

TOPSHAM, MAINE

Route 196 Corridor Plan

July 2013



WRIGHT-PIERCE 
Engineering a Better Environment

Land Use
Planning and
Development

*In association with
Gorrill-Palmer Consulting Engineers*

Acknowledgements

The Topsham Route 196 Corridor Master Plan was developed for the Town of Topsham, Maine, by Wright-Pierce, in association with Gorrill-Palmer Consulting Engineers, Inc.

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1 Introduction

The western Route 196 Corridor (Lewiston Road) in Topsham, between the I-295 interchange and the Lisbon town line, is a major transportation corridor serving both local and significant regional transportation needs. It is also a corridor poised to accommodate future growth and development, both residential and non-residential. As part of a larger regional connector between Topsham/ Brunswick and Lewiston/Auburn, the corridor bears the burden of high commuter volumes and opportunities for highway commercial growth; locally, it is a largely low density corridor characterized as a predominantly wooded route with high speeds, serving several residential neighborhoods, small businesses, and the town's only Industrial Zone.

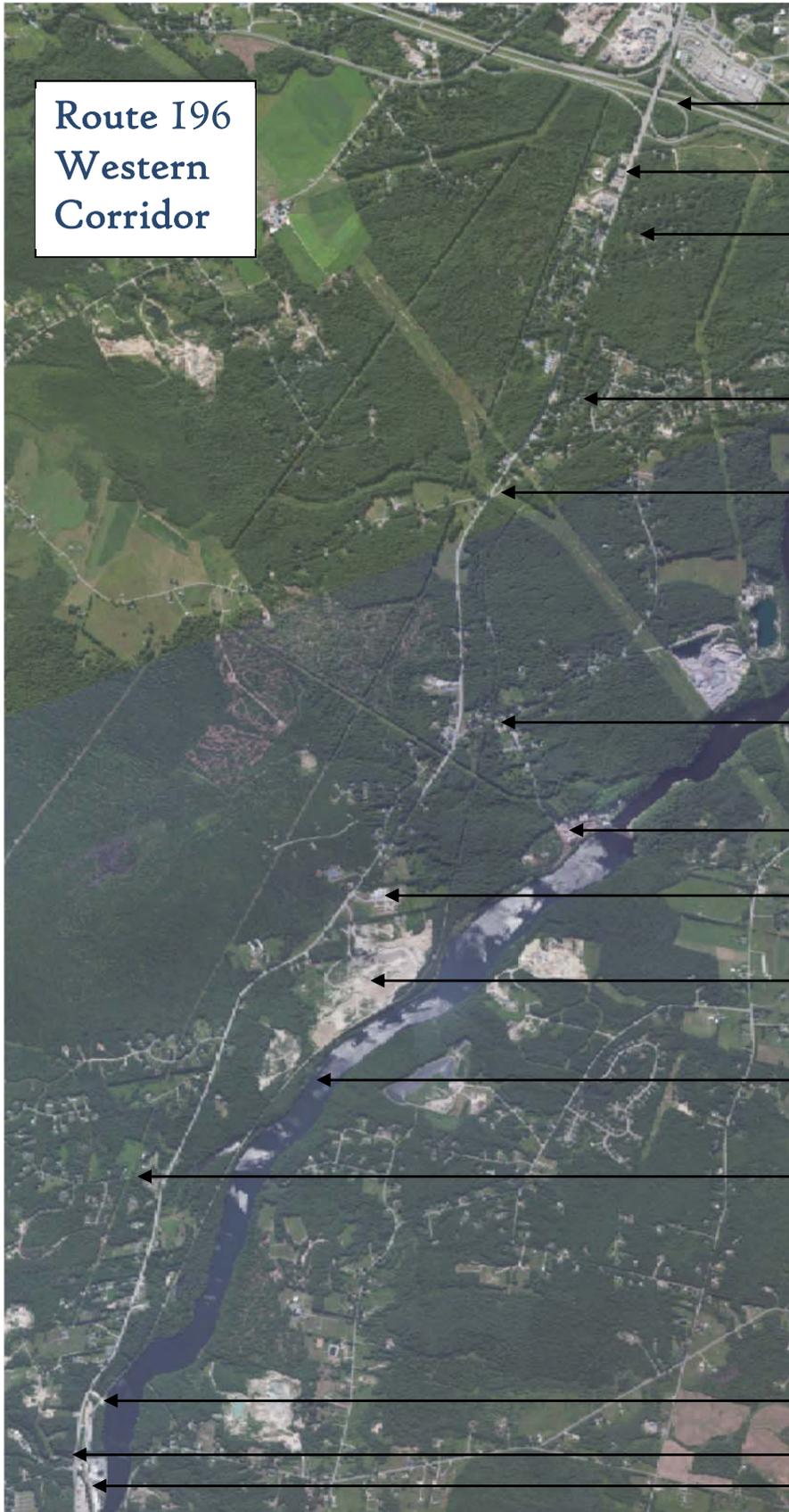


What do residents and business owners see as the future of this corridor? How might a balance be found between serving transportation needs, accommodating economic growth, protecting residential neighborhoods, and maintaining positive visual character? This Corridor Plan seeks to address this balance and outline the vision and priorities for the future of the Route 196 Corridor.

1.1 PROJECT OBJECTIVES

Through this process, Topsham sought to establish a vision and master plan for the Route 196 Corridor (from I-295 to the Lisbon town line). The objectives for this plan include:

- Create a Route 196 Corridor Plan, to supplement the Comprehensive Plan;
- Define a vision for the future of this corridor;
- Assess issues of land use and future growth, transportation, utilities, visual character, and zoning;
- Coordinate with state and regional agencies, and other partners;
- Develop a set of recommendations in support of the vision, identifying short-term and long-term strategies; and
- Designate priorities for the implementation of the Corridor Plan.



Route 196
Western
Corridor

I-295 interchange

Gas Station

Blueberry Lane
Neighborhood

Ivanhoe
Neighborhood

Whitehouse Crossing,
Meadow Cross

Pejepscot Village,
River Road

Grimmel Industries

Coastal Metal Fab

Crooker Site

Androscoggin River

West Merrill Road
Neighborhood

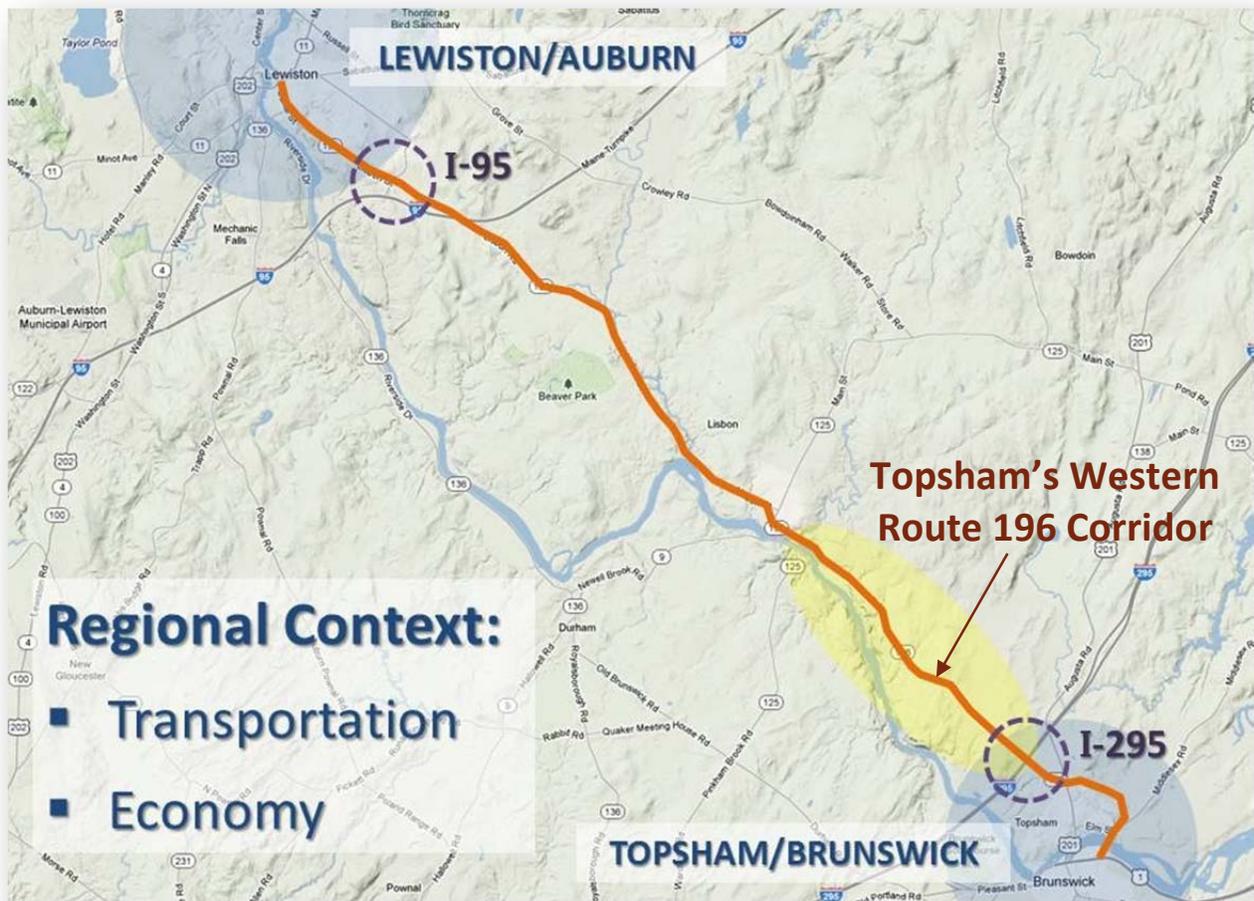
Pejepscot
Boat Launch

Lisbon Town Line

Former Knight-Celotex

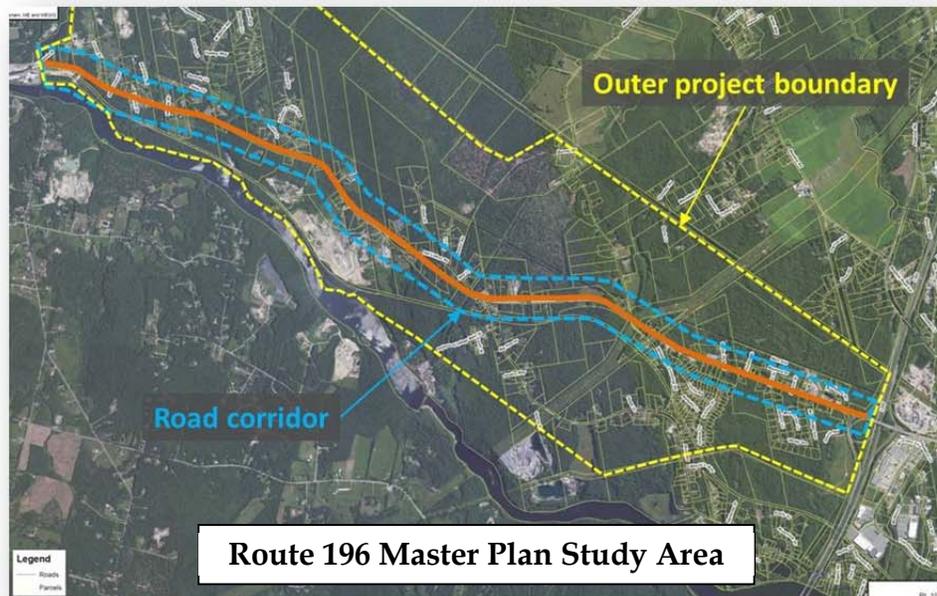
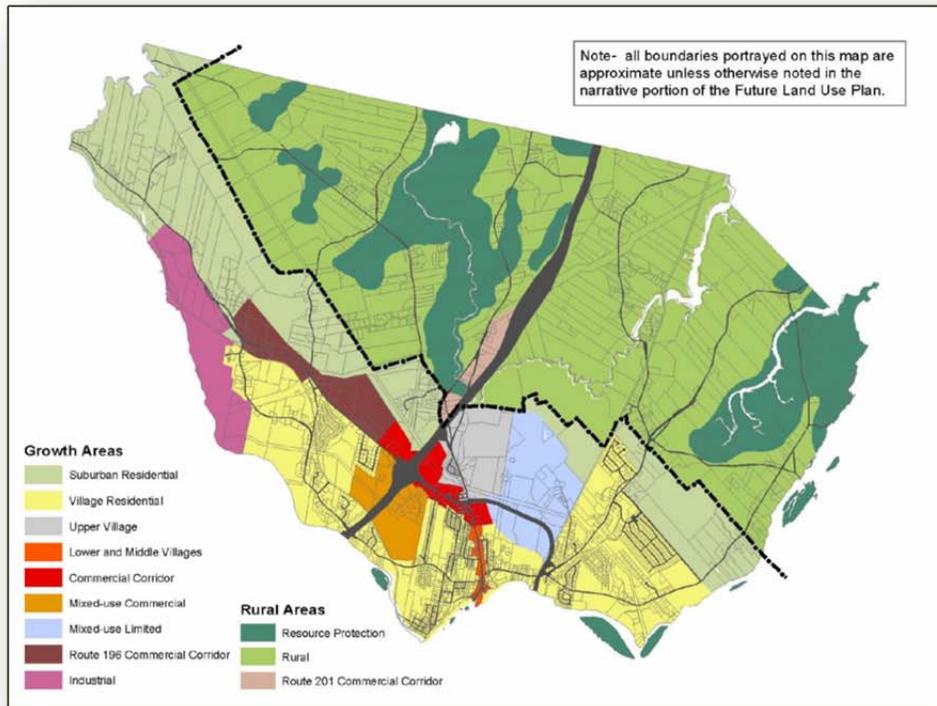
1.2 ROUTE 196 CONTEXT

The western Route 196 Corridor in Topsham represents one third of a regionally significant transportation corridor between Topsham/Brunswick and Lewiston/Auburn. Officially designated by the Maine State Legislature as a “Corridor of Economic Significance”, this route connects not only the two major population centers but also includes all of Lisbon’s villages and commercial areas. The Topsham section extends approximately 5 miles, a little more than one third the distance between the Topsham I-295 interchange and the Lewiston I-95 interchange. There is a high demand on the corridor for regional through-traffic – commuters, trucks and



shipping needs, and those accessing I-295. Between the Topsham Fair Mall area and Lewiston’s I-95 interchange, this section of Route 196 represents an area characterized by high speeds and relatively low levels of turning traffic. High speeds along this corridor are aggravated by commuter traffic being held up by congested areas and traffic lights just on either side of the corridor, at the Topsham Fair Mall area and in the Lisbon Falls Village – motorists tend to use this stretch of road to “make up time”. Local users report increasing concerns for traffic safety and capacity, as regional traffic patterns continue to impact their day to day use of the corridor.

