

SMARTGrowth ANALYSIS

E. ENVIRONMENTAL QUALITY

1. WATERSHED PROTECTION

- A. **PURPOSE:** The purpose of this criterion is to mitigate the ill effects of increases in velocity, volume, and pollution of surface run-off on downstream property owners and to protect the overall water quality of the Town as a result of rapid and intense urbanization.
- B. **CRITERION: Watershed Protection.** No development application or project shall be approved if the projected velocity and volume of surface run-off exceeds predevelopment conditions, with any additional run-off projected to be generated by development being retained on-site and absorbed, evaporated and/or released from the development at a rate not exceeding the predevelopment conditions. Erosion control and pollution prevention plans shall be adequate to prevent erosional and depositional features such as gullies and accumulations of silt attributable to site development, with such adequacy being determined by the Town.

The proposed development site design shall include “best management practices,” as defined in the Town’s Engineering Standards Manual. “Best management practices” may include, but are not limited to, the following types of structural and nonstructural practices: wet ponds, dry extended detention ponds, infiltration basins and trenches, porous pavement, bioretention, organic filters, buffer zones, open space design, urban forestry, conservation easements, storm water wetlands, grassed swales and filter strips, green parking, alternative turnarounds and water quality inlets. “Best management practices” will be included in a Watershed Protection Plan and said Watershed Protection Plan shall evaluate and minimize potential drainage impacts that could negatively affect, destroy or otherwise compromise on- and offsite surface and subsurface water quality, sensitive environmental features (such as riparian vegetation, trees, soils or grassland and prairie vegetation) and wildlife habitats (including terrestrial and aquatic).

- C. **METHODOLOGY:** The Watershed Protection Plan shall be prepared by a qualified individual or firm designated by the Town and must be approved by the Town prior to any site development by an applicant.
- D. **APPLICATION:** For residential projects, applicable to applications for development plans and record plats. For nonresidential projects, applicable to applications for record plats and site plans.

2. WETLANDS

- A. **PURPOSE:** The purpose of this criterion is to protect the natural, scenic and ecological resources that are essential elements of Flower Mound's community character and which provide irreplaceable plant and wildlife habitat.
- B. **CRITERION: Wetlands.** No development application or project shall be approved without appropriate professional certification as to the existence of any jurisdictional wetlands and/or waters of the United States, as such jurisdictional areas are defined at the time of development application by the United States Army Corps of Engineers. If such wetlands and/or waters are determined to exist, assurance or proof of compliance acceptable to the Town must be provided relative to all federal regulations pertaining to the protection and mitigation of such jurisdictional areas. The Town reserves the right to require the protection and preservation of any or all jurisdictional areas determined to exist and to deny proposed mitigation measures.
- C. **METHODOLOGY:** Field investigation and certification shall be prepared by Town personnel or a qualified individual or firm designated by the Town and said certification must be approved by the Town prior to any site development by the applicant.
- D. **APPLICATION:** For residential projects, applicable to applications for development plans and record plats. For nonresidential projects, applicable to applications for record plats and site plans.

3. TOPOGRAPHICAL SLOPE PROTECTION

- A. The purpose of this criterion is to ensure that development is respectful of and appropriately integrated with the natural physical geography of the land in Flower Mound by requiring environmentally sensitive development techniques to eliminate “scrape and build” development.
- B. **CRITERION: Topographical Slope Protection.** No development application or project shall be approved that proposes development on any existing topographical slopes of twelve percent (12.0%) or greater, or that proposes to alter any existing topographical slopes that are less than twelve percent (12.0%) but equal to or greater than five percent (5.0%) (other than within five feet of the footprint of the proposed structure or structures).
- C. **METHODOLOGY:** Compliance with this criterion shall be in accordance with the applicable provisions of the Design Criteria and Construction Standards as adopted by the Town Council. This criterion shall apply when the stated topographical slopes exist for a total horizontal distance over 50 feet or if the total vertical rise is over 6 feet.
- D. **APPLICATION:** For residential projects, applicable to applications for zoning, planned developments, development plans and record plats. For nonresidential projects, applicable to applications for zoning, planned developments, record plats and site plans.

4. WATER IMPOUNDMENT PROTECTION

- A. **PURPOSE:** The purpose of this criterion is to protect the natural, scenic and ecological resources that are essential elements of Flower Mound's community character and that provide irreplaceable plant and wildlife habitat.
- B. **CRITERION: Water Impoundment Protection.** No development application or project shall be approved that proposes to eliminate, or to alter or discontinue recharge flows to, existing impoundments of water with a surface area capacity of one-half acre or more (regardless of whether such impoundments are naturally occurring or constructed). All such impoundments shall be integrated into the proposed development and addressed in the development's Environmental Protection Plan, if applicable, which shall at a minimum include such enhancements and restoration as are necessary to provide or maintain reasonable wildlife habitat, to improve the aesthetic quality in areas of shoreline transition and to stabilize shoreline areas subject to erosion.
- C. **METHODOLOGY:** Compliance with this criterion shall be in accordance with the applicable provisions of the Design Criteria and Construction Standards as adopted by the Town Council.
- D. **APPLICATION:** For residential projects, applicable to applications for development plans and record plats. For nonresidential projects, applicable to applications for record plats and site plans.

