

**TOWN OF HARVARD
PLANNING BOARD AGENDA
MONDAY, SEPTEMBER 18, 2023 @ 7:00PM**

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.

THVolGovt Pro is inviting you to a scheduled Zoom meeting.

Join Zoom Meeting

<https://us02web.zoom.us/j/85616408933?pwd=TmVKMlYrb3d1eXpRSDBnYzdmeEhJdz09>

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Meeting ID: 856 1640 8933

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Public Comment

Old Business: a) Updates on Ayer Road visioning phases 2 & 3.

New Business: a) Interview with Mr. Richard Abt, to fill Associate Planning Board member seat.
b) Update on Chestnut Tree & Landscape at 320 Ayer Road & Conservation Comm.

Public Hearings:

7:30pm **Continuation of Public Hearing for Section 125-35:** Open Space Residential Development Bylaw Amendment for adoption.

Standard Business: a) Review Metrics
b) Board Member Reports

- Representatives & Liaisons Update
- Community Matters

c) Planning Board budget update
d) Prospective MBTA Multi-family zoned overlay district bylaw
e) Master Planning for 2026
f) 2016 Master Plan Action item updates from Boards
g) Approve Minutes

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 also be brought up for discussion to the extent permitted by law.

**NEXT SCHEDULED MEETINGS:
MONDAY, OCTOBER 2, 2023**

AS

TOWN OF HARVARD

VOLUNTEER APPLICATION (12/02/2008)



Thank you for your interest in serving the town of Harvard. Please complete this application to be kept informed of volunteer opportunities and/or to apply for a specific position or fill a vacancy when one occurs. You may be also be contacted based on your stated areas of interest for other opportunities to volunteer. Your application will be kept on file for 3 years.

Date of Application: August 15, 2023

Applicant Information:

Name: Richard B. Abt Jr

Address: 119 S. Shaker Rd, Harvard

Home/Work Phone # 617-257-2129

Mobile Phone# 617-257-2129

Email Address: r_abt@outlook.com

Indicate below which Board(s) or Committee(s) are of interest to you:

Planning Board

Have you previously been a member of a Board, Committee or Commission (either in Harvard or elsewhere)? If so, please list the Board name and your approximate dates of service:

Do you have any time restrictions? YES NO

Are you a registered voter? YES NO

Please list your present occupation and employer (you may also attach your résumé or CV)

Retired for two years. Formerly an engineering project/program manager.

Do you, your spouse, or your employer have any current or potential business relationship with the Town of Harvard that could create a conflict of interest? (If YES, please describe the possible conflict) No conflicts

Please outline any education, special training or other areas of interest you have that may be relevant to the appointment sought.

Please see attached resume.

Received by Town of Harvard

Return to: Town Of Harvard, 13 Ayer Road, Harvard MA 01451 or email jdoucet@harvard-ma.gov

RICHARD B. ABT JR.

Harvard, MA. 01451
617.257.2129

r_abt@outlook.com
<https://www.linkedin.com/in/richardabt/>

PROGRAM / SENIOR PROJECT MANAGER

Accomplished engineering professional with a history of success and experience in engineering and technology solutions delivery, project, program, and customer relationship management. Known for the ability to manage complex and demanding projects and delivering multiple projects on-time and within budget. Highly skilled at vendor and customer management and negotiations, with a thorough understanding of evolving business needs and technological capabilities. Previous Security Clearance. Key skills include:

Business Development, Manufacturing
End-to-End Project Management including RFP & Stage/Gate process
Robotics, Motion Control, Complex Electro-Optical/Machine Vision System Development
Software Object Oriented Design, Testing, Integration, and SQA
Product Development/Marketing/NPI - Embedded Software & Automation Systems
Process Improvement Initiatives & Cost Control - Cross-Functional Team Management
Automated Machinery Design and Development - Six Sigma Methodologies
Product Lifecycle Management - FMECA Process - Earned Value Management System (EVMS)
Risk Identification, Mitigation and Escalation - Customer Relationship and Expectations Management
Factory Acceptance Testing (FAT) - CE (European) Machinery Certification
Clean Room Setup and Operations - Vendor and Contractor Management
Design for Manufacturability (DFM) - Software Metrics and Version Control
Resource Allocation and Management - Verification and Validation Procedures
JIRA/SharePoint/DOORS/MATLAB

EXPERIENCE

Staples Supply Chain & Logistics, Framingham, MA
Manager, Automaton & Robotics

June 2019 - June 2020

Led a team of cross-functional engineers to support design, development, and installation of robotic and automation solutions for order fulfillment and warehouse distribution operations.

- Managed project schedule and budgets.
- Manage spare parts delivery and provide support to site operations personnel.
- Support site maintenance, logistics and training activities.
- Managed 3rd party contractors including offshore engineering teams.
- Contributed to developing/testing innovative ideas for warehouse automation.

MKS Instruments, Wilmington, MA
Senior Project Manager

April – August 2018

Responsible for leading large-scale projects for the global operations organization of a top semiconductor equipment manufacturer.

- Led multi-site efforts and coordinated cross-department project teams for site build out, product transfer and significant production capacity expansion.
- Primary interface for operations projects.
- Acquired resources from other departments to complete projects.
- Prepare and deliver status update presentations to senior management.
- Motivate, lead and drive performance of the participating site teams.
- Manage site preparation, including budget, for moving Paragon product line production to Nogales, Mexico site.
- Implement statistical process control techniques on the Paragon production line.
- Assist with new product introduction (NPI) process for two new products.
- Manage/coordinate cross-functional teams, interface with account managers.

