BY IN HAND SERVICE
Attn: Noreen H. Stockman
Staff Assistant for the Zoning Board of Appeals and Housing Partnership
Town of Weston
P.O. Box 378
Weston, MA 02493

Re: City of Cambridge’s Supplemental Response to 104 Stony Brook LLC’s G.L. c. 40B Comprehensive Permit Application for its Proposed Project at 104 Boston Post Road

Dear Members of the Weston Zoning Board of Appeals:

Enclosed please find attached the City of Cambridge’s proposed conditions concerning the above referenced matter.

Thank you for your attention to this matter.

Very truly yours,

Sean M. McKendry

Enclosure

cc:
Julie Barry, Prince Lobel Tye LLP
City of Cambridge Proposed Conditions and Comments
104 Stony Brook LLC’s Chapter 40B Application to
Weston Zoning Board of Appeals, Weston, Massachusetts

Conditions and Comments Related to Proposed Stormwater Management System

1. 104 Stony Brook, LLC (“Applicant”) will amend the Operation and Maintenance Plan contained in the Revised Drainage Report, dated June 15, 2017, that was prepared by Allen & Major Associates, Inc. (“Allen & Major”) to include information regarding the operation and maintenance of the proposed mechanical snow melt system as specified in the letter that Tim Williams (“Williams”) of Allen & Major submitted to David Kaplan (“Kaplan”) of the Cambridge Water Department (“CWD”) on May 16, 2017. A copy of Williams’ May 16, 2017 letter is attached to these conditions and comments as Exhibit “A” and incorporated herein.

2. As CWD has discussed with Allen & Major, including in an email correspondence Williams sent to Kaplan on May 18, 2017, based on the City of Cambridge’s (“City”) experience with other projects in the vicinity of its watershed lands, the construction phase erosion and sediment control plan needs to be modified to address the steep grades of the site of the Applicant’s proposed project and proximity to the Stony Brook, the Stony Brook Reservoir and any nearby Zone A land. The Applicant’s erosion and sediment control plan should address construction runoff to a Class A Surface Water Source under 314 CMR 4.00 et seq., and the Applicant agrees to work with CWD and the Massachusetts Department of Environmental Protection (“MADEP”) (through the BRP WM 15 permitting process) during the development of construction phase documents to design a system that captures 100% of construction-phase runoff. Although the City understands that the details of said system will be developed as part of preparing the construction phase documents, at a minimum, the Applicant agrees that, prior to any major disturbance/tree removal, demolition and/or site preparation, or any other activities exposing sediments to mobilization, it will install a sediment pond designed to capture 100% of the construction phase runoff at the site in addition to other sediment control measures that may be proposed. Williams’ May 18, 2017 email is attached to these conditions and comments as Exhibit “B” and incorporated herein.

3. The Applicant, and any of its successors in interest, must perform inspections of the construction phase and post-construction stormwater management systems every three months after the start of construction and operation of said systems and provide a report to CWD detailing what effects, if any, the stormwater management systems have had on the Stony Brook, the Stony Brook Reservoir and any nearby Zone A land. Additionally, as to the construction phase stormwater system, the Applicant must provide CWD copies of each report that is submitted to the United States Environmental Protection Agency pursuant to the requirements for National Pollutant Discharge Elimination System General Permits for Discharges from Construction Activities. If any impacts are identified by either the Applicant, any of its successors in interest, or CWD, the Applicant, or any of its successors in interest, must promptly prepare a remedial plan for addressing the impacts. Any such plan must be submitted to and approved by CWD.

