

OPEN SPACE RESIDENTIAL DEVELOPMENT OR CONSERVATION SUBDIVISION DESIGN (CSD) MODEL BYLAW

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Individuals and communities are encouraged and hereby permitted to produce copies of this model bylaw, amended as appropriate for their individual needs; provided, however, that subsequent public printings of this model bylaw (in its original form or amended) shall include the above noted information crediting the production of the original model bylaw to MAPC and its funding source, EOEA.

This Open Space Residential Development or Conservation Subdivision Design (CSD) Bylaw¹ promotes an alternative to the conventional subdivision of land. CSD augments the choices available to the development community. CSD cannot be used to mandate the "clustering" of lots within a subdivision. In order to find a receptive audience with developers, CSD must be carefully tailored to fit the landscape, the town's regulatory capacities, and the requirements of the development community.

This model tries to anticipate the many issues that face a community interested in adopting a CSD Bylaw. Where substantive requirements are set forth, they are intended only to provide an example. The numbers ultimately chosen for your CSD Bylaw should reflect careful planning beforehand. Where procedural choices are available, this model annotates the options to provide guidance in the drafting of

¹ *There are many names for conservation development techniques that each refers to an alternative to conventional subdivision of land, including cluster development, open space preservation, and landscape preservation. This model will primarily use Conservation Subdivision Design, or CSD, to represent these possible names. A community needs to select the term most meaningful to it.*

a local bylaw. All of the options and annotations are in italics and are meant for the users education only. They are not meant to be included as bylaw text.

Before adopting and implementing a CSD bylaw, municipalities should have in place a mechanism to receive and disburse funds for the technical review of the project by a civil engineer, traffic engineer, wetlands scientist, attorney, and/or other experts. The complex nature of a CSD proposal necessitates some help from professionals. Typically, towns use the provisions of G.L. c. 44, s. 53G to require the applicant to provide such funds with the application for special permit or subdivision review. Among the many towns that have adopted technical review fees pursuant to G.L. c. 44, s. 53G are Groton, Chelmsford, Dighton, and Clinton.

I. PURPOSE AND INTENT

The model bylaw identifies those purposes that are common to all towns as primary purposes. Those purposes unique to a town are set forth as secondary purposes. Towns should incorporate, at a minimum, the primary purposes and select from appropriate secondary purposes in any proposed article for Town Meeting vote.

1. The Primary Purposes for CSD are the following:

- (a) To allow for greater flexibility and creativity in the design of residential developments;
- (b) To encourage the permanent preservation of [choose] open space, agricultural land, forestry land, wildlife habitat, other natural resources including aquifers, waterbodies and wetlands, and historical and archeological resources in a manner that is consistent with a municipality's comprehensive and open space plan, if any;
- (c) To encourage a less sprawling and more efficient form of development that consumes less open land and conforms to existing topography and natural features better than a conventional or grid subdivision;
- (d) To minimize the total amount of disturbance on the site;
- (e) To further the goals and policies of the [choose] comprehensive, master, and/or open space plans;
- (f) To facilitate the construction and maintenance of housing, streets, utilities, and public service in a more economical and efficient manner.

As stated above, these secondary purposes are intended as suggestions, from which communities should choose relevant items.

2. The Secondary Purposes for CSD are the following:

- (a) To preserve and enhance the community character;

- (b) To preserve and protect agriculturally significant land;
- (c) To protect the value of real property;
- (d) To protect community water supplies;
- (e) To provide for a diversified housing stock;
- (f) To provide affordable housing to persons of low and moderate income.

II. ELIGIBILITY

The options available to towns in establishing eligibility criteria are quite extensive. Some towns limit CSD to the residentially zoned district with larger minimum lot sizes; others allow CSD town-wide. Some towns set a minimum tract size or minimum number of lots to qualify; others consider any tract eligible.

Obviously, towns would prefer to see CSD-style development proposals over conventional “cookie cutters.” In most instances, such applications result from a combination of factors, some “carrots,” some “sticks.” Several towns make cluster mandatory within select districts. For example, Amherst requires developers to cluster in several resource protection districts. However, the legality of this mandatory approach has not been tested in the courts. The Subdivision Control Law, G.L. c. 41, ss. 81K-81GG, permits developers to subdivide as of right, as long as the project complies with local standards. Towns are therefore advised to proceed cautiously until the Courts balance these competing interests.

The following specific provisions attempt to set eligibility thresholds for CSD. Towns are encouraged to set these standards as low as possible in order to maximize the applicability of the CSD approach. In communities promoting a diversified housing stock consideration should be given to allow a mix of housing types. Furthermore, communities can specifically define contiguous to include parcels physically divided by a street. This would make a greater number of parcels eligible. Applicability of cluster/CSD to non-contiguous parcels held in common ownership is significantly underutilized considering that it does not require the adoption of additional administrative procedures. Although relatively unused at this time, enabling CSD to apply to non-contiguous parcels under non-common ownership should be given serious consideration.

1A. Minimum Size of Tract. To be eligible for consideration as a CSD, the tract shall contain a minimum of ____ acres. Where the tract is located in the [specify name of special district] the minimum tract area shall be ____ acres.

Alternatively, the threshold can be the number of lots to be created:

1B. Minimum Number of Lots. To be eligible for consideration as a CSD, the tract shall contain not less than ____ lots.

Or, if a mandatory approach to CSD is favored, this option would be appropriate:

- 1C. Any development that [will create more than ___ lots] *and/or* [is on a parcel of ____ acres or more] shall submit an application for CSD to the Planning Board.
2. Zoning Classification. Only those tracts located in the ___ Districts shall be eligible for consideration as a CSD.
3. Contiguous Parcels. To be eligible for consideration as a CSD, the tract shall consist of a parcel or set of contiguous parcels.
4. Land Division. To be eligible for consideration as a CSD, the tract may be a subdivision or a division of land pursuant to G.L. c. 41, s. 81P. *If condominium ownership is to be allowed (with a zero lot line approach), add the following:* provided, however, that CSD may also be permitted where intended as a condominium on land not so divided or subdivided.

