



August 18, 2022

Ms. Liz Allard  
Land Use Administrator/Conservation Agent  
Town of Harvard  
13 Ayer Road  
Harvard, MA 01451

Via: Email to [lallard@harvard.ma.us](mailto:lallard@harvard.ma.us); and First Class Mail

Reference: Special Permit and Site Plan Application Supplemental Peer Review  
Ayer Road Village  
203 Ayer Road  
Harvard, Massachusetts  
B+T Project No. 3241.02

Dear Ms. Allard and Planning Board Members:

Beals and Thomas, Inc. (B+T) is pleased to assist the Town of Harvard Planning Board (the Board) with the supplemental review of the Special Permit and Site Plan Approval applications for the proposed large scale commercial development at 203 Ayer Road, Harvard, Massachusetts (the Site). We understand that Yvonne Chern and the Wheeler Realty Trust (the Applicant) is requesting permits for three commercial-use buildings and associated site improvements. Building A will be a 29,988± gross square foot commercial recreation center with indoor badminton courts. The details of Buildings B and C will be determined when an end-user is identified and are depicted as possible layouts subject to final layout design and review. The Project also proposes associated landscaping, access roadway, parking, and utility installations including a stormwater management system.

B+T issued a letter to the Board, dated June 3, 2022, which presented the results of our site visit and our initial review of the original documentation submitted by the Applicant. As a result of our initial comments, the Applicant has submitted the following additional supplemental documentation as listed herein.

We received the following documentation which served as the basis for our supplemental review:

- *Special Permit and Site Plan Review Application, 203 Ayer Road, Harvard, MA. Project Review Response Letter Revision-1*, dated July 25, 2022, prepared by GPR Engineering Solutions for Land & Structures (GPR) (7 pages)
- *Ayer Road Village Special Permit, 203 Ayer Road, Harvard, MA*, dated March 11, 2022, revised through July 25, 2022, prepared by GPR (11 sheets)

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Civil Engineering ▪ Land Surveying ▪ Landscape Architecture ▪ Land Use Permitting ▪ Environmental Planning ▪ Wetland Science

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- *Stormwater Management Report, 203 Ayer Road, Harvard, MA, dated March 2022, revised through July 25, 2022, prepared by GPR (163 pages)*

We have reviewed the documentation submitted by the Applicant with respect to the relevant sections of the Protective Bylaw of the Town of Harvard, including but not limited to Chapters 125-1, 125-14, 125-20, 125-23, 125-37, 125-38, 125-39, 125-46 and 125-52 (the Bylaws); The Code of the Town of Harvard, Chapter 133 (the Code); the Massachusetts Wetlands Protection Act and Regulations (MassDEP Regulations); the Massachusetts Department of Environmental Protection (MassDEP) Stormwater Handbook (the Handbook); and, particularly with respect to our original comments dated June 3, 2022.

### **Review Format**

In an effort to establish clarity for the Administrative Record, we have included the comments from our initial letter report dated June 3, 2022, followed by a summary of the Applicant's responses in *italicized* font, followed by our current comments in **bold** font to document the status of our original comment.

### **General Comments:**

1. §125-20.D of the Bylaw requires the development to provide water supply and sewage disposal approved by the Board of Health (BOH). We acknowledge the proposed connections to the previously installed on-site systems. We note this for the benefit of the Board and defer review and approval of the adequacy of these connections to the Board of Health Review process.

*Applicant's Response: No comment.*

**Current B+T Response: We reiterate the intent of our previous comment.**

2. §125-29.I of the Bylaw requires a building factor calculation to confirm the lot shape. The referenced calculation does not appear to have been provided by the Applicant. We request that the Applicant provide the referenced calculation in accordance with the referenced section of the Bylaw.

*Applicant's Response: Lot shape calculation provided under the Zoning Summary Table as requested.*

**Current B+T Response: This comment has been adequately addressed by the Applicant. No further action is required.**

3. §125-30.B of the Bylaw requires a total building floor area calculation for all levels of all buildings. Understanding that buildings B & C are not fully designed, as proposed, the Project does not appear to comply with the 10% maximum coverage area. We request that the Applicant clarify the design intent and document compliance with the referenced section of the Bylaw.