4. Pursuant to Allen & Major’s June 15, 2017 Revised Drainage Report, the Applicant has re-designed the proposed post-construction stormwater management system by making the entire system an infiltration-based system. Soil boring investigations performed onsite at the Applicant’s
property by New England Boring Contractors on June 5, 2017 indicate that granite bedrock is present at two feet below grade surface in all areas where the proposed infiltration system is to be sited. In light of this, CWD has the following comments regarding the revised design of the post-construction stormwater management system:

a. siting an infiltration system in bedrock is not common engineering practice and it is unclear whether this type of system will be effective; and

b. the Applicant is assuming an infiltration rate of 0.045 inches per hour, which was determined by back calculating from the system storage volume to comply with the requirement that the system drain out within 72 hours, rather than determining the actual infiltration rate for fractured bedrock at the site of the Applicant’s proposed project. The Applicant essentially assumed an infiltration rate that ensured a calculation demonstrating that the system would work, rather than basing that determination on the actual conditions at said site. The Applicant shall be required to demonstrate that the infiltration system will work properly based on actual conditions at the site of the proposed project; and

c. the Applicant will employ a geotechnical engineer to develop a geotechnical report for the project site in order to review and evaluate the feasibility of infiltration in blasted bedrock, as well as the potential for migration of groundwater into the post-construction stormwater management system via foundation underdrains (regardless of whether said system is infiltration based or detention based). Both of these aspects would contribute significantly to the design and sizing of the proposed post-construction stormwater management system.

Further, if investigation of the geology reveals that stormwater recharge, as proposed in Allen & Major’s June 15, 2017 Revised Drainage Report is not feasible, the Applicant will redesign the post-construction stormwater management system as a detention based system set to maintain peak runoff flows and volumes, and maximize water quality. The previously designed gabion wall and mattress segment with level spreader combination and configuration for scour mitigation at the outlet shall be employed as part of the stormwater management system design scenario that is chosen (regardless of whether said system is infiltration based or detention based), to prevent potential re-concentration of runoff downstream from the outlet. Any such redesign must address any concerns of CWD relating to erosion and runoff.

5. The Applicant shall confirm that the proposed stormwater management system is designed to accommodate peak runoff flows and volumes contributed from roof drains once architectural details of the proposed building are finalized.

6. The detail provided for permeable precast pavers on Sheet D-1 of Allen & Major’s March 28, 2017 Site Development Plans must be updated to comply with recommended layers and thickness of bedding courses for permeable pavement as indicated in Vol. 2, Ch. 2 of MADEP’s Massachusetts Stormwater Handbook. Furthermore, surface runoff allowed to infiltrate through the joints between the pavers is likely to contribute to either the proposed infiltration based stormwater management system, or the foundation underdrains (regardless of whether said system is infiltration based or detention based), as it migrates through the subgrade materials. This runoff
volume must be accounted for in the design of the chosen post-construction stormwater management system scenario.

7. As part of the geotechnical report recommended in condition #4, above, an evaluation into slope stability and proposed ledge face design parameters around the perimeter of the site must also be developed.

8. The Applicant will correct the following discrepancy contained in Allen & Major’s June 15, 2017 Revised Drainage Report: Sheet C-3B of the design drawings indicates the presence of an 8”x8”x8” PVC tee to the gabion wall mattresses at the discharge of the post-construction stormwater management system, however the “Standard Gabion Wall & Mattress Segment” detail on Sheet D-4 indicates a 12”x12”x12” PVC tee.

9. The “General Detention System Plan View” detail on Sheet D-4 of Allen & Major’s June 15, 2017 Revised Drainage Report must be updated to read “General Infiltration System Plan View.”

10. The Operations and Maintenance Plan schedule contained in Allen & Major’s June 15, 2017 Revised Drainage Report must be updated to reflect the use of a Jellyfish filter instead of a Stormceptor unit.

11. The Applicant must provide the ZBA with post development 1” water quality storm event HydroCAD results that confirm the flow indicated by Contech’s design of the proposed Jellyfish filter to be used with the post-construction stormwater management system.

12. The Applicant shall provide to the ZBA and CWD a signed “Illicit Discharge Compliance Statement” pursuant to standard no. 10 of MADEP’s Stormwater Management Standards.

