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NORTH CAROLINA



Date: March 12, 2012

To: Michael M. Ruffin, County Manager

Through: Lee Worsley, Deputy County Manager

From: Steven L. Medlin, AICP, City-County Planning Director

Subject: Unified Development Ordinance Text Amendment – Fences (TC1100003)

Summary. This text amendment would create standards for electric fences other than fences erected for animal control. It would confine them to certain uses, and increase the allowable fence height. This amendment would also revise the fence height and materials standards for utilities, create homeland security exemptions where necessary, and re-format existing text to provide more clarity. Relevant City and County departments were involved in the creation of this amendment.

Recommendation. Staff recommends that the Board of Commissioners approve the text amendment. The Planning Commission recommended approval on January 10, 2012, with a vote of 12-0.

Background. This text amendment was requested on February 15, 2011 by Sentry Security System, LLC (Sentry Security), which sells the Electric Guard Dog security fence. The request is Attachment B to this document. The proposed text also contains related changes requested by the City Water Management Department. Since that time, the City-County Planning Department has worked with the applicant and the relevant City and County departments to develop supportable text. The applicant also made several presentations on the fences to City and County departments.

The Joint City-County Planning Committee suggested that staff revise the proposed text slightly to clarify: 1) that only barbed wire fencing materials would be allowed outside the rural tier in conjunction with major or minor utilities; and 2) that concertina wire is not allowed to be used with an electric fence, in addition to barbed or razor wire.

Review of the proposed text prior to scheduling the item for governing body approval revealed that further clarification and simplification of the text was warranted, primarily focusing the regulations on location, dimension, and usage

standards, while removing details that were construction material related and not planning or use related. Planning determined that the subsequent changes warranted an additional public hearing with the Planning Commission.

The applicant also requested a modification that would permit electric fences of a limited height in street frontage only with a minor special use permit, where the proposed text would prohibit them in the street frontage. Staff supported this request, and the text amendment was recommended for approval by the Planning Commission with the requested change on January 10, 2012. Their comments are included as Attachment C.

Issues. Electric fences are not currently addressed in the UDO. They have been allowed because they are not prohibited, but no specific standards apply. They do, however, need to comply with the general eight-foot height limit.

Sentry Security's request would allow electric fences, powered by 12-volt batteries, which are surrounded by non-electric perimeter fences. The interior electric fence could be ten feet high if the perimeter fence is eight feet high. The request suggests a permit process and the use of "Knox" boxes, which are key boxes used to enter and disconnect an electric fence in case of emergency. The request also requires compliance with international electrical standards.

Staff supports the use of electric fences in certain areas and the increased height, and agrees that cutoff switches and electrical standards should be required. Certain modifications to the request were necessary, however, and individual aspects of the proposed text are discussed below.

- **Permitting.** Staff looked at the issue of permitting and found that it would create a process for something that does not currently require a permit. Because the electrification is provided by a battery, no electrical permit is required. The Planning Department staff does not have the time or expertise to oversee this process and none of the other departments indicated the ability to add this to their workload either. Therefore, a new type of permit is not included as part of this proposed amendment.
- **Electrical Standards.** The proposed fences are powered by 12-volt batteries rather than AC power, so United States electrical code standards do not apply, and the City-County Inspections Department does not regulate them. The international electrical standards proposed by the applicant are also used in several other U.S. jurisdictions. The spacing standard below is intended to prevent serious injury or death and recognize that the fence may be an attractive nuisance for children. Specific construction details are not included in the proposed regulations since they are not regulated by

Planning; liability will remain a private issue with the entity responsible for the fence if an accident occurs.

- **Fence Spacing Standard.** The fence spacing standard is important because the amount of space between the perimeter fence and the electric fence must prevent entrapment against the electric fence. The proposed standard is drawn from other U.S. jurisdictions and the international standard provided by the applicant.
- **Use and Locations.** Staff assessed appropriate locations for electric fences and determined that, for clarity, they should be confined to specific uses as follows:
 - a. Government facilities, to address security concerns raised by Public Works Department for its Operations Center;
 - b. Utilities, to address security concerns raised by City Water Management Department regarding water towers and other public utilities; and
 - c. Industrial uses.

The only zoning prohibition is proposed for Design Districts.

- **Utilities.** The City Water Management Department has requested changes to the height and material standards for fencing of major and minor utilities due to problems at water towers and other facilities in residential areas. The proposed text, therefore, allows utilities to use barbed wire in residential zoning districts. However, in residential districts, electric fences or fences with barbed wire must be aesthetically compatible with the surrounding residential uses. Public safety is enhanced through these changes by preventing people from entering utility locations, thereby protecting the public served by the utilities and preventing injuries to trespassers.
- **Homeland Security.** In preparing this amendment, emergency services departments requested exemptions for homeland security needs should they arise. Homeland security exemptions have accordingly been included to authorize additional fence height and electric fence locations or associated uses that are otherwise prohibited. An applicant requesting a homeland security exemption must obtain approval from the appropriate emergency services department.

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Attachments: Attachment A, An Ordinance to Amend Provisions of the Unified Development Ordinance Regulating Fences, Mark-up Version
Attachment B, An Ordinance to Amend Provisions of the Unified Development Ordinance Regulating Fences, Clean Version
Attachment C, January 10, 2012 Planning Commission comments
Attachment D, Sentry Security Systems, LLC Application for UDO Text Amendment