



# **WEST NEWBURY MASTER PLAN 1986**

**MASTER PLAN UPDATE  
TOWN OF WEST NEWBURY**

**January 5, 1987**

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COVER PHOTOGRAPH

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## I. BACKGROUND

The West Newbury Master Plan, which was prepared in 1961 and updated in 1977, has served as a guide to decision-making regarding growth and development within the Town. Although these documents have served well while the Town experienced a population growth of approximately fifty-five (55) percent, the significant changes which have occurred both within the Town and within the surrounding region in the last decade, necessitate a thorough review of the Town's growth management systems.

The first step in this review will be an examination of the changes which have occurred within the Town since 1961, and the identification of the development issues the Town must face if it is to guide future growth and development in the manner desired by its residents. With the benefit of this review, the Town can establish realistic goals and objectives for future growth and development. These goals and objectives will provide the base for selection of an overall development plan for the Town, and for the subsequent identification of specific actions to be taken to implement the selected development plan.

## II. ISSUES AND CONCERNS

Many changes have taken place during the 25 years since the preparation of the West Newbury Town Plan. The Town has grown dramatically with more than a two fold increase in lots and a parallel expansion of the Town's population. The Town is fortunate that, although it has experienced significant growth since 1961, this growth has been predominantly of high quality and of a character consistent with that of the Town. As a result, many of the assumptions and policies of the original plan and zoning policy remain valid. However, these issues and concerns must be reviewed within their current context, and consideration must be given to contemporary development control techniques.

The Town of West Newbury's principal challenges will relate to the following issues:

- Preservation of environmentally sensitive areas. Large portions of the Town are in areas which require protection as delicate ecosystems or fragile natural features, e.g., wooded areas, wetlands, streams, steep slopes, aquifers, poor soils, and land along the Merrimack River. Such areas not only enhance the aesthetic quality of the Town, but also provide for much of the Town's open character. However, such areas are particularly vulnerable to the impacts of development. Preservation of environmentally sensitive areas would not only serve to maintain and enhance the the Town's aesthetic and open character, but would also protect such areas for the enjoyment of residents of the Boston metropolitan region and maintain the quality of resources now exploited by surrounding communities.
- Provision of affordable housing for starting families and the elderly. Housing prices have risen considerably since the preparation of the previous Master Plan to the point where prices over the \$200,000 level are not uncommon. Maintenance costs have also risen. These factors make it difficult for young families and elderly on fixed incomes to find and maintain affordable housing in the Town.

- Provision of a variety of housing types, costs, and densities. Part of West Newbury's character is attributable to the mix of housing and architectural styles found in the Town. Conventional subdivision may lead to more homogeneity.
- Maintenance of the Town's high aesthetic quality and the Town's historical and open character as it it develops. One of the Town's most visible characteristics is its historic rural New England charm with open space and wooded areas and older, well-maintained structures. Uncontrolled or mis-directed development can and will impact negatively on this asset.
- Provision of a rational basis for Town investment and continuing efficient services. Like any community, the Town can ill afford to make capital investments or provide services in a haphazard or unplanned manner. With limited resources (the Town has no industrial tax base on which to draw), the Town must seek the most efficient plan for capital improvements and the delivery of essential services.
- Maintenance of quality of life and provision of quality of services sufficient to serve the Town's residents. As stated above, the Town has a limited tax base on which to draw. However, essential services must be maintained in order to maintain the quality of life in West Newbury. Uncontrolled or mis-directed development can jeopardize the Town's ability to assure the provision of quality services.

Each of the issues listed will affect land use decisions, and the manner in which the Town Planning Board and Town Selectmen administer the Planning and Zoning By-Laws will determine in large measure what the future holds for West Newbury.

### III. GOALS AND OBJECTIVES

Goals and objectives for the future development of West Newbury have been expressed previously in conjunction with the 1961 Master Plan and the Local Growth Policy Statement. These goals are:

- Preservation of natural resources
- Maintenance of the Town's rural character
- Accommodation of growth (population) pressure
- Provision of parks and municipal services
- Management of future growth and development.

These goals are quite broad and somewhat ambiguous, and fail to address the specific issues and concerns which have become pertinent since their articulation and which are noted above. Therefore, the Planning Board adopted these goals statements restated and supplemented as follows:

- Goal: Preserve environmentally sensitive areas within the Town.  
Objective: To protect the large amount of land in Town with delicate eco-systems and, in the process, preserve resources and maintain the aesthetic character of the Town.
- Goal: Maintain the Town's distinctive character.  
Objective: To protect the Town's historic rural New England charm from uncontrolled or mis-directed growth.
- Goal: Provide quality and cost effective municipal services.  
Objective: To maintain essential services and, at the same time, provide the highest possible quality of municipal service.
- Goal: Encourage growth of high aesthetic and environmental quality.  
Objective: To preserve the Town's rural character and to protect natural resources.
- Goal: Encourage the provision of a variety of housing types at a range of cost.  
Objective: To provide housing for all sectors of the population.

#### IV. LAND AVAILABILITY

An analysis of land use in West Newbury indicates that the Town has used about twenty-four percent of its available land for urban purposes. Approximately 2330 acres of the land total of 9500 acres has been put into some use as of 1985. The amount of land devoted to streets has increased due to the large amount of land which has gone into subdivision. Much of the land fronting along existing streets has been developed.

Different parts of the Town have developed at different rates with the greatest impact along Route 113, on Main Street and in western areas of the Town. The removal from development by the City of Newburyport of the drainage basin and environs of the Artichoke Reservoir has had the effect of lessening the development potential in the eastern part of the Town. It should be noted that those areas serviced by water have been the most intensely developed. Conversely the lower density Residential "A" areas are the least developed areas of the Town. Approximately four hundred acres of the Town are in right-of-way and nearly one thousand acres are in other public uses.

An analysis of the compatibility of potential land uses with existing conditions and stated planning goals was performed. See Table I on the following page. The Table indicates that land uses most compatible with a low density community such as West Newbury include single-family dwellings, agriculture, open space and recreation.

The determination of the Town's future land use intensity and development pattern will depend on the plan and implementation strategies and their application and enforcement.

TABLE I

## LAND USE COMPATIBILITY ANALYSIS - WEST NEWBURY

LAND USE	FACTORS				PLANNING GOALS	
	PHYSICAL	INFRASTRUCTURE	EXISTING LAND USE	REGIONAL TRENDS/NEEDS	PRESERVE DISTINCTIVE CHARACTER	PRESERVE ENVIRONMENTALLY SENSITIVE AREAS
Residential Single-family Multi-family	+ o	+ -	+ o	+ +	+ +	+ +
Commercial Retail Office Warehouse	o o o	o + -	o + -	o + o	+ + -	+ + -
Industrial Heavy Light Research	- o o	- - o	- - +	- o o	- + +	- + +
Agricultural	+	+	o	+	o	+
Open Space	+	+	+	+	+	+
Recreation (e.g., golf course)	+	+	+	o	+	+
Institutional (e.g., colleges, hospitals)	+	-	+	o	o	o

+ compatible

- incompatible

o may or may not be compatible (Compatibility on some instances varies with location in the Town.)



## V. GROWTH

West Newbury has experienced rapid growth during the past two decades with even more or equal growth forecast in the future. Between 1970 and 1980, the Town's population grew faster than that of surrounding communities. Between 1980 and 1985, the population growth rate was surpassed only by the Town of Newbury. See Table II and Figure I.

**TABLE II**  
**POPULATION GROWTH RATE**  
**WEST NEWBURY AND NEIGHBORING COMMUNITIES**

MUNICIPALITY	POPULATION			POPULATION % Change	
	1970	1980	1985	1970 - 1980	1980 - 1985
Amesbury	11,388	13,961	13,923	22.6	-0.3
Groveland	5,382	5,039	5,089	6.4	1.0
Haverhill	46,120	46,815	46,172	1.5	-1.4
Merrimac	4,245	4,442	4,237	4.6	-4.6
Newbury	3,804	4,494	5,423	18.1	20.7
Newburyport	15,807	15,910	15,635	0.6	1.7
West Newbury	2,254	2,852	3,175	26.5	11.3

**FIGURE I**  
**REGIONAL POPULATION GROWTH RATE**

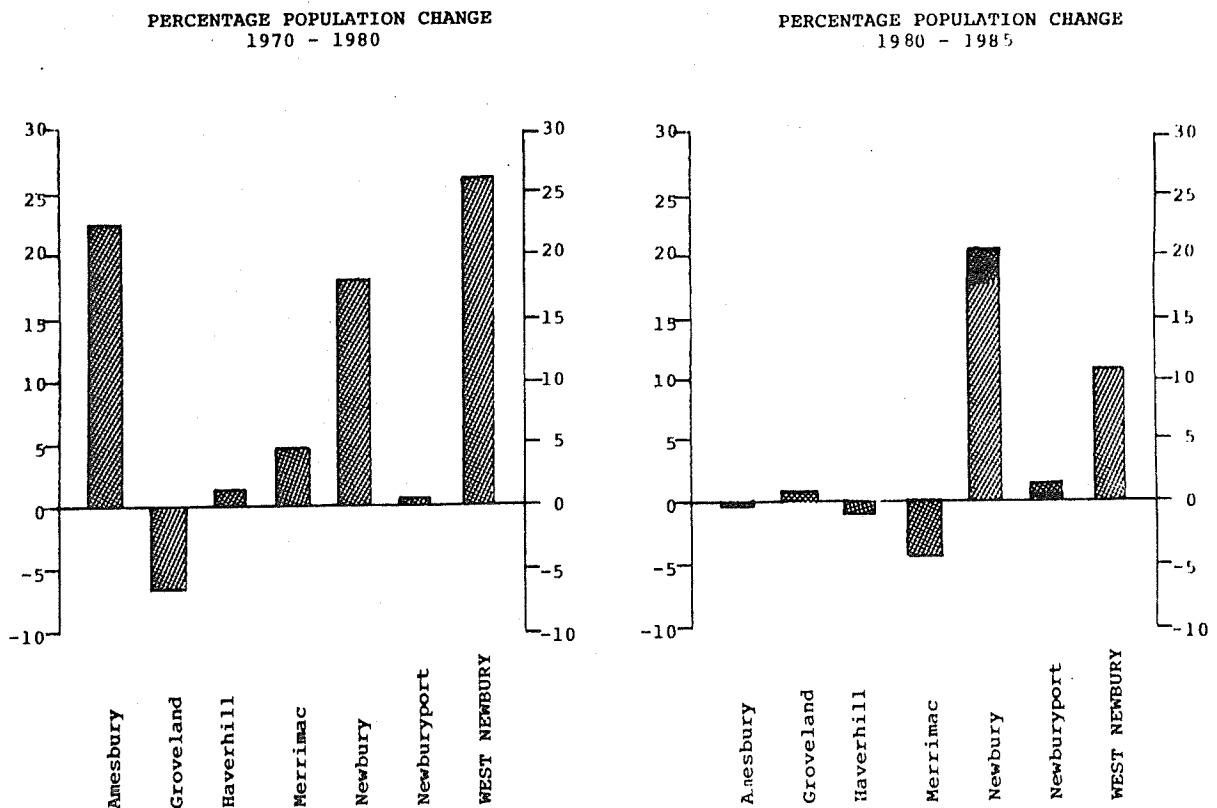


Table III shows both historic population trends and a projection of population growth. The projections were developed by the Massachusetts Department of Public Health and are based on a projection of the rate of change in the population between 1970 and 1980.