13. The City is specifically reserving its right to challenge the determination by the ZBA, MADEP or the Applicant that the design of the construction and post-construction stormwater management systems satisfy the requirements of all applicable environmental laws.

**Conditions and Comments Related to Proposed Wastewater Management Treatment Plant**

1. The City and the Applicant have engaged in discussions regarding the City’s concerns with the design of the proposed wastewater treatment plant to be constructed at the site of the Applicant’s proposed project. The Applicant has represented to the City that the City’s concerns will be addressed in the final construction documents for the proposed wastewater treatment plant (the “WWTP Construction Documents”). The Applicant shall submit the WWTP Construction Documents to MADEP for review and approval prior to construction of the plant, and the Applicant agrees to simultaneously provide copies of the WWTP Construction Documents to the City for the City’s review. The Applicant agrees to address the reasonable comments and requested improvements of the City based on the requirements of applicable environmental laws. The City is specifically reserving its right to challenge the determination by the ZBA, MADEP or the Applicant that the final wastewater treatment plan design satisfies the requirements of all applicable environmental laws.

2. The Applicant, and any of its successors in interest, must perform an inspection of the wastewater treatment plant at a minimum of every six (6) months after the start of construction
and operation of the plant and provide a report to CWD detailing what effects, if any, the wastewater treatment plan has had on the Stony Brook, the Stony Brook Reservoir and any nearby Zone A land. The exact parameters of such inspections will be determined at a later date and will be approved by CWD, and may be further amended by the CWD if necessary. If any impacts are identified by either the Applicant, or any of its successors in interest, or the City, the Applicant, or its successors in interest, must promptly prepare a remedial plan for addressing the impacts. Any such plan must be submitted to and approved by CWD.

Other Concerns

1. The City owns watershed land that abuts the Applicant’s land to the west, southwest, south and southeast. The Applicant’s proposed project will include the construction of a building that will contain 150 residential units. In light of the scale of this project, the likelihood of trespassers accessing the City’s property and illegally using the Stony Brook and Stony Brook Reservoir will increase once the project is completed, as the use of the Applicant’s land will change from an office use to a residential use that will accommodate hundreds of people. In light of this increased risk, the Applicant, and any of its successors in interest, must take the following measures to prevent trespassers from accessing the City’s property, the Stony Brook and Stony Brook Reservoir:

a. install and maintain signage and fencing at locations acceptable to CWD prohibiting access to the City’s property as well as the Stony Brook and Stony Brook Reservoir;

b. offer to lease to the City space on the proposed residential building for $1.00 per year for the installation of a video camera directed at the City’s property to assist in monitoring its land as well as the Stony Brook and Stony Brook Reservoir; and

c. include provisions in any and all agreements for and pertaining to the rental or purchase of units in the proposed residential building to be constructed on the Applicant’s land prohibiting renters and unit owners from trespassing onto the City property, and that any trespass onto the City’s property may result in eviction in the case of rentals units.
Exhibit A
May 16, 2017

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

RE: A&M Project #2275-01
Stony Brook Weston 40B Development
104 Boston Post Road
Weston, MA 02493
A&M Response to Kleinfelder Peer Review Letter dated
May 9, 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 and their peer review consultant Kleinfelder in an email and memo dated May 9, 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. The Applicant has chosen to remove the infiltration portion of the sub-surface stormwater detention/infiltration system previously proposed due to the inability to investigate and determine the seasonal high groundwater level, infiltration rate, and hydraulic conductivity of the soils. The Applicant seeks to obtain this information once topography at the site makes it practical to perform the necessary investigation. This enabled the creation of a separate stormwater management design that could be employed if soils were found to be unsuitable for infiltration.