*Applicant's Response: The project proposes 45,998 SF of total building floor area, this is approximately 9.57% total lot area.*

**Current B+T Response: We acknowledge the calculation provided by the Applicant. We note for the benefit of the Board, as a potential condition of the approval, that the proposed floor areas for the undesignated Buildings B & C be limited to a total of 16,000 SF to maintain compliance with the referenced section of the Bylaw.**

4. §125-30.D of the Bylaw requires that the area within 20-ft of the street line be clear of signage, fences, plantings, etc., to provide adequate visibility for oncoming traffic. As proposed, the landscape plan does not appear to comply with this requirement. We request that the Applicant clarify the design intent and document compliance with the referenced section of the Bylaw.

*Applicant's Response: As designed the sight triangle will not be impacted.*

**Current B+T Response: The landscape design continues to provide for plantings directly adjacent to Ayer Road in the area of the access driveway that impacts the sight triangle depicted on the plans. Accordingly, we reiterate the intent of our previous comment.**

5. §125-31.B(2) of the Bylaw requires each branch of a shared driveway shall include a turnaround for vehicles, especially emergency vehicles. We acknowledge the swept path analysis provided for a SU-30, or a typical delivery truck. Based on this analysis, the required turnarounds do not appear to be provided. We request that the Applicant clarify the design intent and document compliance with the noted section of the Bylaw for vehicles larger than a SU-30 and more typical of a fire engine. We defer ultimate review and approval of the driveway geometry and adequacy of the emergency access provided to Harvard Fire Department personnel.

*Applicant's Response: Turning analysis has been revised to show fire truck turning template.*

**Current B+T Response: The required turnarounds continue to not be provided for each branch of the parking area as prescribed by the referenced Bylaw. Accordingly, we reiterate the intent of our previous comment.**

6. §125-38.D(2) of the Bylaw requires that site plans include provisions for lighting. A lighting design does not appear to be included in the current submission. We request that the Applicant clarify the design intent for lighting and provide a photometric plan as may be applicable.

*Applicant's Response: The proposed project has accounted for on site lighting and light fixtures as proposed are in accordance with §125-40. See Sheet C3.1. Additionally, Site photometric plan shall be submitted shortly.*

**Current B+T Response: We reiterate the intent of our previous comment pending the submission of the referenced photometric plan.**

7. §125-38.D(3) of the Bylaw requires site plans include provisions for water supply to be provided. A layout of the proposed water distribution network is provided; however, the specific length, size and material of water main is designated as "to be determined." Additionally, a fire suppression system is also proposed, but again, designated to be "designed by others". We request that the Applicant clarify the design intent for the water system to the satisfaction of the Board and the overarching BOH review process.

*Applicant's Response: Although §125-38.D(3) of the Bylaw requires site plans to include provisions for water supply, it does not require final specifications for a fire suppression system that will be submitted as required for the building permit application.*

**Current B+T Response: We acknowledge the response provided by the Applicant. We defer to the Board on the adequacy of the response provided. Details for the water distribution system (sizing, materials, etc.) remain pending.**

8. §125-38.D(3) of the Bylaw requires site plans include provisions for waste water collection to be provided. We acknowledge the Subsurface Sewage Disposal System Upgrade plan provided. We note the plan includes the use of 4" collection pipe, which appears to be smaller than industry standard for buildings of this size. We request that the Applicant clarify the design intent for the sewage collection system to the satisfaction of the Board and the overarching BOH review process.

*Applicant's Response: Final design and specifications pertaining to the subsurface sewage disposal system shall be reviewed and discussed with the Board of Health.*

**Current B+T Response: We continue to defer to the BOH review process. We note for the benefit of the Board that unique leaching fields are now proposed for Buildings B & C as opposed to use of the existing on-site system originally proposed.**

9. §125-38.F(1) of the Bylaw requires that renderings for the front, rear and side elevations of the proposed development be provided including external HVAC equipment, generators, etc. A comprehensive package of the required renderings does not appear to have been provided by the Applicant. The renderings provided appear to be inconsistent with the site plans relative to the layout and orientation of Building “C”. We request that the Applicant document compliance with the noted section of the Bylaw.