Locally, the corridor is identified in the Comprehensive Plan as part of the town’s Growth Area, envisioned with areas of commercial highway, village residential, industrial, and suburban residential. While there are distinct economic opportunities closer to I-295, development (whether residential or non-residential) through much of the corridor will inevitably be limited by both physical/environmental conditions and the road and traffic conditions (including site distances and driveway locations), and the need to maintain mobility and safety.



1.3 ROUTE 196 CORRIDOR VISION

*"The Lewiston Road Corridor will always be our town's major connection with Lewiston/Auburn and Lisbon, but this corridor should function differently in the future. Exactly what this corridor becomes will require more discussion and choices by the Town (expanding commercial opportunities, changing the pattern of development, improving our Industrial Zone, curtailing new development), but everyone agrees that traffic volume and pedestrian safety will need to be addressed along Route 196. Access to the Androscoggin River will be improved, and Pejepscot will be redeveloped to a commercial center or residential village. The River Road corridor will have more [and] denser residential development." **Topsham Comprehensive Plan***

The Topsham Comprehensive Plan sets the stage for the development of a more detailed vision for the western Route 196 corridor. The assessment of the existing conditions and future needs, as well as public input, have shaped the following vision for this corridor.

Overall Corridor Vision

Generally this corridor should be managed and developed to have a parkway aesthetic, emphasizing limited (or shared) access points for turning traffic and a landscaped or tree-lined visual character. For future growth, the section between I-295 and Pejepscot should support more commercial development, while the outer corridor towards Lisbon should support low to medium density residential and the industrial uses between Route 196 and the river. Critical goals for this corridor include maintaining good visual character, addressing traffic safety and pedestrian/bicycle safety, and minimizing negative impacts of new growth on existing residences and neighborhoods.



Transportation

For the corridor's transportation needs, mobility and safety will continue to be critical issues for this roadway. There will be a need to carefully manage driveways and entrances, turning traffic, traffic speeds, and bicycle and pedestrian access. More rigorous access management standards and alternative roadway and entrance design options will help improve traffic safety

and mobility, but because of the high speeds through much of this corridor, this must be supported by speed enforcement, as the use of traffic calming design measures will likely present some conflict with traffic mobility goals.

For bicycle and pedestrian use, the local and regional use remains fairly low, but can be expected to increase, and providing for safe access and facilities is an important long-term goal. The existing shoulders technically provide enough width, but given speeds and vehicle use to right-hand pass turning cars, there are significant concerns for safety. Off-road pedestrian/bike facilities, including the use of the rail corridor, must be pursued as the corridor continues to develop.



The Inner Corridor

Between I-295 and River Road intersection (Pejepscot), opportunities for commercial growth are appropriate given the proximity to I-295 and Topsham's core commercial area. The interface between existing residential neighborhoods and new non-residential development must be treated carefully, balancing the economic development opportunities with the need for minimizing neighborhood impacts. The road itself is likely to see substantial changes as traffic increases with development and regional transportation demands; the town should prepare to see additional lanes added, and with should consider both including pedestrian/bicycle facilities and maintaining a visual aesthetic similar to Route 196 by Monument Place (tree-planted center medians, grass esplanades and sidewalks, bike lanes).

The commercial growth opportunities envisioned in this area could support the need to expand utilities. This vision is echoed in the Town's 2006 study and recommendations on the I-295/Route 196 Intersection (*see 1.4 Related Studies, below*). The significant costs to extending infrastructure to this area warrant a combination of public and private investment. Whether

this is a short-term, intermediate, or long-term effort depends on the extent of new and anticipated development proximal to I-295.



The Outer Corridor

Between Pejepscot and the Lisbon Falls town line, the corridor should remain more wooded, with development less oriented to Route 196. This area will continue to support low to medium density residential land use, as well as some industrial and commercial use associated with the Industrial Zone between Route 196 and the river. Commercial uses on Route 196 in this area should be limited in order to best accommodate traffic mobility, maintain compatibility with suburban residential land uses, and encourage development closer to services and infrastructure. The continued use or re-use of the existing industrial properties should be sensitive to neighboring residential uses, and opportunities to provide better vehicular access to the Industrial Zone (and accommodate road and traffic needs associated with large truck traffic), should be a private effort with town support, in addition to the recommendations of this plan. The envisioned land uses are not expected to warrant the expansion of utilities to this area. For the roadway, this section of the corridor should remain two lanes, with the addition of turn lanes or slip lanes as needed for specific intersections or properties. This would be accomplished through land use and access management regulations.

1.4 RELATED STUDIES

The following studies and plans were utilized in the development of this Plan:

- Topsham Comprehensive Plan, 2005
- Report of the Route 196/I-295 Intersection Study Committee, 2007
- Growsmart Maine Re-Envisioning the Highway Strip, Topsham Pilot Project, 2012
- Topsham Transportation Plan, 2005
- State Route 196 Transportation Planning Study, 2010

2 Corridor Master Plan

2.1 CORRIDOR PLAN INTRODUCTION

The Western Route 196 Corridor is a locally and regionally significant transportation corridor, and represents a future growth area for the Town of Topsham. In the near term, the corridor must be supported by pro-active town efforts to manage traffic mobility and safety, as well as local zoning and regulatory standards that allow for appropriate growth at the I-295 end and limit growth at the Lisbon end. The visual character of this gateway corridor must also be pro-actively managed through regulatory standards, as it may be susceptible to the negative impacts of “typical highway strip development”. The extension of utilities such as sewer and water may come into play in the near term if significant development is proposed near the I-295 interchange, and is best served through combined public and private investment.



ROUTE 196 CORRIDOR PLANNING COMPONENTS

Future Land Use and Potential Growth. Although currently this stretch of road is relatively underdeveloped, it holds good opportunities for both commercial and residential growth to serve Topsham. This plan describes the types and relative densities of land uses appropriate along this corridor, and highlights how zoning and standards can support the vision and future land use plan.

Transportation. This corridor has significant transportation demands given its regional context, and the primary transportation needs are to maintain mobility, improve safety, and improve pedestrian and bicycle safety and access.

Visual Character. This plan describes the vision for the visual character, or how people see and experience the corridor. Given the transportation and growth pressures along this corridor and its role as a gateway to Topsham, it is important to identify how visual character is linked to both land use (and zoning) and transportation planning and regulations, and ensure that character is maintained as the corridor develops.

Infrastructure. The corridor’s potential for future and long-term growth should be supported by adequate utilities, such as public water and sewer, and natural gas, broadband, and 3-phase power as appropriate. This plan notes how utilities could be extended to serve growth opportunities, and also how limiting the extent of utilities expansion is needed to minimize fiscal impacts and support sound growth management.

2.2 FUTURE LAND USE & POTENTIAL GROWTH

THE VISION:

- > The section between I-295 and Pejepscot should support more commercial development.
- > The outer corridor towards Lisbon should support low to medium density residential, and industrial uses between Route 196 and the river.
- > Critical goals include maintaining good visual character, addressing traffic safety and pedestrian/ bicycle safety, and minimizing negative impacts of new growth on existing residences and neighborhoods.

2.2.1 Community Objectives

- Support the growth management and future land use policies of the Comprehensive Plan, and the recommendations of the I-295/Route 196 Intersection Study.
- Plan for future growth in order to avoid negative impacts on the character of this gateway corridor, and minimize conflicts/impacts of new development on existing residents and businesses. *(See also Section 2.5 Visual Character.)*
- Plan for future growth in order to make strategic decisions and efficient use of resources/funds for both transportation (roadway) and infrastructure (utilities). *(See also Sections 2.4 Transportation and 2.6 Infrastructure.)*

2.2.2 Future Land Use Description

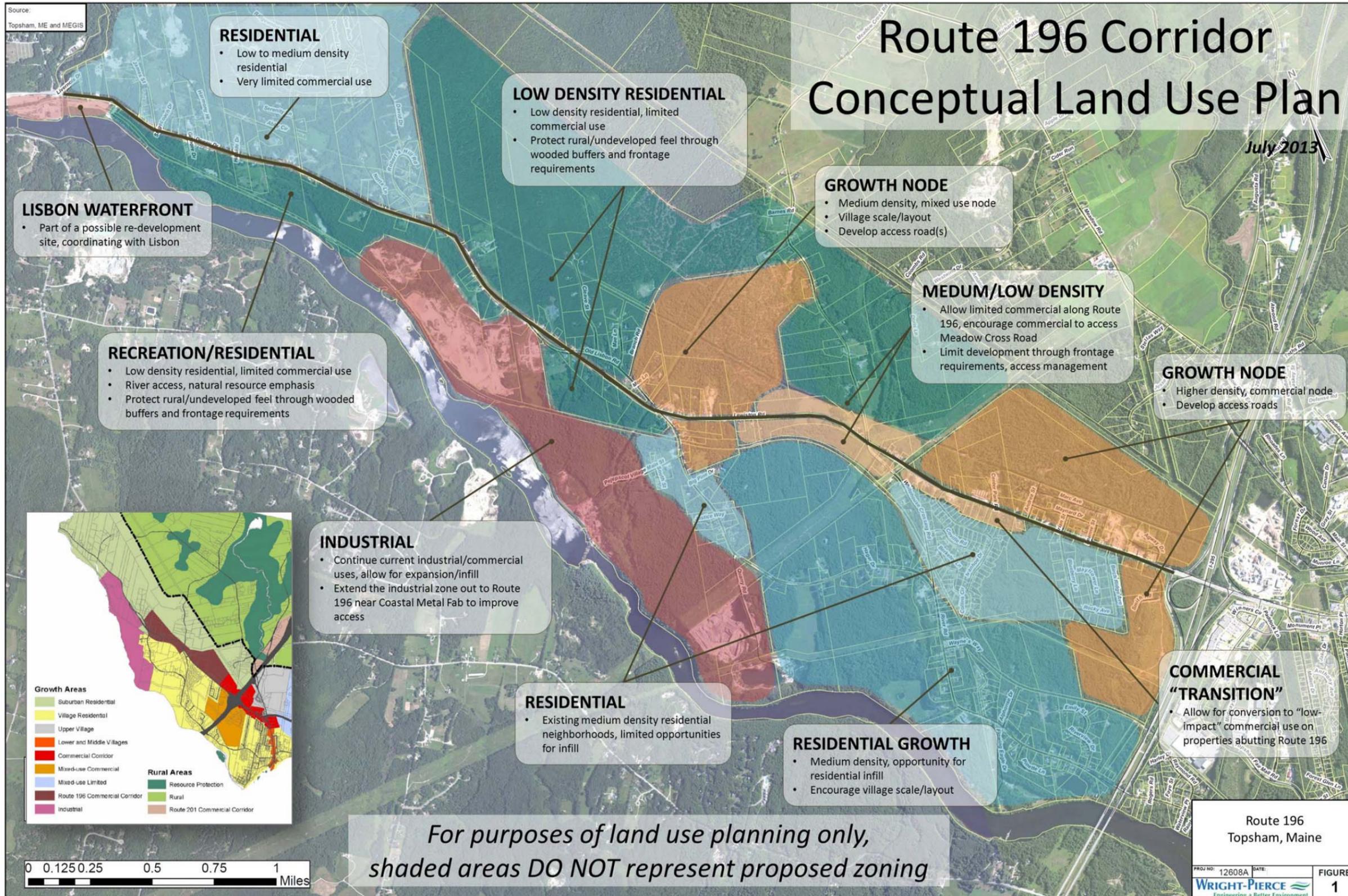
Building on the general vision for future land use along the corridor and on the Conceptual Land Use Plan diagram (next page), each of the land use types/areas listed below are described in this section to elaborate on their purpose and potential regulatory changes.

- a) I-295 Growth Node
- b) Pejepscot Growth Node
- c) Medium/Low Density Commercial
- d) Residential 2 - Business (Commercial "Transition")
- e) Residential & Residential Growth (River Road Area)
- f) Rural/Recreational/Residential (Outer Corridor)
- g) Industrial
- h) Lisbon Waterfront Extension

Route 196 Corridor Conceptual Land Use Plan

July 2013

This conceptual land use diagram summarizes the envisioned general land use types within the project study area, indicating the envisioned growth in terms of the relative development density (e.g. growth areas versus low density).

