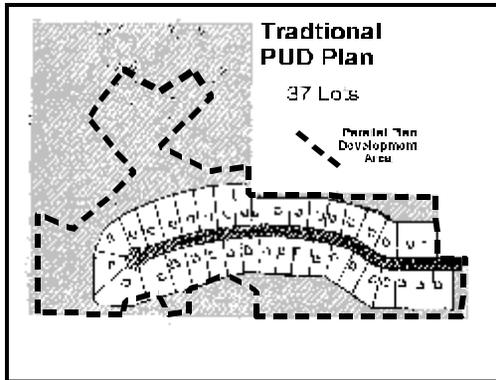


# Principles of Open Space Development



## Going from "Cluster" to "Open Space" Development

The principle of "cluster development" was devised in the mid-to-late 1970s as a means to make housing more affordable during a time of high interest rates that placed some people out of the market for a new home. Clustering units allowed for less street length and shorter utility lines, which lowered development costs. Over time, however, as economic conditions improved and more people had access to a wide variety of housing, the concept moved away from "cluster" to "open space" development. This style of development placed less emphasis on affordable housing and more on the preservation of open spaces and enhancement of neighborhoods. Open space development offered an alternative to the traditional subdivision look and introduced the use of open space as a design element.



*The view driving down the street will simply be that of manicured lawns, cars in driveways, and homes neatly lined up side by side.*

Even though more land developers were becoming aware of the need to preserve open space, some of the design elements that make neighborhoods livable places were being left behind. In many projects a large percentage of the site was preserved as open space, but many residents were unable to take advantage of those open spaces and found themselves instead in a traditional subdivision row of houses lining the street. As an example, the "Traditional PUD Plan" shown here provides almost no access or even views of those open spaces for most of the lots. As a result, the Open Space Development concept has been less attractive to home buyers seeking a rural environment.



## **The Open Space Preservation Act**

In 2001, the Michigan legislature passed legislation mandating that local governments provide zoning regulations related to “open space preservation.” The provisions of the law do not apply to communities that had open space provisions in their ordinances prior to October 1, 2001. However, the regulations must have been used by at least one residential project that permanently preserved at least 50 percent of the land within the development for townships, or 20 percent for cities and villages.

The provisions apply to a “qualified” township, city or village. To be “qualified” the community must have a zoning ordinance, a population of 1,800 or more, and have residentially zoned land with a minimum lot size of one-half acre (2 units per acre) without public sewer, or 14,520 square feet (3 units per acre) with public sewer.

The open space provisions are to be provided as an “option” to the land owner. Regulations added to the ordinance must provide a minimum of 50 percent open space in townships and 20 percent in cities and villages and that the open space be permanently protected from development by some legal means that assures its preservation. Two other provisions require that the development not be dependent on an extension of either public water or public sewer systems (unless those systems would otherwise be required even without the open space option), and that the affected land had not already been developed under an open space provision. The open space preservation provisions do not override any applicable ordinances or laws related to groundwater protection or approval of sanitary sewer disposal systems where public systems are unavailable.

The act broadly defines open space (“undeveloped state”) with a golf course as the only specific exclusion from consideration as open space.

## What is Open Space Development?

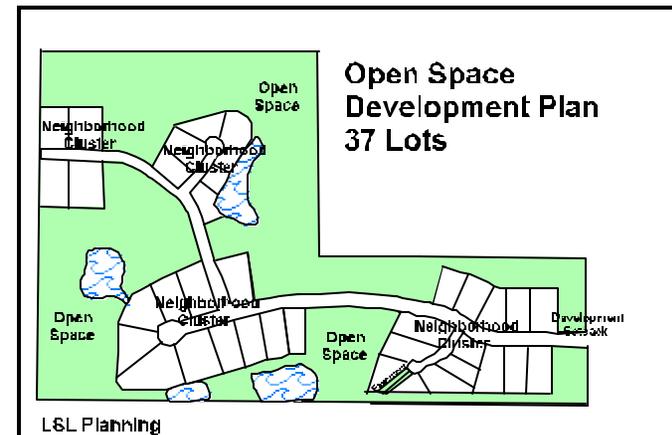
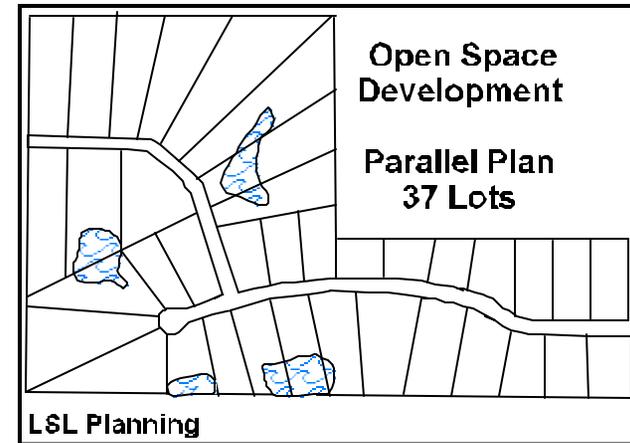
The underlying principle of Open Space Development is that it allows the same overall amount of development that is permitted under existing zoning, but concentrates development inside pockets of land so that the remainder can be preserved as usable open space. Open space regulations are relatively easy to administer, allow rural landowners to realize the full development potential of their property, and permanently protect substantial natural open spaces.