**TABLE III**  
**POPULATION TRENDS AND PROJECTIONS**

	1960	1970	1980	1990*	2000*
Number of Persons	1844	2254	2861	3160	3550
Number of Development Units	519	634	807	1260+	1500+

\* Based on Massachusetts Department of Health Population Forecast

The Town's 1985 population of 3,175 exceeds that projected by the Department of Public Health for 1990. Based on the rate of growth between 1980 and 1985, the Town may face a 1990 population of 3411 and a population of 4161 in the year 2000. Without changes in land use policies or controls the Town will need to provide services and meet the impact of approximately twenty-four percent growth factor over the time between now and the next century.

#### A. Growth Analysis

The population projections in Table III may not necessarily occur; the actual future population is dependent on both economic forces and Town policies.

The conflict between growth and preservation of natural resources is a principal area of concern. The proper resolution of this problem is paramount to meeting the other problems facing the Town. Steps to resolve this conflict include the identification and preservation of critical resources. This can be done by protective controls, the creation and use of incentives for development sensitive to aquifer recharge wetlands, estuary and agricultural land and encouragement of development in service areas.

The use of more restrictive controls and density exchange, cluster and design, may well impact housing costs having an adverse affect on affordability. The effect of growth and time without an awareness of how the open space works, may have cumulative impact and change the character of an area from natural to suburban or urban without preserving the unique heritage and character of the Town.

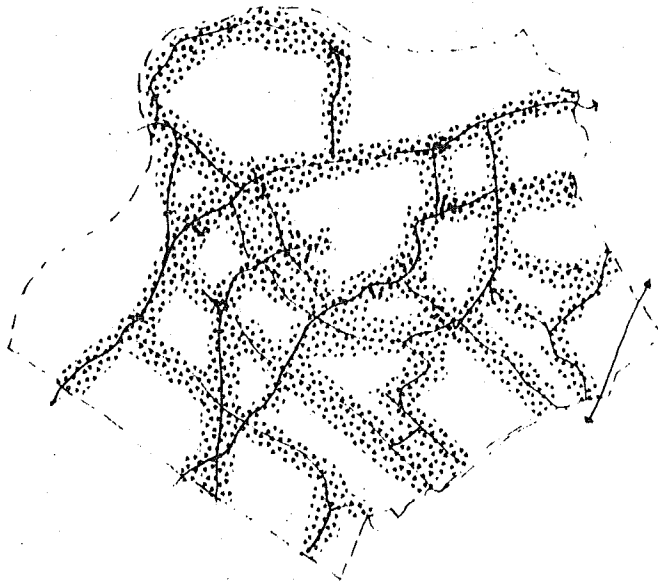
As a tool to make an analysis of the impact of development on the Town, a set of four scenarios was postulated to examine future policies, to explore different possible actions and their likely result and impact. See Figures II through V on the following page.

#### Scenario I Continuation of Present Trends with Town House Clusters

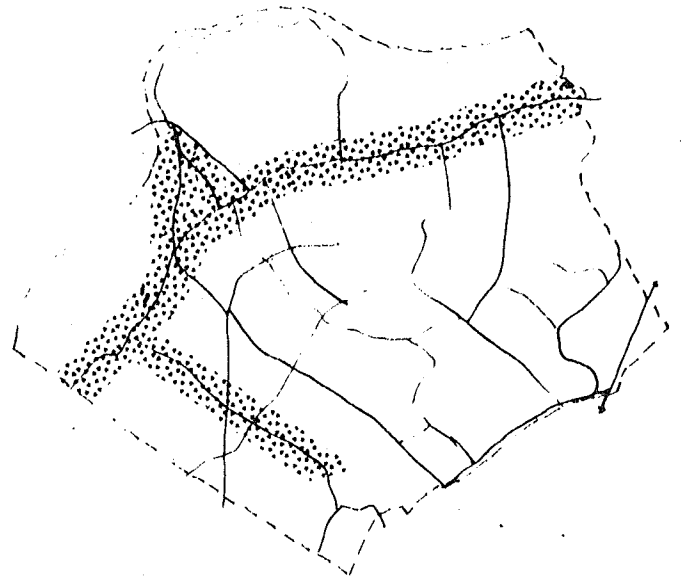
Existing and historical Town growth has occurred on lots of 20,000, 40,000 and 80,000 square feet. The recent rate of growth has been between forty and seventy-eight units per year, utilizing an average between 1.5 and 1.75 acres per unit (1). This will result in the development of between a low of sixty acres and a high of eighty-five acres per year, or approximately six hundred acres to eight hundred and fifty acres over a ten year period, provided the Commonwealth's economy continues to remain healthy.

(1) Assuming a mix of lot sizes.

**FIGURE II**  
**SCENARIO I**  
**SIXTY-FIVE NEW UNITS/YEAR**



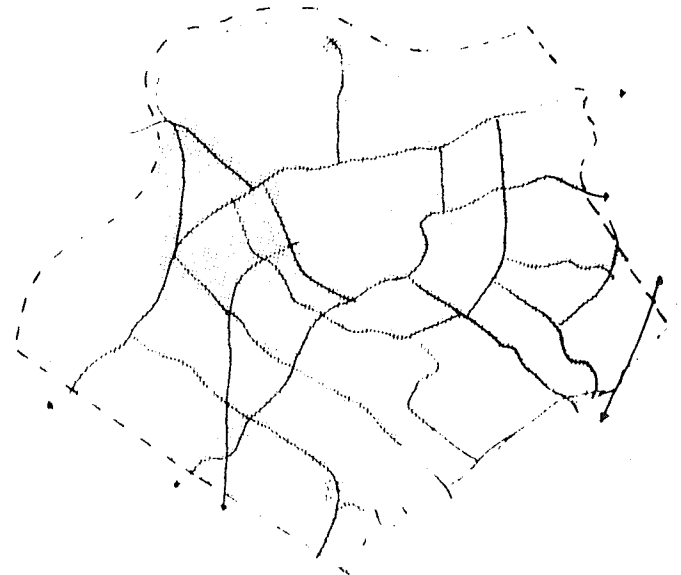
**FIGURE III**  
**SCENARIO II**  
**TOWN HOUSES & CLUSTER**  
**IN WATER SERVICE AREA**



**FIGURE IV**  
**SCENARIO III**  
**ACCELERATED GROWTH RATE**



**FIGURE V**  
**SCENARIO IV**  
**DECELERATED GROWTH RATE**



In this scenario Town growth would be at a rate of sixty-five units per year on one half and one acre lots and in town house clusters. Some development would occur in the more rural areas of the Town.

#### SIXTY-FIVE NEW UNITS/YEAR

	1985 Acres/D.U.	1990* Acres/D.U.	2000* Acres/D.U.
Residential	1016/940	1051/1265	1681/1915
Business	58	58	58
Public	893	900	900
Street right-of-way	378	408	442
Total	2345	2617	3081
% of Land Developed	24.5%	21.5%	32.5%

\* Based on 65 units per year on primarily one half and one acre lots in clusters.

D.U. = Dwelling unit.

Other service costs should remain consistant.

#### Scenario II Cluster and Planned Unit Development of Town Houses

In this scenario, Town policy would be to encourage cluster and town house development in higher density areas with Town water. At the same growth rate as in Scenario I, Town house and cluster development could result in a density of development of .75 acres per unit, or an annual rate of thirty to fifty-two acres per year. This would result in the development of three hundred to five hundred and twenty acres over a ten year period, reserving up to approximately three hundred acres of open space and increasing the ratio of open space to developed land. Such development could be accomodated with minimal increase in water distribution pipes, roads and fire and police services, and would maintain or decrease the costs of other Town services, e.g., schools, transportation costs.

If this scenario were to be followed, development would primarily occur in areas served by town water and cluster development would be encouraged. Thus, the growth in total units would be similar, but the proportion of land in development and in streets per unit would decrease over the present pattern of growth.

#### TOWN HOUSES AND CLUSTER IN WATER SERVICE AREA

	1985 Acres/D.U.	1990* Acres/D.U.	2000* Acres/D.U.
Residential	1016/940	1511/1265	2500/1915
Business	58	58	58
Public	893	906	986
Streets	378	425	491
Total	2325	2894	3950
% of Land Developed	24.5%	30.1%	41.5%

\* Based on Projected Increase of 65 Units per/annum

D.U. = Dwelling unit.

### Scenario III Increase in the Annual Rate of Town Growth

This scenario postulates a policy of an accelerated growth by factors of ten percent, twenty percent or more. This would mean a growth rate of seventy-five to ninety units per year. It is quite obvious that if the growth rate is accelerated it will have a serious impact on the character of the Town and that by the year 2000 over fifty percent of the Town will be developed with street rights-of-way, an increase to more than one thousand acres as opposed to approximately three hundred and eighty at present. Other costs will also be accelerated and demands will increase in the need for fire, police and trash disposal due to lack of commercial and industrial development with its higher tax yield. The encouragement of development will, with proposition 2 1/2, limit the amount of taxes that can be raised and will create a need to enact service fees and other revenue to adequately furnish services.

The annual impact of such a policy would greatly affect Town services and increase dramatically linear feet of water pipe, road, etc., and, more importantly, would have an impact on fire service, schools and related youth services. Over a ten year period, there would be a significant reduction in the Town's undeveloped land areas. It would also create very significant increases in library, fire and road maintenance costs. Because new suburban homeowners have potentially more children per family, short term requirements for schools and related youth services would increase.

The table below identifies some of the effects the use of this policy would create on the Town.

#### ACCELERATED GROWTH RATE

	1985 Acres/D.U.	1990* Acres/D.U.	2000* Acres/D.U.
Residential	1016/940	1692/1350	3044/2170
Business	58	58	58
Public	893	900	900
Street right-of-way	378	633	1138
Total	2345	3283	5140
% of Land Developed	24.5	34.6	54.1

\* Based on a mid-range rate 82 Units per year in all areas.

D.U. = Dwelling unit.

### Scenario IV Decrease in the Annual Rate of Town Growth

This scenario would result in a decreasing growth rate induced by the increase or maintenance of existing standards, a reduction in the areas available for higher density areas, and a congruent increase in lower density development. Such a policy, because of market forces, results in slower utilization and development of land. Such development would reflect higher cost per unit and a different mode of marketing (1).

- (1) Single family development is developed and financed generally on a one to five unit basis, whereas town house and cluster development are designed, built, financed, and marketed through large scale promotion.

A decrease in the Town's rate of growth to, say an average of forty units per year, would result in the impacts shown in the following table. This policy implies lower density and that a greater number of facilities would be limited in the lower zoned density and there would be a fewer units being developed in cluster and town housing subdivisions.

#### DECELERATED GROWTH RATE

	1985	1990*	2000*
	Acres/D.U.	Acres/D.U.	Acres/D.U.
Residence	1016/940	1366/1140	22066/1540
Business	58	58	58
Public	893	900	900
St & R/W	378	508	772
Total	2345	2932	3796
% of Land Developed	24.5	30.9	39.9

\* Based on growth 40 units per year average of 1.75 acres /D.U.

D.U. = Dwelling unit.

Each scenario will have additional measurable impacts, which are summarized on Table IV on the following page.

The more urgent of the measurable impacts as shown on Table V are water supply, housing market and schools.

