



PSPR – ROLESVILLE, WENDELL, ZEBULON Pre-Submittal Plan Review Checklist

Project Name	Merritt Reserve			Planning Number	PSP-24-07	Jurisdiction	Rolesville
Applicant	Brad Haertling bHaertling@american-ea.com			Watershed	Lower Neuse	New or Expansion (N/E)?	N
Project Acreage	152.278	Existing Impervious SF	1,743 sf	Proposed Impervious SF	2,381,426 sf	Disturbed Acreage	UNKNOWN
Residential – 223 Single Family Units				Nonresidential – 275 Attached Units			
Review Status:	<input checked="" type="checkbox"/>	Pre-Submittal Plan Comments All checked items must be addressed upon submittal of construction plans.					
3/4/2025							
References for Erosion and Sediment Control: Wake County Unified Development Ordinance (UDO) Article 10 References for Stormwater Management are as follows: ROLESVILLE: Town of Rolesville Unified Development Ordinance (UDO) Section 7.5: Stormwater Management Standards WENDELL: Town of Wendell Unified Development Ordinance (UDO) Chapter 6: Environmental Protection, adopted 7/26/10. ZEBULON: Town of Zebulon, NC Code of Ordinances: Chapter 151 and Chapter 152.249.							
Submittal Package Requirements							
Items marked with an "X" were noted as either insufficient or not provided. Engineer comments are in RED and provide the necessary requirements for either pre-construction or construction plan approval.							
<input checked="" type="checkbox"/>	1.	Cover letter stating the purpose of the submission.					
<input checked="" type="checkbox"/>	2.	One copy of the Municipal Stormwater Tool (Site Data Sheet, Drainage Area Sheets, Site Summary Sheet, BMP Sheets, and BMP Summary sheet). The design tool may be downloaded here .					
<input checked="" type="checkbox"/>	3.	Drainage Area Maps with stormwater discharge points (existing/post construction/post BMP).					
<input checked="" type="checkbox"/>	4.	Copy of the USGS Quad Map with delineated project limits.					
<input checked="" type="checkbox"/>	5.	Copy of the Wake County Soil Survey map with delineated project limits from the 1970 manuscript in color.					
<input checked="" type="checkbox"/>	6.	Proposed Site Plan:					
	<input checked="" type="checkbox"/>	a.	North arrow, graphic scale, signed/dated engineer's seal, drafting version date, and legend. Please include signed/dated engineer's seal. Please add signed professional seal.				
	<input checked="" type="checkbox"/>	b.	Show all Neuse Riparian Buffers: [15A NCAC 02B .0714]. Please add riparian buffer labels to all plan sheets.				



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<input checked="" type="checkbox"/>	c.	Delineation of all existing and proposed impervious surfaces: roads, well lots, recreation sites, single family residences, etc. (consistent with Municipal SW Tool inputs). Please break out impervious for roads, lots, etc. in site data table.
<input type="checkbox"/>	d.	Delineation of current FEMA boundaries (floodway, flood fringe & future/0.2%).
<input checked="" type="checkbox"/>	e.	Proposed drainage easements and widths (<i>in Feet</i>). Please check all locations of easements and proposed swale contours (i.e..Between Lot 38 and 39).
<input checked="" type="checkbox"/>	f.	Location and type of all proposed stormwater management structures (<i>grass swale, wet/dry detention basin, filtering/infiltration basin, bioretention, etc.</i>). Please label type of SCMs on site plan drawing sheets.
<input checked="" type="checkbox"/>	g.	Proposed easement access lanes and sediment disposal areas for future maintenance of stormwater management facilities. Provide and label minimum 20 ft. Access easement and 10 ft. Maintenance easement from toe of stormwater pond embankment. Please add and label 10 ft maintenance easement around each SCM on all plan sheets. Please revise proposed label to “20’ Stormwater access & maintenance easement”
<input checked="" type="checkbox"/>	h.	A note should be added to the recorded plat distinguishing areas of disconnected impervious (refer to town websites and ordinances for final plat requirements).