*Applicant’s Response: Revised architectural renderings have been provided as requested.*

**Current B+T Response: The revised renderings do not appear to have been provided as indicated. Accordingly, we reiterate the intent of our previous comment.**

10. §125-38.G of the Bylaw requires a landscape plan, prepared by a Registered Landscape Architect (RLA). We acknowledge the landscape plan provided; however, there appears to be an inconsistency with the plan scale. We request that the Applicant clarify the noted inconsistency and revise the plan as applicable.

*Applicant’s Response: Landscaping plan scaling has been revised as requested.*

**Current B+T Response: This comment has been adequately addressed by the Applicant. No further action is required.**

11. §125-39.B(5)(a)(2) of the Bylaw requires trip generation analysis for average daily traffic. The Applicant does not appear to reference what trip generation is being assumed for Building A, and without known uses for Buildings B and C, it is unclear how this analysis can be conducted accurately. We request that the Applicant clarify what assumptions are being made of trip generation and document compliance with the noted section of the Bylaw.

*Applicant’s Response: The Traffic Study Report has been provided.*

**Current B+T Response: B+T has not been authorized to review the traffic report; however, acknowledge that it has been submitted as requested.**

12. §125-39.B(5)(e)[1] of the Bylaw requires specific turning radii for the proposed driveway. The radii for the driveway as proposed do not appear to meet the minimum requirements. We request that the Applicant document compliance with the noted section of the Bylaw and revise the design accordingly.

*Applicant’s Response: Revised turning analysis has been provided.*

**Current B+T Response:** The curb radii at the intersection of the proposed access drive and Ayer Road remain unchanged from the original submission. We reiterate the intent of our previous comment.

13. §125-39.B(5)(a) of the Bylaw requires shared entrance and exit access driveways be separated by a traffic island. We acknowledge the concrete rubble island proposed by the Applicant; however, its location would appear to intercept the referenced location of the future Town installed shared use walkway. It is unclear if the concrete rubble strip will be an acceptable or compatible material in this location or if further design coordination will be required. We note this for the benefit of the Board.

*Applicant's Response: Noted.*

**Current B+T Response:** We reiterate the intent of previous comment.

14. §125-39.E of the Bylaw requires provision be made for fire protection. As noted herein, the fire suppression system is designated to be "designed by others". We request, to the satisfaction of Harvard Fire Department personnel, that the Applicant document compliance with the noted section of the Bylaw.

*Applicant's Response: Final design and specifications of fire suppression system shall be reviewed and discussed during the filing of a building permit application.*

**Current B+T Response:** We continue to defer to Fire Department personnel relative to the adequacy of the fire suppression system and emergency access proposed for the Project.

15. §125-39.G(1) of the Bylaw requires projects subject to the site standards within the Commercial District provide curbs and sidewalks. As proposed, the Project does not propose either. Understanding that sidewalks and curbs do not exist on this portion of the Ayer Road, it is unclear if the referenced Bylaw is applicable to this specific Site. The Applicant also makes reference to a future Town installed shared use walkway parallel to Ayer Road. We defer to the Board to determine the applicability of the noted Bylaw relative to the Project location.

*Applicant's Response: Noted.*

**Current B+T Response:** We reiterate the intent of previous comment.

16. §125-41.B(3) of the Bylaw stipulates setback requirements for signage. The sign location proposed does not appear to comply. We request that the Applicant clarify the design intent of the sign (dimensions and size) and document compliance with the noted section of the Bylaw relative to its proposed location.

*Applicant's Response: Final sign dimensions shall be in compliance with the zoning bylaw.*

**Current B+T Response: The intent of our comment was related to the signs location and not its size. Accordingly, we reiterate the intent of our previous comment.**

17. §125-52.D.(4)(a) of the Bylaw stipulates that no more than 25% of the parking should be located in the building "front yard." Building A proposes front yard parking and when considering the potential contribution for "front yard" parking spaces from Building C, it does not appear that the Project complies with the noted Bylaw. Furthermore, without known uses for Buildings B and C, it is unclear how the proposed total number of parking spaces was derived. We request that the Applicant clarify their interpretation of noted Bylaw to the satisfaction of the Board and document the assumptions made relative to the number of parking spaces provided.

