VI

Land Use Trends, Potentials, Issues and Opportunities

Introduction

The following inventories and analyzes the town's undeveloped privately owned land and suggests the amount of development possible if all of the land were used to its capacity under the present zoning. It also recommends items for further study. The analysis assumes that the town continues to be unsewered and that water supplies do not constrain development. Comprehensive sewering would increase potential residential development. The chapter then examines existing land use patterns and trends, and explores the implications of alternative futures,

A. Build Out Analysis

1. Approach

Delineation of Study Areas

The study areas are tracts of contiguous vacant, privately owned land divided from other such land by major roads or development, or are comparable closely related areas separated by a minor road or a minimal amount of development.

Undeveloped land is defined as land without buildings and not in a use directly related to residential, industrial, institutional or public uses. Thus land used for open storage by an adjacent industry would be considered to be in an industrial use. Private agricultural and recreational holdings are mapped as used in themselves, but their potential more intense uses are also discussed and included in the build out analysis. Extensive areas on a residential parcel, i.e. areas significantly exceeding typical house lots or minimum lot area requirements, are considered to be potentially developable unless they are clearly used as part of the home site. This acknowledges the potential develop ability of such land given access to a road.

2. Applicable Zoning

The major zoning provisions affecting development in Halifax are the following:

AR Agricultural-Residential

This allows single-family detached houses as-of-right and multi-family housing by special permit on one-acre (43,560 sq. ft.) lots. It also allows a variety of institutional/public uses as-of-right with special permits required for major uses such as hospitals. In addition the District allows selected commercial uses such as funeral

Homes, veterinary hospitals and campgrounds by special permit. It requires 150 feet of frontage and allows up to 25% lot coverage. The dimensional table refers to 40,000 sq. ft. lots, but the bylaw text calls for one-acre for housing. The text should prevail since the table merely illustrates or summarizes it. Accordingly this analysis assumes that the AR District requires a full acre lot.

Multi-family housing is also allowed in the Business and Commercial District by special permit. The number of units must not exceed the number of acres on the site (though the dimensional table again says 40,000 sq. ft.). The minimum parcel is ten (10) acres and 80% of it must be found percable by the Board of Health. No unit shall exceed 2 ½ stories containing living space. The required front and rear setbacks are increased from 50' and 40', to 75' and 100', respectively. The 30' side yard at the edge of the parcel is retained, but there must be 100' between any two multi-family buildings.

The provisions allow only about 10% higher overall density than that allowed with detached single-family housing. (This assumes that the internal roadways remain part of the lot for dimensional purposes). However, the provisions could allow for very flexible, compact development with much of the land kept in open space or agriculture. For example, a 12 acre parcel could accommodate its allowed 12 units in 3 groups of 4 town-houses on less than three acres, leaving 9 acres for uses such as gardening, recreation or informal open space. This potential is shown in the extensive open areas preserved on the north side of the Twin Lakes development.

CB Commercial and Business District

This district allows most retail, service and office uses as-of-right, while requiring special permits for wholesaling, gas stations and body shops, drive-by businesses and light industrial uses. It allows most public/institutional uses and "the same residential uses as the AR District"; that is, single-family detached houses as-of-right, and two-family and multi-family dwellings by Special Permit. It requires lots of at least forty thousand (40,000) square feet and allows 25% lot coverage. It is assumed that this 40,000 square foot standard applies to business and commercial uses and that residential uses require the same one-acre lots as under the AR District. It is mapped largely along sections of Rtes. 106 and 58.

