

**COMMUNITY DESIGN
ELEMENT**

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Better Community Design Through County Regulations and Incentives

At one time, Sussex County consisted mainly of small towns surrounded by rural countryside. The towns were characterized by compact neighborhoods, small-town “Main Street” business areas, and a mix of traditional architectural styles. The rural areas featured working family farms, crossroads villages and extensive woodlands, all connected by country roads.

Sussex County is still an attractive place, with many towns having elements of their traditional character and style. Much of the rural countryside remains picturesque farmland. Many new developments have included well-designed open spaces and carefully designed buildings and amenities. However, crowded highways, strip commercial development, cookie cutter subdivisions, nondescript construction, and other aspects of suburban sprawl now exist in some areas. In certain areas of the County’s eastern sector and along some higher volume state roads, there little physical distinction between the town and the country.

The key is to design modern land uses in a manner that adds to the character of the community, instead of intruding into it. Some of these changes have expanded economic opportunities, brought commercial services, provided new housing opportunities and created convenient road connections. Yet, too often new construction has occurred with little thought towards design, causing parts of Sussex County to have the same overly-standardized appearance as many other parts of the country.

This Plan recognizes that change is inevitable. At the same time, the County is looking for the best ways to direct the location, appearance and function of new development. This chapter discusses how to use zoning, subdivision regulations and other means to produce development that is based on rational site planning, and forward-thinking design. Many of the techniques discussed illustrate how to incorporate open space and traditional design elements into new settings, an attempt to draw from the best of the old and the best of the new.

It also is important to maintain an attractive environment for economic development reasons. Visitors and new residents come to Sussex County for an attractive setting, where they can enjoy waterways, beaches and other natural areas. If Sussex County becomes unattractive, with garish signs, excessive numbers of billboards, destruction of natural features, and monotonous construction, it will harm economic growth.

Promoting Traditional Patterns of Development

Traditional Neighborhood Development – Better design through “Traditional neighborhood development” involves: a) making sure new development fits into the character of existing older neighborhoods and b) encouraging new development that incorporates the best features of older development. This involves extending the best features of the older areas into new neighborhoods.

This Plan encourages this concept. Traditional neighborhood development primarily involves the following:

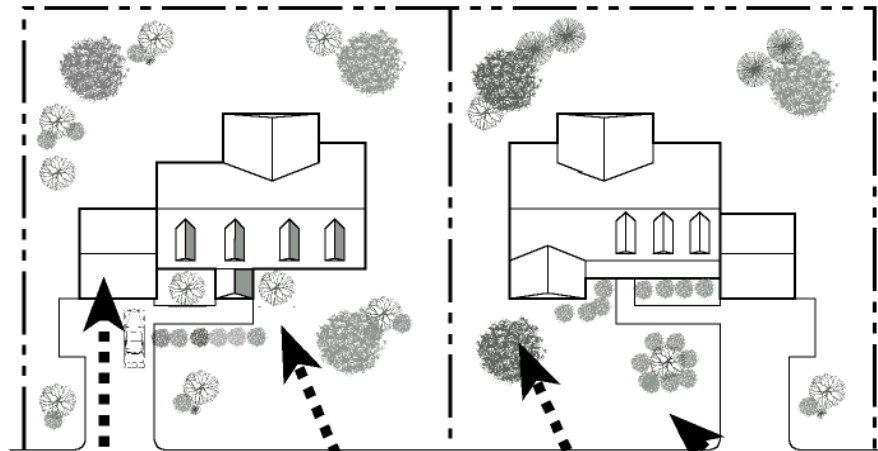
- Street trees should be planted to eventually provide a canopy of shade over streets. Studies show that mature street trees can increase the value of homes up to 10 percent. If it is not appropriate to have shade trees in the right-of-way, they can be required immediately outside of the right-of-way.
- New street lights should meet a design standard that is similar to older styles of street lights.
- Sidewalks should be provided (or asphalt paths along main roads in rural areas). There should be an orientation to pedestrians, with an ability to walk or bicycle to stores, schools and parks. Overly wide residential streets and intersections should be avoided to discourage speeding and to make it easier for pedestrians to cross the street.
- A modest density should be encouraged that is similar to the typical development that occurred during the 1930s through 1940s. This density (such as 5 to 10 homes per acre) should make best use of available land, while avoiding overly dense development and parking problems.
- Whenever practical, parking should be located to the rear or side of buildings, so that the front yard can be landscaped. At best, parking and garages would be placed to the rear of lots, with access using alleys. This design avoids conflicts between sidewalks and vehicles backing into the street, and allows the entire curbside to be available for on-street parking.
 - If rear access to garages is not practical, then garages should enter onto the side of homes whenever possible, particularly on corner lots. If a front-entrance garage is proposed, it should be designed so that it is not an overly prominent part of the street. For example, a one lane driveway can pass along the side of a house and then widen to enter a two-car garage that is setback from the front of the house. "Snout" houses should be avoided that have a front entrance garage as the home's most prominent feature.
- Buildings should be placed relatively close to the street, with front or side porches, to encourage interaction among neighbors. On a corner lot, a side porch can have the same effect. If residents spend time on their front porch, they can help oversee the neighborhood and report suspicious activity to the police.

