

ENVIRONMENTALLY SENSITIVE AREAS PROTECTION STANDARDS

(1) Purpose

The Environmentally Sensitive Area Standards are intended to protect and, where possible, enhance the natural environment of the City of Lawrence while recognizing the need for urban development.

These standards are intended to provide flexibility in the design of developments on lands with environmentally sensitive areas in order to use land efficiently and to preserve environmentally sensitive areas as open space amenities. These standards are intended to allow modifications of the requirements of the base zoning district and subdivision regulations. During the review process, the specific circumstances surrounding each application, such as the types of sensitive features that are present and to what degree; special constraints to the development such as being in an infill location; and the need for the extension of public utilities or infrastructure will be considered. The Environmentally Sensitive Area standards will be applied in an effort to achieve development solutions that best promote the spirit, intent and purpose of environmentally sensitive lands protection.

(2) Objectives

The objectives of these standards are:

- (a) To identify and prioritize environmentally sensitive areas during the initial stages of the development review process.
- (b) To establish levels of protection for environmentally sensitive features which vary with the priority ranking of each feature or combination of features.
- (c) To aid developers in the creation of development plans so that negative impacts to the environmentally sensitive areas are avoided or minimized to the greatest extent possible.
- (d) To coordinate sensitive areas protection with other City environmental programs such as the Floodplain Management Regulations, and the City Stormwater Ordinance.
- (e) To encourage the use of innovative and flexible development techniques and to provide flexibility in the planning process when needed to balance environmental and economic goals.
- (f) To establish levels of protection for existing sensitive lands and institute requirements for the reparation of lands found to be prematurely destroyed or altered.

(3) Modifications to the Sensitive Area Design Standards and Guidelines

The development standards and guidelines contained in this section are to be used as minimum requirements for evaluating development plans on lands containing environmentally sensitive areas. However, the standards and guidelines are not intended to restrict creativity or prohibit reasonable economic returns on developing property. An applicant may request modifications of the sensitive areas design standards and guidelines, such as, but not limited to, a reduction in the area required to be preserved, or a change in the hierarchy ranking of protected features, if all the following criteria are met:

- (a) The modification will be in harmony with the purpose and intent of this section.
- (b) The modification will generally enhance the sensitive areas development plan and will not have an adverse impact on its physical, visual or spatial characteristics.
- (c) The modification shall not result in a configuration of lots or a street system which is impractical.
- (d) The modification will not result in danger to the public's health, safety or welfare.
- (e) The modification shall not involve environmentally sensitive features for which protection is required, such as 'floodway' or 'jurisdictional wetlands'.

Modification requests will be reviewed by Planning Staff and presented to the Planning Commission. The Planning Commission shall make the determination on the modification request. Appeals of the Planning Commission's decision shall be made to the City Commission.

(4) Applicability of Environmental Design Standards

The provisions of this Article regarding environmental protection for sensitive lands shall apply to all construction and development activity in all zoning districts except as expressly exempted in this section.

If a proposed development, as specified in this section, contains any of the environmentally sensitive features described below the environmentally sensitive design standards and guidelines will apply. Where disagreements occur regarding the presence or amount of environmentally sensitive features contained on a property, the Planning Commission shall determine compliance with this Article based upon the submitted evidence of staff and/or the applicant.

Environmentally Sensitive Features include the following:

- (a) Regulatory Floodplain:
 - 1. Regulatory Floodway, designated on the FEMA Flood Insurance Rate Map for Douglas County.
 - 2. Regulatory Floodway Fringe, designated on the FEMA Flood Insurance Rate Map for Douglas County
- (b) Jurisdictional wetlands as determined and regulated by the U.S. Army Corps of Engineers.
- (c) Streams, shown on the United States Geological Survey Quad Maps, and their corridors as defined by the City Stormwater Engineer.
- (d) Woodland Areas: Any tract of land with a contiguous wooded area not less than two (2) acres and containing not less than one hundred (100) trees per acre that are two inches (2") in diameter or greater.
- (e) Individually Significant Trees: an existing healthy tree which, when measured four feet above grade, has a minimum diameter of 8 inches for evergreen trees, or 12 inches for deciduous trees. Significant trees may be of any species listed in the Northeast Kansas Preferred Species List (available at the Planning Office) or any of the following native species: walnut, red maple, shagbark hickory, black cherry, black locust, American elm, Chinese elm, hackberry,

osage orange, white/red mulberry, chinkapin oak, bur oak, white oak, black oak, honeylocust, cottonwood, sycamore, red cedar, black gum, or yellow poplar.