At the same time, Open Space Development allows the preservation of open space without large public expenditures (to purchase development rights), and allows communities to recognize and preserve sensitive natural areas without adopting overly restrictive land use regulations.

Sites lacking significant natural elements, such as flat farm fields, offer a more challenging design problem. It is difficult to apply many of the open space principles to large open areas, uninterrupted by trees or topography. Emphasis on these sites should be on creating neighborhood clusters, separated by open spaces, and in ensuring that the open spaces are sufficiently large and in a useable shape.

## Development Density

The allowed density of an Open Space Development is based on the existing residential district. However, rather than computing density simply on the basis of a mathematical formula, the applicant is required to submit a "parallel plan" which provides the community with a feasible development plan showing the number of homes that could reasonably



be placed on the site using conventional development regulations.

To properly implement Open Space Development regulations, it is necessary to require applicants to submit detailed information regarding the presence of natural features, topographic conditions, and other site characteristics that might affect the layout of the development. Significant views may also be highlighted that might contribute to the character of the development. The additional requirements placed on applicants and the desire for more creative design can increase development costs of individual projects. Accordingly, offering bonus densities for more creative layouts would be an appropriate response.

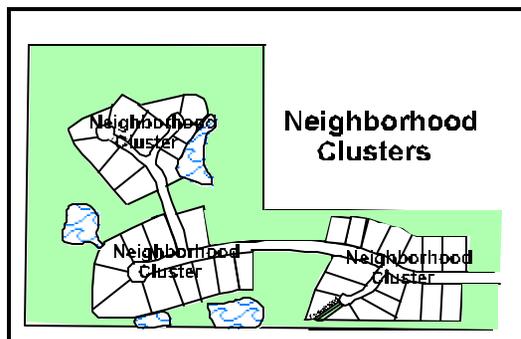
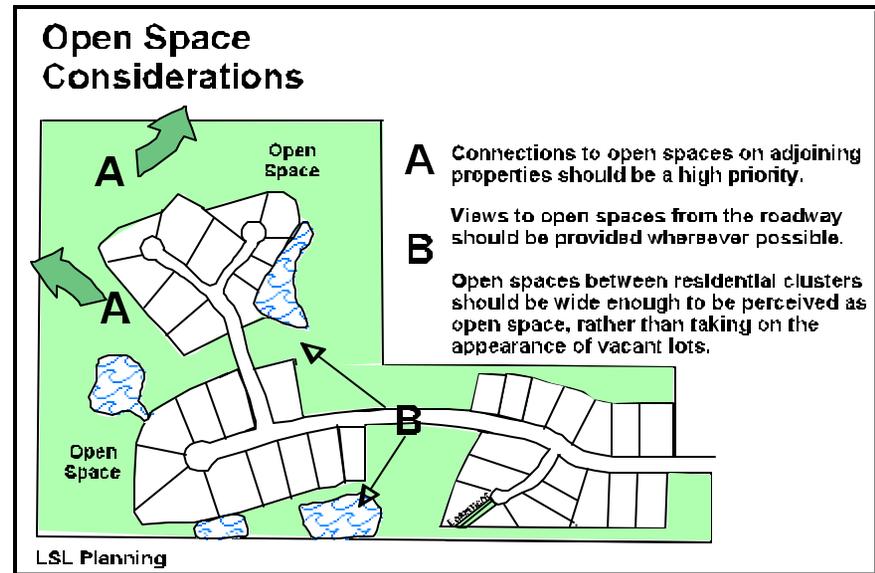
Some of the following principles will be more applicable to sites that have significant areas of natural features or other areas worthy of preservation. Other principles will apply more directly to properties with large open spaces, such as fields that were cleared for farming.

