

Development Opportunities: Enhancing Our Villages, Streets and Roadways

Introduction

Increasing commercial and housing construction activity in the Midcoast gives us as residents, landowners and local officials the opportunity to encourage development proposals that strengthen our communities.

Well-designed commercial developments and residential subdivisions can add to the quality and character of our region. They not only provide needed employment opportunities and housing, but when properly planned, can reduce traffic congestion, increase roadway safety and protect property values.

This review outlines strategies to expand mixed-use development and residential neighborhoods in and around villages by following the traditional pattern and scale of development in our region.



North Haven's village serves traditional marine uses year-round, as well as recreational and seasonal activities.

Local Land Use Controls

Successful comprehensive plans and local land use ordinances recognize that most development and conservation is carried out through the countless private actions of individual property owners.

Municipal ordinances can provide an orderly framework for private development and the related municipal service facilities required. In doing this, ordinances can help private enterprise determine the right type of development and the proper place for it.

Objectives

1. Encourage development that maintains and enhances village and rural areas
2. Preserve state road safety, capacity, and posted speed limits
3. Improve local residential street conditions and safety
4. Avoid sprawl/strip development: both commercial and residential

Strategies

From the review of planning strategies presented here, town planning board members, other municipal officials and citizens can examine their local land use ordinances and consider whether these ordinances include adequate provisions (termed Performance Standards and Design Guidelines) to reinforce and encourage traditional patterns of development. Revisions to the following ordinances can help shape the type of communities that residents want:

1. Site Plan Review Ordinance
2. Subdivision Ordinance
3. Roads Ordinance
4. Land Use Ordinance



Brooks village along State Routes 7 and 139 provides a modest mix of activities: commercial, civic, residential, and religious.

Mixed-Used Development

Midcoast villages have historically been places where people not only lived, but also worked, shopped and attended school. Some of our villages have maintained this mixed-use development; others have not. As we all observe, new development tends to be located in rural areas, away from villages, where land is cheaper and property taxes are lower.

Many of us now drive long distances for more opportunities, for more choices of where to live, work and shop. In fact, the increase in annual vehicle miles traveled by Mainers consistently outpaces population growth, by as much as three to one in Knox and Waldo Counties. This travel costs us time spent on the road, vehicle expenses, and increases congestion and the taxes needed to support road construction and maintenance.



Washington village along State Route 220 is largely residential, with a general store and post office.

While we have the opportunity to travel farther, at the same time, we should at least have the choice that we once had: we should be able to do many of life's activities within our own towns and in nearby communities.

Site Plan Review and Land Use Ordinances are important tools that towns can use to promote well-designed, mixed-use development in villages. Likewise, when new commercial development is to be located in rural areas, towns can ensure that such development protects natural, scenic and recreational resources. Some key principals following traditional village and rural conservation development are reviewed.



Union from the Village Common: located off State Route 17, through-traffic and congestion is reduced, allowing for a balance of commercial, civic and residential uses.

Site Planning Principles for Villages

New commercial buildings should reflect the areas in which they are located.

In built-up villages, buildings should be placed close to the street, in conformance with existing, adjacent setbacks. Where there is a reasonably uniform relationship between the front walls of buildings and the street, new buildings should be placed on a lot in conformance with that established relationship. For buildings on corner lots, the setback relationship of both streets should be maintained.

Buildings entrances should be visible by design, landscaping, and/or signage. Main entrances should face the street unless the parking layout or

the grouping of the buildings justifies another approach.

When a highly visible building (as used by businesses that attract customers from passing traffic) or a large facility is proposed in a village where its scale or other features may be out of place, care must be taken to design the new building or facility to be compatible with its neighbors. This may include using materials that are or look traditional, like clapboards or brick, as well as reproducing roof pitches, facades, and architectural proportions.



The Rockland Planning Commission rejected this first proposed design for a Wendy's Restaurant, as it did not fit the neighborhood well. See the next picture for the approved revised design.



