

**MASSACHUSETTS DEPARTMENT OF
HOUSING AND COMMUNITY DEVELOPMENT**

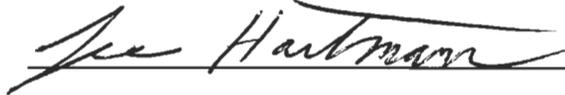
**SMART GROWTH ZONING OVERLAY DISTRICT PROGRAM (C. 40R)
APPLICATION FORM**

Municipality: Town of Plymouth
 Name of District (optional): Cordage Park Smart Growth District

Municipal contact person: Lee Hartmann
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The undersigned representative of the Town of Plymouth hereby certifies that all information in this application is accurate and complete as of the date hereof.

Signed: _____



Name, title: Lee Hartmann, Director of Planning and Development
 Date: January 31, 2006

Summary Information

Category of Eligible Location	
Near Transit Station	Yes
Area of Concentrated Development – City/Town Center, Existing Commercial District	Yes
Area of Concentrated Development – Existing Rural Village District	N/A
Highly Suitable Location	Yes

	Acres	% of Municipality
Size of Proposed District	66.3	<~0.2% ¹
Aggregate size of all districts	Same as above	

¹ According to the DHCD Community Profile, Plymouth has a total area of 133.99 sq. mi., and total land area of 96.48 sq. mi. (= 61,747.2 ac.). (Note: 2004 Master Plan lists 61,592 total acres).

Build-out	
Total Existing Zoned Units	0 ²
Total Future Zoned Units	671
Total Incentive Units	671

	Acres	% of District
Developable Land	0	0
Underutilized Land	33.6	50.7
Substantially Developed Land	27.5	41.5
Historic District(s)	0	0
Existing Open Space	0	0
Future Open Space	0	0
Rights-of-way of streets, ways, and transit lines.	1.1	1.7
Land currently in use for governmental functions	0	0
Environmentally constrained land	0	0
Other non-developable land	4.1	6.2

As-of-right densities (units/acre)	Smart Growth Zoning	Underlying Zoning
1-family	8	0
2/3-family	12	0
Multi-family	20	0
Substantially Developed subdistrict(s)	N/A	N/A

Affordability	Number of Future Zoned Units	% of total Future Zoned Units
Affordable 1-family Units		
Affordable 2/3-family Units		

² Per the Town of Plymouth Zoning Bylaw at Sec. 205-53. Light Industrial/Waterfront (LI/WF), residential development is allowable by special permit only.

Affordable Multi-family Units		
Total Affordable Units	134	20%

Housing Diversity		
One and Two Bedroom Units		
3+ Bedroom units (total) ³		≥10%
3+ Bedroom units (Affordable) ⁴		≥20%

	Yes	No
Mixed-use development allowed	X	
Design Standards	X	
Planned Infrastructure Upgrades ⁵		X

³ Per the proposed zoning at Sec. 205-73(J)(2), "At least ten percent (10%) of the Dwelling Units constructed within the Cordage Park Smart Growth District shall have three or more bedrooms. Applicants for residential Developments that do not include the required percentage of three or more bedrooms shall be required to demonstrate to the satisfaction of the Planning Board that a number of units with three or more bedrooms at least equal to ten percent (10%) of the proposed total number of units in the Development has been permitted in another Development within the Cordage Park Smart Growth District, and that said units exceeded the minimum required percentage of units with three or more bedrooms within said Development, such that the aggregate percentage of units with three or more bedrooms within all residential developments in the Cordage Park Smart Growth District shall not be less than ten percent (10%)."

⁴ Per the proposed zoning at Sec. 205-73(K)(5)(a), "The number of bedrooms per unit in the Affordable Units shall be in the same proportion as the number of bedrooms per unit in the market rate units except that an additional number of Affordable Units may be provided such that a minimum of twenty percent (20%) of all Affordable Units shall include three or more bedrooms."

⁵ Although no Planned Infrastructure upgrades are proposed as discussed at 760 CMR 59.03(1)(i), the Town of Plymouth may require as a condition of project approval mitigation that may include practicable infrastructure improvements as may be necessary to mitigate any extraordinary adverse impacts of the Development on nearby properties [see proposed bylaw at Sec. 205-73(L)(6)]. Project mitigation as may be necessary subject to the provisions of M.G.L. c.40R and 760 CMR 59.00 inclusive is the subject of ongoing discussions between Cordage LLC and the Town of Plymouth.

1. ELIGIBLE LOCATION

1.A Locator Map.

Please find attached Map 1.A Locator Map (1) and Map 1.B Locator Map (2) for the Town of Plymouth.

1.B **Category.** What is the category of Eligible Location for the District:

(a) Near transit station:

Yes. The MBTA Old Colony Line (Plymouth Branch) extends through the proposed Cordage Park Smart Growth District. The Plymouth Commuter Rail Station is located at the north end of the District.

(b) Area of Concentrated Development – City / Town Center or Existing Commercial District:

Yes. The proposed Cordage Park Smart Growth District meets the following criteria as a Town Center/Existing Commercial District:

- The proposed District is currently served by municipal sewer;
- At least fifty percent of the total land area within the proposed District is either Substantially Developed Land or Underutilized Land; and
- The primary current use of land and buildings in the proposed District is commercial.

(c) Area of Concentrated Development – Existing Rural Village District:

N/A

(d) Highly Suitable Location:

Yes. The land within the proposed Cordage Park Smart Growth District has been identified as an appropriate locus for high-density and mixed-use development in multiple public plans, including in the 2004 update to the Plymouth Master Plan and in the Town of Plymouth Housing Plan. The proposed district will also enable the alternative development patterns of Transportation Oriented Development (TOD), Traditional Neighborhood Development (TND), and Compact, Mixed-Use Development identified and encouraged in the *Old Colony Planning Council Regional Land Use and Transportation Policy Plan*, dated October 20, 2000.

1.C **District Near Transit Station.** If the District is near to a transit station, identify the station:

Plymouth MBTA Station, on Old Colony Line (Plymouth Branch)

1.D **City / Town Center or Existing Commercial District.** If the District is within an Area of Concentrated Development, is the area currently served (yes no) or scheduled to be served within five years of the application (yes no) by public sewer(s) and/or private sewage treatment plant(s)?

The land within the proposed district is currently served by municipal sewer.

Describe briefly the primary current use and zoning (*as shown on the Underlying Zoning, see Attachments 4-3 & 4-4*) of land and buildings in the District:

Current Use of Land and Buildings in District

“The project site is the location of the former Plymouth Cordage Company ropeworks, which from 1824 until 1964 made rope and rigging for the maritime trade. For a period, Plymouth Cordage was the major supplier of rope to the United States Navy. The site is partly upland, and partly filled tideland. The MBTA Old Colony Line (Plymouth Branch) extends through the site, terminating at the south end of the site.

“The site hosts an accretion of buildings of various sizes, manufacturing and processing buildings. These buildings include a picker house, five warehouses, one central mill building with associated coal house, boiler room, and engine room. The buildings are generally structurally sound, but are in various states of dilapidation and abandonment. They represent an extraordinary unrealized opportunity for redevelopment and revitalization of one of Massachusetts’ most significant waterfront sites.

“Portions of the Plymouth Cordage Company were sold or developed by others in the period 1983-2000. From 1983 through 1989, 350,000 s.f. of existing space was renovated and tenanted for users including specialty retail, office development, and a branch of the Braintree Rehabilitation Hospital, on upland portions of former Plymouth Cordage Company property west of the tracks. In 1995, Wal*Mart, Inc. obtained approvals for construction of a 122,000 s.f. retail store and parking on former Plymouth Cordage Company land west of the tracks and north of the main access road.”⁶

Since that time, the Wal*Mart store has been abandoned, and is currently vacant. However, the site retains a healthy mix of office and institutional users in the renovated mill and industrial buildings.

⁶ *Source:* Excerpted from Cordage Development LLC. Cordage Seaside – Environmental Notification Form submitted in accordance with the provisions of the Massachusetts Environmental Policy Act, 301 CMR 11.00. April 31, 2001.

Current Zoning in District

The land within the proposed Cordage Park Smart Growth District is located in the Light Industrial/Waterfront Zone (LI/WF), described in Sec. 205-53 of the Zoning Bylaw of the Town of Plymouth (attached). This zoning district, adopted in 1980 and most recently amended in 1988, is summarized below.

The LI/WF zoning district encourages development of certain waterfront-related uses and allows for a mix of uses, including low intensity commercial uses, residential uses, and compatible industrial uses. The bylaw allows light manufacturing, light industrial, office and marine-related uses As-of-right, while other commercial and retail uses, including restaurants, hotel/motel and specialty shopping facilities are subject to special permit review and compliance with environmental design conditions. Multi-family and single-family attached residential uses are also allowable by special permit and must meet environmental design conditions.

Dimensional requirements in the LI/WF zoning district include a 20,000 s.f. minimum lot size; 10 foot minimum front, side and rear setbacks; maximum building height of 3 stories or 35 feet; maximum lot coverage of 50%; and maximum Floor Area Ratio of 1.0. The zoning also establishes a maximum building floor area equal to 50% of the total gross floor area of all structures which existed at the time of adoption of the bylaw. In the LI/WF zoning district, special permit residential uses are limited to a maximum of 30% of the total building floor area in the district.

Is the District within land designated as a commercial center under M.G.L. c.40, § 60 (yes ___ no X)?

Complete the following table for the District (all calculations to exclude open water bodies):

Total land area of District	66.2 acres
Substantially Developed Land	27.5 acres
Underutilized Land	33.6 acres
Substantially Developed + Underutilized Land as percentage of District	-92%

1.E Existing Rural Village District. If the District is within an Area of Concentrated Development, but it is not currently served or scheduled to be served within five years of the application by public sewer(s) and/or private sewage treatment plant(s), does it contain two or more of a town hall, post office, public library, public school, or public safety facility (yes ___ no ___)?

N/A

If yes, identify the facilities that it contains:

N/A

Does it contain an existing village retail district (yes ___ no X)?

If yes, describe briefly its characteristics:

N/A

Complete the following table for the District (all calculations to exclude open water bodies):

N/A

Total land area of District	___ acres
Substantially Developed Land	___ acres
Underutilized Land	___ acres
Substantially Developed + Underutilized Land as percentage of District	___%

1.F Adjacent Areas. Does the District contain an Adjacent Area (yes _ no X)?

If yes, identify and describe briefly the destination of frequent pedestrian use:

N/A

Is the Adjacent Area currently served (yes ___ no ___) or planned to be served within five years of the application (yes ___ no ___) by public sewer(s) and/or private sewage treatment plant(s) and other Infrastructure?

N/A

1.G Highly Suitable Locations. Has the District been identified as an appropriate locus for high-density housing or mixed-use development in a local or regional plan document (see instructions for more details) (yes X no ___)? If yes, attach a copy of the plan as Attachment 1-3 and identify and describe briefly the section(s):

North Plymouth, including Cordage Park, was identified as an Economic Opportunity Center in the October 2004 update to the Town's Master Plan: *Growing Smarter in Plymouth's Fifth Century: A Strategic Action Plan for the Town of Plymouth, MA*. Specifically, this plan identified Cordage Park as a suitable location for "new residential and business development in mixed-use, walkable environments; high design standards for attractive places to live and work; new property tax revenue; and receiving areas for future TDRs."⁷ The plan anticipated "transit oriented housing in a mixed use Cordage Park redevelopment project,"⁸ and identified specific strategies to encourage this investment. The zoning design standards proposed within this smart growth zoning district advance several of the policy recommendations outlined in the October 2004 Master Plan.

The proposed district will also enable the alternative development patterns of Transportation Oriented Development (TOD), Traditional Neighborhood Development (TND), and Compact, Mixed-Use Development identified and encouraged in the *Old Colony Planning Council Regional Land Use and Transportation Policy Plan*, dated October 20, 2000.

Does the District include land designated as a development district under M.G.L. c.40Q (yes ___ no X)?

If no to both previous questions, the Municipality must provide satisfactory evidence, in a statement to be attached as Attachment 1-5, that designation of the area is consistent with the statutory goals for smart growth set forth in M.G.L. c.40R §1 (see instructions for further details).

N/A

⁷ *Growing Smarter in Plymouth's Fifth Century: A Strategic Action Plan for the Town of Plymouth, MA*. October 2004. Pg. 10.

⁸ *Growing Smarter in Plymouth's Fifth Century: A Strategic Action Plan for the Town of Plymouth, MA*. October 2004. Pg. 15.

2. LAND AREA

2.A **Total Land Area of District.** Complete the following table for the District (all calculations to exclude open water bodies):

Total land area of District	66.3 acres
Total land area of Municipality	61,747.2 acres
Land area of District as percentage of Municipality	-0.2%

If the land area of the District exceeds 15% of the Municipality, has the Department has previously approved an area waiver (yes ___ no ___)?

N/A

2.B **Aggregate Land Area of Districts.** Are there any other approved or proposed Districts within the Municipality (yes ___ no X)?

3. DEVELOPABLE LAND

3.A Developable Land Plan.

Please find attached the Developable Land Plan for the Cordage Park Smart Growth District as Attachment 3-1. The Development Land Plan is accompanied by a Developable Land spreadsheet, included as Attachment 3-2.

Attach an aerial photograph of the District (optional) as Attachment 3-2.

Map 1.A Locator Map (1) and Map 1.B Locator Map (2) for the Town of Plymouth, attached, include aerial photographs of the Cordage Park Smart Growth District.

3.B Complete the following table for the District (all calculations to exclude open water bodies).

(Note that the total may add up to more than 100%, because some categories overlap.)

	Acres	% of District
1. Developable Land	0	0
1A. Underutilized Land	33.6	50.7
2. Substantially Developed Land	27.5	41.5
2A. Historic District(s)	0	0

	Acres	% of District
3. Existing Open Space	0	0
4. Future Open Space	0	0
5. Rights-of-way of existing public streets, ways, and transit lines.	1.1	1.7
6. Land currently in use for governmental functions	0	0
7. Environmentally constrained land	0	0
8. Other non-developable land*	4.1	6.2

**Attach copies of any local subdivision, historic preservation, board of health, or other ordinance, by-law, or regulation that affects the As-of-right residential density as Attachment 3-3, identify the section(s), and briefly summarize how it affects the density.*

3.C Future Open Space. Is any portion of the District categorized as Future Open Space (yes ___ no X)?

If yes, describe briefly the nature of the Future Open Space, and its consistency with the current local open space plan:

N/A

If yes, complete the following table: N/A

Future Open Space:	___ acres
Developable Land Area + Future Open Space:	___ acres
Future Open Space as percentage of (Developable Land Area + Future Open Space):	___%

3.D Historic Districts. Is any portion of the District located within an existing Historic District (yes ___ no X)?

If yes, is any portion of the Historic District categorized as Developable Land (yes ___ no ___)?

N/A

4. UNDERLYING ZONING / EXISTING ZONED UNITS

4.A Existing Zoned Units Plan.

Please find attached the Existing Zoned Units Plan for the Cordage Park Smart Growth District as Attachment 4-1.

4.B Existing Zoned Units Spreadsheet.

Please find attached the Existing Zoned Units Spreadsheet as Attachment 4-2.

4.C Underlying Zoning.

Please find attached a copy of the text and map of the Town of Plymouth for the Underlying Zoning (LI/WF) applicable to the District one year prior to the date upon which this application is submitted to the Department, as Attachments 4-3 and 4-4.

4.D Existing Zoned Units. Complete the following table, based on the maximum As-of-right residential density achievable in accordance with the Underlying Zoning, in the District and any sub- district of the District:

	Maximum As-of-right residential density (units / acre)	Acres of Developable or Underutilized Land	Existing Zoned Units
[1-family sub-district(s)]	0	N/A	0
[2/3-family sub-district(s)]	0	N/A	0
[multi-family sub-district(s)]	0	N/A	0
[substantially developed sub-district(s)]	0	N/A	0
District Totals	0	33.6	0

5. SMART GROWTH ZONING / FUTURE ZONED UNITS & INCENTIVE UNITS

5.A Smart Growth Residential Density Plan.

Please find attached the Smart Growth Residential Density Plan for the Cordage Park Smart Growth District as Attachment 5-1.

5.B Smart Growth Residential Density Spreadsheet.

Please find attached the Smart Growth Residential Density Spreadsheet for the Cordage Park Smart Growth District as Attachment 5-2.

5.C Smart Growth Zoning.

Please find attached a copy of the proposed zoning text and map for the Cordage Park Smart Growth District as Attachments 5-3 and 5-4. It is anticipated that the proposed amendments to the Zoning Bylaw and the Zoning Map of the Town of Plymouth will be considered at a Special Town Meeting on May 20, 2006.

5.D Density and Incentive Units. Complete the following table, based on the maximum As-of-right residential density achievable in accordance with the Smart Growth Zoning and any other local ordinance, by-law, or regulation, in the District and any sub-district:

	Maximum As-of-right residential density (units / acre)	Acres of Developable or Underutilized Land	Future Zoned Units	Incentive Units (Future Zoned Units minus Existing Zoned Units)
[1-family sub-district(s)]				
[2/3-family sub-district(s)]				
[multi-family sub-district(s)]				
[substantially developed sub-district(s)]				
District Totals	20	33.6	671	671

The proposed bylaw does not include sub-districts, and allows each of the listed housing types, including multi-family housing at 20 units/acre, throughout the Cordage Park Smart Growth District.

If the maximum As-of-right residential density of the District or any sub-district fails to meet the minimum statutory standards, has the Department previously approved a density reduction (yes ___ no ___)?

N/A

5.E Mixed-use Development. Does the Smart Growth Zoning allow Mixed-Use Development Projects As-of-right (yes no)?

If yes, what is the minimum portion of such Mixed-use Development Projects that must be devoted to residential uses:

Per the Definitions in Sec. 205-73(C) of the proposed Bylaw, "Mixed-use Development that is allowed As-of-right shall contain "a residential Principal Use and one or more commercial, institutional or industrial Secondary Uses, provided that separate and distinct entrances are provided for residential and non-residential uses and that no more than 33% of the total gross floor area shall be used for non-residential uses."

5.F Substantially Developed Sub-districts. Does the Smart Growth Zoning contain any Substantially Developed sub-district(s) within the District (yes no)?

Although the proposed Cordage Park Smart Growth District includes substantially developed land, it is not shown as a distinct sub-district. However, Substantially Developed land and other undevelopable land has been excluded from the calculation of Future Zoned Units and Incentive Units.

If yes, state the maximum as-of-right residential densities within such sub-district(s):
_____ units/acre.

N/A

Identify and briefly describe the provisions of the Smart Growth Zoning that allow the construction of infill housing on existing vacant lots:

Although the calculation of Incentive Units and Future Zoned Units is based on the amount of Development Land within the proposed Cordage Park Smart Growth District, all parcels within the proposed District will benefit from the As-of-right zoning at the allowable densities.

Identify and briefly describe the provisions of the Smart Growth Zoning that permit additional housing units in existing residential buildings and permit additional housing units for additions or replacement of such buildings:

The land area within the proposed Cordage Park Smart Growth District does not contain any existing residential buildings or housing units.

5.G Housing Diversity. Identify and describe briefly the provisions of the Smart Growth Zoning that ensure the development of housing which is appropriate for diverse populations, including households with children, other households, individuals, households including individuals with disabilities, and the elderly:

The proposed bylaw at Sec. 205-73(J) reads as follows:

Residential composition and unit mix.

- (1) Residential composition in the Cordage Park Smart Growth District shall be comprised of a variety of housing types, and may include any of the following subject to the provisions of this Bylaw:
 - (a) Dwelling Units, Single-Family Detached.
 - (b) Dwelling Units, Duplex.
 - (c) Dwelling Units, Multi-Family.
 - (1) Multi-Family.
 - (2) Single-Family Attached.
 - (3) Patio House.
 - (4) Townhouse.
 - (d) Housing Developments in which all units are accessible to the handicapped under all applicable laws and regulations, provided that not less than twenty-five percent (25%) of the housing units in any such Development shall be Affordable Units.
 - (e) Mixed-use Development allowing for no more than 33% of the total gross floor area to be used for non-residential uses.

- (2) Unit mix. At least ten percent (10%) of the Dwelling Units constructed within the Cordage Park Smart Growth District shall have three or more bedrooms except for those designed specifically for assisted living or handicapped occupancy. Applicants for residential Developments that do not include the required percentage of three or more bedrooms shall be required to demonstrate to the satisfaction of the Planning Board that a number of units with three or more bedrooms at least equal to ten percent (10%) of the proposed total number of units in the Development has been permitted in another Development within the Cordage Park Smart Growth District, and that said units exceeded the minimum required percentage of units with three or more bedrooms within said Development, such that the aggregate percentage of units with three or more bedrooms within all residential developments in the Cordage Park Smart Growth District shall not be less than ten percent (10%).

Complete the following table for the Future Zoned Units:

Type of unit	% of total
One and Two Bedroom Units	N/A

3+ Bedroom Units	≥10%
District totals	100%

6. AFFORDABILITY

The following questions refer to the Smart Growth Zoning attached as Attachment 5-3.

6.A Project requirements Does the Smart Growth Zoning establish a threshold for Projects that are subject to the Smart Growth Zoning affordability requirement (yes no)?

If yes, what is that threshold and identify the section of the smart growth zoning containing that requirement:

N/A

Does the Smart Growth Zoning contain provisions to ensure that Projects are not segmented to evade the size threshold for Affordability (yes no)?

N/A

If yes, identify the section of the Smart Growth Zoning containing such provision and briefly describe how this provision will ensure that Projects are not segmented to evade the threshold requirement for Affordability:

N/A

6.B District-wide affordability target. Identify and describe briefly the provisions of the Smart Growth Zoning that ensure the total number of Affordable units constructed in the District equals not less than twenty percent (20%) of the total number of all units constructed within Projects in the District:

The language in the proposed bylaw at Sec. 205-73(K)(1), requires that “Twenty percent (20%) of all housing units constructed in the Smart Growth District on a lot or lots in common ownership shall be Affordable Units. In the event housing constructed in the Smart Growth District shall include Developments limited in occupancy for the elderly or persons with disabilities, twenty-five percent (25%) of the housing units in such Developments shall be Affordable Units.”

Describe briefly how such provisions will not "Unduly Restrict"* opportunities for development within the proposed District under the Smart Growth Zoning:

The requirement for 20% affordability within the Cordage Park Smart Growth District is necessary to satisfy the statutory and regulatory requirements of Ch. 40R Smart Growth Zoning.

6.C Eligible households. Identify the section(s) of the Smart Growth Zoning that ensure the affordable housing restriction on an Affordable unit will be occupied by an eligible household paying an affordable rent or affordable purchase price during the term of the restriction:

Sec. 205-73(C) Definitions and Sec. 205-73(K) inclusive, especially Sec. 205-73(K)(3).

Identify the section(s) of the Smart Growth Zoning that specify the method by which such affordable rents or affordable purchase prices will be computed:

Sec. 205-73(C) Definitions and Sec. 205-73(K) inclusive, especially Sec. 205-73(K)(3).

Does the Smart Growth Zoning specify decreased maximum income limits of eligible households (below 80 percent of the area-wide median income as determined by HUD) (yes ___ no X)?

If yes, describe how such decrease will not "Unduly Restrict"* opportunities for development within the proposed District under the Smart Growth Zoning:

N/A

6.D Monitoring and enforcement. Identify the section or sections of the Smart Growth Zoning that ensure that there will be effective monitoring and enforcement of the affordable housing restriction during the term of Affordability:

Sec. 205-73(K) inclusive, especially Sec. 205-73(K)(7).

7. PLAN REVIEW

The following questions refer to the Smart Growth Zoning attached as Attachment 5-3, or the Design Standards attached as Attachment 7-1.

7.A Categories of Project; Approving Authority. Does the Smart Growth Zoning provide for Plan Review of Projects within the District (yes X no ___)?

If yes, who is the Approving Authority:

* See Part II.6 of the Instructions for the definition of "Unduly Restrict."

The Planning Board of the Town of Plymouth

7.B **Design Standards.** Does the Smart Growth Zoning contain Design Standards (yes no)?

If no, have separate Design Standards been promulgated or drafted (yes no)?

Sec. 205-73(H) of the proposed Bylaw reads as follows: **“Design standards.** In addition to the standards set forth in this Bylaw, the physical character of Developments within the Cordage Park Smart Growth District shall comply with Design Standards in order to ensure that new development shall be of high quality, and shall be compatible with the character of building types, streetscapes, and other community features traditionally found in Cordage Park and the North Plymouth Village Service Area. The applicable design standards are included in the attachment entitled: Design Standards for the Cordage Park Smart Growth District, adopted by the Planning Board of the Town of Plymouth and approved by the Massachusetts Department of Housing and Community Development, dated _____.”

The Town of Plymouth is in the process of working with the North Plymouth Steering Committee, the affected landowners, public officials, citizens and other interested parties to draft and adopt Design Standards that meet the stated objectives of the proposed Bylaw. A draft of the proposed Design Standards shall be submitted to DHCD for review and approval within the 90-day review period for this application, and as soon as is feasible.

Have these design standards been previously applied to a residential development in the community (for example, through the Underlying Zoning) (yes no)?

If yes, briefly identify the project(s) that have been approved using these standards:

N/A

Describe how the Municipality will ensure that its Design Standards will not "Unduly Restrict"* the development of Projects in the District:

The design standards applicable within the Cordage Park Smart Growth District will be developed in cooperation with municipal officials and staff, the North Plymouth Steering Committee and the affected landowners within a public review process. Upon submittal of the Design Standards to DHCD for review and approval, it is our goal to simultaneously submit a letter signed by

* See Part II.6 of the Instructions for the definition of "Unduly Restrict."

owners of land including Incentive Units shown on Attachment 5-1 stating that the Design Standards will not Unduly Restrict opportunities for development, and indicating their commitment to adhere to the design standards upon approval.

7.C Waivers. Does the Smart Growth Zoning allow the Approving Authority, through the Plan Review process, to waive specific dimensional and other standards (other than Affordability requirements) otherwise applicable to a Project (yes no)?

7.D Phased Project Reviews. Does the Smart Growth Zoning permit the Plan Review approvals of proposed Projects to be phased for the purpose of coordinating development with the construction of Planned Infrastructure upgrades that are identified in the application (yes no N/A) or that are required to mitigate any extraordinary adverse Project impacts on neighboring properties (yes no)?

For Projects that are approved and developed in phases, identify the provisions of the Smart Growth Zoning requiring that the proportion of Affordable units and the proportion of Existing Zoned Units to Bonus Units shall be consistent across all phases:

The proposed bylaw at Sec. 205-73(K)(4)(b) requires that "All Affordable Units must be constructed and occupied not later than concurrently with construction and occupancy of Unrestricted Units or development. In phased developments, Affordable Units may be constructed and occupied in proportion to the number of units in each phase of the Development."

8. COMPREHENSIVE HOUSING PLAN

8.A Housing Needs. Identify and briefly summarize briefly the section(s) of the plan that assess the housing needs within the Municipality:

The Town of Plymouth Housing Plan includes an extensive analysis of housing needs on Pages 11-46. Please find attached the complete Housing Plan as Attachment 8-1. This section includes some of the key demographic, housing stock and housing affordability findings, respectively, included in the Housing Needs Analysis in the Housing Plan.

Demographic Findings

Plymouth's median household income of \$54,677 ranks 171 out of 351 cities and towns in the Commonwealth, and has increased at a rate consistent with statewide income growth.⁹ The proportion of low- and moderate-income

⁹ Town of Plymouth Housing Plan, Pg. 19.

households in Plymouth is approximately 41.5%, which compares to 43.9% statewide.¹⁰

Plymouth's average family size of 3.16 is smaller than the average for Plymouth County, including a somewhat larger percentage of married-couple families but fewer children per family.¹¹ 78% of all non-family households are single people living alone and 19% are two-person households. Young households – headed by persons 15-34 – comprise a somewhat larger percentage of all households in Plymouth.¹²

Nearly 19% of Plymouth's 18,423 households are elderly households, i.e., a household headed by a person 65 years or older, which is a smaller percentage than in any neighboring town, Plymouth County or the state.¹³ Plymouth is the only town in the immediate region with a roughly proportional distribution of elderly renters and homeowners, which suggests that the Town offers a better balance of housing options for senior citizens.¹⁴ However, Plymouth has experienced significant in-migration of older individuals and smaller household sizes, which is expected to create a significant demand for housing.¹⁵

North Plymouth, in which the Cordage Park Smart Growth District is located, has an older housing stock and a significantly higher population density than the community as a whole.¹⁶ Nearly 60% of all under-34 householders live in the three village center neighborhoods in town – North Plymouth, Plymouth Center and Manomet.¹⁷

According to the Housing Plan, the Town's minority population increased more rapidly than the overall population between 1990-2000, and the total percentage of racial minorities in 2000 was 5.6%.¹⁸ Portions of North Plymouth house more minorities relative to overall population than other areas, and the proposed Cordage Park Smart Growth District is located within an Environmental Justice area designated by the Massachusetts Executive Office of Environmental Affairs.

Approximately 17% of Plymouth's non-institutionalized population over 5 years of age has a disability, which is comparable to 18.5% of the population

¹⁰ Town of Plymouth Housing Plan, Pg. 21.

¹¹ Ibid. Pg. 17.

¹² Ibid. Pg. 16.

¹³ Ibid. Pg. 16.

¹⁴ Ibid. Pg. 27.

¹⁵ Ibid. Pg. 11.

¹⁶ Ibid. Pg. 12.

¹⁷ Ibid. Pg. 17.

¹⁸ Ibid. Pg. 12.

statewide.¹⁹

Housing Stock

According to the Housing Plan, “Plymouth is the region’s leader for amount, mix, and choice of housing. Its 21,520 housing units have been developed over time in a wide range of settings and at variable densities, though most of the Town’s newer homes are single-family dwellings on large lots in rural areas.”²⁰ “Approximately 75% of all housing units in Plymouth are detached single-family homes, but two-family and small (3- to 4-unit) multi-family dwellings are prevalent in the Town’s older village centers and overall, they surpass modern multi-family developments as a source of attached housing.”²¹

The Housing Plan finds that the village based growth strategy articulated in the Master Plan will build on and reinforce historical development patterns. “The most densely settled areas lie along the coast in North Plymouth, Plymouth Center and Manomet.”

The Housing Plan finds that growth patterns in recent decades, however, have undermined the Town’s goal of compact development in village centers, citing “significant new residential growth outside of Plymouth’s village planning areas... since 1970.”²² The Housing Plan cites several reasons for these growth patterns, including “the Town’s abundant supply of vacant land in outlying areas, its zoning policies [that] have effectively steered new growth away from its traditional village centers, causing average single-family lot sizes to double in the past 24 years.”²³

These growth patterns have occurred concurrent with the greatest amount of residential development in the Town’s history. “Plymouth has absorbed a staggering amount of new residential development since the end of the 1980s, issuing an average of 239 building permits per year for new housing units from 1989-2000. More than 2,700 new housing units have been built since 1996, nearly all in rural areas and predominantly the Pine Hills.”²⁴ The Housing Plan finds that, overall, more than 70% of the 21,520 housing units in Plymouth have been built since 1950.²⁵

This pattern of growth is reflected in the housing prices in Plymouth, where the “median single-family home sale price has increased every year since

¹⁹ Town of Plymouth Housing Plan, Pg. 15.

²⁰ Ibid. Pg. 22.

²¹ Ibid. Pg. 23.

²² Ibid. Pg. 22.

²³ Ibid. Pg. 33.

²⁴ Ibid. Pg. 33.

²⁵ Ibid. Pg. 25.

1995, for a decade-long increase of 189%.²⁶ However, owing largely to the Town's size and historical residential character, "the diversity that exists within the single-family home inventory plays an important part in meeting housing and labor force needs both locally and throughout the lower South Shore area."²⁷

In its assessment of the rental housing market in Plymouth, the Housing Plan finds that "rents... generally rank at the top of the lower South Shore market and as a result, [and] tenants pay a slightly larger share of their monthly income for rent and utilities than tenants in the Boston metropolitan area."²⁸

"In addition to offering the region's largest inventory of rental housing, Plymouth has the smallest percentage of subsidized rental units even though its subsidized rental inventory is quite large. Accordingly, market rents in Plymouth are very important to the lower South Shore because the Town houses about half region's renter households and well over half of all renters in non-subsidized housing units."²⁹

Housing Affordability

The Housing Plan identifies significant challenges regarding affordable housing in Plymouth, finding that "the median single-family home sale price in Plymouth creates barriers not only for moderate-income households but also for households at the median for the Boston area."³⁰

According to DHCD, 4.06% of all dwelling units in Plymouth meet the statutory definition of "low- and moderate-income housing," and the Town is 1,130 units shy of meeting the 10% statutory minimum under M.G.L. c.40B.³¹

Further, "according to federal census data, 29.1% of all homeowners in Plymouth qualify as housing-cost burdened, and the same applies to 39.7% of all renters in Plymouth."³²

This challenge has worsened in recent years. "Plymouth's home values rose so dramatically after 2000 that last year's median sale price was \$67,316 higher than the maximum affordable purchase price for homebuyers at the Boston area median household income, and \$120,972 higher than the price affordable to a moderate-income family."³³

²⁶ Town of Plymouth Housing Plan, Pg. 28.

²⁷ Ibid. Pg. 23.

²⁸ Ibid. Pg. 32.

²⁹ Ibid. Pg. 32.

³⁰ Ibid. Pg. 36.

³¹ Ibid. Pg. 34.

³² Ibid. Pp. 35-6.

³³ Ibid. Pg. 37.

The relative diversity of housing stock in the Town of Plymouth places it in somewhat better position than many neighboring communities. “Overall, it is clear that condominiums in Plymouth provide an attainable source of housing for small, median-income households and they remain somewhat affordable to moderate-income households.” However, Housing Plan finds that condos “are not affordable to Plymouth’s renters or to single people earning the average wages paid by many local companies. Rental housing is still Plymouth’s mainstay option for one-person households, workers earning modest wages and low-income households.”³⁴

The Housing Plan states that “several indicators reinforce Plymouth’s need to expand its inventory of rental housing. Family size in relation to available units suggests a shortage of apartments suitable for one-person households and small families.”³⁵

This challenge will be significant to local jobs growth and the health of the Town’s economy. “To attract and maintain a vital workforce, the Town needs more moderately priced rental housing for young one-person households and couples.”³⁶

Identify and summarize briefly the section(s) of the plan that describe the strategies, including but not limited to those contained in the Smart Growth Zoning, to address these needs:

The Housing Plan identifies a number of Goals & Strategies for affordable housing in Plymouth, including the following specific strategies that the Cordage Park Smart Growth District is designed to pursue:

GENERAL HOUSING OBJECTIVES³⁷

- Allow and encourage transfers of development rights from priority protection areas to any of the growth areas, where adequate infrastructure can be provided.
- Establish incentives and regulatory provisions to encourage Above-Average and High Priority housing production. Incentives should include density bonuses and growth rate cap exemptions.

TOWN-WIDE AFFORDABILITY OBJECTIVES³⁸

- Encourage the creation of at least 10 affordable housing units per year, split between retention and production approaches; exempt new

³⁴ Town of Plymouth Housing Plan, Pp. 38-9.

