



February 4, 2022

Ms. Valerie Oorthuys, Town Planner
Bolton Town Hall
663 Main Street
Bolton, MA 01740

Re: Initial Stormwater & Wetlands Technical Peer Review
Comprehensive Permit Application – ALTA Nashoba Valley
580 Main Street, Bolton MA

Dear Ms. Oorthuys:

The Horsley Witten Group (HW) is pleased to provide the Bolton Zoning Board of Appeals (ZBA) with this letter report summarizing our initial technical peer review of the multi-family residential development proposed at 580 Main Street in Bolton, MA (Assessor's Map 4C Lot 24). Allen & Major Associates, Inc. has prepared the Comprehensive Permit Plan set and Project Narrative & Drainage Report on behalf of Limited Dividend Affiliate of WP East Acquisition, LLC (Applicant). The proposed development, submitted in accordance with Massachusetts General Law Chapter 40B, Section 20-23, includes four (4) three-story residential buildings (229 units), a clubhouse, a mail center, and access road, 382 parking spaces and supporting infrastructure. The project includes private on-site wells for water supply, and a private on-site wastewater treatment system.

The subject property contains approximately 39 acres of land and is the current location of the Bolton Office Park, which will be modified under a separate application to allow for the proposed development. The subject property is proposed to be divided into two parcels: Lot 1 will be created for the modified Bolton Office Park, and Lot 2 (comprised of 32.4 acres) will be created for the proposed residential development. The existing access driveway into the site will be preserved and will provide access for the proposed development, the existing senior housing facility, and the existing office building. Located within the Limited Business (LB) Zoning District and adjacent to the Residential Zoning District, the 39-acre parcel contains several resource areas including Bordering Vegetated Wetlands (BVW), Isolated Vegetated Wetlands (IVW), Riverfront Area, and Bordering Land Subject to Flooding (BLSF). HW understands that the Applicant will be required to file a Notice of Intent (NOI) with the Bolton Conservation Commission for work proposed within these resource areas as well as the wetland buffer zones.

Documents Reviewed

As part of this peer review, HW has received the following documents:

- Project Narrative & Drainage Report to Accompany Comprehensive Permit Application, Multi-Family Development, 580 Main Street, Bolton, MA prepared by Allen & Major

Associates, Inc., dated September 10, 2021, including the following sections and appendices:

- Section 1.0 – Project Summary
 - Section 2.0 – Existing Conditions
 - Section 3.0 – Proposed Conditions
 - Section 4.0 – Stormwater Management
 - Section 5.0 – Waivers
 - Appendix A – Support Documents to Comprehensive Permit Application
 - Appendix B – Wetland Report
 - Appendix C – Water Supply & Wastewater
 - Appendix D – Traffic Impact Assessment
 - Appendix E – Architectural
 - Appendix F – Geotechnical Report
 - Appendix G – HydroCAD
 - Appendix H – Supporting Information
 - Appendix I – Operation & Maintenance Plan
 - Appendix J – Watershed Plans
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- Plan Set entitled “Preliminary Application for Comprehensive Permit, Alta Nashoba Valley, 580 Main Street, Bolton, MA” prepared by Allen & Major Associates, Inc., and Market Square Architects, dated September 10, 2021 (“Site Development Plans”), which includes:
 - Title Sheet
 - Existing Conditions V-101 – V-104
 - Notes & Abbreviations C-001 – C-002
 - Conceptual Property Line Modification C-003
 - Erosion Control Plan C-100
 - Overall Layout and Materials Plan C-101
 - Layout and Materials Plan C-102 – C-104
 - Overall Grading and Drainage Plan C-105
 - Grading & Drainage Plan C-106 – C-108
 - Overall Utilities Plan C-109
 - Utilities Plan C-110 – C-112
 - Details C-501 – C-507
 - Vehicle Movement Plan C-601
 - Landscape Plan (by Grady Consulting, LLC) 1
 - Arch Plans – Building 1 B1.A1.01 – B1.A2.00
 - Arch Plans – Building 2 B2.A1.01 – B2.A2.00
 - Arch Plans – Building 3 B3.A1.01 – B3.A2.00
 - Arch Plans – Building 4 B4.A1.01 – B4.A2.00
 - Arch Plans – Clubhouse CH.A1.01 – CH.A2.00
 - Arch Plans – Garages GA.A1.01 – GC.A2.01
 - Arch Plans – Mail and Parcel MP.A1.01 – MP.A2.01

