

9-1973

Subdividing in the Wildlands of Maine (1973)

Maine Land Use Regulation Commission

Bruce Hendler

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Subdividing



In the Wildlands of Maine

Written and Illustrated
by

Bruce Hendler
Landscape Architect
for the

Maine Land Use Regulation Commission

September, 1973



Land Use Information Series - II

Subdividing



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Printed by J. S. McCarthy Co., Inc., 32 Winthrop St., Augusta, Maine 04330

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Introduction

“The charming landscape which I saw this morning is indubitably made up of some twenty or thirty farms. Miller owns this field, Locke that, and Manning, the woodland beyond; but none of them owns the landscape. There is property in the horizon which no man has but he whose eyes can integrate all the parts...this is the best part of these men’s farms, yet to this their warranty-deeds give no title.”

—Ralph Waldo Emerson
1836

Subdividing in the Wildlands of Maine is the second of a series of informational booklets being prepared by the Maine Land Use Regulation Commission.

This booklet is part of the commission’s effort to help unravel some of the problems encountered when planning to create a subdivision on land already owned, or when planning to purchase land for the purpose of subdividing.

The primary objective behind the extensive research and planning which went into the preparation of this booklet was to present in a non-legal and relatively non-technical fashion, a pictorial discussion of the principles and techniques of subdivision site analysis and site planning. As such, it is intended to be a supplement to the commission’s more specific land use standards and regulations relative to subdivisions.

It is an attempt to point out how to avoid the mistakes frequently made in choosing suitable land for subdividing, and in appropriately subdividing that land — mistakes which result in increased land use conflict and environmental degradation, and which cause problems and delays in applying for and receiving a subdivision permit — all of which results in a waste of time and money.

I hope that the content and enjoyably clear graphic format of this booklet will help towards a better understanding of what land use regulation is all about. I think you will find that it is a matter of common sense and for our common benefit.

James S. Haskell, Jr.
Executive Director
Maine Land Use Regulation Commission
Augusta, Maine
September, 1973

1

Map and Glossary

Map of Maine

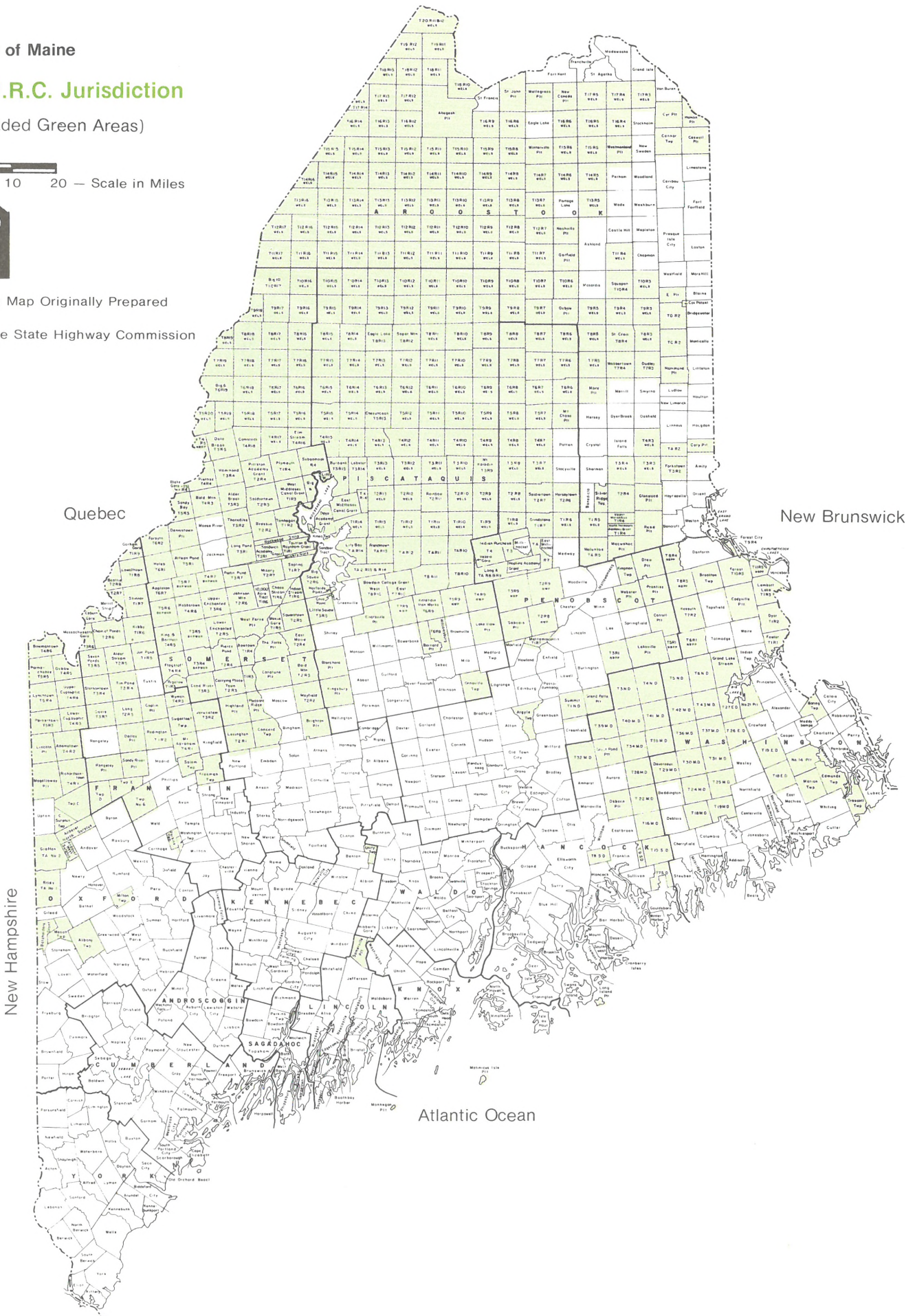
L.U.R.C. Jurisdiction

(Shaded Green Areas)

0 10 20 — Scale in Miles



Base Map Originally Prepared by
Maine State Highway Commission



Glossary of Terms Used in this Book

Subdividing in the Wildlands of Maine is not a legal document.

It is an informational publication, and as such, does not take pains to employ a legally defined vocabulary — hence, the following glossary:

**Building
Dwelling
Structure
Units**

Are used interchangeably in reference to all buildings — including mobile homes and prefabricated structures — which are used part-time, seasonally, or year-round for human habitation, commercial, recreational, or vehicular activity.

**Lot
Parcel
Property
Site**

Are used interchangeably in reference to the land — whether owned or leased — upon which subdivision activity is anticipated.

**Development
Development Activity
Subdivision
Subdivision Activity**

Are used interchangeably to describe the subdivision — including all utilities, buildings, and access/circulation systems — during sale, construction, and in subsequent use.

Land

Is used to mean a subdivision, development, lot, parcel, site, or property; or in reference to the surrounding area or region in which the subdivision, development, lot, parcel, site, or property is located.

L.U.R.C.

The Maine Land Use Regulation Commission.

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Before Buying Land

Before Buying Land

What to Ask the Seller or Agent

These questions should be asked both for the protection of the seller or agent, and the buyer.

To be certain of what you are getting can prevent the buyer from getting “stuck”, as much as it can prevent the seller or agent from being sued for an honest mistake.

The checklist below is by no means complete, but may, at least, serve as a jumping-off point for more specific questions the individual may have.

Is the land accessible?

- by public or private road?
- what kind of road? (gravel, tarred?)
- year-round or seasonal? (is it plowed in winter?)
- is access by water?

What type of terrain is it?

- flat?
- hilly?
- steep?
- low-lying?
- swampy or marshy?

Is water available?

- spring?
- well? (drilled, driven, or dug?)
- lake?
- quantity?
- quality?

What types of soils are on the property?

- well-drained?
- poorly drained?
- deep or shallow?
- stony or non-stony?
- suitable for on-site waste disposal?

Is the lot forested?

- what kind of growth? (hardwood, softwood?)
- how mature is the growth?
- is it marketable or worth preserving simply because it is beautiful or unique.

Are there any views?

Is there any major development next to the property or near it which may affect it? (i.e., an existing or proposed highway, an existing or proposed quarry, existing or proposed commercial or industrial activity?)

What is the general trend of land values in the area?

What are the property taxes?

Are there any existing buildings on the land?

- what kind of buildings? (wood frame, barn, brick, etc.?)
- how old?
- what is the condition of the structure(s)?

Are public services available?

- electric service?
- waste disposal area?
- emergency services (doctor/-ambulance, police, fire?)
- schools?

Before Buying Land

What to Ask the Seller or Agent

If you are not buying through a bank, *have a title search done by a lawyer*. If you are mortgaging through a bank, they will usually have a title search done for you. Even so, ask the bank's attorney to give you a title opinion.

A title search should reveal:

- if there are back taxes owed on the land.
- whether the seller really owns the land.
- if there are any liens or attachments on the land.
- if any easements or other restrictions would affect your use of the land.

It is important to have a *market analysis* done. A reputable marketing research firm or bank specialists can do this for you.

A competent market analysis won't guarantee investment, but will aid the prospective subdivider in determining the wisest economic course of action to take — whether to simply sell lots, or to undertake construction, as well... or to avoid a bad investment altogether.

Don't put your money down unless you are relatively certain that the Maine Land Use Regulation Commission will permit you to subdivide as you visualize.



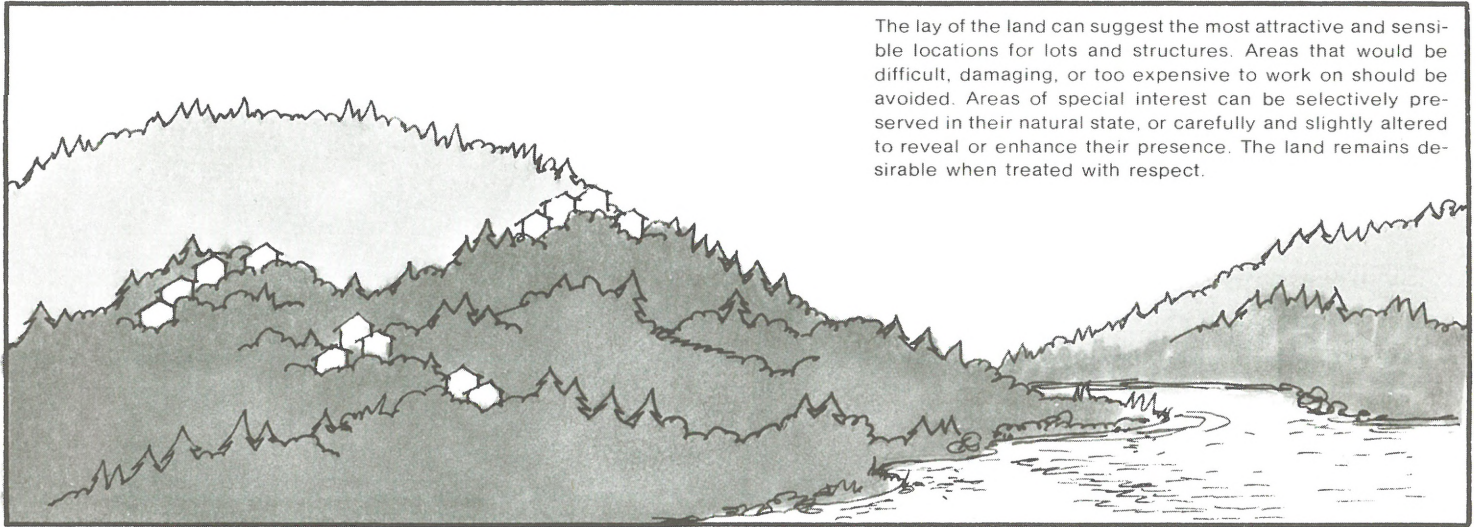
Anonymous - Brown Brothers Archive

To avoid later entanglements, be sure to inform prospective purchasers of lots on your subdivision, whether or not their lot meets the requirements of the Maine Land Use Regulation Commission — **especially if they plan to construct a building themselves.**

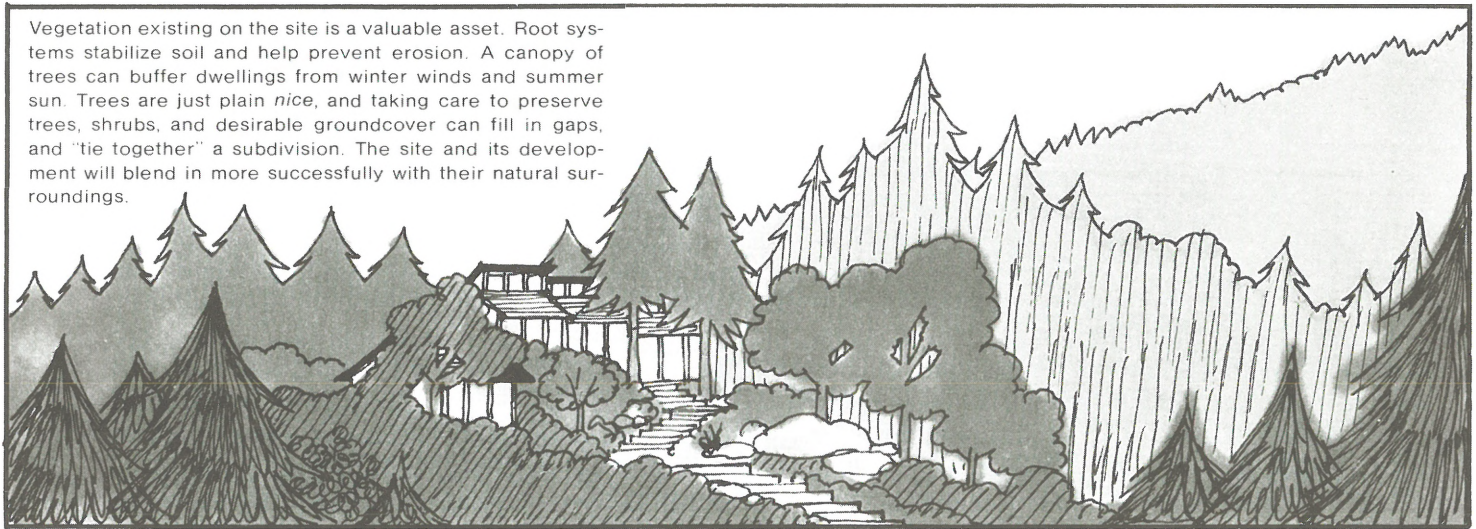
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Knowing the Land

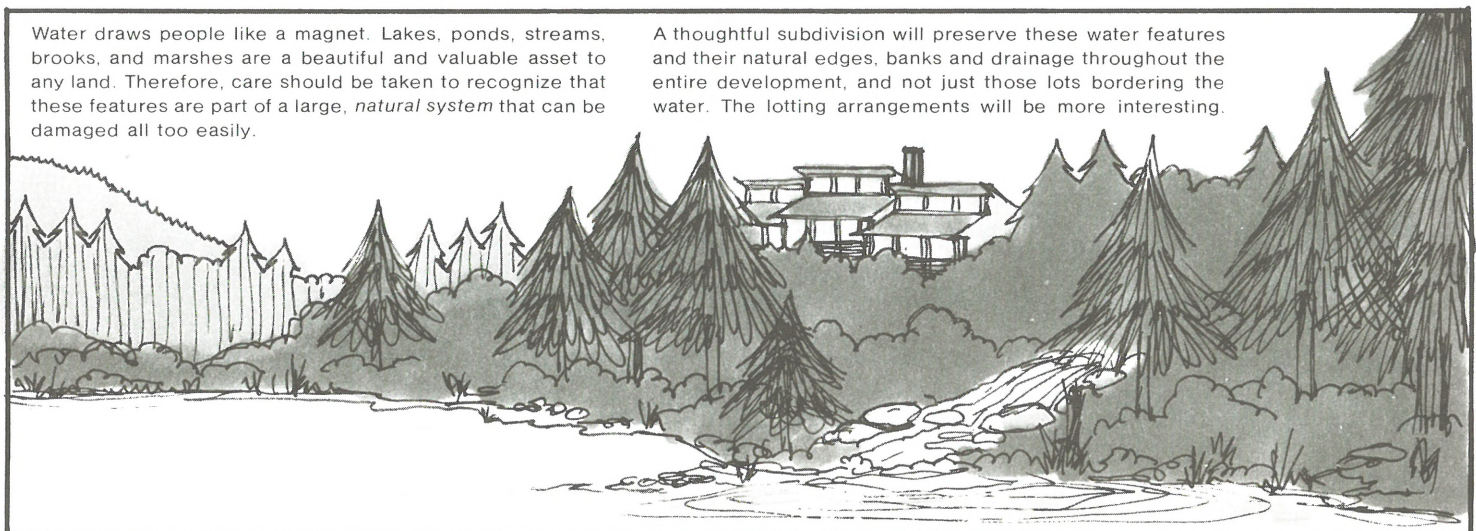
Why Know the Land?



The lay of the land can suggest the most attractive and sensible locations for lots and structures. Areas that would be difficult, damaging, or too expensive to work on should be avoided. Areas of special interest can be selectively preserved in their natural state, or carefully and slightly altered to reveal or enhance their presence. The land remains desirable when treated with respect.



Vegetation existing on the site is a valuable asset. Root systems stabilize soil and help prevent erosion. A canopy of trees can buffer dwellings from winter winds and summer sun. Trees are just plain *nice*, and taking care to preserve trees, shrubs, and desirable groundcover can fill in gaps, and "tie together" a subdivision. The site and its development will blend in more successfully with their natural surroundings.

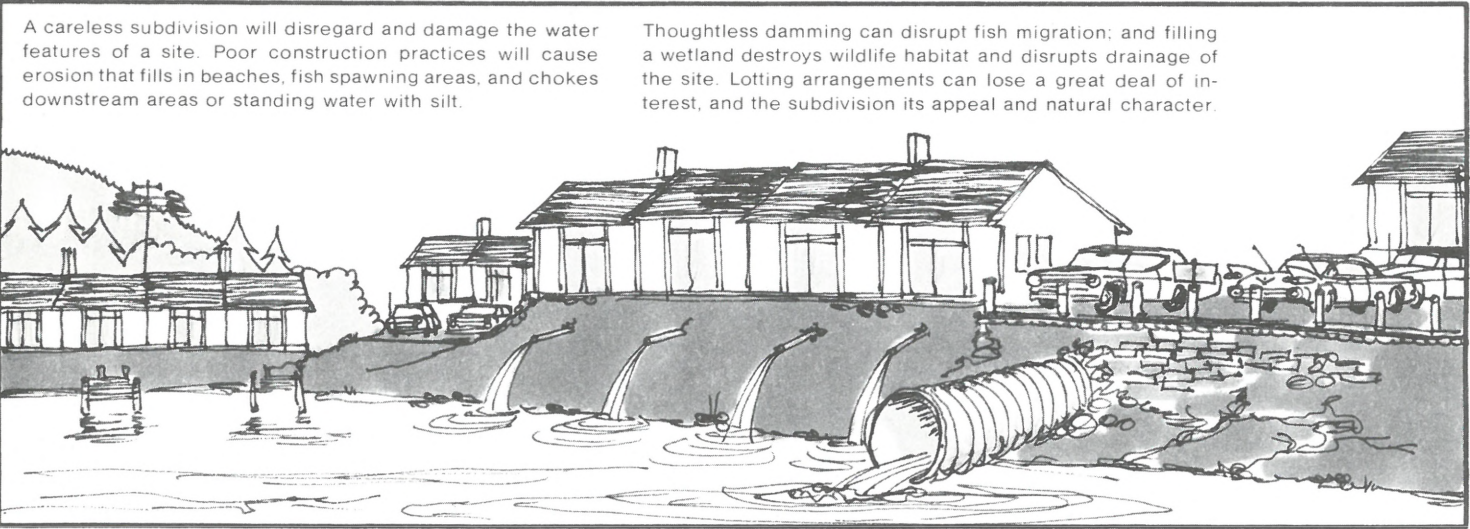
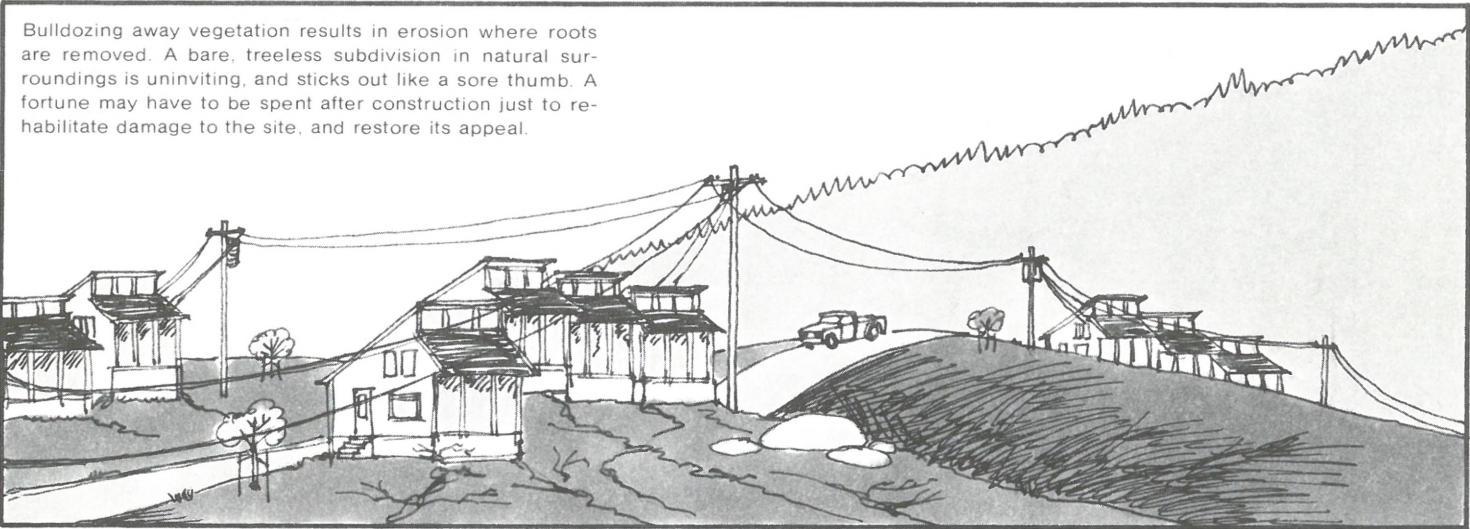
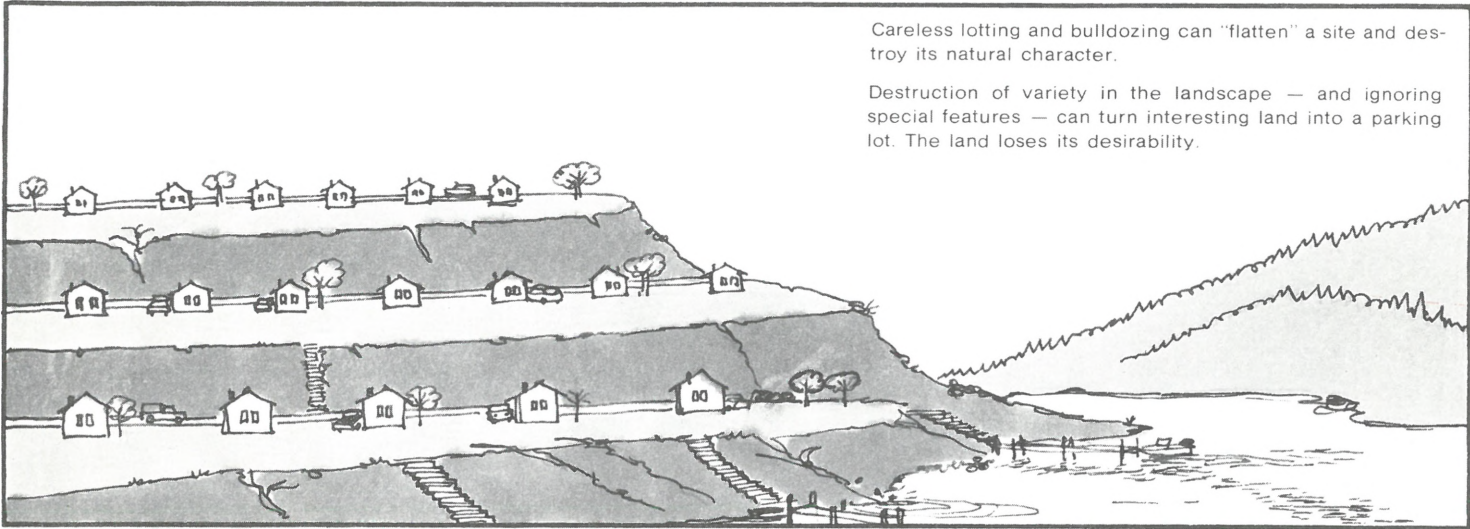


Water draws people like a magnet. Lakes, ponds, streams, brooks, and marshes are a beautiful and valuable asset to any land. Therefore, care should be taken to recognize that these features are part of a large, *natural system* that can be damaged all too easily.

A thoughtful subdivision will preserve these water features and their natural edges, banks and drainage throughout the entire development, and not just those lots bordering the water. The lotting arrangements will be more interesting.

Knowing the Land

Why Know the Land?



1

2

3

Proposed Subdivision of Property of John Smith Elk Pond, Maine (T47R29)

Existing Features – 1

Plan by Nyssa Sylvatica June 4, 1973

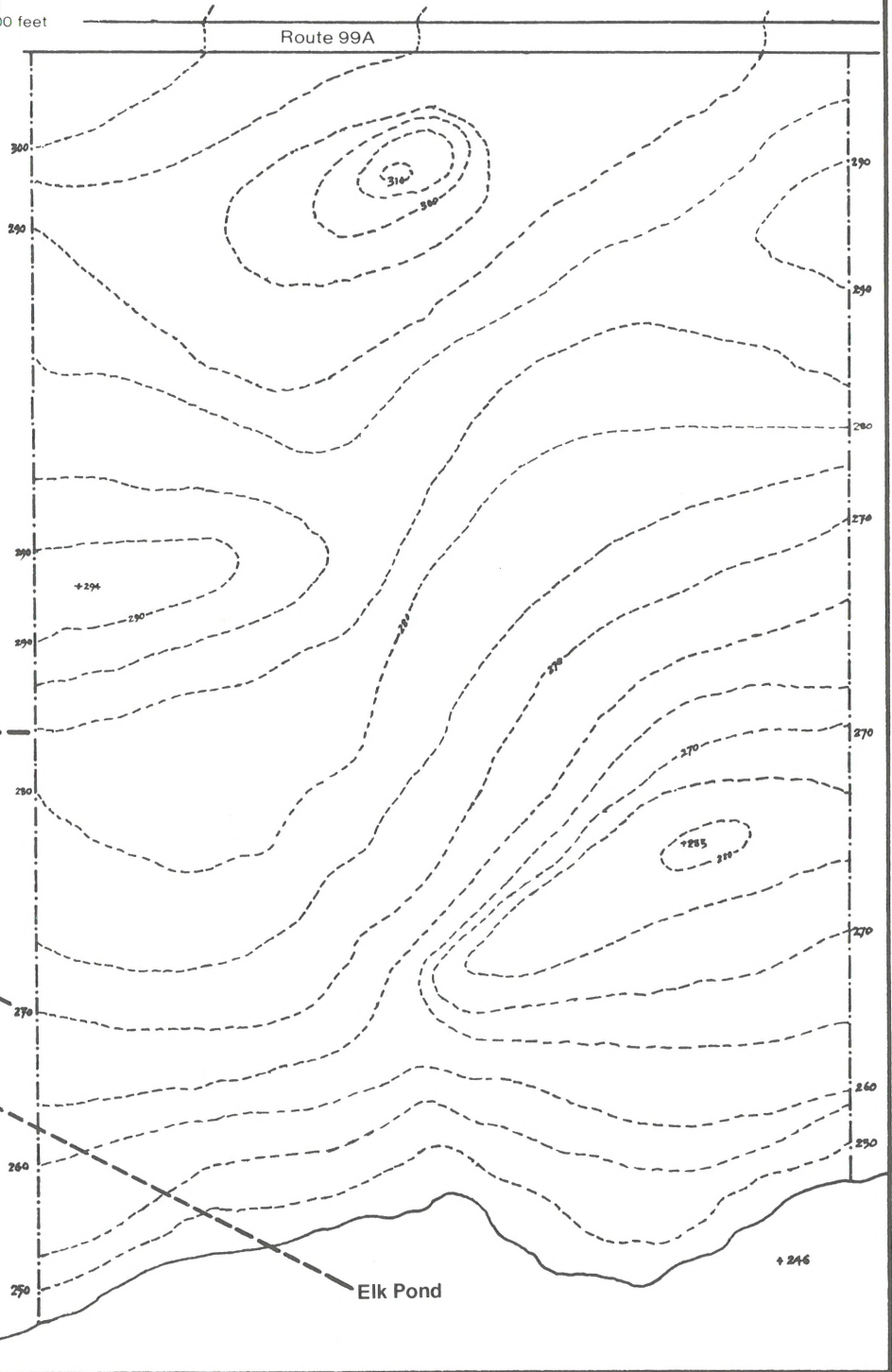
0 200 400 600 feet

Scale



Contours: 5 feet
Source: Tax maps

Key



4

5

6

7

8

9

10

1 Map Size:

All maps should measure 8½" x 11", or a multiple of 8½" x 11" (17" x 22", or 25½" x 33", etc.). This is a standard format which permits easier and less wasteful reproduction for records.

2 Title:

All maps should have a title indicating the *ownership* and *location* of the property, as well as the name of the person(s) who prepared the map.

3 Numbering and Label:

All maps should have a number and label to indicate that there is specific information on the map that is different from another map of the same property.

4 Scale:

All maps should include a simple graph indicating the scale of the map. This information shows the relationship of the map to the actual dimensions of the property (for example, 1 inch on the map represents 400 feet on the property). It is preferred — though not necessary — that all maps in a plan or permit application be the same scale. This helps speed understanding of the relationship between different maps of the same property. If any changes in scale *do* occur from map to map, then those changes should be noted on the map.

5 North Arrow:

All maps should include some indication of the relationship of the property to North on the compass. Furthermore, it helps understanding of a series of maps if *all* the maps in that series show the property in the *same relationship* to North.

6 Sources:

Maps should indicate where the information on the map was obtained.

7 Key:

All maps should contain some form of key. The key is a clear way to identify specific information on each map (see the following pages).

8 Property Line:

The boundaries of the property should be shown on the maps. The dimensions of the property should match the scale.

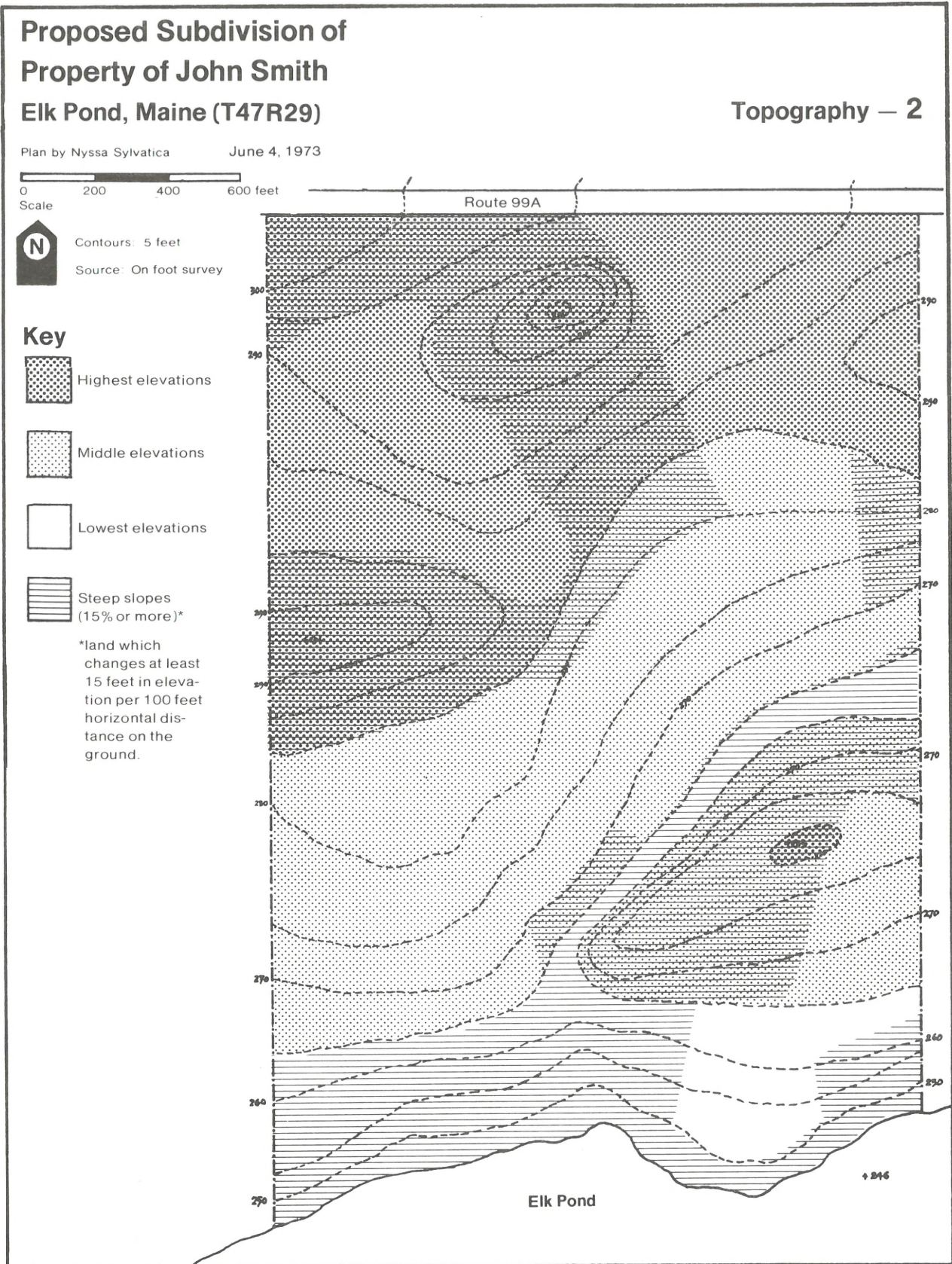
9 Contours:

Changes in elevation on the property are best indicated by *contour lines* which show the *contour interval* — that is, the changes in elevation which occur from contour line to contour line. The contour interval should be frequent enough to give an accurate and detailed description of the lay of the land. The contour interval on the map is 5 feet, that is, every 5 foot change in elevation on the property is shown.

10 Features:

All outstanding features on the property should be expressed and *labelled*. This includes all permanent natural and man-made features.

Lay of the Land (Topography) Map



Knowing the Land

Lay of the Land (Topography) Map

What to look for:

Level areas.

