

§133-62, Open Space Residential Development (OSRD) Option – Version 1.0 (October 2021)

A. Site Improvements

Comment: A site improvements section has been included since the design of an OSRD differs from a typical conventional subdivision. Certainly, sewage disposal solutions will be a key influence on density and design, stormwater management is intended to be based on Low Impact Development methods to further the green design theme, and road design is also intended to be focused on reducing infrastructure costs for both the developer and the Town of Harvard in the event the road is made public.

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

- (1) Sewage Disposal – Privately owned and maintained on-site sewage disposal or treatment systems may be approved to serve buildings and lots in an OSRD, if owned, maintained, operated, and monitored by a residents association or other approved managing entity, notwithstanding the provisions of §125-32D of this Bylaw, if such treatment facility or system is approved by the Board of Health (BOH) 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. Applicants are encouraged to maintain early and frequent communication with the Board of Health and use innovative solutions to sewage disposal that are acceptable to the BOH. Where a lot(s) is to be served by public sewers or by a package treatment plant, the application shall contain a certificate from the Board of Health stating that such public sewers or package treatment plant are adequate to serve any permitted use of the lot(s).
- (2) Water Supply – The provision of individual water wells shall be coordinated with the Town of Harvard Board of Health based on the requirements of MGL Chapter 111.
 - a. Shared wells shall be permitted for a maximum of 12 bedrooms. Systems larger than that are considered public water supplies, are exempt from these regulations, and are regulated by DEP (310 CMR 22:00).
 - b. Public water supplies (community or non-community) shall meet the requirements of 310 CMR 22, and the Planning Board may waive the provisions of §125-32D of this Bylaw, provided that the ownership and maintenance agreement of said system is satisfactory to the Planning Board and Board of Health.
- (3) Stormwater Management – The applicant shall demonstrate that, as compared with the situation that would exist on the site without the development, no phase of the proposed OSRD will result in an increase in the peak rate of stormwater runoff at the parcel boundary for the OSRD as a whole for a 24-hour storm using the rainfall distribution recommended by the Northeast Regional

Climate Center “Atlas of Precipitation Extremes for the Northeastern United States and Southeastern Canada.”. In making such determinations, any state or local orders or requirements of the Wetlands Protection Act or the Town's Wetlands Protection Bylaw shall be assumed in the calculations of runoff and flood storage without the OSRD, but alternative forms of development shall not be assumed. The use of Low Impact Development (LID) techniques (such as LID road design, swales, and rain gardens), practices that limit off-site stormwater runoff (both peak and non-peak flows) to levels substantially similar to natural hydrology by emphasizing decentralized management practices and the protection of on-site natural features, is required. Drainage design shall comply with the most recent version of the Massachusetts Stormwater Management Policy standards. A conceptual SRPA plan shall be provided demonstrating that the facility will have dedicated access for maintenance, shall be adequately screened from view as necessary, and protected from trespass. Please note that LID stormwater facilities may be included as part of required open space up to ten (10%) percent of SRPA area.

- (4) 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 OSRD, are fully identified and that workable and acceptable mitigation measures are proposed as part of the submission of a final plan.
- (5) Road Design – The applicant shall be aware that part of the purpose of OSRD is to reduce infrastructure costs, thus benefiting both the applicant and the Town. As such, roadways shall be no wider than necessary, adhere to Low Impact Development (LID) standards to the extent possible, and facilitate a design that incorporates the recommendations of Step 3 of the design process above and LEED-ND principles. Additionally, applicants are recommended to refer to the guidelines contained in the document entitled, “*Sustainable Neighborhood Road Design: A Guidebook for Massachusetts Cities and Towns*” as published by the Citizen Planner Training Collaborative and sponsored by the Home Builders Association of Massachusetts and the Massachusetts Chapter of the American Planning Association. Regardless, local access streets should be limited to eighteen (18') feet in width of pavement with three (3') foot sand/gravel shoulders to facilitate on-street parking. Shoulder should be covered with 2-3" of loam and seeded with Dutch white clover.
- (6) Sidewalk and Bicycle Facility Design – Walkways, trails, and bicycle paths or lanes shall be provided to link residences with amenities such as recreation facilities (including parkland and open space) and adjacent land uses where appropriate. Such facilities should be sited and designed to optimize interconnectivity within the development and external to the development but are not required to parallel roadways.