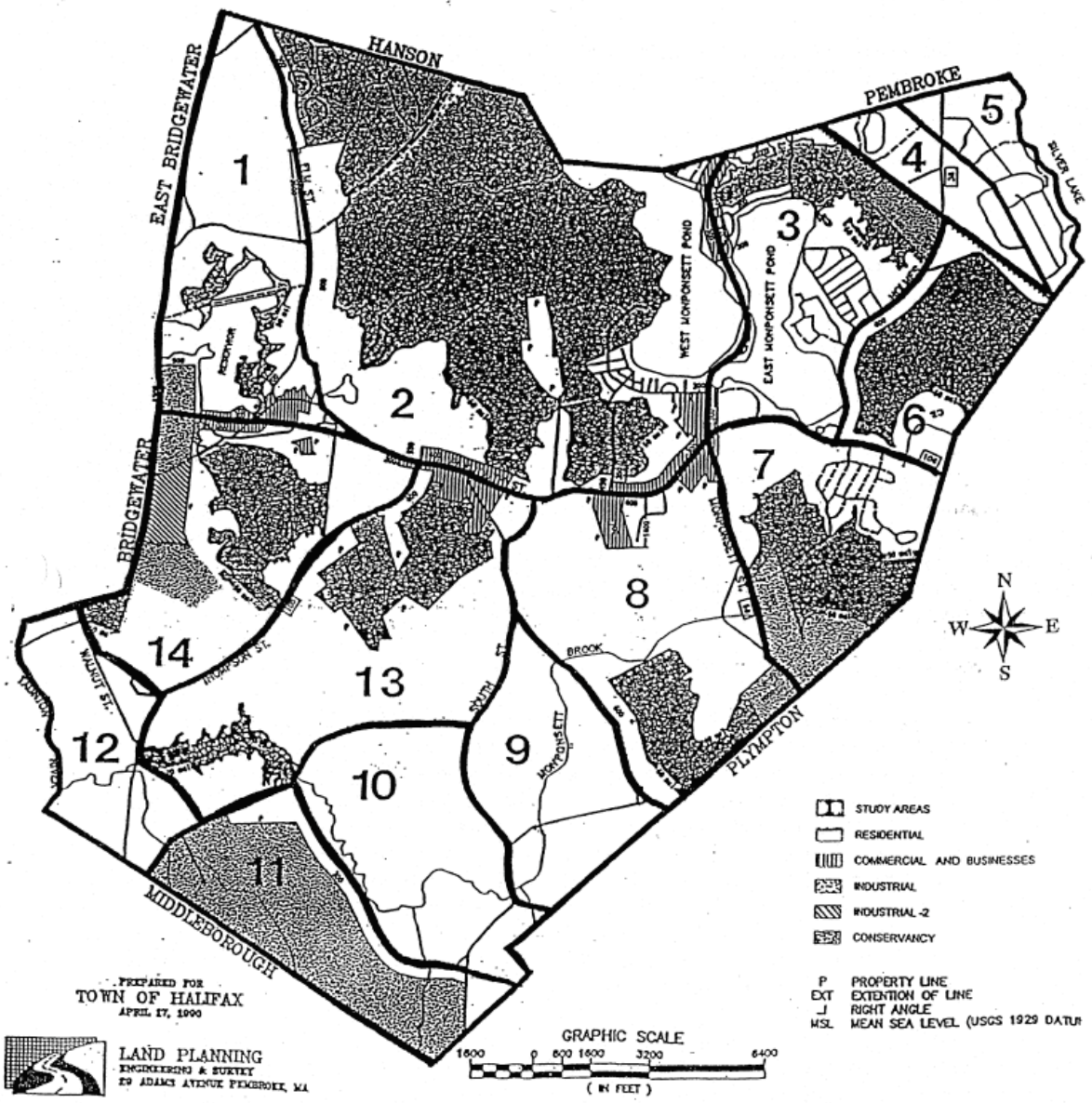
I-1 Industrial District

This District allows a wide-range of light industrial and commercial uses as-of-right. It also allows most public/institutional uses as-of-right, but excludes housing to avoid use conflicts. It requires lots of at least forty thousand (40,000) square feet, and as above, allows no more than 25% lot coverage. It is mapped along a portion of the railroad tracks west of Rte. 36; along the southern end of Rte. 58 on the Plympton town line; on Rte. 106 at the East Bridgewater line; west of Thompson St. on the Bridgewater town line; and over an extensive area of farmland and wetlands south of Wood St. on the Middleboro line.

Fig VI-1 Zoning

ZONING AT TIME OF BUILDOUT ANALYSIS

Fig. VI-1



I-2 Industrial – 2 District

This district accommodates sanitary landfills in appropriate sites. It allows them as-of-right and excludes most other uses. It is mapped only at the site of the closed BFI landfill.

C Conservancy District

This allows most public/institutional and agricultural uses as-of-right but require special permits for housing and major institutions, and prohibit most business and commercial recreation uses. Its purpose is to "protect the town's wetlands, floodplains and bogs while allowing appropriate development". It is mapped over extensive areas of wooded swamp, floodplains, cranberry bogs, and some agricultural upland. However, it does not cover all such lands.

FP Floodplain District

This is overlay district is mapped over the 100-year floodplain on the Federal Emergency Management Administration's Final Flood Insurance Rate Maps (FIRM) Maps). The underlying permitted uses are allowed, if they meet certain requirements. All encroachments, including fill, new construction, substantial improvement to existing structures, and other development, must be certified not to increase flood levels during a one hundred year flood and must meet the Massachusetts State building Code for construction in floodplains.

AWP Aquifer and Well Protection District

This recently established district is mapped over the Zone I (400' radius circle) areas and the DEP-approved Zone II aquifer recharge areas of the town's Richmond Park and YMCA wells and over any Interim Wellhead Protection Areas. (The IWPA's are half-mile radius circles around wells used until final Zone II areas are approved by DEP. The Zone II areas contribute to a well during a 6-month period of sustained pumping without recharge). Like any zoning, the District regulates proposed uses but not existing ones. It covers much undeveloped land and agricultural land along with commercial development at the junction of Rtes. 58 and 106, and considerable housing at Richmond Park. It does not cover Zone IIIA and Zone IIIB areas from which groundwater and surface water respectively, flow to the Zone II areas of existing or potential wells, or to surface supplies such as the Monponsett Ponds or Silver Lake.

The bylaw excludes potentially contaminating uses, which are otherwise allowed or allowable in the underlying districts, or allows them only through a special permit requiring protective provisions. (See discussion and recommendations in Chapter XI, Implementation/Development Regulations).

Exclusion of Wetlands and Flood Plain from Required Lot Area

A 1997 Zoning bylaw amendment allows no use of land protected under the Wetlands Protection Act or in the mapped FEMA floodplain to meet minimum lot are requirements. Thus such land is excluded by the analysis even if it otherwise could have been included in usable lots.

3. Other Development Controls

Building Permit Limitation Bylaw

The town has adopted a growth management process in the form of the Building Permit Limitation Bylaw. This seeks to keep development within the pace of recent years by issuing no more than 40 permits/year; by allowing no more than 6 permits/applicant over 12 months; and by allowing only 10 permits/project over 24 months. This limits the pace of growth, but not its location or ultimate extent. The bylaw is discussed in Chapter XII, Implementation/Development Regulations

Wetlands Protection Non-Zoning Bylaw

In 1989 the town adopted non-zoning Wetlands Protection bylaw. This parallels the concerns and procedures of the Wetlands Protection Act, but goes further in.

- Expanding the values protected to include wildlife habitat, recreation, air and noise pollution and aesthetics.
- Expanding the jurisdiction to land within 100 feet of listed wetlands resources
- Requiring an explicit permit (rather than an order of conditions) for wetlands alterations potentially harming the protected values.
- Explicitly calling for refusing such a permit if the proposed activities "will have an adverse or cumulatively adverse effect upon the wetland values protected by this chapter). (See Chapter XII)

Proposed Area of Critical Environmental Concern (ACEC) Designation

A citizen group led by the late Wamponoag environmental activist Russell Gardner has been seeking Executive Office of Environmental Affairs designation of a "Monponsett Corridor Area of Critical Environmental Concern". – essentially complementing and extending the Bridgewater-centered Hockomock Swamp ACEC designated in the 1980's.

This would increase the environmental protection in sensitive areas and lower the thresholds for mandatory environmental review. The proposed area includes all of Halifax north of Plymouth and Franklin Sts., and adjacent areas in East Bridgewater, Hanson, Pembroke and Plympton, which are in the Taunton River Basin.