High elevations: crests
ridges
hilltops

Low elevations: valleys
swales
depressions
wetlands
floodplains

Rocky areas: exposed ledge
stony surface

Surface water: lakes, ponds,
rivers, streams,
springs, seeps,
bogs, wetlands,
etc.

Steep slopes.

Good views: from high land

- from low land
- from site toward water
- from water toward site
- from site toward road or distance
- from road or distance toward site

How to find it:

On foot: the cheapest, most thorough and reliable source of information. Even though time-consuming on larger properties, it is worthwhile in the long run.

Aerial photographs: available from the nearest office of the Soil Conservation Service, or directly from the federal government. You can tell a lot from these photographs; but thorough, accurate interpretation of them is a process which may require the services of a professional.

U.S.G.S. Maps (United States Geological Survey): available from realtors, sporting stores, etc., or you can get them yourself from Washington. U.S.G.S. maps are generally reliable as far as actual topography is concerned, but the scale and contour interval are usually too large for smaller properties and lots. Information about man's activities are usually out-of-date.

Why it is important:

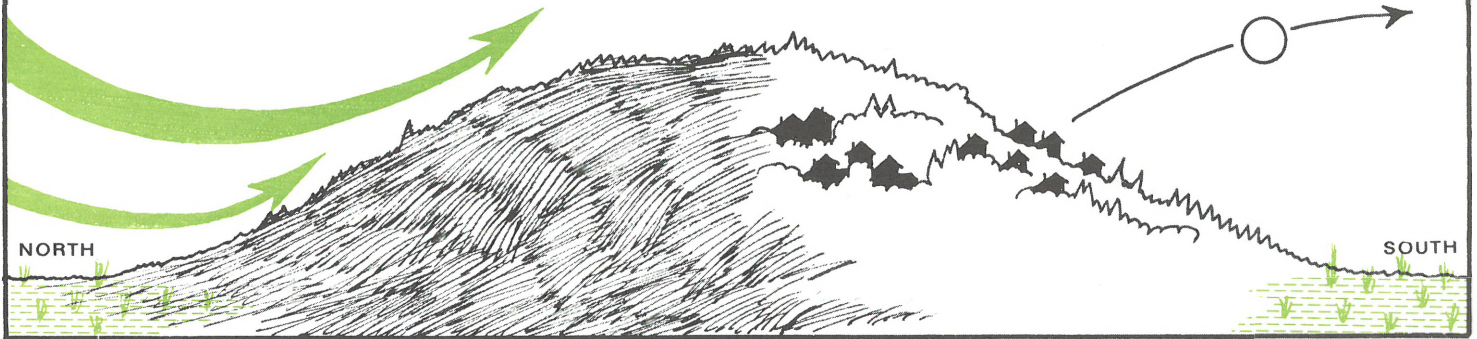
Topographic information gives a fast overview of the character of the site—whether it is hilly or flat; sloping gradually or steeply; where it is likely to find wet spots or good views. A quick look at the lay of the land can suggest the best site for buildings, access location, plumbing and activity areas.

Knowing the Land

Considering the Lay of the Land

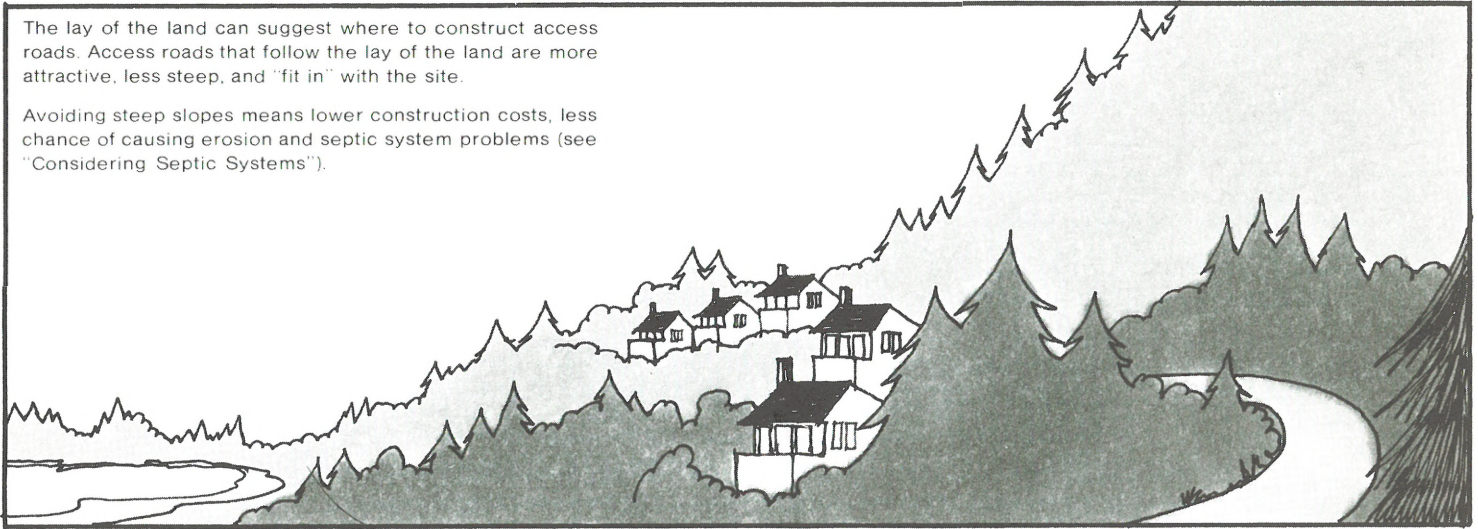
South slopes receive more sunlight, and are protected from prevailing northerly winds during the winter.

Development below the crest of a hill reduced its visibility to others, and increases the availability of water supply. Higher land also reduces the chance of problems with drainage and septic systems.

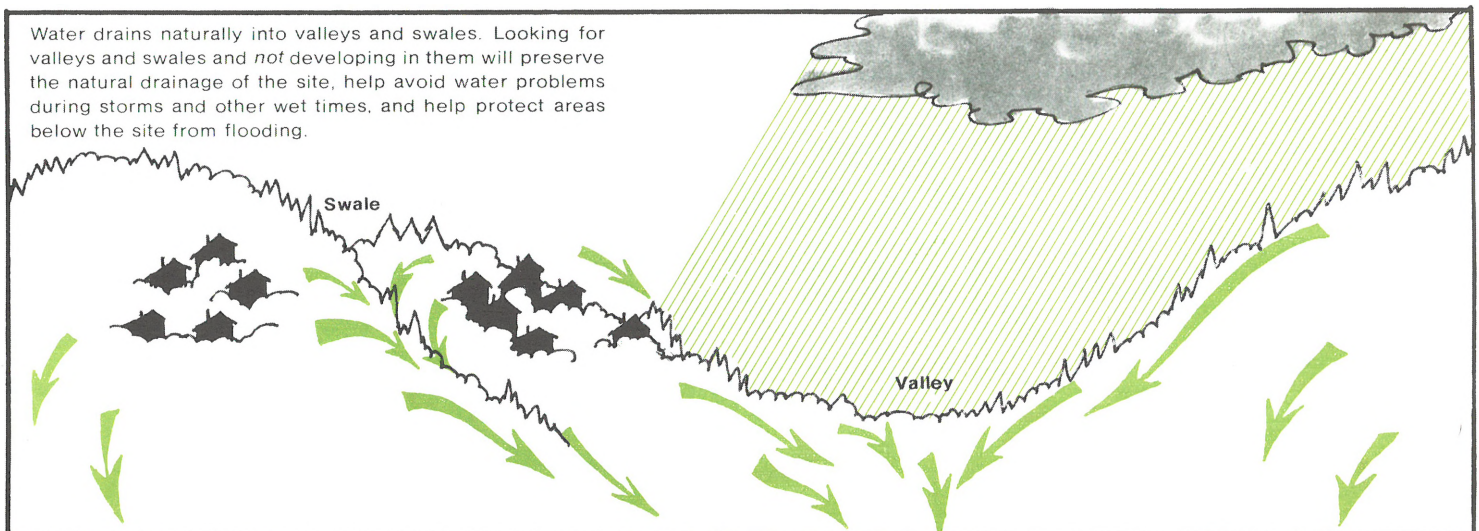


The lay of the land can suggest where to construct access roads. Access roads that follow the lay of the land are more attractive, less steep, and "fit in" with the site.

Avoiding steep slopes means lower construction costs, less chance of causing erosion and septic system problems (see "Considering Septic Systems").



Water drains naturally into valleys and swales. Looking for valleys and swales and *not* developing in them will preserve the natural drainage of the site, help avoid water problems during storms and other wet times, and help protect areas below the site from flooding.



Knowing the Land

Disregarding the Lay of the Land

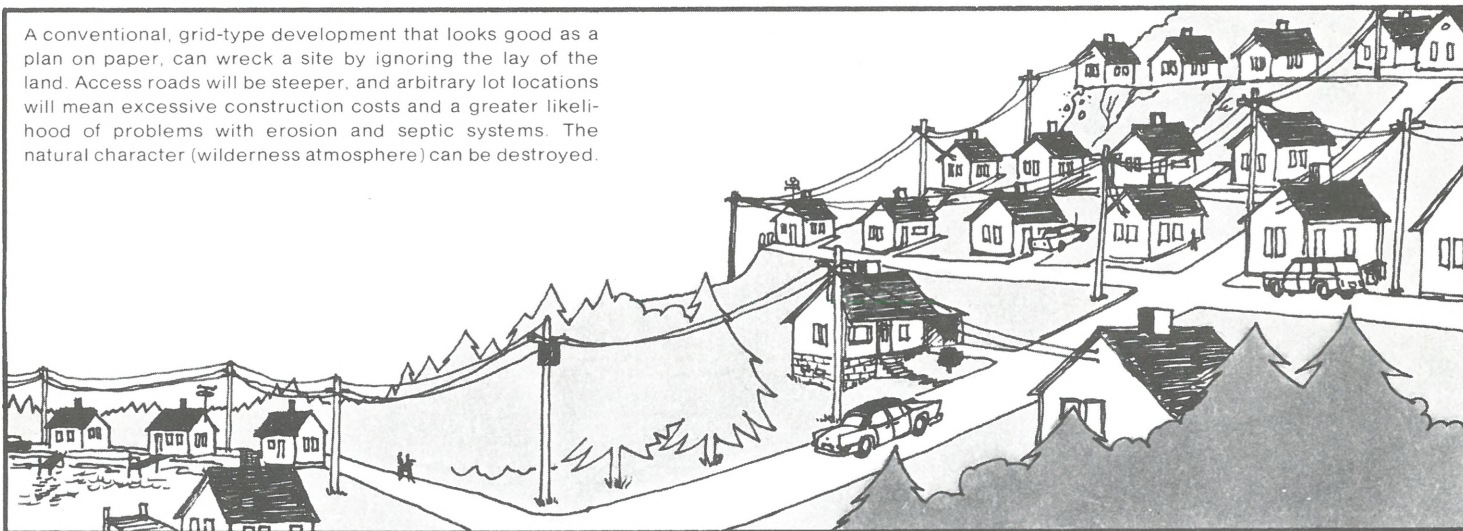
North slopes receive less sunlight than south slopes and are therefore colder and wetter. They are also exposed to the prevailing northerly winds of winter.

Development at the crest of a hill is exposed to wind from most directions. It is highly visible, and can thus destroy the natural character of the site and its surrounding area. Water sources may be unavailable or expensive to reach.

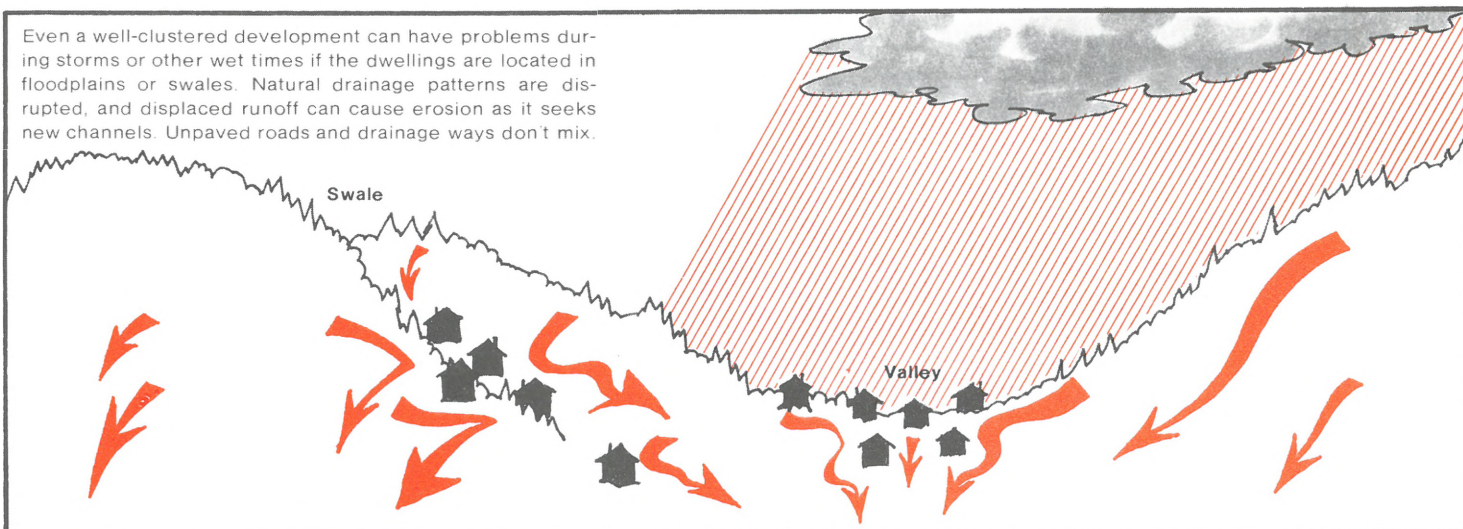
The lowest areas on the site may be coldest and wettest (a frost pocket or wetland). The chances of problems with heat, water supply, and septic systems increase.



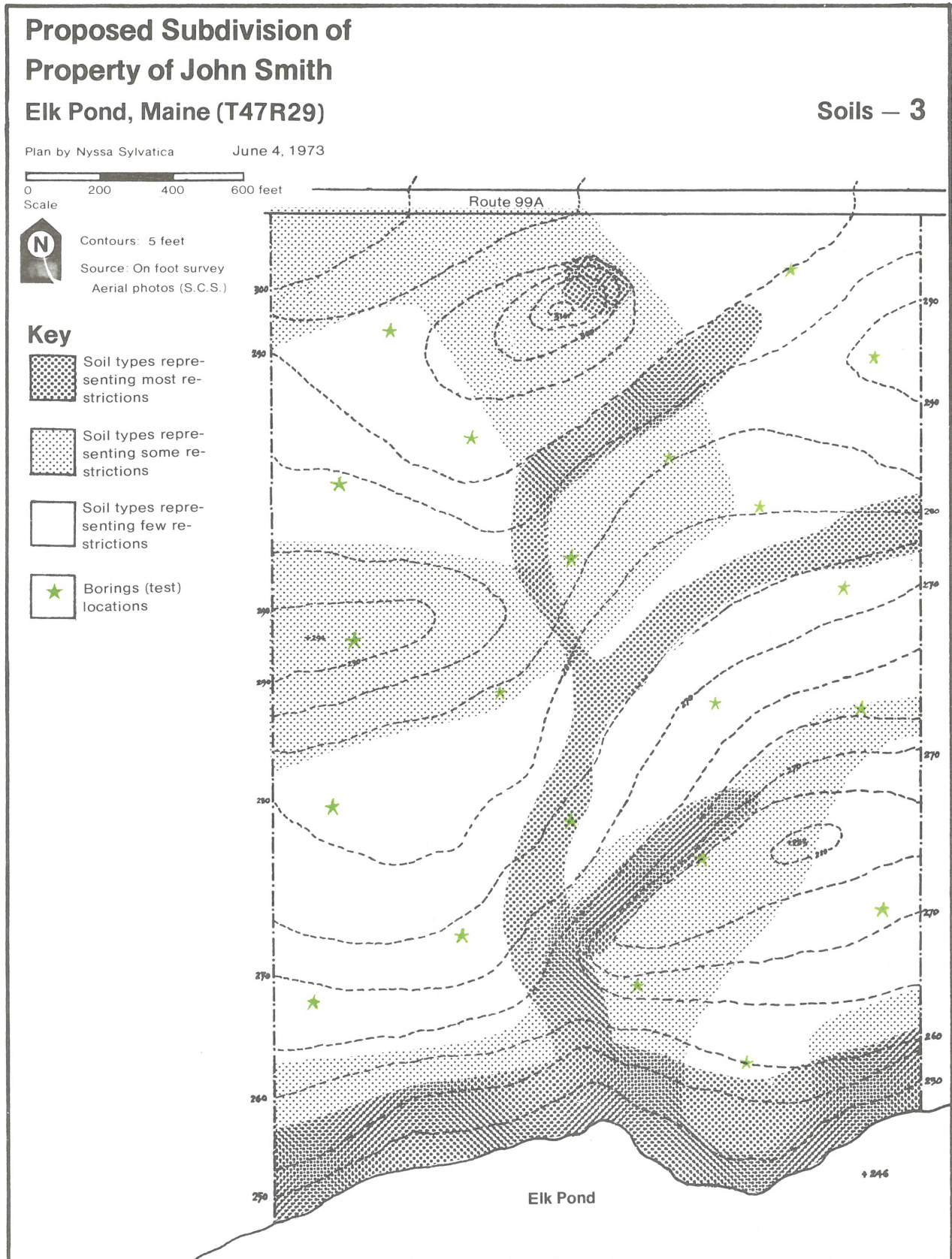
A conventional, grid-type development that looks good as a plan on paper, can wreck a site by ignoring the lay of the land. Access roads will be steeper, and arbitrary lot locations will mean excessive construction costs and a greater likelihood of problems with erosion and septic systems. The natural character (wilderness atmosphere) can be destroyed.



Even a well-clustered development can have problems during storms or other wet times if the dwellings are located in floodplains or swales. Natural drainage patterns are disrupted, and displaced runoff can cause erosion as it seeks new channels. Unpaved roads and drainage ways don't mix.



Soils Map



Knowing the Land

Soils Map

What to look for:

Steep slopes.

Obviously wet areas.

Vegetation that indicates wetness, such as cattails, alders, cedars, etc.

Rock outcroppings.

Depth to bedrock.

Where to find it:

An on-foot visual check.

S.C.S. maps (Soil Conservation Service); S.C.S. offices are located in every county seat in Maine.

Test borings and pits, preferably conducted by a soils scientist.

Why it is important:

The suitability of soils for building sites depends, in part, on their capacity to drain water. Soil types are categorized by both wetness and degrees of slope, as well as the texture and size of particles involved — all of which affect the ability of the soil to permit water to pass through it, or to support the weight of buildings placed on it.

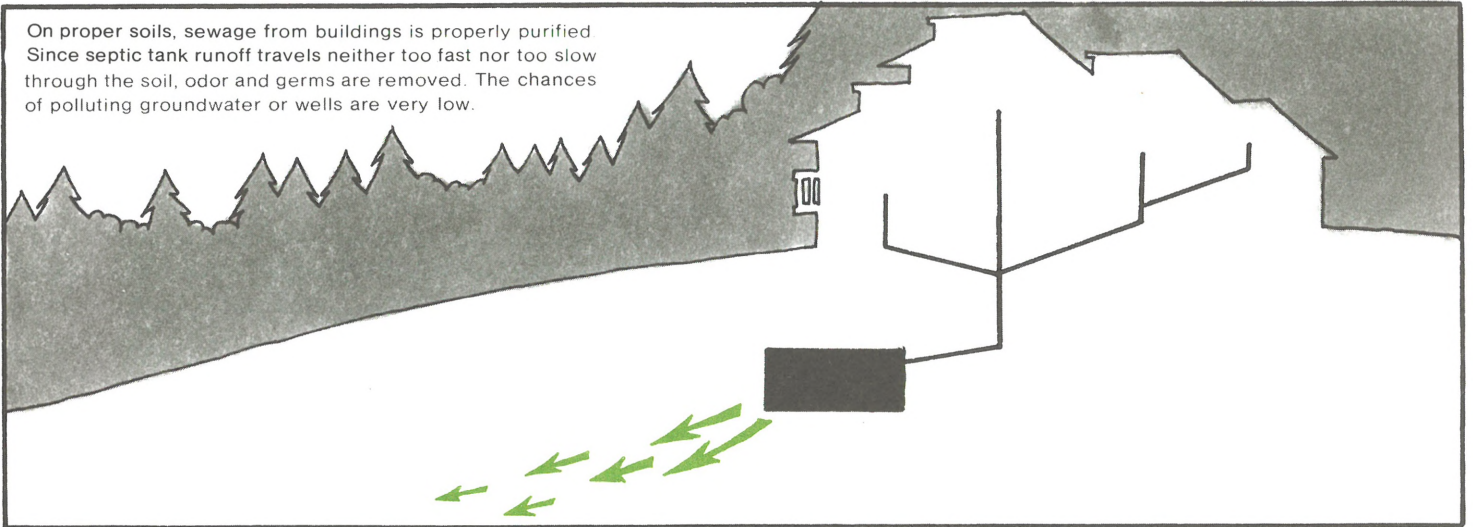
For example: Wetlands are found on soil types that have a low percolation rate — that is, the density of the soil particles dramatically slows the ability of water to seep through it (or it stops water from seeping through it altogether, as with clay). Water then remains close to, at, or above the surface. Wet soils thus require subdivision and building restrictions.

Dry, sandy soils with moderate to severe slopes also require building restrictions because such soils are highly susceptible to erosion. Erosion carries away topsoil, and deposits excessive amounts of this material in streams and river floodplains (siltation).

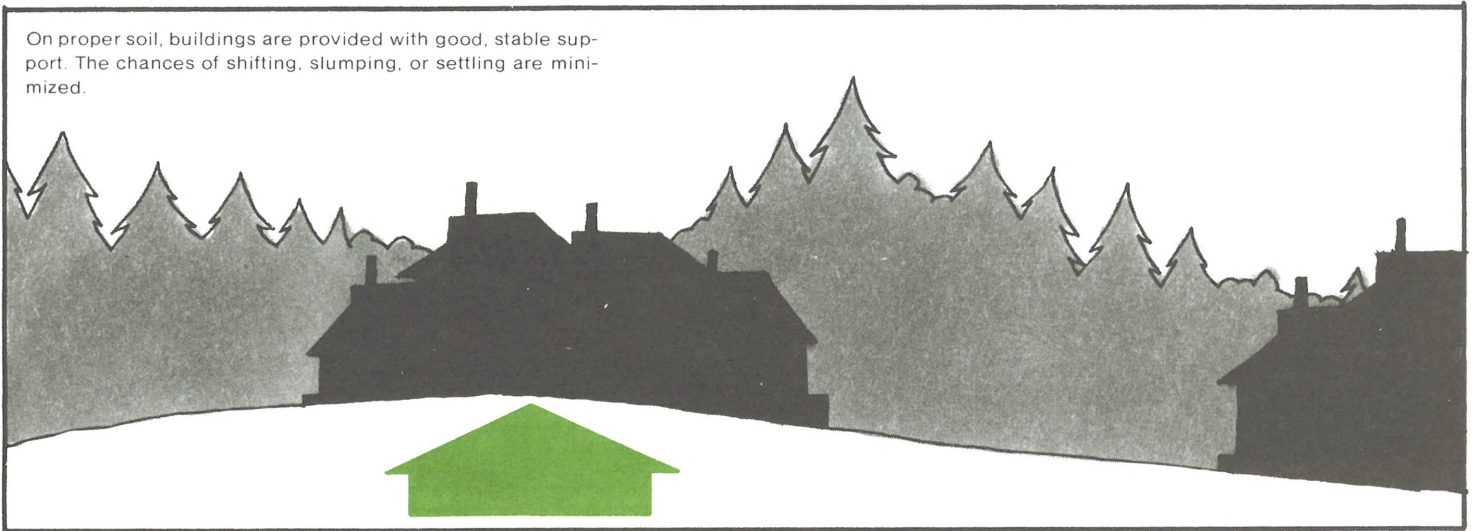
Knowing the Land

Considering Soils

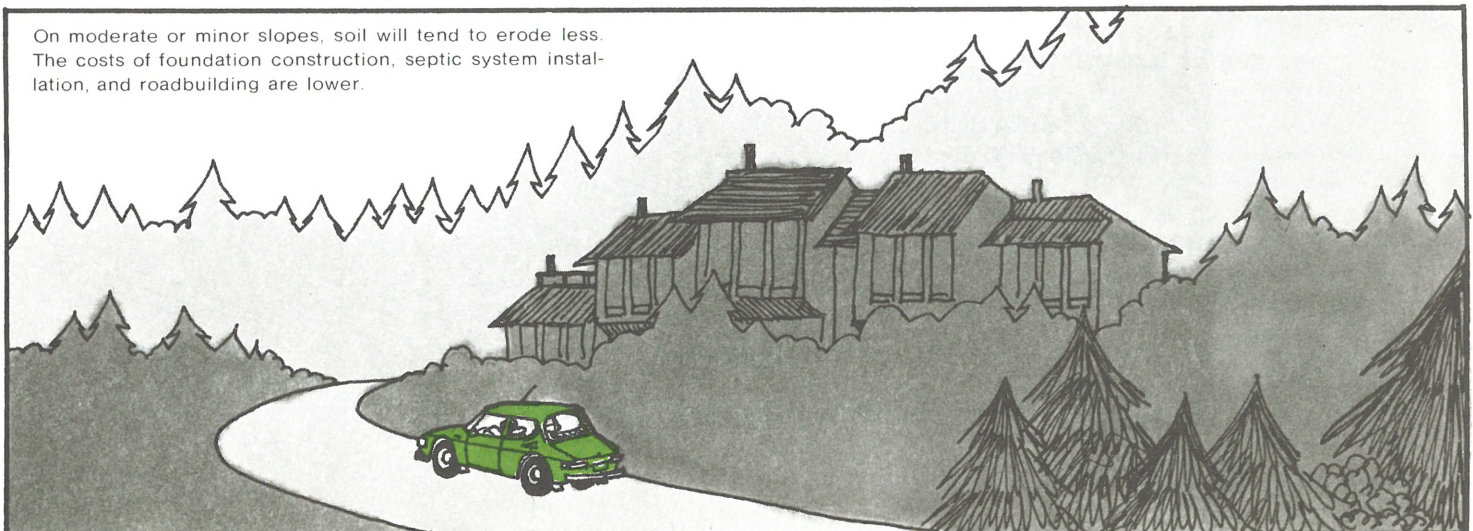
On proper soils, sewage from buildings is properly purified. Since septic tank runoff travels neither too fast nor too slow through the soil, odor and germs are removed. The chances of polluting groundwater or wells are very low.



On proper soil, buildings are provided with good, stable support. The chances of shifting, slumping, or settling are minimized.



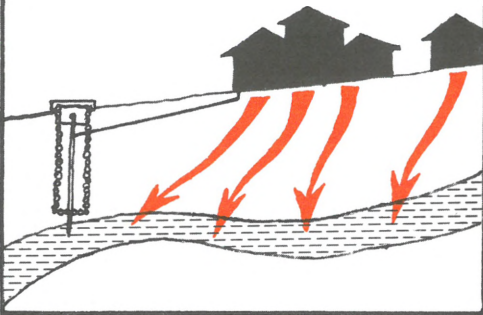
On moderate or minor slopes, soil will tend to erode less. The costs of foundation construction, septic system installation, and roadbuilding are lower.



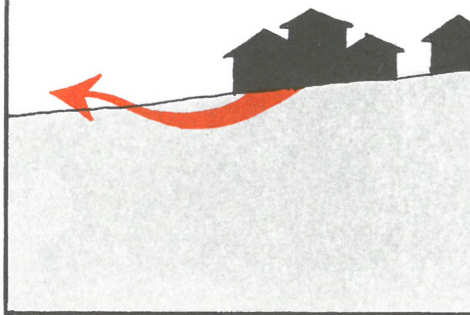
Knowing the Land

Ignoring Soils

Too permeable soils (such as sand) permit sewage to run through it too quickly to be purified — polluting groundwater and wells.



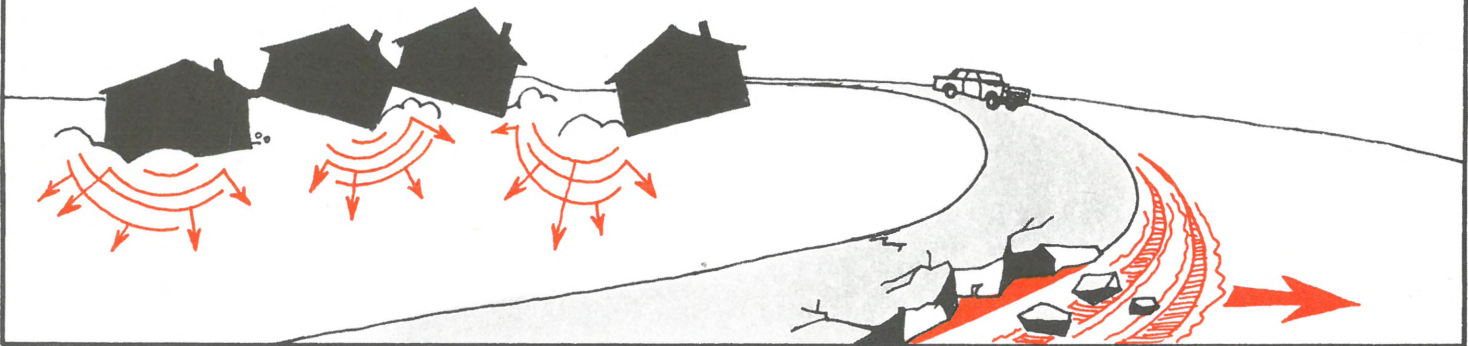
Soils not permeable enough (such as clay) will cause sewage to seep to the surface — creating wet, smelly, and unsanitary conditions.



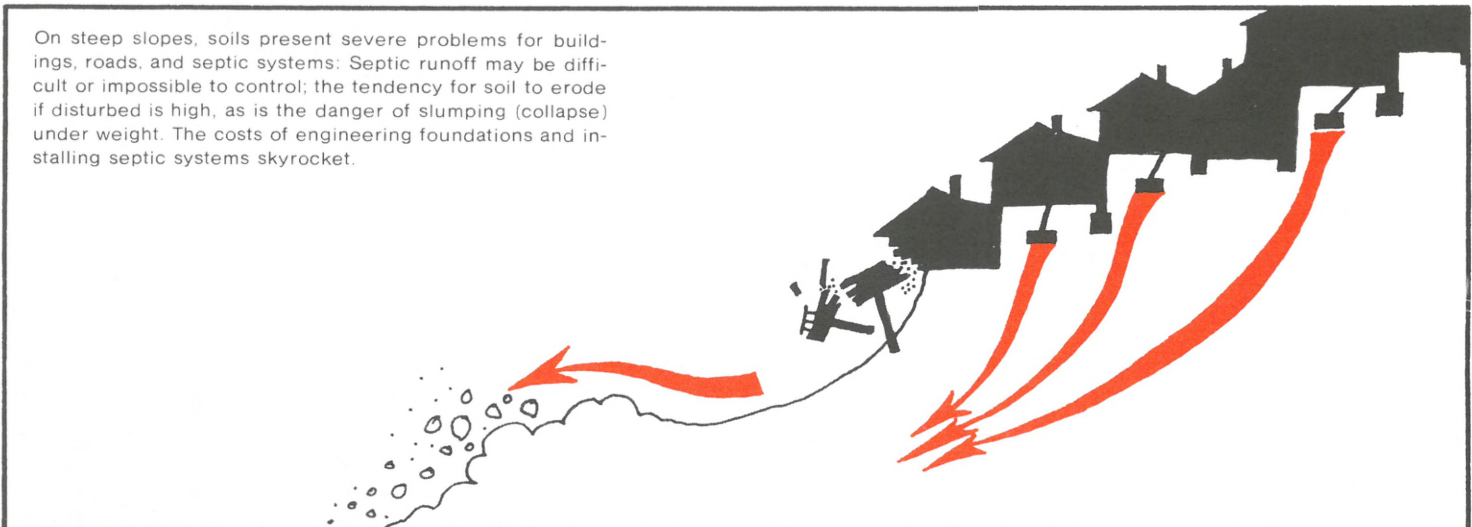
Bedrock too close to the surface will cause sewage to be deflected back to the surface — also creating unsanitary conditions.



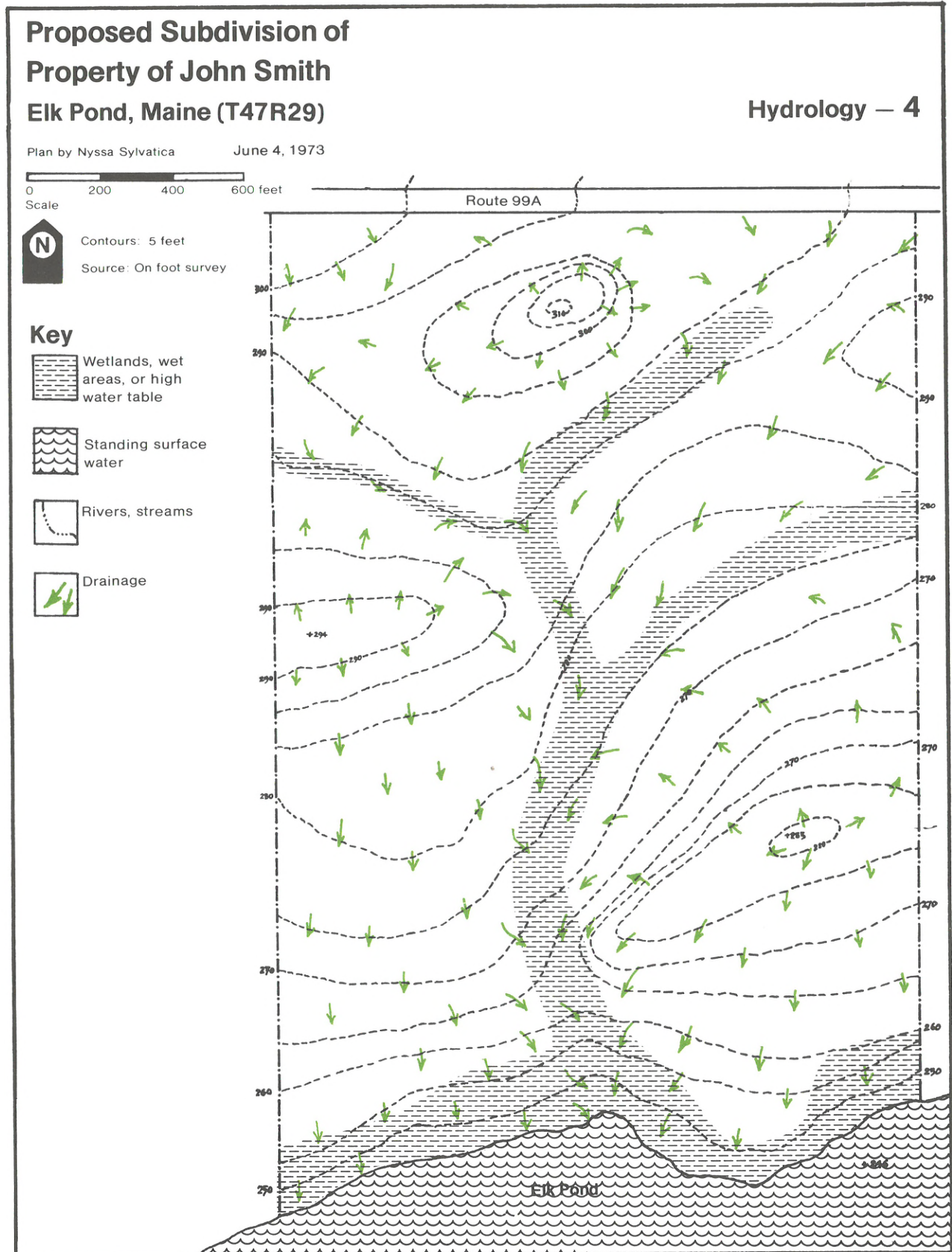
Improper soils — even on moderate or minor slopes — may be unable to bear the weight of construction equipment, buildings, or traffic. Settling, shifting, and slipping can result in damage and constant maintenance problems.



