

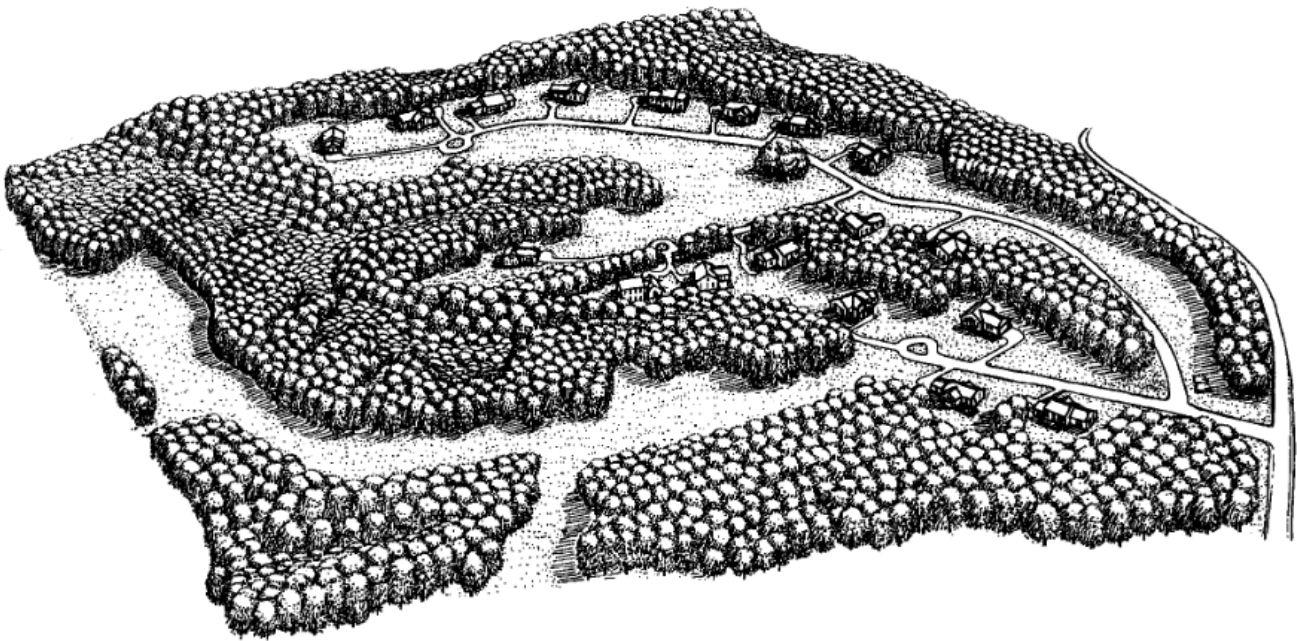


Michigan State University Extension
Land Use Series

Better Designs for Development in Michigan; putting conservation into local land use regulations

Original version: 1999

Last revised: 1999



Local communities can take control of their destinies so that conservation goals will be achieved simultaneously with development objectives, in a manner that is fair to all parties concerned. This “bird’s-eye” perspective shows a new way of designing residential developments which differ dramatically from the current land consumptive approach typical of most Michigan communities.

*“Thirty seven million acres is
all the Michigan we will ever have”*
William G. Milliken

This is a fact sheet developed by experts on the topic(s) covered within MSU Extension. Its intent and use is to assist Michigan communities making public policy decisions on these issues. This work refers to university-based peer reviewed research, when available and conclusive, and based on the parameters of the law as it relates to the topic(s) in Michigan. This document is written for use in Michigan and is based only on Michigan law and statute. One should not assume the concepts and rules for zoning or other regulation by Michigan municipalities and counties apply in other states. In most cases they do not. This is not original research or a study proposing new findings or conclusions.

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In the subdivision shown above, the developer can build the maximum number of homes permitted under the community’s zoning, while at the same time permanently protecting over half of the property, adding it to an interconnected network of conservation lands. The property illustrated above has been used elsewhere in this booklet to demonstrate the principles of “conservation planning/design.” If you would prefer to see new development create more livable communities and in the process conserve irreplaceable natural resources such as prime farmlands, forest land and wildlife habitat, this approach may be right for your community.

The Conservation Planning/Design Concept

Each time a property is developed (especially for residential purposes), an opportunity exists for adding land to a community-wide network of conservation lands. Although such opportunities are seldom taken in most communities, this situation could be reversed fairly easily by making several small but significant changes to a community’s land use plan and regulations. Simply stated, Conservation Planning/Design rearranges the development on each parcel as it is being planned so that only half (or less) of the buildable land is consumed by lots and streets. Without controversial “down zoning,” the same number of lots can be developed, but in a less land consumptive manner, allowing the balance of the property to be permanently protected and added to an interconnected network of conservation lands. This “density neutral” approach provides a fair and equitable way to balance conservation and development objectives.

Four Key Conservation Tools

Experience around the country has shown communities which are likely to be successful at conserving significant amounts of land on an ongoing basis incorporate the following techniques into their community planning:

1 Envisioning the Future: Performing “Community Audits.”

Successful communities have a realistic understanding of their future. The audit projects past and current development trends into the future so that officials and residents may easily see the long-term results of continuing with current land use regulations. Communities use this knowledge to periodically review and adjust their goals and strategies for conservation and development.

2 Identifying Networks of Conservation Lands

Successful communities have a good understanding of their important natural, scenic and historic resources. They establish reasonable goals for conservation and development that reflect their special resources, existing land use patterns and anticipated growth. Their Land Use Plans document these resources, goals and policies. The plan contains language about the kinds of ordinance updating and conservation programs necessary for those goals to be realized. A key part of the Land Use plan is a Map of Potential Conservation Lands that is intended to identify the location of potential conservation lands in each development as it is being laid out.

3 Conservation Zoning: A “Menu of Choices”

Successful communities have legally defensible, well-written zoning regulations that meet their “fair share” of future growth and provide for a logical balance between community goals and private landowner interests. They incorporate resource suitabilities, flexibility, and incentives to require the inclusion of permanent conservation lands into new development. The four zoning options summarized in this publication, and described in detail in the Better Designs for Development manual, respect the property rights of landowners and developers without unduly impacting the remaining natural areas that make our communities such special places in which to live, work and recreate.

4 Conservation Design: A Four Step Process

Successful communities recognize that both design standards and the design process play an important part in conserving a community’s natural and scenic resources. Such communities adopt land use regulations which require site planning while identifying the special features of each property, and introduce a simple methodology showing how to lay out new development, so that the majority of those special features will be permanently protected in designated conservation areas or preserves. To a considerable extent, these areas can be pre-identified in the Land Use Plans’ Map of Potential Conservation Lands so that as each area is developed it will form an integral part of a community-wide network of protected conservation lands, as noted above.

Envisioning the Future

Performing “Community Audits”

The future that faces most communities in Michigan under current zoning practices is the systematic conversion of every unprotected acre of buildable land into developed uses. Most local ordinances allow, encourage and in many cases mandate standardized layouts of “wall-to-wall lots.” Over a period of time



1937

this process produces a broader pattern of “wall-to-wall sprawl” (see Figure 1). The “community audit” visioning process helps local officials and residents see the ultimate result of continuing to implement current land use policies. The process helps start discussions about how current trends can be modified so that a more desirable future is ensured.