Standards and Requirements Items marked with an “X” note relevant standards to be applied to the proposed development. Notes in **RED** provide review comments and/or any required elements to comply with standard. References are shown in brackets for the municipalities.

ROLESVILLE: Town of Rolesville Unified Development Ordinance (UDO) [Section 7.5: Stormwater Management Standards](#)
WENDELL: Town of Wendell Unified Development Ordinance (UDO) [Chapter 6: Environmental Protection, adopted 7/26/10.](#)
ZEBULON: Town of Zebulon, NC Code of Ordinances: [Chapter 151 and Chapter 152.249.](#)

Stormwater Management Requirements

<input checked="" type="checkbox"/>	7.	Stormwater Review Required - All residential subdivision development must submit a plan to comply with the applicable municipalities’ stormwater ordinance. Office, institutional, commercial or industrial development that <u>disturbs</u> greater than 20,000 square feet is required to comply with the stormwater management regulations. Development and redevelopment that disturb less than 20,000 square feet are not exempt if such activities are part of a larger common plan of development or sale, even though multiple, separate or distinct activities take place at different times on different schedules. Rolesville [7.5.1(E)], Wendell [Chapter 6.5(F)], Zebulon [Chapter 151.05]
<input checked="" type="checkbox"/>	8.	Stormwater Permit – is required for all development and redevelopment unless exempt pursuant to the Code of Ordinances. A permit may only be issued subsequent to a properly submitted, reviewed and approved stormwater management plan and permit application. Rolesville 7.5.1(E)(3)], Wendell [Chapter 6.5(F)(3)], Zebulon [Chapter 151.21(A)] Note: A permit may not be required if there are no post-construction requirements (i.e., SCMs).




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<input checked="" type="checkbox"/>	9.	<p>SCMs - For projects requiring stormwater treatment for quality and/or quantity control, the applicant must:</p> <ol style="list-style-type: none"> 1) comply with the NC Stormwater Design Manual Rolesville [7.5.1(G)], Wendell [6.5(H)], Zebulon [151.07] 2) as well as <i>Completion of Improvements and Maintenance</i>, prior to issuance of a certificate of compliance or occupancy. Rolesville [7.5.5], Wendell [Chapter 6.5(O)], Zebulon [Chapter 151.50 – 151.56]
<input checked="" type="checkbox"/>	10.	<p>Standards Based on Project Density- In accordance with the definitions, projects are identified as Ultra Low-Density (15% or less Built-Upon Area, referred to as BUA, and less than one dwelling unit per acre), Low-Density (more than 15% BUA and no more than 24% BUA), and High-Density (24% or more BUA). Rolesville [7.5.4], Wendell [Chapter 6.5(M)], Zebulon [Chapter 151.35]</p>
<input type="checkbox"/>	a.	<p>Standards for Ultra-Low and Low-Density Projects:</p> <ul style="list-style-type: none"> • Use of vegetated conveyances to maximum extent practicable • Location of development and redevelopment outside Riparian Buffer and Flood Protection Zones • Recorded deed restrictions or protective covenants to ensure future development maintains consistency with approved project plans. • Permanent SCMs (Stormwater Control Measures) are to be designed in accordance with and as specified in the North Carolina Department of Environmental Quality’s Design Manual. • For Low-Density only, no net increase in peak flow leaving the site from the pre- development conditions for the 1 yr-24hr storm. Runoff volume drawdown time shall be a minimum of 48 hours, but not more than 120 hours. • Residential runoff after development must not exceed the Target Curve Numbers listed in the chart “Maximum Composite Curve Number, by Soil Group”. • Ultra-Low and Low-Density projects may be eligible for target curve number credits. <p>Wendell Only: Nitrogen export limited to 3.6 pounds per acre per year unless project achieves classification as an LID Project. Rolesville [7.5.4(A) (1-3)], Wendell [6.5(M)(1-3)], Zebulon [151.35(A-C)]</p>
<input checked="" type="checkbox"/>	b.	<p>Standards for High-Density Projects:</p> <ul style="list-style-type: none"> • Measures shall control and treat runoff from the first inch of rain. Runoff volume drawdown time shall be a minimum of 48 hours, but not more than 120 hours. • Structural measures shall be designed to have a minimum of 85 % average annual removal for Total Suspended Solids (TSS) • Permanent SCMs (Stormwater Control Measures) are to be designed in accordance with and as specified in the North Carolina Department of Environmental Quality’s Design Manual. • No net increase in peak flow leaving the site from the pre -development conditions for the 1 yr-24hr storm. Runoff volume drawdown time shall be a minimum of 48 hours, but not more than 120 hours. • Location of development and redevelopment outside Riparian Buffer and Flood Protection Zones <p>Wendell Only: Nitrogen export limited to 3.6 pounds per acre per year unless project achieves classification as an LID Project. Rolesville [7.5.4(A)(4)], Wendell [6.5(M)(4)], Zebulon [151.35(D)]</p>



