

## Chapter 8B

### CONSERVATION DESIGN STANDARDS

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**8B.1 Purpose** The primary purpose of these conservation design standards and regulations is to promote the health of the community and to protect its natural and environmental resources through the application of flexible land development techniques to the arrangement and construction of dwellings, roads, drainage systems, and infrastructure improvements.

#### **Commentary:**

*The standards and regulations in this Chapter pertain to the development of land using a “conservation design” approach. The “conservation design” approach can be used with a variety of development applications, including special use permits, planned unit developments, traditional neighborhood developments, and the development of individual building sites and zoning lots. The submittal requirements and steps in the approval process for these applications are provided elsewhere in this Ordinance. The intent of this Chapter 8B is to advise the development community of additional requirements and benefits associated with “conservation design” and the alternative design features which can be used and that will benefit the City’s natural resource base.*

*The standards in this Chapter are based on information from a number of publications, including the following:*

- *Conservation Design Resource Manual: Language and Guidelines for Updating Local Ordinances, Northeastern Illinois Planning Commission/Chicago Wilderness, March 2003.*
- *Growing Greener – A Conservation Planning Workbook for Municipal Officials in Pennsylvania, Natural Lands Trust, October 1998.*
- *Conservation Design for Subdivisions: A Practical Guide to Creating Open Space Networks, Randall G. Arendt, 1996.*
- *Best Development Practices, Reid Ewing, 1996.*
- *Section 14, Requirements for design and Improvements, Code of Ordinances, Town of Caledonia, Wisconsin.*
- *Etowah HCP Model Conservation Subdivision Ordinance, Etowah Habitat Conservation Plan, October 2005.*

*These publications may provide additional guidance and motivation to the developer regarding the use of conservation design standards and techniques.*

Such flexibility is intended to retain or increase the development rights of the property owner and the number of occupancy units permitted by the underlying zoning designation, while

encouraging environmentally responsible development. “Conservation design” is most appropriate in areas having natural and open space resources to be protected and preserved in perpetuity. These include floodplains, groundwater recharge areas, wetlands, woodlands, streams, wildlife habitat and migratory nesting sites, severe slopes, and historic and cultural resources. It is a system that first takes into account the natural landscape and ecology of a development site rather than determining design features on the basis of pre-established density criteria. “Conservation design” facilitates development while maintaining and preserving the most valuable natural features and functions of a site. The regulations contained herein are intended to:

- A. Conserve open land, including areas containing unique and sensitive natural features such as woodlands, wetlands, steep slopes, streams, groundwater recharge areas, floodplains, by setting them aside from development.
- B. Provide diverse lot sizes, building densities, and housing choices that can accommodate a variety of age and income groups and population groups.
- C. Create neighborhoods with direct visual access to open land and with a strong neighborhood identity.
- D. Conserve scenic views and elements of Woodstock’s rural character, and to minimize perceived density by minimizing views of new development from existing roads.
- E. Avoid development on and prevent destruction of sensitive natural resource areas.
- F. Provide a wider range of sites for the use of stormwater “best management practices”.
- G. Reduce the quantity and improve the quality of stormwater runoff from new development and minimize impervious surfaces.
- H. Reduce soil erosion by retaining and/or reintroducing native plant species and minimizing development on steep slopes.
- I. Reduce and minimize encroachments into resource conservation areas and resource conservation corridors.
- J. Reduce the cost of public services required for new development and increase future property value.
- K. Create livable and sustainable mixed-use communities.
- L. Establish a method for resolving development challenges in a creative and efficient manner.

## **8B.2 Application**

The regulations set forth in this Chapter shall apply to subdivisions/PUDs which contain areas or abut areas designated as “resource conservation” or “resource conservation corridor” on the City’s comprehensive planning documents or are characterized by sensitive natural resources. Where an application for planned unit development, subdivision, or special use approval is requested for land depicted as “resource conservation” or “resource conservation corridor” in the

City's comprehensive planning documents or for land that is characterized by sensitive natural resources, compliance with this Chapter is required unless waived by the Plan Commission. The City may require compliance with these standards and regulations as a condition of annexation.

**Commentary:**

*The term "best management practices" can be defined based upon the characteristics of the development site. Specific "best management practices" vary depending upon several factors, including location (urban, suburban, rural), climate (warm, moderate, cold), or circulation preference (pedestrian, automobile, public transit). They are also used to address specific public issues pertaining to housing, crime prevention, transportation, and energy efficiency. Not all "best management practices" are applicable in every situation and in some instances may be detrimental to the planning goals and objectives of a community.*

*In regard to conservation design, "best management practices" refers to a combination of conservation measures, structures, or management efforts that reduces or avoids adverse effects of development on a site, on adjoining land, and on waterways and water bodies. "Best management practices" are used to control soil loss and enhance water quality, to minimize impacts to surface water and groundwater resources, to improve water circulation patterns, and to reduce negative impacts to the chemical, physical, and biological characteristics of wetlands. The application of "best management practices" should be used whenever possible to achieve the City's development goals and objectives.*