4. Assumptions Used in Estimating Potential Developability

The following assumptions were used to estimate the potential build out:

- Ten percent of the acreage would be used for roadways and sidewalks in each district. This reflects the 50' roadway right-of-way required for local streets, the 60' required for collector streets under the Subdivision Rules and Regulations, and the 150' frontage required in all Districts under the zoning bylaw. The actual percentage used for circulation will be less with deep oversized lots with minimum frontage, or with lots on existing roads; and greater where lots are shallow or exceed the minimum frontage.

- Initially, that only 50% of mapped floodplain areas could be used for development. This reflected possibilities ranging from those where encroaching development could meet FEMA and state requirements, to those where most or all of the floodplain was in the rear portion of lots and could be used to meet lot area requirements without being built upon, to the most limited where the flooding potential of an extensive area precluded any development. Since much of Conservancy District is in floodplain, this assumption would have helped to reflect the limited development likely in such typically swampy areas.

  A 1997 zoning bylaw amendment excludes the use of lands protected under the Wetlands Protection Act or FEMA floodplains to meet lot area requirements. This was applied in two revisions of this analysis; one using USGS wetlands mapping and one using the more extensive Massachusetts Wetlands Inventory. These greatly reduced the potential build out.

- Seventy-five percent of land mapped with severe limitations for septic systems due to a high water table (3W, "septically limited land') by the US Soil Conservation Service (now Natural Resources Conservation Service) would be usable. This reflected regional experience where most lots in large-lot subdivisions (an acre or more) on such land turned out to be approvable for septic system.

  Health agents note that such high water tables better predict system maintenance need than actual developability. The assumed 75% usability could overstate potential development in extensive, deep wetlands requiring filling and alteration beyond that approvable by Conservation Commissions, or where tight soils are too deep for practical replacement. Conversely, it could understate the potential where some innovative/alternative systems allow use of difficult sites. In accord with the 1997 amendment, the revised analysis excludes any septicly limited soils shown as wetlands on the Massachusetts Wetlands Inventory.

- Land in more than one category is treated according to its most restrictive characteristic. Thus septically limited land in the flood plain was initially counted as flood plain, and then totally excluded under the 1997 zoning amendment.

- Land is considered to have adequate frontage if it fronts on a way acceptable for an "approval not required". Form A lot, or if it could gain frontage if combined with other vacant, private land.

- Wetlands regulated under the Wetlands Protection Act (MGL, Ch.131, S.40) were not treated separately in the original analysis because such land is commonly in the Floodplain or is so severely limited for septic systems that most development will be restricted under the Flood Plain zoning and sanitary code. However, severe wetlands (wooded swamp, marsh, or wet meadow) may be restricted more than originally calculated and the 1997 amendment flatly excludes their use to meet lot requirements. Accordingly, the revised calculations exclude this land.

- Future land uses and densities would reflect the present zoning including the basic standard of one acre (43,560 sq. ft.) per housing unit. Industrial potential reflects the bylaws allowed 25% coverage and assumes that most development is at one story. The number of employees reflects assumed space usage of 200 sq. ft. per office worker, 600 sq. ft. per manufacturing worker, 650 sq. ft. per retail worker and 1,200 sq. ft. per wholesale-distribution worker. The allowed 25% coverage would generate 18 workers per net acre in manufacturing, 16.5 per net acre of retail activity and 8 per net acre of distribution activity. Actual impacts will vary with specifics.

- Assessor's Developability Catagories were not useful indicators of potential development. The Assessors rank vacant land by assumed developability and by the character of adjacent uses, e.g.

  390 Developable Land accessory to Commercial Property
  391 Potentially Developable Land Accessory to Commercial Property
  392 Undevelopable Land Accessory to Commercial Property

The degree of developability is based primarily on access with frontage lots the most developable, and approved subdivisions and lots on paper streets the next most developable, while back land with minimum access, wetlands, failed percolation tests or no recorded tests is assumed to be undevelopable. The Halifax Assessor's office reports that lots in category 132 – Undevelopable Residential Land – are so designated because they lack a percolation test. Thus these rankings are largely apart from soils and topography. The results may overstate the developability of frontage lots with poor soils.

5. Method

a. The Council acquired nominal half-size base maps from the Assessors Office and combined them to cover individual study areas shown on the Zoning Map, Fig VI-1. Staff then mapped existing uses on all parcels accessible by road and determined the uses of back land from US Geologic Survey Maps, contact with town officials, and site visits.

b. Undeveloped parcels were listed by Study Area from the Assessors' maps and printout, and totaled by zoning category. Existing approved lots were counted as buildable.

c. Soils with severe septic limitations were coded on an 8-00'/" enlarged Plymouth County Soil Survey map and overlain with the Flood Hazard Boundaries from the Federal Emergency Management Administration's Final Insurance Rate Maps (FEMAmaps) to show development constraints.

d. These constraints were scaled on to the 800'/" map and the total vacant private land was reduced by the factors noted above (e.g., by 50% in Flood Plains and by 25% on septically limited land) to get the net developable land by Study Area.

e. Each area's net developable land was reduced by 10% for roads and sidewalks, and divided by 43,560 sq. ft. to get a number of potential subdivisions lots, and these were added to the existing lots and those possible along existing roads.

f. Find the potential number of multi-family units the net developable area was divided by 43,560, (one acre per unit) since internal circulation space is included in the area requirements.

g. In areas zoned in the Commercial and Business or Industrial Districts the development limitations and circulation requirements were applied as above and the possible floor area was calculated according to the allowed 25% coverage assuming one-floor construction.

h. Finally potential employment was calculated by the above mentioned standards of 20 square feet/office worker' 600 square feet/industrial worker' 650 square feet/retail worker; and 1200 square feet/distribution worker.

To compensate for the initial limited exclusion of mapped wetlands, these were highlighted on USGS topographic sheets, lain over the other mapped constraints, and subtracted from the otherwise buildable land. Subsequently, the USGS mapped wetlands were replaced by the generally more extensive findings of the Massachusetts Wetlands Inventory; and the buildable land was reduced accordingly. Similarly, the mapped FEMA flood plain that was not wetland was measured and half of it was subtracted from the buildable land to achieve the 100% exclusion of floodplain required by the amended zoning bylaw.

