

# REQUEST FOR BOARD ACTION

## HENDERSON COUNTY BOARD OF COMMISSIONERS

**Meeting Date:** May 4, 2009

**Subject:** Continued Discussion on Proposed Land Development Code 2008 Annual Text Amendments 12, 17, 21 and 22 (TX-2008-05)

**Attachments:**

1. Staff Memo
2. R1 Zoning District near US 25N Map
3. R1 Zoning District in Etowah Area Map
4. Proposed LDC Text Amendment (TX-2008-05)

### SUMMARY OF REQUEST:

The Board held a public hearing on the proposed Land Development Code Text Amendments (TX-2008-05) on April 6, 2009 and voted unanimously to approve all of the proposed text amendments except for amendments 12, 17, 21 and 22. The Board agreed to discuss these text amendments within 30 days following the hearing. A Staff memo (See Attachment 1) is attached with additional information on these remaining text amendments and a detailed description of these proposed text amendments (See Attachment 2) has also been provided for the Board's review.

The Planning Board reviewed the proposed LDC text amendments at its November 20, 2008 and December 18, 2008 meeting and voted unanimously (5-0) to send forth a favorable recommendation on text amendments 12 and 22. At its January 15, 2009 meeting, the Planning Board considered text amendments 17 and 21 and voted (7-1) to send forth an unfavorable recommendation on these two amendments. The Environmental Advisory Committee reviewed text amendments 17 and 21 at its meeting on February 5, 2009 and voted unanimously to send forth a favorable recommendation on these amendments.

### BOARD ACTION REQUESTED:

Planning Staff recommends that the Board of Commissioners approve, approve with modifications, or deny proposed text amendments 12, 17, 21 and 22 (Land Development Code 2008 Annual Text Amendments (TX-2008-05)). The following motion has been provided if the Board supports the proposed text amendments to the LDC.

### Suggested Motion:

I move that the Board approve proposed the Land Development Code 2008 Annual Text Amendments 12, 17, 21 and 22 (TX-2008-05) and that these proposed text amendments are in general compliance with the recommendations of the 2020 Henderson County Comprehensive Plan.

**MEMORANDUM**

**TO: Board of Commissioners**  
**Steve Wyatt, County Manager**  
**Selena Coffey, Assistant County Manager**

**FROM: Autumn Radcliff, Senior Planner**  
**Anthony Starr, Planning Director**

**DATE: May 4, 2009**

**SUBJECT: Continued Discussion on Proposed Land Development Code 2008 Annual Text Amendments 12, 17, 21 and 22 (TX-2008-05)**

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The Henderson County Land Development Code (LDC) was adopted with the anticipation that it would be reviewed each year and amended as needed. On April 6, 2009, the Board of Commissioners held a public hearing on the proposed Land Development Code 2008 Annual Text Amendments (TX-2008-05), the first annual review since the LDC's adoption on September 19, 2007. The proposed amendments addressed a range of issues including: emergency vehicle access, some community character and design standards, clarifications to portions of the code text, and staff or Board concerns and/or suggestions.

After hearing public comments the Board voted to adopt all proposed text amendments to the LDC with the exception of text amendments 12, 17, 21 and 22. Following discussion by the Board, it was agreed that the Board would continue its discussion on text amendments 12, 17, 21 and 22 within thirty (30) days.

Based on the Boards discussion during the public hearing on April 6, 2009, the Board indicated that it was concerned with all of these remaining proposed text amendments, but specifically with text amendments 12 and 22. Staff has provided the following additional information on text amendments 12 and 22.

**Text Amendment 12** (Wind mills/turbines permitted as accessory uses in all zoning districts)

The proposed text amendment 12 would allow wind mills/turbines as an accessory use in all districts provided:

- Height Limitation – no more than 40 above obstructions within a 200' radius (maximum height of 100')
- Setback – 10' from surrounding property lines. Wind turbines that are more than 40' in height shall be setback a distance equivalent to 110% the height of the turbine at its highest point.
- Wind turbines must be a color that is consistent with existing development or natural conditions
- Wind turbines shall comply with FAA and FCC regulations

The Board indicated that it was not opposed to wind mills/turbines permitted as accessory uses, but was concerned with the impact to surrounding neighbors in regards to height, setback, noise and safety among others.