The removal of the subsurface infiltration system removed significant potential for phosphorus removal prior to discharge. It is suggested that the Applicant consider the following options for phosphorus removal in lieu of the subsurface infiltration system in the event that soils are found to be unsuitable for infiltration:

- Employ the use of proprietary filters at the CB locations in lieu of the Stormceptor 450i,
- Upgrade the Stormceptor 450i (STC 450i) to a proprietary membrane filtration system, such as a Jellyfish® filter, or
- Install a Stormwater filter at the end of the proposed STC 450i and subsurface detention system treatment train to capture phosphorus loading prior to discharge.
A&M Response: An off-line Jellyfish® Filter has been incorporated into the revised drainage design, and has been appropriately sized by an engineer at Contech Engineered Solutions, LLC. System Details have been provided as well. See the Drainage plan and Details sheets.

2. The Applicant is encouraged to propose and quantify potential recharge from non-structural best management practices (BMP’s) in lieu of a structural infiltration chamber. Standard 3 of the Stormwater Handbook should still be addressed to the maximum extent practical. It should be noted that exfiltrating bio-retention basins or rain gardens can be used to promote recharge when placed strategically at the surface as the site permits.

A&M Response: The current site design does not lend itself to Bio-retention as the available open space needs to be accessible by emergency vehicles.

3. The Applicant should consider construction of a modified berm, or granite curb along the downgradient edge of the existing paved drive to convey flows to the existing catch basin on Sibley Road and mitigate for any potential erosion or scouring beyond the edge of pavement that would arise from the likely re-concentration of peak runoff beyond the rip-rap dissipater.

A&M Response: To mitigate disturbance within the 200’ riverfront area, existing drainage patterns are proposed to be maintained, and no berm or curbing is proposed to be installed along the existing access drive to remain. The drainage outfall design proposed to incorporate a rip-rap lined level spreader at flared-end section 1 (FES-1) to dissipate effluent velocity and mitigate scouring and erosion.

Based on observations the soil type is assumed to be fine sandy loam. Attached please find Exhibit 8-23 Permissible Velocities for Channels with Erodible linings from the Massachusetts Highway Department Design Manual. The maximum permissible velocity for this soil type based on the attached table is \( V = 1.7 \text{ ft/s} \).

Based on the HydroCAD Calculations the proposed discharge peak velocity of the riprap apron into the existing channel is \( V = 0.81 \text{ ft/s} \).

\( 0.81 < 1.7 \)

Peak exit velocity for the 100-year storm event is within the permissible velocity for the underlying soil types.

City of Cambridge Water Department Comments:

1. Please provide supporting calculations demonstrating how the proposed stormwater management system will meet Charles River TMDL phosphorus removal prescription without recharge (see attached Kleinfelder memo)

A&M Response: Calculations prepared by the manufacturer’s engineer at Contech Engineered Solutions, LLC, have been included in the enclosed revised materials for the Contech Jellyfish Stormwater Treatment Filter.
2. O&M

- Please avoid using landscape maintenance products containing fertilizer/herbicide mixes as proposed. Fertilizers should be P-free and applied in accordance with 330 CMR 31.00

- Parsimonious use of a targeted pesticide/herbicide application as needed, in accordance with the label is acceptable best practice.

*A&M Response: The O&M Plan has been updated appropriately, and the revised materials have been included in the re-submission as enclosures. 330 CMR 31.00 has been added as a submittal material for the revised submission.*

3. O&M of a mechanical snow-melt system

*A&M Response: O&M for the mechanical snow-melt system has been provided in the resubmitted materials. If there are small areas not treated by the mechanical snow-melt device (walks, doorways, etc.), environmentally friendly MAG Ice Melting Pellets may be used in parsimonious amounts. MAG brochure and MSDS sheets have been included in the re-submitted materials.*

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.**

[Signature]

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 and Details Sheets, revised through May 16, 2017
2. Supplementary April 18, 2017 Drainage Report materials from report dated revised through May 16, 2017
Exhibit B
From: Tim Williams [mailto:twilliams@allenmajor.com]
Sent: Thursday, May 18, 2017 4:56 PM
To: Kaplan, David <dkaplan@cambridgema.gov>
Cc: david calhoun <dkbeachisland@comcast.net>; David Robinson <drobinson@allenmajor.com>; O'Connell, Jamie K.
<joconnell@cambridgema.gov>; MacDonald, Tim <tmacdonald@cambridgema.gov>; Corda, Sam
<scorda@cambridgema.gov>
Subject: RE: 104 Boston Post Road

David,
I think when we get to the Construction Document Phase we work together on the Erosion Control Plans and preparation of the SWPPP plans. As your aware we are in a ORW so the DEP is going to need to sign off on the SWPPP plan so beefing it up with CWD input is in everyone’s best interest.

