This chapter provides planning boards with a new approach for achieving certain local master plan objectives through the zoning ordinance. Feature-based density is a zoning technique where the permissible density is calculated based on a set of factors contained in the ordinance, as opposed to a uniform standard being applied to all of the land in the zoning district. Conventional zoning prescribes one minimum lot size for a particular use throughout each zoning district, along with a residential density uniformly applied to each parcel of land in the district. In communities with the most basic zoning ordinances, one size is applied throughout town. Many small New Hampshire towns have a simple tiered system with small lot sizes/higher density in areas designated as village, and larger minimum lot sizes/lower density in the rest of town.

FIGURE 1.3.1 Simple Rural Zoning Scheme

RELATED TOOLS:
- Lot Size Averaging
If all land parcels were the same, this approach would not trouble planners. However, since the landscape in many areas such as northern New England is hilly and challenging to develop, zoning has evolved to incorporate mechanisms for adjusting the rules. For example, overlay zoning for features such as steep slopes and wetlands is sometimes used as a way of making exceptions to the minimum lot size/maximum density provisions of the underlying district. This is the case in communities where, in addition to the requirement that development be kept away from wetlands and steep slopes for example, the area unsuitable for development is excluded from the area used for calculating the maximum number of lots. Zoning ordinances sometimes enable adjustments in the other direction, i.e. smaller lot sizes/increased density, to factor in the benefits of a particular land use to the community. Density bonuses for affordable housing are the most well known example.

Basing the permitted density on a feature of the parcel is not a new concept. Soil-based lot sizing is an approach used by some communities based on a single factor—suitability of the soils for treatment and dilution of septic system effluent. Similarly, subdivisions proposed in outlying areas on inadequate roads are often reduced in size by the applicant after a planning board raises concerns that a large subdivision might be scattered and premature (as provided by RSA 674:36II(a)) without a substantial upgrade of the road at the applicant’s expense (pursuant to RSA 674:21V(j)).

When zoning ordinances begin with uniform requirements and evolve toward additional considerations and/or flexibility, e.g. with multiple density districts, multiple overlays, cluster provisions, etc., they become more and more complex. A feature-based density approach can actually simplify the ordinance by replacing district-
specific density regulations, overlays and certain other provisions, and result in more successful implementation of the master plan. Feature-based density can strengthen the ability of the planning board to ensure that the zoning ordinance and individual subdivision layouts achieve many goals of the local community. These include:

- Conservation of forest, agricultural land, scenic resources, wildlife habitat.
- Concentration of development activity close to services.
- Provision of a range of building lot sizes and prices throughout the community.
- Layout of subdivisions in a manner that is conducive to neighborhood dynamics.
- Walkability, linkage between areas.

**APPROPRIATE CIRCUMSTANCES AND CONTEXT FOR USE**

Feature-based density is appropriate for any size community. It may be applied town-wide or in specified districts. It can be an effective tool when the planning board’s goals for development density are related to such things as the geography of the community, e.g. dense development is desired close to a village area, features of the landscape, or road attributes.

**LEGAL BASIS AND CONSIDERATIONS FOR NEW HAMPSHIRE**

**ENABLING STATUTES**

RSA 674:16, Grant of Power, provides the foundation of a municipality’s right to zone. Lot sizes and the density of the population are among the aspects of land use a zoning ordinance “shall be” designed to regulate. Feature-based density complies with RSA 674:20, Districts, requiring that “regulations shall be uniform for each class or kind of buildings throughout each district.” Although it has become commonplace, nowhere in the enabling statutes is it stated or implied that the maximum density must be uniform for each piece of land in a district as opposed to being derived from features of the land itself.

For the planning board member looking for further reassurance, RSA 674:16 clarifies that the power to adopt a zoning ordinance “... expressly includes the power to adopt innovative land use controls which may include, but which are not limited to, the methods contained in RSA 674:21.” Among the techniques listed in 674:21 are “flexible and discretionary zoning” and “environmental characteristics zoning,” both of which enable a feature-based density approach.

**LOCAL CONSIDERATIONS**

It is important for planning boards to carefully consider the municipality’s ability to implement and enforce an ordinance prior to proposing a particular approach.