#### B. WATER SUPPLY

Major factors that will have significant impacts on the future will be the availability and cost of water supply to the Town. The City of Newburyport has recently significantly increased the rate which it charges the Town for water. Efforts by the Town to develop its own supply have been delayed. As a result, prices for the consumer have risen, and the Town will remain dependent on the City of Newburyport for its water.

In 1985, a total of 651 families received water service and 289 units did not, resulting in a ratio of serviced to non serviced units of seventy percent to thirty percent. In 1975 582 units out of a total 735 units were serviced with Town water, for a serviced to non-serviced ratio of eighty-two percent to eighteen percent. This represents a decline of twelve percentage points over the past decade. If continued into the future, this decline has profound implications on issues of ground water and possible well contamination, and, if so, the specter of having to provide sewer services to large areas of the the Town at very low densities and consequent high cost to individual rate payers will face the Town.

The 651 residential units served by water now use 58,750,000 gallons per year, or 90,245 gallons per residence per year, equating to 247 gallons per unit per day. Rounding this to 250 gallons per unit per day, keeping the percent of units served at a constant seventy percent and projecting the different scenarios of growth, the Town would be consuming water at the rates and costs shown in Table V.

TABLE IV

## COMPARATIVE GROWTH IMPACT - 10 YEAR GROWTH (1)(2)

Activity	Factor of Increase	Scenarios I & II 650 New Units	Scenario III 800 New Units	Scenario IV 400 New Units
Streets	1/2 frontage @75' per unit	48750 linear ft 9.2 miles	60,000 linear ft 11.6 miles	30,000 linear ft 5.6 miles
Water Line	1/2 frontage @75' per unit	48750 linear ft 9.2 miles	60,00 linear ft 11.6 miles	30,000 linear ft 5.6 mi
Drainage	1/2 frontage @75' per unit	48750 linear ft 9.2 miles	60,000 linear ft 11.6 miles	30,000 linear ft 5.6 miles
Police	.8/100 families	5.2 officers	6.4 officers	3.2 officers
Fire	.6/100 families	3.9 fire persons	4.8 fire persons	2.4 fire persons
Water	@250 gal/du	59,312,500 gal	73,000,000 gal	36,500,000 gal
Schools	@E=20 H=25 pupils per room at 1.30 people per/du	+12.4 school rooms	15.2 school rooms	+7.6 school rooms
Libraries	@20 volumes per/du (3)	+13000 volumes	+16000 volumes	+8000 volumes
Solid Waste	2.2 acre ft/ year	+22 acre ft/ year	+27 acre ft/ year	+13.5 acre ft/ year

(1) Standards collected by Thomas Planning Services, adjusted for West Newbury.

(2) E = Elementary du = dwelling units gal = gallons H = High School  
ft = feet acre foot = one acre of land covered to a depth of one foot

(3) This figure is considered a minimum requirement. The G.A.R. Memorial Library has a collection of approximately 19,700 volumes. Although the size of the collection is larger than the minimum requirement shown on the Table, it is well within the range of library needs for a Town the size of West Newbury. The collection attests to the Town's support of its library facilities and the quality of Town services.

TABLE V\*  
PROJECTED WATER USE

	Existing 1985	Projected 1990			2000		
		Low	Mod.	High	Low	Mod.	High
Total D. U.	940	1100	1265	1350	1540	1915	2170
@ 70% Served	651	770	885	945	1078	1340	1519
% all in million							
@ 250 gal/ per D.U	58.75	70.26	80.80	86.23	98.36	122.32	138.60
Costs @ 1985 rate							
@ .89 per 1000	\$52.40	\$62.50	\$71.91	\$76.03	\$87.54	\$108.86	\$123.36

\* Based on Town Reports.

Based on an analysis of historic data it appears that each new housing unit in Town serviced with water results in an approximate addition of 200 feet of transmission pipe. This figure will be used in capital program preparation. for purposes of capital cost analysis. In addition, the extension of water service may be used as a guide for the Town to encourage development of those areas deemed suitable and properly zoned for residential use.

### C. HOUSING

The location of West Newbury on the edge of the Boston Metropolitan Housing service area; the Town's attractive setting; rolling land; beautiful homes in historic settings; views of the Merrimack River, as well as the high tech land growth on 495 in Lowell/Lawrence and spin off from Portsmouth and Rockingham County in New Hampshire all put pressure on undeveloped land in the Town. As the economy grows and increases in the area and as Newburyport and other communities become developed, the attractiveness of West Newbury will continue to further increase land values and the resultant cost of housing.

#### 1. Needs

Based on an examination of the 1980 census and on an analysis undertaken by the Massachusetts Executive Office of Communities and Development, which is irrespective of the scenario selected, the elderly and starting young couples and families constitute the greatest housing need in the community. Table VI shows that the Town of West Newbury has four percent of its 1980 population below the poverty line; however, of very real significance is that the elderly - those over sixty-five years of age - who are below the poverty limit constitutes sixteen percent of all senior citizens in the Town.

TABLE VI

#### HOUSEHOLDS WITH INCOMES BELOW THE POVERTY LEVEL

	<u>Below Poverty</u>			<u>Below Poverty</u>		
	Population	1980	DU	Population	1985	DU Need
Elderly	241	38	18	261	42	21
Family	315	78	22	330	82	21
Need	556	116	40	53	123	42

D.U. = Dwelling unit.

Based on a reasonable Town policy of attempting to meet fifty percent of the 1985 personal housing needs of the elderly and twenty-five percent of the 1985 young family housing needs in the near future, the Town has an effective and documented current need for forty-two units - twenty elderly and twenty-two family units. A possible breakdown of units by size would be twenty one-bedroom units and twenty-two two-bedroom units to meet elderly and start up family needs.

#### 2. Affordable Housing Costs

Unit costs of new housing in West Newbury have increased to in excess of \$200,000 per unit. Unit cost affordable to the elderly and start up families must fall in the \$60,000 to \$80,000 range if those eligible to use these units are to afford them. The target population, even with subsidized mortgage from



state funded programs at 5 1/2% interest or through non-profit ownership, will result in paying monthly unit rentals for one bedroom units at \$325.00 and a two bedroom at \$375.00 per month not including services, utilities or heat.

It is evident that to meet economic realities that the garden apartment or town houses in clusters should be the proper approach to meet the Town's subsidized housing needs. Conversion of existing structures may also offer a partial solution of the housing needs of the Town.

The Town will have to cooperate and use its resources of land and perhaps even contribute improvements like water service, roads and drainage improvements through a cooperative approach, further operating subsidies from the Town could be minimized or eliminated. By helping keep down initial cost, the cost of financing improvements and the carrying costs on each unit can be kept reasonable and result in affordable rents or mortgages.

#### D. SCHOOLS

The implications for schools of a town growth policy of sixty-five units per year or 650 per decade (Scenarios I and II) is shown in the following table. Assuming a school classroom size of twenty pupils for elementary school children, grades K-6, and twenty-five per classroom for Junior and Senior High, grades 7-12, would result in the need to add twenty new elementary classrooms by the year 2000 and fifteen additional secondary classrooms assuming current teacher pupil ratios and that facilities are adequate but at or near capacity (1). Scenario II would increase the numbers shown and Scenario IV would decrease them.

TABLE VII

#### GROWTH POLICY IMPACTS ON SCHOOLS

	1985	1990	Change	1995	Change	2000	Change
Population	3240	4428	1188	5565	+1137	6703	+1138
Dwelling Units	940	1265	+325	1590	+ 325	1915	+ 325
Persons per D.U.	3.5	3.5	-	3.5	-	3.5	
School Age							
Children/D.U.	1.35	1.30	-.05	1.30	.05	1.25	-.05
K-6	360	505	+145	636	+131	766	+130
7-12	334	468	+135	587	+119	707	+120
Total School Pop.	694	973	+279	1223	+250	1473	+250
Elem. Rooms K-6 *			7.0		6.5		6.5
Sec. Room 7-12 *			5.4		7.8		4.8

\* K-6 @ 20 elementary pupils per classroom = 15 classrooms; 7-12 @ 25 pupils per classroom = 15 classrooms

(1) Current school system teacher contracts call for a ratio of thirty five teachers per 1000 pupils in elementary grades and forty teachers per 1000 pupils in Junior and Senior High School.

## VI. POLICY QUESTIONS

None of the scenarios developed is the best policy for the Town to adopt in and of themselves. A combination of the encouragement of growth in areas of water service and a moderation of rate of growth in combination would provide the Town with its best opportunity to achieve its particular goals, both aesthetic and financial.

Alternate Town size and density is at issue, but even more so is the present character and allure of the Town. The establishment of the Town's rate of growth in acceptable numerical terms may in part provide the kind of policy guide that will allow the Town to properly manage its affairs, provide needed services, and prepare and enforce the character and physical ambience that presently exists.

A series of questions come into play before limits in growth rate can be agreed upon. First, what magnitude is numerically sound and healthy and can be legally justified within the existing free enterprise system? Is it fair to all individuals? How does the Town establish who will build - through a stringent plan, a lottery, or some other rational system?

The combinations of water supply, financial constraints, the protection of open space, aquifers, wetlands, river and other water frontage, wooded areas, clusters, vistas, and architectural heritage all are factors which must be considered in choosing a growth policy. They are each reflected in the Planning Board's analysis and the selection of the growth policy, which follows.

### A. RECOMMENDED GROWTH POLICY

The Town Planning Board has reviewed the four different strategies or scenarios of growth patterns and their impact and development consequences. The review included a low growth rate scenario of forty units per year, two medium growth proposals at sixty-five units per year, one at medium and one at low density, and a high growth rate scenario of over eighty units per year.

The Board reviewed each scenario for its relationship to the satisfaction of the articulated planning goals. In addition, the probability of public acceptance was evaluated. The result of the analysis indicated that Scenario II is most satisfactory. See Table VIII on the next page.

The Planning Board has selected a medium growth policy permitting up to sixty five new residential units per year. This was felt to be the most realistic and achievable way of meeting the goals listed in the town plan. See Figure VI.

The Planning Board proposes to implement the growth management policy by additions and amendment of the zoning by-laws and subdivision regulations. Changes recommended include the proposed consideration of using impact fees for new residential units equal to presently existing investment in facilities, the tightening up of subdivision regulations with respect to percentage of lot area that is usable, the encouragement of cluster development via incentives and rules for large acreage owners and farmers to use clusters, better design review, and to encourage development in serviced areas of The Town versus unserved and more rural areas. The Town Planning Board also wants to encourage the Town to meet goals for moderate and low income housing for the elderly and starting young families.