On steep slopes, soils present severe problems for buildings, roads, and septic systems: Septic runoff may be difficult or impossible to control; the tendency for soil to erode if disturbed is high, as is the danger of slumping (collapse) under weight. The costs of engineering foundations and installing septic systems skyrocket.



Water Systems (Hydrology) Map



Water Systems (Hydrology) Map

What to look for:

Seeps, springs, wells, and other sources of water supply.

Drainage patterns.

Wet areas, bogs, etc.

Surface water, such as lakes, ponds, and streams.

Water table level.

Vegetation typical of wet areas, such as cattails, alders, cedar, etc.

How to find it:

On foot.

Testing for location by boring test holes or digging pits.

Testing for quality of water once location is established.

Hydrologic maps (if available) from the U.S. Geological Survey, Water Resources Division.

Dowsing (but be careful; have a contract).

Why it is important:

Precipitation, in the form of rain and snow, seeps into the ground, moving through various permeable layers in a roughly vertical direction until it reaches bedrock or other impermeable strata. Water then begins to move in a roughly horizontal direction. This is called groundwater.

Sources of groundwater are important to dwellings with wells as the main source of drinking water.

The depth to groundwater can determine if a site will allow septic facilities.

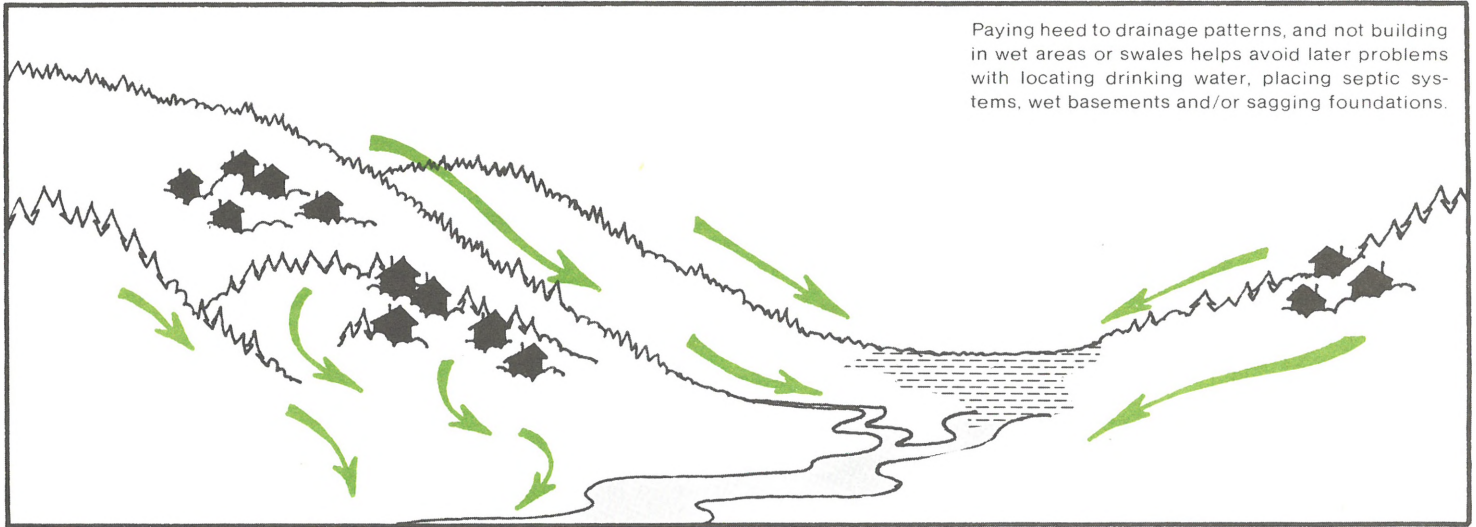
Precipitation which does not drain into the soil, but remains or appears above the ground is called surface water. Surface water includes lakes, ponds, rivers, seasonal and year-round streams, seeps, marshes, swamps, wetlands and floodplains.

The disruption of drainage patterns can result in erosion siltation, and damage to the building. If large numbers of people are careless about water systems, then the soil and water resources of an entire region may become polluted or destroyed.

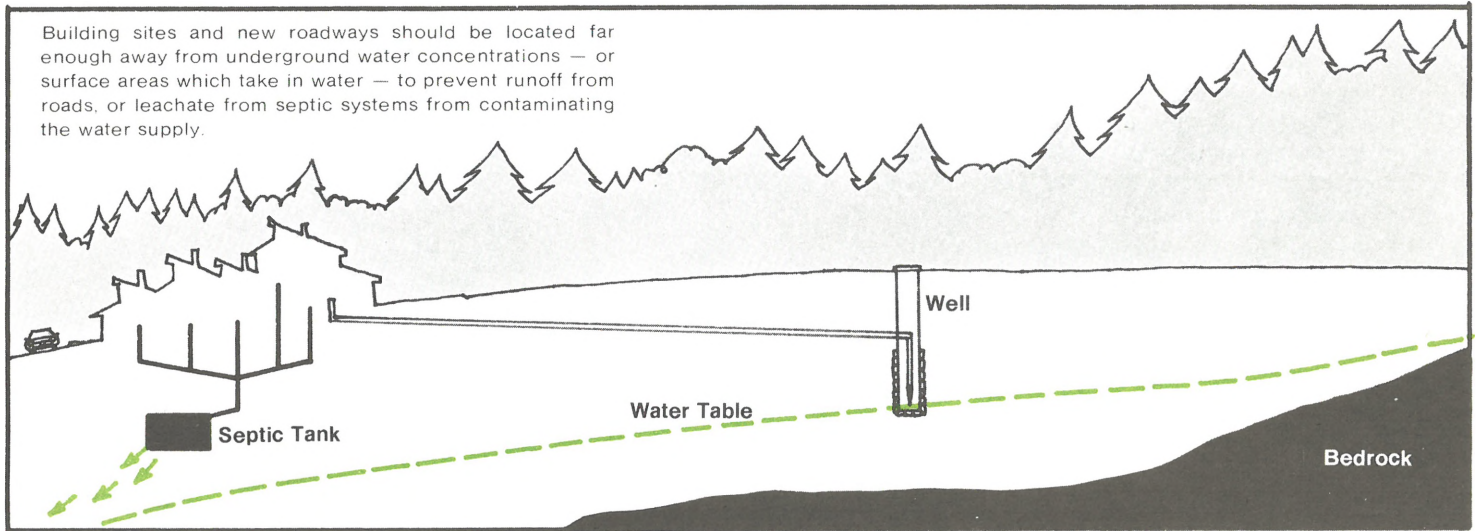
All of these elements of groundwater and surface water are linked to one another, and modifying any one element will result in modification of all the other elements.

Knowing the Land

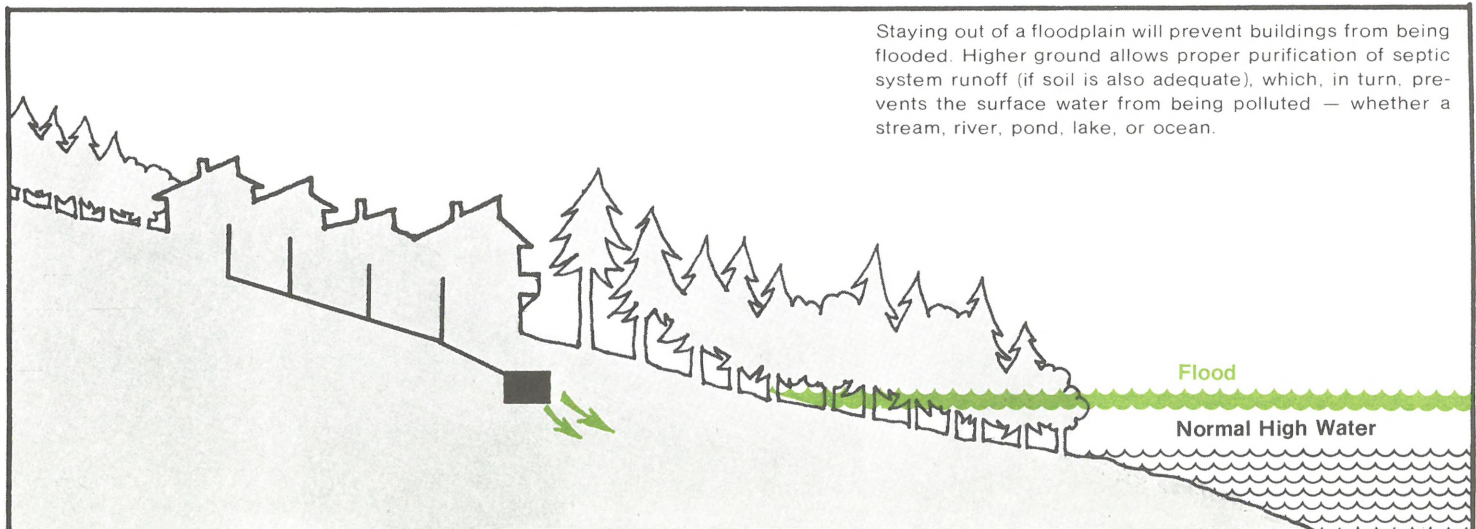
Considering Water Systems



Paying heed to drainage patterns, and not building in wet areas or swales helps avoid later problems with locating drinking water, placing septic systems, wet basements and/or sagging foundations.

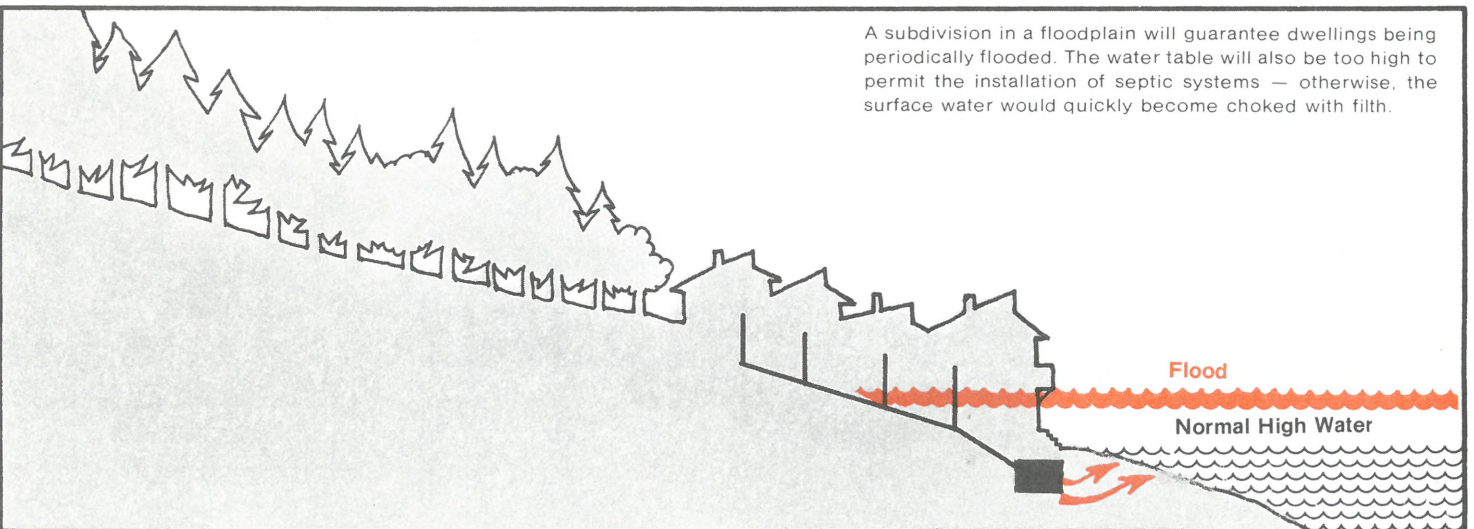
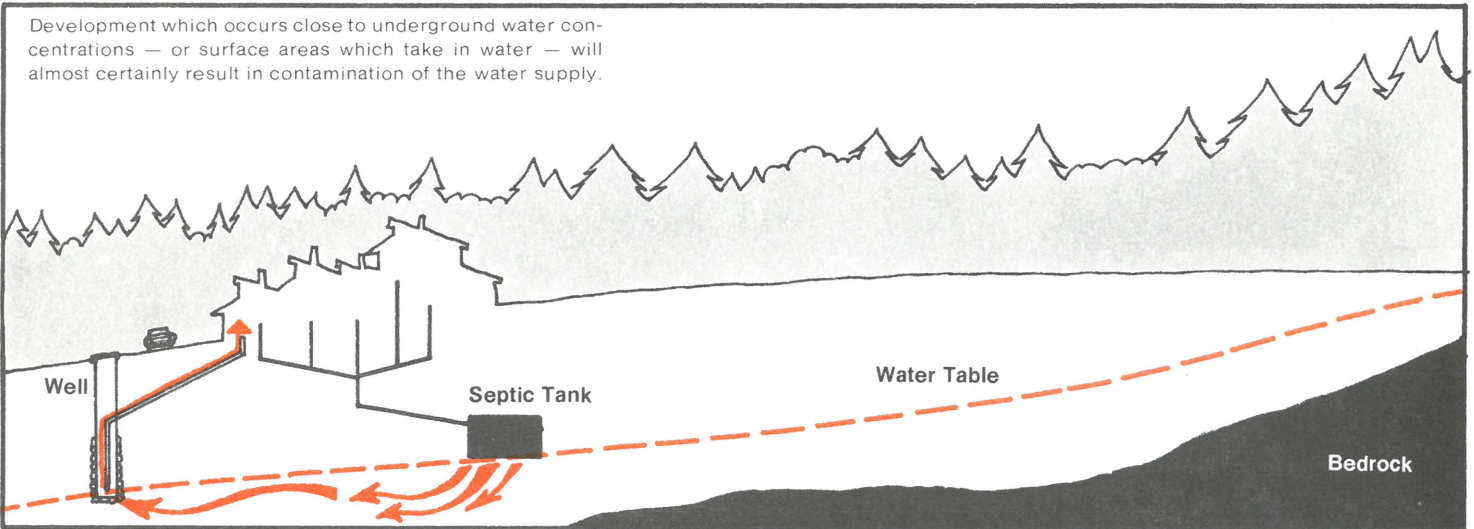
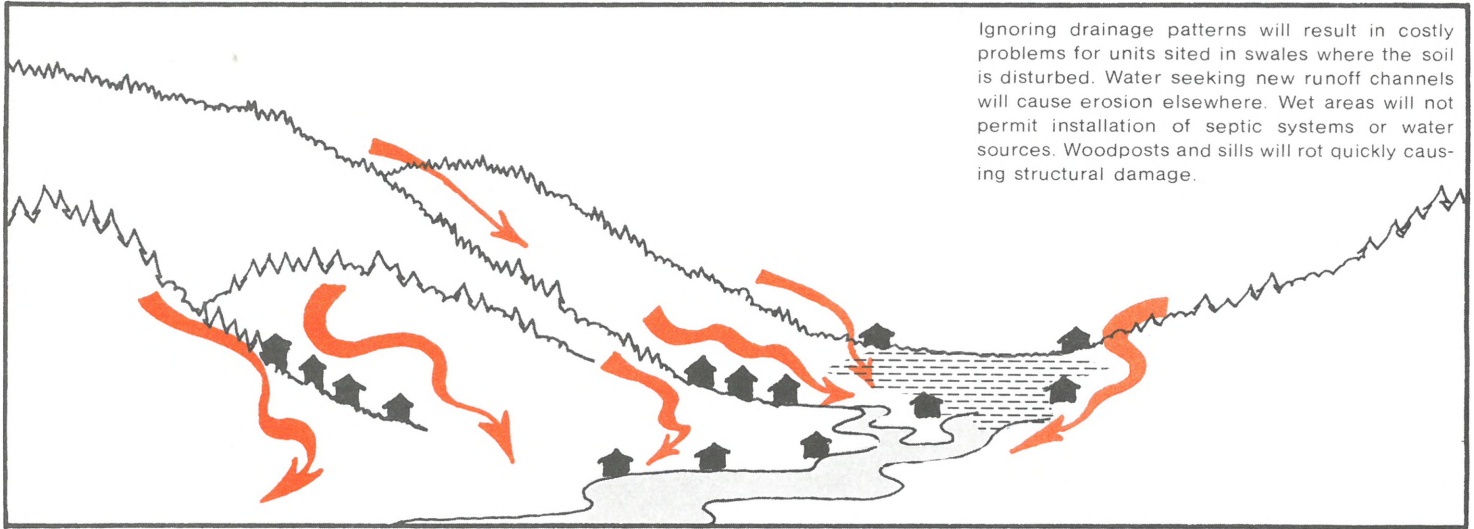


Building sites and new roadways should be located far enough away from underground water concentrations — or surface areas which take in water — to prevent runoff from roads, or leachate from septic systems from contaminating the water supply.



Staying out of a floodplain will prevent buildings from being flooded. Higher ground allows proper purification of septic system runoff (if soil is also adequate), which, in turn, prevents the surface water from being polluted — whether a stream, river, pond, lake, or ocean.

Disregarding Water Systems

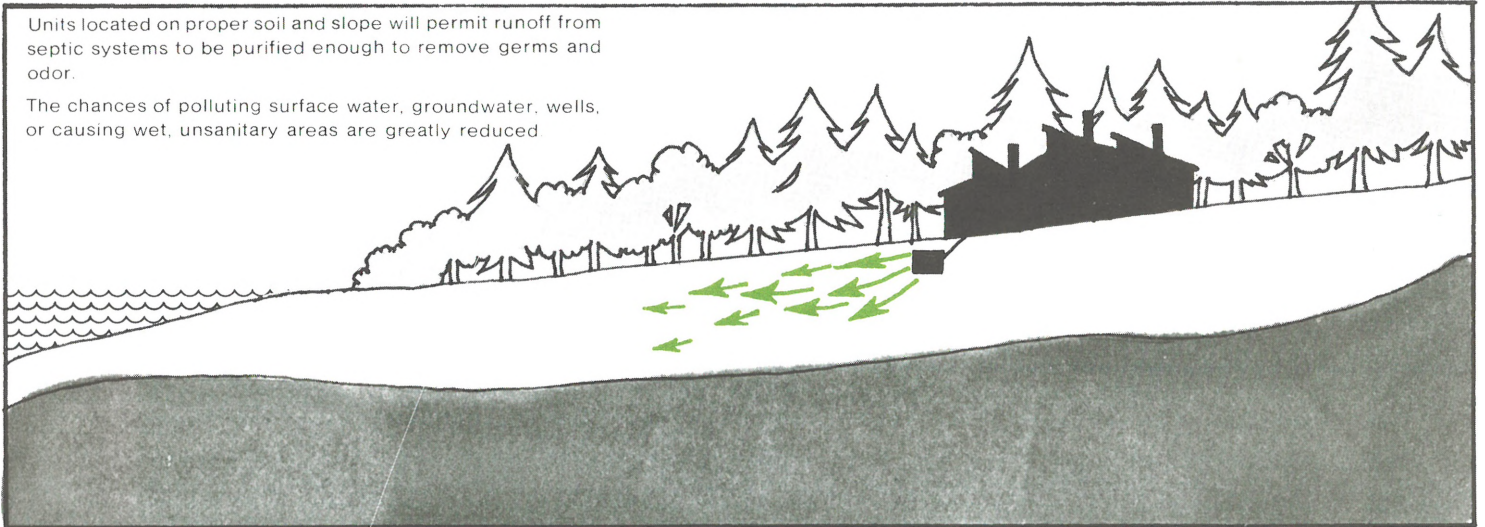


Knowing the Land

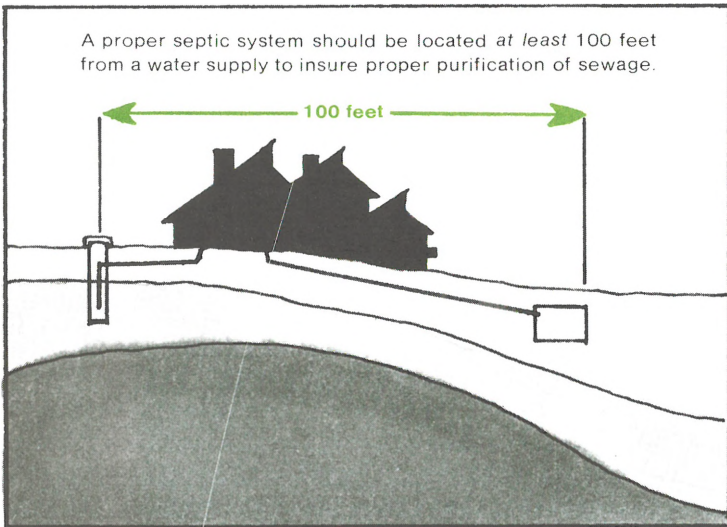
Considering Septic Systems

Units located on proper soil and slope will permit runoff from septic systems to be purified enough to remove germs and odor.

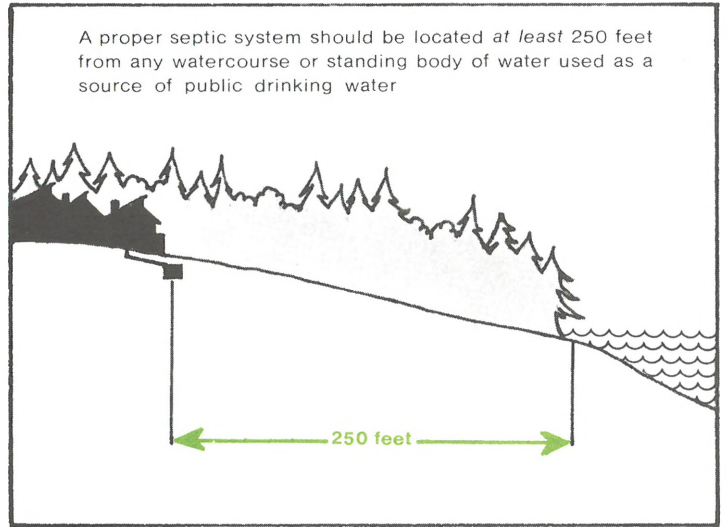
The chances of polluting surface water, groundwater, wells, or causing wet, unsanitary areas are greatly reduced.



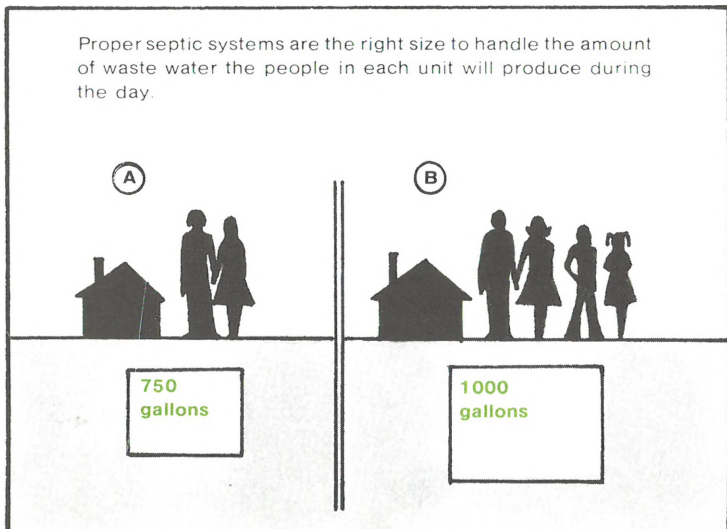
A proper septic system should be located *at least* 100 feet from a water supply to insure proper purification of sewage.



A proper septic system should be located *at least* 250 feet from any watercourse or standing body of water used as a source of public drinking water.

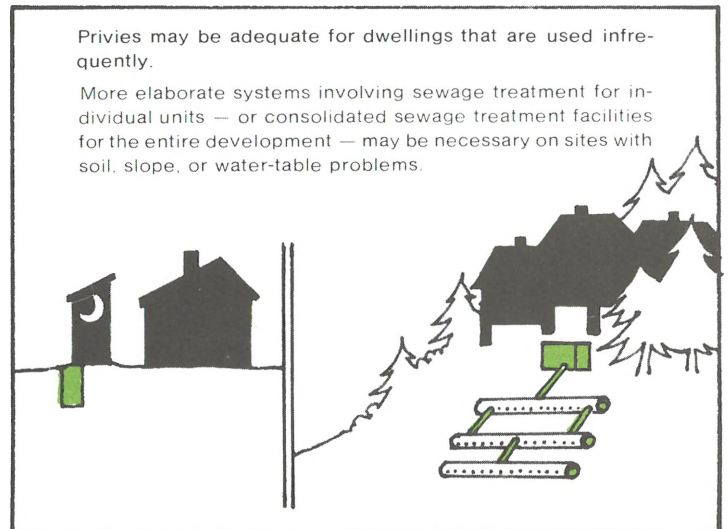


Proper septic systems are the right size to handle the amount of waste water the people in each unit will produce during the day.



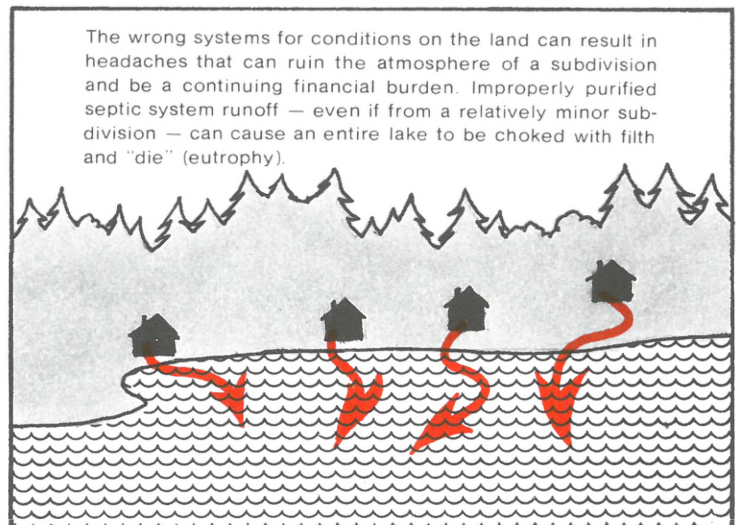
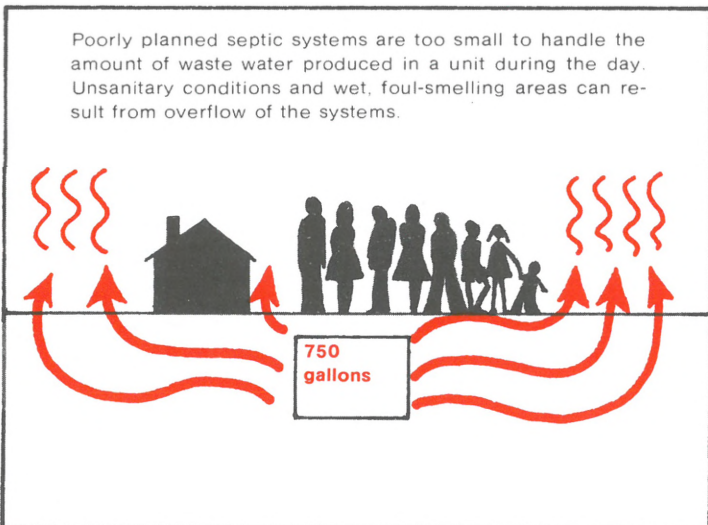
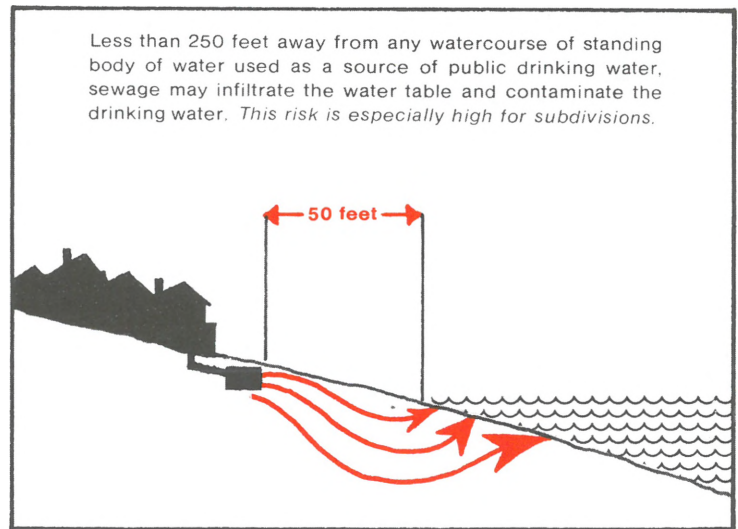
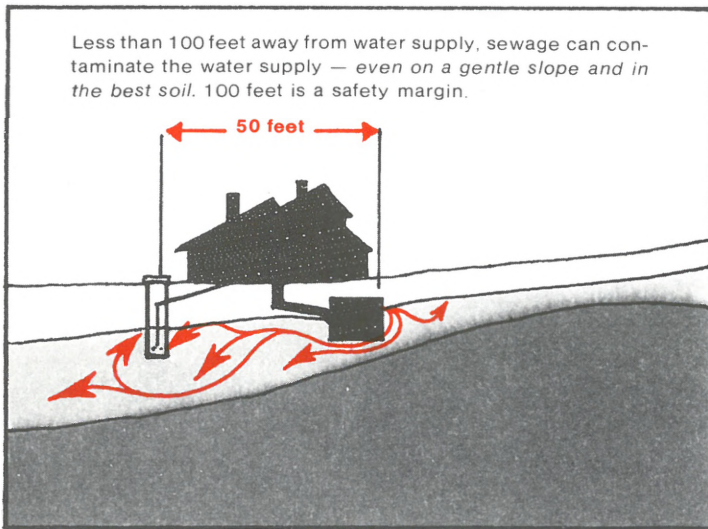
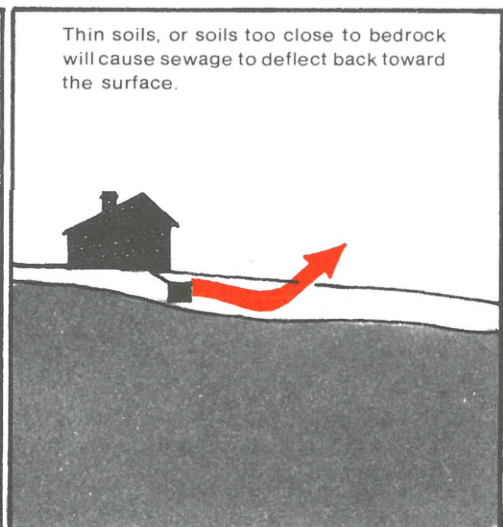
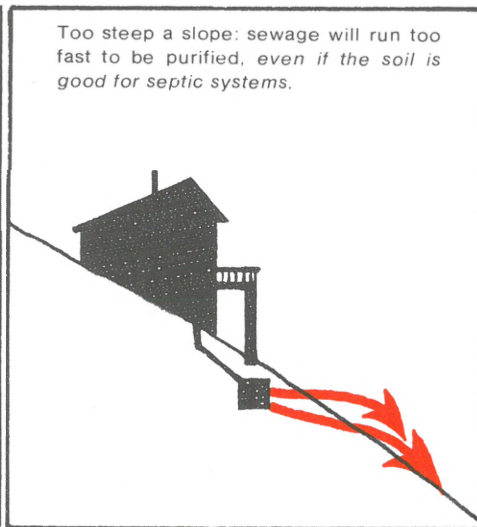
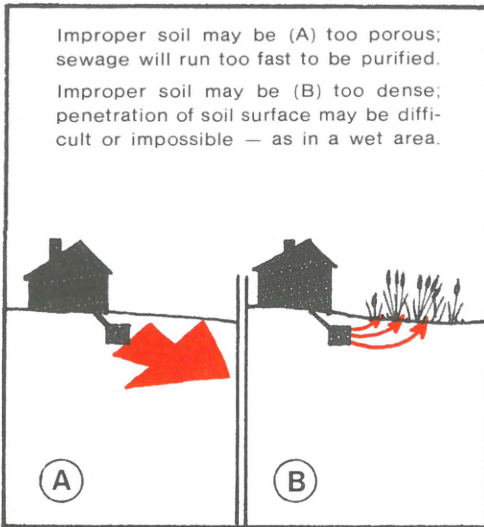
Privies may be adequate for dwellings that are used infrequently.

More elaborate systems involving sewage treatment for individual units — or consolidated sewage treatment facilities for the entire development — may be necessary on sites with soil, slope, or water-table problems.

