

Planning for Better Roadscapes

by Kate Lampton

Whether it's a state highway, a county road, or a frequently traveled local road, every town has main corridors that form the framework around which the community develops. The way these corridors look and function not only helps define a community, but has a large impact on our daily lives. Many planners, planning commissioners, and citizens have come to recognize that:

- too often our roadway corridors are given over to a hodgepodge of uses, with development sprawling out from town or village centers;
- the preservation of farmland and open spaces along the corridor are not always given much attention; and
- valued vistas and natural landscapes are often lost to scattered development.

There are alternatives to these common trends, but they require a fresh look at the landscapes of our roadway corridors and the ways we allow them to grow and develop.

START WITH A CORRIDOR ANALYSIS

An essential first step in understanding a roadway corridor and planning for its future involves conducting a landscape analysis of the corridor. A landscape analysis will provide a solid base of information and understanding upon which to develop your comprehensive plan and zoning and subdivision regulations. This, in turn, will allow for better review of specific projects within the corridor. Landscape analyses can vary in detail and complexity, based on your commission's time, funding, and level of assistance, but the essential steps are similar. Regardless of the level of sophistication an analysis is well worth the time and effort.

Before beginning your analysis you must first determine the extent of the focus area along your community's main

INCORPORATING WHAT YOU'VE LEARNED ABOUT ROAD CORRIDORS INTO THE PLAN CREATES A SOUND BASIS FOR THE IMPLEMENTATION TOOLS YOU LATER ADOPT.

road corridor. If your corridor is a lengthy one you may need to begin with a portion of the corridor, rather than tackling the entire stretch. Start with some simple questions to help set your study boundaries:

- What is of most concern?
- Where are there features that the community particularly values or enjoys?
- Are there areas where large changes are imminent, such as road improvements or a major development?
- Are there physical features or lot lines that form a logical study area boundary?

These types of questions will help you define the area you are most interested in and the extent to which roads that connect to your main corridor are included.

Don't forget to also consider your capacity for the work, including funding, participants, and timeframe. Start with whatever you can manage well.

1. Hit the Road!

An effective – and often enjoyable – way to start a corridor landscape analysis is to gather your planning commission for a road trip along the route. Even though you may all travel the route frequently, you may not have taken a hard look at what's really happening. Moreover, different people tend to notice different things while traveling. Find a vehicle that everyone can fit in. Prepare a list of questions to consider and distribute them ahead of the tour. The kinds of questions to ask might include:

- What do you notice that is key to the corridor?
- What do you like and dislike about the corridor and why?
- What is vulnerable? What, if it changes, would alter your perception of the corridor?

Don't worry too much at this stage

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Author's Note:

In the Champlain Valley

Until recently I served as the Director of a small non profit organization in Vermont's Champlain Valley. The Champlain Valley Greenbelt Alliance (CVGA) was formed in 2000 out of a concern for the changes occurring in the Route 7 corridor and to consider ways that the scenic qualities of the road corridor could be preserved. Route 7 is a main corridor for northwestern Vermont's Champlain Valley. The pattern of development along its path, with growth spreading out from the Burlington metropolitan area, is an example of the issues and opportunities facing many communities across the country

where growth spreads down a road corridor.

CVGA worked with several planning commissions on tools and techniques for preserving open spaces in the corridor, and on specific project reviews. We provided ideas for fitting new development into the corridor with less impact. CVGA's work culminated in 2006 with the publication of *The Roadscape Guide: Tools to Preserve Scenic Road Corridors*. This well-illustrated 67 page guidebook covers the topics I discuss in this article in greater detail. It is available by contacting the Vermont Forum on Sprawl at: 802-864-6310, or through their website: <www.vtsprawl.org>.

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about in-depth discussions or detailed answers; the object is to get everyone thinking and to generate other questions that should be considered. Having this common experience of the corridor will serve your group well during the rest of the analysis – and even in the future if your commission reviews projects located within the corridor.