5. ENVIRONMENTAL SURVEY

- A. PURPOSE:** The purpose of this criterion is to identify important natural, scenic and ecological resources that are essential elements of Flower Mound’s community character and which provide irreplaceable plant and wildlife habitat.
- B. CRITERION: Environmental Survey.** No development or project shall be approved for development until an “Environmental Survey” (“the Survey”) has been prepared by the Town or a Town-approved environmental consultant. The Survey shall identify and visually represent all potentially environmentally sensitive areas (“ESAs”), which include upland habitat, riparian habitat, waters of the State, prairie habitat, and developed and undeveloped floodplain. If an ESA is found on the proposed development site, the developer must submit to the Town a professionally prepared Environmental Protection Plan (“the Plan”). The Plan shall be prepared by a qualified individual or firm designated or retained by the Town.
- C. METHODOLOGY:** The Survey required under this section shall be prepared by Town Staff. Town Staff will be responsible for identifying any designated ESA on the proposed development site. The ESA Survey will involve a Geographic Information Systems (GIS) analysis using orthographic aerial photographs and at least one (1) predevelopment site inspection. The criteria for determining if an ESA is present on the site shall be: Upland Habitat includes any stand of trees equal to or greater than ten (10) acres (which may be entirely or partially contained within or intersecting the site) consisting predominated of tree species listed on the Town’s Protected Tree List; Riparian Habitat includes any vegetative coverage (canopy and/or understory) within a floodplain or directly adjacent to and interconnected with vegetative coverage within a floodplain; Waters of the State include any water body designated by the Texas Water Code or Federal Clean Water Act as a “Water of the State” (this includes, but not limited to, streams, creeks, lakes, ponds or wetlands); prairie habitat includes climax or mid-successional native grass species with associated intact prairie or savannah soil types; floodplains shall be determined from official FEMA Flood Insurance Rate maps. If the Survey identifies at least one ESA on the proposed development site, the developer shall be responsible for creating, implementing and managing specific, Town approved best management practices developed through the use of an “Environmental Protection Plan.”
- D. APPLICATION.** For residential projects, applicable to applications for zoning amendments, development plans and record plats. For nonresidential projects, applicable to applications for zoning amendments, development plans, record plats, and site plans.

6. ENVIRONMENTAL PROTECTION PLAN

- A. **PURPOSE:** The purpose of this criterion is to protect the natural, scenic and ecological resources that are essential elements of Flower Mound’s community character and which provide irreplaceable plant and wildlife habitat.
- B. **CRITERION: Environmental Protection Plan.** No development application or project shall be approved for development without the submission of an Environmental Protection Plan (“the Plan”) prepared by a qualified individual or firm designated or retained by the Town if an Environmental Survey identified any Environmentally Sensitive Area (ESA) within the proposed development site.

The Plan shall identify principle flora and fauna species present; indicate the overall ecological integrity/health of the site; and designate and map existing environmental and wildlife habitat elements. The Plan shall also demonstrate best management practices to minimize land disturbance and the modification of natural land forms to protect, conserve and/or restore any designated ESA; demonstrate proposed measures to maintain contiguity of tree stands and other wildlife habitat areas or corridors; demonstrate proposed measures to inform and educate future residents or occupants of the development site about the Plan.

- C. **METHODOLOGY:** The Town shall evaluate and approve or disapprove the Plan on the basis of the following criteria: sound environmental science, water quality protection, specific site conditions, cost effectiveness, impact upon the site’s development potential, environmental and public health objectives and economic development objectives.

The Plan shall identify and visually represent: the principal fauna and flora species present; indicate the overall ecological health of the proposed development area; any habitat or species within the proposed development area that are designated by any state or federal agency as “protected,” “threatened,” or “endangered;” all existing environmental and wildlife habitat elements (including: sources of water, vegetative cover and composition, soil type and condition, site topography, and wildlife management corridors and wildlife use areas).

The consultant preparing the Plan shall also provide a list of potential structural, nonstructural and incentive-based Best Management Practices (“BMPs”), which could be specifically used to protect, conserve and/or restore the environmentally sensitive areas located on the proposed development site.

Through the Plan, The developer shall demonstrate specific BMPs for minimizing land disturbance and the modification of natural land forms in order to maximize the preservation of large stands of trees and/or other habitat related environmental features, which are, where applicable, maintained as contiguous with both onsite and adjacent trees stands, as well as, other related wildlife habitat areas; demonstrate proposed measures to provide for the movement of wildlife through or around the proposed development areas by the interconnection of wildlife management corridors; demonstrate proposed measures contained within the overall site plan that shall mitigate, protect and/or restore the

ecological integrity, habitat biodiversity and wildlife management corridors that are commensurate with the ecological conditions within the proposed development area; and demonstrate proposed measures acceptable to the Town to inform and educate future residents of the development relative to the development's environmental protection features and how to properly maintain said features in the long-term. The Plan will be evaluated using the following criteria: sound environmental science and planning, specific site conditions, cost effectiveness and other relevant Town environmental and public health concerns or issues.

- D. APPLICATION:** For residential projects, applicable to applications for development plans and record plats. For nonresidential projects, applicable to applications for development plans, record plats, and site plans.