In addition to the materials above, HW reviewed relevant source data from MassGIS to better understand site constraints and context.

Wetland Resources

The project narrative and supporting documentation provide a fairly comprehensive site description of the existing conditions, and indicates the following wetland resource areas associated with Great Brook to the east that are located on or adjacent to the site:

- Bordering Vegetated Wetlands (BVW);
- Isolated Vegetated Wetlands (IVWs);
- Bordering Land Subject to Flooding (BLSF); and
- Riverfront Area.

The Applicant has stated that it will seek confirmation of the wetland resource areas with the Bolton Conservation Commission through an Abbreviated Notice of Resource Area Delineation (ANRAD). HW notes a slight discrepancy between the written documents and the project plans with respect to the IVW areas located in the central portion of the Bolton Office Park, west and southwest of the existing buildings, the B-series and C-series wetlands.

The project narrative indicates that the B-series is a BVW “located between the existing building and parking area” and that the C-series is an IVW located “on the northwesterly side of the existing building” (p. 2-6). The wetland scientist’s report prepared by Goddard Consulting, LLC, (Appendix B) cites the presence of culverts within each of these two wetland areas, which would indicate the potential for both of these wetland areas to be BVW.

The Applicant purports that these wetland areas are non-jurisdictional, which appears to be an unsupported claim. The local bylaw includes all freshwater wetlands as defined in M.G.L. c. 131 s. 40, para. 7[8]. If these areas are determined to be BVW, then they would be regulated under the Massachusetts Wetlands Protection Act (M.G.L. Ch. 131 § 40). In addition, these areas may be protected under the Federal Clean Water Act (33 U.S.C. 1251, et seq.) and/or Section 27 of the Massachusetts Clean Waters Act (M.G.L. c. 21, §§ 26 through 53).

Further, using the Adobe measuring tool, HW estimates that these areas are approximately 3,200 SF (B-series) and 4,100 SF (C-series). The local bylaw also has jurisdiction over Lands Subject to Flooding or Inundation by Ground Water or Surface Water that are “1,000 square feet or greater in surface area and hold an average depth of six inches.”

1. HW recommends that the Applicant clarify the jurisdictional status of the two interior wetland areas.

Resource Area Alterations

The Applicant proposes to fill both of these wetland areas (B- and C-series), totaling approximately 7,300 SF, but does not indicate provisions for providing mitigation. The Applicant also proposes to fill BLSF and provide compensatory flood storage, although details are not provided. The project also proposes alterations within the 200-foot Riverfront Area. The Applicant indicates that there will be a future Notice of Intent (NOI) filing with the Conservation

Commission, at which time, the Applicant will be required to demonstrate compliance with the performance standards at 310 CMR 10.57(4)(a); 310 CMR 10.58(4) or 10.58(5) for a redevelopment project, and potentially, 310 CMR 10.55(4)(d) under the Massachusetts Wetlands Protection Act regulations.

2. HW recommends that the Applicant clarify the amount of wetland resource area fill and the jurisdictional status of the wetland resource areas.

Alterations are also proposed within the locally regulated 25-foot buffer zone in three locations:

- a) Grading associated with the installation of Subsurface Infiltration System #1 located south of Building 4;
- b) Grading associated with the installation of Subsurface Infiltration System #2 located east of Garage C; and
- c) Grading associated with the provision of 2,500 CY of compensatory flood storage.