III. SPECIAL PERMIT REQUIRED

The model makes it clear that a CSD requires the issuance of a special permit from the Planning Board. The Planning Board is the logical choice to serve as the Special Permit Granting Authority (SPGA) because it will invariably be involved in the subdivision of the tract. To force the developer into two forums (such as to the Planning Board for subdivision determinations, and to the Zoning Board of Appeals for zoning determinations) is a strong disincentive.

The Planning Board may authorize a CSD pursuant to the grant of a special permit. Such special permits shall be acted upon in accordance with the following provisions:

IV. PRE-APPLICATION

The developer should be encouraged, in the strongest possible terms, to work with the Planning Board before a formal application has been filed. Some towns go so far as to give a density bonus when a developer requests pre-application review of a CSD.

Pre-application negotiations allow the developer to get feedback from the Planning Board before extensive engineering work has been done. The primary purpose of this meeting is to introduce the potential applicant to the standards and procedures of the bylaw and initiate dialogue up front. The Planning Board can signal its concerns for resource areas, affordable housing, aesthetics, and other matters. In fact, it is probably advisable to have the Planning Board's technical experts involved at the pre-application stage to maximize communication between the parties.

If a town and developer, upon mutual agreement, choose to engage technical experts at the pre-application stage to help review these submittals, the developer should enter into a "Memorandum of Agreement" with the Planning Board to establish an escrow account to house the funds to pay the consultant(s).

1. Conference. The applicant is very strongly encouraged to request a pre-application review at a regular business meeting of the Planning Board. If one is requested, the Planning Board shall invite the Conservation Commission, Board of Health, and [list other appropriate committees/Boards]. The purpose of a pre-application review is to minimize the applicant's costs of engineering and other technical experts, and to commence negotiations with the Planning Board at the earliest possible stage in the development. At the pre-application review, the applicant may outline the proposed CSD, seek preliminary feedback from the Planning Board and/or its technical experts, and set a timetable for submittal of a formal application. At the request of the applicant, and at the expense of the applicant, the Planning Board may engage technical experts to review the informal plans of the applicant and to facilitate submittal of a formal application for a CSD special permit.
2. Submittals. In order to facilitate review of the CSD at the pre-application stage, applicants are strongly encouraged to submit the following information:
 - A. Site Context Map. This map illustrates the parcel in connection to its surrounding neighborhood. Based upon existing data sources and field inspections, it should show various kinds of major natural resource areas or features that cross parcel lines or that are located on adjoining lands. This map enables the Planning Board to understand the site in relation to what is occurring on adjacent properties.
 - B. Existing Conditions/Site Analysis Map. This map familiarizes officials with existing conditions on the property. Based upon existing data sources and field inspections, this base map locates and describes noteworthy resources that should be left protected through sensitive subdivision layouts. These resources include wetlands, riverfront areas, floodplains and steep slopes, but may also include mature un-degraded woodlands, hedgerows, farmland, unique or special wildlife habitats, historic or cultural features (such as old structures or stone walls), unusual geologic formations and scenic views into and out from the property. By overlaying this plan onto a development plan the parties involved can clearly see where conservation priorities and desired development overlap/conflict.
 - C. Other Information. In addition, applicants are invited to submit the information set forth in Section VI.1 in a form acceptable to the Planning Board.
3. Site Visit. Applicants are encouraged to request a site visit by the Planning Board and/or its agents in order to facilitate pre-application review of the CSD. If one is requested, the Planning Board shall invite the Conservation Commission, Board of Health, and [list other appropriate committees/Boards].
4. Design Criteria. The design process and criteria set forth below in Section V should be discussed by the parties at the pre-application conference and site visit.

V. DESIGN PROCESS

The conservation of land is the focus of this CSD Model. The design process makes the placement of house lots and streets sensitive to this objective. The design process identifies historical, cultural and natural resources, potential open space corridors, views, etc. that should be preserved. This process excludes these areas from development and targets construction on the rest of the parcel.

The process consists of four steps: (1) Identifying Conservation Areas; (2) Locating House Sites; (3) Aligning Streets and Trails; and, (4) Drawing in the Lot Lines. This process may use pre-existing data sources, such as the Existing Conditions/Site Analysis Map discussed above, USGS topographical maps, FEMA floodplain maps, tax assessors maps, any wetland maps or orthophotographs, and NRSC soil maps.

At the time of the application for a special permit for CSD in conformance with Section VI.1, applicants are required to demonstrate to the Planning Board that the following Design Process was performed by a certified Landscape Architect and considered in determining the layout of proposed streets, house lots, and open space.

1. **Step One: Identifying Conservation Areas.** Identify preservation land by two steps. First, Primary Conservation Areas (such as wetlands, riverfront areas, and floodplains regulated by state or federal law) and Secondary Conservation Areas (including unprotected elements of the natural landscape such as steep slopes, mature woodlands, prime farmland, meadows, wildlife habitats and cultural features such as historic and archeological sites and scenic views) shall be identified and delineated. Second, the Potentially Developable Area will be identified and delineated. To the maximum extent feasible, the Potentially Developable Area shall consist of land outside identified Primary and Secondary Conservation Areas.

Because the design process intends to maximize the intrinsic value of a parcel of land, the house sites are located before the roads are laid out, ensuring that the former will dictate the later and not vice versa. Therefore emphasis is placed on principles of good landscape design and not solely engineering.