2. Conduct an Inventory

After you've had your group field trip, the next (and more time consuming) step is to conduct a thorough inventory of the main physical features of the corridor, and other factors that affect the landscape. Although these will differ according to your locale, the basics include:

- Topography (particularly if significant features such as ridgelines are part of the corridor)
- Soils (especially important for agricultural areas)
- Transportation infrastructure
- Utilities
- Historic sites
- Floodplains, water courses, and water bodies
- Wildlife habitat and endangered or rare plant species
- Public or conserved land
- Zoning districts
- Lot lines
- Building coverage



Charlotte, Vermont, Town Plan

Here's how the results of the corridor analysis done for U.S. Route 7 were concisely incorporated as one of the objectives of the Town of Charlotte, Vermont's town plan:

The function of the Route 7 corridor as the main north-south corridor in the Town and a regional arterial highway should be protected through the limitation of access points and the control of land use along the highway. The Route 7 corridor shall be protected as a scenic travel corridor.

—Adopted 2002



ALEX MACHEAN LANDSCAPE AND JULIE CAMPBELL

Several underlying patterns contribute to this scenic landscape in New Haven, Vermont. The building pattern reinforces the contrast between a dense village and open countryside. Buildings are sited close together within the village and in tight clusters at intervals along the road, always set close to the street. A pair of buildings marks the edge, or gateway, between dense and open areas.

This kind of information is generally available from local, regional, or state planning offices – and can be presented on a map or series of maps. Aerial or orthophoto maps can be a good base for a landscape inventory map.

While understanding the physical and regulatory features within the roadway corridor is important, so is learning more about development trends and the current status of any major landowner plans. Questions you may want to address include:

- Where within the corridor is development occurring, and what type is it?
- Are there land uses that are declining?
- Do any major landowners have any plans for changing the use of their land or selling it?
- Are there pressures to change zoning?
- Are there plans (or identified needs) for improvements to the road itself or to any infrastructure within the corridor, such as sewer or transmission lines?

Historic information is often available, and can reveal how the corridor has developed and changed. In some areas, aerial photos are available dating back to the 1930s. Check with local, regional, or state planning offices for availability.

Historic societies and libraries may also have useful information. By considering changes that have occurred over time, you'll gain not just a better understanding of how the corridor has evolved, but insights that may be useful in your own planning efforts.

3. Look for Patterns

The features in your inventory are the building blocks for the next phase of your analysis – understanding the landscape patterns of your corridor. Look for patterns that you consider pleasing, as well as those that detract. Your inventory of corridor features will probably have given you good insights into prominent patterns. Among the questions you might ask when looking for patterns:

- Is there a clear transition from a village or other developed area to undeveloped areas? Where exactly does the landscape change?
- Do natural features within the corridor have a pattern of transition, such as from field to forest?
- Are there prominent features in the landscape that draw the eye toward them? What is the foreground view of the prominent feature? Is that foreground view compatible with the focus feature?

- What is the nature of the built environment? For example, is there a pattern to the size, age, type, and spacing of structures? Similarly, what is the pattern of land uses along the roadway?

4. Analyze Your Information

A site analysis map is a helpful tool for visualizing the information on landscape features and patterns that you have gathered. Incorporate what you've learned about prominent features and patterns onto your base map. Your map may be complex, with many levels of information, or it may be used to illustrate a particular issue or a specific area that you've identified as important. One of the advantages of this visual tool is that it allows you to see the relationship between the corridor features and patterns.

MAKING USE OF WHAT YOU'VE LEARNED

1. Incorporating Corridor Objectives into the Comprehensive Plan

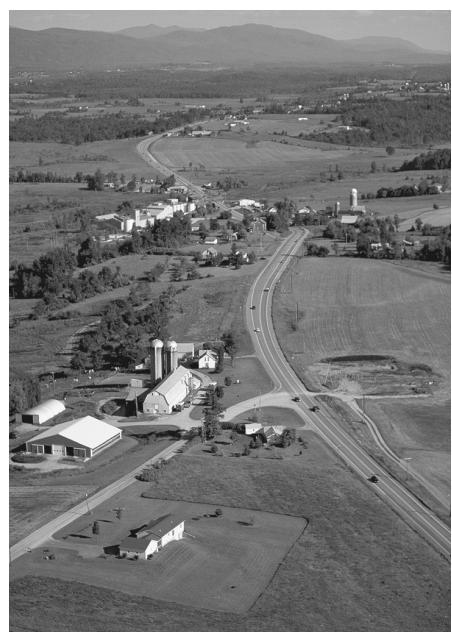
Once you've completed your analysis, and have a clear picture of the patterns that make up the road corridor, you'll be in a better position to determine not just your goals and objectives for the future of your corridor, but how these goals can be achieved. A first step is to ensure that your comprehensive plan supports what you want to accomplish.