According to the NC Wind Energy, Appalachian State University, small scale wind mill/turbines can either be connected to the utility grid or stand-alone as an "off-grid" application, normally providing electrical power for home, farm, school, or business applications. Small scale wind mills/turbines can have blade length between 3ft-30ft, with a 100ft tower, and can power between 1/4 to 6 average American homes (and even more if they are energy conscious). The standard guideline is to site a wind mill/turbine at least 30 feet above anything within 300-500 feet in order to utilize the wind currents for energy purposes. The pictures below illustrate what a small wind turbine utilized for residential purposes might look like.



Above pictures from NREL's Wind Graphics Library

Other jurisdictions such as Ashe and Watauga counties regulate small wind energy systems with a capacity of not more than 20 kW. These two counties restrict the tower height for residential uses to 135 feet, require a minimum setback of 1.5 times the height of the tower unless the applicant secures a permanent easement from the adjoining property owner(s) providing for a fall zone, and require a building permit, standard drawings and an engineering analysis of the tower by a licensed professional engineer for ice/wind loading (may be supplied by the manufacturer). Ashe and Watauga counties also require evidence that the utility company has been informed of the customer-owned generator being installed (off-grid systems are exempt from this requirement), and requirements are stated for the removal of defective or abandoned wind energy systems.

In reference to the Boards concern with noise, there are a number of studies. These studies show that it is difficult to separate background noise such as the wind itself to determine the turbine acoustics. According to a study titled "Acoustic Tests of Small Wind Turbines" conducted by the National Renewable Energy Laboratory (NREL), different wind turbines have different acoustic signatures on different days even at the same wind speed. The study also stated that noise levels increase during high wind conditions when the blades flutter or when the inverter is offline. Most of the manufacturers have made an effort to reduce noise which has resulted in quieter turbines. According to the American Wind Energy Association, small wind turbines do make some noise, but not enough to be found objectionable by most people. A typical residential wind system makes less noise than the average washing machine.

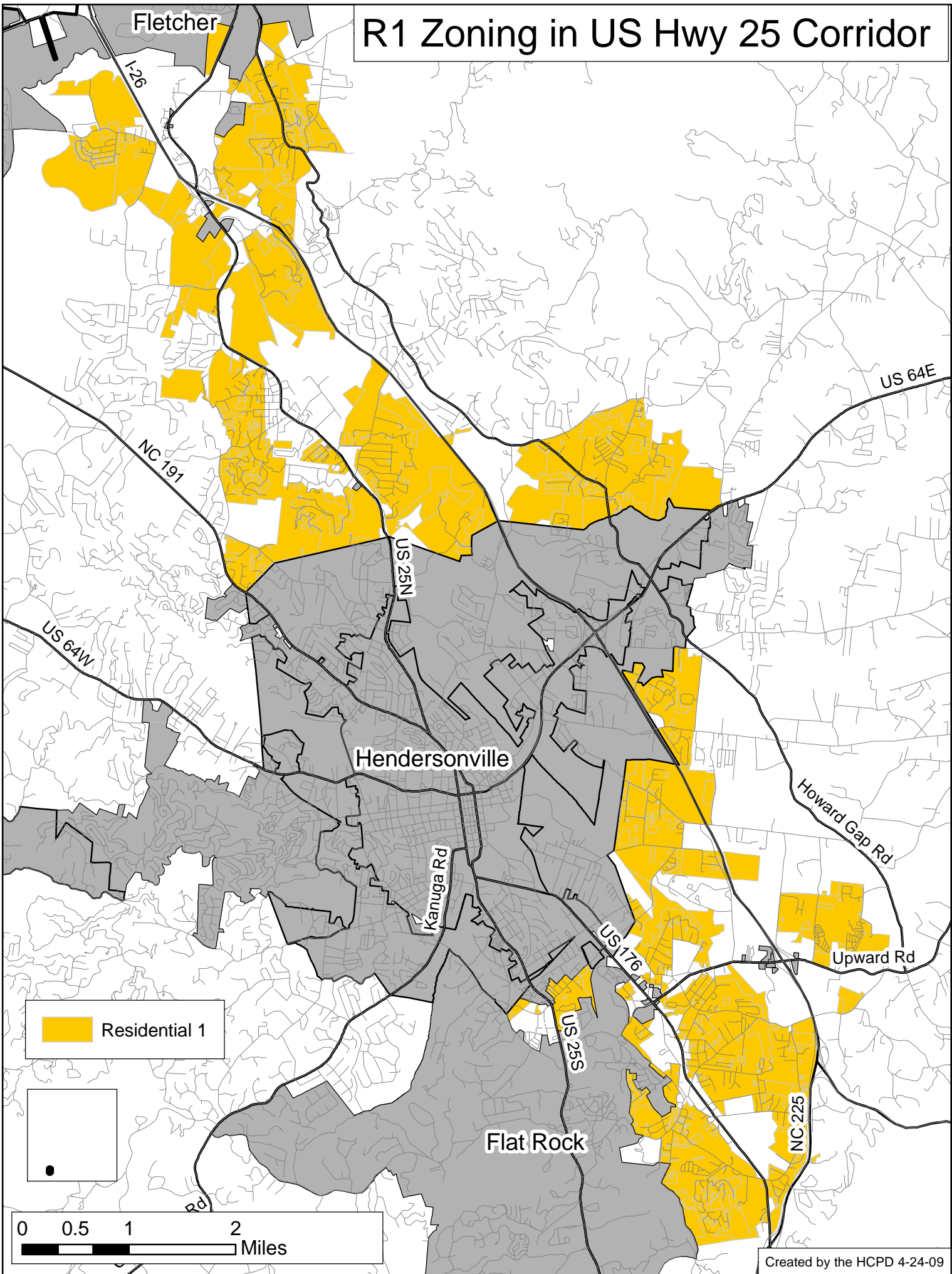
**Text Amendment 22** (Allowing an intermediate density of eight (8) units per acre in the R1 (Residential One) zoning district)