## **PRINCIPLES OF OPEN SPACE DEVELOPMENT**

- The intent of Open Space Development regulations is to allow flexibility in layout to avoid affecting wildlife habitat areas or scenic features of the rural landscape, such as large rock formations, wetlands, hill crests, and mature tree-stands. Adequate open space protection, through deed restrictions, donation to land conservancies, or other permanent preservation measures must be provided to the community.
- Open space should be provided where significant natural features may be preserved, active agricultural land maintained, or be used for passive or active recreation. Having connected open space “corridors” can provide routes of travel for wildlife and help ensure their survival.
- Septic systems or water systems may be located outside individual lot areas, through easements within protected open space. Community water and sewer systems serving all or part of the development may be encouraged through the use of bonus density provisions.



- Open space should generally be accessible from as many places within the development as possible, rather than limited to individual easements between development lots. To this end, providing open space segments along the internal roadways should be a high priority. Such areas should be large enough to appear as open space, rather than a vacant lot for future development, and kept in their natural state. They may, however, incorporate trails or other internal pedestrian circulation paths.
- The Open Space Development should be designed with due regard for views from roadways as well as lots within the development.
- The location of open space around the perimeter of the development should also consider adjoining properties. If other Open Space Developments have been approved on adjacent properties, linking open spaces between the two can create areas large enough to support wildlife and enhance the other benefits of open space.



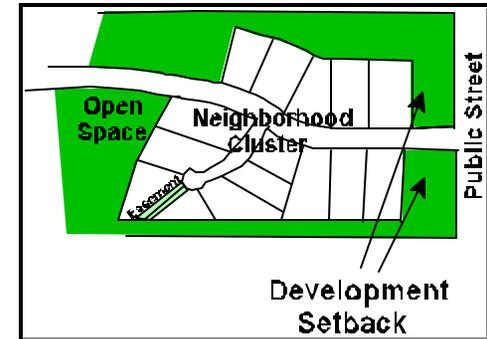
- Lots should be clustered in small groups (perhaps from four to ten lots in smaller developments, to as many as 15-20 in larger developments), with open space between clusters. Emphasis should be on the creation of smaller, more cohesive neighborhoods, as opposed to long linear stretches of homes. Creating these small clusters helps promote a sense of community. Larger expanses of open space should be used to separate the neighborhoods.

- Where possible, substantial setbacks from adjacent development should be provided, except where internal roadways are designed to connect to adjacent properties for the purposes of providing a network of internal connections between properties.



*Highly artificial landscaped entries can detract from the rural character of the area.*

- A “development setback” should be included that provides a substantial open space area between existing access roadways and the building sites within the project. The development setback area should remain in as natural a state as possible, with only the street and necessary utilities requiring land disturbance.



- Entryways to open space developments may also have a significant effect on the character of the project as well as the general area. Elaborate, artificial, landscapes designed as entry points, with large boulevards, flagpoles, and other artificial elements can detract from the rural, natural character of the area.

- If a sign is included in the development plan, it should be unobtrusive and constructed as part of the overall landscape. Plastic, internally lighted signs should be



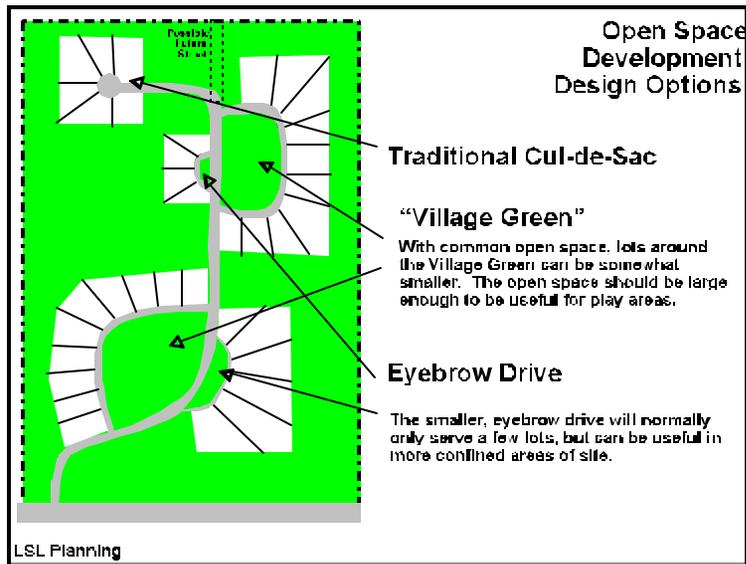
avoided.

