

## FOREWORD

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### Broadly Defining ‘Rural’

When this book was first written 20 years ago, its focus was not on truly rural areas where there was typically little growth and change, but rather on the suburbanizing edges of metropolitan regions where farms and forests were being replaced by subdivisions, shopping centers, and office parks.

Its main premise was that elements of rural character could be retained through insightful planning and progressive regulations to create places where the old and new could gracefully coexist. In this modified landscape, various natural features can be designed around and maintained while inevitable growth is ideally accommodated in more compact building patterns reminiscent of the ways traditional towns evolved prior to World War II, with walkable neighborhoods and mixed uses, in contrast to the conventional postwar model of suburban sprawl with excessively separated land uses.

Today, by most objective measures, most of these places are no longer rural. Wildlife and livestock no longer outnumber human inhabitants, and fields and woodlands no longer dominate the landscape. Many of these communities have become increasingly developed, although pockets with rural character—typically family farms and woodlands with wetter soils or steeper slopes—have survived until the present.

In such situations, the concept of rurality is partly a state of mind and partly an attitude that can inform local planning processes to help communities maintain elements of their natural and cultural landscape as they cope with the challenges of dealing with changes caused by growth pressures. In dealing with such challenges, many residents and officials look for ways to combine the best

of both worlds as they try to shape growth so it does not obliterate the natural heritage of their community and replace what is left of its once-rural character with generic suburban sprawl.

This 20th anniversary edition of *Rural by Design* acknowledges the continuing applicability of the original book’s core message: that the broad concept of “rural” lies largely in the eyes of the beholders and that rural elements are not only appropriate but indeed necessary for the healthy functioning of the more densely developing communities of the 21st century.

This volume therefore pays special attention to various planning techniques for producing a more livable future, answering fundamental human needs for green space and parkland (described by noted Harvard biologist E. O. Wilson as biophilia) while at the same time building more responsibly, efficiently, and sustainably where urban services exist or can be easily extended.

Possibly the most promising avenue for exploration is the basic greenway concept, discussed in chapters 8 and 15, which can be adapted to areas as different as rural hinterlands and urban cores. Greenways provide connectivity within ecological systems and provide linkages within and among human settlements. The best land-use plans are therefore based on greenways, with communities designed with nature and for people. Greenway planning, in its broadest sense, is therefore a recurring theme of this new edition. Fortunately, this enlightened approach can easily be integrated into both new urban planning and conservation design.

## INTRODUCTION

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When writing the original edition of *Rural by Design*, my goal was to create the kind of resource book I wish had been available when I was a graduate student and young planner 40 years ago. The topics it addressed were those I felt would be of the greatest value and importance to people interested in and concerned about land-use planning, including students in degree courses, those teaching them, those working in the profession, and those preparing for professional exams, in addition to the unsung heroes in our communities who donate their time serving as members of local boards and commissions. All these people need relevant information. My goal then, as now, was to create a comprehensive resource filled with useful material and examples they could easily access, understand, and apply in their work.

As the world of planning has evolved over the past two decades, this new edition has been retooled and largely rewritten to reflect those changes, providing a greater amount of information on a wider range of topics. For example, it expands coverage of town centers, commercial corridors, housing options, village and hamlet planning, and individual case studies. It also contains entirely new chapters on subjects not addressed in 1994: form-based coding, visioning, sustainability, low-impact development, green infrastructure networks, and transfers of development rights. Additional new topics addressed include complete streets, pocket neighborhoods, official mapping, gateway planning, redeveloping commercial corridors, mitigation banking, vernal pool protection, waterway daylighting, and restoring wetlands, grasslands, woodlands, and floodplains. Seventy new case studies, photos, and drawings have been added to enrich the learning experience, including 10 on greenways and greenway development.

The focus of this edition has changed somewhat to reflect shifting development trends—hence its greater emphasis on infilling neighborhoods, strengthening town centers, and transferring development from outlying areas to locations closer to schools, shops, and jobs. A chapter on blending the new urbanism with greenway planning has been provided to fill a significant hiatus in the literature. However, recognizing the inevitability of further greenfield development in unserved areas, it provides guidance on a range of techniques to deal with those challenges as well.

New planning approaches and more sophisticated or effective versions of older techniques have substantially improved the results that communities are able to achieve, compared with 20 years ago. As noted in chapter 19, an estimated 180,000 acres of land have been preserved through conservation subdivision design, one of the techniques advocated in both the earlier and current editions. Sprawl has been curtailed in some jurisdictions through downzoning (noted in chapter 6) and by innovative transfer of development rights (TDR) programs (chapter 18). Public resistance to increasing density and mixing uses has generally lessened due to the influence of improved physical design, as detailed in the chapters on form-based coding (chapter 7), town centers (chapter 10), and highway corridors (chapter 11) and in many of the case studies. As a result, the semirural parts of most metropolitan regions (the focus of both editions) are in better shape today, although planning is always a “work in progress,” and much remains to be done.

Randall Arendt, FRTPI  
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## Chapter 3

# FUTURE PROSPECTS

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## Choosing Among Alternative Patterns

Because communities vary so much in their layouts, topography, history, economy, culture, and functions, no single planning or design approach is likely to provide all the answers. However, much can be said for getting back to basics and building community character. To be sure, the design approach followed in most communities during the second half of the 20th century—giving free rein to suburban subdivisions and shopping strips—usually conflicted with official policies written in comprehensive plans, which typically favor compact, walkable communities where the green infrastructure of farm and forest is protected as a working landscape. In this context, a strong argument exists for returning to the time-tested design principles that guided the growth of towns during the 19th and early 20th centuries, as discussed in the preceding two chapters, whose main themes this chapter expands on and discusses in greater detail.

### PUBLIC DISSATISFACTION WITH CONVENTIONAL ZONING

Many professional planners are increasingly feeling the effects of a growing public dissatisfaction with typical suburban approaches to new development that erode the special qualities of their communities. Initially spurred by the prospect of large, “cookie-cutter” subdivisions on farmland at one gateway to their town, residents in the Village of Honeoye Falls, New York (population 2,674), gathered more than 500 petition signatures protesting the proposal and formed a citizens advisory committee to study a range of issues that planning board members were too busy to examine.

