

**TOWN OF HARVARD
ZONING BOARD OF APPEALS AGENDA
WEDNESDAY OCTOBER 4, 2023 @ 7:00pm via ZOOM**

Pursuant to Chapter 2 of the Acts of 2023, An Act Making Appropriations for the Fiscal Year 2023 to Provide for Supplementing Certain Existing Appropriations and for Certain Other Activities and Projects, and signed into law on March 29, 2023, this meeting will be conducted via remote participation. Interested individuals can listen in and participate by phone and/or online by following the link and phone number below.

UpperTH ProWebinar is inviting you to a scheduled Zoom meeting.

Topic: Zoning Board of Appeals

Time: Oct 4, 2023 07:00 PM Eastern Time (US and Canada)

Join Zoom Meeting

<https://us02web.zoom.us/j/82936690785?pwd=R3BGTGIYWnU3NORWakdMWkNNR2xMQT09>

Meeting ID: 829 3669 0785

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Meeting ID: 829 3669 0785

Find your local number: <https://us02web.zoom.us/u/kbNoPSRdT>

7:00pm Continuation of Special Permit Hearing – Latham at 200 Still River Road, §125-3B Non-conforming one- and two-family dwellings, and §135-25 Special rule applicable to one- and two-family dwellings.

7:15pm Continuation of Special Permit Hearing – William Ference at 247 Littleton County Road, §125-3C Non-conforming structures other than one – and two-family dwellings and §125-3D Non-conforming uses, for Modification of a Special Permit.

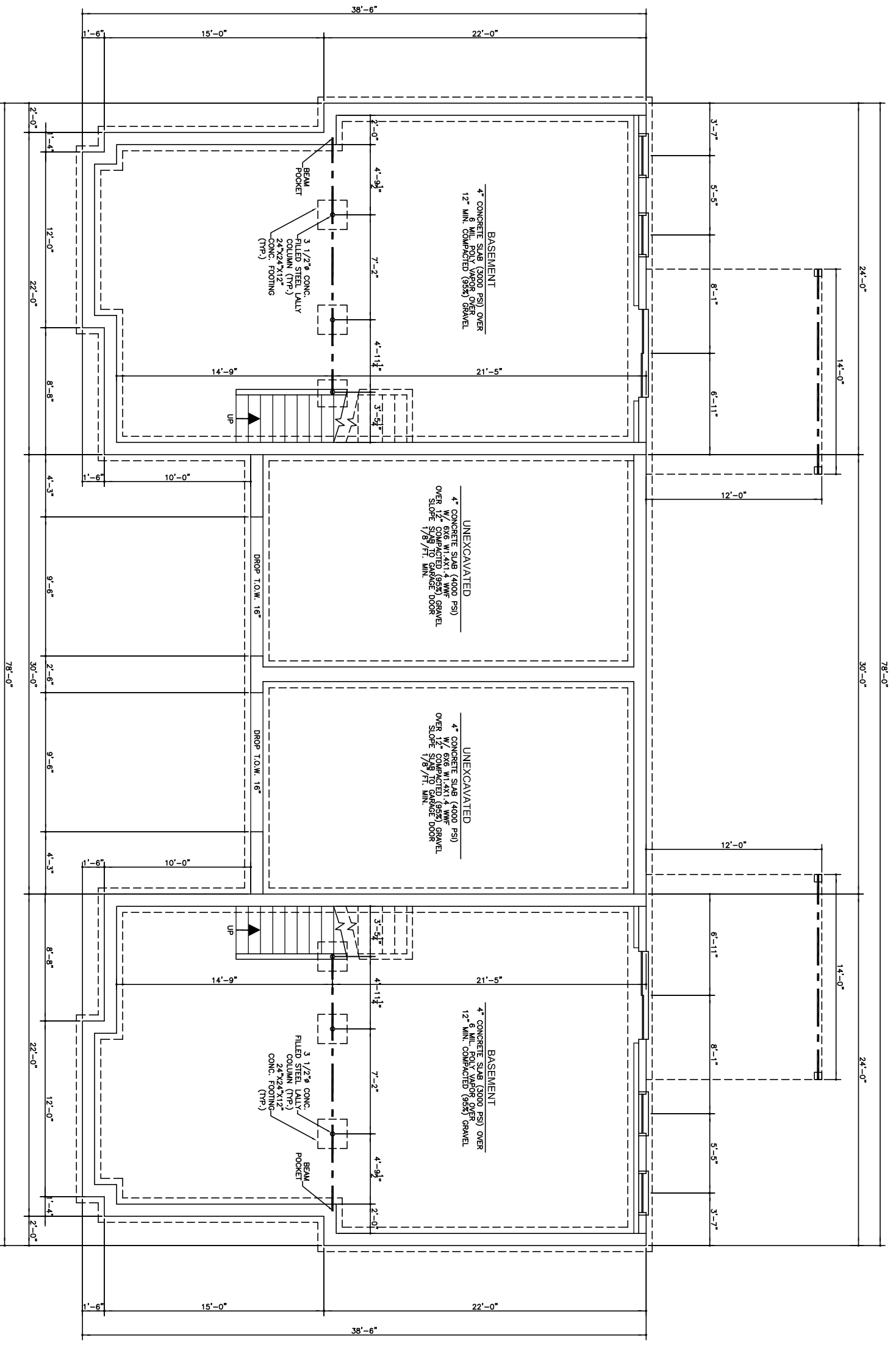
7:30pm Continuation of Public Hearing of COMPREHENSIVE Permit Hearing – Proposed 40-B development by JUNO Construction LLC at Old Mill Road,