## Design Options

There are many alternatives to the traditional curvilinear street and cul-de-sac arrangements that have tended to dominate suburban residential design in the past decades. In some respects, elements of creative design are returning to concepts that helped create strong neighborhoods, such as common open spaces and clearly identified boundaries.

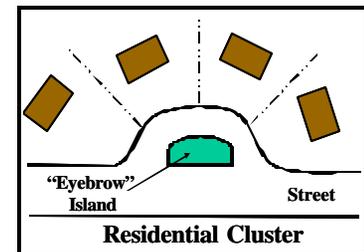
Traditional cul-de-sacs may still perform a useful function but their use should have a specific purpose, such as reaching a corner of the development site, or other similar use. Even though cul-de-sac lots have a significant marketing advantage, the other designs discussed here can also provide similar advantages.

# The variety of layouts for lots and streets are numerous, but should emphasize easy access and clear views to open spaces and natural areas from many points within the development. They may range from very formal arrangements, with large, internal open space “town squares” to the more informal “eyebrow” lots.



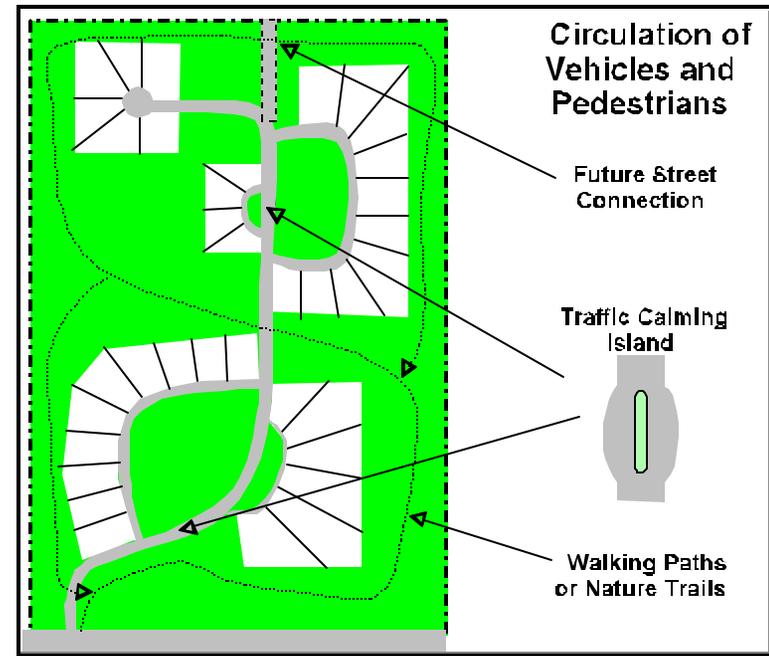
# A “Village Green” can be created by routing a short street segment from the main collector street. The Green may either be actively use for recreation, or it may be used to isolate and preserve significant natural features.

# “Eyebrows” are driveways or marginal access roads that provide an internal link to the main road. This may involve



the use of a small island off the main street (see illustration). In effect, this is a down-scaled version of the Village Green layout, but generally serves a smaller number of homes.

- # Consideration of traffic patterns for both vehicles and pedestrians is also important. Nature and walking trails provide an attractive element to an Open Space Development, but must be planned and constructed carefully in order to be functional and remain in character with the area. Trail materials must be durable to avoid future maintenance issues. Materials such as wood chips, while natural, require frequent replenishment.
- # Whenever possible, the main road serving the development should have as few homes fronting it as possible.
- # Longer road segments may include traffic "calming" elements in the roadway to help avoid excessive speeds and promote safety.



### Open Space Regulations

Open space development ordinances are currently in place in each of the four townships. Separate *Principles of Open Space Development* guidebooks that contain the open space regulations for each of the four townships are available through the Four Township Water Resources Council. The following pages contain sample ordinance provisions that can be used as an Open Space Development regulation. Notations are provided to indicate alternative approaches or to describe why various provisions are either necessary or desirable.

Open Space Development regulations can be implemented in a variety of ways. One simple approach is to allow Open Space Developments as permitted uses in selected residential zoning districts. They may also be reviewed as planned unit developments or as a separate overlay zoning districts. The general requirements are nearly the same. The key differences

in the methods will be the approval processes. Allowing Open Space Developments as permitted uses may be the most attractive to developers in that the review process is limited to a site plan review.

**CHAPTER \***  
**OPEN SPACE**  
**DEVELOPMENT REGULATIONS**

The purpose clauses are important in that they provide the justification for the regulations. The language may include references from the Master Plan to provide a more direct connection between the Plan and the Zoning Ordinance.