For feature-based density the factors chosen need to be rationally related to density and to the purposes listed in the enabling statute (RSA 674:17). Data on the features
chosen needs to be available in a suitable form and level of detail to provide the
planning board and landowner a reasonably accurate determination of developable
area. For a reasonable cost relative to the overall cost of development, more detailed
information should be able to be obtained by the applicant if desired. Consider
steep slopes for example. A relatively inexpensive town-wide soil-based map or map
based on digital topographic data can be obtained from your regional planning com-
misson showing, for example, slopes over 25 percent, slopes 15-25 percent, and
slopes less than 15 percent. For large land areas, these may provide an adequate
basis for determining whether or not steep slopes are likely to be an issue on the
property. However, the scale of the source data makes it impossible to determine
the proportion of the property in each slope category. On-site surveying is required
in that case.

Subdivision application fees should be reviewed to ensure that they cover the costs
of administering the ordinance, including any special studies or outside assistance
routinely utilized, such as a regional planning commission circuit rider planner.

EXAMPLES AND OUTCOMES

Following completion of a town plan update, the Norwich, Vermont, planning com-
nission reviewed the community’s zoning ordinance with an eye toward influencing
development patterns in a manner more closely tied to the town’s land use goals.
These included encouraging denser development near the village where facilities
and services are available, on better roads, and away from the town’s rural natural
resource areas. With the assistance of Burnt Rock Inc. of Waitsfield, Vermont,
the commission incorporated feature-based density into the town’s subdivision
regulations in 2002. A cross-referencing statement was incorporated in the zoning
ordinance as well.

Following a presentation on Norwich’s innovative approach organized by the Upper
Valley Lake Sunapee Regional Planning Commission, the Newbury N.H. planning
board developed a similar approach incorporating feature-based density into that
town’s zoning ordinance. Newbury had previously adopted overlay districts for
shorelands, wetlands and steep slopes. The planning board had been discussing and
evaluating the relationship between natural features such as these and permitted
development density. The community supported excluding these areas from the
portion of a lot used for calculating the permitted number of lots. As with any sub-
stantial zoning amendment such as this, public input and acceptance strongly influ-
enced the factors ultimately incorporated by Newbury. As a result of this input and
of the physical layout of the community, Newbury did not include an “anti-sprawl”
factor such as distance to the town center in the calculations. Several important
conservation and recreation areas were identified as ones where a lower density in
adjacent properties is desired.
Model Language and Guidance for Implementation

I. MINIMUM LOT SIZE

The minimum lot size within the [District] shall be not less than [smallest permissible lot size in square feet or acres].

This may or may not be the same as the maximum density depending on whether lot size averaging is allowed or multiple buildings are permitted on a lot.

If the community allows smaller lot sizes as part of a specific named clustering scheme such as a PUD, PRD or Village Plan, additional language will be needed here to make that exception to the usual minimum lot size.

Communities with public water and/or wastewater will probably want to consider different minimum lot sizes for lots on and off these services.

II. MAXIMUM AND MINIMUM DENSITY

In general the density (total number of units allowed on any pre-existing parcel) shall be as determined by the planning board in accordance with this section of the Ordinance, based upon the formulas set forth in Tables 1 and 2. However, the maximum density permitted will be [insert maximum permissible density, e.g. one unit per developable acre]. In no case will a density less than [insert minimum density, e.g. one unit per every 50 acres of developable area] be required.

The treatment of lot size and density varies from community to community. Every zoning ordinance needs a statement establishing whether or not each lot is limited to one dwelling unit or other principal use or building. Care should be taken to word this section in a manner which is consistent with the rest of your ordinance.

III. DETERMINATION OF DEVELOPABLE AREA

It is the intent of these regulations to limit development density on parcels on which fragile features and critical natural resources are located. To achieve this intent, development density shall be calculated based upon the total amount of developable area found on the pre-subdivision parcel. The developable area shall be determined by subtracting the area of these fragile features and critical natural resources, in
Feature-based density applies to new subdivisions. It can not replace environmental overlays, such as steep slopes and wetlands districts, as they would still be needed to ensure development on existing lots is located in the safest, most suitable location. While feature-based density accounts for unbuildable land in determining density, it does not prevent building on sensitive lands; environmental overlays are an effective tool to keep building sites away from sensitive resources.

The figures provided in the table are for example only. The planning board should revise it to fit the objectives of the local master plan and other zoning ordinance provisions such as floodplain, shoreline and wetlands overlays.

The total developable area shall be based upon the formula described in Table 1.3.1.

Determination of developable area only applies to the proposed creation of new lots or to the determination of density if more than one dwelling unit, other than an accessory unit, is desired on the lot. It does not apply to the use of pre-existing parcels for single or two family dwellings or other nonresidential uses that otherwise meet the minimum requirements of the zoning ordinance.