The close proximity of the proposed grading to the wetland boundary, which in each of these areas is within just a few feet has the potential for additional unintended wetland alterations.

[Additional Permitting Considerations](#)

Alterations of freshwater wetlands above 5,000 SF requires additional review and permitting per the Water Quality Certification (WQC) regulations at 314 CMR 9.04:

(6) More than 5000 Sq. Ft. of Isolated Vegetated Wetlands. Any activity in an area not subject to jurisdiction of M.G.L. c. 131, § 40 but which is subject to 33 U.S.C. 1251 (i.e., isolated vegetated wetlands) and which will result in the loss of more than 5000 square feet cumulatively of bordering and isolated vegetated wetlands and land under water.

Additionally, alterations of greater than 5,000 SF cumulatively of bordering or isolated wetlands, or alteration of ½ or more acres of any other wetlands (e.g., BLSF or Riverfront Area) that require a Permit (as defined) would also require review under Massachusetts Environmental Policy Act, M.G.L. c. 30 §§ 61 through 62H, inclusive (MEPA).

3. HW recommends that the Applicant provide clarifications of the additional wetland permits and/or reviews required at a minimum, when filing the NOI with the Conservation Commission, so that the full extent of resource area alterations is understood by the Town, and we recommend that the Applicant provide copies of all wetland permits to the Town.

[Waiver Requests](#)

The Applicant has indicated that a waiver will be sought for provisions under the local Wetlands Bylaw and Regulations as part of the Comprehensive Permit Application. HW will reserve further comment specifically on whether the waiver requests are appropriate for the project or whether strict adherence to the additional provisions in the wetlands bylaw and regulations would be in the best interest of the Town towards protection of resource area interests.

4. However, at this time, given the extent of alterations within the 25-foot buffer and within just 2-3 feet of the BVW, and in the southernmost area, an outfall is proposed at the wetland boundary, HW recommends that the ZBA consider holding the local bylaw provisions for protection of local wetland areas (to be filled) as well as the 25-foot buffer.

Site Visit

Due to the current snow cover, HW has not yet had an opportunity to conduct a site visit. We will coordinate with the Town to determine an appropriate time to confirm the site conditions.

Stormwater Review

The proposed stormwater management design includes a closed drainage system consisting of deep sump hooded catch basins, drain manholes, and proprietary treatment units, and two (2) subsurface infiltration chamber systems. There are two existing stormwater wet basins on the property which also serve as fire ponds, and these will be preserved. The proposed disturbance is greater than one acre and a portion of the work is within the 100-foot buffer zone of a BVW, Riverfront Area associated with Great Brook, and Bordering Land Subject to Flooding. HW based our review on the Massachusetts Stormwater Handbook (MSH) dated February 2008 which includes ten stormwater performance standards that apply to the proposed project, the Massachusetts Wetlands Protection Act (310 CMR 10.00), and standard engineering practice.

According to the MSH, the project is considered to be a mix of redevelopment and new development due to the existing office building, parking lots and maintained landscape area currently occupying most of the project area. The Applicant has explained that the front portion of the project area is being considered redevelopment while the remainder of the project was designed as new development. HW agrees with the Applicant's designations, which are consistent with the intent of the MSH. The new development portion(s) must fully comply with the Stormwater Standards, while the redevelopment portion is only required to comply with certain standards to the maximum extent practicable. Further information on the redevelopment requirements can be found in the discussion of Standard 7 below.