**SECTION \*.01      DESCRIPTION AND PURPOSE**

A. The purpose of an Open Space Development (OSD) is to permit greater flexibility in development than is generally possible under standard District regulations. The intent of the regulations is to foster the preservation of significant natural features, large open spaces, or active agricultural land that would otherwise be developed but will be preserved as a result of the OSD.

B. The OSD provisions are not intended as a device for ignoring the requirements of this Ordinance and are not intended simply as a means to increase density. These provisions are intended to result in land development substantially consistent with the underlying zoning, but

provide a degree of flexibility in design to allow for customization of design to meet the unique natural conditions of a particular site and innovation in design to create a higher quality development than could otherwise be possible with the underlying zoning.

**SECTION \*.02      QUALIFYING CONDITIONS**

A. The tract of land for which an OSD application is received must be either in one (1) ownership or the subject of an application filed jointly by the owners of all affected properties.

Normally, a larger minimum development area is required so enough open space is available to ensure that the community benefits from the OSD. If the property is too small, the “clustering” can begin to have a detrimental effect on adjacent properties.

B. The property which is the subject of an OSD application must be a minimum of forty (40) contiguous acres in total area and may be located within any Residential District. The Planning Commission may consider a lesser development size if the proposed project substantially forwards the intent

of the Residential Cluster Development regulations.

C. The applicant must demonstrate that the property proposed for the OSD contains unique site conditions, significant natural features, large open spaces, or active agricultural land, which would be otherwise be developed but will be preserved as a result of the OSD.

### **SECTION \*.03 REVIEW PROCEDURES**

#### **A. Preliminary Plan Approval**

1. To be considered as an OSD the applicant shall be required to first receive approval of a preliminary plan in accordance with the requirements of this Chapter.

The approval process can vary from being permitted by right, as this example allows, or by a planned unit development and/or special land use. In all cases, some provision for public review and hearing should be available.

2. Applications for preliminary plan approval for OSDs shall be submitted to the Zoning Administrator at least thirty (30) days prior to the date of first consideration by the Planning Commission.

3. The application materials shall include all the

following information, unless the Zoning Administrator determines that some of the required information is not reasonably necessary:

a. Current proof of ownership of the land to be utilized or evidence of a contractual ability to acquire such land, such as an option or purchase agreement, or a signed agreement from the property owner indicating permission to file such application.

b. Parallel Plan used to determine base density that meets the standards of Section \*.05, C.

c. Written documentation that the proposal meets the standards of Section \*.06.

Larger developments may be submitted in more than one phase. Each phase should be able to stand alone. The final site plan should meet the requirements normally applied to other final plans.

d. If a phased development is proposed, identification of the areas included in each phase. The density, lot area and setbacks of proposed housing units within each phase and for the total OSD.

A preliminary, or sketch plan may be submitted in the early review stages to ensure that the proposal meets the general intent of the OSD provisions and to provide some guidance to the developer as to the Commission's desires.

- e. Arrangement and area calculations for open space, including upland and wetland open space areas.
- f. A completed application form, supplied by the Zoning Administrator, and an application fee.
- g. Ten (10) copies of a preliminary plan meeting the requirements of (preliminary site plans).

4. The Planning Commission shall review the preliminary plan in accordance with the requirements of this Ordinance and deny, approve, or approve with conditions, the preliminary plan.

#### B. Final Site Plan Approval

1. After receiving approval of a preliminary plan from the Planning Commission, the applicant shall within one (1) year submit a final site plan to the Planning Commission.

2. The final site plan may be for either the entire project or for one (1) or more phases.

3. Applications for final site plan approval for OSDs shall be submitted to the Zoning Administrator at least thirty (30) days prior to the date of first consideration by the Planning Commission.

4. The application materials shall include all the following information, unless the Zoning Administrator

determines that some of the required information is not reasonably necessary:

a. Current proof of ownership of the land to be utilized or evidence of a contractual ability to acquire such land, such as an option or purchase agreement, or a signed agreement from the property owner indicating permission to file such application.

b. Written documentation that the proposal meets the standards of Section \*.06.

c. If a phased development is proposed, identification of the areas included in each phase. The density, lot area and setbacks of proposed housing units within each phase and for the total OSD.

d. Arrangement and area calculations for open space, including upland and wetland open space areas.

e. A completed application form, supplied by the Zoning Administrator, and an application fee.

f. Ten (10) copies of a final site plan for the phase for which approval is requested, meeting the requirements of Section \*.