B. Application Process

***Comment:** The application process for an OSRD project technically includes both a (required) preliminary process where a conceptual plan is provided and all critical site assets of a conservation, historic, or cultural importance are provided, and a definitive plan which is very close to a conventional subdivision's definitive plan process and requirements.*

There are two (2) distinct phases of the application process for OSRD developments. The first phase is considered “pre-application” and includes a pre-application discussion, preparation of a site context

map and existing features plan, a site visit, a conceptual development plan, and a conceptual long-range development plan (if the project is to be phased). All of these steps shall be considered the elements of a preliminary plan and shall substitute for the requirements of a conventional preliminary subdivision plan.

- (1) Pre-Application Discussion – A pre-application discussion is strongly encouraged between the applicant, site designer(s), Planning Board, and also the Conservation Commission and/or Historic Commission, as necessary. The purpose of this informal meeting is to introduce the applicant and site designer(s) to the zoning and subdivision regulations.

Applicant and Town officials shall discuss the applicant's objectives in relation to local regulations and to deliberate the conservation (agriculture, open space, and other natural resources) and other significant resources (historic, cultural) on the site and those which have been determined to have the most resource value and most important to preserve and where development may be most appropriately located using the four (4) step design process noted in Section F. below. The applicant may choose to bring a Site Context Map and an existing features plan to this meeting but it is not required.

- (a) Site and Location Context Map and Narrative— Applicants should possess knowledge and sensitivity to the locational context of the site and incorporate this knowledge into a project design.

The Site and Location Context Map shall be drawn to a size adequate to show the relationship of the proposed subdivision to adjacent properties and to locate the subdivision within the municipality, e.g., 1 inch = 400 feet. The site context map shall include the following:

- [1] An outline of subject parcel along with abutting properties from a assessor's map or equivalent and the current land uses on those properties;
- [2] Existing development in proximity of the subject parcel;
- [3] An outline of the subject parcel on a separate USGS topographic map;
- [4] Zoning district(s) on site and adjacent parcels;
- [5] Tax map and lot number of subject parcel(s);
- [6] Watershed description and delineation;
- [7] Location and names of existing streets and ways;
- [8] Show important features within half-mile radius of subject parcel.

The narrative should include an awareness and understanding of the pattern of settlement in Harvard, the historic pattern of village design in the historic core of Harvard, and the historic streetscapes including street trees, pedestrian ways, the orientation of houses to each other, the siting of porches and balconies, and other civic and architectural design features. The locational context shall be described in the Development Impact Assessment along with a description of how the proposed development meets this criterion.

(b) Existing Features Plan (Site Inventory) – In order to enable the Planning Board to determine whether or not a proposed Open Space Residential Design proposal satisfies the purposes and standards of this Section, an applicant must present sufficient information on the environmental, open space, and/or cultural resources for the Board to make such determination. The required information shall be provided in the form of a Resource Analysis. The site inventory plan(s) shall be at a scale of one-inch equals 100 feet (unless another scale is mutually agreed upon) and shall involve an individual or team with the necessary training in natural resources, who shall certify the information submitted. The inventory and plan(s) shall include, at a minimum, the following:

- [1] The proposed name of the project, north arrow, date and scale.
- [2] The boundaries of the parcel based upon a standard boundary survey prepared by a registered land surveyor and giving the bearings and distances of all property lines.
- [3] A contour map based upon topographic maps published by the U.S. Geological Survey.
- [4] Resource Analysis – The Resource Analysis is a depiction of all of the natural, historic, and cultural resources on the site and shall include, as applicable:
 - [a] Primary Resource Protection Areas (PRPAs) description and delineation. The total acreage of PRPAs shall be noted and include:

Comment: This subsection describes the types of conservation lands that cannot be developed or disturbed and therefore shall be automatically protected. Because of this, the acreage of these lands will not penalize the developer toward their maximum density.

- {1} The total acreage of lakes, ponds, and streams;
- {2} Land subject to easements or restrictions prohibiting development;
- {3} FEMA 100-year floodplains;
- {4} All freshwater wetlands as defined in Chapter 131, Section 40 of the General Laws, as delineated by an accredited wetlands specialist and approved by the Harvard Conservation Commission, and Chapter 119, Harvard's Wetland Protection Bylaw;
- {5} Acreage of land with slopes of 33% or greater shown on a map (2000 square feet or more of contiguous sloped area at least 10 feet in width); and
- {6} At the Planning Board's discretion, any of the information described above may be taken from current geographic information systems data available from the Massachusetts

Department of Environmental Protection, Mass GIS, and other credible sources including delineations registered by the use of global positioning systems.