*Examples of "best management practices" are listed below. The list is not exhaustive and the practices listed may not necessarily be applicable in all situations or in Woodstock.*

- *Keep vehicle miles of travel below the area or regional average.*
- *Develop in clusters and keep the clusters small.*
- *Place higher density housing near commercial centers, public transit opportunities, and park and recreational amenities.*
- *Phase convenience shopping and recreational opportunities to keep pace with housing growth.*
- *Make subdivisions into neighborhoods with well-defined centers and edges.*
- *Reserve school and park sites and require them in order to attract new schools and parks.*
- *Concentrate commercial development in compact centers, rather than spread out in strips.*
- *Make shopping centers and business parks into all-purpose activity centers.*
- *Separate auto-oriented land uses from pedestrian-oriented uses.*
- *Design street networks with multiple connections and relatively direct routes.*
- *Use traffic calming measures where appropriate in neighborhood settings.*
- *Keep speeds on local streets down to 20 miles per hour.*
- *Keep speeds on collector streets down to 30 to 35 miles per hour.*
- *Keep local streets as narrow as possible and not more than 4 lanes wide.*
- *Align streets to give buildings energy efficient orientations.*
- *Provide interconnected networks for pedestrian and bicycle traffic.*
- *Provide pedestrians and bicyclists with alternatives to traveling along high-volume streets.*
- *Encourage infill development and channel development activity into already disturbed areas.*
- *Preserve high quality habitat areas as large and as circular as possible, with feathering at the edges and, where possible, connected to wild-life corridors.*
- *Preserve, protect, and enhance migratory nesting sites, especially when located within environmentally sensitive or valuable areas.*
- *Design around significant high quality, high function, and ADID wetlands.*
- *Establish upland buffers around all retained wetlands and natural water bodies.*
- *Preserve significant existing uplands.*
- *Restore and enhance environmental functions disrupted or destroyed by previous site activities.*
- *Minimize stormwater runoff by clustering development on the least porous soils and using infiltration devices and permeable pavement materials.*
- *Detain runoff with open, natural drainage systems.*
- *Design artificial or constructed lakes and stormwater ponds for maximum habitat value.*
- *Use reclaimed water and integrated pest management on large landscaped areas.*
- *Use organic pesticides, herbicides, and fertilizers for lawn application purposes.*
- *Offer life cycle housing opportunities.*
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- *Use cost-effective site development and construction practices.*
- *Design internal energy saving features*
- *Maximize opportunities for energy efficiency and green technology, including but not limited to opportunities in the areas of insulation, appliances, and renewable energy.*
- *Supply affordable single -family homes for moderate-income families.*
- *Supply affordable multifamily and accessory housing for low-income families.*
- *Mix housing according to type and cost to the extent that the market will bear.*

Conservation design standards and regulations may be incorporated into and approved through either the planned unit development process or the subdivision approval process, as well as through the City's project review and building permit review process. The conservation design approach may be applied to a portion of a development site and it can be used or combined with other approaches to land development, such as a traditional neighborhood development.

### **8B.3 Conservation Development Site Design**

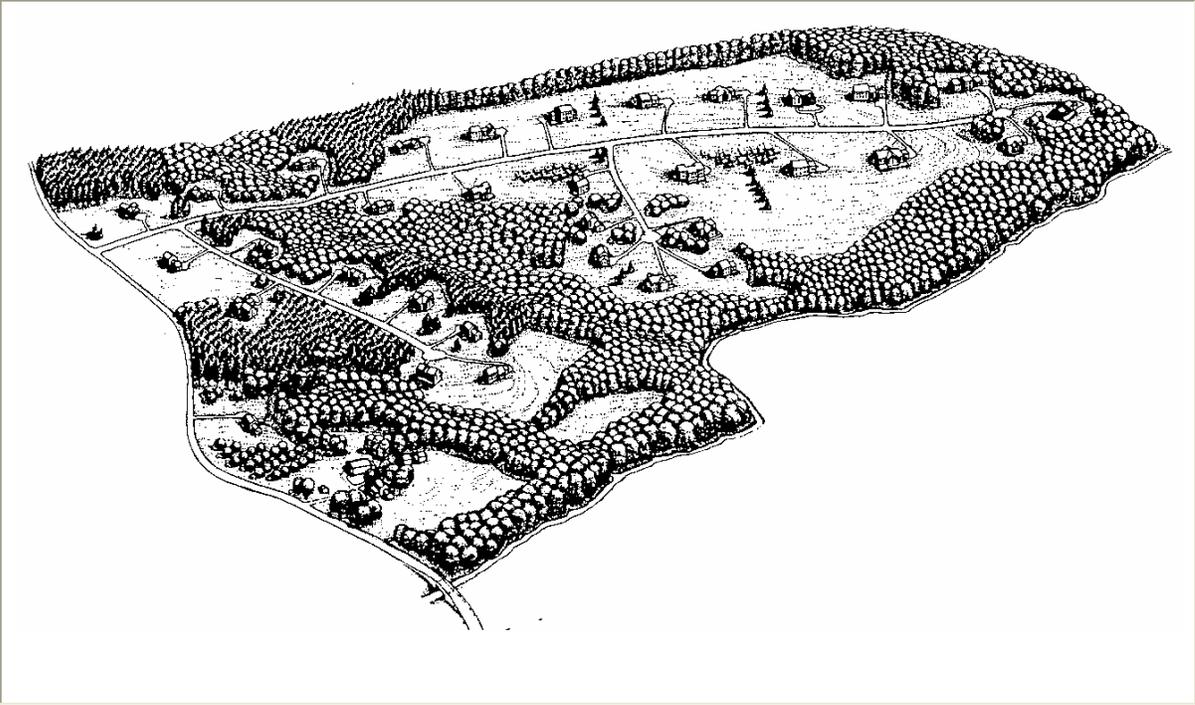
The primary factor in determining acceptable site design is the land and its underlying characteristics. Proposed development shall be designed to fit the topography, physical features, and soil conditions of the subject site. Site design that recognizes natural drainage patterns, the use and preservation of native vegetation and the stabilization of soils during construction, and which protects, enhances, and maintains natural resources is encouraged. The general steps indicated below shall be followed when designing the layout and arrangement of a development site. Additional information about the conservation design process, including visual renderings prepared for each phase in the "conservation design" process can be found in Exhibit I.

