

Environmental Services Report

AESA24-0002/Dentex

City Council District #4

The applicant, Thomas Fletcher, on behalf of Alan Hughes has requested an Alternative Environmentally Sensitive Areas (AESA) Plan to allow for modifications to 29.9 acres of Undeveloped Floodplain for grading in support of a residential development. Restoration work will include three (3) rain gardens and the establishment of native grasses and forbs throughout the revised floodplain.

Within the City of Denton certain areas with ecological value are designated as Environmentally Sensitive Areas (ESAs). These areas are subject to regulations that limit land-disturbing activities to protect water quality, provide habitat, and provide critical wildlife corridors. Areas identified on the official ESA map are assessed as part of the development process to confirm the ecological conditions of the area meet the standards to be an ESA.

Approval of an AESA Plan must first be obtained if a property owner wishes to deviate from protection requirements of an ESA as provided for in the Denton Development Code. Approval of an AESA Plan requires two public hearings, the first at the Planning and Zoning Commission for a recommendation and the second at the City Council for ultimate approval.

EXISTING ENVIRONMENTALLY SENSITIVE AREAS:

An ESA Field Assessment (ESA24-0018) was performed by a third-party consultant and confirmed headwater tributaries of the Graveyard Branch of Hickory Creek are not supported by a riparian vegetated buffer because the former agricultural use prevented the establishment of riparian vegetation; therefore, it was determined that there is not Riparian Buffer ESA on the property to be protected. However, the 29.9 acres of floodplain are generally in their natural state and thus meet the criteria of Undeveloped Floodplain ESA. The location of the confirmed Undeveloped Floodplain ESAs are shown in Figure 1 below. A more detailed description of the evaluated ESAs is provided in the Dentex Alternative ESA Plan (Exhibit 3).

The proposed residential development is a single-family subdivision with Residential 6 zoning. A conceptual layout for the subdivision is provided below as Figure 2. The proposed mitigation plan for encroachments into the Undeveloped Floodplain ESA is provided as Figure 3 and discussed in more detail below.

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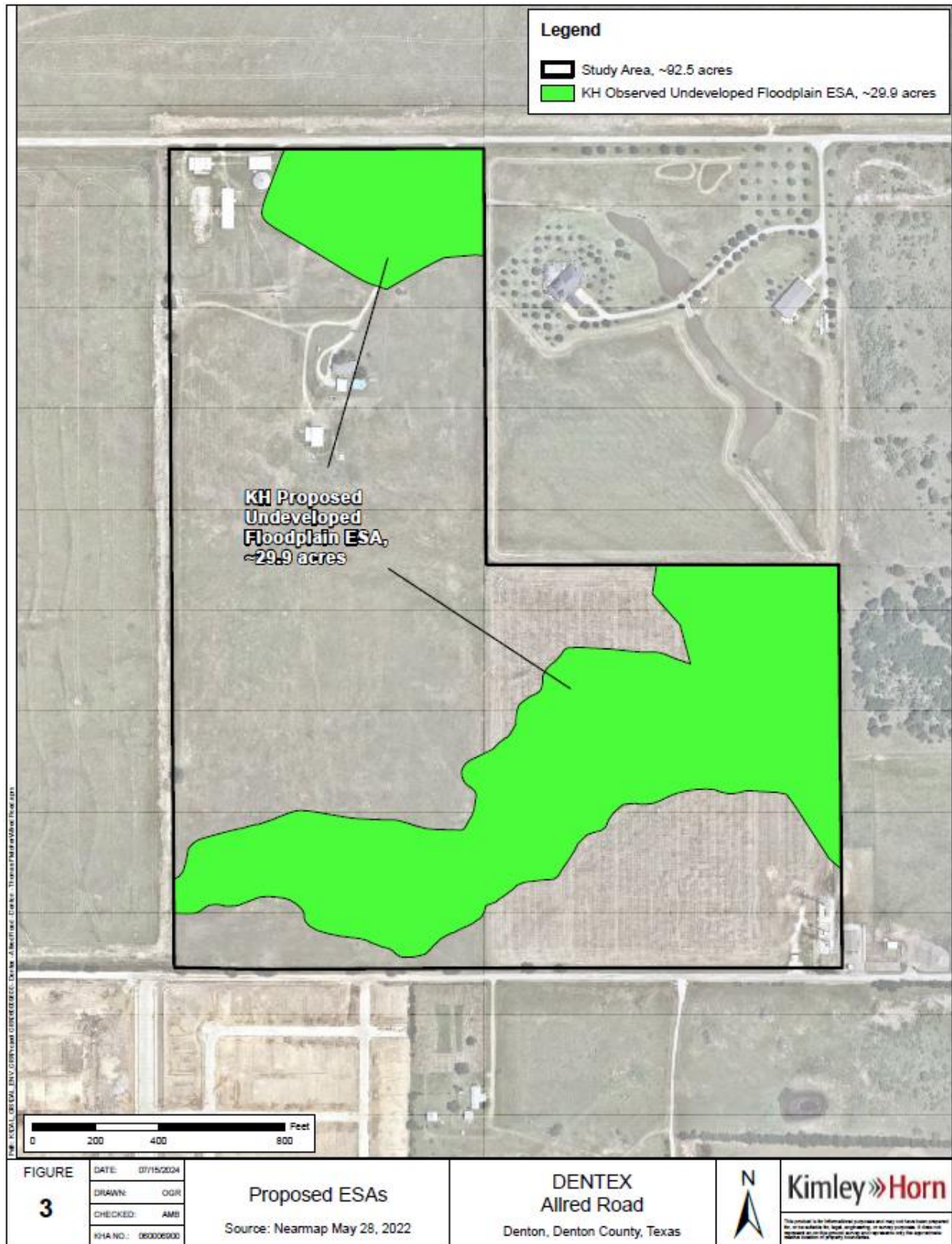