The above factors are included in this subsection for net acreage calculation purposes only and do not convey or imply any regulatory constraints on development siting that are not contained in other applicable provisions of law, including this zoning bylaw.

- [b] Potential Secondary Resource Protection Areas (SRPAs) –They may include:

Comment: This subsection describes the types of resource protection lands that could be developed or disturbed and therefore shall be credited to the developer when calculating final net density if protected as open space.

- {1} Mature woodlands;
- {2} Acreage of areas within 75 feet of a wetland under the jurisdiction of the Harvard Wetlands Bylaw and implementing regulations;
- {3} Prime agricultural land including lands with Class 1-3 agricultural soils;
- {4} Open meadows;
- {5} Land with slopes of 25% (2000 square feet or more of contiguous sloped area at least 10 feet in width);
- {6} Critical wildlife habitat onsite or within 250' of the development;
- {7} Areas of the site dominated by natural vegetative cover, whether the area(s) are forested, wet or dry meadow, shrubs, but not invasive species.
- {8} Sites of historic, cultural, or archeological significance; and
- {9} At the Planning Board's discretion, any of the information described above may be taken from current geographic information systems data available from the Massachusetts Department of Environmental Protection, Mass GIS, and other credible sources including delineations registered by the use of global positioning systems.

- [c] The location and delineation of existing buildings and unbuildable areas that are not located in PRPAs including rights-of-ways and easements; and

- [d] Determination of proposed Open Space Allocations – Open space allocations and delineations shall be developed according to the provisions of Chapter 125-35, Section D.

(2) Resource Protection Findings

Comment: This subsection describes the how the Planning Board and Conservation Commission assess the applicant's initial Development Impact Statement (DIS) and Conservation Findings with their own findings. They may accept the DIS as submitted, make recommendations for changes, request additional information, or reject the analysis.

- [1] The Planning Board, in consultation¹ with the Conservation Commission shall study the Existing Features Plan, conduct field visits (including one formal site visit as described in subsection J.2. below), and shall formally determine which land should be preserved and where development may be located. The Planning Board shall make written findings supporting this determination (the "Resource Protection Findings"). The Planning Board shall deny any application that does not include sufficient information to make Resource Protection Findings or that does not preserve land that the Planning Board determines should be preserved from development as a result of the Existing Features Plan and Resource Protection Findings.
- [2] The Planning Board's Resource Protection Findings shall be incorporated into its decision to approve, approve with conditions, or deny an application. The Resource Protection Findings shall show land to be permanently preserved by a conservation restriction, as well as recommended conservation uses, ownership, and management guidelines for such land. The findings shall also indicate preferred locations for development if the Plan is denied based upon such findings.
- [3] Site Visit – After the Existing Features Plan has been prepared, the Planning Board shall schedule an on-site visit to walk the property with the applicant and the site designer. The applicant shall bring a copy of the Existing Features Plan to the site visit. The purpose of this site visit is to familiarize Town officials with the property's special features, and to provide them an informal opportunity to offer guidance (or at least a response) to the applicant regarding the location of the SRPAs and potential house locations and street alignments. How the "four step process" to designing subdivisions in Section G. above could be applied to the subject property should also be discussed.
- [4] Conceptual Plan – Applicants shall submit a conceptual plan for the proposed development of the subject parcel that reflects the characteristics of the site as detailed in the site inventory and map(s) and its location within the community as indicated in the site context map. The conceptual plan shall be prepared at the same scale as the site inventory map and be provided as both a translucent sheet, which can be overlaid onto

¹ Please note that depending on the type of resources located on the site, the Historic Commission and/or the Cultural Commission may also be consulted.

the site inventory map(s), and solid plan. A conceptual plan shall be a draft plan, which does not include engineering details, but is drawn to scale and indicates the following:

- [a] Plan and narrative demonstration that the conceptual plan is consistent with the four-step design process described in Section G. above.
 - [b] Proposed location of any new road(s) or common driveway(s).
 - [c] Proposed residential lots, building envelopes, limits of disturbance of natural vegetation, and potential house sites for each lot, as applicable.
 - [d] Existing and proposed features and amenities, including common areas, trails, or community buildings, etc.
 - [e] Proposed boundaries of the designated open space.
 - [f] A narrative description of the proposed approach for providing drinking water supply, waste water treatment, stormwater management, and landscaping.
- (3) Conceptual Long-Range Development Plan – When a project will not utilize the entire parcel and there is potential for future subdivision or development of the parcel or any of the lots being created (phasing), the application shall include a conceptual long-range development plan showing the potential utilization of the lots and the balance of the parcel not being subdivided. The conceptual long-range development plan is a sketch plan with no engineering details, intended to be conceptual in nature, to rely on published data about natural resources relevant to the parcel, and to demonstrate that the current subdivision proposal will not compromise important conservation values or the long-term development of the parcel as a conservation design subdivision. This plan shall show the relationship of the proposed subdivision area to the balance of the parcel and to adjacent land. This plan shall analyze the conservation and development potential of the remaining area of the parcel and shall identify and delineate future designated open space area(s), and development area(s) in a manner that demonstrates that both the proposed development and the future development can occur so that it conforms to the requirements for conservation design subdivisions and preserves the significant natural resource and conservation values of the entire parcel. The number of future residences allowed and number of future residences proposed must be shown on the plan. After an initial plan has been approved the number of residences for the entire parcel and the boundaries of future area(s) to be developed and future area(s) to be protected as designated open space cannot be changed.
- (4) Preliminary Project Approval – Once these steps have been taken, the results shall be formally submitted to the Planning Board as a preliminary plan which should include seven (7) hard copies of the following plus all files provided electronically:
- (a) Formal application filing (one original and seven copies) and fees
 - (b) Conceptual long-range development plan (as applicable)
 - (c) Conceptual plan of proposed development, including:

- [1] Existing features plan

[2] Site context map

(d) Cover letter and narrative summarizing plan objective

(e) List of waivers requested from §130-16 Preliminary phase.

- (5) Formal Application Process – the formal application process shall proceed as a site plan under site plan review according to the provisions of §§ 125-38 and 125-39. Should any formal subdivision of the site be required, the applicant shall either submit the appropriate Approval Not Required (ANR) documentation or provide a Definitive Plan as a formal subdivision.

In addition, the applicant shall provide the following:

- (a) Plan of Proposed Development – Applicants shall submit a site plan for the development of the subject parcel that reflects the characteristics of the site as detailed in the site inventory and map(s) and its location within the community as indicated in the site context map. The development plan set shall be prepared at the same scale as the site inventory map and be provided as both a translucent sheet, which can be overlaid onto the site inventory map(s), and solid plan. A development plan shall include engineering details, is drawn to scale, and indicates the following in addition to the required definitive subdivision plan pages and documentation:

- [1] Plan and narrative demonstration that the conceptual plan is consistent with the four-step design process described in Section G. above.
- [2] Proposed location of any new road(s) or common driveway(s), sidewalks, and bike lanes.
- [3] Proposed residential lots or exclusive use areas, building envelopes, and potential house sites for each lot, as applicable.
- [4] All existing primary and secondary resource protection features and a plan page showing which are to be protected.
- [5] Existing and proposed features and amenities, including common areas, trails, community buildings, recreational facilities, etc.
- [6] Proposed boundaries of the designated open space, by type
- [7] A narrative description of the proposed approach for providing for drinking water supply, waste water treatment, stormwater management, and landscaping.
- [8] The Development Impact Statement (DIS)
 - [a] List of proposed waivers from §§130-17 and 130-18.

C. Criteria for Evaluation

No approval for an OSRD shall be given unless the application complies with the following criteria:

- (1) The proposed development shall be compatible with respect to the objectives and policy recommendations of the Open Space and Recreation Plan and Community Development Plan or Master Plan;
- (2) The proposed development shall be consistent with the intent and purposes of this bylaw;
- (3) All dwellings shall, to the greatest extent possible, be located out of view from any road unless valuable natural resources or farmland located to the rear of the property render building in view of the road more desirable;
- (4) The portion of a parcel placed in open space shall, to the greatest extent possible, be that which is most valuable or productive as a natural resource, wildlife habitat, farmland, or forestry land;
- (5) The OSRD shall result in the creation of less curb cuts or vehicular access points to a public way than would reasonably be expected to occur under Standard ANR or Subdivision Development.
- (6) Streets shall be designed and located in such a manner as to maintain and preserve natural topography, significant landmarks, and trees; to minimize cut and fill; and to preserve and enhance views and vistas on or off the subject parcel.
- (7) The preferred location for the required protected open space in an OSRD shall be, to the extent feasible, in view of town roads and linked to any existing protected lands on adjacent parcels.