The County could provide incentives to promote these features, such as a density bonus and reduced dimensional requirements. Traditional neighborhood development can be particularly attractive to developers by allowing single family lots that are more narrow than would otherwise be allowed. This reduction in lot width can result in dramatic reductions in the average costs of improvements per housing unit. Allowing relatively narrow single family detached lots can also provide an alternative to building townhouses - at a similar density.

- Many of the traditional neighborhood development ideas can be incorporated through the current Residential Planned Community option, which is described later in this chapter.

Suburban vs. Neotraditional Design

Suburban Design

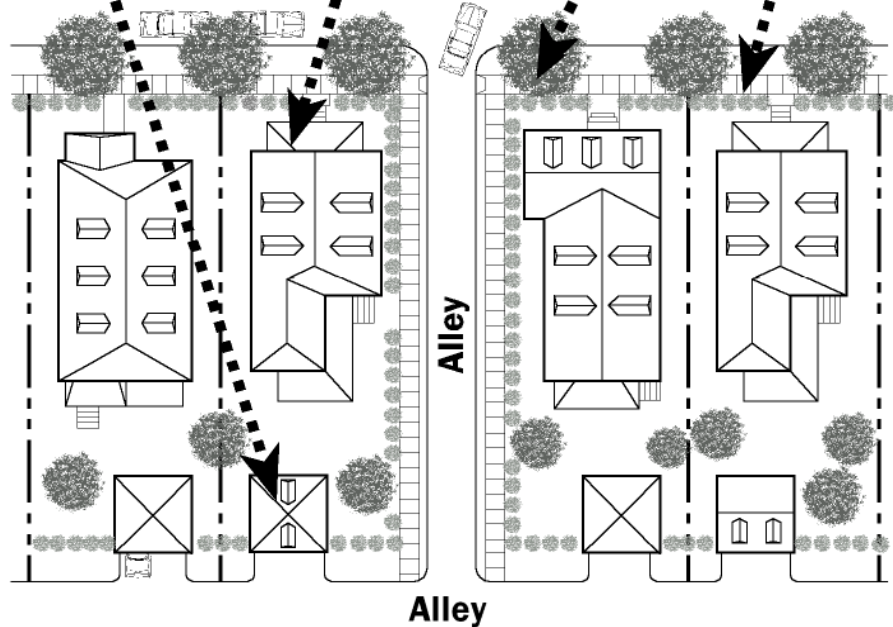


Garages forward
Garages on alleys

Deep front yards
Shallow yards,
porches

Trees in yards
Trees along
street

No Sidewalks
Sidewalks



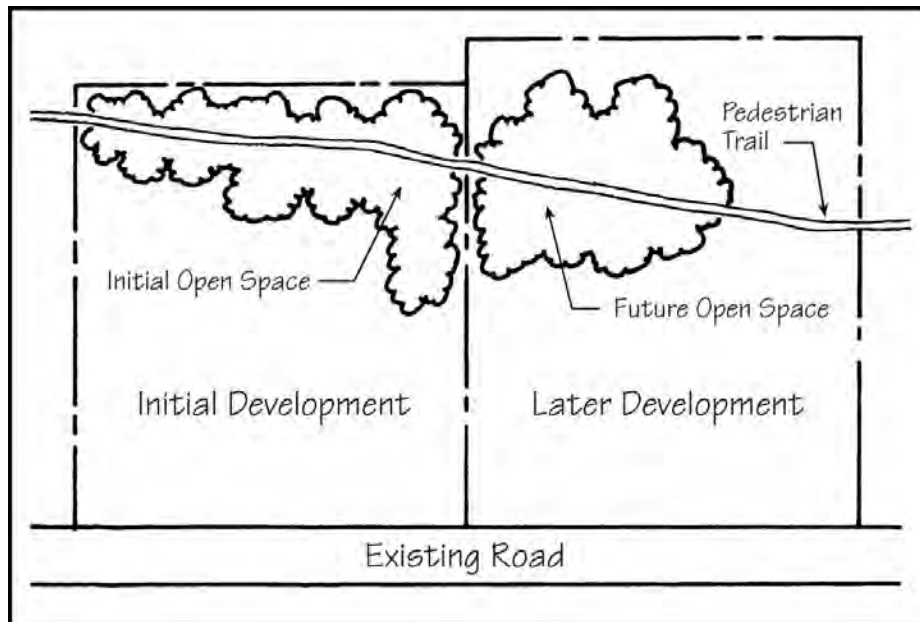
Neotraditional Design

Design Standards

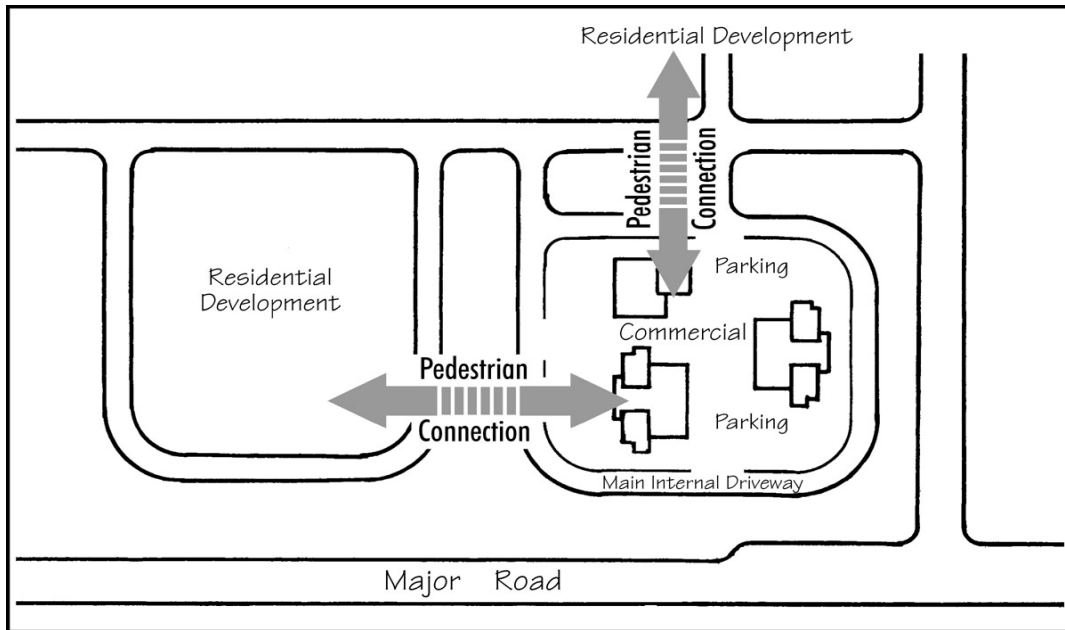
The following design standards should be considered in new development.



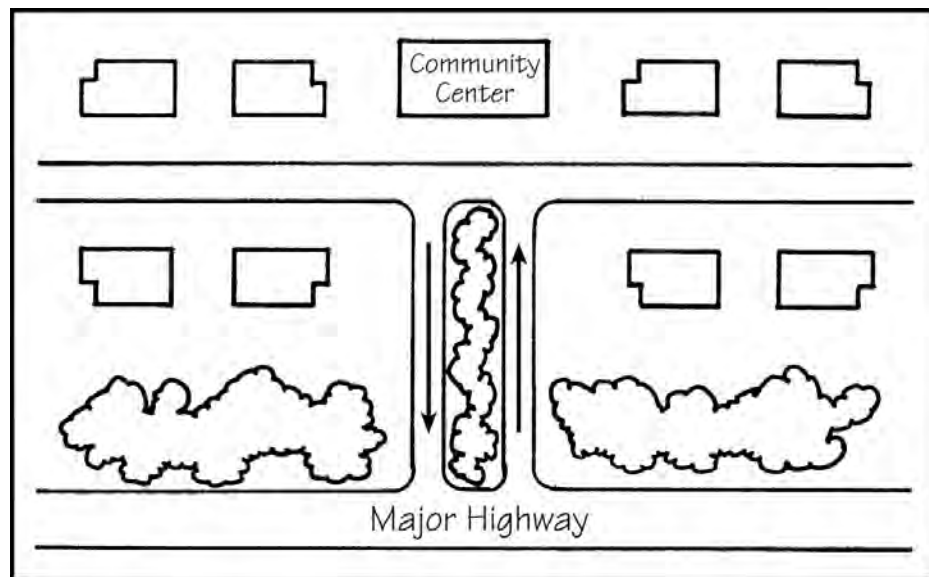
Pitched roofs, varied rooflines and architectural details can add visual interest, even for chain stores.