5. Failure to submit a final site plan for approval within the one (1) year period shall void the previous preliminary plan approval and a new application shall be required to be submitted and approved in accordance with these provisions.

6. The Planning Commission shall conduct a public hearing prior to considering the proposed final site plan. Notices of the public hearing will be provided in accordance with the requirements of the Zoning Act for special land uses.

The final approval authority will depend on the process used for approval. If approved as a special land use, for example, the special land use chapter of the ordinance will indicate by whom final approvals are granted.

7. The Planning Commission shall review the final plan in accordance with the requirements of this Ordinance and deny, approve, or approve with conditions, approval of the OSD.

8. Major changes in the final site plan shall be submitted to the Township pursuant to the above procedures applicable to the original application.

If submitted as a planned unit development, the OSD may also permit other uses, such as duplexes, multiple family, and limited commercial uses, depending on the language of the PUD provisions. The example shown here is exclusively for single family uses.

## **SECTION \*.04 PERMITTED USES**

The following uses may be permitted, either singly or in combination, in accordance with the applicable OSD requirements:

- A. Single-family detached dwellings.
- B. Accessory buildings and uses customarily associated with single family detached dwellings.
- C. Agriculture.
- D. Private open space and recreational facilities for use by the residents of the OSD.

A minimum lot size, width, and setbacks may be included in the OSD provisions or the regulations may allow the community to determine the minimum lot requirements for each development. This requires careful consideration by the community and the developer to ensure that the lot sizes are adequate for site conditions. Both examples are provided.

## **SECTION \*.05 SITE DEVELOPMENT REQUIREMENTS**

A. The minimum lot area, width, setbacks and yard requirements for any lot designated for residential use shall be determined by the Planning Commission as part of the review process for the OSD. Minimum floor area and height regulations for dwelling units shall conform to the \*\*\*\*

Minimum lot size option: The community may wish to establish a minimum lot size as a guide to applicants. The following table provides an example of how this may be structured.

B. Land not proposed for development, but used for the calculation of overall density shall be considered open space and subject to the requirements of Section \*.05, C.

The purpose of the parallel plan is to establish the number of dwelling units that would otherwise be allowed if the property were developed under the normal Zoning Ordinance requirements, i.e. the "base density." The parallel plan need not be the most desirable layout; it need only be feasible and meet the requirements of the existing zone district.

Residential District requirements.

Services Provided	Lot Requirements		Yard Requirements (Ft.)		
	Area (Sq. Ft.)	Width (Ft.)	Front	Side	Rear
Individual septic system & well	25,000	110	25	10	20
Community water	13,500	100	25	10	20
Community sanitary sewer	13,500	85	25	10	20
Community water & sanitary sewer	10,000	80	25	10	20

### C. Development Density

1. Parallel Plan: The maximum base density and number of dwelling units permitted in the OSD shall be determined through the completion and submission of a parallel plan which shall indicate the number of dwelling units that may be developed under the existing zoning classification. The parallel plan shall meet the following minimum requirements:

a. The parallel plan shall contain enough detail to permit the Township to evaluate the feasibility of development for each indicated lot and/or dwelling unit. The Planning Commission may require additional detail or information as it may determine necessary to evaluate the feasibility of the parallel plan.

b. All lots or buildings shown on the parallel plans shall be located on buildable lots, which, for the purposes of this Section shall mean lots or building areas that have an area of sufficient size and shape to accommodate the proposed main building septic and well systems (where no public sanitary sewer or water system is to be used), and required driveways, streets, or other means of permitted access.

c. Areas of wetlands, water bodies, and other unbuildable areas shall not be included within buildable areas, but may be included in the lot area calculations.

The density bonus provisions are optional. If included, the numbers presented in these regulations are very flexible. The community should first decide the maximum bonus that should be allowed, then determine what development features they would like to “reward” through the bonus. Other possible elements for which bonuses could be provided might be recreation areas, trails, high quality architecture, or other similar features.

