

May 11, 2018

M&C 7291-0002 (Revised)

Kimberly Tyson
Chatham County Planning Department
80-A East Street
Pittsboro, NC 27312-0130

RE: **Ryan's Crossing First Plat**

Ms. Tyson:

This application is for Ryan's Crossing Subdivision which contains 61 lots on 114 acres off of Mann's Chapel Road (near its intersection with Tobacco Road). The smallest lot is 0.5 acres and the largest is 1.7 acres. The average residential lot size of 0.81 acres. The proposed roads have a 20' wide paved travel way with a 60' wide public right-of-way. The total length of roads is approximately 5,500 linear feet. A 60' right-of-way stub is being provided to AKPAR parcel 84850. Each residential lot will be served by Chatham County public water and by individual septic systems.

The project is currently zoned R-1 for Residential District 1, which primarily allows low to moderate density residential development within the residential-agricultural areas of the jurisdiction. The property is located in an area of the County identified as Compact Residential on the Future Land Use and Conservation Plan Map. As listed in the Comprehensive Plan, Compact Residential is a mix of detached and attached residential units complemented by a variety of open spaces. The residential subdivision is proposed to be a Conservation Subdivision. As an alternative to conventional layouts, the County encourages the preservation of large, contiguous blocks of land referred to as Conservation Space. The conservation space consists of natural space and open space. Ryan's Crossing provides over 40% of its project area, approximately 47 acres, in Conservation space. The project will meet the riparian buffer and stormwater control standards of the County. There are approximately 34 acres of stream and wetland buffers in the project that are being protected. An additional 13 acres of non riparian buffer area are included in Conservation Space. The project will have only two creek crossings (one perennial and one intermittent crossing). In order to limit stream disturbance, headwalls will be used at the stream culvert crossings and culverts have been aligned to cross the streams in a perpendicular fashion.

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Residential lot setbacks will be the minimum setbacks allowed by the Ordinance and Regulations.

Compliance with the Chatham County Conservation Subdivision Guidelines and also with the Big Woods Conservation Design Guide is summarized as follows:

Conservation Guidelines: The minimum Conservation Space of 40% is exceeded in Ryan's Crossing which has Conservation Space comprising +/- 40.92% of the gross acreage of the site or 47 acres in Conservation

Space (see First Plat). Less than 20% of the total Conservation Space will be used for impacted Open Space. The balance will be left in Natural Space. In addition, the Primary and Secondary conservation space selection criterion have been observed. The density bonus allowed for under the Subdivision Ordinance is not being taken advantage of in this subdivision. The primary purpose of using the conservation subdivision tool is not to obtain the density bonus but rather to design the subdivision in keeping with the environmental stewardship principles of the conservation subdivision provisions.

Big Woods Conservation Design Guide (Four Steps): The Four Steps set out in the Design Guide are (1) Conservation Area Identification; (2) Developable Area and Yield; (3) Development Envelope Delineation; and (4) Subdivision Design. Each of these Four Steps informed the design of Ryan's Crossing.

- (1) Conservation Area Identification: In drafting, mapping and producing the Environmental Impact Assessment for Ryan's Crossing, the conservation area identifications emerged organically and rather intuitively from the digested environmental information. The EIA includes maps of all applicable environmental inventories (i.e., soils, streams/wetlands identification, topographic, floodplain, watershed, Farmland, geologic, Natural Heritage Elemental Occurrences). These maps were assembled as part of documentation for the peer-reviewed EIA. Additionally a series of on-site inventory maps were prepared and submitted for the project.
- (2) Developable Area and Yield: The Ryan's Crossing layout meets or exceeds all benchmarks as set forth in the table below.

Gross Acres	Env. Constrained	Net Land Area	Cons. Space Req'd	Zoning	Max Density	Allowable Number of Units	Density Bonus Units	Max Yield	Dev Area	Min Lot Size
114.85	34.2 ac	80.65	45.9 ac.	R-1	1	80.65	8	88	34.75 ac.	.395 ac.

- (3) Development Envelope Delineation: Based on the environmental mapping and the conservation space analysis and lot yield information, the development envelope was created. See the submitted Fragmentation Map. The development envelope largely avoided primary and secondary conservation areas.
- (4) Subdivision Design: Taking into account the Development Envelope the Applicant created a subdivision layout that accentuated and preserved riparian areas, buffers and drainage ways. It took into account the least impactful crossings based on a multitude of factors. The resulting lot layout is set forth on the First Plat.

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North Carolina's Wildlife Action Plan (WAP) is a comprehensive planning tool developed by the NC Wildlife Resources Commission to help conserve and enhance the State's full array of fish and wildlife species and their habitats. There are primary and secondary natural community conservation areas. In determining the area for conservation space, there are some primary natural systems conserved on the northern section of the conservation area. The majority of the conserved areas fall under the secondary Lowland Systems.

The project is utilizing recommendations made in the Big Woods Conservation Design Guide provided by Chatham County Planning Department. To minimize negative impacts to water quality in wetlands associated with streams, a 100-foot buffer is provided for wetlands along perennial streams and a 50-foot buffer for wetlands along intermittent streams. The project conserves the floodplain habitat within the 114 acre site. No utilities are being installed within the floodplain. The impervious footprint of the rural 20-foot wide roadways is a very small percentage of the site. Clearing and grading will be very limited and will be done only as needed to install the roadways and stormwater BMP areas.

Even though a traffic study was not required by the County, the project engaged Kimley-Horn to provide a traffic analysis of the project. The analysis showed that no queueing issues would be expected at either study intersection and that no turn lanes were warranted at the site driveway. The complete analysis by Kimley-Horn was included with the First Plat submittal documents.

The project has worked with Duke Energy on street lights and, although this has not been finalized, we think we will be utilizing the Mitchell Top Hat LED with Ribs, Bands and Medallions with a decorative fluted pole. The street lights will be approximately 250' to 300' on center along the project's streets and will meet the County's ordinance. They will be 50 watts, IESNA type V light pattern and B3-G3-U3 backlight-uplight-glare rating according to Duke Energy's specification sheet.

Stormwater on the project will be handled through roadside ditches and piped culverts to convey stormwater runoff to a series of wet detention/water quality ponds. The stormwater BMPs will meet the design requirements of the Chatham County Stormwater Ordinance.

Within the 47 acres of Conservation Space preserved by the project, there will be a series of mulch trails to connect portions of the site to the residential streets. The trails will be located outside of the protected riparian buffers.

We are showing three (3) potential amenity site locations on the First Plat map. The type of amenities may be open air yoga pavilion, benches, trails, gazebos, etc. Final determination of types of amenities to be determined during the construction plat process.

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Development Schedule

- Construction Plan submittal for Phase 1: Within 2 years after First Plat approval.
- Final Plat submittal for Phase 3 (final phase): December 31, 2025.

If you have any questions during your review, please do not hesitate to give me a call at 919.233.8091.

Sincerely,

McKIM & CREED, INC.



Chris Seamster, PLA
Regional Manager

cc: Mr. Alex Barroso
Mr. Nick Robinson

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