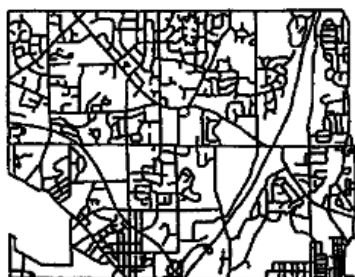
No community actively plans to become a bland expanse of suburban-type “sprawl.” However, most zoning codes program exactly this outcome. Communities can perform audits to see the future before it happens, so that they will be able to judge whether a mid-course correction is needed. A community audit entails:



1974

Numerical Analysis

The first step involves a numerical analysis of growth projections, both in terms of the number of dwelling units and the number of acres that will probably be converted into houselots and streets under present codes.



1990

Written Evaluation

The second step consists of a written evaluation of the land-use regulations that are currently on the books, identifying their strengths and weaknesses and offering constructive recommendations about how they can incorporate the conservation techniques described in this booklet. It should also include a realistic appraisal of the extent to which private conservation efforts are likely to succeed in protecting lands from development through various non-regulatory approaches such as purchases or donations of conservation easements or fee title interests.

Figure 1 The pattern of “wall-to-wall subdivisions” that evolves over time with zoning and subdivision ordinances which require developers to provide nothing more than houselots and streets.

“Build-Out” Maps

The third step entails mapping future development patterns on a map of the entire community (see Figure 2). Alternatively, the “build-out map” could focus only on selected areas in the community where development is of the greatest immediate interest, perhaps due to the presence of special features identified in the Land Use Plan or vulnerability due to development pressures.



Figure 2 A matching pair of graphics, taken from an actual “build-out map,” showing existing conditions (mostly undeveloped land) contrasted with the potential development pattern of “checkerboard suburbia” created through conventional zoning and subdivision regulations.

Practical Application for Communities

The following parts of this booklet describe practical ways in which communities can take control of their destinies so that conservation goals will be achieved simultaneously with development objectives, in a manner that is fair to all parties concerned.

Identifying Networks of Conservation Lands

Although many communities in Michigan have adopted Land Use Plans which outline the need to protect their natural, aesthetic and historic resources, very few have taken the next logical step of identifying these areas and creating a *Map of Potential Conservation Lands*.

Such a map is the first step for any community interested in conserving natural and aesthetic resources in an interconnected network. The *Map of Potential Conservation Lands* serves as the tool which guides decisions regarding which land to protect in order for the network to eventually take form and have substance.

A Map of Potential Conservation Land usually starts with information contained in the community's existing planning documents. The next task is to identify two kinds of resource areas. Primary Conservation Areas comprise only the most severely constrained lands, where development is typically restricted under current codes and laws (such as wetlands, flood plains, and areas where slopes exceeding 20-25% predominate). Secondary Conservation Areas include all other locally noteworthy or significant features of the natural or cultural landscape. This may include features such as mature woodlands, wildlife habitats and scenic roadways, prime and unique farmlands, prime timberlands, groundwater recharge areas, green ways and trails, river and stream corridors, historic sites and buildings, and scenic viewsheds. These Secondary Conservation Areas are often best understood by the local residents who may be directly involved in their identification. Usually under most community land use regulations these resource areas are totally unprotected and are simply zoned for one kind of development or another.



A base map
is then
prepared on
which the
Primary

Figure 3 Part of a Map of Potential Conservation Lands showing roads, parcel lines, historic structures (large dots), and the following resource areas: wetlands/floodplains (dark gray), woodlands (medium gray), open fields and pastures (white), and prime farming soils (diagonal hatched lines).

Conservation Areas have been added to an inventory of lands which are already protected (such as parks, land trust preserves, and properties under conservation easement). Clear acetate sheets (or GIS Data Layer) showing each kind of Secondary Conservation Area are then laid on top of the base map in an order reflecting the community's preservation priorities (as determined through public discussion).

This “sieve mapping” process will reveal certain situations where two or more conservation features appear together (such as woodlands and wildlife habitats, or farmland and scenic viewsheds). It will also reveal gaps where no features appear.

Although this exercise is not an exact science, it frequently helps local officials and residents visualize how various kinds of resource areas are spatially related to one another, and enables them to tentatively identify both broad swaths and narrow corridors of resource land that could be protected in a variety of ways. Figure 3 illustrates a portion of a township map which has followed this approach.

The planning techniques which can best implement the community-wide Map of Potential Conservation Lands are Conservation Zoning and Conservation Design. These techniques, which work hand in hand, are described in detail below. Briefly stated, Conservation Zoning expands the range of development choices available to landowners and developers. And just as importantly, it also eliminates the option of creating full-density suburban sprawl layouts that convert all land within new developments into new lots and streets.

The second technique, Conservation Design, devotes half or more of the buildable land area within a development as undivided permanent conservation lands. Not surprisingly, the most important step in designing a new development using this approach is to identify the land that is to be preserved. By using the community-wide Map of Potential Conservation Lands as a template for the layout and design of conservation areas within new developments, an interconnected network of conservation lands spanning the entire community is eventually created.

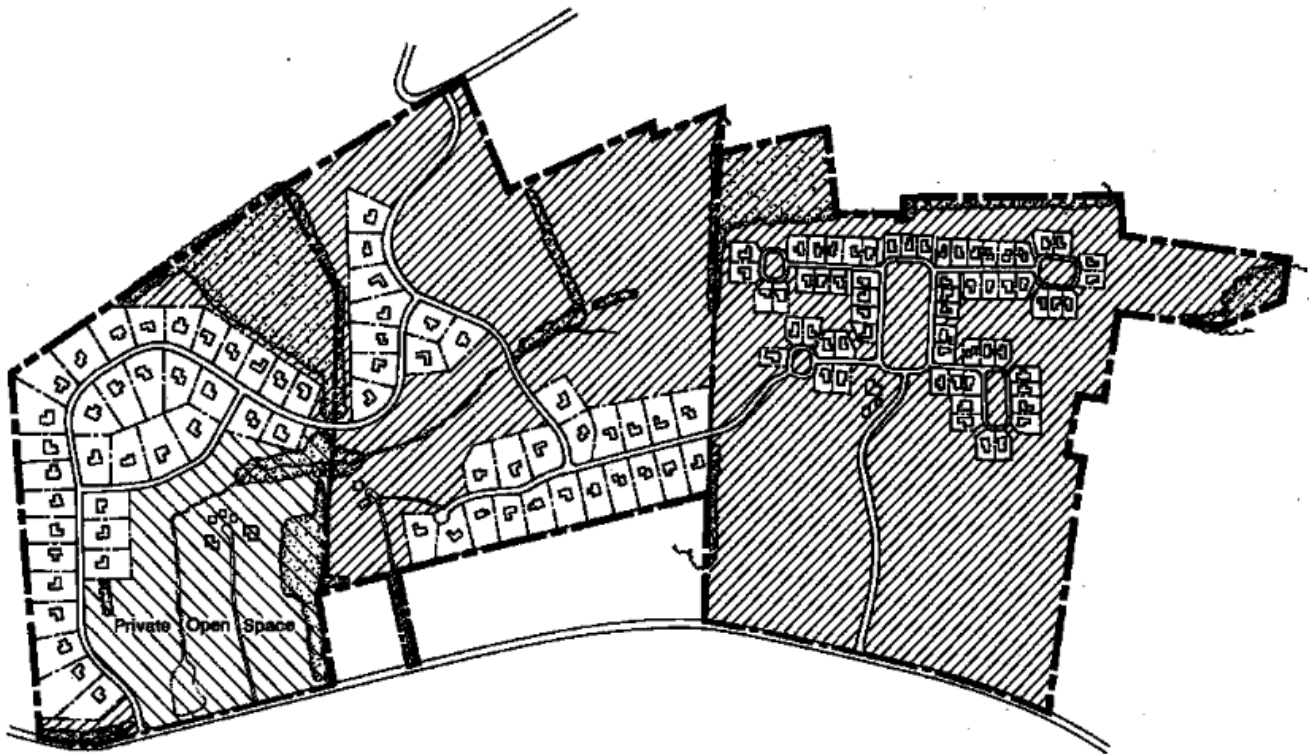


Figure 4 The conservation lands (shown in gray) were deliberately laid out to form part of an interconnected network of open space in these three adjoining subdivisions.