2. Density Bonus: In order to preserve the maximum amount of open space, an OSD may permit an increase in the number of dwelling units above the base density established in the parallel plan.

a. Bonus allowances are cumulative, but In no case shall the density bonus exceed sixty percent (60%) of the base density.

b. The OSD may qualify for density bonuses in accordance with the following:

Facility/Open Space Provided		Density Bonus
Open Space	55% open space	10%
	60% open space	20%
	65% open space	30%
Community or Public Sanitary Sewer Service		30%
Community or Public Water Service		20%
Community or Public Sanitary Sewer and Water Service		60%

Density bonuses should be greater for a community sewer system than water. Having a community sewer system is one way to help ensure groundwater quality is protected.

c. For the purposes of this Section, *community sanitary sewer* shall be defined as all aspects of a complete system required to properly collect, treat, and dispose of wastewater from all of the individual dwelling units or other buildings within the OSD, including all pumps, pipes, laterals, controls, valves, treatment units, and other equipment necessary to collect, treat, and dispose of wastewater at a central location.

d. *Community water service* shall be defined as all aspects of a complete system required to draw water from a groundwater source, including all pumps, pipes, laterals, controls, valves, and other equipment necessary to provide potable domestic water to all of the individual dwelling units or other buildings within the OSD from a central location or water source.

Open space should be carefully evaluated in order to ensure that the open space provided is beneficial; rather than simply being land left over and impractical to develop. Projects claiming larger percentages of open space are not always desirable if that open space is otherwise not providing a benefit to the project.

D. Open Space: Any open space provided in the OSD shall meet the following considerations and requirements:

1. Open space areas shall be large enough and of proper dimensions so as to constitute a useable area, with adequate access, through easements or other similar arrangements, such that all properties within the entire OSD may utilize the available open space.

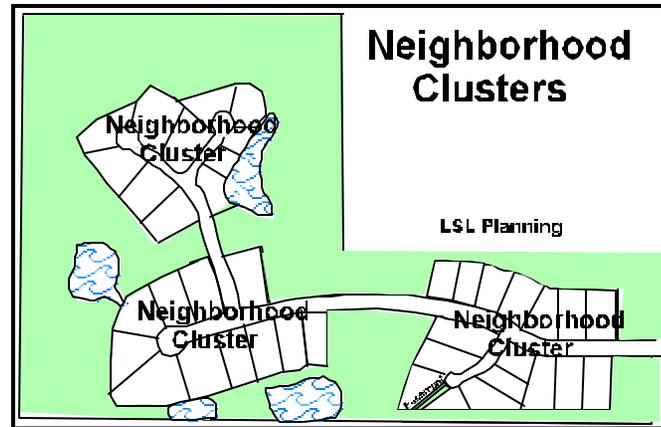
2. The OSD shall have a minimum of fifty percent

Minimum open space for cities and villages is 20 percent. Townships must require a minimum of 50 percent.

(50%) open space. Any area used in the calculation of required open space shall have a minimum width of fifty (50) feet.

3. Evidence shall be given that satisfactory arrangements will be made for the maintenance of such designated land to relieve the Township of the future maintenance thereof.

4. Open space may be provided where significant natural features may be preserved and/or be used for passive or active recreation. Open space is encouraged to be located between neighborhood clusters of housing units, as shown in the accompanying illustration.



5. All land set aside as open space shall be deed restricted, protected by conservation easement, or other similar permanent restriction, to ensure that the open space remains in a natural and undisturbed condition in perpetuity. Land set aside for agriculture may, at the discretion of the property owner(s) be converted to open space, but shall not be used as land for the construction of additional dwellings, nor used for any other development.

A property owner's association is required in order to ensure that the open spaces are maintained. "Maintained" does not necessarily mean mowed or manicured lawn areas. But natural areas also need to be maintained to ensure that junk is not dumped there, or that diseased or dead trees are removed or not allowed to become a hazard.

6. All open space shall be in the joint ownership of the property owners within the OSD. A property owner's association shall be formed which shall take responsibility for the maintenance of the open space.

The development setback is an optional, but effective, provision. Its aim is to preserve roadside rural character by providing a natural strip of land along the adjacent major roadway(s) serving the site.

E. Development Setback

1. Any building area, which for the purposes of this Section shall mean any lot on which a main use is located, shall be located at least two hundred (200) feet from any public street right-of-way not constructed as part of the OSD.

2. No native or natural vegetation shall be removed from the (200) foot setback, nor any grading or changes in topography occur, except that necessary for entrance roads, required utilities, or drainage improvements.

3. The Planning Commission may modify this requirement provided the applicant demonstrates that the clearing of existing vegetation would contribute significantly to the purpose and objectives of the OSD.

4. The Planning Commission may reduce this setback to not less than one hundred (100) feet if existing landscaping or topography provides a natural screen that substantially blocks the view to the proposed development. In such case the Commission may also require additional landscaping if necessary to further screen the development area. Such landscaping may consist of either existing vegetation, land forms, or landscaped areas using native or natural materials, or a combination thereof.