New Business: a) Approve Minutes
b) Approve Invoice: Beals + Thomas Peer Review- \$6,246.03
c) Confirm ZBA meeting night starting in November 2023 (not 2nd Wednesday of the month)

**NEXT SCHEDULED MEETING:
WEDNESDAY, NOVEMBER 1, 2023
AS**

The listing of matters are those reasonably anticipated by the chair which may be discussed at the meeting. Not all items listed may in fact be discussed and other items not listed may be brought up for discussion to the extent permitted by law, also.

*These drawings are conceptual only. The actual construction documents may vary due to design changes necessary to meet current codes and regulations. Any major design changes are subject to Board approval.



FOUNDATION/BASEMENT PLAN

SCALE: 1/8"=1'-0"

FOR BOARD APPROVAL ONLY

Sheet: 1 / 4		Title:	Project:	Copyright © Jozokos Architecture, Inc. All rights reserved.	Date:	Project No.: 23XXXX
		BASEMENT/ FOUNDATION PLAN	NEW DUPLEX HARVARD, MA	Per the Architectural Works Copyright Protection Act of 1990, this document shall not be copied, duplicated, replicated or otherwise reproduced in any form whatsoever without the prior written permission of Jozokos Architecture, Inc. This document is not effective unless signed & sealed by James J. Jozokos, Architect.	Sept. 22, 2023	
		Jozokos Architecture Inc. 1147 Main Street #115, Tewksbury, MA (978) 985-1813 jozokos@comcast.net		Drawn By: SD Checked By: JJ		



September 20, 2023

Town of Harvard
Zoning Board of Appeals &
Conservation Commission
13 Ayer Road
Harvard, MA 01451

**Subject: Notice of Intent Application
The Village at Robin Lane
At Old Mill & Ayer Road
Harvard, MA**

Dear Board Members:

On behalf of the proponent, Juno Construction, LLC, GPR submits the following responses to the comments from the following review comments documents:

- **“Office of the Conservation Commission – Memorandum – Requested Exemptions Village at Robin Lane” as prepared by the Harvard Conservation Commission. Dated September 7, 2023.**

The responses below are intended to address these comments, while summarizing revisions made to address them. Responses from GPR are shown below in **green**.

Wetland Protection Bylaw Section 119-4E:

A portion of the fees collected under the Wetland Protection Bylaw provided for the cost associated with the monitoring of projects by the Conservation Agent during the construction process. The Commission would be willing to discuss with the applicant a reduction of the fees under the Wetland Protection Bylaw, but would recommend against waiving the fee in its entirety. The Commission suggests the applicant complete Form F Schedule, under Chapter 147, in order for the Commission to understand the totality of the fee that would be applied to this project had it been proposed as a conventional subdivision.

Town of Harvard NOI Filing Form F provided as requested. The Form F fees for this project are \$11,269.50 above and beyond the \$1,575.00 (\$775 State share and \$800 Town share) State fees.

Wetland Protection Bylaw Regulations Section 147-6C:

See comment above.

Town of Harvard NOI Filing Form F provided as requested.

Goldsmith, Prest & Ringwall, Inc.

Wetland Protection Bylaw Regulations Section 147-12:

As proposed the plan shows three Public Water Supply (PWS) wells and an associated gravel access road within the setbacks established under this section, with the PWS being within 10-feet of the wetland resource area. The Commission will need additional information from the Applicant on how the resource areas will be protected during the installation of the PWS and gravel access road before making a determination on the requested exemption.

As part of the standard procedure for the project's construction phase, erosion control barrier shall be installed and maintained prior to work beginning. The removal of organics and installation of gravel will be upgradient of the erosion control barrier. The working access (during construction) will be lower than the adjacent organic layers creating an earthen berm to help control any runoff. Tailing pits will be dug adjacent to the proposed wells with additional wattles around them during drilling. Upon completion the access driveway will be graded to match adjacent grades. The drive will be graded to break up drainage patterns into smaller areas to each side rather than down the drive.