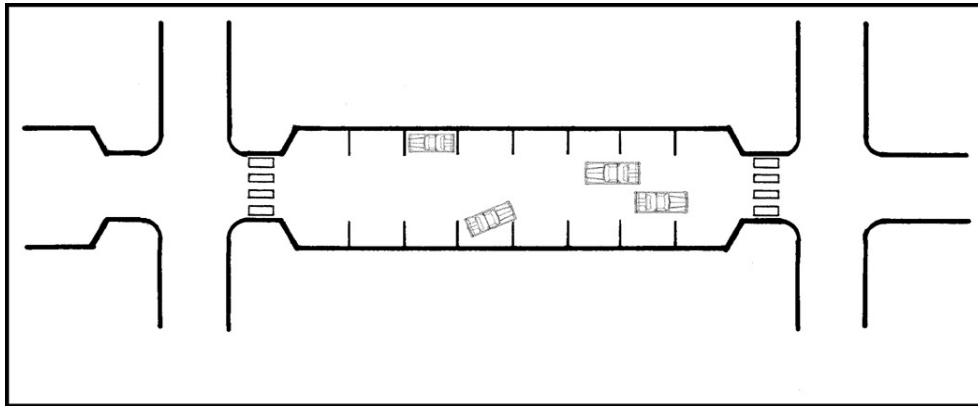
Open spaces and trails should be coordinated across various developments. When considering open space and trail locations in a current proposed development, future linkages on adjacent future development tracts should be considered.



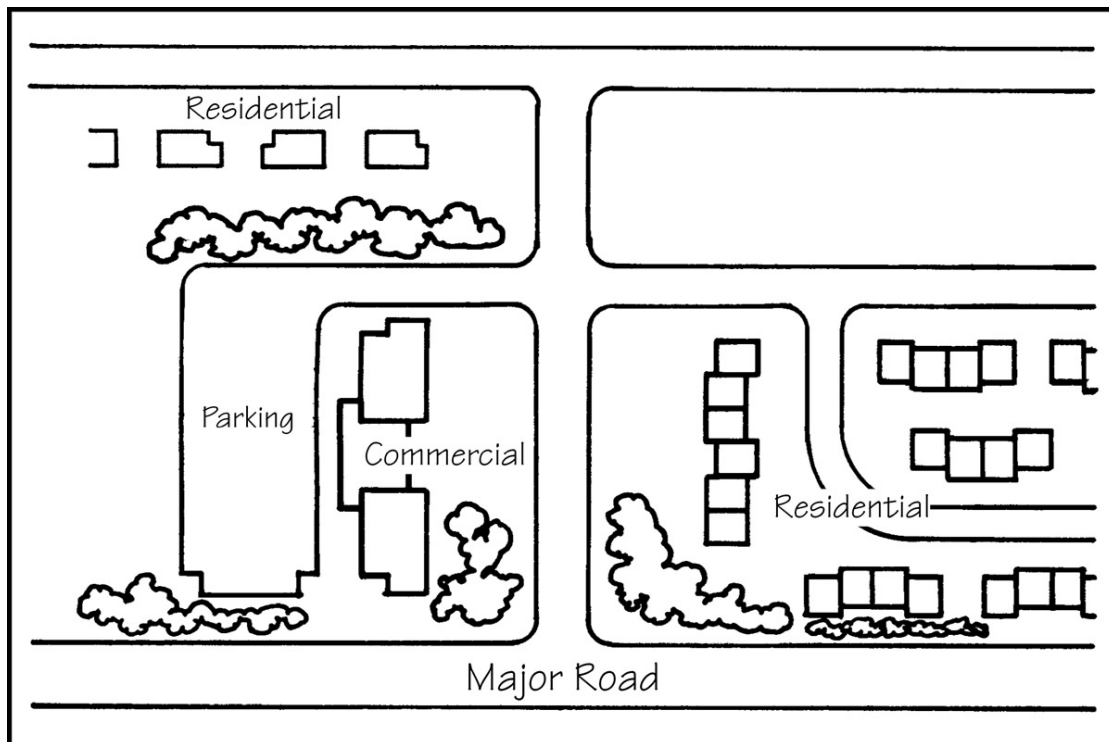
Pedestrian and bicycle connections should be provided between various developments. Where a road does not provide a connection, a hard-surfaced pedestrian easement should be provided. In larger commercial developments, most vehicle traffic should be directed to routes that do not conflict with the main pedestrian entrances from parking lots.