- (f) Prominent Geographic Features with Rocky Outcroppings: A rocky protrusion having greater than a 3:1 slope, a minimum height of 20' above the surrounding grade and covering an area of 1 or more acres. Exposed rock area is 50% or more limestone or sandstone;
- (g) Archaeological and Historic Sites which include sites of historical significance regardless of listing on local, state, or federal registers.
- (h) Prairie remnant of one (1) acre or larger: Prairie areas that have remained relatively untouched on undeveloped, untilled portions of properties and containing Prairie Remnant of one (1) acre or larger: Prairie areas that have remained primarily a mixture of native grasses interspersed with native flowering plants. (These areas have not been planted, but are original prairies)
- (i) Slopes:
 - 1. Steep Slopes: A slope of fifteen percent (15%) but less than twenty five percent (25%).
 - 2. Critical Slopes: A slope of twenty five percent (25%) but less than forty percent (40%)
 - 3. Protected slopes: Any slope of forty percent (40%) or steeper.

(5) Determination of Development Land Area

In determining whether a proposed development contains sensitive lands, all contiguous lands under the same ownership or control shall be considered. Lands owned or controlled by a partnership, trust or corporation shall be considered along with lands owned directly by the applicant and lands under option to the applicant or a partnership, trust or corporation under the effective control of the applicant.

(6) Exemptions.

The following activities are exempt from the requirements of this section:

- (a) Extension of utilities and infrastructure: A written request for exemption must be submitted to the Planning Director. Development activity may occur only after the Planning Director has determined that the amount of damage to the sensitive features is minimized either through construction methods or location and has provided written approval of the exemption request.
- (b) Existing Single-Dwelling and Duplex Residences: Normal maintenance/expansion of single-family or duplex residences in existence as of **DATE OF THIS TEXT AMENDMENT**, including exterior remodeling, reconstruction or replacement of single-family or duplex residences.
- (c) Existing Subdivisions for Single-Dwelling and Duplex Residences: Construction of new single-family or duplex residences in platted subdivisions that are in existence, or for which applications for plats have been submitted, prior to the effective **DATE OF THIS TEXT AMENDMENT**.

- (d) Woodland Management Activities. Practices associated with 'timber management standards' as defined by the International Society of Arboriculture, or its successor, or existing tree farming operations, such as Christmas tree farming, fruit, or nut production and tree nurseries, during such time as the land is used for tree farming operations are exempt.

(7) Sensitive Areas Site Plan

Development on lands with environmentally sensitive areas as set forth in Section **XX(4)** shall require submission of a Sensitive Areas Site Plan.

A Sensitive Areas Site Plan must be submitted to, and approved by the Planning Commission prior to woodland clearing, grading or any development activity on lands that contain environmentally sensitive features specified in **Section XX(4)**. The Sensitive Areas Site Plan can be submitted concurrent with the submittal of any other site plan or development plan. The Sensitive Areas Site Plan will be incorporated with other development or site plans for the property.

(8) Development Activity Which Occurs Without Approval of a Sensitive Areas Site Plan

If clearing, grading or other development activity occurs without approval of a Sensitive Areas Site Plan, the sensitive areas and features will be determined for the property using the best available data (aerials, surveys, etc.) and the property shall be made whole **to the extent required in Section X(10)** under the following guidelines prior to building permits being granted:

Removal of trees from woodland areas: If woodland areas are altered by human activity such as clearcutting or removal of trees to the degree that the property no longer meets the definition of 'woodland', the property owner shall replace the trees at a ratio of 1 tree per every 200 sq. ft. of prior woodland area **to the extent required in Section X(10)** .

Damage to Stream Corridor: If the stream or the stream corridor, as required by the City Stormwater Engineer, is altered by human activity, such as the removal of trees or vegetation or in anyway altering the channel, the property owner shall reestablish the channel and replace the trees at a ratio of 1 tree per every 200 sq. ft. of area of stream corridor as determined by the City Stormwater Engineer and shall reestablish ground cover per the approval of the City Stormwater Engineer.