2. **Step Two: Locating House Sites.** Locate the approximate sites of individual houses within the Potentially Developable Area and include the delineation of private yards and shared amenities, so as to reflect an integrated community, with emphasis on consistency with the Town's historical development patterns. The number of homes enjoying the amenities of the development should be maximized.
3. **Step Three: Aligning the Streets and Trails.** Align streets in order to access the house lots. Additionally, new trails should be laid out to create internal and external connections to existing and/or potential future streets, sidewalks, and trails.

Lot lines may not be applicable in a CSD utilizing condominium ownership.

4. **Step Four: Lot Lines.** Draw in the lot lines.

VI. PROCEDURES

Approval of a CSD must proceed in accordance with the provisions of G.L. c. 40A, s. 9. Accordingly, the application for a CSD is subject to the standard procedures for issuance of a special permit: publication of notice, certified mail of notice to parties in interest, and a public hearing before the SPGA. If the Zoning Bylaw already contains these details, they should be incorporated by reference.

*This model bylaw describes two procedural approaches to CSD special permits, both of which must acknowledge two legal constraints. First, when special permits are approved subject to a plan, the plan becomes a condition of the special permit. Any significant deviation from the plan requires a modification of the special permit. *DiGiovanni v. Board of Appeals of Rockport*, 19 Mass. App. Ct. 339, 346-47 (1985). Second, a Planning Board is without authority to issue a special permit where "a further determination of substance" must be made after the close of the public hearing. *Weld v. Board of Appeals of Gloucester*, 345 Mass. 376, 378 (1963).²*

Option One: Concept Plan

In the first procedural model, the special permit is approved on the basis of a Concept Plan. A Concept Plan contains a Sketch Plan and a Yield Plan (see Section VII). The Sketch Plan is generally defined to require less information than a standard preliminary subdivision plan, but enough information to make the requisite findings set forth in Section XI, below. The Sketch Plan shows the dimensional features of the proposal - lot sizes, lot frontage, and open space - in general terms and not in exact detail. Similarly, the technical aspects of the proposal, including stormwater management appurtenances, building design, and wastewater disposal, are not engineered in the Sketch Plan, however they are discussed in narrative form. The final details are reviewed and approved by the Planning Board under Definitive Subdivision Approval.

Based upon the Concept Plan, the Planning Board establishes a Basic Maximum Number of lots/units (see section VII) and either approves or denies the special permit. The special permit, if granted, invariably has a series of attached conditions, including the maximum number of units/bedrooms, conformance with the requirements of the Conservation Commission and/or Board of Health, and compliance with the remaining standards of the CSD bylaw. Once the special permit is granted, the applicant proceeds with Definitive Subdivision Plan Approval.

The Concept Plan approach has many advantages. Developers receive an answer on the special permit application in a shorter period of time. They spend significantly less in engineering and legal costs before the vote. These are powerful incentives to choose the CSD option.

On the other hand, due to the innate characteristics of a Concept Plan, specifically the absence of construction specifications at the public hearing and review process, the decision might be challenged in court as being "arbitrary and capricious." Essentially the Planning Board is walking a "fine legal line."

However, this bylaw has been carefully crafted to address this potential issue by ensuring that all of the information typically reviewed for a Preliminary Plan is in fact "at the table" during the public hearings

² For example, in *Tebo v. Board of Appeals of Shrewsbury*, 22 Mass. App. Ct. 618, 624 (1986), the issuance of a special permit for gravel removal was accompanied by this condition: "Before commencing any operation, a detailed plan of dust control must be submitted to the Board for approval." Abutters complained that this condition "postpones for future action a determination of substance, the fatal weakness of the special permit in *Weld*." *Id.* at 623-624. The court annulled the special permit and remanded the matter to the board.

for review and consideration. The key to creating this alternative procedure while successfully walking that “fine legal line” was accomplished by changing both the format and level of detail of the information required for submittal (see Section VI Concept Plan). Specifically, this bylaw requires detailed narratives regarding the various elements for which construction specifications are not required (such as stormwater, water supply and wastewater systems), requires the submittal of a Site Context Map and Existing Conditions / Site Analysis Map, and requires copies of existing contour and soil maps. This information is necessary for the Planning Board to make an informed decision. Furthermore, to provide additional security and to further strengthen the legality of the decision, communities are advised to require a description of the “outer limits” or the most severe impacts of the proposed CSD, specifically on abutting properties and the community.

Option Two: Preliminary Plan

In the second procedural model, the special permit is approved on the basis of a Preliminary Plan, consisting of a Preliminary Plan as defined in the Planning Board's Subdivision Rules and Regulations and a Yield Plan (see Section VII). Applicants are required to submit all of the construction specifications and engineering detail required for a preliminary subdivision plan before the special permit vote is taken.

Where this level of detail is required up front, applicants may choose to apply for the special permit and for definitive subdivision plan review at the same time. The Planning Board may hold the required public hearings concurrently in such cases. Only when the special permit and definitive subdivision plans have been coordinated and finalized are the hearings terminated.

Again, there are advantages and disadvantages to this approach. Developers typically complain about Option Two because the costs associated with the preparation of the Preliminary Plan are more than the cost of a Concept Plan. This makes the special permit more of a speculative venture. However, a Planning Board sensitive to this concern can signal the applicant that the CSD will be approved if the details can be worked out; mixed messages are both costly and grating for the developer. A community that has predetermined CSD as favorable to conventional development should not create a bylaw that provides disincentives for the use of CSD. The advantage of procedural Option Two is that the likelihood of any substantial variation between the Preliminary Plan, approved as a condition of the special permit, and the Definitive Subdivision Plan is unlikely due to the level of detailed engineering that is provided.

1. Application.

An application for a special permit for a CSD shall be submitted on the form(s) provided by the Planning Board in accordance with the rules and regulations of the Board. Applicants for CSD shall also file with the Planning Board ____ copies of the following: **[Choose either Option One or Two]**

OPTION ONE: Concept Plan

The Concept Plan shall include a Sketch Plan and a Yield Plan (see Section VII). The applicant shall submit both the Site Context Map and Existing Conditions/Site Analysis Map prepared according to Section IV.2 above. Additional information reasonably necessary to make the determinations and assessments cited herein shall be provided, including existing site contour maps and existing current soil maps.