Figure 4 shows how the conservation lands in three adjoining developments has been designed to connect, and illustrates the way in which the Map of Potential Conservation Lands can become a reality.

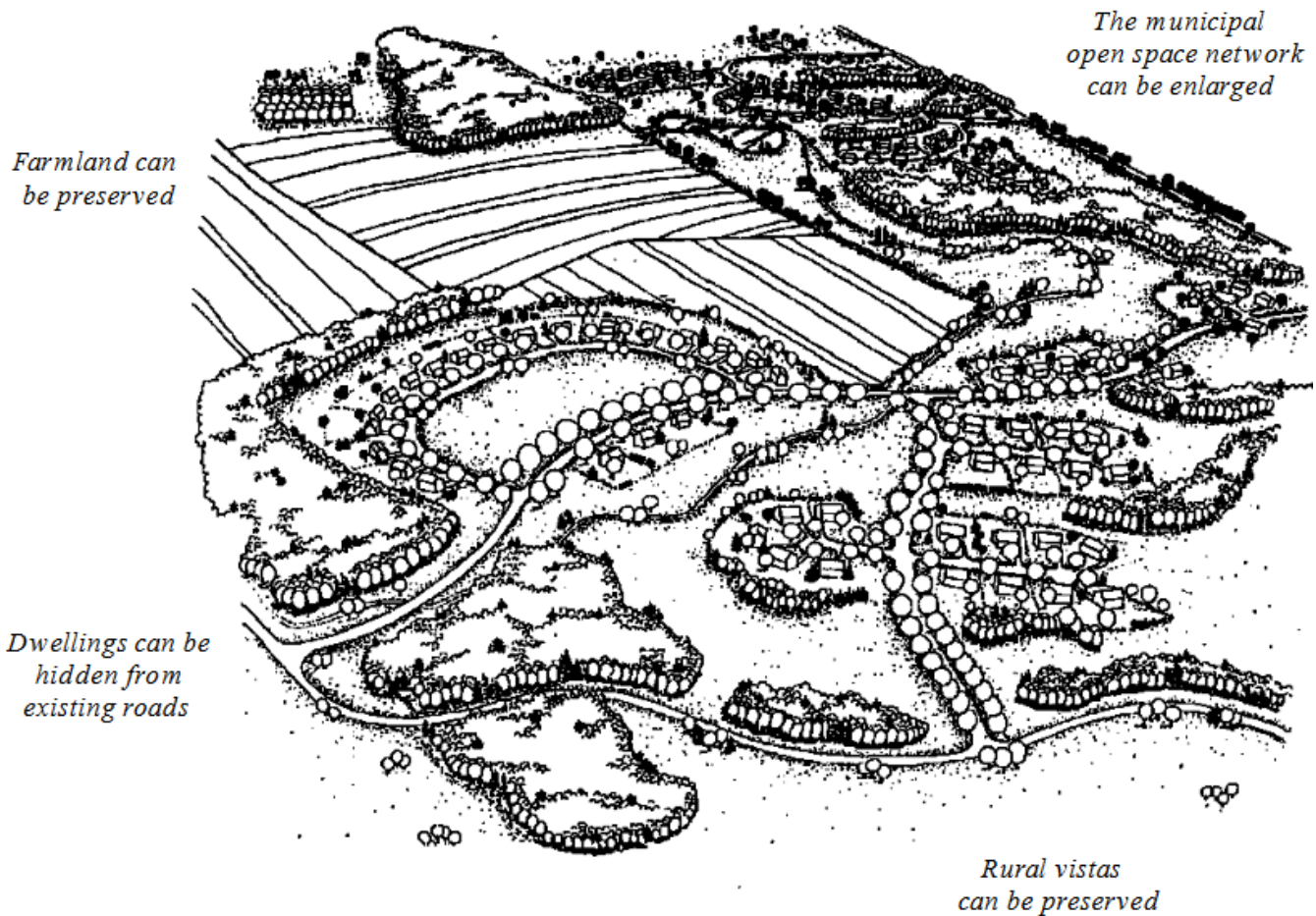


Figure 5 The end-result of applying the techniques described in this booklet is illustrated in this perspective sketch prepared by the Montgomery County Planning Commission.

Figure 5 provides a bird's-eye view of a landscape where an interconnected network of conservation lands has been gradually protected through the steady application of conservation zoning techniques and conservation design standards.

Conservation Zoning: A “menu” of choices

As mentioned previously the main reason that most new development in Michigan consists of nothing more than new lots and streets is that most communities have adopted a very limited planning model whose sole purpose is to convert natural lands into developed properties. Little if anything is asked in respect to conserving natural resources or providing neighborhood amenities (see Figure 9).

Communities wishing to discourage this type of development pattern need to consider modifying their zoning to require new development to set aside at least 50 percent of the buildable land as permanently protected conservation lands. The development potential that could normally be realized in this area is “transferred” to the remaining 50 percent of the buildable lands on the property.

Following this approach, a municipality would first calculate a site's yield using traditional zoning. A developer would then be permitted full density only if at least 50 percent (or more) of the buildable land is maintained as undivided conservation lands (illustrated in Figure 6: "Option 1"). Under certain conditions communities might also consider offering as much as a 100 percent density bonus for protecting 70 percent of the land (Figure 7: "Option 2").

It is noteworthy that the 36 village-like lots in Option 2 occupy less land than the 18 lots in Option 1, and that Option 2 therefore contributes more significantly to the goal of creating community-wide networks of conservation lands. The village-scale lots in Option 2 are based on traditional neighborhood design principles and are modeled after historic hamlet and village layouts. This type of development has proven to be particularly popular with empty nesters, single-parent households, and couples with young children. Developers wishing to serve the large lot market have a "country properties" option (Figure 8: "Option 3").

Under this option up to 20 percent of the properties gross area (10 acres in this case) may be split into small lots. The average size of these small lots may be no less than two acres. The remainder of the property may remain as a single contiguous parcel or if area allows this parcel may be split into large lots a minimum of 25 acres in area. Under conservation zoning, absent from this menu of choices is the conventional full-density development providing no conservation lands (Figure 9). Because that kind of development causes the largest loss of resource lands and poses the greatest obstacle to conservation efforts, it is not included as an option under this approach.