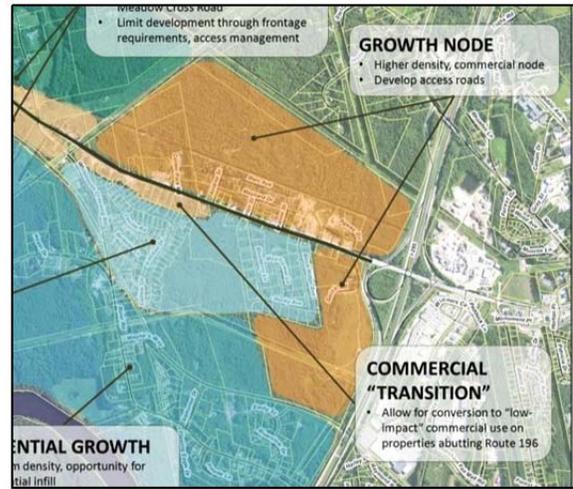


For purposes of land use planning only,
shaded areas DO NOT represent proposed zoning

a) I-295 Growth Node

Shown in dark orange on the Conceptual Land Use Plan.

The growth nodes represent areas envisioned to have opportunities for more significant development off Route 196, requiring the use of connector roads and an overall site plan development including multiple parcels. The I-295 nodes, north and south of Route 196, have been the focus of a previous study, but the land use recommendations and subsequent zoning amendments should be evaluated for effectiveness.



Development along this section of the corridor has seen the most commercial activity and interest of all the corridor, and continued growth is expected given the proximity to the interstate and Topsham Fair Mall area. The key to the envisioned future development of the I-295 growth node lies in planning for and managing the visual character and access management (see Sections 2.4 and 2.5).

EXISTING	SUGGESTED
<u>Zone(s):</u>	
MUC-1, BPD, CC196	<i>No change to BPD and CC196</i>
<u>Dimensional standards:</u>	
Front Setback	
25 feet	<i>Possible increase to 30-35 feet to allow for future need for roadway expansion and bike/pedestrian</i>
Frontage	
50-100 feet	<i>Minimum 100 feet along Route 196</i>
<u>Allowed Non-Residential Land uses¹:</u>	
MUC-1: Home occupation, planned mixed use development, small wind energy, amusement facility, auto sales, B&B, commercial recreational facility, day care, hotel/motel, inn, lab/research facility, light manufacturing, medical clinic, motor vehicle sales/equipment, neighborhood grocery store, office building as accessory use, printing, professional office, public facility, public utility facility, restaurant, retail business, school, service business, wholesale business, warehousing/storage/distribution	<i>There is a need to review the MUC-1 zoning, recognizing concerns that there are significant regulatory obstacles to the envisioned development and buildout of this area. The goal of the previous Route 196/I-295 study was that this area become an attractive business/commercial center with reduced impacts on neighboring properties. There is concern that the current land use regulations are not supporting this goal.</i>

¹ Table does not list all allowed land uses, only commercial and business related allowed uses.

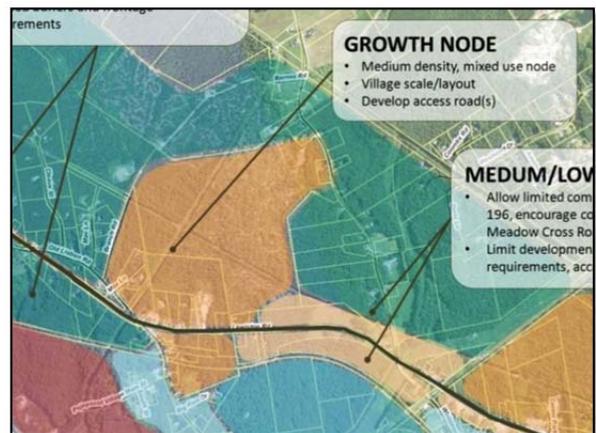
EXISTING	SUGGESTED
<p>PBD: Day care, lab/research facility, light manufacturing, medical clinic, office building as accessory use, planned commercial development, professional office, public facility, service business, small wind energy, veterinary hospital, wholesale business, addiction treatment, commercial recreational facility, hotel/motel, medical marijuana dispensary, printing, public utility facility, restaurant, school, transmission tower, warehousing/storage/distribution</p> <p>CC196: Day care, lab/research facility, light manufacturing, medical clinic, office building as accessory use, professional office, public facility, service business, small wind energy, veterinary hospital, wholesale business, auto sales, B&B, commercial recreational facility, gasoline sale, home occupation, hotel/motel, inn, motor vehicle services/repair, natural resource related business, printing, public utility facility, restaurant, retail business, rural entrepreneurial use, school, transmission tower, warehousing/storage/distribution</p>	

b) Pejepscot Growth Node

Shown in dark orange on the Conceptual Land Use Plan.

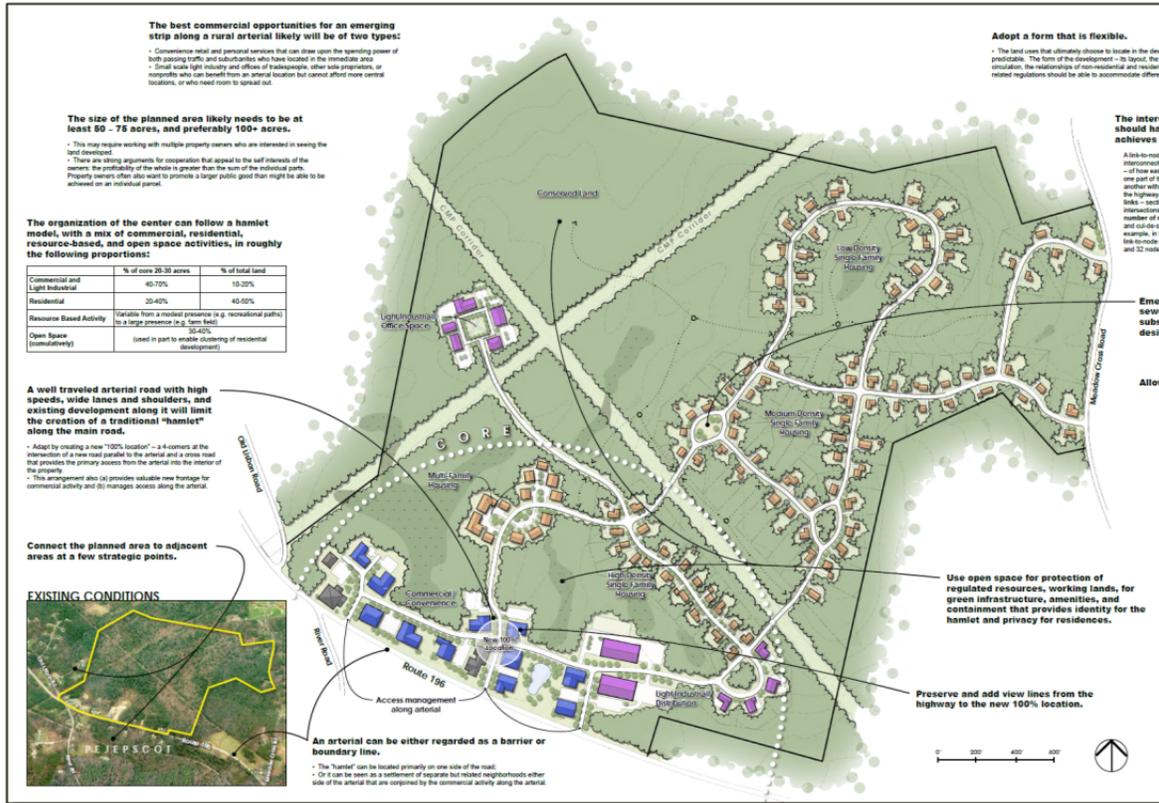
The growth nodes represent areas envisioned to have opportunities for more significant development off Route 196, requiring the use of connector roads and an overall site plan development including multiple parcels. The Pejepscot node centers around the River Road intersection, emphasizing a large area between Route 196 and Meadow Cross Road for potential growth, but also including the Pejepscot village area.

A development node in this area should be medium density, mixed use development, with more of a village layout than a business park layout. The allowed land uses would generally not be as intense or large-scale as allowed land uses in the I-295 growth node. The development node could



Example of a development node centered around a four-way intersection.

be laid out as a mixed use core surrounding the River Road intersection with connections to the Pejepscot village, and/or as a mixed use development between Route 196 and Meadow Cross Road, possibly with non-residential proximal to Route 196 and residential development in the back lot area:



This mock development sketch was developed by Growsmart Maine to illustrate a growth node along Topsham’s Route 196 (for full size document and supporting materials, see the Appendix).

The Town may need to incentivize and/or consider pro-actively developing the road layout/buildout concept to encourage the development of this growth node. The development of a node or cluster at the River Road intersection should take into account potential road widening for future additional travel lanes and turning lanes.

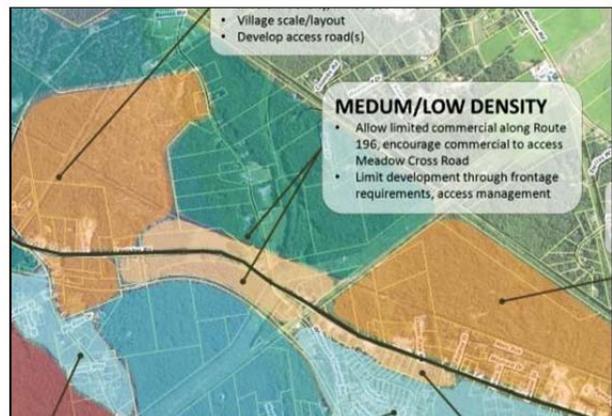
EXISTING	SUGGESTED
Zone(s):	
RCU, R3	Other zone to allow for node development
Dimensional standards:	
Front Setback	
75-80 feet	Reduce to 30-40 feet, for Route 196 frontage

EXISTING	SUGGESTED
Frontage	
150-200 feet	<i>Minimum 200 feet</i>
Allowed Non-Residential Land uses:	
<p>RCU: B&B, boat house, day care, gasoline sale, home occupation, inn, kennel, marina, medical clinic, museum, natural resource related business, neighborhood grocery store, planned commercial development, printing, professional office, public facility, restaurant, school, seasonal retail sales, small wind energy, transmission tower, veterinary hospital, amusement facility, auto sales, commercial recreational facility, hospital/nursing, hotel/ motel, lab/research facility, light manufacturing, motor vehicle service/repair, public utility facility, retail business, reuse of an ag. building for non-residential, service business, wholesale business, warehousing/ storage/distribution</p> <p>R3: Boat house, campground, day care, fairground, home occupation, kennel, piers/ docks, printing, seasonal retail sales, small wind energy, stable, veterinary hospital, B&B, commercial recreation facility, extractive facility, hospital/nursing, inn, marina, museum, natural resource related business, neighborhood grocery store, professional office, public facility, public utility facility, reuse of an ag. building for non-residential, rural entrepreneurial use, sawmill, school, transmission tower</p>	<p><i>Possible expansion of uses allowed in RCU; R3 allowed uses too limited for purposes of the growth node</i></p>

c) Medium/Low Density Commercial

Shown in light orange on the Conceptual Land Use Plan.

The area between the two growth nodes runs from the large transmission lines crossing and River Road, and includes the White House Crossing and Meadow Cross Roads. The opportunities for back lot development accessing Route 196 are more limited due to the location of the railroad line to the south and the rural and agricultural nature of Meadow Cross Road.



This area should support medium or low density growth along the corridor. The curve in the road and location of the intersection mean that more limited access management may be needed, though there may be

opportunities for development proximal to White House Crossing or Meadow Cross Road to use those roads for access.

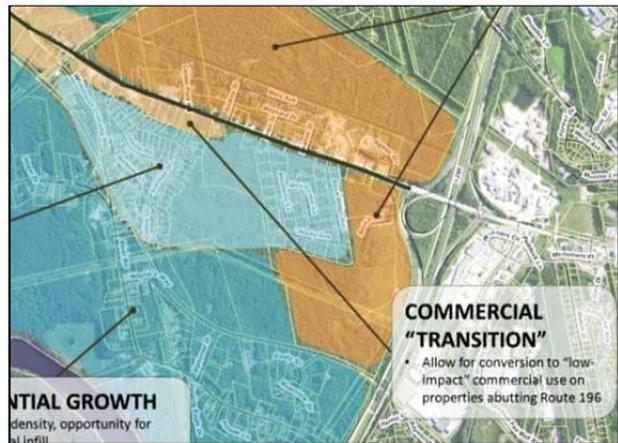
The allowed land uses could remain consistent with the existing RCU zone. Limiting development in this area may be accomplished through larger frontage requirements and through roadside buffer/landscaping and access management standards.

EXISTING	SUGGESTED
<u>Zone(s):</u>	
RCU	<i>No change</i>
<u>Dimensional standards:</u>	
Front Setback	
80 feet	<i>No change</i>
Frontage	
200 feet	<i>No change</i>
<u>Land uses:</u>	
B&B, boat house, day care, gasoline sale, home occupation, inn, kennel, marina, medical clinic, museum, natural resource related business, neighborhood grocery store, planned commercial development, printing, professional office, public facility, restaurant, school, seasonal retail sales, small wind energy, transmission tower, veterinary hospital, amusement facility, auto sales, commercial recreational facility, hospital/nursing, hotel/motel, lab/research facility, light manufacturing, motor vehicle service/repair, public utility facility, retail business, reuse of an ag. building for non-residential, service business, wholesale business, warehousing/storage/distribution	<i>No change</i>

d) Residential 2 - Business (Commercial "Transition")

Shown in light orange on the Conceptual Land Use Plan.