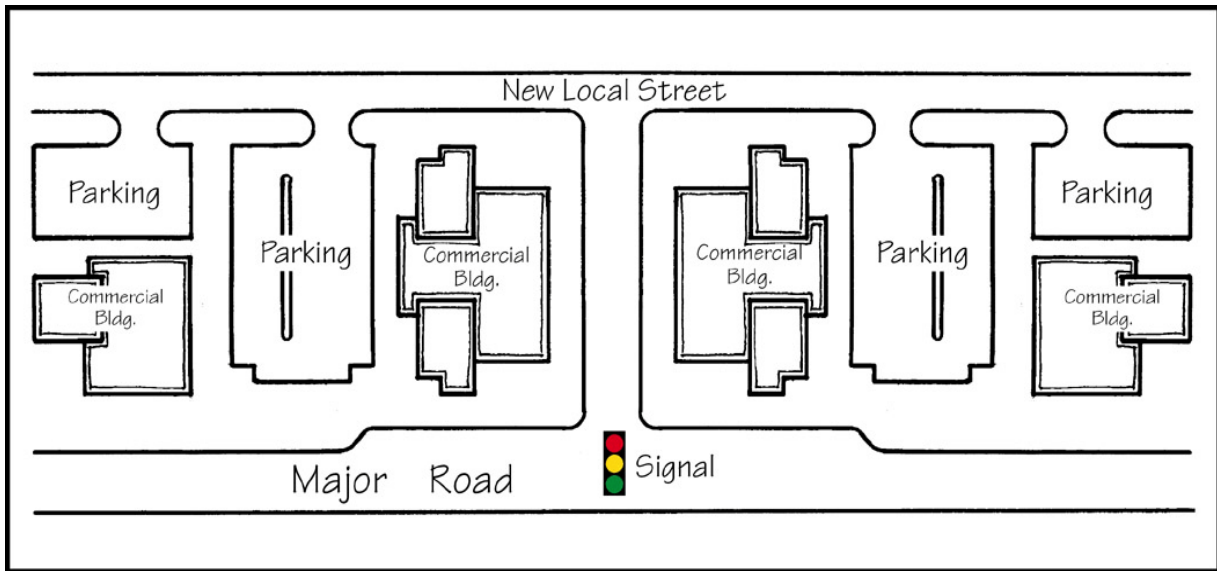
A well landscaped boulevard-style entrance can provide a great first impression. Along major roads, reverse frontage lots should be used to minimize the number of driveways entering onto major roads. When rear yards face onto a major road, they should be separated by landscaping, with any fencing on the inside of the landscaping. Open space should be provided along major roads to maintain some of the rural character and to reduce noise conflicts between homes and traffic.



On residential and some downtown streets, curbs should be extended outward at intersections so there is less width of street that needs to be crossed by pedestrians. The street can then be widened where on-street parking spaces are provided. By reducing the street width where there is not a need for parking, it reduces the amount of pavement and runoff and reduces construction and maintenance costs.



In larger residential developments, an area of neighborhood-oriented stores and services is desirable to serve local needs. Well-distributed commercial areas throughout the County can reduce the lengths of driving trips for everyday needs. The commercial area should be well-buffered from homes by landscaping.



Commercial buildings should be encouraged to be placed relatively close to the road, provided they still allow proper sight distance and room for future road widening. Most vehicle parking should be placed to the rear or side of buildings. At best, a new street or alley or interconnected parking aisles should be provided parallel to the major road so that most traffic can access the main road at a traffic signal.

Development Standards

Residential Planned Community (RPC) – There should continue to be RPC provisions in the County’s Zoning Ordinance to allow flexibility in the standards for larger developments, in return for a higher quality of site design. An applicant may ask the County to add this option to their property as an option to the regular zoning provisions. Similar provisions are in place in many of the towns, and should be further encouraged.

