

*Density Bonuses /  
Minimum Density*



**Guide | Model Regulations**

Lehigh Valley Planning Commission

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Cover photograph courtesy of the Housing Development Corporation. The homes pictured are in the Florin Hill development in Mount Joy Borough, Lancaster County. Florin Hill took advantage of density bonuses offered by Mount Joy to provide affordable housing, regional recreation facility improvements and design enhancements in exchange for an additional four dwelling units per acre.

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**TABLE OF CONTENTS**

INTRODUCTION ..... 1

AUTHORIZATION ..... 1

DENSITY BONUSES ..... 2

    Types of Bonuses ..... 2

    Density Bonus Pitfalls..... 3

    Commercial Density Bonuses ..... 4

    Administrative Options ..... 4

    Density Bonus Example..... 5

MINIMUM DENSITY ..... 7

MODEL REGULATIONS..... 9

DENSITY BONUSES: MODEL REGULATIONS ..... 11

MINIMUM DENSITY: MODEL REGULATIONS..... 16



## INTRODUCTION

This guide discusses two Smart Growth techniques available to Lehigh Valley municipalities: *density bonuses* and *minimum density*. Both are effective ways to promote higher density housing, while density bonuses are also useful for accomplishing other community development objectives.

The Lehigh Valley Planning Commission has long advocated for higher densities in areas recommended for urban development. However, LVPC research has found that for many municipalities, densities continue to be less than recommended. Compact development in appropriate areas reduces the cost of urban infrastructure, reduces transportation costs and reduces the need to consume open space for sprawling housing.<sup>1</sup>

For municipalities that are considering strategies to increase density in areas that are developing or redeveloping, density bonuses and minimum densities become effective tools.

Density bonuses allow developers to build more units of housing or more commercial floor space than would usually be allowed by zoning in exchange for adding certain amenities of public benefit to their projects. Density bonuses are a way for a municipality to acquire civic amenities that they might not otherwise be able to require developers to provide. A density bonus program can be used to entice developers to provide regional amenities, such as off site stormwater or recreation improvements in addition to what the municipality can require through the Subdivision and Land Development Ordinance. In areas identified by the *Comprehensive Plan The Lehigh Valley... 2030* as recommended for urban development, a density bonus program can be used to increase densities to recommended levels while also providing public benefits to the municipality at no direct cost to the taxpayers.

Adding minimum density requirements to the zoning ordinance will keep the municipality's land development more consistent with its comprehensive plan. This can be a good way to keep newly developing areas from growing too sparsely.

## AUTHORIZATION

Both strategies are authorized by Pennsylvania's Municipalities Planning Code (MPC). Section 603 (b)(4) says that zoning ordinances "may permit, prohibit, regulate, restrict and determine... density of population and intensity of use," allowing the implementation of minimum density requirements. Section 603 (c)(6) specifically authorizes density bonuses, stating that zoning ordinances may contain "provisions authorizing increases in the permissible density of population or intensity of a particular use based upon expressed standards and criteria set forth in the zoning ordinance..." This gives municipalities approval to use density bonuses to promote civic goals.

While legal challenges to density bonus programs have been rare nationwide due to their voluntary nature, some practices could be troublesome. In some instances, municipalities have provided density bonuses to offset simultaneously adopted downzonings. In these instances, the bonus program acts as an exaction mechanism when compared to the original zoning. Other density bonus pitfalls are examined on page 3.

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<sup>1</sup> M. Najafi, et al., *Fiscal Impacts of Alternative Single-Family Housing Densities*, 2007, Journal of Urban Planning and Development, p. 179.

The municipal ordinance authorizing the density bonuses should also include a justification given for the amenities sought by the municipality.<sup>2</sup> This could possibly take the form of the general welfare under the police power (for example, bonuses for affordable housing), or an analysis of the externalities caused by the increased density of the bonus (such as street enhancements that mitigate the traffic added by the higher density), or—ideally—by reference to goals articulated in a comprehensive plan.

## DENSITY BONUSES

### TYPES OF BONUSES

Below are some of the types of density bonuses that can be offered by municipalities. This is only a sample of the amenities that could be offered through a density bonus ordinance.

- *Affordable Housing.* The practice of offering density bonuses for affordable housing is closely related to a strategy known as *inclusionary zoning*. With this approach, a residential developer who agrees to include a percentage of units of housing affordable to lower income families as part of a development is entitled to increase the housing density for the project. Thus, the developer can build more market rate units to compensate for the lower revenue from the affordable units. Appropriate bonuses will result in increased developer participation, especially in voluntary inclusionary zoning programs. The developer is usually required to work closely with a non-profit affordable housing provider to manage the units. This strategy is discussed in greater detail in the LVPC publication *Inclusionary Housing—Guide and Model Regulations*.
- *Open Space/Cluster Development.* Another Smart Growth strategy that can utilize density bonuses is cluster development, where higher density development is permitted on one part of a property if the remaining land is preserved for open space or agriculture. In its strictest implementation, this strategy would not increase the total density of an area, but merely shift it into one section of a parcel. However, density bonuses can be incorporated into cluster housing regulations as an incentive for developers to take part in the program.