A. Sketch Plan.

The Sketch Plan shall be prepared by a certified Landscape Architect, or by a multi-disciplinary team of which one member must be a certified Landscape Architect, and shall address the general features of the land, and give approximate configurations of the lots, open space, and roadways. The Sketch Plan shall incorporate the Four-Step Design Process, according to Section V above, and the Design Standards according to Section X below, when determining a proposed design for the development.

(1) Quality Standards.

This Model does not define the quality and quantity of materials to be submitted to satisfy this filing. Communities should examine their existing bylaws for quality standards such as scale, number of copies, and sheet size and incorporate them within this section.

(2) Required Content.

The Sketch Plan shall include the following:

- a. The subdivision name, boundaries, north point, date, legend, title “Concept Plan,” and scale.
- b. The names of the record owner and the applicant, and the name of the Landscape Architect that prepared the plan.
- c. The names, approximate location, and widths of adjacent streets.
- d. The proposed topography of the land shown at a contour interval no greater than ___ (___) feet. Elevations shall be referred to mean sea level.
- e. The location of existing landscape features including forests, farm fields, meadows, wetlands, riverfront areas, waterbodies, archeological and historic structures or points of interest, rock outcrops, boulder fields, stone walls, cliffs, high points, major long views, forest glades, major tree groupings, noteworthy tree specimens, and habitats of endangered or threatened wildlife, as identified as primary and secondary resources according to Section V.1. Proposals for all site features to be preserved, demolished, or moved shall be noted on the Sketch Plan.

Note that as part of Section XI, Decision of the Planning Board, the special permit decision will include several conditions. Resource areas and their buffer zone boundaries will be shown on the Sketch Plan (as well as later in Option Two), however a condition of the special permit will be the approval of the delineation by an Order of Conditions/Request for Determination of Applicability by the local Conservation Commission. It is recommended that at the pre-application conference, the developer is strongly encouraged to seek this official determination during the Concept stage rather than accepting the risk of a triggering a “substantial variation” later on, after they have invested significant time and money.

- f. All on-site local, state, and federal regulatory resource boundaries and buffer

zones shall be clearly identified and all wetland flag locations shall be numbered and placed upon the Sketch Plan.

- g. Lines showing proposed private residential lots, as located during Step-Four, Section V.4, with approximate areas and frontage dimensions.
- h. All existing and proposed features and amenities including trails, recreation areas, pedestrian and bicycle paths, communities buildings, off-street parking areas, [list any others] shall be shown on the plan and described in a brief narrative explanation where appropriate.
- i. The existing and proposed lines of streets, ways, common driveways, easements and any parcel of land intended to be dedicated for public use or to be reserved by deed covenant for use of all property owners in the subdivision, or parcels of land or lots to be used for any purpose other than private residential shall be so designated within the subdivision in a general manner.
- j. Proposed roadway grades.
- k. Official soil percolation tests for the purpose of siting wastewater treatment options are not required for the Concept Plan. However, a narrative explanation shall be prepared by a certified Professional Engineer detailing the proposed wastewater systems that will be utilized by the development and its likely impacts on-site and to any abutting parcels of land. For example, the narrative will specify whether individual on-site or off-site systems, shared systems, alternative to Title V systems, or any combination of these or other methods will be utilized.
- l. A narrative explanation prepared by a certified Professional Engineer proposing systems for stormwater drainage and its likely impacts on-site and to any abutting parcels of land. For example, the narrative will specify whether soft or hard engineering methods will be used and the number of any detention/retention basins or infiltrating catch basins, it is not intended to include specific pipe sizes. Any information needed to justify this proposal should be included in the narrative. The approximate location of any stormwater management detention/retention basins shall be shown on the plan and accompanied by a conceptual landscaping plan.
- m. A narrative explanation prepared by a certified Professional Engineer, detailing the proposed drinking water supply system.
- n. A narrative explanation of the proposed quality, quantity, use and ownership of the open space. Open space parcels shall be clearly shown on the plan.
- o. All proposed landscaped and buffer areas shall be noted on the plan and generally explained in a narrative.

- p. A list of all legal documents necessary for implementation of the proposed development, including any Conservation Restrictions, land transfers, and Master Deeds, with an accompanying narrative explaining their general purpose.
- q. A narrative indicating all requested waivers, reductions, and/or modifications as permitted within the requirements of this bylaw.

B. Yield Plan.

Applicant shall submit a narrative explanation detailing the results of the determination of any proposed allocation of yield determined according to Section VII, Basic Maximum Number (of lots/units/bedrooms).

C. Relationship between Concept Plan and Definitive Subdivision Plan.

Changes may occur between the Concept Plan and the Definitive Plan due to site-specific engineering. Each community must determine the types of changes that it considers substantial enough to warrant a re-opening of the special permit hearing. The following items 1 – 6 are the most common items that result in a substantial variation. Communities can administer changes to these items in one of three ways:

1. *Provide specific thresholds to define each substantial variation.*
2. *Provide a list of minor variations to be exempt, and then leave the determination of all other changes to the discretion of the Planning Board.*
3. *Provide a list of substantial variations (without defined thresholds) and leave the determination to the discretion of the Planning Board.*

The Concept Plan special permit shall be reconsidered if there is substantial variation between the Definitive Subdivision Plan and the Concept Plan. If the Planning Board finds that a substantial variation exists, it shall hold a public hearing on the modifications to the Concept Plan. A substantial variation shall be any of the following:

- (1) an increase in the number of building lots;
- (2) a significant decrease in the open space acreage;
- (3) a significant change in the lot layout;
- (4) a significant change in the general development pattern which adversely affects natural landscape features and open space preservation;
- (5) significant changes to the stormwater management facilities; and/or
- (6) significant changes in the wastewater management systems.