Symbotic LLC, Wilmington, MA**September 2016 – March 2018****Program Manager**

Responsible for managing customer warehouse robotic implementation projects from initial testing to project close out. Projects contain from 50 – 500 robots for automatically storing and retrieving material from the multilevel structure.

- Manage multi-disciplinary teams to meet major schedule milestones.
- Organize meetings and calls between different company groups and customer personnel.
- Detailed status tracking and reporting to company and customer management.
- Manage vendors and contractors.
- Allocate resources among multiple projects with constantly changing priorities.
- Directed teams/resources for three \$30-40M projects and the company test center.
- Created KPI scorecard to close out \$40M contract and receive final payment.
- Provide single point of contact between company and customer.
- Lead, motivate and drive teams to solve system problems involving: robot/system programming, QA, IT, electrical, mechanical, pneumatic systems.
- Meet all schedule and customer contract payment milestones.
- Spend significant time at project site keeping customer updated and teams moving forward.

Sensitech – Div. of United Technologies, Beverly, MA**April 2015 – June 2016****Sr. Project Manager**

Led project teams to produce products and services to monitor/manage temperature sensitive food, pharmaceuticals, biologics and industrial chemicals.

- Responsible for planning, managing, monitoring, and communicating status of regular and custom engineering and other project releases.
- Manage Wireless/Cellular communications projects and NPI.
- Providing a single point of contact for product releases while keeping the cross-functional engineering teams on task and schedule throughout the entire software development life cycle (SDLC).
- Collaborated with Product Management, SW/HW Engineering Management, SQA and Deployment teams as well as other stakeholders to ensure a smooth and seamless release of products and project deliverables.
- Lead teams (onshore/off shore) in project design, problem solving and removing project roadblocks.
- Conduct risk mitigation and escalation analysis activities.
- Provide team leadership, management and direction with tight schedules multiple projects involving SW/HW.
- Engage Product Managers to define project scope/schedules, dependencies and remove roadblocks.
- Influence people not directly reporting to me to accomplish project goals.

AgaMatrix, Inc., Salem, NH**December 2013 – December 2014****Sr. Project Manager**

Directed team of four junior project managers.

- Provided project/product management for different types of blood glucose meters (Class II) for US and European pharmaceutical markets.
- The cross-functional teams consist of requirement analysis, HW/FW design engineers, test/integration engineers and marketing group. Projects managed with JIRA and Confluence.
- Worked with US FDA and EU agencies to certify diabetes devices in GMP environment.
- Provided customers and company management project status updates..
- Managed project schedules and budgets from start notice through to product release to the market.
- Knowledge of Certification, 510k, ISO13485, IEC 60601 standards.
- Contributed to new business development by managing customer projects with very short timelines.
- Organized offshore teams for manufacturing and marketing activities.
- Influenced people not directly reporting to me to accomplish project goals.
- Resource allocation guidance to keep projects on schedule.
- Provided mentoring and guidance to junior project managers

Project Manager

Provided project/product management and engineering insights for CMAT (Camera Module Align and Test) and PMAT (Photonic Module Align and Test) line of custom robotic electro-optical/electro-mechanical and machine vision automation solutions.

- Led teams to produce flexible automation systems that are used in high volume manufacturing lines.
- Monitored schedule/budget of multiple projects and updated management on project status. Managed cross-functional engineering team including Agile SW development and LIMS Interface.
- Liaised with customers to develop project proposals, schedules and budgets.
- Instrumental in design and build of custom electro-mechanical options for machines including vision, defining machine requirements, and close order for production line or research machines.
- Visited customer sites to supervise machine installation and training activities.
- Contributed to new business development by managing projects involving the development of prototype cameras.
- Worked with offshore teams for machine maintenance and troubleshooting.
- Steered efforts towards outsourcing parts of the machine to save approximately 35-40 hours assembly time.
- Influenced people not directly reporting to me in order to accomplish the project goals.
- Manufacture and debugging of complex electro-mechanical components (SW, EE, ME) for automotive and medical industries.
- Revitalized two stalled projects to get them back-on-track using a variety of methods.
- Successfully directed CE certification of machinery despite severe financial challenges for the company.
- Effectively resolved conflicting requirements resulting in no schedule slip; Reduced nonvalue added work and machine cost.
- Played an integral role in implementing complex requirements for camera alignment and testing.
- Conducted design reviews with the customer and kept them updated on project/machine build progress.

Raytheon, Integrated Defense System Division, Tewksbury, MA

April 1996 - May 2011

Project Engineer, Senior Software Engineer II & Cost Account Manager

Developed SW & HW/Digital systems for Spy-3 high power radar and Standard Missile flight guidance/Sensors with real-time RHEL.