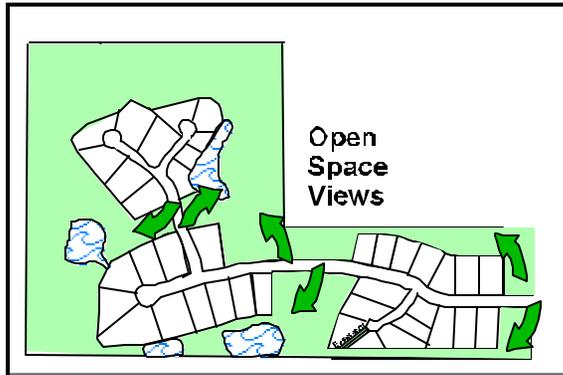
5. OSD sites abutting more than one (1) public street shall be permitted to reduce the setback on the shortest side of the abutting streets to one hundred (100) feet without a natural screen. No native or natural vegetation shall be removed from the one hundred (100) foot setback, nor any grading or changes in topography occur, except that as may be necessary for entrance roads or utilities.

The design principles are intended as a guide to allow the community to properly evaluate the effectiveness of the OSD in achieving the desired objectives. They are intended not to limit creativity but to foster it.

F. Design Principles: The overall intent of the Open Space Development regulations is to foster more creative development design, using open space to the advantage of the development, maintaining the rural character of the township, ensuring access to open spaces, preserving natural features, and other design objectives intended to foster an improved living environment. To this end the following general guidelines will be considered by the Planning Commission in evaluating proposed Open Space Developments.

1. Open space should be provided where significant natural features may be preserved, active agricultural land maintained, or be used for passive or active recreation.

2. Open space should generally be used to group areas of residential neighborhoods as clusters of housing units. This is intended to avoid the suburban development type normally found in urbanized areas. Generally, neighborhood clusters should have not more than 8-10 units per cluster for smaller developments and 15-20 units for larger developments.



3. The Open Space Development should be designed with due regard for views from roadways as well as lots within the OSD.

4. Open space within the development should generally be accessible from as many places within the development as possible, rather than limited to individual easements between development lots. To this end, providing open space segments along the internal roadways will be considered a high priority by the Township. Such areas

should be large enough to appear as open space, rather than a vacant lot for future development, and kept in their natural state. Such areas may, however, incorporate trails or other internal pedestrian circulation paths.

5. The overall design of the Open Space Development should emphasize the rural character of the Township, provide views to open spaces from as many areas of the development as possible, and avoid long, straight street segments and rows of homes.

As with any zoning approval, review standards are necessary to permit consistent and effective evaluation of individual projects. They must be taken seriously and compliance must be ensured before approval. Reasonable conditions may be attached to the approval to ensure that these review standards are satisfied.

## SECTION \*.05 REVIEW STANDARDS

The following review standards will be used by the Planning Commission in its consideration of a OSD. Before such developments may be approved the Planning Commission shall find:

- A. That the OSD meets the stated purposes of Section \*.01.

B. That the OSD does not substantially alter the character of the general neighborhood in which the development is proposed.

C. That the location of the buildings of the OSD do not unduly impact other single family uses in the vicinity of the proposed development.

D. That the OSD preserves, in perpetuity, unique site conditions, such as significant natural features, wetlands, large open space areas, or active agricultural land.

E. That the OSD can accommodate adequate and safe disposal of sanitary sewer and can provide an adequate, assured source of water for domestic use.

Placing a number of dwelling units, particularly with individual septic systems and wells, can create concerns about groundwater quality. Paragraph F allows greater discretion in reviewing OSDs in that light.

F. The Planning Commission may require evidence from the applicant that groundwater sources will be protected and that other environmental concerns are met. Approval of the \*\* County Health Department or other agencies, while required to develop the site, will not be the sole determining factor in this regard. To evaluate this review standard, the

Planning Commission may specify what additional evidence it deems to be acceptable to ensure the review standards are met, including additional soil borings, soil reports, hydrological tests, and other such evidence which will be submitted by the applicant and reviewed by the Township prior to approval of the OSD.

G. Stormwater Management: Stormwater management systems and drainage facilities shall be designed so as to:

1. protect the natural environment, including wetlands, water bodies, watercourses, flood plains, groundwater and soils;
2. retain the natural retention and storage capacity of any wetland, water body, or watercourse, and not increase flooding or the possibility of polluting surface water or groundwater, on-site or off-site;
3. incorporate and/or use natural drainage systems existing on the site to promote the natural infiltration of stormwater on site where appropriate.