landscaping as shown. Courtesy Rolf Kielman and Truex Cullins.

A *site plan* is a drawing that is a bird's eye view of the project. It shows the major features of the land and the footprint of existing structures and structures to be built. The complexity of a site plan varies with the size of the project, local regulatory requirements, the consulting engineer, and budget. It should contain standard features, such as a location map, title block, scale, and dimensional and zoning information. A basic site plan may be accompanied by other plans that detail landscaping, utility corridors, building design, easements, lighting, soil erosion control, stormwater management, and more.

Overview

Understanding site development plans (often called “site plans” for short) and subdivision plats is essential to effectively review projects and apply local regulations. This module explains key features to look for when reading a subdivision plat or a site plan for a proposed project.

Site plans reveal how a project design addresses siting challenges such as topography, water supply and wastewater treatment, water resource protection, storm water runoff, erosion, human and vehicular circulation, and aesthetic concerns. Those who know how to read and interpret plats and plans are also better able to

communicate with the developer and other parties about the project.

Some Vermont municipalities have trained professional staff to assist review, while others have none. Regardless, all AMP members should have baseline knowledge adequate to:

- Determine if an application is complete.
- Evaluate an application for compliance with adopted municipal standards and regulations.
- Answer questions about the project posed by adjoiners, town officials and community members.*
- Make findings of fact.
- Develop conditions of approval.

Mapped information should give reviewers a clear picture of how the development will impact the environment and community as well as how the development will conform to bylaws and fit in with the surrounding area. Plans visually represent an array of features, as specified for identification in the bylaws and associated application materials. Examples of such features include: whether the development is viable and whether it meets municipal siting standards, resource protection or buffer requirements, and infrastructure needs. Interpreting mapped information calls on a different set of skills than reading a written description, but with practice gives a clearer picture of the scope of development.

*Note that discussion of the merits outside the context of a hearing is considered impermissible ex parte communication. Also, it is the applicant's job to answer questions during the hearing—AMP members should not answer questions at the hearing that are appropriate for the applicant to answer. See module "Taking Evidence".

“Bylaws and associated maps should identify and define all features considered and regulated by the municipality.”

What is required to be on a Plat?

27 V.S.A. §1403 requires that all filed plats:

- Be an *appropriate size* and *have correct margins* determined by the municipality.
- Conform to municipality's *specifications*.
- Be clearly *legible*.
- Have a *scale* that allows pertinent data to be shown.
- Have a *title block* that states the location of the land; scale in engineering units; date of compilation; name of record owner as of that date; the land surveyor's certification with the surveyor's seal, name and number, and a certification that the plat conforms with the requirements of section 1403. (There is an exception for this requirement when Site Plan Review is done. See 24 V.S.A. § 4416 & 27 V.S.A. § 1404(b).)
- Correctly describe the *directional bearings* used.

Application Review

Development is regulated on both the state and municipal level. The extent of regulation on the municipal level varies greatly, so it is important to familiarize yourself with your municipality's bylaws. The state enables municipalities to adopt land use regulations to specifically implement adopted municipal plans.

A site plan is used in development review to describe proposed land development. Therefore, the term “site plan” is used in two different ways—one is a mapped representation of a project and the other is a review process called Site Plan Review. State law allows a host of factors to be written into bylaws for consideration during Site Plan Review. Since each municipality has its own bylaws, the required content of site plans will vary. Municipalities must adopt specific guidelines regarding maps, data, and

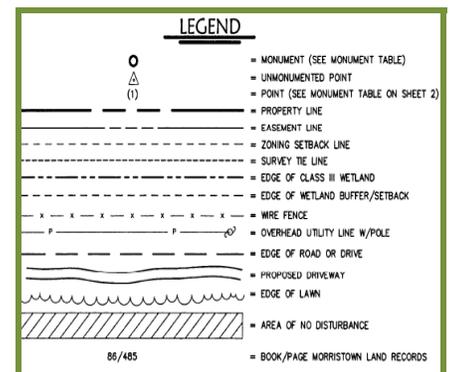
other information for Site Plan Review and the other various review processes. Other review processes include Subdivision Review, Planned Unit Development Review, and Design Review. Understanding mapped representations is important for every review process.

Application requirements—like those imposed by site plans and subdivision plats—must relate to standards written into bylaws. Likewise, the bylaws should mimic the goals and objectives of the municipal plan. Bylaws and associated maps should identify and define all features considered and regulated by the municipality.

Features Common to Both Plats and Plans:

Plats and plans should have a *location map*, usually an inset, which allows reviewers to locate the subject parcel in the municipality.