----OR----

OPTION TWO: Preliminary Plan

Preliminary Plans shall include a Preliminary Plan and a Yield Plan (see Section G) and any additional information reasonably necessary to make the determinations and assessments cited herein. The applicant shall submit both the Site Context Map and Existing Conditions/Site Analysis Map prepared according to Section IV.2. Additional information reasonably necessary to make the determinations and assessments cited herein shall be provided, including existing site contour maps and existing current soil maps.

A. Preliminary Plan.

Preliminary Plans shall use the Four-Step Design Process (see Section V) to demonstrate how the parcel was designed and shall comply with the Design Standards according to Section X below. The Preliminary Plan shall contain the following information:

- (1) A Preliminary Plan conforming to the requirements for a preliminary plan as set forth in the Subdivision Rules and Regulations of the Planning Board.
- (2) All on-site local, state, and federal regulatory resource boundaries and buffer zones shall be clearly identified and all wetland flag locations shall be numbered and placed upon the Sketch Plan.
- (3) Data on proposed wastewater disposal, which shall be referred to the Planning Board's consulting engineer for review and recommendation.

B. Yield Plan.

Applicant shall submit a narrative explanation detailing the results of the determination of any proposed allocation of yield determined according to Section VII, Basic Maximum Number (of lots/units/bedrooms).

[The remaining provisions 2,3, and 4, of Section VI, apply to either Option One or Two]

2. Procedures.

Whenever an application for a CSD special permit is filed with the Planning Board, the applicant shall also file, within five (5) working days of the filing of the completed application, copies of the application, accompanying development plan, and other documentation, to the Board of Health, Conservation Commission, Building Inspector, Department of Public Works, Police Chief, Fire Chief, Town Engineer and _____ for their consideration, review, and report. The applicant shall furnish the copies necessary to fulfill this requirement. Reports from other boards and officials shall be submitted to the Planning Board within thirty-five (35) days of receipt of the reviewing party of all of the required materials; failure of these reviewing parties to make recommendations after having received copies of all such required materials shall be deemed a lack of opposition thereto. In the event that the public hearing by the Planning Board is held prior to the expiration of the 35 day period, the Planning Board shall continue the public hearing to permit the formal submission of reports and recommendations within that 35 day period. The Decision/Findings of the Planning Board shall contain, in writing, an explanation for any departures from the recommendations of any reviewing party.

3. Site Visit.

Whether or not conducted during the pre-application stage, the Planning Board shall conduct a site visit during the public hearing. At the site visit, the Planning Board and/or its agents shall be accompanied by the applicant and/or its agents.

4. Other Information.

The submittals and permits of this section shall be in addition to any other requirements of the Subdivision Control Law or any other provisions of this Zoning Bylaw. To the extent permitted by law, the Planning Board shall coordinate the public hearing required for any application for a special permit for a CSD with the public hearing required for approval of a definitive subdivision plan.

VII. BASIC MAXIMUM NUMBER (OF LOTS/UNITS/BEDROOMS)

The CSD should prescribe a limit on the number of lots, dwelling units, or bedrooms that may be constructed therein. Generally, this number is derived after calculating the density available on the tract under an orthodox development proposal.

The CSD Bylaw may use either lots, dwelling units or bedrooms as the standard for the Basic Maximum Number. Where the CSD Bylaw limits development exclusively to single-family homes, lots or dwelling units are an acceptable standard. Where the CSD Bylaw contemplates multifamily structures, bedrooms may be a better choice. It is particularly important to focus on the standard where the CSD is proposed in an area without sewer service. If the area falls within a Zone II Wellhead Protection District, a close count on the number of bedrooms becomes crucial. The number of bedrooms is used to calculate the appropriate size of an on-site wastewater system. The Massachusetts Department of Environmental Protection assigns a baseline wastewater generation of 110 gallons per day (gpd) per bedroom. Industry standards also assume that the average single family house contains four bedrooms, resulting in wastewater generation of 440 gpd per single family house.

There are two methods of generating the Yield Plan to calculate the Basic Maximum Number: formula or picture. Each are discussed, in turn, below.

[Choose either Option One or Two]

Determination of Yield, OPTION ONE: Formula

The Basic Maximum Number shall be derived after the preparation of a Yield Plan. The Yield Plan shall be the following calculation to determine the total number of lots (or dwelling units):

$$\text{Total Number of Lots} = \frac{\text{TA} - (0.5 \times \text{WA}) - (0.1 \times \text{TA})}{\text{district minimum lot area}}$$

TA = Total Area of Parcel
WA = Wetlands and Riverfront Areas of Parcel

In this simple example, half of the wetlands and any riverfront area are subtracted from the total area of the parcel. Additionally, one tenth of the total area is subtracted and assumed to be consumed by infrastructure. The remaining area is then divided by the minimum square-footage for a lot in the underlying zoning district. This will yield the Total Number of Lots or Basic Maximum Number of lots or

units.

Any formula used should account for all other regulatory requirements in the zoning bylaw, such as the deduction of other sensitive land - in flood plains, steep slopes (more than 25%), land under high-tension power lines, etc. - from the total tract area.

A formula option has advantages and disadvantages. The results are predictable, and there is seldom an argument once the computation is done. However, the formula may not result in neutral density (density equal with conventional zoning). Each site is different, and ledge, wetlands, steep slope, and other factors can skew the formula. Towns are advised to take several conventional subdivisions in the files and apply any formula to check results before adopting this approach.