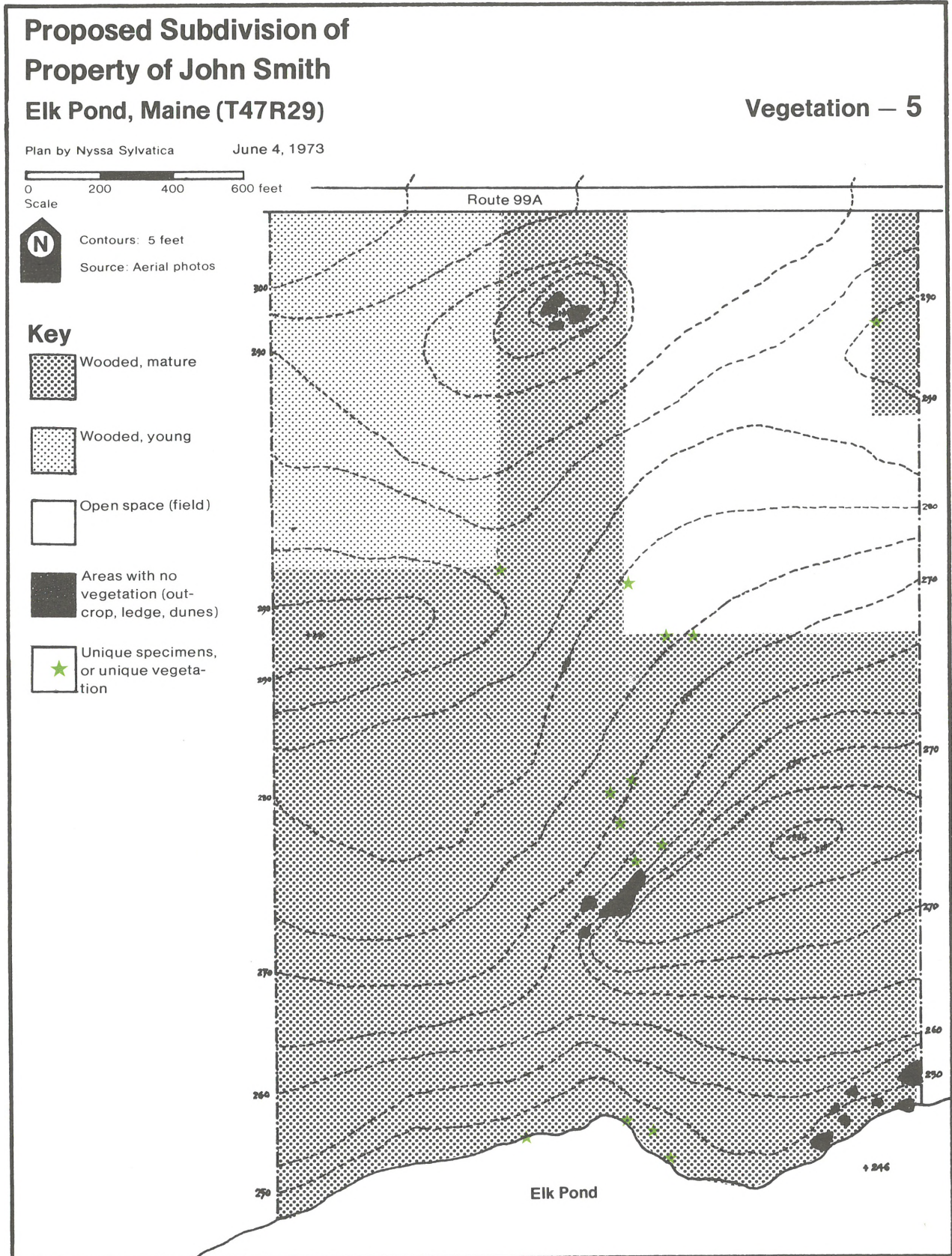


Knowing the Land

Septic System Problems



Vegetation Map



Knowing the Land

Vegetation Map

What to look for:

Areas made up primarily of mature trees.

Areas made up primarily of younger trees (thin trunks, dense growth).

Cut-over areas.

Open areas, such as fields.

Unusual or unique specimens (such as a very old white pine of immense size).

Areas with no vegetation, such as ledge or outcrop, and dunes.

How to find it:

On foot — the cheapest reliable way of getting information. It is the best way to spot details that aerial photography misses.

Aerial photography — a reliable means of gaining general information about vegetation on the site. A trained interpreter can determine species, age of the stand(s), and other information from the photographs.

U.S.G.S. maps (United States Geological Survey) are generally too large in scale for accurate information, and are usually outdated. The vegetated areas are indicated by a pale green color, and are meant only to show vegetation which is large enough to hide a man (military use).

Why it is important:

Aside from forests being harvested for timber and pulp, green areas are critical to our survival, since green plants are a source of oxygen, as well as the basic source of food for all living creatures.

Field, forest, and wetland alike provide both food and shelter for many different kinds of birds and animals. They are also useful to man for their educational, scientific, and recreational value. Indeed, *indiscriminate alteration of vegetation will only result in destroying the principal natural resource which attracts people to the wildlands of Maine.*

There is no way to place a dollar value on such a resource — it is priceless.

Forest values other than wood products include:

- Maintenance and enhancement of visual character.

- Ability to buffer noise.

- Wildlife habitat, such as: wetlands, deer wintering areas, eagle nesting areas, heron rookeries, etc.

- Recreation.

- Soil stabilization.

- Watershed protection.

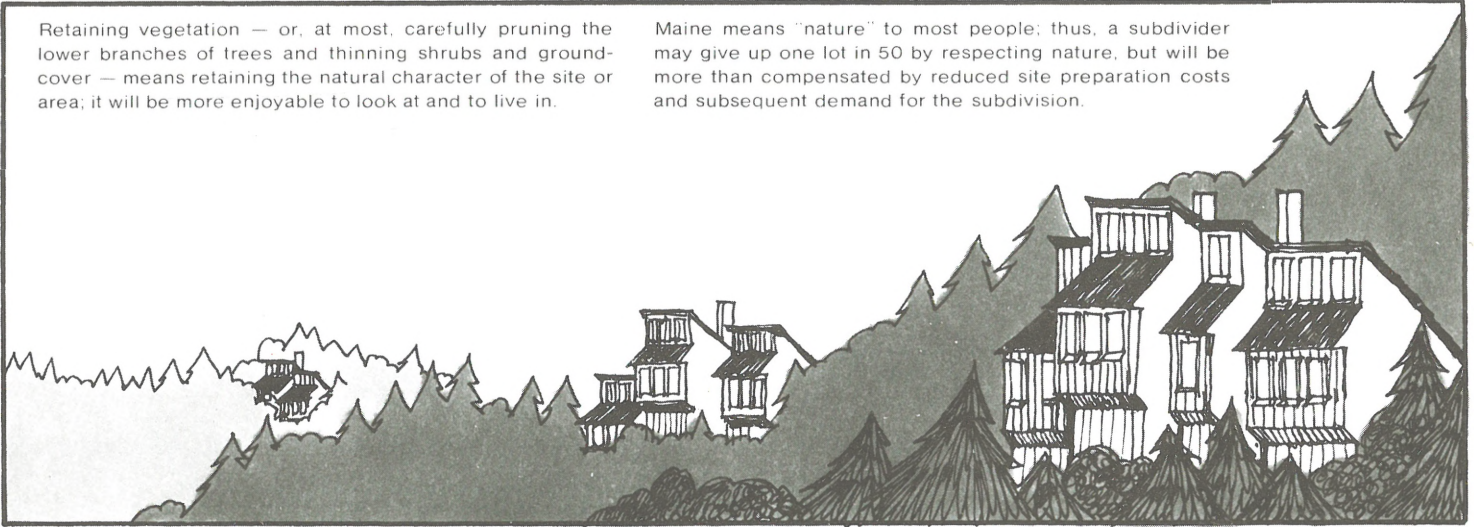
- Ability to moderate climate by screening sun and wind (microclimate).

Knowing the Land

Considering Vegetation

Retaining vegetation — or, at most, carefully pruning the lower branches of trees and thinning shrubs and ground-cover — means retaining the natural character of the site or area; it will be more enjoyable to look at and to live in.

Maine means “nature” to most people; thus, a subdivider may give up one lot in 50 by respecting nature, but will be more than compensated by reduced site preparation costs and subsequent demand for the subdivision.



A buffer of trees and shrubs can provide privacy and reduce noise.



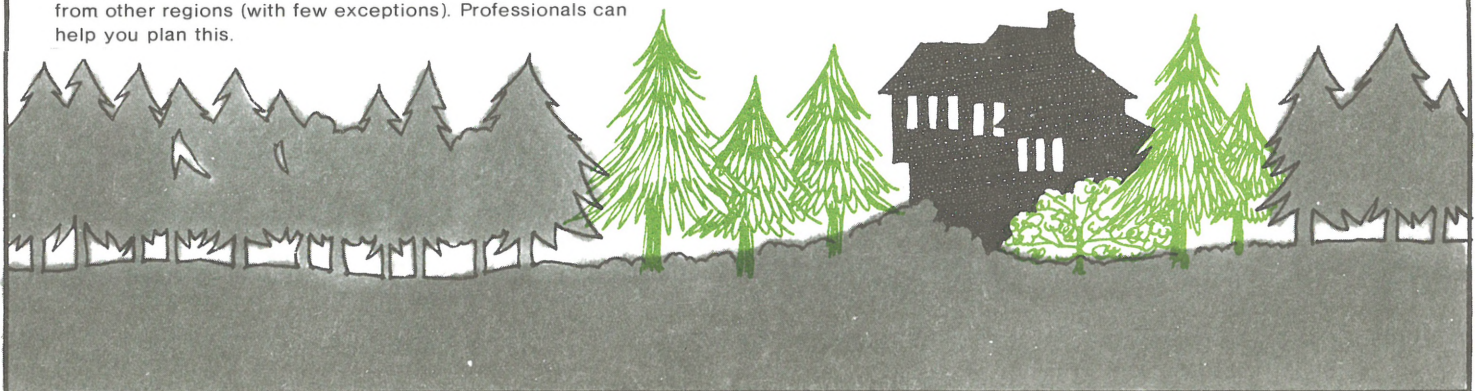
Retaining vegetation helps preserve the natural drainage on the site and reduces the chance of erosion.



Retaining vegetation provides protection from excessive wind, snowdrifts, or too much sun in summer.



When doing new planting — or replanting an area — use plant species native to the region. This will insure that the new plants will blend in with the surrounding area. Plant species native to Maine are best adapted to the climate of Maine, and will better survive conditions than plant species from other regions (with few exceptions). Professionals can help you plan this.



Knowing the Land

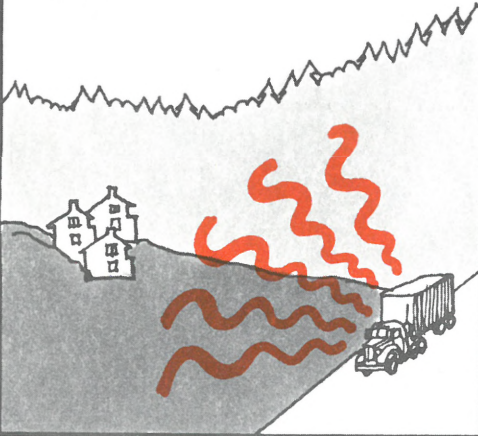
Disregarding Vegetation

Bulldozing the vegetation may make it easier for heavy equipment to move around, but the natural character of the site or area will be destroyed.

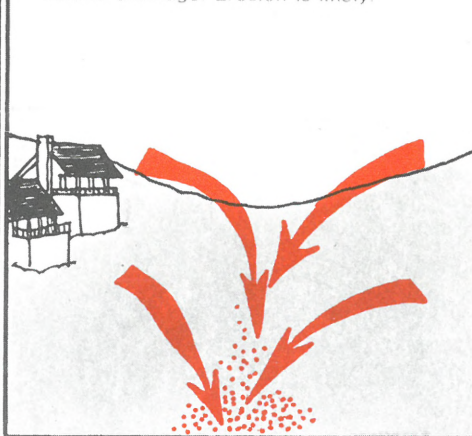
As a result, even the best architecture can look stark and uninviting. In the long run, the subdivider will spend a lot more trying to make the subdivision attractive again.



Stripped of vegetation, the site loses privacy and protection from excessive noise.



Stripping away vegetation — especially when coupled with regrading — disrupts natural drainage. Erosion is likely.



Stripping away vegetation results in a loss of protection from excessive winds, snowdrifts, or too much sun in summer.



Using inappropriate plants from other regions can cause a site to "stick out" from its surroundings. Plant materials from other regions may not be as hardy to Maine's weather as native species, and the plants may die. Moreover, new planting that is done ignoring the lay of the land — even with native species — looks bad.



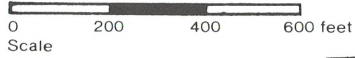
Noise/Visual Impact Map

Proposed Subdivision of Property of John Smith Elk Pond, Maine (T47R29)

Noise/Visual Impact — 6

Plan by Nyssa Sylvatica

June 4, 1973



Contours: 5 feet

Source: On foot survey

Key



Good views

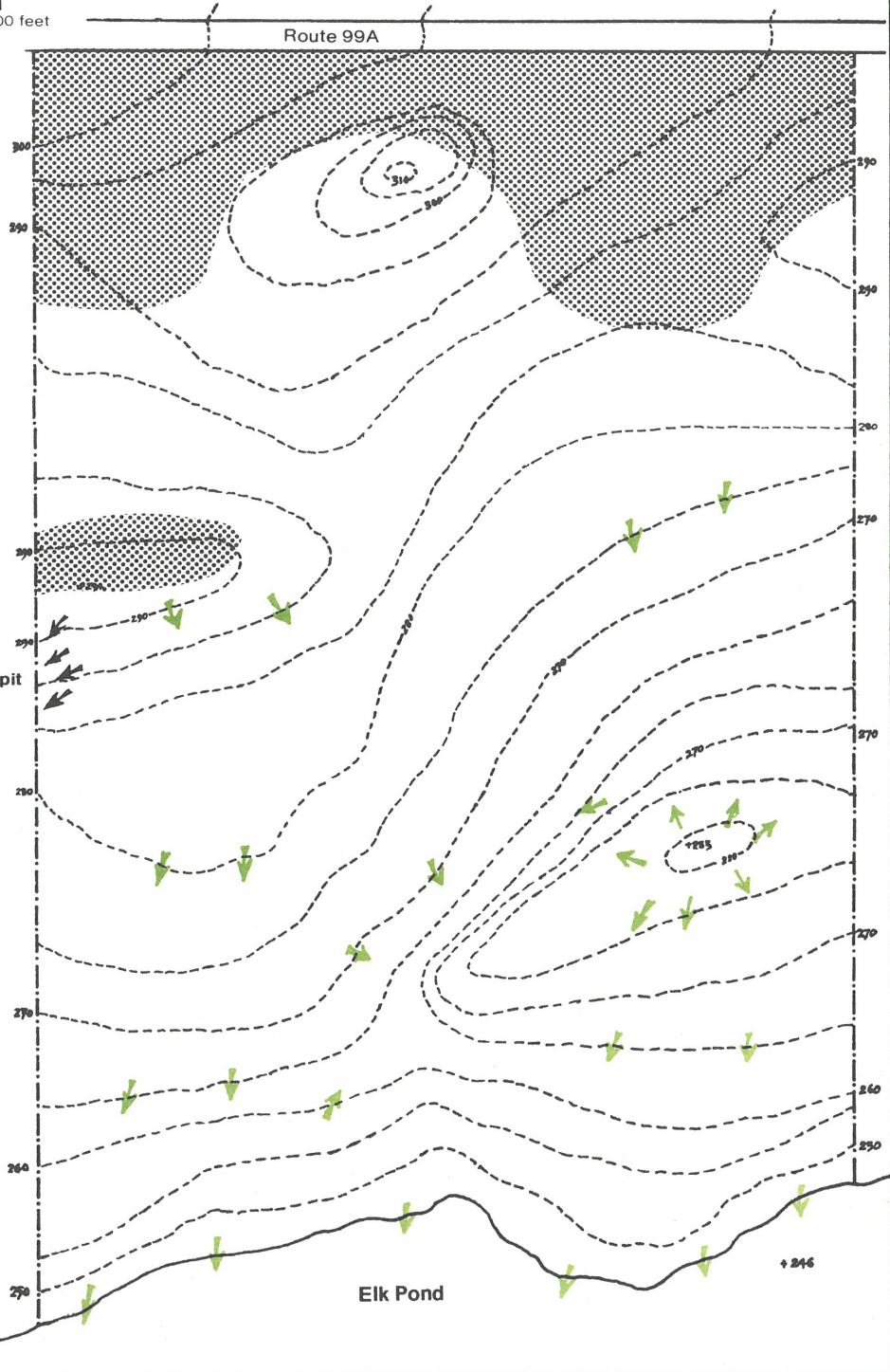


Eyesores



Noise

Old gravel pit
250 feet



Noise / Visual Impact Map

What to look for:

Natural features that will have a positive effect on the subdivision, such as: Near and distant views of bodies of water and interesting or dramatic landform features.

Natural features that will have a negative effect on the subdivision, such as: Being in the shadow of a neighboring hill or mountain, etc.

Man-made features that will have a positive effect on the subdivision, such as: A view of a nicely clustered, old village, etc.

Man-made features that will have a negative effect on the subdivision, such as: A view of an abandoned gravel pit; a view of a clear-cut area; a view of a commercial area/ brightly-lit signs; a view of a carelessly-done subdivision; noise from a highway or industrial operation.

How to find it:

On-foot exploration.

Asking area residents.

Checking on development plans for the area (i.e., roadway improvement usually leads to further development of an area).

Again, U.S.G.S. maps (United States Geological Survey) are usually outdated as far as man-made changes are concerned.

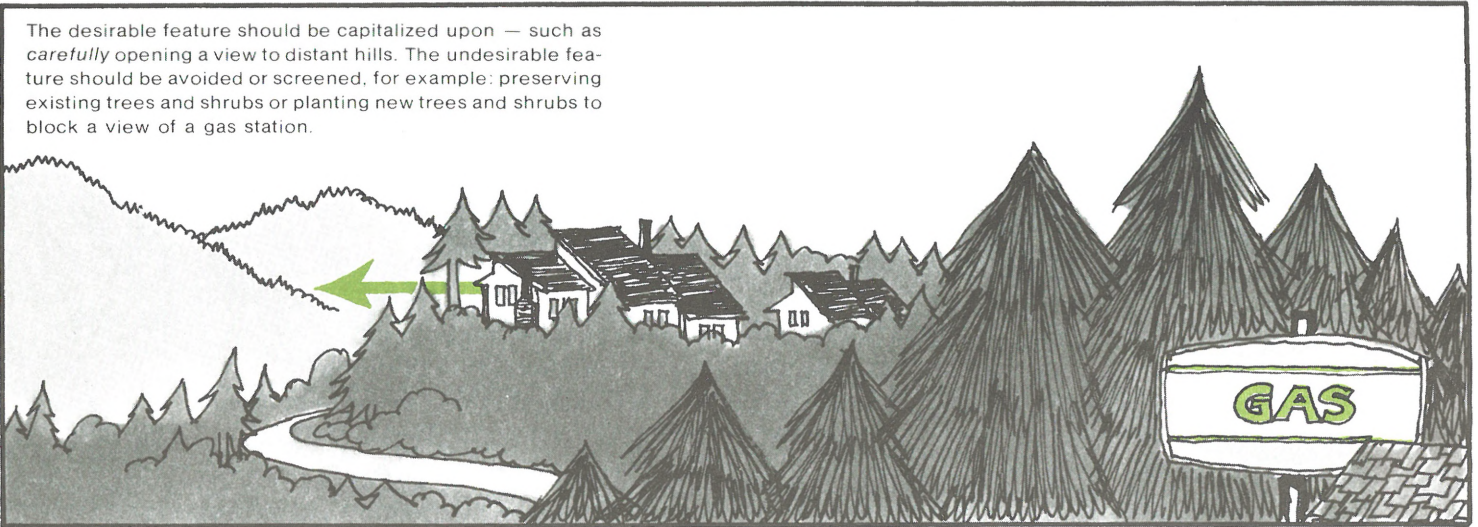
Why it is important:

Being aware of the neighboring features of a site — both natural and man-made — can help the subdivider take advantage of those features felt to be pleasant, and to avoid those features felt to be unpleasant.

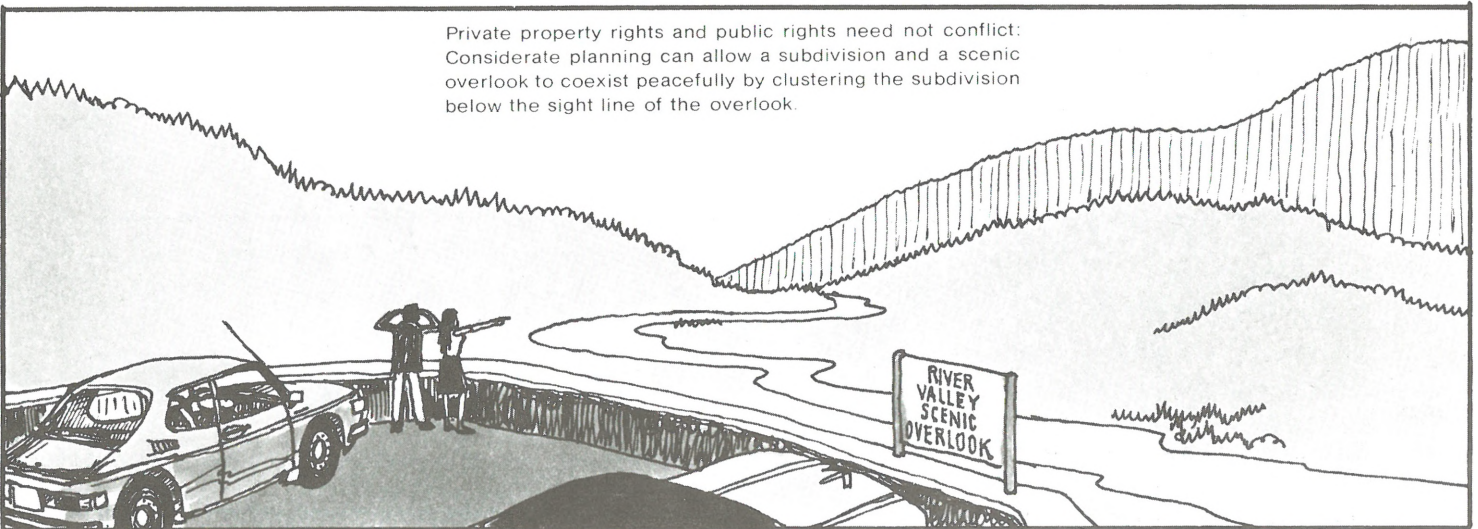
Knowing the Land

Considering Surrounding Features (Visual Impact)

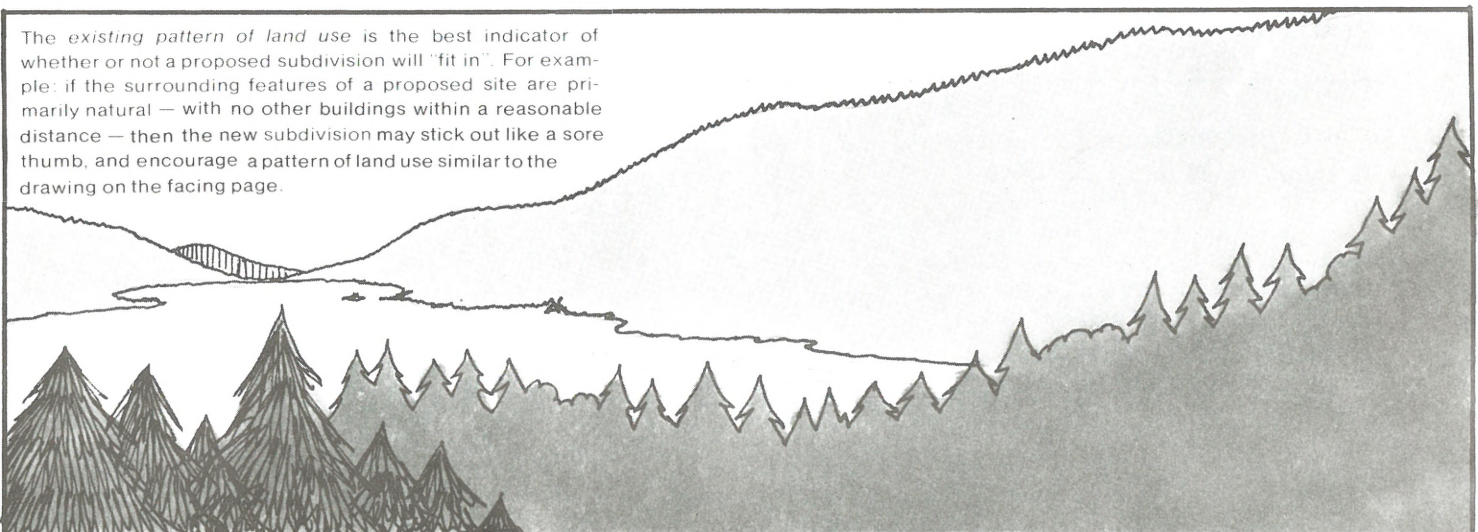
The desirable feature should be capitalized upon — such as *carefully* opening a view to distant hills. The undesirable feature should be avoided or screened, for example: preserving existing trees and shrubs or planting new trees and shrubs to block a view of a gas station.



Private property rights and public rights need not conflict: Considerate planning can allow a subdivision and a scenic overlook to coexist peacefully by clustering the subdivision below the sight line of the overlook.

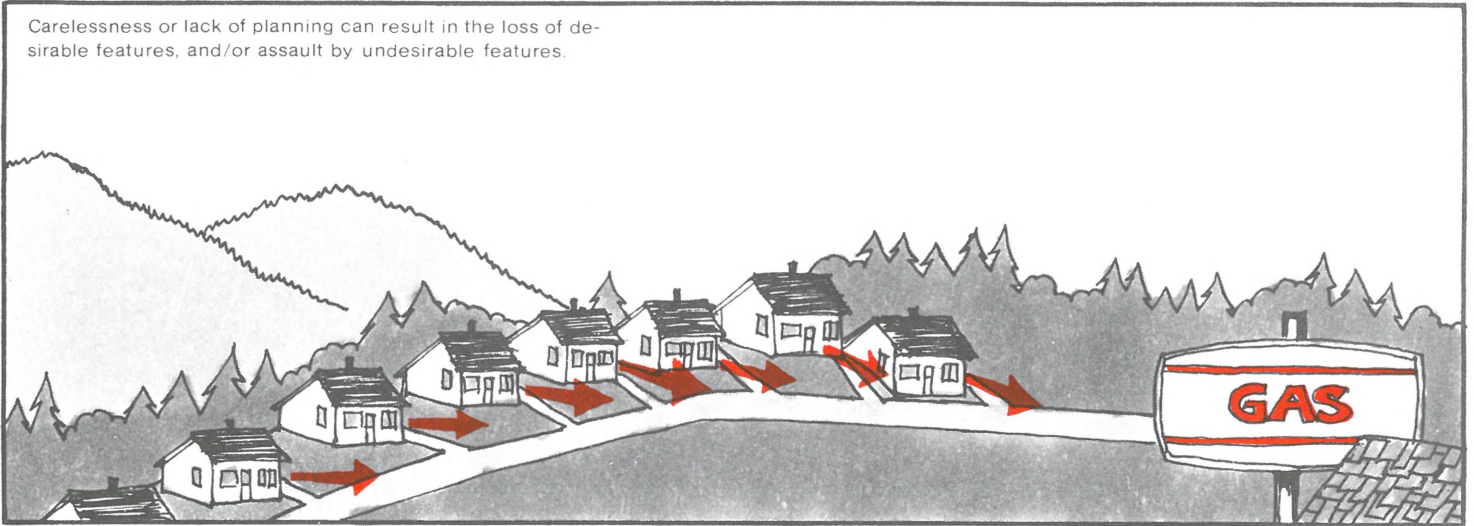


The *existing pattern of land use* is the best indicator of whether or not a proposed subdivision will "fit in". For example: if the surrounding features of a proposed site are primarily natural — with no other buildings within a reasonable distance — then the new subdivision may stick out like a sore thumb, and encourage a pattern of land use similar to the drawing on the facing page.

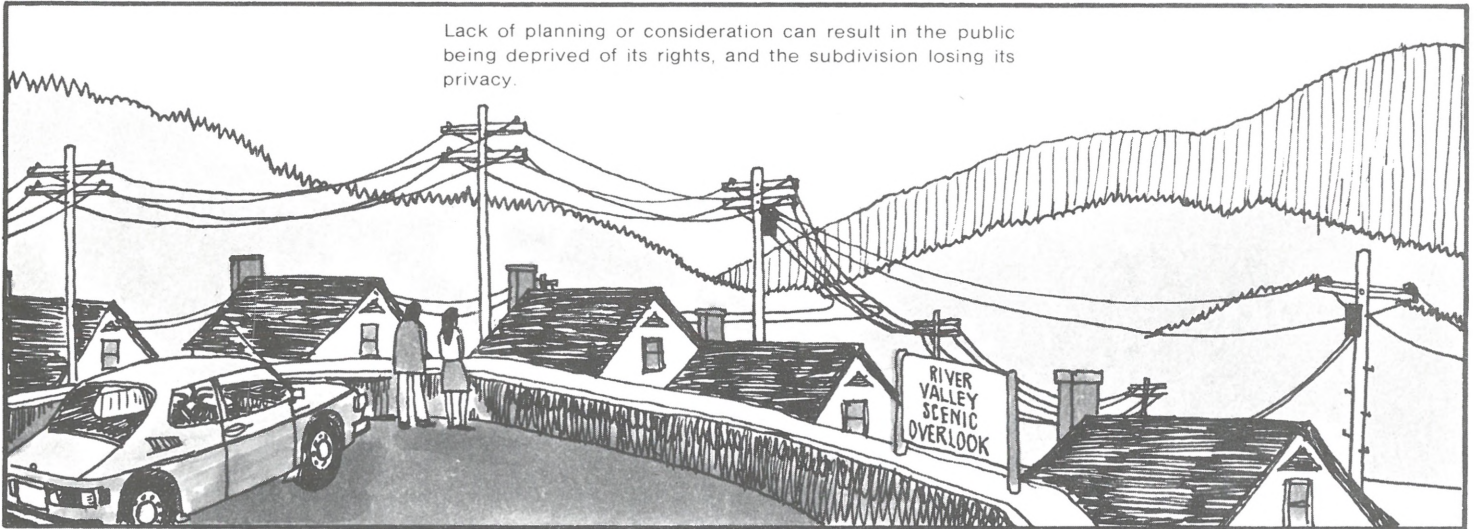


Disregarding Surrounding Features (Visual Impact)

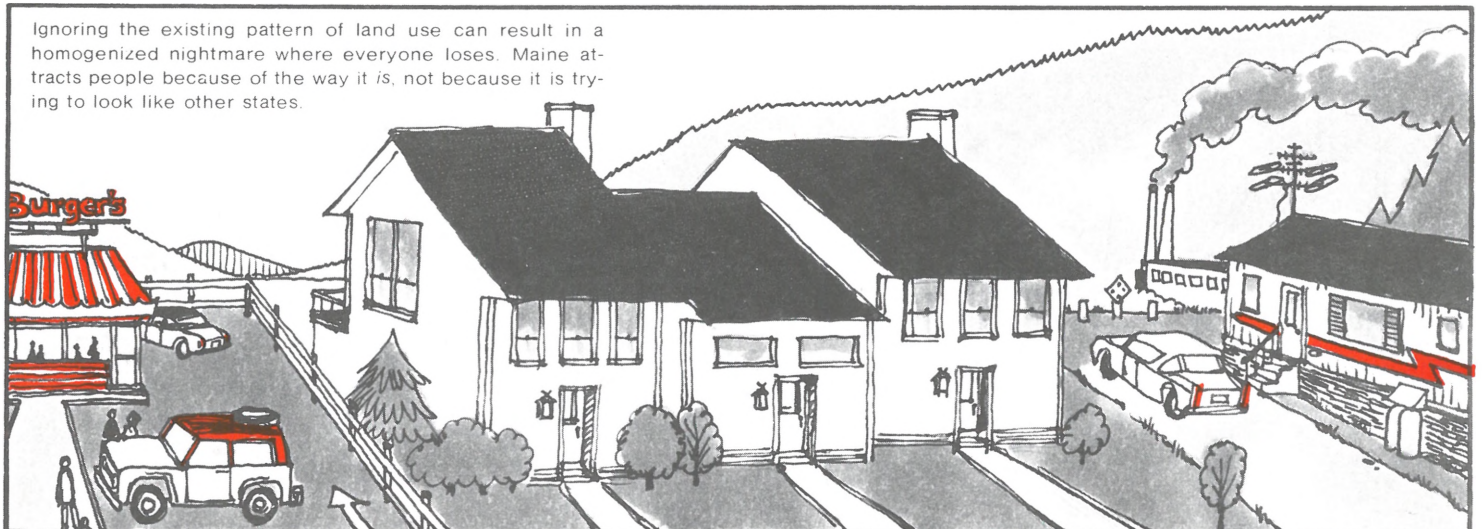
Carelessness or lack of planning can result in the loss of desirable features, and/or assault by undesirable features.



Lack of planning or consideration can result in the public being deprived of its rights, and the subdivision losing its privacy.

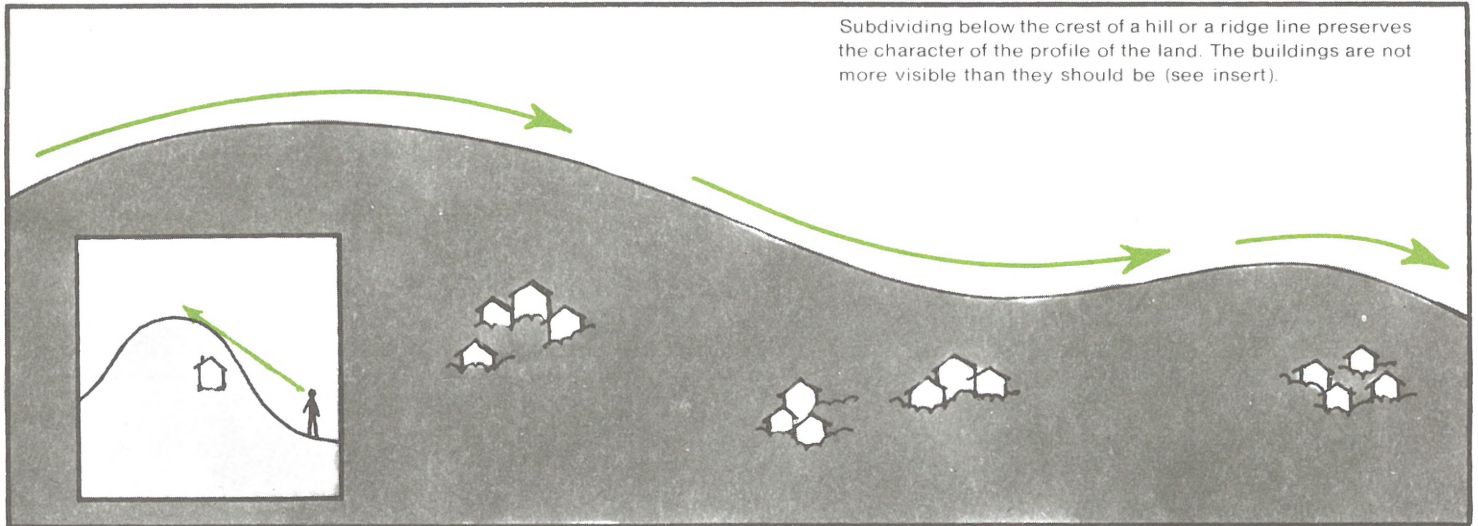


Ignoring the existing pattern of land use can result in a homogenized nightmare where everyone loses. Maine attracts people because of the way it is, not because it is trying to look like other states.

