

June 15, 2017

David Kaplan
Watershed Manager
City of Cambridge Water Department
250 Fresh Pond Parkway
Cambridge, MA 02138

RE: A&M Project #2275-01
104 Stony Brook, LLC
Stony Brook Weston
Revised Drainage Design and Details
**A&M Response to Kleinfelder Peer
Review Letter dated May 22, 2017**

Dear Mr. Kaplan:

Allen & Major Associates, Inc., on behalf of 104 Stony Brook, LLC respectfully submits a review response memo regarding the 104 Boston Post Road Multi-Family Development Project based on comments and concerns raised by the City of Cambridge Water Department peer review consultant Kleinfelder in an email and memo dated May 22, 2017.

To assist in the review of this document, A&M has provided a response in ***bold Italics*** following each of the outstanding comments.

Kleinfelder Comments:

1. An offline Jellyfish filter has been incorporated into the drainage design. However, the Jellyfish filter has not been detailed on the provided detail sheet (D-4). It should be added to the detail sheet for construction. In addition, hydraulic calculations demonstrating the function of the diversion manhole (OCS-1) have not been provided. Calculations showing that the Jellyfish filter will receive the calculated water quality flow and that all flow in excess would be diverted to the detention system, should be provided.

A&M Response: The Jellyfish filter details were previously provided as a manufacturers detail drawing, but have now been added to the revised Details, Sheet D-5, for construction.

The weir elevation within the Diversion Manhole (OCS-1), and confirmed by the manufacturer, Contech, has been set at 105.40. The peak elevation for the maximum design storm for this project is noted as elevation 103.98 at time 12.09 hours, for a 24-hour 100-year storm event. It is understood that this peak elevation is 1.42 feet below the crest of the weir. Therefore, 100% of the runoff directed to the Jellyfish filter will be treated for water quality, including phosphorous removal, up to the 100-year storm. Any storms larger than the 100-year design storm could by-pass the Jellyfish system, and would be conveyed directly to the infiltration system.

2. The Applicant has documented that within the rip-rap lined level spreader, velocities do not exceed the allowable velocities for a Fine Sandy Loam. However, the slope downgradient of the level spreader is significantly steeper than that of the rip rap lined level spreader, and discharge flows

may re-concentrate, creating an erosive condition downstream of the level spreader. It is understood that the Applicant would prefer not to cause disturbances within the 200-foot Riverfront Buffer, however the development of a modified berm or curb along the downgradient edge of the existing paved road is not believed to cause as significant of an impact as potential erosion could in the future. The addition of a berm would also be consistent with the design proposed in the stormwater management report as it will serve to convey runoff directly to the catch basin in Sibley Road.

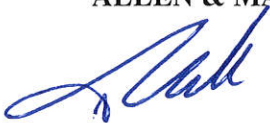
A&M Response: The entire drainage system including the outfall area have been significantly revised. The drainage system has been revised from a detention system to an infiltration system. Furthermore, the system footprint has been expanded to include an overblast area with stone and blasted ledge below the crushed stone bedding for significant stone storage. This will also reduce post-development peak volumes below pre-development peak volumes, and allow for infiltration into the underlying native materials. Stormwater infiltration for the project is proposed at an assumed rate of 0.045 in/hr, in order to meet the 72-hour drawdown calculations. Once the project is established at its proposed subgrade, soil testing can be accomplished, and if found to meet or exceed the proposed rate, the infiltration system will be constructed as designed. Should the infiltration rate not satisfy the design standards, an alternate design will be proposed.

The outfall area has been completely redesigned to incorporate a level spreader and velocity dissipating Gabion wall, with Gabion mattresses and rip-rap linings. As currently proposed, the runoff from the infiltration system will outlet to a control structure, designed with various outlets at differing elevations to meet pre/post peak flows for all design storms (2-, 10-, 25- and 100-year storm events.) The effluent is proposed to be conveyed to a 12" diameter perforated PVC pipe set within a Gabion wall, with Gabion mattresses below and in front of the outlet area. Runoff will trickle through the perforated pipe, through the Gabions, and fill up the rip-rap lined concrete level spreader. Once the runoff reaches the crest of the level spreader, it will overtop onto the rip-rap velocity dissipater apron below, and runoff through the wooded hillside, down to the Stony Brook and Stony Brook Reservoir. The outlet has been designed to reduce scouring and erosion to the maximum extent practicable for the application, and is a significant improvement over the existing conditions, which allow for unmitigated and untreated flow to the Stony Brook and Reservoir areas, with high potential for scouring and erosion.

If you have any questions or comments, please do not hesitate to contact me at (781)-935-6889. We look forward to further discussing the project with the City of Cambridge Water Department.

Very truly yours,

ALLEN & MAJOR ASSOCIATES, INC.



Timothy J. Williams P.E.
Principal

Cc via email: David Calhoun, Chris Berardi of 104 Stony Brook LLC
Weston Zoning Board of Appeals, c/o Mrs. Winifred I. Li

- Enclosures:
1. Drainage, Grading, Layout and Details Sheets, revised through June 15, 2017, per Kleinfelder peer review comments
 2. Supplementary Drainage Report materials revised through June 15, 2017
 3. Boring Test Results and Plan from New England Boring Contractors