The insights gained in the analysis of landscape patterns and changes along the corridor will most likely lead to ideas that become statements of goals and objectives for the future of the corridor. Although the comprehensive plan is not a regulatory document, it does serve as the basis for zoning regulations. Incorporating what you've learned about the road corridors into the plan creates a sound basis for the implementation tools you later adopt. The maps and other information generated in the inventory can be valuable additions to the plan, as well.

2. Regulatory Steps for Corridor Preservation

• Zoning Districts and Uses

Once you have your corridor objectives



Comparison of an Oblique Aerial Photograph and an Orthophotograph. The image on the left is an orthophotograph. The image on the right is an oblique aerial photograph, providing a three-dimensional view that is more familiar to most people.

adopted as part of the comprehensive plan, the next step is to examine your existing regulatory tools – primarily zoning and subdivision regulations – to see if they are consistent with what you want to accomplish for the corridor.

Zoning district designations and the uses allowed within districts are basic to creating patterns of development that are compatible with your community's vision for its main road corridors. Compare the patterns that your landscape analysis identified as important to the character of your area with your current zoning district designations. Will those designations and the uses allowed foster the key patterns you want to maintain (or achieve) within the corridor, or will they work against them?

In many towns road corridors have long been viewed as the place to zone for predominantly commercial uses. It's not uncommon to see zoning districts that allow for commercial development lining the entire length of a corridor through a community. The results are unfortunately obvious: seemingly endless strips of parking lots, road signs, and commercial buildings.

If you have identified scenic or open areas along your corridor that you want to preserve, consider zoning that allows

for more intense uses in blocks or nodes around existing villages, or in other areas where concentrated development makes sense. This will encourage a compact

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The Mountain Road

The Mountain Road in Stowe, Vermont, is the main route to the ski resort for which the community is famous. As with many road corridors, the Mountain Road was zoned for commercial use. Not surprisingly, strip development was spreading into the remaining open and scenic meadows along the road.

In recognition of the importance of its meadows to the character of the community, the Town rezoned the commercial corridor by designating compact, mixed-use growth nodes in appropriate locations, with the connecting corridor zoned for lower density residential uses. Important meadows were designated as a "Meadowland Overlay District" subject to special design standards.

A transfer of development rights program was also established that allows for development density to be transferred from the Meadowland Overlay District to the mixed use growth nodes.

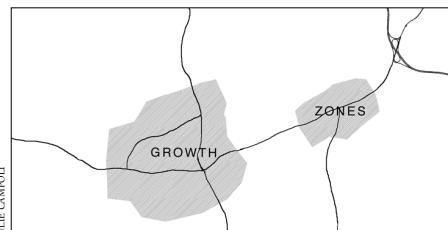
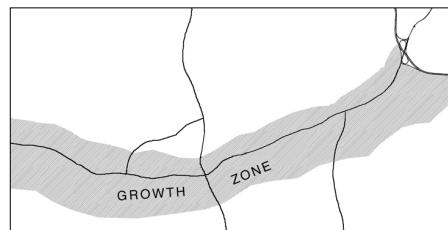
Sidebar from The Roadscape Guide, p. 32

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pattern of growth so that open spaces can remain in the land between these growth areas. Your earlier examination of the natural features of the corridor's landscape will also likely have revealed clues to logical zoning district boundaries. See Sidebar, *The Mountain Road*.