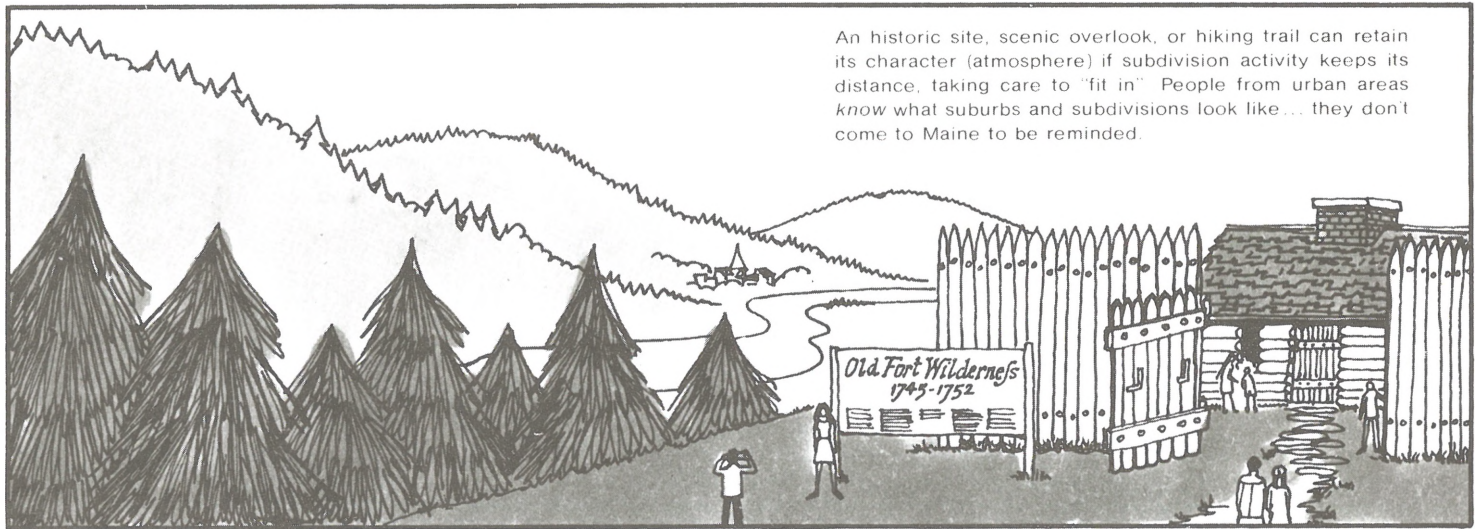


Considering What Others See (Visual Impact)

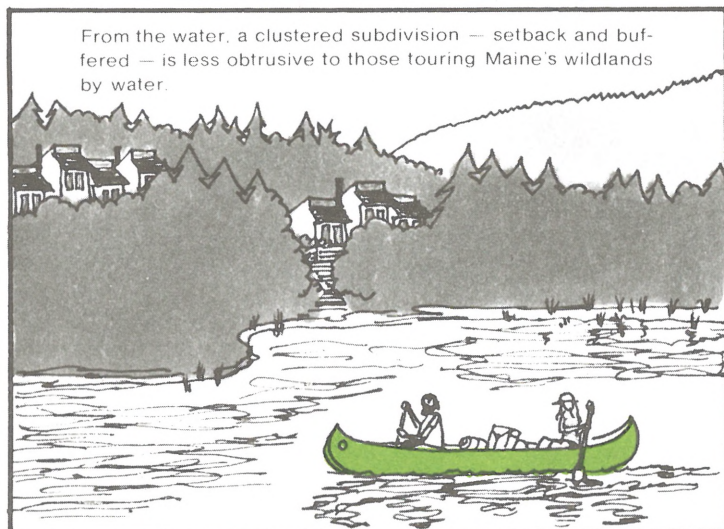
Subdividing below the crest of a hill or a ridge line preserves the character of the profile of the land. The buildings are not more visible than they should be (see insert).



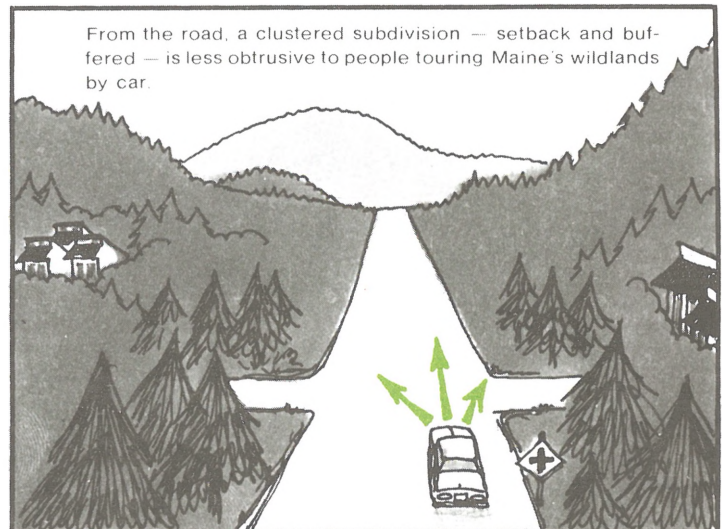
An historic site, scenic overlook, or hiking trail can retain its character (atmosphere) if subdivision activity keeps its distance, taking care to "fit in." People from urban areas *know* what suburbs and subdivisions look like... they don't come to Maine to be reminded.



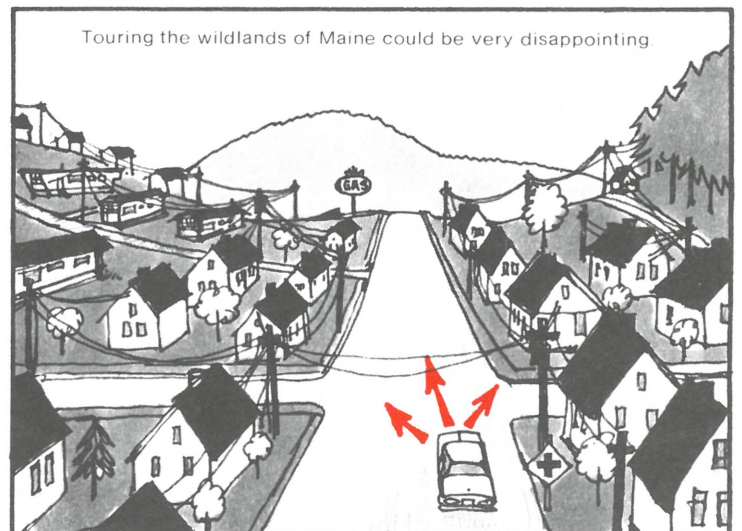
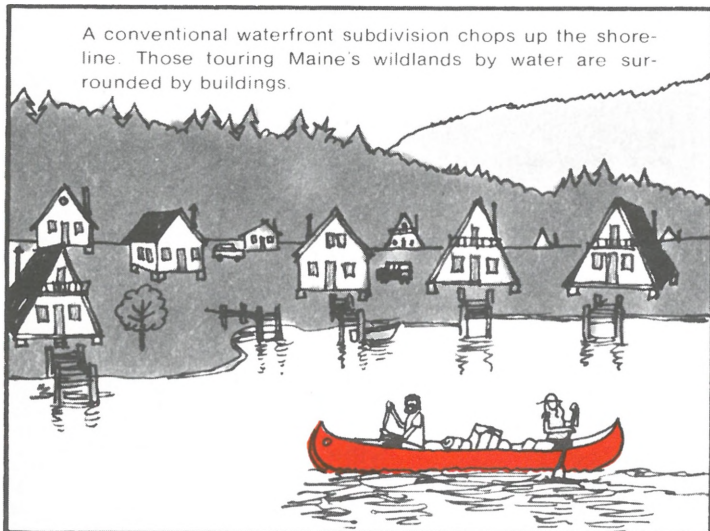
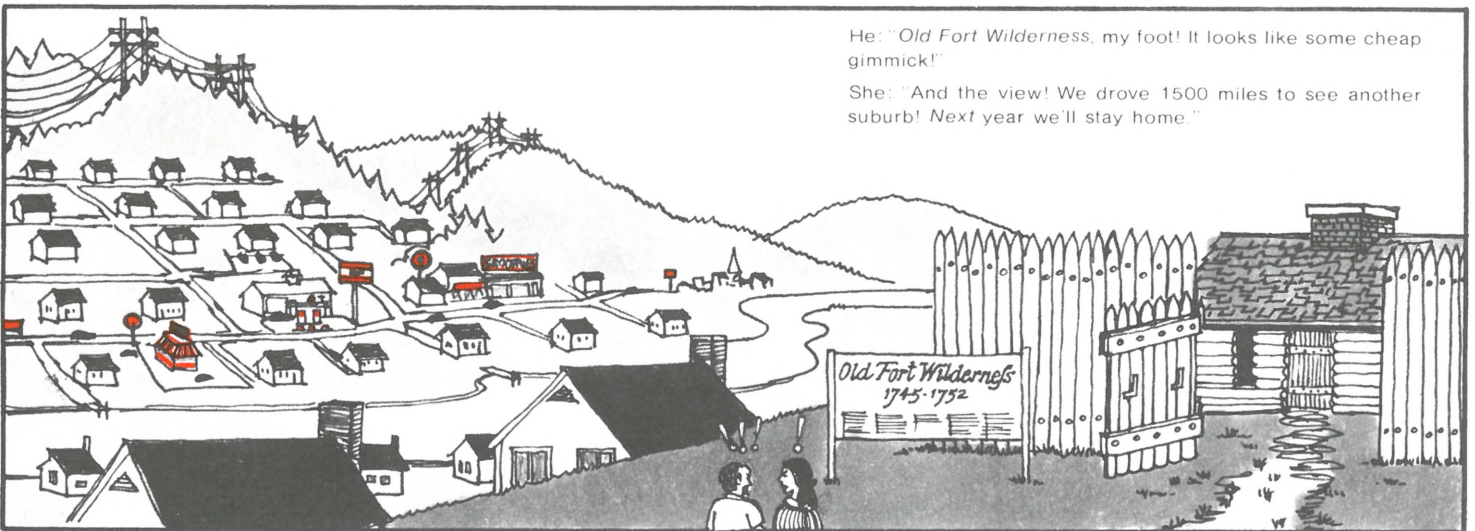
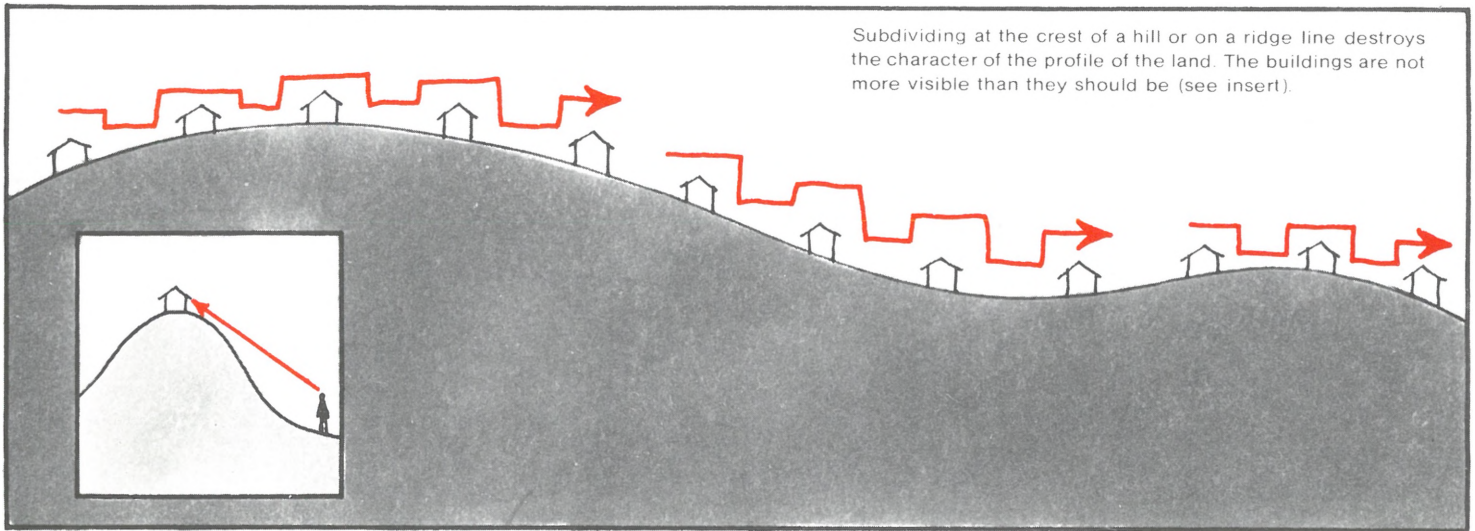
From the water, a clustered subdivision — setback and buffered — is less obtrusive to those touring Maine's wildlands by water.



From the road, a clustered subdivision — setback and buffered — is less obtrusive to people touring Maine's wildlands by car.

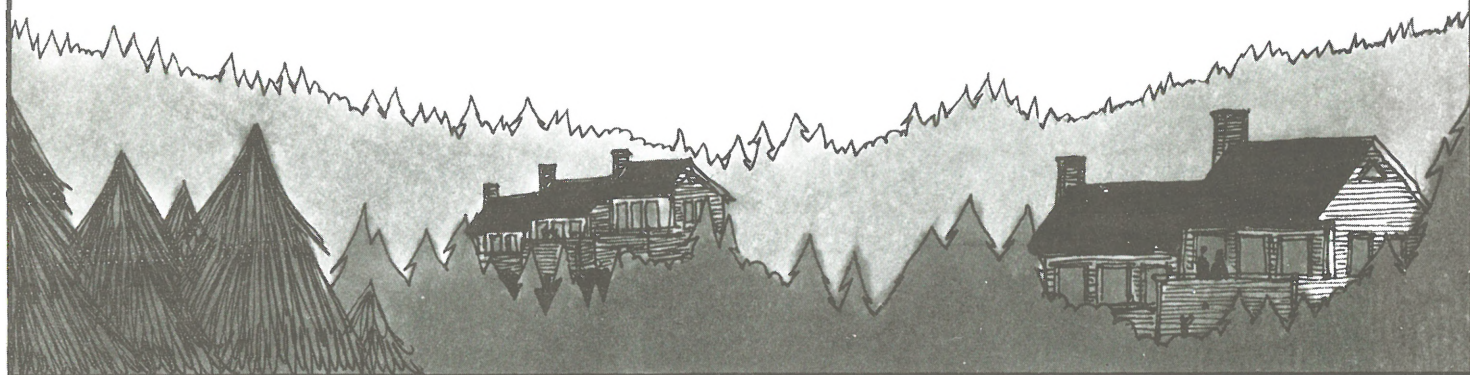


Disregarding What Others See (Visual Impact)



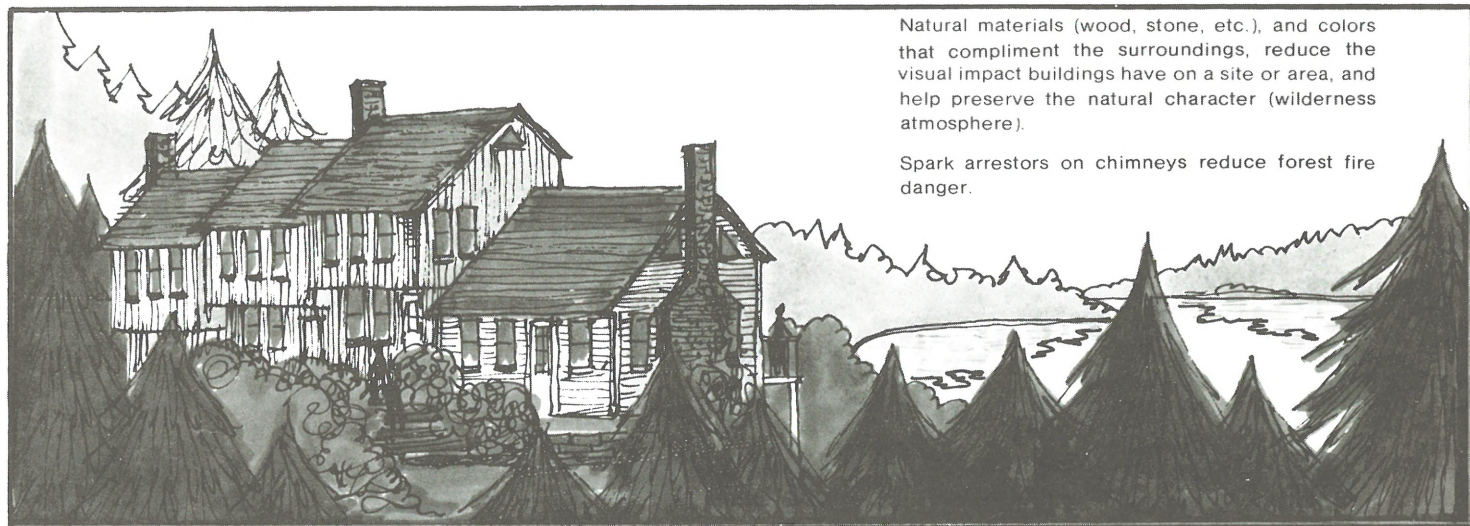
Considering Buildings and Materials (Visual Impact)

The size of buildings can compliment a site by respecting the *natural scale* of the site or area; that is, the size of the trees, and the size and shape of the landforms of that site or area.

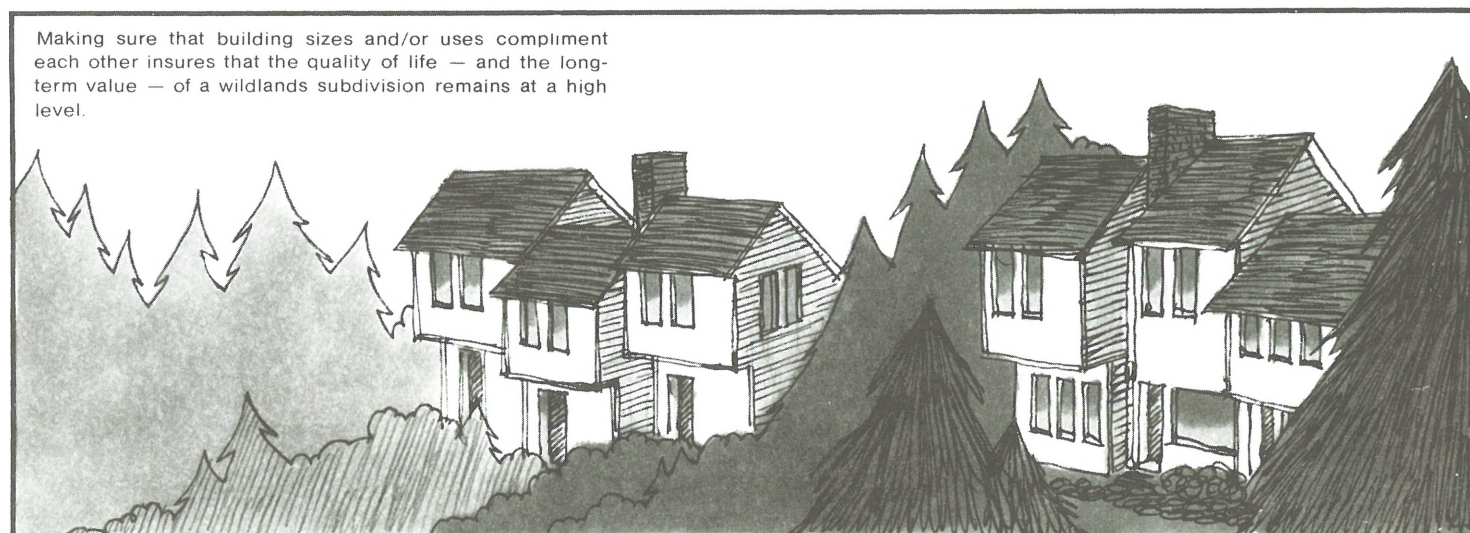


Natural materials (wood, stone, etc.), and colors that compliment the surroundings, reduce the visual impact buildings have on a site or area, and help preserve the natural character (wilderness atmosphere).

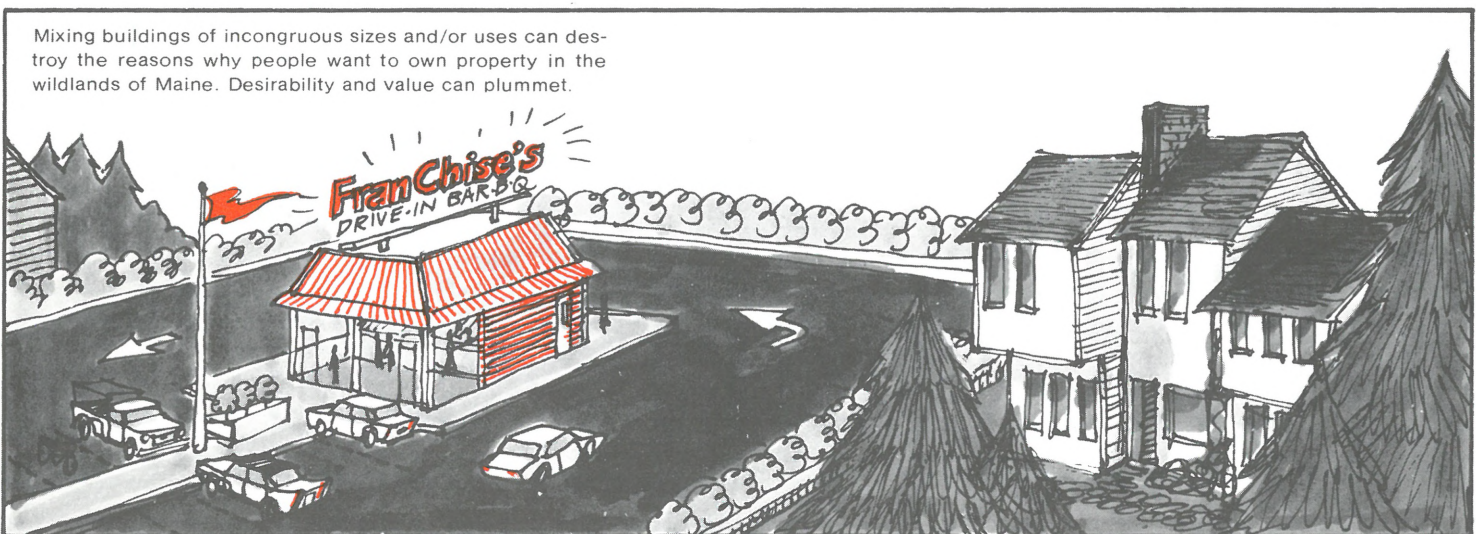
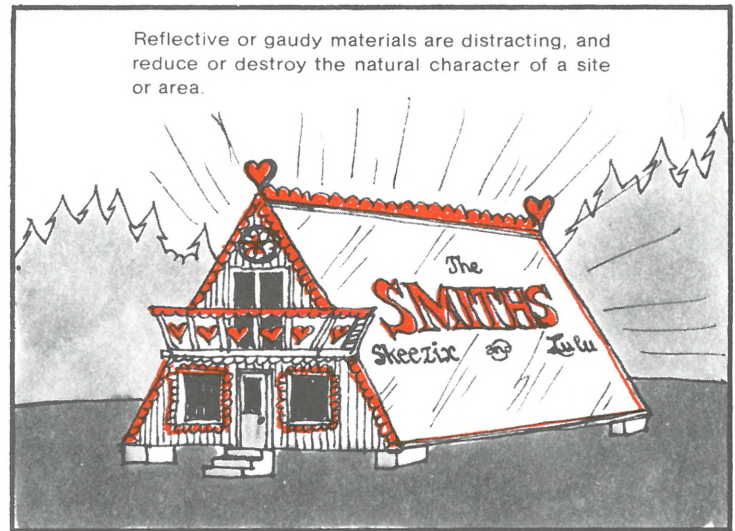
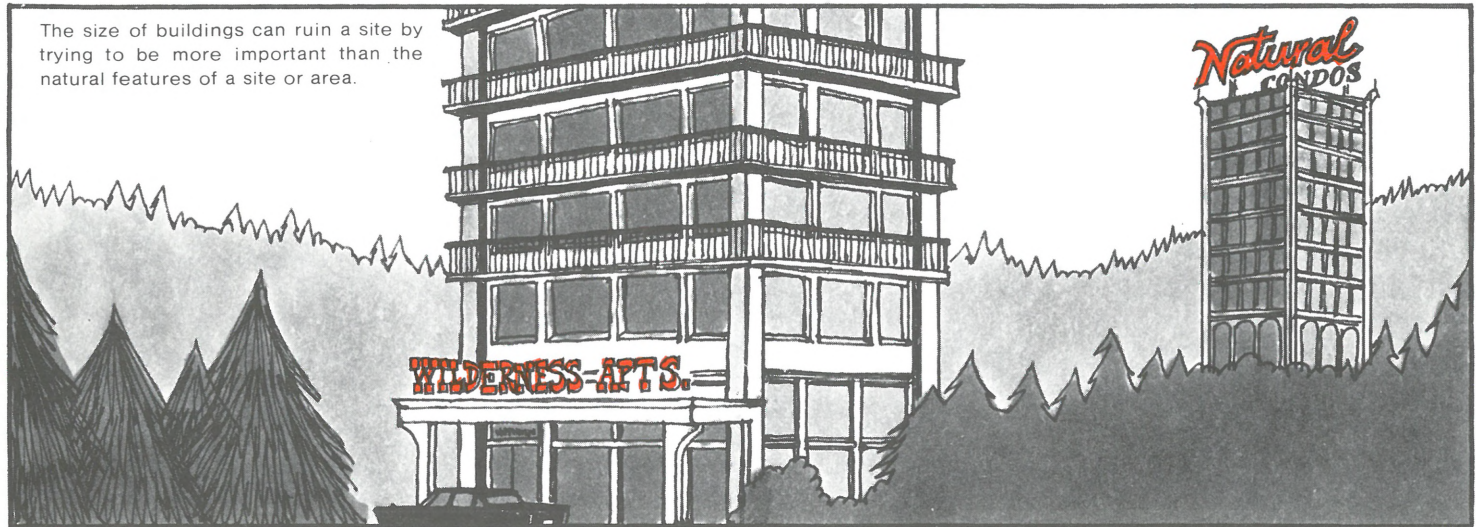
Spark arrestors on chimneys reduce forest fire danger.



Making sure that building sizes and/or uses compliment each other insures that the quality of life — and the long-term value — of a wildlands subdivision remains at a high level.



Disregarding Buildings and Materials (Visual Impact)



Proposed Subdivision of Property of John Smith Elk Pond, Maine (T47R29)

Composite Overlay – 7

Plan by Nyssa Sylvatica June 4, 1973






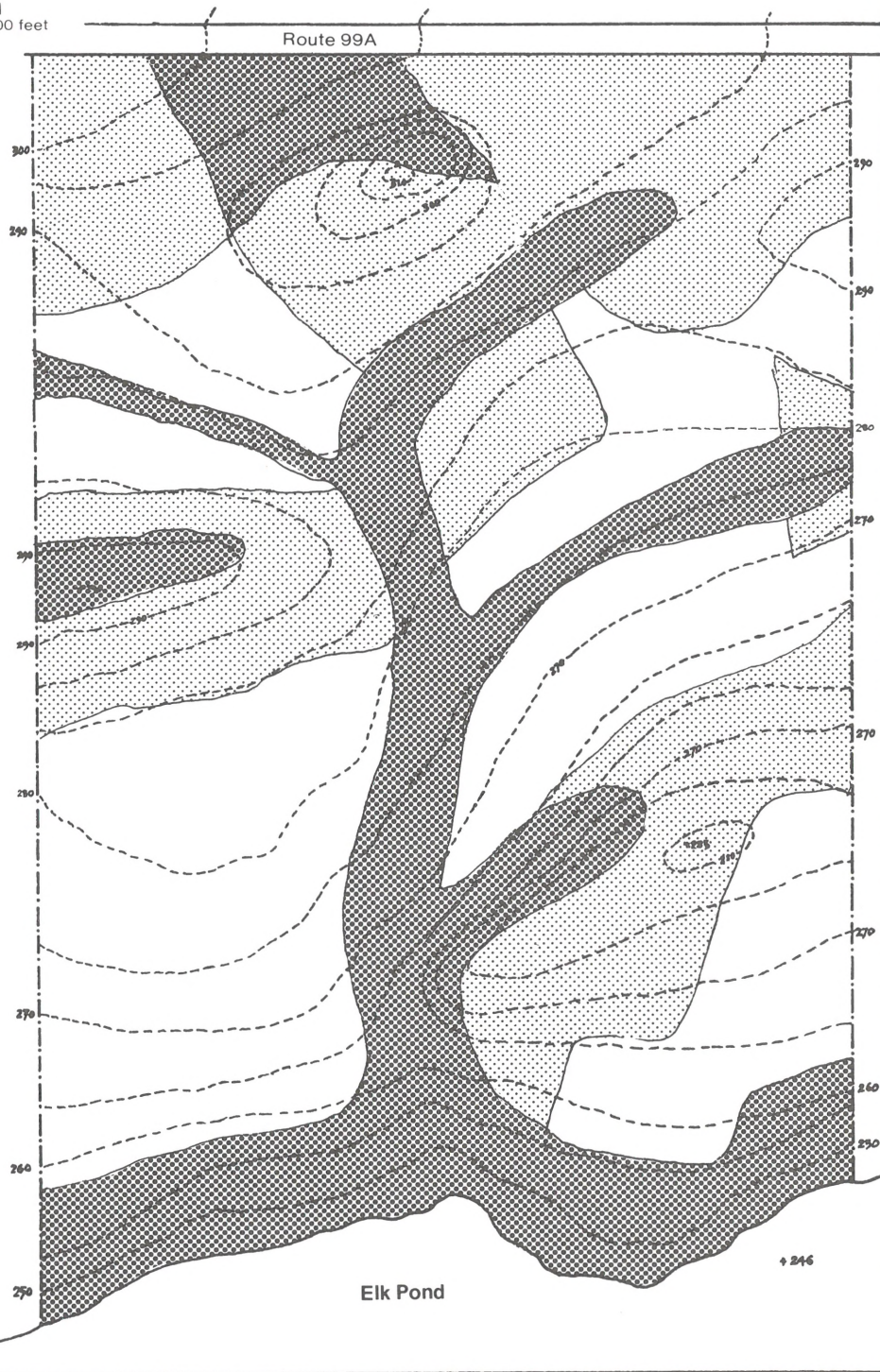
Scale



Contours: 5 feet
Source: previous maps

Key

-  Most restrictions
-  Some restrictions
-  Few restrictions



The Map Overlay - Revealing Opportunities and Constraints

Providing all the prior maps had dark areas meaning restrictions on use of the land, and light areas meaning few or no restrictions on the use of the land, an overlay can be made — a composite of all the base information about the land — which can eliminate a lot of the guesswork involved in getting the subdivision started.

Making the Overlay

The water systems (hydrology) map, vegetation map, soils map, and noise/visual impact map are placed over each other, taking care to see that the features of each map overlay one another exactly, as in the first illustration.

The entire bundle is then placed over a strong light source, such as a window, as in the second illustration. Certain areas on the property will show through lighter than other areas. These lighter areas represent those portions of the property which have fewer restrictions on them.

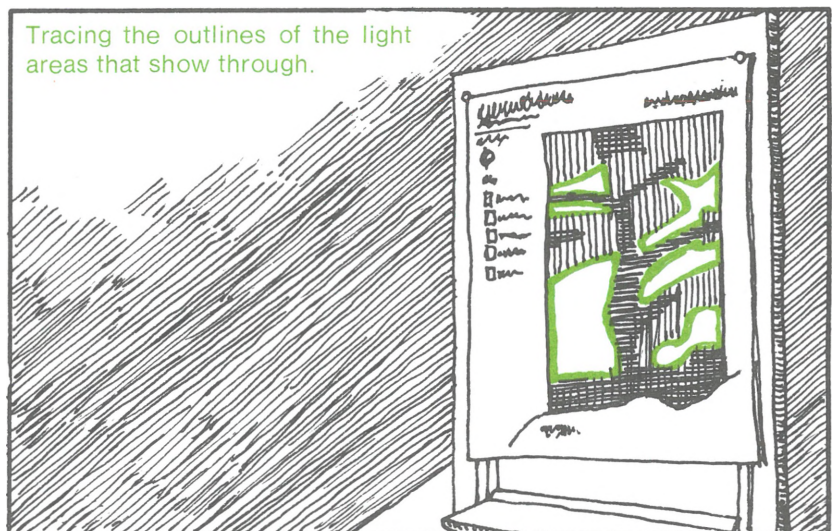
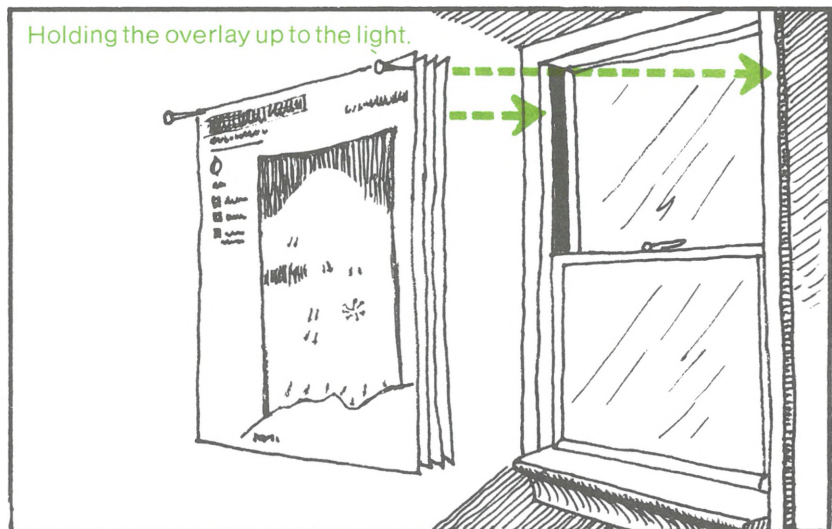
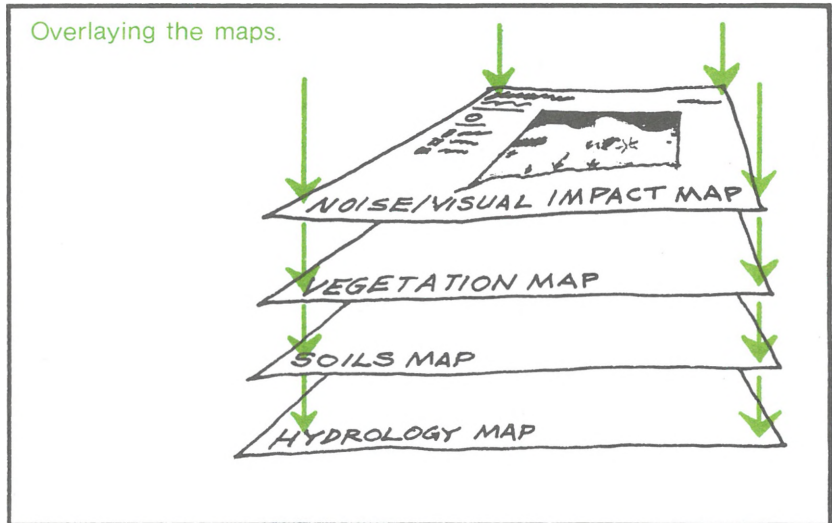
Tracing the Information

A tracing of the outlines of the light areas is then made. The darker areas are not traced, since they represent areas on the property which will present problems in subdividing or obtaining a permit to subdivide.