Currently, the R1 zoning district allows for a standard density of 4 units per acre with a maximum density of 16 units per acre for multifamily developments proposing 5 or more dwellings. The proposed text amendment would allow, by right, an intermediate density of 8 units per acres in the R1 zoning district where infrastructure is present. The intermediate density would only be allowed when the dwellings were served by both a municipal water and a sewage disposal system (municipal, approved public, or approved community). This amendment would steer growth to areas appropriate for development, provide opportunities for more affordable housing and reduce total infrastructure costs.

To better understand the current potential for development using the intermediate density, Staff has provided the following calculations for the R1 zoning district (See Attachments 2 and 3).

- 9,913.61 (approximate) acres are currently zoned R1
- 240,099.79 (approximate) total acres in Henderson County (includes the municipalities)
  - R1 zoning district accounts for 4.13% of the total County acreage
- 240,562.73 (approximate) acres are within the County's jurisdiction
  - R1 zoning district accounts for 4.85% of the acreage within the County's jurisdiction
- According to the tax assessor's classified vacant lands, approximately 2,513.30 acres (25.35%) of land currently zoned R1 is vacant.
- Less than 5% of the acreage within the County's jurisdiction could utilize the intermediate density option
  - Based on acreage of land currently zoned R1
  - Dependant upon the availability of infrastructure (water and sewer)