After reviewing the documents listed above, HW offers the following comments, which are presented in accordance with the ten Massachusetts Stormwater Standards:

1. **Standard 1** states that no new stormwater conveyances may discharge untreated stormwater directly to or cause erosion in wetlands of the Commonwealth.
 - a) The project includes two new outfalls for each subsurface infiltration system, which will discharge treated stormwater at stabilized outlets protected by riprap energy dissipators as detailed on Sheet C-503. The outlets for Subsurface Infiltration System 1 discharge treated stormwater to the south, into the BVW at the rear of the site. The outlets for Subsurface Infiltration System 2 discharge treated stormwater to the east toward Great Brook and the adjacent BVW. HW notes that the riprap energy dissipators do not appear to be drawn to scale on the Grading & Drainage Plans and recommends that the Applicant revise them for consistency with the detail on Sheet C-503.
 - b) It does appear that both systems are discharging within feet of the edge of the adjacent BVWs. HW recommends that if feasible the Applicant pull back the outfalls to respect the

local 25-foot buffer zone. It is not clear why the Applicant has chosen to create a parking lot on the east side of the site within an existing grassed area so close to the wetland and in turn remove an existing parking lot that is further from the wetland.

- c) HW further recommends that the Applicant limit the area of disturbance on the south side of the project area to the edge of the existing parking lot.
 - d) The existing outfall location at the northern BVW at the front of the site will be maintained, which will receive runoff from the portion of the site being considered "redevelopment" as it relates to the MSH. The first 150 feet ± of the existing access drive will be preserved, including the drainage infrastructure which captures and conveys runoff to the northern BVW. Further discussion of the redevelopment aspects can be found under Standard 7.
2. **Standard 2** requires that the stormwater management systems be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates.
- a) The Applicant provided a hydrologic analysis for the 2-year, 10-year, 25-year, and 100-year storm events, under both Existing and Proposed Conditions. The precipitation rates utilized were obtained from the NOAA Atlas 14 database for the Bolton area, which is currently the local industry standard. HW reviewed all components of the hydrologic analysis, which include Existing & Proposed Watershed Plans, Existing & Proposed HydroCAD models, and a Narrative summary of the hydrologic analysis.

The proposed subsurface infiltration systems were sized appropriately, such that the peak discharge rates under Proposed Conditions do not exceed those under Existing Conditions for all storm events analyzed. Additionally, the Applicant has documented that total runoff volumes are decreased in the Proposed Condition for all storm events.
 - b) There is a minor discrepancy between the total watershed areas reported in the Existing and Proposed models. HW recommends that the Applicant revise the models as necessary to ensure the total areas match.
 - c) The Applicant has chosen to include two separate areas within Subcatchment E-3, both technically are tributary to Great Brook, however one side flows into a large wetland before reaching Great Brook. HW recommends that the Applicant separate these two areas of Subcatchment E-3 and revise the HydroCAD model accordingly.
 - d) The peak discharge rates and volumes are controlled by the use of two outlet control structures for each subsurface infiltration system, which are located within the pavement areas. These outlet control structures discharge treated stormwater to the stabilized outlets described under Standard 1. HW notes that the inside diameter of the outlet control structures is listed as 4 feet on the detail on Sheet C-506, but the plan view appears to depict a larger diameter to accommodate the inlet and outlet pipe connections. HW recommends that the Applicant verify the required diameter of the outlet structures (and any other oversized manholes) and update the plans and/or details accordingly. As noted previously HW recommends that the outfalls be pulled further away from the edge of the adjacent wetlands.

- e) Due to the large size of the subsurface infiltration systems, the Applicant included pipe manifolds on either end to facilitate even distribution of stormwater during large storm events. The manifold elevation is set approximately 12 inches above the primary inlet to the isolator row, which means that stormwater is forced to first enter the isolator row for treatment and will only enter the manifold pipe when the depth exceeds 12 inches. HW finds this to be an acceptable design but recommends that the Applicant adds text to the inlet manhole call-outs to clarify which pipe is meant to be higher.
 - f) The Applicant provided pipe sizing calculations for both the 25-year and 100-year storm events using the Rational Method, which document that all pipes within the closed drainage system are sized properly. No further action required.
3. **Standard 3** requires that the annual recharge from the post-development site approximate the annual recharge from pre-development conditions based on soil type.
- a) The Applicant provides calculations for the required recharge volume using both the Hydrologic Soil Group (HSG B=0.35") and the MA MS4 General Permit requirement of 1" rainfall over the total post-development impervious area. Based on the 1" rainfall depth over 377,668 square feet (SF) of impervious area, the required recharge volume is 31,472 cubic feet (CF). The Applicant utilized the Simple Dynamic Method for sizing the two subsurface infiltration systems to retain/infiltrate the required recharge volume. HW notes that there are minor discrepancies in the impervious area number used, between the Narrative, the Post-Development HydroCAD model and the Simple Dynamic Method HydroCAD model. These discrepancies should be rectified by the Applicant based on the final impervious area calculations.