The committee’s recommendations—later incorporated into new zoning and subdivision regulations—paralleled the typical results of image preference surveys (described in chapter 2) conducted across the country and included the following highlights:

#### Commercial Areas

- zero front setback, rear parking, pedestrian access via a continuous sidewalk system
- building scale and design to harmonize with village context
- new “traditional mixed use district” for downtown business expansion and transition to residential areas
- new “gateway business district” with traditional scale and grouping of buildings, interior courtyards, and rear parking

#### Residential Areas

- diversity of housing types encouraged through accessory apartments in large homes
- subdivision designs required to include a variety of lot and house sizes in the same developments
- residential design standards for critical features such as roof shape and pitch, gable orientation, and front setbacks
- rectilinear streets connecting with each other

#### Open Space/Trails

- villagewide trails and sidewalk system linking neighborhoods with one another and with schools, shops, natural areas, and other open spaces
- significant open space set-asides on parts of each parcel in new developments made possible by requiring more compact building patterns

Without a budget, the volunteers relied heavily on simple observation and plain common sense. Led by an able local organizer, residents began to take “the critical second look” at everything in their village and articulated what they liked and did not like. They examined their ordinances to determine the connection between the rule books and the nontraditional suburban development of recent decades. Naturally, they found a strong causal relationship: zoning

really was a type of genetic code shaping all new growth. The trouble was that the current “gene pool,” as expressed in the regulations, lacked many of the traits necessary for new growth to retain any “family resemblance” to the village core districts and older neighborhoods. In other words, the place was on its way to losing its identity because its regulations had much more in common with generic suburbia than with their village.

The standardization dilemma faced by Honeoye Falls has been nicely stated by Professor Ellen Dunham-Jones, now at Georgia Tech:

Unaffected by place, the new developments are interchangeable. Despite superficial stylistic or marketing differences, a new shopping mall in Vermont differs little from one in Nebraska, either in terms of physical design (they both only really look like parking lots), air temperature, or products for sale. While a developer will conduct a market survey to determine the particular habits of local consumers, he/she is still likely to bulldoze a site flat, effacing its particular nature, so as to more easily impose the standard plan. In the continual search for new markets, trusted formulae are reproduced such that the new market bears an uncanny resemblance to all other markets and any sense of place is eradicated. (Dunham-Jones 1990)

Several examples of commercial and mixed use developments where a very considerable effort was made to blend in with the local or regional vernacular are presented in chapters 23 and 24, particularly sites in Waitsfield, Vermont; Kent, Connecticut; Milton, Georgia; and South Hadley, Massachusetts.

### BOOTS ON THE GROUND: EVALUATING COMMUNITY STRENGTHS AND WEAKNESSES

To reach beyond nebulous discussions about “sense of community” and to identify the specifics of what people mean by those words, one approach is to put residents on the ground and give them the tools they need to figure it out, creating outdoor learning laboratories to help local people build stronger communities. When people are out on the streets, they can observe, feel, evaluate, measure, and decide which attributes contribute to community livability and which do the opposite. It is important that people expand their vision and begin to really notice things and catalog what some planners call the positive and negative DNA of communities.

In terms of streets and streetscapes, these volunteers critically examine car-centered street design and identify its deficiencies in providing for other users (see also

chapter 12). In order for streets to function as genuine usable places for people, such improvements as sidewalks, shade trees, and benches are essential components, not discretionary items. In some ways, these participants are following the advice of geographer John Stilgoe, who in *Outside Lies Magic: Regaining History and Awareness in Everyday Places* urges us to “go outside, move deliberately, then relax, slow down, look around. . . . Walk a bit, long enough to take in and record new surroundings. . . . Learning to look around sparks curiosity, encourages serendipity. Amazing connections get made that way. Questions are raised, and sometimes answered, that would never be otherwise.” Stilgoe encourages us to notice what is missing as well as what is present (Stilgoe 1999).

In the same way that some progressive planning boards conduct site walks on parcels proposed for development to evaluate existing conditions, fieldwork involving residents spending time on the major streets of their community can help generate ideas for new development consistent with the community’s shared values and goals. In October 2011, 50 residents participated in two workshops in Lincolnville and Belfast, Maine, hosted by the Orton Foundation with the Friends of Midcoast Maine and the Project for Public Spaces (PPS). After discussing what they value most and least about their communities, participants walked the streets to evaluate both qualitative aspects (such as comfort and attractiveness) and quantitative aspects (such as building heights and positions vis-à-vis streets and other buildings).

Participants used the PlaceGame technique pioneered by PPS to brainstorm ways to improve public spaces by listening to the people who use them. Host community leaders typically select a number of public spaces for analysis,



**Figure 3-1:** Two residents of Belfast, Maine, record their impressions of various aspects of their downtown while sitting in chairs created through a public art project. (Source: Orton Foundation)



which are visited by small teams and a facilitator. Spaces are evaluated according to access and linkage, comfort and image, sociability, and uses and activities. Participants were also introduced to “Power of Ten” mapping, in which people are asked to list 10 things residents or visitors could do or great places they could enjoy in the downtown area. It is not enough to have just one great place in a community, as a number are needed to create a truly lively town. Using “triangulation” exercises, PPS staff help residents understand that having multiple activity areas near each other creates more vibrancy and livability than dispersing them throughout town.

Organizations such as PlaceMatters, based in Denver, are doing similar work. In PlaceMatters’s “walkshops,” participants take photos of various aspects of their community, recording images later used in planning discussions. All the smartphone photos taken by walkshop participants are sent via e-mail or multimedia messaging to a central computer and are uploaded instantly onto a single website. Participants browse through the uploaded photos with interactive touch-screen technology. Photos sent from smartphones with locational geodata are then placed on computer maps. This technique can be used to map both positive and negative attributes of the community. Comments on the photos’ subject lines help to begin a group conversation in which different possibilities for change are discussed.

This is essentially a technologically advanced version of earlier participatory approaches from the 1980s in which residents were given disposable cameras, the prints from which were arrayed on display boards to illustrate buildings and places that the photographers particularly liked or disliked. In both cases, participants learn what their communities should “code for and against,” with ultimately improved regulations and design standards.

In all these approaches, the common theme is that “the community is the expert,” based on the belief that creating an informed public that decides its own future is one of the best ways to foster positive change.

## IDENTIFYING ‘PLACES OF THE HEART’

Despite the best intentions, many planning studies overlook some of the most important aspects of a community that make it a special place. This concern motivated residents in Wendell, Massachusetts (population 848), to devise a more creative way to identify the features most needy and worthy of extra protection. They recognized that these important elements are often too familiar or too subtle to be noticed until they have vanished. Wendell’s Rural Design Assistance Committee worked with consultants to create a participatory process for determining which aspects of the town were most valued or cherished by residents and which places would be missed most if they were to disappear. The first part of the process involved a survey

asking respondents to locate these “places of the heart” on a town map and to list landmarks and memorable places (Babize and Cudnohufsky 1990).

Survey participation was encouraged by volunteers who hand-delivered questionnaires to each household, telling everyone that by returning a completed form they would automatically be entered in a raffle. A “vision workshop” was conducted two weeks after the survey forms were handed in, at which time residents gathered into small groups to describe in words and sketches what they wanted their town to look and be like in 10 to 30 years. Children were also encouraged to participate via specifically prepared exercises and drawings, which yielded some different ideas and added important perspectives.