³⁵ Ibid. Pg. 44.

³⁶ Ibid. Pg. 44.

³⁷ Ibid. Pg. 50.

³⁸ Ibid. Pg. 51.

affordable construction units from growth rate cap until town reaches at least a minimum of 0.75% increase of affordable units annually (affordable units =10% of year-round housing supply).

- Authorize density bonuses to encourage market production of affordable housing; integrate with other development incentives (TDR, resource protection, etc.).
- For all affordable units created, encourage styling and quality of construction similar to market units.

GENERAL VILLAGE HOUSING OBJECTIVES³⁹

- Adopt design guidelines and size & siting controls that promote compatibility of new housing in existing neighborhoods.
- Allocate quantities of new housing units in each village according to gross densities; allow greater quantities in North Plymouth and Plymouth Center, where higher densities prevail and Town sewer service is available.
- Encourage diversity in the mix of housing types in each village area
- Encourage mixed use in village commercial centers.
- Allow vertical housing construction to five stories and density bonus where infrastructure can accommodate such growth and historic resources will not be impacted.

VILLAGE AFFORDABILITY OBJECTIVES⁴⁰

- Encourage creation/production of affordable housing up to 10% of year-round housing stock in each village area.
- Provide zoning bonus for affordable housing that demonstrates reasonable availability of efficient transportation options for occupants.
- Emphasize geographic dispersion of affordable units within village areas; avoid 100% affordable projects.

The complete Housing Plan, including the Goals & Strategies section, is included as an attachment to this application.

Identify and summarize briefly the section(s) of the plan that show how the Smart Growth Zoning will allow for the development of housing which is appropriate for a diverse population:

The Town of Plymouth Housing Plan is fully consistent with the village-based land use strategy outlined in the Master Plan, in which distinct housing objectives are articulated for Villages and Rural Areas.

The Housing Plan identifies the following as an “Above Average” housing production priority in the Town of Plymouth:

³⁹ Town of Plymouth Housing Plan, Pp. 51-2.

⁴⁰ Ibid. Pg. 52.

“Any housing that is designed to have a positive municipal revenue impact and is located within a designated growth area, and/or includes Local Initiative affordable housing inside a designated growth area.”⁴¹

The housing that will be produced as a result of the Cordage Park Smart Growth District will achieve these objectives. In Appendix B of the Housing Plan, North Plymouth Center is specifically identifies as an area suitable for growth, and is described as follows:

“North Plymouth Center

North Plymouth is an established community characterized by a dense mixed use development pattern. It has historically been a center of population and employment. The center extends from the town’s boundary with Kingston on the north, Nelson Memorial Park to the south, Route 3 to the west and Plymouth Harbor to the east. Municipal sewer and water service this section of the Town, although many dwellings and commercial buildings do not utilize both services. The focal point of this village is Cordage Park, which is undergoing a shift from a retail center to an office complex and marina.

Commercial uses are clustered on Court Street. Additional commercial uses mixed with high-density residential uses can be found along each of the principal streets leading to the Center. Dense residential development, consisting of multiple family dwellings, is typically located adjacent to or within one block of commercial development on Court Street. Although most of the area is zoned for high density residential and commercial development, the population has been fairly stable over the past ten years, increasing from 4,029 in 1980 to 4,314 in 1990 and 4,395 in 2000. This stability is due in large part to the lack of available land for new development.”

The Cordage Park Smart Growth District will specifically address the goals of the Master Plan and the Housing Plan to channel new investment and new residential development to established village centers such as North Plymouth. This will strengthen both housing and job opportunities within the surrounding neighborhoods that are designated as Environmental Justice areas by the Massachusetts Executive Office of Environmental Affairs.

Identify the section(s) of the plan that summarize the Existing Zoned Units, Future Zoned Units, and Incentive Units of the proposed Smart Growth Zoning District:

Although the Housing Plan does not include specific reference to the number of projected units in the Cordage Park Smart Growth District, this policy will advance several of the objectives adopted by the Affordable Housing Committee including streamlining the zoning and permitting procedures to facilitate creation of affordable housing and realize an opportunity to convert under-utilized property for affordable housing.⁴²

⁴¹ Town of Plymouth Housing Plan, Pg. 49.

⁴² A list of objectives adopted by the Affordable Housing Committee based on the Board of Selectmen’s directive is included in the Housing Plan, Pp. 47-48.

8.B Fair Housing. Identify and summarize briefly the section(s) of the plan that assess local housing needs within the Municipality for households in protected classes as identified in state and federal law:

According to the Housing Plan, the Town's minority population increased more rapidly than the overall population between 1990-2000, and the total percentage of racial minorities in 2000 was 5.6%.⁴³ Portions of North Plymouth house more minorities relative to overall population than other areas, and the proposed Cordage Park Smart Growth District is located within an Environmental Justice area designated by the Massachusetts Executive Office of Environmental Affairs.

Approximately 17% of Plymouth's non-institutionalized population over 5 years of age has a disability, which is comparable to 18.5% of the population statewide.⁴⁴

Nearly 19% of Plymouth's 18,423 households are elderly households, i.e., a household headed by a person 65 years or older, which is a smaller percentage than in any neighboring town, Plymouth County or the state.⁴⁵ Plymouth is the only town in the immediate region with a roughly proportional distribution of elderly renters and homeowners, which suggests that the Town offers a better balance of housing options for senior citizens.⁴⁶ However, Plymouth has experienced significant in-migration of older individuals and smaller household sizes, which is expected to create a significant demand for housing.⁴⁷

Identify and summarize briefly the section(s) of the plan that specify strategies , including but not limited to those contained in the Smart Growth Zoning, that address how housing choice for such households will be served:

In addition to the goals and strategies outlined above, the Housing Plan recommends that "Plymouth should focus on higher-density affordable homes in growth areas to meet the fiscal needs of the Town while working to improve the availability of affordable housing."⁴⁸

Identify and summarize briefly the section(s) of the plan that provide for affirmative fair marketing of the Affordable units, and for the collection of relevant data from applicants and occupants of the Affordable units in compliance with their privacy

⁴³ Town of Plymouth Housing Plan, Pg. 12.

⁴⁴ Ibid. Pg. 15.

⁴⁵ Ibid. Pg. 16.

⁴⁶ Ibid. Pg. 27.

⁴⁷ Ibid. Pg. 11.

⁴⁸ Ibid. Pg. 48.

rights:

The Housing Plan Goals & Objectives section includes the following among its stated objectives:

- Develop a mechanism to monitor quarterly the market demand for the various housing types in greater Plymouth region. (p. 50)
- Provide for staff, for the Town housing office or a non-profit housing agency to initiate and implement the Affordable Housing Plan. (p. 51)
- Document and prioritize local housing need every five years; tailor housing assistance programs to meet the priority needs. (p. 51)

8.C Previously submitted plans. Has the Comprehensive Housing Plan been previously submitted to the Department (yes ___ no X)?

If yes, attach a copy of the plan and give the date of its first submission to the Department:

The Town of Plymouth completed updating its Housing Plan in 2005, said plan included as Attachment 8. This application is the first submittal of the Housing Plan to the Department of Housing and Community Development.

Is the Municipality submitting as its Comprehensive Housing Plan a community development plan or equivalent document that was previously submitted to the Department (yes ___ no X)?

If yes, attach a copy of the plan and give the date of its previous submission to the Department:

N/A

Describe how the proposed District relates to and will further the goals of such previously submitted plan or document:

The proposed Cordage Park Smart Growth District will advance each of several specific objectives outlined above (pp. 22-23, herein). The following table includes each of the listed objectives that the Cordage Park Smart Growth District will support.

Objective	Supported by CPSGD
Allow and encourage transfers of development rights from priority protection areas to any of the growth areas, where adequate infrastructure can be provided.	Yes
Establish incentives and regulatory provisions to encourage Above-Average and High Priority housing production. Incentives should include density bonuses and	Yes

growth rate cap exemptions.	
Encourage the creation of at least 10 affordable housing units per year, split between retention and production approaches; exempt new affordable construction units from growth rate cap until town reaches at least a minimum of 0.75% increase of affordable units annually (affordable units =10% of year-round housing supply).	Yes
Authorize density bonuses to encourage market production of affordable housing; integrate with other development incentives (TDR, resource protection, etc.).	Yes
For all affordable units created, encourage styling and quality of construction similar to market units.	Yes
Adopt design guidelines and size & siting controls that promote compatibility of new housing in existing neighborhoods.	Yes
Allocate quantities of new housing units in each village according to gross densities; allow greater quantities in North Plymouth and Plymouth Center, where higher densities prevail and Town sewer service is available.	Yes
Encourage diversity in the mix of housing types in each village area	Yes
Encourage mixed use in village commercial centers.	Yes
Allow vertical housing construction to five stories and density bonus where infrastructure can accommodate such growth and historic resources will not be impacted.	Yes
Provide zoning bonus for affordable housing that demonstrates reasonable availability of efficient transportation options for occupants.	Yes
Emphasize geographic dispersion of affordable units within village areas; avoid 100% affordable projects.	Yes

The proposed Cordage Park Smart Growth District is also consistent with the regional planning priorities set forth in the Old Colony Planning Council's *Regional Policy Plan: A Guide for Shaping Our Communities and the OCPC Region* (October 2000). That plan calls for identification of "priority development areas whose combination of land, infrastructure and services, accessibility, and amenities suit them to accommodate a significant portion of the region's anticipated growth." Within those priority development areas, communities are encouraged to facilitate "compact, mixed-use community centers...designed to allow convenient pedestrian, bicycle and transit movement...offering a range of housing choices...and a mix of business, commercial, civic, and cultural uses along with systems of parks, open space, and natural resource areas." (Pg. 7).

9. LOCAL PUBLIC NOTICE AND HEARING

9.A **Public Hearing.** Did the chief executive of the Municipality or designee hold a public hearing on whether the provisions of the proposed Smart Growth Zoning shall be adopted by the Municipality (yes X no ___)?

Please find attached as Attachment 9-1 a copy of the notice of the public hearing that was held by the Plymouth Board of Selectmen on January 31, 2006. At the conclusion of the hearing, the Selectmen voted unanimously to authorize the filing of this application with DHCD.

9.B **Public Comments.**

Please find attached copies of all written comments received by the Town of Plymouth on the proposed Cordage Park Smart Growth District, including any letters of support issued by the planning board, board of health, conservation commission, or other interested parties, as Attachment 9-2.

Summarize briefly any modifications that were made in the proposed Smart Growth Zoning or other documents in response to the comments received:

The Planning Board and the North Plymouth Steering Committee both indicated their preliminary support for the concept of smart growth zoning for the proposed District. However, both clearly reinforced the importance of clear design standards to ensure an exceptional outcome for development on the site. Public officials and neighbors will be working closely with the landowners, their design team and other interested parties in the coming weeks and months to produce design standards in a stand-alone document as referenced in the Bylaw. Upon satisfactory completion, these design standards will be forwarded to DHCD for review and approval.

10. INFRASTRUCTURE IMPACTS AND UPGRADES

See the Instructions for a description of the required Attachment 10-1, which shall demonstrate that the impacts of Future Zoned Units within the District will not over burden transportation, water, public and/or private wastewater systems, and other Infrastructure (which for the purposes of this subsection shall include improvements to public open space and public recreational facilities) as it exists or may be practicably upgraded.

The attachment must be certified by a municipal engineer or public works official.

Check List of Attachments

Identify documents submitted with the Smart Growth Application in the following manner:

- 1-1 Locator Map of the Municipality (required)
- 1-2 Copy of designation letter under M.G.L. c.40, § 60 (if applicable under I.D)
- 1-3 Copy of relevant portions of plan document (if applicable under 1.G)
- 1-4 Copy of designation letter under M.G.L. c.40Q (if applicable under 1.G)
- 1-5 Evidence of District's consistency with statutory goals for smart growth (if applicable under 1.G)

- 2-1 Previously approved area waiver (if applicable)

- 3-1 Developable Land Plan of District (required)
- 3-2 Aerial photograph of District (optional)
- 3-3 Copies of local by-laws, ordinances, or regulations that affect As-of-right residential densities in District (if applicable)

- 4-1 Existing Zoned Units Plan of District (required)
- 4-2 Existing Zoned Units Spreadsheet (required)
- 4-3 Underlying Zoning Text (required)
- 4-4 Underlying Zoning Map(s) (required)

- 5-1 Smart Growth Residential Density Plan of District (required)
- 5-2 Smart Growth Residential Density Spreadsheet (required)
- 5-3 Smart Growth Zoning Text (required)
- 5-4 Smart Growth Zoning Map(s) (required)
- 5-5 Previously approved density reduction (if applicable)

- 7-1 Design Standards (if adopted, and not contained within Smart Growth Zoning)

- 8-1 Comprehensive Housing Plan (required)
- 8-2 Plan enhancements/ updates (if applicable)

- 9-1 Notice of public hearing (required)
- 9-2 Written comments on Smart Growth Zoning and District (required)
- 9-3 Summary or transcript of oral comments on Smart Growth Zoning and District (required)

- 10-1 Information on Infrastructure impacts and Planned Infrastructure upgrades, certified by municipal official (required)



**DHCD Smart Growth Zoning
Overlay District Program
(C. 40R) Application:
Proposed Cordage Park Smart
Growth District in the
Town of Plymouth
Map 1.A Locator Map (1)**

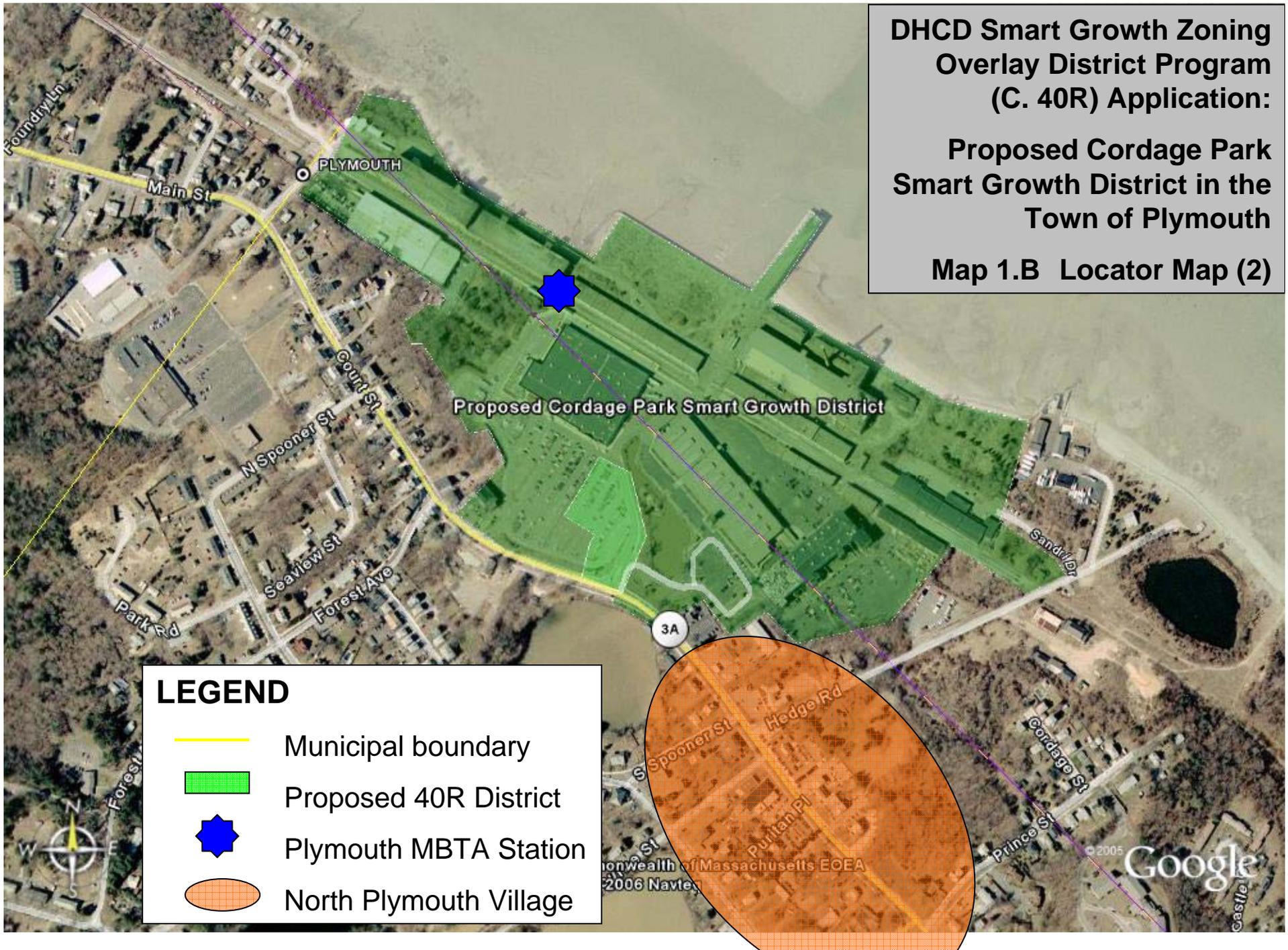
Image MassGIS, Commonwealth of Massachusetts EOE
© 2006 Navteq
Image © 2006 DigitalGlobe

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**DHCD Smart Growth Zoning
Overlay District Program
(C. 40R) Application:**

**Proposed Cordage Park
Smart Growth District in the
Town of Plymouth**

Map 1.B Locator Map (2)



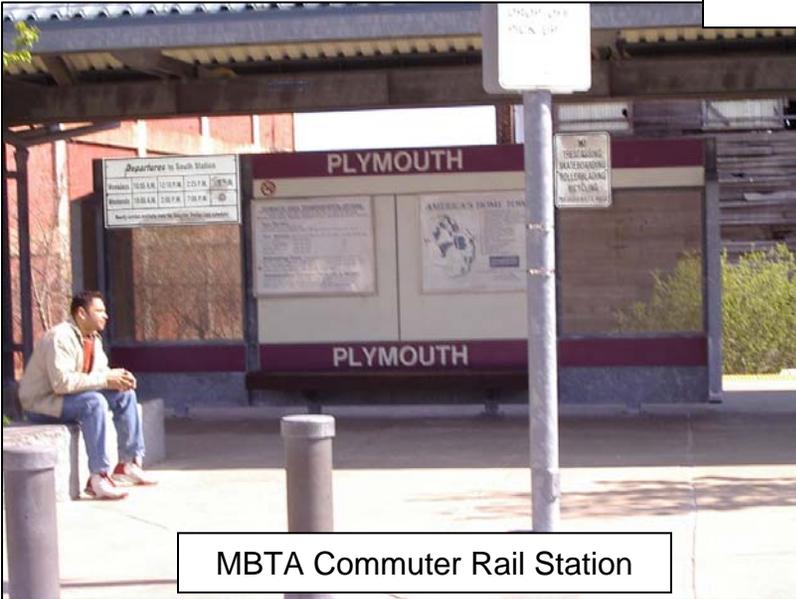


Commercial Mill Building



Soon to be vacant Wal-Mart Building

Views of commercial uses west of railroad tracks



MBTA Commuter Rail Station



Commercial Mill Building

1
Figure



Town of Plymouth

Cordage Park
Site Photographs



Views east of
railroad tracks and
north of marina



2

Figure



Town of Plymouth

Cordage Park
Site Photographs



Ocean views north of marina



The marina

Views east of
railroad tracks and
south of marina



3

Figure



Town of Plymouth

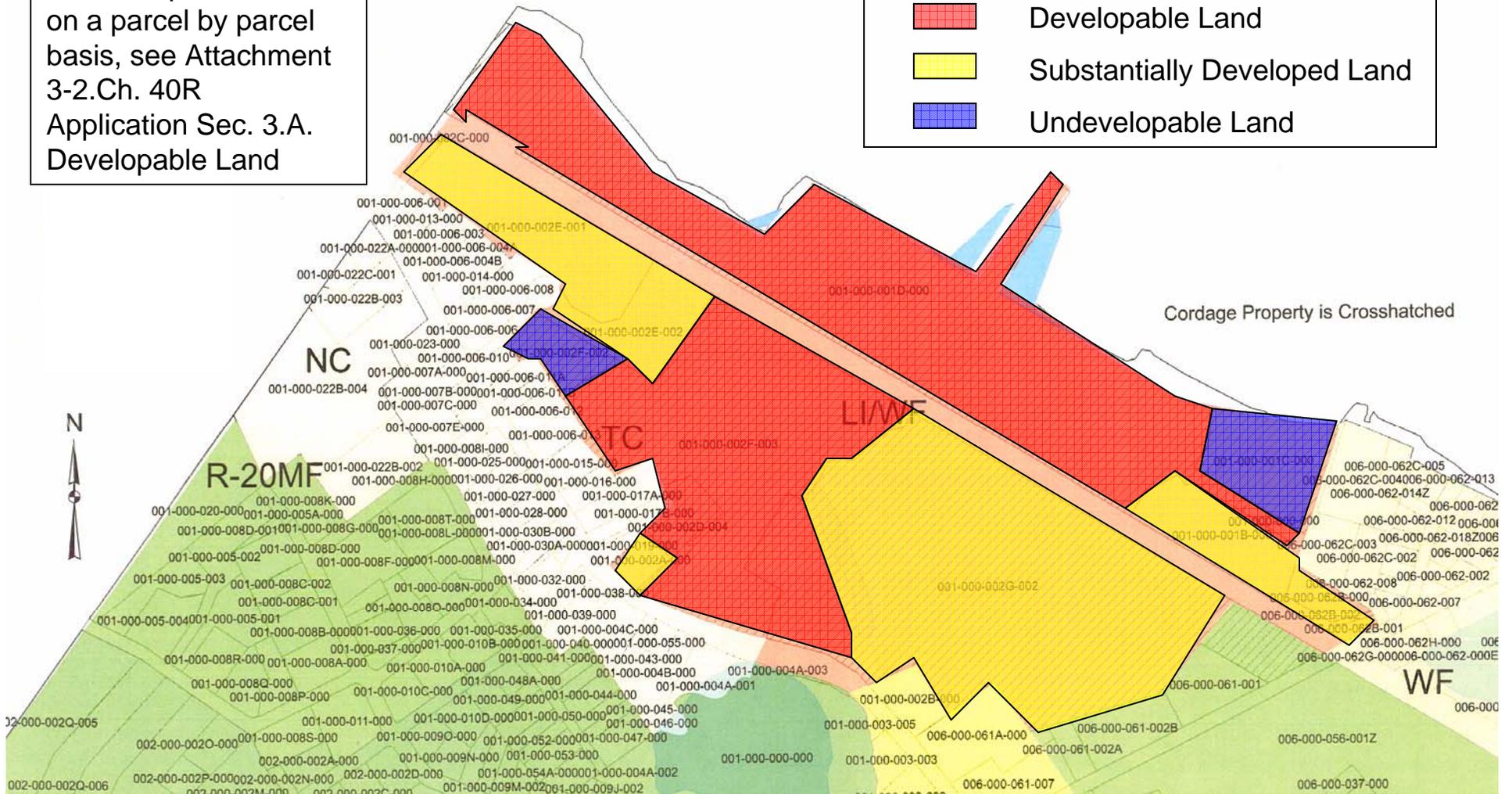
Cordage Park
Site Photographs

Attachment 3-1: Developable Land Plan for the CPSGD

For specific calculation of Developable Land on a parcel by parcel basis, see Attachment 3-2.Ch. 40R Application Sec. 3.A. Developable Land

LEGEND

-  Developable Land
-  Substantially Developed Land
-  Undevelopable Land



Attachment 3-2. Ch. 40R Application Sec. 3.A. Developable Land

			Land Classification Category												
			Developable Land (Add)			Substantially Developed and Undevelopable Land (Subtract)								Net Developable Land	
Parcel Number	Parcel Street Address	Parcel Acreage	1. Developable Land	1A. Underutilized Land	Total 1+1A	2. Substantially Developed Land	2A. Historic District(s)	3. Existing Open Space	4. Future Open Space	5. Rights-of-way of existing public streets, ways, and transit lines	6. Land currently in use for governmental functions	7. Environmentally constrained land	8. Other non-developable land	Total 2-8	Parcel Acreage minus Substantially Developed and Undevelopable Land
001-000-001C-000	COURT STREET	2.597	0	0	0	0	0	0	0	0	0	0	2.60	2.6	0.0
001-000-001D-000	0 COURT STREET	20.1	0	20.1	20.1	0	0	0	0	0	0	0	0	0	20.1
001-000-002D-004	385 COURT STREET	0.91	0	0.91	0.91	0	0	0	0	0	0	0	0	0	0.9
001-000-002F-002	CORDAGE PARK	1.438	0	0	0	0	0	0	0	0	0	0	1.44	1.44	0.0
001-000-002F-003	381 COURT STREET	11.18	0	10.04	10.04	0	0	0	0	1.14	0	0	0	1.14	10.0
001-000-002G-002	377 COURT STREET	20.56	0	2.52	2.52	18.04	0	0	0	0	0	0	0	18	2.5
001-000-002E-001	5 BOUNDARY STREET	3.733	0	0	0	3.73	0	0	0	0	0	0	0	3.73	0.0
001-000-002E-002	5 BOUNDARY STREET	1.948	0	0	0	1.95	0	0	0	0	0	0	0	1.95	0.0
001-000-002A-000	385 COURT STREET	0.413	0	0	0	0.41	0	0	0	0	0	0	0	0.41	0.0
001-000-002C-000	BOUNDARY LANE	0.05	0	0	0	0	0	0	0	0	0	0	0.05	0.05	0.0
001-000-001B-000	SANDRI AVE	2.19	0	0	0	2.19	0	0	0	0	0	0	0	2.19	0.0
006-000-062B-000	HEDGE RD	0.83	0	0	0	0.83	0	0	0	0	0	0	0	0.83	0.0
006-000-062B-001	HEDGE RD	0.144	0	0	0	0.14	0	0	0	0	0	0	0	0.14	0.0
006-000-062B-002	HEDGE RD	0.17	0	0	0	0.17	0	0	0	0	0	0	0	0.17	0.0
District Totals		66.263	0	33.57	33.57	27.47	0	0	0	1.14	0	0	4.085	32.7	
Percent of Total:		100.0	0.0	50.7	50.7	41.5	0.0	0.0	0.0	1.7	0.0	0.0	6.2	49.3	

NET DEVELOPABLE ACREAGE: 33.6

Notes:

Parcel 001-000-001C-000

8. Other non-developable land. This was formerly a Superfund site and was restricted to non-residential use. Amendment to use would require EPA approval, so parcel has been excluded in its entirety from Developable Land.

Parcel 001-000-002F-002

8. Other non-developable land. During permitting for the Wal*Mart, this parcel in its entirety was restricted from further development by agreement with the Town of Plymouth.

Parcel 001-000-002F-003

5. Rights-of-way of existing public streets, ways, and transit lines. MBTA holds easement to 100 dedicated parking spaces (Plymouth County Registry of Deeds Bk. 37, Pg. 1180).

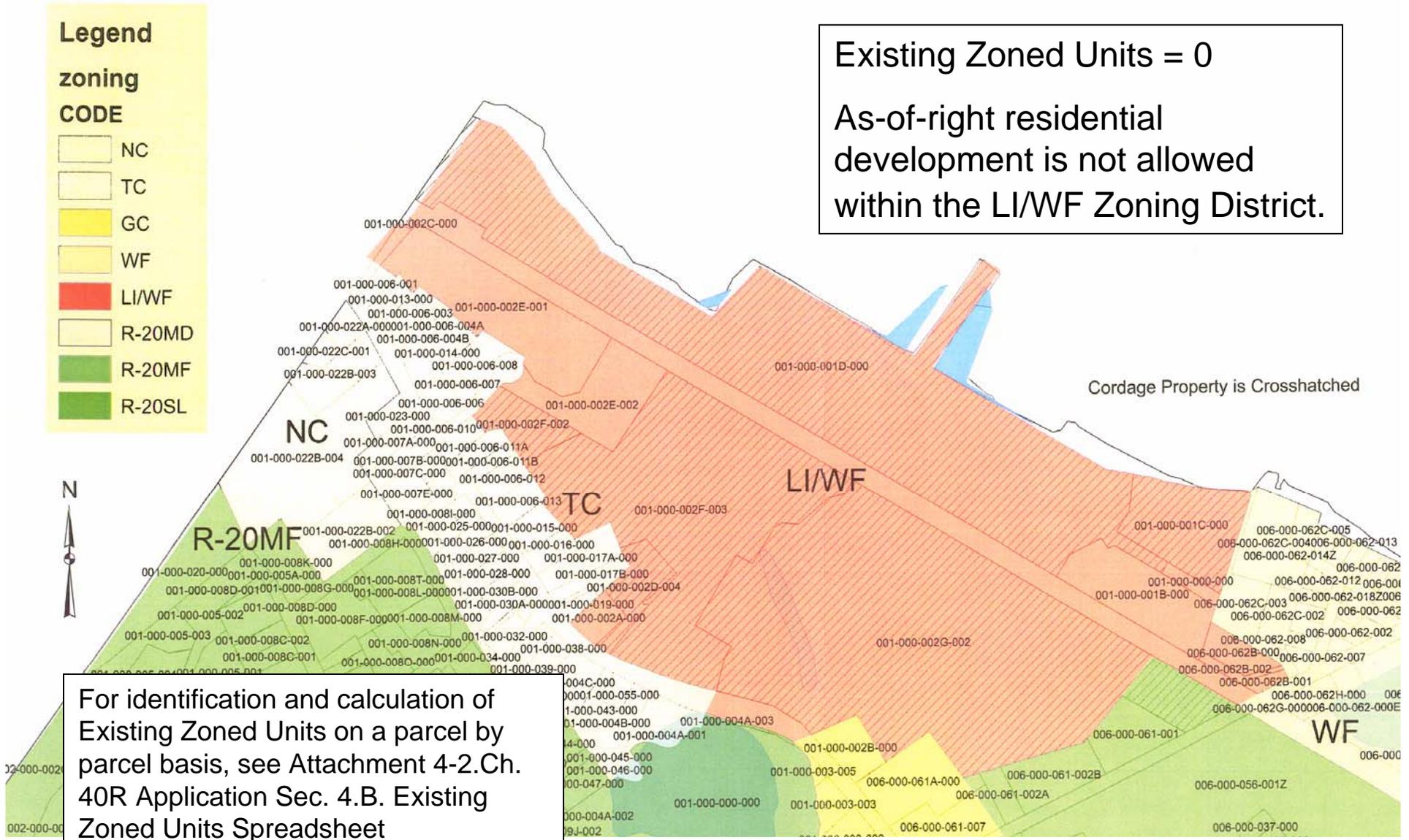
Parcel 001-000-002F-003

7. Environmentally constrained land. Area of wetland in northwest corner of parcel is estimated at 0.4 acres based on surveyed base map, which is less than the statutory limit of 0.5 acres. However, the actual portion of the wetland located on this parcel will be determined through a landowner survey and, if in excess of the statutory limit of 0.5 acres, will be deducted from the calculation of Developable Land.

Parcel 001-000-002G-002

1A. Underutilized Land. Equals combined area of parking easement granted to Wal*Mart (74,210 sf) + MBTA access road easement (35,577 sf) = 109,787 sf. Area included in Wal*Mart parking area is Underutilized Land based on development scenario projecting this land for mixed-use development. Access to MBTA parking spaces will be preserved through access easement; however, per the terms of the easement, landowner anticipates exercising right to relocate easement to match projected new access road to site.

Attachment 4-1: Existing Zoned Units Plan for the CPSGD



Attachment 4-2.Ch. 40R Application Sec. 4.B. Existing Zoned Units Spreadsheet

Parcel Number	Parcel Street Address	Parcel Acreage	As-of-right residential density under Underlying Zoning (units / acre)	Existing Zoned Units
001-000-001C-000	COURT STREET	2.60	0	0
001-000-001D-000	0 COURT STREET	20.10	0	0
001-000-002D-004	385 COURT STREET	0.91	0	0
001-000-002F-002	CORDAGE PARK	1.44	0	0
001-000-002F-003	381 COURT STREET	11.18	0	0
001-000-002G-002	377 COURT STREET	20.56	0	0
001-000-002E-001	5 BOUNDARY STREET	3.73	0	0
001-000-002E-002	5 BOUNDARY STREET	1.95	0	0
001-000-002A-000	385 COURT STREET	0.41	0	0
001-000-002C-000	BOUNDARY LANE	0.05	0	0
001-000-001B-000	SANDRI AVE	2.19	0	0
006-000-062B-000	HEDGE RD	0.83	0	0
006-000-062B-001	HEDGE RD	0.14	0	0
006-000-062B-002	HEDGE RD	0.17	0	0
District Totals		66.26		0

- (2) Types of agriculture excluding grain crops which would attract birds.
 - (3) Industrial uses as prescribed in § 205-51 and subject to all conditions therein, provided that no industry shall create significant smoke.
 - (4) Private clubs and certain commercial or public recreation uses such as golf courses.
- C. **Special permit uses.** [Amended 4-4-1988 STM by Art. 6]
- (1) Uses which can tolerate a high level of sound exposure:
 - (a) Limited commercial uses of a type related to aviation or to other aviation- or airport-oriented uses.
 - (b) Any industrial uses subject to special permit as required by § 205-51.
 - (c) Planned commercial parks which: [Amended 4-10-1989 ATM by Art. 40]
 - [1] Contain no more than 15,000 square feet of gross floor area of Neighborhood Commercial uses allowed in § 205-47B; and
 - [2] Are located in a village service area; and
 - [3] Are located on lots created prior to January 1, 1988, which lots may not be subdivided thereafter into lots containing additional planned commercial parks.
 - (2) Any uses which may be incompatible with location in the Airport Zoning District, or in a village services area, or in a planned commercial park may be denied a permit. All sound-sensitive uses shall be appropriately insulated.
- D. **Prohibited uses.** Residential uses are prohibited. Adequate sound insulation shall be required of all regularly occupied buildings.
- E. **Height limitations.** In order to prevent the erection of structures which, due to height, would create hazardous obstacles to air navigation in the vicinity of Plymouth Airport, the provisions of MGL c. 90, §§ 35A to 35D, inclusive, and the standards of the Federal Aviation Regulations, Part 77, as amended, are hereby adopted by reference and made a part of this bylaw. No structure shall be erected which exceeds the height limitations of the above regulations unless a permit shall have been issued by the Plymouth Airport Commission and, when appropriate, by the Massachusetts Aeronautics Commission or the Federal Aviation Agency. In order to aid in administration of these height regulations, Airport Zone 2 shall be an overlay of other surrounding zones within which these restrictions shall apply, administered as in Subsection F below.
- F. **Special review.** All uses allowed by special permit in the Airport Zone shall be subject to environmental design conditions and shall also be reviewed by the Plymouth Airport Commission and a written report shall be made to the Planning Board. Prior to issuance of any special permit it shall be determined that the use causes no hazard to air navigation, visibility, or flight safety, excessive numbers of birds, or electrical interference.