TABLE VIII

## GROWTH SCENARIOS AND GOAL SATISFACTION

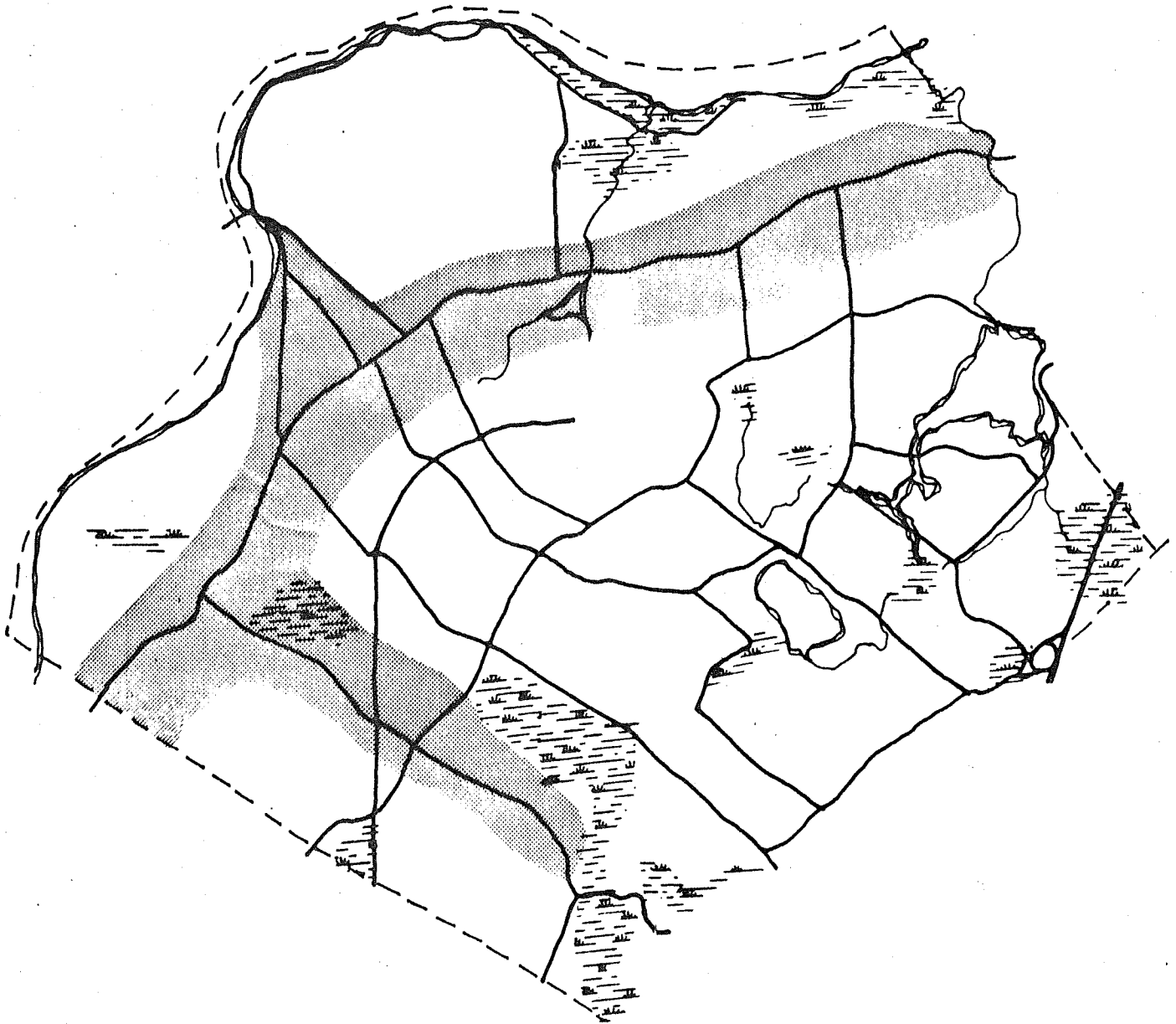
	GROWTH SCENARIO			
	SCENARIO I PRESENT RATE OF GROWTH - PRESENT PATTERN	SCENARIO II PRESENT RATE OF GROWTH PLUS TOWN HOUSE & CLUSTER IN WATER SERVICE AREA	SCENARIO III ACCELERATED RATE OF GROWTH	SCENARIO IV DECELERATED RATE OF GROWTH
<hr/> GOAL SATISFACTION				
Preserve Environmentally Sensitive Areas	-	●	○	○
Maintain Town's Character	-	●	○	-
Provide Quality Cost- Effective Municipal Services	○	●	○	-
Encourage Growth of High Aesthetic and Environmental Quality	○	●	○	○
Encourage Provision of Variety of Housing Types and Costs	-	●	-	○
<hr/> GOVERNMENTAL/ADMINISTRATIVE				
Political Acceptance	●	●	○	○
Ease of Administration	-	-	○	○
Ease of Implementation	●	●	○	○

- = Satisfies goal or criterion  
○ = Does not satisfy goal or criterion  
- = May or may not satisfy goal or criterion

FIGURE VI

RECOMMENDED GROWTH PLAN

PRESENT RATE OF GROWTH AND TOWN HOUSE  
AND CLUSTER DEVELOPMENT IN WATER SERVICE AREA



The pattern of land use that would likely result from a moderate growth policy of sixty-five units per year to the year 2000 in serviced areas of the Town is shown on Table IX. This Table projects land usage in various categories with development being encouraged to occur where water service exists and within those areas of the Town now zoned for more intensive residential development. It is not proposed to change zoning density or designations but rather to encourage intelligent and sensitive growth.

**TABLE IX**  
**PROJECTED LAND USE**

	1985 Acres/DU 1016/940	1990 Acres/DU 1051/1265	2000 Acres/DU 1681/1915
Residential	1016/940	1051/1265	1681/1915
Business	58	58	58
Public	893	900	900
Streets	378	408	442
<b>TOTAL</b>	<b>2325</b>	<b>2617</b>	<b>3081</b>
% of Town Developed	24.7%	27.5%	32.5%

DU = dwelling unit

The principal implications of the moderate growth policy would be the more widespread use of cluster development to preserve the open areas of the Town and reduce ultimate utility and road maintenance costs.

#### **VII. ISSUES FOR FURTHER STUDY**

In selection of the growth policy three issues requiring immediate Town action have been discussed (water, housing, schools). However, the Town faces a number of currently non-critical but long term issues that will eventually have to be resolved to avoid detrimental consequences on the Town's health, safety and appearance. These issues, which will have to be addressed in the near future, include the following:

Provision and maintenance of solid waste disposal sites adequate for future needs. Any increase in the Town's population will bring with it an increase in the generation of solid waste and a need for environmentally safe disposal areas. The Town must act to provide for solid waste disposal sites adequate to meet future needs.

Protection of the Town's Merrimack River frontage. The Merrimack River is a visual, environmental and recreational asset for the Town. The River's beauty and serenity contribute to the Town's character and provide boating and passive recreation opportunities. Development

along the Merrimack can impact negatively on its visual qualities, restrict access for passive recreation, and cause serious environmental problems, e.g., erosion, flooding, and pollution. The Town must act to preserve the River frontage and to provide for development which is not detrimental to the Town's goals and policies.

Protection and preservation of designated conservation and agricultural areas. Conservation and agricultural areas protect environmentally sensitive areas, provide land for farming and enhance the Town's open and rural nature while providing areas for passive recreation. Development adjacent to such areas, or overuse of the conservation areas, may result in serious negative impacts on both the protected natural resources and the Town's character. The Town will need to act to protect and preserve agricultural land and designated conservation areas.

Visual enhancement of, and improvement of safety in, the Town's commercial center. An important aspect of the Town's character and aesthetic appearance is how the commercial area along Main Street impacts residents and visitors to the Town. It is an area of the Town needing attention and improvement if traffic safety and Town appearance are to be improved. The retail area on Main Street consists of a few small commercial establishments, a bank and a post office. The commercial establishments are of the "convenience" outlet variety, serving only the emergency needs of the Town's residents. Parking is on-street.

There is a need to expand the business area to provide retail establishments which will serve the daily shopping needs of the residents of West Newbury. The expanded business area could include a small supermarket, a hardware store, a pharmacy and similar establishments. The existing business area can be expanded in the Church and Whetstone Street area on each side of Main Street. The expansion could provide for parking behind with one way circulation through the parking lot.

Guidelines for the development of such an area should include provisions to buffer the impacts of traffic, noise and aesthetics on abutting properties. It is suggested that a unified plan for commercial signage be undertaken to give the Town a commercial design theme. Better standards for off-street parking for commercial uses, better street lighting for pedestrians in these areas, and a more sensitive and intensive use of landscaping and trees within the commercial areas would greatly improve the visual ambience of the area. The Town's encouragement and support of such improvements will help make West Newbury more attractive and safer for children and the elderly, and help maintain the economic health of the Town's commercial center.

## VIII. IMPLEMENTATION TECHNIQUES

The Planning Board has a variety of techniques and tools available for implementing the Master Plan and its growth strategies for the Town. See the Growth Management Technique Table in Appendix A. Based on an analysis of the techniques, several were chosen for implementation. These techniques can be classified as regulatory and financial and include the following:

### A. Regulatory

- Zoning: The Zoning of the Town afforded protection prior to major growth pressures, but is not geared to present land use development trends. Therefore, the Planning Board is considering the increased use of performance zoning and improved site plan requirements to encourage better development and to lessen negative impacts of growth on the Town in general, and on neighbors in particular. These standards will require that noise, lighting, odor and other potentially adverse impacts be properly mitigated and controlled prior to the issuance of construction permits. A copy of revised performance standards have been sent to the Planning Board for review (see Appendix B). Proposed revisions to the site plan requirements are located in Appendix C. Every effort has been made to keep the zoning simple for administrative reasons, particularly since the Town has very little staff. The performance criteria in the zoning contains such basics as slope, swamp, and contiguous land area.

Another aspect of zoning will be to revise the provision regulating the use of steep slopes, wetlands, flood areas, and aquifer recharge or conservation areas for density credits toward development. The Board is seeking an equitable and fair method of allowing existing owners of undeveloped property to have an opportunity to build, while minimizing adverse effects on neighbors or the Town. It is also attempting to protect abutters and existing residents from the negative aspects of growth on the levels of service and the costs of living in West Newbury. The poor quality of the soils in the Town, the lack of sewers, the limited water service area and the large size of dwellings necessitates large building lots to provide adequate separation between septic systems and water supplies, and to enhance infiltration of runoff. See Appendix D and E. The standards should be firmly based on an analysis of land capacity. See Appendix F.

The Town should also consider revisions to the zoning to promote the development of alternative housing styles and affordable housing. Revisions should include the use of cluster in water serviced areas mandatory cluster in outlying, low density areas of Town, which would also preserve agricultural land, open space and environmentally sensitive land, and the use of quadruplexes on land suitable for such development. The Table in Appendix G illustrates the cost savings for cluster development under the present zoning and for the proposed Agricultural/Conservation District. In addition, the Town should amend the accessory apartment and congregate housing provisions of the Zoning to provide more opportunity for such housing within existing development

constraints. Overall density should be maintained to preserve the rural character of the Town. These techniques will help contain future costs to the Town while preserving and conserving its natural landscape and aesthetic qualities. The text of proposed zoning changes are in Appendices H through L.

In addition, the Planning Board is considering the option of permitting development on "pork chop lots", so called due to their resemblance to the shape of a pork chop. Such lots generally have sufficient land area to meet minimum lot area requirements, but lack sufficient frontage. Development of such lots would provide additional opportunities for housing; however, criteria for development on pork chop lots should include a consideration of density, privacy and spacing of dwellings to maintain the Town's character. The text of an amendment to permit development of such lots is located in Appendix M.

The Zoning indicates that frontage on curves is measured from side lot line to side lot line along the tangent of the curve. This definition has been found to be confusing and complicated. The Board should consider modifying the definition to simplify the calculation. The text of a proposed method of calculating frontage is located in Appendix N.

- Subdivision Regulations: Subdivision regulations govern the division of land into lots for the purposes of building and the provision of streets, utilities and other amenities to serve the lots and to protect the community from adverse development. Special emphasis is given to safe access, drainage, preservation of natural features, and the public health and safety. These regulations are promulgated and administered by the Planning Board in accord with Massachusetts General Law.

