MODEL ZONING ORDINANCE
FOR VILLAGE DEVELOPMENT

CONTENTS

201. PURPOSES AND APPLICABILITY
   A. General Purposes
   B. Applicability

202. VILLAGE AREAS AND USES
   A. Standards Applicable to Village as a Whole
   B. Storefront Area
   C. Central Residential Area
   D. Village Residential Area
   E. Village Greenway Area

203. DENSITY DETERMINATION AND DIMENSIONAL STANDARDS
   A. Village Size and Separation
   B. Density and Greenway Land Determination
   C. Area and Dimensional Standards
   D. Greenway Land Dimensional Standards
   E. Additional Standards Applicable in all Village Areas

204. DESIGN STANDARDS FOR VILLAGE DEVELOPMENT AND
     GREENWAY AREAS
   A. Overall Form and Spatial Relationships
   B. Design Standards for Greenway Land
   C. Design Standards for Storefront Area
   D. Residential Design Standards for Central Residential and Village
     Residential Areas

205. MODIFICATIONS
   A. Height
   B. Side Yard

206. DEFINITIONS
MODEL ZONING ORDINANCE PROVISIONS
FOR VILLAGE DEVELOPMENT

Commentary: This model ordinance combines aspects of two complementary approaches to land use planning: conservation design and the New Urbanism. In each case, a number of municipalities around the country have adopted standards similar to those contained in this new model, which brings those elements together and creates a hybrid version containing the best of both of those two design worlds.

One municipality that stands out as a leader in combining these two approaches is the Town of Davidson, near Charlotte, North Carolina, which employs these techniques in their rural and urban areas. In Davidson, where key planning staff members possess design backgrounds and skills, the community has recognized the importance of the design aspect of the planning process.

The perennial question which always arises when discussing more creative design approaches is how does a municipality structure its regulations to encourage or ensure that applicants will follow this course, and not simply continue submitting conventional layouts? There are several ways in which this can be accomplished.

1. Requiring Village Conservation Design: Some communities simply require that within specified districts (or overlay districts), certain design standards must be followed. This model, however, does not take that approach, following the general preference among New Urbanists that codes be amended to permit traditional neighborhood design rather than mandating it.

2. Density Incentive: This model provides for substantial additional density to encourage applicants to opt for the recommended approach because most municipalities, landowners, and developers are more familiar and comfortable with that approach. Such density bonuses are also needed for a number of other reasons, including: (1) the higher infrastructure costs involved when building New Urbanist communities which, for example, cannot usually be developed with individual wells and septic systems; (2) the greater risk perceived by developers and bankers when following New Urbanist principles of intermixing different housing types along the same street, and integrating retail and services into the neighborhood. In addition to a basic bonus simply for following the design standards in this model, the code provides supplementary density bonuses to further certain public objectives, including affordable housing, public access to conservation lands, and endowment of conservation lands to ensure proper long-term maintenance.

3. Density Disincentive: Another way of helping to ensure that developers opt for village conservation design would be to reduce the permitted building density attainable with the conventional development alternative. Although I have recommended that approach in other publications advocating for rural
conservation design, it is not a part of this model, primarily because of concerns that adding that extra dimension to this already complex code would burden the ordinance with further complexity.

201. PURPOSES AND APPLICABILITY.

Commentary: The local governing body should determine, based on historical drawings and photos, if there is a style or pattern of development that the citizens of the community want to see emulated in new development. That style or pattern can then be identified in the ordinance by reference to those drawings, the date and location of that historical development, or by other means.

1. To encourage creation of a functionally diverse, but visually unified, community focused on a central square.

2. To promote use of neighborhood greens, landscaped streets, boulevards, parkways, and “single-loaded” streets woven into street and block patterns in order to provide neighborhood identity and space for social activity, parks, and visual enjoyment.

3. To provide buildings for common or institutional purposes, such as civic or religious assembly, that act as visual landmarks and symbols of identity.

4. To promote the location of dwellings, shops, and workplaces in close proximity to each other, the scale of which accommodates and promotes pedestrian travel for trips within the community.

5. To preserve Greenway Land, scenic vistas, agricultural lands, and natural areas.

201.B. Applicability.
The standards in this section are applicable within the Village Design Overlay District (VDOD).

Commentary: The Village Design Overlay District (VDOD) is a special overlay zoning district whose location(s) is (are) indicated on the [municipal] zoning map. The Comprehensive Plan should also include the criteria for selecting areas suitable for the VDOD, such as adequate road access, utility services, topography, and location relative to schools, shops and services. Sites selected for the VDOD represent areas where there is broad consensus that higher density (and possibly also mixed use) development is both appropriate and desirable. VDOD boundaries should be shown on the zoning map contained in the local government’s ordinance.
This model represents an important variation on the standard PUD ordinances of the past. Most PUD regulations provide increased flexibility to permit developers to fit more lots into those parts of their property where environmental constraints are less and to designate their unbuildable lands as open space, but they typically fail to require a reciprocal effort by those same developers to follow any comprehensive design standards (1) to reserve an interconnected network of conservation lands (including a significant percentage of otherwise buildable lands), or (2) to implement key New Urbanist principles of traditional neighborhood design (such as to ensure that mixed uses and different housing types are physically integrated instead of being separated into separate “pods”, and that attached dwellings retain a close relationship to the street instead of being arranged around central parking areas).

In this variation upon the familiar PUD process, this model incorporates some different approaches. For example, we believe that Sketch Plans provide for greater flexibility and facilitate public participation by stimulating meaningful discussion at the onset of the design process, an extremely important element that is often lost during the more formal PUD process. We also believe that our standards are as specific as they can be, without removing all judgmental aspects of the review process, which should involve more than simply going down a check-list and ticking off items that have been completed or addressed. There is always a qualitative aspect to the review process.

202. VILLAGE AREAS AND USES.

202.A. Standards Applicable to Village as a Whole.

1. Villages are intended to provide for a range of complementary uses and may consist of up to four areas: Storefront Area, Central Residential Area, Village Residential Area, and Village Greenway Area.

Commentary: The ideal village consists of all four areas listed above. However, at a minimum, all villages must contain Village Residential Areas and Village Greenway Areas.

2. All villages shall contain both a Village Residential Area and a Village Greenway Area.

3. In villages containing more than 100 dwelling units, at least 20 percent of the dwelling units shall be other than single-family detached.

4. A minimum of [insert number] percent of the Adjusted Tract Area, plus all constrained lands shall be permanently protected as Greenway Land.

Commentary: The municipality should insert the appropriate percentage of Greenway Land. This may range from 30 to 70 percent, depending on whether the development
represents infilling or extensions to existing towns or villages, or new development on greenfield sites or associated with existing hamlets or crossroads clusters.

202.B. Storefront Area.

1. **Purpose.** The Storefront Area, which is optional, serves as the village core. All nonresidential uses shall be located within the Storefront Area. This area shall provide a variety of retail shops and services complemented by other compatible business, civic, institutional and upper-story residential uses in buildings consistent in scale with a small downtown or central market place in the community. Upper story dwelling units above nonresidential uses are specifically encouraged. First-floor residential uses are prohibited.

2. **Maximum Size.** The Storefront Area, including parking, shall be limited to 6 percent of the Adjusted Tract Area of the entire village. This limit may be increased as follows:
   a. Commercial buildings and their associated parking areas may occupy up to 12 percent of the Adjusted Tract Area if they include second-story non-retail uses above at least 10 percent of the commercial building coverage.
   b. Commercial buildings and their associated parking areas may occupy up to 18 percent of the Adjusted Tract Area if they include second-story residential units, provided that at least half of the new commercial building coverage is two stories, and at least 25 percent of the second-story space is designed for residential uses.

4. **Uses Permitted in the Storefront Area.** The following uses are permitted by right:
   a. Retail uses, professional offices and personal or professional services occupying 2,400 square feet or less in one-and-one-half-story buildings, and up to 4,800 square feet in buildings of two or more stories.
   b. Civic and institutional uses such as schools, libraries, and places of worship.
   c. Governmental or public uses, excluding storage of materials, trucking or repair facilities, private or municipal sanitary landfills.
   e. Day-care centers.
   f. Upper-story dwelling units in addition to the base residential density otherwise permitted, provided the total number of dwelling units in a development shall not be increased by more than 10 dwelling units or 10 percent, whichever is greater. Shared parking arrangements shall be permitted.
Commentary: Shared parking standards should be adopted, by reference, from
established sources such as those published by the Urban Land Institute in its
publication, “Shared Parking Standards.”
   g. Home occupations.

Commentary: The municipality should review its regulations pertaining to home
occupations (particularly those concerning dimensional requirements such as setbacks)
to ensure compatibility with the character of the village district. Very often such
regulations reflect more suburban characteristics and can unintentionally prevent or
discourage such activities in this mixed-use district.
   h. Live/work units for artisans, professionals, and service providers.
   i. Gasoline stations along major arterial roads.
   j. Active recreation.

Commentary: Communities may wish to add Special Exception Uses such as public
utilities, including substations, pumping stations and waste treatment facilities and their
accessory uses.

202.C. Central Residential Area.

1. Purpose. The Central Residential Area, which is optional, provides a wide
variety of housing types in close proximity to the Storefront Area when
the village contains commercial uses.

2. Uses Permitted in the Central Residential Area. The following uses are
permitted by right:
   a. Single-family detached dwellings.
   b. Two-family, three-family, four-family, and five-family dwellings.
   c. Multifamily dwellings, limited to [8-16] dwellings in a single
building.

Commentary: Communities may wish to permit age-restricted multifamily housing at a
higher density.
   d. Accessory dwelling units that are architecturally integrated with
the primary structure or accessory buildings in accordance with
Section 203.E.5.
   e. Home occupations.
   f. Uses accessory to residential uses.

3. Mix of Residential Uses. The Central Residential Area shall consist of at
least two dwelling types, with a maximum of 40 percent single-family
detached units.
Commentary: The different housing types should not be segregated from each other, but should be located together on the same street. The architectural design standards in Section 204.D will help to ensure compatibility between the smaller and larger residential structures.


1. **Purpose.** The Village Residential Area, required in all villages, is located outside the Central Residential Area and contains primarily single-family detached dwelling units, but may include some two, three, four or five-family units, and accessory dwelling units.

2. **Uses Permitted in the Village Residential Area.** The following uses are permitted by right:

   a. Single-family detached dwellings.
   b. Two- through five-family dwellings.
   c. Accessory dwelling units that are architecturally integrated with the primary structure or accessory buildings in accordance with Section 203.E.5.
   d. Home occupations.
   e. Uses accessory to residential uses.

3. **Mix of Residential Uses.** Village Residential Areas shall consist of at least 80 percent single-family detached units, except that village developments containing fewer than 100 dwelling units may consist of 100 percent single-family detached units.


1. **Purpose.** The Village Greenway Area consists of all the Greenway Land required in the Village. Greenway Land shall consist of Primary Conservation Areas and Secondary Conservation Areas. At least 15 percent of the minimum required Greenway Land shall consist of multiple greens, commons, squares, or parks.