For example, a municipality could offer a 20% density bonus for projects that commit 35% of a parcel for preservation as open space. These programs have the effect of dramatically reducing the lot sizes in the developed part of the parcel. In rural areas, this could lead to lots that are too small for on-lot water and sewage disposal systems, requiring alternative measures.

Municipalities may also consider using density bonuses to acquire off site open space, using a system where developers voluntarily offer land or the development rights to land or cash to purchase land of value to the municipality in exchange for the right to build at a higher density in another area. Alternatively, a density bonus could be granted in exchange for a cash payment toward a regional recreation facility, as was the case with the density bonus ordinance in Mt. Joy Borough, Lancaster County. Any municipalities interested in using this type of density bonus are strongly encouraged to properly value the bonus density, as outlined on page 3

- *Transportation/Infrastructure Improvements.* Density bonuses provide another means for accomplishing off site transportation improvements in addition to the provisions of Article 5-A, section 503-A(b) of the MPC, which reads: “No municipality shall have the power to require as a condition for approval of a land development or subdivision application the construction, dedication or payment of any off site improvements or capital expenditures of any nature whatsoever or impose any contribution in lieu thereof, exaction fee, or any connection, tapping or similar fee *except as may be specifically authorized under this act* (em-

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<sup>2</sup> M. Morris, *Incentive zoning: Meeting Urban Design and Affordable Housing Objectives*, 2000, American Planning Association PAS 494, p. 10.

phasis added).” The main exception to this rule, specifically authorized in 503-A(d), is a program of transportation impact fees, following the act’s provisions. But what about voluntary measures? Density bonuses are specifically authorized by Section 603 (c)(6), which gives municipalities the authority to increase the permissible density of a use according to expressed standards set forth in the zoning ordinance. This gives the municipality authority to offer a voluntary density increase in exchange for off site transportation, stormwater or other infrastructure improvements. In Bucks County, Richland Township offers up to a 15% density bonus to developers who agree to “construct substantial off site transportation improvements” identified by the Township. This practice is not yet widespread in Pennsylvania.

- *Other Public Benefits.* Many other amenities could be encouraged by density bonuses:
  - Historic preservation
  - Green building (LEED or Energy Star certification)
  - Mixed housing type (townhouses, single family detached, etc.)
  - Transit oriented development
  - Structured parking
  - Elder housing
  - Enhanced design
  - Cottage housing development
  - Recreation improvements
  - Stormwater, sewer or water systems
  - Other improvements found in the municipality’s Subdivision and Land Development Ordinance.



*A transportation improvement density bonus was used to construct a traffic circle in Richland Township.*

### **DENSITY BONUS PITFALLS**

Municipalities should watch for these situations when crafting an ordinance:

- *Undervalued or overvalued bonuses or amenities.* The precise amount of density bonus to offer is an important consideration. The bonus needs to be valuable enough to offset the cost of the public amenities without becoming a windfall. If the value of the bonus is less than the cost to the builder to provide the amenity, few developers will voluntarily take part in the program.

A number of methods exist for determining the developer’s cost to provide an amenity compared with the value of the bonus. One method is to determine what the developer would have to pay to acquire the same development rights as would be available through the bonus. If the cost of the amenity is less than the cost of acquiring the bonus through the private market, then the developer has an incentive to participate. This is called the “Equivalent Cost” method.<sup>3</sup>

The best way to determine the equivalent cost of bonus density is to first conduct a land value study to determine the cost per square foot of developable real estate within the municipality. The municipality could use a professional appraiser to conduct this study. Since the value of land is likely to vary throughout a municipality, this value should be determined independently for different districts. This amount is multiplied by the size of the bonus (0.2, for example, if the program provides for 20% additional density) to find the equivalent cost. This is the amount of money a builder would have to pay to buy the land needed to build the

<sup>3</sup> J. Getzels and M. Jaffe, *Zoning Bonuses in Central Cities*, 1995, American Planning Association PAS 410.

additional dwelling units under the existing zoning regulations. To make an effective incentive, this figure needs to be discounted (for example, by multiplying by 0.8 for a 20% discount) so that it is a good deal for a developer to take part in the bonus program.

Other methods try to look at the return on the developer's investment or the marginal cost of the bonus (i.e. how much per square foot of additional space?) to put a dollar value on the additional density.