§ 205-53 Light Industrial/Waterfront (LI/WF). [Added 4-10-1980 ATM by Art. 64]

- A. **Intent.** [Amended 4-4-1988 ATM by Art. 52]

- (1) This district is intended to encourage the development of certain waterfront-related uses and to allow for a mix of uses, including commercial uses of a light intensity and clean operational nature, residential uses and compatible industrial uses. The special permit mechanism is provided to allow for a broader range of retail, service and other commercial uses. The special permit mechanism will also allow for establishment of heavier industries which would not be detrimental to waterfront activities or other uses in the zone or to adjoining zones by reason of their location within the district, special site characteristics and safeguards or for other reasons which can best be determined on a case-by-case basis.
- (2) The special environmental design conditions for certain uses are intended to ensure proper emphasis on pedestrian environment and its separation from industrial traffic, adequate pedestrian links between proposed development and surrounding properties, and high standards of the planning and architectural design which are compatible with the existing surroundings.
- (3) Consistent with the mixed-use character of this district, all lots within this district greater than five acres in area which were existing prior to (the effective date of this amendment) and not devoted to single-family residential use shall be subject to the following planning guidelines: not more than 50% of the total gross floor area of all structures which existed on such lot as of the effective date of this Zoning Bylaw, and the gross floor area devoted to residential uses on any such lot shall not exceed an amount equal to 30% of such total gross floor area.

B. Allowed uses.

- (1) Light manufacturing, processing, and assembly in enclosed buildings with no greater than .25 floor area ratio.
- (2) Trucking and freight terminals or depots.
- (3) Wholesaling, warehousing and distribution facilities.
- (4) Professional and other offices (including outpatient medical clinics and similar facilities), laboratories and research facilities. [Amended 4-4-1988 ATM by Art. 52]
- (5) Boat sales, service, rentals, ramps and docks and commercial sightseeing or ferrying.
- (6) Marine railways, repair yards, storage yards, and marine supply outlets.
- (7) Commercial fishing and seafood wholesale or retail outlets and related uses.

C. Special permit uses.

- (1) Contract construction, utility contractors, building supply and lumber yards, but not to include junkyards, saw mills, concrete or cement mixing plants, asphalt plants and the like.
- (2) Utility plants and substations.
- (3) Technical schools or other training facilities on spacious, adequately buffered sites.

D. Special permit subject to environmental design conditions. [Amended 4-4-1988 ATM by Art. 52]

- (1) Restaurants and outdoor eating facilities.

- (2) Recreational, social, or cultural facilities, such as a theater, playhouse, band shell, outdoor pavilion, nightclub, or community center.
- (3) Hotel, motel, or other tourist-related facility.
- (4) Specialty shopping facilities such as art galleries, gift shops, antique shops, import shops, and leather and natural goods stores, as part of a pedestrian-oriented shopping arcade or center.
- (5) Uses of a more general commercial nature allowed or authorized by special permit in the General Commercial Zone which do not detract from the purposes of this district.
- (6) Multifamily and single-family attached residential, provided complexes are designed not to preclude public access to and along the shoreline.

E. Prohibited uses.

- (1) Any use which emits strong odors, or dust particles, or smoke, or poses danger, such as manufacture of acids, gases, fertilizers, and glue, petroleum refining, reduction of animal matter, and manufacture of cement, gypsum, or explosives.
- (2) Any other use dangerous to persons within or outside the district by reason of emission of odor, fumes, gases, particulate matter, smoke, noise, vibration, glare, radiation, electrical interference, threat of fire or explosion, or any other reason.
- (3) General commercial uses not related to any of the stated purposes or activities of the waterfront which would not make appropriate use of its unique potential.

F. Dimensional and other requirements. [Amended 4-4-1988 ATM by Art. 52]

- (1) See Table 5.
- (2) All uses, premises, and structures should be designed to allow pedestrian access that is not inconsistent with such uses to and along the shore.
- (3) Minimum setback of major structures (other than existing structures or structures used in connection with marine uses) from mean high-water mark shall be 25 feet, unless the wetlands designation and regulations of § 205-39 apply.
- (4) In the case of multifamily and single-family attached residential uses, the dimensional and intensity requirements contained in § 205-45 shall be applicable, provided that the special permit granting authority may waive or modify any such requirements in connection with the reuse of existing structures in a manner that is not incompatible with adjacent uses.
- (5) **Maximum height.** For all structures erected after the effective date of this Zoning Bylaw (March 27, 1973), the maximum height shall be three stories or 35 feet. For any structure erected prior to the effective date of this Zoning Bylaw, the maximum height shall be the height of such structure as of the effective date of this Zoning Bylaw. Accessory or appurtenant improvements necessary to the operation of a structure (for example, elevator or stairway enclosures) may exceed the maximum height limit by not more than 15 feet.
- (6) In this district, where two or more lots in common ownership are contiguous or are separated by a right-of-way or other land not owned by the owner of such lots, so as not to preclude integrated development, such lots may be considered as one lot for the following purposes:

- (a) Maximum lot coverage/maximum FAR.
- (b) Maximum building coverage.
- (c) Parking requirements.
- (d) Minimum useable open space.
- (e) Dwelling units per acre.
- (f) Retail and residential planning guidelines provided in Subsection A of **this section**.
- (g) Frontage.

§ 205-54.Downtown/Harbor District (DH). [Added 4-6-1991 STM by Art. 17]

A. Intent.

- (1) To encourage a mix of **commercial and residential uses on individual lots and throughout the district that complement the Town's rich historical background.**
- (2) To create a pedestrian-oriented **environment by creating links between existing and proposed areas of activity to better serve residents and tourists.**
- (3) To preserve and protect the **distinctive characteristics of buildings and places significant in the history of Plymouth or their architecture, through the maintenance and improvement of settings for such buildings and places and the encouragement of designs compatible therewith.**

B. Allowed uses.

- (1) Single-family, two-family, and multifamily **dwelling, containing fewer than nine units on the same lot, provided that:**
 - (a) Each unit contains a minimum **floor area of 600 square feet for one-bedroom units, 720 square feet for two-bedroom units, and (720 + 100X) square feet for (two + X) bedroom units; and**
 - (b) Such uses are not allowed on **the street floor of a building located on a state-numbered highway, as designated as of January 24, 1991.**
- (2) Boat sales, service, rentals, ramps, and **docks and commercial sightseeing or ferrying.**
- (3) Marine railways, repair yards, storage yards, and marine supply **outlets.**
- (4) Commercial fishing and seafood wholesale or retail outlets and **related uses.**
- (5) Hotels, motels and inns, for occupancy of 25 rooms or fewer.
- (6) Indoor and outdoor eating and drinking establishments.
- (7) Retail establishments.
- (8) Personal service establishments, **including such uses as barber and beauty shops, shoe repair shops, self-service laundry and cleaners, laundry and dry cleaners.**
- (9) Offices, studios, and laboratories.

PLYMOUTH CODE

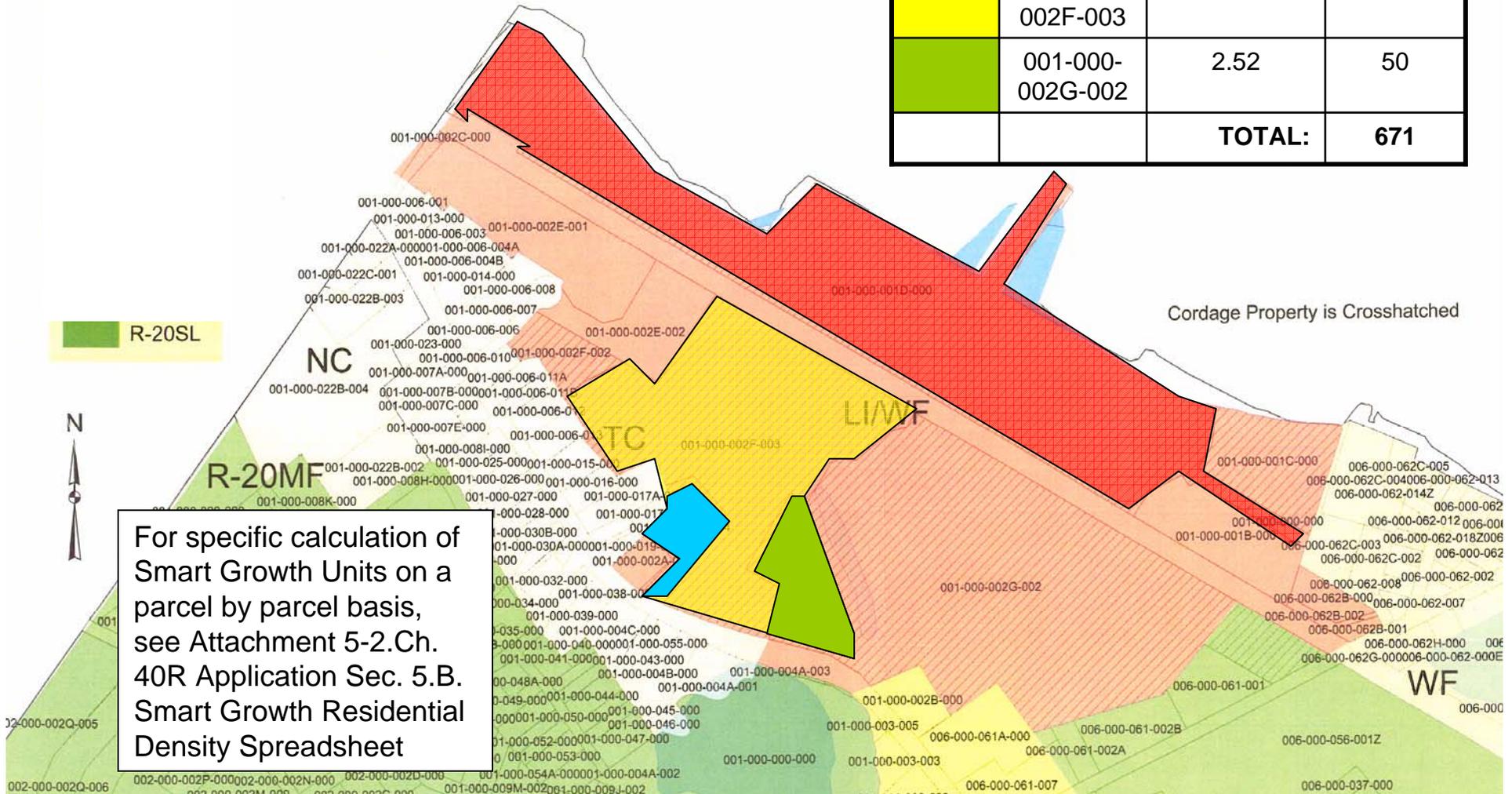
Table 5 - continued

District	Intent of District	Allowed Uses	Special Permit Uses ¹	Prohibited Uses	Minimum Lot Size	Minimum Lot Dimensions	Min Side Yard	Min Front Yard	Min Rear Yard	Max Lot Coverage/ Max FAR**	Max Height
§ 205-51 LI Light Industrial	To reserve for the development of industry. To set standards which will ensure that all industries be of a clean and spacious nature compatible with the Town and the immediate area	Light manufacturing, construction and utility contractors, trucking and freight terminals, wholesale and distribution, heavy commercial, office buildings and complexes, utilities plants	Certain heavy manufacturing, wrecking and salvage yards, fertilizer, petroleum gravel pits, stockyards, asphalt plants, construction contractors, and heavy commercial, PCD § 205-61	Manufacture of acids, chlorine or other noxious gases, petroleum refining, explosives, distillation of bones or rendering of fat, manufacture of hair or glue, or similar noxious or dangerous uses	40,000 SF	Width 200' 400' on numbered route or highway except where reverse frontage is employed. Depth 150' More than one principal structure on a lot – see § 205-17 D2.	30'	50'; 30' 500' natural buffer from a highway or route from which access is directly obtained, including a buffer strip of 15' measured from the edge of the right-of-way, left in its natural state if access is from service road.	30'	50%/1.75 See § 205-171 if located in West Plymouth Village Center	35 feet
§ 205-52 AP -Airport	To provide for necessary airport expansion. To protect incompatible or sound-sensitive uses from conflict with airport.	Aviation-related uses on airport property, industrial uses allowed in LI, agriculture and recreation	Limited commercial related to aviation or other aviation-oriented uses, industry authorized by special permit in LI and commercial park on airport property*	Residential and other sound-sensitive uses						Requirements of LI shall apply to industrial uses. Requirements of GC shall apply to commercial uses. Special permits reviewed by Airport Commission.	
						*See § 205-17 D1 with respect to more than one principal nonresidential building on a lot.					
§ 205-53 LI/WF Light Industrial/ Waterfront	To promote the development of land uses and activities which are appropriate to the waterfront. To reserve for the development of industry especially waterfront dependent industries. To require coordination of site plans and pedestrian circulation and compatibility with the adjacent architecture. To set standards which will ensure that all industries be of a clean and spacious nature compatible with the Town and the immediate area.	Light manufacturing, construction and utility contractors, salvage yards, freight terminals, wholesale and distribution, heavy commercial, office buildings and complexes, specialty sales, service, repair rental; fishing	Certain heavy manufacturing, wrecking and construction contractors, heavy commercial; restaurants, motel, or dangerous uses; any similar compatible uses, including most facilities which complement and strengthen the function of the waterfront area; multifamily and single-family attached dwellings	Manufacture of acids, chlorine or other noxious gases, petroleum refining, explosives, stockyards, distillation of bones or rendering of fat, manufacture of hair or glue or similar noxious or dangerous uses; any General Commercial facilities which are not compatible with the intended use or function of the waterfront or do not fit into the desired pattern of activity	20,000 SF	70'	10'	10'	10'	50%/1.0	3 stories 35 feet
						Does not apply for planned shopping complexes Yard requirements may be made greater or less for special permit uses subject to environmental design conditions					

Notes: 1. Certain special permit uses subject to additional environmental design conditions. ** FAR = GROSS FLOOR AREA (SF) of the building ÷ TOTAL LAND AREA (SF) of the parcel upon which the building is located.

Attachment 5-1: Smart Growth Residential Density Plan for the CPSGD

Parcel Color	Parcel	Net Developable Acres	Incentive Units
	001-000-001D-000	20.1	402
	001-000-002D-004	0.91	18
	001-000-002F-003	10.04	201
	001-000-002G-002	2.52	50
	TOTAL:		671



For specific calculation of Smart Growth Units on a parcel by parcel basis, see Attachment 5-2.Ch. 40R Application Sec. 5.B. Smart Growth Residential Density Spreadsheet

Cordage Property is Crosshatched

Attachment 5-2.Ch. 40R Application Sec. 5.B. Smart Growth Residential Density Spreadsheet

Parcel Number	Parcel Street Address	Parcel Acreage	Existing Zoned Units	Net Developable Land	As-of-right residential density under Smart Growth Zoning (units / acre)	Smart Growth Units	Incentive Units (Smart Growth Units minus Existing Zoned Units)
001-000-001C-000	COURT STREET	2.60	0	0.00	20	0	0
001-000-001D-000	0 COURT STREET	20.10	0	20.10	20	402	402
001-000-002D-004	385 COURT STREET	0.91	0	0.91	20	18	18
001-000-002F-002	CORDAGE PARK	1.44	0	0.00	20	0	0
001-000-002F-003	381 COURT STREET	11.18	0	10.04	20	201	201
001-000-002G-002	377 COURT STREET	20.56	0	2.52	20	50	50
001-000-002E-001	5 BOUNDARY STREET	3.73	0	0.00	20	0	0
001-000-002E-002	5 BOUNDARY STREET	1.95	0	0.00	20	0	0
001-000-002A-000	385 COURT STREET	0.41	0	0.00	20	0	0
001-000-002C-000	BOUNDARY LANE	0.05	0	0.00	20	0	0
001-000-001B-000	SANDRI AVE	2.19	0	0.00	20	0	0
006-000-062B-000	HEDGE RD	0.83	0	0.00	20	0	0
006-000-062B-001	HEDGE RD	0.14	0	0.00	20	0	0
006-000-062B-002	HEDGE RD	0.17	0	0.00	20	0	0
District Totals		66.26	0			671	671

Zoning Incentive Payments Formula per M.G.L. c.40R Sec. 9(a)

Up to 20	\$10,000
21-100	\$75,000
101-200	\$200,000
201-500	\$350,000
501 or more	\$600,000

Projected Zoning Incentive Payments: Cordage Park Smart Growth District **\$600,000**

Density Bonus Payments Formula per M.G.L. c.40R Sec. 9(b)

Payment per unit of new housing \$3,000

Projected Density Bonus Payments: Cordage Park Smart Growth District **\$2,014,137**

Total Incentive and Density Bonus Payments (excluding 40S): **\$2,614,137**

ZONING AMENDMENT: CORDAGE PARK SMART GROWTH DISTRICT

Article __: To see if the Town will vote to amend the Zoning Bylaw by adding § 205-73: Cordage Park Smart Growth District to read as follows:

§ 205-73.Cordage Park Smart Growth District (CPSGD).

A. **Purposes.** The purposes of the Cordage Park Smart Growth District are:

- (1) To provide an opportunity for residential and mixed-use development within a distinctive, attractive and livable environment that supports the commercial revitalization of Cordage Park and the North Plymouth Village Center.
- (2) To promote continuing development and redevelopment in Cordage Park that is pedestrian friendly and consistent with Plymouth history and architecture.
- (3) To ensure high quality site planning, architecture and landscape design that enhances the distinct visual character and identity of North Plymouth and provides an environment with safety, convenience and amenity.
- (4) To provide for a diversified housing stock at a variety of costs within walking distance of the North Plymouth Village Center and the Plymouth commuter rail station, including affordable housing, and in housing types that meet the needs of the Town's population.
- (5) To generate positive tax revenue, and to benefit from the financial incentives provided by M.G.L. c.40R, while providing the opportunity for new business growth and additional local jobs.

B. **Scope and authority.** The Cordage Park Smart Growth District is established pursuant to the authority of M.G.L. c.40R and 760 CMR 59.00, and shall be deemed to overlay the parcels as shown on the Zoning Map of the Town of Plymouth, as amended. The applicant shall have the option of applying for Development permits pursuant to the zoning controls set forth in this § 205-73, or complying with all applicable zoning controls set forth in the Zoning Bylaw of the Town of Plymouth including the underlying LI/WF District.

C. **Definitions.** Except as noted hereinafter, all definitions are as provided in the Zoning Bylaw of the Town of Plymouth. As used in this section, the following terms shall have the meanings set forth below:

AFFORDABLE HOUSING RESTRICTION – A deed restriction of an Affordable Unit meeting statutory requirements in M.G.L. c.184 Sec. 31 and the requirements of § 205-73(K) of this Bylaw.

AFFORDABLE UNIT – A dwelling unit constructed per the requirements of § 205-73(K) of the Bylaw which meets the following conditions:

1. In a Development in which Affordable Units will be rented, a unit shall be considered an Affordable Unit if:

- a. It is rented to an Eligible Household; and
 - b. It is made available at a cost including rent, insurance and tenant-paid utilities of no more than 30% of gross household income of Eligible Households.
 - c. The Massachusetts Department of Housing and Community Development (DHCD) regulations and guidelines for qualification of the Affordable Units towards meeting the requirements under M.G.L. c.40B, its regulations, or any amendments thereto, including maximum rents and sale price, will be followed in order to enable the Town to qualify the dwelling units created under § 205-73(K) of the Bylaw towards the Town's subsidized housing inventory.
2. In a Development in which Affordable Units will be sold, a unit shall be considered an Affordable Unit if:
- a. It is sold to an Eligible Household; and
 - b. It is made available at a cost including mortgage interest, principal, taxes, insurance and common charges of no more than 33% of gross household income of Eligible Households.
 - c. The Massachusetts Department of Housing and Community Development (DHCD) regulations and guidelines for qualification of the Affordable Units towards meeting the requirements under M.G.L. c.40B, its regulations, or any amendments thereto, including maximum rents and sale price, will be followed in order to enable the Town to qualify the dwelling units created under § 205-73(K) of the Bylaw towards the Town's subsidized housing inventory.

ANNUAL UPDATE – A list of all approved and currently proposed Smart Growth Districts within the Town of Plymouth, to be filed on or before July 31 of each year with the Massachusetts Department of Housing and Community Development, with tabulation of each District of the total land area, the Developable Land Area and the Substantially Developed Land zoned at various allowable As-of-right densities under Ch. 40R Smart Growth Zoning.

APPLICANT – A landowner or other petitioner for a development permit within and subject to the provisions of a Smart Growth District.

AS-OF-RIGHT DEVELOPMENT – A Development allowable under zoning without recourse to a special permit, variance, zoning amendment, or other form of zoning relief. A Development that requires site plan review pursuant to this § 205-73 of the Bylaw shall be considered As-of-right.

ASSISTED LIVING HOUSING DEVELOPMENT – A Development designed for the elderly with supportive services and licensed by the Commonwealth of Massachusetts as an assisted living facility.

COMMON OWNERSHIP – Two or more contiguous or non-contiguous parcels within the Cordage Park Smart Growth District shall be deemed to be in Common Ownership if majority control of each is held by a common entity.

DESIGN STANDARDS – Means provisions of the Smart Growth District, or regulations adopted pursuant to the Smart Growth District, that are made applicable to Developments within the district that are subject to Site Plan Review by the Planning Board.

DEVELOPABLE LAND – All land within a Smart Growth District that can feasibly be developed into residential or Mixed-Use Developments. Developable land shall not include substantially developed land, protected open space, public rights-of-way, land currently in use for governmental functions or not developable due to environmental, topographical or regulatory constraints as more fully defined at 760 CMR 59.02.

DEVELOPMENT – The construction, reconstruction, conversion, alteration, relocation, enlargement or substantial rehabilitation of any structure or building for which review and/or approval is required, or proposed subject to a single permit application, within a Smart Growth District.

DWELLING UNIT — One room or rooms connected together constituting a separate, independent housekeeping establishment for owner occupancy, or rental or lease on a weekly, monthly, or longer basis, and physically separated from any other rooms or dwelling units which may be in the same structure and containing independent cooking and sleeping facilities. The following types of dwelling units are specifically defined:

- (1) SINGLE-FAMILY DETACHED — A detached residential dwelling unit, other than a mobile home, designed for and occupied by one family only.
- (2) DUPLEX — A detached residential building containing two dwelling units, designed for occupancy by not more than two families.
- (3) MULTI-FAMILY.
 - a. THREE-FAMILY - A residential building designed for or occupied by three families, with the number of families in residence not exceeding the number of dwelling units provided.
 - b. MULTI-FAMILY – A residential building designed for or occupied by more than three families, with the number of families in residence not exceeding the number of dwelling units provided.
 - c. SINGLE-FAMILY ATTACHED — A single-family residence that is attached to another single-family residence by a roof, carport, breezeway, or a common party wall, normally with front and rear

entrances and private yard space, commonly called a "townhouse" or "row house."

- d. PATIO HOUSE — A dwelling unit, normally on a small lot, which may be either single-family detached or attached, which often spans the entire width of the lot and which is designed to create a private outdoor patio.

ELIGIBLE HOUSEHOLD – An individual or household whose annual income is at or below eighty percent (80%) of the area-wide median income as determined by the United States Department of Housing and Urban Development (HUD), adjusted for household size, with income computed using HUD's rules for attribution of income to assets.

HOUSEHOLD INCOME, MEDIAN – The median income, adjusted for household size, as reported by the most recent information from, or calculated from regulations promulgated by, the United States Department of Housing and Urban Development (HUD), pursuant to Section 8 of the Housing Act of 1937, as amended by the Housing and Community Development Act of 1974, and/or the Commonwealth's Local Initiative Program and/or any successor federal or state program.

MIXED-USE DEVELOPMENT – A Development containing a residential Principal Use and one or more commercial, institutional or industrial Secondary Uses, provided that separate and distinct entrances are provided for residential and non-residential uses and that no more than 33% of the total gross floor area shall be used for non-residential uses.

SITE PLAN REVIEW – Standards and criteria which a Development in the Smart Growth District must meet under the review procedure established by this § 205-73 and administered by the Planning Board of the Town of Plymouth.

SMART GROWTH DISTRICT – An overlay zoning district adopted pursuant to M.G.L. c.40R, in accordance with the procedures for zoning adoption and amendment as set forth in M.G.L. c.40A and approved by the Department of Housing and Community Development pursuant to M.G.L. c.40R and 760 CMR 59.00.

UNDERLYING ZONING – The zoning requirements adopted pursuant to M.G.L. c.40A that are otherwise applicable to the geographic area where the Cordage Park Smart Growth District is located. Nothing in M.G.L. c.40R and 760 CMR 59.00 shall affect the Town of Plymouth's authority under M.G.L. c.40A to amend any provision of its Zoning Bylaw, including the Underlying Zoning applicable within any area that lies within the boundaries of the Cordage Park Smart Growth District.

UNDULY RESTRICT – A provision of a Smart Growth District or a Design Standard that adds unreasonable costs or unreasonably impairs the economic feasibility of proposed Developments in a Smart Growth District.

UNRESTRICTED UNIT – A Dwelling Unit that is not restricted as to rent, price or eligibility of occupants.

USE, ACCESSORY – A use subordinate to the Principal Use on the same lot or in the same structure and serving a purpose customarily incidental to and found in connection with the Principal Use, and which does not in effect constitute conversion of the Principal Use of the lot, site or structure to a use not permitted. Accessory uses are permitted or prohibited in zoning districts to the same extent as if such uses were Principal Uses.

USE, PRINCIPAL – The main or primary purpose for which a structure, building, or lot is designed, arranged, licensed, or intended, or for which it may be used, occupied, or maintained under this Bylaw.

USE, SECONDARY – A use located on the same lot as a Principal Use but which is of lesser scale, impact, or visibility than the Principal Use. A Secondary Use is not an Accessory Use as it is largely independent from the Principal Use. Secondary Uses include ground floor commercial in principally residential structures. Secondary Uses are permitted or prohibited in zoning districts to the same extent as if such uses were Principal Uses.

VILLAGE SERVICE AREA – That portion of the Town, as delineated on the Zoning Map of the Town of Plymouth, in which the major portion of growth and development is projected to occur and in which capital improvements will be provided to support development during the current capital improvements programming and planning period.

D. **Establishment and delineation of Cordage Park Smart Growth District.** The boundaries of this district are delineated on the Official Zoning Map of the Town of Plymouth on file in the office of the Town Clerk.

E. **Allowed uses.** The following uses shall be permitted As-of-right upon Site Plan Review and issuance of a permit pursuant to the provisions of this § 205-73:

- (1) Dwelling Units, Single-Family Detached.
- (2) Dwelling Units, Duplex.
- (3) Dwelling Units, Multi-Family.
 - (a) Three-Family.
 - (b) Multi-Family.
 - (c) Single-Family Attached.
 - (d) Patio House.

- (4) Housing Developments in which all units are designed for or accessible to the elderly or the handicapped under all applicable laws and regulations, provided that not less than twenty-five percent (25%) of the housing units in any such Development shall be Affordable Units.
- (5) Mixed-use development allowing for no more than 33% of the total gross floor area to be used for non-residential uses.

F. Prohibited uses or activities.

- (1) Any use which emits strong odors, or dust particles, or smoke, or poses danger, such as manufacture of acids, gases, fertilizers, and glue, petroleum refining, reduction of animal matter, and manufacture of cement, gypsum, or explosives.
- (2) Any other use dangerous to persons within or outside the district by reason of emission of odor, fumes, gases, particulate matter, smoke, noise, vibration, glare, radiation, electrical interference, threat of fire or explosion, or any other reason.
- (3) General commercial uses not related to any of the stated purposes or activities of the waterfront which would not make appropriate use of its unique potential.

G. Dimensional and other requirements.

- (1) Table of dimensional and density requirements. The following height and density requirements shall apply to all lots and buildings within the Cordage Park Smart Growth District, notwithstanding any inconsistent provisions of the Underlying Zoning:

Use	Max. Height ¹	Allowed Res. Density (du/ac.)
Dwelling Units, Single-Family Detached.	35	8
Dwelling Units, Single-Family Attached.	35	8
Dwelling Units, Three-Family	35	12
Dwelling Units, Multi-Family.	60	20
Assisted Living	60	20
Dwelling Units, Duplex.	35	12
Dwelling Units, Patio House.	35	8
Housing accessible to the handicapped.	60	20
Mixed-Use Development.	60	20

- (2) Maximum height. The maximum height for all structures located to the east of the MBTA rail right-of-way shall be sixty (60) feet or, for any structure erected prior to the effective date of this Zoning Bylaw, the maximum height shall be the height of such structure as of the effective date of this Zoning Bylaw, whichever is greater. The maximum height for all structures located to the west of the MBTA rail right-of-way shall be three stories or thirty-five (35) feet. Accessory or appurtenant

¹ Maximum height is further detailed in Sec. 205-73(G)(2) of this Bylaw.

improvements necessary to the operation of a structure (for example, elevator or stairway enclosures) may exceed the maximum height limit by not more than fifteen (15) feet.

- (3) Additional dimensional standards and requirements. Applications for Development will also be governed by the attachment entitled Design Standards for the Cordage Park Smart Growth District, adopted by the Planning Board of the Town of Plymouth pursuant to Sec. 205-73(H) of this Bylaw and approved by the Massachusetts Department of Housing and Community Development pursuant to M.G.L. c.40R Sec. 10 and 760 CMR 59.04(1)(f).
- (4) Total allowable non-residential mixed-use development. The aggregate amount of non-residential uses within Mixed-Use Development permitted subject to the provisions of this Bylaw shall not exceed ___ total square feet.
- (5) Contiguous parcels. In the Cordage Park Smart Growth District, where two or more lots are contiguous or are separated by a right-of-way, such lots may be considered as one lot for the purpose of calculating maximum lot coverage; parking requirements; minimum useable open space; and dwelling units per acre.
- (6) Common ownership. In cases where an Applicant satisfactorily establishes Common Ownership of two or more parcels within the Cordage Park Smart Growth District at the time of application for a Development permit, the Applicant may choose to locate Dwelling Units in configurations that exceed the allowable density for a single parcel as long as the number of Dwelling Units constructed on another parcel is reduced such that the total number of Dwelling Units does not exceed the total allowable As-of-right development for the parcel as a whole. The total allowable As-of-right development for the parcel as a whole shall be calculated by multiplying the total area of Developable Land by the As-of-right residential density of twenty (20) units per acre.
- (7) Transfer of development rights. As more fully described in Sec. 205-73(L), residential density may be increased beyond the densities shown in the Table of Dimensional and Density Requirements above through the Transfer of Development Rights from another parcel consistent with the requirements of Sec. 205-70. In order to facilitate the Transfer of Development Rights, the Planning Board may waive specific dimensional and density requirements if such waivers are of high quality and in the public interest as more fully described in Sec. 205-73(N).

H. Design standards. In addition to the standards set forth in this Bylaw, the physical character of Developments within the Cordage Park Smart Growth District shall comply with Design Standards in order to ensure that new development shall be of high quality, and shall be compatible with the character of building types, streetscapes, and other community features traditionally found in Cordage Park and the North Plymouth Village Service Area. The applicable design standards are included in the attachment entitled: Design Standards for the

Cordage Park Smart Growth District, adopted by the Planning Board of the Town of Plymouth and approved by the Massachusetts Department of Housing and Community Development, dated _____.

I. Open spaces and recreational areas.

- (1) Design and location. The common open space and facilities system shall be designed to accomplish the following objectives:
 - (a) The primary access drive to the Cordage Park site shall be designed as a boulevard with sidewalks, street trees and lighting, and shall create a view corridor to Plymouth Harbor. The access drive shall create a prominent pedestrian and bicycle corridor connected to the Plymouth Seaside Rail Trail, and oriented in an east-west direction, extending from the Court Street corridor (Route 3A) to the waterfront.
 - (b) Proposals for development of the Cordage Park site shall seek to restore and maintain public access to the Plymouth Harbor waterfront. Public amenities accompanying Development located to the east of the MBTA rail right-of-way should include parks, benches, trees and landscaping, and a gazebo or other public gathering space.
- (2) Ownership and maintenance. The plans and documentation submitted to the Planning Board shall include a description of all common open space or facilities.
- (3) Plans. The plans and any necessary supporting documents submitted with an application for a development within the Cordage Park Smart Growth District shall show the general location, size, character, and general area within which common open space or facilities will be located.

J. Residential composition and unit mix.

- (1) Residential composition. Residential composition in the Cordage Park Smart Growth District shall be comprised of a variety of housing types, and may include any of the following subject to the provisions of this Bylaw:
 - (a) Dwelling Units, Single-Family Detached.
 - (b) Dwelling Units, Duplex.
 - (c) Dwelling Units, Multi-Family.
 1. Three-Family
 2. Multi-Family.
 3. Single-Family Attached.
 4. Patio House.

- (d) Housing Developments in which all units are accessible to the elderly and or the handicapped under all applicable laws and regulations, provided that not less than twenty-five percent (25%) of the housing units in any such Development shall be Affordable Units.
 - (e) Mixed-use Development allowing for no more than 33% of the total gross floor area to be used for non-residential uses.
- (2) Unit mix. At least ten percent (10%) of the Dwelling Units constructed within the Cordage Park Smart Growth District shall have three or more bedrooms. Applicants for residential Developments that do not include the required percentage of three or more bedrooms shall be required to demonstrate to the satisfaction of the Planning Board that a number of units with three or more bedrooms at least equal to ten percent (10%) of the proposed total number of units in the Development has been permitted in another Development within the Cordage Park Smart Growth District, and that said units exceeded the minimum required percentage of units with three or more bedrooms within said Development, such that the aggregate percentage of units with three or more bedrooms within all residential developments in the Cordage Park Smart Growth District shall not be less than ten percent (10%).

K. Affordable housing.

- (1) Number of affordable units. Twenty percent (20%) of all housing units constructed in the Smart Growth District on a lot or lots in common ownership shall be Affordable Units. Further, any rental development must include twenty-five percent (25%) Affordable Units. In the event housing constructed in the Smart Growth District shall include Developments limited in occupancy for elderly persons or persons with disabilities, twenty-five percent (25%) of the housing units in such Developments shall be Affordable Units.
- (2) Fractional Units. When the application of the percentages specified above results in a number that includes a fraction, the fraction shall be rounded up to the next whole number if the fraction is 0.5 or more. If the result includes a fraction below 0.5, the fraction shall be rounded down to the next whole number.
- (3) Affordable Units shall comply with the following requirements:
 - (a) The monthly rent payment for an Affordable Rental Unit, including utilities and parking, shall not exceed 30 percent of the maximum monthly income permissible for an Eligible Household, assuming 1.5 persons per bedroom, except in the event of an Eligible Household with a Section 8 voucher in which case program rent limits shall apply.

- (b) For an Affordable Homeownership Unit the monthly housing payment, including mortgage principal and interest, private mortgage insurance, property taxes, condominium and/or homeowner's association fees, insurance, and parking, shall not exceed 33 percent of the maximum monthly income permissible for an Eligible Household, assuming 1.5 persons per bedroom.
- (c) Affordable Units required to be offered for rent or sale shall be rented or sold to and occupied only by Eligible Households.

(4) Design and construction.

- (a) Design. Affordable Units must be dispersed throughout a Development and be comparable in initial construction quality and exterior design to the Unrestricted Units. However, nothing in this section is intended to limit a homebuyer's rights to renovate a Dwelling Unit under applicable law. The Affordable Units must have access to all on-site amenities. Affordable Units shall be finished housing units.
- (b) Timing. All Affordable Units must be constructed and occupied not later than concurrently with construction and occupancy of Unrestricted Units or development. In phased developments, Affordable Units may be constructed and occupied in proportion to the number of units in each phase of the Development.