Figure 1: Location of Confirmed Undeveloped Floodplains

PROPOSED FLOODPLAIN REVISIONS:

To support the land development the applicant is proposing to revise all 29.9 acres of the 1% effective FEMA floodplain. The applicant must demonstrate compliance with the City of Denton drainage requirements and meet all drainage standards in the Denton Design Criteria Manual. This request is limited to establishment of a high-quality habitat through a re-vegetation plan.

RE-VEGETATION PROPOSAL:

To create a high-quality habitat and establish ecological services offered by ESAs the applicant is proposing to re-vegetate the 15-acre mitigation property with native grasses, forbs (non-woody, flowering plants) and trees. Different plant selections were made based upon the appropriate situation for the plant material, with upland plants on the upper banks of the floodplain and plants adapted to wet soil conditions closer to the waterway and within the three detention basins connected to the waterway. The proposed mitigation measures will create direct habitat connectivity of the mitigation area to future potential habitat along the waterway on adjacent undeveloped properties.

RAIN GARDEN PROPOSAL:

The applicant has integrated three rain gardens within the 15-acre mitigation property to help mitigation for the reduction of permeable surface within the floodplain. The rain gardens will be placed within the floodplain lot in a location that will intercept sheet flow from the residential development. Designed using integrated Stormwater Management (iSWM®) standards, rain gardens are expected to further serve to intercept and sequester ubiquitous residential pollutants.

OTHER DEVELOPMENT CONSIDERATIONS:

Although ESAs and tree preservation are closely related concepts, the DDC regulates these items separately and requires that the two be analyzed in a mutually exclusive way (i.e. a tree located in a preserved ESA cannot be counted towards tree preservation). Some street trees and mitigation trees are proposed to be planted within the ESA mitigation area. This request is limited to the mitigation plan and the final location and count of trees to meet the tree preservation requirements will be determined at a subsequent development application.

A 10-foot trail will be constructed following the waterway through the floodplain and is expected to connect to the City of Denton Trail Master Plan. A 3 to 5-foot vegetative buffer of native grasses will be maintained along the trail to prevent tall grass and weeds encroaching onto the trail.