The uses allowed within zoning districts should also be considered. Your goal is to have new uses which are com-



Creating Blocks or Nodes for Growth Areas
Linear development along a road (top) will result in a loss of open land, as well as adverse impacts to safety and the road's capacity to handle the increased traffic. Designating areas for future growth in blocks or nodes around existing villages or developed sections of a corridor (bottom) encourages a more compact pattern.

Conservation Subdivisions

Editor's Note: the following is excerpted from Randall Arendt's, "Growing Greener: Conservation Subdivision Design." Arendt is one of the country's leading advocates for subdivision regulations which better support the preservation of open space, farmland, and natural areas. The full article can be ordered & downloaded at: <www.plannersweb.com/wfiles/w155.html>.

Subdivision regulations are one of the principal tools for shaping our communities. It is through the subdivision review process that communities most directly assure that residential development is designed in a way which promotes community objectives such as the preservation of open space and

patible with the key landscape patterns you want to maintain. If you've identified areas where the landscape is already degraded, careful attention to new uses, over time, will lead to improvements.

Don't forget to consider the types of structures, infrastructure, and other associated design details that go with the allowed uses because these can also have a major impact on the landscape qualities you wish to preserve. For example, does a currently allowed use (such as a vehicle sales facility or warehouse) require large parking lots, high levels of lighting, or buildings that would be difficult to screen? If so, then be sure this kind of use is only allowed where it will not cause an impact to your corridor's most important features, particularly open spaces and scenic areas.

• Overlay Districts

The use of "overlay districts" can be an effective zoning technique for areas of importance, such as ridgelines, intact agricultural areas, or stretches of scenic views and vistas. Overlay districts add a set of regulations, specific to the characteristics of the focus feature, to the underlying district requirements. These additional regulations can allow or prohibit uses, establish more flexible or restrictive setbacks, or require an extra level of review and establish those review criteria.

• Dimensional and Site Standards

The patterns created by zoning requirements for lot size and coverage, setbacks, and frontages can also affect the corridor's visual qualities. Two techniques can help in analyzing your zoning requirements. One is to prepare sample illustrations of potential development footprints in key areas along your corridor. Base these hypothetical developments on what's allowable under your existing zoning requirements, and assess whether the results are consistent with your objectives for the corridor.

Another technique is to look at existing developments along sections of the road corridor that work well visually. Note the dimensional aspects of these developments, and see if they can provide guidance in improving your zoning code's standards. Keep in mind that in many corridors the dimensional patterns we most like may have been created before zoning was adopted – and may even be illegal under current regulations.

Site planning standards are another section of the regulations where your landscape analysis should be used to set criteria which support the best patterns of the corridor. Note the existing types of landscaping, building style, lighting, and similar elements that are most compatible with the key patterns you want to preserve. Use those as guidelines for

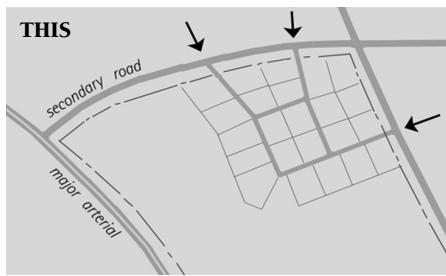
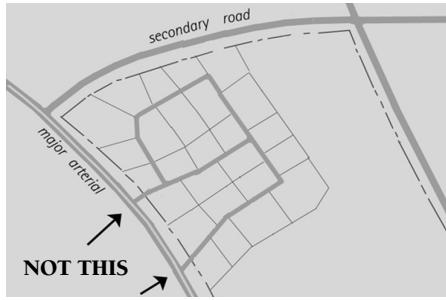
natural areas.

Conservation subdivision design differs in several significant ways from the more familiar "cluster development" approach. Under conservation design principles, at least 50 percent of potentially buildable land is set aside. This compares with cluster provisions that frequently require only 25 to 30 percent of the gross land area to be conserved. Moreover, with cluster development this open space is often comprised of left over, undesirable areas such as stormwater management facilities or land under high-tension power lines.