2. **Uses Permitted in the Village Greenway Area.** The following uses are permitted by right:

   a. Conservation of open land in its or natural or managed state (for example, woodland, fallow field, or meadow).
   b. Agricultural and horticultural uses, including raising crops or livestock, wholesale nurseries, associated buildings, excluding residences needed to support an active, viable agricultural or horticultural operation. Specifically excluded are commercial
livestock operations involving swine, poultry, mink, and other animals likely to produce highly offensive odors.

c. Pastureland for horses and other grazing livestock used solely for recreational purposes. Equestrian facilities, including commercial facilities, shall be permitted but may not consume more than half of the minimum required Greenway Land. Indoor or outdoor riding arenas are permitted, excluding seating areas and facilities for audiences. Rodeo facilities are specifically excluded.

d. Silviculture, in keeping with established standards for selective harvesting and sustained-yield forestry.

e. Neighborhood Greenway Land uses such as village greens, commons, picnic areas, community gardens, trails, and similar low-impact passive recreational uses specifically excluding motorized off-road vehicles, rifle ranges, and other uses similar in character and potential impact as determined by the [governing body].

f. Active noncommercial recreation areas, such as playing fields, playgrounds, courts, and bikeways, provided such areas do not consume more than half of the minimum required Greenway Land or ten acres, whichever is less. Parking facilities for the same shall also be permitted, provided they shall not be included in the required Greenway Land.

g. Golf courses may comprise up to 50 percent of the minimum required Greenway Land, but shall not include driving ranges or miniature golf. Golf course parking areas and any associated structures shall not count toward the minimum required area of Greenway Land.

h. Water supply facilities, sewage disposal systems, and infiltration areas for stormwater management facilities, provided that such areas do not occupy more than 25 percent of the required Greenway Land, and excluding mounded septic systems, storage lagoons, and detention and retention basins greater than 36 inches in depth.

i. Easements for drainage, access, sewer or water lines, or other public purposes.


k. Above-ground utility and street rights-of-way may traverse, but shall not count toward the minimum required area of Greenway Land.

l. Single-family detached dwellings and accessory units on “country properties” at least 10 acres in area.

203. DENSITY DETERMINATION AND DIMENSIONAL STANDARDS.

203.A. Village Size and Separation.
Commentary: The maximum size of a village may be defined by the municipality in terms of the number of dwelling units permitted or by the acreage involved. Ideally, the village overlay district boundaries will be specifically delineated on the zoning map. The separation between villages may be determined by mapping contained districts, where each district represents a single village, or by imposing separation distances between villages. Some municipalities may wish to proceed cautiously with lower size limits than they might eventually permit, in order to become comfortable and gain experience with smaller projects prior to permitting larger ones.

203.B. Density and Greenway Land Determination.

1. Residential Density. The maximum number of dwelling units to be permitted shall be the sum of the following:

<table>
<thead>
<tr>
<th>Determined in Section Number</th>
<th>No. of Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>203.B.2.b</td>
<td>Base Density</td>
</tr>
<tr>
<td>203.B.3</td>
<td>Standard Village Development Bonus</td>
</tr>
<tr>
<td>203.B.4.a</td>
<td>Bonuses to Further Certain Public Objectives</td>
</tr>
<tr>
<td></td>
<td>a. Public Use of Greenway Land</td>
</tr>
<tr>
<td>203.B.4.b</td>
<td>b. Endowment for Greenway Land Maintenance</td>
</tr>
<tr>
<td>203.B.4.c</td>
<td>c. Affordable Housing Development</td>
</tr>
<tr>
<td>202.B.4.f</td>
<td>Storefront Area Dwelling Units Constructed above Commercial Uses</td>
</tr>
</tbody>
</table>

Maximum Number of Permitted Dwelling Units =

2. Density Determination. Determination of the maximum number of permitted dwelling units shall be based on the Adjusted Tract Area of the site. The Adjusted Tract Area equals the Gross Tract Area minus the Adjusted Constrained Land. The following calculations are required:

a. Adjusted Tract Area. The acres occupied by the constraints listed below shall be calculated and multiplied by the multiplier. Where two or more constraints overlap, only the constraint with the highest multiplier shall be used in the calculation.
<table>
<thead>
<tr>
<th>Constraint</th>
<th>Acres of Constrained Land</th>
<th>Multiplier</th>
<th>Adjusted Constrained Land</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Right-of-Way</td>
<td></td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Wetlands</td>
<td></td>
<td>0.95</td>
<td></td>
</tr>
<tr>
<td>Floodway</td>
<td></td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Floodplain</td>
<td></td>
<td>0.50</td>
<td></td>
</tr>
<tr>
<td>Rock outcrops greater than 1,000 SF in area</td>
<td></td>
<td>0.90</td>
<td></td>
</tr>
<tr>
<td>Very steep slopes (greater than 25%)</td>
<td></td>
<td>0.80</td>
<td></td>
</tr>
<tr>
<td>Moderately steep slopes (15-25%)</td>
<td></td>
<td>0.25</td>
<td></td>
</tr>
</tbody>
</table>

**Commentary:** The above "multipliers" are similar to those upheld in a decision by Pennsylvania's Commonwealth Court in 1992 (Reimer v. Upper Mt. Bethel Twp., 615 Atlantic Reporter 2nd., 938-946). In that case, the court expressed strong support for such approaches to determining density, which are based on measurable criteria pertaining to the inherent suitability of land for development, as contrasted with "blanket" densities applied to all properties within a zoning district regardless of the presence or absence of physical constraints. These density factors are then multiplied against the acreage that is covered by each type of constraining feature or characteristic. The use of this concept was pioneered by the Bucks County Planning Department in Doylestown, Pennsylvania, in the mid-1970s and is described at length in Performance Zoning by Lane Kendig et al. (1980).

**Formula:** Adjusted Tract Area = Gross Tract Area - Adjusted Constrained Land

\[
\text{Gross Tract Area} - \text{Total Adjusted Constrained Land} = \text{Adjusted Tract Area}
\]

b. **Base Density.** Base density shall equal the Adjusted Tract Area times the density factor. The density factor is the density of the underlying zoning district expressed as dwelling units per acre.
**Commentary:** For example, in a district with an underlying density of two dwelling units per acre, the density factor is two. Likewise, in a zoning district with a minimum lot size of one-half acre, the density factor is also two.

**Formula:** Base Density = Adjusted Tract Area x Density Factor

\[
\text{Adjusted Tract Area} \quad \frac{\text{acres}}{\text{x}} \quad \text{Density Factor} \quad = \quad \frac{\text{Base Density}}{\text{dwelling units}}
\]

**Commentary:** For example, on a 100-acre parcel with 24 acres of adjusted constrained land, in a zoning district with a minimum two-acre lot size (0.5 du/ac), the maximum number of permitted dwelling units is 38 (76 acres x 0.5 = 38 units).

3. **Standard Residential Density Bonus for Village Development.** This bonus is provided to encourage applicants to select the village design option. Compliance with all Greenway Land and development standards in this article and in the subdivision ordinance is required. To determine the residential density bonus for village design, base density shall be multiplied by [insert number].

**Commentary:** Because the concept of building density is so closely bound to the matter of local context, this model ordinance suggests only general guidelines for the village bonus. For example, in rural areas with low base densities the bonus can be greater (perhaps 100 percent), while in existing towns and villages with moderate to high base densities, the bonus should be much less, such as 25 percent.

**Formula:** Village Density Bonus = Base Density x [insert number]

4. **Additional Residential Density Bonuses to Further Certain Public Objectives.** Village residential density may be increased beyond base density when certain public objectives pertaining to public land dedication, and conservation land endowments are achieved. The additional dwelling units shall be cumulative, provided that the total additional number of dwelling units under this section shall not exceed 15 percent of the base density.

a. **Public Use of Greenway Land.** A density increase may be granted at the discretion of the [municipal governing body] where the proposal provides for the dedication of Greenway Land for public use (including active and passive recreation areas, municipal sanitary sewerage land application systems, municipal buildings, school sites, etc.) in accordance with the following standards:

1) The increase in density shall be computed on the basis of one dwelling unit per five acres of natural resource land
including, but not limited to: woodlands, pastures, conservation meadows, farm fields; or per one acre of land improved for active recreation (such as ball fields) or per half-mile of trail that becomes publicly accessible. The density shall not exceed 10 percent increase over the base density.

2) The decision whether to accept an applicant's offer to dedicate land to public usage within a proposed village development shall be at the discretion of the [municipal governing body], which shall be guided by the recommendations contained in the Greenway Land/recreation element of the municipal [comprehensive plan, Greenway Land plan, or similar plan].

b. **Endowment for Greenway Land Maintenance.**

1) A density increase may be granted at the discretion of the [municipal governing body] when Greenway Land is to be donated to a land trust or to [name of local government] or another public entity, up to a maximum of [insert number] percent over base density, to generate additional income to the recipient for the sole purpose of endowing a permanent fund to offset continuing costs of maintaining the Greenway Land, including costs associated with active or passive recreation facilities. Spending from this fund shall be restricted to expenditure of interest so that the principal may be preserved. The estimate of maintenance costs shall be prepared by an agency, firm, or organization acceptable to the [municipal governing body], and with experience in managing Greenway Land and recreational facilities. The density shall not exceed a maximum 10 percent increase over the base density.

**Commentary:** This provision is intended to cover activities such as mowing meadows, removing invasive vines, and paying insurance premiums and local taxes. Ten percent is suggested as the maximum bonus, but, once local maintenance costs are determined, the local government may want to adjust that figure. If spending is to be restricted to the interest gained from investment, the amount designated for the endowment fund needs to be in line with the interest rate. In other words, if the interest rate is 5 percent, the endowment must be at least 20 times the estimated annual maintenance costs; if it is 4 percent, it must be 25 times the estimated annual maintenance costs.

2) Because additional dwellings, beyond the maximum that would ordinarily be permitted, may reasonably be considered to be net of development costs and represent true profit, 75 percent of the net selling price of the endowment lots shall be donated by the applicant to the
Greenway Land Maintenance Endowment Fund for maintenance of the lands to be conserved within the subdivision. This fund shall be transferred by the developer to the designated entity with ownership and maintenance responsibilities.

3) When estimating the projected maintenance costs of the Greenway Land, any area that is not accessible to the subdivision residents for their common enjoyment shall not be included in these calculations. Such inaccessible lands shall include areas designated on the Final Plan as “country properties” and other non-common acreage.

c. Affordable Housing Development. A density increase may be granted where the proposal provides housing opportunities for low- or moderate-income households. For each affordable housing unit, one additional building lot or dwelling unit shall be permitted, up to a maximum 10 percent increase over the base density.

**Commentary:** Village development is an opportune way in which a community can address affordable housing issues. By mixing unit types within the village, and by using architectural techniques that do not emphasize the location of affordable units, they essentially become invisible within the fabric of the community. These will appeal to young couples, single adults, and empty nesters. Accessory dwelling units are also more affordable, by virtue of their smaller size, but are provided for in other sections of the ordinance and do not qualify for this bonus.

d. Implementation. For each of the public purposes described above, dwellings resulting from density bonuses may be accommodated by reducing the amount of required Greenway Land acreage by up to 10 percent, reducing the minimum lot area requirements by up to 20 percent, or by a combination of these approaches, provided that [municipal governing body] is satisfied that the public purpose objectives are being achieved.

**Commentary:** The intent of this provision is to encourage developers to take certain actions in the public interest, which they cannot otherwise be required to do by ordinance. Also this provides the Municipal governing body with certain guidelines to assist them in their decision-making. A village must have at least 40 percent Greenway Land before consideration can be given to reducing it.

5. Minimum Required Greenway Land. The minimum Greenway Land required equals the adjusted constrained land as determined in Section 203.B.2.a plus the following percentages of Adjusted Tract Area, in accordance with the base density of the underlying zoning district as follows:
a. Three to five dwelling units per acre, at least 33 percent of Adjusted Tract Area.

b. Two dwelling units per acre, at least 40 percent of Adjusted Tract Area.

c. One dwelling unit per acre, at least 60 percent of Adjusted Tract Area.

d. One dwelling unit per two acres, at least 70 percent of Adjusted Tract Area.