The Opportunities Map

This new map, then, represents a *very basic* process of elimination whereby a person may determine the best locations for subdivision activity.

The following pages will concentrate on what other factors should be considered before the final site plan is determined.



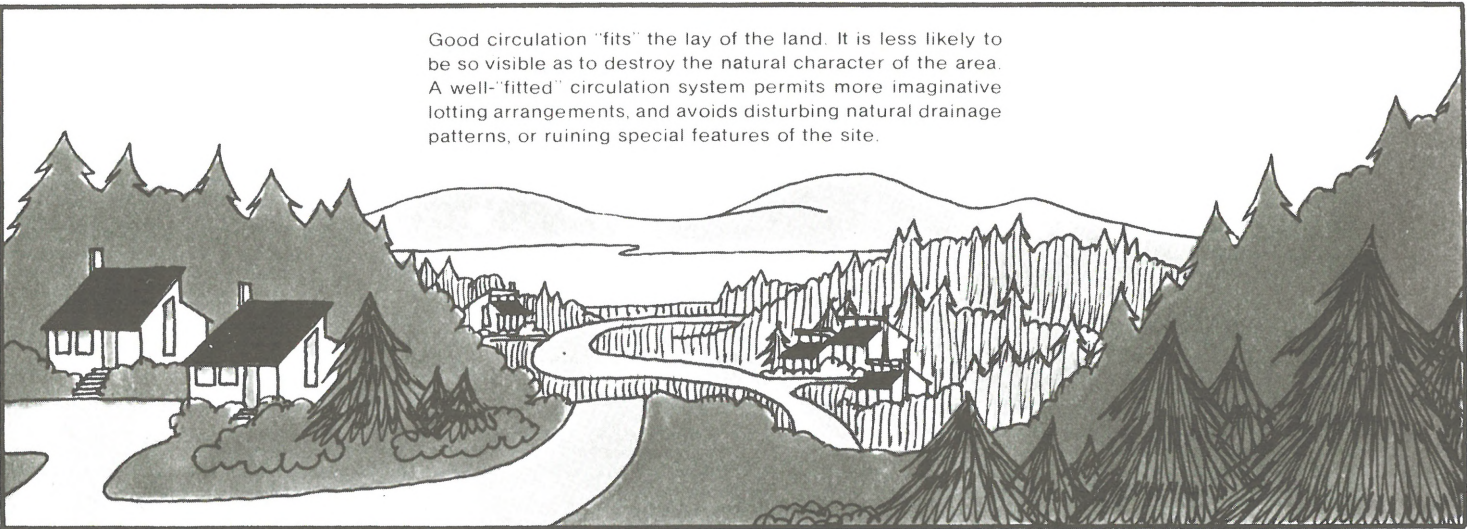
4

Design Considerations

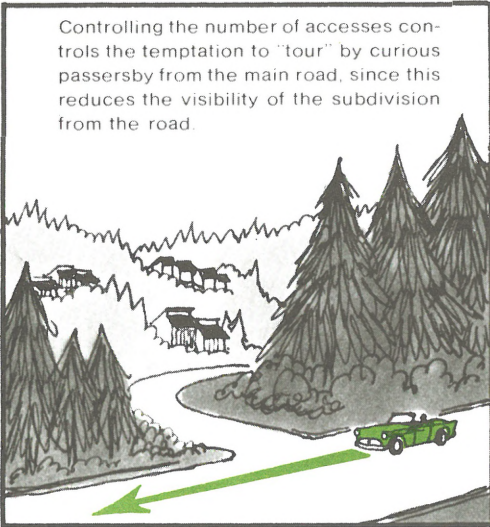
Design Considerations

Considering Access and Circulation

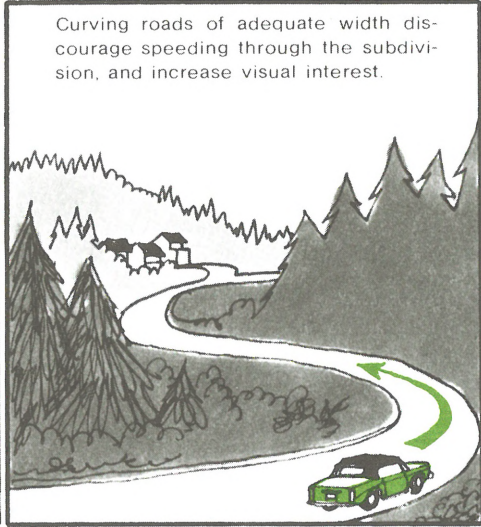
Good circulation "fits" the lay of the land. It is less likely to be so visible as to destroy the natural character of the area. A well-"fitted" circulation system permits more imaginative lotting arrangements, and avoids disturbing natural drainage patterns, or ruining special features of the site.



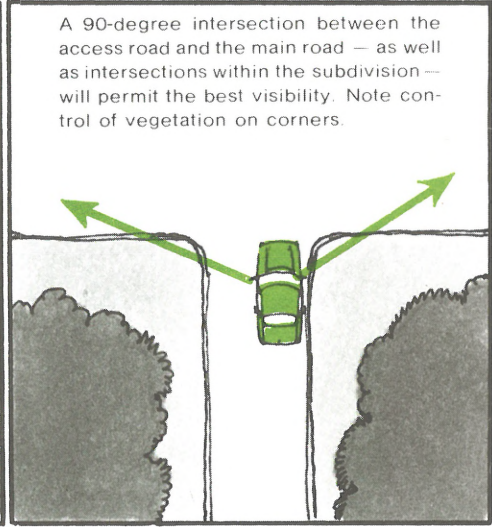
Controlling the number of accesses controls the temptation to "tour" by curious passersby from the main road, since this reduces the visibility of the subdivision from the road.



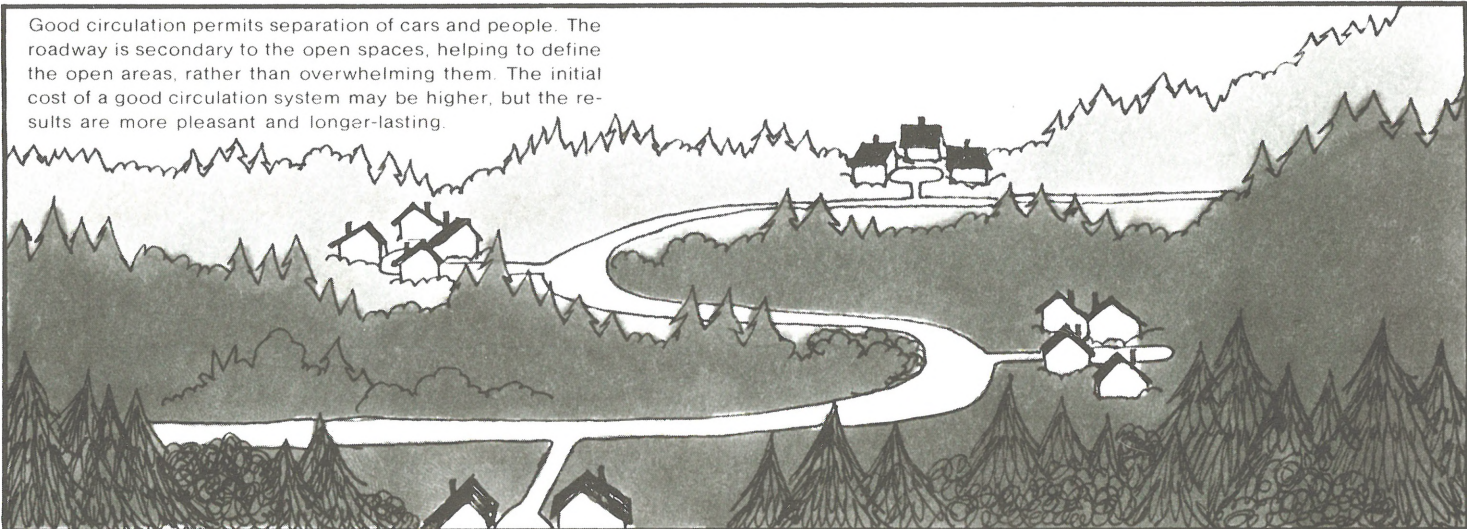
Curving roads of adequate width discourage speeding through the subdivision, and increase visual interest.



A 90-degree intersection between the access road and the main road — as well as intersections within the subdivision — will permit the best visibility. Note control of vegetation on corners.



Good circulation permits separation of cars and people. The roadway is secondary to the open spaces, helping to define the open areas, rather than overwhelming them. The initial cost of a good circulation system may be higher, but the results are more pleasant and longer-lasting.

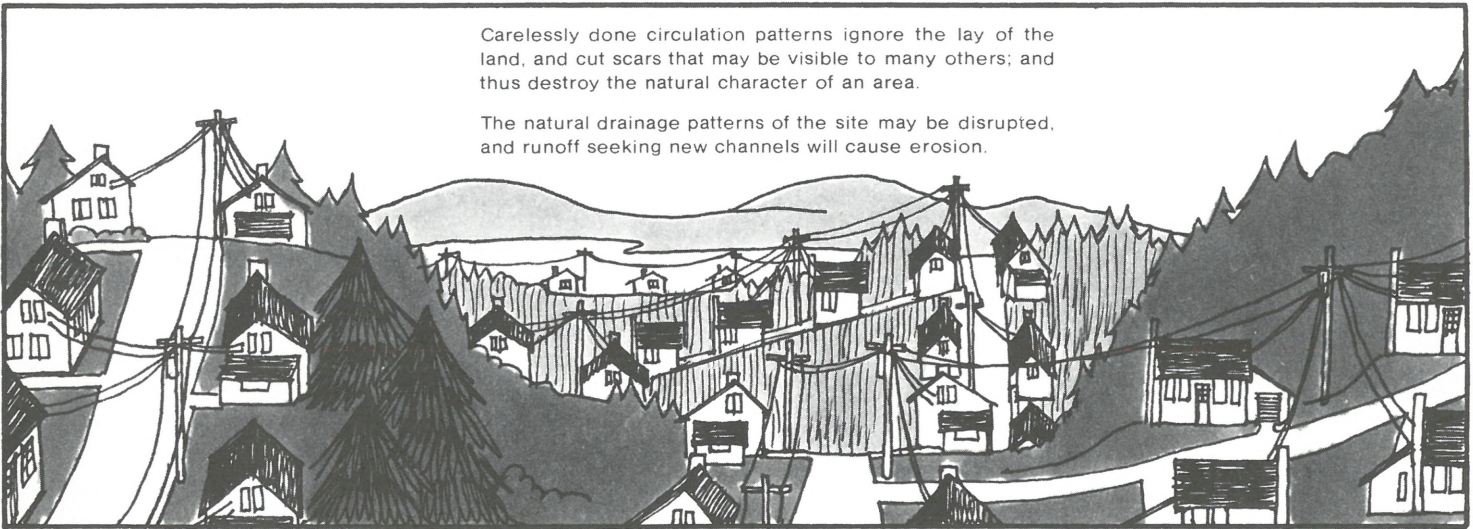


Design Considerations

Disregarding Access and Circulation

Carelessly done circulation patterns ignore the lay of the land, and cut scars that may be visible to many others; and thus destroy the natural character of an area.

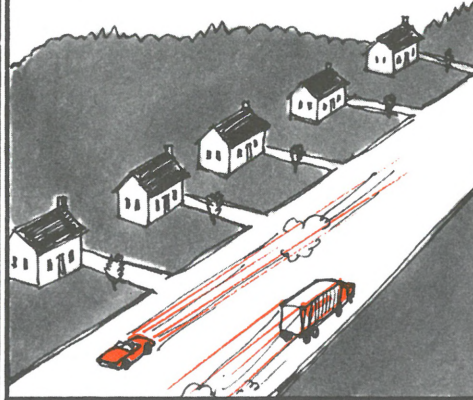
The natural drainage patterns of the site may be disrupted, and runoff seeking new channels will cause erosion.



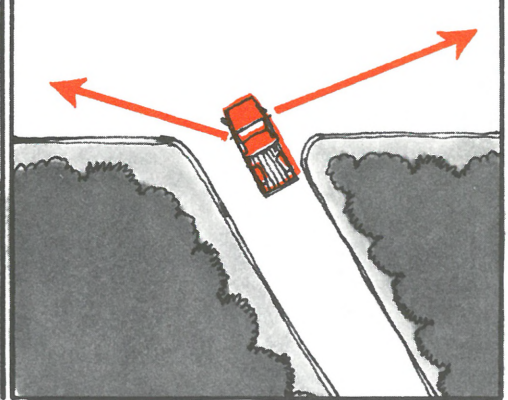
Too many access points encourage penetration of the subdivision by passersby. More confused traffic may also be expected.



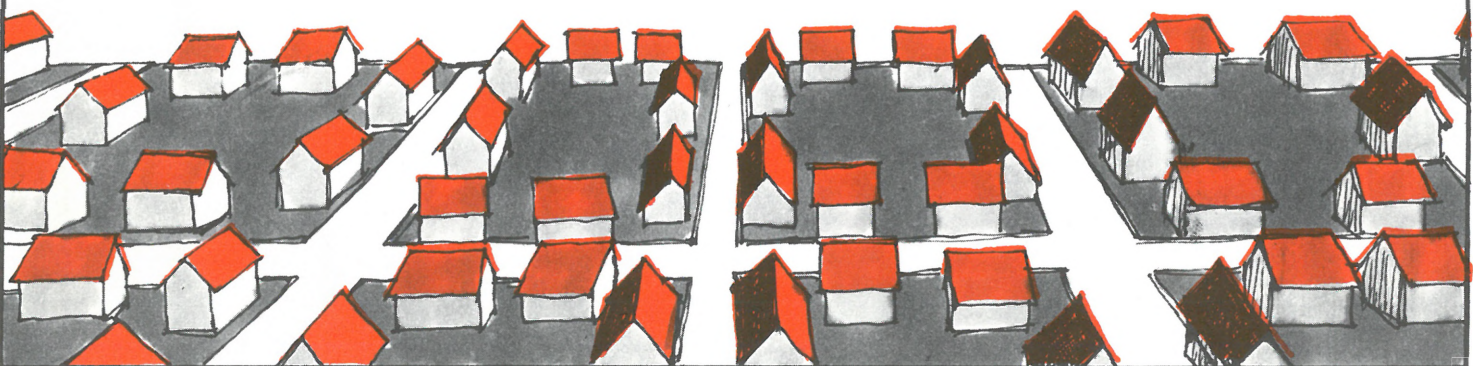
Straight, too-wide roads encourage speeding and decrease the amount of variety (visual interest) viewed from a car.



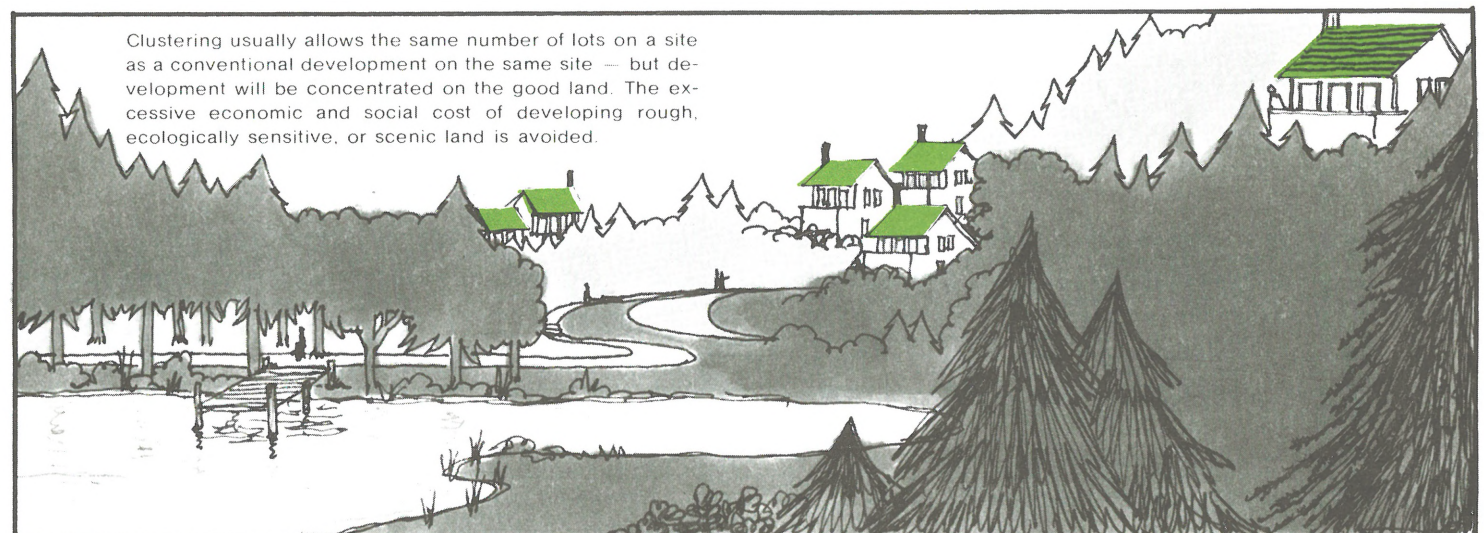
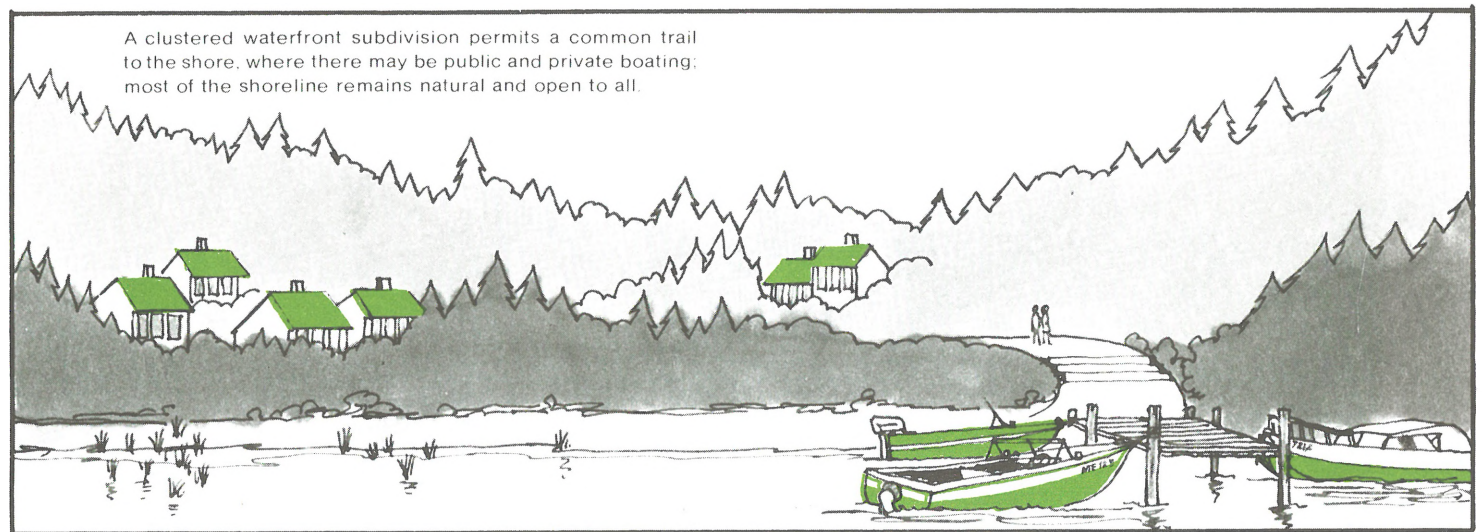
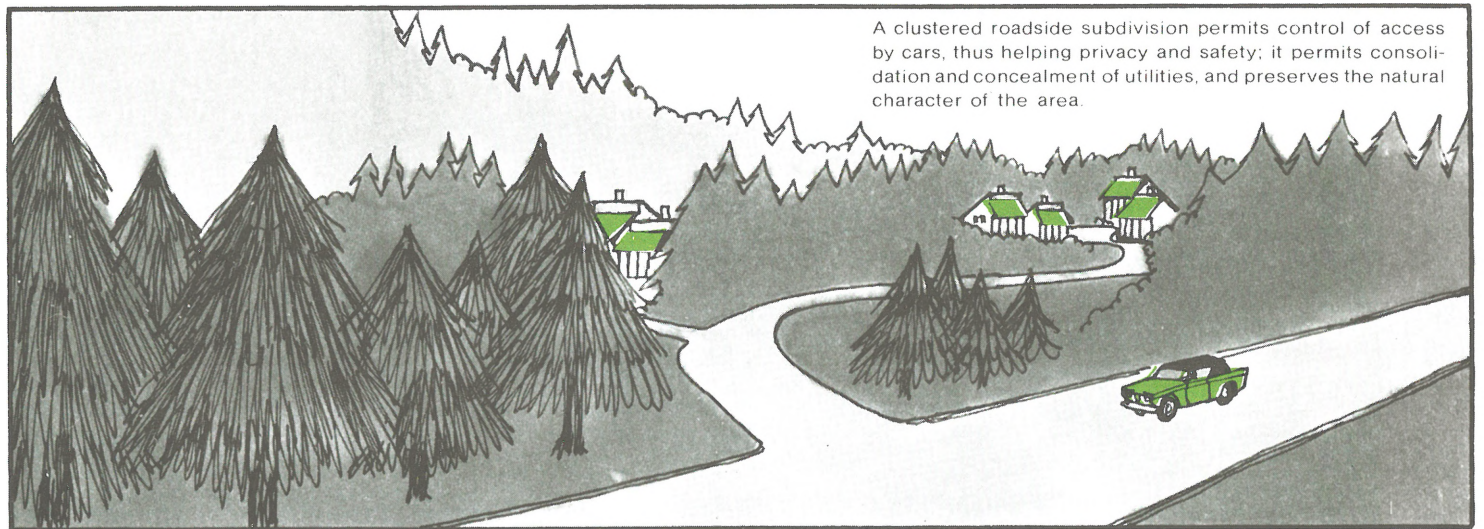
Intersections at an angle reduce two-way visibility, and force cars into the intersection to see both ways clearly.



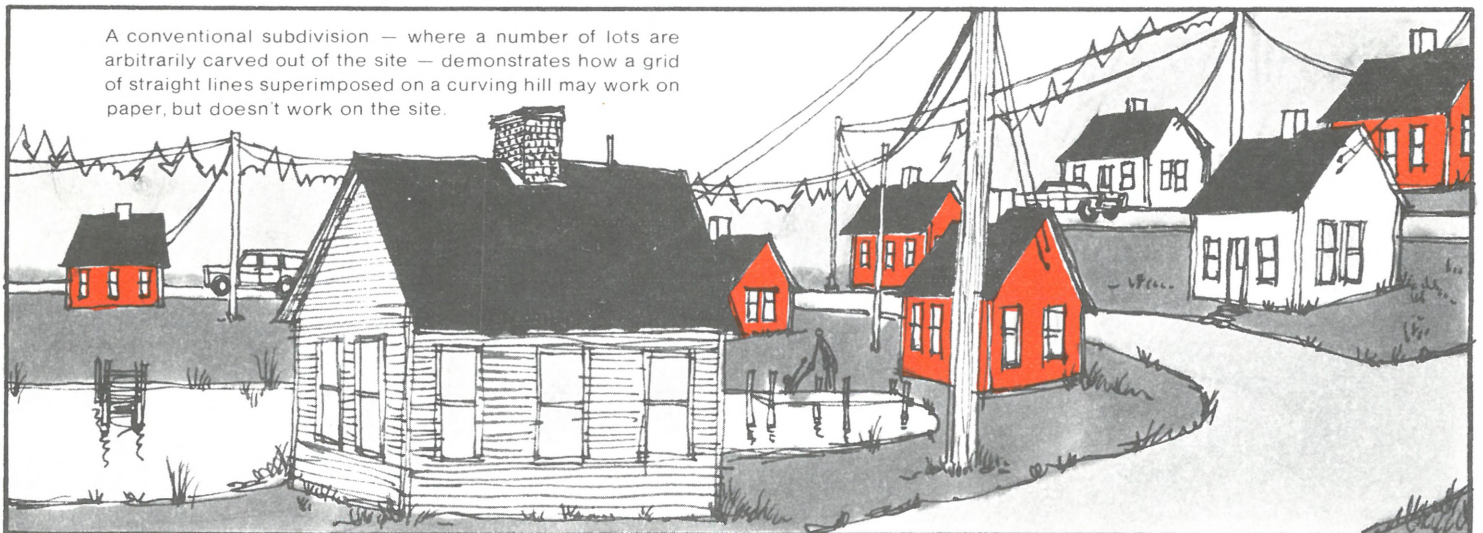
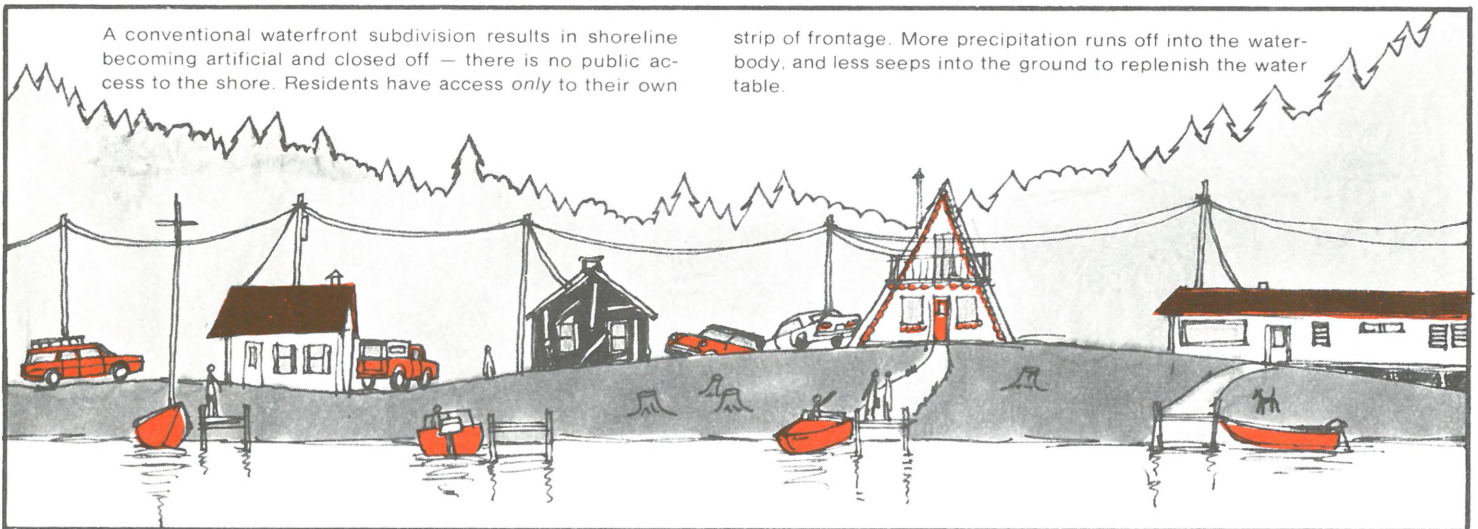
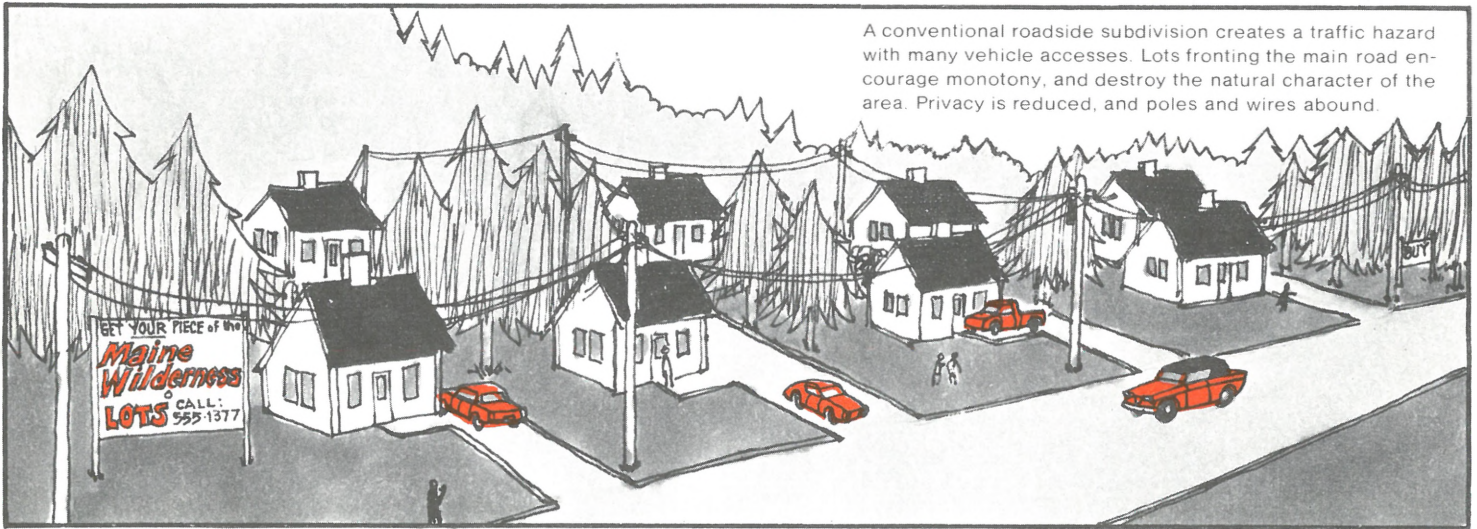
A conventional circulation pattern tends to make cars and asphalt more important than people and green, open space. Conventional, suburbs-style circulation patterns may be easier and cheaper to begin with, but long-term costs in safety, loss of site character and appeal are high.