# R1 Zoning in US Hwy 25 Corridor





# R1 Zoning in Etowah

Mills River

NC 280

Etowah Country Club

HORSESHOE BEND RD

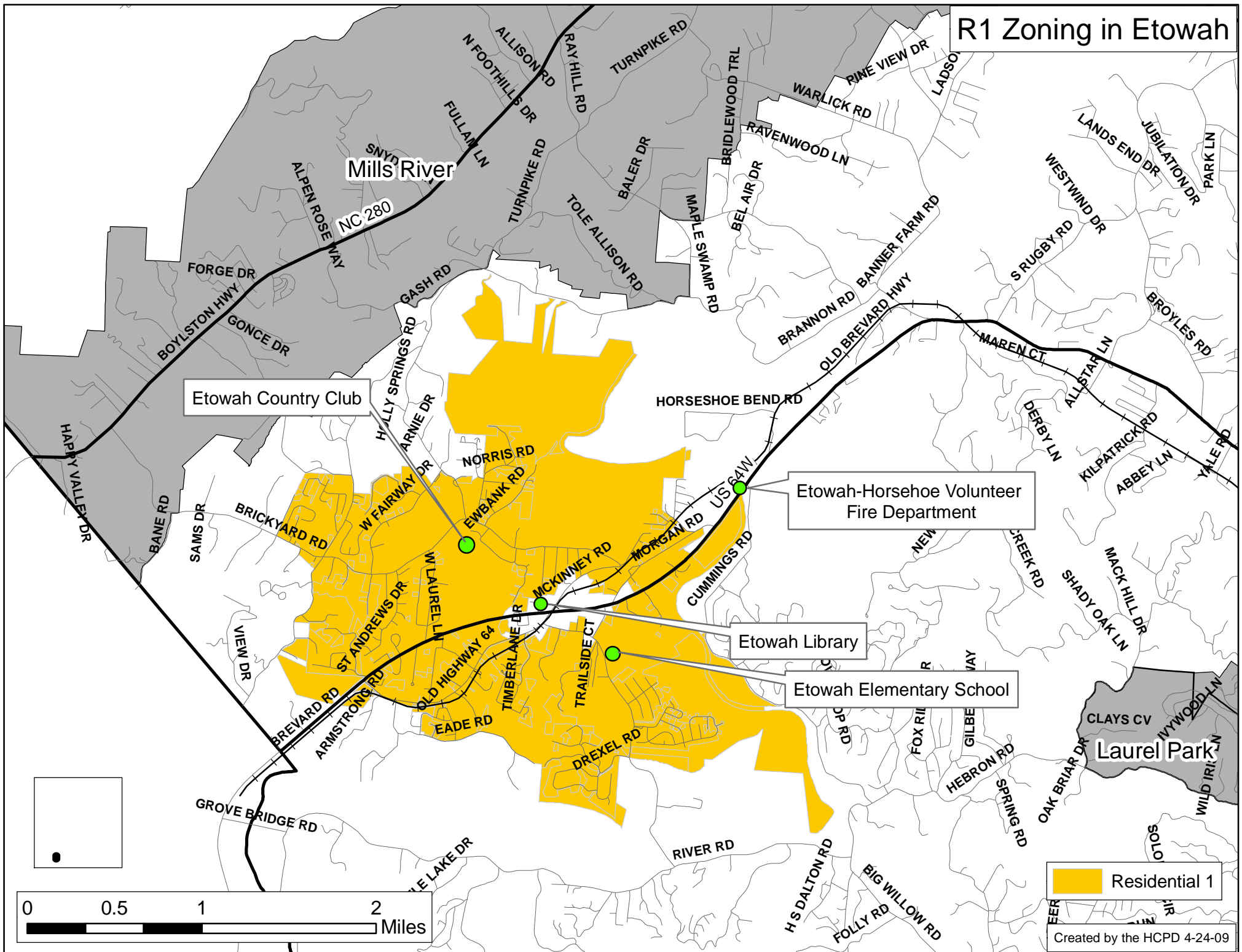
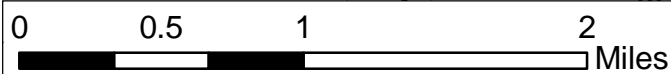
Etowah-Horsehoe Volunteer Fire Department

Etowah Library

Etowah Elementary School

Laurel Park

Residential 1



**Land Development Code 2008 Annual Text Amendments 12, 17, 21 and 22 (TX-2008-05)**

**LDC Text Amendment 12:**

**Issue:** The LDC does not currently allow for wind turbines as an accessory use for residential, commercial or industrial uses. The following amendment would specifically list wind turbines as an accessory use that would be allowed in all zoning districts with supplemental requirements.

**Planning Board Recommended**

**Recommendation:** Amend §200A-62 Table of Permitted and Special Uses and add an SR 2.12 Wind Turbine.

**§200A-62. Table of Permitted and Special Uses**

USE TYPE	GENERAL USE DISTRICT											
	P=Permitted; S=Special Use Permit											
	R1	R2	R2MH	R3	R4	OI	MU	LC	CC	RC	I	SR
<b>2. ACCESSORY USES</b>												
Wind Turbines (Wind Mills)	P	P	P	P	P	P	P	P	P	P	P	2.12

\*Add as a permitted use in the R-40 and WR zoning districts with supplemental requirements.