**Formula: Greenway Land = Adjusted Constrained Land + Percent of Adjusted Tract Area**

**Commentary:** In unsewered rural areas, the minimum required percentage of Greenway Land can easily be in the 60 to 70 percent range, whereas in serviced infill areas, it might be closer to 30 to 35 percent.

**Commentary:** A number of jurisdictions around the country have adopted these or similar standards for Greenway Land, as described in greater detail in Growing Greener: Putting Conservation into Local Plans and Ordinances (Island Press, 1999). This model has been carefully drafted to avoid the takings issue. On the most basic level, it provides for a significant density bonus simply for following the design standards. This supplemental density more than compensates for any density that would be lost due to the application of the multipliers used in weighting various types of constrained lands when determining Adjusted Tract Area in Section 203.B.2. Additional density bonuses are also available to advance a number of other public policy objectives, including affordable housing and proper long-term maintenance of the conservation lands.

Another reason why the takings issue should not be a factor is because the Growing Greener approach involves various density options that provide alternatives for applicants to choose from. One of those choices is completely “density-neutral,” two involve density increases, and two involve voluntary density reductions.

A third reason that takings should not be an issue is that the ordinance does not require the public dedication of any Greenway Lands to any governmental body or agency, nor does it require that public access be granted. In fact, all conservation lands may remain in private hands, held either individually (as in the case of large “conservancy lots”) or held in common ownership (by HOAs).

### 203.C. Area and Dimensional Standards.

Proposed lots and buildings in the Central Residential, Village Residential and Storefront Areas shall meet the area and dimensional standards in Table 203.C.

<table>
<thead>
<tr>
<th>Lot Area</th>
<th>Lot Width</th>
<th>Setbacks</th>
</tr>
</thead>
</table>

9/9/2003
<table>
<thead>
<tr>
<th></th>
<th>Min.</th>
<th>Max.</th>
<th>At Street Line1</th>
<th>At Building Line</th>
<th>Front Yard</th>
<th>Rear Yard</th>
<th>Side Yard</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Central Residential Area</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single-family detached dwelling</td>
<td>5,500 SF</td>
<td>8,500 SF</td>
<td>20 ft</td>
<td>20 ft</td>
<td>30 ft</td>
<td>30 ft</td>
<td></td>
</tr>
<tr>
<td>with accessory dwelling</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Two to five-family units</strong></td>
<td>2,500 SF/du</td>
<td>4,000 SF/du</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Multi-family units</strong></td>
<td>2,500 SF/du</td>
<td>4,000 SF/du</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Principal Dwelling</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0-20 ft3</td>
<td>20 ft</td>
<td>5 ft</td>
</tr>
<tr>
<td><strong>Accessory Building</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10 ft4</td>
<td></td>
<td>5 ft</td>
</tr>
<tr>
<td><strong>Front Loading Garage</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>40 ft</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Village Residential Area</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single-family detached dwelling</td>
<td>5,500 SF</td>
<td>8,500 SF</td>
<td>20 ft</td>
<td>20 ft</td>
<td>30 ft</td>
<td>30 ft</td>
<td></td>
</tr>
<tr>
<td>with accessory dwelling</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Two to five-family units</strong></td>
<td>2,500 SF/du</td>
<td>4,000 SF/du</td>
<td>30 ft</td>
<td>30 ft</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 Residential lots shall have frontage on a street, rear lane or alley. Dwellings served by rear lanes or alleys may front directly onto parks or greens.
2 Side yards may be modified in accordance with Section 205.B.
3 Not applicable to interior buildings in courtyard designs.
4 From edge of pavement of alley.
<table>
<thead>
<tr>
<th></th>
<th>Lot Area</th>
<th>Lot Width</th>
<th>Setbacks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal Dwelling</td>
<td></td>
<td></td>
<td>12 ft 5 ft</td>
</tr>
<tr>
<td>Open Front Porches and Steps</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Screened Front Porches</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Front Porches Enclosed by Windows</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accessory Building (excluding garages)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Detached Front Loading Garage</td>
<td></td>
<td></td>
<td>40 ft 10 ft</td>
</tr>
<tr>
<td>Attached Side Loading Garage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attached Front Loading Garage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rear Loading Garage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storefront Area</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Principal Building</td>
<td></td>
<td></td>
<td>-0- 10 ft 20 ft</td>
</tr>
<tr>
<td>Accessory Building</td>
<td></td>
<td></td>
<td>10 ft 3</td>
</tr>
</tbody>
</table>

5 Dwellings on opposite sides of the street shall be located at least 70 feet and no more than 90 feet across from one another, except along boulevards and when buildings front onto greens, commons or other Greenway Land.
6 Min. 20 foot building separation between principal buildings on adjacent lots.
7 Behind the plane of the front facade of the principal building.
Commentary: The following comments refer to the dimensions in Table 203.C.

Street Frontage. Street frontage and lot width can be different dimensions. Width needs to be sufficient to accommodate the building and its side yard setbacks. Street frontage may be considerably less, just sufficient to provide vehicular access. In situations with alleys or back lanes, the street frontage requirement can be met solely on the alley, with the front of the lot abutting Greenway Land, such as village greens or pedestrian walkways. Readers are referred to Figures 57, 81A-B, 117, 119, and 121.

Lot Width. Residential lots should have as narrow a width as is practicable to encourage pedestrian movement. In general, the narrowest lot that appears to be practicable for single-family detached dwellings is about 30 feet wide. An example of an attractive home designed at a 22 foot width can be seen in Figure 146. Variations of this house type may include highly usable decks or patios located in the 8-foot strip of land between homes. Visual privacy from the house abutting it on the other side is assured by eliminating windows on that façade, or by restricting them to clerestory windows for daylighting purposes. Visual privacy for outdoor seating can be provided by opaque screening, 42 inches high.

Front Yards. Maximum (rather than minimum) front yard setbacks are designed to help foster the feeling of "outdoor rooms," such as illustrated in Figures 44,142, and 156. Varying front yard setbacks with respect to garage doors are intended to visually de-emphasize them, and to prohibit "snout houses" (Figures 144 and 145). Another technique is to set a maximum front setback for houses (such as 20 feet) and a minimum front setback for all front-loading garages (such as 40 feet).

Side Yards. Such design allows houses to be located off-center on their lots, so that one side yard may be larger and therefore provide more usable outdoor space, as illustrated in Figure 140. Designing windows on the opposing façade of the adjacent house to maximize visual privacy is illustrated in Figure 141. Minimal side yard setbacks allow dwellings to be located off-center on their lots, so that one side yard may be larger and therefore provide more usable outdoor space.

Building to Building Distance across a Street. The distances recommended in this section are designed to help foster the feeling of "outdoor rooms," such as those illustrated in Figures 57, 130, 132, and 142. In the Central Residential Area, the building-to-building distance should be at least 70 but no more than 90 feet, and in the Storefront area the building-to-building distance should be at least 50 feet but no more than 70 feet, except along boulevards and except when buildings face onto greens, commons, or other Greenway Land.

Height. A minimum height, or so-called "build-up line," is required to produce a greater feeling of enclosure in new village streetscapes, helping them to achieve the character of older traditional neighborhoods.
203.D. Greenway Land Dimensional Standards.

1. **Greens, Commons, Squares and Parks.**
   a. At least 15 percent of the minimum required Greenway Land shall consist of multiple greens, commons, squares or parks.
   b. Active recreation facilities located in greens, commons, squares or parks shall be set back a minimum of 100 feet from adjoining residential lot lines.

2. **Country Properties.** In districts where the density is one dwelling unit per two acres or lower, required Greenway Land may, at the discretion of [the municipal governing body], take the form of Country Properties provided that:
   a. The total required Greenway Land within the proposed village shall meet the requirements in Section 204.B.
   b. The area occupied by Country Properties shall not exceed 80 percent of the total required Greenway Land.
   c. Country properties shall have a minimum lot size of 10 acres.
   d. Greenway Land on country properties shall not include buildings, other than those traditionally associated with greenway uses, such as barns, stables and other similar outbuildings.
   e. Country properties shall be protected from further subdivision through conservation easements running with the chain of title and recorded in the [County Register of Deeds or equivalent].
   f. Up to two accessory dwelling units may be built on Country Properties in accordance with Section 204.B.4 and the following requirements:
      1) The gross floor area in the first accessory dwelling unit shall not exceed 900 square feet.
      2) The gross floor area in the second accessory dwelling unit shall not exceed 750 square feet, except that, on lots exceeding 15 acres, the second accessory dwelling unit may take the form of a tenant house containing up to a maximum of 2,000 square feet of gross floor area.
      3) Existing historic structures, including historic accessory buildings, more than 75 years old, that exceed these floor area limits may be permitted by the [municipal governing body] to be used as accessory dwelling units without having to meet the dimensional setback requirements of this ordinance.
   h. Country Properties shall meet the following dimensional standards:
      1) Minimum lot width: 50 feet.
      2) Minimum lot width at building line: 200 feet.
      3) Minimum front yard: 100 feet.
      4) Minimum side yard: 100 feet.
      5) Minimum rear yard: 100 feet.
6) Maximum building height: 2.5 stories or 35 feet, except as provided in Section 205.A.

7) Maximum impervious coverage: 5 percent.

203.E. Additional Standards Applicable in All Village Areas.

1. **Lot Area.** Area contained within a lot shall be exclusive of 100-year floodplains, wetlands and slopes exceeding 25 percent, with the exception of Country Properties in Greenway Land.

2. **Flag Lots.** Flag lots shall have at least 20 feet of frontage on a street. No more than two contiguous flag lots shall be created, and flag lots shall not comprise more than 10 percent of all lots within a village. The "pole" end of such lots shall not exceed 150 feet in length measured to the street right-of-way, except for Country Properties for which there is no such restriction.

**Commentary:** Flag lots can be very useful in creative site design, making it possible to use odd corners of land in reasonable ways. See Figures 71, 76, 83, 85, 97, and 114. However, some safeguards need to be established to prevent abuses.

3. **Height.**
   a. Building height shall be between 1.5 and 2.5 stories above grade at the front elevation, with a maximum height of 35 feet, except as provided below.

   **Commentary:** These suggested heights are predicated on the "build-up line," as shown in Figure 138. Second-story floor space can be used for retail, office, or residential purposes, as provided for in this ordinance.

   b. In the Central Residential Area the maximum height of residential dwelling units with a roof pitch of 7:12 or greater may be increased to 40 feet.

4. **Maximum Impervious Cover.**

<table>
<thead>
<tr>
<th>Area</th>
<th>Impervious Cover (max.)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Central Residential Area</strong></td>
<td></td>
</tr>
<tr>
<td>Lots 4,000-6,000 SF in area</td>
<td>75 %</td>
</tr>
<tr>
<td>Lots greater than 6,000 SF</td>
<td>50%</td>
</tr>
<tr>
<td><strong>Village Residential Area</strong></td>
<td>60%</td>
</tr>
<tr>
<td><strong>Storefront Area</strong></td>
<td>80%</td>
</tr>
</tbody>
</table>
5. **Accessory Dwelling Units.**
   1) No more than 15 percent of all the residential lots within a village may have accessory dwelling units.
   2) Accessory dwelling units are not counted toward maximum village density.
   3) Accessory dwelling units shall be limited to one per lot.
   4) Accessory dwelling units shall be limited in size to a maximum of 900 square feet.
   5) Either the principal or the accessory dwelling unit shall be owner-occupied.

**Commentary:** Accessory dwelling units are an effective way of providing for smaller dwellings that are essentially “invisible” and because of their smaller size they tend to be more affordable. In historic structures, the community may choose to increase the maximum size of accessory dwelling units to make the reuse of these structures more economically feasible.