----- OR -----

Determination of Yield, OPTION TWO: Sketch Plan

Since the CSD is subject to special permit approval, the determination of a Basic Maximum Number is just one aspect of a negotiated resolution. It is better to require less detail in the Yield Plan than to make the process too costly for the average developer. Accordingly, this definition of a Sketch Plan of the conventional subdivision requires only a modicum of engineering details to demonstrate the maximum number of lots (or units) that could reasonably be achieved through a conventional layout. If the proponent is determined to argue the point, the burden of proof places the obligation to provide more details on the applicant. A Sketch Plan may require more details where marginal lands are involved, such as the location of wetlands, floodplains, and steep slopes.

The Basic Maximum Number shall be derived from a Yield Plan. The Yield Plan shall show the maximum number of lots (or dwelling units) that could be placed upon the site under a conventional subdivision. The Yield Plan shall contain the information required for a [choose either Sketch Plan or Preliminary Plan accordingly], as set forth above in Section VI. The proponent shall have the burden of proof with regard to the Basic Maximum Number of lots (or dwelling units) resulting from the design and engineering specifications shown on the Yield Plan.

VIII. REDUCTION OF DIMENSIONAL REQUIREMENTS

In order to make the concept work, the CSD Bylaw must allow for reduced lot size, particularly with regard to area, width, and frontage. While it is typical for zoning to require lots with reduced area and frontage not to be located on existing public ways where the new development patterns will be out of place, it is critical to remember that CSD is intended to achieve certain conservation values and should not be driven solely by aesthetics or what has been commonly accepted to date.

This model provides two options. The first, and preferred, option recommends a flexible ("zero lot line") approach, leaving the lot size to be governed by Title 5 (State Sanitary Code) and the marketplace. Title 5 has been revamped to allow alternative wastewater systems; as a result, large lots need no longer be tied to wastewater disposal. The second option establishes a sliding scale for minimum lot area, depending on the amount of open space required in the tract (See Section IX): more open space equals a smaller minimum lot size.

OPTION ONE: Flexible (Zero-Lot Line)

The Planning Board encourages applicants to modify lot size, shape, and other dimensional requirements for lots within a CSD, subject to the following limitations:

1. Lots having reduced area or frontage shall not have frontage on a street other than a street created by the CSD; provided, however, that the Planning Board may waive this requirement where it is determined that such reduced lot(s) will further the goals of this bylaw.
2. At least 50% of the required setbacks for the district shall be maintained in the CSD unless a reduction is otherwise authorized by the Planning Board.

---- *OR* ----

OPTION TWO: Sliding Scale

The Planning Board may authorize modification of lot size, shape, and other bulk requirements for lots within a CSD, subject to the following limitations:

1. Lots having reduced area or frontage shall not have frontage on a street other than a street created by a subdivision involved, provided, however, that the Planning Board may waive this requirement where it is determined that such reduced lot(s) are consistent with existing development patterns in the neighborhood.
2. Lot frontage shall not be less than 50 feet. The Planning Board may waive this requirement where it is determined that such reduced frontage will further the goals of this bylaw.
3. Each lot shall have at least 50% of the required setbacks for the district unless a reduction is otherwise authorized by the Planning Board.
4. Lots may be reduced in area according to the following schedule³:

Minimum Open Space (%)	District Minimum Lot Area (sq. ft.)	CSD Minimum Lot Area (sq. ft.)
50	80,000	20,000
50	60,000	15,000
50	40,000	10,000
50	30,000	7,500

³ It should be noted that this table is for conceptual purposes only. Lot areas subject to 50% open space requirements were reduced by three-quarters; areas subject to 70% open space requirements were reduced by seven-eighths.

Minimum Open Space (%)	District Minimum Lot Area (sq. ft.)	CSD Minimum Lot Area (sq. ft.)
50	20,000	5,000
50	10,000	5,000
70	80,000	10,000
70	60,000	7,500
70	40,000	5,000
70	30,000	5,000
70	20,000	5,000
70	10,000	5,000

IX. OPEN SPACE REQUIREMENTS

The most important decision in adopting a CSD Bylaw will be the minimum amount of required open space to qualify for consideration by the Planning Board. In existing open space and cluster bylaws some set the required open space figure quite low - 10% is the entry level - to attract as many developers as possible. Others set the required open space high - up to 70% - to make sure that the project yields appropriate benefits to the town. This model chooses 50% as the minimum requirement.

The open space on the site should be valuable. It may also be usable. It should not be just the "fingers" of land between houses, nor land that was unsuitable for development anyway. The open space should not be disproportionately wet; not more than the overall percentage of wetlands on the tract should be wet in the required open space.

Permissible uses (if any) on the open space should also be set forth. If a zero lot line approach is used, the open space will probably be essential for on-site wastewater and stormwater attenuation. The open space might also provide an area for recreational opportunities, including swimming pools, basketball and tennis courts, and community facility buildings. However, the Planning Board may require, in some or all instances, that the open space is dedicated exclusively to conservation or passive uses. There is no requirement that the open space is used for recreation or other active uses. Uses permitted should reflect the value of the open space as determined by the Four-Step Design Process. For example, the primary and secondary resources identified may have delineated sensitive wildlife habitat with intrinsic conservation value and therefore should be "used" for conservation only, not even for passive recreation.

Finally, the ownership of the open space should be regulated in conformance with G.L. c. 40A, s. 9, which authorizes the Town, a nonprofit land trust, or a homeowners' association to manage the open space.

1. Open Space. A minimum of fifty percent (50%) of the tract shown on the development plan shall be open space. Any proposed open space, unless conveyed to the Town or its Conservation Commission, shall be subject to a recorded restriction enforceable by the Town,

providing that such land shall be perpetually kept in an open state, that it shall be preserved exclusively for the purposes set forth herein, and that it shall be maintained in a manner which will ensure its suitability for its intended purposes.