Although the R2 zoning currently allows both residential and business uses, there has been some difficulty in the marketability of lots fronting on Route 196 as either residential or commercial. Some of the house lot owners find the market value of their properties as



residential is low being on Route 196, and many of these property owners feel that being in a Residential zone limits the commercial marketability (even though some commercial use is allowed). The residential neighbors behind the Route 196 frontage lots in Ivanhoe and Blueberry Lane neighborhoods are also concerned that because the frontage lots are only 250-300 feet deep, commercial uses will have a significant impact on them without adequate buffers and standards to protect from light, noise, and other commercial impacts.

The establishment of a “transition zone” for the Route 196 frontage lots has been discussed as a possible option to address commercial marketability, and work to ensure residential abutters are protected. The purpose of creating a new R2-B zone would be to improve the marketability of Route 196 frontage for a range of small business uses, with consideration for enhancing the protection for the existing residential neighborhoods behind.

The general layout of this zone would include only the parcels currently with frontage along Route 196, or property within 250-300 feet of the right-of-way. Since these properties are generally small, it may be likely that two or more parcels could be combined to accommodate a new non-residential use. Uses must be limited to businesses that have



less impact on abutting residential lots, such as office or small scale service business use, with standards in place to limiting hours of operation, vehicle trip generation, and providing adequate screening and buffers. Certain types of non-residential uses are more likely to have negative impacts on residential abutters; many of these types of uses are already non-permitted in the R2 zone. Some examples of non-residential uses that can have less impact and might be considered more acceptable in this area include (but are not limited to) office uses like an accounting, insurance, or realty office; or service businesses like a plumber, a florist, or a land surveyor, or a day care facility.

Impacts of traffic safety and mobility in this area from an increase in commercial driveways (and more turning traffic) may be addressed through the establishment of adequate access management standards or requiring increased minimum frontage for non-residential uses.

EXISTING	SUGGESTED
<u>Zone(s):</u>	
R2	<i>Residential 2 - Business (R2-B)</i>
<u>Dimensional standards:</u>	
Front Setback	
25 feet	<i>Increase to 35 feet to allow for future need for roadway expansion and bike/pedestrian</i>

EXISTING	SUGGESTED																																		
Rear Setback																																			
25 feet	<i>Increase to 50 feet, and require a 35 foot vegetated buffer to protect the abutting residential neighborhoods. Existing vegetation within the 35 foot setback should be maintained, and supplemented where needed. Suggested supplementing screening would be 3 rows of 6 foot minimum height trees, 10-15 feet on center, with at least one third deciduous trees and understory plantings.</i>																																		
Frontage																																			
125 feet	<i>Increase for non-residential development (access management strategy). Consider establishing a maximum frontage to limit the creation of a single large development and combining too many lots.</i>																																		
<u>Allowed Non-Residential Land uses:</u>																																			
R2: Boat house, home occupation, piers/docks, school, seasonal retail sales, small wind energy, B&B, day care, hospital/nursing, inn, museum, natural resource related business, neighborhood grocery store, professional office, public facility, public utility facility, reuse of an ag. building for non-residential, rural entrepreneurial use, transmission tower	<p><i>Suggested allowed uses include:</i></p> <table style="width: 100%; border: none;"> <tr><td><i>Accessory Use</i></td><td style="text-align: right;"><i>P (permitted use)</i></td></tr> <tr><td><i>Boarding Houses</i></td><td style="text-align: right;"><i>C (conditional use)</i></td></tr> <tr><td><i>Church</i></td><td style="text-align: right;"><i>P</i></td></tr> <tr><td><i>Day Care</i></td><td style="text-align: right;"><i>C</i></td></tr> <tr><td><i>Single Family</i></td><td style="text-align: right;"><i>P</i></td></tr> <tr><td><i>Two Family</i></td><td style="text-align: right;"><i>P</i></td></tr> <tr><td><i>Multi-family</i></td><td style="text-align: right;"><i>P 25 (see note below)</i></td></tr> <tr><td><i>Home Occupation</i></td><td style="text-align: right;"><i>P</i></td></tr> <tr><td><i>Major Home Occupation</i></td><td style="text-align: right;"><i>P</i></td></tr> <tr><td><i>Natural Resource</i></td><td style="text-align: right;"><i>C</i></td></tr> <tr><td><i>Professional Office</i></td><td style="text-align: right;"><i>C</i></td></tr> <tr><td><i>Public Utility</i></td><td style="text-align: right;"><i>C</i></td></tr> <tr><td><i>Retail</i></td><td style="text-align: right;"><i>C 26</i></td></tr> <tr><td><i>Rural Ent. Uses</i></td><td style="text-align: right;"><i>C</i></td></tr> <tr><td><i>Seasonal Retail</i></td><td style="text-align: right;"><i>C</i></td></tr> <tr><td><i>Service Business</i></td><td style="text-align: right;"><i>C 26 (see note below)</i></td></tr> <tr><td><i>Yard Sale</i></td><td style="text-align: right;"><i>P</i></td></tr> </table> <p><i>Notes: (the numbering of notes corresponds to the existing Topsham Dimensional Standards Table)</i></p> <p><i>25 Shall have a maximum number of units set (TBD)</i></p> <p><i>26 Limited to 3,000 s.f. of total floor area</i></p> <p><i>Further consideration will be given to determining the final list of allowed uses when the Town prepares the actual proposed ordinance language.</i></p>	<i>Accessory Use</i>	<i>P (permitted use)</i>	<i>Boarding Houses</i>	<i>C (conditional use)</i>	<i>Church</i>	<i>P</i>	<i>Day Care</i>	<i>C</i>	<i>Single Family</i>	<i>P</i>	<i>Two Family</i>	<i>P</i>	<i>Multi-family</i>	<i>P 25 (see note below)</i>	<i>Home Occupation</i>	<i>P</i>	<i>Major Home Occupation</i>	<i>P</i>	<i>Natural Resource</i>	<i>C</i>	<i>Professional Office</i>	<i>C</i>	<i>Public Utility</i>	<i>C</i>	<i>Retail</i>	<i>C 26</i>	<i>Rural Ent. Uses</i>	<i>C</i>	<i>Seasonal Retail</i>	<i>C</i>	<i>Service Business</i>	<i>C 26 (see note below)</i>	<i>Yard Sale</i>	<i>P</i>
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Residential and Non-Residential Compatibility

The issue of compatibility between new development and existing residences is addressed through determining what non-residential land uses are appropriate next to residential areas, as well as through utilizing site development standards to mitigate the impacts of new development. Topsham's existing ordinances already include many provisions to address potential impacts of new development on residences. Also, some new developments such as Rusty's (photo below) illustrate how specific buffer requirements can be applied to a particular commercial project for compatibility with a residential neighborhood.



It is recognized that compatibility is a concern for both residents and business/property owners, and that both of these stakeholder groups have different concerns.



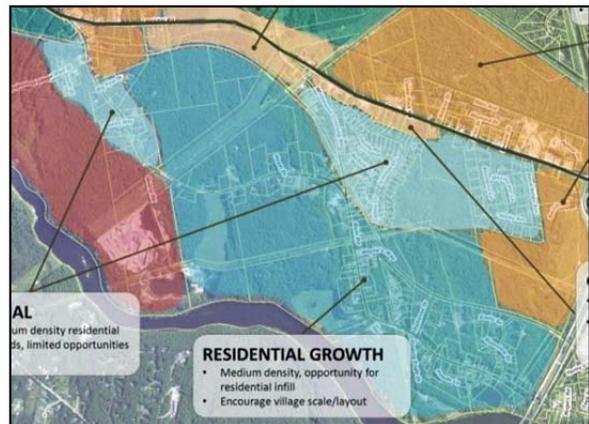
There are several examples in town of non-residential development proximal to residential neighborhoods, where the site layout and design of the non-residential use takes into account potential impacts to residential abutters. One example is the Topsham Town Office complex, which neighbors an established residential neighborhood (right).



e) Residential & Residential Growth (River Road Area)

Shown in light and medium blue on the Conceptual Land Use Plan.

Although the conceptual land use plan eliminates any direct access for the River Road residential area onto Route 196, this important residential growth area and the existing neighborhoods connect directly to the Route 196 corridor, and those residents represent a large stakeholder group for the Route 196 master plan. The general needs for the residential areas as pertaining to this



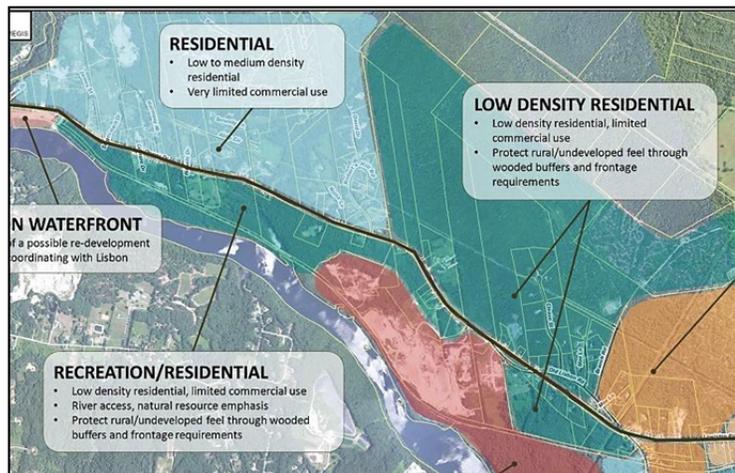
corridor plan are that as growth and non-residential development comes in along the Route 196 corridor, standards must be in place to minimize the impacts of development on existing residential areas.

EXISTING		SUGGESTED	
<u>Zone(s):</u>			
R2		<i>No change</i>	
<u>Dimensional standards:</u>			
Front Setback			
25 feet		<i>No change (no frontage on Route 196)</i>	
Frontage			
125 feet		<i>No change (no frontage on Route 196)</i>	
<u>Allowed Non-Residential Land uses:</u>			
Boat house, home occupation, piers/docks, school, seasonal retail sales, small wind energy, B&B, day care, hospital/nursing, inn, museum, natural resource related business, neighborhood grocery store, professional office, public facility, public utility facility, reuse of an ag. building for non-residential, rural entrepreneurial use, transmission tower		<i>Evaluate the need for more specific buffer requirements to protect the rural residential character.</i>	

f) Rural/Recreational/Residential (Outer Corridor)

Shown in light and dark blue on the Conceptual Land Use Plan.

The outer corridor, between Pejepscot and the Lisbon town line, is envisioned as primarily a rural to suburban density residential area. On the north side of the corridor, the existing residential subdivisions towards Lisbon represent an area becoming more suburban in density, while the residential area between River Road and Roberts Hill Road is lower density. On the south side of the corridor, there is little existing residential development, and significant development constraints, including topography, Resource Protection/Shoreland Zoning, floodplain, and utility easements. This section of



the corridor also has the only direct access, physically and visually, to the Androscoggin River, and therefore holds good potential for public or private recreational use.

Current zoning allows for limited commercial development, which may be maintained as allowed use along Route 196, though issues of access management and impacts to neighboring residences must be managed for new businesses along the corridor.

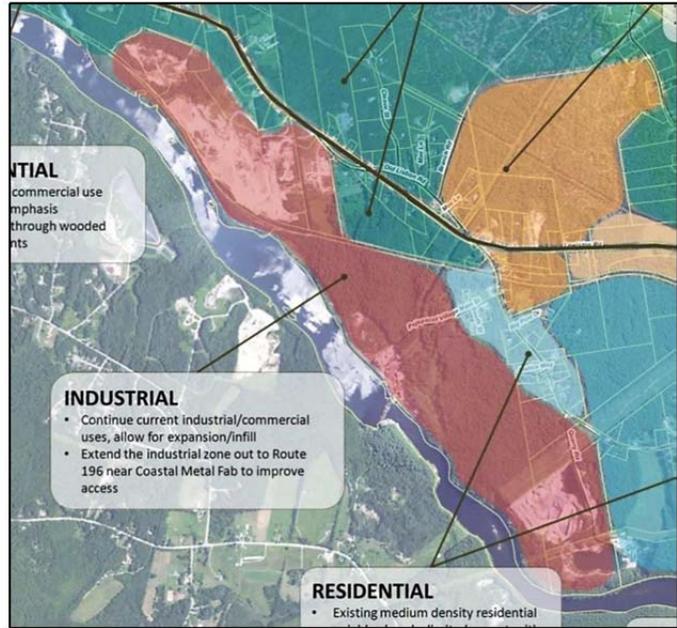
Generally the residential growth in the outer corridor should be set back from the Route 196 corridor, maintaining a wooded and more rural feel. Shared driveways and creating new subdivision roads will help address traffic mobility and safety, and for certain subdivisions, turning lanes on Route 196 may be needed in the future.

EXISTING	SUGGESTED
<u>Zone(s):</u>	
R3	<i>No change</i>
<u>Dimensional standards:</u>	
Front Setback	
75 feet	<i>No change</i>
Frontage	
150 feet	<i>No change</i>
<u>Allowed Non-Residential Land uses:</u>	
Boat house, campground, day care, fairground, home occupation, kennel, piers/docks, printing, seasonal retail sales, small wind energy, stable, veterinary hospital, B&B, commercial recreation facility, extractive facility, hospital/nursing, inn, marina, museum, natural resource related business, neighborhood grocery store, professional office, public facility, public utility facility, reuse of an ag. building for non-residential, rural entrepreneurial use, sawmill, school, transmission tower	<i>(The area on the south side of Route 196 should only see limited commercial uses and development, though this may be addressed through the site constraints such as topography, site distances for driveways, and the existing regulations for natural resource protection including Shoreland Zoning.)</i>

g) Industrial

Shown in dark red on the Conceptual Land Use Plan.