The Planning Board has under consideration revisions to the existing Subdivision Regulations at the present time. The revisions provide for improved administration of the subdivision process and better standards for development to protect the Town and present residents from poor and undesirable development practices.

## B. Financial

- Capital Improvement Program: This is a high priority work item for the Planning Board and the Town. To prepare for the impact of economically driven growth pressure on the Town, a practical and realistic program of capital expenditures should be developed. Such a capital budget would help maintain Town solvency and would permit, on a "pay as you go" basis, the construction and maintenance of adequate facilities and capital equipment, in turn providing a level of service to the Town without large annual fluctuations of costs and tax rates. The Planning Board is exploring the imposition of impact fees to maintain the quality and quantity of present services without imposing financial penalties



for new development on existing residents. (See Impact Fees below.) A prerequisite for enacting impact fees is to have in place a capital program that clearly indicates a Town wide application of funding and expense related to the Master Plan and the provision of those services on which the impact fees are to be structured and based. With the present rate of Town growth anticipated to continue, it is important that action be taken to develop a capital program adequate to meet service and facility needs of new development as it occurs, and to encourage the development of affordable housing, so that that existing levels of schools and other services are not provided primarily at a cost to existing Town tax payers.

The Planning Board has requested funds under the Executive Office of Communities and Development Strategic Planning Grant Program to inventory and assess the Town's capital improvement needs, schedule improvements, and to develop a methodology for funding such improvements, which methodology does not discourage the development of affordable housing. The study will be based on a methodology of assessing fixed assets now under development by the Massachusetts Municipal Association and will utilize initial steps undertaken by the West Newbury Finance Committee, including the survey of community needs. See Appendix O for a copy of the survey form.

- **Impact Fees:** The Planning Board is considering the imposition of impact fees as a method of financing capital improvements necessitated by the increased growth rate and the maintenance of Town services at existing levels. Under existing funding techniques, such improvements would be financed with Town revenues or a municipal bond, unfairly placing the burden of cost on all residents of the community. With the imposition of impact fees, new development would bear a reasonable share of the cost of improvements and service levels it imposes on the Town. See Appendix P.

Impact fees have become increasingly used throughout the country, with many states now permitting their use. In Massachusetts, the interest has resulted in the formation of the Statewide Impact Fee Committee, a group of planners, town administrators and other town officials, working with several communities across the Commonwealth to promote the use of impact fees. As part of the work program developed for the Strategic Planning Grant application, the Town will consult with the Committee to develop a methodology for the imposition of impact fees, which methodology will not discourage the development of affordable housing. The study will be based on the Town's capital improvement budget.

- **Land Acquisition:** The Town may, as part of its Master Plan, wish to identify for purchase certain parcels of land for wells, aquifer recharge, flood and drainage way protection, recreation, and sites for future facilities or for maintaining scenic vistas, promontories or wooded areas that are vital ecological, historical, recreational, or visual treasures to the Town. Scenic areas need to be identified and programmed for acquisition before they are lost forever to private development.

- Gifts: The Town should be prepared to take advantage of the current tax laws with respect to gifts of property, buildings and other valuable assets. The Town should identify future needs in terms of sites for water wells, schools, parks, trails, and water ways, which often can be acquired by the public in return for tax benefits, negotiated trade-offs for development on large land tracts, or, in special circumstances, to preserve open areas adjacent to estates or long time family held lands. By taking advantage of such opportunities, the Town can achieve its articulated goals at little or no direct cost.

The Town, by moving ahead simultaneously on all fronts, can ensure that its plans will be implemented to a high degree. Through growth control and enactment of recommended strategies the Town can confidently face the future with the knowledge and ability to achieve its plan and keep West Newbury's beauty, viability and rural ambience.

TABLE X

ACTION TABLE  
1987 - 1988

ACTION	TOWN PLANNING BOARD	TOWN	PRIVATE
Adopt Revised Zoning Provisions	•	•	
Accessory Apartments*			
Agricultural/Conservation District*			
Buildable Land Ratio*			
Congregate/Shared Housing*			
Frontage*			
Mandatory Cluster*			
Performance Standards*			
Pork Chop Lots*			
Quadruplexes			
Site Plan*			
Slope*			
Approve Updated Subdivision Regulations	•		
Develop Capital Program	•	•	
Adopt Capital Program	•	•	
Develop Growth Impact Fees	•	•	•
Adopt Growth Impact Fees	•	•	
Develop Commercial Area Plans	•	•	
Make Planned Commercial Area Improvements		•	•
Determine and Identify Future Public Land Needs, Site Specific	•	•	•
Initiate Acquisition of Sites by Purchase		•	•
Initiate Acquisition of Sites by Gift		•	•
Initiate Affordable Housing Program	•	•	•

\* Prepared item - see Appendix

## APPENDIX

# APPENDIX A

## GROWTH MANAGEMENT TECHNIQUES

Development Control Option	Method of Adoption	Major Advantages	Major Disadvantages	Status in West Newbury
A. ZONING				
Performance zoning <ul style="list-style-type: none"> <li>• limit amount of unsuitable land in lot size calculation</li> <li>• buffers</li> <li>• protection of sensitive features</li> <li>• define net developable land</li> </ul>	Town - Zoning Amendment	No capital expenditure; preserves environmentally sensitive areas Reduces yield	None	In place: 6.1.1.10.  In place: 6.2.1.
Combine undersized contiguous lots in same ownership	Town - Zoning Amendment	No capital expenditure	May have limited applicability	G.L. requires revision
Increase side yard for fire protection purposes	Town - Zoning Amendment	No capital expenditure	May have limited yield reduction May create non-conforming lots	Not needed, except possibly in Business District
Increase frontage	Town - Zoning Amendment	No capital expenditure Reduce number of lots	May create non-conforming lots	Not practical
Increase lot size	Town - Zoning Amendment	No capital expenditure Reduces yield	May create non-conforming lots	Not practical
Increase lot area for conversion	Town - Zoning Amendment	No capital expenditure	May limit conversion	In place: 5.1.3.6.2.
Eliminate cumulative zoning	Town	No capital expenditure	None	NA
Restrict conversion to owner occupied units	Town - Zoning Amendment	No capital expenditure	May limit conversion	In place: 5.1.3.6.12.
Flood Plain/Wetland Zoning <ul style="list-style-type: none"> <li>• limit development in flood plain and wetland areas</li> </ul>	Town - Adopt Zoning	No capital expenditure Reduces yield Preserves environmentally sensitive areas	None	In place: 5.4.
Shore Protection Zoning <ul style="list-style-type: none"> <li>• limit development along waterfront areas</li> </ul>	Town - Adopt Zoning	No capital expenditure Reduces yield Preserves environmentally sensitive area; Preserves public access to waterfront	Limits private return	Recommended - 100' from Merri-mack 50' from all other water bodies
Watershed Zoning	Town - Adopt Zoning	No capital expenditure	Limits private return	Recommended - see Rural District
Reduce number of units allowed in conversion	Town - Zoning Amendment	No capital expenditure Reduces yield	May limit conversion	NA
Transfer of Development Rights <ul style="list-style-type: none"> <li>• allow greater density in suitable areas in return for lesser density in unsuitable areas</li> </ul>	Town - Adopt Zoning	No capital expenditure Channels growth to suitable area Can be drafted to reduce use of undersized lots	Does not limit growth  Administrative cost	Not recommended
EIS with site plan	Town - adopt Zoning	No capital cost	Administrative cost only	Recommended
Agricultural Zoning	Town - adopt Zoning	No capital cost Preserves farmland	Limits private return	Recommended See Rural District

Development Control Option	Method of Adoption	Major Advantages	Major Disadvantages	Status in West Newbury
<b>B. SUBDIVISION</b> Increase percent of land to be dedicated to Town for public facilities	Town - Sub-division Amendment	No capital expenditure Increases quantity of open space Reduces yield	None	Requires amendment to statute
Require environmental impact report	Town - Sub-division Amendment	No capital expenditure Clear picture of probable impacts May reduce yield	Cost	Drafted in Rules and Regulations
Plat expiration • Final plat expires if no construction within a specified time after approval of said plat	Town - Sub-division Amendment	No capital expenditure Reduces yield	None	See Rules and Regulations
<b>C. OTHER</b> Acquire undeveloped land	State, county, municipality - purchase, donation	Reduces yield Preserves open space; can be sold in the future in accord with a phased growth plan	May involve expenditure Reduces tax base	Apply for State funds for sensitive sites after Master Plan Update is complete
Acquire development rights	State, county, municipality - purchase, donation	Reduces yield Preserves open space Owner of land responsible for its maintenance	May involve capital expenditure Reduces tax base	Apply for State funds for sensitive sites after Master Plan Update is complete
Acquire conservation restrictions	State, county, Municipality - purchase, donation	Reduces yield Preserves open space Land remains undeveloped as long as restriction is in effect Owner of land responsible for its maintenance	May involve expenditure	Recommended - Conservation Commission encourage gifts
Phased growth: • limit number of building permits to a specific number per year • Limit construction of units in subdivision to a percentage of the units per year	Town	No capital expenditure	Fairness issue	Not recommended  Recommended - see draft
Population Cap	Town	Reduces yield	Requires other implementing tools May involve capital expenditures	Not recommended
Moratorium • building construction • permits	Town	Stops growth until a plan can be developed	Temporary	Not recommended (Crisis does not exist)
Reduced assessment for farmland and conservation land	Taxing authority	No capital expenditure	Reduces tax yield	Defer until budget complete
Impact fees	Town	No capital expenditure	Increases development costs	Recommended
Connection fees	Town - Water Department	No capital expenditure	Increases development costs	Recommended - ongoing
Strict enforcement of all local regulations	Town	No capital expenditure	Administrative costs	Recommended - ongoing

## APPENDIX B

### PERFORMANCE STANDARDS - DRAFT

#### 7.0. CONDITIONS FOR USE

#### 7.1. Performance Standards

##### 7.1.1. Administration and Interpretation

7.1.1.1. All proposed uses of buildings, lots or premises within any District after the passage of this ordinance shall conform to the following:

a.) The applicant, at his own expense, shall furnish evidence sufficient to satisfy the Inspector of Buildings that the proposed use of the building or premises will not produce any nuisances beyond the lot lines as measured by the performance standards listed below or as existing in comparable operations allowed in the District.

b.) Any nuisance produced in excess of the standards permitted below or any other nuisance found after public hearing to be excessive shall be reduced to acceptable standards or discontinued.

##### 7.1.2. Building Construction

7.1.2.1. All buildings shall be of construction prescribed in the State Building Code. No building permit shall be granted unless the application for such permit is filed in accord with the Building Code.

##### 7.1.3. Air Pollutants

7.1.3.1. Except as is herein provided, all use and conditions of land, buildings and structures shall be in conformance with the Regulations 310 CMR 6.00-8.00 of the Environmental Department Quality Engineering, Commonwealth of Massachusetts, December 31, 1981 and amendments thereto.

##### 7.1.4. Noise

7.1.4.1. No noise shall be in excess of sixty (60) decibels at any lot line opposite or abutting a Residential District nor in excess of ninety (90) decibels at any other line.

7.1.4.2. In a Residential District, noise shall not exceed sixty (60) decibels between the hours of 8:00 P.M. and 7:00 P.M. and, at all other times, shall not exceed sixty (60) decibels for more than twenty (20) minutes in each hour.