- A. The first step is to identify all natural resources, conservation areas, open space areas, and physical features (floodplain, wetlands, lakes, ponds, channels and other water bodies, steep slopes, mature and young woodlands and significant trees, meadows and prairies, and soil types) on the site. Significant vistas and scenic areas that are present on the property and worthy of preservation shall also be identified. These features shall be preserved and protected from any negative impacts generated as a result of the development or other land disturbing activities.
- B. The second step is to locate building sites. Once natural resources and conservation areas are identified, building sites should be located to take advantage of open space and scenic views. Smaller lot areas and smaller lot widths which maximize the number of lots abutting natural resources and conservation areas should be considered in order to provide more efficient use of the land, as well as to protect the development rights of the property owner and the number of occupancy units permitted by the underlying zoning of the property.
- C. The third step is to design the street and circulation necessary to provide access to building sites and to allow movement throughout the subdivision and onto adjoining lands. The street layout should avoid sensitive natural resources such as wetlands, woodlands, significant tree stands, and wildlife habitats, and should be designed to take advantage of open space vistas. Interconnection of internal streets and street connections to adjoining land parcels should be provided to create opportunities for future connectivity.

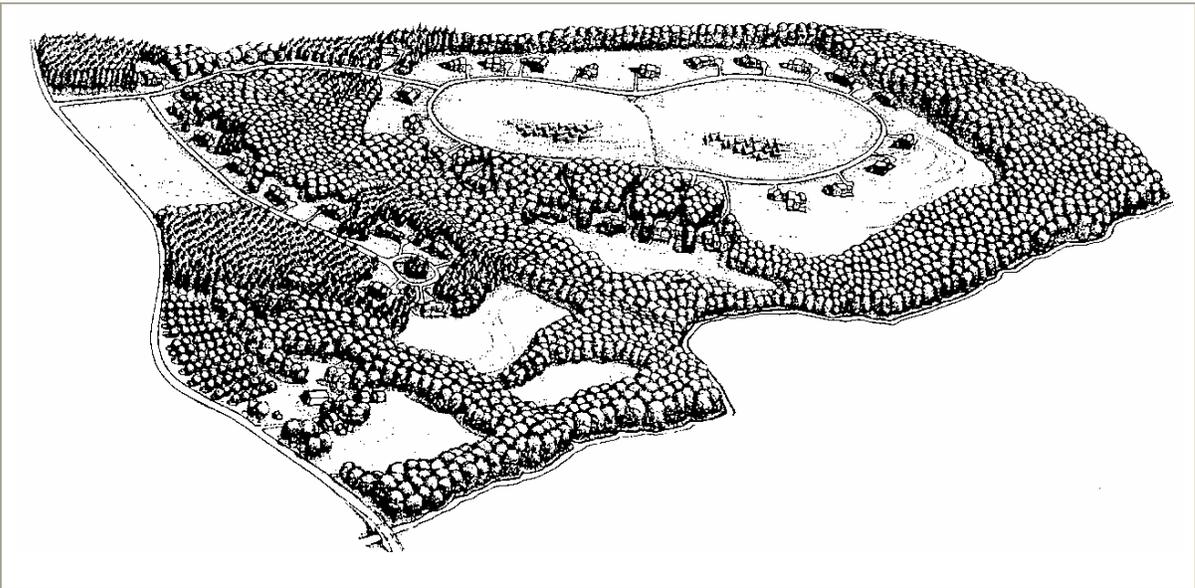
**Commentary:**

The following illustrations provide a comparison of a conventional subdivision design and a conservation development approach to development.