6. Summary Findings

The inventory includes the major contiguous areas of vacant, privately- owned undeveloped land, and undeveloped land in agricultural or recreational use as of the time of the analysis. It also includes individual lots or apparently developable rear portions of large, partially developed residential parcels, if they have potential frontage.

As Table VI-1 indicates, vacant privately owned land totaled 6,489 acres. Allowing for mapped flood plain and septically limited soils, but not for all wetlands, the AR and Conservancy-zoned parcels, including 287 existing lots, had the potential for 3,322 new single- family houses. Excluding the existing lots (which lacked the 10 acre minimum for multi family development) this land had the potential for 3,365 multi family units The CB-zoned land had the potential for 120 lots, 121 multi family units, or 470,000 square feet of commercial-business space. The industrial-zoned land had the potential for 8,504,000 sq. ft. of industrial or distribution space. See Table IV-2.

Table VI-1
Vacant Privately Owned Land Available for Development – Acres (1994)

Study Area	A-R Dist.	Cons. Dist.	C.-B. Dist.	Ind. Dist.	Total
1	457	20	16	35	528
2	200	697	67		964
3	91	61	3	57	212
4	32				32
5	53				53
6	41	76			117
7	234	167		176	577
8	463	164	21	59	707
9	299				299
10	548				548
11	63			503	566
12	253				253
13	640	314	31		985
14	165	210	3	273	651
Totals	3539	1709	141	1103	6492

Notes:
Vacant land is undeveloped land and land in agricultural use or in extensive recreational use e.g. golf courses
The AR District allows multi-unit housing by special permit
C-B District allows same residential uses as AR District
Conservancy District allows housing by special permit
C-B and Ind. Districts allow business and industrial space at 25% coverage
Distribution and Retail are allowed in Ind. District by special permit
Mfg. And Distribution are allowed in C-B District by special permit

These calculations only reduced the potential of wetlands, which were mapped as in the flood plain or as having severe restrictions for septic systems. After separately totaling the wetlands mapped by the Massachusetts Wetlands Inventory and the FEMA (Federal Emergency Management Agency) flood plain, and subtracting development on them prohibited under the 1997 zoning amendment, the study found that the potential new single family houses dropped to 1,622 and the maximum new multi family units dropped to 1,469. See the last column on Table VI-2 below.

Assuming only single-family development, the potential 1,622 houses on AR, Conservancy and CB zoned land could hold up to 4,379 new residents at the recent 2.7 persons/household. Combined with the estimated 1996 population of 6,844 (approximating the population at the time of analysis) this gives a theoretical build out population of 11,233. This is a 3,723 increase over the 2000 Census figure of 7,500.

In contrast, the recent build out analysis commissioned by the Executive Office of Environmental Affairs found a potential for 2,380 new units. It assumed 2.5 persons/unit and added the results to an estimated 1998 population for a very similar theoretical build out population of 13,114. Both are well below the 15,516 to 19,230 ranges calculated by Charles Downe in 1964.

Table VI-2

Potential Detached Single Family Build Out on Privately Owned Land

Study Area	Total Vac. acres	A-R Lots New/exist	Cons. Lots New/exist	C-B Lots New/exist	Total Lots New/exist	Total Lots Adjusted for Wetlands & Flood Plain
1	529	259/8	14	8	289	117
2	964	171/69	331	66	637	297
3	211	75/148	27	3	253	232
4	32	28/2			30	30
5	53	44/2			46	46
6	117	21/2	46		69	48
7	577	91			91	55
8	706	297/31	73	14	415	281
9	299	175/6			181	128
10	548	339			339	257
11	566	47			47	47
12	253	157/5			162	127
13	985	434/11	179	27	651	599
14	650	148/3	79	2	232	199
Totals	6484	2286/287	749	120	3442*	1622

Note: These include using C-B land; the total using only A-R and Cons. land is 120 lots smaller.

The potential 5,723,200 sq. ft. of floor space on vacant industrially zoned land could accommodate 9,538 jobs in manufacturing, or by special permit it could allow 4,770 jobs in distribution or 8805 jobs in retail. The 1,470,000 sq. ft. possible through full use of Commercial and Business zoned land could add 2,262 retail jobs, or by special permit it could allow up to 1,225 jobs in distribution, or 2,450 jobs in manufacturing.

Allowing for the land used by the Wal Mart store, an added 1,310,000 sq. ft. is possible through full use of the remaining Commercial and Business zoned land. This could accommodate 2015 retail jobs, or by special permit it could allow 1091 jobs in distribution or 2183 jobs in manufacturing. Very little of this land is affected by regulation of wetlands or floodplain. The implications of the proposed rezoning of excess strip commercial CB land are discussed in Chapter VII.

Note that these figures reflect alternate possible totals. Thus the single family versus multi- family totals in the AR,CB and Conservancy zoning districts reflect development of all the vacant land in one use or the other, though various mixes of housing types and commercial uses are also possible. Similarly, the totals of industrial and commercial uses in the CB or Industrial districts reflect maximum alternate commercial or industrial development with no new housing in the C-B District.

Detailed site analysis, particularly in wetlands, may lead to significant changes in approvable development. Similarly, the actual near term developability of many parcels which lack direct frontage will depend on the ability of owners to negotiate projects or land exchanges/sales to create needed access.

Items for consideration or further study, which were identified in the Build Out Analysis follow. Detailed descriptions of the findings by study areas are in Appendix B.

5. Items for Further Study/Tentative Recommendations

Study Area 1

1. The appropriateness of Industrial zoning and development on otherwise scenic, open land at the gateway to the town and close to the Poor Meadow Brook Aquifer serving the East Bridgewater and Hanson wells. This is particularly questionable given industrially zoned upland to the south across Rte. 106.
2. The possibility of extending gas service to the Industrial Park.