*Applicant's Response: Less than 25% of the Building A parking is in the front yard. No other parking is proposed in front yard of the other buildings.*

**Current B+T Response: The proposed parking lot for Building C abuts Ayer Road similar to Building A. It is unclear if this is considered as "front yard" as it will be readily visible from Ayer Road. We also reiterate our request for the Applicant to clarify the assumptions made for calculating the number of parking spaces for Building's B & C without confirmed uses for these buildings.**

18. The Applicant has proposed accessible parking spaces at the entries to each of the proposed buildings; however, the van accessible spaces at the front of Building A are shown as 9' wide with a 6' wide access aisle. The aisle should be revised to 8' wide with 8' wide spaces in accordance with Section 23.4.7.e of the Massachusetts Architectural Access Board (MAAB) regulations (521 CMR).

*Applicant's Response: The proposed handicap parking layout has been revised as required.*

**Current B+T Response: This comment has been adequately addressed by the Applicant. No further action is required.**

19. We request that the Applicant confirm that the proposed site lights are full cutoff fixtures, and they submit a lighting plan that demonstrates that the proposed site lighting complies with §125-40 Lighting.

*Applicant's Response: Site plan note has been added to state site lights are full cutoff fixtures and shall meet all the requirements in accordance with §125-40. See Sheet C3.1. Additionally, Site photometric plan shall be submitted shortly.*

**Current B+T Response: We acknowledge the inclusion of the referenced note. We reiterate the intent of our previous comment pending the submission of the photometric plan.**

20. §125-52.D.(4)(c) of the Bylaw requires facilities to provide a means for solid waste collection. Building A is proposed with a trash enclosure; however, Buildings B and C are not. We request that the Applicant document compliance with the referenced section of the Bylaw.

*Applicant's Response: Trash bins shall be utilized for Buildings B and C.*

**Current B+T Response: We acknowledge the response provided by the Applicant. We defer to the Board on the adequacy of the proposed approach and not providing formal trash enclosures for each building.**

21. §125-52.E of the Bylaw requires approvals for the privately owned and maintained sewage disposal systems be provided by the BOH. We note this for the benefit of the Board and defer to overarching BOH review and approval process.

*Applicant's Response: No comment.*

**Current B+T Response: No action required.**

22. The Project proposes a gravel driveway to future parcel "A" beyond Building B. It is unclear what the future intent is for parcel "A" and if this access will be gated or monitored in any way. We request that the Applicant clarify the need for future access to parcel "A".

*Applicant's Response: Parcel "A" has been removed and the entire subject site shall remain the same as existing conditions. The proposed gravel driveway is intended to provide access to the existing control structure for the well and water supply on site.*



**Current B+T Response: This comment has been adequately addressed by the Applicant. No further action is required.**

23. The architectural plans provided appear to include a residence on the second floor of proposed Building A. It is unclear if this seemingly residential use within the Commercial Zoning District would require additional permitting. We request that the Applicant clarify the residential component of the Project as proposed.

*Applicant's Response: The proposed dwelling unit within Building A is dedicated for the on-site manager as required to maintain extended operating hours exclusive to the premium members of the of the badminton facility that is Building A.*

**Current B+T Response: We acknowledge the response provided by the Applicant. We defer to the Board relative to the applicability and potential permitting ramifications of the proposed residential component within the commercial zoning district.**

24. Though a numbered route, it does not appear that Ayer Road is under the jurisdiction of MassDOT at the Project location. A large gore and street markings exist that create two lanes of southbound traffic approaching the interchange of Rt 2. The proposed Project driveway will impact the existing markings and would appear to require a reconfiguration of the existing traffic pattern. We request that the Applicant clarify the future design intent for the intersection of the Project driveway at Ayer Road.

*Applicant's Response: Noted. The Applicant will coordinate with Town of Harvard relative to the proposed Ayer Road TIP project.*

**Current B+T Response: No action required.**

25. Although plantings are proposed along the rear property line that abuts a residential zoning district and residential units, the proposed screening does not appear to comply with §125-39.D.(4) and (5). We request the Applicant revise the Planting Plan to provide additional plantings to provide the required screening.