Excluding sites mentioned fewer than five times, 39 locations were identified by the 134 respondents and included a variety of natural and man-made features visible from public roads (ponds, hilltops, fields, farm complexes, civic buildings, and the like). Of the 39 special places identified in the survey, 21 were unprotected in terms of their character preservation (i.e., they were privately owned with no restrictions on future changes). These included rural landscapes along back roads and edges of several ponds, brooks, and wetlands. Concluding that “much of Wendell’s sacred structure remains vulnerable to undesired and compromising change” (Babize and Cudnohufsky 1990), the organizing committee identified 12 “areas for controlled growth.” Recommendations included a mix of regulatory and nonregulatory approaches. Two key suggestions were to contact owners of large parcels where special character-defining features would be threatened by conventional development and to encourage either land conservation measures or conservation subdivision design (described in chapter 19).

In addition, compact traditional development (including locally affordable housing) was recommended in a new “village center district” where septic systems could be located “off-lot,” sharing nearby areas of better soils on one portion of the development property (see chapter 14). Among the regulatory approaches mentioned were techniques to protect the visual quality of rural roadsides, such as deep buffered setbacks, vegetative clearing restrictions, and minimized curb cuts with shared driveways.

## HEART AND SOUL PLANNING: INCORPORATING COMMUNITY VALUES INTO LAND-USE PLANS

A newer variation on Wendell’s approach is the Heart and Soul Community Planning process (H&S) developed by the Orton Family Foundation to help residents identify and define the characteristics that make their town a special place, from physical features to social relationships. Conventional planning, with its typical top-down decision

making, has proven incapable of preventing communities from becoming “soulless shells.”

The H&S approach helps residents from all walks of life discover, value, and protect their town’s special places, characteristics, and customs. “The heart and soul of a place is what makes people love where they live. Those attachments, in turn, lead people to care enough to take action to improve their hometown and get involved in the tough decisions required to protect it” (Orton Family Foundation webpage, [http://www.orton.org/who/heart\\_soul](http://www.orton.org/who/heart_soul)).

Damariscotta, Maine, was one pioneer of the H&S program. Although Damariscotta’s population is small (1,868), the town serves a region of 9,000 people. In 2005, the town rebuffed a Walmart proposal by setting an upper limit on the size of any new individual retail establishment. That effort spurred interest in long-range planning, led by a newly appointed planning advisory committee. In 2008, the town partnered with the Orton Family Foundation and Friends of Midcoast Maine (FMM) in a two-year H&S visioning project.

According to Jane Lafleur, Damariscotta project lead and director of FMM, the H&S process is a values-based planning process that engages the public, identifies the community’s values, and bases all visions and plans on the agreed-on values. When people agree on those values, the steps to reach a shared vision become easier to take.

Damariscotta H&S participants

- gathered stories highlighting what people love about the town,
- held community forums about planning and development issues,
- conducted surveys about what people (including high school students) want to see in future growth, and
- spread the word about activities and progress through regular articles in the local paper, an electronic newsletter, and manning informational tables at local events.

These activities produced agreement on six “core community values”:

1. Working locally and growing locally owned businesses
2. Living and shopping locally
3. Participating in local schools, organizations, churches, and community events and festivals
4. Keeping culture and nature in close proximity
5. Providing easy access to goods and services
6. Fostering a strong sense of community where people trust one another and feel safe

A visioning process involving a multiday design charrette generated options for shaping new development consistent with the six core values, resulting in a town vision and set of recommendations that partners began to implement in 2010. Damariscotta’s H&S project involved

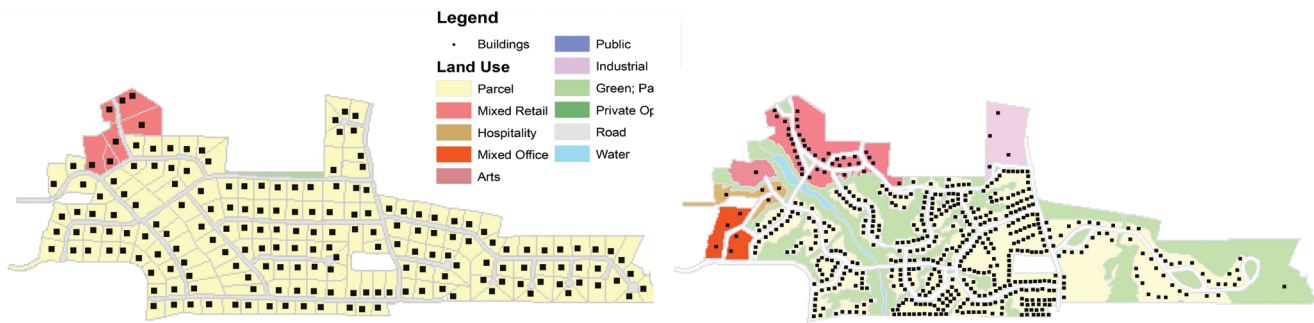


**Figure 3-2:** *The Heart and Soul charrette attracted many residents and officials in the small coastal town of Damariscotta, Maine. It was led by the firm of B. Dennis Town Design, which also authored the charrette report and illustrative plan. (Source: Orton Family Foundation)*

many people who became involved in reimagining the waterfront, protecting the historic downtown, and adapting to new growth without losing local character and traditions. Following such a process, the result is often that ordinary citizens lead the way and the community becomes empowered. Community building is the outcome. The long-term aspects of this effort involve updating the comprehensive plan and creating and implementing economic development strategies. A new nonprofit has been established to coordinate downtown businesses with local government.

Although town voters rejected the key recommendation from the H&S process (form-based coding, a concept described in chapter 7) in 2011, a new vision statement by the comprehensive plan steering committee incorporates all six H&S core values. It also embraced the philosophy of becoming “better, not bigger,” striving to improve existing retail rather than creating new commercial areas (as the Piper Commons plan—described later—had proposed), which might have drawn business away from existing downtown merchants (e-mail from Tony Dater, town planner, October 7, 2013).

In response to growing public interest in harmoniously fitting new development into existing downtowns, neighborhoods, and the surrounding landscape, the Conservation Fund in Arlington, Virginia, has produced a series of well-illustrated design booklets called *Better Models for Development*. Published between 1999 and 2005 for various states (Virginia, California, Maryland, Delaware, and Pennsylvania) and two regions (the Shenandoah Valley and the Chesapeake Eastern Shore), these publications are written for nontechnical audiences of local planning commission members to help increase awareness of the importance of design in the built environment, particularly town centers and commercial corridors.