Study Area 2

1. The potential use of service roads in the cranberry areas for access to any future development.
2. The open space potential of the recent 256-acre Hemlock Island donation to the Audubon Society. If a protective agreement could be negotiated with the Society, this major upland forest area could allow some low impact recreation use while complementing and extending the water supply protection zoning.
3. The potential to use regulatory powers, negotiation, and vehicular/pedestrian circulation improvements to shape future investments into a more compact, unified, and better functioning commercial center around the Rtes. 106/58 intersections.

4. The advisability of rezoning much of the C-B zoned residential or undeveloped land along Rte. 106 to residential in order to lessen sprawl, protect housing, and concentrate commercearound Rtes. 106 and 58.

Study Area 3

1. The possibility of a direct driveway and/or open space/pedestrian route from the Twin Lakes Development and adjacent neighborhoods to the MBTA railroad station.

Study Area 4

1. The desirability of improving/paving the existing streets.
2. The possibility of developing direct pedestrian access to the commuter rail station.
3. Opportunities for compact retail/professional facilities related to the rail station.
4. The desirability/possibility of public access to Crystal Lake/Muddy Pond from Crescent Ave.

Study Area 5

1. The possibility/desirability of public access to Silver Lake, perhaps on surplus City land.

Study Area 6

1. The relationship of the Area's privately- owned land to adjacent land in Plympton.
2. The extent of privately- owned land in the Conservancy District.

Study Area 7

1. The developability of the 60 acres east of the trailer park, considering wetlands, septic limitations and flood plain constraints.
2. Appropriate uses of the industrially- zoned woodland and farm land.

Study Area 8

1. The appropriateness of zoning relatively inaccessible agricultural land for industry.
2. Potential public open space acquisition along the edge of the fields and wooded swamp south of the Country Club.
3. The remaining potential to use regulatory powers, negotiation, and vehicular/pedestrian circulation improvements to develop a more compact, unified commercial center around the Rtes. 106/58 intersection.

Study Area 9

1. The prospects for further cranberry bog expansion or contraction.
2. The implications of bog operations for nearby housing.

Study Area 10

1. The potential for open space acquisitions giving access and protection along the Winnetuxet River and Raven Brook.

Study Area 11

1. Examining constraints on industrial development, particularly the Ch. 21 Environmental Assessment status of the former munitions works site.
2. The possibility of finding more appropriate industrial land than the munitions site, perhaps off of Rte. 106 near the BFI landfill.
3. If industrial development remains a preferred use of the site, consider extending town water via River Street or drawing on Middleboro, and getting gas service to the area.

Study Area 12

1. Open space acquisition/protection of vacant land along the Taunton and Winnetuxet Rivers.

Study Area 13

1. The appropriate extent and configuration of the CB District given remaining residential uses, especially on Carver St., the expressed desire to limit commercial sprawl along Rte. 106, and the potential to concentrate commercial growth at Rtes. 106 and 58.
2. Rezoning much of the CB-zoned residential or vacant land along Rte. 106 to AR for the reasons noted above.
3. The effectiveness of apparent policies to protect agriculture such as the extensive Conservancy zoning of upland agricultural uses.

Study Area 14

1. The open space/recreation potential of the high, unbuildable portion of the closed landfill off of Plymouth Street.
2. The feasibility of reaching the industrial land south of the landfill without harming nearby housing, or conversely, the wisdom of rezoning this land to A-R.
3. The feasibility of an industrial park using Industrial land north and south of the landfill with access from Rte. 106 via the landfill property as well as from Thompson St.

Items 2 and 3 are moot since that land has since been rezoned to AR.

B. Land Use Patterns and Trends

Land Use Patterns

Halifax's land use patterns are those of a traditional agricultural town becoming suburban. There are relative concentrations of commercial uses and civic uses on Rte. 106; pockets of relatively high density housing at 5-10 units/acre near the ponds and commercial center, scattered low density subdivisions and Form A lots along existing roads, primarily north of Rte. 106 and in the southwestern corner along Thompson St., and dispersed rural holdings in outlying areas, particularly in the southern portion of town. There are also a few small industrial/heavy commercial uses off Rte. 106 and on Elm St. in the western portion of town.

Agriculture continues with extensive cranberry bogs where soil and water conditions permit and scattered corn fields elsewhere. However bog expansion has generally stopped, and some bogs are out of cultivation due to the precipitous drop in prices over the past two years.

Civic facilities are grouped handsomely around the junction of Rte. 106 and South St., while commercial/service uses are increasingly spread along Rte. 106. Examples are the new Jordon Hospital Wellness Center and the Post Office. They are easily accessible by car, but do not strengthen either center or benefit from being close to related activities. In particular the Post Office is essentially at an automobile-oriented site past other Civic Center uses. It works, but could contribute more if located in a more compact, pedestrian friendly concentration of retail and service uses.

Land Use Trends

Overall land use trends in Halifax are suggested by the following Table VI-3 comparing the major land uses found by the 1971 and 1975 UMASS MacConnell Land Use aerial surveys and 1994-1997 estimates developed by this study. The data show the rapid increase in residential land consumption due to housing development and large lot requirements; the increase in commercial uses with the Wal Mart Store and continued commercial/industrial development along Rte. 106; and the growth in new or restored cranberry bogs. The table does not show the dispersion of most growth, and the loss of rural landscape from lots walling off country roads and from large-lot subdivisions on open land. These are often jarringly out of character with their surroundings. Nor does it show the halting of bog expansion and the abandonment of cultivation on some bogs.

These changes reflect the main residential trend of continuing moderate to expensive single family detached housing on large lots with rare multi unit projects like the Twin Lakes complex and earlier proposals for the Country Club and the Nessralla property.

grew twice as rapidly (+200.1%) going from 611 acres in 1971 to 1841 acres in 1997. In all, the population doubled and residential land consumption tripled.