7.1.4.3. Noise shall be muffled so as not to become objectionable due to intermittence, beat frequency or high frequency.

- 7.1.4.4. Such sound levels shall be measured with a sound level meter and octave band analyzer approved by the United States of America Standards Institute.
- 7.1.4.5. Noise making devices which are maintained and are utilized strictly to serve as warning devices are excluded from these regulations.
- 7.1.5. Heat, Glare, Vibration and Radiation
- 7.1.5.1. No heat, glare or vibration shall be discernible without instruments from the outside of any structure, and no nuclear radiation shall be discernible from the outside of the structure with or without instruments.
- 7.1.5.2. Wind energy conversion systems, machinery and equipment shall not cause interference with radio and/or television broadcasting or reception and shall comply with the provisions of 47 CFR Part 15 (Federal Communications Commission), as exists or as may be amended.
- 7.1.6. Odor
- 7.1.6.1. Emissions from plant sites or other sources as measured at the user's property line shall not exceed the established threshold limit values for odors as outlined in T.M. Hellman and F. H. Small, Journal Air Pollution Control Association, 24 (10), 979-982, (1974); and amendments thereto added by the Manufacturing Chemists Association, Inc., Washington, D.C.
- 7.1.7. Exterior Lighting
- 7.1.7.1. No exterior lighting, other than street lighting approved by the Selectmen, shall shine on adjacent properties or towards any street.
- 7.1.7.2. Exterior illumination of buildings or grounds in Residential Districts, except as may be permitted for required parking areas, shall:
- a.) Be permitted only for non-commercial uses open to the public, such as a church or playground; and
  - b.) Shall be shown on a site plan approved by the Inspector of Buildings.
- 7.1.7.3. Any lighting shall be continuous and non-flashing.
- 7.1.8. Storage
- 7.1.8.1. All materials, supplies and equipment shall be stored in accord with the Fire Prevention Standards of the National Fire Protection Association and shall be screened from view from public ways or abutting properties.



7.1.9. Waste Disposal, Water Supply and Water Quality

7.1.9.1. Regulations of the State Department of Public Health shall be met and when required, approval shall be indicated on the approved site plan. In no case shall discharge cause the waters of the receiving body to exceed the limits assigned by the Commonwealth of Massachusetts Water Resources Commission, Division of Water Pollution Control as published and entitled "Water Quality Standards", filed with the Secretary of State on September 21, 1978, and bodies and groundwater with the Town.

7.1.10. Hazardous Materials

7.1.10.1. All hazardous materials used, created, stored, processed disposed of by processing, diluting, burying or containment, leaching or any other manner, or transported including piping in the Town of West Newbury shall be used, created, stored, processed, disposed of or transported in accord with all applicable federal, state and local regulations.

7.1.10.2. A notice for use, creation, storage, processing, disposal or transport shall be filed with the Board of Selectmen on such form as it shall require. Notification shall include, as a minimum, identification of material, the amount involved, the process, if any, the place of storage, the routes of transport, carrier and conveyance, if any. The Board may require a bond to be posted to cover any and all possible damage to persons, property and environment.

7.1.10.3. All radioactive materials, including but not limited to low level radioactive materials, used or transported in the Town of West Newbury shall in addition to the requirements in Sections 7.1.10.1. and 7.1.10.2. require a special permit to be granted by the Board of Selectmen after a public hearing subject to such conditions and limitations as it shall establish, which shall relate to but not be limited to an emergency plan, approved by the Board of Selectmen.

7.1.11. Erosion Control

7.1.11.1. Whenever the existing contours of the land are altered, the land shall be left in a usable condition, graded in a manner to prevent the erosion of soil and the alteration of the runoff of water to or from abutting properties, and shall be suitably landscaped.

7.1.12. Dish Antennae

7.1.12.1. Accessory dish antennae shall be located in the rear yard of all structures, shall be set back at least the minimum setback distance listed in the table in Section 6.2.1. from all property lines, principal buildings and accessory buildings, and shall not have a diameter greater than one-third (1/3) of the required rear yard.

7.1.13. Electrical Interference

7.1.13.1. No equipment or process shall be used which creates visual or audible interference in any radio or television receivers off the premises, or causes fluctuations in line voltage off the premises.

7.1.14. Access

7.1.14.1. All driveways cuts shall be approved by the Board of Selectmen, and all driveways except for those one (1) family dwellings shall be constructed to the same specifications as pertain to road surface and drainage as required for minor streets by the subdivision regulations of the Town of West Newbury.

7.1.15. Landscaping

7.1.15.1. All land not covered by buildings, roads, drives, walkways or recreation facilities shall be left in a natural state, cultivated, or landscaped with indigenous plantings or grass.

7.1.15.1. Where a non-residential use abuts a Residence A, B or C District, there shall be a buffer strip of at least four (4) feet planted with a tree or shrub screen shown on and approved with the site plan in accord with Section 8.2.

## APPENDIX C

### SITE PLAN - DRAFT

- 8.1.5.3. Delete in its entirety and replace with the following:
- 8.1.5.3. All site plans shall show the following for the entire site, whether or not development is to be phased, unless an item or items are waived in writing by the appropriate Board:
- 8.1.5.3.1. Location map at a scale of six hundred feet per inch, showing all streets approaching or within a reasonable proximity of the subject property.
- 8.1.5.3.2. The name and address of the owner or owners of the property shown.
- 8.1.5.3.3. A perimeter survey of the lot, indicating locations of all easements, property boundaries and bearings, known surveyor's monuments of bounds, lot area, and zoning, existing and proposed.
- 8.1.5.3.4. The use and ownership of adjacent land and the location and use of any buildings thereon within two hundred (200) feet of the boundary of the subject property.
- 8.1.5.3.5. Topographic plan indicating existing and proposed contours of the lot at two (2) foot intervals.
- 8.1.5.3.6. Unusual natural features, existing and proposed vegetation, ground culture or surface.
- 8.1.5.3.7. The floodplain elevation as described in Section 5.4. and also any lands which falls within areas covered by Chapter 130 and 131 of the General Laws.
- 8.1.5.3.8. All existing and proposed buildings, structures, parking spaces, driveways, driveway openings, access walks, loading areas and service areas and open space on the subject property.
- 8.1.5.3.9. Elevations and perspective drawings which thoroughly illustrate and define the features of the entire project,
- 8.1.5.3.10. Other structural details and cross-sections needed to describe and explain the proposal.
- 8.1.5.3.11. Proposed screening, surfacing, exterior storage, lighting, landscaping, including fences, walls, planting area and signs.
- 8.1.5.3.12. Proposed provisions for waste disposal, refuse, drainage, dust, erosion control and other utilities and their exterior appurtenances.
- 8.1.5.3.13. An Environmental Impact Statement prepared to the specifications of Schedule E of the West Newbury Planning Board Rules and Regulations Governing the Subdivision of Land.

## APPENDIX D

### BUILDABLE LAND RATIO

Revise the Table in 6.1.1. to read as follows:

<u>District in Which Located</u>	<u>Area in Square Feet (1)</u>	<u>Frontage in Feet (2)</u>	<u>Percentage of Required Land Area to be Contiguous and Buildable (1)</u>
Agricultural Conservation	304,920	200	75
Residence A	80,000	200	75
Residence B	40,000 (3)	200	60/50 (4)
Residence C	20,000 (3)	150	50
Business	(3)	100	50
Industrial	(3)	100	50

- (4) Sixty (60) percent if not serviced with Town water; fifty (50) percent if serviced with Town water.

## APPENDIX E

### SLOPE

TO: West Newbury Planning Board  
FROM: **THOMAS PLANNING SERVICES, INC.**  
RE: Development on Steep Slopes  
DATE: June 30, 1986

The Planning Board has requested information regarding a change in the definition of buildable land in the West Newbury Zoning to exclude land with slopes in excess of fifteen percent. The existing definition excludes land with a slope in excess of twenty percent. This change would result in the following impacts:

#### Positive

- Removes additional marginal land from development
- Preserves open space
- Preserves scenic areas and vistas
- Reduces erosion
- Reduces the need for extensive cut and fill
- Improves safety for individuals and property
- Consistent with accepted planning standards

#### Negative

- Effectively increases lot size requirements
- Limits the siting of structures to take advantage of scenic views

#### Mixed or Neutral Impacts

- Reduces development costs, but increases cost of land
- Restricts development

The change would be consistent with accepted planning standards, which recognize the problems and high costs associated with development on steep slopes, e.g., erosion, extensive cut and fill, and substantial drainage and foundation improvements. These standards generally do not recommend development on land with slopes greater than fifteen percent (1).

- (1) Community Builders Handbook, Urban Land Institute, Washington, D.C., 1968.  
Planning Design Criteria, DiChiara & Koppelman, Van Nostrand Reinhold Company, New York, 1969.  
Time Saver Standards for Site Planning, DiChiara and Koppelman, McGraw-Hill Book Company, New York, 1984.

The proposed change can be easily incorporated into the Zoning Bylaw. An example of wording for insertion in the Town Meeting warrant follows:

To see if the Town will vote to amend the Zoning Bylaw by deleting the phrase "twenty (20)" in footnote (1) of Section 6.1.1. and inserting in its place the phrase "fifteen (15)", or take any other action relative thereto.

# APPENDIX F

## DWELLING UNIT YIELD AT VARIOUS BUILDABLE LAND PERCENTAGES - 100 ACRES

	<u>Present Zoning</u>		<u>Possible Variations</u>			
	<u>100% Buildable Units</u>	<u>At Minimum % Buildable Units</u>	<u>Decrease Minimum % Buildable Units</u>	<u>Increase Minimum % Buildable Units</u>	<u>Moderate Level % Buildable Units</u>	
Residence A	50	25 50	15 42	75 12	50 25	
Residence B	70	40 42	20 56	60 20	50 35	
Residence C	150	50 75	25 112	60 90	50 75	

# APPENDIX G

## CONVENTIONAL DEVELOPMENT VS CLUSTER

	<u>Present Zoning - Conventional</u>			<u>Present Zoning - Cluster</u>			<u>Proposed</u>		
	Residence A	Residence B	Residence C	Residence A	Residence B	Residence C	Agricultural/Conventional Cluster	Conservation Cluster	Residence C
Minimum Parcel Size	80,000 sq. ft.	40,000 sq. ft.	20,000 sq. ft.	20 acres	10 acres	-	7 acres	20 acres	5 acres
Minimum Lot Size	80,000 sq. ft.	40,000 sq. ft.	20,000 sq. ft.	20,000 sq. ft.	15,000 sq. ft.	-	7 acres	80,000 sq. ft.	15,000 sq. ft.
Minimum Frontage	200'	200'	150'	80'	80'	-	200'	80'	50'
Unit Yield per 24 acres	12	17	36	12	17	-	2.5	12	36
Assumed Raw Land Cost Per Unit	\$100,000	\$ 70,000	\$ 37,300	\$100,000	\$ 70,600	-	\$100,000	\$100,000	\$ 33,333
Assumed Development Cost	\$ 25,000	\$ 25,000	\$ 20,000	\$ 12,000	\$ 12,000	-	\$ 25,000	\$ 12,000	\$ 10,000
Total Land Cost Per Unit	\$125,000	\$ 95,600	\$ 53,300	\$112,000	\$ 82,600	-	\$125,000	\$ 95,000	\$ 43,000
Permanent Open Space or Farmland	-	-	-	6 acres	6 acres	-	-	12 acres	12 acres

(1) Based on \$50,000 per raw acre for illustrative purposes

(2) Average \$100/linear foot of street plus soft costs for illustrative purposes



## APPENDIX H

### CLUSTER FOR AFFORDABLE HOUSING -- DRAFT

5.4.10.2. Renumber as 5.4.10.1.

6.4.2.1. Insert the following after "Residence B District":

,or five (5) acres in the Residence C District provided that certification that the development contains at least twenty-five percent (25%) low to moderate income housing for the elderly or families, as defined by the Massachusetts Executive Office of Communities and Development,

6.4.3.1. Insert after "Residence B District", the following:

,or at least five (5) acres all contained in the Residence C District

Insert new section 6.4.3.1.1. to read as follows:

6.4.3.1.1. In no case shall cluster units be developed with more than four (4) attached units in any single structure.

6.4.3.2. Delete the word "and" after "Residence B District" and insert a comma in its place. Insert the following at the end of the second sentence:

and 1.5 dwelling units per acre of usable land in the Residence C District.