CONSIDERATIONS:

Section 2.8.4 of the Denton Development Code outlines the criteria for approval of an Alternative ESA Plan. These criteria are as follows:

Criteria for Approval	Applicable to Project	Strategy to Meet Criteria
Mitigation goals are obtained by creating, expanding, and/or improving environmentally sensitive areas.	Yes	The proposed plan creates 15 acres of higher quality habitat from the remainder of a stream and its floodplain than the current agricultural use.

<p>Mitigation goals are obtained by preserving environmentally sensitive areas above the minimum requirements, exchanges between different types of ESAs, installing pollution prevention controls, and/or implementing best management practices or any other approaches that result in the improvement of the environment being impacted.</p>	<p>Yes</p>	<p>The mitigation area is expected to provide a higher quality habitat through increased species diversity and richness. Rainfall sheet flow from the residential properties is expected to be intercepted and pollutants sequestered, resulting in improved water quality when compared to typical drainage design.</p>
<p>Areas offered as mitigation are linked to existing or planned open space or conserved areas to provide an overall open space system.</p>	<p>Yes</p>	<p>The mitigation area will be placed in an HOA common lot and a drainage easement placed over the drainageway, creating open space.</p>
<p>Development is arranged for maximizing access and utilization of the environmentally sensitive areas by citizens.</p>	<p>Yes</p>	<p>A 10-foot trail will be designed to allow for linking this section to adjacent properties as they develop in the future.</p>
<p>Areas offered as mitigation are placed either in a lot or lots that incorporate a permanent conservation easement, a preserved habitat, restrictive covenants, or such other legal mechanism to allow for the long-term conservation of said areas. Such legal mechanisms shall limit any future land disturbing activity or construction within the ESAs, shall run with the land and shall be binding upon all successors and assigns of the current owner.</p>	<p>Yes</p>	<p>The floodplain will be placed in a drainage easement.</p>
<p>The Alternative ESA Plan shall demonstrate that the developer's alternative proposal results in a high-quality development meeting the intent of the standards in the MPC.</p>	<p>Yes</p>	<p>The mitigation area will result in an uplift in habitat quality and ecological benefits.</p>

RECOMMENDATION:

Staff recommends **approval** of the request with the following conditions to be included in the ordinance.

1. Land disturbances within Environmentally Sensitive Areas are limited to the Development Impact Area, as described in **Exhibit “B”** and depicted on the map provided on **Exhibit “C”**.
2. Grading for the Created Habitat, described in **Exhibit “D”** and depicted on the map provided on **Exhibit “D”** will immediately commence upon permission from the City to clear and grade land for the development. All improvements described in **Exhibit “F”** shall commence prior to scheduling Final Walk or requesting Final Acceptance, or, upon written approval by the Environmental Services Director at a date of earliest weather-dependent availability, but prior to the issuance of the first building permit in the development.
3. A minimum of two (2) educational signs shall be installed in a visible location. The signs shall be installed prior to the issuance of the first building permit in the development.
4. Vegetation established as a part of the approved revegetation plan are to be seeded and maintained across a 15-acre area by the Property owner/developer for a period of three (3) years following installation. Any plants that are removed, destroyed, or die within that three (3) year period are required to be replaced by the Property owner/developer to achieve a minimum 80% land cover rate.
5. Following the installation and inspection of the revegetation, the Property owner shall submit an annual report to the Environmental Services Director during the first three (3) years describing the cumulative mitigation work performed and the survivability of the plantings for staff review and inspection. Within 30 days of approval of the report by staff, the applicant shall replace any plants that were identified in the report as removed, destroyed, or dead.
6. Upon receipt of the third annual report City of Denton staff will perform an inspection and, upon confirmation the conditions of this plan have been met, issue a letter of acceptance. A project component not having received a letter of acceptance will continue to be monitored and repaired until the conditions of the plan have been met.
7. The Property owner retains all responsibilities and shall bear all costs and liabilities of any kind related to the ownership, operation, upkeep and maintenance of the AESA Property, and the responsibility to implement and enforce the requirements of the Alternative ESA Plan, and cure any defaults of the Alternative ESA Plan.