204. **DESIGN STANDARDS FOR VILLAGE DEVELOPMENT AND GREENWAY AREAS.**

204.A. **Overall Form and Spatial Relationships.**

1. **Overall Form.**
   a. New village development shall be generally compact with a well-defined edge between new developed areas of the village and adjacent rural, undeveloped lands, and when extending the geographical boundaries of an existing village. This shall not apply in the case of infill parcels within an existing village.
   b. Areas of new construction shall be located to best preserve natural resources, cultural features, and scenic vistas. Modification of existing topography shall be minimized to the greatest extent possible.

2. **Block Design.**
   a. Villages shall be designed in a generally rectilinear pattern of blocks and interconnecting streets and rear lanes, defined by buildings, landscaping, pedestrian ways, sidewalks and street furniture. To avoid the monotony of a rigid grid layout and to better conform to the natural terrain, streets may include frequent gentle curves.
   b. The maximum length of a block shall be 500 feet. This length may be extended up to 800 feet when mid-block footpaths are provided.
Commentary: See Figures 100, 101 and 102.

c. Rectilinear blocks of the dimensions required above may be reshaped at the discretion of [the municipal governing body] when topography, existing vegetation, or hydrology considerations influence block shape and size.

d. In the Storefront Area, at least one pedestrian pathway, a minimum of eight feet wide, shall be provided for every 250 feet of street frontage, connecting with rear parking lots.

e. Each block that includes storefronts and/or townhouse lots less than 40 feet wide shall be designed to include a rear alley serving parking areas or garages in the rear.

f. Local access streets shall be configured using a design speed of 25 mph. Traffic calming techniques shall include “T” intersections, traffic islands, circles, loops or crescents, roundabouts, three-way and four-way stop signs. Speed bumps shall be avoided. At least 25 percent of local access streets shall terminate in “T” intersections. The distance between “T” intersections shall not exceed three blocks or 1,500 linear feet, which ever is less. “T” intersections shall meet the offset requirements from other intersections set forth in the [municipal subdivision and land development ordinance].

Commentary: Experience has shown that physical features are more effective than regulatory devices (stop signs, posted speed limits, etc.) in reducing vehicle travel speed. Unfortunately, decades of subdivision street design standards written by highway engineers have eliminated many traditional traffic-calming features, such as the circles, crescents, and sharp curves illustrated in Figures 11, 16, 29, 92, 105 and 106. An example of a layout maximizing three-way intersections is Seaside in Bridgeport, Connecticut, Figure 44. For additional information on traffic calming theory and techniques, readers are referred to Pedestrian- and Transit-Friendly Design: A Primer for Smart Growth, by Reid Ewing (Smart Growth Network, 1999), and Street Design Guidelines for Healthy Neighborhoods by Dan Burden et al. (Center for Liveable Communities, 1999).

3. Locational Considerations for Village Uses.

a. Residential uses, excluding upper story dwelling units in the Storefront Area, shall not be located within 500 feet of an arterial highway having four or more lanes, nor within 300 feet of a two-lane state highway, unless effectively screened from public view by virtue of topography, dense vegetation or other physical or visual barriers.

Commentary: A deep buffer area along existing highways not only helps to maintain rural character; it also reduces traffic noise on village residents and enhances safety for
young children and wandering pets. Substituting earthen berms for "foreground meadows" in open landscapes introduces an artificial and very suburban element into the countryside and should be generally prohibited. When berms are unavoidable, they should be required to be designed with very gently tapering edges resembling natural landforms, and landscaped naturalistically with primarily native species of shrubs and trees.

b. **Use Transitions.**

1) Similar land uses shall face one another across a street, while dissimilar land uses shall abut along alleys or rear parking areas.

2) Where feasible, a village green shall be used to separate residential blocks from mixed-use blocks.

**Commentary:** The purpose of this regulation is to avoid distinct visual differences on two sides of the same street, such as in the scale of buildings. Alleys are an effective means of creating an unobtrusive common boundary between different land uses such as commercial and residential, and between different intensities of the same land use (e.g., single-family and multifamily housing). Sections 202.C.3 and 202.D.3 of these regulations require mixing housing types. It should be noted that multifamily housing not exceeding four du/building can often be physically integrated into single-family neighborhoods when care is taken with the architecture.

c. At least 80 percent of dwelling units shall be no more than 1,500 feet from the Storefront Area.

d. Nonresidential uses generating more than [insert number] trips per day shall be located to permit vehicular access from outside the village without passing through residential streets. This part of the village shall be located close to streets having a functional class designation of collector or higher.

**Commentary:** A distance of between 1,350 and 1,500 feet has been found to be the maximum comfortable walking distance for many North Americans, in terms of walking from homes to shops. This distance usually requires about five minutes to cover on foot.

### 204.B Design Standards for Greenway Land.

1. Greenway Land shall be delineated in accordance with the standards in Sections 103.A, B and C of the [municipal] Subdivision and Land Development Ordinance, setting forth the Four-Step Design Process, the prioritized list of resources to be conserved, and additional design considerations.

2. Greenway Land shall consist of two types: natural and formal.

   a. Natural Greenway Land consists of, but is not limited to:
meadows, woodlands, large specimen trees, hedgerows, wetlands, floodplain and steep slopes.
b. Formal Greenway Land consists of: greens, commons, squares and parks that are defined by building walls, streets and street trees.

3. **Greens, Commons, Squares and Parks.**
   a. Greens, commons, squares, and parks shall serve a variety of outdoor leisure and assembly needs of village residents and enhance the form and appearance of the village.
   b. Greens, commons, squares and parks shall be distributed throughout the village in the Village Residential Area, the Central Residential Area and, when included, the Storefront Area.
   c. When a Storefront Area is proposed, a main village green shall be required, which shall be:
      1) Located within 200 feet of the outer perimeter of the Storefront Area. These locational requirements may be adjusted by reason of topography or natural resources to be preserved, at the discretion of the [municipal governing body].
      2) Of pedestrian scale, approximately one-half to one acre in area, and shall be no longer or wider than 300 feet.
   d. Additional, smaller greens, commons and squares, no less than 8,000 square feet in size, shall be dispersed throughout the village in such a way that no lot is more than 1,250 feet from a green, common or square.
   e. All greens shall be planted with shade trees along their edges, at intervals not greater than 40 feet.
   f. The views of greens, commons and squares shall be maximized by locating Greenway Land in “terminal vista” locations as often as possible, such as the ends of streets at three-way intersections, and/or along the outer edges of curving streets.
   g. Commercial areas shall surround, be located adjacent to, or be across the street from a public green, common or square at least 10,000 square feet in area.

4. **Accessory Dwelling Units.** On "Country Properties", accessory dwelling units in principal residences or in new traditional outbuildings, such as barns, stables, carriage houses, and spring houses, shall be designed as shown in [source document or reference for design guidelines].

**204.C. Design Standards for Storefront Area.**

1. **Design Considerations along an Existing Major Arterial Street.**
   When the Storefront Area is located along an existing major arterial street the following provisions shall apply:
   a. The buildings shall be designed with display windows and signage
facing the major arterial street.

b. Canopy trees shall be planted at intervals not greater than 40 feet along the major arterial street.

c. The Storefront Area shall not parallel the major arterial street for a distance greater than 600 feet, unless the store fronts are located behind a landscaped buffer area providing visual screening in all seasons of the year, or on the opposite side of a village green extending the full length of the Storefront Area as it parallels the major arterial street. If berms are used within the buffer they shall be no taller than two feet and shall taper gradually into the landscape with slopes not exceeding 1:5.

**Commentary:** These provisions will help prevent Storefront Areas from presenting a strip center appearance along any public thoroughfare running alongside or through the village.

2. **Architectural Design Guidelines.**

**Commentary:** A community may want to insert local architectural design guidelines here. Because architectural traditions and taste vary widely across the country, architectural design guidelines are not included here, but sample text is provided in Appendix C.

3. **Landscaping of Commercial Buildings.** In addition to the requirements of Section 105 in the [municipal] Subdivision and Land Development Ordinance, the following regulations shall apply:

a. To reduce maintenance, ensure longevity, and reinforce the indigenous materials of the area, landscaping around commercial buildings and their parking lots shall emphasize native species trees, shrubs, and flowers. Species shall be selected to provide visual interest at different times of the year, with relatively low maintenance needs.

b. The facades of storefront buildings may be separated from the sidewalk by a landscaped strip no greater in depth than three feet, except as necessary to accommodate outdoor eating establishments, or in courtyard designs.

4. **Street Furniture.**

a. At least one public trash receptacle of a design and color approved by the [municipal governing body] shall be provided in each block on each side of the street.

b. Public benches of a design and color approved by the [municipal governing body] shall be provided at bus stops and at intervals no greater than 100 feet on each block; and in greens, commons, squares and parks at a rate of one bench per 5,000 square feet.

c. At least one bicycle rack adjacent to the sidewalk shall be provided
on each block, with a paved pad designed to accommodate it.

5. **Signs.**
   In addition to the requirements in Section __________, signs shall conform to the following regulations:

*Commentary:* Business identification signs are an integral part of any commercial structure. Artisan crafted signs and high-quality materials should be highly encouraged. The size, location and type of signs should not cover or obscure the architectural details of a building, or otherwise detract from its overall design. The referenced section should be the standard sign regulations in the municipal code.

a. Signs shall not be freestanding and shall be affixed to a building facade, canopy, or arcade.

b. The top of signs (except window signs) shall be located no higher than the sills of second-story windows.

c. Signs shall be constructed of wood, metal or synthetic material, provided that the typeface and logos have a dimensional rather than flat quality.

d. Sign colors shall preferably be dark background colors with light-colored lettering.

e. Signs may be illuminated from external light sources only; lighting shall conform to the regulations contained in Section [reference to lighting standards section of ordinance]. Flashing and moving lighting is prohibited.

f. Moving signs and signs with moving elements are prohibited.

g. External neon signs are prohibited. Nonflashing neon signs may be displayed inside windows provided they occupy no more than 15 percent of the glass area of the window in which they are displayed.

*Commentary:* These sign regulations are offered as a minimum, and should be used in conjunction with village standards, tailored to the region, that regulate size, number, location, shape, position on the buildings, materials, typeface and logo and illumination. The regulations should also address specific sign types such as freestanding signs, projecting signs, window signs, wall signs and awnings. Such model regulations may be found in Dealing with Change in the Connecticut River Valley: A Design Manual for Conservation and Development (*Lincoln Institute of Land Policy, 1988*).

**204.D. Residential Design Standards for Central Residential and Village Residential Areas.**

1. Architecture. Housing styles, shapes, and materials shall be varied, within the overall theme of traditional village dwellings as shown in [source document or reference for design guidelines].
a. Single-family detached dwellings, excluding those on country properties, shall be designed so that:
   1) At least two-thirds shall be oriented with their gable-ends facing the street.
   2) At least 35 percent shall have a covered front entry porch, raised a minimum of 18 inches above ground level.

b. Two, three, four and five-family dwellings shall be designed to emulate traditional buildings of this nature in [name of jurisdiction] historic settlements or to resemble large single-family residences as shown in [name of reference for design guidelines].

c. Roof Pitch. Pitched roofs with slopes between 8:12 and 12:12 shall be encouraged.

**Commentary:** Architectural design standards are enforceable outside designated historic districts because the Village Design Overlay District is (a) optional and (b) offers built-in density incentives. Good examples of two-family and multifamily buildings can be seen in Figures 40, 43, 44, 48, 51, 53, 55 and 124. Another good architectural reference on housing types and sizes is the TND Series: Traditional Neighborhood Design, Volumes I and II (Homestyles Publishing and Marketing, Inc., 1997).