**Figure 3-3:** The conventional layout of the Piper Commons demonstration site in Damariscotta, Maine, following current town regulations (left), contrasted with a more creative alternative reflecting values identified through the H&S process (right). Using smart growth design strategies, about one-third of the site was able to be designated as an interconnected open space network, despite a significant increase in dwellings. (Source: Orton Foundation)



**Figure 3-4:** A perspective sketch of traditional village homes clustered on modest lots around a small neighborhood green, produced as part of the Piper Commons charrette. (Sources: Orton Family Foundation and B. Dennis Town Design)

Inspired by the *Better Models* series, Chautauqua County in rural western New York produced a 56-page design booklet of its own, addressing design considerations for both residential and commercial development for both urbanized and rural areas. Created as part of the county's 2009 comprehensive plan update, *Visualizing Our Options: Creating a Better Future* can be seen at <http://www.planningchautauqua.com/pdf/CompPlan/FinalReport/Appendix/Chautauqua09.pdf>.

## TWO PATTERN BOOK EXPERIENCES: DENTON AND HUNTERSVILLE

Any effort to establish standards for the exterior design of new buildings must be supported by the public and elected officials. Without a commitment to implement new rules, even the best document can remain on a shelf or be downgraded. This appears to have happened in Denton, Maryland (population 4,372), after an elaborate pattern book was adopted in 2008. Produced by UDA Architects and Redman-Johnston Associates, this 93-page publication

was created in response to several large-scale mixed use development proposals. It was also intended to inform the infill and redevelopment process, with design standards to regulate new commercial buildings and advisory guidelines for residential development.

However, when large commercial projects faltered in the Great Recession and the political balance changed on the town council, a new conservative majority downgraded the book's commercial design standards to advisory guidelines that applicants are not required to follow. (A set of voluntary design guidelines for commercial development is contained in a 17-page zoning ordinance appendix, without illustrations.) In addition to the political realignment, it is possible that tiny Denton, with its usually moderate growth rate, was simply too small and not facing enough sustained development pressure to match the size of its pattern book (*Town of Denton: A Pattern Book for Denton Neighborhoods*, [http://www.dentonmaryland.com/uploads/file/pdf/denton\\_pattern\\_book\\_final.pdf](http://www.dentonmaryland.com/uploads/file/pdf/denton_pattern_book_final.pdf)).

In contrast, Huntersville, North Carolina (population 49,344), a rapidly growing suburb of Charlotte that had been gradually adopting a number of design standards over the last decade, took a low-budget approach and engaged two interns seeking a landscape architecture degree and an architectural degree to prepare an illustrated design guidebook in 2009. The purposes of this guidebook, which enjoys broad political support, are to provide a visual aid for innovative design approaches and to inspire creative design solutions. Half the length of the Denton pattern book and focusing more on commercial than residential (as Denton had), this publication does a very good job of describing basic design principles (such as requiring that every new building front onto a street, rather than a parking lot) and has been well accepted by the development community, which had already been exposed to such design ideas in previous regulations. In fact, the publication is more of an illustrated extension of the zoning ordinance than a "guidebook" (a term implying





**Figure 3-5:** Huntersville, North Carolina's design guidebook contains many illustrations such as this one, from the *Small Area Plan for East Huntersville*, showing the kind of urban form the community is striving to achieve through new development and redevelopment. (Source: Design Guidebook, Huntersville, North Carolina)

voluntary compliance), as it restates key requirements of that ordinance. As a visual aid to understanding what the ordinance means, it has been extremely successful and could serve as a good model for other communities (*Design Guidebook: Town of Huntersville, North Carolina*, <http://www.huntersville.org/Portals/0/Planning/Design%20Guidebook%20for%20web.pdf>).

According to Planning Director Jack Simoneau, the planning board will usually see development proposals when it considers requests for conditional rezoning, where developers typically show the building layout. By the time a conditional rezoning request reaches them, however, two staff reviews have been conducted and most issues have been resolved, ensuring that the developer's proposal is consistent with the *Design Guidebook* and relevant regulations.

## VILLAGE AND HAMLET PLANNING IN NORTHERN VIRGINIA

A very notable 30-year planning effort began in 1984 in northern Virginia when the Loudoun County Board of Supervisors adopted the Rural Land Management Plan, intended to resolve the issue of rural residential subdivisions that threatened the long-term viability of large-scale farming in the western part of the county. This section describes the very long evolution of the rural planning process in one of Virginia's fastest-growing counties. Although it extended across several decades and was fraught with political conflict, the process eventually produced some remarkably positive results, producing effective regulations to shape the future.

Major concerns included the potential need to "down-zone" the rural area from three-acre lots and the financial

impact this would have on farmland owners. The proposed solution involved a voluntary transfer of development rights (TDR) program, allowing landowners to sell development rights in a TDR-like system to developers in the eastern part of the county, closer to Washington, D.C. However, this technique was not embraced by many developers, nor were the incentives great enough to generate much interest among farmland owners.

Further, the idea of saving land in the west while promoting development in the east was strongly resisted by residents in the eastern "receiving areas," with repercussions at the polls resulting in the ouster of supportive county supervisors in the east. Newly elected supervisors from the east refused to accept western density but supported local clustering in the west, which led to design studies for several new towns, villages, and hamlets during the late 1980s. Distrustful of TDRs, the county's political leadership opted for farm-by-farm clustering into villages and hamlets and announced its Rural Vision Initiative in 1988.

Sparked by deepening public concern about the highly negative visual and environmental impacts of large-lot (three-acre) zoning on Loudoun's fragile and extremely scenic open landscapes and farmland, the county supervisors commissioned a six-month study by its planning staff. By that time, much of rural Loudoun had been gridded into 10-acre parcels exempt from subdivision regulations, typically rectangles measuring 600 by 730 feet, arranged without regard to existing streams, steep slopes, access easements, or even septic perk sites. Also, many other farms had been subdivided according to the outmoded three-acre zoning provisions originally adopted in 1959 (intended to allow farmers to break off a few home sites in order to raise capital for their working farms), and those lots were ready to be built on whenever market forces prevailed.

Reluctant to further downzone (since equity arguments had been strongly voiced by many landowners), financially unable to purchase a significant number of development rights, and aware that the continued fragmentation of the countryside into three- to five-acre parcels threatened groundwater quality, compromised long-term agricultural viability, and generated higher public service delivery costs, the supervisors considered several alternative growth patterns. Two classic planning solutions were eventually rejected (major expansion of existing towns and the creation of five new towns), but two others were ultimately endorsed (creation of 20 new rural villages and an unspecified number of new rural hamlets).

The heart of the county's "Vision" at this time was neatly summarized as follows: "The Board envisions a continuation of Loudoun's traditional land-use pattern of rural villages and low density development. To achieve this Vision, the Board will encourage the development of new mixed use villages, each consisting of a few hundred houses grouped together at a comfortable human scale and surrounded by significant amounts of permanent open

## Huntley Farm

Loudoun County planning staff, which then included two architects with design backgrounds (Planning Director Milton Herd and Senior Planner Richard Calderon), took part in a meeting concerning a controversial subdivision proposal for two cul-de-sac streets serving large-lot homes in the Huntley Farm subdivision in historic Waterford village..