**Conventional Subdivision Design**



**Conservation Subdivision Design**  
Same number of building sites and increased open space



From: *Growing Greener - A Conservation Planning Workbook for Municipal Officials in Pennsylvania, PA.* Department of Conservation and Natural Resources, October 1998. Design

- D. The fourth step is to establish lot lines and lot sizes in order to take maximum advantage of conservation subdivision concepts. This step creates individual building lots and allows ownership of said lots to be transferred from one land owner to the next.
- E. A fifth and final step, which is separate from the initial conservation design approach but which is required for all development proposals in the City, is to prepare engineering plans which indicate how each building site can be served by essential public utilities, while at the same time acknowledging the need to preserve and protect the environmental resources on a site. This may require innovation on the part of the engineering professional in order to provide utility service while protecting natural resources and amenities.

#### **8B.4 Permissible and Prohibited Activities**

- A. Permissible activities are those in accordance with the purposes of this Ordinance. As part of the review and approval process for a conservation design development, a mix of different uses may be approved. Within dedicated open space areas, permitted activities may include the following:
  - 1. Conservation of natural, archeological, or historical resources;
  - 2. Meadows, woodlands, wetlands, wildlife corridors, games preserves, or similar conservation-oriented areas;
  - 3. Pedestrian paths or bicycle trails, constructed of either porous or paved material, as determined by the City Engineer;
  - 4. Active recreation areas provided they comprise no more than 10% of the total open space on the site;
  - 5. Passive recreation areas such as open fields or observation areas;
  - 6. Nonstructural stormwater management facilities and practices that allow for infiltration, such as bioretention areas;
  - 7. Easements for drainage, access, and underground utility lines; or
  - 8. Other conservation-oriented uses compatible with the purposes of this Chapter.
- B. To ensure the preservation and enhancement of existing natural resources, including but not limited to constrained and sensitive lands, natural and cultural resources, wildlife habitat and other unique and sensitive lands, development activity using a “conservation design” approach shall not commence prior to the granting of any other required development approvals. All subsequent development activity shall be conducted in accordance with and subject to applicable permit and development approval requirements of the City. For purposes of this Chapter, the term “development activity” shall include any disturbance or alteration of the property in any way, but shall not include continuation of any currently existing permitted use of the property.
- C. Subject to the provisions set forth herein, any provision of this Chapter may be waived by the Plan Commission. Such waivers may only be granted for good cause based upon specific circumstances or conditions attached to the property. No waiver shall be granted that would be contrary to the public interest or contrary to the intent of this Chapter. Any waiver of minimum conservation land dedication standards shall require comparable compensation, off-site improvements, amenities, or other consideration of comparable size, quality, and/or value.

## **8B.5 Approval Process**

Development approval applications for conservation design projects shall comply with the applicable submittal and content requirements of this Ordinance and the requirements of this Chapter. A conservation design planned unit development or subdivision shall comply with and be processed in accordance with the requirements of Chapter 5 “Planned Unit Developments,” Chapters 6A “General Requirements for Subdivisions, Planned Unit Developments, and Plats”, 6B “Subdivisions and Planned Unit Developments: Pre-Application and Preliminary Plat Approval Process”, and 6C “Subdivisions and Planned Unit Developments: Final Plat and Final Engineering Plan Content and Approval Processes” of this Ordinance. A special use permit shall comply with and be processed in accordance with the provisions of Chapter 4 “General Review Procedures” of this Ordinance.

In addition to the aforesaid requirements, a “Site Yield Plan”, “Natural Resources Inventory”, and “Open Space Ownership and Stewardship Plan” are required. These items shall be prepared as part of a pre-application submittal (see Section 6B.1.2) and as part of a preliminary plat submittal (see Section 6B.2.4), or for any other site intended to be developed as a conservation design project:

### **8B.5.1 Site Yield Plan**

All applications for conservation design projects shall include a Site Yield Plan prepared in accordance with the following provisions. The Site Yield Plan shall be used to determine and calculate the base number of dwelling or occupancy units for any given property intended to be a conservation design development.

- A. A Site Yield Plan for the proposed project shall be provided and shall indicate how the property can be developed under a conventional design layout using the standards in Chapter 7A for the underlying zoning district. The Site Yield Plan is not intended to propose or permit the actual development of the property in accordance with the standards in Chapter 7A, but is presented to depict a base number of dwelling or occupancy units that could be constructed if the project was designed as a conventional development, and thereby the number of dwelling or occupancy units for the conservation design development.
- B. A conservation design development is intended to serve an overlay function, the sole purpose of which is to permit property to be developed using conservation design standards contained herein. Except as otherwise permitted, the underlying zoning district provisions shall apply.
- C. The Site Yield Plan shall be drawn to scale and shall exhibit a realistic design reflecting a conventional subdivision layout that could reasonably be expected to be implemented given the required dimensional standards, the presence of non-buildable areas, natural resource areas, existing encumbrances, and the need for utility easements and right-of-way.