The envisioned industrial area remains largely unchanged from the existing zone, but the extension of the zone to Route 196 near the existing Coastal Metal Fabrication facility is suggested. Compatibility of long-term and future commercial/industrial use with abutting residential areas in this area is a consideration, and can be managed through existing standards requiring buffering and minimizing impacts



through site plan review. The issue of access for large trucks and industrial traffic through the Pejepscot neighborhood, connecting to Route 196, should be addressed through the establishment of new access roads (private or public-private initiative) and the proposed extension of the Industrial Zone out to Route 196 in one area as depicted.

EXISTING	PROPOSED
<u>Zone(s):</u>	
I	<i>No change</i>
<u>Dimensional standards:</u>	
Front Setback	
100 feet	<i>No change (no frontage on Route 196)</i>
Frontage	
200 feet	<i>No change (no frontage on Route 196)</i>
<u>Allowed Non-Residential Land uses:</u>	
Aquaculture, auto salvage, boat house, bulk fuel storage, cogeneration of power as accessory use, commercial composting, commercial recycling, electrical power generation, extractive industry, gasoline sale, heavy equipment repair, home occupation, hospital/nursing, junkyard/ automobile graveyard, lab/research facility, light or heavy manufacturing, marina, museum, motor vehicle services/repair, natural resources related business, neighborhood grocery store, office building as accessory use, paper de-inking, piers/docks,	

EXISTING	PROPOSED
planned commercial development, printing, public facility, retail business, reuse of ag. building for non-residential, rural entrepreneurial use, sawmill, service business, small wind energy, transmission tower, trash-to-energy incinerator, wholesale business, warehousing/storage/ distribution, auto sales, day care, public utility facility	

h) Lisbon Waterfront Extension

Shown in pink on the Conceptual Land Use Plan.

This small area represents a part of the former Knight-Celotex development based along the Lisbon waterfront. As the Town of Lisbon seeks options to redevelop this site, the Town of Topsham should consider the potential reuse options for the parcel located on the Topsham side of the town line. Current zoning has limited this site to Residential 3, and there are natural resource constraints (Shoreland Zoning, floodplain, etc.), yet there may be an opportunity to use the site for uses associated with a future development in Lisbon.



Alternatively, should Lisbon’s waterfront redevelopment plans change, this area would be associated with the adjoining Recreational/Residential riverfront area, as noted above under (f). The site’s adjacency to the Pejepscot boat launch also means potential opportunities for recreational waterfront use (commercial or public). In whatever development scenario may follow, the site’s scenic character and visual (and/or physical) access to the river remain important qualities to protect.

EXISTING	SUGGESTED
<u>Zone(s):</u>	
R3	<i>Other zone to allow for waterfront development</i>
<u>Dimensional standards:</u>	
Front Setback	
75 feet	<i>No change</i>
Frontage	
150 feet	<i>No change</i>

EXISTING	SUGGESTED
<u>Allowed Non-Residential Land uses:</u>	
<p>Boat house, campground, day care, home occupation, kennel, piers/docks, seasonal retail sales, small wind energy, stable, veterinary hospital, B&B, commercial recreation facility, inn, marina, natural resource related business, professional office, public facility, public utility facility, rural entrepreneurial use, transmission tower</p>	<p><i>From R3: Boat house, piers/docks, seasonal retail sales, veterinary hospital, B&B, inn, hotel/motel, commercial recreation facility, medical office, marina, museum, natural resource related business, professional office, public facility, public utility facility, rural entrepreneurial use</i></p> <p><i>Possibly as “accessory” to future Lisbon waterfront use: cogeneration of power as accessory use, electrical power generation, heavy equipment repair, lab/research facility, light or heavy manufacturing, natural resources related business, office building, public facility, rural entrepreneurial use, service business, wholesale business, warehousing/ storage/ distribution, public utility facility</i></p>

2.2.3 Recommendations/Strategies

- Retain the existing CC196 and BPD zoning near the I-295 interchange, and re-evaluate the MUC-1 zoning, in support of the recommendations of the Topsham Route 196/I-295 Intersection Study.
 - Extend CC196 zone along the corridor to the major CMP utility crossing (currently RCU).
 - Review and address the potential deficiencies in the MUC-1 zone in allowing the level of development envisioned for this area, while still offering protection for neighboring residential neighborhoods.
 - Overall, consider changes (increases) to lot frontage requirements, supporting traffic and access management objectives to reduce the number of new uses and driveways on Route 196.
- Create a Residential 2 - Business (R2-B) zone on the southwest side of Route 196 between the existing MUC-1 zone and the CMP utility crossing near Whitehouse Crossing.
 - Limit allowed uses to small business types less likely to impact abutting residences (based on intensity of use, hours of operation, traffic generation, etc.). This would likely represent a slight change in allowed uses and dimensional standards from current R2 zoning, but would seek to improve opportunities for business development.
 - Ensure adequate standards, such as buffers, to mitigate impacts (noise, smells, light, etc.) of new businesses on existing residences behind these lots, including no parking, dumpsters, or noise/smell generating utilities to the rear of buildings.
- Retain the existing RCU zone north of the CMP utility crossing and up to the proposed Pejepscot “growth node” (see Conceptual Land Use Plan diagram).
 - Consider changes to lot frontage requirements (to support traffic management).
- Establish new zoning to support a growth node in the vicinity of the River Road intersection, including a larger area for medium density growth northeast of the corridor (connecting to Meadow Cross Road).
- Extend the Industrial Zone to Route 196, to include the Coastal Metal Fab lot and adjacent Crooker lots fronting on Route 196, to allow for improved access to the Industrial Zone.

- Require increased front setbacks and large buffers along the corridor for both visual character and general traffic management.
- Retain the remainder of the existing R3 zoning between the corridor and the Industrial Zone.
- Retain the existing R3 zoning on the northeast side of the corridor between the Pejepscot growth node and the Lisbon town line.
 - Consider possible allowance for increased density north of West Merrill Road.
- Retain the existing R3 zoning on the southwest side of the corridor between the Industrial Zone and the Pejepscot Boat Launch.
- Rezone the riverfront property between the Pejepscot Boat Launch and Lisbon town line, to allow for limited development or development accessory to the potential redevelopment of the former Knight-Celotex property in Lisbon.

2.3 TRANSPORTATION

THE VISION:

- > Generally this corridor should be managed and developed to have a parkway type aesthetic, emphasizing limited access points for turning traffic and a landscaped or tree-lined visual character.
- > Traffic mobility and safety will continue to be critical issues for this roadway. There will be a need to carefully manage driveways and entrances, turning traffic, traffic speeds, and bicycle and pedestrian access.
- > For bicycle and pedestrian use, the local and regional use remains fairly low, but can be expected to increase, and providing for safe access and facilities is an important long-term goal. Use of the shoulders may be an interim solution, but off-road pedestrian/bike facilities must be pursued.

2.3.1 Community Objectives

- Maintain good traffic flow (mobility) for through traffic
- Address issues of safety of turning traffic along the corridor
- Improve access management standards for the corridor
- Identify opportunities for access/connector roads or other alternative traffic design
- Address future road widening concerns (adding lanes)
- Address heavy truck traffic issues associated with existing and future industrial and commercial development along Route 196 (for residents and businesses)
- Support needed long-term bicycle and pedestrian improvements

2.3.2 Transportation Description

a) Traffic Data & Capacity

The following annual average daily traffic volumes (AADT's) were available along Route 196 from the MaineDOT. AADT's are average yearly 24 hour two way traffic volumes along the roadway:

- Southeast of Meadow Cross Road
 - 2007-14,820
 - 2010-13,920

- Northwest of Whitehouse Crossing Road
 - 2007-14990
- Northwest of Old Lisbon Road
 - 2007-13780
 - 2010-12940

This data shows that the volume has been declining over the last several years which is generally a statewide trend due to the economic recession and the increase in gas prices, but also effected regionally by the closure of the Brunswick Naval Air Station (as the former BNAS is redeveloped and the economy improves, traffic may increase again).

A review of the 2009-2011 crash data in this area found there were no high crash locations within the corridor within this three year period. A total of 62 collisions occurred within the corridor over the three year period. There were no fatalities but there some serious injuries. There were no collisions involving a bicyclist or pedestrian.

It is noted that the MaineDOT records may be incomplete for 2011 due to potential Statewide reporting issues.

Existing Roadway Capacity

Route 196 currently has a single twelve foot travel lane in each direction and ten foot shoulders on both sides of the roadway. Route 196 is relatively limited development intensity along both sides of the corridor so the wide shoulders allow vehicles to travel around left turning vehicles onto the side streets or driveways and for right turning traffic to decelerate using the adjacent shoulder.

The capacity of a roadway is most often determined by the adjacent intersections, particularly along roadways such as this section of Route 196 with relatively limited development. While a single through lane along the roadway can handle the current levels of through traffic, the level of service and safety will rapidly become a concern as development occurs. In general terms the roadway is nearing its effective capacity today with an AADT of nearly 15,000 vehicles per day.

Future Traffic Forecast

Working with the project advisory committee, the project team has developed a conceptual lane use plan along the corridor. The projected uses include low to high density residential development, commercial and industrial residential uses. While a more detail forecast was not feasible within the project budget, we assumed the following development ranges for the purpose of estimating traffic over the next twenty years will occur over the next 20 years for the purpose of the study:

- Residential – 200 to 540 units
- Office – 500,000 to 1,000,000 sf
- Commercial – 1,000,000 to 2,000,000 sf
- Industrial – 125,000 to 250,000 sf

The forecast trip ends based on this level of development is from 24,000 trip ends (entering and exiting traffic combined) to over 40,000 trip ends. While not all this traffic would peak at the same time nor travel over the same portion of the corridor, it clearly could result in a major increase in traffic along the corridor.

b) Potential Strategies

1. Access Management

As previously discussed, the long-term proliferation of full-access driveways is potentially a major concern along Route 196. It is recommended that the Town work with the MaineDOT, home owners and local businesses to make access management part of any site redevelopment plan as well as proposed site plans.

Access management typically consists of several aspects, which are listed as follows:

- *Sight Distances:* MaineDOT requires minimum sight distances for driveways along state-aid roadways; however, for projects within the Topsham urban compact, the Town of Topsham maintains sight distance requirements for all new driveways. Projects generating over 100 peak hour trip ends also require a traffic movement permit from MaineDOT in addition to local site plan approval.
- *Spacing between Driveways/Corner Clearance:* Just as major intersections with traffic control devices should be placed to minimize impacts upon driveways in their vicinity, distances from driveways best serve traffic flow and safety needs when sufficiently spaced away from major intersections as well as other driveways.
- *Spacing of Driveways along Three or Five-Lane Sections:* Given the potential for Route 196 to be widened in the future, if sections of Route 196 are widened the arrangement of driveways is potentially critical. They should be spaced such that left turning traffic into or out of developments on the opposite side of the street do not overlap.
- *Number of Curb Cuts Per Lot:* Typically, the most-utilized aspect of access management is that of reducing the number of curb cuts or reducing potential turning movements at certain driveways. For example, if a small site has three full-access driveways, or worse, a single large curb cut with no clear delineation as to where vehicles should enter or exit, the potential for conflicts with other vehicles becomes significant. If the driveways are

reduced to one or two, and appropriate signage is utilized, the ability for motorists to understand where they need to be will be made clear, and the potential for conflict significantly reduced. This can be a positive for owners since it can make the access safer for their customers / clients, by eliminating a driveway that could allow additional parking, or provide opportunity for additional landscaping.

- *Double Frontage Lots:* If a parcel has frontage along multiple streets (in particular, public ways or high-volume commercial driveways), it is considered to have double frontage. Many communities and to an increasing extent, MaineDOT, now require that full access be provided to the lower-volume driveway or street, where traffic may come to the main roadway via traffic control if it is available. If an additional driveway is to be permitted along the main roadway, it can be restricted to right turns only in order to minimize potential turning conflicts.
- *Driveway/Entrance Widths:* MaineDOT typically requires that a driveway be no more than 42 feet in width (not including radii). However, in the case of access to major traffic generators this width can be increased with inclusion of appropriate medians and traffic control devices. Ultimately, the driveway width should be based upon the needs of the site, as well as other factors such as pedestrian crossings and truck access. But in most cases, the width should not exceed the demonstrated need.
- *Consolidation of Roadways / Driveways:* Consistent with limiting the number of curb cuts along the corridor to reduce the number of conflict points, consolidation of driveways or even public accesses and roads has the same benefits. However, it can take several years to consolidate since it is typically done as part of a redevelopment of the property.
- *Interconnection of Adjacent Properties:* This includes providing vehicular, pedestrian and bicycle connections between adjacent properties. This reduces the number of vehicles that need to turn onto Route 196 only to turn off at the next driveway. Providing this interconnection improves the capacity and safety of the corridor.

In summary, it is recommended that the Town of Topsham evaluate each parcel along Route 196 through the approvals process when the site is developed, redeveloped, or required to get some form of permit from the Town, to ensure that each site takes into account access management measures and does so in context with adjacent parcels. By doing this, fewer turning conflicts will take place, safety will improve, and the need for major changes such as medians along Route 196 will be delayed or eliminated.