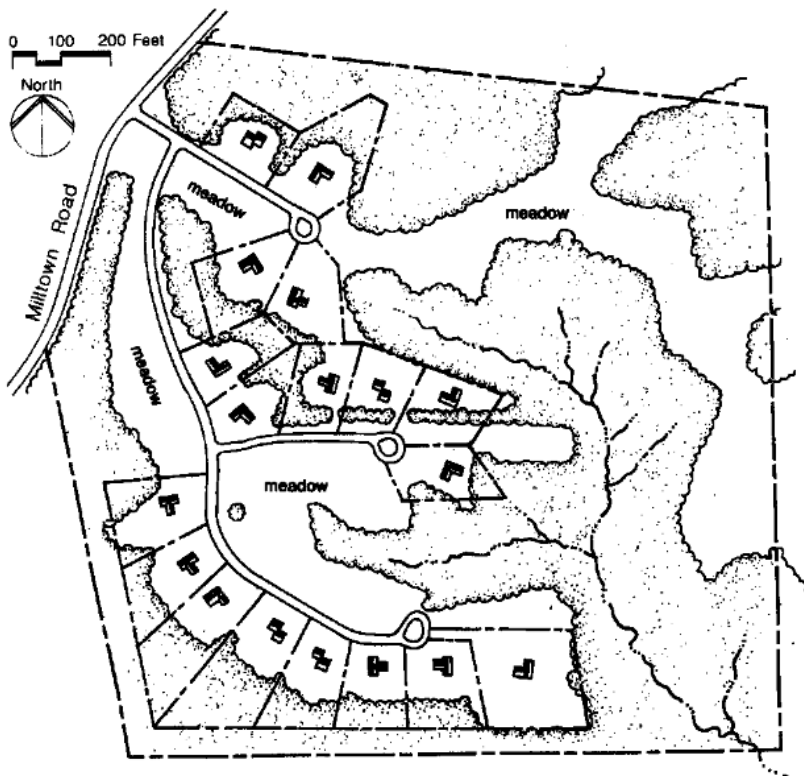


Figure 6 Option 1 Density-neutral with Pre-existing Zoning 18 Lots Lot Size Range: 20,000 to 40,000 sq. ft. 50% undivided open space.

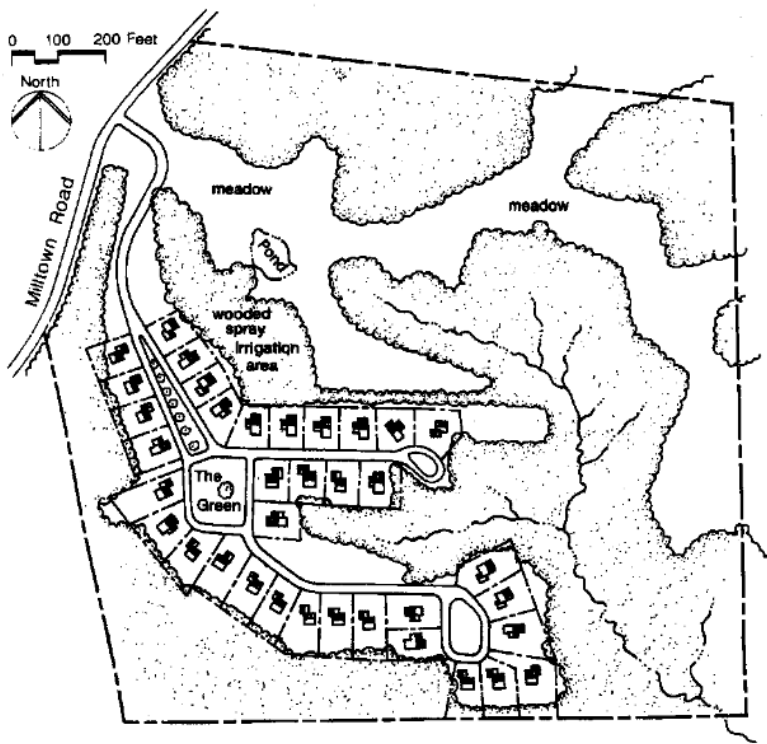


Figure 7 Option 2 Hamlet or Village. 36 Lots Lot Size Range: 6,000 to 12,000 sq. ft. 70% undivided open space.

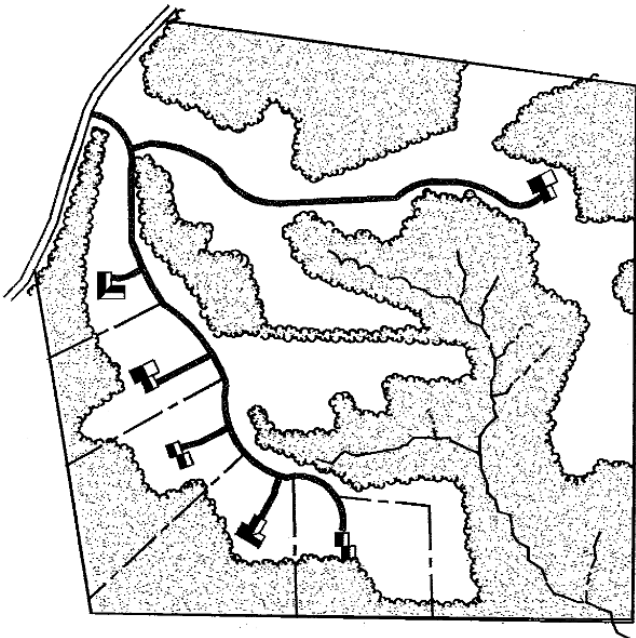


Figure 8 Option 3 County Properties. A maximum of 5 lots may be created on 10 acres. The remainder of the land remains as a single parcel or may be divided into lots 25 acres or greater in area.

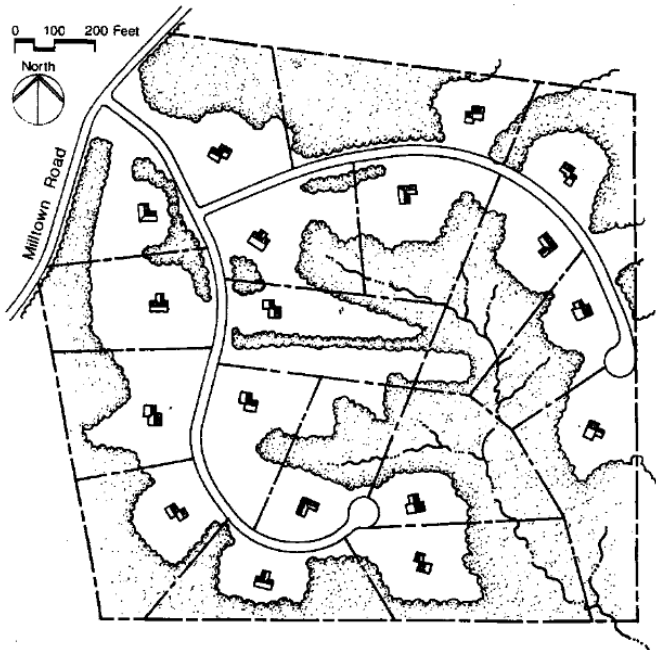


Figure 9 The kind of subdivision most frequently created in Michigan is the type which blankets the development parcel with houselots, and which pays little if any attention to designing around the special features of the property. However, such a sketch can provide a useful estimate of a site's capacity to accommodate new houses at the base density allowed under zoning—and is therefore known as a "Yield Plan."

