



March 14, 2021

Jason Sullivan  
Planning Director  
Chatham County  
P.O. Box 54  
80-A East St.  
Pittsboro, NC 27312

RE: Review Comments – Revised Environmental Impact Assessment for the proposed Savannah Ridge Development  
JMT Job No. #19-03787-004

Dear Mr. Sullivan:

Johnson, Mirmiran & Thompson (JMT) has completed our review of the Revised Environmental Impact Assessment (EIA) prepared by Timmons Group for Esplanade Development for the Savannah Ridge Development. Our comments have been compiled utilizing the *ERAC EIA Review Checklist* format. JMT reviewed the EIA for completeness in accordance with the most recent version of the Chatham County Subdivision Regulations (<https://www.chathamnc.org/home/showdocument?id=24461>).

In our opinion, the Revised EIA satisfies the requirements of the regulations and should be considered complete. We would like to note that there are still several items that will need to be addressed and/or corrected on future submittals as the project progresses through the approval process. Responses from the applicant to these final comments are not required at this time. These items are addressed in detail in the attached checklist and summarized below.

- Inconsistent labeling and data on figures:
  - Appendix A, Figure 2. The graphic does not distinguish between open space and natural space; only open space is labeled. The graphic states open space as 76.17 acres though the table lists 28.20 acres. Proposed impervious cover is shown as 6.62 acres (11.1%) on the figure, but Page 2 of the EIA states that impervious surface cover is 23.6 acres (15.5%).
  - Appendix A, Figure 3. Inconsistent labeling of “off site septic”. The locations of pump stations, septic tanks, distribution boxes, etc will be required for future milestone reviews.
- It is not clear if riparian buffers will need to be cleared to allow for permanent easements over the force mains at stream crossings. Riparian Buffer impacts may require a permit and proposed methods employed to protect the riparian buffer during clearing will be required.
- CCHA and SHPO have requested a survey for a potential cemetery located on the parcel proposed for development. At the time of the second EIA review, the requested survey was not

completed. If a cemetery is identified during construction and road or lot locations need to be revised, a new review and approval will be needed. Although not required, it is highly recommended that an investigation is conducted as requested by the SHPO. Confirmation of the presence or absence of the suspected cemetery could potentially save time and money and avoid project delays.

- The EIA states that wildlife displacement will be approximately 30.2 acres due to land disturbance from grading, including approximately 0.16 acres of riparian buffer. However, drainfield areas will be permanently cleared and this should also be considered a wildlife impact habitat loss.

If you have any questions or need further information, please do not hesitate to contact me at (984) 269-4923 or rbode@jmt.com.

Very truly yours,

JOHNSON, MIRMIRAN & THOMPSON, INC.



Ray Bode, PWS  
Senior Associate



Bill Jenkins, P.E.  
Vice President

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Environmental Impact Assessment Item	Adequately Described and Fully Discussed?
<b>Proposed Project Description and Need</b>	
1. Describe the overall project in detail, including all proposed phases.	Included.
2. Provide a project location map showing surrounding areas.	Included.
3. Provide a project site plan showing existing and proposed facilities.	Included.
4. Describe how this project fits into larger plans or connects with adjacent projects.	Included.
5. List and describe public facilities or benefits provided by the project.	Appendix A, Figure 2 Conservation Space Summary Table states that 49.02 acres of natural space and 28.20 acres of open space will be provided. The graphic does not distinguish between open space and natural space; only open space is labeled. Also, on the graphic it states open space as 76.17 acres. Please note too that a recreation fee per lot is required whenever a parcel of land is subdivided into lots of ten acres or less in size.
6. Discuss the land acreage to be disturbed during each phase.	Included.
7. List square footage and height (in stories) of new buildings.	Included.
8. Describe proposed uses of all buildings and proposed facilities.	Included.
9. Show number of parking spaces in parking lots and decks.	Included.
10. Show areas to be cleared, graded, filled, paved and landscaped.	Information provided is adequate; however, the EIA is not clear if riparian buffers will need to be cleared to allow for permanent easements needed for future maintenance over the force mains that cross jurisdictional streams. Riparian Buffer impacts may require a permit.
11. Show connections to existing utility and sewer lines or new utilities.	Included.
12. Show wastewater management systems on a map.	Appendix A, Figure 3. Inconsistent labeling of "off site septic." Comment noted regarding the location of system components. The locations of pump stations, septic tanks, distribution boxes, etc will be required for future milestone reviews.
13. Show proposed areas of impervious and semi-pervious surfaces.	App A, Figure 2 states that proposed impervious cover will be 6.62 acres (11.1%). Page 2 of the revised EIA states that impervious surface cover is 23.6 acres (15.5%).