6.4.3.3. Delete in its entirety and insert the following:

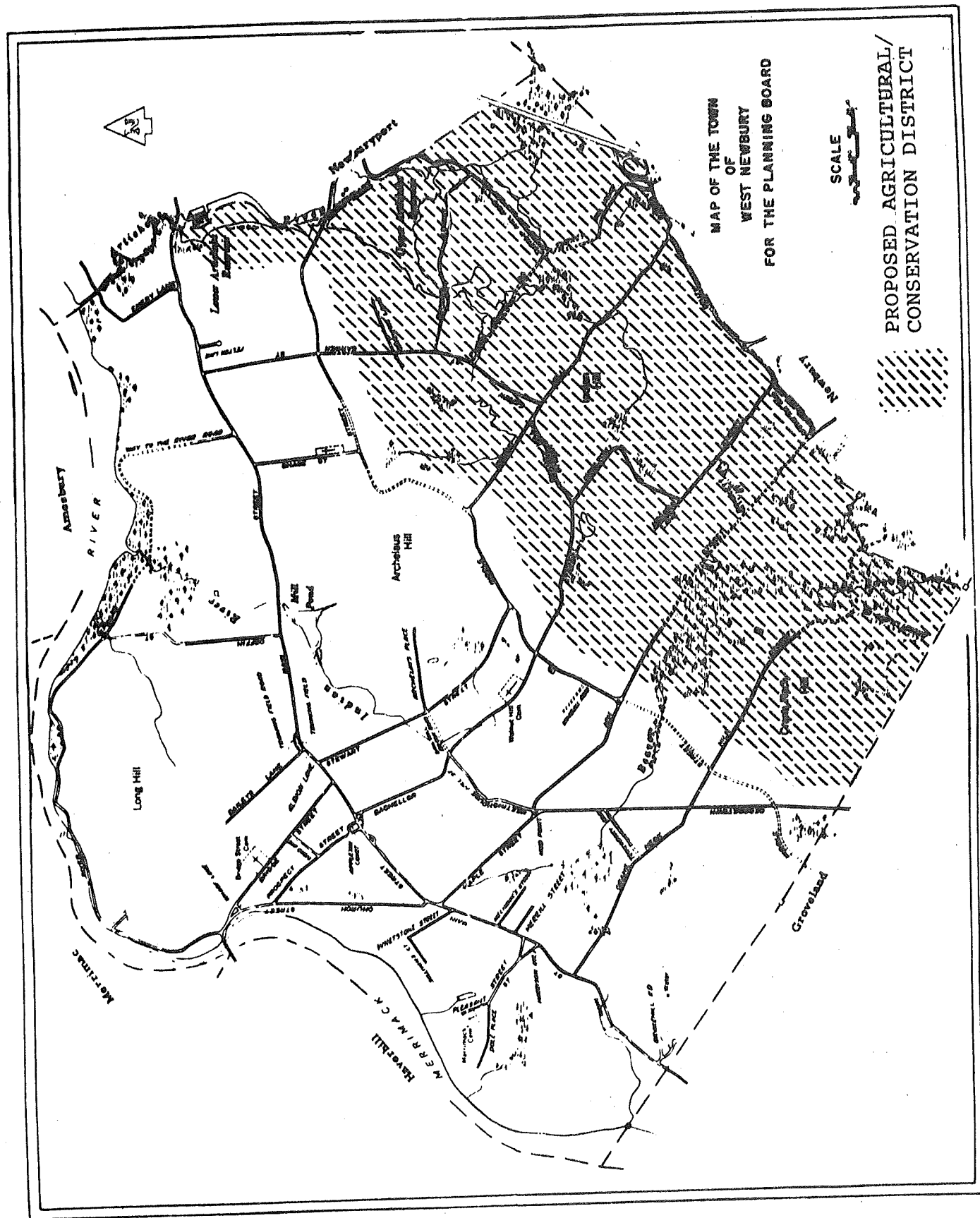
The percent of defined wetlands considered eligible for usable land for purposes of this calculation shall be in conformance with the following:

	<u>Average Lot Size</u>	<u>Non-Buildable</u>	<u>Buildable</u>
Residence A	80,000 sq. ft.	(10) percent	(90) percent
Residence B	40,000 sq. ft.	(15) percent	(85) percent
Residence C	20,000 sq. ft.	(20) percent	(80) percent
Business		(20) percent	(80) percent

In no instance shall any portion of the minimum building lot area contain seasonal high surface water from an adjacent river, pond or swamp or other permanent body of water land or be contained in Flood Plain District.

6.4.3.5.1. Insert the following in the table:

<u>District</u>	<u>Average Lot Size</u>	<u>Minimum Lot Size</u>	<u>% Which May Be Less Than Average</u>
Residence C	15,000	10,000	40



## APPENDIX I

### AGRICULTURAL/CONSERVATION DISTRICT - DRAFT

Add:

- 5.1.1.3. The Agricultural/Conservation District is intended to preserve agricultural and environmentally sensitive land, the rural character of the Town, and result in preservation of ground water resources.

Add a new Section 5.2. and renumber accordingly:

#### 5.2. Agricultural/Conservation District

- 5.2.1. Permitted uses in the Agricultural/Conservation District, in addition to the uses permitted in all districts (Section 4.3.).
- 5.2.1.1. One (1) family dwelling.
- 5.2.1.2. Agriculture, horticulture, floriculture and viticulture.
- 5.2.1.2. Open space.
- 5.2.1.3. Conservation areas for water, plants and wildlife, and dams necessary for achieving this purpose.
- 5.2.2. Uses permitted in the Agricultural/Conservation District on a special permit granted by the Planning Board subject to appropriate conditions which are deemed necessary to protect the neighborhood or the Town in accord with the provisions of Section 8.1. and in further subject to the provisions of Section 6.4.
- 5.2.2.1. One (1) family dwelling at a density no greater than one-half (1/2) unit for each acre of buildable land, and further provided that:
- 5.2.2.1.1. Residential dwelling units shall be developed on a maximum of fifty (50) percent of the buildable land within the parcel.
- 5.2.2.1.2. A minimum of fifty (50) percent of the land within the parcel shall be permanently designated in a covenant filed with the Planning Board as rural conservation or agriculture.
- 5.2.2.1.3. The selection of land within the parcel to be designated as rural conservation or agriculture shall be made by the applicant and shall be subject to the approval of the Planning Board based on the criteria in Section 6.4., and the following criteria:
- (a) preservation of existing farms;
  - (b) appropriateness of land for agricultural use;

- (c) preservation of environmentally sensitive lands;
  - (d) location and availability of roads, utilities and other services;
  - (e) location of other rural agricultural land or rural conservation land;
  - (f) location of other development sites;
  - (g) preservation of ground water and elimination of surface runoff.
- 5.2.2.1.4. The rural conservation land is held in private ownership or, if proposed for public ownership, is dedicated to the Town of West Newbury.
- 5.2.2.1.5. Land designated as rural conservation shall be limited to the following uses:
- (a) agriculture, to include the growing of crops, grazing, and accessory uses limited to
    - 1.) buildings in accord with Section 6.3.
  - (b) passive non-commercial recreation area;
  - (c) open space.

Insert in Table in 6.1.1. the following:

District in Which Located	Area in Square Feet(1)	Frontage in Feet(2)	Percent of Required Land Area to be Con- tiguous and Buildable(1)
Agricultural/ Conservation	304,920	200	50

Insert new Section 6.3.2.:

- 6.3.2. Barns or accessory farm buildings used for poultry breeding or agricultural research shall not be more than thirty (30) feet or two (2) stories in height, whichever is less.

Insert in 6.4.2.1. after "Residence A District", the following:

or Agricultural/Conservation District,

Insert in 6.4.3.1. after "Residence A District", the following:

or Agricultural/Conservation District,

Insert the following at the beginning of Section 6.4.3.4.:

Except as provided in Sections 5.2.1.1. through 5.2.1.5.,

Insert in Table in 6.4.3.5.1., the following:

District	Average Lot Size	Minimum Lot Size	% Which May Be Less Than Average
Agricultural/ Conservation	80,000	40,000	50

## APPENDIX J

### ACCESSORY APARTMENTS

Delete 5.1.3.6.1. in its entirety and renumber accordingly.

Delete present Section 5.1.3.6.2. (renumbered Section 5.1.3.6.1.) and insert the following in its place:

5.1.3.6.2. The lot contains at least two times the required lot area for the District in which it is located.

Insert the following in present section 5.1.3.6.3. (renumbered Section 5.1.3.6.2.) after "structures":

or impervious surfaces.

Add a new Section 5.1.3.6.13. to read as follows:

5.1.3.6.13. Before approval of the special permit, the applicant shall receive approval of the sewage disposal system from the Board of Health.

## APPENDIX K

### CONGREGATE/SHARED HOUSING - DRAFT

Insert new Section 2.1.46. and renumber accordingly. The new Section 2.1.46. is to read as follows:

- 2.1.46. Shared Elderly Housing
- See Congregate Housing.

Delete "or congregate housing for the elderly" in Section 5.1.3.8.

Insert new Section 5.1.3.9. and renumber accordingly. The new Section 5.1.3.9. is to read as follows:

- 5.1.3.9. Congregate housing for the elderly and shared elderly housing providing that:
- 5.1.3.9.1. In addition to the requirements of Section 6.1., the lot shall contain at least one-half (1/2) again the required lot area for the District in which it is located.
  - 5.1.3.9.2. There shall be no more than twelve (12) persons per unit and no more than two (2) persons per bedroom.
  - 5.1.3.9.3. All required licenses and permits from the Commonwealth and the Board of Health have been obtained.
  - 5.1.3.9.4. The use is served by municipal water.
  - 5.1.3.9.5. Off-street parking is provided in the side or rear yards.
  - 5.1.3.9.6. Off-street loading, if any, is in the rear of the structure.