Conservation Design, A Four-Step Process

Designing developments around the central organizing principle of land conservation is not difficult. However, it is essential that ordinances contain clear standards to guide the conservation design process. The four-step approach described below has been proven to be effective in laying out new full-density developments where all the significant natural and cultural features have been preserved.

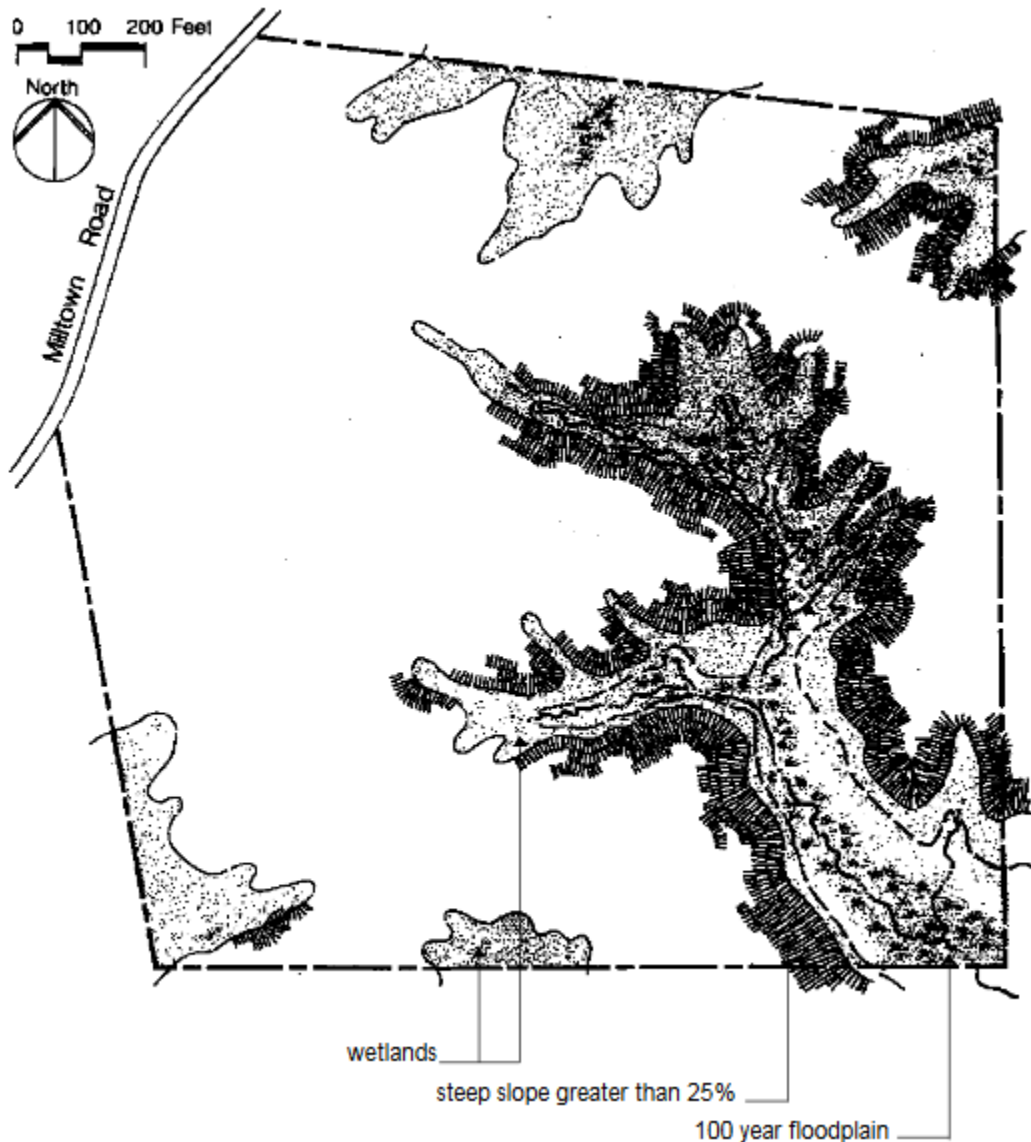


Figure 10 Step One, Part One. Identifying Primary Conservation Areas.

Step One consists of identifying the land that should be permanently protected. The developer incorporates areas pre-identified on the community-wide *Map of Potential Conservation Lands* and then performs a site analysis in order to precisely locate features to be conserved. The developer first identifies all the *Primary Conservation Areas* (Figure 10). He then identifies *Secondary Conservation Areas* (Figure 11) which comprise noteworthy features of the property that are typically unprotected under current codes. These include: mature woodlands, greenways and trails, river and stream corridors, prime farmland, hedgerows and individual free-standing trees or tree groups, wildlife habitats and travel corridors,

historic sites and structures, scenic viewsheds, etc. After “greenlining” these conservation elements, the remaining

