

**From:** Rob Gordon  
**To:** [otten@csitedesign.com](mailto:otten@csitedesign.com)  
**Cc:** "[Dawn Snotherly](#)"; [Derek Pielech](#)  
**Subject:** Eng Review - McDonalds 2543 Carolina Beach Rd  
**Date:** Tuesday, April 09, 2013 5:09:00 PM  
**Attachments:** [image002.png](#)

---

Engineering has reviewed the plans for the McDonalds reconstruction at the corner of Carolina Beach Rd & Shipyard and offer the comments below. It should be noted that Engineering received an a complete application on 3/8, but a new set of plans was submitted 4/8. The comments below are on the new plans , but all other documents submitted 3/8.

1. It does not appear that an operation & maintenance agreement was signed/submitted. Please complete the required form.
2. Please call out the square feet of the drainage area on the drainage area map in the calcs.
3. A pedestrian access easement will have to be recorded for all sidewalk constructed within the McDonalds property boundary. It is not clear if one is proposed on the site plan.
4. There appears to be a few issues with design of the stormfilter system:
  - a. It appears you may be using a flow rate approach to design, which is not listed as an option in the NC BMP manual. The mass loading approach is the only design approach listed.
  - b. The media loading rate should be 1 gpm/sf, not 2.
  - c. The Mean Annual rainfall for Wilmington NC is 57 in, not 45in.
  - d. There does not appear to be any pretreatment volume provided other than the vault itself, which does not satisfy the required pretreatment volume.

Please resubmit any revised forms, calcs & drawings for additional review. 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](mailto:rob.gordon@wilmingtonnc.gov)  
[www.wilmingtonnc.gov](http://www.wilmingtonnc.gov)



**Follow us on Facebook or Twitter**

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