The project will be required to submit a Stormwater Pollution Prevention Plan (SWPPP) prior to construction. Following typical SWPPP procedure, the project site will be monitored, and a report shall be generated and provided for the Conservation Commission on a weekly basis to ensure the above procedures are followed..

Wetland Protection Bylaw Regulations Section 147-14C:

Although a large portion of this project is outside of the jurisdiction of the Conservation Commission it is not only upgradient resource areas but will require a significant amount of fill material for the development of this property. The State has not yet completed its update to 310 CMR 10.57 and the Hydrology and Stormwater Handbook, but has indicated it will be incorporating either the National Oceanic and Atmospheric Administration Atlas 14 or precipitation frequency statistics prepared by Northeast Regional Climate Center (NRCC) at Cornell University in place of the current Technical paper 40 methodology. With Harvard being exempt from Municipal Separate Storm Sewer System requirements there is no local Stormwater Management Bylaw as there are in many municipalities within Massachusetts, in 2021 the Commission incorporated stormwater management requirements into its regulations that include the use of Extreme precipitation in New York & New England developed by NRCC. In addition, recent weather, including an increase in heavy rain events, only highlights the need to address stormwater management requirements as provided for within Chapter 147. The Commission would suggest the applicant provided details as to how and why they are unable to comply with these regulations.

Storm event precipitation data used within the Stormwater Management Report are greater than the specific rainfall data as shown under Section 147-14C of the Harvard Wetland Protection Bylaw Regulations. Storm events used within the project's drainage design analysis are the latest precipitation frequency statistics as provided by the Northeast Regional Climate Center (NRCC) through HydroCAD.

The proposed project provides a drainage design to meet the Ten Stormwater Management Standards under the Massachusetts Stormwater Handbook. The project is unable to meet the Harvard's stormwater management regulations specifically in regard to:

“Stormwater best management practices shall be provided to reduce by at least five (5) percent match or improve the peak runoff rates and volumes under proposed conditions compared to existing conditions for the 2- and 10-year frequency storm events, and peak runoff rates and volumes under proposed conditions compared to existing conditions shall not exceed existing peak runoff rates and volumes for the 50- and 100-year frequency storm events.”

The proposed stormwater design provides peak runoff rates to meet the pre-development rates for the 2- and 10-year storm events at 0.0 cfs and 0.2 cfs, respectively. The 5% reduction for the peak runoff rates (0 and 0.2 cfs) would be considered as De minimis under the Massachusetts Stormwater Handbook, therefore the peak runoff rate reduction requirement from the existing conditions cannot be reported.

In order to minimize the limit of tree clearing, grading work within wetland buffer limit and maintaining a 50-ft No Disturb Wetland Buffer limit (excluding the disturbance as needed to install the public water supply wells), the proposed project is unable to meet and match the stormwater peak runoff volume requirements similar to existing conditions.

To meet and match the stormwater peak runoff volume requirement for the 100-year frequency storm event, an additional infiltrating BMP with a storage capacity of approximately 17,500 CF must be provided. The proposed infiltration basin currently provides approximately 6,800 CF of stormwater storage capacity, therefore meeting the peak runoff volume requirement would require the proposed Infiltration Basin to nearly quadrupled in size or provide an additional infiltration basin nearly three times the size of the current Infiltration Basin. As the project has multiple onsite constraints with setback requirements to an infiltrating BMP, such as the communal septic system and public water supply wells' Zone 1 radii, providing additional stormwater storage capacity will require much greater limit of tree clearing, grading work within the wetland buffer limit, and siting additional infiltrating BMP area within the 50-ft No Disturb Wetland Buffer Limit.

Sincerely,
Goldsmith, Prest & Ringwall, Inc.



Limhuot Tiv, PE

Copy to: 211140
Walter Erikson

Attachments:

1. "Form F- Wetland filing fees calculation worksheet for work in resource areas."

September 20, 2023

Town of Harvard
Zoning Board of Appeals
13 Ayer Road
Harvard, MA 01451

**Subject: Peer Review Comments Response - Chapter 40B Comprehensive Permit
The Village at Robin Lane
At Old Mill & Ayer Road
Harvard, MA**

Dear Board Members:

On behalf of the proponent, Juno Construction, LLC, GPR submits the following responses to the comments from the following review comments documents:

- **“Chapter 40B comprehensive Permit – The Village at Robin Lane” as prepared by Beals and Thomas. Dated September 5, 2023. Project No. 3241.03.**

The responses below are intended to address these comments, while summarizing revisions made to address them. Responses from GPR are shown below in **green**.