As revealed by a site walk and a site analysis map of the property, the proposed southern cul-de-sac would destroy an important group of trees serving as an entry feature, while the northern cul-de-sac on a small ridge would visually dominate the community. Additionally, the loose and random layout of new houses would compromise the distinct order and edge of the historic village (see Figure 3-6). At the request of community leaders, the developer, county planning commissioners and supervisors, and planning staff prepared an alternative design—partly to test the county’s then-new rural hamlet and village ordinances, adopted as part of the Rural Vision Initiative.

In the staff proposal, the southern group of trees and the northern ridge were left untouched. Janney Street was extended eastward and, instead of being lost in a curving

cul-de-sac, terminated at preserved fields and pastures, providing long-distance mountain views across them. The new Huntley Street, which would parallel Second and High Streets in a traditional manner, was designed with a slight jog to focus the pedestrian or driver on several barns. Huntley would end at Fairfax Street, just across from the old Waterford School, an early 20th century Greek Revival building forming a new terminal vista. Another advantage of this design was the way children would be able to walk to school without risking their lives on High Street, an intracounty collector.

Viewed within the village context, the staff design proposal captured the essential character of the historic settlement and can be distinguished from it only with difficulty. Sadly, the design position within the planning department was later eliminated (and never restored) due to budget cuts, reducing the department’s ability to suggest creative design improvements to subdivisions laid out by country surveyors and civil engineers. (In some states, municipalities without planning staff designers can hire consultants to perform such services and recoup their fees from applicants.)



**Figure 3-6:** The developer’s proposal for Huntley Farm (left) included two suburban-style cul-de-sacs breaking the traditional village street pattern, as well as house locations blocking distant views from the village and dominating higher elevations. Virtually all the preserved open space would be hidden behind new houses. However, in the staff’s design proposal (right), homes are located along interconnected streets extending the historic pattern. For part of its length, the new street borders a new village green, offering views eastward toward the Catoclin Mountains. The new street also terminates with a view of the old school at its northern end. Finally, tree groups and ridge areas are kept free of intrusive development. (Source: Loudoun County Planning Department)

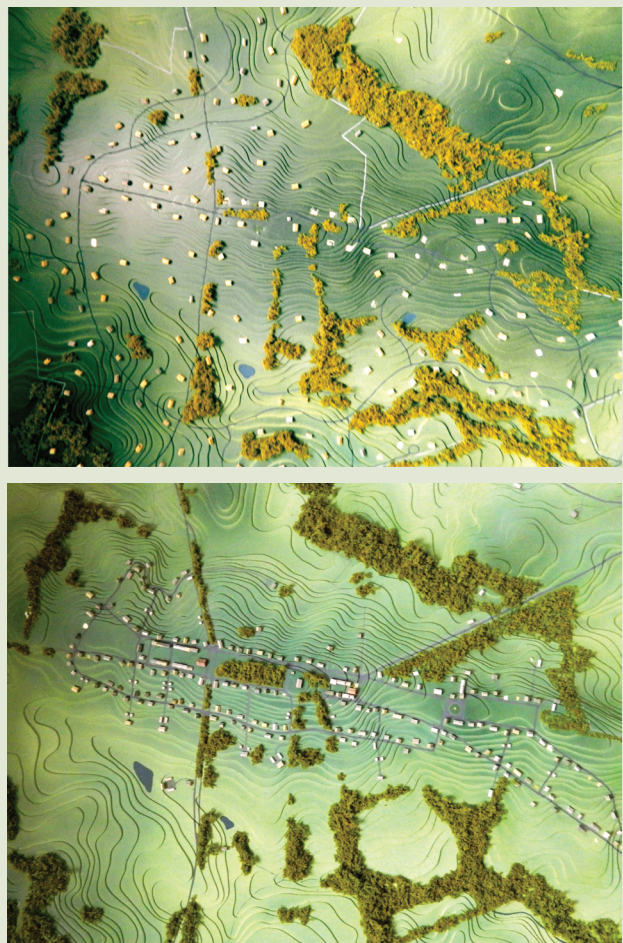


## Black Oak and Fremont Villages

Loudoun County hired the town planning firm of Duany Plater-Zyberk & Company to prepare prototype designs for two rural villages. The first, a 184-unit village called Black Oak, located on an 870-acre farm, was designed by Charles Barrett, assisted by Andres Duany, Richard Calderon, and Milton Herd. Their design clustered homes on one-fifth of the parcel, permanently conserving 80 percent of the land. Homes were arranged on lots of various sizes in concentric tiers on either side of the ridgeline running through the center of the property, keeping the highest elevations open and the skyline rural. The layout was designed to add value with long distance views from the great majority of dwellings. Extensive pedestrian and equestrian paths were also planned to traverse 700 acres of preserved farmland.

Although this village model was estimated to cost a developer \$3.4 million more than a conventional layout (due to centralized infrastructure), those additional expenses would have been more than outweighed by the greater projected net sales tax revenues (or profit)—\$8.2 million versus \$4.4 million—representing a 50 percent increase over the net sales tax revenues from the large-lot model using the village approach with smaller lots arranged more compactly and surrounded by preserved farmland (according to a comparative financial *pro forma* economic analysis prepared by Hammer, Siler, and George).

A second village, Fremont, was designed with 80 internal lots and 60 perimeter lots. Bonus lots (20 percent) took the form of attached housing and were located near the village center. One-third of the single-family detached homes could include accessory dwellings to create supplementary income and housing diversity. Although much care was taken to design around cultural features such as farm fences and hedgerows in Fremont's satellite hamlet, 20 of the village interior lots were situated within a wooded habitat, a design decision with which environmentalists would probably disagree. Like Black Oak, four-fifths of the property was designated as permanent open space, and each village was to include a convenience store and gasoline station, although their economic viability would have been a concern.



**Figure 3-7:** Above are models commissioned by Loudoun County, Virginia, to illustrate the differences between two contrasting rural development approaches at Black Oak Farm: conventional three-acre lots (top) versus the village form (bottom). (Sources: Models built by Brian Luwis, Duany Plater-Zyberk & Company, and photos by Loudoun County Planning Department)

space. Each village will be served by its own water supply and sewer facility. Beyond the village boundaries, the Board's policy will be to encourage low density development" (Loudoun County Board of Supervisors 1988).

A critical design standard was the requirement that the developed area of each village must not exceed 20 percent of the parcel area, with the remainder protected as farmland and viewsheds through conservation easements. Given western Loudoun's Piedmont topography of rolling hills, hedgerow screens, forested mountaintops, and

stream valleys, the county supervisors felt that extensive use of the rural village and hamlet options would preserve rural character.