Table IV-3

Generalized Developed Land Uses – Acres

	1964	1971	1985	1994	1997	2000
Industrial *	516.0	10.9	10.9	50.0	49.0	54.0
Commercial	53.0	21.6	26.6	49.6	79.6	84.6
M-F Res.	1.0	0.0	97.1	184.0	184.0	184.0
S-F Res.**	773.0	611.4	1067.6	1555.0	1657.0	1922.0
Total Res.	774.0	611.0	1174.7	1739.0	1841.0	2106.0
Agricultural ***	1782.0	836.0	1834.0	1834.+	2990+	3029.0
Bogs	500.0	n.a.	n.a	766.0	1883.7+	653.0 (Inc. in agri.)
Other	6910.0	10467.7	9909.4	7439.0	6152.0	5838.0

Sources: Chas. Downe's 1964 Master Plan Report; 1971,1985,and 1991 Umass MacConnell maps and tabulations; 1994 and 1997 OCPC field surveys; and 1997 Mass. Wetlands Inventory

* 1964 Figure includes 513 inactive acres at the former munitions testing range; Post 1985 figures reflect the BFI landfill and support facilities; Heavy Commercial used (e.g. truck repair garages, self-storage facilities) in Industrially zoned areas are listed as commercial.
**Apparent 1964-1971 losses probably reflect varied treatment of large parcels holding just one house.
***Total agricultural is the 1991 crop and pastureland minus 100 acres estimated lost to development, plus twice the land in bogs on 1997 aerial photo for a conservative estimate of bog support land. (Mass DOR allows up to 4 times the bog area to be under Ch. 61A). Resulting 3029 acres is still less than the 3525.16 acres under Ch. 61A as of 2001.

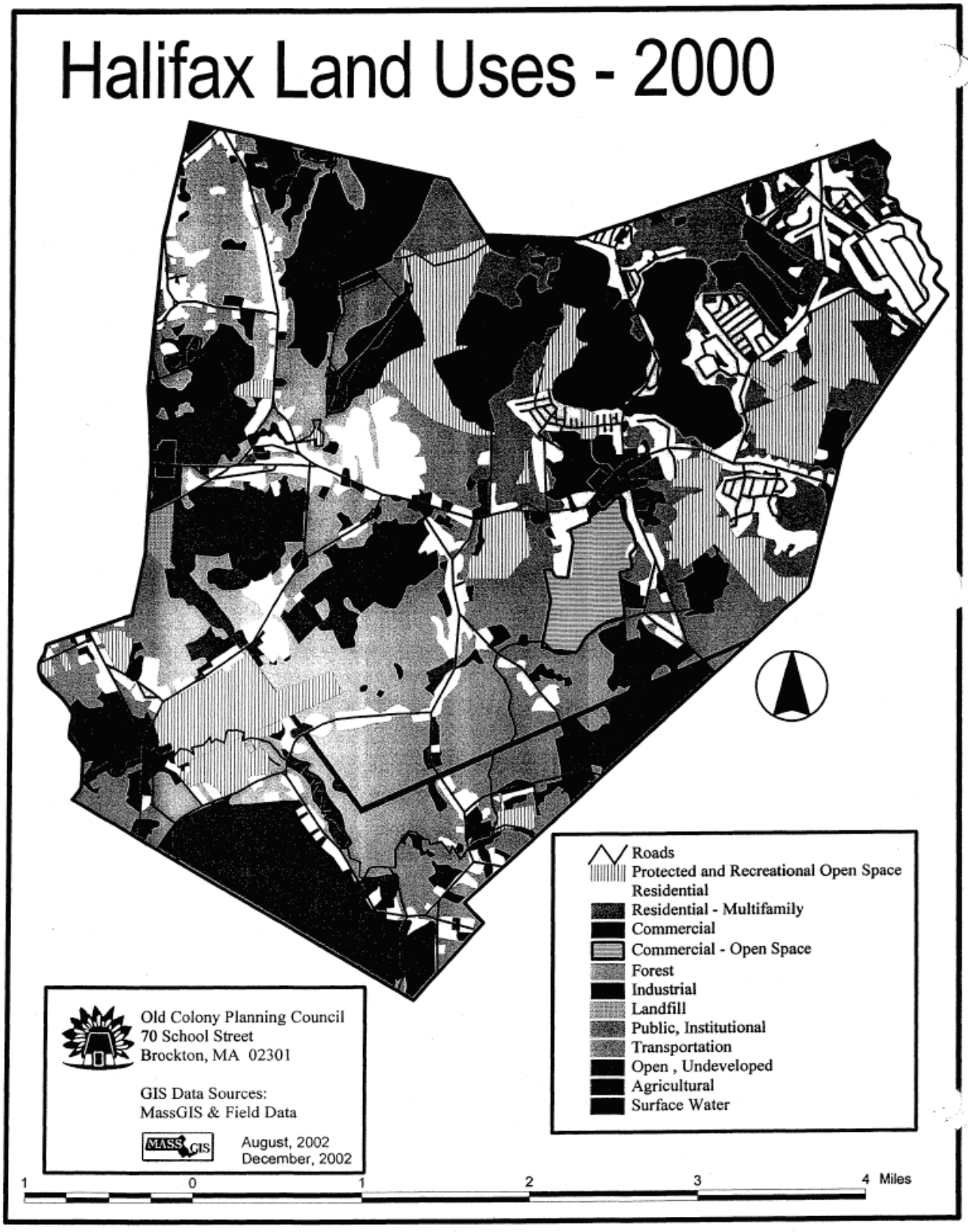
The effects of large-lot zoning can be seen in the fact that town's population grew from 3537 in 1970 to an estimated 7066 in 1966 (+99.8%), while the land in residential use grew twice as rapidly, (+200.1%) going from 611acres in 1971 to 1841 acres in 1997. In all the population doubled and the residential land consumption tripled.

As part of this pattern, residential densities have been dropping, going from 5.8 persons/acre in 1970/71 to less than 3.8 persons per acre in residential use by 1991. In the more recent period from 1985 to 1996/97 the population grew by 17.5%, going from 6015 to 7066 (1996), while residential land grew by 56.7%, going from 1174.7 acres to 1841 acres. At this 1996/97 rate of .634 acres/person reaching the OCPC projected 2020 population of 10,100 would consume 1924 more acres, for a total of 3765 acres.