HW further notes that the total recharge volume presented in the Simple Dynamic Method calculation is 30,755 CF, which is less than the required 31,472 CF. It is also noted that the Simple Dynamic Method HydroCAD model shows a minor amount of additional storage above the peak elevation and below the low outlets, which effectively adds storage volume to the numbers reported. HW recommends that the Applicant revisit this calculation or provide further explanation of its design methodology.
 - b) The Applicant included soil testing results in the application package, but the test locations are not depicted on the plans. HW notes that small symbols appear on the grading and drainage plans which appear to indicate the locations of TP-11,12 & 14, but the corresponding test pit logs were not found in the application package. In accordance with Volume 2, Chapter 2, page 97 of the MSH the Applicant is required to conduct a minimum of two test pits within each infiltration system. HW recommends that the Applicant revisit the soil testing information to ensure that all available test results are adequately documented on the plans and report(s).
 - c) In accordance with the previous comment, HW is unable to confirm the soil testing information used in the design of the subsurface infiltration systems. However, both systems are located within a "fill" area, which will likely provide adequate separation to the seasonal high groundwater table. Based on the narrative description, the infiltration rates used seem appropriate, but will need to be confirmed based on HW's review of the additional soil testing information to be submitted by the Applicant.
 - d) HW recommends that the Applicant modify the construction detail for the subsurface infiltration systems to clearly state which existing soil layers must be removed prior to installation.

4. **Standard 4** requires that the stormwater system be designed to remove 80% Total Suspended Solids (TSS) and to treat 1-inch of volume from the impervious area for water quality. The drainage system must also provide at least 44% TSS removal for pre-treatment of runoff from paved surfaces prior to entering any infiltration practices.

- a) The Applicant has provided the required water quality calculations to verify compliance with Standard 4 on pages 4-4 through 4-6 of the Project Narrative & Drainage Report. The stormwater treatment train included deep-sump hooded catch basins, proprietary water quality structures (Contech CDS, Cascade, and Stormceptors), and subsurface infiltration systems (Stormtech SC-740 chambers) equipped with isolator rows. HW finds the selected best management practices (BMPs) and associated calculations reasonable and appropriate for the project. No further action required.
- b) HW notes that the Applicant has proposed a Contech CDS unit within the parking lot of the adjacent office building property, which treats runoff from the adjacent proposed pavement areas. HW finds this to be a reasonable design approach, but notes that an easement would likely need to be secured for future maintenance of the structure.

The Applicant appears to comply with Standard 4.

5. **Standard 5** relates to projects with a Land Use of Higher Potential Pollutant Loads (LUHPPL).

- a) The Applicant explains that the proposed project is considered a LUHPPL because the parking area is “high intensity” (greater than 1,000 trips per day). As required, the Applicant documents that the stormwater management system was designed using the 1” Water Quality Volume and that proprietary water quality structures will provide greater than 44% pretreatment prior to conveyance to the subsurface infiltration systems. No further action required.

The Applicant appears to comply with standard 5.

6. **Standard 6** relates to projects with stormwater discharging into a critical area, a Zone II or an Interim Wellhead Protection Area of a public water supply. These discharges require the use of the specific source control and pollution prevention measures and the specific structure stormwater best management practices determined by the Department to be suitable for managing discharges to such areas, as provided in the MSH.