Conservation design rearranges the development on each parcel as it is being planned so that half (or more) of the buildable land is set aside as open space. Without controversial "down zoning," the same

number of homes can be built in a less land-consumptive manner, allowing the balance of the property to be permanently protected and added to an interconnected network of community green spaces. This "density-neutral" approach provides a fair and equitable way to balance conservation and development objectives.

It is critical to realize that conservation subdivision design is not only fair to developers, it actually enhances the value of development. Studies comparing developments built according to conservation design principles with those following more conventional, land-consumptive, layouts show that values appreciate faster with conservation design. ...



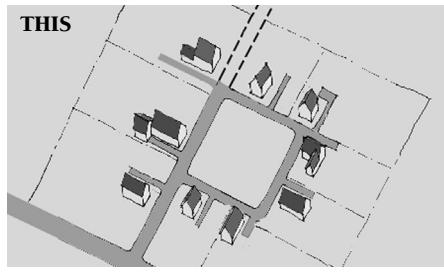
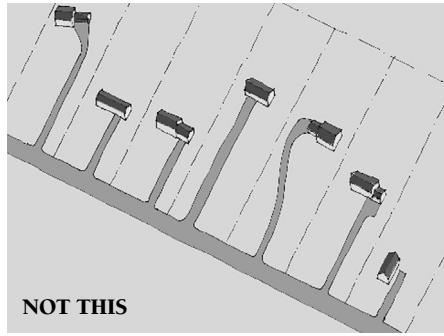
Access points should be from secondary roads, not from major arterials.

developing standards within your regulations.

• Access Management

Roadway access management is another important tool to promote patterns consistent with the goals for your road corridor. The number, design, and location of access points to the roadway should be compatible with the landscape patterns you wish to preserve or promote. Unmanaged, unlimited access contributes to sprawling development along a corridor, and can reduce the safety, function, and capacity of the road.

Access rules vary from state to state (and according to the status of the roadway), and may be set and administered at the state, regional, or local level. But even



Limit the number of access points

if jurisdiction is not at the local level, your planning commission can advocate for appropriate access standards, based on your goals and objectives for the roadway corridor. *Editor's Note: See Elizabeth Humstone and Julie Campoli's excellent article "Access Management: A guide for Roadway Corridors," in PCJ #29; available to order and download at: <www.plannersweb.com/wfiles/w364.html>*

• Utilities and Infrastructure

Although your planning commission will be focused on the zoning and subdivision aspects of land use, there are other factors that can

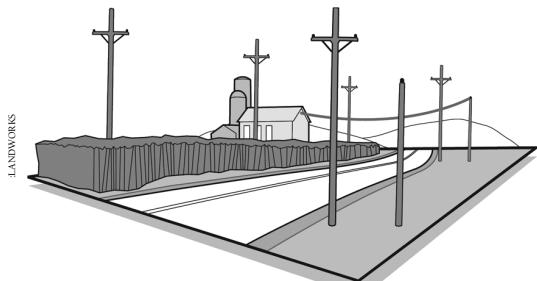
have a major impact on the road corridor. One is the location of utilities and infrastructure.

We tend to take electrical, phone and cable utility lines as a given for modern life. They are, of course, essential, but their placement can have a significant impact on the visual qualities of a road corridor. Your commission may need to advocate for policies that, for example, reduce visual "clutter" by limiting the number of locations where overhead lines cross the roadway, or by restricting overhead power line placement to one side of the road. In key areas you might also push for the undergrounding of utility lines.

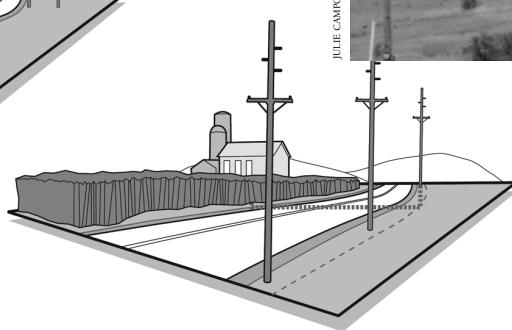
Sewer and water service lines, although out of sight underground, have some of the greatest impacts on growth and development in a main road corridor. *Editor's Note: See Kate Lampton's article "Developing a Sewer Ordinance: One Town's Experience," in PCJ #44; available to order and download at: <www.plannersweb.com/wfiles/w366.html>*

Your corridor landscape analysis will have given you a detailed picture of the existing patterns of development and open space. This information, in conjunction with your objectives for the

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Utility Infrastructure: Utility poles along both sides of a road, with their multiple crossings, can detract from scenic landscapes. Poles along one side of the road and consolidated (or underground) crossings can make a significant improvement.