Waiver Comments:

1. The Applicant is seeking a waiver from Section 125-23 of the Bylaw which limits residential land use within the Commercial District. The noted section of the Bylaw refers to keeping the character of the Commercial District consistent with the Master Plan adopted by the Planning Board. The waiver is necessary to accommodate the proposed residential use. B+T takes no exception to the requested waiver from a technical standpoint.
No comment.
2. The Applicant is seeking waivers from Section 125-30.A and 125-31 of the Bylaw, which require that residential structures be provided with their own lot and limits the number of structures per lot. As proposed, all structures are proposed to be constructed on a single lot. B+T takes no exception to the requested waivers from a technical standpoint.
No comment.

Goldsmith, Prest & Ringwall, Inc.

3. The Applicant is seeking a waiver from Section 125-30.B of the Bylaw, which requires that the building floor area ratio not exceed 10%. The Applicant is requesting relief from this requirement but does not indicate what the proposed floor area ratio would be if the waiver is granted and why the relief is necessary. We request that the Applicant clarify the proposed floor area ratio for the Project to provide context for the Board when considering the appropriateness of the waiver request.

The Harvard Bylaw defines floor area ratio as all buildings at all levels, including basements, garages, and sheds. The total site is area is 11.47 acres (499,853± SF), 10% allows 49,985 SF of gross floor area. Each of the dwelling units contains 3,290 SF. Twenty-four units is 78,960 SF plus the gazebo and the maintenance shed. The units alone are 15.8% of the land area.

4. The Applicant is seeking waivers from Section 125-30.E(2) and 125-30.E(4) of the Bylaw, which prescribe required setbacks from property lines. The Applicant further requests that setbacks for the residential structures be pursuant to Section 125-30.E(3) and 125-30.E(4), which pertain to setback alternatives. The proposed location of the gazebo does not comply and is only 6-ft from the property line and adjacent to Old Mill Road. It appears there may be opportunities to relocate this structure within other common areas for the Project. We request that the Applicant clarify the hardship that limits a compliant location for the gazebo.

The purpose of the waiver request for the gazebo location is to provide a school bus waiting area with a closer proximity to Old Mill Road.

5. The Applicant is seeking a waiver from Section 125-32.D of the Bylaw, which requires that communal sanitary disposal systems be owned and operated by the Town of Harvard. The Applicant is requesting the use of a private on-site communal system in accordance with applicable Title 5 regulations. Though not clearly stated, it appears this system will be owned and operated by a homeowner's association. As a potential condition of approval, we recommend that the Applicant provide documentation relative to the long-term operation and maintenance of this system to provide context for the Board when considering the appropriateness of the waiver request.

There are several conflicts within the Harvard Bylaw allowing communal septic systems to be privately owned and operated. It is and has been allowed in several 40B Harvard projects. The system will be an Innovative / Alternative system with nitrogen reduction because the property becomes a nitrogen sensitive area due the proposed work within the Interim Wellhead Protection Area (IWPA). The Board of Health will be reviewing the septic system and the required service agreement including required testing. These approvals will also require deed notices on the property.

6. The Applicant is seeking waivers from Section 125-38.F and 125-58.E of the Bylaw, which require design review submissions to the Planning Board. Being submitted as a Chapter 40B Comprehensive Permit, these are procedural waiver requests as the Board is the permit granting authority. However, those design reviews do include design information that has not been provided herein. Pursuant to Section 125.38.F(1)(a), the design review submission is to include renderings and narrative descriptions relative the façade and roofing materials, roof slopes, HVAC equipment locations, etc. B+T does not take exception to the procedural waiver being requested; however, does request that the Applicant provide all the technical information typically provided through the review process for consideration by the Board, either now or as a potential condition of approval.

No comment.

7. The Applicant is seeking a waiver from Section 125-38.G of the Bylaw, which requires the preparation of a landscape plan prepared by a Landscape Architect. Though street trees are depicted within the plan set, it is unclear what hardship prevents the Applicant from

preparing a compliant landscape plan. Additionally, the street trees proposed are located approximately 75'-100' apart, where Section 130-23, K requires trees a maximum of 50' apart. We recommend that the Applicant revise the design to include additional tree plantings. We also recommend that the Applicant provide a landscape plan prepared by a Landscape Architect either now or as a potential condition of approval.

The proposed project is not a subdivision, therefore compliance with Section 130 is not required. GPR and the applicant have revised the planting plans and proposed two typical unit landscaping details using input from the Harvard Climate Initiative Committee.