**Commentary:** An optional paragraph may be inserted here requiring the use of building materials traditional in the region.

3. Accessory Dwelling Units.
   a. The design of accessory dwelling units shall comply with the following regulations:
      1) Accessory dwellings or outbuildings shall be designed according to the principles shown in [source document or reference for design guidelines].
      2) Exterior fire escapes are prohibited on any side of accessory dwelling units except at the rear.
      3) All off-street parking for accessory dwelling units shall be located to the side or rear and shall be visually screened from adjoining properties.
   
   b. Issuance of permits for accessory units shall be contingent upon [County Health Department] approval for any on-site septic sewage disposal systems needed.

205. **MODIFICATIONS**
The following modifications are permitted under the terms and specifications herein:

A. Height.
The height limitations of this ordinance shall not apply to chimneys, spires, gables, cupolas, standpipes, flagpoles, monuments, transmission towers, radio or television antennas, cables, water tanks and similar structures and necessary mechanical appurtenances for the village district, provided that no such exception shall cover at any level more than 10 percent of the area of the building’s roof or the ground on which it is located. Such architectural features on institutional or civic buildings may equal the height of the building.

B. Side Yard.
Residential side yards may be reduced to zero (“zero lot line”) in the Central Residential Area and the Village Residential Area, when a dwelling has either no side windows, or when the side window sills are located at least 64 inches above the finished floor elevation.

206. DEFINITIONS.

Commentary: Users should review local, county and state definitions sections to ensure compatibility with the recommended definitions in this model.

Adjusted Constrained Land. The sum acreage of certain site elements that are multiplied by a given percentage.

Adjusted Tract Area (ATA). Acreage of land remaining on a development parcel after adjusted constrained lands have been deducted from the gross tract area.

Base Density. The maximum number of permitted dwelling units determined by multiplying the Adjusted Tract Area (ATA) by the density factor of the underlying zoning district.

Build-Up Line. The height of a building’s cornice, which establishes the vertical visual dimension of a building and defines its proportion in relation to the street.

Building-to-Building Distance. The horizontal distance between the facades of buildings on opposite sides of a street, excluding porches, stoops and projecting eaves.

Country property. A single-family detached dwelling on a minimum 10-acre lot, as one technique for owning and maintaining Greenway Land in non-common ownership.

 Dwelling, front facade. The plane of the facade of the building closest to the street right-of-way, excluding stoops, porticos, open colonnades, and open porches.

Garage, front loaded. A garage having its vehicular entry door facing the street.

Garage, side loaded. A garage having its vehicular entry door facing the side yard.
Garage, rear loaded. A garage having its vehicular entry door facing an alley or rear lane.

Greenway Land. A given percentage of Adjusted Tract Area plus the Adjusted Constrained Land.

Housing, Affordable. Any housing that is subsidized by the federal, state, or local government, or any housing in which at least [20] percent of the dwelling units are subject to covenants or restrictions which require that such dwelling units be sold or rented at prices which preserve them as affordable housing for a period of at least [15] years.

Housing, Low-Income. Housing that is affordable, according to the U.S. Department of Housing and Urban Development, for either home ownership or rental, and that is occupied, reserved, or marketed for occupancy by households with a gross household income that does not exceed 50 percent of the median gross household income for households of the same size within the housing region in which the housing is located.

Housing, Moderate-Income. Housing that is affordable, according to the U.S. Department of Housing and Urban Development, for either home ownership or rental, and that is occupied, reserved, or marketed for occupancy by households with a gross household income that is greater than 50 percent but does not exceed 80 percent of the median gross household income for households of the same size within the housing region in which the housing is located.

Non-common Ownership. That part of the Greenway Land now owned jointly by the residents of a community association.

Primary Conservation Area. All floodplains, wetlands, and steep slopes greater than 25 percent on a development parcel.

Secondary Conservation Area. Lands that are set aside as permanent Greenway Land on a development parcel, excluding Primary Conservation Areas.

Terminal Vista. The building or landscape element that is visible at the end of a street, or along the outside edge of a curve, where the view is focused or ends.
MODEL SUBDIVISION ORDINANCE
FOR VILLAGE DEVELOPMENT

CONTENTS

101. VILLAGE DEVELOPMENT PLAN: PROCESSING PROCEDURES
    A. Overview of Procedures
    B. Pre-application Meeting
    C. Existing Resources and Site Analysis Plan
    D. Site Visit
    E. Submission and Review of Sketch Plan
    F. Submission and Review of Conceptual Preliminary Plan
    G. Submission and Review of Final Plan

102. VILLAGE DEVELOPMENT PLAN: PLAN REQUIREMENTS
    A. Sketch Plan
    B. Conceptual Preliminary Plan
    C. Final Plan

103. VILLAGE GREENWAY LAND DESIGN PROCESS
    A. Four-Step Design Process
    B. Prioritized List of Resources To Be Conserved
    C. Other Design Considerations
    D. Ownership, Maintenance, and Permanent Protection
    E. Dedication of Greenway Land for Public Use
    F. Conservation Practices During Site Preparation and Clean-Up

104. STREETS, SIDEWALKS AND PARKING
    A. Streets
    B. Sidewalks
    C. Parking

105. STREET TREES AND LANDSCAPING
    A. Street Trees
    B. Landscaping
MODEL SUBDIVISION ORDINANCE PROVISIONS FOR VILLAGE DEVELOPMENT

101. VILLAGE DEVELOPMENT PLAN: PROCESSING PROCEDURES.

101.A. Overview of Procedures.
Item 4, Sketch Plan, is optional, but strongly encouraged as an important step that will speed the review process and may result in lower costs for the project. These steps shall be followed sequentially and may be combined only at the discretion of the [name of local government]:

1. Pre-Application Meeting.
2. Existing Resources and Site Analysis Plan.
3. Site Visit.
6. Final Plan.

101.B. Pre-Application Meeting.
A pre-application meeting is required between the applicant, the site designer, and the [planning commission] (and/or its planning consultant), to introduce the applicant to the [name of local government]'s zoning and subdivision regulations and procedures, to discuss the applicant's objectives, and to schedule site visits, meetings and plan submissions as described below. Applicants are encouraged to present the Existing Resources and Site Analysis Plan at this meeting.

101.C. Existing Resources and Site Analysis Plan.
Applicants shall submit an Existing Resources and Site Analysis Plan prepared in accordance with the requirements contained in Section 102.B.3.b. This plan shall form the basis for the proposed site layout as shown on the Sketch Plan [or on the Conceptual Preliminary Plan, if the optional Sketch Plan is not submitted]. Applicants are strongly encouraged to submit this plan, which is required with the Conceptual Preliminary Plan submission, prior to or at the site visit.

101.D. Site Visit.
The Applicant shall arrange for a site visit of the property by the [planning commission]. Applicants, their site designers, and the landowner are encouraged to accompany the
[planning commission]. The purpose of the visit is to familiarize local officials with the property's existing conditions and special features, to identify potential site design issues, and to provide an informal opportunity to discuss site design concepts, including the general layout of Greenway Land, and potential locations for proposed buildings and street alignments. Comments made by municipal officials or their staff and consultants shall be interpreted as being only suggested. It shall be understood by all parties that no formal recommendations can be offered, and no official decisions can be made, at the site inspection.

**Commentary:** It is extremely important for both staff and commission members to walk the proposed development site because it is impossible to really understand a property without experiencing it first-hand. Matters such as relative distances, height of trees or hedgerows, and the quality of the resources on the site cannot be truly understood without a site visit. Although the site visit is for informal, information gathering purposes, it should be an advertised meeting if a quorum of officials will be present.

**101.E. Submission and Review of Sketch Plan.**

1. **Purpose.** Sketch Plan submission is very strongly encouraged by [name of municipality] for the purpose of helping applicants and officials develop a better understanding of the development parcel and to help establish an overall design approach that respects its natural resources, and scenic and cultural features, while providing for the density permitted under the zoning ordinance. Submission of a Sketch Plan does not constitute formal filing of a plan with [name of municipality] and shall not commence the statutory review period as required by the [name of code].

2. **Procedure.** The following procedure is intended to provide the applicant with an orderly process whereby sketch plan proposals can be properly and efficiently evaluated.

   a. The applicant shall prepare a sketch plan in accordance with the plan requirements in Section 102.A.

   b. [Number] copies of the Sketch Plan shall be submitted to the [municipality] at least seven days prior to the [planning commission] meeting at which the Sketch Plan is to be discussed.

   c. The [municipal secretary or clerk] shall check the submission for completeness. If the submission is incomplete, it shall be returned to the applicant within seven days with deficiencies noted. If the submission is complete, the [secretary or clerk] shall distribute copies of the Sketch Plan to the [municipal governing body, planning commission, municipal planner, municipal engineer, and applicable municipal advisory boards].

   d. The [planning commission] shall review the Sketch Plan and comments received from other reviewing agencies at a public meeting, and shall
Part 3. Model Village Subdivision Ordinance

submit its comments in a written report to the [municipal governing body].

e. The [municipal governing body] shall review the Sketch Plan and comments of the [planning commission] and other reviewing agencies, and shall inform the applicant of the extent to which the plan does or does not conform to the intent and requirements of the Township ordinances. Such communication shall be in writing and mailed to the applicant’s last known address.

f. The [municipal] review shall include but is not limited to:

1) Degree of conformance with the Four-step Design Process described in Section 103.A.
2) The location of all areas proposed for grading and other land disturbance with respect to notable features of natural or cultural significance as identified on the applicant's Existing Resources and Site Analysis Plan and on the [name of local government]'s Map of Potential Conservation Lands.
3) The suitability of the proposed open space network, terminal vistas, village greens and other Greenway Land.
4) The potential for street connections with existing streets, other proposed streets, or potential developments on adjoining parcels.
5) The location of proposed access points along the existing road network.
6) The proposed building density and impervious coverage.
7) The compatibility of the proposal with respect to the objectives and policy recommendations of the [Comprehensive Plan] and the [Open Space Plan].
8) Consistency with the zoning ordinance.

Commentary: Sketch Plan issues may require more than one meeting to resolve.


1. If an applicant opts not to submit a Sketch Plan, the Conceptual Preliminary Plan shall include all information set forth in Sections 102.A and B.

Commentary: The Conceptual Preliminary Plan is developed before high engineering costs are incurred in preparing detailed alignments and profiles for streets, and detailed calculations for stormwater management and sanitary sewer systems.

2. Submission. The applicant shall comply with the submission requirements set forth in Section [insert municipal ordinance section number applicable to preliminary plan processing procedures].
3. **Review.** The Planning Commission shall review the Conceptual Preliminary Plan in accordance with the procedures set forth in Section [insert municipal ordinance section number applicable to preliminary plan processing procedures].


1. **Submission.** The applicant shall comply with the submission requirements set forth in Section [insert municipal ordinance section number applicable to Final Plan processing procedures].

2. **Review.** The Planning Commission shall review the Final Plan in accordance with the procedures set forth in Section [insert municipal ordinance section number applicable to Final Plan processing procedures].

102. **VILLAGE DEVELOPMENT PLAN: PLAN REQUIREMENTS**

102.A. **Sketch Plan.**

**Commentary:** In states where the enabling legislation does not permit local jurisdictions to require sketch plans, the language below provides for optional sketch plans that are very strongly encouraged. These provisions go a step farther, however, to ensure that the first plan submitted by the applicant is not a highly engineered document (the so-called "preliminary" plan) costing large sums of money, which most applicants are extremely reluctant to modify in any significant way. In states where sketch plans may be required, the wording below describing them as optional, should of course be removed.