This scenic road corridor is marred by the jumble of power lines and poles along the road. Although utility infrastructure is a necessity, there are alternatives for design and placement that can fit well into the landscape.

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corridor's future, can be used in developing policies for sewer and water service areas. Again, the aim is to promote future growth in locations that are compatible with preserving the best features and character of your corridor.

• Subdivision Regulations

How often have you seen house lots spread out down a once open and scenic road corridor, each ensconced in a lot too big to mow, but too small to farm? This pattern is a familiar one. Large residential lots, deep setbacks, and lot layouts that make shared drives and utilities impractical do much to erode the open and scenic stretches along our road corridors. Unfortunately they are too often the result of well-intentioned, but counter-

productive, subdivision regulations.

There are subdivision techniques that offer the flexibility to better preserve open spaces along road corridors. Whether these are called planned unit (or residential) developments, open space, or conservation subdivisions, the technique is similar. *Editor's note: for some of the distinctions between PUD/cluster development and conservation subdivisions, see the sidebar.* The same number of lots allowed under traditional zoning is generally allowed, but lot sizes and setbacks are modified to fit into the landscape better. Land that is not part of the lots becomes protected open space. In addition to providing flexibility for developers in planning the lots and infrastructure layouts, the open space subdivision is one of the very best regulatory tools to preserve the scenic and open

lands that are so important along road corridors.

For an open space subdivision to be successful, the open space must be designed with as much care as the lot layouts. In addition to the following general design guidelines, which can be incorporated into your subdivision regulations, use your landscape analysis to develop more specific guidelines for your road corridor.

- Open spaces should be linked to create a greater mass.
- The purpose and use of the open space (agricultural, natural area protection, and/or recreational) should be considered to ensure that the land included is a size and configuration that fits that purpose and use.
- Buildings should be kept below the height of land and ridgelines, with the edges of woods and fields used for screening.
- Roads and utilities should follow contours and fit into natural features to reduce their visual impact.

Even traditional subdivisions can be designed to do a better job of retaining open space. Consider guidelines which discourage lot lines that disrupt key landscape features and patterns (such as a lot line through the middle of a farm field). At the same time, encourage practices like the use of shared driveways, and the screening of structures by natural features.

SUMMING UP:

Major road corridors are complicated places, with many competing uses, issues, and expectations. Taking a fresh look at a road corridor, with a particular focus on understanding the corridor's natural landscape and development pattern, can lead to improved land use policies that better meet your community's long-term goals and objectives. ♦



Small Property, Big Scenic Value

A 10-acre parcel was on the market with a high price tag. It was an open field, sometimes hayed, but with no particular agricultural value. There were no wetlands, watercourses, unusual plant species, or valuable wildlife habitat. Yet it became a high priority for conservation by the Champlain Valley Greenbelt Alliance. Why? The CVGA project criteria list identified these as essential considerations:

- the parcel was a visual link between

sweeping views to the Green Mountains on the east and the Adirondacks and Lake Champlain on the west.

- a house anywhere on the property would have disrupted those vistas and would have dominated the viewshed.
- the property was surrounded by other conserved lands ... conservation of the 10-acre parcel would fill a hole in the larger conserved landscape.
- the property could be used by the Town as a trailhead to paths in the area and as a scenic overlook, with a small parking lot placed unobtrusively.

Kate Lampton served as Executive Director of the Champlain Valley Greenbelt Alliance until the organization completed its work mission and closed its doors in 2006. Prior to joining CVGA, Lampton was the Director of Planning and Zoning for the Town of Shelburne, Vermont. She is also a past Chair of the Charlotte, Vermont, Planning Commission.