

From: [Rob Gordon](#)
To: [Genna Porter](#)
Subject: FW: Eng TRC comments - Four Seasons Site
Date: Friday, June 27, 2014 4:37:38 PM
Attachments: [2012-05-15 DP2012012 4S Storage Facility.pdf](#),
[2012-05-15 Release Docs 4S Earthworks.pdf](#),
[2012-05-15 Release Plans 4S Earthworks.pdf](#),
[image003.png](#)

My TRC comments for this project (a day late). Please upload to protak & the X drive. Thanks.

Robert Gordon, PE
Project Engineer
City of Wilmington/Engineering
(910) 341-5856

From: Rob Gordon
Sent: Friday, June 27, 2014 4:37 PM
To: 'Isneeden@coastalstormwater.com'
Cc: Derek Pielech; Jim Diepenbrock
Subject: Eng TRC comments - Four Seasons Site

Engineering has reviewed the plans for the Four Seasons Site and have the following TRC comments:

1. The project is proposing in excess of 10,000 sf of newly constructed impervious area and a stormwater management plan will be required. Please submit a completed application, all required forms and supporting calculations as well as a \$1,000 review fee to Engineering for full Stormwater review. Required forms are located on our website at:
http://www.wilmingtonnc.gov/public_services/engineering/plan_review_permits/stormwater_permits
2. All stormwater control systems must be designed to treat the stormwater runoff from all surfaces generated by one and one-half (1 ½) inches of rainfall for water quality purposes. All structural stormwater treatment systems used to meet these requirements shall be designed to the standards outlined in the State BMP manual and shall provide eighty-five percent (85%) average annual removal for total suspended solids (TSS).
3. The stormwater management system shall attenuate the peak run-off produced by the two (2)-year, ten (10)-year, and twenty-five (25)-year frequency design storms to predeveloped conditions (woods in good condition).
4. All conveyances must be designed for the 10-yr event and analyzed for the 50-yr event. Please be sure to include an inlet drainage area map
5. Please include an inlet and BMP drainage area map that shows and specifies the amount of drainage to each inlet as well as the overall BMP.
6. Please be sure to include appropriate tailwater condition on the storm drainage analysis.
7. Please provide a copy of the soils report indicating the SHWT in the vicinity of the pond areas.
8. Please make sure the Stormwater Management Plan Approval stamp is on each sheet in the drawing set, preferably in the lower right corner of the page.
9. As discussed in TRC, this project currently holds an existing drainage plan (2012012). Please reference that # on the application. All permit docs and plans are attached. There were no calcs for this project.
10. Also, please decide how you would like to structure the stormwater permit (or permits) for the site (1 permit, master permit + offsite etc...). Please call to discuss options.
11. Please try to convey drainage with swales as much as possible. The gravel areas will generate a lot of stone dust and sediment (from the equipment) that will clog pipes. Also, swales encourage passive infiltration and better contain runoff on-site.
12. There are gravel options that are considered pervious – please call to discuss if interested. However,

excessive compaction, material storage or sediment loads from construction equipment may impact the long-term viability of a pervious stone surface. Therefore, we would suggest assuming all gravel surfaces to be impervious if the pond can be sized to accommodate this. This would be the best way to assure long term compliance of the site.

These comments will be uploaded to protrak. Please call or email if there are any questions. Thank you.

Robert Gordon, PE
Project Engineer

City of Wilmington, Engineering Division
212 Operations Center Drive
Wilmington, NC 28412
Office: (910) 341-5856 | Fax: (910) 341-5881
Email: rob.gordon@wilmingtonnc.gov
www.wilmingtonnc.gov



Follow us on Facebook or Twitter

[facebook/cityofwilmington](https://www.facebook.com/cityofwilmington)

[@cityofwilm](https://twitter.com/cityofwilm)