### **8B.5.2 Natural Features Inventory**

All applications for conservation design projects shall include an inventory of natural features prepared according to the provisions set forth herein. The natural features inventory shall identify all natural and cultural resources, floodplains, wetlands, severe slopes, meadows, grasslands, tree stands, streams and stream corridors, watercourses, farmland, rapidly permeable soils, wildlife corridors and habitat, historic buildings and/or sites, archeological sites, green spaces, and views and viewsheds on the property and within 400 feet of the property. Applicants are solely responsible for ensuring the accuracy and designation of natural features in said inventory for their particular project and adjacent applicable property. If this requires entry onto adjacent properties, applicants are solely responsible for obtaining all required permits and/or approvals for such entry and analysis. This submittal shall include, but is not limited to, a "Natural Resource Inventory (NRI) Report" furnished by the McHenry County Soil and Water Conservation District. The applicant shall at its own expense order and furnish the required information to the District and have a report presented to the Community Development Department.

### **8B.5.3 Open Space Ownership and Stewardship Plan**

- A. Ownership. The ultimate owner of dedicated open space, as well as the entity responsible for maintaining it, shall be identified. If a homeowners association or condominium association is the owner, membership in the association shall be mandatory and automatic for all lot and parcel owners and their successors. The association shall have lien authority to ensure the collection of dues from all members. The responsibility for maintaining the open space and any facilities located thereon shall be borne by the owner. In the event an association ceases to exist the responsibility for maintaining the open space and any facilities located thereon shall be borne by all lot and parcel owners or by the owners of those lots and/or parcels which abut the dedicated open space.
- B. Conservation Easement Required. Dedicated open space shall be protected in perpetuity by a binding conservation easement or similar binding legal instrument recorded with the McHenry County Recorder and granted in favor of one or more of the following entities, which entity shall be responsible for all maintenance, control, and insurance of common areas, including dedicated open space and natural areas:
1. A public agency such as the McHenry County Conservation District. Such agency may, but is not required to, accept dedication in the form of fee simple ownership of the designated natural area provided it has access to and agrees to maintain such natural areas and open space.
  2. A homeowners or property owners association. Membership in such an association shall be mandatory for the owners and purchasers of all lots and/or parcels in the development. The association shall be responsible for all maintenance, control, and insurance of common areas, including the dedicated natural areas.
  3. A not-for-profit entity whose primary purpose is the preservation and maintenance of conservation areas and natural resources. Such conservation areas and natural resources shall be established in the form of conservation easements.

- C. **Corrective Action.** After 15 days written notice, the City may enter dedicated open space areas in order to take corrective action necessary to ensure compliance with this Chapter 8B and the provision of extended maintenance, when such action has not been provided by the entity responsible for such actions. The costs of such corrective action may be charged to the property owner, condominium association, homeowners association, conservation organization or not-for-profit organization, or individual property owners, and may include administrative costs and penalties. Such costs shall become a lien on said properties and shall be filed by the City with the McHenry County Recorder.
- D. **Stewardship Plan.** Every conservation design development must include a plan that provides a means to properly manage dedicated open space in perpetuity and the long-term means to properly manage and maintain all dedicated open space. The plan shall be approved as part of the applicable development review process. The plan shall be in textual form and may include graphic renderings. The plan shall provide specific details and methods regarding the preservation, re-establishment, maintenance, and management of open areas and natural resources in perpetuity on the subject site. It shall be in a format that is easily understood and shall identify specific tasks which must be completed in order to ensure the viability of current and future resources on the site. It shall allocate responsibility and guidelines for performing said tasks, and shall include provisions for long-term capital improvements. It shall also serve as an educational resource for future residents and property owners. The plan shall do the following:
- Designate the ownership of natural features and dedicated open space.
  - Establish necessary regular and periodic operation and management responsibilities.
  - Estimate staffing needs, insurance, and other associated costs and define the means for funding these on an on-going basis.
  - Allocate responsibility and guidelines for the maintenance and operation of the dedicated open space and any facilities located thereon, including provisions for ongoing maintenance and long term capital improvements.
  - Estimate the cost and staffing requirements needed for maintenance and operation of, and insurance for, the dedicated open space and describe the means by which such funding will be obtained or provided.
  - Provide that the plan shall not be changed without the approval of the City and describe how the plan will be enforced.

In the event the party responsible for maintenance of the dedicated open space fails to maintain all or any portion of it in reasonable order and condition, the City may assume responsibility for its maintenance. The costs of such maintenance shall be charged to the responsible party as set forth in this Section 8B.5.3 and may include administrative costs and penalties. Such costs may become a lien on all lots and parcels.

- E. **Performance Standards.** The Stewardship Plan shall include performance standards for all natural open space areas and naturalized stormwater management facilities and buffers. The performance standards shall identify proposed methods for establishing the areas and shall require monitoring and maintenance for three full growing seasons following planting. The purpose of establishing and ensuring compliance with performance standards is to ensure that the overall design intent for these areas is achieved and maintained. The design intent for such facilities is to provide an aesthetic, healthy, diverse community of native vegetation to meet the objectives of soil

stabilization, water quality improvement, and wildlife habitat. Minimum performance standards for prairies, wet-detention basins, drainage swales, and buffer areas are included in “Appendix JA”. Under circumstances where the minimum performance standards cannot be achieved, alternative performance standards must be presented to and approved by the City.