2. Transportation Demand Management

With the forecast of continuing growth in traffic for Topsham, and constraints to various transportation funding mechanisms the current norm, alternative measures to keep traffic volumes from increasing will have greater importance. One significant group of measures has been typically clustered under the umbrella of Transportation Demand Management

(TDM). TDM measures include many techniques, and what follows is a brief discussion of many of the most common techniques:

- *Staggered work hours:* Particularly for hourly employees, workers coming to and from a place of employment results in brief periods of time where roadways are often overwhelmed with traffic. Yet, it is unrealistic to redesign transportation infrastructure to accommodate brief periods of traffic surges. If employers can work with their employees to adjust work hours (perhaps from 7:30 to 4:30, or 9:00 to 6:00), peak periods can be extended, rather than intensifying the existing peak hour traffic volumes.
- *Carpooling/Vanpooling:* If drivers with similar hours commute to and from the same town, sharing rides can significantly cut down on peak hour traffic volumes. Ideally, if clusters of employers communicate with each other on worker needs, the potential for carpooling is increased. For larger employers with many workers from the same town, use of a vanpool with a driver may also be an option.
- *Bus Service:* Bus service is another transportation demand management technique. This technique could be especially helpful to connect the larger neighborhoods to the local businesses. An intra-town bus route that would allow residents and guests the opportunity to visit the downtown establishments without dealing with the traffic could be very beneficial and would help to reduce or slow the rate of growth in Route 196 traffic.
- *Secure Bicycle Facilities:* For some people with short commutes, one impediment to using a bicycle for a mode of transit is the lack of secured bicycle storage areas. Provision of such facilities can encourage workers interested in such travel modes particularly in the summer when traffic volumes are highest. Additional accommodations such as shower and changing room facilities are also beneficial in promoting walking and bicycling as viable modes of transportation.

While such measures were once relegated to large metropolitan areas, mandatory TDM requirements are already practiced in the City of Portland, and the Maine Department of Transportation has begun assessing fees for creation of various TDM programs in several regions of the state. Again, while there may be initial skepticism of such measures, in the long run they can ultimately save money, and help to preserve corridors such as Route 196 that are dealing with capacity constraints. In the end, the measures should be tailored to specific employers, as the impacts and ability to mitigate those impacts by a small employer would be different than a large one.

3. Corridor Improvement Options & Recommendations

Developing a balance between providing access, mobility and safety is critical to the future of Route 196 which is poised for development. It is recommended that in conjunction with appropriate planning for land use and growth, the following transportation planning measures be used to address mobility, safety, and the need for future road improvements:

- *Access Management Plan:* The most important portions of any access management plan are reducing and strategically locating the number of curb cuts, reducing curb cut widths, providing interconnections between adjacent sites, and use of side/parallel streets where feasible and appropriate. The potential for proliferation of full-access driveways is a major concern along Route 196 which is poised for development. Given the need to maintain mobility along this corridor, it is important for the Town to work with local businesses and the Planning Board through their site plan review process, and on the building permits process to make access management part of any development plan.

The Town of Topsham can help to realize the improvements by requiring them as part of the site redevelopment process for businesses along the corridor. Specific access management provisions should be developed and incorporated into the Town Ordinances and include allowable number of curb cuts, sight distance requirements, curb cut spacing, corner clearances etc.

Several options for the near- or intermediate-term have been identified. These options would require further study and analysis for effectiveness and appropriateness, based on traffic volumes, cost of improvements, State approvals, and in some cases voter approval.

- *Develop Access Road Plans:* There are a few areas where the development of a planned access road or connector road is warranted to support increased density of development (growth nodes) while limiting access onto Route 196. The Town can work proactively with private landowners and developers to develop plans for these access roads and how they connect to existing public roads.
- *Re-Striping Route 196:* The current pavement width of Route 196 in the study area averages about 44 feet (ranging from 40 to 45 feet), which for portions of the corridor could allow for restriping of the roadway without repaving, to provide a center two-way left-turn lane, a single travel lane in each direction, and possibly shoulders that could be wide enough for bicycles. This cross section would allow left turning vehicles on Route 196 to use the left turn lane and not restrict the movement of the through traffic. This would also assist left turning vehicles exiting the side streets/driveways to use the center turn lane to make a two stage left turn. This would have a capacity of up to 24,000 vehicles per day depending on the number and location of driveways and intersections. Prior to implementing such a design, the Town would have to work closely with MaineDOT on costs and impacts to through traffic.
- *Signalize/Redesign River Rd and/or Meadow Cross Road and While House Crossing:* Signalization of intersections, such as Route 196/River Road or Route 196/Meadow Cross Road/Whitehouse Crossing, can provide better control for traffic entering or exiting the travel way. Full signalization of these intersections would require realignment, which would have to be done with input and assistance from MaineDOT. The intersection will first need to meet warrants for signalization or redesign according to the Manual on Uniform Traffic Control Devices (MUTCD) and be approved by the MaineDOT. In order for a traffic signal to be installed it must meet one of more of the signal warrant criteria contained in the MUTCD.

4. Other Possible Long-Term Strategies

These measures are anticipated to provide adequate roadway capacity to Route 196 for some time (ten to twenty years, even with additional development). Prior to implementing any of these more structural alternatives, additional studies would be required to identify: (a) adverse impacts, (b) cost estimates, (c) impacts to private property, (d) anticipated effectiveness, and (e) ultimate feasibility. Depending on the level of development and extent of through traffic possible additional measures may be needed as follows:

- *Widening of Route 196 to Three or Five Lanes:* The possible need for these types of improvements were noted in the State Route 196 Transportation Planning Study (MaineDOT, 2010), and vary considerably based on the growth of the area and how well access management techniques are implemented throughout the corridor. The current two-lane section is already operating marginally during peak periods. With the implementation of the three lane cross section described previously, the corridor should operate better than it does today and hopefully a five lane section will not be needed for a long time.

While not recommended at this time, widening Route 196 to a five lane cross section would require additional right-of-way, have impacts on the quality and quantity of stormwater, and could negatively impact properties along the corridor. For those reasons, every effort should be made to avoid the five lane cross-section. However, should volumes and capacity exceed a three lane cross-section which may be as much as 24,000 vehicles per day, the five lane cross section may be needed, which would include two through lanes in each direction and a center two-way left turn lane or a series of dedicated left turn lanes.

The Town can take some proactive steps to plan for the long-term need for a five lane cross section to avoid unnecessary impacts to newer development, by anticipating a future need for right-of-way expansion, the need for utilities and bike/pedestrian infrastructure. Increasing building setbacks now will avoid buildings needing to be removed or becoming too close to the road if it is widened; and by developing a design plan to accommodate utilities and bicycle and pedestrian infrastructure, future funding or construction opportunities may be taken advantage of.

- *Center Medians with Roundabouts:* A possible alternative to a three lane section and certainly a five lane section is to construct roundabouts at key locations and install a center median in between to prohibit left turning traffic in or out of development, similar to Route 196 east of the I-295 interchange. This design is safer and has more capacity since left turning traffic is eliminated. All traffic turns right out of each driveway and proceeds to the nearest roundabout where it can reverse direction. Another advantage to this concept is that the center turn lane can be converted to the median and green space which tends to reduce speeds as well as stormwater runoff and provides a more pleasant driving experience.

c) 2005 Transportation Plan Findings

Topsham's 2005 Transportation Study identifies a number of potential future roadway connections that would address the already limited capacity of in-town intersections, as development and traffic increases. These include:

- the construction of a Routes 201/196 Western Connector (north of Route 196 and west of I-295),
- a Route 196/River Road Connector (south of Route 196 and west of I-295),
- a Commercial Connector linking the MUC-1 area to the Topsham Fair Mall, and
- the widening of Route 196 over the interstate.

To facilitate these improvements, the Town should:

1. Work with TDI and the Maine Department of Transportation to determine if it will be possible to obtain a crossing over the railroad to allow the Route 196/River Road Connector to be constructed.
2. If it appears that it may be possible, conduct a preliminary engineering study to assess the feasibility and identify a location for the portion of the Route 196/River Road Connector from the north side of the railroad R.O.W. to River Road.
3. If construction of this portion of the Route 196/River Road Connector is feasible, identify and obtain a R.O.W. from the MUC District to River Road.
4. Assess the feasibility and potential cost for constructing the Commercial Connector under the interstate from Quadrant #1 to the Topsham Fair Mall.
5. If construction of the Commercial Connector appears to be feasible in the future, work with the Maine Department of Transportation to obtain future rights to go under the interstate.
6. Conduct a preliminary engineering study to assess the feasibility and identify a location for the Routes 201/196 Western Connector.
7. Identify and obtain a R.O.W. for the Routes 201/196 Western Connector from the power line north to Route 201.
8. Begin discussions with the Maine Department of Transportation about the possible widening of Route 196 over I-295 and identify the preliminary actions that need to occur.

EXISTING LOCAL AND STATE ACCESS MANAGEMENT CONSIDERATIONS

Topsham's current ordinance provisions addressing access management and MaineDOT's requirements for permitting on Route 196 already influence traffic and access management. These regulations may be adequate for the Outer Corridor (north of Pejepscot Village), but may need to be enhanced for the inner corridor where more intense growth is envisioned.

From Existing Town Ordinances:

Each off-street parking area shall have no more than two openings onto the same street, each opening not to exceed 26 feet in width, except as further limited below:

- (a) Within CC and BP2 Zones, only one twenty-six-foot-wide access drive shall be allowed per 100 feet of frontage.
- (b) Within RCU Zones, only one twenty-six-foot-wide access drive shall be allowed per 200 feet of frontage.
- (c) Within MUC and MUC-1 Zones only one twenty-six-foot-wide access drive shall be allowed per 100 feet of frontage.

The use of shared parking and driveways on site or off site is allowed. Required off-street parking may be located off-site when the developer/owner demonstrates right and availability of parking within that zone. The following criteria must be met in order for the Planning Board to grant the right to shared parking or driveways: accessible to the site; walking distance to the facility; reasonable sharing with the sharee; provides enough spaces for each business to function in a reasonable manner. If businesses change hands, the property owner must return to the Planning Board for re-approval of the shared parking.

Additional requirements for Mixed Use Limited (MUL) and Mixed Use Commercial (MUC) Zones:

- (1) Driveways are not permitted within the setback areas of a lot except for access drives which are perpendicular to the setback for access to parking areas.
- (2) All parking in the Mixed Use Limited Zone must be located to one side and/or the rear of buildings.
- (3) Side yard driveways serving commercial properties and multifamily developments must have a planting strip and sidewalk which leads from the parking area to the street.
- (4) A sidewalk with a minimum width of six feet must be constructed the width of the front property line of each developed property.
- (5) A minimum six-foot wide raised or physically separated pedestrian walk must be constructed between all parking areas and drives which abut buildings, except in areas of drive-through facilities and loading bays.

MaineDOT Driveway Entrance and Traffic Movement Permitting:

MaineDOT does have restrictions on the location and number of driveways on Route 196, associated with their permitting process. These generally focus on sight distance lines (visibility of oncoming traffic by a vehicle turning onto Route 196) and drainage. If a development generates 100 or more vehicle trips during a "peak hour", a traffic movement permit is needed, which has significant standards for driveway separation, potential need for turning lanes, etc. In terms of access management needs for Topsham's Route 196 corridor, the need is really for projects that generate less than 100 trips in a peak hour, which cumulatively, can be a lot of development, in fact probably the majority.

Example site distance and driveway spacing requirements, from the Town of Lisbon’s Access Management Ordinance:

Posted Speed (MPH)	Sight Distance (Feet)
25	250
30	305
35	380
40	580
45	710
50	840
55	990

Posted Speed (MPH)	Driveway Separation (Feet)
25	70
35	85
40	175
45	265
50	350
55	525

d) Bicycle & Pedestrian Transportation

Though the current use of the Route 196 corridor by cyclists and pedestrians is low, there is an acknowledgement that the roadway is used more than people may think. The safety concern is quite significant – although there are paved shoulders throughout the corridor, the high traffic speeds and volumes, combined with the use of shoulders by vehicles passing left-turning traffic, creates a very unsafe bicycle and pedestrian environment. However, the cost of constructing sidewalks and bike lanes, or a shared use path, for the entire corridor would be very high, and is considered a long-term effort as there are other areas of town serving greater densities of development/population that will likely take precedent.





There have been discussions in the region on developing a rail trail, which would roughly parallel the Route 196 corridor and the Androscoggin River. The communities of Lewiston and Lisbon are already developing plans and beginning to implement such a rail trail, which could serve as a significant regional connector and multi-use path. The issue of rail right-of-way ownership in this region (MaineDOT or PanAm), current policies surrounding the use of rail corridors, and the outlook for future freight service on the corridor make this project fairly complex. For Topsham, ownership by MaineDOT works in favor of a possible trail, but the potential need for future freight access to the Industrial Zone may be a

challenge. In addition, the town already has a number of other local and regional trail projects in line for design and construction, so the Route 196 area may not become a priority until much later.

In the near-term, the Town should designate the shoulders along Route 196 as a bike route, as part of the regional strategy being considered by Lisbon and Lewiston, as part of their Regional Bike/Pedestrian Plan (through the Androscoggin Transportation Resource Center). This should be considered an interim step to developing safer bicycle facilities, and would include signage and pavement markings for shoulders. As noted, there are legitimate safety concerns for cyclists on the Route 196 corridor given traffic speeds and the use of the shoulders by right-turning vehicles or vehicles going around other left-turning vehicles, but as the type of infrastructure needed to significantly improve bicycle safety will take a good deal of time and funding, interim steps are needed.