(5) Unit mix.

- (a) The number of bedrooms per unit in the Affordable Units shall be in the same proportion as the number of bedrooms per unit in the market rate units except that an additional number of Affordable Units may be provided such that a minimum of twenty percent (20%) of all Affordable Units shall include three or more bedrooms.
 - (b) If only one Affordable Unit is required and the other units in the Development have various numbers of bedrooms, the Applicant may select the number of bedrooms for that unit. If Affordable Units cannot mathematically be exactly proportioned in accordance with the Market Rate Units, the unit mix shall be determined by the Planning Board.
- (6) Affordable housing restriction. Each Affordable Unit shall be subject to an Affordable Housing Restriction which is recorded with the Plymouth County Registry of Deeds or Land Court Registry District of Plymouth County. The Affordable Housing Restriction shall provide for the implementation of the requirements of this § 205-73(K) of the Zoning Bylaw. All Affordable Housing Restrictions must include, at minimum, the following:

- (a) Description of the development, including whether the Affordable Units will be rented or owner-occupied.
- (b) A description of the Affordable Unit by address and number of bedrooms.
- (c) Specification of the term of the Affordable Housing Restriction which shall be no less than thirty years.
- (d) The name and address of an administering agency with a designation of its power to monitor and enforce the Affordable Housing Restriction.
- (e) Reference to a housing marketing and resident selection plan, to which the Affordable Unit is subject, and which includes an affirmative fair housing marketing program, including public notice and a fair resident selection process. The housing marketing and selection plan may provide for preferences in resident selection to the extent consistent with applicable law. The plan shall designate the household size appropriate for a unit with respect to bedroom size and provide that preference for such unit shall be given to a household of the appropriate size.
- (f) A requirement that residents will be selected at the initial sale or initial rental and upon all subsequent sales and rentals from a list of Eligible Households compiled in accordance with the housing marketing and selection plan.
- (g) Reference to the formula pursuant to which rent of a rental unit or the maximum resale price of a homeownership unit will be set.
- (h) A requirement that only an Eligible Household may reside in an Affordable Unit and that notice of any lease or sublease of any Affordable Unit shall be given to the administering agency.
- (i) Provision for effective monitoring and enforcement of the terms and provisions of the Affordable Housing Restriction by the administering agency.
- (j) Provision that the restriction on an Affordable Homeownership Unit shall run in favor of the administering agency and the Town of Plymouth, in a form approved by municipal counsel, and shall limit initial sale and re-sale to and occupancy by an Eligible Household.
- (k) Provision that the owner[s] or manager[s] of Affordable Rental Unit[s] shall file an annual report to the administering agency, in a form specified by that agency certifying compliance with the provisions of this Bylaw and containing such other information as may be reasonably requested in order to ensure affordability.
- (l) A requirement that residents in Affordable Units provide such information as the administering agency may reasonably request in order to ensure affordability.

- (7) Administration. An administering agency which may be the Plymouth Housing Authority, regional non-profit housing agency, or other qualified housing entity shall be designated by the Plymouth Board of Selectmen and shall ensure the following:
- (a) Prices of Affordable Homeownership Units are properly computed; rental amounts of Affordable Rental Units are properly computed.
 - (b) Income eligibility of households applying for Affordable Units is properly and reliably determined.
 - (c) The housing marketing and resident selection plan conforms to all requirements and is properly administered.
 - (d) Sales and rentals are made to Eligible Households chosen in accordance with the housing marketing and resident selection plan with appropriate unit size for each household being properly determined and proper preference being given.
 - (e) Affordable Housing Restrictions meeting the requirements of this section are recorded with the Plymouth County Registry of Deeds or Land Court Registry District of Plymouth County.

The housing marketing and selection plan may make provision for payment by the owner of reasonable costs to the administering agency to develop, advertise, and maintain the list of Eligible Households and to monitor and enforce compliance with affordability requirements. Such payment shall not exceed one-half (1/2%) percent of the amount of rents of Affordable Rental Units (payable annually) or four (4%) percent of the sale or resale prices of Affordable Homeownership Units (payable upon each such sale or resale).

In the case that the applicant and the administering agency cannot mutually agree on duties, upon certification of this fact by the Plymouth Board of Selectmen or by the Department of Housing and Community Development, the administrative duties shall devolve to and thereafter be administered by a qualified housing entity designated by the Plymouth Board of Selectmen or, in the absence of such designation, by an entity designated by the Department of Housing and Community Development. The applicant shall agree to pay reasonable fees as necessary to ensure that the Affordable Unit remains in compliance with affordability and marketing requirements over time.

- L. **Transfer of development rights.** Residential density permitted in the Cordage Park Smart Growth District may be increased by up to X residential units above the allowable densities stated herein with the transfer of development rights from other parcels of land, whether contiguous or noncontiguous, as specified in § 205-70, Transfer of Development Rights.

M. Administration. In reviewing an application for smart growth development, the Planning Board shall be the permit granting authority.

(1) Pre-application review. The applicant is encouraged to participate in a pre-application review at a regular meeting of the Planning Board. If a pre-application review is requested by the applicant, the Planning Board shall notify all interested boards and committees of the date and time of said meeting, including but not limited to the Board of Selectmen, Design Review Board, Board of Health, Historical Commission, Housing Partnership, and the North Plymouth Steering Committee. The purpose of the pre-application review is to minimize the applicant's cost of engineering and other technical experts, and to obtain the advice and direction of the Planning Board prior to filing the application. At the pre-application review the applicant shall outline the proposal and seek preliminary feedback from the Planning Board, other municipal review entities, and members of the public. The applicant is also encouraged to request a site visit by the Planning Board and/or its designee in order to facilitate pre-application review.

(2) Application procedures.

- (a) The applicant shall file the required number of copies of the application with the Town Clerk for certification of the date and time of filing, and with the Planning Board. Said filing shall include any required forms provided by the Planning Board.
- (b) Review fees. The applicant shall be required to pay for reasonable consulting fees to provide peer review of the application for the benefit of the Planning Board. Such fees shall be held by the Town of Plymouth in an interest-bearing escrow account, and shall be used only for expenses associated with the review of the development application by outside consultants. Any surplus funds remaining after the completion of such review, including any interest accrued, shall be returned to the applicant forthwith.
- (c) Upon receipt by the Planning Board, applications for permits shall be distributed to at least the Design Review Board, Historical Commission, Fire Chief, Board of Health, Housing Partnership and the North Plymouth Steering Committee. The reports of the Design Review Board, Board of Health, the North Plymouth Steering Committee or others, which are advisory, shall be submitted to the Planning Board within 60 days of filing of the application.
- (d) Within 30 days of filing of an application with the Planning Board, the Board or its designee shall evaluate the proposal with regard to its completeness and shall submit an advisory report in

writing to the applicant certifying the completeness of the application. The Board or its designee shall forward, with its report, copies of all recommendations received to date from other boards, commissions or departments.

- (3) Public hearing. Upon certifying the completeness of the application filed pursuant to this § 205-73 of the Bylaw, the Board shall, within a duly noticed public hearing, review all applications according to the procedure specified in M.G.L. c.40R § 11 and 760 CMR 59.04(1)(f) and in accordance with the provisions of this Bylaw.
- (4) Planning Board decision.
 - (a) The Planning Board shall make a decision on the application, and shall file said decision with the Town Clerk, within 120 days of the receipt of the application by the Town Clerk. The time limit for public hearings and taking of action by the Planning Board may be extended by written agreement between the petitioner and the Board, with a copy filed with the Town Clerk.
 - (b) Failure of the Planning Board to take action within 120 days or extended time, if applicable, shall be deemed to be an approval of the application.
 - (c) A petitioner who seeks approval because of the Planning Board's failure to act on an application within 120 days or extended time, if applicable, must notify the Town Clerk in writing, within fourteen (14) days from the expiration of said time limit for a decision, of such approval and that notice be sent by the petitioner to the parties in interest by mail. The applicant shall send such notice to parties in interest by mail and each such notice shall specify that appeals, if any, shall be made pursuant to M.G.L. c.40R and shall be filed within twenty (20) days after the date the Town Clerk received such written notice from the applicant that the Planning Board failed to act within the time prescribed.
 - (d) The Board's findings, including the basis of such findings, shall be stated in a written decision of approval, conditional approval or denial of the permit application. The written decision shall contain the name and address of the applicant, identification of the land affected and its ownership, and reference by date and title to the plans that were the subject of the decision. The written decision shall certify that a copy of the decision has been filed with the Town Clerk and that all plans referred to in the decision are on file with the Planning Board.
 - (e) The decision of the Planning Board, together with the detailed reasons therefor, shall be filed with the Town Clerk, the Board of Appeals and the Building Inspector. A certified copy of the

decision shall be mailed to the owner and to the applicant if other than the owner. A notice of the decision shall be sent to the parties of interest and to persons who requested a notice at the public hearing.

- (f) Effective date. If twenty (20) days have elapsed after the decision has been filed in the office of the Town Clerk without an appeal having been filed or if such appeal, having been filed, is dismissed or denied, the Town Clerk shall so certify on a copy of the decision. If the application is approved by reason of the failure of the Planning Board to timely act, the Town Clerk shall make such certification on a copy of the application. A copy of the decision or application shall be recorded with the title of the land in question in the Plymouth County Registry of Deeds or the Plymouth Land Registry District, and indexed in the grantor index under the name of the owner of record or recorded and noted on the owner's certificate of title. The responsibility and the cost of said recording and transmittal shall be borne by the owner of the land in question or the applicant.

- (5) Criteria for approval. The Planning Board shall approve the development upon finding that it complies with the purposes and standards of the Cordage Park Smart Growth District and accompanying Design Standards.
- (6) Criteria for conditional approval. The Planning Board may impose conditions on a permit approval as necessary to ensure compliance with the Cordage Park Smart Growth District and accompanying Design Standards, or to mitigate any extraordinary adverse impacts of the Development on nearby properties, insofar as such conditions are compliant with the provisions of M.G.L. c.40R and 760 CMR 59.00 and do not Unduly Restrict opportunities for development. Pursuant to 760 CMR 59.04(1)(h), the Planning Board may require construction of an approved Development to be phased for the purpose of coordinating the Development with any mitigation required pursuant to this Bylaw.
- (7) Criteria for denial. The Planning Board may deny an application for development pursuant to this § 205-73 of the Zoning Bylaw if the Board finds one or more of the following by majority vote:
 - (a) The Development does not meet the conditions and requirements set forth in the Smart Growth Zoning and accompanying Design Standards.
 - (b) The applicant failed to submit information and fees required by the Smart Growth Zoning and necessary for an adequate and timely review of the design of the Development or potential Development impacts.
 - (c) It is not possible to adequately mitigate significant adverse Development impacts on nearby properties by means of suitable conditions.

- (8) **Time limit.** Within its written decision, the Planning Board shall establish a reasonable period, not to exceed two years, after which, if substantial use or construction permitted by the permit has not been commenced and is not continued, the permit shall expire except for good cause shown. This time period will begin on the date on which the written decision is filed with the Town Clerk. The time period shall automatically be extended by the amount of time required to pursue and await the determination of an appeal.
- (9) **Appeals.** Any person aggrieved by a decision of the Board may appeal to the Superior Court, the Land Court or the District Court within twenty (20) days after the decision has been filed in the office of the Town Clerk, and pursuant to M.G.L. c.40R, § 17.

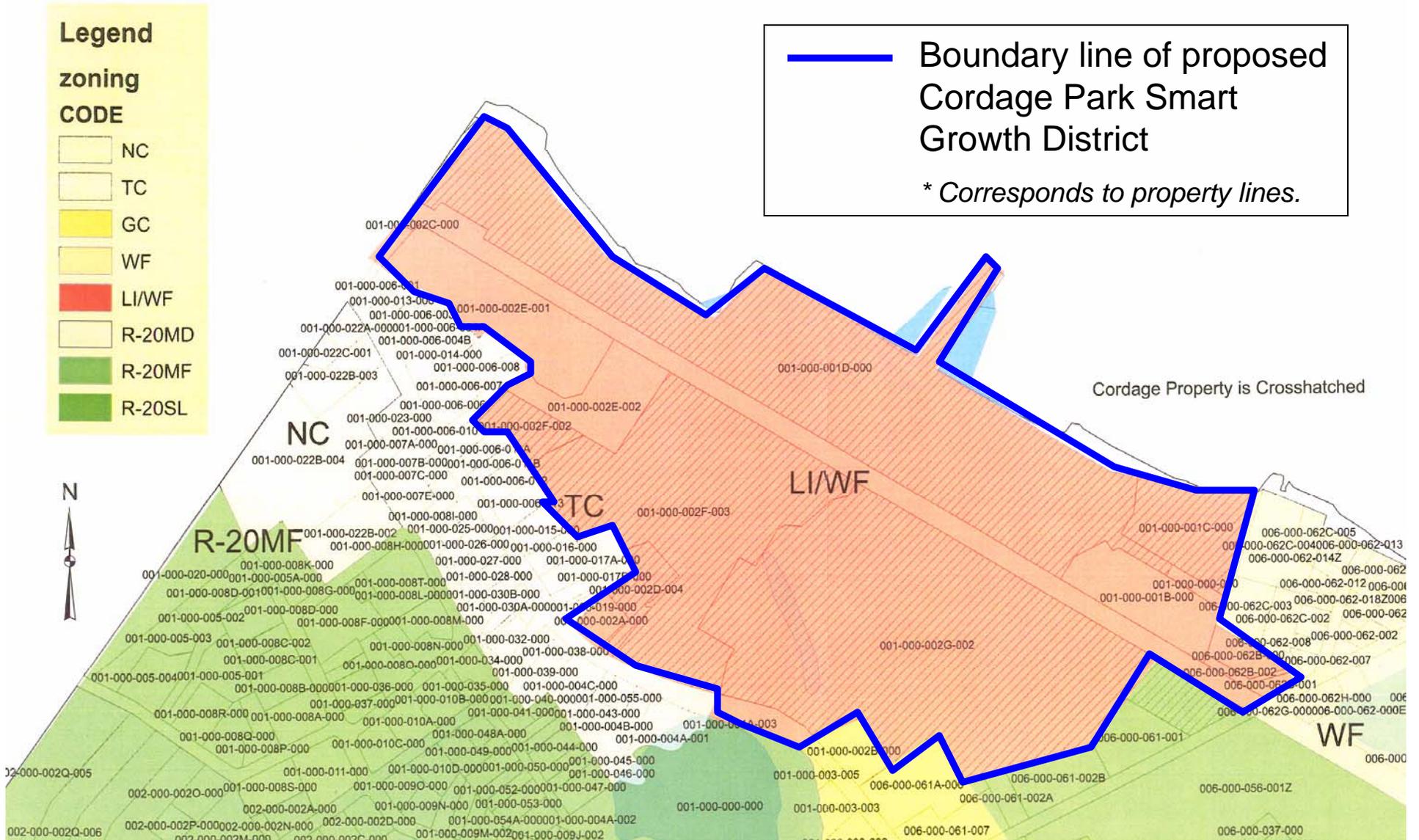
N. **Waivers.** Waivers with respect to the standards set forth above, or in any other section of the Zoning Bylaw which may be incorporated by reference into this § 205-73, may be authorized by the Planning Board in the site plan approval within the Cordage Park Smart Growth District, upon demonstration that any proposed waivers are of high standards, are in the public interest, and that any departure from the general criteria will not violate the intent of the Zoning Bylaw. However, the Board may not waive any portion of the Affordable Housing requirements in § 205-73(K).

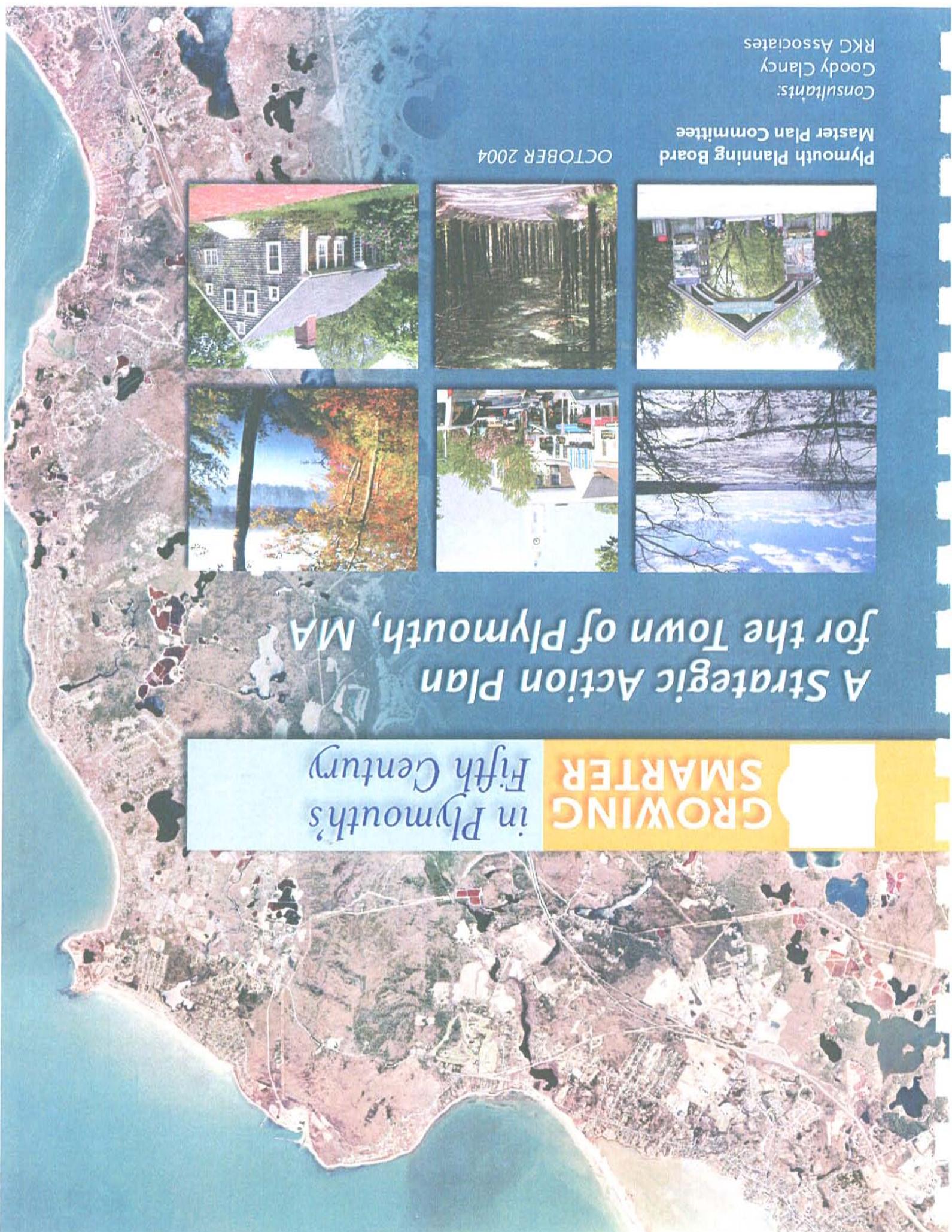
O. **Annual update.** On or before July 31 of each year, the Director of Planning and Development of the Town of Plymouth shall cause to be filed an Annual Update with the Department of Housing and Community Development (DHCD) in a form to be prescribed by DHCD. The Annual Update shall contain all information required in 760 CMR 59.07, as may be amended from time to time, and additional information as may be required pursuant to M.G.L. Ch. 40S and accompanying regulations. The Town Clerk of the Town of Plymouth shall maintain a copy of all updates transmitted to DHCD pursuant to this Bylaw, with said copies to be made available upon request for public review.

P. **Notification of issuance of building permits.** Upon issuance of a residential building permit within the Cordage Park Smart Growth District, the Building Inspector of the Town of Plymouth shall cause to be filed an application to the Department of Housing and Community Development (DHCD), in a form to be prescribed by DHCD, for authorization of payment of a one-time density bonus payment of \$3,000 for each housing unit. The application shall contain all information required in 760 CMR 59.06(2), as may be amended from time to time, and additional information as may be required pursuant to M.G.L. Ch. 40S and accompanying regulations. The Town Clerk of the Town of Plymouth shall maintain a copy of all such applications transmitted to DHCD pursuant to this Bylaw, with said copies to be made available upon request for public review.

- Q. **Date of effect.** This Bylaw shall go into effect upon receipt of a Letter of Approval from the Department of Community Development pursuant to 760 CMR 59.05(5) that the Cordage Park Smart Growth District meets the approval requirements set forth in M.G.L. c.40R and 760 CMR 59.04(1). Upon receipt of said letter, the effective date of the Bylaw shall be the date of municipal approval at a Town Meeting of the Town of Plymouth.
- R. **Exemptions.** Housing units created pursuant to this § 205-73 of the Bylaw shall be deemed exempt from the provisions of § 205-11 (Building Permit Limitations) and § 205-68 (Residential Development Phasing).
- S. **Severability.** The provisions of this section are severable. If any provision of this section is held invalid, the other provisions shall not be affected thereby. If the application of this section or any of its provisions to any person or circumstances is held invalid, the application of this section and its provisions to other persons and circumstances shall not be affected thereby.

Attachment 5-4: Smart Growth Zoning District Boundary

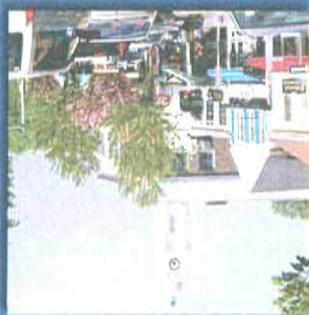




Consultants:
Goody Clancy
RKG Associates

Plymouth Planning Board
Master Plan Committee

OCTOBER 2004



A Strategic Action Plan for the Town of Plymouth, MA

**GROWING
SMARTER**

*in Plymouth's
Fifth Century*





PLYMOUTH PLANNING BOARD

LORING TRIPP, *Chair*
 NICHOLAS FILLA, *Vice Chair*
 LARRY ROSENBLUM

MALCOLM MCGREGOR
 PAUL MCALDUFF
 WENDY GARFOW, *ALTERNATE*

PLYMOUTH MASTER PLAN COMMITTEE (2004)

ENZO MONTI, *Chair*
 RUTH AOKI, *Vice Chair*
 AILEEN DROEGE
 SASH ERSKINE
 ELAINE SCHWOTZER LUTZ

JOHN MARTINI
 LARRY ROSENBLUM
 IRA SMITH
 LORING TRIPP
 CHARLES VANDINI

PREVIOUS MEMBERS OF THE MASTER PLAN COMMITTEE

THOMAS BOTT
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 WILLIAM FRANKS
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 GERRE HOOKER
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 TOM MALONEY

JAMES MASON
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 DON QUINN
 ROBERT REIFISS
 TOM WALLACE
 BRIAN WHITFIELD
 MARK WITHINGTON

DIRECTOR OF PLANNING AND DEVELOPMENT

LEE HARTMANN

MASTER PLAN CONSULTANT

MICHAEL PESSALANO

STRATEGIC PLAN CONSULTANT

GOODY CLANCY WITH RKG ASSOCIATES

Photos:
 Larry Rosenblum
 Paul McAluff
 Goody Clancy

Thanks to everyone in Plymouth who helped create the Master Plan and the Strategic Action Plan.



Growing smarter in Plymouth's fifth century: a letter from the Master Plan Committee and the Planning Board

Fall 2004

In 2020, Plymouth will enter its fifth century. What do we want Plymouth to be like at our 400th birthday celebration? What do we have to do as a community to make sure we preserve the qualities of our community that are so important to us while taking advantage of all the opportunities the future can bring? This Plymouth Strategic Action Plan-2007/2025 is our road map to the future. Based on the results of the Town's recent planning projects, especially the Economic Development and Cost of Services Study, the Master Plan and the Open Space Plan, the Strategic Action Plan presents a clear framework and action agenda for implementing the recommendations of those plans.

Over the centuries we have changed from a tiny settlement perched on the Atlantic coast to one of the fastest-growing communities in New England. In the late 1900s, Plymouth residents recognized that the Town needed a new master plan to help us make the right choices as we face new challenges. A Master Plan Task Force was established that later became the Master Plan Committee, with representatives from a variety of town boards, commissions, neighborhood groups, as well as other citizens.

In town-wide workshops, surveys, and neighborhood meetings we asked you what you were concerned about and what you wanted for Plymouth's future. You told us you were worried about rising taxes, the pace and impacts of development, and the importance of school quality. You wanted Plymouth to keep its small-town qualities, to shape and direct residential growth, and to preserve our open spaces and the quality and quantity of the water in our ponds, streams, and aquifer.

This Strategic Action Plan is our report to you. It summarizes the findings of the Master Plan, describes a vision for the future, sets forth a policy framework to guide town decision makers in the future, and advances an action agenda to achieve the vision. It is a plan for "smarter growth" that balances preservation of our exceptional natural and cultural heritage and our quality of life with pursuit of new and exciting opportunities for economic growth. The plan asks us to be innovative so that we can protect the things most important to us while making sure that we have a robust economic foundation for successful community life.

Plymouth is a special place and each of us, whether life-long residents or new arrivals, has a stake in its future. We invite all members of the Plymouth community to join in putting the Strategic Action Plan into practice.

Master Plan Committee

Plymouth Planning Board



The strategic action plan—

THE VISION FOR PLYMOUTH'S FUTURE

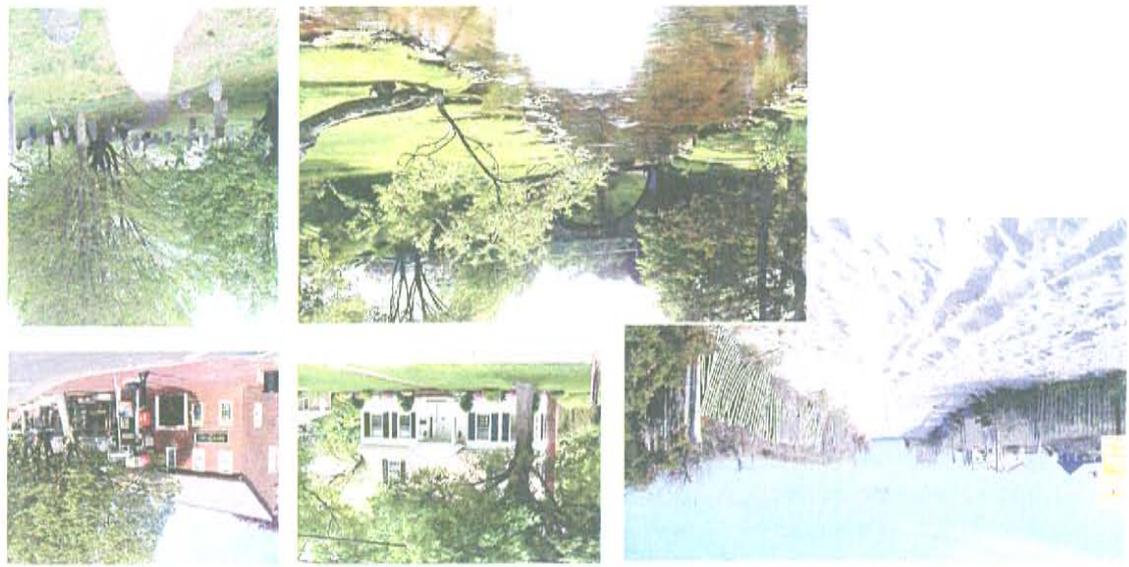
With vibrant and pleasant village centers, a preserved and enhanced historic heritage, long stretches of accessible coastline, integrated areas of commerce and compact housing, and vast connected areas of open space for environmental protection, outdoor activities and appreciation of nature, Plymouth will be an even more desirable town to live in that it is today.

- First, the Town will retain its outstanding visual character, which is defined by its vast natural areas, pristine ponds, rivers, and wetlands, extensive coastline, and wooded ambiance.

- Second, the Town will efficiently provide a full array of services and amenities through its success in achieving and sustaining smart growth.

- Third, economic prosperity will be enhanced through desirable and sustainable business investment, employment, shopping, tourism, housing choice, and entrepreneurship.

The successes in plan-making and plan-implementation will be reflected in a beautiful, maturing community with something for everyone.



from sprawl growth to smarter growth

Critical Questions Facing Plymouth

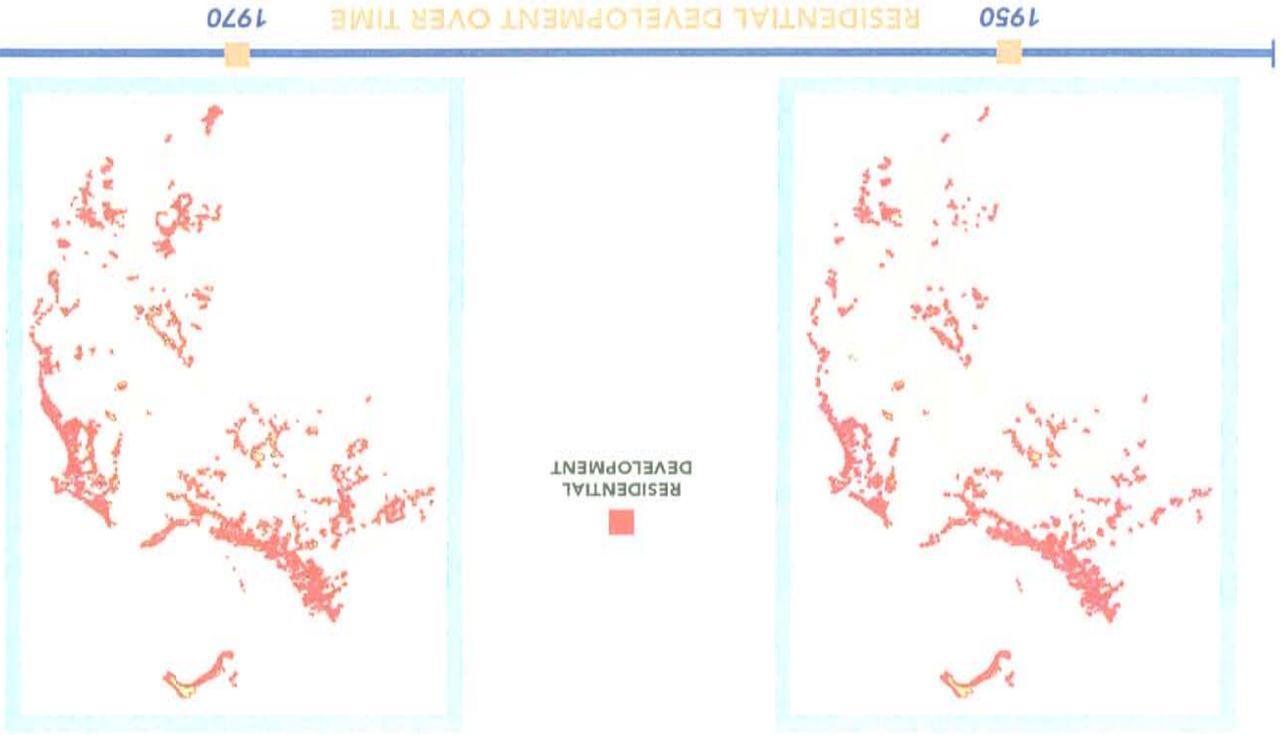
- Where should we grow?
- Plymouth will grow and change. The majority of new development is occurring in the rural parts of town where there is a large amount of undeveloped land. Is this where we should grow?
- How should we grow?
- Most recent developments are single family houses on large lots. Do we want to continue to promote this kind of development? How can we encourage non-residential development?
- How do we preserve our most treasured assets?
- We value the diversity of our landscape—villages and open spaces, ponds and beaches, historic sites and pine barrens—and we have some of the most important environmental resources and wildlife habitat in Massachusetts. Can we be better stewards of this heritage from the past and pass it on to the next generation?
- How do we succeed in a highly competitive economic environment?
- We need to improve our economy—but the regional economy is very competitive. How do we make the most of our economic, environmental and cultural assets?

Guiding Principles to Answer the Questions

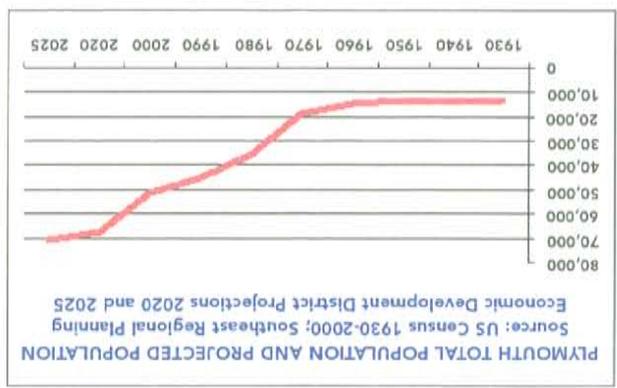
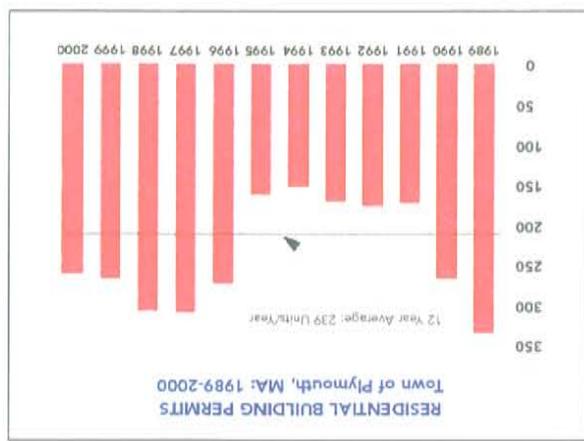
- Control sprawl
Sprawl is large-lot, low-density development that consumes open space and costs more in town services than it returns in property taxes.
- Encourage economic development
Economic development provides jobs for Plymouth residents and tax revenues to help pay for town services.
- Balance costs and growth
Sprawling residential growth is the most costly to town government while business growth and compact residential growth cost less in services and result in retaining more open space.
- Preserve character
Historic sites and buildings, village settlements, rural vistas, and the interplay of ocean, ponds, streams, and wetlands make Plymouth unique; this diversity in landscape and building types should be preserved.
- Protect the environment
Plymouth is a significant center of biodiversity and lies above the second-largest aquifer in Massachusetts.
- Improve quality of life
Residents seek an environment that allows them to live, work, and play in Town and to enjoy Plymouth's uniqueness.

The Policy Context for Decision-Making

- Plymouth respects the rights of private property owners.
- The Town will promote changes to outdated state laws, such as Approval Not Required Subdivisions on road frontage, which constrain Town regulation of development and settlement patterns.
- Plymouth needs to protect critical natural and historic resources, but the Town cannot protect all critical resources by purchasing land or development rights.
- Plymouth needs growth as well as preservation to create jobs for residents and pay for the services desired by residents.
- The Town will use a combination of incentives and regulation to shape both preservation and development decisions.
- The Town will use public-private partnerships where possible to achieve the community's goals through implementation of the Master Plan.