This revised design for the Wendy's Restaurant reflects the neighborhood and its architecture better, and so was approved by the Rockland Planning Commission.

Within built-up village areas, parking lots should be located to the side or rear of the building(s), not between the building and the street. The use of shared parking, shared driveways and the cross-connection of parking lots should be encouraged.



Warren: With the closure of a mill, and location off US Route 1, little commercial activity now occurs in the village; retail is mostly seasonal. Opportunities for new year-round commercial development that respects the village and surrounding residential neighborhood would prove beneficial. Site Plan review is an important tool for encouraging such development.

Site Planning Principles for Rural Areas

New buildings should be set well back from the road to conform to the character of the rural areas in which they are located. If parking lots are placed in front, a generous, landscaped buffer between road and parking lot should be provided. Buffers improve the appearance of sites from the road, and can create clearly defined points of access. If grass buffers are likely to be compromised, e.g., used for business activities, low shrubbery can effectively maintain the desired integrity of the buffer while providing visual access to the business. Where vegetative buffers cannot be used, a low wall, or fence may suffice.

Larger scale uses as well as uses that do not require visibility from the road, including industrial, agricultural, and research or corporate facilities, may be located further from the road with a larger landscaped buffer.

Roadway Capacity and Safety - Access Management

Vehicular access to and from all commercial and other businesses, as well as public facilities, must be safe, convenient, and on roads that have adequate capacity to accommodate the additional

traffic generated by the development(s). Any driveway, entrance or proposed street must provide at least the minimum required sight distance, as set in Maine Department of Transportation Access Management standards. The Maine DOT issues permits for driveways and entrances on state and state aid roadways outside of urban compact areas.



Searsmont village along SR 131, a general store allows residents to shop locally for basic items.

If a lot has frontage on two or more streets, the primary access must be provided from the street where there is less potential for traffic congestion and for traffic and pedestrian hazards. Where it is necessary to safeguard against hazards to traffic and pedestrians and/or to avoid traffic congestion, the developer should be responsible for providing turning lanes, traffic directional islands, and traffic controls on public and private streets.

Entrance accessways should have sufficient capacity to avoid queuing of entering vehicles on any public street, or any other negative impact with nearby intersections.

Parking areas with more than two parking spaces should be arranged so that it is not necessary to back out into the roadway in order to exit.

The accessways within a development network should provide for vehicular, pedestrian, and cyclist safety, all season emergency access, snow storage, and delivery and collection services.

Residential Subdivisions

Successful subdivisions create or expand well-defined neighborhoods that are in keeping with the function and traditional appearance of surrounding village or rural areas. The alternative of tract-style, monotonous subdivisions that look the same no matter where they are located, typify the suburban type sprawl increasingly seen in southern Maine and other built-up areas.

New subdivisions should be compatible with the prevailing housing density of an area. Buffers may be used where densities between new and established neighborhoods differ.

To maximize traffic safety and promote neighborhood cohesiveness, building lots should have an internal orientation with low-volume residential streets serving driveways. From these low-volume and low-speed streets, connections to higher volume roadways are made. Individual driveway access onto state and other high-volume, high-speed roadways should be avoided. Where such connections are necessary, common vehicular access points should be established.



New subdivision in Rockland: modest homes on small lots provide affordable housing for those who work locally. The subdivision road was designed for low-volume, low-speed use, with one access point to a municipal road. The traditional cape style is well established in our region, and with time, landscaping will enhance this new neighborhood to better fit the surrounding areas.

In rural areas, vegetative road frontage buffers preserve the low-density character of the countryside. By managing roadway access,

buffers along state and high-volume roadways maintain capacity and posted speeds. This type of planning allows for new development without congestion.

House Placement

The placement (siting) of homes should preserve important environmental and natural features, maximize privacy for residents on adjoining parcels and encourage the establishment of an interesting streetscape.