- These provisions usually allow a mix of housing types, including singles, townhouses and apartments.
- The density for a RPC should be slightly higher than the density that is possible without use of the RPC provisions, in order to provide an incentive.
- A RPC should continue to allow a percentage of the tract (such as up to 15 percent) to be developed in neighborhood-oriented commercial uses that are highly compatible with homes. A specific list of allowed uses and maximum sizes for businesses would be appropriate. Moreover, first floor commercial uses should be allowed with apartments on upper stories.
- The RPC provisions give the County the authority to modify zoning requirements, such as setbacks, within a RPC development. The County should also be able to reduce street widths.
- A set of design standards should be promoted. Use of alleys should be encouraged to allow rear driveways and rear garages.

- A minimum percentage of the tract should be required to be preserved in open space. There currently is no minimum open space requirement. Greater attention is needed to the design of the open space to make sure it serves a valuable public purpose and is inter-connected. The amount of open space can vary with the allowed density, based upon the underlying zoning district.

Maximum Building Setbacks and Limits on Front Yard Parking – In key older areas of the County (including parts of the towns and cities), it may be appropriate to specifically establish a maximum building setback. The goal is to have new construction be consistent with prevailing setbacks along a block of older buildings. The code can also limit new parking in the front yard in older areas. The goal is to encourage front yard setbacks that are relatively small, but well-landscaped. Front porches should be encouraged. Where an alley is available or could be feasibly extended, a developer could be required to have driveways and garages access that alley, as opposed to having a front garage door. Garage doors and driveways can also be promoted to use the less heavily traveled street on a corner lot.

Buffering and Landscaping – A much greater emphasis is needed on buffering and landscaping. A high impervious coverage can still be attractive with the proper landscaping. Street trees and shade in parking lots should also be required. Buffering is particularly important between new businesses and residential neighborhoods. A buffer yard in some cases can be strengthened with a berm. To minimize the amount of land that is consumed by a berm, a retaining wall could be used on the business side of the berm. The County should also have the authority to require fencing when needed on the business side of buffer yard landscaping.

Preserved Open Space Within New Developments

Cluster development or “open space development” involves providing incentives for the permanent preservation of a substantial percentage of the land within a new development. In a cluster development, the land is typically owned and maintained by a homeowner association, although other methods of ownership are possible. The homes are allowed to be placed on smaller lots than would normally be required, or different types of housing types are allowed, to offset the land used as open space. The County offers greater flexibility in lot sizes and dimensions in return for the open space. The open space is permanently preserved by a conservation easement, that prevents future subdivision or building on the open space.

In comparison, conventional subdivisions usually result in little or no preserved open space (except wetlands) because the entire tract is subdivided into building lots. Often, most of the building lots in a conventional subdivision are virtually the same size and shape—hence the nickname “Cookie Cutter Subdivisions.”

The preserved open space should be used to help to maintain the scenic character of the County by preserving landscaped open areas along major roads and to maintain forested buffers between developments. Forested buffers should also be required between new residential developments and adjacent farmland.

Preserved open space can often increase values of adjacent homes. Open space development can also help retain more naturalistic stormwater patterns, which promotes groundwater recharge and protects water quality. This is because stormwater swales can be wider and vegetated, as opposed to having stormwater piped or constrained within narrow channels to avoid losing density.

Cluster development also permits the developer to reduce road lengths, amounts of grading and lengths of utility lines - each of which saves on construction and maintenance costs.

Sussex County has promoted use of cluster development. The cluster option has been very widely used in recent years, particularly in the AR-1 zoning district, which covers most of the undeveloped land areas in the County. The cluster option has made it more economical to develop central water and sewage systems in rural locations. However, there have been insufficient controls on the types of lands that are allowed to be counted as open space.

In cluster development, the applicant should need to show that the development has been carefully located to protect important natural areas, including mature forests and waterways. Open spaces should be required to be linked together, as opposed to being smaller fragmented areas. Narrow areas should not count as open space. Land areas should not be allowed to be counted towards the required open space unless they serve the residents of a community. Consideration should be given to whether wetlands should not count as open space. Stormwater ponds should only count as open space if they are designed to resemble a natural pond or are suitable for a recreational purpose. Careful attention should be focused upon what types of water and sewage facilities should be allowed to count as open space. Generally, spray irrigation fields and well sites should be able to count as open space, but other treatment facilities should not. Also, golf courses can be suitable for open space, as long as there also is a recreation area that is available for use by all residents.