- Managed schedules, budgets, and resources for eight-member multi-disciplinary software team.
- Produced radar signal processing HW.
- Led teams for rapid prototyping projects.
- Tracked software metrics and produced management briefing charts and reports.
- Participated in project gate reviews including System Preliminary Design Reviews (PDR) and Critical Design Reviews (CDR) for complex software systems.
- Worked with internal and external customers to keep project on schedule and budget.
- Proposal development and Cost Account Manager (EVMS) including WBS.
- Six sigma and EAR/ITAR/FAR training.
- Contributed to feasibility studies.
- Designed, developed, tested, debugged and integrated CMMI-5 software for major defense systems.
- Slashed development and production testing time by 25% by implementing open loop and computer in the loop (CIL) simulations for radar guided missiles.
- Developed SW and Digital systems for the Standard Block IV missile system
- Provided EVMS reporting and Cost Account Management for SW development team.
- Junior Engineer and Team Mentoring produced cohesiveness among culturally diverse team members.
- Achieved several team awards for outstanding effort; successfully worked with government customers.

EDUCATION

Master of Science (MS), Advanced Technology / Computer Science
State University of New York, Binghamton, NY

Bachelor of Science (BS), Electrical Engineering, Stevens Institute of Technology, Hoboken, NJ

PROFESSIONAL AFFILIATIONS

Project Managers Network
Boston Software Engineering Managers
Automation & Control Engineering Network
Industrial Automation and Controls Network
Machine Safety Forum
Systems Engineers Network Safety Automation Forum

§ 125-35. Open Space and Conservation - Planned Residential Development (OSC-PRD).

[Added 3-29-2003 ATM by Art. 32¹]

This section establishes and regulates Open Space and Conservation Planned Residential Development (OSC-PRD). Development under this section is pursuant to a special permit granted by the Planning Board.

A. Purpose and intent. The purpose and intent of the OSC-PRD provision is to permit high-quality residential development that preserves open space, water resources, wetlands, habitat, prime agricultural land, scenic landscapes and natural features, reduces infrastructure and site development cost, and promotes a diversity of housing opportunities within the Town, while respecting and enhancing neighborhoods, and promoting attractive standards of appearance and aesthetics consistent with Town character.

- (1) A further purpose of the OSC-PRD provision is to reduce the anticipated negative fiscal impact on the Town associated with conventional residential development.
- (2) The OSC-PRD provision is designed to encourage the siting of homes in a manner that clusters units together in well-designed village settings, on buildable portions of the site, as a distinct alternative to the conventional more-arbitrary siting associated with lot-by-lot development typically reflected in plans submitted pursuant to Massachusetts General Laws Chapter 41, Sections 81K through 81GG, the Subdivision Control Law, which often does not further said purpose and intent.
- (3) ~~The OSC-PRD will aid the Town in developing sustainable housing and associated infrastructure in harmony, as much as possible, with the Town's Climate Action Plan.~~

B. Applicability. The Planning Board may grant a special permit for an OSC-PRD on an Agricultural-Residential (AR) zoned tract of land that is a least 4.5 acres of land area, with definite boundaries ascertainable from a recorded or registered deed(s) or recorded or registered plan(s). Existing public and private ways need not constitute boundaries of the tract, but the area within such ways shall not be counted in determining tract size.

- (1) **Permitted uses in Open Space and Conservation Planned Residential Development.** Permitted uses include the following:

¹ Editor's Note: This article also repealed former § 125-35. Cluster development for open space conservation, added 3-31-1990 ATM by Art. 18, as amended.

- (a) Single-family detached dwellings.
- (b) ~~Multi-family dwellings. Attached units, not to exceed 6 or more units in any single building.~~
- (c) Agriculture and horticultural uses including but not limited to orchards, vineyards, forestry, farming for fruits and vegetables.
- (d) Open space.
- (e) Trails.
- (f) Passive outdoor recreation as defined in, cf. 301 CMR Mass. Reg. 5.02.
- (g) Educational and religious uses and other uses not mentioned above which are exempt from regulation by zoning under Massachusetts General Laws Chapter 40A, Section 3.
- (h) Accessory residential recreational uses (e.g., tennis court, pool, playground).
- (i) Active outdoor recreation as defined in, cf. 301 CMR Mass. Reg. 5.02.

C. Requirements and process for approval. An applicant who is the owner (or with the permission of the owner) of a 45 acre or larger tract of land in the AR District as described above, may submit to the Planning Board a plan and application for a special permit for an OSC-PRD in accordance with the provisions of this section, excepting the building lots or lot shown on such plans from the lot area and other dimensional requirements specified in other sections of this Bylaw. While a subdivision plan is not required to be submitted in conjunction with an application for a special permit under the provisions of this section, in the event that a subdivision plan is being proposed by the applicant, such plan shall be submitted to the Planning Board in accordance with the Subdivision Rules and Regulations of the Planning Board.

- (1) **Submittal requirements.** Prior to the granting of a special permit pursuant to this section, a duly submitted application for said special permit shall be submitted together with a site plan to the Planning Board, in accordance with § 125-38, Site plans, of the Bylaw, and any Site Plan Rules and Regulations adopted by the Planning Board. For purposes of this Bylaw, a landscape architect, architect, land surveyor, and professional engineer ~~shall~~ must participate in the preparation of such site plan, which shall include the following:
 - (a) The location of the proposed development.