**§200A-63. Supplemental Requirements to the Table of Permitted and Special Uses**

**SR 2.12. Wind Turbines (Wind Mills)**

- (1) Height. Wind turbine height shall be no more than 40 feet above any obstruction (*structure, tree, etc. (excluding communication towers)*) within a 200 foot radius of the base of the wind turbine. In no case shall the height exceed 100 feet.
- (2) Setback. The base of the wind turbine shall be at least ten (10) feet from surrounding property lines. Wind turbines that are more than 40 feet in height shall be *setback* from property lines by a distance equivalent to 110 percent of the height of the wind turbine at its highest point.
- (3) Color. Wind turbines must be a color that is consistent with *existing development* or natural conditions.
- (4) Compliance with FAA Regulations. Wind turbines must comply with applicable FAA regulations, including any necessary approvals for installation close to *airports*. Evidence of compliance or non-applicability shall be submitted to the *Zoning Administrator*.
- (5) Compliance with FCC Regulations. Wind turbines must comply with applicable FCC regulations. Evidence of compliance or non-applicability shall be submitted to the *Zoning Administrator*.

**LDC Text Amendment 17:**

**Issue:** To ensure that an adequate source of potable water is available before a subdivision is built in the RAA (Rural Agricultural Area), require major subdivisions to do one of the following: provide a public community well system where individual wells are not allowed, or provide proof that there is a sufficient water supply to support 60% of the proposed lots in the subdivision. This provision will encourage the use of community wells and will better address water quantity. The Environmental Advisory Committee and the Draft Etowah and Horse Shoe Communities Plan recommended that the County incorporate water supply standards into major subdivision regulations. The Draft Etowah and Horse Shoe Communities Plan states that prior to development plan approval, water supply studies should be incorporated into major subdivision regulations to ensure that adequate water is available for larger subdivisions.

**Planning Board Did Not Recommend  
Environmental Advisory Committee Recommended**

**Recommendation:** Modify §200A-81 (B) (2) as follows.

**§200A-81. Major Subdivisions**

- B. Water Supply System and Sewage Disposal System Required. Every *lot* within a *subdivision* shall be served by a *water supply system* and *sewage disposal system* that is adequate to accommodate the reasonable needs of the proposed *use* and comply with all applicable health regulations. The *applicant* must provide evidence that *water supply system* and/or *sewage disposal system* plans have received final approvals by the appropriate agency prior to final plat approval (except as noted in item B(1) below).
- (1) Individual Water Supply and Sewer Systems (Well and Septic Tanks). For *subdivisions* in which the *water supply system* and/or *sewage disposal system* to be installed is an individual system for each *lot*, the installation of said systems will not be required prior to *final plat* approval.

Where a *subdivision* is located entirely or partially in those areas designated as Rural (RAA) in the *Comprehensive Plan*, the *applicant* shall adhere to one (1) of the following two (2) options:

- a. Provide a community well system (a type of *public water supply system*) that meets State standards for *public community water systems* (individual wells shall not be permitted in this situation). The location of each well and the waterlines shall be shown on the development plan. If the locations of the well(s) or waterlines change, the *applicant* shall submit a revised development plan. The distribution system (waterlines) is not required to be constructed and installed prior to beginning land disturbing/construction activity or any other improvements.
- b. The use of community wells is recommended, however, if individual wells are proposed, the *applicant* shall provide reasonable documentation demonstrating there is sufficient water supply to support 60 percent of the proposed *lots*. The location of each well shall be shown on the development plan.

The *applicant* shall provide documentation for either Option a or Option b prior to beginning any land disturbing/construction activity or any other improvements not associated with the installation of the well or wells.



**LDC Text Amendment 21:**

**Issue:** Add a provision that small accessory wastewater treatment plants would not be permitted in the R3 and R4 zoning districts. The County Comprehensive Plan recommends that these types of uses should not be permitted in the RAA which is predominately made up of the R3 and R4 zoning districts.