In terms of economics, it was assumed that these small lots would match conventional A-3 (three-acre) lot prices because village and hamlet lot purchasers would buy, in addition to their lot, an open space conservation easement on the farmland surrounding the settlement—an exchange of real estate for secured rural views. This assumption was buttressed by the results of an independent financial

analysis by Hammer, Siler, George Associates, which estimated a 49 percent greater return on land values at the proposed Black Oak village development compared with returns on a standard three-acre lot development.

After favorable public hearings, the board invited two practical tests to demonstrate the viability and benefits of the village approach, one small, the other large. The first involved the redesign of a proposed 19-lot conventional subdivision called Huntley Farm at the edge of historic Waterford Village. The second involved designs for two farms in probate—one for a village and another for a hamlet. Although neither was built, they remain excellent examples of rural design.

Loudoun County's 1988 Rural Vision Initiative therefore introduced the concept of rural clustering through small hamlets and new villages surrounded by farms and forests, similar to the pattern of Loudoun's historic settlements. Sadly, the vision was never marketed to key western constituencies such as traditional farmers, bankers, wealthy horse farmers, exurban owners of large lots, and the surveyors who had gridded a large number of farms into three-acre lots and 10-acre parcels. For many reasons, these critical constituencies felt that the hamlet/village vision did not represent a viable solution and generally did not support it. According to a former planning director, some felt that it was simply a ruse that presaged a broad downzoning of the rural area from three-acre lots "by-right" to far more restrictive minimum lot sizes of 10 acres or more (e-mail from Milt Herd, former planning director, Loudoun County, July 2, 2012).

Although the county comprehensive plan adopted in 1991 following the Rural Vision Initiative continued to promote these options, it failed to recommend changing the underlying base A-3 zoning (one unit per three acres). Further, although 30 hamlets were designed, approved, and built between 1988 and 2000 (two of which are detailed in chapter 21, Birch Hollow and Dobbins Creek) and four rural villages were approved, use of the sprawling A-3 rural residential subdivision form accelerated rapidly, consuming rich agricultural soils, jeopardizing the rural economy, straining rural road capacities, and diverting limited public resources away from areas of the county that had been planned for growth. After this sobering experience, in 2001, Loudoun County updated its comprehensive plan and successfully replanned the rural area for much lower residential densities to support the rural economy. Then after five years of drafting, approving, reconsidering, and redrafting the zoning ordinance, the rural area was rezoned and remapped in 2006 to implement the plan policies.

In the northern tier of the rural area, where land has been downzoned to a base density of one dwelling unit per 20 acres, property owners and developers are able to recoup much of their previous density through the rural clustering option. This option was liberalized to allow densities of one dwelling unit per five acres when 70 percent of

the acreage consists of rural economy lots or a combination of open space and rural economy lots (having at least 15 acres and supporting a rural use such as farming, horses, and the like). A number of commercial uses were also included in the 2006 ordinance revision to allow more economic return (some permitted by-right and others by minor special exception), ranging from rural retreats/resorts, conference centers, bed-and-breakfasts, agriculture-related offices, art galleries / antique stores, and others.

In the southern part of the county, where equestrian uses are very strong, the base density of 1:40 can, with clustering, be increased to 1:15. These recouping cluster options were key to resolving the many lawsuits filed immediately following adoption of the 2003 version of the zoning ordinance. Another positive outcome, perhaps in light of the tight residential market but also likely due to the expanded zoning ordinance provisions for rural-related commercial uses, has been the considerable strength and growth of the rural economy. As of 2012, Loudoun County had 33 vineyards and wineries (more than any other county in the state). Also, numerous innovative agricultural and horticultural enterprises, bed-and-breakfasts, and similar businesses had been established.

Between 1995 and 2005, the county's farm economy doubled in revenue despite the continual subdividing of rural land. This growth was created by many younger farmers who bought smaller parcels in the 10- to 100-acre range and began producing a variety of more intensive, high-value crops, including llamas, grapes, Christmas trees, and flowers. Although many of these farmers are part-timers, they have expanded the agricultural economy.

By mid-2012, 15 additional hamlets had been established in the county, some under their "grandfathered" densities and others using the county's current cluster provisions. Three reasons for the popularity of the hamlet option continue to be declining interest in large suburban lots, the minimum parcel size of 40 acres, and the ability to secure on-site water or wastewater facilities. Because of its greater threshold size, the need for more significant utility systems, and rezoning requirements, the village model has not been embraced to nearly the same extent. Only four have been approved, of which only three have been built.

Further, due in large part to their size (up to 300 dwellings), new rural villages are no longer an option for the rural area. However, they are now allowed and encouraged in three of six subareas of the "Transition Policy Area" created by the county's comprehensive plan in 2001 to provide development choices that would achieve a visual and spatial transition from suburban to rural areas. This special area covers 35 square miles, or nearly seven percent of the county. Drawing from the traditional hamlet development pattern, the plan and zoning districts for this area *require* residential development to be clustered at densities that vary by subarea.

In addition to rural village options and residential cluster provisions, a “countryside village” option was introduced for one of the subareas. These are envisioned as a community form more akin to their suburban planned unit development neighbors but are compact, moderately dense, mixed use communities on a minimum of 500 acres that include permanently eased conservancy areas and open space. No development applications for the countryside village option had been submitted to the county as of late 2014.

To summarize, while Loudoun County has moved away from the village concept (and even the hamlet name) in its rural area, it essentially adopted both forms as transition tools in the newly created Transition Policy Area—keeping the rural village criteria and option in three of the six subareas and allowing the countryside village option in one of the others. Furthermore, the entire Transition Policy Area *requires* cluster design.

## OPPOSITION TO PLANNED COMMUNITIES

Many of the neotraditional (or new urban) villages and towns proposed in recent years have been controversial because of their location and scale, often involving hundreds or even thousands of new homes, frequently on productive farmland away from existing jobs, shops, and schools. Such siting (usually driven by the location of the land owned by speculative developers and rural property owners) has caused a number of creatively designed mixed use villages to be heavily criticized as “the right proposal in the wrong location.” (In fact, the Black Oak and Fremont Village designs described previously could be faulted in this way.)

In most rural counties, outdated existing low-density, large-lot, single use zoning necessitates amending current regulations and comprehensive plans to allow (or encourage) more progressive land uses; this is typically a highly charged political process. Such was the case when the Caroline County (Virginia) Board of Supervisors was asked by a developer to revise its current land-use policy and regulations to approve the large, mixed use Haymount project. Because of its scale and the substantial density increases requested, this new town of 4,000 homes and 750,000 square feet of retail, office, and warehouse space sharply divided residents in this rural county, located at the terminus of a new commuter rail line to Washington, D.C.