Destruction of remnant prairie. If an area that has been determined by the KS Biological Survey as having remnant prairies is plowed or otherwise destroyed, the area of the former remnant prairie, as defined by the KS Biological Survey must be preserved as open space and replanted with prairie vegetation **to the extent required in Section X(10)** .

(9) Sensitive Areas Site Plan Procedure

A Sensitive Areas Site Plan shall be submitted and approved prior to any development activity, including vegetation removal or grading. The Sensitive Areas Site Plan may be submitted prior to, or concurrent with, another development application, i.e. plat, site

plan, rezoning, etc. The Sensitive Areas Site Plan shall delineate and note all sensitive areas and designate protected sensitive areas and associated buffers.

A Sensitive Areas Site Plan shall be reviewed by the Planning Director in accordance with the Site Plan review procedure listed in Section 20-1305:

(a) A Sensitive Areas Site Plan is normally submitted in preparation for another development proposal, such as a plat, development plan or site plan. There is no review fee for a Sensitive Areas Site Plan.

(b) Site Plan Contents:

(i.) The site plan should be arranged so the top of the plan represents north or, if otherwise oriented, is clearly and distinctly marked.

(ii.) The site plan should clearly delineate the property boundaries and all of the sensitive areas located on the property and shall designate protection zones for sensitive areas as prescribed below.

1) Regulatory Floodplain, including Floodway and Floodway Fringe, designated on the FEMA Flood Insurance Rate Map for Douglas County.

2) Wetlands.

a) The site plan must show the delineation of a jurisdictional wetland area that is accepted by the US Army Corps of Engineers prior to submittal of the Sensitive Areas Site Plan; or

b) The site plan must show any area that is included on the U.S. Fish and Wildlife Service Wetland Mapper as a suspected or potential wetland area, along with a 100' buffer area unless a certified wetland specialist, the Kansas Biological Survey, or the Army Corps of Engineers, determine that the area is not a wetland.

3) Streams and stream corridors.

Streams that are shown on the USGS Quad Map must be included with corridors as established by the City Stormwater Engineer. When other sensitive features are located within a stream corridor, the most stringent required protective buffer will apply. Unless exempt under the provisions of this Section, the following buffer requirements will be maintained:

a) The City Stormwater Engineer will rank the streams and will provide the required width of each stream corridor based on the size of the stream, and frequency and amount of seasonal flow.

b) The amount of stream corridor required may be reduced by the City Stormwater Engineer if requiring the full stream corridor buffer would preclude reasonable use of the property, and

enhanced vegetative cover will be provided in any remaining buffer area to the extent possible. A waiver request must be provided in writing to the City Stormwater Engineer which explains how the provision of the full required stream corridor precludes reasonable use of the property.

- 4) Woodland Areas. Any property containing a woodland area must submit a Sensitive Areas Site Plan prior to woodland clearing or any development activity. The following requirements apply to development on properties with woodland areas:
 - a) The woodland area required to be retained shall be delineated to include a buffer area by measuring fifty feet (50') outward from the trunks of trees intended to be preserved.
 - b) If the City determines that the required woodland area cannot be retained due to site constraints or infrastructure requirements, replacement trees will be required. One tree shall be planted for every two hundred (200) square feet of woodland removed from the otherwise required retention area and shall be of the same or equivalent species as those being removed.
 - i) The replacement of trees may be waived if it is determined by the Parks and Recreation Director that site constraints prohibit the replacement of trees on site.
 - c) To the extent possible, woodlands located on steep slopes and/or within 100 year floodplains should be given the highest retention priority.
- 5) Individually significant trees. The species and size of the tree(s) shall be noted on the plan.
- 6) Archaeological and Historic Sites.
- 7) Prairie remnants one acre in area or larger
 - a) If development is proposed on a property which is shown on the Douglas County Natural Areas Inventory Map as containing remnant prairies these areas must be delineated and noted on the Sensitive Areas Site Plan, if confirmed by the Kansas Biological Survey.
 - b) Prairie remnants associated with other sensitive features should be treated as environmental assets, and should be considered no-build areas to the extent possible, and used for buffers, filter strips along waterways and/or neighborhood open space.