Trees should be planted in open space areas where appropriate. Landscape tree specimens should be planted in active open space areas where appropriate, particularly around playgrounds.

It may be desirable to allow a reduction in the amount of active open space if the developer provides substantial recreation facilities. However, if a pool, recreation center, or community center are built, significant forethought must be put into determining how these facilities will be operated, maintained, and funded.

It is important to make sure that clustering would not dramatically increase the total number of homes built in the County, unless it is offset by funding the preservation of land on other sites.

Several alternatives exist for long term maintenance of the preserved open space, including ownership by a legally-binding homeowners association, the County, or a land trust. The areas needing the least maintenance would be areas preserved in forests or wetlands. In some cases, the open space could remain in one large agricultural use or a horse farm, with pedestrian trails around the edge of the farm for use by the residents.

Wherever feasible, open space should be provided in locations that can connect to existing public or semi-public open spaces or preserve land along a waterway. Required open spaces should be

required to include pedestrian trails that are accessible by the residents, and preferably by the public. The trails should connect to other neighborhoods, nearby commercial areas and public lands.

Water Features

As described in the Natural Features Element, wetlands and uplands along waterways should be preserved as passive open space. Existing native vegetation should be retained and additional native plantings should be considered in areas where natural vegetation is sparse.

To the extent possible, trails should be constructed on upland areas. If a wetland must be crossed, the wetland crossing should be the shortest distance possible and the walkway should be elevated. In tidal wetlands, the boardwalk should be elevated to allow vegetation to grow under the boardwalk.

Green Architecture and Green Site Design

“Green Architecture” involves types of construction that is designed to be environmentally friendly, healthy for its occupants, and very energy-efficient. It often involves use of solar energy, which may simply involve “passive” solar heating and maximum use of natural sunlight for internal lighting. An emphasis is placed upon minimizing the amount of fossil fuels that must be used for heating, air conditioning and ventilation.

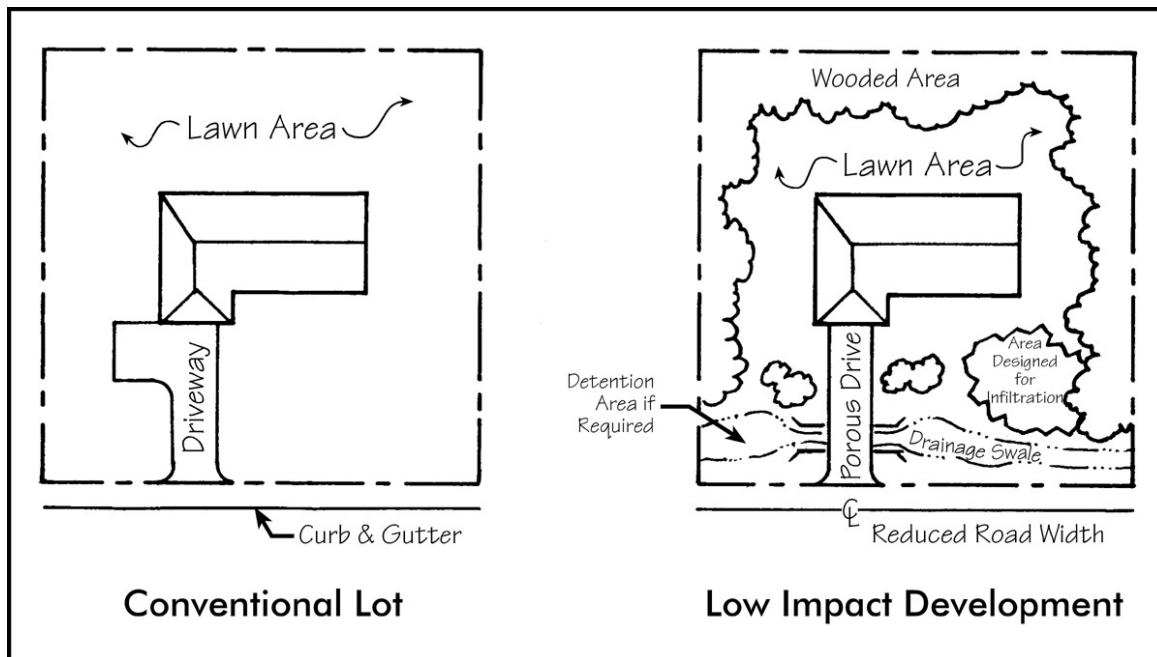
A simple principle is to locate buildings to maximize southern exposure to the sun. This involves placing large number of windows on the south side of a building, to allow natural heating and lighting. Deciduous trees should then be planted along the south side of the building, to avoid excessive heat during the Summer, while allowing the sun through in the winter. Evergreen trees should be planted on the north and west sides of a building to block winter winds and provide shade. If buildings in a development are constructed to use solar energy, there should be deed restrictions to avoid future obstructions on adjacent lots.