Southeastern Massachusetts is the fastest growing region in the Commonwealth and one of the fastest growing on the East Coast. Plymouth's population almost doubled between 1970 and 1980 and it grew another 26% during the 1980s. During the 1990s, population growth moderated somewhat, but still grew another 13%. Based on current trends, regional planning agencies forecast continuing high growth until stabilization in the 2020s.



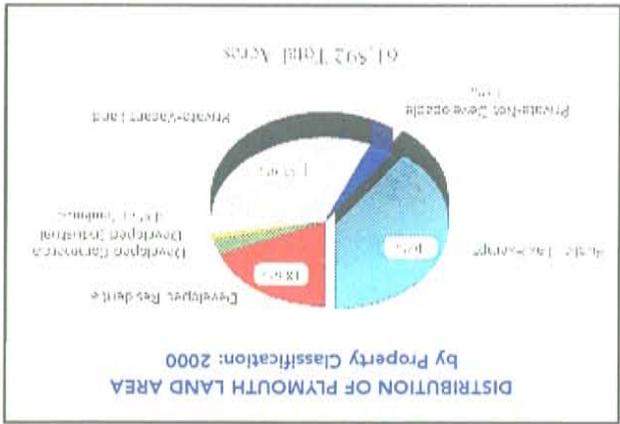
Plymouth at the crossroads—



Where have we been?

Since 1998, the number of new house lots has averaged 276 a year. Housing growth and values have outpaced business growth and values. The result is an ever-increasing reliance on single-family homeowners to pay for municipal services.

Overall, residential development costs the town \$1.14 for every \$1 in property tax collected. But average costs disguise the difference between the costs of sprawl growth and smarter growth. Sprawling growth of single family homes on large lots brings higher costs in town services because it consumes more land and requires services over larger distances. The average cost to service a single family home in Plymouth's rural areas exceeded \$8,600 in Fiscal Year 2001—more than double the \$4,200 cost of servicing housing units in older, higher density neighborhoods located in Plymouth's Village Centers. Similarly, the average cost to service an "empty nester" unit, such as at White Cliffs or the Pinehills, is roughly \$2,200, half the cost of conventional high-density residential development.



RESIDENTIAL DEVELOPMENT



1990 RESIDENTIAL DEVELOPMENT OVER TIME 2004

Plymouth at the crossroads—

Development since the Village Centers Plan

Since the 1980 Village Centers Plan, Plymouth has embraced the concept of encouraging growth within the existing Village Centers. But current land use policies have been less effective than hoped in curbing sprawl and helping the Town maintain a balance between growth and preservation that Plymouth citizens desire. Since 1980:

- Most new housing has taken the form of single family homes.
- 8% of all single-family houses have been built outside the Village Centers.
- 82% of all single family housing has been built in the larger-lot zoning districts.
- Average land consumption per single family unit has almost doubled from an average lot size of 0.6 acre to 1.0 acre.
- Average lot size within the Village Centers has grown to 0.7 acre and outside the Village Centers to 1.26 acre.

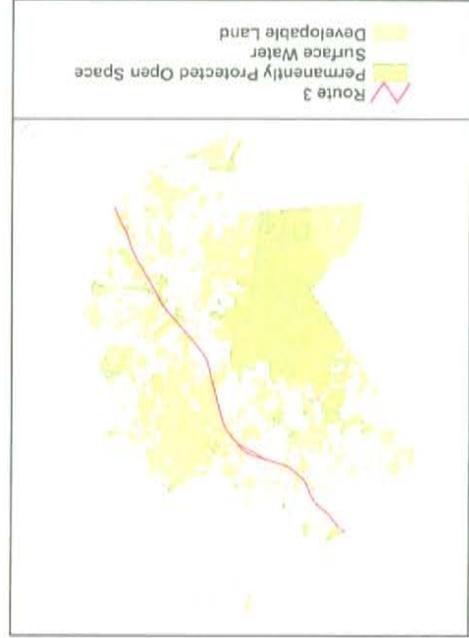
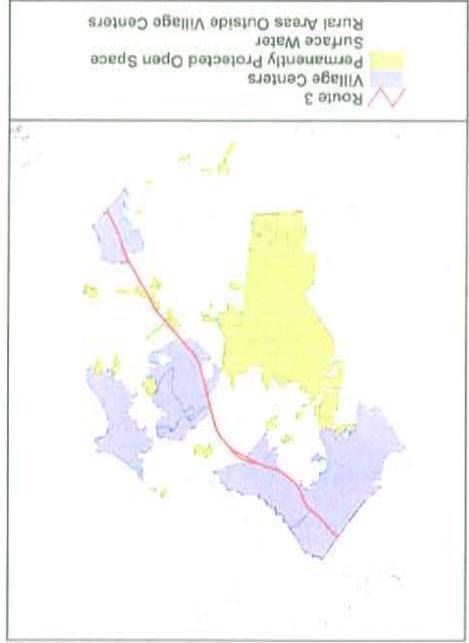
Building caps do not stop sprawl. The 1998 cap on building permits does not affect the geographical distribution of new housing units in town.

Land Available for Development

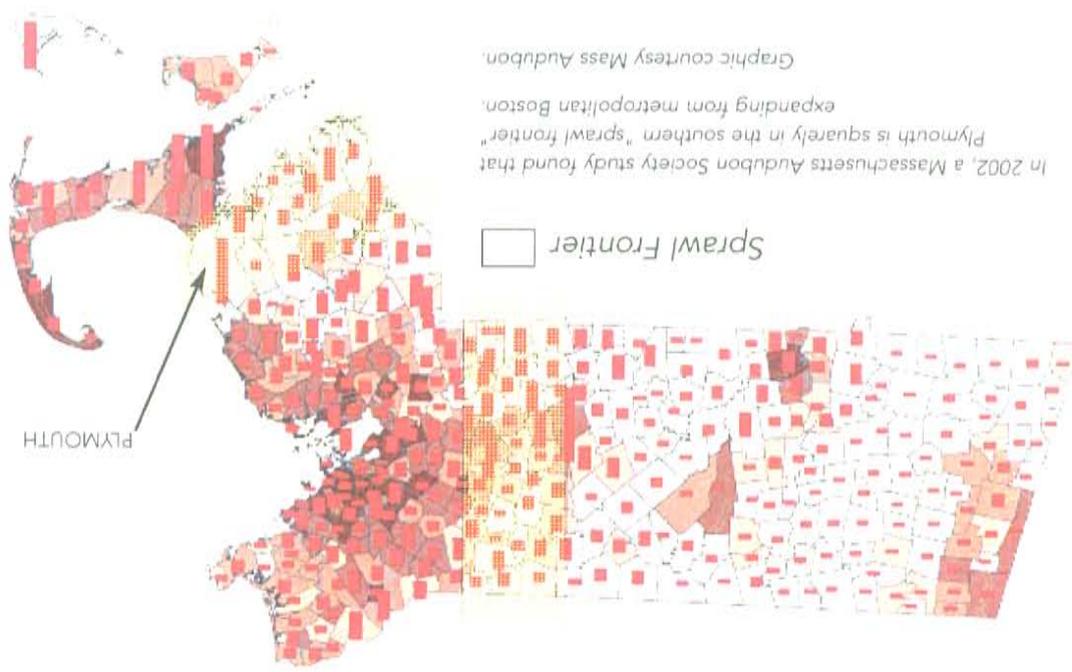
Except for the state forest, Plymouth has a relatively small amount of permanently protected open space and a large amount of open land that could be developed under current zoning as large-lot single family houses.

- 34% of Plymouth's land area could be developed for new housing.
- 88% of that land (28% of Plymouth's total land area) is located in the large-lot, Rural Residential zoning district.

Much of this land is fragile pine barren country. More sprawling development could deplete the water table, increase pollution of ponds and streams and contaminate the aquifer, and require more suppression of the natural cycles of wildlife essential to this ecosystem. More houses would create more demand to pave rural gravel roads, resulting in higher speeds and more traffic. The globally rare coastal plain pond ecosystems can be permanently damaged by development impacts.



on the road to sprawl



PLYMOUTH ON THE SPRAWL FRONTIER

As housing development has spread outward from the Boston metropolitan area, Plymouth's combination of beaches, open space, a historic town center, developable land, and relatively affordable housing prices have put the Town near the top of the list in the number of new housing units produced in Massachusetts towns and cities.

• 38% of Plymouth workers have a job in town and the rest commute to locations on the South Shore and elsewhere.

• Between 2000 and 2002, Plymouth issued more permits for single family houses than all but one other Massachusetts community;

• Based on existing trends, regional planning agencies project a 31% increase in Plymouth's population from 51,701 people in 2000 to 67,778 in 2020. Using the 2000 average of 2.67 persons per household, that would mean that Plymouth in 2020 would have nearly 7,000 new households - and housing units.

PLYMOUTH IS ON THE SPRAWL FRONTIER - BUT SPRAWL HAS NOT YET CONQUERED PLYMOUTH

This is a moment of opportunity for Plymouth to avoid irreversible sprawling development and establish smarter growth policies that accommodate growth while protecting town character and heritage.

The master plan alternative—

Smarter growth means the right development in the right place.

And it also means that places that should be preserved from development will retain their open space character. By implementing a plan for smarter growth, Plymouth will be able to manage and direct change towards accomplishing town goals rather than simply react to change that has already happened. To take charge of Plymouth's destiny and make the most of new opportunities while preserving what we value most, Plymouth citizens will have to embrace new ideas about preservation, growth, regulation, and investment in the future.

What would a smarter-growth Plymouth be like?

The model for new development would be Plymouth's historic village centers with their walkable streets, mixture of uses in commercial districts, and friendly neighborhoods. Redevelopment of sites such as the old cordage mill in North Plymouth or the Revere Copper site in Plymouth Center will bring new activities and vitality. The edges of Plymouth's village centers and specific Route 3 interchange areas would be designated for new, compact development that favors easy access for both auto and public transportation. Town policy would direct infrastructure and service investments to support a high quality of life in the villages and designated growth areas. By directing growth to these areas, Plymouth would protect its exceptional natural resources and environments.

Smarter growth means investing in both Green Infrastructure and Growth Infrastructure.

Green Infrastructure is the interconnected system of land and water resources that sustains a healthy environment for Plymouth's people and its wildlife. Growth Infrastructure in the widest sense encompasses the transportation, water supply, wastewater, regulatory, and public services systems that promote growth while providing a high quality of life. All parts of Plymouth would fall into one of two overall land use and development categories, preservation areas or growth areas.

PRESERVATION AREAS where the goal is to constrain development and preserve open space:

- The Town should be committed to focusing open space preservation in these areas.
- Zoning should keep the total number of housing units low.
- Infrastructure investments should be limited to maintaining the existing rural infrastructure.
- Small centers to provide limited services for rural residents should be provided for in the form of rural service convenience centers.
- Open space should be protected for environmental, scenic, cultural, recreational and fiscal reasons through a variety of methods in addition to acquisition.

GROWTH AREAS where the goal is to accommodate development through redevelopment of existing sites,

- infill development on vacant sites, and new development in compact locations at the edges of existing growth areas, with access to regional roads and future public transportation;
- The Town should be committed to providing and maintaining adequate infrastructure and municipal services in the growth areas, including neighborhood open space.
- Design and development guidelines should ensure that new development will fit appropriately into existing neighborhoods.
- New development at the edges of growth areas should be compact and not sprawling.
- A mixture of business and housing uses should be encouraged in areas designated for commercial growth with greater permitted densities and heights where appropriate.
- The Town should be committed to accommodating affordable housing throughout the growth areas.

smarter growth for Plymouth

HOW DO WE IMPLEMENT SMARTER GROWTH FOR PLYMOUTH?

- Set the regulatory framework.
- Provide incentives and disincentives to shape development.
- Take a strategic approach.
- Invest in the necessary institutional capacity and staff.
- Strengthen public-private partnerships.

KEY ACTIONS TO SET THE FRAMEWORK

- Establish natural resource and open space and cultural heritage networks (Green, Blue and Cranberry Networks)
- Establish Growth Areas and Preservation Areas.
- Establish a People Network where most people will live and where businesses will be located.
- Plan for economic growth based on Plymouth's natural and cultural heritage assets.
- Provide the human infrastructure and capacity to implement the plan.

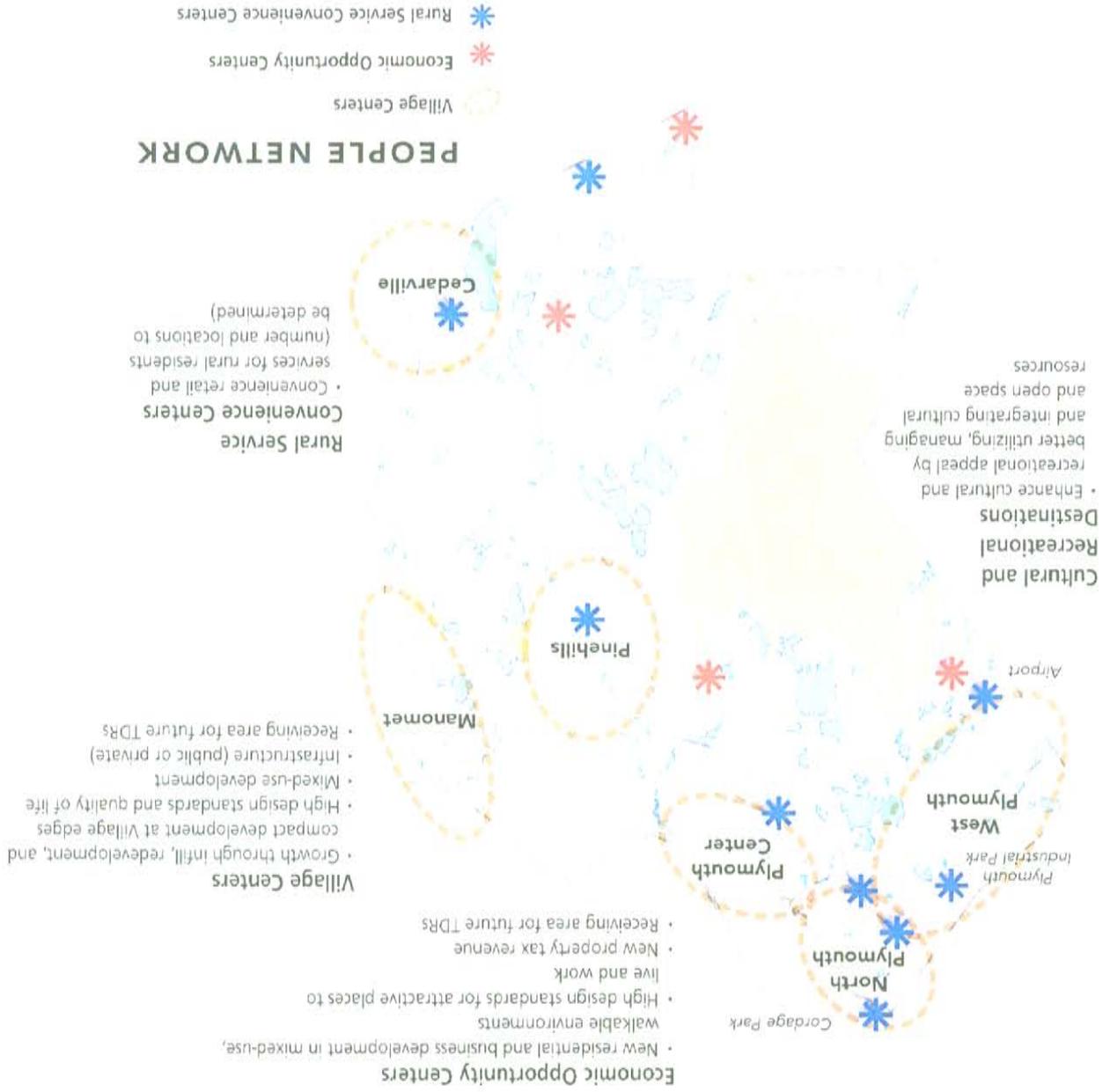
KEY TOOLS TO IMPLEMENT THE FRAMEWORK

- Infrastructure limits: geographic and conservation constraints on expanding public infrastructure
- Design makes the difference: density and design standards to ensure that development fits in with its surrounding context and protects environmental health
- Transfer of Development Rights program:
- a refined system linked with regulatory incentives
- Provision of open space in growth areas and the introduction of "hamlet" rural service centers in preservation areas
- Integrate a comprehensive wastewater management plan with land use goals
- Plan for transportation systems to support growth opportunity focus areas



Preservation and People Networks

The Master Plan answers the critical questions facing Plymouth with a strategy to focus and diversify growth in a "people network" of Village Centers and Economic Opportunity Centers and a system of "preservation networks" to protect environmental resources and cultural heritage:



establish the geography of growth and protection

The Strategic Action Plan coordinates policies and actions for land use, infrastructure, and environmental protection:

- Village Centers and Economic Opportunity Centers receive development rights from rural areas through the Transfer of Development Rights Program (TDR).
- Comprehensive water supply, wastewater and transportation plans focus infrastructure investments in the growth areas and limit it in the rural preservation areas.

Blue Network: Water Resource

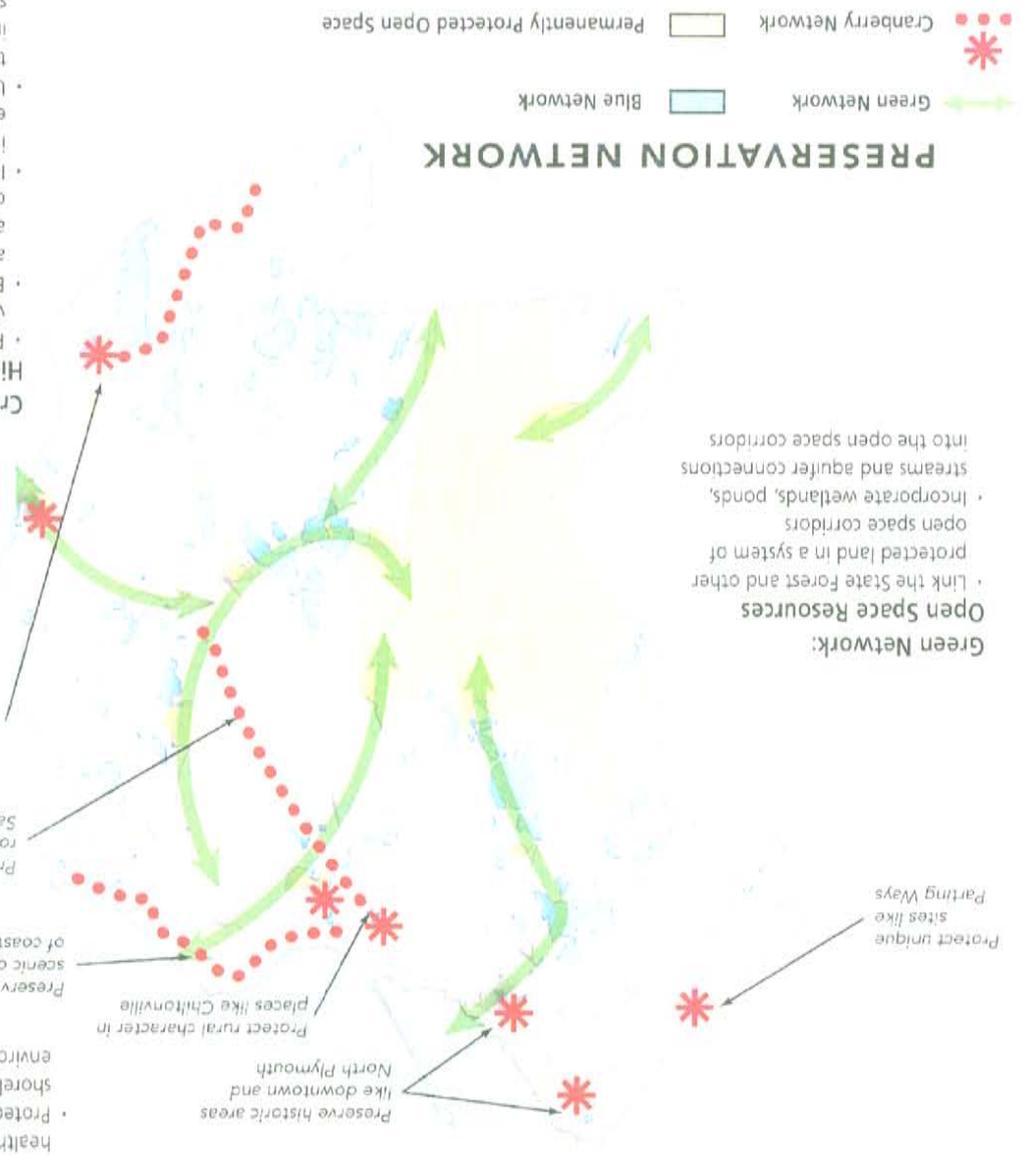
- Protect and enhance the environmental health of ponds and streams
- Protect and enhance coastal waters and shoreline for conservation and environmentally-friendly access

Cranberry Network: Historic and Cultural Resources

- Preserve historic areas like downtown and North Plymouth
- Preserve rural character in places like Chiltonville
- Preserve the scenic character of coastal roads
- Protect rural roads like Old Sandwich Road
- Protect historic sites like the Red School House

Green Network: Open Space Resources

- Link the State Forest and other protected land in a system of open space corridors
- Incorporate wetlands, ponds, streams and aquifer connections into the open space corridors



and integrating cultural and open space resources into cultural and recreational enhancement and preservation plans

- Use TDRs and other preservation tools to protect rural character in an economically and environmentally sustainable way.

Smarter growth creates

GREEN NETWORK

Plymouth is a center of biodiversity in Massachusetts, with 67 rare species and two areas designated as Areas of Critical Environmental Concern. The Town's pine barren, coastal pond, and frost pocket ecosystems are globally rare. Myles Standish State Forest provides the largest expanse of protected open space and habitat, supplemented by Ellenville State Park, the Town Forest and Town Conservation Land. Large expanses of significant open space remain unprotected. Morton Park, Brewster Gardens, neighborhood playgrounds and athletic fields provide recreational open space for Plymouth's neighborhoods and for use townwide by residents.

GOALS:

- Link open space and wildlife habitat throughout Plymouth in a Green Network.
- Preserve sensitive ecosystems, habitats and wildlife corridors.

HOW?

- Evaluate and rank unprotected open space resources according to criteria for environmental sensitivity and scenic and cultural value.
- Work with nonprofit conservation organizations to protect critical open space.
- Seek donation of conservation restrictions from landowners, who will benefit by reduced property taxes.
- Establish low maximum densities in Rural Preservation Areas.
- Establish development standards with incentives for protection of large blocks of open space, public access, or other public benefits.
- Seek additional dependable revenue streams for conservation purposes.

BLUE NETWORK

Plymouth has several hundred ponds, including 76 over 10 acres in size, and ten waterways (five of which are anadromous fish runs used by fish that live in the ocean and spawn in fresh water) and its coastal waters include Plymouth Harbor, Plymouth Bay, Cape Cod Bay and Buzzards Bay. Plymouth's ponds and streams are the surface manifestations of an immense underground aquifer, the 199-square-mile Plymouth-Carver aquifer. It is Plymouth's sole source of drinking water. Currently in good condition, it remains vulnerable to contamination from development impacts on very permeable soils. Plymouth Harbor, the El River and some of Plymouth's ponds have been affected by pollution and many are vulnerable as development increases. Despite this wealth of water resources, there are few public access points to the ocean and to ponds.



GOALS:

- Protect and enhance the Blue Network of inland and coastal water resources, including wetlands and aquifer connections.
- Protect the quality and quantity of groundwater and surface water.
- Promote public awareness of best practices in private landscape management to protect water resources and wetlands.
- Expand opportunities for public access to water.

HOW?

- Identify the recharge areas to large ponds and major waterways.
- Implement a town-wide stormwater management plan.
- Review subdivision and building requirements to promote lower impact development.

Preservation Networks

- Make information on best management practices widely available to the public. Government agencies and nonprofit organizations have created fact sheets, brochures and pamphlets for distribution.
- Identify ponds that can accept more public access and protect ponds that are too fragile for wide public access.

CRANBERRY NETWORK

Plymouth's historic role as the first permanent English settlement in America will always give it unique importance. But Plymouth has a cultural heritage that extends beyond the story of the Pilgrims. The Town's cultural character and history encompass its heritage as an agricultural, seafaring, and mill community. In addition to historic buildings and sites, Plymouth's landscapes of meadows, cranberry bogs, rural gravel roads, and pine woods should be considered an integral part of the Town's cultural character and heritage.

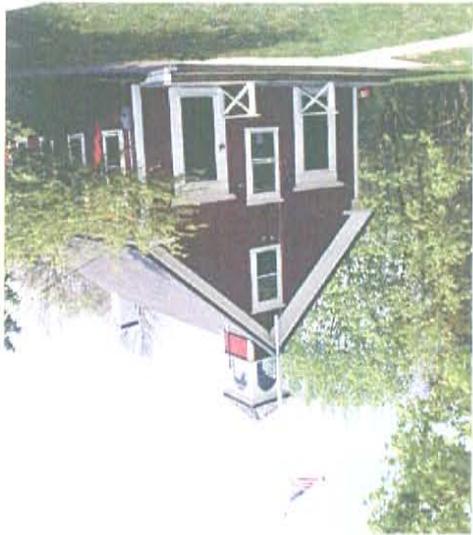


GOALS:

- Create a Cranberry Network of culturally and historically significant buildings and landscapes with markers, a mapped route, and interpretive materials.
- Enhance public awareness of Plymouth's history and historic sites dating from after the colonial period.
- Preserve historic sites that are not in the Local Historic District.
- Preserve scenic landscapes characteristic of Plymouth's heritage, such as cranberry bogs and working farms.

• Maintain an inventory of all historic sites, coordinating with

- the Massachusetts Historical Commission
- Pass a Demolition Delay Bylaw to encourage alternative uses of historic buildings: demolition permits for structures deemed of historic significance and preferably preserved by the Historical Commission (according to criteria spelled out in the bylaw) must be delayed for a period of six months or a year while alternatives to demolition are pursued.
- Consider Neighborhood Conservation Districts, a Landmarks Bylaw and preservation easements to preserve buildings and sites outside the Town's Local Historic District.
- Designate Scenic Roads. On designated scenic roads, cutting of trees and changes in stone walls within the road right of way cannot be made without a public hearing before the Planning Board.
- Explore official recognition for historic landscapes under the Massachusetts Heritage Landscape Program. The state Department of Conservation and Recreation (DCR) Historic Landscape Preservation Initiative has published a guide, *Reading the Land*, to assist communities in identifying, documenting, evaluating and protecting historic landscapes.
- Create a town-wide historic preservation organization, building on the existing Historic Alliance.



Smarter growth protects

BUILDING ON THE VILLAGE CENTERS PLAN: HOUSING WITH QUALITY OF LIFE

CREATE A BALANCE BETWEEN VILLAGE AND RURAL SETTLEMENTS

- Establish restrictions on infrastructure expansion and improvements, including paving of rural roads.
- Continue to refine the town's Transfer of Development Rights (TDR) program.
- Downzone rural areas consistent with the optimum functioning of the TDR system.
- Establish mandatory, by-right conservation subdivision zoning with site plan review in rural areas in order to preserve large blocks of open space.
- Upzone and allow mixed use development in selected areas of Village Centers.
- Zone to encourage compact development on the edges of the Village Centers.
- Zone to encourage multifamily and mixed-use development in new economic opportunity centers.

Rural Settlements

Plymouth outside the Village Centers should remain rural in character. This does not mean that no one should live there but that further development should be limited as much as possible to the carrying capacity of the land without substantial infrastructure. Zoning requirements should reflect that character and the town should not encourage more development by upgrading infrastructure. Where possible, the town should support farming and other resource-based economic activities, as long as operators use best management practices to protect the environment. Zoning should also provide for small nodes for rural service retail. Rural areas include Chiltonville, South Pond, Six Ponds, Ellenville Harbor, Bourne Road, and Federal Furnace.

GOAL:

Retain the rural land use, scenic, scenic, and environmental character of areas outside the Village Centers.

HOW?

- Continue making Rural Areas the sending areas for Transfer of Development Rights. Plymouth's existing TDR program should be continued and its existence publicized to landowners and developers. A study should be undertaken to determine the right balance between zoned development capacity in rural areas and the goal of directing the use of that development capacity to the Village Centers and Economic Development Centers.
- Use mandatory, by right conservation (cluster) zoning based on low rural densities and with site plan review to ensure compatibility with resource and open space preservation networks.
- When subdivisions are allowed, they should be designed so that large blocks of open space remain intact and linked with other parts of the Green Network. Site plan review will provide the Town with oversight on design and development standards.
- Zone for hamlets.
- Rural areas need small service areas so that residents do not have to drive long distances for convenience retail and zoning should reflect that need.
- Work with conservation nonprofits such as the Willilands Trust and The Nature Conservancy to preserve rural landscapes.
- Except for Myles Standish State Forest Plymouth does not have a large amount of permanently protected open space. Nonprofit conservation organizations have already become active in Plymouth and they can collaborate with the Town to create a model of sustainable levels of rural settlement.

quality of life in the People Network

Village Centers

The 1980 Village Centers Plan is a good foundation that needs more effective implementation. Residents generally like their neighborhood quality of life and will be naturally concerned about what directing growth to their village center might mean for their quality of life. Good design and development standards will result in attractive new housing that fits into existing neighborhoods.



GOALS:

HOW?

- Accommodate new housing within Village Centers or at their edges.
- Promote development that mixes retail with housing above.
- Include housing in mixed-use commercial centers.
- Make all Village Centers into walkable environments.

- Focus significant infrastructure

investments in Village Centers.

- Continue making the villages receiving areas for development rights transferred from rural areas. Density

bonuses can be calibrated as incentives for development of different sites.

- Create design and development guidelines for non-residential development in each of the village areas. Design

guidelines appropriate to each village's scale, character, and infrastructure capacity should be included as

performance standards in the zoning by-law.

- Promote mixed-use development, including residential above retail, to mitigate the traffic impacts of new growth.

People who live in commercial districts add to the liveliness of those areas without taking out their cars.

- Provide infrastructure in support of appropriate growth, such as parking, attractive and walkable streets, and

neighborhood-oriented green spaces. In addition to design guidelines, successful infill and compact development

needs high quality public spaces.

- Create zoning incentives or Planned Development Districts under special permit processes to encourage

residential mixed-use redevelopment in Economic

Opportunities Areas such as Cordage Park and

commercially-zoned sites near highway interchange areas.

- Accommodate compact growth at the edges of the villages

through greater density inside the infrastructure limits.

Consider providing for potential future expansion of

village centers as the edges become built out.

- Create greenways and green belts outside the village area

infrastructure limits by pursuing conservation restrictions.



PLYMOUTH CENTER

- Development on

infill sites

- Housing above shops

Parking

NORTH PLYMOUTH

- Development on

infill sites

- Transit oriented

housing in a mixed use

Cordage Park

WEST PLYMOUTH

- Sidewalks

Incentives for

redevelopment of the

commercial corridor

with multi-family

housing and shops

MANOMET

- Pedestrian friendly

village center

- Development on

infill sites

CEDARVILLE

- Development of a

compact village center

- near Route 3, Exit 2

Development on

infill sites

PINEHILLS

- Planned buildout of the

residential community

and village center.

- Formalize as a Village

Center by appointment

of a Steering

Committee

Smarter growth creates economic

During the last twenty years, Plymouth proved it could attract new businesses, employment and commercial and industrial development. During every year in the 1980s, the Town attracted, on average, nearly 190,000 square feet of new industrial and commercial development. Although the rate of new construction during the 1990s did not reach this level, between 1992 and 2000 the Town attracted more than 230 new companies and 4,100 jobs.

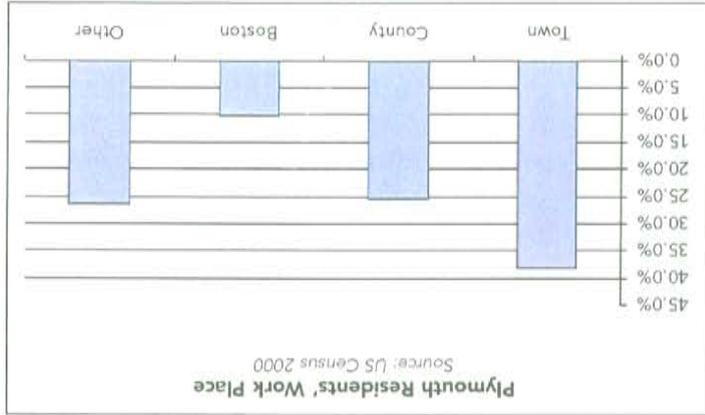
New business growth is almost entirely in services and trade, rather than manufacturing. New and emerging sectors in Plymouth need different resources and different kinds of facilities than the Town has traditionally depended on. One of the most important resource needs is for a larger and more highly skilled work force. In addition, Plymouth's regional market is very competitive; neighboring communities have affordable development sites in good locations, the potential to

expand the supply of land and buildings, and aggressive local development programs.

Smarter growth offers the potential to create an economic development policy that makes Plymouth a regional employment center while providing a range of housing opportunities to satisfy the labor force that would be needed. At the time of the 2000 Census, 64% of Plymouth residents already worked either in the Town of Plymouth or in other Plymouth County locations.

ECONOMIC OPPORTUNITY CENTERS

Smart growth provides for economic growth that promotes fiscal stability, offers more quality jobs for Town residents so they can reduce commuting time, and helps create lively, animated places for retail shops.



GOALS:

- Promote compact, dense growth in and around existing commercial and industrial nodes.
- Promote compact, dense growth including multi-family residential development at most Route 3 interchanges.
- Enhance the traditional commercial districts of older Village Centers.

HOW?

- Make Economic Opportunity Centers the receiving areas for development rights in the TDR system.
- Use Economic Opportunity Area incentives to assist new business development that meets town goals.
- Use District Improvement Financing designations to fund infrastructure and other public investment where needed.
- Redevelop underutilized nonresidential sites such as Cordage Park.
- Identify revitalization and redevelopment opportunities for older retail and service centers.
- Create and/or enhance pedestrian friendly retail areas with attractive streetscapes and public spaces and supporting infrastructure such as well-placed parking.
- Explore the use of Business Improvement Districts (BIDs) for retail areas. BIDs are organizations of business and property owners in commercial districts that develop, fund and manage programs and services targeted to improve the commercial district.

Opportunity in the People Network

ECONOMIC OPPORTUNITY AREAS FOR COMPACT, MIXED-USE GROWTH

Cordage Park—A Major Waterfront Opportunity for a Mixture of Residential and Commercial Uses

The combination of waterfront property, with an underutilized mill complex redolent of Plymouth's history and proximity to the Town's commuter rail station is a potent opportunity for Plymouth.

Cordage Park could be an exciting residential and retail destination. Drawings courtesy Cordage Commerce Center



Industrial Development

- Plymouth Industrial Park
- Plymouth Municipal Airport

Commercial and Multi-Family Residential Development

- Route 3/Route 44, exits 2, 3, 5, 6, and 7
- Encourage more retail, office and hospitality uses

IMPROVEMENTS TO VILLAGE CENTER COMMERCIAL AREAS

DOWNTOWN PLYMOUTH

- Enhanced retail for residents and visitors
- Encourage office and residential uses
- Parking garages in unobtrusive but convenient locations.
- Protection of historic scale and character.