At a more conservative overall rate of one 2.7 person household per acre (or .37acres/person), such growth in subdivisions would consume at 1124 acres. In practice the land used for roads or left in over-sized lots would further lower overall densities and consume land.

Industrial/heavy commercial growth has been very slow, reflecting the town's limited accessibility. Until recently there were only two firms in the visible, relatively accessible

Figure VI-2


Halifax Land Uses - 2000
Roads
Protected and Recreational Open Space
Residential
Residential - Multifamily
Commercial
Commercial - Open Space
Forest
Industrial
Landfill
Public, Institutional
Transportation
Open , Undeveloped
Agricultural
Surface Water
Old Colony Planning Council
70 School Street
Brockton, MA 02301
GIS Data Sources:
MassGIS & Field Data
MASS GIS
August, 2002
December, 2002
1 0 1 2 3 4 Miles

industrial park on Rte. 106 at the Bridgewater line. Now at least five heavy commercial / industrial buildings and the town's transfer station occupy the 15 lot park.

Retail and professional service uses have been increasing more rapidly. After growing only in proportion to local demand (therefore unable to support a supermarket) they have begun drawing on surrounding communities with the advent of the Walmart store. Since Walmart builds at a scale to blanket the surrounding market, more stores of its size (e.g. "big boxes") are unlikely. However, the town could attract some smaller, complementary operations. The supermarket which Halifax alone could not support alone is now proposed and Jordon Hospital has opened the above-mentioned multi-community medical center.

Agricultural growth, particularly in cranberry bogs, is has been impressive. Overall, agriculture grew from 836 acres in 1971 to 1834 acres in 1985. While 766.0 acres of bogs and support land were estimated from 1994 land use maps the Assessors have more recently listed 1883.8 acres of bogs. Proposals over the past several years included adding or restoring about 73.0 acres of bogs and support land east of Thompson St. and about 92.9 acres west of Walnut St. This trend is now being dampened by the drastic drop in prices leading to the 2002 sale of the vast Northland properties to the state's Division of Fisheries and Wildlife. However prices reportedly have begun to recover and the Walnut St. project was recently reported to be continuing.

A much smaller trend is the recent growth of small horse farms, particularly in southern part of the town.

In terms of visual character Halifax is becoming suburban. This is more apparent from Form A development along major roads than in subdivisions, unless the subdivisions are in open fields. As can be seen in the rural Summit St., Thompson St., River St. neighborhood, uniform large-lot subdivisions on open land can be particularly jarring in contrast to nearby traditional rural development with its varied setbacks, building types and lot sizes, and its greater integration with the landscape. Hence, limited subdivision activity is no protector of rural character.

What may protect some of the landscape is the high value of cranberry bogs compared to other uses, but this has been declining in the face of lower cost production elsewhere. Unless considerable adjacent land is kept as support space or buffering, any restored value of bog land may do more to convert woods to bogs than to protect other farmland.

These considerations suggest encouraging development which can fit into its setting, for example by using woods and backland, rather than existing frontage and fields.*

*For approaches to development which fits its setting see Randall Arendt's Rural by Designs 1994 and Crossroads, Hamlet, Village, Town, 1999, both APA Planners Press; and Conservation Designs for Subdivisions, Island Press, 1996.

Prospects

In all, with the exception of retail expansion, Halifax is growing much as Charles Downe anticipated in 1964. The question is whether the town wishes to change the direction or character of this growth. Without major policy revisions these trends will continue. They are likely to vary only in attracting slightly higher income groups and more expensive houses due to the commuter rail restoration, and this effect may be slight, given the number of communities with such service.

C. Alternate Futures, Implications, and Recommendations

With over 6000 acres of vacant private land offering the potential for 2600 new houses, over 1,400,000 square feet of commercial space, and over 7,000,000 sq. ft. of industrial space, Halifax has the potential for much change. These possibilities can be described in terms of "alternate futures". Of course, the options are limited by realistic considerations such as market responses, probable regional population, and political/financial feasibility. For example, despite the Walmart store, Halifax may still have little potential to be a major commercial center due to its limited accessibility and stronger centers elsewhere.

The following hypothetical alternatives are offered to suggest elements to consider in completing the plan.

1. An Agricultural - Suburban Residential Community – The Present Trend

This would feature large lots, one-site sewage disposal, great land consumption for the population housed, increased property taxes, and the loss of a varied rural character and landscape. These reflect the limited non-residential tax base, the extensive development along existing roads and in large lot subdivisions, and the probable continued strip commercial development. These effects could be slightly offset by selective, relatively intense non-residential development, by open space acquisition/protection to complement major housing developments; and by regulations encouraging development on rear land rather than on Form A lots, and development on woodland rather than on visible open fields.

Such a model would also need programs to encourage retention or creation of some affordable housing to balance the increasing cost of market housing. Public services would continue to rely heavily on the residential tax base.,

2. An Agricultural – Residential Community

This would preserve/expand farmland and public or semi-public open space, and feature the varied lot sizes and residential/agricultural patterns still found in South Halifax. Developments could include some smaller holdings than present minimum lot sizes, and some of 2-4+ acre holdings allowing truck gardens or small horse farms etc. depending

on individual needs and desires. There would also be few commercial/industrial uses, and a possible concentration of population growth and limited commercial expansion in village centers.

The intent would be to take market pressure off of ordinary agricultural land, to avoid conflicts with cranberry bogs, and to offer living settings meeting varied individual needs and desires. This model recognizes that one lot size does not fit all.

Population growth would be comparable to the suburban model, but with preservation of a more varied landscape and townscape like that of the present South Halifax. As with the Suburban community, public services would continue to rely heavily on the residential tax base.

This approach would best suit the rural sections of town. It would require unified ownership of the land and approval through something like a planned unit development approach.

3. A Regional Commercial Center

This would dedicate an extensive area to region-serving retail development and require improving local roads to partially make up for the distance from major highways. It would rely on the present Wal*Mart to draw customers pending growth of a more general customer base. If feasible, it would greatly increase the non-residential tax base, greatly alter the character of nearby arears, and increase employment and traffic.