- (b) The size of the site in acres.
- (c) The total number of the proposed buildings and/or lots, and the size of each in square feet.
- (d) The acreage and proposed use of permanent open space.
- (e) A statement on the disposition or manner of ownership of the proposed open space.
- (f) The lots or areas which are to be used as building areas or lots, and the lots or areas which are to remain as permanent open space.
- (g) Lines showing yard and setbacks as required by this Bylaw, within which dwellings or structures must lie.
- (h) Sufficient detail of proposed built and natural features as described in § 125-35D and § 125-35E to enable the Planning Board to make the required determinations of § 125-35C(3).
- (i) A landscape preservation plan sheet(s) to be included with the site plan, reflecting the existing, natural features to be preserved and proposed landscape features and details, including snow storage area(s).
- (j) Site Development Climate Mitigation Narrative. All features which are sustainable and designed to help mitigate climate impact should be included in this plan. This plan should specifically address, but not be limited to, the following areas.
 - [1]. Heating and Cooling. How the development will be heated and cooled. The plans to use heat pumps or a geothermal system to heat and cool the buildings. Electrification of all systems and appliances.
 - [2]. Energy Generation. Solar panels should be considered to the maximum extent. Include how much power they will provide both in absolute kilowatt-hours and as a percentage of the total electricity requirements.
 - [3]. Energy Use and Resource Use Minimization. Roofing, insulation and windows that minimize heat loss and cooling loss. LED lights should be installed in all common areas. Water-saving fixtures should be installed in units as well as for landscaping.
 - [4]. Parking. EV chargers installed with infrastructure to expand capacity based on anticipated growth. Include percentage of the anticipated automobile population that will be served by the chargers and the

anticipated expansion readiness. Parking to be pervious to reduce runoff.

[5]. Landscaping. Any trees removed from the site to be replaced with trees of equal size or compensated by more trees than removed. Shade trees be planted in areas to offset heat from parking areas. Drought-tolerant and native plants to be used in the landscaping.

[6]. Site Infrastructure. Composting and recycling stations available to all residents. Rain water collection site to reduce water usage.

(k) Requests for waiver or relief to dimensional standards as identified in § 125-35 J (1).

~~(2) **Submittal of preliminary plan.** In order to assist the Planning Board in making a determination, pursuant to § **125-35C(3)(d)**, that an OSC-PRD is superior to a conventional subdivision development, an applicant must submit a plan of the required form and content standards as a "Preliminary Plan" in accordance with the Massachusetts General Laws Chapter 41, Section 81S and the "Rules and Regulations of the Harvard Planning Board Relative to Subdivision Control." Such plan, although not a formal subdivision plan filing, and submitted for conceptual purposes only, shall include a perimeter survey prepared by a registered land surveyor, location of wetlands delineated by a wetlands specialist, and topography based upon the most recent United States Geological Survey map. The applicant shall demonstrate to the satisfaction of the Board that a subdivision plan, if formally filed, would be buildable without reliance on significant waivers of the subdivision regulations, and without extraordinary engineering techniques. Further, the applicant must demonstrate and provide sufficient evidence, to the satisfaction of the Planning Board, that each of the lots reflected on the "Preliminary Plan" submitted are capable of being served by an individual sewage system that would comply with the regulations of the Board of Health.~~

(3) **Approval criteria.** After notice and a public hearing in accordance with Massachusetts General Laws Chapter 40A, Section 9, 11, and 15 and after following the procedure outlined in this Bylaw, the Planning Board may grant such a special permit with any conditions, safeguards, and limitations, if it determines:

- (a) That the application form and content referred to in § 125-35C(1), herein is properly completed.
- (b) That the site plan referred to in § 125-35C(1) is properly completed.

- (c) That all the other requirements of this Section and Bylaw are fully met.
- (d) That the design and layout of the proposed OSC-PRD ~~is superior to a conventional subdivision plan in preserving~~ preserves open space for conservation and recreation; that it preserves natural features of the land; allows more efficient provision of streets, utilities and other public services; and, that it provides a high degree of design quality, based on the criteria and considerations enumerated herein in § 125-35E.
- (e) That if development of single-family homes is being proposed on separate lots, as opposed to a clustered village concept that is a major objective of this Bylaw, exemplary site planning is demonstrated, and other determinations in § 125-35D, are met.

(2) Editor's Note: See Ch. 130, Subdivision Control.

D. Design criteria. In its consideration of an OSC-PRD, the Planning Board shall give particular attention to, and shall use as a basis for its decision, all of the following:

- (1) Lots, streets, off-street parking, sidewalks, pathways and buildings which achieve the harmonious integration of the proposed development with surrounding properties.
- (2) Overall layout and design that achieves the relationship between the proposed development and the land under consideration.
- (3) Appropriately sized and configured open spaces for active or passive recreation, and where possible, links to adjoining common open space areas.
- (4) Protection of natural features such as streams, mature trees or clusters of trees, rock outcrops, bluffs, slopes, high points, views, vistas, and historic or archeological features.
- (5) Provision of ~~large~~ buffer areas, composed of existing vegetation, to surround building groupings and building envelope areas, to discourage site clearing and encourage preservation of existing land cover and mature vegetation.
- (6) Provision of ~~access~~ accessibility to open spaces ~~for the physically handicapped, elderly and children.~~ for all, consistent with Massachusetts Architectural Access Board, 521 CMR 1.00 et seq. Accessibility Rules and Regulations~~guidelines.~~
- (7) Use of open spaces for preserving, enhancing, or providing scenic vistas; preservation and protection of historic resources.

- (8) Adequacy of provisions for public safety, protection from fire and flood, and maintenance of public facilities, streets, utilities, and open space.
- (9) Is consistent with the Town of Harvard Climate Action Plan, with sufficient conservation and sustainability in the design of the development.