- 9) Steep slopes, slopes with grades of 15% or higher
 - a) Any property with slopes greater than 15% grade shall be required to submit a Sensitive Areas Site Plan.
 - b) Any property with slopes between 25% and 40% grade shall be required to submit a Sensitive Areas Site Plan and a grading plan. Disturbance of slopes with 25% to 40% grades requires approval of the City Stormwater Engineer.
 - c) Any property with slopes of 40% grade or more shall be required to submit a Sensitive Areas Site Plan. Slopes greater than 40% grade shall not be graded and must remain in the existing state, except that natural vegetation may be supplemented by other plant material. A buffer will be required around any slopes of 40% grade or more. Two feet (2') of buffer will be provided for each foot of vertical rise of the slope up to a maximum buffer of fifty feet (50'). No development activity, including removal of trees and other vegetation, shall be allowed within the buffer.
- 10) A site summary table must be provided which includes the total site area, the area of each environmentally sensitive area delineated on the site plan, and the percentage of the total site which is included in each area. Areas with overlapping environmentally sensitive features must be listed along with the percentage of the total, as well.

(10) Ranking and Required Protection of Environmentally Sensitive Features

Protection of certain environmentally sensitive features is more critical than others. The following priority scheme will assist in the determination of environmentally sensitive areas in which protection is 'critical', those in which protection is important and should be achieved to the greatest extent possible and those for which protection is desirable.

All protected areas together shall not be required to exceed 20% of gross land area unless critical sensitive areas exist; then the protected area shall not be required to exceed 30%. When determining which features should be protected, protection will be required in the following ranking order:

Critical Sensitive Areas. Areas containing the following critical sensitive features: floodway, stream corridors, jurisdictional wetlands, slopes with greater than 40% grade, or archaeological and historic sites. Protection of 100% of these sensitive features is required to the maximum extent noted above.

Protected Sensitive Areas. Slopes between 20% and 40% grade, floodplain and areas with two or more environmentally sensitive features, other than those listed as 'critical sensitive features', occurring together. Environmentally Sensitive Features or Areas that

occur together are of higher priority than any one feature occurring singularly. The priority increases with the number of environmentally sensitive features occurring together. Protection of areas containing these features is required to the maximum extent noted above.

Desirable Sensitive Areas. Areas with environmentally sensitive features, other than those listed as critical or protected sensitive areas, occurring singularly. In addition, woodland areas that are part of a larger continuous wooded area that may extend off site are of higher priority than woodland areas that are isolated. Protection of areas containing these features is required to the maximum amount noted above.

Environmentally Sensitive Features shown on the site plan are prioritized for protection by the ranking scheme above in combination with an evaluation of the development proposal, the surrounding area (to determine connectivity) and the mix of sensitive features present on the site.

(11) DEVELOPMENT OPTIONS

The following development options are available for properties containing environmentally sensitive lands:

- (a) May develop as a Planned Development, per standards in Section 20-701, to protect the greatest amount of environmentally sensitive features possible while accommodating development. The minimum amount of natural open space to be preserved will be determined after a review of the Sensitive Areas Site Plan. Planned Developments provide the following additional flexibility: reduced lot sizes, increase in maximum net residential density by up to 25%, reduction in minimum setback standards of the base district with some restrictions, increase in the height of the buildings, and reduction in the number of off-street parking spaces required.
- (b) May develop as a Cluster Development per standards listed in Section 20-702. If environmentally sensitive features are present, a Cluster Development may exceed the 35 lots permitted in Section 20-702(c)(1). Cluster Development allows the property to develop at the same maximum density as the base zoning district permits, but with no minimum lot area or lot width requirements. Special setbacks for the perimeter apply and 10' separation is required between all dwellings.
- (c) May develop with a site plan, or single-dwelling or duplex residential development may occur through a traditional subdivision, when a review of the Sensitive Areas Site Plan indicates that it is possible to develop the property according to the regulations of the base zoning district while protecting the sensitive areas. The development proposal must be reviewed with the approved Sensitive Areas Site Plan to insure that the proposed development will preserve the amount of sensitive area necessary. The Sensitive Areas Site Plan will be incorporated with any submitted development proposal, i.e. plat, site plan, development plat, etc. The protected sensitive areas and building envelopes must be shown on the preliminary and final plat to insure that buildings and construction activity do not encroach into the sensitive areas. A

note must be included on the plat or site plan noting the party responsible for the maintenance of the protected environmentally sensitive areas and stating that all development activity, including grading and construction, is prohibited within the protected sensitive areas.