- *Inappropriate amenities.* It is important to make sure that the amenities are things that the municipality actually wants. For example, in the 1980s, many major cities offered density bonuses in exchange for urban plazas, however the plazas were often underused by the public and created new downtown problems. The amenities required for density bonuses need to be the municipality's highest priority items.
- *"Let's make a deal."* Overly vague density bonus regulations quickly devolve into a chance for municipalities and developers to haggle. Developers are more likely to participate in the program if there is certainty about how much density they will be granted for which amenities. This also protects the municipality from making a bad deal with a developer.
- *Density bonuses as exactions.* The density bonus program should be used as a means of increasing density from that currently allowed in the ordinance. The program should not be coupled with downzonings that leave the developer with the same density that was possible under the original zoning provisions. Such coupled actions could be characterized as exactions and are in fact counterproductive to the aims of the density bonus program.

## **COMMERCIAL DENSITY BONUSES**

The use of density bonuses for commercial construction is common in many large metropolitan areas, however, it is rarely used in suburban municipalities. For developers, an appropriate bonus option that allows for greater floor space could be an especially powerful incentive to include mixed use, affordable housing or other important public benefits as part of a project. However, retail developers are likely to reject floor space as a useable bonus. Unless the municipality is expressly trying to promote office development in a high-demand area, density bonuses are less likely to be effective.

Design restrictions should be enforced to make sure the amenities meet the public's expectations. For example, green space may be more valuable to the community than an indoor plaza or a concrete "arcade," many of which go unused, or revert to private control as café seating or the like.<sup>4</sup> Also, some commercial builders have taken advantage of vague requirements to construct loading docks or equipment storage areas instead of publicly accessible park space.<sup>5</sup>

Since there seem to be few areas in the Lehigh Valley where this technique would be effective, the model regulations recommended by LVPC do not include a commercial density bonus program.

## **ADMINISTRATIVE OPTIONS**

The structure of a density bonus system depends greatly on the policy goals of the municipality. If the purpose of the density bonus is to achieve a single, particular public goal—for example, affordable housing—then the

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<sup>4</sup> L. Chamberlain, "The trade-offs in zoning trade-offs," New York Times, November 23, 2005.

<sup>5</sup> Morris, p. 17.

bonus will be likewise limited in scope. If the goal is to achieve higher density development, then the bonus should be offered for a variety of public benefits.

The “menu” approach gives developers the flexibility to choose which public amenities they are able to incorporate into their projects. The exact structure of the menu can vary, depending on how the municipality handles density in its zoning code. Some places use a point system, where different public amenities are assigned point values that can be exchanged for density according to some schedule. Others, like Mt. Joy Borough, Lancaster County, award dwelling units directly in exchange for amenities. Mt. Joy’s approach is structured so that a maximum increase from four to eight dwelling units per acre can be achieved by choosing from a number of possible bonuses:

- 1 additional unit per acre if the architecture reflects pre-1946 style;
- 1 additional unit per acre if the developer includes substantially greater amounts of park or recreation improvements than are required;
- 2 additional units if the developer contributes funds toward a regional recreation facility;
- 1 additional unit if the project includes 10% affordable housing.

With this example, the Borough’s priority item was the regional recreation facility—it is not possible to reach the maximum density without it. But with it, the developer needs only to add two of the remaining three choices—pre-1946 architecture, park improvements or affordable housing—to reach the maximum eight units per acre. The ordinance also allows for smaller lot sizes to reflect the higher density.

With the more focused approach, the purpose of the density bonus is to accomplish a particular goal. One recent example from a rural Chester County township was a density bonus for historic preservation. An ordinance allowed developers to add one additional unit to a project for every two acres of historic land preserved through a conservation easement, with that land also counting toward the developer’s open space requirement. The ordinance also allowed bonus units for the preservation of historic structures—one additional unit for each 2,000 square feet (after the first 1,000) in floor area of structure preserved, renovated and rehabilitated in accordance with a qualified restoration architect. A maximum of four total bonus dwelling units could be added to a project through these preservation efforts.

### **DENSITY BONUS EXAMPLE**

The following example shows how a density bonus system would work with a proposed development. This example is also illustrated in the chart on page 8.