Without discussing the specific merits of the case (and they were numerous), it is important to note that many rural and suburbanizing counties are geared for a conventional “suburban sprawl” pattern of low-density, disconnected single use subdivisions with large lots, shopping centers, and office parks. Many lack smart growth policies and regulations and are unprepared for any such proposals. Any large-scale proposal to follow more historic patterns

of compact neighborhoods surrounding mixed use centers is likely to trigger a major debate, especially when coupled with a request for increased density.

Local governments should anticipate and prepare for such proposals and consider encouraging them as a desirable alternative—within reasonable density limits—based on carrying capacities and service thresholds. Appropriate locations should be designated in official planning and regulatory documents to guide progressive developers to areas that make sense from the standpoint of infrastructure provision, service delivery, and natural resource management. Such documents should also be updated as frequently as necessary to account for changes in infrastructure, such as new road or rail links, increased or declining capacity in water and sewerage, technological alternatives to public water and sewer, and other updates.

Land-use planning often involves many political considerations, and regardless of how thorough or rational a planning goal or policy may be, major development decisions are usually controversial. Ironically, the Haymount project was ultimately approved for the wrong reason—the construction jobs it would generate—a criterion that a poorly designed proposal would also have met. After more than 20 years of attempting to secure financing, however, the project remains only a bundle of drawings and a box of reports.

It is sadly true that large-scale proposals offer, on the one hand, the best possibility for good site design (featuring compact neighborhoods, traditional mixed use centers, and significant open space set-asides) and, on the other hand, the greatest potential for organized opposition. Planners at all levels (including citizens serving on local boards or commissions) should become vocal advocates of planned growth coupled with planned conservation. The alternative is too easy and too dismal to contemplate: letting developers take the course of least resistance, following conventional codes that ultimately produce endless acres of low-density, single use subdivisions, shopping centers, and office parks, each proposed and approved independently and eventually spreading over square mile after square mile of countryside as evidenced almost everywhere today. Clearly, there are more imaginative ways to accommodate inevitable growth.

## INITIATING BETTER DESIGN SOLUTIONS

Although county or municipal planning staffs are rarely encouraged—or even allowed—to suggest specific design solutions, such involvement should be promoted if the present “lowest common denominator” standard of development confronting many communities is to be improved. It is commonly felt that the proper function of the public sector should be limited to reviewing proposals drawn up by developers. However, many developers would welcome



constructive guidance early on, such as during a preapplication or conceptual sketch plan stage. That would be an appropriate moment for public-sector representatives to walk the property to understand its opportunities and constraints and to state clearly what they would like to see regarding building form and location, street connections, open space provision, and other key elements. The Huntley Farm redesign in Loudoun County, described previously, exemplifies the kind of improved results that trained staff can help applicants produce.

In Davidson, North Carolina (population 11,750), every major development proposal is required to proceed through a mini-charrette process, whose scale and duration is keyed to project size. Sometimes it is as short as a single day, with discussions and sketching following a site walk that conveys an essential understanding of the existing features, opportunities, constraints, and context of the property in question. For large or complex proposals, this process can take several days or even a week.

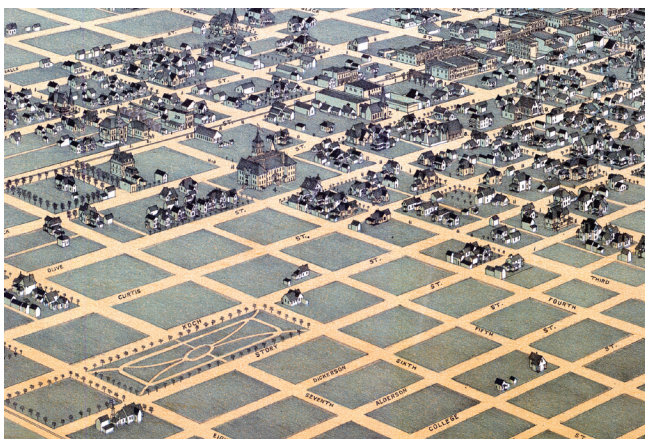
Municipal officials with conservative instincts concerning the appropriate role of local government would do well to ponder the historic precedents in countless locations around the country where town fathers exercised considerably greater influence over the resultant development pattern than most officials would ever dream of attempting today. Bozeman, Montana, is a fairly typical example of a 19th century municipality that had a far clearer idea of what it wanted to become than many communities now have regarding their own future.

The most striking features of the 1898 bird's-eye lithograph of Bozeman (see Figure 3-8) are the layout of the street pattern decades before it was filled in and the advance provision of a fairly major park to serve a then-unbuilt section of town. Until about 60 years ago, it was

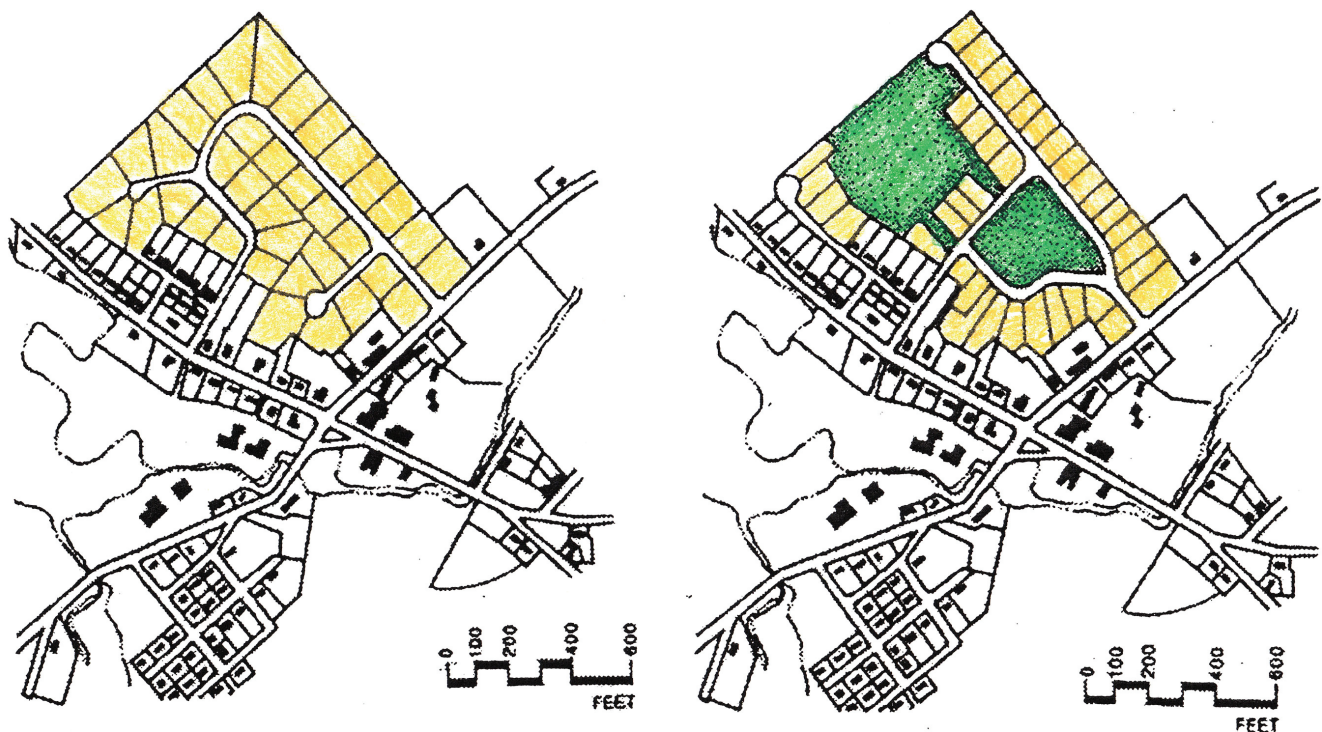
not uncommon for town plans to include an "official map" showing the locations of at least the major new connecting streets (see chapter 12). This sort of forward thinking regarding the "gray infrastructure" should be resumed and be supplemented by another overlay map showing all natural areas to be protected as permanent open space preserves, linked together with trails and green corridors—the "green infrastructure" (see chapter 16). Such open spaces could easily be designated by requiring new development to follow traditional principles of compact design, with the saved land placed under conservation easements to create a network of natural areas and parklands for both formal and informal recreation.

