

From: [Rob Gordon](#)
To: ["jfentress@stroudengineer.com"](mailto:jfentress@stroudengineer.com)
Cc: [Brian Chambers](#); [Trent Butler](#)
Subject: Eng Review - Marshes at Rivers Edge
Date: Thursday, November 21, 2019 1:09:40 PM
Attachments: [image001.png](#)

Engineering has reviewed the plans for the Marshes at Rivers Edge and have the following comments. Please note, we reviewed the plans submitted to planning on 11/8 as well as the supporting documents submitted to Engineering on 10/31.

1. Regarding the parking, until the pervious materials receive a credit, the ponds will realize a net increase in impervious surface. Because the State issued the WQ permit for this site, they have to be the one to review and approve any credit. Because of the small net increase, I have no problem releasing the project for construction with a condition added to require modification of the state permit for the pervious materials.
2. Please provide a cross-section detail of the turf stone on the plans.
3. Your pond 4 diagram (attached to the narrative) was pretty clear, but on pond 5 – was this entire 1531 turfstone footprint previously permitted as asphalt and is being converted to pervious to offset the net increase (149+608+226)?
4. Are the pavement markings going to be altered outside of the overlay area? There needs to be minimal grinding of existing markings outside of overlay area.
5. Note Only for the file – the Walk Wilmington plan and Comp Greenway plan call for a future MUP along the River Road frontage of the Marshes. Because 2003 approval pre-dates these plans and shows sidewalk along the River Road frontage, we are assuming a vested right to sidewalk construction. Because there are no current plans, much less funded plans, for the MUP connection from Independence to the Riverlights MUP, the City would prefer construction of this required sidewalk from Independence to the Phase 3 entrance to provide a more immediate connection between Phase 3 portion of the project and the neighborhood amenities and park project within Echo Farms.
6. City staff is willing to accept a payment in lieu for the portion of the sidewalk between the Ph 3 entrance and the bridge. It will be the option of the project whether to construct or submit payment-in-lieu (PIL). Please make sure the plans are clear where sidewalk will be constructed and submit a PIL estimate for the remainder of the required sidewalk.
7. The biggest problem I see with the roadway is clear recovery between the travel lane and the sidewalk. The NCDOT roadway design manual specifies 18-20 ft of horizontal clear recovery area. This project appears to be providing 10 ft (6 ft of shoulder + 4 ft of bike lane). Horizontal clear recovery is especially important at this location because it is on the outside of the bend. Please improve horizontal clear recovery area or consider providing 6" of vertical separation (curb).
8. Please make sure the widening detail is consistent with City SD 3-12
9. The 2003 plans called for a 36" driveway pipe to be installed at the Phase 3 entrance. Please clarify:
 - a. Was this pipe installed?
 - b. If the road is superelevated the other way, is it necessary?
 - c. Will there be any roadside ditch on the Northeast side of the road?
 - d. Please coordinate any ditch with the proposed sidewalk.
10. Similarly, there is a driveway pipe proposed under the Independence entrance. Please clarify

the required roadside ditch improvements along Independence. It looks like a significant amount of the Independence runoff may be entering the pond. This will have to be directed to an outfall, but that will be complicated by a lot of utility conflicts near Independence/River.

11. Please add spot grades at both entrances (along EP, r/w, SW).
12. Note Only – maintenance will be required at each of these ponds prior to CO of any structure. This will be added as a construction release condition. You may want to add a note to the plans so the contractor is aware this will be a requirement.

Please submit a full set of plans to Engineering for additional review. Call or email if there are any questions. Thank you.

Robert Gordon, PE
Plan Review Engineer

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