- A. The percentage of the open space that is wetlands shall not normally exceed the percentage of the tract which is wetlands; provided, however, that the applicant may include a greater percentage of wetlands in such open space upon a demonstration that such inclusion promotes the purposes of this bylaw.
- B. The open space shall be contiguous. Contiguous shall be defined as being connected. Open Space will still be considered connected if it is separated by a roadway or an accessory amenity. The Planning Board may waive this requirement for all or part of the required open space where it is determined that allowing non-contiguous open space will promote the goals of this bylaw and/or protect identified primary and secondary conservation areas.
- C. The open space shall be used for wildlife habitat and conservation.

If other uses of the open space are desirable, choose the following subsection C. In an attempt to legitimize this bylaw and remain true to the original purpose of CSD and the 4 step design process, particularly the conservation of primary and secondary resources, communities are strongly cautioned to permit a low percentage of impervious surfaces within the required open space (insert % below). While other uses may be allowed, and will likely be desirable, these should not and need not occur at the expense of basic principles of CSD.

- C. The open space shall be used for wildlife habitat and conservation and the following additional purposes [choose]: historic preservation, education, outdoor education, recreation, park purposes, agriculture, horticulture, forestry, a combination of these uses, and shall be served by suitable access for such purposes. The Planning Board may permit up to ____ % of the open space to be paved or built upon for structures accessory to the dedicated use or uses of such open space (i.e., pedestrian walks and bike paths).

The minimum open space requirement of 50% means that wastewater systems and other utilities will likely require location on the open space.

- D. Wastewater and stormwater management systems serving the CSD may be located within the open space. Surface systems, such as retention and detention ponds, shall not qualify towards the minimum open space required.

2. Ownership of the Open Space. The open space shall, at the Planning Board's election, be conveyed to:

- (a) the Town or its Conservation Commission;
- (b) a nonprofit organization, the principal purpose of which is the conservation of open space and any of the purposes for such open space set forth above;

- (c) a corporation or trust owned jointly or in common by the owners of lots within the CSD. If such corporation or trust is utilized, ownership thereof shall pass with conveyance of the lots in perpetuity. Maintenance of such open space and facilities shall be permanently guaranteed by such corporation or trust which shall provide for mandatory assessments for maintenance expenses to each lot. Each such trust or corporation shall be deemed to have assented to allow the Town to perform maintenance of such open space and facilities, if the trust or corporation fails to provide adequate maintenance, and shall grant the town an easement for this purpose. In such event, the town shall first provide fourteen (14) days written notice to the trust or corporation as to the inadequate maintenance, and, if the trust or corporation fails to complete such maintenance, the town may perform it. Each individual deed, and the deed or trust or articles of incorporation, shall include provisions designed to effect these provisions. Documents creating such trust or corporation shall be submitted to the Planning Board for approval, and shall thereafter be recorded.

X. DESIGN STANDARDS

Design guidelines are intended to establish the aesthetics and design principles of a CSD. The design standards address all of the remaining issues, from the types of permissible buildings to landscaping. The standards provided below are divided into Generic and Site Specific and represent a checklist of issues for consideration to adopt as part of a zoning bylaw.

Communities that have Residential Design Manuals may already regulate several of these design issues, and including them in this bylaw would be redundant. In that case applicants should be directed to any such existing manual or bylaw provision by reference in this bylaw.

The following Generic and Site Specific Design Standards shall apply to all CSD's and shall govern the development and design process:

1. Generic Design Standards

- (a) The landscape shall be preserved in its natural state, insofar as practicable, by minimizing tree and soil removal. Any grade changes shall be in keeping with the general appearance of the neighboring developed areas. The orientation of individual building sites shall be such as to maintain maximum natural topography and cover. Topography, tree cover, and natural drainage ways shall be treated as fixed determinants of road and lot configuration rather than as malleable elements that can be changed to follow a preferred development scheme.
- (b) 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.
- (c) Mixed-use development shall be related harmoniously to the terrain and the use, scale, and architecture of existing buildings in the vicinity that have functional or visual

relationship to the proposed buildings. Proposed buildings shall be related to their surroundings.

- (d) All open space (landscaped and usable) shall be designed to add to the visual amenities of the area by maximizing its visibility for persons passing the site or overlooking it from nearby properties.
- (e) The removal or disruption of historic, traditional or significant uses, structures, or architectural elements shall be minimized insofar as practicable, whether these exist on the site or on adjacent properties.

2. Site Specific Design Standards

- (a) **Mix of Housing Types.** The CSD may consist of any combination of single-family, two-family and multifamily residential structures. A multifamily structure shall not contain more than _____ dwelling units. Residential structures shall be oriented toward the street serving the premises and not the required parking area.

If a community does not want to enable “any combination” of housing as suggested above, the following may be used:

- (a) **Maximum Percentage of Housing Type.** The CSD shall consist of ____ % single family, ____ % two family and ____% multifamily structures.

The bylaw may also provide specific guidelines regarding what percent of single family units may be attached and detached. The bylaw may also provide guidelines for the size, scale, massing, and maximum number of units within each multifamily structure.

- (b) **Parking.** Each dwelling unit shall be served by two (2) off-street parking spaces. Parking spaces in front of garages may count in this computation. All parking areas with greater than ____ spaces shall be screened from view.
- (c) **Buffer Areas.** A buffer area of ____ feet may be provided at the following locations: *[choose from:]* (a) perimeter of the property where it abuts residentially zoned and occupied properties; (b) certain resource areas on or adjacent to the tract like ponds, wetlands, streams and riverfront areas, rock outcrops, ledge, agricultural or recreational fields, and land held for conservation purposes; and (c) existing public ways. Driveways necessary for access and egress to and from the tract may cross such buffer areas. No vegetation in this buffer area will be disturbed, destroyed or removed, except for normal maintenance of structures and landscapes approved as part of the project. The Planning Board may waive the buffer requirement in these locations when it determines that a smaller buffer (or no buffer) will suffice to accomplish the objectives set forth herein.
- (d) **Drainage.** The Planning Board shall encourage the use of “soft” (non-structural) stormwater management techniques (such as swales) and other drainage techniques that reduce impervious surface and enable infiltration where appropriate.