A 90-acre parcel is in a district with the following base density (minimum lot sizes in square feet):

- Townhouses (TH): 10,000
- Garden Apartments (Apts.): 5,445
- Single Family Detached (SFD): 17,424

The developer begins by producing a sketch plan to show how many dwelling units could be platted using conventional zoning. In this example, some of the land is needed for roads and utilities. Development is kept from other parts of the parcel due to difficult terrain. These factors reduce the net buildable area to 76.5 acres. The hypothetical developer wishes to develop the remaining land equally in land area for each of the three housing types: 25.5 acres each for townhouses, apartments and single family detached dwellings. The sketch plan presented by the developer shows:

- 111 townhouses
- 204 garden apartments

- 63 single family detached dwellings
- 378 total dwelling units

The density bonus ordinance allows for three bonuses, as outlined in the Model Regulations on page 11: affordable housing, open space and infrastructure improvements. The developer must prove to the municipality that the project will qualify for each density bonus:

- To qualify for the 40% affordable housing bonus (page 13), the development must reserve 15% of the dwelling units (not including any bonus units) for affordable housing. In this case, that would mean 17 townhouses, 31 apartments and 10 single family detached houses.
- To qualify for the open space density bonus (page 13), the project must reserve a large percentage of the property as open space, through a conservation easement, a dedication of land to the municipality or some similar mechanism. The amount of the density bonus depends on the percentage of the parcel preserved as open space. To qualify for the maximum 20% density bonus, the developer must preserve 35% of the gross acreage of the parcel—31.5 acres. This land is in addition to any open space preservation requirements in the municipality's subdivision and land development ordinance. One advantage to taking the open space bonus is that land that might not be available for development due to steep slopes, sensitive habitat or other issues could be used to satisfy the requirement for the bonus.
- To qualify for the 10% infrastructure improvements bonus (page 14), the developer must either contribute to a municipal infrastructure improvement fund or construct actual improvements valued at the same amount. This example assumes that the municipality has determined, with the help of a study, that the value of a 10% density bonus for infrastructure improvements is \$0.16/square foot. The developer would therefore need to contribute \$627,264 worth of infrastructure improvements. These improvements are in addition to anything required through a transportation impact fee ordinance.

Having qualified for these three bonuses, the developer is now entitled to increase the number of dwelling units by 70%.

- Townhouses:  $111 \times 70\% = 77$  bonus units; 188 total
- Garden Apartments:  $204 \times 70\% = 142$  bonus units; 346 total
- Single Family Detached:  $63 \times 70\% = 44$  bonus units; 107 total
- Total dwelling units: 263 bonus units; 641 total

However, the use of the open space density bonus has significantly reduced the amount of buildable land available. Since the model regulations provide for a maximum overall density (Table 1, on page 12), it is important to determine if the development is still within the density limits. After removing the open space, there are 58.5 acres remaining for development. Roads, utilities and other infrastructure are assumed, for this example, to remove an additional 8.8 acres (in practice, the developer would determine this by creating the preliminary land use plans). Multiplying the density limit by the amount of remaining land for each housing type (16.6 acres) shows the maximum number of dwelling units that could be permitted:

- Townhouses: 248
- Garden Apartments: 331
- Single Family Detached: 116

Comparing these to the maximum number of dwelling units permitted after the bonuses were applied shows that there are fewer townhouses and single family detached dwellings available than the density cap. However, the

density for garden apartments is capped at 331, while the developer has qualified for 346 through the bonuses. In this case, the developer is limited by the maximum density to 331 apartments.

In this example, the use of density bonuses has generated valuable benefits for both the municipality and the developer:

#### **MUNICIPAL BENEFITS**

- 58 affordable housing units
- \$627,264 in infrastructure improvements
- 31.5 acres of preserved open space

#### **DEVELOPER BENEFITS**

- 77 additional townhouses
- 128 additional garden apartments
- 44 additional single family detached dwellings
- 626 total dwelling units—an increase of 249 units

## **MINIMUM DENSITY**

Minimum density is simply the minimum number of units permitted to be built in a development, expressed as dwelling units per acre. It is a tool a municipality can use to better regulate housing density in accord with the goals of its comprehensive plan. While virtually all zoning ordinances regulate maximum density, few set minimums on density. Density maximums are often employed to prevent overcrowding and protect public safety and welfare, while minimum density can be used to secure other public goals, such as conformity with a comprehensive land use plan, viable public transit service and farmland preservation.

An advantage of the minimum density approach is conformity of the built densities with those recommended by a municipality's comprehensive land use plan. If an adopted comprehensive plan recommends that densities in a certain area reach a particular level, it could be disruptive to the plan if developers choose to build at a density below that level. Minimum densities set the lowest amount of density the municipality desires—as expressed in the comprehensive plan—for a particular place. In this sense, minimum density is an implementation strategy: it is a way to bring about the decisions a community makes through the comprehensive planning process.

