

Engineering has reviewed the plans for the 17<sup>th</sup> Street Mixed-Use project submitted October 30, 2019 and have the following comments:

**Stormwater Management Permit Application Form:**

- 1) II. Permit Information; Line Item 3: Why is 404/401 Permit Checked? Note on plans state no wetlands exist on site. Please forward any permit documentation and/or Jurisdictional Determination (JD) on to the City.

**Supplement:**

- 2) Infiltration Basin #1 SHWT needs to be adjusted. The basin sits on a 34' contour with a SHWT depth of 102". Basin elevations will need to be adjusted once it is raised to meet 2' SHWT separation requirements.

**Stormwater Calculations:**

- 3) As a result of raising Infiltration Basin #1 adjust references to SHWT and Cross Section elevations such as weir heights, inverts...ect.
- 4) Raising Infiltration Basin #1 will require updated HGL Pipe Calculations based on a higher tailwater condition.
- 5) Add offsite bypass storm system to pipe table (aka runoff from the golf course).

**Plans:**

- 6) Tree Removal Plan C1.20: All attempts need to be made to save 32" Oak tree located within proposed Dog Park area.
- 7) Tree Removal Plan C1.20: Add tree protection fencing around trees, to be preserved, located in the Southeast property corner.
- 8) Grading C4.00: Provide bypass conveyance (grassed swale and/or piping) for offsite runoff, trapped behind proposed retaining wall, located along the Eastern property boundary. Delineate offsite drainage area, from golf course, and appropriately size piping system and/or swale.
- 9) Grading C4.00: Assure Manhole cover for JB-301 is set outside of wheel path. This comment can be handled by adding a note to the plans.
- 10) Fine Grading C4.10: A trench drain or curb inlets need to be provided at property line for Northern Driveway. This storm system can tie directly into JB-301. Currently there is too much runoff being directed to 17<sup>th</sup> Street over public sidewalk without capture.
- 11) Fine Grading C.4.10: SHWT for Infiltration #1 looks to be at elevation 25.5'. The bottom elevation for the basin will need to be raised to meet SHWT separation requirements. Fortunately, it looks as if proposed final grade elevations will allow for treatment system to fit without additional fill.
- 12) Storm Details: Add SHWT to each ADS Stormtech cross sections.
- 13) Storm Details: Will observation ports be provided on Stormtech isolator rows? These ports are highly recommended on the longer runs of isolator rows.
- 14) Storm Details: Assure pre-treatment sumps are added to all boxes tied to infiltration systems. I believe the ADS details shows a sump but please add an additional note on the Drainage/Grading for clarity.
- 15) Storm Details: Provide trash guard (within boxes) on all header pipes discharging to infiltration system.
- 16) All Detail Sheets: Update Engineering Approval Stamps to "Stormwater Management Plan Approval".

- 17) Drainage Area Maps: Delineate and show offsite drainage. Post 2C will have additional area from the Golf Course with runoff currently transported by existing ditch.
- 18) Please Note: Adjacent parcel "Wilmington Surgcare Expansion" is also currently under review with the City. Improvements are being made along the Western property line where Infiltration Basin #2 outfalls. Please coordinate your plans with the Surgcare project – current plans can be found on Protrak.

**Variances:**

- 19) Formal Variance request needed for 500/800 rule.
- 20) Formal Variance request needed for 75' driveway offset from property line along major thoroughfare.

Please submit revised plan sheets, calculations, supplement, variance requests, and any other requested documentation to Engineering for additional review. Please call or email if there are any questions.  
Thank you.