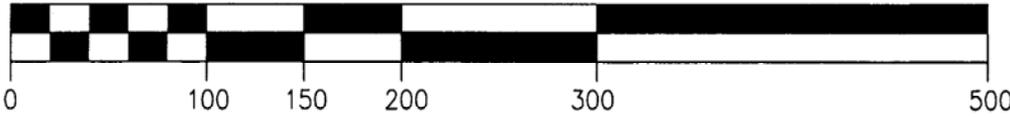
Plats and plans should have a *legend* or key, indicating what the line types and symbols signify on the plan.



A legend is essential to make sense of features shown on a subdivision plat or site development plan.

The *title block* contains basic information, including project title, landowner, site address, professional consultant or name of the firm that prepared the plan, date the drawing was done, revision dates, and more. The *north arrow* in combination with the *location map* allows the reader to orient the map to the project's location. It also allows a reviewer to orient themselves when a submission includes multiple plans.

SCALE: 1"=100'



Scale is the relationship between the distance shown on a plan and the corresponding distance in the field. All plats and site plans should have both a written and a graphic scale. This is an example of both a written linear scale and corresponding graphic scale, where one inch equals 100 feet. It is important to include both a graphic scale and a written scale. The graphic scale allows for size reduction or size expansion in photocopies. While the written scale becomes obsolete in this process, the graphic scale remains true.

A scale is also the tool used to measure the distances between features in a plan. An *engineer's scale* is the most commonly used scale in drawing plans. An engineer's scale is divided into increments of 10, 20, 30, 40, 50, and 60 divisions per inch. In combination with the written scale, the reviewer uses this tool to measure the size of or the distances between features.



Zoning and Dimensional Information

Development plans should provide the title and section of the zoning or subdivision regulations being followed, along with details on the project's conformance. The engineer may prepare a chart, including the name of the zoning district in which the project is located and the zoning bylaws' dimensional requirements for lot size, building coverage, parking spaces, total lot coverage, setbacks, and frontage. However, AMP members should refer to bylaws to ensure that information contained on the plan is accurate.

A plan's main purpose is to show these zoning requirements visually. Use the map's legend to identify property boundaries and setback lines on a development plan. Boundaries on development plans should be shown clearly for the entire tract: any proposed lots, roads, easements, right-of-way, or land reserved to mitigate natural resource impacts should be obvious.

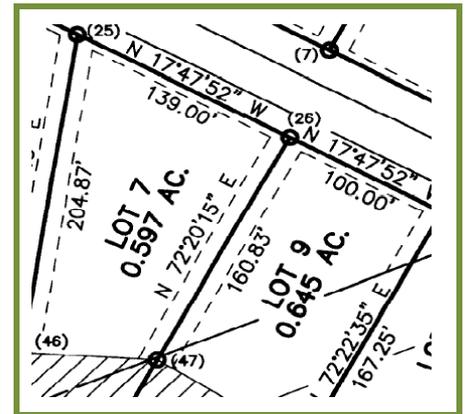
The exact location of property boundaries may be presented on plats and plans using *metes and bounds*. The metes and bounds method is a very old, low tech method to describe property.

The letters and numbers direct the reader on the proper course to take using a compass. In the graphics to the

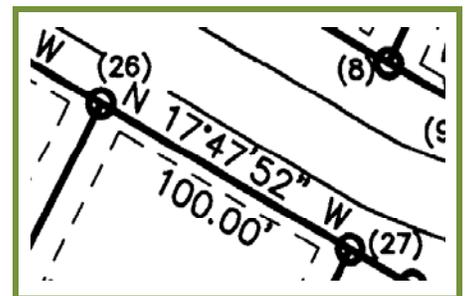
right, $N 17^{\circ}47'52'' W$ means to begin at the monument labeled (26) and go 100.00 feet 17 degrees, 47 minutes and 52 seconds west of north. There are 60 minutes in one degree and 60 seconds in one minute. Someone interested in following the lot's boundary in-person can begin at north and turn counter clockwise to the west $17^{\circ}14'12''$, then walk in a straight line for 100 feet to reach point 27.

Plats and plans may show where existing and proposed utilities are located, such as water or sewer lines. Additionally, plats will often state the zoning regulations' dimensional standards for the proposed area. This makes it easier to evaluate the setbacks and lot size. As always, standards listed on maps should be cross-referenced directly with the bylaws.

Using Metes and Bounds:



Morrisville's property boundaries and required set backs displayed using metes and bounds. Map courtesy Charles Grenier.



Morrisville's property boundaries and required set backs displayed using metes and bounds. Map courtesy Charles Grenier.