8. The Applicant is seeking a waiver from Section 125-39.A of the Bylaw, which prescribes parking/loading requirements. The referenced section contains multiple subsections. Other than a minor variation from the standard parking stall dimensions, it is unclear what relief the Applicant is seeking from this section. We request that the Applicant clarify the specific relief being requested. We recommend that the Board avoid the granting of blanket waivers from broad sections of the Bylaw.

Waiver request has been revised to specifically request relief for Section 125-39.A.(3)(a)[1]: "Parking stalls at least nine by 19 feet", to allow for guest parking stall dimension to be nine by 18 feet.

9. The Applicant is seeking waivers from Section 125-39.G(1) and 125-39.G(2) of the Bylaw, which stipulate sidewalk requirements. The Applicant is requesting relief on required materials (bituminous vs. cement concrete), locations (one side vs. both), and width (4-ft vs. 6-ft). B+T takes no exception to the requested waivers from a technical standpoint.

No comment.

10. We note for the Administrative Record that the Applicant is requesting certain waivers from the Harvard Wetland Protection Bylaw (Chapter 119) and the Bylaw's implementing Regulations (Chapter 147). With respect to the procedural waivers, specifically the relief requested from Section 119-4E (filing fee) and Section 147-6C (filing fees in the regulations), B+T takes no exception to these requests as the project is being reviewed through the Comprehensive Permit process. We do, however, question why the Applicant has not extended this waiver request to other procedural requirements as well, including the whole of Section 147-6 (local filing procedures), which appear to be equally applicable.

Although the proposed project is being reviewed through the Comprehensive Permit process, it does not exempt the project from filing a Notice of Intent application with the local approving authority. Therefore, local filing procedures must be maintained to allow for the Harvard Conservation Commission to review and express their concerns. Please see the attached letter to the ZBA and Harvard Conservation Commission (HCC) regarding the HCC comments on the requested waivers from their regulations.

11. The Applicant is seeking a waiver from Section 147-12 of the Wetland Protection Bylaw implementing Regulations, which speaks to required setbacks within what the Bylaw establishes as the "No Disturb Zone." Rather than just a blanket statement requesting review under the MA Wetlands Protection Act requirements, we recommend that the Applicant provide the rationale as to why relief from local setbacks is necessary, especially as the proposed wells appear to be less than 10 feet away from the wetland boundary and will generate spoils during the installation process.

The request for relief regarding the location of the proposed wells is required as the associated protective Zone 1 cannot contain any manmade structures, drainage, etc. Please see the response to #10.

12. The Applicant is seeking a waiver from Section 119-14C as it pertains to stormwater management. As Section 119-14C does not exist, we presume the Applicant means Section 147-14C of the Wetland Protection Bylaw implementing Regulations (Stormwater Management) and that the provided reference is a typographical error. Based on this assumption, we request the Applicant provide documentation as to why this waiver is necessary, and whether it is related to runoff rate requirements established therein.
The presumption that the section in question should be Section 147-14C is correct. This waiver request is necessary as the project cannot meet the requirement specifically under Section 147-14C.(1). "...stormwater best management practices shall be provided to reduce by at least 5%, match or improve the peak runoff rates and volumes under proposed conditions compared to existing conditions for the two- and ten-year frequency storm events,..." Again, please see the response to #10.
13. The Applicant has not requested a waiver from Section 147-14B of the Wetland Bylaw implementing Regulations which establishes plan requirements, including colorizing wetland delineations. We recommend the Applicant consider whether a waiver to this section is appropriate or adjust the plan accordingly.
A colored plan has been provided to the Conservation Commission during the filing of the Notice of Intent application. Please see the response to #10.

General Comments:

14. Section 125-39.A.3(b) of the Bylaw requires that car stops be provided for parking spaces as applicable. The Applicant is proposing two (2) visitor parking areas of six (6) spaces each. One includes a guardrail "car stop" and the other does not. We request that the Applicant clarify the design intent and provide car stops for all proposed parking spaces.
The safety feature associated with one of the two visitor parking areas was provided as it was deemed necessary due to the grade drop beyond the limit of the parking area. Additional curbing has been provided for the other parking area without guardrails, as a means to prevent unauthorized vehicular intrusion into green areas.
15. The design of the proposed Robin Lane appears to be 20-feet wide; however, in accordance with Section 130-23.D(1)(a) of the Regulations, each lane is required to be a minimum of 25-feet for a Subdivision. Understanding the Project is not a traditional subdivision, we request that the Applicant reevaluate the design in accordance with the Regulations to ensure that safe and adequate travel is provided.
This office (and members of the office) has designed and permitted several subdivisions over the years and each has waived the street width requirement. Further, the proposed project is not a subdivision, therefore not required to follow Section 130.
16. The design of the proposed Robin Lane appears to include center-line radius (curvature) of 125-feet and 300-feet. In accordance with Section 130-23.D(1)(c) of the Regulations, center-line curvature is required to be a minimum of 200-feet. Understanding the Project is not a traditional subdivision, we request that the Applicant reevaluate the design in accordance with the Regulations to ensure that safe and adequate travel is provided.
Same as above.
17. The design of the proposed cul-de-sac for Robin Lane appears to be 50-feet external radius (curvature); however, in accordance with Section 130-23.D(1)(c) of the Regulations, center-line curvature is required to be a minimum of 80-feet. Additionally, Section 130- 23.E stipulates that dead ends not extend beyond 500-ft. Understanding the Project is not a traditional subdivision, we request that the Applicant reevaluate the design in accordance with the Regulations to ensure that safe and adequate travel is