A Sketch Plan shows proposed development, prepared as a transparent overlay sheet, in relation to existing features. A Sketch Plan, complying with the drafting standards in Section 102.B.2 shall include:

**Commentary:** A transparent (or translucent) overlay sheet is required so that reviewers (staff and officials) may easily see how well (or not) the proposed layout has been “designed around” noteworthy or significant site features.

1. **Site Context Map** in accordance with Section 102.B.3.a.

2. An **Existing Resources and Site Analysis Plan** containing the information set forth in Section 102.B.3.b.

3. **Schematic layout** on a transparent overlay sheet indicating compliance with the Four-Step Design Process in Section 103.A; a general concept for village development and land conservation; and the proposed street and lot layout.
4. General description of proposed method of water supply, sewage disposal, and stormwater management.

5. Notes indicating zoning district and calculations for Adjusted Tract Area, minimum required Greenway Land and maximum density.

102.B. Conceptual Preliminary Plan.

Commentary: The approach advocated in this section is to return to the original intent of Preliminary Plans; namely, these plans were meant to be more conceptual than they have become in recent years in many local jurisdictions. The following model provisions strike a balance between the local government's need for certain kinds of information prior to an applicant gaining vested rights in a plan, while at the same time avoiding the situation in which applicants become "locked in" to expensive, highly detailed, "preliminary" plans. It is not essential that such a high degree of detail be supplied at this early stage, and the practice of transforming preliminary plans into very costly engineering documents has proven to be counterproductive in many cases, because applicants typically refuse to alter such "preliminary plans" except in very minor ways. The four-step process is illustrated in Figures 77A-D.

1. Submission Requirements.
   A Conceptual Preliminary Plan submission shall consist of the following, and shall be prepared in accordance with the drafting standards and plan requirements described herein:
   1) Site Context Map
   2) Existing Resources and Site Analysis Plan
   3) Preliminary Improvements Plan
   4) Preliminary Greenway Ownership and Management Plan

2. Drafting Standards.
   All Sketch, Conceptual Preliminary and Final Plans shall conform to the following:
   a. The plan shall be drawn to a scale of either 1 inch = 100 feet or 1 inch = 200 feet unless otherwise approved by the Planning Commission. The scale shall be shown in both written and graphic form.
   b. Dimensions shall be set in feet and decimal parts thereof, bearings in degrees, minutes and seconds (errors in closure shall not be more than one part in 10,000).
   c. Each sheet shall be numbered and shall show its relationship to the total number of sheets.
   d. The plan shall show an adequate legend to indicate clearly which features exist and which are proposed.
   f. As a plan note or table, existing township zoning regulations applicable to
the tract including district designation, lot area, building setback lines, and dimensional requirements.

g. North arrow.
h. Original date of preparation and any subsequent revision dates.
i. All plans submitted shall be made on sheets no larger than 30 by 42 inches, nor smaller than 17 by 22 inches.
j. Name of the proposed subdivision or land development or other identifying title and the name of the municipality in which the subdivision or land development is located.
k. Name, address, and telephone number of the applicant and the name address of the landowner of the tract, if different than the applicant.
l. Name, address, and telephone number of the registered engineer, surveyor, or landscape architect responsible for the plan.

3. Plan Content Requirements.

Commentary: The Context Map does not duplicate the Existing Resources and Site Analysis Plan, as the former shows surrounding (i.e., off-site) features in sketch detail, while the latter includes only the subject development parcel. The 2000 feet of surrounding land requires only an additional five inches of mapping data at the required scale. This submission does not require further field work because most or all of the data for the Context Map are readily available from published sources.

a. Site Context Map.
The location of the proposed development within its neighborhood context shall be submitted.

1) Scale. For sites less than 100 acres in area, such maps shall be at a scale not less than 1 inch = 200 feet and shall show the relationship of the subject property to natural and man-made features existing within 1,000 feet of the site. For sites of 100 acres or more, the scale shall be 1 inch = 400 feet, and shall show the above relationships within 2,000 feet of the site.

2) Features to be shown shall include topography (from United States Geological Survey (USGS) maps), stream valleys, wetland complexes (from maps published by the U.S. Fish and Wildlife Service or the United States Department of Agriculture Natural Resources Conservation Service), woodlands over one-half acre in area (from aerial photographs), ridge lines, public roads and trails, utility easements and rights of way, public land, and land protected under conservation easements.

Commentary: The following section is possibly the single most important document in the entire subdivision design process, for it provides the factual basis upon which informed decisions can
be made by all parties. It is more detailed than what is required in most existing codes, but the benefits far outweigh the costs because careful regard to existing site features can help to smooth the local review process and add value to the ultimate development layout.

b. Existing Resources and Site Analysis Plan.
The following information shall be included:

1) A vertical aerial photograph enlarged to a scale not less than 1 inch = 400 feet, with the site boundaries clearly marked.

2) Topography, the contour lines of which shall be at two-foot intervals, determined by photogrammetry (although 10-foot intervals are permissible beyond the parcel boundaries, interpolated from USGS maps). The determination of appropriate contour intervals shall be made by the [planning commission], which may specify greater or lesser intervals on exceptionally steep or flat sites. Slopes between 15 and 25 percent and exceeding 25 percent shall be clearly indicated. Topography for major subdivisions shall be prepared by a professional land surveyor or professional engineer from an actual field survey of the site or from stereoscopic aerial photography and shall be coordinated with official USGS benchmarks.

3) Ponds, streams, ditches, drains, and natural drainage swales, as well as the 100-year floodplains and wetlands, as defined in the Zoning Ordinance.

4) Vegetative cover conditions on the property according to general cover type including cultivated land, permanent grass land, meadow, pasture, old field, hedgerow, woodland, trees with a caliper in excess of 15 inches, the actual canopy line of existing trees and woodlands. Vegetative types shall be described by plant community, relative age, and condition.

5) Soil series, types, and phases, as mapped by the U.S. Department of Agriculture, Natural Resources Conservation Service, in the published soil survey for the county, and accompanying data published for each soil relating to its suitability for construction (and, in unsewered areas, for septic suitability).

6) Ridge lines and watershed boundaries.

7) A viewshed analysis showing the location and extent of views into the property from public roads and from public parks, public forests, and other public lands.

8) Geologic formations, including rock outcroppings, cliffs, sinkholes, and fault lines, based on available published information or more detailed data obtained by the applicant.

9) All existing man-made features including, but not limited to, streets, driveways, farm lanes, woodland roads, buildings, foundations, walls, wells, drainage fields, dumps, utilities, fire
Part 3. Model Village Subdivision Ordinance

9/9/2003

10) Locations of all historically significant sites or structures on the tract, including but not limited to cellar holes, stone walls, earthenworks, and graves.

11) Locations of trails that have been in public use (pedestrian, equestrian, bicycle, ski, snowmobile, all-terrain vehicle and other similar trails).

12) All easements and other encumbrances of property which are or have been filed of record with the [Recorder of Deeds of name of County].

13) Total acreage of the tract, plus the Adjusted Tract Acreage with detailed supporting calculations.

**Commentary:** For a description of Adjusted Tract Acreage, see Section 203.B.2.a of the model village zoning provisions.

c. **Preliminary Plan.**

   This plan shall include the following items:

   1) All information required on the Existing Resources and Site Analysis Plan, as set forth in Section 102.B.3.b.

   2) Existing and approximate proposed lot lines, lot areas, any existing easements and rights-of-way. Approximate boundaries of Greenway Land shall be indicated.

   3) Approximate location, alignment, width and tentative names of all proposed streets and street rights-of-way, including all street extensions or spurs that are reasonably necessary to provide adequate street connections and facilities to adjoining development or undeveloped areas; preliminarily-engineered profiles for proposed streets.

   4) Approximate location of proposed swales, drainage easements, stormwater and other management facilities.

   5) Where community sewage service is to be permitted, the conceptual layout of proposed sewage systems, including but not limited to the tentative locations of sewer mains and sewage treatment plants, showing the type and degree of treatment intended and the size and capacity of treatment facilities.

   6) Where central water service is to be permitted, the conceptual layout of proposed water distribution facilities including water mains, fire hydrants, storage tanks and, where appropriate, wells or other water sources.
7) Location of all percolation tests, including all failed test sites or pits as well as those approved and including an approved alternate site for each lot requiring a sand mound system. All approved sites shall be clearly distinguished from unapproved sites.

8) Limit-of-disturbance line shown in relation to natural and cultural features to be saved.

9) **Approximate** location and dimensions of proposed playgrounds, public buildings, public areas and parcels of land to be dedicated or reserved for public use.

10) If land to be subdivided lies partly in or abuts another municipality, the applicant shall submit information concerning the location and conceptual design of streets, layout and size of lots and provisions of public improvements on land subject to his control within the adjoining municipalities. The design of public improvements shall provide for a smooth, practical transition where specifications vary between municipalities. Evidence of approval of this information by appropriate officials of the adjoining municipalities also shall be submitted.

11) Where the applicant proposes to install the improvements in phases, he shall submit with the Conceptual Preliminary Plan a delineation of the proposed sections and a schedule of deadlines within which applications for final approval of each section are intended to be filed.

12) Typical street cross-section drawing(s) for all proposed streets shall be shown, including details relating to thickness, crowning and construction materials.

**Commentary:** The typical cross-sections required on the plan are often made available by the municipality and can simply be copied directly onto the plan set. They are critical in the field, for use by both the developer’s contractors and to assist local inspectors.

13) Utilities and Easements.

   a) Exact locations of existing utility easements and approximate locations of proposed utility easements.

   b) **Approximate** layout of all proposed sanitary and storm sewers and location of all inlets and culverts, and any proposed connections with existing facilities. (These data may be on a separate plan.)

   c) The tentative location of proposed on-site sewage and water facilities.
14) Approximate location of proposed shade trees, plus locations of existing vegetation to be retained.

15) Signature blocks for the Planning Commission, Board, and the County Planning Commission shall be provided on the right-hand side of the Preliminary Improvements Plan.

d. Preliminary Greenway Ownership and Management Plan. Using the Preliminary Improvements Plan as a base map, the boundaries, acreage and proposed ownership of all Greenway Land shall be shown. The applicant shall submit a Preliminary Greenway Ownership and Management Plan detailing the entities responsible for maintaining various elements of the property, and describing management objectives and techniques for each part of the property.

Commentary: These Conceptual Preliminary Plan content requirements can be expanded by the municipality to include a sewer and water feasibility report, a groundwater protection and replenishment plan, an erosion and sedimentation control plan, a traffic impact study, draft community association documents and other applicable reports and studies.

102.C. FINAL PLAN.
The final plan shall meet the requirements of Section [insert section number of municipal ordinance for standard final plan review].

103. VILLAGE GREENWAY LAND: DESIGN PROCESS

103.A. Four-Step Design Process.

Commentary: The design process described below can also be used outside the Village Design Overlay District. However, in such areas, where the base density is typically lower and the house lots are larger and more suburban in scale (less like a village), it is recommended that Steps Two and Three below be reversed. For a detailed description of this design approach as applied outside village situations, see Conservation Design for Subdivisions: A Practical Guide to Creating Open Space Networks by Randall Arendt (Washington D.C.: Island Press, 1996).

Conservation design has been adopted and implemented in Pennsylvania through the state-wide Growing Greener: Conservation by Design program, carried out in partnership with the Pennsylvania Department of Conservation and Natural Resources and Natural Lands Trust, a regional land conservancy in Media, Pennsylvania. In a half-dozen Chester County, Pennsylvania, townships that have adopted the Growing Greener standards, more than 1000 acres have been designated for permanent conservation in various subdivision plans. In Hamburg Township, Livingston County, Michigan, conservation design has saved more than 1500 acres, and in Calvert County Maryland the total is twice that number. These ordinances vary in their details, as do ordinances adopted by other communities in seeking to implement
New Urbanism. Recently several state agencies in Massachusetts launched the Green Neighborhoods program, very closely patterned after Pennsylvania’s Growing Greener conservation design ordinance model.