Good Lotting Arrangements

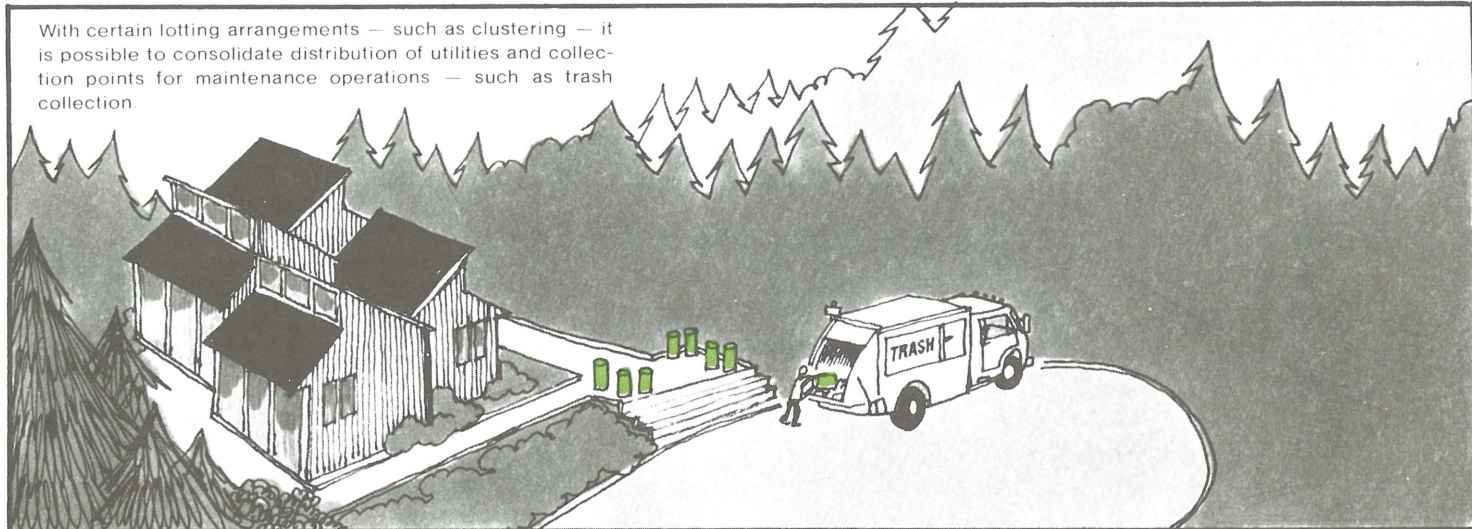
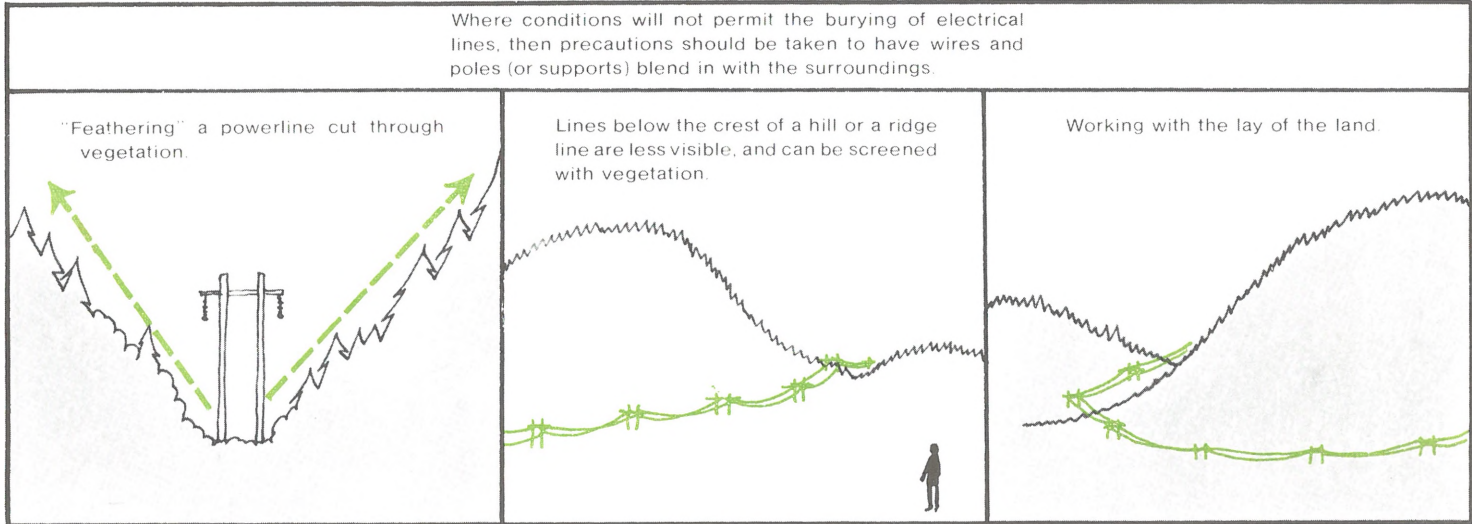
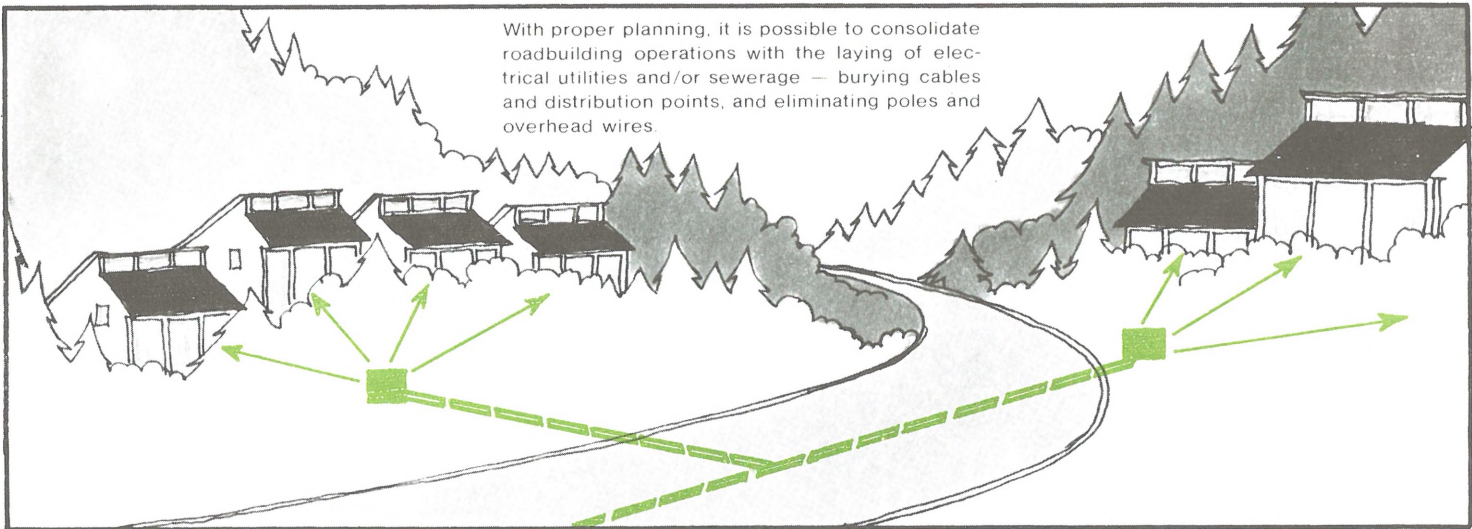


Conventional Lotting Arrangements

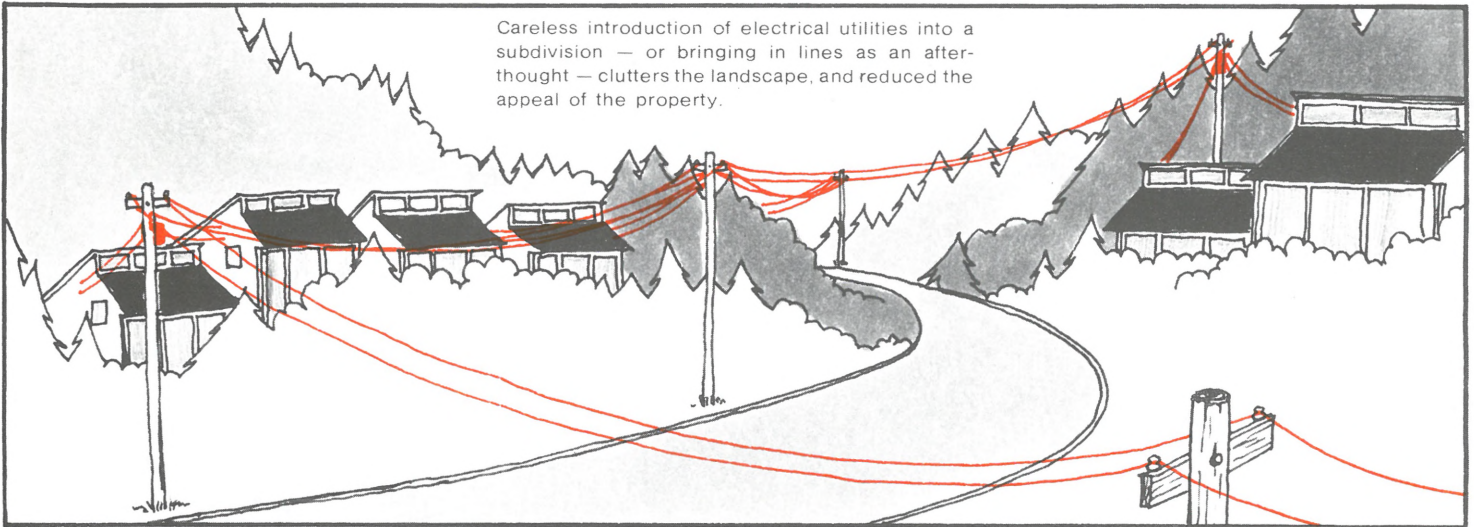


Design Considerations

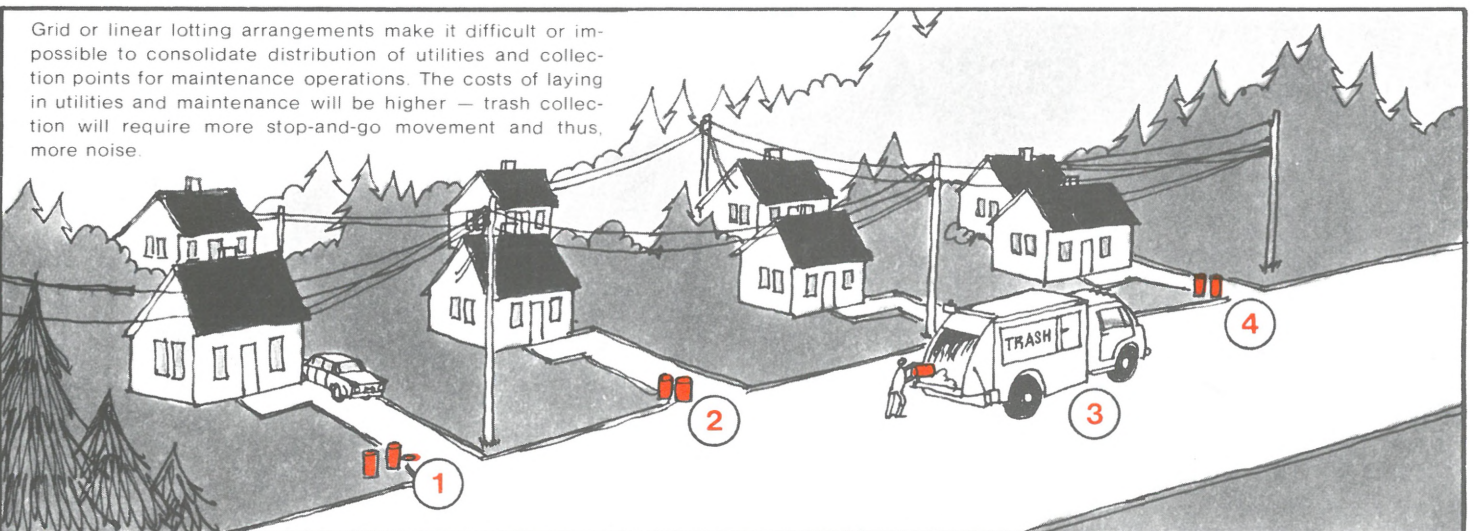
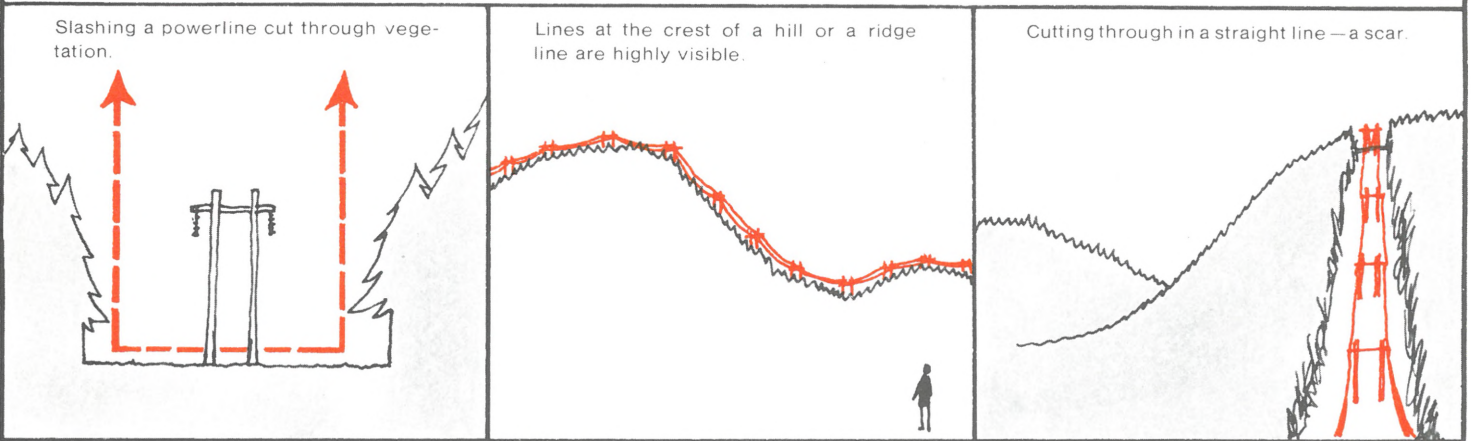
Considering the Presence of Utilities



Disregarding the Presence of Utilities



Careless powerline placement can be damaging to the visual quality of the site and the surrounding area.

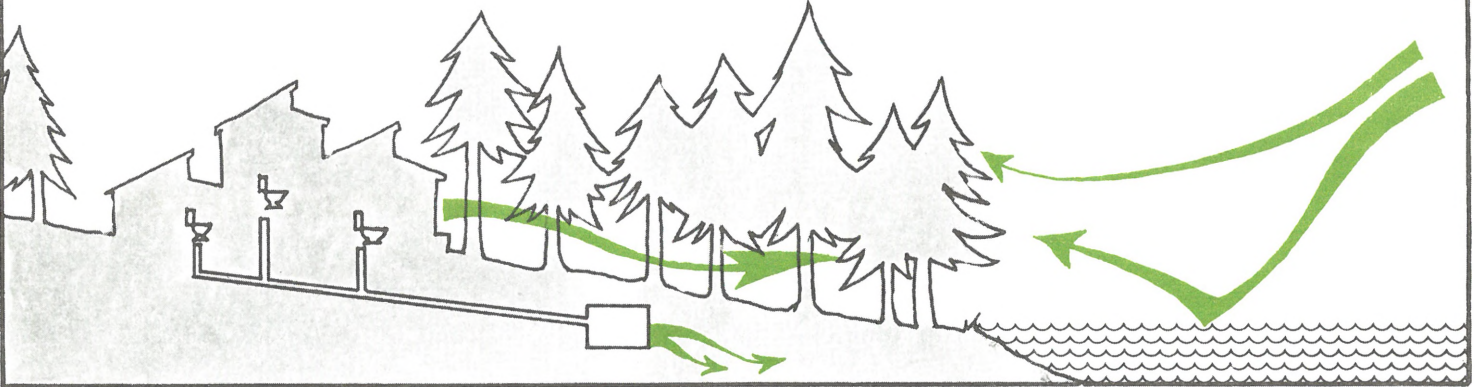


Design Considerations

Considering Setbacks and Buffers

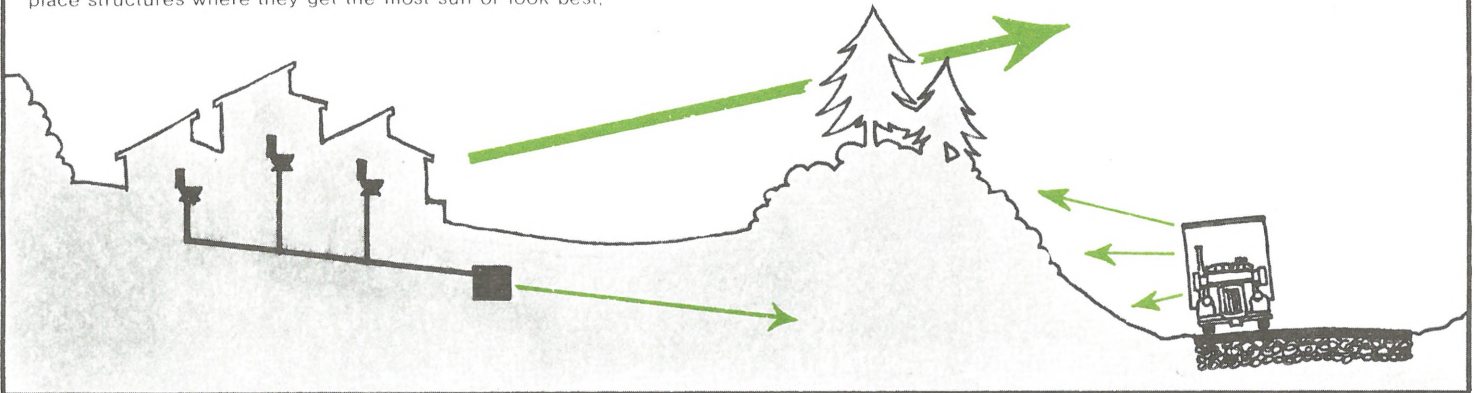
Setback from water, a subdivision has numerous advantages: (1) it helps insure adequate purification of septic system runoff, (2) preserves the natural edge of the waterbody, (3) preserves privacy, (4) makes the view of the water more in-

teresting (the best view is not always the full, open view), (5) natural water's edge vegetation reduces wind and glare off the water, (6) flood hazard is reduced.

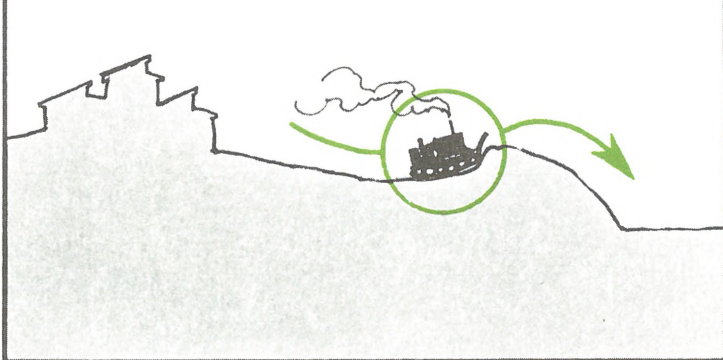


Setback from roadways, a subdivision has such advantages as: (1) privacy, (2) being buffered from road noises — especially if the setback is vegetated, (3) helps insure proper purification of septic system runoff, (4) permits freedom to place structures where they get the most sun or look best,

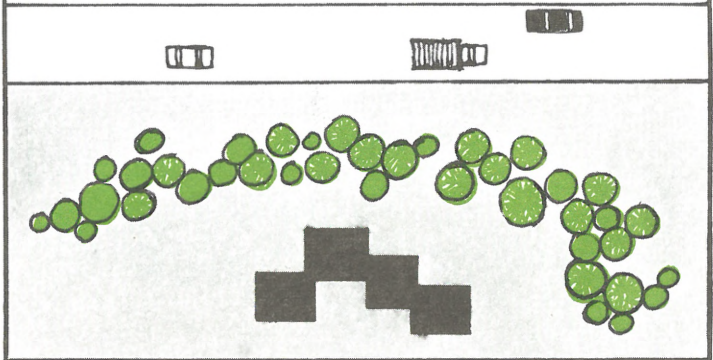
(5) if buildings are downhill from road, it insures filtration of contaminants from the roadway, (6) provides safety for pedestrians and prevents an accident from landing in a livingroom.



Landform buffers may occur naturally, or they may be "sculptured" by careful earthmoving. These earth buffers are called *berms*.

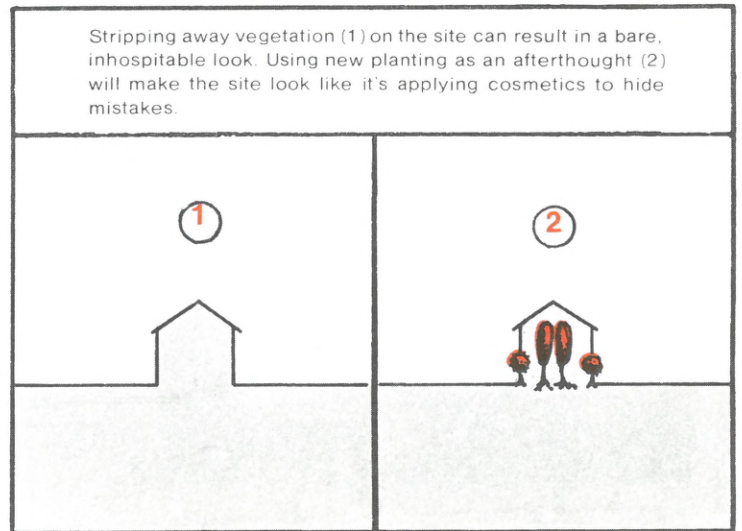
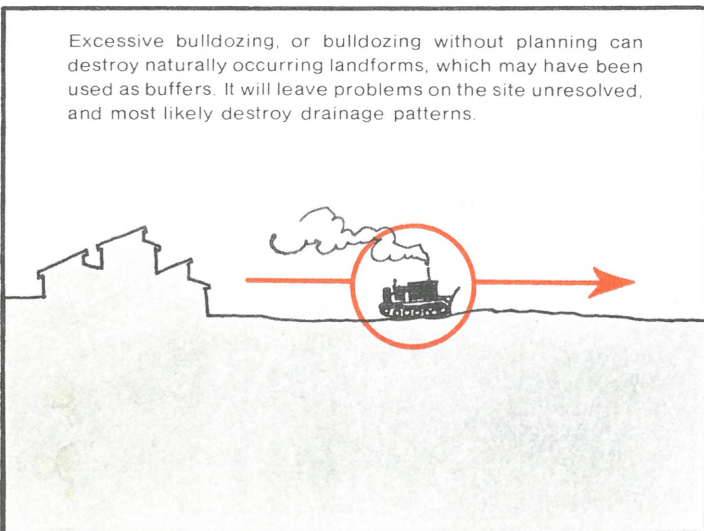
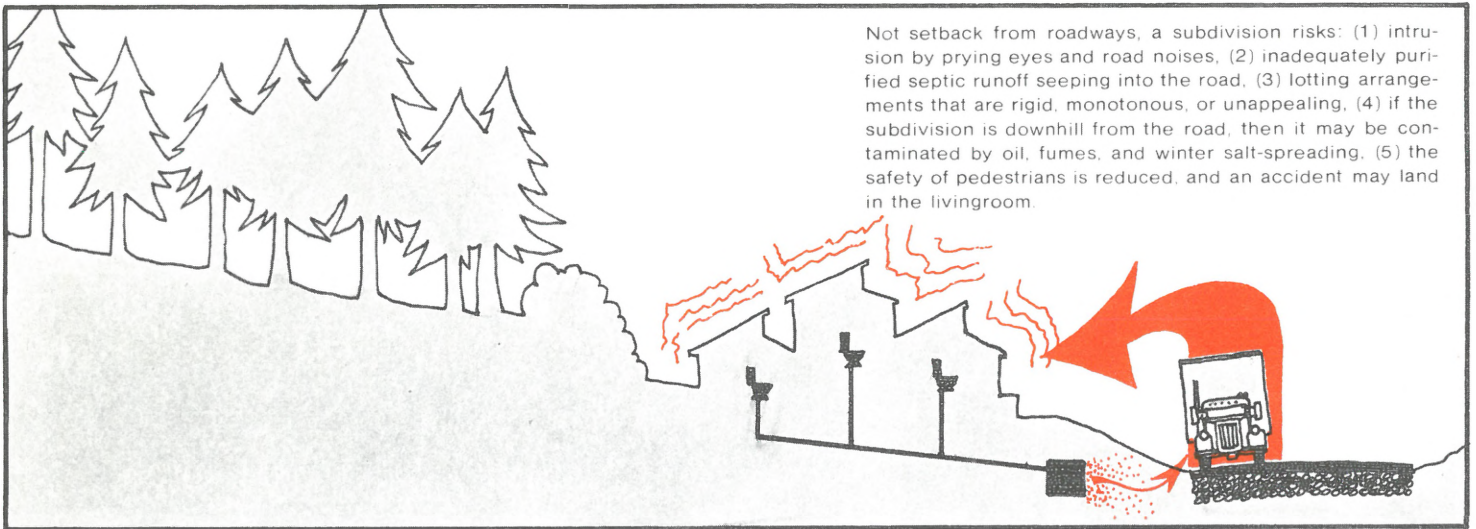
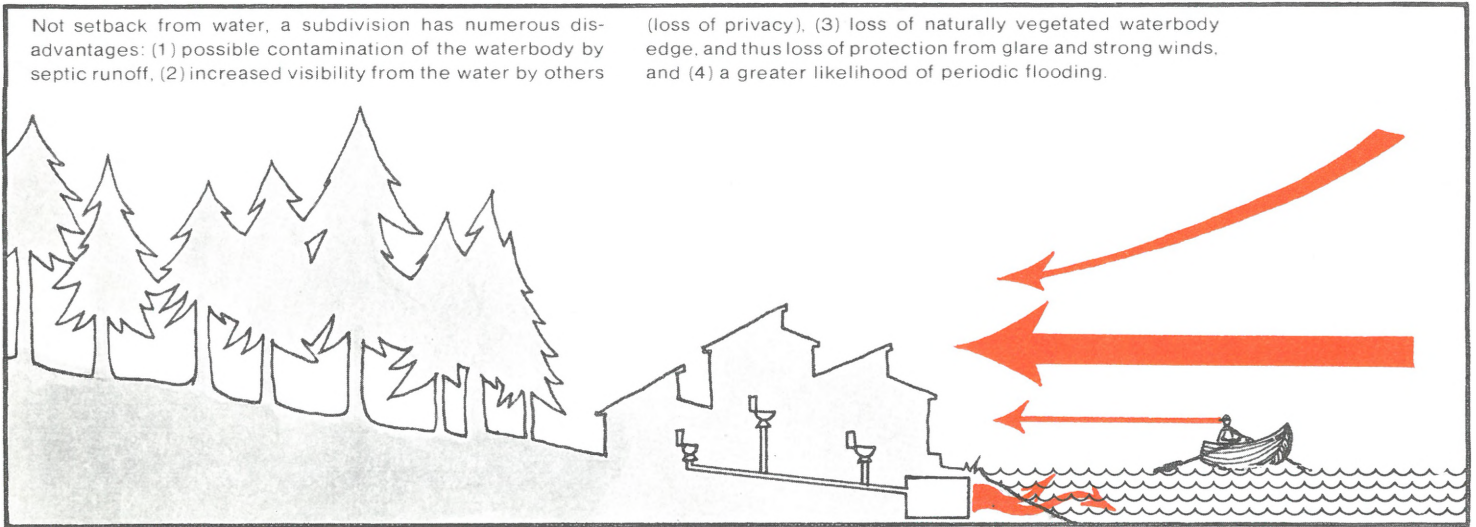


Vegetation buffers may occur naturally, or they may be planted as part of the development plan. Evergreen foliage is generally better than deciduous foliage as a noise/visual filter, since it lasts year-round.



Design Considerations

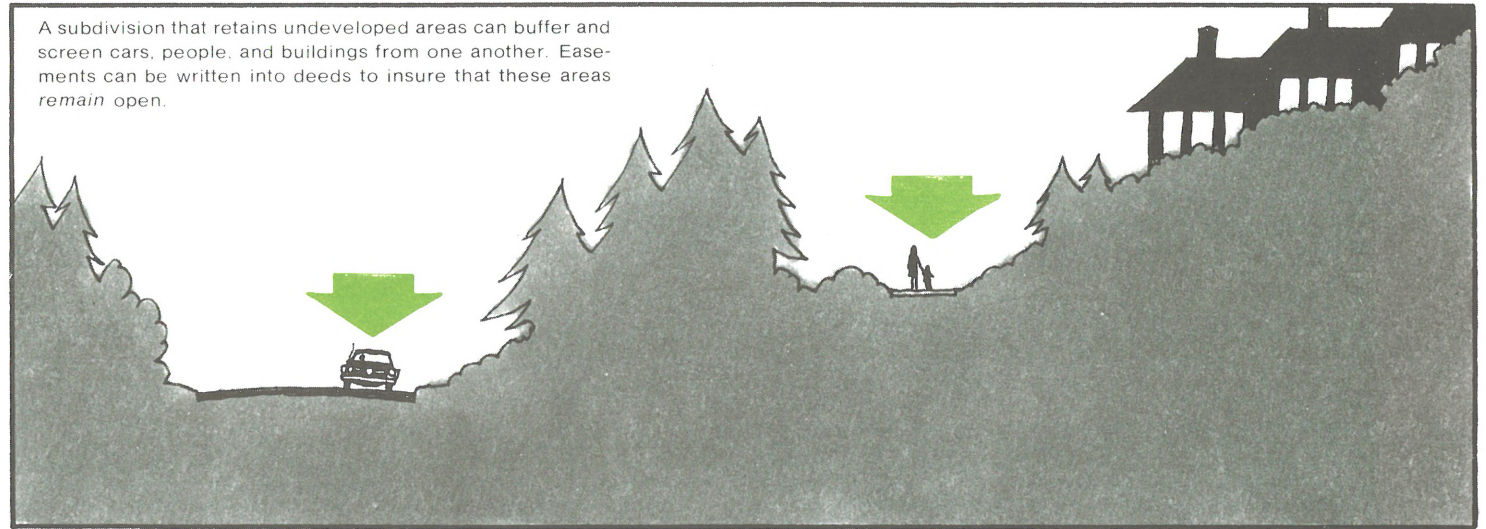
Disregarding Setbacks and Buffers



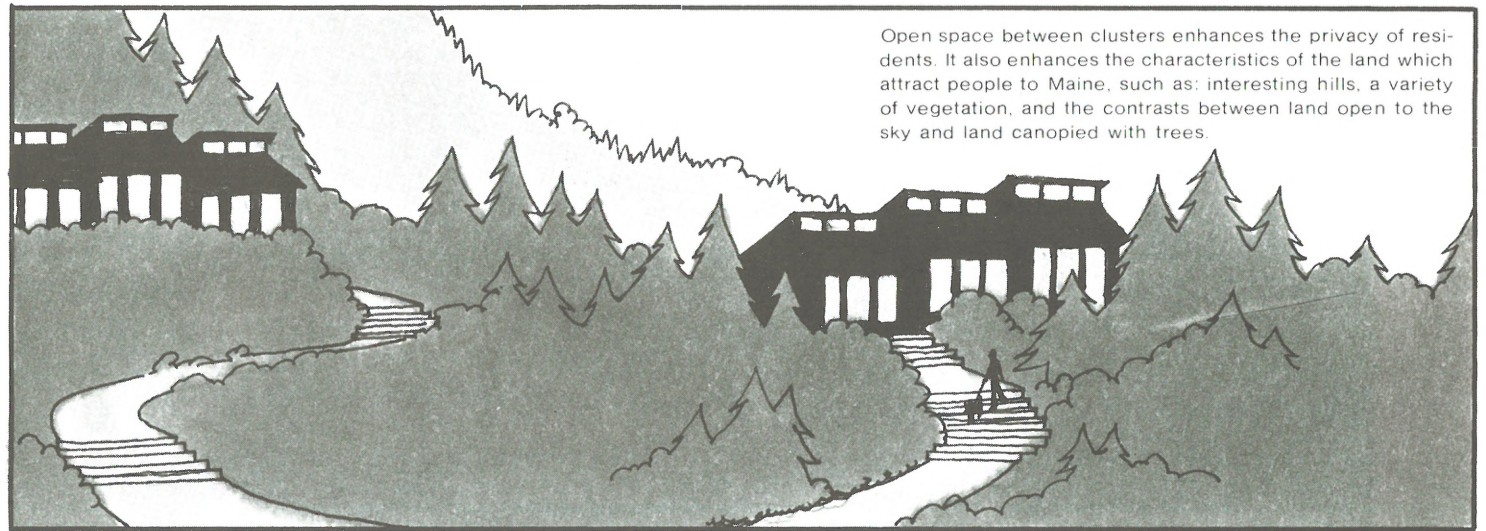
Design Considerations

Considering Open Space / Common Areas

A subdivision that retains undeveloped areas can buffer and screen cars, people, and buildings from one another. Easements can be written into deeds to insure that these areas remain open.

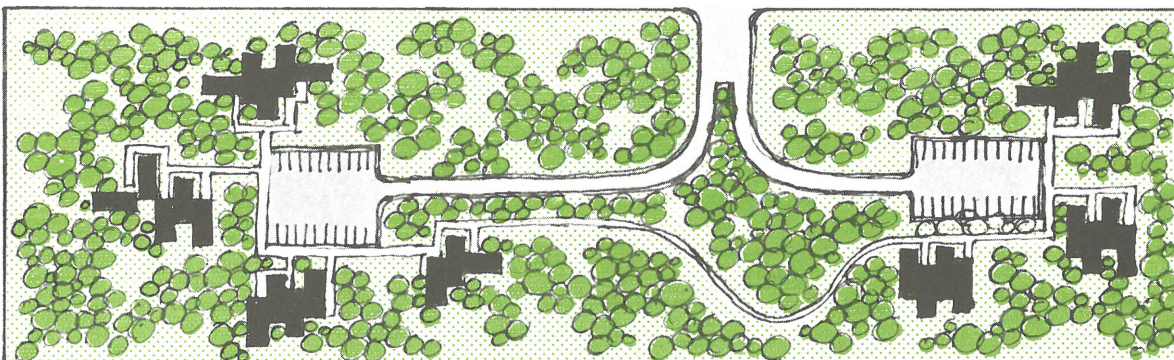


Open space between clusters enhances the privacy of residents. It also enhances the characteristics of the land which attract people to Maine, such as: interesting hills, a variety of vegetation, and the contrasts between land open to the sky and land canopied with trees.



Providing for open space helps insure that if additional development takes place in the future, that adequate open space will still be retained — permitting continued space for recreation and outdoor activities — and the area will not become wall-to-wall buildings.

This plan view shows how the open space forms a "green network" that ties together the development.



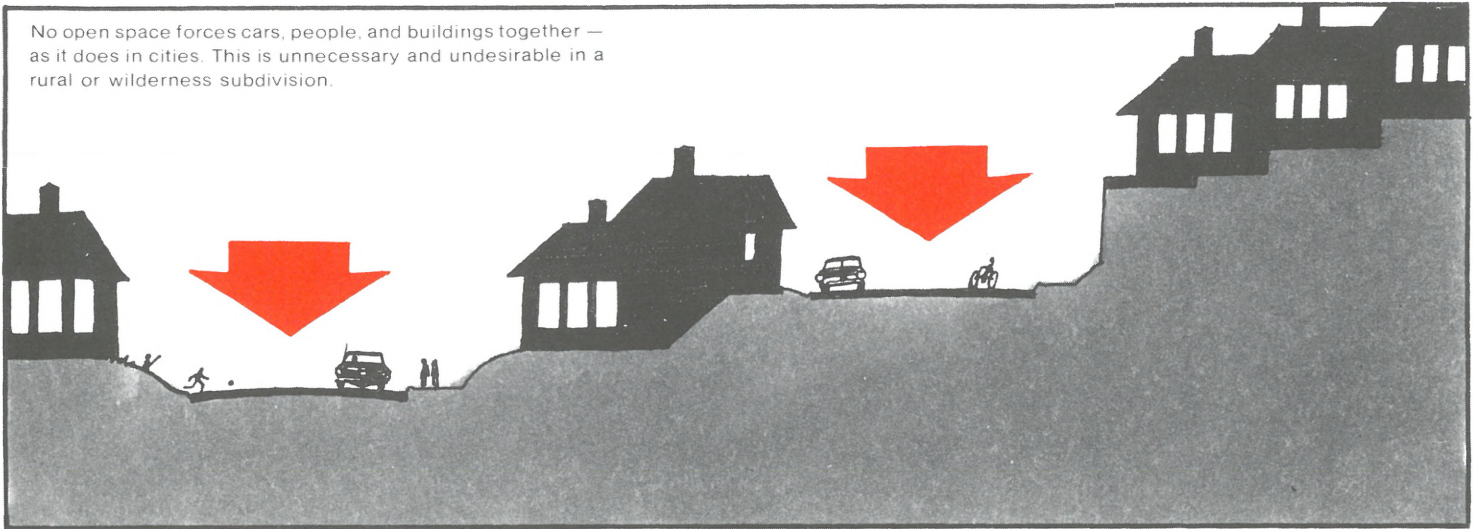
Key

- Open space
- Buildings
- Trees
- Paths
- Paving

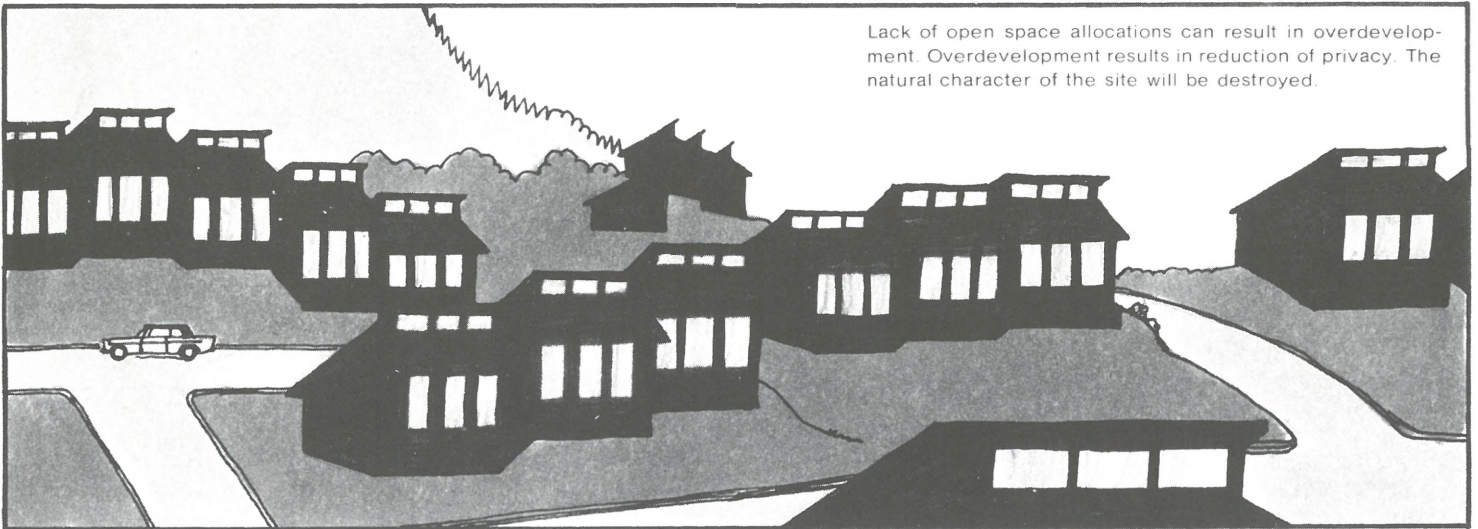
Design Considerations

Disregarding Open Space / Common Areas

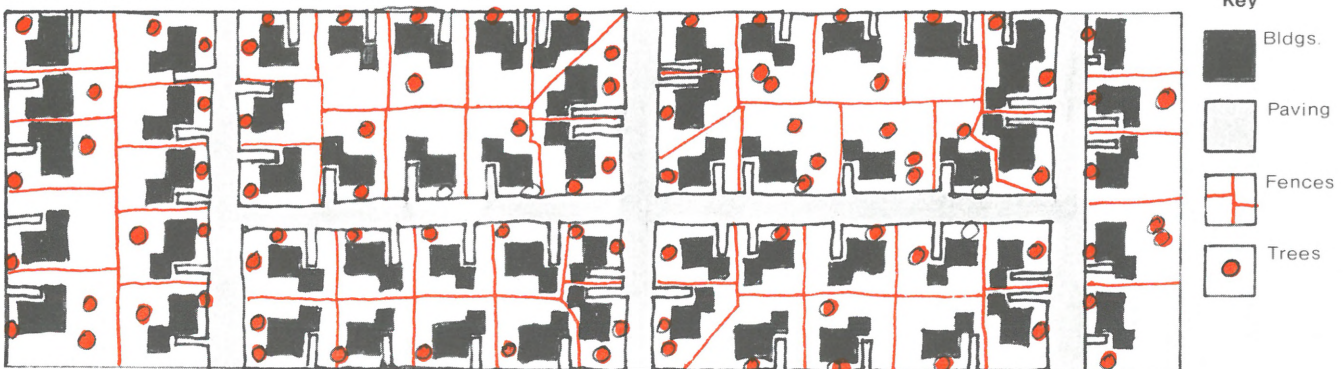
No open space forces cars, people, and buildings together — as it does in cities. This is unnecessary and undesirable in a rural or wilderness subdivision.