- a) Standard 6 applies because the project development is located adjacent to several Zone I's and within the Interim Wellhead Protection Area. The stormwater treatment train and infiltration practices described previously in this letter are suitable for use in these areas. No further action required.
- b) The Applicant states that the existing southerly wet basin/fire pond will be located within a Zone I to the proposed drinking water supply well. As a result, this pond is no longer considered as part of the stormwater management system but will continue to perform its function as a fire pond and receiving water body for the outlets from proposed subsurface infiltration system 1. Based upon the proposed stormwater design, HW finds this to be a reasonable assessment. No further action required.

7. **Standard 7** relates to projects considered redevelopment. A redevelopment project is required to meet the following Stormwater Management Standards only to the maximum extent practicable: Standard 2, Standard 3, and the pretreatment and structural best

management practice requirements of Standards 4, 5, and 6. Existing stormwater discharges shall comply with Standard 1 only to the maximum extent practicable. A redevelopment project shall also comply with all other requirements of the Stormwater Management Standards and improve existing conditions.

- a) The proposed development is considered a mix of redevelopment and new development. The main access road and existing driveway to the office building parking lot will generally be preserved, with proposed pavement resurfacing, sidewalks, and landscaping improvements. The redevelopment portion of the project also includes runoff from the proposed clubhouse roof and associated parking lot and amenity space. These flows will be treated by a proposed CDS unit prior to draining toward the front wet basin/fire pond. The overall impervious area draining to the front wet basin/fire pond will be reduced, which satisfies the requirement for the redevelopment classification.
 - b) HW notes that there are two existing catch basins at the existing driveway entrance off Main Street, with the westerly catch basin flowing through the easterly catch basin prior to discharging toward the existing BVW. The existing discharge pipe is a 12-inch reinforced concrete pipe which runs underneath proposed Leaching Field B. HW recommends that the Applicant review the drainpipe network in this area to confirm that it complies with Title 5, and also whether any drainage improvements could be made to provide additional treatment for this runoff from the high-intensity driveway entrance, prior to discharging into the existing BVW.
8. **Standard 8** requires a plan to control construction related impacts including erosion, sedimentation or other pollutant sources.
- a) The Applicant prepared an Erosion Control Plan (Sheet C-100) and has also included Erosion Control Notes on Sheet C-002 and corresponding details on Sheet C-501. The design calls for "silt fence & tubular barrier" around the limit of work where warranted and shows the location of a stabilized construction entrance and proper protection for the existing catch basins on site. These erosion control measures, and associated documentation are consistent with standard engineering practice. The Applicant also notes that the project will require the preparation of a Stormwater Pollution Prevention Plan (SWPPP) prior to construction, which is a requirement of the EPA National Pollutant Discharge Elimination System (NPDES) Construction General Permit for construction sites which disturb more than one acre of land. HW recommends that the Town require receipt of the SWPPP a minimum of 14 days prior to land disturbance.
 - b) HW recommends that the Applicant confirm that the proposed grading and erosion control barrier along the Great Brook corridor can be constructed without disturbing the existing native trees or shrubs. There is a minor adjustment to the treeline in the proposed conditions, but it is unclear what type of vegetation will be affected. HW further recommends that trees greater than 10-inch diameter within the work area be located on the existing conditions plan, if not already shown, and recommends that the Applicant note any trees that will be removed because of the proposed development. It appears that the Applicant has chosen to protect the trees that are located within the islands of the existing southern parking lot. The parking lot is proposed to be removed and a meadow created with a number of the trees within the parking lot to remain.

- c) HW recommends adding construction fence surrounding the infiltration areas during construction to protect from compaction due to heavy equipment.
- d) A note on the Sheet C-002 describes basic instructions for dewatering. If the Applicant anticipates dewatering to be required, HW recommends that a detail for dewatering be provided along with proposed locations.

9. **Standard 9** requires a Long-Term Operation and Maintenance (O&M) Plan be provided.