Applicants shall be prepared to submit four separate sketch overly maps indicating the findings of each step of the design process, with respect to the features identified on the Existing Resources and Site Analysis Plan, if so requested by the [planning commission].

1. **Step 1: Delineation of Greenway Land.**
   a. The minimum acreage of required Greenway Land shall be submitted as part of the Sketch Plan or Conceptual Preliminary Plan in accordance with Section 203.B.5 of the Zoning Ordinance. Greenway Land shall include all Primary Conservation Areas. The remaining required Greenway land consists of Secondary Conservation Areas—those parts of the remaining buildable lands with the highest resource significance, as described below and in Sections 103.B.
   b. Proposed Greenway Land shall be designated using the Existing Resources and Site Analysis Plan as a base map and complying with applicable sections of the Zoning Ordinance and Sections 103.B and 103.C herein, dealing with Resource Conservation and Greenway Delineation Standards. The [name of local government]'s Map of Potential Conservation Lands in the [comprehensive plan] shall also be referenced and considered. Primary Conservation Areas shall be delineated comprising floodplains, wetlands, and slopes over 25 percent.
   c. In delineating Secondary Conservation Areas, the applicant shall prioritize the natural and cultural resources on the tract in terms of their suitability for inclusion in the proposed greenway, in consultation with the [planning commission] and in accordance with Sections 103.B and 103.C herein.
   d. On the basis of those priorities and practical considerations given to the tract's configuration, its relation to resource areas on adjoining and neighboring properties, and the applicant's subdivision objectives, Secondary Conservation Areas shall be delineated to meet at least the minimum area requirements for Greenway Land and in a manner clearly indicating their boundaries as well as the types of resources included within them.

2. **Step 2: Layout of Streets and Squares.**
   a. Identify the tentative locations of the more formal open space elements such as greens, commons, squares and parks.
   b. Create a connected street network complying with the design standards in Section 104 A.
   c. Create a sidewalk and trail plan complying with the design standards in Section 104 B.
d. Show schematic locations and types of stormwater management, sanitary sewer and water supply systems.

**Commentary:** Readers are referred to Figures 77A-D in the report for a drawing of the four-step design process as applied to village development.

3. **Step 3: Location of House Sites.**
   
a. Potential house sites shall be located along the street network, at least 25 percent of which shall be “single-loaded,” meaning that development shall occur on one side only along those segments.

b. Dwelling units shall be set back at least 100 feet from Primary Conservation Areas and 10 feet from Secondary Conservation Areas.

**Commentary:** All streets bordering village greens or squares are “single-loaded,” as are streets that run along the edges of less formal open spaces, such as greenways, meadows, fields, golf courses, woodlands, wetlands, and water bodies. Most “double-loaded” street designs can easily become "single-loaded" by reducing average lot widths. To achieve the very modest 25 percent standard cited above, average lot width is simply trimmed by that percentage (say, from 100 feet to 75 feet, or from 70 feet to 52 feet, etc.). In developments without rear service lanes (alleys), the visual prominence of garage doors can become an issue. The model village zoning provisions deal with such situations by requiring front-facing garage doors to be set back from the plane of the houses they serve or requiring that such garages be "side-loaded."

**Commentary:** Setbacks from Conservation Areas take into consideration the potential negative impacts of residential development on such areas as well as the potential positive benefits of such locations to provide attractive views and visual settings for the residences.

4. **Step 4: Drawing in the Lot Lines.**
   
Upon completion of the preceding three steps, lot lines are drawn to delineate the boundaries of individual residential lots.

103.B. **Prioritized List of Resources To Be Conserved.**

The tract’s resources shall be delineated on an Existing Resources and Site Analysis Plan, as required in Section 102.B.3.b. The design of Greenway Land in any village development plan shall incorporate, to the fullest extent possible, all of the following resources (if they occur on the tract) listed in order of significance:

1. Stream channels, floodplains, wet soils, swales, springs, vernal pools, and other lowland areas, including adjacent buffer areas that may be required to insure their protection.

2. Significant natural areas of species listed as endangered, threatened, or of special
concern, such as those listed in the [state Natural Diversity Inventory].

3. Moderate to steep slopes, particularly those adjoining water courses and ponds, where disturbance and resulting soil erosion and sedimentation could be detrimental to water quality.

4. Healthy woodlands, particularly those performing important ecological functions, such as soil stabilization and protection of streams, wetlands, and wildlife habitats.

5. Areas where precipitation is most likely to recharge local groundwater resources because of topographic and soil conditions affording high rates of infiltration and percolation.

6. Hedgerows, groups of trees, large individual trees standing alone.

7. Class I, II and III agricultural soils as defined by the USDA Natural Resource Conservation Service.

8. Historic structures and sites.

9. Visually prominent topographic features such as knolls, hilltops and ridges, and scenic viewsheds as seen from public roads, particularly those with historic features.

10. Existing trails connecting the tract to other locations in the [name of local government].

Commentary: The above priority list should be reviewed and rewritten, if necessary, in accord with the kinds of resources that the community values most—typically the rarest elements of its landscape. In agrarian areas, for example, it is often the hedgerows, tree groups, and remnant forest patches that are rated most highly for conservation. In predominantly wooded areas, the reverse is often true, with open fields and meadows topping the conservation priority list.

103.C. Other Design Considerations.
The configuration of Greenway Land shall comply with the following standards:

1. Except for civic and recreational spaces, such as squares and playing fields, Greenway Land shall be free of all structures, excluding, however, historic buildings, stone walls, and structures related to Greenway Land uses. The [name of jurisdiction] may grant approval of structures and improvements required for storm drainage, sewage treatment, and water supply within the Greenway Land, provided that such facilities are not detrimental to the Greenway. Acreage for such uses shall not be credited towards minimum Greenway, unless the land is
appropriate for passive recreational use.

2. Except for formal greens, commons, squares, parks, playing fields, and trail corridors, Greenway Land shall not include parcels smaller than three acres, have a length-to-width ratio of less than 4:1, or be less than 75 feet in width.

3. Greenway Land shall adjoin the largest practicable number of lots within the development. Non-adjoining lots shall be provided with safe and convenient pedestrian access to Greenway Land.

4. Greenway Land designated for active recreational uses shall not negatively impact adjacent dwelling units, parking, driveways, and roads.

5. Greenway Land shall be interconnected wherever possible to provide a continuous network of such lands within and adjoining the village.

6. Greenway Land shall provide buffers to adjoining parks, preserves, or other protected lands.

7. Except in those cases where part of the greenway is located on private house lots, Greenway Land shall provide for pedestrian pathways for use by the residents of the subdivision. Consideration shall be given to providing for public access on such trails if they are linked to other publicly accessible pathway systems within the [name of local government]. Provisions should be made for access to the Greenway Land, as required for land management and emergency purposes.

8. Greenway Land shall be undivided by public or private streets, except where necessary for proper traffic circulation.

9. Greenway Land shall be suitably landscaped either by retaining existing natural cover and wooded areas and/or according to a landscaping plan to protect and enhance greenway resources.

10. Common and noncommon open space areas in Greenway Land shall be preserved for its designated uses and shall be made subject to such agreement with the [name of local government] and such conservation easements, duly recorded in the office of the [County Recorder of Deeds] as may be required by the [name of local government].

11. Greenway Land shall be consistent with the [name of local government]'s [Comprehensive Plan] and its [Open Space Plan].

    Applicants shall demonstrate compliance with Greenway Land ownership and
maintenance standards in Section [insert number] of the zoning ordinance.

1. **Ownership.**
   Among the ownership options, noncommon ownership shall be encouraged for Greenway Land, involving private individual ownership of that land, subject to permanent conservation easement restrictions. Up to 80 percent of the total minimum required Greenway Land may be so designated, with the remaining 20 percent designated for local homeowners' own use and enjoyment.

   **Commentary:** This alternative, overlooked in most existing ordinances, provides opportunities for permanent open space to be owned and maintained by people of means (as large Conservancy Lots limited to one principal residence) or by resource users, such as farmers, who can continue to use the land for productive purposes. This alternative also reduces the responsibility of community associations to manage all of the conservation land, while maintaining the scenic views enjoyed both into and out from the site.

   Other ownership options are listed in Section [insert number] of the Zoning Ordinance, and include community associations, land trusts, and governmental entities.

   **Commentary:** Village Greenway Land can provide opportunities for local government to acquire land for future recreation needs, including both playing fields and trails. Village Greenway Land abutting county, state, or federal parks can often be donated to the relevant agency, providing extra buffering from the new development.

2. **Maintenance.**
   a. Unless otherwise agreed to by the [Municipal governing body], the cost and responsibility of maintaining common facilities and Greenway Land shall be borne by the property owner, community association, conservation organization, or noncommon owner.

   b. The applicant shall, at the time of preliminary plan submission, provide a Plan for Maintenance of Greenway Land and Operation of Common Facilities in accordance with the following requirements.

      1) The Plan shall define ownership.
      2) The Plan shall establish necessary regular and periodic operation and maintenance responsibilities for the various kinds of open space (i.e., lawns, playing fields, meadow, pasture, cropland, woodlands, etc.).
      3) The Plan shall estimate staffing needs, insurance requirements, and associated costs, and define the means for funding the maintenance of the Greenway Land and operation of any common facilities on an ongoing basis. Such funding plan shall include the means for funding long-term capital improvements as well as regular yearly operating and maintenance costs.
4) At the [name of local government]'s discretion, the applicant may be required to escrow sufficient funds for the maintenance and operation costs of common facilities for up to one year.

5) Any changes to the maintenance plan shall be approved by the [Municipal governing body].

c. In the event that the organization established to maintain the Greenway Land and the common facilities, or any successor organization thereto, fails to maintain all or any portion thereof in reasonable order and condition, the [name of local government] may assume responsibility for maintenance, in which case any escrow funds may be forfeited and any permits may be revoked or suspended.

d. The [name of local government] may enter the premises and take corrective action, including extended maintenance. The costs of such corrective action may be charged to the property owner, condominium association, homeowners association, conservation organization, or individual property owners who make up a condominium or homeowners' association and may include administrative costs and penalties. Such costs shall become a lien on said properties. Notice of such lien shall be filed by the [name of local government] in the office of the [name of official].

3. Permanent Protection.
All Greenway Land shall be permanently restricted from future subdivision and other forms of development through a conservation easement running with the chain of title, in perpetuity, and recorded with the [County Recorder of Deeds]. The [name of local government] shall be listed as a cosigner of such easement and shall be given the ability both to enforce these restrictions and to recover its costs from the owner(s) responsible for any breach of the easement. Under no circumstances shall any development be permitted in the Greenway Land at any time, except for those specific uses listed in Section 202.E of the Zoning Ordinance, and without written authorization from all cosigners of the easement.

103.E. Dedication of Greenway Land for Public Use.
Applicants shall demonstrate compliance with relevant standards in Section [insert number] of the Zoning Ordinance, pertaining to dedicating a portion of the development site for public recreational use.

103.F. Conservation Practices During Site Preparation.

Protection of Vegetation from Injury.
Where earthwork, grading, or construction activities will take place in or adjacent to woodlands, single trees to be saved or other significant vegetation or site features, the [name of local government] shall require that the limit of disturbance be delineated and vegetation protected through installation of temporary fencing, or other approved
measures, at the dripline of the woodland edge or individual tree. Such fencing shall be installed prior to commencement of construction activity of and shall be maintained throughout the period of construction activity.