Another benefit is improved transit viability. Transit service is highly dependent on both residential density and commercial intensity. Without a minimum level of density, there are not enough riders living within close proximity of a transit stop and not enough destinations served by transit for them to travel to. The *Comprehensive Plan The Lehigh Valley ... 2030* notes that the region's land use patterns have not favored the use of public transportation, especially as populations and jobs have moved from the central cities to the suburbs:

*This has resulted in an increase of suburb-to-suburb commutes, increasing travel times and generating significant obstacles for public transportation to overcome. While transit usage in the urban core remains high, most new system demand comes from these less financially productive outlying areas.*<sup>6</sup>

High densities and compact development produce shorter trips which enable more walking trips, efficient operation of transit, more customers per mile of travel and higher revenues. Higher densities are also associated with lower levels of auto ownership per household, high costs for owning automobiles and expensive parking. All of these factors exert a positive influence on transit demand.

One way to use minimum density to make transit service more viable is to enact transit corridor zoning. These districts, situated along major transit routes, have minimum densities consistent with the requirements of transit service. This technique has been recommended by the Lehigh Valley Planning Commission since 1995.

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<sup>6</sup> Lehigh Valley Planning Commission, *Comprehensive Plan The Lehigh Valley ... 2030*, 2005, p 75.

**DENSITY BONUS EXAMPLE**

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Housing Type	Gross Site Area (acres)	Net Site Area (acres)	Minimum Lot Size (s.f.)	Permitted units, no bonus	Bonus Requirements		Total Density Bonus	Total Density Bonus	Bonus Units	Total Qualified Units	Net Buildable Acres	Max Density (du/a) from Table 1	Density Cap (units)	Are Total Qualified Units Below Cap?	Max Permitted Units
					F	G	H								
	90	76.5			40% bonus: Affordable Housing (units)	1-20% bonus: Open Space (acres)	10% bonus: Infrastructure Improvements (dollars)	70%							
TH		25.5	10,000	111	17				77	188	16.6	15	248	YES	188
Apts		25.5	5,445	204	31	31.5	\$ 627,264		142	346	16.6	20	331	NO	331
SFD		25.5	17,424	63	10				44	107	16.6	7	116	YES	107

(A-E) The developer presents a sketch plan, showing how many units could be built using conventional zoning.

- In this example, we assume 15% of the gross site area (B) is used for utilities and roads or lost due to terrain:  $B \times .85 = 76.5$  net acres (C). For this example, we divide the net site area by the minimum lot size for each housing type to determine the number of units that are proposed through conventional zoning ( $C \div D = E$ ). In practice, this number would depend on the specific proposal made through the sketch plan. We also assume, for this example, that the developer wishes to use an equal amount of land for each housing type.

(F-H) The requirements for each bonus must be fulfilled.

- To qualify for the Affordable Housing bonus, 15% of each housing type must be affordable to residents earning below 80% of the Area Median Income, as published by the US Department of Housing and Urban Development ( $E \times .15$ , rounded up = F).
- To qualify for the maximum 20% Open Space density bonus, the developer must preserve 35% of the gross site area (B) as open space ( $B \times .35 = G$ ).
- The 10% Infrastructure Improvements density bonus is awarded if the developer contributes to an infrastructure improvement fund—or constructs improvements of an equal value. The amount of contribution required is determined by multiplying the Gross Site Area (B) by the value found in the ordinance (Section 4.C.1). In this example, the value for this district is set at \$0.16/square foot ( $B \times 43,560 \times \$0.16 = H$ ).

(I) Add up all the percentage increase in units for which the developer has qualified ( $F + G + H = I$ ).

(J) Calculate the number of bonus units for each housing type

- Multiply the total density bonus (I) by the number of units shown on the sketch plan—the units that could be built without the density bonus (E). Round this number down ( $I \times E = J$ ).

(K) Add the bonus units (J) to the units permitted through conventional zoning (E) to get the total number of units for which the development has qualified ( $J + E = K$ ).

(L-P) The number of qualified units (K) cannot exceed the density cap (N).

- Determine the net buildable acres (L) for each housing type. In this example, we start with the gross site area (B) and remove the land allotted for open space (G).  $B - G = 58.5$  acres. Take out the area used for roads, utilities or for recreation required by the municipal subdivision and land development ordinance to arrive at the net buildable acres for the site. In this example, assume that these utility deductions total 15%, however, in practice, the developer will determine this through the design of the site. ( $B - G$ )  $\times$  85% = 49.725 acres. Since this developer still wants to use the same amount of land for each housing type, divide this by 3 to get the net buildable acres for each housing type.  $[(B - G) \times 85\%] \div 3 = L$ .

2. Multiply the net buildable acres (L) by the maximum density for each housing type (M), found in Table 1 of the ordinance to find the density cap in dwelling units. Round this down ( $L \times M = N$ ).