*Applicant's Response: Noted. The applicant believes the intent of the Bylaw has been met.*

**Current B+T Response: The proposed quantity and frequency of plantings in the area remains unchanged in the revised plans. We defer to the Board on adequacy of the screening provided.**

**Stormwater Management Comments:**

§125-39.F of the Bylaws requires that provision for drainage be provided. In accordance with this section of the Bylaw, we note the following.

26. Standard 2 of the MassDEP Regulations requires that the Applicant demonstrate peak discharge rate attenuation. The Bylaws further require peak rate and runoff volume attenuation with a reduction of 5% from pre- to post-development analysis for the 2-yr and 10-yr storm events. As modeled, the Project meets all of these criteria. However, the modeling utilizes times of concentration (Tc) less than 6 minutes (0.1 hrs) within the analysis. We request that the Applicant revise the modeling to utilize a minimum 6 minute Tc in accordance with TR-55 methodology and confirm the Project continues to comply with Standard 2 of the MassDEP Regulations.

*Applicant's Response: Drainage calculations has been revised as requested.*

**Current B+T Response: This comment has been adequately addressed by the Applicant. No further action is required.**

27. Standard 3 of the MassDEP Regulations requires that Applicants prepare recharge calculations. We acknowledge the recharge calculation provided; however, we request that the Applicant clarify the values used. The storage volumes provided of each infiltrative best managements practices (BMPs) are not represented in the modeling outputs provided. We further note that these values also impact the infiltrative BMP drawdown calculations and water quality calculations provided under Standard 4 of the MassDEP Regulations. We request that the Applicant clarify the calculations and document compliance with the referenced regulation.

*Applicant's Response: Storage volumes has been provided as requested.*

**Current B+T Response: This comment has been adequately addressed by the Applicant. No further action is required.**

28. Standard 3 of the MassDEP Regulations requires a determination of the estimated seasonal high groundwater elevation and required 2-ft minimum separation to this elevation from the bottom of infiltrative BMPs. The Applicant does not appear to demonstrate a 2-ft vertical separation to groundwater from the bottom of infiltrative BMPs Pond IB-1, Pond IC-1 and IC-2. If the BMP bottom is within 4-ft of the estimated season high groundwater elevation then a mounding analysis will be required.

We acknowledge the mounding analysis provided by the Applicant; however, considering the required separation to groundwater is not provided, we request that the Applicant clarify the calculations provided. We request the Applicant clarify the design intent of the noted BMPs and demonstrate compliance with the noted regulation.

*Applicant's Response: Groundwater separation summary has been provided in the revised Stormwater Management Report as requested.*

**Current B+T Response: The separation summary provided does not appear to correlate to the test pit logs provided. The test pits do not all fall within the footprints of the stormwater infrastructure they are being applied to. Accordingly, we reiterate the intent of our previous comment.**

29. Standard 8 of the MassDEP Regulations requires documentation relative to Construction Period Pollution Prevention and Erosion and Sedimentation Control. Disturbing over 1-acre of land, the Project will be subject to the NPDES Construction General Permit and a Stormwater Pollution Prevention Plan (SWPPP) will be required. This is acknowledged by the Applicant; however, the Applicant commits to submitting a SWPPP under separate cover prior to construction. We note this for the benefit of the Board when considering possible conditions of approval.

*Applicant's Response: No comment.*

**Current B+T Response: We reiterate the intent of our previous comment.**

30. Standard 10 of the MassDEP Regulations requires a prohibition of illicit discharges. We request that the Applicant provide an executed Illicit Discharge Statement to document compliance with the referenced regulation.

*Applicant's Response: Illicit Discharge Statement has been provided as requested.*

**Current B+T Response: This comment has been adequately addressed by the Applicant. No further action is required.**

31. Section 147-14C of the Bylaw stipulates that no resource areas shall be filled for the impoundment, detention, or retention of stormwater. Pond IC-2 is proposed within the limits of the isolated vegetated wetland to be filled. We note that this area is not being filled for the express purpose of stormwater management and that Building A and the associated parking are also proposed within the area to be filled.

We request the Applicant provide a narrative response to whether a waiver should be requested for the noted section of the Bylaw and defer to the Board on the applicability of this section of the Bylaw to this Project.