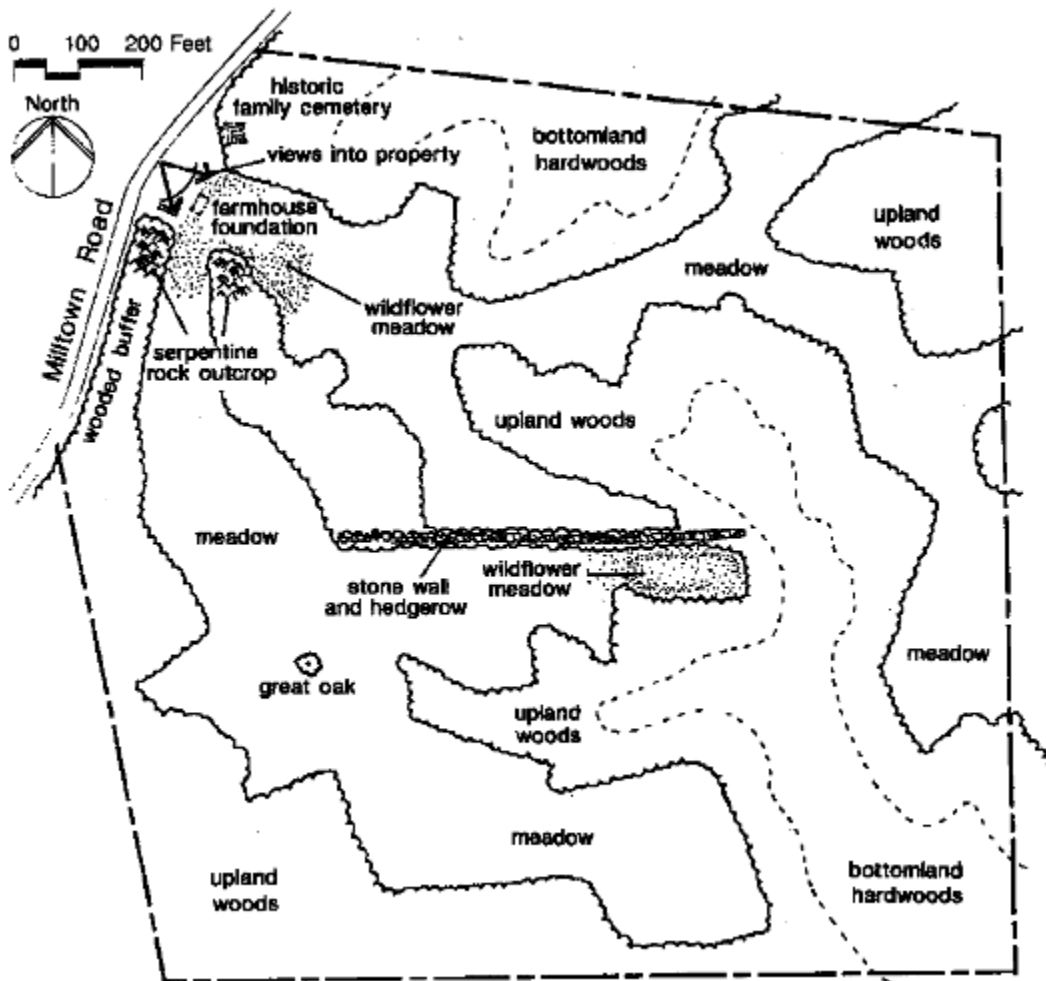


Figure 11 Step One, Part Two Identifying Secondary Conservation Areas.

Step Two involves locating sites of individual building envelopes within the *Potential Development Area* so that their views of the conservation lands are maximized (Figure 13). The number of building envelopes

is a function of the density permitted within the zoning district, as shown on a Yield Plan (Figure 9).

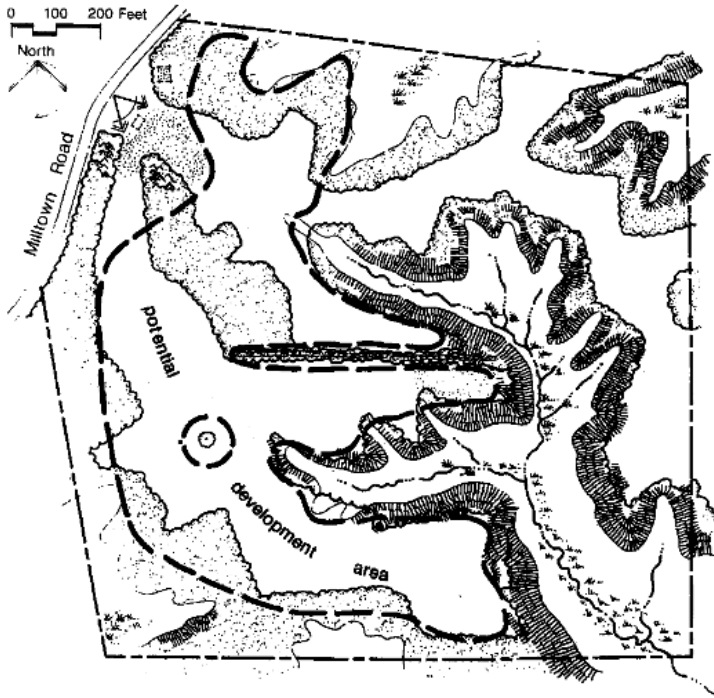


Figure 12 Outline Potential Development Areas. for Options 1 & 2

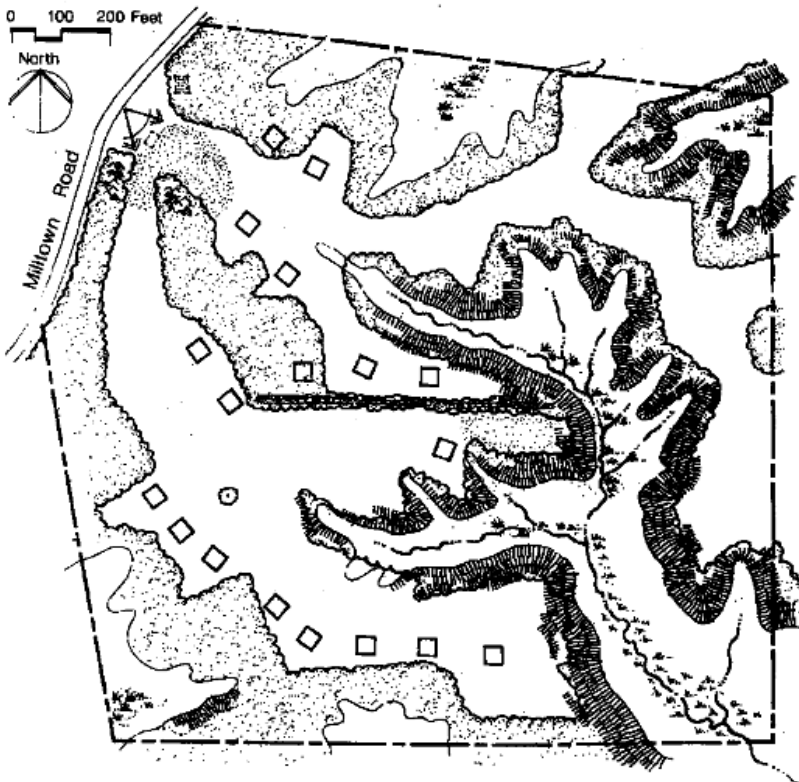


Figure 13 Step Two. Locating House Sites.