E. Design quality. Project design for an OSC-PRD shall be reviewed by the Planning Board with input from Town officials, boards, any review consultant(s), and others as appropriate. This section is to be interpreted as guidelines to be applied flexibly by the Planning Board as appropriate to the situation under review, including factors such as foundation and soil characteristics and other extraordinary site constraints. While these guidelines apply to all site improvements and buildings and structures, it is not the intent of this section to prescribe or proscribe use of materials or methods of construction regulated by the state building code, but rather to enhance the appearance of the built environment within an OSC-PRD.

- (1) **Building and structure placement.** The placement of buildings and structures in an OSC-PRD should:
 - (a) Provide for maximum buffering of buildings and structures to adjoining properties either within the proposed OSC-PRD or to adjacent land uses. Such buffering includes, but is not limited to: landscaping, screening materials, natural barriers, fencing, and related measures.
 - (b) Preserve attractive views from major vantage points, especially from major thoroughfares and residential neighborhoods.
 - (c) Avoid regular spacings and building placements that will be viewed as continuous walls from important vantage points, which may be identified in an OSC-PRD pre-application conference.
 - (d) Avoid the placement of structures, common area facilities, and private space related to individual units in a manner that eclipses views or access to open space areas described in § 125-35K.
 - (e) ~~Ensure that 40% of all units are fully accessible to the disabled and that a majority of units have at least one accessible entrance and bathroom on a first floor.~~ an appropriate number of units are designed to be fully accessible consistent with Massachusetts Architectural Access Board 521 CMR 1.00 et seq. Accessibility Rules and Regulations Guidelines. If greater than 4 but fewer than 10 units, one unit must be accessible. If greater than 10 and fewer than 19, two units must be made accessible. For more than 20 units, 10% must be made accessible.

- (2) **Building massing/articulation.** The massing/articulation of buildings should:
- (a) Avoid unbroken building facades longer than 50 feet.
 - (b) Provide human-scale features, especially for pedestrians and at lower levels.
 - (c) Avoid unarticulated and monotonous building facades and window placement.
- (3) **Building appearance and treatment.** To the extent not inconsistent with or pre-empted by the Sstate Bbuilding Code, the following should be considered as applicable:
- (a) Materials and building treatments that reduce the visibility of the buildings from distant vantage points, and that are compatible with backgrounds and surroundings.
 - (b) Materials and colors compatible with other quality buildings of similar scale in the vicinity.
 - (c) Green building technologies and materials, wherever possible, to minimize adverse environmental impacts.
- (4) **Roofline articulation.** The design of buildings should:
- (a) Provide a variety of building heights and varied roofline articulation that stresses New England vernacular architecture.
 - (b) Locate taller buildings away from major streets, abutting and off-site single-family residential areas and homes.
- (5) **Landscaping.** Landscaping criteria are as follows:
- (a) All open areas, exclusive of areas to remain in an existing natural state within an OSC-PRD, should be landscaped in an appropriate manner, utilizing both natural and man-made materials such as indigenous grasses, trees, shrubs, and ~~attractive paving materials and outdoor furniture~~ other appropriate elements.
 - (b) Deciduous trees should be placed along new and existing streets and ways. Outdoor lighting should be considered in the landscaping plan, and should be designed to complement both man-made and natural

elements of the OSC-PRD and adjacent areas. ~~Appropriate methods (such as cutoff shields) should be used to avoid glare, light spillover onto abutting property.~~

- (c) Intensive, high-quality landscaping or preservation of existing vegetation should be provided within the OSC-PRD where it abuts major streets, existing residential areas, and along internal drives.
- (d) Preservation of existing vegetation or tree-lined areas should be maintained.
- (e) Parking areas and lots should use landscaping and terracing to break up large areas of pavement and to enhance residential flavor and appearance; trees and shrubs should be used to the maximum extent feasible.
- (f) Features such as shade trees, forest trees, and expansive planting areas should be preserved and/or introduced along external property boundaries and on the perimeter of the OSC-PRD itself, to buffer the site from adjoining parcels.

(g) Any lighting in the proposed development shall comply with ~~the~~ Lighting provisions of the Bylaw set forth in §125-40.

(h) Area should be designated for storage of plowed snow such that melting snow runoff will not result in undesired contamination or erosion

~~(6) Pedestrian amenities and recreation. In this category, the design should include the following components/characteristics, appropriate to the land under consideration.~~

~~(a) Accessible pedestrian-oriented features such as walkways, pergolas, outdoor sitting plazas, landscaped open space, drop-off areas, and recreational facilities should be emphasized.~~

~~(b) Tree-lined or otherwise appropriately landscaped pedestrian paths and walkways should link together areas designated as open space within the site, and wherever possible, to adjoining public areas.~~

~~(c) Passive and active recreational facilities should be of a size and scale appropriate for the number of units proposed.~~

F. Utilities. To the maximum extent feasible, all utilities ~~should~~ shall be located underground.

G. Signage. ~~At each principal entrance to the site, one sign only shall be permitted; it should be of a maximum signboard area of three square feet, with content limited to identifying the name and address of the development. All signs shall comply with the sign provisions of the Protective Bylaw set forth in § 125-41, provided, that,--h~~ However, within the development, signs, not to exceed two square-foot each, of a number and location to be approved as part of the OSC-PRD, may be permitted for the sole purposes of orientation and direction, and of identifying common building spaces.