At the village level, much could be done to encourage (or require) more traditionally scaled streets and lot layouts, together with formal and informal open spaces. Figure 3-9 compares two conceptual plans for extending a historic mill village in Sutton, Massachusetts. On the left is a conventional suburban layout, contrasted with a more imaginative design on the right, where nearly all the lots, which are more in scale with the historic lot size, either face onto a common or back up to a playing field. Readers particularly interested in village design issues are referred to *Crossroads, Hamlet, Village, Town: Design Characteristics of Traditional Neighborhoods, Old and New* (Arendt 1999, 2004).

If readers feel that some of the changes that have occurred in their communities over the last 10 or 15 years could have been handled better (with the benefit of hindsight), they are not alone. In many cases, local land-use regulations were adopted without any clear picture of their ultimate consequences when implemented. Unlike developers, who are often required to file impact statements detailing the expected consequences of their proposals,



**Figure 3-8:** On the left, an 1898 bird's-eye perspective of Bozeman, Montana, drawn by Augustus Koch, showing future streets and park locations as envisioned by the city fathers and as built by their successors. This early lithograph contains an implicit challenge to planners and municipal leaders today: to match their foresight and their will to provide open space in traditionally scaled neighborhoods. (German-born Koch, who served in the Civil War as a cartographer, produced similar lithographs for 112 communities between 1868 and 1898.) On the right is Cooper Park today, the formal open space reservation shown in the 1898 bird's-eye perspective. (Sources: City of Bozeman, left; Randall Arendt, right)



**Figure 3-9:** Two alternatives for expanding a mill village in Sutton, Massachusetts. On the left is a conventional subdivision with lots twice as large as in the historic village to which it is attached, a classic example of communities increasing minimum lot sizes inconsistent with the traditional community fabric. On the right, a revised plan, after rezoning to encourage more compact development with value-adding greens and playing fields, the same number of homes is accommodated, with lot dimensions more in keeping with those of the original, adjoining neighborhood. This example, designed by the author for the National Park Service, shows that lot dimensions can be easily reduced without loss of livability. (Sources: Arendt 1999 and Natural Lands Trust)

municipalities are not required to prepare similar projections describing the likely results of adopting and implementing new ordinance provisions. If this kind of exercise were performed, however, it is probable that many proposed regulations would not be approved (see the section on “build-out” maps in chapter 2).

An excellent resource for communities wishing to promote discussion of the concepts presented in this chapter is an eight-part video produced by the North Carolina Division of Community Assistance (“Designing Better Places,” <http://www.designingbetterplaces.com>). Each of its eight segments runs about five minutes and covers a different topic, including architectural character, “outdoor rooms,” pedestrian scale versus automobile scale, form-based coding, and complete streets (as also discussed in chapters 7, 10, and 12). People are invited to use the images in local presentations, as there is no copyright, or to substitute their own photos and adapt the script to tailor it to their own communities.

Participants in land-use debates would benefit by thinking both positively and negatively about potential impacts

of growth. All too often, discussions in small communities become polarized between groups or individuals who tend to view new development as either beneficial or detrimental. Development, if designed sensitively and located appropriately, can certainly complement and enhance the character of small towns in the same way that much turn-of-the-century development improved the quality of life in many small 19th century villages. The common perception of growth as a generally negative force is understandable in view of the serious damage inflicted on traditional town character by much late 20th century development. The problem is usually not with development per se but rather with its pattern, scale, location, and design.

In his booklet, *Saving Place*, published by the National Trust for Historic Preservation, consulting planner Philip Herr proposed a number of deliberately provocative questions intended to stimulate discussion and to motivate residents and officials to improve the ways their town conducts “the development business” (Herr 1991). A dozen of these questions follow. Readers are invited to



take Herr's test by asking these questions around their own communities.

1. Do controls in village centers allow real compactness by permitting lots and setbacks as small, densities as high, and roads as compact, winding, and steep as those already existing in well-liked areas?
2. Do the combination of public parking provisions and zoning parking requirements allow compact business development by waiving on-site parking in village centers, perhaps using impact fees to help create new municipal parking areas nearby?
3. Do subdivision regulations avoid mandating uniform development in all contexts by having standards that vary for different locations, such as villages, farmlands, and woodlands?
4. Does the town lead the way through centrally locating such public development as town offices, elderly housing, post offices, and recreational facilities, and removing from central areas inappropriate uses, such as public works yards?
5. In outlying areas, does the town strictly limit the extent of business zoning along highways and impose strict egress and landscaping controls?
6. Do town regulations effectively encourage or require affordable housing support as part of new development, resulting in such housing in more than a single location?
7. Are there architectural design controls in historic districts or appearance codes elsewhere?
8. Has the town established site-plan review procedures with approval based on specific site design and development criteria?
9. Are there scenic road controls protecting trees and stone walls, strict billboard controls, and on-premises sign controls that go beyond numerical rules to deal with design quality?
10. Has the town adopted cluster regulations or similar controls allowing preservation of open space by compact siting of housing and made it possible for the town to decide where and when cluster development must be used?
11. Has the town more than once appropriated funds for property or property rights acquisition to protect natural or cultural resources?
12. Has the town created mechanisms (such as a community development corporation) to encourage economic development that is compatible with protecting community character?

Chapter 4 examines some of these issues and expands on them in terms of community aesthetics, with chapter 7 focusing even more on townscape form.