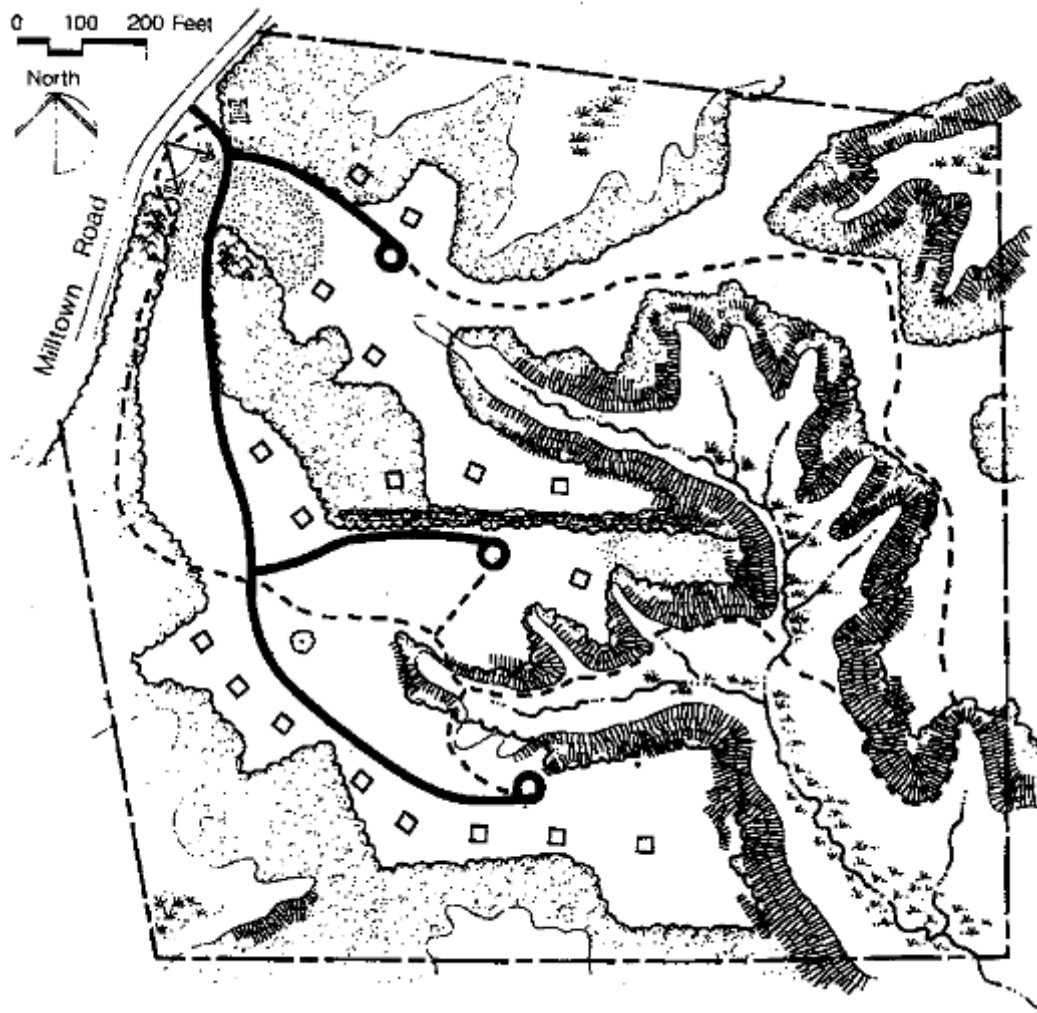


Figure 14 Step Three. Aligning Streets and Trails.

Step Three simply involves “connecting the dots” with streets and informal trails (Figure 14), while Step Four consists of drawing in the lot lines (Figure 15).

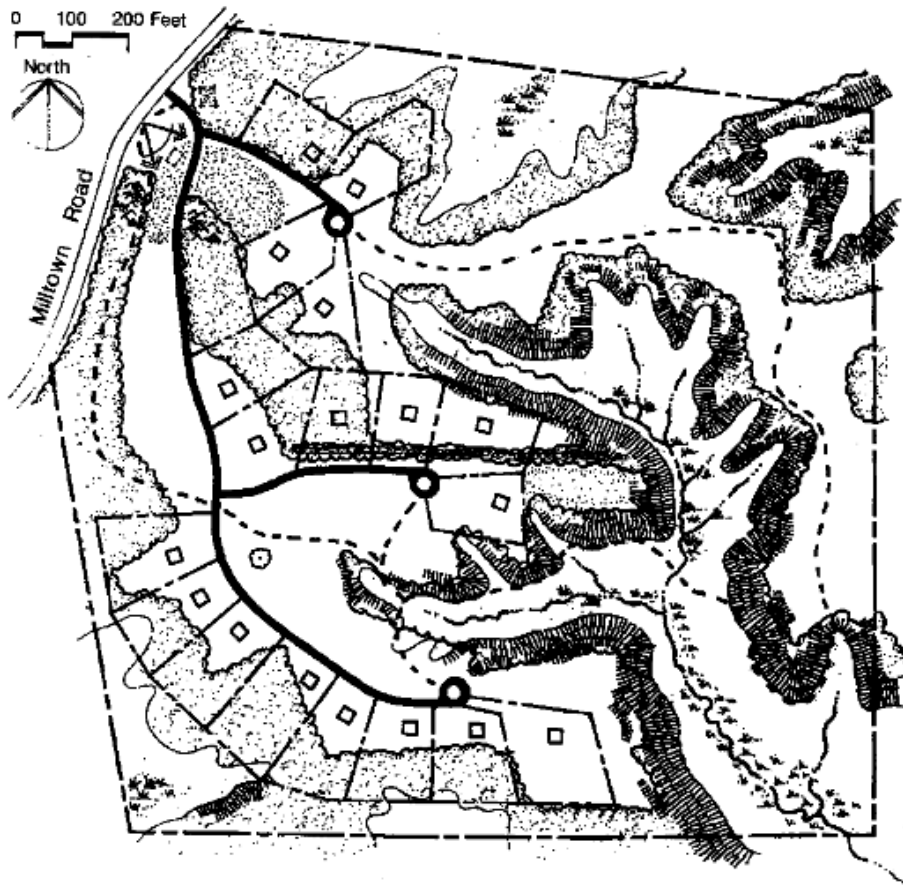


Figure 15 Step Four. Drawing in the Lot Lines.

This approach reverses the sequence of steps in laying out conventional developments, where the street system is the first thing to be identified, followed by lot lines fanning out to encompass every square foot of ground into new lots. When communities require nothing more than “new lots and streets,” that is all they receive. By setting community standards higher and requiring 50 to 70 percent conservation lands as a precondition for achieving full density, officials can effectively encourage the conservation of natural and scenic resources in their community. The protected conservation lands in each new development become building blocks that add new acreage to a community-wide network of interconnected conservation lands each time a property is developed.

Frequently Asked Questions

Q. Does conservation planning/design involve a “takings”?

A. No. People who do not fully understand this conservation-based approach to development may mistakenly believe that it constitutes “a taking of land without compensation.” This misunderstanding may stem from the fact that conservation developments, as described in this booklet, involve either large percentages of undivided conservation lands or lower overall building densities.

There are two reasons why this approach does not constitute a “takings.”

First, **no density is taken away.** Conservation zoning is fundamentally fair because it allows landowners and developers to achieve full density under the municipality’s current zoning and, in some cases even to

increase that density significantly through several different “as-of-right” options. Of the three options previously described, two provide for either full or enhanced densities. The other option offers the developer the choice to lower densities and increased lot sizes. Although conservation zoning precludes full density layouts that do not include conservation lands, this is legal because there is no constitutional “right to sprawl.”

Second, no land is taken for public use. None of the land which is required to be designated for conservation purposes becomes public (or even publicly accessible) unless the landowner or developer wants it to be. In the vast majority of situations, communities themselves have no desire to own and manage such conservation land, which they generally feel should be a neighborhood responsibility. In cases where local officials wish to provide community recreational facilities (such as ballfields or trails) within conservation developments, the community must negotiate with the developer for the purchase of that land on a “willing seller/willing buyer” basis. To facilitate such negotiations, conservation zoning ordinances can be written to include density incentives to persuade developers to designate specific parts of their conservation land for public ownership or for public access and use.

Q. How can a community ensure permanent protection for conservation lands?

A. The most effective way to ensure that the conservation of land in a new development will remain undeveloped forever is to place a permanent conservation easement on it. Such easements run with the chain of title, in perpetuity, and specify the various uses that may occur on the property. These restrictions supersede zoning ordinances and continue in force even if legal densities rise in future years. Easements are typically held by land trusts and units of government. Sometimes adjacent property owners are also easement co-holder in conjunction with the local unit of government or land trust. Deed restrictions and covenants are, by comparison, not as effective as easements, and are not recommended for this purpose. Easements can be modified only within the spirit of the original agreement, and only if all the co-holders agree.

Q. What are the ownership, maintenance, tax and liability issues?

A. Among the most commonly expressed concerns about developments with permanently protected conservation lands are questions about who will own and maintain the conservation land, and who will be responsible for the potential liability and payment of property taxes. The short answer is that whoever owns the conservation land is responsible for the above.

Q. But who owns this land?

A. Ownership Choices:

There are basically four options, which may be combined within the same development where that makes the most sense.