- Are the total qualified units for each housing type (K) less than that housing type's density cap (N)? If so ( $K < N$ ), then the developer is allowed to build that many units ( $P = K$ ). If the number of total qualified units is greater than the density cap ( $K > N$ ), then the developer is limited to the number of units allowed by the cap ( $P = N$ ).

*The concept ... is that the availability of transit service reflects additional transportation infrastructure capacity. That is, the area is more accessible and has more travel capacity than it would have if the transit service were unavailable. Therefore, the transit service area is suited for more intensive development.*<sup>7</sup>

The LVPC continues to research the connection between transit and zoning. Future work on this issue will include topics such as transit corridor zoning and transit oriented development.

A form of minimum density can already be found in parts of the Lehigh Valley for the purpose of preserving areas for agriculture. The Lynn Township zoning ordinance, in place for over 25 years, requires a minimum density in combination with a maximum lot coverage for the construction of non-agricultural dwelling units. This has the effect of restricting housing development to a small portion of a parcel, leaving the rest preserved for farming.

Minimum density regulations can be designed to either affect an entire municipality or they can be targeted at particular zones, housing types or even development types. For example, minimum density might be a vital tool for a transit corridor, where a high number of residences are needed to make public transit an efficient transportation option. Minimum density could also be used to implement or enhance existing and planned transit service. Or, minimum density could be part of a Traditional Neighborhood Development, ensuring that a traditional “town center” development is built successfully.

Municipalities should carefully review demands for future growth including the goals of the comprehensive plan before enacting minimum densities. A minimum density that is set too high could be counterproductive, discouraging development, rather than encouraging higher density development.<sup>8</sup> In addition, many minimum density ordinances include exceptions for small developments, such as those on less than 10,000 square feet of land. Other exceptions should be made for environmentally sensitive land or for land not served by public sewer and community water.

## MODEL REGULATIONS

The following model regulations represent a recommended approach to the use of density bonuses to accomplish a number of planning goals while also encouraging higher density development in urban areas. These provisions are intended to be included in the *General Regulations* section of a municipal zoning ordinance. Another approach would be to include the bonus option as part of an overlay zone, targeting a particular area. This example ordinance uses a menu system, where a percentage increase in units is added to a project if particular amenities are included. The bonus is assumed to be available in all residential zoning districts with access to public sewer and community water.

The amenities proposed in these model regulations represent the priorities for the region, as found in the *Comprehensive Plan The Lehigh Valley... 2030*. The regulations weight the density bonuses to give the most support to the highest priority: in this case, affordable housing followed by open space preservation and improved infrastructure. The regulations allow for a maximum density bonus of 70%. This is based on an analysis of how the regulations would function, technically, under various conditions throughout the Lehigh Valley. Municipali-

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<sup>7</sup> Joint Planning Commission Lehigh-Northampton Counties, *Community Planning and Transit: A Case for Transit Supportive Design*, 1995, p7.

<sup>8</sup> <http://www.dca.state.ga.us/toolkit/index.asp>.

ties should adopt their mix of amenities in concert with their own priorities, preferably those identified in a comprehensive plan.

When determining the apportionment of the density bonuses, municipalities should keep in mind that the amount of density bonus needs to reflect a balance between the need for the municipality to achieve its priorities and the need to entice the developer to voluntarily participate in the program.

The model regulations offer a 40% density bonus for developers who provide 15% of their pre-bonus dwelling units as housing affordable to families earning no more than 80% of the area median income. This provision is consistent with previous LVPC research, including *Inclusionary Zoning Guide/Model Regulations*. Families between 50% and 80% of the area median income are the most in need of housing opportunities while also being able to meet the income requirements for home ownership. For this reason, the regulations only allow a density bonus for housing that is affordable to families earning less than 80% of the area median income.<sup>9</sup>

The following amenities are on the menu:

- Affordable Housing
- Open Space
- Infrastructure Improvements

The model minimum density regulations may be incorporated into the dimensional requirements for each residential zone. These standards should be modified in areas where lower densities are appropriate due to the absence of public sewer and community water service, or due to the presence of environmental limitations.

Municipalities should seek the advice of legal counsel before adopting these regulations.

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<sup>9</sup> Lehigh Valley Planning Commission, 2008, *Inclusionary Zoning Guide/Model Regulations*, p. 3. See also, Lehigh Valley Planning Commission, 2007, *An Affordable Housing Assessment of the Lehigh Valley in Pennsylvania*, p. 70.

## DENSITY BONUSES: MODEL REGULATIONS

### SECTION 1: INTENT

The intent of these regulations is to provide for an increase in the allowable residential density based on requirements for the provision of certain public amenities, including affordable housing, open space preservation and infrastructure improvements.