Lack of open space allocations can result in overdevelopment. Overdevelopment results in reduction of privacy. The natural character of the site will be destroyed.



This plan view of a subdivision shows a monotonous saturation with buildings. The "network" that ties the development together is no longer green and living, but hard pavement and automobiles. A resident will feel as though a suburb — rather than the Maine wilderness — surrounds him.



5

The Site Plan

Proposed Subdivision of Property of John Smith Elk Pond, Maine (T47R29)











Site Plan — 8

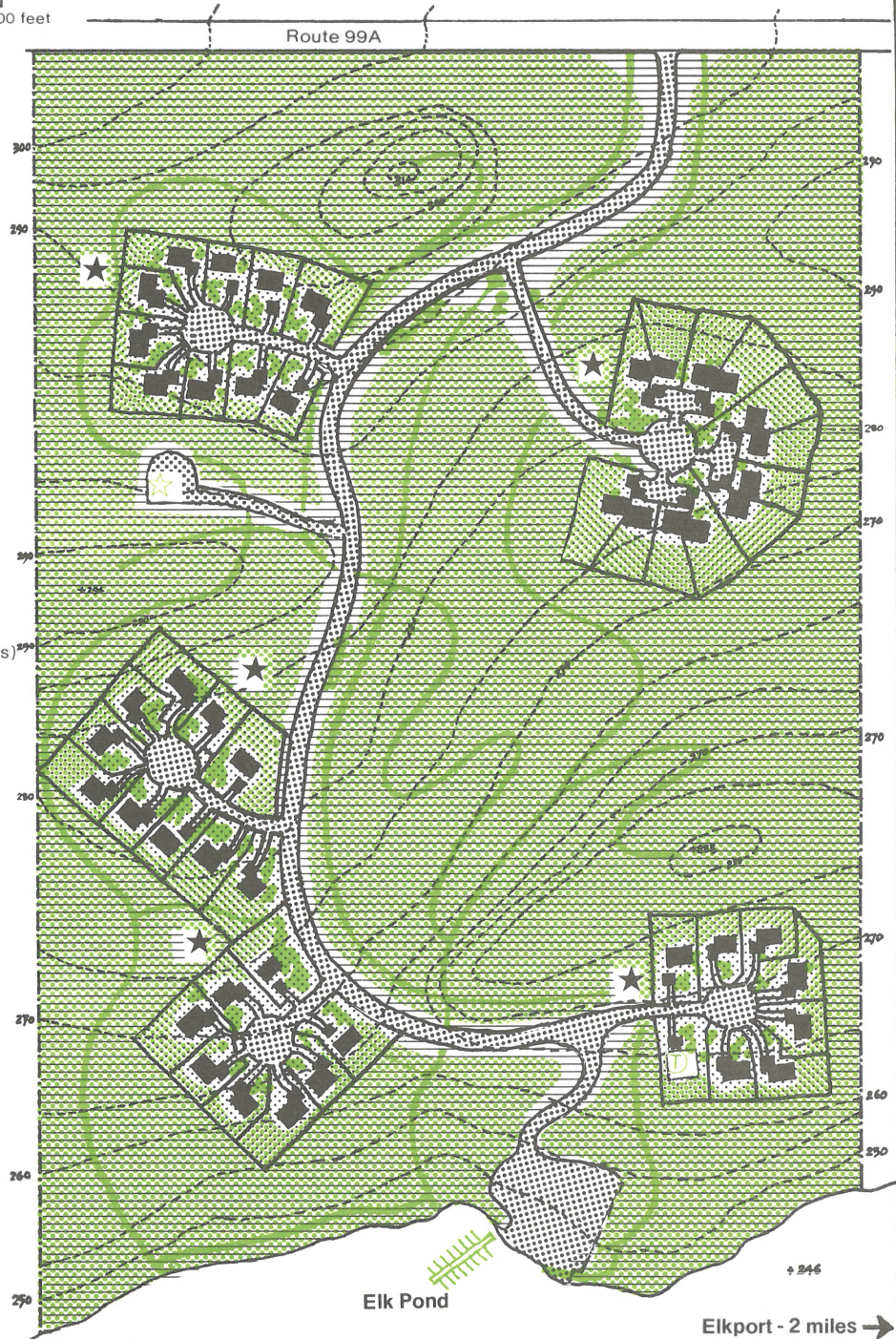
Plan by Nyssa Sylvatica June 4, 1973



Contours: 5 feet
Source: Previous maps

Key

-  Road construction
-  New lots
-  New buildings (residential)
-  Common (open) space
-  Pathways (Moderate slopes maintained as firelanes)
-  Existing vegetation to remain
-  Areas to be cleared
-  New planting
-  Maintenance
-  Community landing
-  Wells
-  Central septic treatment facility



Note: Electric and telephone lines will be buried in roadbed

The Site Plan

The site plan should be attempted only after gaining thorough working knowledge of the land, and giving careful consideration to design factors, such as lotting arrangement, access, and setback — as outlined in the preceding pages.

This working knowledge, in addition to pre-filing conferences with the L.U.R.C. staff, can help avoid cause a subdivision permit application to be delayed or rejected.

Using a base map which depicts all of the existing features of the site (see “Preparing Maps”), a typical site plan should indicate all of the changes envisioned, including (but not limited to):

Building locations.

Water source locations (wells, springs, etc.)

Septic systems or septic treatment facility location(s).

Paving and roadbuilding—including bridges and culverts.

Changes in vegetation, including areas where extensive cutting and/or pruning will occur.

Pathway locations.

Type of structure(s), foundation(s), and building materials to be used.

Relationship (distances) between construction activities and neighboring features.

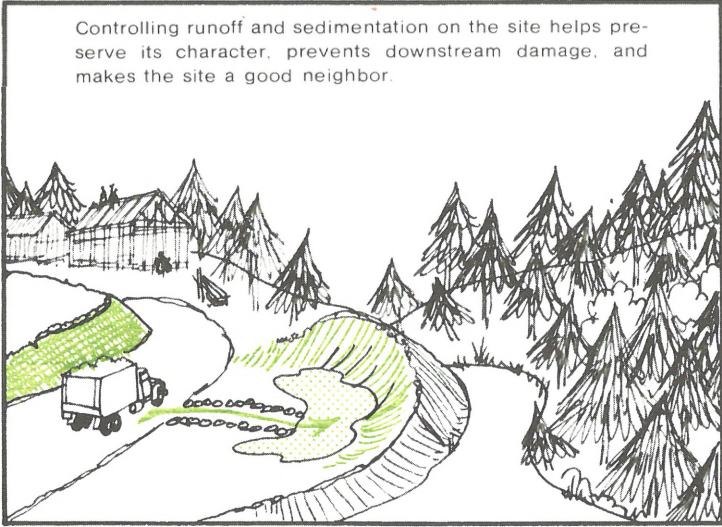
6

Further Considerations

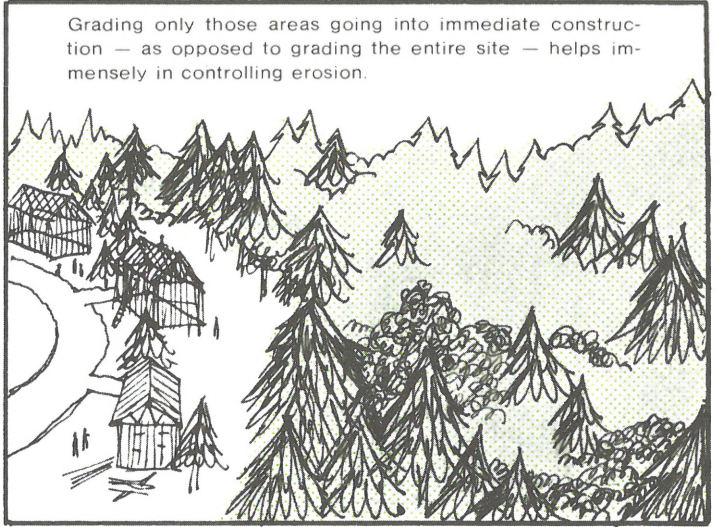
Further Considerations

Controlling Construction Damage to the Site

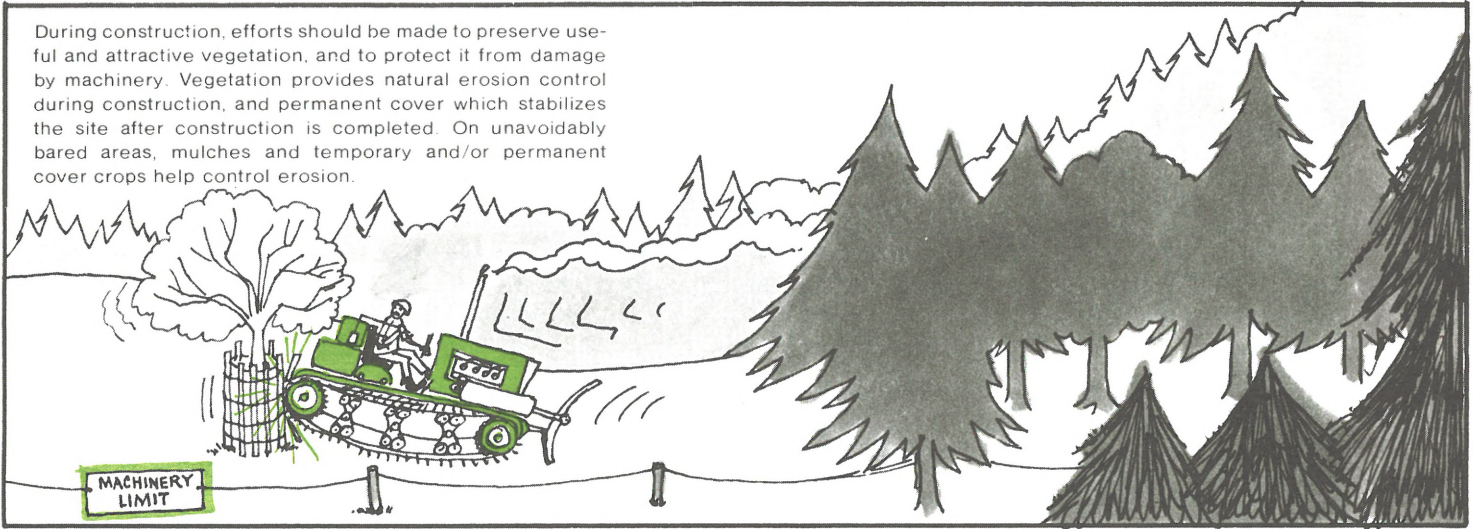
Controlling runoff and sedimentation on the site helps preserve its character, prevents downstream damage, and makes the site a good neighbor.



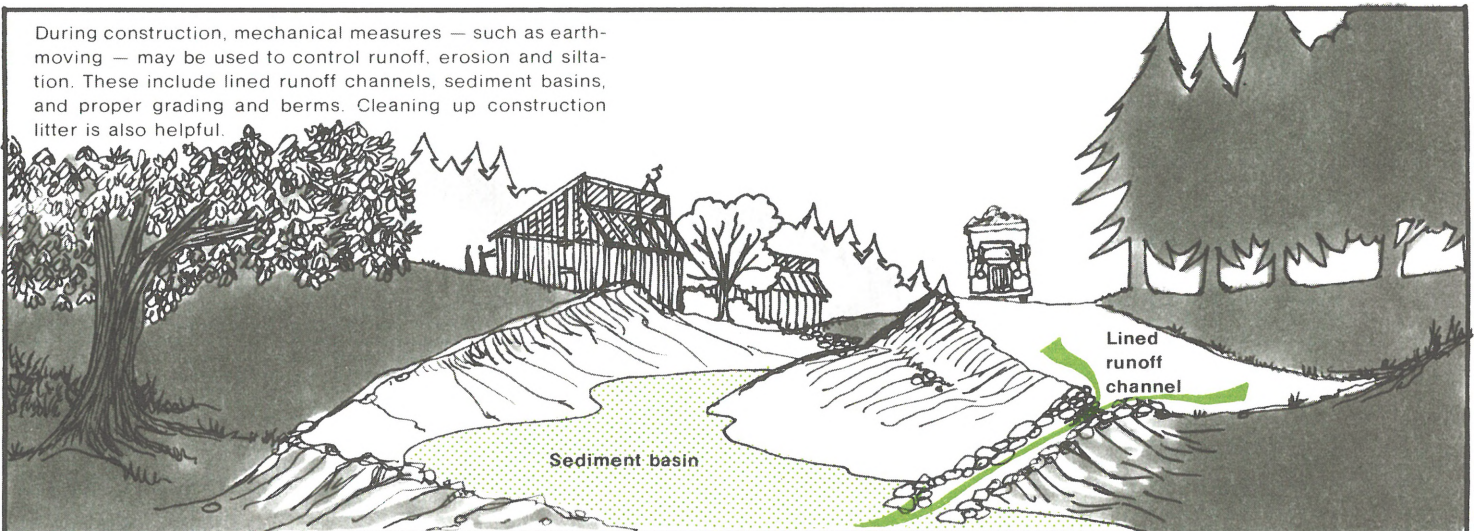
Grading only those areas going into immediate construction — as opposed to grading the entire site — helps immensely in controlling erosion.



During construction, efforts should be made to preserve useful and attractive vegetation, and to protect it from damage by machinery. Vegetation provides natural erosion control during construction, and permanent cover which stabilizes the site after construction is completed. On unavoidably bared areas, mulches and temporary and/or permanent cover crops help control erosion.



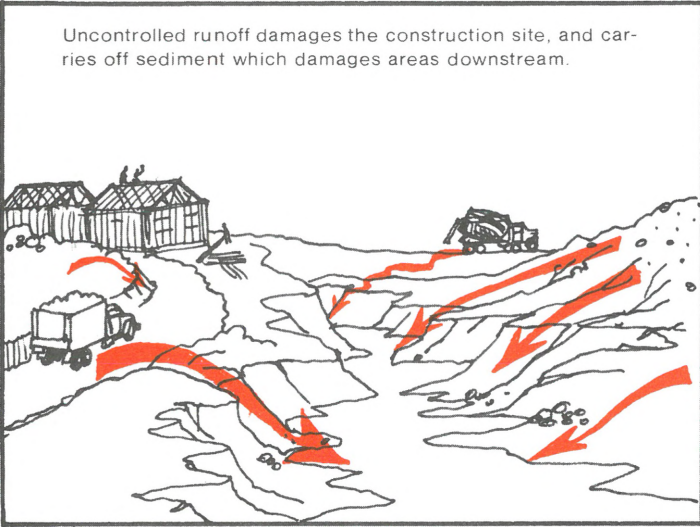
During construction, mechanical measures — such as earthmoving — may be used to control runoff, erosion and siltation. These include lined runoff channels, sediment basins, and proper grading and berms. Cleaning up construction litter is also helpful.



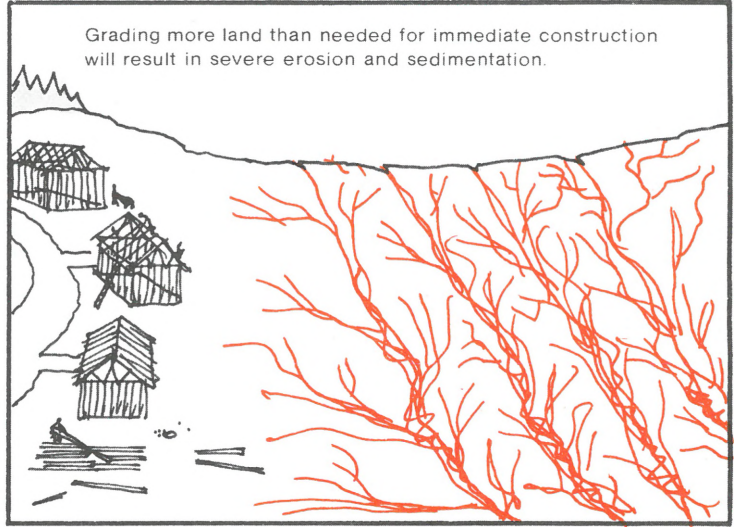
Further Considerations

Careless Construction on the Site

Uncontrolled runoff damages the construction site, and carries off sediment which damages areas downstream.

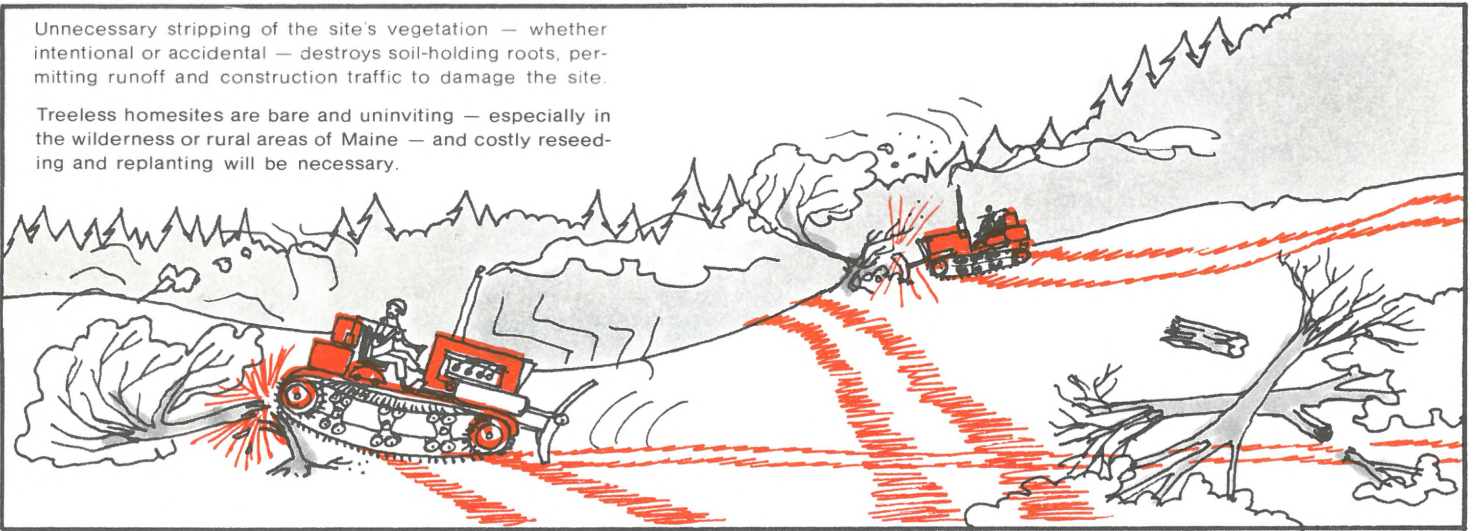


Grading more land than needed for immediate construction will result in severe erosion and sedimentation.



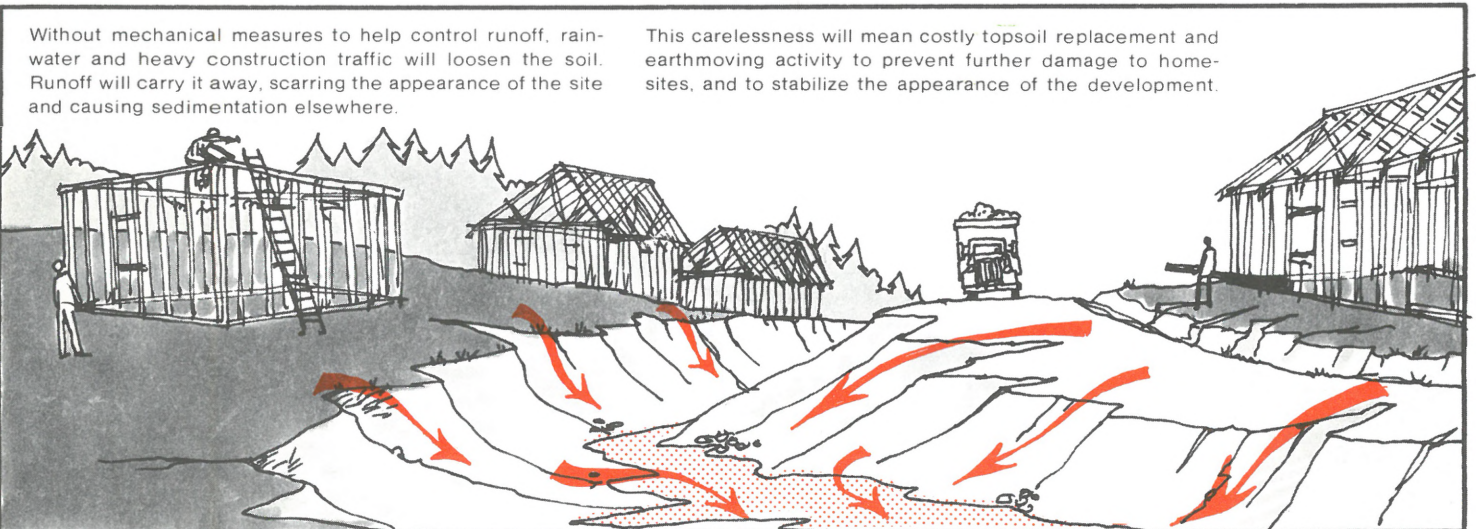
Unnecessary stripping of the site's vegetation — whether intentional or accidental — destroys soil-holding roots, permitting runoff and construction traffic to damage the site.

Treeless homesites are bare and uninviting — especially in the wilderness or rural areas of Maine — and costly reseed-ing and replanting will be necessary.



Without mechanical measures to help control runoff, rain-water and heavy construction traffic will loosen the soil. Runoff will carry it away, scarring the appearance of the site and causing sedimentation elsewhere.

This carelessness will mean costly topsoil replacement and earthmoving activity to prevent further damage to homesites, and to stabilize the appearance of the development.



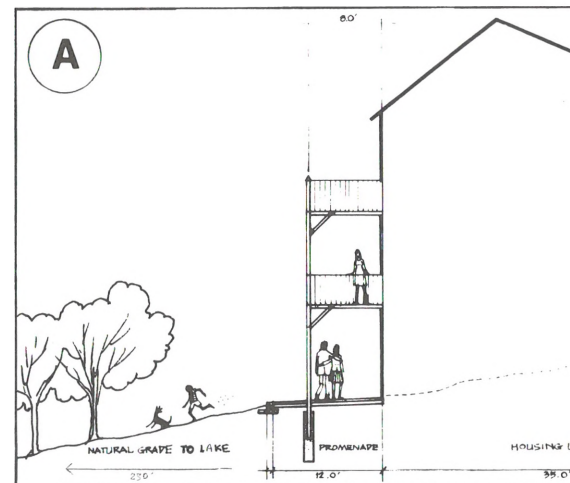
Further Considerations

Covenants and Controls

Covenants and controls may be written into purchase agreements or deeds. They may be used to insure that:

- no further subdivision of the site take place by establishing *minimum lot size*.
- proper screening and buffering of buildings from roads, waterfront, and each other occur by establishing *setback requirements and open space easements*.
- common space is maintained by establishing *maintenance obligations*.
- access to common space or recreational areas remain open by establishing *easements*.
- water quality be maintained by establishing *sewage and waste water disposal requirements*.
- visual character of the subdivision be maintained by establishing *scenic easements and sign lighting controls*.
- site character be maintained by establishing *standards of quality and quantity of materials used in the construction and finish of buildings* (see pages 40-41).
- site character and quality be maintained by *limiting or prohibiting certain land uses* — such as *commercial activity or open burning*.
- fire prevention measures be instituted by *requiring spark arrestors on chimneys*.
- if a developer is subject to site development requirements — such as a sewage treatment facility — before he or she can sell lots or bring in utilities, then *lot purchasers can be required to help maintain the facility*.

Hence, one can see that covenants and controls are beneficial, since they provide a legally binding means of maintaining the desirable qualities of the subdivision long after the developer has completed construction, and sold the lots.



Further Considerations

Landowner's Associations

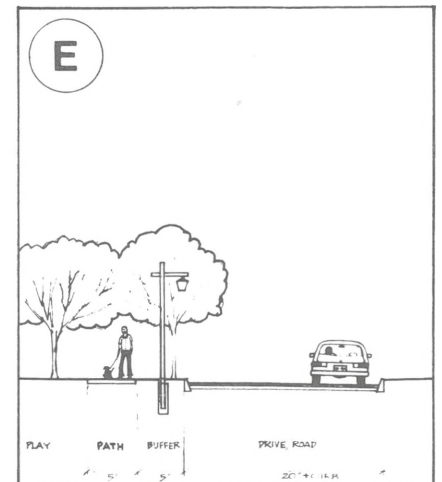
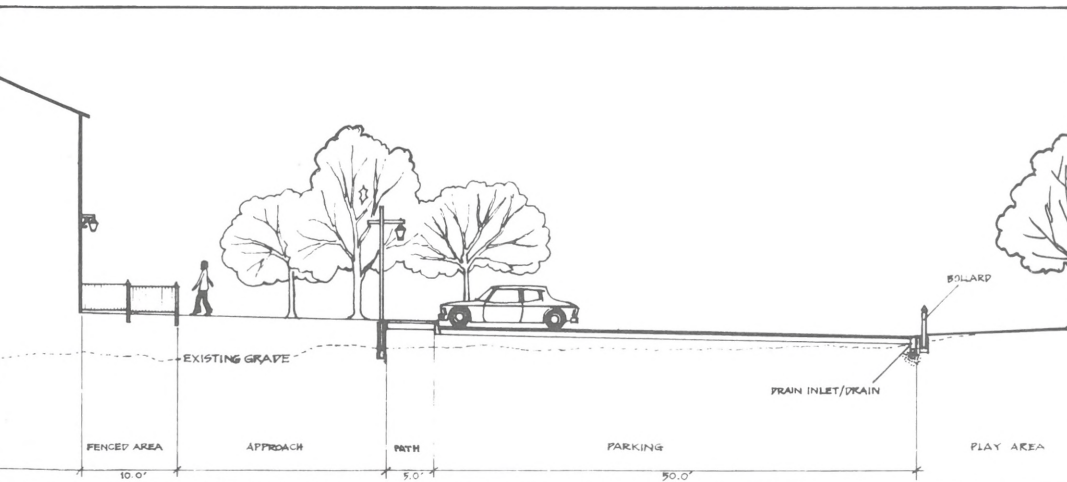
Once covenants and controls are established, a vehicle to *administer and enforce* them is urged. This vehicle is called a *Landowner's Association*, and its membership is comprised of residents of the subdivision.

The developer can initiate the formation of a Landowner's Association by writing into the property deeds that the purchaser of a lot maintain membership in the Landowner's Association. The purchaser should be informed that *all* the owners of lots in the subdivision must maintain membership, as well.

It is preferable that the legal framework of the Landowner's Association be structured so that:

- the Landowner's Association be incorporated as a non-profit organization.
- the Landowner's Association be empowered not only to *administer and enforce* the covenants and controls, but to *arbitrate disputes* which may arise between individuals concerning the covenants and controls, as well.
- a governing board — serving limited terms — may be elected from the membership to administer, enforce, and arbitrate the activities and disputes relative to the covenants and controls.
- additionally, the Landowner's Association should be empowered to assess reasonable dues to administer areas of the subdivision requiring specialized or constant maintenance, such as: picking up litter in the common, open space; pulling out the dock in the fall from the common waterfront area; maintenance of water quality and cleaning of a common swimming pool; trash collection, etc.

The Landowner's Association can serve a further purpose by forming the nucleus for social and public events in the region. It can provide a vehicle for fostering a sense of community responsibility, and thus assist in establishing community stability. In this respect, a Landowner's Association may insure — or at least enhance — property values.



7

More Help

Individuals

Site Planning and Design:

Landscape Architects.

Soils:

Civil Engineers.

Local Plumbing Inspectors.

Sanitary Engineers: State and Private.

Soils Scientists: List is available from L.U.R.C. office in Augusta. *Soils Scientists are the principal source of specific site information.*

Water Resources:

Consulting Geologists.

Consulting Hydrologists.

Consulting Sanitary and/or Civil Engineers.

Local Plumbing Inspectors.

Timber Management:

Consulting Foresters.

Plant Materials:

Landscape Architects.

Nurserymen.

Agencies

Septic Facilities / Plumbing Code:

Agricultural Extension Service, University of Maine

Local Planning Boards.

Maine Department of Health and Welfare: Water Supply Inspector, Health Engineering Department.

Maine Land Use Regulation Commission Staff, Augusta.

Maine Soil and Water Conservation Commission, Augusta and County Seats.

Soil and Water Conservation District Offices (United States Department of Agriculture, Soil Conservation Service); Located in county seats across Maine.

Town Conservation Commissions.

Soils:

Agricultural Extension Service, University of Maine.

Local Planning Boards.

Maine Land Use Regulation Commission Staff, Augusta.

Maine Soil and Water Conservation Commission District Offices and U.S. Soil and Water Conservation District Offices—usually located in the same office space or building with each other in county seats across Maine. *They are the principal sources of soils information.*

Town Conservation Commissions.

Water Resources:

The agencies listed above under "Soils".

Wildlife Habitat:

Maine Department of Inland Fish and Game, Augusta.

More Help

Books and Pamphlets

All Subjects:

Local libraries.

Construction Practices:

House and Home, McGraw-Hill (monthly magazine).

Controlling Erosion on Construction Sites, U.S.D.A. Soil Conservation Service, Information Bulletin 347, 1970.

Cluster Development, William H. White; American Conservation Association; New York, New York, 1964.

Great Ponds Act:

Protecting Your Lake, M. M. Smith, Maine Natural Resources Council, 1973.

Septic and Water Resources:

Is Your Water Safe?, prepared by the Division of Sanitary Engineering, Maine Department of Health and Welfare, 1972.

Wastewater Treatment Systems for Rural Communities, S. N. Goldstein and W. J. Moberg; Commission on Rural Water; 221 N. LaSalle St., Chicago, Ill., 60601 (\$12.50), 1973.

Private Sewage Disposal, Division of Sanitary Engineering, Maine Department of Health and Welfare, 1972.

Private Water Supplies, Division of Sanitary Engineering, Maine Department of Health and Welfare, 1964 (Reprint).

Soil Suitability Guide for Land Use Planning in Maine, U.S.D.A. Soil Conservation Service and U. of Maine (Misc. Pub. 667 - rev.), 1969.

Land Use Decision Making:

Soil Surveys in Making Land Use Decisions, Bartelli, Klingbiel, Baird, and Heddleson; Soil Science Society of America / American Society of Agronomy; Washington, D.C., 1966.

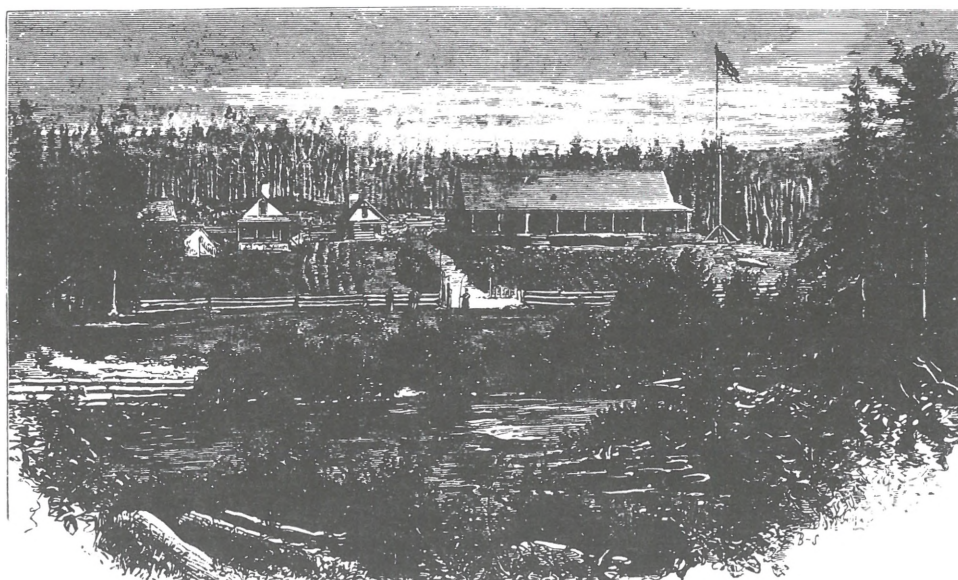
Looking at the Vineyard, Kevin Lynch, et al; Vineyard Open Land Foundation; West Tisbury, Massachusetts, 1973.

Making Rural and Urban Land Use Decisions, F. M. Schaller, D. H. Simms, R. L. Hine; Soil Conservation Society of America, 1968.

Site Planning, Kevin Lynch; M.I.T. Press, Cambridge, Mass., 1967.

Utilities:

Environmental Criteria for Electric Transmission Systems, U.S.-D.I./U.S.D.A.; U.S.G.P.O. #0-446-290, 1971. (Pamphlet/ - Booklet)



Notes

Notes



Printed Under Appropriation Number 1249-1001