## APPENDIX L

### QUADRUPLICES - DRAFT

Insert a new Section 5.1.4. to read as follows:

- 5.1.4. Uses permitted in the Residence B and C Districts on a Special Permit granted by the Planning Board subject to appropriate conditions where such are deemed necessary to protect the neighborhood or the Town in accord with the provisions of Section 8.1.
- 5.1.4.1. Dwelling containing four (4) units, provided that:
  - 5.1.4.1.1. The lot shall have at least four (4) times the minimum lot area for the District in which it is located.
  - 5.1.4.1.2. The units are serviced with Town water.
  - 5.1.4.1.3. No such structure shall be constructed or placed on and shown as Medisapristis, Scarboro, Ipswich or Westbrook Soils, or on soils listed in Table 16 as having frequent flooding and/or depth to water table of less than six (6) feet, and shown on a map or maps contained in the "Soil Survey of Essex County, Northern Part", U.S. Department of Agriculture, Soil Conservation Service, February 1981, on file with the Planning Board and the Town Clerk.
  - 5.1.4.1.4. The structure shall be designed to conform to the natural terrain.
  - 5.1.4.1.5. The structure shall be of an architectural style which is compatible with the prevailing style in the area in which it is located.
  - 5.1.4.1.6. The percolation rate for the parcel on which the structure is located shall be less than fifteen (15) minutes per inch.
  - 5.1.4.1.7. All parking shall be located to the rear of the front setback line.

## APPENDIX M

### PORK CHOP LOTS - DRAFT

Insert the following after "Section 6.4." in 6.1.1.:

"and the provisions of Sections 6.1.2. and 6.1.3.,"

Add a new Section 6.1.2. and 6.1.3. to read as follows:

- 6.1.2. Subject to approval of a site plan by the Planning Board in accord with Section 8.2., a principal building may be erected on an existing lot in the Residence A and Residence B Districts with less than the required minimum lot frontage specified in Section 6.1.1., provided that:
  - 6.1.2.1. Said lot was in existence prior to [Note: Insert effective date of this Section].
  - 6.1.2.2. There is no other contiguous lot held in the same ownership which, if combined with the lot in question, would result in a frontage equal to or in excess of the minimum lot frontage specified in Section 6.1.1. .
  - 6.1.2.3. The area of said lot is at least two (2) times the minimum lot size specified in Section 6.1.1.
  - 6.1.2.4. The lot has a minimum continuous street frontage of not less than one hundred (100) feet.
  - 6.1.2.5. The lot is in compliance with Section 6.2.2..
  - 6.1.2.6. In the opinion of the Planning Board, the lot is so located that it does not block future extension of a dead-end street, does not interfere with the use and enjoyment of abutting lots, and does not adversely affect. the neighborhood.
  - 6.1.2.7. In the opinion of the Planning Board, the lot has adequate access to the structure from its legal frontage.
  - 6.1.2.8. That portion of the lot providing access to the building site (the access strip), does not provide access to more than one (1) lot and/or principal dwelling.
  - 6.1.2.9. Notwithstanding any other provisions, the lot shall not be hereafter subdivided, reduced in area, or changed in size or shape.
- 6.1.3. Subject to the granting of a Special Permit by the Planning Board in accord with Section 8.1., a principal building may be erected on a lot in the Residence A and Residence B Districts with less than the required minimum lot frontage specified in Section 6.1.1., provided that:
  - 6.1.3.1. The lot complies with the provisions of Sections 6.1.2.2 through 6.1.2.9.

## APPENDIX N

TO: West Newbury Planning Board  
FROM: THOMAS PLANNING SERVICES, INC.  
RE: Frontage on a cul-de-sac  
DATE: August 19, 1986

In accord with Section 6.1.1. of the Zoning Bylaw, frontage on a cul-de-sac is measured from side lot line to side lot line along the tangent of the curve. This measurement is confusing and difficult to calculate. The Board is considering amending the Zoning to permit frontage to be measured along the centerline of the street between the points where the side lot lines, extended, meet the centerline. This method of measurement does not appear to be equitable. Extension of the property line to the centerline would result in a smaller figure for frontage for parcels on the outside of the cul-de-sac (see Figure 1 below).

A more equitable measurement would be to measure frontage along the centerline between the side lot lines extended to a point at a right angle to the tangent of the centerline. However, this method would involve determining the tangent and would defeat the intent of the amendment, i.e., simplification of the measurement.

It is recommended that frontage be measured along the property line between the side lot lines. See Figure 2 below. The Zoning can be amended to reflect this change by deleting "except on a cul-de-sac where frontage shall be measured from side lot line to side lot line along the tangent of the curve" in footnote (2) in Section 6.1.1.

FIGURE 1

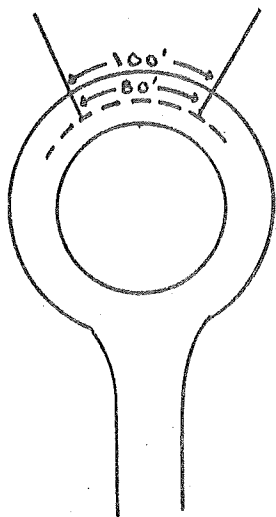
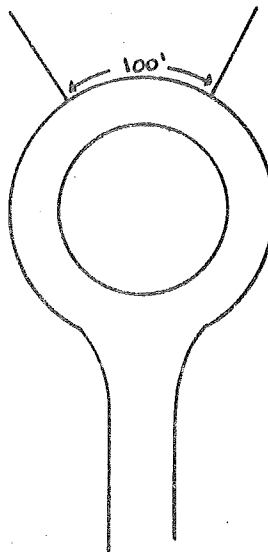


FIGURE 2



## APPENDIX N

### FRONTAGE - DRAFT

Delete the first sentence in footnote (2) in Section 6.1.1. and insert the following:

Frontage shall be contiguous and shall be measured along the centerline of the right of way between the points of intersection of the side lot lines extended at a right angle to the centerline. Frontage shall only be measured between the points where the lot depth exceeds the minimum front yard setback.

The revised foot note is to read as follows:

- (2) Frontage shall be contiguous and shall be measured along the centerline of the right of way between the points of intersection of the side lot lines extended at a right angle to the centerline. Frontage shall only be measured between the points where the lot depth exceeds the minimum front yard setback. Frontage must provide access to the lot from the right-of-way counted for frontage unless otherwise approved by the Planning Board on a Definitive Plan submitted in accord with Chapter 41, General Laws or approved by the Planning Board in the same manner as a Definitive Plan.

CAPITAL IMPROVEMENT PROGRAM - WEST NEWBURY, MASSACHUSETTS

FY87-FY92

# PROPOSED PROJECT REQUEST

Dept. \_\_\_\_\_  
Date \_\_\_\_\_

1. Title and category: \_\_\_\_\_
2. Location: \_\_\_\_\_
3. Justification for and priority of project: \_\_\_\_\_
4. Project objective: \_\_\_\_\_
5. Project description (include area of land and/or building, type of facility, proposed use, etc.): \_\_\_\_\_
6. Estimated useful life (years): \_\_\_\_\_
7. Will project remove taxable property from tax list?  
Yes      NO      Land \$            Buildings \$
8. Relation to other projects within department's long-range program: \_\_\_\_\_
9. Relation to other projects planned or ongoing by other communities, county, and/or state: \_\_\_\_\_
10. Remarks: \_\_\_\_\_
11. \_\_\_\_\_

(Prepare 3 copies: submit 2 and retain 1)

11. Estimated costs:  
 planning and design  
 Land acquisition  
 Site preparation (including demolition)  
 Construction  
 Equipment

TOTAL

	1st	2nd	3rd	4th	5th	6th	Following
Total	FY87	FY88	FY89	FY90	FY91	FY92	Years
City							
State							
Federal							
Other							

**Suggested financing (explain source of funds) :**

Local (tax rate, bond issue, betterment, other)

State (specify program)

Federal (specify program)

Other 2430 (4.13%)

14. Anticipated operating costs of project, if any (these costs should not be included within Capital Improvement Program request):

## Personnel

Operating costs

Equipment not in CIP

**TOTAL**

[illegible]

## APPENDIX P

### Impact Fees

During the examination and discussion of growth scenarios and strategies, the concept of impact fees on the Towns' new residential development were explored. The following statement outlines both the spirit and manner in which the fees would be developed and assessed.

It must be made very clear that the concept proposed is not intended to raise revenues for the expansion of Town services or facilities but rather to insure that the existing levels of same are not diminished. The Courts have almost unanimously held that the imposition of fees to finance expansion is a tax, but that fees related to actual costs are not. The fees are placed in a fund to be used for capital replacement or costs related to new development. The concept proposes the exploration of impact fees as a device to carry out the growth policy and achieve enumerated goals without denigration of the current levels of services, facilities and associated amenity, and preserving the ambience and existing Town character. The concept of adding up to sixty five units per year with equivalent availability, quality and standards as now exist is an attempt to regulate the rate and quality of Town growth without denegrating existing standards or levels of services.

An analysis of past growth in the Town and costs related to each added dwelling unit have been documented where possible. A suggested list of items that should be considered for impact fees, and formulae for determining the factors to be used in the establishment of such fees is examined in the following discussion.

### Capital Program

The courts have held that the use of impact fees must be based on some logical or rational allocation of benefits to those who have paid the fees. The most reasonable and effective use of these funds is to finance capital costs identified by the establishment of a long range capital program including costs for enumerated fee components. The Town should create its long range capital program based on the Town plan. Thus it becomes in fact an implementing device to carry out growth policies of the plan.

The development of a detailed and long range five to six year capital program with annual components is an additional task requiring substantial discussion and local input before adoption of impact fees can be realistically attempted.

### Impact Fee Determination

Because of the questions of fairness and equity in establishing the basis of impact fees, a rigorous methodology should be used in the initial establishment of the fee structure as well as establishing some method to adjust reflected changing dollar values used as its basis. A methodology proposed would be to establish the costs from existing Town records or to use a professional appraisal or valuation to set the basis for establishing the rates in the following categories.

Sample formula based on West Newbury expenses are:

Schools: (Average number of pupils per dwelling unit @ .75\*) x (cost of classroom space @ \$115 per square foot) x (average square feet per pupil @ 60 square feet) = assessment per new dwelling unit.

#### Water

Compute cost of additional pipe and related appurtenances for each dwelling unit. Example: Number of new dwelling units 1984-1985 divided by linear feet of pipe and appurtenances added to system in dollars per dwelling unit cost of additions to system in year.

Formula: (Dwelling units) divided by (Costs of linear feet of pipe and appurtenances) = water assessment per new dwelling unit.

#### Library

Library costs should be based on the number of volumes in the library and the determination of the replacement value of the library structure. The formula for library assessment follows.

Formula: (Dwelling units) divided by (number of volumes; 19,680 in library @ \_\_\_\_\_ dollars per volume) + (value of library structure) = assessment per new dwelling unit.

#### Roads

A charge should be levied against each new dwelling unit based on cost of one-half of the the frontage in linear feet times the cost of constructing the street including drainage, utility poles and signage.

Formula: (One-half street frontage) x (cost of street per linear foot) = road assessment per dwelling unit.

#### Fire

Cost of replacement of current apparatus, hydrants, etc. via appraisal or other value establishment method divided by number of dwelling units equals assessment per dwelling unit.

Formula: (Appraised costs of fire apparatus and related equipment) divided by (total number of dwelling units) = assesment per new dwelling unit.

#### Updating Methodology

A method of maintaining and updating the value factors needs to be determined. One method that may merit consideration would be an annual adjustment based on the Engineering News Record Construction Cost Index, or on some agreed upon inflation or deflation factor to insure the currency of the formula to maintain equity. On a five year or some other recurring frequency the dollar base should be adjusted to reflect changes that may have accrued during the period of time the formula has been in place.

\* Based on average number of students per dwelling unit in West Newbury in 1980.