Green construction also seeks to promote recharge of stormwater into the ground. This can be accomplished through rain gardens (which are landscaped depressions on a site), infiltration trenches (which are filled with stones above a geotextile), long and wide vegetated swales, and other methods.

When stormwater is directed to long relatively flat swales or vegetated filter strips, it not only promotes recharge, but also filters out eroded soil and certain other pollutants before they reach waterways.

Sussex County hopes to establish three new incentives to encourage green design:

- A possible partial building permit rebate for projects in developing areas that receive federal Energy Star certification.
- Possible expedited review at the County and State levels for projects within the environmentally sensitive developing areas that incorporate an approved checklist of green design features.
- A possible increase in maximum building height and density for mixed use developments in Town Centers for up to twelve units per acre provided: a) the development receives a County-adopted LEED-type certification which rewards green design and construction techniques; and b) the development receives conditional use approval.



The sketches above compares a lot that is mostly grass with stormwater directed into the gutter of a street, to a lot with much lower environmental impacts. The low impact lot involves directing some runoff into an area to recharge into the ground, and using drainage swales that filter out some pollutants before the water reaches a waterway. The low impact lot also maximizes the amount of the lot covered by trees.

To minimize environmental impact, there should be efforts to minimize the total land areas that are covered by surfaces that are “impervious” to water. This involves clustering homes on portions of a site, which reduces the amount of pavement per home. Excessive widths of streets should be avoided. Green construction also promotes use of pervious pavement. This can involve porous concrete or pervious asphalt. In both cases, the mix does not include fines, so that some runoff can pass through the pavement. A stone base is used and then a geotextile to filter the runoff underground. Pervious pavement is particularly useful in portions of parking areas that are not used on a daily basis and in pedestrian areas. Less used parking areas can also be constructed with grass that is grown within a grid material.

Whenever practical, the turnaround of a cul-de-sac street should include a landscaped island. This island improves the appearance and reduces runoff.

Natural drainage flow paths should be maintained. Drainage from rooftops should be directed into vegetated areas on each lot, as opposed to be directed to large stormwater systems. The amount of land area that is disturbed at various times during construction should be minimized. Plantings of many open space areas should be encouraged to result in their eventual re-forestation. Streets and parking lots should be periodically mechanically swept to collect pollutants before they reach waterways.

Infiltration measures need to be carefully designed and maintained in order to function properly. Otherwise, they can become clogged with sediment. Many measures are described in the report entitled “Green Technology: The Delaware Urban Runoff Management Approach,” which is available for free on the DNREC website.

Stormwater ponds ideally would be designed to hold water for several hours or more to allow pollutants to separate from runoff. However, if the ponds retain water for more than 24 hours, aeration is desirable to avoid breeding of mosquitos.



An example of a green roof, with vegetation over vehicle garages in an apartment complex.

A “flag lot” is a lot that has a narrow land area connecting the main part of the lot to a road. The narrow stretch includes the driveway. Flag lots should be controlled so they are not overly used. However, one or two flag lots within a development can be beneficial at the end of a road to allow a greatly reduced length of road.

The LEED Certification process is available to recognize buildings that best comply with these principles. The LEED certification was originally designed for very large commercial and public buildings, but is not being expanded to other types of construction. The National Association of Homebuilders also has prepared a set of Green Building Principles. It may be appropriate for the County's Zoning Ordinance to provide incentives for buildings that meet a national certification process.

For example, a green certified building could be allowed to have a higher percentage of the lot covered by buildings and/or paving, or a taller height.

Signs

The sizes and heights of signs should be controlled to maintain the attractiveness of the County. In particular, billboards should be limited in their sizes (such as 300 square feet), their locations, and the minimum distances between billboards. Electronically changing signs should be limited in how often they can change to avoid distractions to motorists. Flashing and animated signs should be prohibited.