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14. Show and describe any proposed stormwater control devices.	Included.
<b>Alternatives Analysis</b>	
1. Discuss and compare all reasonable development alternatives (site selection, facility layout, utilities, stormwater management, construction methods, open space preservation, any other pertinent alternative considerations).	Included.
2. Discuss how the preferred alternative was selected and its benefits relative to other alternatives (including a no-build alternative, if applicable).	Included.
<b>Existing Environment and Project Impacts</b> For each resource topic below, describe:	
A. Existing resources and conditions.	Included.
B. Anticipated impacts (short-term construction impacts, long-term operation impacts, and indirect or secondary impacts.)	Information provided is adequate; however, EIA is not clear if riparian buffers will need to be cleared to allow for permanent easements needed for future maintenance over the force mains that cross jurisdictional streams. Riparian Buffer impacts may require a permit.
C. Discuss how potential impacts to the resource will be avoided and minimized through alternative selection, design strategies, construction methods, and long-term maintenance procedures.	Included.
D. For unavoidable impacts, describe whether any compensatory mitigation is planned or required.	Included.
<b>1. Geography</b>	
<ul style="list-style-type: none"> <li>Discuss the geographic setting, geology, and topography of the project area and adjacent areas.</li> </ul>	Included.
<ul style="list-style-type: none"> <li>Provide a topographic map of the property and surrounding area, use the county GIS website topography (2' contours interval) data at a scale appropriate for the project size, i.e., 1" = 100', etc.).</li> </ul>	Included.
<ul style="list-style-type: none"> <li>Identify any 100-year floodplains (FEMA Special Flood Hazard Areas) on or adjacent to the property. If present, provide an appropriate-scale map of the flood-prone areas defined by the NC Flood Mapping Program.</li> </ul>	Included.
<ul style="list-style-type: none"> <li>Show areas that will be graded or filled</li> </ul>	Included.

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and provide estimated cut/fill volumes.	
<ul style="list-style-type: none"> <li>If the project includes pond or dam work, show areas that will be flooded.</li> </ul>	N/A
<b>2. Soils and Prime Farmlands</b>	
<ul style="list-style-type: none"> <li>Identify dominant soils in the project area (county GIS or NRCS website) and show on a map.</li> </ul>	Included.
<ul style="list-style-type: none"> <li>Discuss any soil constraints (fill, wetland soils, septic suitability, slopes, etc.) and indicate those areas on a map.</li> </ul>	Included.
<ul style="list-style-type: none"> <li>Describe any soil disturbance or contamination expected as a result of this project.</li> </ul>	Included.
<ul style="list-style-type: none"> <li>If contamination is expected, discuss containment plans and procedures.</li> </ul>	N/A
<ul style="list-style-type: none"> <li>If soil will be relocated, specify the number of square yards/feet to be moved, and its relocation site.</li> </ul>	Included.
<ul style="list-style-type: none"> <li>Describe runoff management plans for the project.</li> </ul>	Included.
<ul style="list-style-type: none"> <li>If soil disturbance is proposed, describe the off-site impacts expected from this activity.</li> </ul>	Included.
<ul style="list-style-type: none"> <li>Provide a map of any prime or unique farmland soils in the project or service areas, and include reference used to make this determination.</li> </ul>	Included.
<ul style="list-style-type: none"> <li>Describe impacts to prime or unique farmland soils, including acreage estimates of lost farmland soils and retained farmland soils.</li> </ul>	Included.
<b>3. Land Use</b>	
<ul style="list-style-type: none"> <li>Provide a map showing current use of land on the site and surrounding properties.</li> </ul>	Included.
<ul style="list-style-type: none"> <li>Discuss how the current land use fits into the surrounding area (conservation, development, ecological function, etc.)</li> </ul>	Included.
<ul style="list-style-type: none"> <li>Provide the current zoning of the project site and the surrounding area.</li> </ul>	Included
<ul style="list-style-type: none"> <li>Discuss how the proposed uses fit into the intended land use of the area (conservation, development, ecological function, quality of life).</li> </ul>	Appendix A, Figure 2 Conservation Space Summary Table states that 49.02 acres of natural space and 28.20 acres of open space will be provided. The graphic does not distinguish between open space and natural space; only open space is labeled. Also, the graphic states open space is 76.17 acres.