(12) Sensitive Areas Development Design Guidelines:

- a) Street rights-of-way, public utility corridors and building sites should be located so as to minimize their impact on environmentally sensitive areas.
- b) Where possible, environmentally sensitive areas to be protected should be located within designated public or private open space, either through dedication, a conservation easement, or control by a homeowner's association.
- c) The total site area required to be protected is specified in Section X(10). The minimum percentage of the individual sensitive features which should be protected is listed below.
 - i) Critical sensitive features: 100% of all critical sensitive features are required to be protected under this provision. These features/areas must be shown on the Sensitive Areas Site Plan as 'critical' sensitive features and may not be developed.
 - ii) Protected sensitive features: The actual features to be protected will be determined after a review of the Sensitive Areas Site Plan. but a general guideline is provided below:
 - a) Prairie Remnant + 1 other feature---- A minimum of 60% of the feature shall be protected. Prairie remnants associated with other sensitive features will be considered no-build areas to the extent possible and used for buffers, filter strips along waterways, and/or neighborhood open space.
 - b) Other protected sensitive features----minimum of 40% of the feature shall be protected.
 - iii) Sensitive Features:
 - 1. Prairie Remnant occurring alone---minimum of 40% of the feature.
 - 2. Any other environmentally sensitive feature occurring alone---- minimum of 30% of the feature.
- (iv) If a review of the Sensitive Areas Site Plan and proposed development indicates that it is not possible or reasonable to protect the required amount of sensitive features, mitigation may be possible. Mitigation plan shall be submitted to the Planning Commission for review. Any

appeals from the Planning Commission's determination on the mitigation plan would be heard by the City Commission.

Definitions to be added to general glossary

Clearcutting. The removal of most or all trees on a site, or any portion thereof greater than one-half (0.5) acre in contiguous area, during a single timber harvesting operation or within a three (3) year period.

Environmentally Sensitive Areas – Areas containing natural features and/or natural resources which include regulatory floodplain, jurisdictional wetlands, streams and their corridors, woodland areas, individually significant trees, prominent geographic features with rocky outcroppings, archaeological and historic sites, prairie remnants and steep slopes.

Individually Significant Tree – A significant tree is an existing healthy tree which, when measured four feet above grade, has a minimum diameter of 8 inches for evergreen trees, or 12 inches for deciduous trees. Significant trees may be of any species listed in the Northeast Kansas Preferred Species List (available at the Planning Office) or any of the following native species: walnut, red maple, shagbark hickory, black cherry, black locust, American elm, Chinese elm, hackberry, osage orange, white/red mulberry, chinkapin oak, bur oak, white oak, black oak, honeylocust, cottonwood, sycamore, red cedar, black gum, or yellow poplar.

Open Space – An area of land or water, either landscaped or essentially unimproved, which is used to meet human recreational or spatial needs, or for resource protection. Open space areas may or may not be improved but can include playfields, trails, greenbelts/greenways, community gardens, farmed areas, buffers between land uses of differing intensities, areas within community or neighborhood parks and other environmentally sensitive areas.

Prairie Remnants – Prairie areas that have remained relatively untouched on undeveloped, untilled portions of properties and containing Prairie Remnant of one (1) acre or larger: Prairie areas that have remained primarily a mixture of native grasses interspersed with native flowering plants. (These areas have not been planted, but are original prairies)

Prominent Geographic Features with Rocky Outcroppings – A rocky protrusion having greater than a 3:1 slope, a minimum height of 20' above the surrounding grade and covering an area of 1 or more acres. Exposed rock area is 50% or more limestone or sandstone.

Stream – A stream is a natural body of flowing water, whether constant or intermittent, that begins at headwaters and gathers water from run-off, rain, snow melt, or from underground springs. Streams hold great importance regardless of size or flow. Streams provide water, a variety of aesthetic values and are important wildlife habitats. All streams shown on the USGS Quad maps are included in this listing.

Stream Corridor – A stream corridor is a buffer area, the width of which varies according to the size of the stream, the amount of flow, and topography of the site. The City Stormwater Engineer will determine the required buffer area for streams.

Woodland Area – Any tract of land with a contiguous wooded area not less than two (2) acres and containing not less than one hundred (100) trees per acre that are two inches (2”) in diameter or greater. The extent of any woodland plant community or any part thereof shall be measured from the outermost drip line of all the trees in such plant community. Woodland shall include any area where timber has been harvested within the previous three years and/or woodland disturbance has occurred within the previous three years which would have met the definition of woodland prior to timbering or disturbance.