~~(1) Within the development, signs, not to exceed two square-foot each, of a number and location to be approved as part of the OSC-PRD, may be permitted for the sole purposes of orientation and direction, and of identifying common building spaces.~~

H. Base development density. The maximum number of dwelling units per acre permitted in an OSC-PRD shall not exceed ~~one~~ two units per 1.50 acre of land area, and in no event exceed the maximum number of lots or dwelling units obtainable under a conventional subdivision plan for the land area under consideration, except as provided in § 125-35I.

I. Development incentive.

(1) The Planning Board may authorize an increase in lots or dwelling units up to a maximum of ~~25% above that allowed under 125-35H of this Bylaw,~~ provided the following conditions ten units per acre. Increased permissible density will be allocated as the following conditions are met:

(a) Additional Open Space Preservation The applicant proposes a significant increase in open space above 50% and preserves significant natural resources, in the opinion of Planning Board.

[1] The applicant proposes a significant increase in open space above 50%, and preserves significant natural resources.

[2] There is permanent preservation of land devoted or set aside for agricultural use or other unique preservation strategy, including preservation of historic structures or barns, or other special features of the built environment.

(If (a)[1] or (a)[2] above are found to be satisfied, in the opinion of Planning Board, it may authorize a 1 unit per acre increase over base density.)

(b) ~~There is permanent preservation of land devoted or set aside for agricultural use or other unique preservation strategy, including preservation of historic structures or barns, or other features of the built environment.~~ The applicant proposes public improvements or amenities

that result in substantial benefit to the Town and the general public, provided:

~~(If (a) and (b) above are found to be satisfied, in the opinion of Planning Board, it may authorize a 5% increase in applicable base density.)~~

(b) The applicant proposes public improvements or amenities that result in substantial benefit to the Town and the general public, provided:

[1] There are significant improvements to the environmental quality or condition of the site and its surrounding areas, including a decrease in stormwater runoff from what would otherwise result from a conventional subdivision plan.

[2] There are provisions contributing to off-site public facilities or environmental improvements beyond those necessary to mitigate the impacts of the proposed development.

(If (b)[1] or (b)[2] if (e) above are found to be satisfied, in the opinion of Planning Board, it may authorize a 1.5 unit per acre increase over base density.)

(c) Housing units for senior citizens and persons aged 55 years and over housing is provided. Such units should conform to §125-57E, Age-Appropriate Design. The applicant proposes public improvements or amenities that result in substantial benefit to the Town and the general public, provided:

~~(1) There are significant improvements to the environmental quality or condition of the site and its surrounding areas, including a decrease in stormwater runoff from what would otherwise result from a conventional subdivision plan.~~

~~(2) There are provisions contributing to off-site public facilities or environmental improvements beyond those necessary to mitigate the impacts of the proposed development.~~

(If (c) above is found to be satisfied, in the opinion of Planning Board, it may authorize a 5% increase in applicable 1.5 unit per acre increase over base density.)

(d) The applicant proposes attached dwellings that include a maximum of two bedrooms per unit, and are developed in the character of a New England Village style of architecture. sets aside 15% or more of lots or dwelling units on the site for Affordable Housing for purchase or rental by those with households of low or moderate incomes. Such units must be includable count toward the Town's Subsidized Housing Inventory, and comply be in accordance with the provisions of 760 CMR 56.00, as

may be amended. The Planning Board shall review and approve the actual percentage distribution of qualifying low versus moderate income units.

(If (d) above is found to be satisfied, in the opinion of Planning Board, it may authorize a 3 unit per acre increase over 5% increase in applicable base density.)

(e) Units are designed to conform with Passive House (PassivHaus) Design standards. Housing units for senior citizens and persons aged 55 years and over housing is provided.

(If (e) above is found to be satisfied, in the opinion of the Planning Board, it may authorize a 3 unit per acre increase over 5% increase in applicable base density.)

(f) The development incorporates at least five elements of environmentally conscious design beyond those elements required to meet ~~Sstretch~~ ~~Ceode~~ provisions, including, but not limited to heat pump/geothermal climate controls, smart windows, solar panels, smart outlets, LED lighting, substantial use of pervious pavement, conservation-minded landscaping including drought tolerant plantings, and low-flow water fixtures. Elements used to claim incentives using the Passive House Design in (e) above will not count toward the five elements for this incentive. The applicant sets aside 10% or more of lots or dwelling units on the site for “affordable housing” for purchase or rental by those with households of low or moderate incomes. Such units must count toward the Town’s Subsidized Housing Inventory, and be in accordance with the provisions of 760 CMR 45.00, as may be amended. The Planning Board shall review and approve the actual percentage distribution of qualifying low versus moderate income units.

(If (f) above is found to be satisfied, in the opinion of Planning Board, it may authorize a 1.5 unit per acre increase over 20% increase in applicable base density.)