This remains an unlikely alternative given Halifax's limited accessibility, through the proposed adjacent supermarket could increase the frequency of shopping trips from nearby communities

The distribution of Wal Marts (and supermarkets) suggests that relatively few communities support each store. To draw on a larger area, other, more specialized stores would have to have a significant niche following. Stores like Romms Jewlers or Central Music at the Rte. 24 edge of Brockton, or Saftler's Fabrics in Whitman thrive though they are away from other major attractions, but even the least accessible of these at the junctions of Rtes. 14 and 18 has more traffic than the junction that of Rtes. 106 and 58.

However, unlikely this option is, clear locational and design policies could make recent and potential commercial growth much more of a town asset than is possible under present policies – even with the Planning Board's impressive, imaginative application of Site Plan Review to the Wal Mart.

4. An Industrial Town

This option would commit much open land to industrial parks and individual sites, and would require investment improving needed roads and other facilities. It would increase

the non-residential tax base and create local jobs. It could also cost much landscape character if sited as prominently as the present industrial park.

A number of firms do function from peripheral sites on secondary roads e.g. a cabinet firm, a titanium firm and a motorcycle parts firm along Rte. 27 on the East Bridgewater/Hanson line and the former Foxboro Company plant in East Bridgewater, along with varied firms in Hanson's town-owned Commerce Park. And, as noted above, the industrial park at the Bridgewater line has had some success.

None-the-less, an extensive park is unlikely, as is shown by the slow absorption of sites in the present Halifax Industrial Park. Similarly, a major industrial / distribution park like that in Avon requires accessibility and land far beyond that in Halifax. This suggests developing a moderate sized park off of Rte. 106 for firms needing reasonable access, to draw on local labor, but not highway visibility.

Thus the full Industrial Town alternative is remains unlikely.

5. An Up-Scale Open Space-Oriented Residential Community

Such a town would preserve a maximum of open space for recreation, wildlife habitat, agriculture and water resource protection, as well as for more general preservation of a rural landscape. It would so do in order to maintain Halifax's character and to gain an outdoors-oriented upper-income population attracted by the restored commuter rail service and by the opportunity to boat on the Lakes and ride through the town's fields and woods. Public services would continue to rely on the residential base but with more of it carried by the higher proportion of more expensive houses.

This approach would strengthen the case for connecting public lands and scenic private land with trails suitable for riding and other uses, and for preserving such opportunities through or between major new housing developments. It could also suggest purposefully managing stream control structures and making minor channel alterations to maintain canoeing./ kayaking opportunities on selected streams such as Stump Brook and well into summer.

With its slow population growth, preservation of local character, and limited service needs, this option could be attractive. However, even with relatively expensive new houses, the limited tax base might only meet the needs of those who use few local services. The educational and service demands of new upper income families might actually increase the burdens on moderate-income long-term residents.

Yet some of this option's increased open space protection may be needed in any case. This is because the present landscape relies more on agricultural uses and natural constraints (and on some chance town holdings) than on purposefully protected public land. With the decline of farming and the possibility of limited sewering or increased use of more effective innovative / alterative systems, much of this land could become

developable. It could not and need not all be acquired but, key areas should be protected building on the town' s open space and recreation plan.

6. A Combination of Elements

While only the first model is likely as a whole, and the others are extreme or improbable, each responds to some local needs or preferences. The Master Plan should incorporate or reconcile many of the best features. These include:

- Guided commercial development - consciously guiding new or expanded businesses to strengthen existing patterns, increase opportunities for convenient "park once " shopping and lessen strip development.

- A clear policy towards farmland, particularly the endangered cranberry bogs and their buildable upland, and the rest of the 3827.3 acres (32.4% of the town) under Chapters 61, 61a and 61 b.

- An aggressive, selective, anticipatory open space program. This would protect significant areas through fee acquisition or easement; and explore possibilities for agricultural preservation, and for "joint development" combining open space with needed housing, public facilities or businesses.

- Industrial./ Commercial rezoning or direct development - encouraging / providing industrial / commercial space in appropriate areas to attract firms while preserving more sensitive or more valuable parts of the town.

- Flexible development controls allowing varied housing types, costs and neighborhood patterns meeting diverse needs and preserving attractive settings for all residents

- Programs to maintain Halifax's balanced diversity of housing size, cost, and settings, perhaps through land donation or a housing rehabilitation loan program to upgrade the existing low cost stock.

<u>Implications and Initial Recommendations.</u>

Halifax has the potential to combine aspects of several alternative futures; the Suburban Residential Community; the moderate Commercial Center; and the Open Space Oriented Town. Choosing a path will require a sense of these possibilities; clear preferences among them (i.e., a vision for town); an awareness of their costs; and a willingness to express clear choices and to implement them.

A number of actions could help to accommodate moderate growth; to meet varied community needs; to increase the tax base; and to preserve much of Halifax's rural character.

Those deserving study include:

- Revision of the development regulations to implement Master Plan Policies, particularly rezoning to strengthen one or two commercial centers and to protect sound housing and townscape along major roads from further strip commercial development

- Continued improvement and expanded protection of the water system

- Adoption of an active, comprehensive open space program

- Developing means to respond when land in Chs. 61; 61a and 61b comes on the market. Reuses could involve joint mixed-use projects combining open space, Agriculture, businesses, and varied housing.

- Examining the use of selective sewering, or of package treatment plants to allow well-located development at compact village densities, combined with preservation of farm land and open space

- Development of provisions focusing retail growth in a healthy, varied, attractive town center and lessening strip commercial development

- Exploring recreation and industrial use of different parts of the closed BFI landfill

- Moderate, selective road improvements in response to safety needs and circulation constraints on development

- Designation of certain streets as legally protected Scenic Roads

- Development of a binding town-wide bicycle/pedestrian path system, particularly connecting isolated neighborhoods to each other and to varied activity centers

- Diverse town-supported efforts to protect or add affordable housing in the face of the ever-increasing cost of market rate housing.

Such considerations and recommendations are discussed are discussed further in the Land Use Element, Chapter XI.