provided. Relative to the length of the dead-end driveway, we defer the adequacy of this condition to Harvard Fire Department personnel.

GPR has met with the Harvard Fire Department prior to filing the plans and designed the project to meet their requests. GPR assumes the Harvard Fire Department will forward a review in the near future.

18. Section 136-3.A(1)(a)[1][b][x] of the Bylaw requires that propose lighting and photometric analysis be included with a Comprehensive permit submission. We request that the Applicant provide the referenced documentation in accordance with implementing Bylaw Section 125-40.

As the proposed common private driveway (Robin Lane) is not subject to the same lighting requirements as a proposed subdivision roadway, site lighting is only limited to individual lighting apparatus commonly associated with residential dwellings.

19. The Applicant proposes to construct three potable water wells to service the Project; however, information regarding the design water demand does not appear to have been included. We request that the Applicant clarify and document assumptions that we were used to determine the well designs and yields.

See Site Data on Sheet C1.0. See proposed IWPA Radius and Zone 1 Radius on Sheet C3.1. Said protective radii, placement and collection have been done in coordination with Northeast Geoscience, Inc. They will be overseeing the MA DEP PWS applications, permitting and installation with MA DEP PWS Division. MA DEP will be issuing the permits and approvals.

20. The Applicant does not appear to provide turning movements or diagrams for accessing the proposed drinking water well area. We request that the Applicant provide turning movements documenting that a service vehicle could access the proposed well location, turnaround, and drive out.

Access into the proposed drinking water well area is limited to maintenance vehicles, which does not require swift access to the designated area. Maintenance vehicles should be able to back onto the designated area as needed.

21. We request that the Applicant clarify the design intent regarding the intersection between the gravel path to the proposed well area, sidewalk, and the bituminous concrete curbed paved road. We request that the Applicant consider how a maintenance or emergency response vehicle would interact with this intersection and provide for a level transition.

It is not intended for emergency response vehicles to access the gravel path to the proposed well area, drainage features or septic system. Maintenance vehicles can go over cape cod berm and onto the gravel path from the driveway.

22. There appear to be proposed contours missing at the rear of Building 11. We request that the Applicant clarify the design intent.

Proposed contours have been revised to clarify the design intent.

23. The Applicant does not appear to provide a clear path for maintenance equipment to be able to access all sides of the proposed infiltration basin or sediment forebay. We request that the Applicant clarify how the proposed Best Management Practices (BMPs) will be maintained.

Maintenance vehicles can access the sediment forebay using the gravel path and the east side of the infiltration basin, as well as going over the drainage swale as needed to access the berm side of the infiltration basin.

24. We acknowledge that the Applicant has provided some turning movements for emergency vehicles within their Driveway Profile & Emergency Vehicle Turning

Movement plan; however, we request that the Applicant demonstrate additional turning movements for emergency vehicles entering and leaving the Site from both the east and west along Old Mill Road. Additionally, from the provided plan it appears that a fire truck leaving the Site heading east on Old Mill Road will need to enter an oncoming lane in order to complete the turn. We request that the Applicant clarify the design intent and revise the plan as necessary so that vehicles entering and exiting the Site stay in their respective lanes during the turning movements. We defer ultimate review of the adequacy of the access provided to Harvard Fire Department personnel.

Additional emergency vehicle turning movements along Old Mill Road were provided as requested. It is within the design intent to allow the emergency vehicle to slightly encroach upon the oncoming lane while making a right-hand turn onto Old Mill Road. The Harvard Fire Department has previously reviewed and approved the emergency vehicle movements.

25. The Applicant appears to propose one dry hydrant at the end of the cul-de-sac over approximately five hundred and fifty feet from Old Mill Road. From our site visit, B+T did not observe fire hydrants along Old Mill Road in the vicinity of the Project. We recommend that the Town of Harvard Fire Department review the plan relative to the adequacy of the fire hydrant location and emergency response. With portions of the dry hydrant cistern being within the driveway, we request that the Applicant document the structure meets H-20 loading requirements.