In the long-term, the Town should seek options for off-road bike/pedestrian facilities, and must plan for the development of sidewalks/bike lanes or a shared-use path for the Inner Corridor (near I-295) as commercial and residential growth increases.

2.3.3 Recommendations/Strategies

Because Route 196 is a State road, prior to implementation of any of the following strategies, individual projects would be required to be fully evaluated by the Maine Department of Transportation. In addition, MaineDOT would have to be a partner in funding any of these options.

- In the near- to intermediate-term, as demanded by traffic capacity and turning movements, consider re-striping the existing roadway (approximately 44 feet wide) between I-295 and Ivanhoe Drive as a three lane roadway, with a center turn lane. Consideration must be given to maintaining safe shoulder widths, particularly for bicycle use.
- Develop long-term, preliminary study and engineering in anticipation of a widened cross-section (additional lanes) for the Route 196 Inner Corridor – to address potentially more immediate needs for mobility and capacity, and create a “shovel ready” project. It is envisioned that the Inner Corridor will support more commercial growth and soon require additional road capacity to accommodate turning traffic as well as increasing through-traffic.
 - Develop a longer term plan for future widening of Route 196 to include up to 5 lanes. The preliminary design of an increased cross-section will provide insights on likely needs for acquiring additional right-of-way width, conflicts with buildings/structures closer to the existing road, the need for increasing required building setbacks, and the need to accommodate underground utilities, and will better prepare the Town for significant development in the Route 196 Inner Corridor.
 - Design to accommodate a 5-lane cross-section, which would include the addition of sidewalks and bike lanes, and the location of underground utilities (such as water and sewer, which could be developed prior to road widening).
 - Integrate access management planning into the future roadway improvement plans.
 - Evaluate the long-term need to widen Route 196 over I-295 and the future configuration of the interchange on and off ramps.

- Consider the use of center medians and/or roundabouts to either reduce the number of traffic lanes or provide improved mobility or traffic calming.
 - Determine planning-level costs for road improvements, and develop a preliminary funding plan to include both public and private (developer) funds.
- Increase setback dimensional requirements to allow for future road widening.
- Evaluate potential need for purchasing additional land for ROW widening.
- In the near-term, consider designating the shoulders along Route 196 as bike routes, as part of the regional strategy being considered by Lisbon and Lewiston. This should be viewed as an interim step to developing safer bicycle facilities, and would include signage and pavement markings for shoulders. As part of this effort there would need to be an evaluation of the impacts of existing and future vehicle turn lanes, potential road re-striping, or other road improvements that could affect the bike routes.
- In the long-term, seek options for off-road bike/pedestrian facilities, either along the corridor or off-corridor such as a rail-trail, and plan to develop sidewalks and bike lanes for the Inner Corridor as growth in this area occurs.
- Establish an Access Management Plan and standards associated with Site Plan Review to address the location and allowed number of curb cuts, reduction of curb cut widths, provision of interconnections between adjacent development sites, and the use of shared driveways and connector roads (side/parallel streets) where possible, to promote safety and mobility in the long-term and reduce the need for major roadway improvements such as added lanes or lighted intersections. Site distance requirements and current MaineDOT permitting requirements must be taken into account.
- Work with private landowners to develop connector roads (side/parallel streets) within growth nodes to reduce access points/drives, improve the frontage on Route 196, and increase development potential for growth areas (the Monument Place development and connector road serves as a model).
- Continue to seek opportunities to create new road connections to improve in-town traffic access, when feasible (*recommendations of the 2005 Topsham Transportation Plan*):
 - *A Routes 201/196 Western Connector (north of Route 196 and west of I-295)*
 - *A Route 196/River Road Connector (south of Route 196 and west of I-295)*
 - *A Commercial Connector linking the MUC-1 area to the Topsham Fair Mall*
- Work with MaineDOT on a regular basis to evaluate traffic speeds along the Western Route 196 corridor and the need to adjust speed limits or address enforcement.

2.4 VISUAL CHARACTER

THE VISION:

- > Generally this corridor should be managed and developed to have a parkway type aesthetic, emphasizing limited access points for turning traffic and a landscaped or tree-lined visual character.
- > Critical goals for this corridor include maintaining good visual character.

2.4.1 Community Objectives

- Ensure that new development and land use change along the corridor maintains positive visual character.
- Use similar standards to the Route 196 corridor near the Monument Place development, or the Route 201 gateway corridor.

2.4.2 Visual Character Description

Visual Character refers to how people see and experience the corridor. Why does it matter? The town seeks to avoid “typical highway strip development” for the western Route 196 corridor because of its status as a gateway to the community, and the potential negative impacts of growth on both traffic and image. Typical highway strip development is

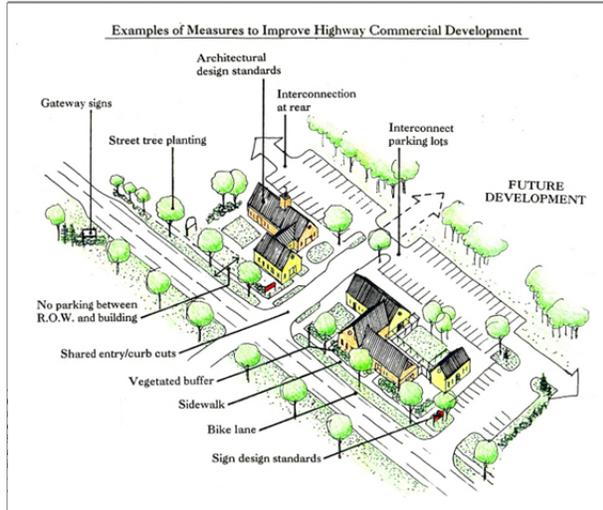


car-oriented, where commercial uses quickly fill up the frontage all along a corridor, have multiple driveways and entrances (or wide open paved areas with no curb), and have frontage that is overall dominated by pavement and parking. Also, the image that comes to mind for highway strip development is one of cluttered signage, a lack of street trees or any landscaping, buildings that have little architectural character or perpetuate the “anywhere USA” feel. Communities in Maine are increasingly aware of the very real impacts of poor image on the local economy, and the recent Quality of Place movement provides a well-researched defense of the importance of maintaining local character and uniqueness.

Currently, the corridor has some relatively small-scale commercial development at the I-295 end, and is mostly wooded with some houses and subdivisions along the rest of the corridor.

VISUAL CHARACTER

What will it look like as new commercial and residential growth occurs along the corridor? What regulatory tools are already used in Topsham that will help ensure this gateway corridor allows for economic opportunities while protecting visual character?



Good building and signage design, reduced amounts of paved areas in the front setback, and street trees and landscaping are some key elements to positive character along a commercial highway.

a) Route 196 Corridor Character Description

This corridor is a significant gateway to Topsham, experienced by thousands of drivers each day. The visual character envisioned for the corridor can be described in terms of the inner corridor (between I-295 and the River Road intersection) and the outer corridor (between the River Road and the Lisbon town line).

As described in the vision, the inner corridor will generally serve to accommodate more intense and higher densities of growth. Non-residential development along the roadway should emphasize good landscaping and site layout, and good building and signage design. (Shared driveways and other access management standards must also be employed.)



Example of a developed highway corridor featuring buildings and landscaping in front, parking to the side and rear.



Visual character must also be part of public roadway improvements. On Route 196 near the Monument Place development, the roadway design includes a planted center median, bike lanes, and a sidewalk separated from the road by street trees and a grass esplanade.



The recent plan and development of Rusty's Market in Topsham also illustrates good design principles such as site layout and building and sign design.

The outer corridor should be characterized by lower density growth, less oriented to Route 196. Non-residential growth should have a larger, wooded or well-landscaped buffer between the roadway and the development.



Examples of development set back from the road, with wooded and landscaped buffers along the road.

b) Visual Character Standards

Topsham already has a number of regulatory standards in place to address the issue of visual character (listed below). These standards apply to new non-residential development, multi-family development, or subdivisions, but do not apply to existing development. For existing buildings and lots, the town can create incentives for them to meet the character and standards that new development does, but cannot require them to meet standards unless there is a change of use or substantial change to the site plan or lot layout.

When the town's ordinances are amended to include the changes proposed in this Route 196 Plan, consideration must be given to improving on existing visual character standards as needed, especially for zones where new non-residential development may impact residential properties.

Topsham Standards relating to Visual Character:

- **Lighting:** Lighting may be provided which serves security, safety and operational needs but which does not directly or indirectly produce deleterious effects on abutting properties or which would impair the vision of a vehicle operator on adjacent roadways. Lighting fixtures shall be shielded or hooded so that the lighting elements are not exposed to normal view by motorists, pedestrians or from adjacent dwellings. Direct or indirect illumination shall not exceed 0.5 footcandle upon abutting residential properties. (Zoning Ordinance)
 - Site Plan Review has further detailed standards for lighting.
- **Parking:** Off-street parking and loading spaces for nonresidential uses, where not enclosed within building, shall be effectively screened from view by a continuous landscaped area not less than six feet in height, unless waived by the Planning Board for expressed reasons, along exterior lot lines adjacent to residential properties and all public roads, except that driveways shall be kept open to provide visibility for entering and leaving. No off-street parking and loading shall be permitted within the front setback or any setback adjoining a public street, except as specifically authorized in this chapter.
 - Site Plan Review has further detailed standards for parking areas.
- **Landscaping:**
 - The landscape shall be preserved in its natural state insofar as practical, by minimizing tree removal and grade changes in keeping with the general appearance of neighboring developed areas. Landscaping shall be designed to soften, screen or enhance the physical design of structures and parking areas to avoid the encroachment of the proposed use on abutting land uses. All parking lots shall be landscaped along the property boundaries with shrubbery, trees and other landscape materials. In the LV, MV, VC, LI, and R4 Zones², and that portion of the CC that fronts on Rt. 201, a combination of fencing, landscaping and grading shall be utilized to screen parking areas and minimize the impact of vehicle head lights on adjacent residential uses.

² Landscaping standards that reference specific zones should include new Route 196 zones, particularly for the Inner Corridor.

- Site Plan Review has further detailed standards for landscaping, with special attention to BP and CC196 zones.
- No industrial or commercial buildings or uses shall be established in, or abut, a residential district or use, unless a landscaped buffer strip is provided to visually screen the uses. Where no natural vegetation can be maintained or due to varying site conditions the landscaping may consist of fences, walls, hedges or combinations thereof. The buffering shall be sufficient to minimize the impacts of any kind of potential use such as loading and unloading operations, outdoor storage areas, vehicle parking, mineral extraction, waste collection and disposal areas³. Where a potential safety hazard to small children would exist, physical screening barriers shall be used to deter entry to such premises. The buffer areas shall be maintained and vegetation replaced to ensure continuous year-round screening.
- Landscaping must consist of full vegetative ground cover. Rock, bark and other nonliving material may be used only for accent in landscaped areas. All landscaped areas must be maintained in a healthy growing condition.
- A minimum six-foot wide landscaped area must be installed adjacent to all sides of commercial buildings and structures except in the LV Zone and industrial buildings in the LI Zone. In the LV, VC, BP2 and LI Zones, and that portion of the CC that fronts on Rt. 201, where the front of the building directly abuts a streetscape, a six-foot wide landscaped area is not required. The design of the streetscape shall meet all other applicable standards.
- **Storage & Junk Yards:** Exposed storage areas, raw materials for the production of finished items for sale, exposed machinery, sand and gravel extraction operations and areas used for the storage or collection of discarded automobiles, auto parts, metals or any other articles of salvage or refuse shall have sufficient setbacks and screening (such as a stockade fence or a dense evergreen hedge six feet or more in height) to provide a visual buffer sufficient to minimize their impact on other land uses and properties in the area. In the LI Zone, and that portion of the CC that fronts on Rt. 201, this vegetated buffer shall be at least 25 feet wide. Where a potential safety hazard to children would be likely to arise, physical screening sufficient to deter small children from entering the premises shall be provided and maintained in good condition.
- **Prohibited signs:**
 - (1) Any sign comprised of, or illuminated by, intermittent light, except digital public service messages, such as time, date, temperature, public notices, public safety, etc., except as otherwise noted.
 - (2) Movable signs.
 - (3) Off-premises signs, except as allowed by the State of Maine through its off premises business direction signs.
 - (4) Temporary signs, unless otherwise permitted.
 - (5) Portable signs.
- **Noise:** The maximum permissible sound pressure level of any continuous regular or frequent source of sound produced by any activity shall be limited by the time period and use district listed [*see ordinance*]. Sound levels shall be measured at least four feet above ground at the property boundary.
- **Smells:** No use shall for any period of time discharge across the boundaries of the lot wherein it is located toxic and noxious matter in concentrations in excess of one-fourth (1/4) of the maximum allowable concentrations set forth in the Industrial Hygiene Standards Maximum Allowable Concentrations, of the Air Pollution Abatement Manual, by Manufacturing Chemists' Association, Inc., Washington D.C., as subsequently amended or revised, which is hereby incorporated in and made a part of this section by reference..

³ Consider including “offensive noise” to the buffer mitigation standards.