1. Individual Landowner. At its simplest level, the original landowner (a farmer, for example) can retain ownership of 70 to 100 percent of the conservation land to keep it in the family. (In these cases up to 30 percent of the conservation lands could be reserved for common neighborhood use by development residents.) That landowner can also pass this property on to sons or daughters, or sell it to other individual landowners, with permanent conservation easements running with the land and protecting it from development under future owners.

2. Homeowners’ Associations. Most conservation land within developments is owned and managed by homeowners’ associations (HOAs). A few basic ground rules encourage a good performance record. First, membership must be automatic, a precondition of property purchase in the development. Second, zoning should require that bylaws give such associations the legal right to place liens on properties of members

who fail to pay their dues. Third, facilities should be minimal (ballfields and trails rather than clubhouses and swimming pools) to keep annual dues low. And fourth, detailed maintenance plans for conservation areas should be required by the community as a condition of approval. The community should have enforcement rights and may place a lien on the property should the HOA fail to perform their obligations to maintain the conservation land.

3. Land Trusts. Although homeowners' associations are generally the most logical recipients of conservation land within developments, occasionally situations arise where such ownership most appropriately resides with a land trust (such as when a particularly rare or significant natural area is involved). Land trusts are private, charitable groups whose principal purpose is to protect land under its stewardship from inappropriate change. Their most common role is to hold easements or fee simple title on conservation lands within new developments and else where in the community.

To cover their costs in maintaining land they own or in monitoring land they hold easements on, land trusts typically require some endowment funding. When conservation zoning offers a density bonus, developers can donate the proceeds from the additional "endowment lots" to such trusts for maintenance or monitoring.

4. Municipality or Other Public Agency. In special situations a local government might desire to own part of the conservation land within a new development, such as when that land has been identified in a Land Use Plan as a good location for a neighborhood park or for a link in a community trail network. Developers can be encouraged to sell or donate certain acreage to communities through additional density incentives, although the final decision would remain the developer's.

5. Combinations of the Above. As illustrated in Figure 18, the conservation land within new developments could involve multiple ownerships, including (1) "non-common" conservation lands such as crop-land retained by the original farmer, (2) common conservation lands such as ballfields owned by an HOA, and (3) a trail corridor owned by either a land trust or by the community.

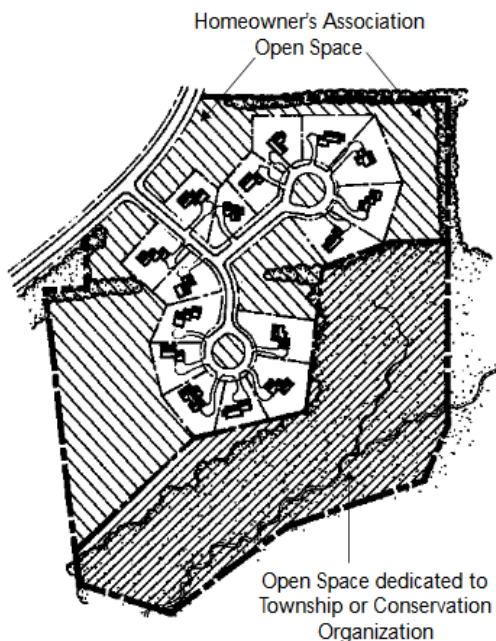


Figure 16 Various private and public entities can own different parts of the open space within conservation subdivisions, as illustrated above.

Tax Concerns. Property tax assessments on conservation developments should not differ, in total, from those on conventional developments. This is because the same number of houses and acres of land are involved in both cases (except when part of the conservation lands is owned by a public entity, which is uncommon). Although the conservation lands in conservation developments is usually taxed at a lower rate because easements prevent it from being developed, the adjacent lots usually are taxed at a higher rate since their location next to permanently protected conservation lands usually result in them being more desirable.

Q. How does this conservation approach differ from “clustering”?

A. The conservation approach described in the previous pages differs dramatically from the kind of “clustering” that has occurred in many communities throughout Michigan over the past several decades. The principal points of difference are as follows:

Higher Percentage and Quality of Conservation lands. In contrast with typical cluster codes, conservation zoning establishes higher standards for both the quantity and quality of conservation lands that is to be preserved. Under conservation zoning, 50 to 70 percent of the unconstrained land is permanently set aside. This compares with cluster provisions that frequently require only 25 to 30 of the gross land area be conserved. That minimal land area usually ends up including all of the most unusable land as conservation lands, and sometimes also includes undesirable, left-over areas such as stormwater management facilities and land under high-tension power lines.

Conservation lands Pre-Determined to Form Community-wide Conservation Network. Although clustering has at best typically produced a few small “green islands” here and there in any community, conservation zoning can protect blocks and corridors of permanent conservation lands. These areas can be pre-identified on in the community's *Map of Potential Conservation Lands* so that each new development will add to rather than subtract from the community's conservation lands acreage.

Eliminates the Standard Practice of Full-Density with No Conservation lands. Under this new system, full density is only achievable for layouts in which 50 percent or more of the unconstrained land is conserved as permanent, undivided conservation lands. By contrast, cluster zoning provisions are typically only optional alternatives within ordinances that permit full density, by right, for standard “cookie-cutter” designs with no conservation lands.

Q. How do residential values in conservation developments compare to conventional developments?

A. Another concern of many people is that homes in conservation developments will differ in value from those in the rest of the community. Some believe that because so much land is set aside as conservation lands, the homes in a conservation developments will be prohibitively priced and the community will become a series of elitist enclaves. Other people take the opposite view, fearing that these homes will be smaller and less expensive than their own because of the more compact lot sizes offered in conservation developments.

Both concerns are understandable but they miss the mark. Developers will build what the market is seeking at any given time, and they often base their decision about selling price on the character of surrounding neighborhoods and the amount they must pay for the land.

In conservation developments with substantial open space, there is little or no correlation between lot size and price. These developments have sometimes been described as “golf course communities without the golf course,” underscoring the idea that a house on a small lot with a great view is frequently worth as much or more than the same house on a larger lot which is boxed in on all sides by other houses.

It is a well-established fact of real estate that people pay more for park-like settings, which offset their tendency to pay less for smaller lots. Successful developers know how to market homes in conservation developments by emphasizing the conservation lands. Rather than describing a house on a half-acre lot as such, the product is described as a house with 20 and one-half acres, the larger figure reflecting the area of conservation land that has been protected in the development. When that conservation area abuts other similar land, as in the township-wide conservation lands network, a further marketing advantage exists.

Relationship of the Better Designs Approach to other planning techniques

Successful communities employ a wide array of conservation planning techniques simultaneously, over an extended period of time. Communities should continue their efforts to preserve special properties in their entirety whenever possible, such as by working with landowners interested in donating easements or fee title to a local conservation group, purchasing development rights or fee title with county, state or federal grant money, and transferring development rights to certain “receiving areas” with increased density. While these techniques can be effective, their potential for influencing the “big picture” is limited.

The conservation approach outlined above offers great potential because it:

1. does not require public expenditure of funds
2. does not depend upon landowner charity
3. does not involve complicated regulations for shifting rights to other parcels
4. does not depend upon the cooperation of two or more adjoining landowners to make it work

The conservation planning/design approach offers communities a practical way of protecting large acreages of land in a methodical and coordinated manner.

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