Additional note has been included under the fire cistern detail to specify for H-20 loading requirements for the structure.

26. We request that the Applicant document that the roots from the proposed plant materials sited above and in the vicinity of the proposed 30,000-gallon underground cistern will not impact the long-term functionality and integrity of the cistern or impede the growth and establishment of the plantings.

Plant materials above the proposed 30,000-gallon underground cistern are limited to small shrubs and grasses that will not interfere with the long-term functionality and integrity of the fire cistern.

27. The Applicant proposes to use an on-site pressure distribution septic system sited in the northeastern portion of the Site adjacent to Old Mill Road. Test pits in the area indicate that estimated seasonal high groundwater (ESHW) is conservatively approximately 3.5-feet from existing grade (approximate ESHGW elevation ± 242 -feet). The Applicant does not appear to provide a cross section of the proposed septic system with elevations and Plan Reference #4 of the plan set notes the date of the sewage system plans to be "TBD". We request that the Applicant provide a cross section for the proposed system with elevations documenting appropriate offset to ESHGW. We defer review and approval of the proposed system to the Board of Health review process.

Supporting documents to be provided as required per Board of Health's application and review of the shared system onsite.

28. The proposed utilities are not depicted in the profile; however, the water main and sewer trunk line cross in multiple locations. There is no indication or detail for concrete encasement of mains where this occurs. We request that the Applicant clarify the design intent for these crossings and revise the plans as applicable.

A Site Plan Note has been provided to indicate concrete pipe encasement as needed for crossings, additionally concrete encasement has also been provided. See Sheet C3.1 and C7.1.

29. Street signs do not appear to be depicted within the provided plans. We request that the Applicant revise the plans to depict street signs consistent with Section 130-25 G of the Regulations.

Proposed private common driveway sign has been provided.

30. It appears that the Riverfront Area depicted on the plans extends more than 200 feet from the flagging to the east of flags RF-6B through RF-8B. We recommend that the Applicant revise the depiction of the Riverfront Area to extend 200-ft from the Mean Annual High Water.

200-ft Riverfront Area is correctly depicted on the plan. The extension of the Riverfront Area along the southern portion of the project site is due to the flag RF-2B. Site Plan has been revised to show further extent of flagging along Bowers Brook south of the subject site.

31. The Erosion and Sediment Control Requirements provided by the Applicant do not appear to account for dust mitigation. We request that dust mitigation procedure be incorporated into the documentation.

Dust mitigation shall be addressed as part of the SWPPP submission prior to construction.

Stormwater Comments:

32. Standard 2 of the Handbook requires that the Applicant demonstrate peak discharge rate attenuation. Section 14714 of Regulations further require peak rate and runoff volume attenuation with a reduction of 5% or match pre- to post-development analysis for the 2-yr and 10-yr storm events. As modeled, the Project meets these criteria. However, the post development modeling utilizes times of concentration (Tc) less than 6 minutes (0.1 hrs.) within the analysis which does not comply with TR-55 methodology. 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 Handbook.

Stormwater model has been revised to utilize a minimum 6-minute Tc as requested. See revised Stormwater Management Report.

33. Standard 3 of the Handbook stipulates the requirements for stormwater recharge on-site. We note that a portion of the runoff from the proposed roofs appears to discharge to the on-site wetlands without being captured by a BMP. We request that the Applicant clarify the design intent and revise the recharge calculations or plans as necessary.

Proposed roof runoffs that will not be captured by a BMP are limited to the back portion of the building No. 11 & 12. Said portion of the roof runoffs are considered "clean" and will overland flow across 100 ft+ of grass/vegetations, prior to discharging into the wetland area. Required onsite infiltration volume has been met per Standard 3, and more than 65% of stormwater runoff generated from the proposed impervious area has been captured and treated.

34. Standard 8 of the Handbook stipulates requirements for construction period controls and the submission of a Stormwater Pollution Prevention Plan (SWPPP). We note that a SWPPP or draft SWPPP has not been provided by the Applicant. We recommend that the submission of a SWPPP prior to construction be considered as a potential condition of approval.

No comment.

35. Standard 10 of the Handbook requires the Owner to provide a written statement confirming that there will be no illicit discharges to proposed stormwater BMPs. We note

that an Illicit Discharge Compliance Statement has not been provided by the Applicant. We recommend that the submission of a signed Illicit Discharge Compliance Statement be considered as a potential condition of approval.

Illicit Discharge Compliance Statement has been provided as requested revised stormwater management report.