In determining the amount of developable area located on a parcel, the applicant may in some cases utilize the GIS mapset entitled [map titles and dates] prepared by [e.g. regional planning commission] available at the municipal office. In the event the planning board, as a result of site investigation, determines that the town/city’s GIS data may not accurately identify features found on a site, the board may require the applicant to provide more detailed site-scale information prepared by a licensed engineer or surveyor regarding one or more of the features included in the table below. The applicant may also choose to provide site-scale data indicating the features listed in the table and use such data as the basis of the determination of developable area.

In instances where two or more features overlap, the deduction is only made once for a given portion of the lot. The highest applicable deduction is made.

In situations involving the subdivision of land for non-development purposes, the planning board may waive the requirements of this section.

### IV. DETERMINATION OF DEVELOPMENT DENSITY

In accordance with the town/city of [name] master plan, it is the intent of this Ordinance to maintain low development densities in areas of the community with limited and/or poor access to municipal facilities and services, (optional: insert other
objectives to be achieved through density calculations, e.g. maintain low development densities contiguous to significant public lands and open spaces, and to encourage moderate to high densities in areas of the community with good access to municipal facilities and services and close proximity to the town/city center. Rather than designating multiple zoning districts within the [District], maximum density shall be based upon the unique characteristics of the parcel relative to highway access, distance to the town/city center, and [optional: e.g. proximity to protected open space].

The total development density of a site shall be presumed to be one unit per every [e.g. 1 acre] of developable area, although the density shall be adjusted in accordance with the formulas set forth in Table 1.3.2. In no instance shall the total allowable density be less than one unit per every [e.g. 50 acres] of developable area.

The area to be used for road right-of-way or other utility rights-of-way or other areas not incorporated in individual lots shall be excluded from the acreage figure used in the density calculation.

TABLE 1.3.2 Determination of Development Density

<table>
<thead>
<tr>
<th>Parcel Location</th>
<th>Adjustment to Area Required for Each Unit*</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Proposed driveway or development road will access:</td>
<td></td>
</tr>
<tr>
<td>Paved State or Class V Highway or Private Road built to standards approved by the Planning Board as part of an approved subdivision</td>
<td>x 1</td>
</tr>
<tr>
<td>Gravel Class V Highway or Private Road built to standards approved by the Planning Board as part of an approved subdivision</td>
<td>x 2</td>
</tr>
<tr>
<td>Substandard** Class V Highway (as identified by the Town/City) or other private road that does not meet municipal standards</td>
<td>x 4</td>
</tr>
<tr>
<td>B. After adjusting for access, adjustments shall be made for travel distance from the municipal building to the parcel (measured to the nearest part having 50 feet of frontage) by the most direct route using maintained state or town highways.</td>
<td></td>
</tr>
<tr>
<td>Less than 1.5 miles</td>
<td>x 1</td>
</tr>
<tr>
<td>1.5 to 3 miles</td>
<td>x 3</td>
</tr>
<tr>
<td>3 to 5 miles</td>
<td>x 5</td>
</tr>
<tr>
<td>More than 5 miles</td>
<td>x 10</td>
</tr>
<tr>
<td>C. Optional: Consider adding additional objectives, for example:</td>
<td></td>
</tr>
<tr>
<td>After adjusting for access and travel distance, the density shall be adjusted for proximity to the significant public lands listed below:</td>
<td></td>
</tr>
<tr>
<td>[e.g. state park land, Appalachian Trail corridor]</td>
<td>[e.g. x 2]</td>
</tr>
</tbody>
</table>

* Density adjustments are cumulative.

** If using the term “substandard,” the community needs to carefully define what this means. In Newbury, for example, the town’s consulting engineer and road agent worked with the planning board to create a list of criteria based on grade, alignment, sight distances, surface condition and width, and shoulders. All of the roads in town were then evaluated and a list was developed.

www.des.nh.gov/organization/divisions/water/wmb/repp CHAPTER 1.3: FEATURE-BASED DENSITY
V. BUILDING ENVELOPE

A minimum of one building envelope for each proposed new lot shall be delineated on the plans for subdivisions submitted for review and approval by the planning board indicating a minimum of \( x \) square feet for the location of all structures, site work other than access, and septic systems outside of setbacks, floodplains, slopes over \( x \) percent, wetlands and shoreland and wetlands buffers.

REFERENCES

Readings on related topics:


Example of regulations:

Norwich, Vermont’s regulations can be found on the town’s website at www.norwich.vt.us.

Newbury, New Hampshire’s regulations can be found on the town’s website at www.newburynh.org/Public_Documents/NewburyNH_Ordinances/toc