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<ul style="list-style-type: none"> <li>Indicate whether zoning or local land use plans will need to be changed after project completion.</li> </ul>	Included.
<b>4. Wetlands</b>	
<ul style="list-style-type: none"> <li>Indicate whether wetlands are present, describe the basis for this determination and identity of the person who made the determination.</li> </ul>	Included.
<ul style="list-style-type: none"> <li>Show identified wetlands on a map, and describe all relevant details, such as acreage, types, delineation, function, etc.)</li> </ul>	Included.
<ul style="list-style-type: none"> <li>If wetlands are to be filled, specify the number of acres that will be affected.</li> </ul>	Included.
<ul style="list-style-type: none"> <li>List all required permits and permitting agencies.</li> </ul>	Included.
<ul style="list-style-type: none"> <li>If any diversions/additions/withdrawals of surface water will affect wetlands, describe those activities.</li> </ul>	N/A
<b>5. Public lands and Scenic, Recreational, and State Natural Areas</b>	
<ul style="list-style-type: none"> <li>Provide a map of County or municipal parks, scenic, recreational or state natural areas (SNHAs, State or Federal Forests, etc.) on or adjacent to the site/project area.</li> </ul>	Included.
<b>6. Areas of Archaeological or Historical Value</b>	
<ul style="list-style-type: none"> <li>Discuss any archaeological or historical studies of the project location; provide relevant references.</li> </ul>	<p>Response noted. Please note that if a cemetery is identified during construction and road or lot locations need to be revised, a new review and approval will be needed. Per the Chatham County Subdivision Regulations (amended June 18, 2018) "If staff requires review of the Construction Plan by the Board of Commissioners due to significant changes, the Planning Board and Board of Commissions will review the plan." This may result in a potential delay of up to 3 months. In addition, cemeteries are protected by state law. G.S. 70-29 through G.S. 70-33 details the procedure for notifying proper authorities upon the discovery of unmarked remains.</p> <p>Although not required, it is highly recommended that an investigation is conducted as requested by the SHPO. Confirmation of the presence or absence of the suspected cemetery could potentially save time and money and avoid project</p>

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	delays.
<ul style="list-style-type: none"> <li>Describe and identify on a map any structures (i.e., walls, buildings, etc.) on the site and provide estimated ages of those structures.</li> </ul>	Included.
<ul style="list-style-type: none"> <li>Describe all impacts to any archaeological or historical resources in the proposed project area.</li> </ul>	Impacts to cultural resources cannot be ascertained with certainty at this time.
<ul style="list-style-type: none"> <li>Describe plans for demolishing or rebuilding any structures.</li> </ul>	N/A
<ul style="list-style-type: none"> <li>Provide photographs of any significant resources, including all structures older than 50-years.</li> </ul>	N/A
<ul style="list-style-type: none"> <li>Provide relevant correspondence with the Chatham County Historical Association and NC SHPO.</li> </ul>	CCHA and SHPO have requested a survey for a potential cemetery located on the parcel proposed for development. At the time of the second EIA review, the requested survey was not completed.
<b>7. Air Quality</b>	
<ul style="list-style-type: none"> <li>Describe the project's impacts on ambient air quality.</li> </ul>	Response noted.
<ul style="list-style-type: none"> <li>Describe plans for any open burning during or after construction.</li> </ul>	Included.
<ul style="list-style-type: none"> <li>Indicate the number of proposed parking spaces, if applicable.</li> </ul>	Included.
<ul style="list-style-type: none"> <li>Describe whether the project will increase odor levels, or the likelihood of odor complaints.</li> </ul>	Included.
<ul style="list-style-type: none"> <li>Provide a copy of any required traffic studies.</li> </ul>	Response noted. Traffic Impact Analysis was not provided.
<b>8. Noise Levels</b>	
<ul style="list-style-type: none"> <li>Discuss current noise levels; use a benchmark if possible.</li> </ul>	Included.
<ul style="list-style-type: none"> <li>Describe any increases in noise levels expected from this project.</li> </ul>	Included.
<ul style="list-style-type: none"> <li>Specify the distance at which the increased noise will be heard.</li> </ul>	Included.
<ul style="list-style-type: none"> <li>Discuss whether surrounding properties will be affected by noise levels.</li> </ul>	Included.
<ul style="list-style-type: none"> <li>If commercial uses are proposed, specify the hours of operation.</li> </ul>	N/A
<b>9. Light Levels</b>	
<ul style="list-style-type: none"> <li>Describe lighting plans for the project, including how lighting will impact adjacent residents and wildlife.</li> </ul>	Response noted.