*Comment: Justifications for the need for density bonuses could be added here. For example, reference to a recent affordable housing study could be cited to justify the need for using density bonuses to secure the public welfare.*

### SECTION 2: DEFINITIONS

- A: Affordable Housing. Housing units that are affordable (requiring less than 30% of a household's monthly income to pay the principle, interest, taxes and insurance) to individuals or families earning less than 80% of the area median income as determined by the United States Department of Housing and Urban Development.
- B: Infrastructure Improvements. Off site or on site improvements identified through:
1. The comprehensive land use plan; or
  2. A capital improvements plan under an adopted transportation impact fee ordinance; or
  3. The regional long range transportation plan; or
  4. The regional Transportation Improvement Program; or
  5. A storm drainage capital improvements plan; or
  6. A sewage facilities plan; or
  7. A water system capital improvements plan.
- C: Net Density. The number of dwelling units per acre of land — including only the land devoted to residential uses and excluding such areas as street rights-of-way, parks, common open space and other similar uses.
- D: Open Space. Any land or area, the preservation of which in its present use would:
1. Conserve and enhance natural or scenic resources including farmland; or
  2. Protect streams or water supply; or
  3. Promote conservation of soils, wetlands or beaches; or
  4. Enhance the value to the public of abutting or neighboring parks, forests, wildlife preserves, nature preserves or sanctuaries; or
  5. Enhance recreation opportunities.

### SECTION 3: APPLICATION OF BONUSES

- A: Applicability
1. The *Governing Body* shall provide bonus density to any residential development that results in the creation of at least five (5) new dwelling units upon finding that all requirements of this ordinance have been satisfied.

*Comment: For the term “**Governing Body**,” refer to the definition in the Pennsylvania Municipalities Planning Code, Section 107: “the council in cities (and) boroughs...; the board of commissioners in townships of the first class; the board of supervisors in townships of the second class...”*

- 2. Density bonuses are only available to lots served by public sanitary sewer and community water systems.

*The maximum and minimum densities shown in Table 1 reflect those found in the **Comprehensive Plan The Lehigh Valley...2030**, page 62.*

**B: Maximum Density**

Regardless of how many bonuses are qualified for under Section 4 of this ordinance, maximum net densities may not be increased beyond the limits in Table 1:

<b>TABLE 1</b>	
<b>Maximum Densities by Housing Type</b>	
<b>Housing Type</b>	<b>Maximum Dwelling Units per Acre</b>
High or Mid-Rise Apartments	50
Garden Apartments	20
Townhouses, Row Homes, Condominiums	15
Duplexes, Twins	12
Single Family Detached	7
Planned Residential Development	12
Cottage Housing Development	14

**C: Determining Bonus Amount**

Qualified bonuses are first totaled to determine the amount of the density bonus available to the development. The number of allowed dwelling units shall be determined by calculating the number of dwelling units allowable pursuant to the zoning ordinance given the size of the parcel, the lot size/density standards and the environmental protection provisions. These shall be illustrated on a sketch plan. The number of possible units shall be determined by the zoning officer with the assistance of the municipal engineer. From this calculation, the number of units authorized shall be increased by the density bonus.

**D: Dimensional Standards**

The *Governing Body* shall adjust the minimum lot size and other dimensional standards (such as the minimum lot width, the maximum lot coverage by impervious cover, and the minimum front yard, side yard and rear yard setbacks) of a lot proportional to the amount of the density bonus to enable development at the higher density.

## SECTION 4: DENSITY BONUSES

The following items listed in Table 2 are eligible for density bonuses:

<b>Bonus Item</b>		<b>Maximum Increase in Residential Dwelling Units</b>
A	Affordable Housing	40%
B	Open Space	1-20%
C	Infrastructure Improvements	10%
<b>Maximum Bonus:</b>		<b>70%</b>

### A: Affordable Housing

1. The *Governing Body* shall increase the maximum number of residential dwelling units by 40% upon finding that at least 15% of the development's total dwelling units are affordable housing, as defined in this chapter.
2. To utilize this density bonus, the applicant shall submit a plan to the *Governing Body* demonstrating how this program shall be funded, implemented and managed.
3. The applicant shall agree to execute any and all documents deemed necessary by the *Governing Body*, including, but not limited to, deed restrictions, restrictive covenants and other instruments to ensure the continued affordability of the affordable housing units in accordance with this chapter.
4. Affordable housing units shall be integrated throughout the development and shall have an exterior appearance and architectural style similar to, and compatible with, that of the market rate units. Exterior building materials and finishes shall be substantially the same in type and quality.
5. Affordable housing units must remain affordable for at least 30 years.