Depending on location, the identical siting of houses on adjacent lots or up against common property lines may be an appropriate formal arrangement following the pattern of village development, or an out of place, homogenous layout when used in rural areas.

In villages, identical siting of houses on small lots reinforces tradition, and with attractive residences visible from the street, should be continued. In rural areas on larger lots, a more flexible, less formal approach with varying house setbacks and a greater attention to vegetative buffering maintains rural character while allowing for new development. To revise an old adage: Good buffers make for good neighbors.

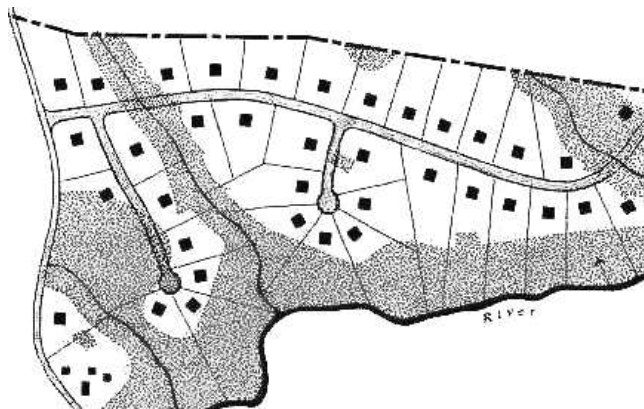
Conservation Subdivisions

Conservation subdivisions locate house lots together on a portion of a larger parcel in order to preserve surrounding areas as open space or forestland. Reducing one or more ordinance dimensional requirements allows for reduced lot areas and shorter building setbacks.

As part of subdivision design, reserved open space is strategically located to connect and augment existing open space and recreation lands, and to create buffers between different types of residential development.

Advantages of conservation subdivisions include environmental protection of wetlands, floodplains, steep slopes, hilltops, ridgelines, major stands of trees, significant geological features and other areas of ecological value.

Buffering conservation subdivisions that border villages helps to maintain the focus of civic and commercial activity in villages.



Typical suburban subdivision layout, 36 houses, no public amenities



Rural conservation subdivision layout, 41 houses, public amenities: open space, resource conservation

Conservation subdivisions often reduce construction and maintenance costs (especially when shorter roads and utility lines are designed). This savings benefits developers, homebuyers and taxpayers.

Early development in villages often grouped residences together. This was done for economy, and that advantage remains today, despite our reliance on automobiles. With conservation

subdivisions and buffering, this traditional pattern of house grouping can be modified for use in rural areas. As described, doing so provides the added advantage of preserving environmental, recreational and scenic resources.

Lot Size

Neighborhood character is in good part determined by lot size and configuration. Where sewer and water connections are available or feasible, new lots can be as small as 5,000 square feet. Without sewers, the minimum size for new lots is 20,000 square feet. This larger lot size supports septic and wells. Towns may adopt larger minimum lot sizes than these state standards. Traditional developments tend to use small lot sizes. However, providing new sewer service, which small lot sizes often require, can be prohibitively expensive.

Conservation subdivisions offer a compromise in which some of the land set aside may be used for engineered septic systems to support several homes on smaller lots. Small and medium scale conservation subdivisions offer a viable way to expand development in and around villages one step at a time while encouraging preservation of natural resources. Single lot-by-lot development, on the other hand, is uncoordinated, leaving to chance the preservation of community valued resources. Oftentimes the full effects of such piecemeal development are not realized until it is too late to do anything about it.



Union Street, Rockport: One entrance serves the apartment residents, with vegetative buffering of parking lots and buildings.

Residential Street Standards

The design and appearance of residential streets should be consistent with their primary use. Successful design standards for these streets promote relatively narrow widths, short lengths, and alignments that encourage slow traffic speeds and discourage through traffic. Performance standards and design guidelines include:

Use short residential street lengths. Shorter street lengths make drivers more aware of pedestrian, bicycle and other nearby activity and so cause drivers to slow down.