NORTH PLYMOUTH

- Revitalize small scale retail businesses with business development programs like facade improvement and signage assistance.

MANOMET CENTER

- Reinforce compact, small-scale retail and services for residents and visitors

PINEHILLS VILLAGE GREEN

- Pursue buildout of the 178-acre planned retail and service district

CEDARVILLE ROUTE 3/EXIT 2

- Use zoning to promote creation of a compact, walkable retail and service district primarily for residents.

WEST PLYMOUTH

- Use zoning to promote creation of a compact, walkable, village-style commercial district



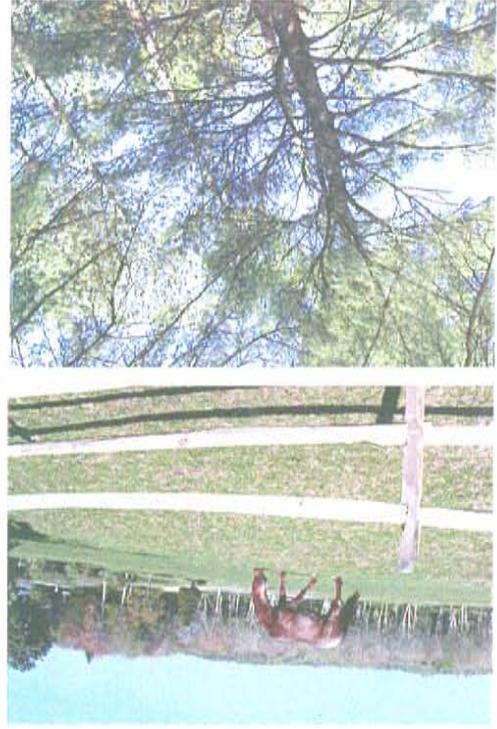
Smarter growth supports

Plymouth's natural and cultural resources are major economic assets, with tourism contributing more than \$300 million per year to the Town's economy. These assets nevertheless can be damaged by sprawl development; growth pressures threaten the sustainability of natural systems town-wide, while sprawl development in some areas has already compromised the quality of the water and wildlife habitats. Careless development can also damage the integrity of the Town's historic and cultural heritage, sometimes preserving a structure but destroying its surroundings.

Plymouth's waterfront is primarily oriented towards tourism-related uses. Given conditions in the

Massachusetts fishing industry and conditions at other ports in the region, Plymouth is unlikely to see an expansion of its commercial fishing industry. However, retention of existing commercial fishing is important to Plymouth's character and diversity on the waterfront. Plymouth is the regional center for excursion boating with whale watches, harbor tours, amphibious duck tours, and party fishing. There is also a summertime daily ferry to Provincetown.

Strengthening this aspect of Plymouth's economy requires preserving and enhancing the waterfront economy, both commercial and recreational, and integrating the Cranberry, Green, and Blue networks in ways that make them visible and accessible to visitors. Heritage and nature routes, with signs, maps, and interpretation; additional access to ocean and inland waters and to scenic views; carefully managed access to important rural sites; and support for the development of tourism infrastructure are all needed in order for Plymouth to encourage visitors to venture beyond Plymouth Rock, the Mayflower and Plimoth Plantation.



the waterfront and tourism economies

- GOALS:**
- Support the waterfront economy, including commercial fishing, excursion boating, and recreational boating.
 - Diversify and enhance Plymouth's appeal as a tourist destination.
 - Expand tourism infrastructure to encourage visitors to stay longer and spend more money in Plymouth.

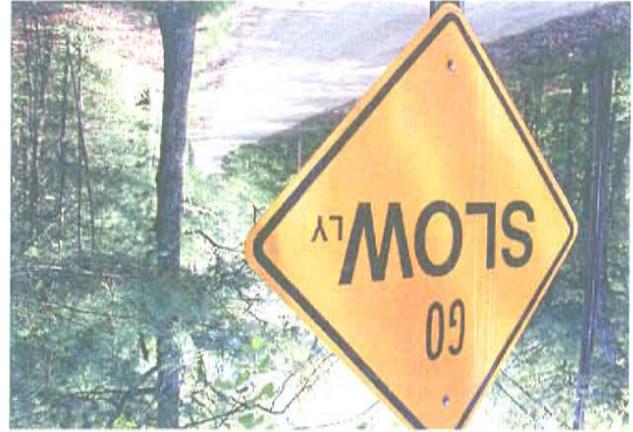
HOW?

- Commission a tourism market study, possibly funded by a public-private partnership, to identify:
 - How to enhance Plymouth's profile as a heritage tourism destination.
 - Methods to attract tourists to stay longer and spend more.
 - Optimum locations, regulatory changes and other conditions necessary for the establishment of new hotels, B & Bs, a conference center, restaurants, and other tourism infrastructure.
 - Opportunities to promote Myles Standish State Forest as a tourism and recreational asset.
 - Marketing strategies for Plymouth as a destination for visitors outside eastern Massachusetts.



- Identify select waterfront sites appropriate for tourism and recreational development and make regulatory changes and infrastructure investments needed to create the conditions for this development.
- Create marked and mapped heritage and recreational routes and trails for visitors.
- Establish a tourism commission supported by a liaison position within the town's Department of Planning and Development to strengthen tourism's position as an economic engine for Plymouth.





- GOALS:**
- Focus infrastructure to encourage compact development in growth focus areas, which is more cost-effective and has less impact on natural resources.
 - Facilitate infrastructure in growth focus areas and constrain it in preservation focus areas.
 - Encourage provision of infrastructure by private developers where it fits into the smart growth plan, but do not accept infrastructure development simply because a developer is willing to fund it.
- Goals for transportation include:
- Provide safe pedestrian routes in Village Centers and economic development zones.
 - Discourage speeding.
 - Promote efficient traffic flow, which is not necessarily high speed.
 - Designate truck routes.
 - Advocate for improved local access to transit.

Infrastructure facilitates growth and development. In a smart growth plan for Plymouth, the Town needs to ensure that infrastructure planning and implementation complements the land use and development goals of the community. This means that infrastructure improvements and expansions will be focused in the Village Growth Centers and Economic Development Opportunity Areas and limited in the Rural Preservation Areas.

Smarter growth depends on integrating

new infrastructure with land use goals

HOW?

- Prepare a **Transportation Master Plan**.
 - Develop a comprehensive road improvement plan consistent with growth objectives and new road development.
 - Implement a traffic-calming program.
 - Plan transportation and parking capacity sufficient for additional development in growth areas.
 - Maintain rural roads and rural centers at current levels and resist efforts to upgrade capacity.
 - Work with regional transportation groups to improve local access to commuter rail stations in order to reduce dependence on single occupant vehicles.
 - Create a town-wide network of marked bicycle and pedestrian routes linking open space, historic, community, and recreational destinations and implement in phases.
 - Encourage development of alternate transport modes, including commuter boats.
- **Commission a Comprehensive Wastewater Management Study** to make recommendations on sewer, community septic systems, and new technologies appropriate to the Smart Growth plan.
 - Incorporate study of the need to protect natural resources.
 - Identify the right balance between and locations for sewer and septic systems.
 - Implement the recommendations through the capital plan, Board of Health regulations, and other appropriate methods.
- **Prepare a Water Supply Study and Master Plan**, including attention to the impact of water withdrawals on surface waters such as fragile ponds.
 - Plan to reserve right of way and easements for future transportation and utility needs, including telecommunications infrastructure and wind energy potential.



Smarter growth fosters balanced housing opportunity

Although Plymouth housing prices remain relatively affordable compared to much of eastern Massachusetts, since the late 1990s prices have been rising steeply. The new housing being built is almost all single family houses and they are bigger and more expensive than most of Plymouth's older housing. Plymouth needs to offer more housing choice for all kinds of households and at a variety of prices. Like most other communities in Massachusetts, the Town has not met the state's 10% goal for permanently affordable housing under Chapter 40B and is therefore open to potential affordable housing projects that could override the Town's zoning requirements.



GOALS:

- Encourage diversity of housing types through zoning.
- Work towards fulfilling the Chapter 40B goal of 10% permanently affordable housing.
- Work with existing for-profit and non-profit affordable housing providers to create additional 40B-eligible affordable housing in Plymouth.

HOW?

- Designate the Fair Housing Committee as the Plymouth Housing Partnership to develop and oversee affordable housing policy and advise on affordable housing activities.
- Create and adopt an affordable housing plan that meets the criteria of the state Department of Housing and Community Development.

- Use the existing expertise of the Redevelopment Authority (which operates first time homebuyer programs) and the Housing Authority.
- Seek planning and other assistance from housing organizations such as the Massachusetts Housing Partnership and Citizens Housing and Planning Association.
- Attract affordable multifamily housing with incentives and direct it to Village Growth Centers or Economic Opportunity Centers with pedestrian-friendly design standards.
- Exempt affordable housing projects from the building permit cap.

- Establish inclusionary/incentive zoning for all projects of 10 or more units.
- Provide for affordable accessory apartments, single or duplex houses on nonconforming lots, and other zoning strategies to encourage affordable housing production, subject to overall smart growth, wastewater management, and design standards.
- Work with the Community Preservation Committee to direct CPA funds to affordable housing projects.



Affordable housing photos from Massachusetts communities courtesy CHAPA

Invest in people and institutions for smarter growth

To grow smarter successfully the Town will have to make an investment in people and in institutions to sustain the greater organizational capacity needed for success over the long term. Both the public and the private sector can contribute to achieving the vision for Plymouth's future. Public-private efforts are essential for environmental protection and land preservation, preservation of historic and heritage resources, and economic development planning and implementation.



In general, Town and school staff levels have not kept pace with development. An investment in additional municipal staff will have the following benefits for the Town:

- More grant proposals and more grant funding
- Coordination and staffing of public-private efforts
- More planning assistance to businesses who seek to invest in a Smart Growth Plymouth
- More assistance and coordination of land protection and preservation efforts
- More technical capacity to review, regulate, and monitor development
- More time for strategic infrastructure planning and investment
- More efficient regulation for projects that meet smarter growth goals

At the same time, volunteers and the private for profit and nonprofit sectors can take the lead in the following areas:

- Creation of a town-wide historic preservation organization
- Raising awareness among property owners in Rural Preservation Areas about the benefits of transferring development rights or donating conservation restrictions
- Raising public awareness about best landscape practices to protect water resources
- Leading marketing, promotional and human resource development efforts for economic development

GOALS:

- Use the Master Plan to guide Town decision-making
- Strengthen Town departmental capacity where needed
- Enhance economic development planning and implementation capacity.

HOW?

- Create a long-term planner position, as required by the Town Charter, to guide Master Plan implementation.
- Establish a Master Plan Implementation Committee to be the stewards of the Master Plan. The Committee should report on Master Plan implementation progress to the Planning Board and Town Meeting annually and sponsor public meetings every five years to confirm or revise the goals and evaluate both the achievements and obstacles to achievement that have occurred thus far. If needed, the plan should then be revised to reflect changed circumstances or goals.
- Use Master Plan policies to guide town decision making and incorporate Master Plan action items into departmental work plans and the town's capital plan.
- Strengthen planning capacity at staff levels.
- Continue to support a strong Economic Development Corporation to lead economic development efforts



Can we afford smarter growth?

Sprawl costs Plymouth more than smarter growth:

The Cost of Services Study found that the average cost to service single family homes in the rural areas of Plymouth, where most residential growth is occurring, is more than double the cost of servicing the higher-density houses in older village centers. Commercial, service, retail, office, and industrial development generates more revenue than costs to the Town. Plymouth will need to make major improvements to its school buildings in the near future—regardless of population growth. Less sprawl and more compact, mixed-use development will help the Town use resources effectively.

- Smart growth is more efficient and cost-effective than sprawl because more people are served at lower costs per household and per person.
- "Smart" planning objectives, regulation, and administration attract high-quality private investment.
- Public investments can be leveraged by future revenue gains.
- Smarter growth maximizes the value of existing developed areas for economic opportunity before opening up new "greenfield" areas.
- Market conditions guide the pace of public investment.



What do we do now? Critical early actions

- Establish a Master Plan Implementation Committee.
- Designate the geographic limits of focus areas for preservation and growth.
- Establish infrastructure expansion limits.
- Establish design, development and density standards for village centers, preservation areas, and economic opportunity growth areas.
- Refine Plymouth's Transfer of Development Rights program and expand definition of sending and receiving areas.
- Provide for open space in village centers and economic opportunity growth areas.
- Provide for rural service convenience centers in preservation areas.
- Develop comprehensive wastewater, water supply and transportation plans.
- Finalize and implement an affordable housing plan.
- Strengthen planning department capabilities in technology and long-range planning (i.e., GIS, transportation, grant-writing) to keep pace with development challenges and opportunities.





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INTRODUCTION

Historical Context

Plymouth is the Commonwealth's largest town. Its 103 square-mile area includes five villages, vast tracts of undeveloped forest land and a number of large, regionally significant ponds. Bounded by Duxbury, Kingston, Carver, Wareham and Bourne, Plymouth serves as a gateway between metropolitan Boston and Cape Cod, for the Town is crossed by four state highways, notably Route 3, which terminates north of the rotary at the Sagamore Bridge (Map 1). Despite its international name recognition, Plymouth was a fairly isolated seacoast community not long ago. Today, it is a major regional employment center, providing jobs to more than 19,000 workers¹ and goods and services for residents throughout the lower South Shore. The original 1620 settlement defines a portion of what is known locally as the Downtown/Harbor District, and while thousands of day tourists visit Plymouth Rock and the Mayflower II each year, Plymouth's economic fortunes were historically linked to the sea, shipping industries and agriculture.

During the 17th and 18th centuries, Plymouth's primary sources of employment included fishing, shellfishing, shipbuilding and farming. By the 19th century, numerous mills had begun to flourish in Plymouth, notably the Plymouth Cordage Company, which opened in 1824. Much of the multi-family housing stock in North Plymouth today is mill housing that was originally built for the Cordage workers. In the same era, North Plymouth became an important node for the East Coast's shipbuilding industry. The Plymouth Cordage Company continued to thrive into the early 1900s, when the Town's fishing fleet also prospered. After World War II, however, the Cordage Company's productivity dropped, primarily due to foreign competition. Moreover, the shipbuilding industry had been deteriorating for several decades because Plymouth Harbor could not accommodate the increased draft of larger, modern ships. A pattern of overall economic decline continued through the mid-1900s, producing severe unemployment in the entire Plymouth area. The Cordage Company eventually closed in 1972, but its demise was foretold by Plymouth's uneasy adjustment to postwar change. As early as the 1950s, cycles of weakening sales began to plague downtown businesses. While the effects of suburbanization were not fully evident in Plymouth until a decade later, the Town's physical evolution from rural and maritime-dependent to modern industrial and auto-dependent had already been initiated.

Agriculture emerged as a significant source of employment for Plymouth in the 18th and 19th centuries. In particular, the cranberry industry developed into an active and lucrative sector of the economy. The cranberry became Plymouth's signature crop, for the Town enjoyed vast productive bogs, and until approximately 20 years ago Ocean Spray Cranberry's corporate headquarters were located on Water Street, facing Plymouth Harbor. Unfortunately, non-cranberry agriculture has all but disappeared in Plymouth, echoing the gradual loss of farms that has occurred throughout the Commonwealth ever since 1950. Moreover, cranberry prices

¹ Massachusetts Division of Unemployment Assistance, Economic Data Programs, "Employment and Wages (ES-202)," at <http://www.detma.org/LMI/dataprogram.htm>.

dropped substantially in the past decade, resulting in many acres of cranberry-related land holdings being sold for single-family home development, although in some cases the cranberry bogs themselves remain in active production. Plymouth still has a large inventory of cranberry-related land that is vulnerable to development, including 3,400 acres of the A.D. Makepeace Company's land in the southern and central parts of Town. Overall, Plymouth has about 11,500 acres in agricultural, forestry and related uses today (Map 2), much of it with moderate to significant development capacity.²

The South Shore's proximity to Boston and major employment centers along Route 128 has greatly influenced the growth rates of its communities, including Plymouth. The region's desirability in terms of land prices, tax rates, residential amenities and access to water further contributed to the growth of each town. For a time, the same factors seemed to have only a modest impact on development in Plymouth because until 1965, the Town grew more slowly than the remaining areas of Plymouth County and the Commonwealth. From 1900-1960, for example, Plymouth's population rose by 50 percent, gaining only 4,853 people in 60 years. The increase occurred primarily as a result of two growth spurts: the first from 1900–1915 and the second from 1940–1960, both being a product of economic conditions and broader demographic trends. Plymouth's 1966 Comprehensive Plan and other studies attributed the Town's relatively slow rate of growth to physical and economic isolation from growth centers elsewhere in the region. This had the effect of shielding the Town's rural qualities and protected its enormous tracts of inexpensive, developable land from the degree of suburbanization experienced in other parts of Massachusetts and across the nation.

Plymouth Since 1960

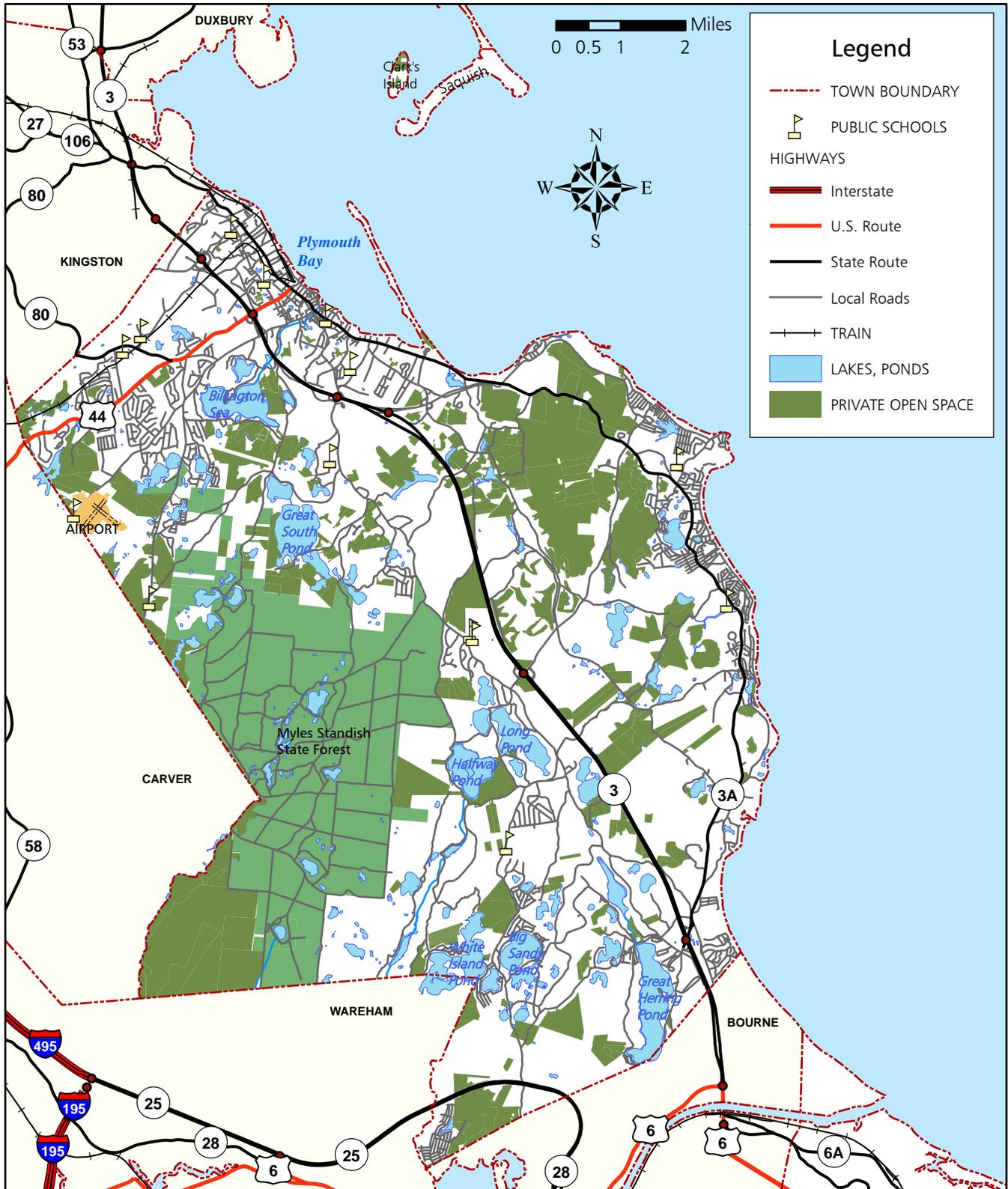
The Boston metropolitan area expanded southward during the 1960s, largely due to the completion of Route 3. The new highway brought Plymouth within reasonable commuting time to once-distant employment opportunities, manufacturing areas, and serviceable populations. For Plymouth, the 1960s also brought the construction of the Pilgrim Nuclear Power Station and the North Triangle and Camelot Industrial Parks – projects that generated employment and additional tax revenues for the Town. These factors, coupled with Plymouth's natural beauty, made the Town an attractive place to live and its potential as a desirable residential community was quickly realized. In addition, proximity to market populations and industries set the stage for new commercial and industrial development in Plymouth. The Town's population grew at an annual rate of about 7 percent during the 1970s, and ultimately doubled from 18,606 in 1970 to 35,913 by 1980. West Plymouth absorbed most of the development that occurred in the 1970s because it is so close to Plymouth's northernmost Route 3 interchange (Route 44), while South Plymouth became a magnet for new growth in the 1980s. The prevalence of single-family homes and subdivision roads throughout West Plymouth and South Plymouth make these areas

² Town of Plymouth, "PlymouthFY04.xls," property records database supplied to author by Plymouth Department of Planning and Community Development. The 11,500 acres referred to here include all vacant land under Chapter 61 and Chapter 61A agreements and associated parcels with an existing residence or business that supports the forest or farm operation.

TOWN OF PLYMOUTH Housing Plan

Map 2: Farms, Forestry & Recreation Land

Community Opportunities Group, Inc.
Boston, Massachusetts



visually and operationally different from the older, established villages of Plymouth Center and North Plymouth or the seaside enclave known as Manomet.³

Table 1: Local & Regional Population Change, 1950-2000⁴

Geography	Census Year					
	1950	1960	1970	1980	1990	2000
Massachusetts	4,690,514	5,148,578	5,689,377	5,737,037	6,016,425	6,349,097
Plymouth County	189,468	248,449	333,314	405,437	435,276	472,822
Bourne	4,720	14,011	12,636	13,874	16,064	18,721
Carver	1,530	1,949	2,420	6,988	10,590	11,163
Duxbury	3,167	4,727	7,636	11,807	13,895	14,248
Kingston	3,461	4,302	5,999	7,362	9,045	11,780
PLYMOUTH	13,608	14,445	18,606	35,913	45,608	51,701
Wareham	7,569	9,461	11,492	18,457	19,232	20,335

Source: MISER, "Population of Massachusetts Cities, Towns and Counties, 1930-1998," and Census Bureau, Census 2000, Summary File 1, Table P1.

Table 1 shows that as of Census 2000, Plymouth's population had increased 178% since 1970. However, population statistics alone do not begin to convey the impact of such rapid change. For example, the Town issued an average of 550 new residential building permits per year from 1985-1990. Most of this new development can be seen in the rural-residential areas of South Plymouth, as shown in Map 3, and virtually all of it is comprised of new single-family home development. The corresponding changes in the population of each village and rural area are reported in Table 2. Some of these areas have absorbed so much growth in such a short period of time that over 60% of their current population is new since 1995.⁵

Plymouth's large tracts of inexpensive land, access to Boston, rural character and high quality of community services help to explain both the location and extent of new residential growth that has occurred in the past 30 years. Today, Plymouth and surrounding areas continue to outpace state averages for new development. The Metropolitan Area Planning Council (MAPC) estimates that Plymouth's population will reach 60,421 in 2010 and 70,723 by 2025. These projections equate to increases of 18% and 17 %.

³ In 1979, Plymouth adopted a comprehensive "Refined Village Centers Plan" to guide future development. The Village Centers Plan promotes concentrated growth within five village centers: North Plymouth, Downtown Plymouth, West Plymouth, Manomet and Cedarville. It also recommends discouraging growth in outlying rural areas, which generally include Bourne Road, Ellisville, Federal Furnace, and Pine Hills. For more information about the Village Centers and Rural Areas, see Appendix.

⁴ Regional comparison tables in this report include statistics for Plymouth County, the Town of Plymouth and all adjoining communities, including the Town of Bourne. Since Bourne is in Barnstable County, its demographic profile is not directly comparable to that of Plymouth County.

⁵ U.S. Department of Commerce, Bureau of the Census, Census 2000, Summary File 3, Table P24, Plymouth County Census Tracts 5301-5309 (Town of Plymouth), via American FactFinder at <http://www.census.gov>.

TOWN OF PLYMOUTH Housing Plan

Map 3: Post-1970 Housing Growth

Community Opportunities Group, Inc.
Boston, Massachusetts

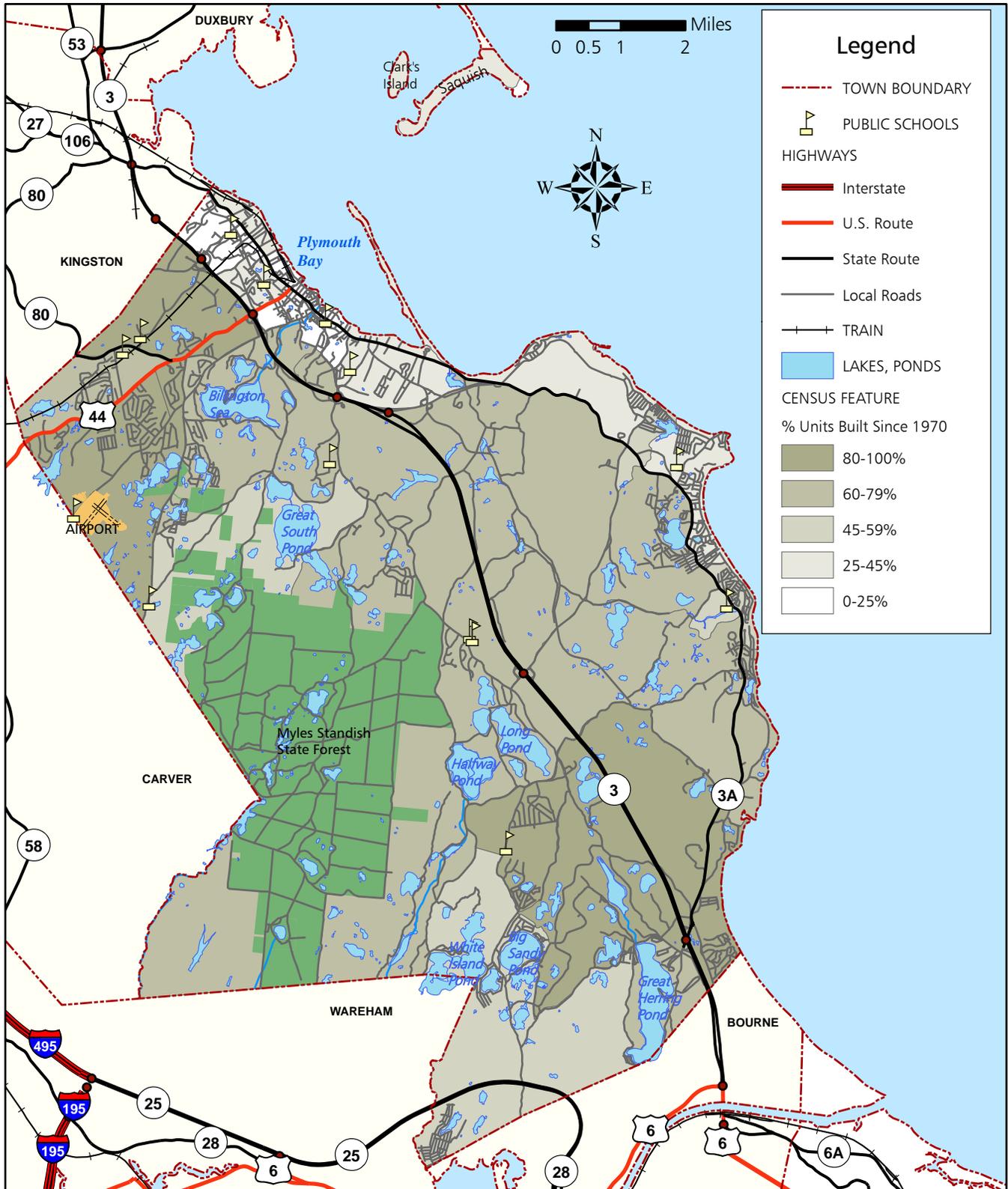


Table 2: Population Change by Village Center and Rural Area

Area	*1980	*1990	**1995	**2000
Plymouth Center	7,880	8,537	8,830	8,941
North Plymouth	4,029	4,314	4,358	4,395
Manomet	5,983	5,753	6,070	6,479
Cedarville	1,304	2,211	2,439	2,737
West Plymouth	8,569	11,067	11,369	11,534
Bourne Road	3,028	6,453	6,998	8,200
Federal Furnace	2,931	3,095	3,221	3,413
Ellisville	1,113	2,506	2,958	3,372
Pine Hills	1,076	1,672	1,728	1,836
Total	35,913	45,608	47,971	50,907

Source: Plymouth Department of Planning and Community Development.

Implications of Future Growth

Plymouth is growing rapidly, but it has not experienced the same rate of growth among persons under 18 as many towns with comparable population growth rates or populations of comparable size. However, standard growth rate trends belie what has happened in Plymouth and what the future holds for this unique community. Census 2000 data show that persons under 18 comprise 25.8% of Plymouth's total population, a youth population percent that ranks 137 out of 351 cities and towns. From 1990-2000, the number of persons under 18 increased by 6.9% in Plymouth, which is much lower than the percent gain that occurred in communities such as Acton, Dover, Marlborough or Boylston, where 1990-2000 overall population growth rates were similar to Plymouth's 13.9%. In contrast, Plymouth ranks 16 statewide for total number of persons under 18, a statistic that places the Town squarely into a comparison group with quite different communities: cities such as Cambridge and Chicopee, and maturely developed towns such as Framingham and Weymouth.⁶ While Plymouth's under-18 population is similar in number to Taunton's, the potential for future development in these communities is much different because the total land area of Plymouth is twice that of Taunton. Developable land studies prepared by the state four years ago suggest that Plymouth's untapped development capacity has the potential to bring about a "buildout" population close to present-day Lowell and a school-age (K-12) population equal to the entire Census 2000 population of Rockland.⁷

For Plymouth more than most of the Commonwealth's communities, it will be a major growth management challenge to maintain a diverse inventory of homes and simultaneously generate enough tax revenue to support the cost of town and school services. Three years ago, the Massachusetts Executive Office of Environmental Affairs (EOEA) commissioned build-out studies for all 351 cities and towns. According to EOEA's estimate, Plymouth's development

⁶ Massachusetts Institute for Social and Economic Research (MISER); rankings by author

⁷ Executive Office of Environmental Affairs, Community Preservation Institute, "Plymouth Buildout Study" (2000), <<http://www.compres/env.state.ma.us>>.

capacity under current zoning includes nearly 20,000 additional single-family homes. As a result, the potential exists to double the number of housing units and population in Plymouth by the time the Town is fully developed. This will severely challenge Plymouth's ability to provide the same level of services to current and future residents because new housing development in Plymouth does not pay for itself, as is the case in most communities. Moreover, continued growth outside the village centers will accelerate the rate at which service costs increase due to the comparatively higher cost of serving very-low-density development. The same type of growth pattern will fragment large natural areas such as those found in the RR District while it consumes more energy and generates air pollution.

A community's growth from village to modern suburb can be traced through the styles, age and location of its homes. As fields and forests gradually gave way to development, the homes that replaced them tell a story about the physical evolution of each city and town. However, the attendant loss of open space has led residents of many towns to oppose new housing development. Concerned about community character, natural resources and the cost of public schools, citizens and town officials seek ways to limit new growth, yet in many cases the techniques they choose bring unintended consequences, including the demise of housing choice. As used in the principles of Smart Growth, housing choice is not a euphemism for low-income housing. Rather, it means a range of housing types and prices so that homebuyers and renters have meaningful choices about where they will live. Although planners and policy analysts think housing choice is an important part of city and town planning, state laws and regulations effectively limit the definition of housing choice to homes affordable to low- and moderate-income people.

Two years ago, the Massachusetts Department of Housing and Community Development (DHCD) issued a new regulation that rewards communities for making steady progress toward providing their regional "fair share" of housing affordable to low- and moderate-income people. Known as "planned production," the regulation challenges local governments to develop a plan for increasing the supply of affordable housing at an annual rate of at least .75 of 1% of their year-round homes. The plan must meet a series of state requirements, and ultimately it must be approved by DHCD. Once a community issues permits for enough units to satisfy the regulatory minimum, local officials may deny new applications from affordable housing developers for up to 12 months and in some cases, 24 months.

The production plan regulation offers an incentive to cities and towns that do not meet a statewide affordable housing goal established by the legislature in 1969. When less than 10% of a community's housing units are affordable to low- and moderate-income people, G.L. c.40B, Sections 20-23 ("Chapter 40B") all but directs local officials to grant a "comprehensive permit" to qualified affordable housing developers. A comprehensive permit overrides zoning and other local requirements that interfere with the feasibility of building affordable housing units. By consolidating the approval powers of multiple town boards into one permit issued by the Board of Appeals, legislators hoped to accelerate low-income housing production in the suburbs. Chapter 40B allows a board of appeals to approve, conditionally approve or deny a comprehensive permit, but in communities that do not meet the 10% statutory minimum, a

denied or conditionally approved permit can be appealed by the developer to the state Housing Appeals Committee (HAC). After achieving the statutory minimum of 10%, a board of appeals may still approve comprehensive permits, but its denial of one is no longer vulnerable to a state appeal process that favors affordable housing over other local needs. Loss of local control and community resistance to housing for low-income people make Chapter 40B controversial in many of the Commonwealth's suburbs and small towns.

In the absence of a state-approved production plan, communities that fall below the 10% goal are vulnerable to large or poorly planned developments. Still, other regulations that went into effect more than three years ago help to buffer towns from very large affordable housing developments and establish a "grace period" for denying additional comprehensive permits even without a production plan. For example, the "large-scale project cap" limits a single affordable housing development to a maximum of 381 units in Plymouth, and under the "recent progress rule," Plymouth would be able to deny a comprehensive permit for 12 months after approving one (or more) with at least 381 low-income units. With a DHCD-approved production plan, however, Plymouth could deny a comprehensive permit for 12 months following the approval of at least 143 new low-income units. By offering the production plan option, DHCD hoped to inspire communities to become more pro-active about affordable housing. An issue for Plymouth and most towns in Massachusetts is whether the planned production standard of .75 of 1% is realistic. Since 1996, Plymouth has issued about 331 new residential building permits per year: all for market housing units. To alter the Town's production pipeline so that more than 50% of all new residential building permits were for affordable housing would be very difficult. If Plymouth relied entirely on new construction to provide more affordable housing units, its production pipeline would have to increase significantly, with new affordable units supplementing market-rate housing development.