**Planning Board Did Not Recommend  
 Environmental Advisory Committee Recommended**

**Recommendation:** Amend §200A-62 Table of Permitted and Special Uses.

**§200A-62. Table of Permitted and Special Uses**

USE TYPE	GENERAL USE DISTRICT P=Permitted; S=Special Use Permit											
	R1	R2	R2MH	R3	R4	OI	MU	LC	CC	RC	I	SR
<b>3. ACCESSORY STRUCTURES</b>												
<i>Wastewater Treatment Plant, Small Accessory</i>	P	P	P	<del>P</del>	<del>P</del>	P	P	P	P	P	P	3.15

**LDC Text Amendment 22:**

**Issue:** Allow an intermediate density of eight (8) units per acre in the Residential One (R1) Zoning District where municipal water and public sewer are available. Allowing, by right, dense development where the infrastructure is present steers growth to areas appropriate for development while also providing for more affordable housing and reducing total infrastructure costs.

**Planning Board Recommended**

**Recommendation:** Amend §200A-27(B) to include a provision for “intermediate” density which would be available where both a municipal water supply system and a sewage disposal system (of the following types: municipal, approved public, or approved community) are available to service a property.

**§200A-27. Residential District One (R1)**

B. **Density and Dimensional Requirements.** Each *use* allowed in this district shall, at a minimum, conform to the following requirements (in the case of a nonresidential *use* the *residential density* requirements shall not apply). In some cases a specific *use* may be required to meet the Supplemental Requirements as set forth in §200A-63 (Supplemental Requirements).

<b>Table 2.1. R1 Density and Dimensional Requirements</b>			
(1) <i>Residential Density</i> (units/acre)		(2) Standard	4
		<b>(3) Intermediate</b>	<b>8</b>
		<del>(4)</del> Maximum	16
(5) <i>Yard Setbacks</i> (feet)	<i>Front or Right-of-Way (ROW)</i>	<i>Local</i>	15
		<i>Collector</i>	20
		<i>Thoroughfare</i>	35
		<i>Boulevard</i>	50
		<i>Expressway</i>	60
		<i>Freeway</i>	90
		<i>Side</i>	10
		<i>Rear</i>	10
		<del>(6)</del> Maximum Height (feet)	40

(1) *Residential density* shall be calculated utilizing the entire acreage of a *tract* of land. Under this scenario, *residential density* shall be determined based on the following formula:

*Lot size* x allowable units per acre = permitted *dwelling units*

The following example assumes a 5 acre tract with an allowable density of 4 units/acre:

5 acres x 4 units per acre = **20 permitted dwelling units**

The maximum *residential density* for portions of the *tract* with a *slope* of 60 percent or greater (where such *slope* areas of the *tract* account for ten (10) percent or more of the *tract*) shall be one-half ( $\frac{1}{2}$ ) the eligible density.

- (2) Standard *residential density* shall be applied:
  - a. On a *lot* existing at the time of the initial adoption of this Chapter, where there is not adequate area to comply with the applicable standard *residential density* requirement;
  - b. To single-family residential *uses*; and
  - c. To multifamily residential *uses* with fewer than five (5) units.
- (3) Intermediate residential density shall be available when individual dwellings would be served by both: (1) a *municipal water supply system* and (2) a *sewage disposal system* (of the following types: municipal, approved public, or approved community) which meet the requirements of applicable local or state authorities having jurisdiction thereof.
- (4) Maximum residential density shall be available to applicants proposing five (5) or more dwellings in any combination of the following unit types (duplexes, triplexes, quadraplexes and multifamily dwellings with five (5) or more units and specifically excluding single-family units) where:
  - a. A total of at least five (5) units would be permitted by standard residential density, and
  - b. Such dwellings are generally served by public or private utility systems which meet the requirements of the Henderson County Department of Environmental Health or other governmental authorities having jurisdiction thereof.
- (5) *Accessory structures* shall be located in *side* or *rear yards* and shall be *setback* a minimum of ten (10) feet from any property line.
- (6) Maximum height may be exceeded in multifamily developments as detailed in §200A-63 (Supplemental Requirements) SR 1.6. (Dwelling, Multifamily, Five (5) or More Units), provided such developments do not exceed 50 feet in height.