*Applicant's Response: The filling of the isolated Harvard Freshwater Wetland area was previously approved for the express purpose of locating Building A and all its associated features under the previously approved Order of Conditions as issued by the Harvard Conservation Commission (MassDEP File #177-0707).*

**Current B+T Response: We continue to defer to the Board on the applicability of the noted Bylaw. For the benefit of the Board, we understand that the Conservation Commission review process is ongoing on a parallel track for the proposed Project. We do note, however, that the OOC referenced in the Applicant's comments notes as a Special Condition (No. 1, Page 7): *This Order of Conditions cannot be executed unless and until an additional Order of Conditions is issued by the Harvard Conservation Commission for the Development of the Property.* We understand that the OOC issued under MassDEP File No. 177-0707 was strictly to evaluate the possibility of isolated wetland impacts and to confirm the wetland delineations, though please refer to our June 3, 2022 letter to the Conservation Commission for more specific discussion on this matter.**

32. Section 147-14C(1) of the Bylaw prescribes rainfall event data for the 2-yr, 10-yr, 50-yr and 100-yr storm events. The Applicant does not utilize the prescribed events; however, used values more conservative than prescribed. B+T takes no exception to the rainfall values used; however, notes the inconsistency relative to the referenced section of the Bylaw.

*Applicant's Response: No comment.*

**Current B+T Response: No action required.**

33. B+T is in receipt of the DEP Central Regional Office (CERO) comments dated May 16, 2022. The CERO comments note that the location of Stormwater Basin #2 does not provide the required 50-ft buffer to the proposed wetland replication area. Accordingly, we request that the Applicant clarify the design intent for the noted stormwater infrastructure and revise the location as required.

*Applicant's Response: Wetland replication area has been revised to be located 50 feet away from the proposed Stormwater Basin #2.*

**Current B+T Response: This comment has been adequately addressed by the Applicant. No further action is required.**

34. The modeling provided by the Applicant is unclear. We note the following inconsistencies relative to the modeling and site plans provided:

- a. The length and slope of the discharge pipes for Ponds CB-10, CB-9 and DMH-9
- b. The invert of the 8" pipe discharge from Pond IC-2 is inconsistent
- c. The rim and invert table appears to incorrectly label the outlet for IC-2 as DMH-7 and not DMH-8.

We request that the Applicant clarify the modeling provided and address the inconsistencies as noted herein.

*Applicant's Response: Site plan and HydroCAD shall be revised to address the inconsistencies above.*

**Current B+T Response: Comments 34a and 34c have been addressed. The invert referenced in Comment 34b remains inconsistent between the plans and the modeling. Accordingly, we reiterate the intent of Comment 34b and request that the Applicant address the noted inconsistency.**

35. The Handbook requires that stormwater basins be designed to maintain 1-ft of freeboard during the 100-yr storm event. Both IB-1 and IB-2 appear to provide less vertical freeboard than the 1-ft recommended by the Handbook. We request that the Applicant clarify the design intent and revise the design as applicable.

*Applicant's Response: Stormwater basins have been revised to provide 1-ft of freeboard during the 100-yr storm event as requested.*

**Current B+T Response: This comment has been adequately addressed by the Applicant. No further action is required.**

36. The limits of the proposed sedimentation control barrier (SCB) are unclear. We recommend that the SCB be extended south along Ayer Road to the northern property and the limit of clearing. We further recommend that a limit of clearing be added to the erosion control plan.

*Applicant's Response: Erosion control barrier has been revised and limit of clearing shall be provided as recommended.*

**Current B+T Response: This comment has been adequately addressed by the Applicant. No further action is required.**

Ms. Liz Allard  
Land Use Administrator/Conservation Agent  
Town of Harvard  
August 18, 2022  
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B+T is available to attend the next Planning Board public hearing, upon request, to present the results of our review and be available for discussion regarding the comments listed herein.

We appreciate the opportunity to assist the Harvard Planning Board with the review of the proposed Project. Please do not hesitate to contact our office with any questions.

Sincerely,

BEALS AND THOMAS, INC.



Matthew Cote, PE  
Senior Civil Engineer

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