The decision to prepare a Chapter 40B production plan is important not only because of the potential advantages involved, but also the potential disadvantages. The controversial nature of Chapter 40B makes it difficult for even the most supportive, experienced communities to increase their supply of affordable housing. Plymouth does not have a long, established track record of low-income housing initiatives. While the Town has a considerable amount of vacant land, the land is located in outlying areas that are not suited for higher-density housing. However, Plymouth does have resources to bring to the table: zoning power, Community Preservation Act (CPA) revenue, existing buildings that can be converted to permanently affordable housing, CDBG funds, qualified professional staff and volunteers with an interest in affordable housing, and developers, realtors, lending institutions, and local employers: people and organizations that need more affordable housing and may be able to help the Town make progress toward the 10% statutory minimum. A housing plan tailored to local capacity and resources could be very successful in Plymouth even if a Chapter 40B production plan proves to be unrealistic.

Defining Housing Needs

Since Chapter 40B focuses solely on low- and moderate-income units, housing plans across the Commonwealth usually emphasize ways to create more low-income housing and yet by doing

so, they strive to meet an affordability target that does not always match local housing needs. Under Chapter 40B, a community is said to have unmet housing needs when less than 10% of its homes are affordable to low- and moderate-income people. By regulation, “low- and moderate-income” means households with income at or below 80% of area median income (AMI), adjusted for household size, for the urban or rural area in which a community is located. In Plymouth’s region (Boston PMSA), a family of four with annual earnings of \$66,150 meets the definition of “moderate income” and would qualify for affordable housing. According to the most recent Subsidized Housing Inventory, the state recognizes 4.06% all 19,008 year-round homes in Plymouth as housing affordable to low- and moderate-income people.

A deceptively simple definition of housing need is the shortfall of Chapter 40B units in a city or town, but at least three factors diminish the utility of using Chapter 40B statistics to measure unmet housing needs. First, economic areas do not follow town boundaries. Second, Chapter 40B developments are not really designed to meet local housing needs; instead, they respond to the strength of a regional housing market. Third, in most parts of the state, low- and moderate-income households comprise a significantly larger percentage of all households than 10%. Understanding housing needs requires an analysis of housing needs and barriers that exist within a regional market area. For Plymouth’s plan, the regional area includes Plymouth and the adjacent towns depicted in Map 1. According to the Subsidized Housing Inventory, these six communities have a combined total of 2,209 Chapter 40B units today, or 4.51% of their total year-round homes. No town in Plymouth’s area meets or exceeds the 10% statutory minimum. Meeting the state’s 10% target on a region-wide basis requires at least 2,689 more affordable units. However, there are about 20,345 low- and moderate-income households in Plymouth and the surrounding towns. The potential to underestimate housing needs is fairly obvious, for even if all six communities satisfied the state’s goal, there would be 4.14 low- and moderate-income households for every one Chapter 40B unit.

The same conditions exist across the Commonwealth. The U.S. Department of Housing and Urban Development (HUD) estimates that 43.9% of the state’s households have incomes in the low- or moderate-income range. Providing enough low- or moderate-income housing to reach 10% of all homes in Massachusetts would appear to require 262,199 units, but since the 10% formula under Chapter 40B excludes seasonal and vacation homes, 10% for the state as a whole would actually be 252,696 units. Aside from the fact that Chapter 40B places less responsibility on resort towns to house the state’s poor, the reality is that even at 10% of all year-round homes in Massachusetts, there would still be 819,008 families without access to an affordable housing unit as the term is defined by law. In Plymouth’s case, reaching 10% requires about 1,130 Chapter 40B units in addition to the existing 771-unit inventory, yet technical compliance with Chapter 40B would leave 5,740 of the Town’s own low- and moderate-income households vulnerable to a shortage of affordable housing.

It is tempting to measure housing needs by looking only at conditions in a single city or town, without regard for problems that exist in larger regions or among communities with overlapping market demands. DHCD has encouraged communities to focus on local housing needs by promoting a policy of 70% “local preference” units in Chapter 40B developments – not for the

purpose of exclusion but rather, to reduce resistance to affordable housing. In Plymouth County, nearly half of all households qualify as low or moderate income and 44% of them live in non-urban communities like Plymouth. Federal census data indicate that 54% of Plymouth County's present population is comprised of move-ins from another part of the state since 1995. Although local officials in most cities and towns worry about the social, economic and fiscal impacts that affordable housing developments may bring to their communities, many households can choose to move from one town to another because they have economic mobility. For low- or moderate-income households, the shortage of affordable housing is effectively a shortage of choices.

Despite Chapter 40B's focus on low- and moderate-income units, housing needs are not limited to low- or moderate-income people. Accessible homes for households with a disabled family member, smaller housing units for older people who do not want the maintenance responsibilities of a single-family home, and a base of modestly priced rental units for young citizens entering the workforce are common needs in communities across the state. Nearly 17% of Plymouth's working-age population has a disability, but except for elderly public housing and a very small inventory of rooms in group homes, Plymouth has very little barrier-free housing. In addition, while Plymouth's region has attracted some over-55 housing developments, most are expensive condominiums or "cottage" units with sale prices that far exceed the means of many senior citizens, especially households headed by people over 75. The Plymouth County inventory of public housing for very-low-income elders has not changed in the past decade and there is virtually no new housing for seniors of modest means in the lower South Shore area. Although some age-restricted Chapter 40B developments have been approved in Massachusetts, the income and asset tests for eligibility to buy a Chapter 40B homeownership unit create more marketing and sales challenges than many people realize.

Defining Housing Barriers

The factors that impede affordable housing development are complex, intertwined and deeply rooted. For example, the most oft-cited barrier to new affordable housing is the shortage of usable land throughout Eastern Massachusetts. The land shortage stems from two conditions: the mature land use pattern found in most communities around Boston, and regulatory barriers to new growth. During the 1990s, land prices skyrocketed as the demand for homes outpaced the land supply. Restrictive zoning regulations that require homes to consume a large amount of land per dwelling unit have contributed to this problem. In suburbs and small towns, most land is zoned for single-family residential development, primarily on one-acre or larger lots. While some communities have multi-family zoning districts, the land is largely built out – as is the case in Plymouth. Locally and regionally, there is a lack of developable land zoned for two-family and multi-family housing.

Zoning makes affordable housing difficult to build, but it is not the only regulatory barrier to housing production. Federal and state authorities administer environmental laws to protect wetlands and water resources, clean up hazardous waste contamination, reduce non-point source pollution, manage stormwater runoff, and remove lead paint from older homes. Plymouth has vast areas of wetlands, floodplain and open water, a coastal Area of

Environmental Concern (ACEC), extensive wildlife corridors and a large state forest. In addition, Title V regulations have the effect of requiring more land per dwelling unit than in the past. Shared septic systems and alternative wastewater technologies may increase the development potential of marginal land, yet few alternative systems have been approved by DEP and they tend to be expensive. Finally, the presence of lead paint in older homes is particularly significant because many communities want to use existing housing stock for affordable units. Lead-based paint was banned in the United States in the 1970s, but large inventories of pre-1970 housing stock exist throughout the region. In Plymouth, 43.4% of all housing units and 66.7% of all renter-occupied units are in structures that were built prior to 1970.

Lack of population diversity usually signals a short supply of affordable housing and reinforces geographic barriers for minorities, low-income families and the elderly. Even though the state's population has become more diverse, its suburbs and small towns remain fairly homogenous. In Plymouth and all neighboring communities except Wareham, well over 90% of the population is white and less than 1% of all white people are Hispanic. Since ethnic and racial minorities tend to be concentrated in neighborhoods with large percentages of low-income households and non-English speaking people, it is not surprising to find that Plymouth has Environmental Justice Populations in two areas of town. Furthermore, the overall aging of the region's population has created a market for over-55 housing, but most over-55 developments and assisted living facilities built since 1995 are priced for high-end homebuyers and renters. A limited inventory of affordable, accessible housing exists for very-low-income people, but there is virtually no accessible housing affordable to those of moderate- or middle-income means.

Housing finance policies exacerbate the physical, regulatory and ideological barriers to decent housing for the poor. Before 1960, the nation's affordable housing was primarily public housing: units built and operated by local housing authorities with federal financial support. Public housing and urban renewal dominated the federal housing agenda until the late 1960s, when new programs paved the way for private developers to build affordable housing. At the same time, the federal government created tenant-based rental assistance for low-income tenants to rent apartments from private landlords. These changes in federal policy occurred in the same era that produced Chapter 40B (1969). The earliest comprehensive permits included a privately developed project that produced the first Supreme Court decision on Chapter 40B, and many more like it were built in Boston-area suburbs throughout the 1970s. By the early 1980s, however, federal funding for affordable housing declined and states assumed increasing responsibility. Mixed-income housing came into vogue to make affordable housing feasible with less federal or state financial support. Today, mixed-income developments serve as the primary supplier of affordable housing and a majority of the units are sold or rented at market rates. Since the feasibility of these projects hinges on the market, they tend to be built in high-growth areas. Moreover, the affordable units are usually sold or rented at prices affordable to people at the high end of the income limits that govern most housing subsidy programs. As a result, many people who need low-cost housing cannot find a unit affordable to them, including but not only the elderly.

The system of public finance creates major barriers to housing development of any kind, and

affordable housing in particular. In Massachusetts, communities depend on property tax revenue to pay for community services and land use decisions often reflect concerns about the fiscal impacts of new growth. Schools are the most expensive service supplied by local governments, so winning support for housing is difficult because local officials and the public associate new homes with school enrollment growth. In most communities, including Plymouth, new homes and housing resales undeniably attracted families over the past decade. When townhouses and multi-family units were built at all after the early 1990s, they typically offered choices to a restricted group of homebuyers or renters: the elderly, and Boomlet singles or childless couples. To reduce conflicts with local permitting authorities, multi-family developers agreed to build age-restricted housing or they excluded three-bedroom units from their projects, even in most Chapter 40B developments, while spacious single-family homes on large lots proliferated throughout the suburbs. Due to the convergence of three barriers – ideological, housing finance and fiscal – low-income families remain the least well served by affordable housing development.

A final barrier that disproportionately affects non-urban communities is lack of capacity to develop, build and manage affordable housing. Funding for new public housing is all but non-existent, and while many federal and state programs offer grants and low-interest loans to non-profit development organizations, very few non-profits serve suburban and rural communities. There are at least two reasons: critical mass, and easier access to financing in the cities. Absent a locally based non-profit developer or a stronger presence by regional organizations, communities like Plymouth have to rely on for-profit developers to provide some affordable units in their projects or to build mixed-income developments under Chapter 40B. Neither is an optimal solution.

HOUSING NEEDS ANALYSIS

Population Characteristics

Population Age

According to the 1960 U.S. Census and the 1966 Comprehensive Plan, Plymouth had an aging population in the 1960s, evenly divided between male and female. An analysis of 1970 population age cohorts reveals a similar pattern, but conditions changed dramatically by 1980. In fact, the 1980 U.S. Census shows that the fastest growing segments of Plymouth's population included persons between the ages of 5-15 and 25-34. Together, these groups accounted for 39% of the Town's total population at the time. A decade later, the most rapid growth had occurred among persons between the ages of 25-34, 35-44, and 5-15. Census 2000 data indicate an absolute decline in the number of pre-school age children and a modest rate of growth among children 5-15, but the population between 45-54 increased by more than 3,500 people, or 80%. Recent in-migration appears to consist primarily of persons 45-64 years of age. The continued in-migration of older individuals and smaller household sizes will converge to create a significant demand for housing. Table 3 reports change in population by age group over the past 30 years.

Table 3: Population Age by Decade, 1970-2000

Year	Measure	Age Cohort							Total Population
		0-4	5-15	16-24	25-44	45-54	55-64	65+	
2000	Persons	3,478	7,859	5,880	16,540	7,932	4,411	5,812	51,701
	Percent	6.7%	15.2%	11.4%	32.0%	15.3%	8.5%	11.2%	100.0%
1990	Percent	3,592	7,590	5,572	16,038	4,401	2,905	5,510	45,608
	Percent	7.9%	16.6%	12.2%	35.2%	9.6%	6.4%	12.1%	100.0%
1980	Persons	2,979	7,210	4,176	11,122	2,774	3,124	4,528	35,913
	Percent	8.3%	20.1%	11.6%	31.0%	7.7%	8.7%	12.6%	100.0%
1970	Persons	1,612	3,235	2,627	3,933	2,188	2,186	2,825	18,606
	Percent	8.7%	17.4%	14.1%	21.1%	11.8%	11.7%	15.2%	100.0%

Source: Plymouth Planning Department.

Population Density

Compared to most Plymouth County communities, Plymouth's population density per square mile (mi²) is fairly low. Its Census 200 population of 51,701 equates to 535.9 persons per mi², or about 75% of the average for Plymouth County. Fifty years ago, however, Plymouth's population density of 141 persons per mi² was less than half of the county-wide average.⁸

⁸ Massachusetts Institute for Social and Economic Research (MISER), "Population of Massachusetts Cities, Towns and Counties: Actual and Estimated, 1930-1998, and Population Density in 1990," updated by author with Census 2000, Summary File 1, Table P1.

Economic history, development patterns and age of housing stock explain the much higher population density of Plymouth's older waterfront neighborhoods, notably Plymouth Center, North Plymouth and parts of Manomet. In these areas, the population density is reminiscent of municipalities that were incorporated in the mid- to late-19th century and achieved most of their residential buildout by World War II. Map 4 reinforces the influence of new residential growth outside of Plymouth's core villages, for there has been a gradual increase in the population density of rural areas, particularly in South Plymouth.

Race, Ethnicity & National Origin

Like most of the South Shore, Plymouth does not have a racially or culturally diverse population. From 1990-2000, however, the Town's minority population increased more rapidly than the overall population. Today, racial minorities comprise 5.6% of Plymouth's total population and one-fourth of the inmate population in prisons on Bumps Pond and Long Pond Roads. Compared to the state as a whole, Plymouth also has a very small percentage of Hispanic persons (1.2%), and more than half are white. Similarly, there are few foreign-born persons in Plymouth, and about one-third of the foreign-born population entered the United States prior to 1965.⁹ These statistics make sense in light of the relatively small percentage of people who speak a language other than English at home: 6.6%. Moreover, the foreign languages represented in Plymouth households have changed. In absolute terms, the number of native-speaking Italian, Portuguese, French Creole and Spanish persons declined in the past decade while the number of native-speaking Scandinavian, Slavic, Asian and Arabic persons increased. Still, rate of growth among persons of Irish and Italian descent far surpassed that of any other ancestral group.¹⁰ Table 4 provides comparison racial and ethnic population statistics for Plymouth's region.

Table 4: Racial & Ethnic Characteristics of Local and Regional Population

Geography	Total Population	Population Percent			
		Racial Minority	Hispanic	Foreign-Born	Non-English Speaking At Home
Massachusetts	6,349,097	15.9%	7.2%	12.2%	17.6%
Plymouth County	472,822	12.3%	2.6%	6.3%	9.4%
Bourne	18,721	5.6%	1.6%	3.1%	5.1%
Carver	11,163	4.6%	0.9%	2.9%	4.3%
Duxbury	14,248	2.3%	0.8%	3.2%	3.5%
Kingston	11,780	3.2%	0.8%	3.1%	6.5%
PLYMOUTH	51,701	5.6%	1.9%	3.5%	6.2%
Wareham	20,335	13.3%	1.6%	3.5%	7.3%

Source: Census Bureau.

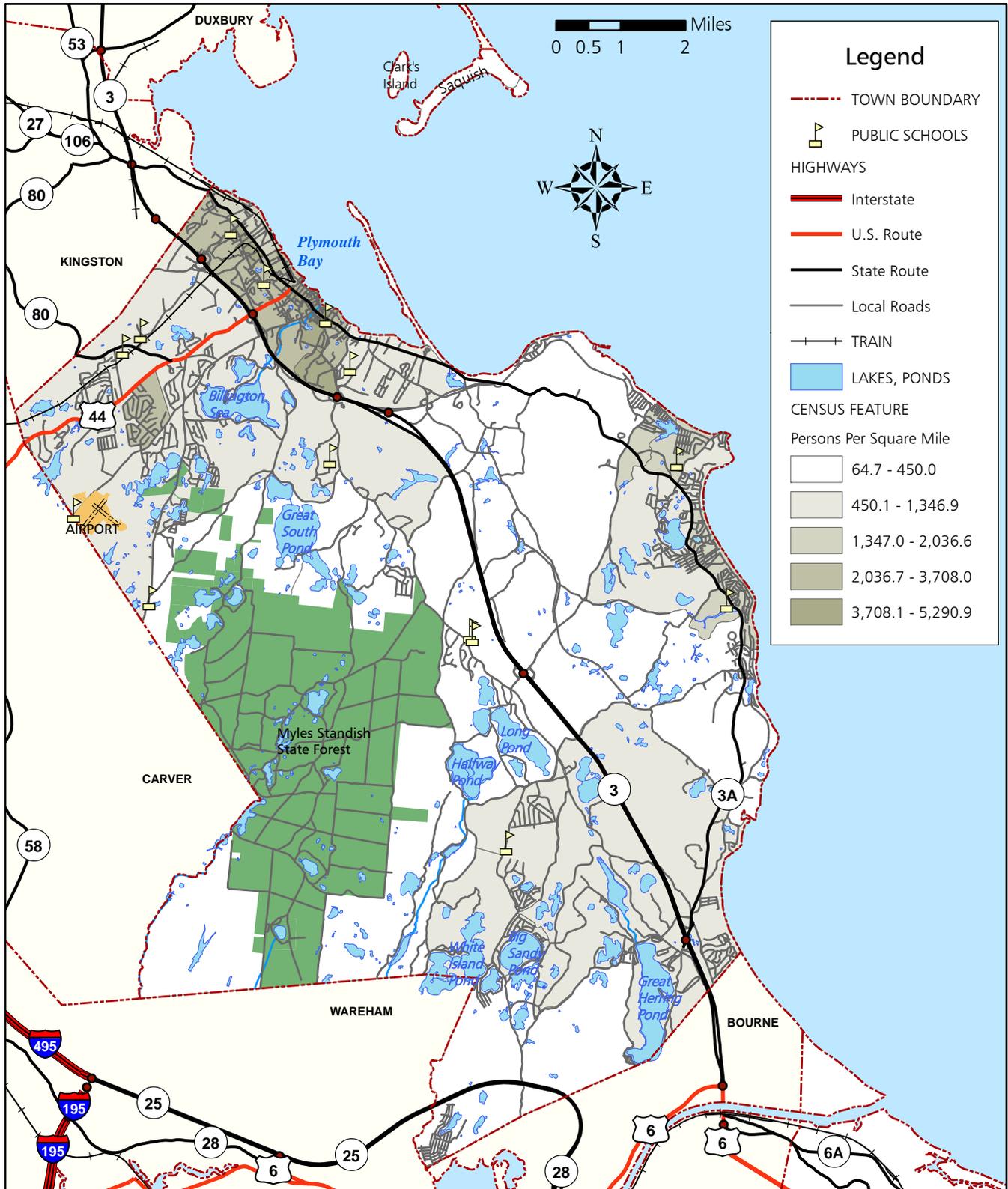
⁹ U.S. Department of Commerce, Bureau of the Census, Census 2000, Summary File 1, Tables P9, P10; Summary File 3, Tables P21, P22, obtained via American FactFinder at <http://www.census.gov>.

¹⁰ Census 2000, Summary File 3, Tables PCT10, PCT11; 1990 Census of Population and Housing, Summary File 3, Tables P029, P031.

TOWN OF PLYMOUTH Housing Plan

Map 4: Population Density

Community Opportunities Group, Inc.
Boston, Massachusetts



The presence of state and county prison facilities has a significant impact on the proportion of minorities in each part of Plymouth. Map 5 shows that the minority population percent is substantially larger in the two census block groups with prisons, yet even when those areas are excluded, minority persons are not evenly distributed across the Town. Portions of North Plymouth and Plymouth Center house more minorities relative to overall population than other areas, while the percentage of minorities in residential neighborhoods seaward of Warren Avenue and State Road are much smaller than the Town-wide average.

Population in Group Quarters

Nationwide, 97% of the population is in households: people living alone or together in a dwelling unit that is their usual place of residence. For census purposes, the other 3% is defined as the population in "group quarters," or people occupying some type of shared living space that does not constitute a housing unit. The group quarters population includes voluntary or non-institutionalized persons such as college students in dormitories and soldiers in military barracks, and involuntary or institutionalized persons, such as prison inmates and nursing home patients. In Massachusetts, about 60% of the group-quarters population is comprised of non-institutionalized people and more than two-thirds of them are college students living in Boston-area dormitories. The situation is quite different in Plymouth County, where only 27% of the group quarters population is non-institutionalized and just over half are college students. In general, the characteristics of a group-quarters population tend to be shaped by unique local conditions. From one community to the next, significant differences are more common than among the household population. This is obvious in the unusually large percentage of college students in and around Boston, Cambridge and Amherst, and the unusually large percentages of prison inmates in any town with a federal, state or county prison facility.

Plymouth has not only a larger-than-average group quarters population, but also a substantially larger percentage of institutionalized people due to the state and county prisons. In addition, the Town has a fairly large number of people in nursing homes. As a result, 94% of Plymouth's group-quarters population is institutionalized and 66% are prison inmates. Furthermore, the inmate population rose by 87% from 1990-2000 because of prison expansions. However, the entire group quarters population increased in the same period; by 2000, Plymouth had many more people in nursing homes and group-homes for persons with disabilities, resulting in total group quarters population growth of 72%. Overall, the increase in Plymouth's group-quarters population accounted for about 17% of total population growth over the past decade.¹¹

Labor Force, Education & Employment

Sixty-eight percent of Plymouth's population over 16 is in the labor force, a rate that slightly exceeds the statewide average (66%). Women comprise 48% of the Town's 27,104-member labor force, and half of all married-couple families in Plymouth rely on the earnings of both husband and wife.¹² Compared to adjacent towns, Plymouth tends to be about average for its annual

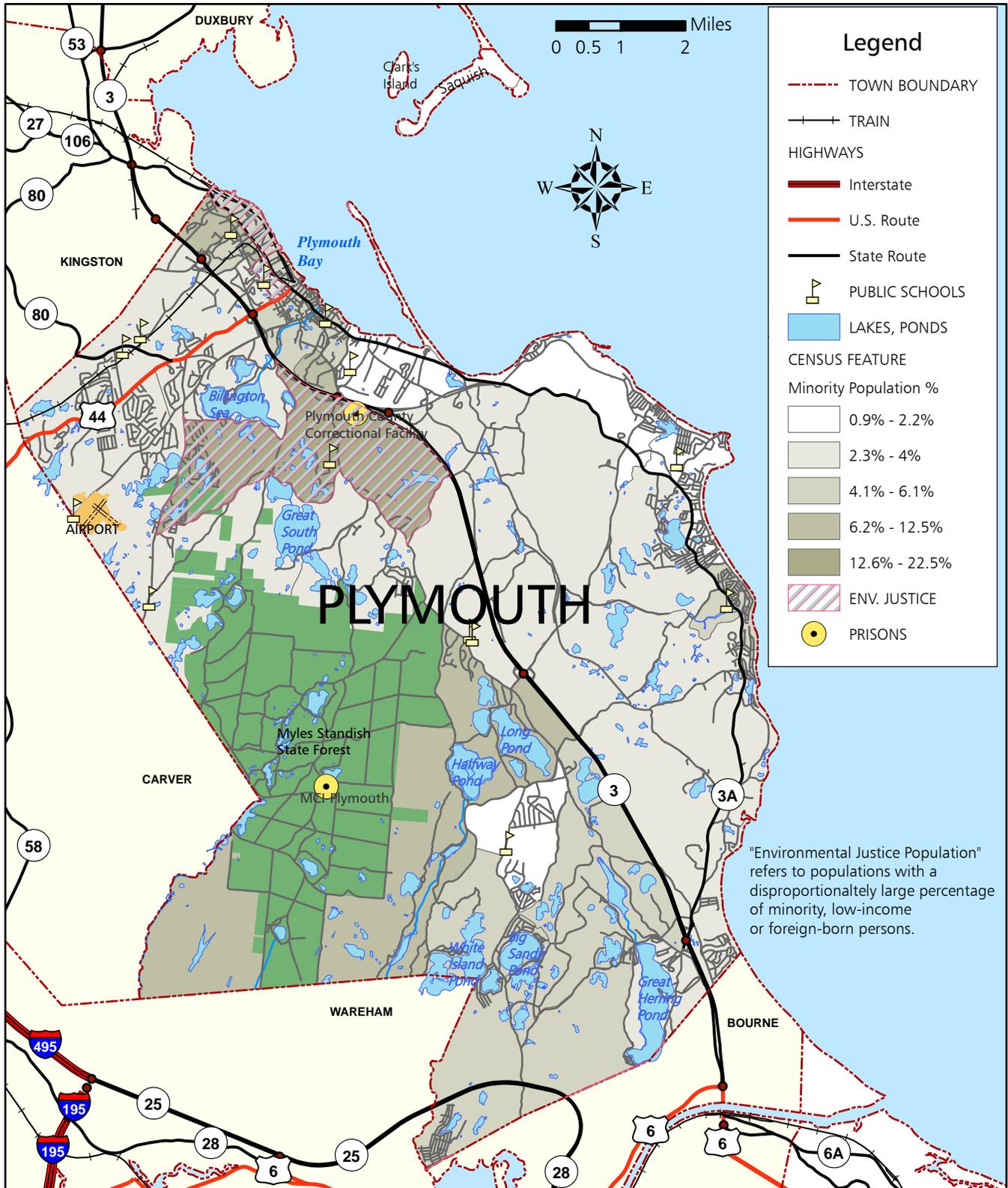
¹¹ Census 2000, Summary File 1, Table P37; 1990 Census, Summary File 1, Table P028.

¹² Census 2000, Summary File 3, Tables P44, P48, DP3.

TOWN OF PLYMOUTH Housing Plan

Map 5: Minority Population

Community Opportunities Group, Inc.
Boston, Massachusetts



unemployment rate, but historically the percentage of unemployed people in Plymouth has been much smaller than in Wareham and larger than in Duxbury. Table 5 provides a snapshot of regional unemployment rates from 1990-2004.

Table 5: Unemployment Trends in Plymouth & Surrounding Communities

Area	2004 (Annual)		Historic Unemployment Rates			
	Labor Force	Unemployed	2002	2000	1995	1990
Massachusetts	3,395,542	6.5%	5.3%	2.6%	5.4%	6.0%
Bourne	8,808	7.2%	4.9%	3.2%	6.4%	6.9%
Carver	5,461	8.5%	5.0%	2.9%	6.8%	7.3%
Duxbury	7,275	3.7%	3.6%	1.6%	3.5%	4.3%
Kingston	6,512	5.5%	3.7%	2.3%	5.1%	6.2%
PLYMOUTH	27,132	7.2%	5.0%	2.9%	6.0%	7.0%
Wareham	9,730	9.7%	6.2%	3.9%	7.9%	9.1%

Source: Massachusetts Division of Unemployment Assistance.

Plymouth residents have a somewhat greater tendency to work locally than is the case for residents across the state. More than 38% of the Town's residents commute to a local job each day, but the same can be said for only 24% of Plymouth County's residents and 31% of all residents of the Commonwealth. Since Plymouth has little in the way of in-town public transportation, a relatively large percentage of its residents commute by car. However, the sheer density of housing units and population in North Plymouth and Plymouth Center makes it possible for many residents to walk or bicycle to work. Some of the neighborhoods in these village centers far surpass state and national averages for walk-to-work employees, but the same neighborhoods also house a disproportionately large share of Plymouth's lower-wage earning households.¹³ Maps X and X illustrate selected characteristics of the local labor force.

Overall, Plymouth exceeds the state for percentage of residents employed in retail, the construction trades and transportation-related industries and it has fewer people with jobs in manufacturing and professional, scientific, health care and education services. The employment characteristics of Plymouth's labor force largely correspond to the education levels of its adult population. Relative to the state, Plymouth has a much larger share of adults whose maximum educational attainment is a high school diploma or an unfinished college degree, conditions that make it more difficult for them to compete for high-paying jobs. On one hand, Plymouth's employment base is seemingly large and somewhat diverse, so it offers opportunities for residents to work locally. On the other hand, since average local wages range from 72-85% of the average wages paid by employers in the Boston Labor Market Area (LMA), the number of living-wage jobs is much lower than the total number of jobs in Plymouth's employment base. Moreover, although Plymouth business establishments provide jobs to many people, the size of the employment base is quite small relative to the size of the labor force, resulting in a jobs-to-labor-force ratio of only .74.¹⁴ It is little wonder that more Plymouth residents commute to jobs in

¹³ Census 2000, Summary File 3, Tables P29, P30.

¹⁴ Commonwealth of Massachusetts, Division of Unemployment Assistance, [Economic Data Programs](#), "Employment and Wages by Industry and Area: ES-202," Town of Plymouth, Boston LMA, Massachusetts

Boston, the north suburbs of the South Shore and the west suburbs along Route 128 than any other part of the state, including employment centers closer to Plymouth on Cape Cod and along Route 44.¹⁵

Population with Disabilities

Approximately 17% of Plymouth's non-institutionalized population over 5 years of age has a disability, defined as a long-lasting impairment of one or more major life functions. Compared to national or state disability statistics, Plymouth does not have a substantially higher or lower incidence of disabled persons or types of disabilities. The percentage of its school-age population with disabilities is somewhat higher than the state average, but there is a much lower incidence of mental disability among Plymouth's school-age children while physical and self-care disabilities are more common. Statewide, the most frequently occurring class of disability among under-65 adults includes conditions that impair their ability to work, with or without accommodation, and this is also true in Plymouth. However, the Town has a slightly larger percentage of adults with physical disabilities, e.g., mobility impairments. Plymouth's senior citizens are affected by disabilities to the same extent as other seniors across the Commonwealth, both in percentage of seniors and the types of disabilities they face. Table 6 provides a disability population summary for Plymouth and the region. In Plymouth, the total number of persons with one or more reported disabilities is 7,655.

Table 6: Population with Disabilities by Age Group

Geography	Population Over 5	% Persons with Disabilities by Age Cohort					% Total >5 Yrs.
		5-15	16-20	21-64	65-74	75+	
Massachusetts	5,860,845	6.2%	14.0%	17.9%	27.6%	49.0%	18.5%
Plymouth County	430,943	6.2%	15.0%	18.6%	27.6%	49.4%	18.3%
Bourne	16,870	6.7%	15.0%	14.9%	23.3%	36.7%	16.3%
Carver	10,425	10.7%	14.3%	20.4%	40.1%	50.1%	21.9%
Duxbury	13,106	4.5%	13.9%	10.8%	12.8%	36.1%	11.2%
Kingston	10,618	4.9%	21.3%	17.0%	40.1%	49.5%	18.7%
PLYMOUTH	45,883	7.4%	14.6%	16.3%	23.5%	46.9%	16.7%
Wareham	18,846	10.1%	19.3%	26.3%	32.7%	57.1%	26.0%

Source: Census 2000, Summary File 3, Table P42.

ES-202 Reports via NAISC Data Retrieval System, <<http://www.detma.org/LMI/dataprog.htm>>, and Census 2000, Summary File 3, Tables P49, P50.

¹⁵ Census Bureau, Journey-To-Work & Migration Statistics Branch, Census 2000, "Minor Civil Division/County to Minor Civil Division/County Worker Flow Files: Residence MCD/County: Massachusetts Data Series," <<http://www.census.gov/main/www/cen2000.html>>.

Household Characteristics

Households & Household Composition

Population trends and population projections are important for town planning because they suggest future needs for public facilities, schools, water, and other local government services. However, planning for housing needs is shaped primarily by household trends. Changes in household types, sizes, composition and incomes, and rates of household formation all create particular needs at all market levels. There is an inextricable relationship between a community's housing stock and the characteristics of its households, and Plymouth is no exception.

The data reported in Table 7 show that while Plymouth's households are predominantly families, the Town has a slightly smaller proportion of family households than most of the surrounding towns and Plymouth County as a whole. The characteristics of Plymouth's non-family households are revealing in their own right, but especially for what they say about the mix of households and people in Plymouth compared to other areas of the state. Throughout Plymouth County, 81% of all non-family households are one-person households, usually seniors citizens and young citizens (under 34), and 16% are two-person households. In Plymouth, 78% of all non-family households are single people living alone and 19% are two-person households.¹⁶

Table 7: Households and Families

Area	Households		Total	Families	
	Total	Average Size		Average Size	% All Households
Massachusetts	2,443,580	2.51	1,576,696	3.11	64.5%
Plymouth County	168,361	2.74	122,421	3.23	72.7%
Bourne	7,439	2.39	5,013	2.90	67.4%
Carver	3,984	2.80	3,010	3.23	75.6%
Duxbury	4,946	2.85	3,943	3.26	79.7%
Kingston	4,248	2.71	3,138	3.19	73.9%
PLYMOUTH	18,423	2.67	13,268	3.16	72.0%
Wareham	8,200	2.44	5,337	3.02	65.1%

Source: Census 2000: Summary File 1, Tables P15, P17, P31, P33.

Nearly 19% of Plymouth's 18,423 households are elderly households, i.e., a household headed by a person 65 years or older. Table 8 shows that as a percentage of all households or percentage of non-family households alone, the elderly comprise a smaller share of households in Plymouth than in any neighboring town, Plymouth County or the state. Young households – that is, headed by persons 15-34 – comprise a somewhat larger percentage of all households in Plymouth, in fact Plymouth is the only town in the immediate region to approximate the Plymouth County average for households headed by young citizens.

¹⁶ Census 2000, Summary File 1, Table P21.

Table 8: Family and Non-Family Households by Age of Householder

Area	Total Households	% All Households			% Non-Family Households		
		Age 65+	Age 15-34	Age 15-24	Age 65+	Age 15-34	Age 15-24
Massachusetts	2,443,580	22.2%	21.1%	3.9%	30.7%	25.7%	6.9%
Plymouth County	168,361	20.2%	16.6%	2.0%	34.5%	16.7%	3.6%
Bourne	7,439	28.0%	17.2%	2.8%	38.3%	13.8%	4.0%
Carver	3,984	26.7%	14.5%	1.0%	50.9%	9.8%	1.7%
Duxbury	4,946	21.6%	7.3%	0.3%	51.0%	7.8%	1.3%
Kingston	4,248	22.8%	16.0%	1.1%	44.2%	12.4%	1.9%
PLYMOUTH	18,423	18.7%	18.0%	1.8%	32.1%	17.5%	3.2%
Wareham	8,200	25.8%	15.6%	2.5%	38.2%	11.6%	2.8%
National Profile	105,480,101	21.0%	22.6%	5.2%	30.2%	25.1%	8.5%

Source: Census 2000, Summary File 1, Table P21.

A striking feature of all towns in Plymouth's area is that young households account for a much smaller percentage of households generally and non-family households in particular than is the case statewide or nationally. The percentage of very-young households (under-24) is conspicuously small. While Plymouth tops the region for presence of households headed by young citizens, nearly 60% of all under-34 householders live in three sections of Town -- North Plymouth, Plymouth Center and Manomet -- as depicted in Map 6.