- **Vibration** inherently and recurrently generated shall be imperceptible without instruments at lot boundaries.
- **Commercial Architectural Design Standards (Site Plan Review):** General standards: To protect, enhance and perpetuate the town's historic, cultural and architectural heritage and to enhance the town's attraction to residents and visitors and to serve as a support and stimulus to business and industry, construction of a new building or structure or addition to an existing structure shall be of such design, form, proportion, mass, configuration, building material, texture, color and location on a lot as to conform with the following standards as deemed practicable by the Planning Board. In areas of the town where structures have little or no historic value (e.g., franchise architecture), new construction or renovations shall enhance the area rather than replicate existing structures. These standards shall not apply to the Industrial Zone. New development in the Business Park and Commercial Corridor 196 Zones, including additions and renovations to existing buildings, shall only be required to conform to specific standards (7)(*relating to the materials, textures and colors of a building façade*) and (8)(*relating to roof shape and pitch*). These standards shall apply in the LV, MV, VC, LI, R4 and BP2 Zones, including the construction of new, or renovation of existing, multifamily dwellings. [See more in ordinance.]

2.4.3 Recommendations/Strategies

- For the inner corridor, establish and maintain standards for good design in buildings, signage, and site layout.
 - Locate parking and large areas of pavement/impervious surface to the side or behind buildings, except where commercial areas back on existing neighborhoods, such as the proposed Residential 2 - Business Zone, where it may be preferred to have parking located away from abutting residences.
 - Consider more stringent buffering and screening standards to mitigate impacts on abutting residential properties, such as in the proposed Residential 2 - Business Zone.
- For the outer corridor, establish and maintain standards to support a more wooded and rural character.
 - For non-retail commercial uses, which are less dependent on direct exposure and frontage along Route 196, maintain larger setbacks with wooded or landscaped buffers.
- Explore the possibility of creating an incentive program for existing development along Route 196 to make improvements to their frontage, landscaping, access/driveways, and façades.
- For multifamily and residential subdivisions, units should be set back away from Route 196, and parking or impervious surfaces should not be located between the unit and Route 196.

2.5 INFRASTRUCTURE

THE VISION:

- > The commercial growth opportunities envisioned in the “inner corridor” area could support the need to expand utilities. This vision is echoed in the Town’s 2006 study and recommendations on the I-295/Route 196 Intersection. Whether this is an intermediate term or longer term effort likely depends on the level of development proximal to I-295.
- > The envisioned land uses are not expected to warrant the expansion of utilities to the “outer corridor” area.
- > The significant costs to extending infrastructure likely warrant a combination of public and private investment.

2.5.1 Community Objectives

- Ensure that the envisioned growth and development types for the Western Route 196 “Inner Corridor” will be appropriately served by utilities and infrastructure. *(See Section 2.4, Future Land Use & Growth.)*
- Develop a plan to determine potential costs and public & private funding structures to expand utilities and infrastructure west of I-295.

2.5.2 Infrastructure Description

The provision of utility service should be coordinated with the level and intensity of development contemplated within this Plan (Land Use & Growth). Consideration should be given to the significant capital and operating costs associated with the construction, operation and maintenance of utility systems.



In many cases, the capacity to address water supply and wastewater disposal on-site can be the limiting factor in the density of development. This is particularly true in cases where soil types and/or terrain limit the ability to construct on-site subsurface wastewater disposal systems, or where groundwater supplies are limited. In addition, the cost and difficulty in developing fire

suppression systems based on on-site wells can greatly restrict the potential for commercial and/or industrial development (as well as certain multifamily residential uses).

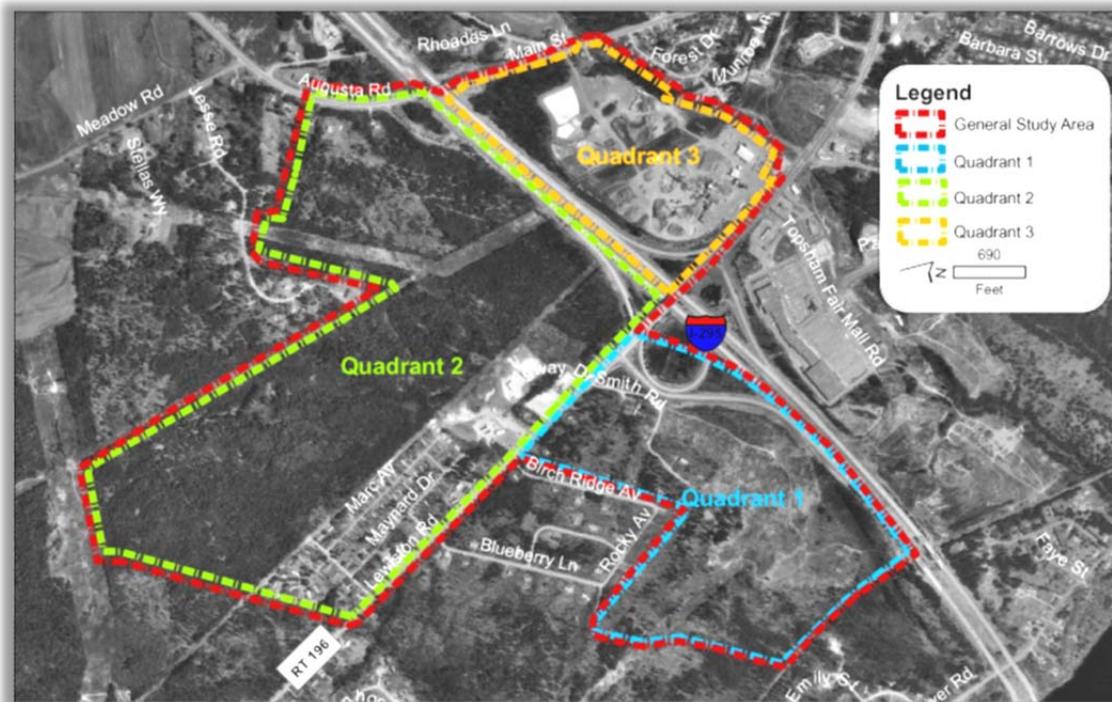
a) Existing Conditions

Availability of utility service varies within the study area and can be summarized as follows:

- **Water** - The Brunswick-Topsham Water District (BTWD) operates a water distribution system providing both potable water supply and fire protection serving areas on the south side of I-295. The Lisbon Water District operates a distribution system serving areas abutting the extreme northern end of the study area, but PUC definitions of service areas may restrict the potential for expansion. Also, it is unlikely that the intensity of development contemplated under the Plan for that portion of the corridor would warrant extension of the system.
- **Sewer** - The Topsham Sewer District (TSD) operates a wastewater collection system serving areas on the south side of I-295. The Town of Lisbon operates a collection system serving areas abutting the extreme northern end of the study area, however it is unlikely that the intensity of development contemplated under the Plan for that portion of the corridor would warrant extension of the system.
- **Electricity** - Central Maine Power Company (CMP) maintains electrical transmission and distribution facilities along Route 196 throughout the corridor. Three-phase power is unavailable in much of the corridor, hence the addition of industrial development or other major loads will likely require system upgrades.
- **Gas** - Maine Natural Gas operates gas transmission and distribution facilities serving areas on the east side of I-295.



In 2006, the Town developed a study that made some specific recommendations for the land area immediately surrounding the I-295/Route 196 intersection (*map, below*). This study explored issues of infrastructure capacity, and provides important insights into the opportunities and limitations, which are incorporated into this Plan.



Based on the envisioned land uses and proposed growth areas, the nature and intensity of development suggest that utility service should be expanded within portions of the corridor but not in others (see Section 2.4 Future Land Use and Growth). While the Inner Corridor is poised for potential growth that would be well-served by public utilities, the Outer Corridor should not see extensive development, and the expansion of public utilities in this area would be counter to this town's land use policies. In the larger town-wide context of growth management, the Inner Corridor is proximal to the community's center, an area likely to see gradual growth and increasing density because it is close to major transportation routes and a higher density of housing and public and private services. Allowing development to sprawl along the Outer Corridor is likely to have not only detrimental impacts on the traffic, but also on the cost community services to a less densely developed area more distant to the town center.

b) Infrastructure Needs

The portion of the Routes I-295/196 Intersection study area west of the Interstate lacks the infrastructure needed to support relatively intensive development as envisioned by the Town's adopted Comprehensive Plan and this Route 196 Plan. Public water is available in the River Road and extends westward and terminates near the intersection of Route 196 and Ivanhoe Drive. There is currently no public sewerage available on the west side of the I-295. Similarly, three phase electric service is not available in this area.

To address the optimum method for providing the infrastructure needed to support the development west of I-295, the Town has completed studies that include:

- Evaluation of Sewer and Water Extensions to Serve the West Side of I-295, Wright-Pierce, 2004
- Evaluation of Infrastructure Required for a New High Pressure Service Zone, Wright-Pierce, 2005



Based upon these studies and other work by the Town, TDI, the Brunswick and Topsham Water District, and the Topsham Sewer District, the core infrastructure improvements listed below offer the best approach for providing coordinated infrastructure to serve the Route 196 area west of I-295. These improvements will provide the basic facilities to serve this area. Developments will then need to connect to these core facilities. The details of the various improvements can be found in the reports listed above. Also outlined is the preliminary work that will be necessary to increase the Town's and utility districts' readiness to provide appropriate infrastructure to support development on the west side of I-295.

- **Public Water Service**

Action: Construction of a new water main from the River Road main on the west side of I-295 northerly through the MUC-1 zone to Route 196 and then westerly along Route 196 to the terminus of the existing water main near the intersection of Route 196 and Ivanhoe Drive

Preliminary Work: The proposed approach for providing public water service to the Route 196 area west of I-295 involves the construction of a looped water main from the existing water main in the River Road near I-295 to the terminus of the existing main near the intersection of Ivanhoe and Route 196. This will provide service to the lower elevations of both quadrants.

To facilitate these improvements, the Town should work with the Brunswick-Topsham Water District to:

1. Conduct an evaluation of the area between River Road and the MUC-1 zone to identify the best location for the proposed water main.

2. Obtain approval and easements to install the main under the railroad
3. Obtain an easement from River Road to the railroad R.O.W.
4. Finalize the location and design of the water main

- **Public Sewer Service**

Actions:

- Construction of a sewer pump station and access road in the CC-196/BP zone near I-295
- Construction of a force main under I-295 from the new pump station to the existing Annex pump station
- Upgrading of the Annex pump station to accommodate the increased flow
- Construction of an upgraded and relocated force main from the Annex pump to the gravity sewer system

Preliminary Work: The proposed approach for providing public sewer service to the west side of I-295 involves the construction of a pump station on the west side of the interstate, a force main under I-295 connecting the pump station to the current system, upgrading the existing Annex pump station, and constructing a new Annex force main to handle the increased flow.

To facilitate these improvements, the Town should work with the Topsham Sewer District to:

1. Conduct detailed topographic mapping and wetlands delineation of the area identified by Wright-Pierce as the possible location for the I-295 pump station, access drive, force main, and related facilities
2. Conduct the geotechnical investigations needed to finalize the design and location of the force main under I-295
3. Finalize the location and design of proposed new I-295 pump station and the force main to the Annex pump station.
4. Obtain necessary approvals and easements from the Maine Department of Transportation and other property owners for the I-295 crossing and force main east of the interstate
5. Acquire the site for the I-295 pump station
6. Acquire easements/land for the access road from Route 196 to the I-295 pump station

7. Obtain any other required permits or approvals need for the construction of the facilities



- **Three-Phase Power**

Action: Extension of three-phase power to the area either from the east side of the interstate or easterly along Route 196 from its current terminus west of the development area.

Preliminary Work: Three phase power will need to be extended to the area. To facilitate this, the Town should:

1. Work with Central Maine Power Company and the Maine Department of Transportation to identify the most cost effective approach for bringing three-phase power to the area
2. Obtain necessary approvals and easements from the Maine Department of Transportation if bringing it across the interstate is the preferred route
3. Finalize the location and design of any needed improvements

2.5.3 Recommendations/Strategies

- Plan to provide utility service (sewer and water) west of I-295 to serve the growth nodes of the Inner Corridor, focusing first on the growth area adjacent to I-295.
- The Town will work with TDI, the utility districts, state departments, property owners, and private developers to facilitate the provision of the core infrastructure to serve development on the west side of I-295.
 - Consider both recommendations to extend existing utilities as referenced in previous plans, as well as opportunities to develop community systems or other alternative utilities service

- Extend three-phase electrical service to the west side of I-295
- Update the Route 196/I-295 study to determine the long-term capacity and infrastructure needs, as well as update cost projections, to accommodate the potential buildout for the entire Route 196 Inner Corridor, to include growth out to the River Road intersection. Determine if additional ROW or easements are needed to accommodate future infrastructure expansion.
- The Town will consider the use of impact fees or other methods to recapture some of the Town's cost of the infrastructure improvements from development that benefits from the improvement.
- The Town should commit to using TIF funds (set aside over a period of years), in combination with other sources of funding such as grants, developer participation, and impact fees, to financially support a portion of the costs for providing utilities west of I-295.

A possible policy for TIF funding should consider the following factors, evaluated on a case-by-case basis:

- *The extent to which proposed or anticipated development will diversify the local economy and provide goods and services not currently available in Topsham*
- *The extent to which proposed or anticipated development will create good quality, high paying jobs*
- *The extent to which proposed or anticipated development will maximize the benefit to the local economy*
- *The extent to which proposed or anticipated development will include transportation improvements that improve traffic movement and/or safety for the larger Topsham Fair Mall area and the community at-large*
- *The extent to which proposed or anticipated development will include the provision of housing*
- *The extent to which proposed or anticipated development will provide appropriate pedestrian and bicycle facilities including links to adjacent residential neighborhoods*
- *The extent to which proposed or anticipated development will provide for significant public open space and the retention of significant natural resources and/or existing wildlife corridors*