- F. **Open Space Special Service Area.** The City, at its discretion, may require the establishment of a “back up” special service area (SSA) in order to provide funds necessary to support the maintenance and upkeep of land set aside and dedicated as open space area or used for required utilities and development improvements. Such a requirement may be a condition of final plat approval and the creation of such an SSA shall occur prior to the sale of individual lots or building sites.

**8B.6 Density Bonuses for Open Space and Design Features**

- A. The permitted number of dwelling or occupancy units in a conservation design development shall be the base density as determined by the Site Yield Plan. However, the City Council may grant a density bonus or bonuses after a review of the proposed conservation design plan and the finding that the proposed development offers a superior layout and quality of design which incorporates environmentally sensitive design features. These features shall include, but are not limited to the preservation of scenic vistas, preservation of natural areas, incorporation of natural landscapes, protection of wildlife habitat, preservation of mature trees, and the creation of landscape buffers. The extent of a density bonus shall be based on the percentage of the site reserved as open space. A density bonus shall not, however, be awarded for any improvement, design, or action required by local, state, or federal law. The density bonuses noted in the following chart are maximum percentage increases in the number of permitted dwelling or occupancy units. No minimum or maximum lot sizes are established for conservation design projects in order to allow for maximum flexibility when arranging building sites.

Total Amount of Open Space Area <sup>1</sup>	Allowable Increase in Density <sup>2</sup>
51 – 55 %	5 %
56 -65 %	7.5 %
66 -75 %	10 %
75+ %	12.5 %
<i><sup>1</sup> As a percentage of total development area minus non-buildable and restricted areas. The above percentages include the base amount of open space required of all conservation design developments.</i>	<i><sup>2</sup> As a percentage of the number of permitted dwelling or occupancy units allowed by the base density allowed by the Site Yield Plan and is not cumulative. Where the application of the resultant percentage results in a fractional number of dwelling units, said number shall be rounded up to the next whole number.</i>

- B. The City Council may grant a density bonus or bonuses after a review of the proposed conservation design plan and the finding that the proposed development provides the following features:

Design Feature	Allowable Increase in Density <sup>1</sup>
More than 35% of residential dwellings are served by side load attached garages.	1%
More than 75% of the lots or building sites abut open space on at least one side.	1%

Internal trails are connected with existing or potential trails outside of the development.	2%
Internal open spaces are connected with existing or potential open spaces outside of the development.	2%
<i><sup>1</sup> As a percentage of the number of permitted dwelling or occupancy units allowed by the underlying or pre-existing zoning designation. Each allowable increase in density shall be a percentage of the base density allowed by the Site Yield Plan and is not cumulative. Where the application of the resultant percentage results in a fractional number of dwelling units, said number shall be rounded up to the next whole number.</i>	

**Commentary:**

*Density bonuses allow a developer to have additional dwelling or occupancy units if conservation design amenities beyond those required by this Chapter are provided. For example, if a developer decides to increase the amount of open space within a 150 unit residential subdivision so that at least 66 percent of the subject site consists of open space, the number of dwelling or occupancy units could increase by up to 10 percent or 15 units, allowing a total of 165 units.*

**8B.7 Design Standards**

Except as waived or altered by the Plan Commission, lots, streets, building and structure location, and the overall layout and development of a conservation design site shall comply, to the greatest extent possible, with the standards listed below. Additional “best management practices” may be required by the Plan Commission in order to provide greater protection of the City’s natural resource base.

A. Land Suitability

No land shall be developed which is unsuitable for a proposed use if said land is identified as being environmentally sensitive. Areas identified as environmentally sensitive may include, but are not limited to those with the following features:

1. All areas identified as floodplain by the Federal Emergency Management Agency or Illinois Department of Natural Resources, or other public or private entity.
2. All wetlands under the jurisdiction of the U.S. Army Corps of Engineers.
3. All areas within 75 feet of the ordinary high water mark of navigable streams and lakes.
4. Areas known to provide habitat for rare, threatened, or endangered species.
5. Land designated as “resource conservation” by the City’s comprehensive planning documents.

B. General Standards

1. Conservation developments shall identify a conservation theme or combination of themes at the time of initial application. Conservation themes shall be based on the natural resource features of the development site and may include, but are not limited to forest stewardship, water quality preservation and enhancement, native landscape restoration and preservation, natural habitat restoration, viewshed preservation, archeological and historical preservation.
2. Conservation developments shall preserve, restore, and/or create environmentally sensitive areas such as wetlands, natural habitat for rare, threatened and endangered species, woodlands, rain gardens, prairies, meadows, primary or secondary

environmental corridors, parklands and viewsheds, and shall include plans and the means to restore, manage, and maintain such areas. These areas may be preserved or restored to their natural state, designed and intended for the passive use and/or enjoyment of residents or users of the proposed development, or preserved in order to expand and extend the usefulness of existing preserved open space and natural areas.