- (e) Common/Shared Driveways. A common or shared driveway may serve a maximum number of ____ single family units.
- (f) Screening and Landscaping. All structural surface stormwater management facilities shall be accompanied by a conceptual landscape plan.
- (g) On-site Pedestrian and Bicycle Circulation. Walkways and bicycle paths shall be provided to link residences with parking areas, recreation facilities (including parkland and open space) and adjacent land uses where appropriate.
- (h) Disturbed Areas. Not more than ____% of the total tract shall be disturbed areas. A disturbed area is any land not left in its natural vegetated state.

XI. DECISION OF THE PLANNING BOARD

The Planning Board may grant a special permit for a CSD if it determines that the proposed CSD has less detrimental impact on the tract than a conventional development proposed for the tract, after considering the following factors:

1. whether the CSD achieves greater flexibility and creativity in the design of residential developments than a conventional plan;
2. whether the CSD promotes permanent preservation of open space, agricultural land forestry land, other natural resources including waterbodies and wetlands, and historical and archeological resources;
3. whether the CSD promotes a less sprawling and more efficient form of development that consumes less open land and conforms to existing topography and natural features better than a conventional subdivision;
4. whether the CSD reduces the total amount of disturbance on the site;
5. whether the CSD furthers the goals and policies of the [choose] open space/ master/ comprehensive plan(s);
6. whether the CSD facilitates the construction and maintenance of streets, utilities, and public service in a more economical and efficient manner.
7. whether the Concept Plan and its supporting narrative documentation complies with all sections of this zoning bylaw.

When using either procedural option the Planning Board will need to condition the findings/decision of the special permit. Due to variations between the Concept Plan, approved under zoning, and the Definitive Subdivision Plan, approved under Subdivision Rules and Regulations, there may be a need for

the Planning Board to re-open the special permit hearing. Upon completion of several of these conditions the final design may change, therefore resulting in either minor or substantial variations (for definitions, see Section VI.1.C.).

The following are several boilerplate conditions that will be applicable in all permits and should be part of the Decision by the Board:

1. *The Basic Maximum Number of [lots, units, bedrooms] granted by the special permit is ____, conditioned upon Definitive Subdivision Approval.*

(Due to the fact that official soil percolation tests are not required during the special permit process the permit indicates a maximum potential number of lots/units/bedrooms that the developer must then substantiate during Definitive Subdivision Approval.)

2. *The design specifications and engineering drawings of the proposed street layouts, wastewater management, water supply systems, stormwater drainage appurtenances, and other site infrastructure of the proposed development will be determined during the forthcoming Definitive Plan approvals.*
3. *The [Sketch Plan or Preliminary Plan] is conditioned upon Conservation Commission approval of resource delineation and an Order of Conditions/Request for Determination of Applicability.*
4. *The [Sketch Plan or Preliminary Plan] is conditioned upon Board of Health approval needed for Title 5, if applicable.*
5. *The [Sketch Plan or Preliminary Plan] is conditioned upon Planning Board approval for Definitive Subdivision Approval.*
6. *All other case-specific conditions deemed necessary by the Planning Board to provide safeguards, including bonding, to secure the objectives of this bylaw, and to protect health, safety, and welfare of the inhabitants of the neighborhood and the Town*
7. *The [Sketch Plan or Preliminary Plan] is conditioned upon compliance with all other required local, state, and federal permits.*

XII. INCREASES IN PERMISSIBLE DENSITY

G.L. c. 40A, s. 9 specifically authorizes an increase in otherwise permissible density ("density bonus") by special permit. The choice to offer a density bonus lies entirely with the town meeting.

An alternative residential bylaw has significant incentives without a density bonus. Reduced lot sizes ought to reduce infrastructure costs associated with shorter and narrower roads, less pipe, and less cut and fill. Groton, for example, has found most developers willing to use its alternative bylaw without density bonuses. Westford, on the other hand, has offered an increase of up to 50% for the provision of certain amenities. Some examples are set forth, below:

The Planning Board may award a density bonus to increase the number of dwelling units beyond

the Basic Maximum Number. The density bonus for the CSD shall not, in the aggregate, exceed fifty percent (50%) of the Basic Maximum Number. Computations shall be rounded to the lowest number. A density bonus may be awarded in the following circumstances:

1. For each additional ten percent (10%) of the site (over and above the required 50%) set aside as open space, a bonus of five percent (5%) of the Basic Maximum Number may be awarded; provided, however, that this density bonus shall not exceed 25% of the Basic Maximum Number.
2. For every two (2) dwelling units restricted to occupancy by persons over the age of fifty-five, one (1) dwelling unit may be added as a density bonus; provided, however, that this density bonus shall not exceed 10% of the Basic Maximum Number.

Where the town has adopted a design manual for alternative residential development, a density bonus may be offered for consistency with the manual.

3. Where the Planning Board determines that the development is in substantial conformance with the document entitled "Town of _____, Residential Design Guidelines," a bonus of up to fifteen (15%) percent of the Basic Maximum Number may be awarded.

The provision of affordable housing can also be tied to a density bonus:

4. For every two (2) dwelling units restricted to occupancy for a period of not less than fifteen (15) years by persons or families who qualify as low or moderate income, as those terms are defined for the area by the Commonwealth's Department of Housing and Community Development, one (1) dwelling unit may be added as a density bonus; provided, however, that this density bonus shall not exceed 10% of the Basic Maximum Number.

Other towns award a density bonus for diversification of housing types, architectural consistency, and resource protection. In order to minimize impacts on the school system, a bylaw may require all dwelling units awarded as a density bonus to be one or two bedroom units.