The Applicant has provided an Operation & Maintenance Plan for this project, prepared by Allen & Major Associates, Inc. and dated September 10, 2021. HW has the following comments:

- a) Under the “Structural Pretreatment BMPs” section, the reference to the various Contech water quality structures does not match the design plans. HW recommends that the Applicant revisit this section to clearly state the different types of structures and ensure that the corresponding manufacturer O&M Plans are included for each structure. References to cast iron hoods and deep sump catch basins should also be removed from this section as appropriate.
- b) The “Subsurface Structures” section should be modified to include provisions for inspecting the systems at certain intervals following large rain events to ensure they are properly draining. HW notes that a detail is included for inspection ports, but their locations are not identified on the plan view. HW recommends that the Applicant identify the proposed inspection port locations on the plans, which are preferably located in drive aisles rather than parking spaces to facilitate access. A note should also be added for the inspection of outlet control structures on an annual basis.
- c) The Applicant included plan sheet O&M 1 entitled “Operation & Maintenance Plan” which depicts the key elements of the stormwater management system for reference during long term maintenance activities. HW recommends that all water quality structure labels are updated to call out the specific Contech products being used, since each has individual O&M requirements. It may also be appropriate to coordinate further with Contech to see if future maintenance could be simplified by reducing the number of different Contech products being used in the design.
- d) Sheet O&M 1 should be updated to call out the inlet and outlet locations for both of the existing wet basins/fire ponds, so that they can be regularly inspected for signs of erosion or blockage. Even though the rear wet basin is no longer considered part of the project’s drainage system, it is still important that it is inspected regularly.

10. **Standard 10** requires an Illicit Discharge Compliance Statement be provided.

- a) To comply with Standard 10 the Applicant states that an Illicit Discharge Compliance Statement will be provided to the Town prior to the discharge of stormwater to the post-construction stormwater BMPs and prior to the issuance of a Certificate of Compliance. The Town may choose to require receipt of this statement as a condition of approval.

General Technical Review

11. *Water Supply Comments:*

- a) The proposed development will be serviced by a combination of new and existing private wells on the subject property. Due to the intensity of use, this is considered a Public Water System (PWS), and the Applicant states that all permitting will be done through MassDEP in accordance with 310 CMR 22 and MassDEP's Guidelines for Public Water Systems. A waiver has been requested from local permitting through the Bolton Board of Health. HW has no opposition to this waiver request, but defers to the appropriate Town of Bolton staff, Boards and Commissions.
- b) The Public Water System wells generate a Zone I radius of protection and an Interim Wellhead Protection Area (IWPA), which are both dependent on the approved yield/volume of each well. The Zone I radii for the existing and proposed well(s) are depicted on the Site Development Plans. The Applicant states that the proposed well is only shown conceptually and that final layout is subject to MassDEP approvals. The Applicant further states that the drilling and installation of all private wells will be coordinated with the Bolton Conservation Commission and Board of Health.
- c) The design of the Public Water System is being performed by Onsite Engineering, Inc. and a design summary memo can be found in Appendix C of the Project Narrative which provides details about the existing and proposed wells along with a description of water treatment, distribution and fire protection.

12. *Wastewater Disposal Comments:*

- a) The project will include a new on-site wastewater treatment and disposal system to serve both the proposed residential development and the modified office building. The Applicant states that the system will be designed by Onsite Engineering, Inc. in accordance with MassDEP *Guidelines for the Design, Construction, Operation and Maintenance of Small Treatment Facilities with Land Disposal*, revised July 2018, and that it is subject to a MassDEP Groundwater Discharge Permit subsequent to a hydrogeological evaluation approval process.
- b) The design flow for the proposed residential development is 43,440 gallons per day (GPD) based on 394 total bedrooms (at 110 GPD/bedroom) along with a 100 GPD allowance for the leasing office space. Since the clubhouse and amenity space are restricted to only residents and their guests, there are no additional flows associated with those elements, as per MassDEP advisory opinions. HW agrees with this preliminary design flow calculation.
- c) The design flow for the modified office building is 4,688 GPD, which is based on a total floor area of 62,500 SF. Since the office building modifications will be carried out by others under a separate application, HW notes that the actual design flows may vary based on the final architectural plans.