Thanks Tim

From: Kaplan, David [mailto:dkaplan@cambridgema.gov]
Sent: Thursday, May 18, 2017 4:53 PM
To: Tim Williams <twilliams@allenmajor.com>
Cc: david calhoun <dkbeachisland@comcast.net>; David Robinson <drobinson@allenmajor.com>; O'Connell, Jamie K.
<joconnell@cambridgema.gov>; MacDonald, Tim <tmacdonald@cambridgema.gov>; Corda, Sam
<scorda@cambridgema.gov>
Subject: RE: 104 Boston Post Road

Tim,

I reviewed your materials and think that at first glance, you’ve sufficiently addressed our comments regarding the proposed stormwater management plan. I’ll discuss internally and issue something on letterhead.

One thing that didn’t make it on the comments that just popped into my head was an issue with the erosion control plan. As proposed, I’m not sure it’s robust enough. Based on our past experience with Bear Hill Road, the steep grades of the site, and proximity to the reservoir, I’d prefer the demo, site prep phasing begin with cutting into a sediment pond designed to capture 100% of the construction phase runoff. Preferably before major disturbance/tree removal, and activities exposing sediments to mobilization. Socks, fencing, and what you’ve proposed won’t be enough to mitigate turbidity impacts to a Class A waterbody.

Please let me know what you think may be an appropriate solution. I appreciate your prompt attention to and willingness to address our concerns.

Thank you,
-Dave

David Kaplan
From: Tim Williams [mailto:twilliams@allenmajor.com]
Sent: Thursday, May 18, 2017 10:30 AM
To: Kaplan, David <dkaplan@cambridgema.gov>
Cc: david calhoun <dkbeachisland@comcast.net>; David Robinson <drobinson@allenmajor.com>
Subject: RE: 104 Boston Post Road

David,
Wanted to follow up to see if you had a chance to review the information forwarded your office. Our hope is our response address the major concerns the CWD has regarding the proposed site development specifically the stormwater management system. Please let me know if you have any questions on the submitted material.
Thanks Tim

From: Tim Williams
Sent: Tuesday, May 16, 2017 4:48 PM
To: "Kaplan, David" <dkaplan@cambridgema.gov>
Cc: "david calhoun" <dkbeachisland@comcast.net>; David Robinson <drobinson@allenmajor.com>
Subject: RE: 104 Boston Post Road

David,
Attached is our response to the most current CWD peer review memo along with accompanying information. I will be overnighting you a hard copy for your records.
Let me know if you have any questions or comments as you review.
Thanks Tim

From: Tim Williams
Sent: Friday, May 05, 2017 4:28 PM
To: Kaplan, David <dkaplan@cambridgema.gov>
Cc: david calhoun <dkbeachisland@comcast.net>
Subject: 104 Boston Post Road

David,
Below is a link to the updated Drainage Report for the 104 Boston Post Road, Weston project which includes a new Drainage Plan and Grading & Spot Grade Plan for your records. As well we have attached a cover letter to the ZBA and a formal CWD review response memo.

Please let me know if you have any questions or comments as you review. We appreciate your cooperation on this project.

Thanks Tim

http://allenmajor.ftpstream.com/35264/5a64f29caf0d6ae95909404960b16b29/C-2275-01%2b-%2bFULL%2bWeston%2b40B%2bDrainage%2bReport%2b-%2bMay%2b5%2b2c%2b2017.pdf
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