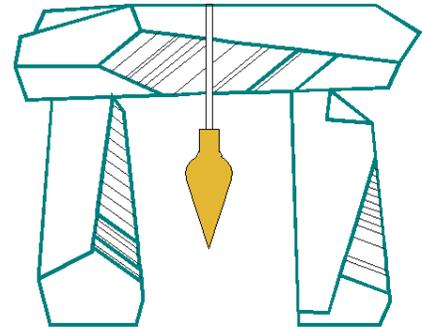


October 16, 2019

Ms. Melissa M. SantucciRozzi, Assistant Director
Department of Planning and Community Development
Town of Braintree
1 JFK Memorial Drive
Braintree, MA 02184

**Re: Peer Review – Stormwater Management System
Parkside Apartment and Parkside Condominiums
383-385 Washington Street and Storrs Avenue
Braintree, Massachusetts**

DeCelle-Burke-Sala



& Associates, Inc.

Dear Ms. SantucciRozzi:

DeCelle-Burke-Sala & Associates, Inc. (DBS) is in receipt of the peer review comments provided by Merrill Engineers and Land Surveyors dated September 23, 2019. Please find attached a revised set of site plans revised October 7, 2019 and a revised Engineering Report dated October 7, 2019. The Engineering Report includes a revised Erosion and Sedimentation Control Plan, a revised Stormwater Management and Operations Plans and revised stormwater management calculations generated by using HydroCAD. We also offer the following comments in response to the above referenced peer review letter. This response letter follows the nomenclature established in the Merrill letter.

Stormwater Regulations – Article VI:

Section 1 – Low Impact Design and Green Infrastructure:

- a. No Comment.
- b. There is no documentation in our application relative to Low Impact Design (LID) techniques. Our evaluation included surface treatment of stormwater such as rain gardens and drainage swales, however the area consumed by these features interrupted traffic flow and parking availability. Therefore, it was this office's decision to pursue a structural approach of Total Suspended Solids (TSS) removal and groundwater recharge to improve water quality and reduce stormwater peak runoff flows and volumes.
- c. The applicant is not considering using the rooftop stormwater runoff for irrigation at this time.

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1266 Furnace Brook Pkwy., #401 Quincy, MA 02169
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Section 2 – Hydrologic and Hydraulic Criteria:

- a. The hydrologic and hydraulic analysis of stormwater control has been revised to include the up-gradient areas. The municipal parking lot is not included in the analysis as this area is collected by an existing catch basin that is connected to the drain line that flows under the athletic field. The revised calculations are attached to this document.
- b. No Comment.
- c. The required attenuation for the 2, 10, 25 and 100-year storm events are met with the revised design.
- d. The two design analysis points are included in the analysis as requested.
- e. No Comment.
- f. The volume and peak flow at the two design points are included in the analysis.
- g. Upon observation the existing runoff actually does flow directly onto Storrs Avenue not the athletic field. There is an earth berm along this field that directs the flow onto Storrs Avenue. The analysis includes this observation. We have designed an overflow into the town system to remove overland flow from Storrs Avenue and into the town system.
- h. The analysis was revised to include the land cover as brush in good condition, rather than lawn.
- i. Up-gradient areas have been included in the design.
- j. The minimum time of concentrations have been reduced to be 6 minutes. The time of concentration paths and calculations have been added to the watershed plans and drainage report.
- k. Documentation is attached showing that the proposed treatment train meets the required 44%TSS removal for the inflow of the surface flow generated from the site. The design includes larger inline deep sump structures to remove the suspended solids and mother pollutants
- l. There is no outlet proposed that will cause erosion.
- m. This office proposes the use of deep sump catch basins and large diameter deep sump water quality structures with the use of a “Snout” as the hood on the outlets. The “Snout” provides improved removal of sediment, oils and trash as it is fitted and mortared to the sides of the structure to form a tight seal preventing silt laden runoff from leaving the structure. The two deep sumps placed in a train using the MADEP 25% reduction

allowance mathematically produces the 44% reduction necessary to meet the treatment requirement prior to release to an infiltration structure. We analyzed the 2-year flow into each water quality structure to size it appropriately. Calculations are attached for your review. This office has used this methodology in the past.