- d) HW recommends that the existing leaching facility location be called out on the Existing Conditions Plans, and that the existing office building sewer service is depicted on the Utility Plans with connection to the proposed sewer.
- e) HW recommends that the proposed sewer manhole annotation is changed on the Utility Plans from PDMH to PSMH and that the Utility Legend is depicted on all Utility Plans.
- f) An existing drainpipe near the driveway entrance flows under the proposed leach field toward the wet basin/fire pond. HW notes that this pipe and other elements of the drainage system may need to be modified to comply with Title 5 requirements.

13. *Additional Comments:*

- a) There is a small dog park proposed to service the apartment buildings, which is shown to the west of Building 3. HW recommends that the Applicant confirm that the dog park size and shape shown are appropriate for the project, and that additional information is added, such as the surface materials, fence specifications, park amenities, drainage and means of disposal for both dog waste and regular trash/recycling. HW notes that the dog park is located outside of the Zone I boundary and outside of any jurisdictional areas under the Wetlands Protection Act, but it is within the Interim Wellhead Protection Area associated with the existing wells on the subject property.
- b) HW recommends that the flow direction of Great Brook is added to the Site Development Plans.
- c) A proposed maintenance gate for the existing well area is shown on the Site Development Plans, but the access drive linework appears to be missing. HW also advises the Applicant to consider whether any dedicated access is required for the new well location.
- d) There is a large ledge outcrop located within and to the north of proposed Building 1 which will need to be entirely removed to accommodate the project, including subsurface elements such as the foundation and utilities. HW recommends that the Applicant provides a preliminary description of the proposed ledge removal method(s) being considered for the project, for review by applicable Town staff, Boards and Commissions.

14. *Waiver Requests:*

- a) Applications for a Comprehensive Permit through the Zoning Board of Appeals requires an Applicant to comply with all local codes, ordinances, Bylaws or regulations unless an exemption or variance is formally requested in the application or modification to the application. As described in detail in *Section 5.1* of the Project Narrative & Drainage Report, the Applicant is requesting waivers from the following local Bylaws, rules and regulations:
 - Town of Bolton Bylaws (Zoning & Wetlands)

- Planning Board Rules & Regulations
- Conservation Commission Rules & Regulations
- Rules & Regulations of the Board of Health

b) HW defers to the Bolton ZBA on the granting of these waivers, but notes that the proposed development project is still required to comply with all applicable regulations, permits and policies of the Commonwealth of Massachusetts. These include, but are not limited to, the Massachusetts Stormwater Handbook, the Wetlands Protection Act/Regulations, Title 5 of the State Environmental Code, MassDEP *Guidelines for the Design, Construction, Operation and Maintenance of Small Treatment Facilities with Land Disposal*, MassDEP Groundwater Discharge Permit, and MassDEP's Guidelines for Public Water Systems. As noted above HW recommends that the Applicant respect the local 25-foot no disturb zone to the adjacent BVWs surrounding the project site.

Conclusions

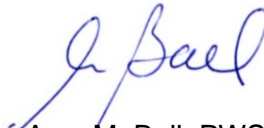
HW recommends that the Bolton Zoning Board of Appeals require that the Applicant provide a written response to address these comments as part of the permitting process. The Applicant is advised that provision of these comments does not relieve him/her of the responsibility to comply with all Commonwealth of Massachusetts laws, and federal regulations as applicable to this project. Please contact Janet Carter Bernardo at jbernardo@horsleywitten.com or at 508-833-6600 if you have any questions regarding these comments.

Sincerely,

Horsley Witten Group, Inc.



Janet Carter Bernardo, P.E.
Associate Principal



Amy M. Ball, PWS, CWS
Senior Ecologist