Design streets with gentle curves and changes in grade. Curves, changes in grade, and other design features interrupt the sight line of the roadway into smaller visual elements and cause drivers to slow down.

Use traffic calming features such as curb extensions, traffic circles, and medians to encourage slow traffic speeds. Curb extensions, traffic circles, and most other traffic calming features are regarded as permanent devices intended to discourage speeding and should be included in the initial street design when appropriate.

Align low volume streets to form three-way ("T") intersections. In residential areas, many streets have the same width and appearance; thus at intersections there is no distinction between the streets and no apparent right-of-way assignment. Three-way intersections can create an inherent right-of-way assignment that significantly reduces accidents, without the use of traffic signals. When used, three-way intersections should be offset a minimum of 150 feet to avoid objectionable jog intersections.

A low volume street that intersects a higher order street, such as a collector, should be aligned with another street to form a four-way intersection. When a low volume street intersects a higher

order street there is a clearer understanding for the driver about right-of-way assignments. Because of the higher traffic volumes on the main street right angle, four-way intersections are encouraged at these locations and are often regulated by traffic control devices.

Avoid creating intersections on low volume streets that would require traffic control devices such as traffic signals. Reserve signals for locations where accident problems exist, where visibility of an approach is limited, or where traffic volumes are high.

Access to state and state aid roadways from proposed residential streets must provide at least the minimum required sight distance, as set in Maine Department of Transportation Access Management standards. The Maine DOT issues permits for entrances and driveways on state and state aid roadways outside of urban compact areas.



Lincolnville Center's general store

Street Width

Narrow residential streets have many benefits to developers, residents and taxpayers, and so are presented in detail.

Narrow streets cost less to build and maintain. Less road base is needed and less surface area is paved. This results in lower materials and labor

costs. An 8' reduction in local street width may result in a 10% reduction in paving, sidewalk, and finishing costs.

Narrow streets reduce the negative impacts of stormwater runoff. Paved streets are impervious surfaces that prevent the filtration of stormwater into the ground. Streets increase the volume of stormwater runoff, which can cause flooding, erosion, and habitat destruction, as well as reducing the groundwater supply. Excess paving increases pollution of surface waters when contaminants from roadway surfaces enter the stormwater drainage system.

Narrow streets encourage more efficient land use. The land saved by using narrow street designs can be used for other purposes, including housing, landscaping and open spaces.

Narrow streets increase traffic safety. Narrow street designs discourage the use of local streets by through traffic and help reduce traffic volumes and speeds. This helps create quiet, safe residential streets with low traffic volumes and speeds. The American Society of Civil Engineers, the National Association of Homebuilders, and the Urban Land Institute, found, "Excessive widths ... encourage greater vehicle speeds." Lower vehicle speeds also reduce the severity of pedestrian automobile accidents. The Center for Urban Transportation Research reports that when vehicle speeds are 30 M.P.H. and over, approximately 55% of accidents are fatal to pedestrians; while only 5% are fatal to pedestrians when vehicle speeds are 20 mph or lower.

Two Residential Street Types

Access Lanes are designed for primary access to a limited number of residential properties. The residential environment is dominant and traffic is completely subservient. Access Lanes can be constructed as cul-de-sacs, loop streets, or short streets connecting other streets, and generally

serve 25 or fewer homes, with a design speed of 15 mph.

Low-Volume Residential Streets are designed for primary access to individual residential property

as well as access adjacent streets. As with Access Lanes, the residential environment is dominant. Traffic volumes are relatively low, with a design speed of 20 mph.