3. Common open space shall to the extent practical, include open space areas in addition to water bodies, ponds, or mapped wetlands that have been identified.
4. Common open space shall be identified, restored, managed, and maintained.
5. Re-use of historical buildings and structures, identified by the Illinois Historic Preservation Agency, shall apply unless the Plan Commission determines otherwise for good cause.
6. Conservation developments shall take into consideration how abutting land with significant natural areas and resources will impact or be impacted by the conservation development.
7. Natural areas and resources, as well as protective buffer areas, shall be preserved on the development site. Dedicated natural areas shall be interconnected where possible with open space areas, greenways, and trail systems within the development site and on abutting lands where possible and appropriate.
8. Enclosures which surround all or a portion of a lot or parcel, and thereby reduce the amount of unrestricted open space, are not allowed. This restriction shall be placed on a final plat or other document of record and established as a covenant or deed restriction.

#### C. Natural and Open Space Standards

1. At least 50 percent of a conservation design development site shall be set aside as dedicated open space. For purposes of this Chapter, the term “open space” shall mean any land or area the preservation of which in its present use would (a) conserve and enhance natural or scientific resources; or (b) protect floodplains, streams or water supply; or (c) promote conservation of soils and wetlands; or (d) preserve wildlife habitat; or (e) protect historic and cultural sites; or (f) enhance recreational opportunities. The term “open space” includes land and water areas retained for use as active and passive recreation areas or for resource protection in an essentially undeveloped state.
2. The natural area counted toward this set-aside shall consist of land, not necessarily undisturbed, which either retains or has been substantially restored to its original natural or native character. Natural area counted toward this shall not include parkways, landscape islands, or similar features. Partial credit may be, although not necessarily, granted for wetlands, floodplains, or other inherently unbuildable areas. Yard and setback areas on individual lots shall not be considered natural areas or open space unless designated on a final plat or similar recorded document as “deed restricted open space” or as having similar restricted use status.
3. Natural and open space areas shall be maintained in perpetuity and shall not be improved with any buildings or structures unless approved by the City and where such buildings or structures will not negatively impact the natural and open space areas. This restriction shall run with the land and be binding on future owners, successors and assigns of the grantee.
4. Whenever and wherever possible, natural and open space areas shall connect with existing or potential open space lands on adjoining parcels and local or regional trail systems.

D. Performance Standards for Residential Lots

1. Residential structures are not required to be on individual lots and more than one primary building may be on a single land parcel. Lot size, shape, and orientation shall be appropriate for the location of the development and for the type of development and use being considered.
2. No minimum or maximum lot size shall be imposed, however, when lot sizes are approved that are smaller than allowed by underlying zoning, front and rear yard setbacks may be reduced. In no case shall such reductions be less than twenty (20) feet for a front yard setback and twenty (20) feet for a rear yard setback.
3. Residential lots or building envelopes shall be large enough to accommodate a house and two-car garage.
4. Lots shall be approximately rectangular in shape, with the exception of lots located on a curved street or on a cul-de-sac turn-around.
5. Side lot lines shall, where practical, be at right angles to straight street lines or radial to curved streets which the lots face.
6. Flag lots are prohibited.
7. Every lot shall front or abut a public street or have other approved means of access.
8. Lots shall be configured to minimize the amount of impervious surfaces including paved roads.
9. Lot access shall, where practical, be from an interior street.
10. Lots shall, where appropriate, be adjacent to or around one or more of the following: central green or square, physical amenity such as a meadow, stand of trees, stream or other water body, or some existing or restored natural feature.
11. Building setbacks, frontage requirements, lot line dimensions, and building height shall be established during the review and approval of the conservation development design.

E. Buffer Standards

The following distance buffers are required:

1. From existing perimeter arterial streets to a structure: a minimum of 100 feet.
2. From existing perimeter collector streets to a structure: a minimum of 50 feet.
3. From a development parcel's boundaries to a lot line: a minimum of 40 feet.
4. From cropland or pastureland to a lot line: a minimum of 50 feet.
5. From dwellings in other subdivisions: a minimum of 75 feet.
6. Buffers shall consist of berms, landscaping, water features, or similar improvements. Where necessary in order to screen new housing or incompatible development, or to preserve scenic views, or otherwise enhance the landscape as seen from existing perimeter roads and from within the development conservation design development, a mix of trees, shrubs, and native landscape materials shall be provided as part of the buffer. These requirements may be waived or reduced by the Plan Commission.

F. Cluster Design Standards

1. Lots, buildings, and building sites should be clustered or grouped together. Lot and building site size may be less than that required by the underlying zoning in order to achieve greater preservation and protection of natural resources.

2. Such clusters or groups should be located so as to minimize negative impacts on the natural, visual, and cultural resources of the site and between incompatible uses and activities.
3. Such clusters or groups should avoid encroaching on rare plant communities, high quality habitats, or endangered species.
4. Such clusters or groups should be designed and sited to achieve the following goals:
  - Minimize disturbance to woodlands, wetlands, grasslands, mature trees, and steep slopes.
  - Prevent negative downstream impacts to waterways due to runoff by utilizing on-site stormwater management practices.
  - Maintain and protect scenic views of open land from adjacent and proposed roads. Minimize visual impact through the use of landscaping, berming, and other similar features.
  - Protect buildings and sites of historic significance or incorporate them through adaptive reuse.
5. Landscaping around the building cluster or group should be provided where appropriate to reduce off-site views of the buildings, and such landscaping should be comprised to the greatest extent possible of native plant species.