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<input checked="" type="checkbox"/>	c.	<p>General Standards:</p> <ul style="list-style-type: none"> Downstream Impact Analysis – DIA must be performed in accordance with the “10% rule”, and a copy provided with the application. <p>Rolesville [7.5.4(B)(1)], Wendell [6.5(N)(1)], Zebulon [151.36(A)] DIA is required at the construction drawing stage.</p>
<input type="checkbox"/>	a.	<p>If a flow easement from downstream property owner(s) is proposed, the developer’s attorney will need to draft an easement agreement and submit to the county for review and approval. The approved agreement should be signed and notarized by the developer and the property owner(s) and recorded with the Wake County Register of Deeds office.</p>
<input type="checkbox"/>	d.	<p>Low Impact Development (LID) Classification:</p> <ul style="list-style-type: none"> All development or redevelopment may be submitted for LID classification. Development must mimic the pre-developed hydrologic conditions of the site, as defined as “woods in good condition” for the 2-yr, 24 hr. storm, within 10%. Techniques required to achieve LID classification. <ul style="list-style-type: none"> Natural site design Bio-retention systems or on-site infiltration (at least one must be used) At least two other techniques from the list provided in Rolesville [7.5.4(B)(5)(e) and Zebulon [151.36(E)(5) At least one other techniques from the list provided in Wendell [6.5(N)(5)(e)
Erosion and Sedimentation Control Requirements		
<input checked="" type="checkbox"/>	11.	<p>Erosion Control: This project will require a Land Disturbance Permit if it involves <u>greater than one acre of disturbance</u>. Adopting by reference the Wake County Soil Erosion and Sedimentation Control Ordinance. Note: If the land disturbance is part of a common plan of development that is greater than one acre of disturbance, an Approved Erosion and Sediment Control Plan and Land Disturbance Permit are required for each individual tract or parcel disturbance within the common plan of development, regardless of land disturbance acreage in each tract/parcel.</p>
Riparian Buffer Rules		
<input checked="" type="checkbox"/>	12.	<p>Due to the location of this project, it should be noted that a rule to protect and maintain existing buffers along watercourses in the Neuse River Basin became effective on July 22, 1997. The Neuse River Riparian Area Protection and Maintenance Rule (15A NCAC 2B .0714) applies to all perennial and intermittent streams, lakes, ponds and estuaries in the Neuse River Basin with forest vegetation on the adjacent land or “riparian area”.</p>
Suggested Changes/Comments		
<input checked="" type="checkbox"/>	13.	<p>All checked items in red font are required for preliminary plan approval. The items checked with a black ‘x’ are required for the erosion and sediment control and stormwater management submittal to Wake County. Please feel free to contact me if you have any questions regarding these items.</p>
<p>Environmental Engineer:  Elizabeth Powell, PE</p> <p style="text-align: right;">Contact Info: elizabeth.powell@wake.gov 984-275-9413</p>		