Specifications	Access Lane	Low-Volume Residential Street
Function	Residential property access serving: no more than 25 dwelling units	Residential property access to individual properties up to 75, and to adjacent streets
Average Daily Traffic	Less than 250 ADT	250-750 ADT
Right-of-way width	40' - 55'	45' - 55'
Paving width	21' - 28'	20' - 28'
Posted Speed	15 M.P.H.	20 M.P.H.
Travel lane	One 14' travel lane (queuing street)	Options for two 10' travel lanes or one 14' travel lane (queuing street)
Parking	Options for parking on one side, and parking on both sides	Options for no on-street parking, parking on one side, and parking on both sides
Sidewalks	Required on at least one side of 21' streets and both sides of 28' streets Both curbside and setback sidewalks are permitted	Setback sidewalks required on both sides of the street
Curb and Gutter	Yes, inverted curbs permitted under certain conditions	Yes
Connectivity	Bulb or turnaround area connects to adjacent street with bicycle/ pedestrian accessway if feasible. Loop and short-length connecting streets connect to a higher order street at both ends	Connects Access Lanes to Medium-Volume Residential streets and other higher order streets

Residential Driveway Standards

Coordination of driveways improves roadway safety and reduces costs to developers and ultimately to homeowners. Shared or common driveway access points (entrances) for house lots should be used on roads where:

1. individual lot driveways would create a safety hazard because of the existing or anticipated high volume of traffic on the road, or

2. the number of driveways intersecting the road are close to each other, or
3. poor sight distance occur along lot frontages.

The number of individual building lots served by a shared driveway entrance should generally be limited to three, with four allowed if the distance between the street and residences is short. Design and construction standards consider emergency service vehicle access requirements, environmental protection

objectives, ease of maintenance, aesthetics, and privacy for abutting property owners.

As the number of lots served by a shared driveway increases or as such driveways become longer, the pertinent standards should begin to approach those applicable to municipal roads.

Multiple driveways for a single building lot should be avoided. If provision for an on-site vehicular turnaround area is desired or required, the turnaround feature should be accommodated entirely on the lot without creating a second vehicular access point along the road frontage. On lots containing permitted accessory uses, access to the principal and accessory uses should be provided from the same driveway.

Provision for road connections to adjoining parcels should be made where necessary to improve emergency access to existing as well as to proposed subdivisions, or where desirable to provide future access to adjoining undeveloped land and to enhance overall transportation circulation.

With new development, existing design standards for town roads should be reexamined to adjust for increasing and changing vehicular circulation needs, traffic safety considerations, and the number of newly created lots to be served.

Environmental Principals

Buildings and other structures should be grouped in those portions of the site that have the most suitable soil conditions for development. As important, rare and endangered wildlife habitats must be clearly identified and preserved.

To prevent pollution, environmentally sensitive sites must be preserved to the maximum extent

possible, especially wetlands, which help maintain the quality of surface and groundwaters. Whether on private well or municipal water, protection of surface and groundwater is crucial for maintaining our drinking water supplies.



Shoreland buffers

Where the creation of an adverse environmental impact is unavoidable, the burden of such impacts should be borne by the land to be developed or subdivided, rather than by adjacent lots.

All roadways inside a development should conform to the site's topography and natural features as much as practical. This means: retaining existing vegetation, minimizing filling, grading, excavation, or other similar activities, which result in unstable soil conditions and erosion.

Clear-cutting of sites often occurs before a site is developed or sold for development. Ordinances can and should prohibit this.

The establishment of clearing and grading limit lines to define the maximum limits of land disturbance on a lot should be part of the town permit review process. Alternatively, the developer could hold the setting of clearing and grading limit lines until after specific plans for a given lot were better known if site plan approval is secured from the Planning Board prior to the issuance of a building permit. In

most all cases, natural buffers should be preserved along all property lines of a lot, except to the extent necessary to provide driveway access.

Planning

Townpeople should define in local ordinances the types of development that will balance their individual property rights with the development and conservation needs of their community as a whole.

Midcoast communities have a choice: they can plan for and encourage development residents want, or they can leave the future of their community to chance. In the end, regrettably, chance often costs residents more as local taxes increase to remediate and provide services to unplanned developments.

For more information on land use ordinances, comprehensive and transportation planning, please contact the Mid-Coast Regional Planning Commission at (207) 594-2299 or www.midcoastplanning.org.

References

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Acknowledgments

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