Condition	Units per acre	Additional Units per acre
Base Density	2	
(a) Additional Open Space Preservation		1
(b) Substantial Benefit to Town		1.5
(c) Senior Housing		1.5
(d) Affordable Housing		3

Condition	Units per acre	Additional Units per acre
(e) Passive House (PassivHaus)		3
(f) Environmentally Conscious		1.5
Maximum Density if all conditions met	10	

- (2) ~~**Standards for on-site affordable units.** Housing units set aside as affordable housing, as described in §125-35(1)(f), shall have a gross floor area comparable to market rate units and shall be integrated into the development and not grouped together. When viewed from the exterior, the affordable units shall be indistinguishable from the market rate units in the same development. The developer shall provide adequate guarantee, acceptable to the Planning Board, to ensure the continued availability and affordability of the units in perpetuity; such guarantee must include recorded deed restrictions, recorded restrictive covenants relative to equity limitation, or other acceptable forms of guarantees. No more than 80% of the building permits for the market rate units shall be issued within an OSC-PRD until construction has commenced on all the affordable units; no more than 80% of the certificates of occupancy for the market rate units shall be issued until all of the certificates of occupancy for the affordable units have been issued.~~

J. Dimensional requirements. The following provisions shall apply:

- (1) The Planning Board may waive or reduce the minimum dimensional ~~for frontage and/or yard~~ requirements that would normally be applicable to land within the AR District in order to achieve maximum open space area, as provided below, and may permit more than one single or two-family dwelling be located on a lot in an OSC-PRD, except as provided below.
- (2) The parcel proposed for development must have a minimum of 50 feet of frontage on a public way or private way which is open to the public.
- ~~(3) Attached units shall contain no more than six units in a single building.~~
- (3) The minimum distance between clusters of multiple unit dwellings, shall be 50 feet.
- (4) A minimum width of 100 ~~150~~ feet of green area shall be established and maintained between any existing dwelling property adjacent to the OSC-PRD and the nearest dwelling unit or units in the OSC, and a minimum of 25 feet from adjacent property lines. ~~(Amended 4-2-2005 ATM by Art.34)~~
- (5) The minimum setback from internal roads shall be 25 feet.

- (6) The maximum height of proposed buildings shall be 35 feet, and shall not exceed 3-2 1/2 stories.
- (7) Except as provided in this Bylaw, any lot in an OSC-PRD shall comply with any other dimensional requirements of the zoning district in which it is located.

K. Common open space. In the aggregate, a minimum of 50% of the OSC-PRD parcel shall be devoted to contiguous open space, and a minimum of 30% of the parcel must be contiguous open space, completely devoid of any structure, parking, loading and unloading space, access ways thereto, or as private yards, patios, or gardens for the exclusive or principal use by residents of individual dwelling units. To the greatest extent possible, such open space shall be left in its undisturbed natural condition or shall be appropriate in size, shape, dimension, location, and character to assure its use as a conservation area, and where appropriate, a recreational area, and be a visual and natural amenity for the development and the Town. The common open space described herein is in substitution of and supersedes any other reference to common open space that may be described elsewhere in the Bylaw.

- (1) **Open space criteria.** The following criteria define open space, and open space that is considered usable for outdoor recreation within an OSC-PRD parcel:
 - (a) No more than 25% of common open space in an OSC-PRD shall be wetlands and a buffer within seventy-five feet of the wetland as defined in Harvard Wetland Protection Regulation, Chapter 119 of Code of the Town of Harvard. The seventy-five-foot buffer is strictly for the purpose of determining how much of the wetland or buffer may be considered open space.
 - (b) Unless approved by the Planning Board, common open space shall not be considered usable if the slope of the finished grade exceeds 33%.
 - ~~(c) Unless approved by the Planning Board, the nearest part of the common open space shall be more than 300 feet in distance from the nearest point of any building that it is proposed to serve.~~
 - (c) No common open space shall be considered usable unless it is compact and contiguous and has no dimension of less than 50 feet.
 - ~~(e) All usable open space shall be open to the sky and pervious.~~

L. Open space conveyance.

- (1) The common open space shall be conveyed in the following ways as approved by the Planning Board:
 - (a) To a corporation or trust comprising a homeowners association whose membership includes the owners of all lots or units contained in the development. The developer shall include in the deed to owners beneficial rights in said open land, and shall grant a perpetual open space restriction to the Town of Harvard or a non-profit corporation or organization over such land to ensure that it be kept in an open state and not be built upon for residential use, or developed for accessory uses such as parking or roadways. Such restriction shall be in such form and substance as the Planning Board shall prescribe, and may contain such additional restrictions on development and use of the open space as the Planning Board may deem appropriate.
 - (b) To a non-profit organization, the principal purpose of which is the conservation of open space. The developer or non-profit organization shall grant an open space restriction as set forth above.
 - (c) To the Town for a park or open space use, subject to the approval of the Select Board, for custody and management by the Park and Recreation Commission if a park, otherwise by the Conservation Commission, with a clause insuring that it shall be maintained as open space. [Amended 10-22-2018 STM by Art. 2]
- (2) **Multiple conveyance.** To provide flexibility, and when deemed in the public interest, the Planning Board may approve more than one organization to accept the open space conveyance, particularly when it is appropriate that a major portion of such land be conveyed to the Town or a non-profit conservation organization, and another portion of such land is more appropriately conveyed to an owners' association.

M. Passageways. Private roadways and common driveways shall be allowed in OSC-PRD parcels. While roadway surface widths may be narrower than widths associated with a conventional traditional subdivision, the durability of passageway surfaces and subsurfaces must be comparable to those in a conventional subdivision. All driveways must conform to the requirements of § 125-31 of the Bylaw. (Amended 4-2-2005 ATM by Art. 34)

- (1) **Criteria for passageways.** The following criteria shall guide the development of these passageways:
 - (a) Paved ~~Cleared~~ widths for traveled ways (excluding on-street parking spaces and passing turnouts) shall not be more than 22 ~~20~~ feet or less than 12 feet for one-way traffic. A cleared height of not less than 16 feet above the entire passageway shall be established and maintained.