Contour Lines

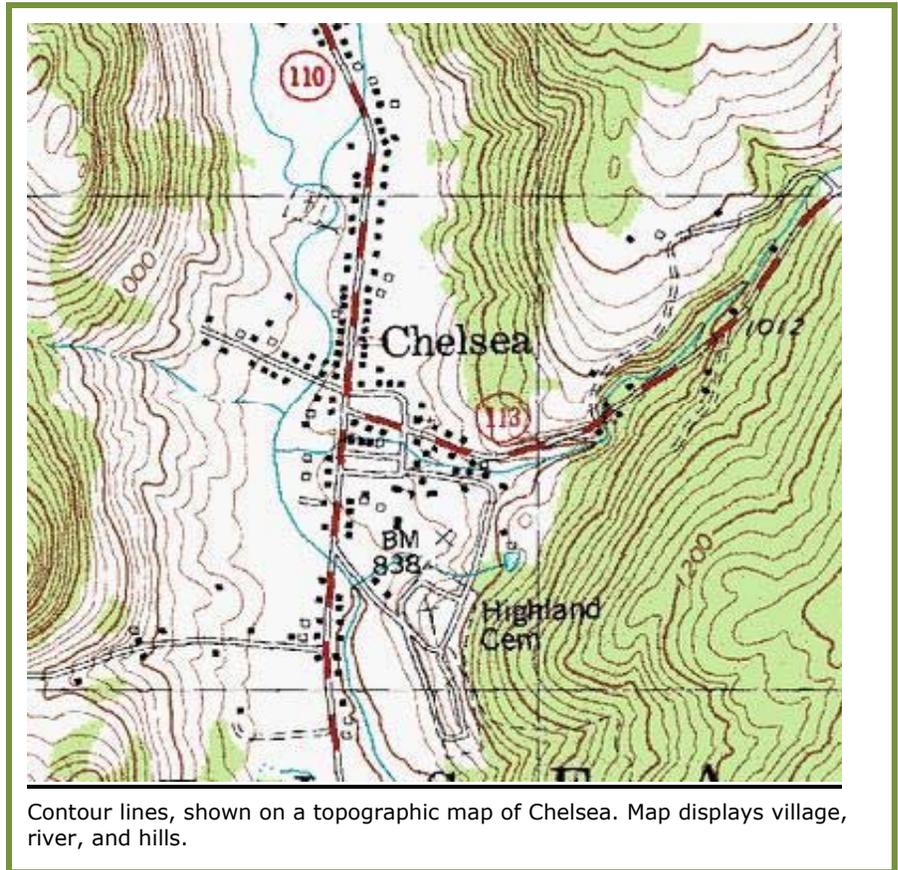
Contour lines connect points of equal elevation. The spacing between the lines denotes the topography. Contour lines that are far apart indicate there is a small change in vertical elevation given the horizontal distance. When contour lines are close together, the terrain is steeper. Lines spaced further apart indicate flatter and gentler terrain. Every fifth line is usually drawn in bold for ease in reading the map, and labeled with the elevation.

Plans should show the existing and proposed topography, usually in two or five-foot contour intervals. Contour interval is the vertical distance between the contour lines. Contour interval is not standard on any plan because the engineer selects the interval for various reasons. However, it is very important to note the interval in order to calculate slope. Slope ratios derived from the contour lines are important to engineering, particularly grading for erosion control, stormwater management, and road design. It also assists review of aesthetic and solar orientation for energy conservation. The plans should indicate existing topography (usually shown as a dashed line), as well as changes in grade that will result from construction (usually shown as a solid line).

The map given here shows contour intervals at every twenty feet: you can tell because the dark lines are labeled at every 100 feet and there are five lines between each dark line. (100 divided by five is twenty.) In contrast, the site plan given on the front page of this module has a contour interval of one foot.

Considerations

Clarity for both the applicant and reviewers is the most important consideration. Application forms and instructions should clearly specify for prospective applicants what information is required and should be related to specific requirements in regulations derived from the adopted municipal plan. Plats and plans submitted by the applicant should provide all information



Contour lines, shown on a topographic map of Chelsea. Map displays village, river, and hills.

required to assist an AMP to understand the proposal and to make findings under the regulations.

Resources

Vermont Land Use Education & Training Collaborative, Subdivision Regulations, available at <http://www.vpic.info/pubs/implementation/pdfs/26-Subdivision.pdf>.

Natalie Mecris, 2000, Planning In Plain English, APA Planning Press.

Dana Farley and Robert Sanford, 2004, Site Plan and Development Review: A Guide for Northern New England; Putney Press.

Credits

Additional material, collaborative assistance, and external review for the Subdivision Plats and Site Plans module provided by Dana Farley, Town of Essex; Faith Ingulsrud, Vermont

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