### B: Open Space

1. A residential development shall qualify for a maximum of 20% additional dwelling units under this section if the *Governing Body* finds that the applicant commits to preserve as open space—as defined in this chapter—through a conservation easement, a dedication to the municipality or a similar legal mechanism, not less than 16% of the total land area of the parcel, in addition to any existing open space or recreation requirements in the Subdivision and Land Development Ordinance.
2. The number of additional dwelling units awarded shall increase with the quantity of land dedicated as open space according to the schedule found in Table 3:

TABLE 3 Open Space Bonus				
% of Parcel Preserved as Open Space	% increase in Dwelling Units		% of Parcel Preserved as Open Space	% increase in Dwelling Units
16%	1%		26%	11%
17%	2%		27%	12%
18%	3%		28%	13%
19%	4%		29%	14%
20%	5%		30%	15%
21%	6%		31%	16%
22%	7%		32%	17%
23%	8%		33%	18%
24%	9%		34%	19%
25%	10%		35%	20%

3. Land offered for dedication or conservation shall be subject to approval by the *Governing Body*.

C: Infrastructure Improvements

1. The *Governing Body* shall increase the maximum number of residential dwelling units by 10% upon finding that the applicant provides the municipality with off site infrastructure improvements equal to \$\_.\_\_ per square foot of land.

*Comment: The **Governing Body** should set the dollar figure in Section 4C(1) based on the following methodology:*

1. *Conduct a study to determine the average price per square foot of developable residential property within the municipality. This study should be updated periodically to reflect changes in the area's real estate market. This figure will probably vary from one part of the municipality to another, depending on the base density and other factors. The municipality should consider setting this value for each zoning district.*
2. *Multiply this figure by the size of the density bonus (10% in this case).*
3. *Multiply the result by 80%. This gives a 20% discount, which is the incentive that will convince a developer to take part in the program.*

*For example, if the study shows that the cost of developable residential land in a particular district averages \$2 per square foot, then the amount used in Section 4C(1) would be: \$2 x 10% x 80% = \$0.16 per square foot. A developer proposing to develop 100 acres (4,356,000 square feet) by taking part in this program would therefore have to contribute infrastructure improvements equal to \$0.16 x 4,356,000, or \$696,960 to qualify for the density bonus.*

2. Contributions to infrastructure improvement may take the form of either the actual construction of identified improvements, as defined in Section 2 of this ordinance, or a payment to the municipality's infrastructure improvement fund or transportation improvement fund.
3. Infrastructure improvements provided in exchange for bonus density are in addition to any required on site transportation improvements and off site transportation improvements required as municipal capital improvements pursuant to Article V-A of the Pennsylvania Municipalities Planning Code. Bonus dwelling units shall be exempt from these transportation improvement requirements.

## MINIMUM DENSITY: MODEL REGULATIONS

### SECTION 1: INTENT

The intent of this ordinance is to establish a minimum net density for residential development to promote efficient delivery of municipal services and infrastructure, viable transit service and development that conforms to the goals of the municipal comprehensive land use plan.

*Comment: While these model regulations are crafted to apply to all residential districts, another approach would be to target minimum densities to achieve the specific policy goals of a comprehensive plan. For example, minimum densities could be enacted for a transit corridor to facilitate the viability of transit service. Or, minimum density could be included in an overlay zone to promote mixed use development. Minimum densities have also been used for many years in conjunction with maximum lot coverage to preserve farmland.*

### SECTION 2: DEFINITIONS

- A: Minimum Net Density: The minimum number of dwelling units required on a parcel divided by the total size of the parcel — including only the land devoted to residential uses and excluding such areas as street rights-of-way, parks, common open space and other similar uses—expressed as dwelling units per acre (du/acre).

### SECTION 3: MINIMUM DENSITY

- A: Minimum Density

*Comment: The minimum densities recommended in these model regulations reflect those found in the **Comprehensive Plan The Lehigh Valley... 2030**.*

In all districts, except as stated in Section 3B, the minimum net density shall be as shown in Table 4:

<b>TABLE 4</b>	
<b>Minimum Net Densities for Housing Types</b>	
<b>Housing Type</b>	<b>Minimum Density</b>
High or Mid-Rise Apartments	15 du/acre
Garden Apartments	8 du/acre
Townhouses, Row Homes, Condominiums	8 du/acre
Duplexes, Twins	6 du/acre
Single Family Detached	4 du/acre
Planned Residential Development	4 du/acre
Cottage Housing Development	8 du/acre

- B: Exceptions

The minimum net density requirement shall not apply to:

1. Lots totaling less than 10,000 square feet; or
2. Lots where floodplains, rivers or streams, riparian buffers, floodplains, wetlands, steep slopes, woodlands, carbonate geology or other environmental factors reduce the total developable land to less than 10,000 square feet; or
3. Lots not served by public sanitary sewer and community water systems.