- (b) Drainage and surface runoff from all passageways must be suitably accommodated by an approved drainage system, using best management practices.
- (c) All OSC-PRD plans shall specify that such passageways will not be dedicated to the Town, but are to remain private ways; all deeds or other instruments conveying any portion of land or structure in an OSC-PRD containing such a passageway(s), shall specify that such passageway(s) are and shall remain private way(s). ~~in perpetuity; and~~

N. Site improvements. Site improvements specific to an OSC-PRD are listed below. To assist the Planning Board's evaluation of site changes and improvements from any OSC-PRD plan, the applicant shall submit said plan to the Town's Conservation Commission and Board of Health for review and recommendations to the Planning Board.

- (1) **Water supply.** ~~Each lot and~~ The development ~~in its entirety~~ shall be served by a single water supply system. Any water supply for such a development must be compliant with MassDEP's well guidelines. These guidelines require a public water supply well if the well services more than 24 people. The applicant should be prepared to meet those requirements in the initial plan submittal.
- (2) **Sewage disposal.** Privately owned and maintained on-site sewage disposal or treatment systems may be approved to serve buildings and lots in an OSC-PRD, if owned, maintained, operated, and monitored by a residents association, notwithstanding the provisions of § 125-32D of this Bylaw, provided that the owners provide evidence that a qualified professional has been hired to maintain the treatment system, and provided such treatment facility or system is approved by the Board of Health and in compliance with the requirements of Title 5, 310 CMR 15.00, or approved in accordance with the requirements of 314 CMR 5.00 (the Ground Water Discharge Permit Program). An approved system may be located on land owned in common by the owners of the building lots or residential units within the development.

Parking. Unless otherwise approved by the Planning Board, ~~a minimum and~~ a maximum of 1.5 off-street parking spaces shall be provided for each unit, exclusive of spaces within garages. The Planning Board may also approve, based upon the nature of the development proposed and exclusive of the 1.5 parking space ratio provided, areas for visitor parking.

- (3) **Storm runoff control.** The applicant shall demonstrate that, as compared with the situation that would exist on the site without the development, no phase of the proposed OSC-PRD will result in an increase in the peak rate of storm runoff at the parcel boundary for the OSC-PRD as a whole for the 25-,

50- and 100-year design storms, and that there will be no net loss in flood storage capacity for the 100-year design storm. In making such determinations, any state or local orders or requirements of the Wetlands Protection Act or the Town's Wetlands Protection Bylaw² shall be assumed in the calculations of runoff and flood storage without the OSC-PRD, but alternative forms of development shall not be assumed.

- (5) **On-site runoff and erosion control.** The applicant shall demonstrate that any adverse existing off-site runoff and erosion conditions or off-site runoff and erosion conditions which would result from the development of the OSC-PRD, are fully identified and that workable and acceptable mitigation measures are proposed as part of the submission of a final plan, consistent with the provisions of § 125-58 of the Bylaw herein.

O. Residents association. In order to ensure that common open space and common facilities within the development will be properly maintained, each OSC-PRD shall have a residents association, which may be in the form of a corporation, non-profit organization, or trust, established in accordance with appropriate State law by a suitable legal instrument or instruments properly recorded with the Worcester County Registry of Deeds or registered in the Worcester County Registry District of the Land Court. As part of the final OSC-PRD site plan submission, the applicant shall supply to the Planning Board copies of such proposed instruments, which shall at a minimum provide the information required by said OSC-PRD submission requirements, § 125-35L of this Bylaw, and Site Plan Rules and Regulations in effect at the time of final submission.

- (1) **Responsibilities of the residents association.** Said legal instruments pertaining to the residents association shall specify that the residents association shall be solely responsible for all related improvements, and all costs associated with the operation of the development, including:

- (a) Roadway maintenance.
- (b) Snow-plowing and clearing of all walkways and public paths/areas.
- (c) Maintenance of street lighting and on-site improvements and utilities.

P. Amendments without public hearing. Following the granting of a special permit pursuant to this Section, the Planning Board may, upon application and for good cause shown, without public hearing, amend the OSC-PRD plan solely to make changes in lot lines shown on the plan, which lot lines are not part of the perimeter of the site, or other minor engineering changes, provided, however, that no such amendment shall:

² Editor's Note: See Ch. 119, Wetlands Protection.

- (1) Grant any reduction in the size or change in location of the open space as provided in the permit;
- (2) Grant any change in the layout of the ways as provided in the permit;
- (3) Increase the number of lots or units as provided in the permit; or
- (4) Decrease other dimensional requirements of any lot below the minimal permitted by the approval of the initial site plan and special permit.

Q. Amendments requiring public hearing. Any proposed change to an existing OSC-PRD special permit considered substantial by the Planning Board, shall require notice and a formal public hearing in accordance with Massachusetts General Laws Chapter 40A, Section 9, 11, and 15 and an amendment to the special permit decision made pursuant to this section.

~~(1) Editor's Note: This article repealed former § 125-35, Cluster development for open space conservation, added 3-31-1990 ATM by Art 18, as amended.~~