104. STREETS, SIDEWALKS AND PARKING.

104.A. Streets.

1. Streets Generally.

a. The street network shall form a generally connected pattern, with a minimum of cul-de-sacs. Rectangular grids shall be varied with boulevards, diagonal streets, curving crescents, eyebrows, ovals and courts providing visual interest. Street patterns shall be designed to respect and follow existing terrain as much as possible, to minimize earthmoving and disruption of the existing topography.

Commentary: See Figures 10, 11, 18, 22, 38, 41, 44, 45, 46, 52, 58, 92, 95, 96, 105, 109, and 134.

b. Streets shall be designed to:

1) Parallel and preserve existing tree lines, hedgerows, stone walls and watercourses.

Commentary: See Figures 83, 86, 87 and 88.

2) Minimize alteration of natural, cultural, or historic features.
3) Minimize the acreage devoted to streets.
4) Calm traffic speeds.
5) Promote pedestrian movement.
6) Secure the view to prominent natural vistas.
7) Be aligned so that the "terminal vista" is of civic buildings or greenway land, either man-made (greens, commons, squares, parks) or natural (such as but not limited to meadows, large specimen trees and woodlands).
8) Minimize crossing of Primary Conservation Areas.

Commentary: See Figures 71, 85, 93, 104, 105, 106, 109, 114, 119, and 122.

c. All streets, with the exception of loop streets and loop lanes, shall terminate at other streets within the village, and at least two streets shall provide connections to existing or proposed through-streets or collectors outside the village, wherever practicable.
Part 3. Model Village Subdivision Ordinance

Commentary: See Figures 11, 44, 71, 93, 103 and 104.

d. Loop lanes shall be designed with a central median running their entire length, bounded on each side by a one-way lane not less than 14 feet in paved width. The median shall be at least 30 feet wide, and shall be planted with shade trees along both sides at intervals not less than [a number locally determined] feet.

Commentary: Loop lanes are illustrated in Figures 52, 95 and 96. The lanes may be pitched toward the wide central median to serve as small bio-retention areas for stormwater, irrigating the shade trees and reducing the need for large basins elsewhere on the site.

2. Street Widths. Street widths shall follow the standards set forth in Table 104.A.2.

Table 104.A.2  Street Width Standards

<table>
<thead>
<tr>
<th></th>
<th>Total Lanes</th>
<th>Parking Lanes</th>
<th>Pavement Width</th>
<th>Shoulders</th>
<th>R.O.W</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary Collector</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Parking</td>
<td>2</td>
<td>0</td>
<td>20ft. (22ft. curbed)</td>
<td>4ft. grassed</td>
<td>50ft.</td>
</tr>
<tr>
<td>Lots 80ft.+</td>
<td>2</td>
<td>0</td>
<td>22ft. (24ft. curbed)</td>
<td>4ft. grassed</td>
<td>50ft.</td>
</tr>
<tr>
<td>Lots 40ft. to 80ft.</td>
<td>3</td>
<td>1</td>
<td>28ft. (30ft. curbed)</td>
<td>4ft. grassed</td>
<td>50ft.</td>
</tr>
<tr>
<td>Lots &lt; 40ft.</td>
<td>4</td>
<td>2</td>
<td>34ft. (36ft. curbed)</td>
<td>4ft. grassed</td>
<td>50ft.</td>
</tr>
<tr>
<td><strong>Secondary Collector</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lots 80ft.+</td>
<td>2</td>
<td>0</td>
<td>20ft. (22ft. curbed)</td>
<td>4ft. grassed</td>
<td>50ft.</td>
</tr>
<tr>
<td>Lots 40ft. to 80ft.</td>
<td>3</td>
<td>1</td>
<td>26ft. (28ft. curbed)*</td>
<td>4ft. grassed</td>
<td>50ft.</td>
</tr>
<tr>
<td>Lots &lt; 40ft.</td>
<td>4</td>
<td>2</td>
<td>32ft. (34ft. curbed)*</td>
<td>none</td>
<td>60ft.</td>
</tr>
<tr>
<td><strong>Local Access</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lots 80ft.+</td>
<td>2</td>
<td>0</td>
<td>18ft. (20ft. curbed)</td>
<td>3ft. grassed</td>
<td>50ft.</td>
</tr>
<tr>
<td>Lots 40ft. to 80ft.+</td>
<td>3</td>
<td>1</td>
<td>24ft. (26ft. curbed)</td>
<td>4ft. grassed</td>
<td>50ft.</td>
</tr>
<tr>
<td>Lots &lt; 40ft.</td>
<td>3</td>
<td>2</td>
<td>26ft. (28ft. curbed)*</td>
<td>4ft. grassed</td>
<td>50ft.</td>
</tr>
<tr>
<td><strong>Lanes or Alleys</strong></td>
<td>1</td>
<td>0</td>
<td>12ft.</td>
<td>2ft. grassed</td>
<td>20ft.</td>
</tr>
<tr>
<td><strong>Access Drives</strong></td>
<td>1</td>
<td>0</td>
<td>10ft.</td>
<td>3ft. grassed</td>
<td>N/A</td>
</tr>
</tbody>
</table>

* The paved width may be reduced by 6 feet when streets are "single-loaded" (lots on one side only), or when driveways are accessed only from rear service lanes or alleys.

Commentary: The street width standards in Table 104.A.2. take into account the need for on-street parking spaces, which increase as lot widths decrease. Similar standards can be found in Residential Streets, 3rd Edition, (Washington, D.C.: Urban Land Institute in partnership with the National Association of Home Builders, the American Society of Civil Engineers, and the
Institute of Traffic Engineers, 2001). The concept of access drives provides a useful alternative to streets and alleys, but if local public safety officials express strong reservations about such arrangements, they should not be used.

104.B Sidewalks.
Public sidewalks (including informal walkways and footpaths) shall:

1. Be no less than four feet wide in residential areas and no less than six feet wide in commercial or mixed-use areas, and shall be constructed of paving brick, concrete, concrete pavers, or concrete with brick paver borders. Asphalt shall not be used.

2. Create a linked network of walkways connecting all uses with parks and other greenway land areas.

3. Link loop streets and the ends of cul-de-sacs with the street network, trails, or greenway land behind the lots served by those loop streets or cul-de-sacs.

4. Be separated from street curbs by a “tree lawn” not less than five feet wide, planted with shade trees in accordance with Section 105.A, in the Central Residential Area and Village Residential Area.

5. Be provided along the front lot lines of all village lots to ensure pedestrian access to each lot. Village lots fronting directly onto common greens or parks shall be provided with sidewalks along their front lot lines abutting the greens or parks.

Commentary: Sidewalks should obviously connect and not terminate abruptly (see Figure 37). They should always be separated from streets by a line of shade trees (see Figures 92, 129, and 135). They are also very useful for mid-block connections (see Figures 100, 101, and 102) and internal pedestrian movement (see Figures 38, 63-65, 101, and 131).

104.C. Parking.

1. Off-Street Parking.

   a. Off-street parking for non-residential buildings, townhouses and multi-family residences shall be located at the rear of the lot, in garages or parking spaces accessed only by rear access lanes.

   b. No off-street parking shall be permitted in the front yards of buildings located in the Storefront Area or in the Central Residential Areas, nor shall off-street parking be permitted on corner lots except when screened behind buildings on those lots.

   c. Any off-street parking space or parking lot in the Storefront Area that abuts a street shall be screened from the street by a landscaped area no less
than four feet wide in which is located a continuous row of shrubs no less than 3.5 feet high, or by a wall no less than four feet and no more than six feet high, in addition to the required shade trees.

d. If dwelling units are constructed above commercial uses, the additional parking required to accommodate such residential uses shall be based on formulas for shared parking arrangements, as permitted in Section 202.B.4.f of the [municipal] Zoning Ordinance.

e. Parking areas serving playing fields, playgrounds and courts shall be gravel-surfaced and properly drained, shall provide safe ingress and egress, and shall not be lighted.

2. **On-Street Parking.**

a. On-street parking spaces along the front property line shall count toward the minimum number of parking spaces required for the use on that lot (except where there are driveway curb cuts).

b. On-street parking spaces shall be designed as either parallel to the curb on one or both sides of the street, or diagonal to the street on the storefront side with landscaped breaks every 200 feet.

c. On-street parking spaces shall measure eight feet wide by 22 feet long.

**Commentary:** Consult the Urban Land Institute’s Shared Parking for additional standards.

**105. Street Trees and Landscaping.**

**105.A. Street Trees.**

**Commentary:** The coordinated planting of deciduous shade trees within the right-of-way of all streets is a central unifying feature of development in villages and hamlets. Aside from the layout design, shade tree planting is arguably the single most important aspect of a traditional neighborhood. With the fullness of time, they even supersede the buildings as the most prominent physical features. See Figures 44, 129, 134, and 135.

1. Street trees shall be planted along each side of all streets, public or private, existing or proposed. Existing healthy and mature street trees may be counted toward the street tree planting requirement.

2. New street trees shall be deciduous shade trees with a caliper of 2.5 to 3 inches measured at chest height.

3. Street trees shall be spaced at intervals no greater than 40 feet along both sides of each street, including arterial roads, excluding rear access lanes and alleys.

4. Selected species shall:
a. Cast moderate to dense shade in summer.
b. Have a typical life span of more than 60 years.
c. Mature to a height of at least 50 feet.
d. Be tolerant of pollution and direct or reflected heat.
e. Require little maintenance by being mechanically strong (not brittle) and insect and disease resistant.
f. Be able to survive two years with no irrigation after establishment.
g. Be of native origin, provided they meet the above criteria.

Commentary: Local planners will need to consult landscape architects in the area or the extension service of their state university to determine what plantings are appropriate. And, of course, there are other sources. For instance, for the Mid-Atlantic states, readers are referred to Street Tree Factsheets (School of Forest Resources, Pennsylvania State University, 1989).

5. In the Storefront Area, street trees shall consist of deciduous species that branch above eight feet (or can be trimmed to this height without destroying its natural habit) to facilitate viewing of storefronts and signage.

105.B. Landscaping.

1. The applicant shall submit to the [Municipal governing body] a master landscape plan for all areas of the village, including Village Greenway Areas, identifying the quantity, location, size and predominant type (deciduous, evergreen, tree, shrub) of both existing vegetation to be retained and proposed new vegetation, typical planting materials, the phasing of landscape installation, and planting methods.

2. Parking lots larger than 20 spaces and/or 6,000 square feet in size shall be provided with at least one shade tree for every eight parking spaces or fraction thereof, located in internal planting islands and perimeter buffer strip(s) along the street edge(s) of the lot.

3. Planting islands at least eight feet wide shall be provided between parking spaces at a rate of one per every eight spaces, shall be depressed four to six inches below grade, and shall be protected with wheel stops or split curbs every six to 10 feet.

4. Trees and other public landscaping shall be protected by means of suitable barriers.

5. The developer shall be required to post a performance bond with [name of local municipality] to ensure that any tree that dies within 18 months of planting shall be replaced with a tree of the same species and size.

Commentary: Local planners will need to consult landscape architects in the area or the extension service of their state university to determine what plantings are appropriate. And, of course, there are other sources. For instance, for the Mid-Atlantic states, readers are referred to Street Tree Factsheets (School of Forest Resources, Pennsylvania State University, 1989).
extension service of their state university to determine what plantings are appropriate. And, of course, there are other sources. For instance, an excellent source book for projects in the Mid-Atlantic states is Elizabeth Dupont’s Landscaping with Native Plants in the Middle Atlantic Region (Chadds Ford, Pa.: Brandywine Conservancy, 1978).