36. During our site visit on August 21, 2023, B+T observed an existing drainage channel that bisects the proposed development area, terminating at the wetland system in the western portion of the Site. The channel appears to be fed by an existing off-site HDPE culvert beneath Ayer Road. The design currently proposes to site one of the buildings within the existing channel. We request that the Applicant clarify the design intent and revise the design and grading scheme as necessary.

A proposed drainage diverter structure has been provided to convey existing overland flow from upgradient property to continue around the development.

37. In accordance with Chapter 2 of the Handbook, a soil boring or test pit shall be dug for every 5,000 sf of basin area with a minimum of three for each infiltration BMP. The Applicant appears to have provided one test pit roughly within the footprint of the proposed Infiltration Basin (1B) which was dug in November of 1999 and none in the vicinity of the proposed Infiltration Chamber (IC). We recommend that the Applicant provide additional test pit data to confirm ESHGW, soil textures and classifications, and justify the infiltration rates utilized in the post-development stormwater calculations. Furthermore, the Handbook requires a 2-ft vertical separation between the seasonal high groundwater elevation and the bottom of infiltrative BMPs. Those systems designed to attenuate the 10-year design storm and above also need to demonstrate a 4-ft vertical separation to groundwater, or a mounding analysis is required. We recognize that the Applicant has provided mounding analyses for the proposed BMPs; however, without determining the elevation of ESHGW in the vicinity of the BMPs it is unclear if groundwater will be a factor in BMP dewatering. We request that the Applicant document and establish the seasonal high groundwater elevation for each of the infiltrative BMPs and provide additional documentation on how values such as specific yield, hydrologic conductivity, etc. were determined.

Although there is only one soil test pit within the limit of the proposed Infiltration Basin and none within the limit of the proposed Infiltration Chamber, there are several test pits near the proposed BMPs to suggest that soil condition is consistent throughout the project site. Although we feel that the nearby test pits should be sufficient in justifying the parameters used for design purposes, additional soil testing shall be performed, and the soil logs shall be provided as supplementary documentation.

38. Stormwater from roofs appears to be included in subcatchments discharging to the proposed stormwater BMPs; however, gutters or roof drains do not appear to be included on the plans. We request that the Applicant clarify how stormwater runoff from the roofs will be collected and conveyed to the proposed drainage system and stormwater BMPs.

Stormwater runoff from the roofs will either be from a drip edge overflow or from downspouts which will flow overland and get collected by either the driveway catch basins, drainage swales or directly into the sediment forebay/Infiltration Basin.

39. Sizing calculations for the proposed sediment forebays do not appear to have been provided. We request that the referenced calculations be provided.

Supporting documents provided as requested within revised Stormwater Management Report.

Sincerely,
Goldsmith, Prest & Ringwall, Inc.



Limhuot Tiv, PE

Copy to: 211140
Walter Erikson

Attachments:

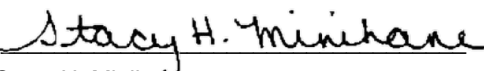
1. "40B Residential Development – The Village at Robin Lane" as prepared by Goldsmith, Prest & Ringwall, Inc. Dated June 2023. Last Revised 9/20/2023. Job No. 211140.
2. "Stormwater Management Report – The Village at Robin Lane" as prepared by Goldsmith, Prest & Ringwall, Inc. Revision-1 9/18/2023. Job No. 211140.

Town of Harvard
Zoning Board of Appeals
13 Ayer Road
Harvard, MA 01451
Frank O'Connor, Jr.Invoice number 3241.03-1
Date 09/08/2023Project **3241.03**
The Village at Robin Lane
Old Mill Road at Ayer Road
Harvard, MA

FOR PROFESSIONAL SERVICES RENDERED: this period through September 08, 2023

Services to undertake a peer review of The village at Robin lane (Old Mill Road at Ayer Road) Comprehensive Permit application. During this period we: completed a site visit, completed our review of submitted materials and issued our associated comment letter, and coordinated with the Town as necessary.

	Hours	Amount
Site Visit		
Professional Staff I	4.50	652.50
Review Letter		
Senior Professional Staff II	2.75	646.25
Senior Professional Staff III	1.50	307.50
Senior Professional Staff V	12.00	2,100.00
Senior Professional Staff VI	7.50	1,200.00
Professional Staff I	8.25	1,196.25
Review Letter subtotal		5,450.00
Supplemental Review Allowance		
Senior Professional Staff V	0.50	87.50
Administrative Staff I	0.25	20.00
Supplemental Review Allowance subtotal		107.50
Reimbursable Expenses		
Mileage		36.03
Invoice total		6,246.03

By: 
Stacy H. Minihane
Principal