G. Street and Sidewalk Standards

1. Neighborhood streets may take the form of a two-way street, a pair of one-way streets on either side of a landscaped median, or a one-way loop street around a landscaped median. Driving aisles within a neighborhood street shall have a minimum width of 12.5 feet except as provided for herein. Said width shall not include the width of curb and gutter improvements.
2. Non-neighborhood streets, such as collectors or arterials, shall meet the improvement and design standards required by this Ordinance for all other streets not within a conservation design development.
3. Pavement width, excluding curb and gutter, for local/neighborhood streets shall be as follows, subject to approval of the City Engineer.
  - Parking restricted on both sides: 25 feet
  - Parking restricted on one side: 28 feet
4. Streets shall be developed according to standards that promote road safety, provide adequate access for emergency vehicles, and allow for adequate vehicular circulation and movement.
5. The use of enclosed drainage curb and gutter systems is discouraged in favor of vegetated swales where a significant environmental benefit will be realized.
6. Sidewalks shall be installed on at least one side of a street and may be required by the City Council to be installed on both sides of a street. Sidewalks shall connect residential areas to common open space areas, and provide convenient pedestrian access throughout the conservation design development and from the development site to other areas of the City. The City Council may waive all or a portion of the sidewalk requirements.
7. Sidewalks located within a public street right-of-way shall have a maximum width of 6 feet and a minimum width of 4 feet, except as provided for in this Ordinance or

unless used to accommodate bicycle traffic, in which case the maximum width may be exceeded.

8. When the conservation design development provides a pedestrian system with access equal to or greater than the provision of sidewalks along public street rights-of-way, said pedestrian system may be installed in lieu of sidewalks along public streets.
9. Sidewalks dedicated and/or intended for public use shall be have a hard, dust-free surface. Walkways not designed for public use may have alternative surfaces.
10. Private drives and parking areas may be built with alternative surfaces and designs, including permeable pavers, subject to the approval of the City Engineer.
11. Shared or common drives shall be permitted and shall comply with the following standards, provided there is a recorded covenant applicable to the properties utilizing such drive which establishes standards for its maintenance and use.
12. A common drive may serve multiple units and may be built to serve residential or non-residential uses. A common drive shall extend from a public or private street and may connect to other existing or planned public or private streets.

#### I. Stormwater Management Standards

1. Integrated management practices designed to capture, use, detain, retain, and treat stormwater and enable it to enter the ground shall be utilized as part of a development site's overall stormwater management plan. Compliance with the City's Stormwater Management Ordinance, as well as the following stormwater management measures is required:
  - Maximize the use of open swales and bioswales, and similar "best management practices", including but not limited to the use of vegetated swales, permeable storm sewer pipe, porous pavement for private driveways and sidewalks, vegetated buffers and strips, and retention of groups of trees and other vegetation to help natural hydrology.
  - Drain roof downspouts to porous surfaces, rain barrels, or rain gardens.
  - Design stormwater management systems and facilities to capture at least 75% of the post-development sediment load on an annual basis.
  - Use natural landscape planting to increase water infiltration and decrease runoff where soil conditions are suitable and building foundation problems will not be created.
  - Preserve natural open space drainage systems ways and incorporate them into the stormwater management system for the overall development.
2. Stormwater management, drainage, and detention facilities shall be designed and installed in compliance with the McHenry County Stormwater Management Ordinance, as amended and adopted by the City.
3. The amount of soil compaction, clearing, and grading at a development site shall be minimized and the extent that impervious surfaces are directly linked to each other shall be limited.
4. The mass grading of development sites is discouraged and is limited to between 20 and 40 acres at any one time. Large developments shall stabilize areas of up to 40 acres that are graded before proceeding with subsequent grading activity. Buffers shall be installed to protect natural resources and amenities. Buffers which are

located in close proximity to or abut such natural resources and amenities, shall be planted and stabilized prior to the start of grading activity.

5. Rooftop runoff and sump pump discharge shall be directed to pervious areas, such as yards, open space, grassed swales, or vegetated areas, via sheet flow or in a similar diffused manner.
6. The routing of rooftop runoff and sump pump discharge to roadways is permitted only with the approval of the City Engineer.

J. Use of Native Landscaping

The use of native plant materials for landscaping is required throughout and along the perimeter of the development site, including those areas containing drainage swales, detention basins, common areas, at the edges of streams, lakes, wetlands, and other water bodies, and the perimeter of the development site.

**Commentary:**

*The City of Woodstock places a high value on natural landscaping design and the use of native plant species. All landscaping activities are encouraged to create landscapes that serve a beneficial natural function and that contribute to the overall preservation and expansion of the natural environment. Appendix H provides a regarding the City's position on natural landscaping and suggest how a developer should approach the design and selection of landscape amenities.*