Section 3 – Segmentation:

- a. No Comment.

Section 4 – Sensitive Areas:

- a. No Comment.

Compliance with Stormwater Management Performance Standards:

1.
 - a. The existing watershed areas delineated for this project currently flow to Storrs Avenue and contributes to the flooding that was observed by this office on occasion and also reported by the neighborhood residents. It is this office's strong belief based on the analysis performed, that the proposed retention and subsequent detention of the stormwater generated by this project will allow the existing town's closed drainage system servicing the area to operate more efficiently because of the significant amount of surface runoff captured and controlled on-site. This can be visualized when comparing the existing and proposed condition volumes of stormwater for the 100-Year storm released from the site to Storrs Avenue. The existing volume released is 2.942 Acre-Feet and the proposed volume is 1.931 Acre-Feet, 1.011 Acre-Feet less.
2.
 - a. Post-development peak discharge rate requirements shall be met for the 2, 10, 25 and 100-Year storm event.
3.
 - a. This office performed additional soil testing for the recharge areas B and C on October 16, 2019. The results are included in the plan set.
 - b. Groundwater elevations were established by a licensed Massachusetts Soil Evaluator and this office stands by these results. Groundwater elevations have been confirmed by additional soil testing on October 16, 2019.

4.
 - a. Compliance with Standard of the Stormwater Management Standards is met using the deep sump structures. Calculations are attached for your review.
 - b. Water Quality calculations are attached to this document.
5. No Comment.
6. No Comment.
7. No Comment.
8.
 - a. A revised construction management plan and Erosion and Sedimentation Control Plan was provided by this office and is attached to this letter.
9.
 - a. A revised Stormwater Operation and Maintenance Plan that includes the Braintree Conservation Commission as the local regulatory contact was provided by this office and is attached to this letter.
10. An illicit discharge statement is included in the engineering report.

Additional Comments:

1. Revised HydroCAD calculations are attached to this letter.
2. Revised HydroCAD calculations using the 6 minute Time of Concentration are attached to this letter.
3. Up-gradient watershed areas have been analyzed and part of the revised HydroCAD calculations attached to this letter.
4. Two design points have been provided for the stormwater management analysis.
5. The use of Hydrologic Group "A" soils was determined after finding Sand and Loamy Sands were found on-site during the soil evaluation. The site is classified as Urban Land by the Natural Resources Conservation Service (NRCS).
6. The watershed areas have been revised and correlate with the watershed map.
7. Storage Group A is part of the stormwater management system which has since been revised. We look forward to your review of the new calculations.

8. The overflow outlet for the systems have been revised.
9. We have designed an overflow pipe that connects to the town system as suggested.
10. The revised HydroCAD model and inverts shown on the revised site plan correlate with one another.
11. The design has been adjusted to use the available Cultec 330 Chamber.
12. The plan set includes a section detail for the infiltration chambers and the proposed wall. The detail includes a barrier to prevent groundwater breakout as it relates to the wall.
13. The typical section on the Cultec detail has been revised to correlate with the site plan dimensions.
14. Mounding calculations for each recharge system is being prepared by this office and will be submitted upon completion.
15. A manifold detail is included in the plan set.
16. The roof collection system has been revised to provide the necessary pipe sizes to accommodate the generated flow. The pipe sizes, types and inverts have been added to the plans.
17. The catch basin rims shown on the utility plan correlate with the grading plan.
18. Pipe velocities are calculated and attached to this letter
19. The oil water separator detail is included in the plans.

It is our hope these revision provide the necessary explanation and detail necessary to move this project forward. We look forward to discussing this project at your next scheduled hearing.

Sincerely,

DeCelle-Burke-Sala & Associates Inc



James W. Burke, P.E.