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10. Surface and Groundwater Resources (discuss separately)	
<ul style="list-style-type: none"> <li>Identify and provide a map of surface waters in the project area. Describe groundwater (aquifers) in the project area.</li> </ul>	Included.
<ul style="list-style-type: none"> <li>Include names, locations, classifications, and use support ratings for surface waters.</li> </ul>	Included.
<ul style="list-style-type: none"> <li>Specify and show on a map the river basin in which the project is located.</li> </ul>	Included.
<ul style="list-style-type: none"> <li>Discuss any known groundwater quality issues.</li> </ul>	Included.
<ul style="list-style-type: none"> <li>Discuss drinking water sources.</li> </ul>	Included.
11. Fish and Aquatic Habitats	
<ul style="list-style-type: none"> <li>Describe fish and aquatic habitats in and adjacent to the site/project area.</li> </ul>	Included.
<ul style="list-style-type: none"> <li>Discuss impacts to fish and aquatic life and their habitats, including a map showing those habitats.</li> </ul>	Included.
12. Wildlife and Natural Vegetation	
<ul style="list-style-type: none"> <li>Describe and provide a map of natural community types on and adjacent to the site/project area.</li> </ul>	Included.
<ul style="list-style-type: none"> <li>List the species of dominant plants and animals observed on the site that typify those communities.</li> </ul>	Included.
<ul style="list-style-type: none"> <li>Evaluate and discuss whether suitable habitat exists for rare, threatened, and /or endangered species, as described by the NC Natural Heritage Program.</li> </ul>	Included.
<ul style="list-style-type: none"> <li>If wildlife will be displaced, discuss any limitation of adjacent areas to support them.</li> </ul>	Response stated, "Preliminarily, this project proposes approximately 30.2 acres of land disturbance, including approximately 0.16 acres of riparian buffer." However, the acreage provided only includes the area to be graded. As shown on recent aerial photography, the site is mostly forested. The revised EIA states, "Drainfield areas will remain clear of vegetation with grass cover only." Removal of forested vegetation for this or any other development purpose is considered a wildlife impact due to displacement from habitat loss. This acreage should be calculated for the area of tree removal regardless of the need for grading.
<ul style="list-style-type: none"> <li>Identify, list, and describe the distribution of the invasive species present on the site. Consult the NC Botanical Garden's Web</li> </ul>	Included.



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page, "Plants to Avoid in the Southeast US" for a list of invasive species common to the region.	
<ul style="list-style-type: none"> <li>If forest will be cleared, discuss the extent of planned deforestation and specify the forestry methods to be used, including BMPs.</li> </ul>	Based on the comment above, the amount of forest clearing will need to be recalculated. Proposed methods employed to protect the riparian buffer during clearing will be required.
<b>13. Hazardous Materials</b>	
<ul style="list-style-type: none"> <li>List all hazardous materials to be stored or introduced during construction or operation.</li> </ul>	Included.
<ul style="list-style-type: none"> <li>For each hazardous material, other than deminimis quantities or for routine housekeeping purposes, describe the procedures to be used to ensure their proper management, storage, and disposal.</li> </ul>	N/A
References	Included.
Exhibits (Maps, Figures, Tables, Photos, etc.)	Included.
State and Federal Permits Required	Included.