Families & Children

Since Plymouth has relatively large shares of non-family households and persons in group quarters, it is not surprising to find that the proportion of the population in families is somewhat smaller than in other nearby towns. A family is a household of two or more people related by blood, marriage or other operation of law, e.g., adoption. By census definition, families include all households with children under 18, and all subfamilies, such as a multi-generational household with grandparents, parents and children or other relatives occupying the same dwelling unit. Plymouth's families include 886 grandparents living with one or more grandchildren, and 38% have childcare responsibilities. The Town has a larger percentage of grandparents in the role of childcare provider than the statewide average of 28%.¹⁷

Plymouth's average family size of 3.16 persons is smaller than the average for Plymouth County and somewhat larger than the average in Wareham and Bourne. Differences like these often reflect a community's percentage of married-couple families and children under 18. However, Table 9 shows that compared to Plymouth County, Plymouth has a somewhat larger percentage of married-couple families but fewer children per family. Plymouth's regionally small number of children under 18 per family seems to correspond to a larger-than-average share of family householders 45-54 years of age -- i.e., families likely to have children over 18. The Town is very close to the County for school-age children as a percentage of all children under 18 in families.

¹⁷ Census 2000, Summary File 3, Table DP2.

TOWN OF PLYMOUTH Housing Plan

Map 6: Presence of Young Households

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Boston, Massachusetts

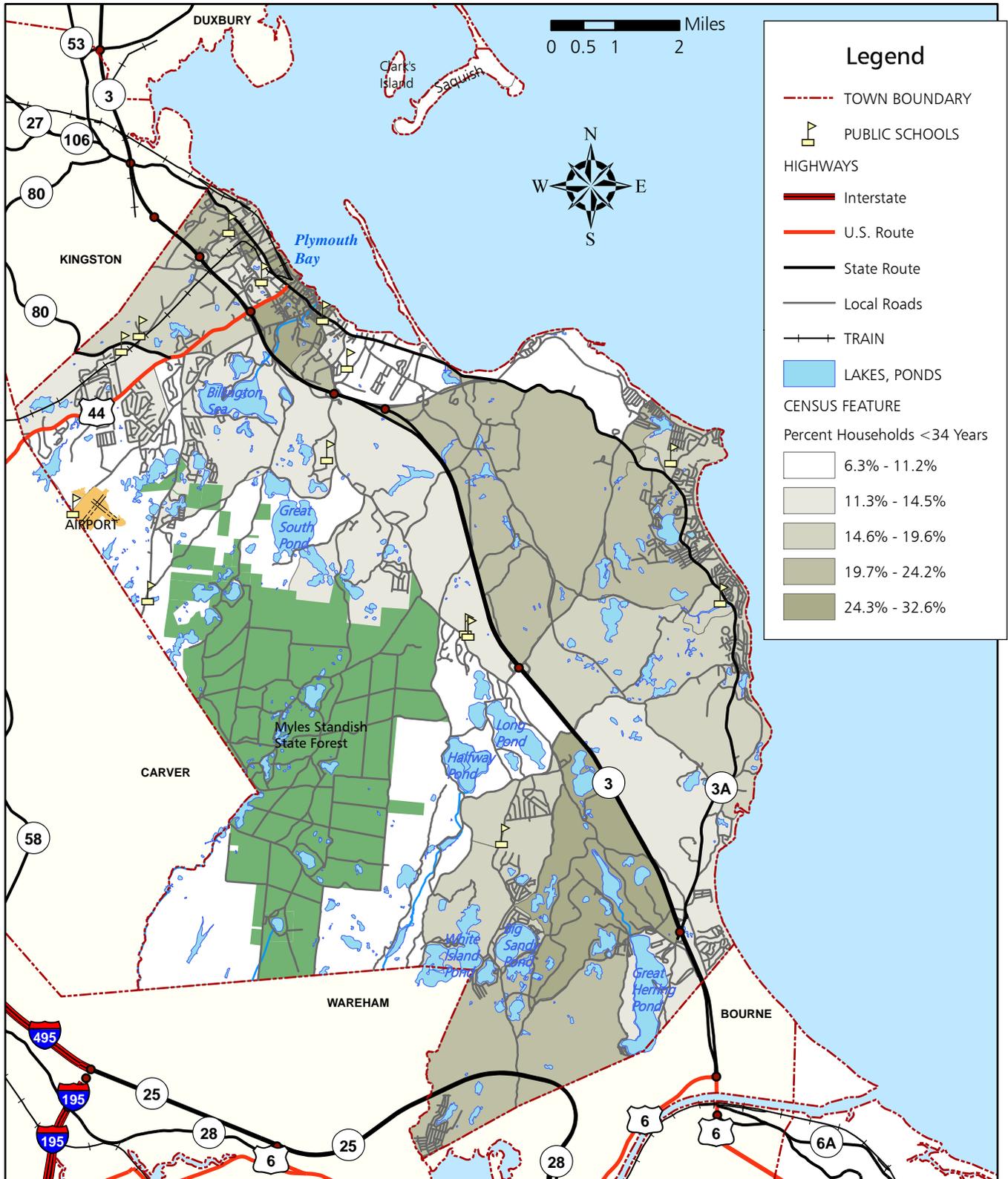


Table 9: Family Type, Size and Presence of Children

Area	Families	% Married Couples	Average # Children/Family		School-Age % All Children
			Under 18	School-Age (5-17)	
Massachusetts	1,576,696	76.0%	0.88	0.65	73.9%
Plymouth County	122,421	78.3%	0.95	0.71	74.4%
Bourne	5,013	81.0%	0.77	0.55	71.5%
Carver	3,010	83.8%	0.93	0.72	77.1%
Duxbury	3,943	88.9%	1.04	0.79	76.2%
Kingston	3,138	84.8%	0.98	0.68	69.6%
PLYMOUTH	13,268	81.0%	0.93	0.69	74.1%
Wareham	5,337	71.2%	0.83	0.64	77.1%

Source: Census 2000, Summary File 1, Tables P31, P34, P36.

Plymouth's largest families live in areas with the newest single-family homes and high concentrations of rental housing that is not age-restricted. Despite significant differences in land use patterns, housing stock and home values, South Plymouth, North Plymouth, the area around Obery Street near Exit 5, and rural areas along Clark, Bourne and Long Pond Roads all house families with more children under 18 than other parts of the Town. In these locations, the average number of children per family ranges from .98 to 1.28 and the average number of school-age children per family, from .69 to .96. To some extent, the presence of families with children correlates with proximity to public schools, but this is not universally true. Plymouth has reasonably walkable neighborhoods with schools and few children per family, and less walkable areas with many children, as illustrated in Map 7. In general, areas with more than .80 children per family also have large percentages of family households, excluding North Plymouth and Plymouth Center, where the percentage of family households falls below 60% in many neighborhoods.

Table 10: Characteristics of Single-Parent Families

Area	Families	% Single- Parents	% With Preschool-Age Children	% With School-Age Children	Ratio Female- to-Male Single Parents
Massachusetts	1,576,696	24.0%	19.1%	42.1%	3.26
Plymouth County	122,421	21.7%	18.0%	43.1%	3.13
Bourne	5,013	19.0%	20.0%	43.8%	2.73
Carver	3,010	16.2%	14.5%	43.8%	2.42
Duxbury	3,943	11.1%	9.6%	39.2%	3.06
Kingston	3,138	15.2%	15.3%	42.1%	3.83
PLYMOUTH	13,268	19.0%	17.4%	47.0%	3.23
Wareham	5,337	28.8%	21.1%	45.3%	3.13

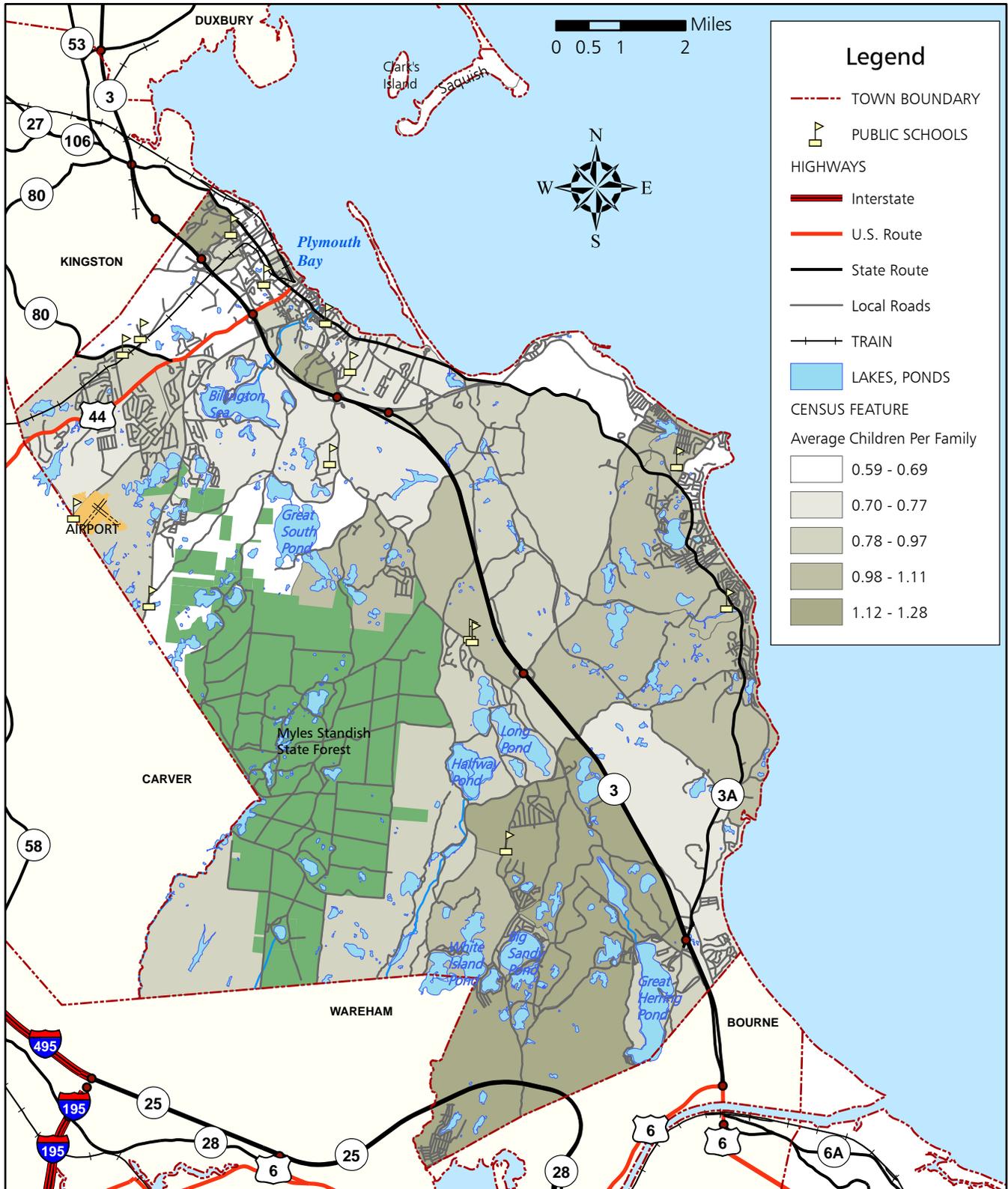
Source: Census 2000, Summary File 1, Table P34.

Massachusetts is very close to the national average for percentage of single-parent families (24%), but this is not the case for most of Plymouth County, including Plymouth. While Plymouth has a relatively small percentage of single-parent families, the families are fairly large. Moreover, a

TOWN OF PLYMOUTH Housing Plan

Map 7: Children in Families

Community Opportunities Group, Inc.
Boston, Massachusetts



larger percentage of Plymouth's single parents are in the labor force (73%) than is the case nationally (68%) or for the state as a whole (66%). Table 10 shows that compared to most nearby towns, Plymouth has more female than male single parents, a condition that applies especially to single-parent families with children under 18. In this regard, the state as a whole is quite different from national norms, for the ratio of female-to-male single parents in the United States is 2.96, yet in Massachusetts it is 3.26. Plymouth aligns more closely to the statewide ratio of female-to-male single parents than any town in the immediate region. It differs from neighboring towns in another respect as well: Plymouth's single-parent families are more likely to have school-age children.

Household & Family Incomes

Plymouth's median household income of \$54,677 ranks 171 out of 351 cities and towns in the Commonwealth.¹⁸ Unlike some of the state's high-growth communities along I-495, Plymouth did not experience a significant change in the economic position of its households or families during the 1990s. In fact, the Town's state ranks for median household income and median family income are very similar to a decade ago because for the most part, Plymouth incomes increased at a rate consistent with statewide income growth. The regional aberration is Duxbury, where household and family incomes rose at an accelerated pace even though the town absorbed very little household or housing unit growth from 1990-2000. Table 11 compares Plymouth's experience to state, county and regional income changes that occurred during the past decade.

Table 11: Household and Family Incomes

Area	Median Household Income			Median Family Income		
	2000	1990	% Change	2000	1990	% Change
Massachusetts	\$50,502	\$36,952	36.7%	\$61,664	\$44,367	39.0%
Plymouth County	\$55,615	\$40,905	36.0%	\$65,554	\$46,872	39.9%
Bourne	\$45,113	\$34,159	32.1%	\$51,603	\$38,408	34.4%
Carver	\$53,506	\$38,678	38.3%	\$61,738	\$41,993	47.0%
Duxbury	\$97,124	\$63,878	52.0%	\$106,245	\$68,575	54.9%
Kingston	\$53,780	\$40,872	31.6%	\$65,101	\$45,386	43.4%
PLYMOUTH	\$54,677	\$39,886	37.1%	\$63,266	\$45,212	39.9%
Wareham	\$40,422	\$29,428	37.4%	\$45,750	\$34,907	31.1%

Source: Census 2000, Summary File 3, Tables P54, P77; 1990 Census, Summary File 3, Tables P080A, P0107A.

In virtually all communities, family incomes exceed household incomes. Moreover, families with children under 18 tend to have the highest incomes of all household types in suburbs and small towns. This is not true in most cities, however, and the effects of urban conditions can be seen in the Commonwealth's slightly lower median income of families with children under 18 (\$61,530) than for families in general (\$61,664). Consistent with state and national demographic patterns, the wealthiest households in Plymouth are married-couple families with children under 18. Not surprisingly, married couples have higher incomes than families overall, without or without

¹⁸ Massachusetts Department of Revenue, Division of Local Services, [Municipal Data Bank](http://www.dls.state.ma.us/mdm.htm), "Four Measures of Property Wealth and Income," at <<http://www.dls.state.ma.us/mdm.htm>>.

children under 18. In contrast, single parents without young children usually have higher incomes than single parents with children, and the poorest single parents are women with children under 18. These conditions are clearly evident in most of Plymouth's region.

Table 12: Family Incomes by Type of Family

Area	Without Children Under 18			With Children Under 18		
	Married Couples	Single Men	Single Women	Married Couples	Single Men	Single Women
Massachusetts	\$66,847	\$53,703	\$44,195	\$74,589	\$34,532	\$22,138
Plymouth County	\$70,570	\$57,349	\$47,140	\$75,418	\$39,907	\$24,051
Bourne	\$55,118	\$60,302	\$36,548	\$65,000	\$42,794	\$17,738
Carver	\$56,563	\$50,625	\$39,722	\$75,203	\$50,417	\$25,217
Duxbury	\$104,541	\$79,301	\$71,544	\$115,360	\$90,957	\$52,344
Kingston	\$63,980	\$45,341	\$35,114	\$74,375	\$61,111	\$22,042
PLYMOUTH	\$69,306	\$65,536	\$49,830	\$70,336	\$34,515	\$24,167
Wareham	\$54,043	\$49,097	\$43,194	\$55,663	\$31,250	\$18,042

Source: Census 2000, Summary File 3, Table PCT40.

Non-family households typically have much lower incomes than families, in part because so many non-family households are senior citizens living alone. There is a significant difference in the economic position of Plymouth's families and non-family households, but this is true region-wide. For the state as a whole, the median non-family household income is 59% of median household income (all households); in Plymouth, it is 56%. However, the non-family household income gap is more pronounced in neighboring Carver, at 42%, and Duxbury, 36%. To some extent, these differences appear to parallel the substantially lower incomes of elderly households. Table 13 compares Plymouth to the surrounding region and the state for non-family household income and the household incomes of young citizens and the elderly.

Table 13: Household Incomes for Non-Family Households and Households by Age

Area	Median Household Income			
	Non-Family Households	Households by Age of Householder		
		Young	Over 65	Over 75
Massachusetts	\$29,774	\$27,364	\$33,589	\$21,522
Plymouth County	\$28,348	\$30,248	\$35,536	\$20,457
Bourne	\$26,262	\$29,265	\$35,212	\$22,574
Carver	\$22,851	\$56,696	\$26,364	\$17,851
Duxbury	\$35,257	N/A	\$60,703	\$26,250
Kingston	\$25,609	\$24,500	\$34,432	\$18,707
PLYMOUTH	\$30,863	\$36,000	\$34,250	\$20,918
Wareham	\$24,422	\$28,155	\$30,459	\$16,867

Source: Census 2000, Summary File 3, Tables P56, P80.

More than 43% of the region's 47,240 households have low or moderate incomes as these terms are used in a majority of housing assistance programs: incomes equal to or less than 80% of the median income of all households throughout the urban or non-urban area in which the household or family resides. The proportion of low- and moderate-income families is smaller:

about one out of every 3.5 families in all six communities. Map 8 shows that most of Plymouth's lower-income families live in neighborhoods of North Plymouth, Plymouth Center and Manomet. Table 14 summarizes the incidence of low- and moderate-income households and families throughout Plymouth's region, as determined by the U.S. Department of Housing and Urban Development.

Table 14: Low- and Moderate-Income Households and Families

Area	Total	Households		Total	Families	
		Moderate-Income	Low-Income		Moderate-Income	Low-Income
Massachusetts	2,443,580	43.9%	28.3%	1,576,696	35.2%	20.3%
Plymouth County	168,361	41.2%	25.0%	122,421	33.0%	17.5%
Bourne	7,439	45.4%	25.2%	5,013	37.0%	17.2%
Carver	3,984	44.6%	31.8%	3,010	34.2%	22.8%
Duxbury	4,946	19.6%	12.7%	3,943	11.7%	6.3%
Kingston	4,248	41.5%	25.8%	3,138	30.8%	17.0%
PLYMOUTH	18,423	41.5%	25.3%	13,268	33.9%	18.6%
Wareham	8,200	58.7%	39.9%	5,337	53.3%	33.4%

Source: U.S. Department of Housing and Urban Development.

Households and Families in Poverty

Massachusetts has a smaller proportion of households and families below poverty than the nation as a whole, and Plymouth County has a lower incidence of poverty than the state. While Plymouth's percentage of households in poverty is even smaller, Table 15 shows that families comprise a significantly larger share of the households. In the immediate region, Plymouth's poverty profile is also unusual for the percentage of single-parent families headed by men, and together, Plymouth and Carver have comparatively large percentages of families in poverty without young children, nearly all of whom are married-couple families.

Table 15: Households and Families in Poverty

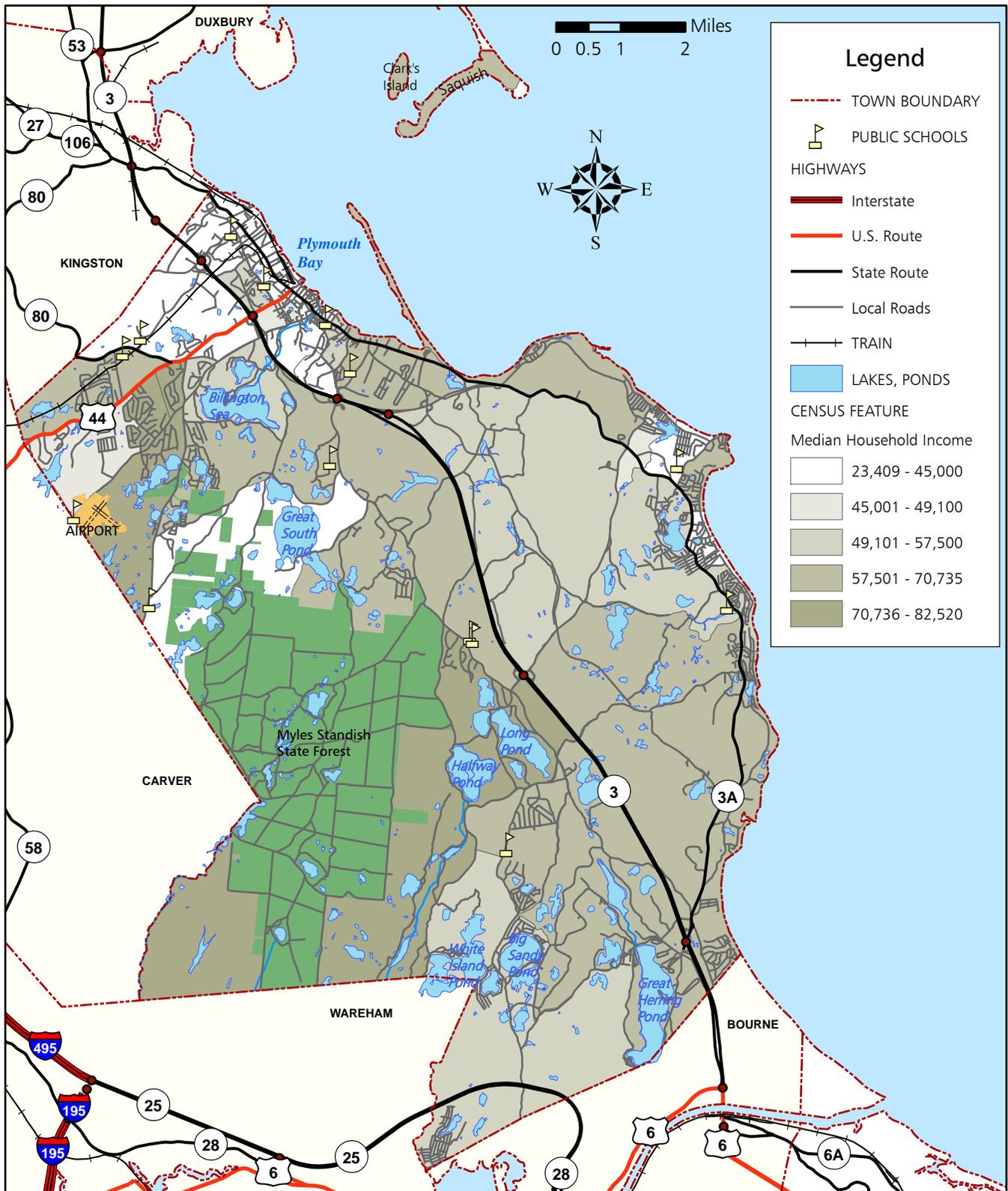
Area	Households			Families Below Poverty	% Families with Children <18		
	Below Poverty	% Family	% Non-Family		Married Couples	Single Parents-Women	Single Parents-Men
Massachusetts	239,406	44.1%	55.9%	105,619	19.4%	52.7%	5.4%
Plymouth County	12,450	48.9%	51.1%	6,083	19.3%	54.2%	5.0%
Bourne	579	50.1%	49.9%	290	10.7%	72.1%	0.0%
Carver	232	59.9%	40.1%	139	22.3%	15.8%	0.0%
Duxbury	123	37.4%	62.6%	46	58.7%	41.3%	0.0%
Kingston	255	49.0%	51.0%	125	16.8%	57.6%	0.0%
PLYMOUTH	1,107	53.2%	46.8%	589	14.9%	54.2%	4.2%
Wareham	984	45.0%	55.0%	443	14.0%	63.4%	4.5%

Source: Census 2000, Summary File 3, Tables P90, P92.

TOWN OF PLYMOUTH Housing Plan

Map 8: Household Income

Community Opportunities Group, Inc.
Boston, Massachusetts



Housing Characteristics

Inventory of Existing Housing

Plymouth is the region's leader for amount, mix, and choice of housing. Its 21,250 housing units have been developed over time in a wide range of settings and at variable densities, though most of the Town's newer homes are single-family dwellings on large lots in rural areas.¹⁹ Table 16 provides a summary-level profile of the regional housing inventory.²⁰

Table 16: Housing Inventory by Number of Units and Occupancy Characteristics

Area	Total Housing Units	Percent Occupied Units	Occupied Units		Vacant Units	
			Owner	Renter	Total Vacant	Seasonally Occupied
Massachusetts	2,621,989	93.2%	61.7%	38.3%	178,409	52.6%
Plymouth County	181,524	92.7%	75.6%	24.4%	13,163	65.3%
Bourne	9,648	77.1%	71.6%	28.4%	2,209	84.2%
Carver	4,127	96.5%	91.5%	8.5%	143	44.8%
Duxbury	5,345	92.5%	88.8%	11.2%	399	60.7%
Kingston	4,525	93.9%	81.8%	18.2%	277	56.0%
PLYMOUTH	21,250	86.7%	77.6%	22.4%	2,827	79.3%
Wareham	10,670	76.9%	75.6%	24.4%	2,470	81.8%

Source: Census 2000, Summary File 1, Tables H1, H3, H4, H5.

Plymouth's entire housing inventory occupies about 15,100 acres, including all privately owned homes in village and rural neighborhoods and on farms, public housing managed by the Plymouth Housing Authority, and housing units in mixed-use buildings. Map 9 reinforces what is visually evident from a survey of the Town: the most densely settled areas lie along the coast in North Plymouth, Plymouth Center and Manomet, with moderately-dense development in and around the villages of West Plymouth and Cedarville. Since 1970, however, there has been significant new residential growth outside of Plymouth's village planning areas. For every 1.1 residential parcels within village areas, the Town has added one new parcel in rural areas (4,787

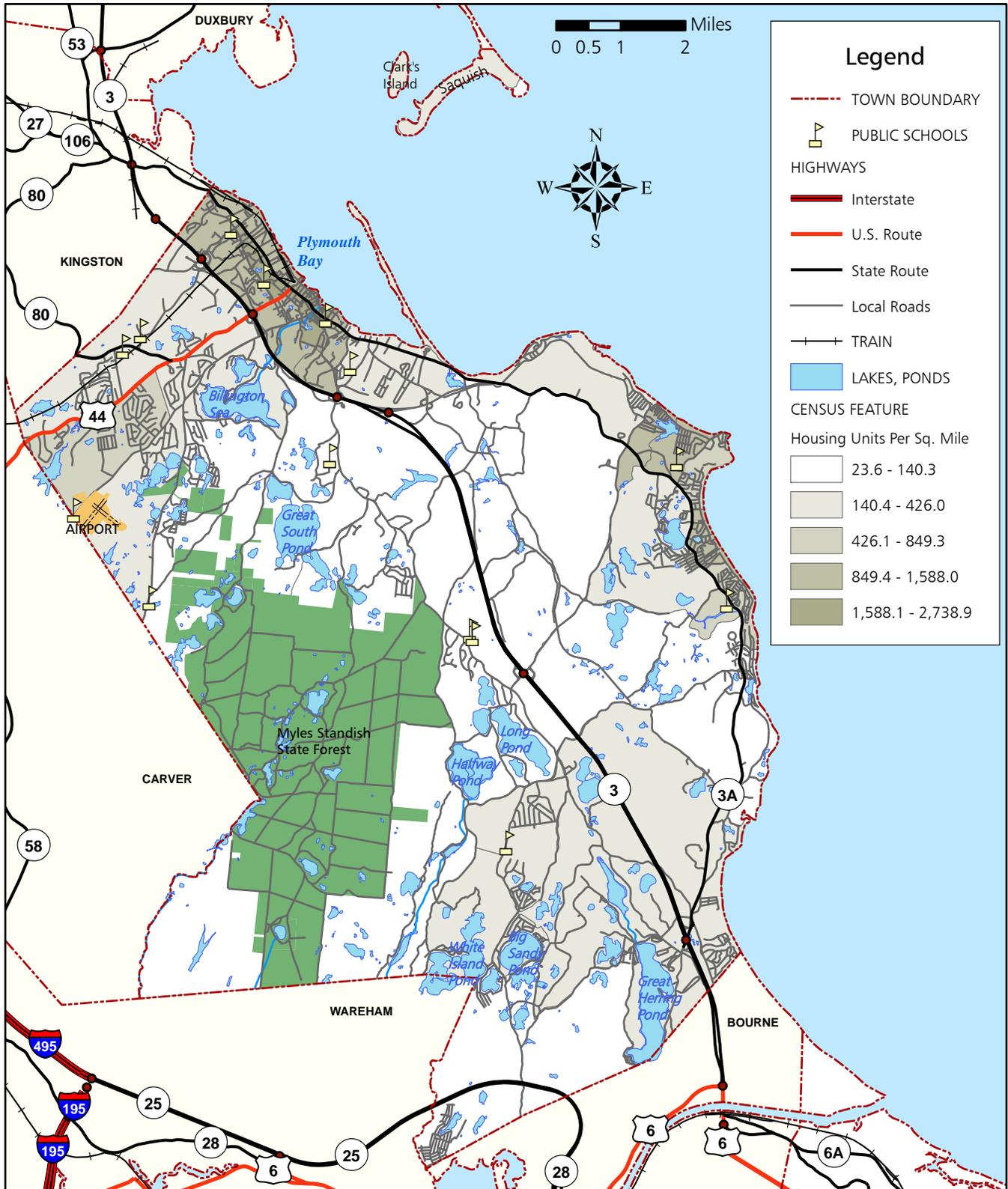
¹⁹ Census 2000, Summary File 1, Table H1.

²⁰ Since 1996, Plymouth has retained RKG Associates to do extensive studies of the Town's past and projected growth patterns, population patterns, costs and revenues (RKG, The Economic Development and Cost of Community Services Study, October 2001), and to create a computer model that can estimate impacts based on historic trends and the area of town that will be directly affected by a proposed development. In September 2003, RKG updated the original study and identified a marked difference between the existing median home price and the price that would be needed to support additional demands for town and school services. Portions of this section of the housing plan are derived from Plymouth's draft update of the Comprehensive Growth Management Plan (October 2003), which includes data from the RKG study. In some cases, however, housing data contained in RKG's reports for the Town differ slightly from data reported by the Census Bureau. To facilitate regional comparisons and construct a region-wide housing market profile, federal census data have been substituted for RKG's where there is a conflict between the two sources.

TOWN OF PLYMOUTH Housing Plan

Map 9: Density of Existing Housing Development

Community Opportunities Group, Inc.
Boston, Massachusetts



new residential uses in villages vs. 4,310 new residential uses outside village areas). Excluding farm acreage associated with a dwelling unit, the average density of residential development town-wide is 1.52 dwelling units per acre.

Physical Characteristics and Condition of Existing Homes

Approximately 75% of all housing units in Plymouth are detached single-family homes, but two-family and small (3- to 4-unit) multi-family dwellings are prevalent in the Town's older village centers and overall, they surpass modern multi-family developments as a source of attached housing. In some North Plymouth and Plymouth Center neighborhoods, more than half of all housing units are two-family and three- or four-unit multi-family dwellings while less than 35% are single-family homes. Table 17 compares the make-up of Plymouth's housing inventory to that of nearby communities and shows that in general, Plymouth closely tracks the county-wide average for all types of residential uses.

Table 17: Housing Units by Type of Structure

Area	Total Units	Single-Family		Two-Family	Multi-Family	Mobile Homes/Other
		Detached	Townhouse			
Massachusetts	2,621,989	52.4%	4.0%	11.6%	25.6%	0.9%
Plymouth County	181,524	71.7%	2.7%	6.1%	14.4%	2.7%
Bourne	9,648	79.0%	4.0%	3.7%	11.8%	1.3%
Carver	4,127	68.1%	1.1%	2.3%	1.6%	26.9%
Duxbury	5,345	84.9%	3.5%	0.4%	7.3%	0.4%
Kingston	4,525	76.6%	2.3%	4.8%	7.2%	7.5%
PLYMOUTH	21,250	75.4%	2.3%	6.0%	11.9%	3.5%
Wareham	10,670	77.2%	2.4%	2.9%	8.7%	8.7%

Source: Census 2000, Summary File 3, Table H30.

New subdivisions in Plymouth offer relatively spacious residences on large lots, yet the Town is unusual for its generous supply of modest single-family homes. Although the presence of so many multi-family units contributes to the Town's visual character, the single-family home nonetheless ranks as the dominant housing type in Plymouth. As a result, the diversity that exists within the single-family home inventory plays an important part in meeting housing and labor force needs both locally and throughout the lower South Shore area. Plymouth provides housing choices that do not exist in other communities, but to some extent these choices hinge on the variety in size, type, design and price range found among the Town's older homes. For Plymouth and most rapidly growing communities, preserving a mix of housing is a major challenge because federal and state environmental laws, local regulations and the market have converged to produce a collection of homes that are larger, more expensive and more isolated from community facilities and services. The trend toward larger homes and land-consuming residential development is particularly dramatic in Plymouth due to the Town's sheer size. Table 18 reports a selection of Plymouth's single-family home characteristics by housing age.

Overall, Plymouth does not have pervasive housing quality problems. While substandard conditions exist in several parts of town, there are no large, obvious areas with deteriorated

homes or a persistent pattern of disinvestment. Basic plumbing, cooking and heating systems exist in virtually every housing unit, and public safety demolitions are rare. Although Plymouth has several tier-classified hazardous waste sites and remediated sites under use restrictions, they are in predominantly commercial areas and not identified as having made any dwelling units unfit for human habitation.²¹ In addition, the Town has a lower incidence of childhood lead poisoning than the state average, despite its many old homes.²²

Table 18: Single-Family Home Characteristics in Plymouth

Year Built	Land Use		Average Building Features			Average Total Value	
	Parcels	Total Acres	Average Lot	Gross Area	Number of Bedrooms		Number of Bathrooms
1998-2003	1,338	1,631.1	1.22	4,120	3.5	2.6	\$366,159
1990-1997	1,611	1,727.1	1.07	3,319	3.3	2.2	\$311,301
1980-1989	2,542	2,235.3	0.88	3,246	3.1	2.1	\$297,161
1970-1979	4,145	2,530.9	0.61	2,845	3.2	1.8	\$269,166
1960-1969	1,611	757.5	0.47	2,400	2.7	1.4	\$241,134
1950-1959	2,152	804.3	0.37	2,038	2.4	1.3	\$227,304
1940-1949	726	314.1	0.43	2,031	2.4	1.3	\$223,262
1920-1939	929	490.8	0.53	2,154	2.7	1.4	\$237,620
1900-1919	996	523.8	0.53	2,778	3.1	1.6	\$266,843
1866-1899	240	149.4	0.62	2,934	3.2	1.6	\$274,065
1800-1865	186	175.2	0.94	3,246	3.3	1.8	\$288,915
pre-1800	75	85.9	1.15	3,615	3.3	2.1	\$317,543

Source: Plymouth Department of Planning and Community Development, Assessor's Parcel Records FY 2004.

Nearly a half-century ago, a pocket of dilapidated buildings at the southern edge of downtown, generally along Summer Street, was cleared and redeveloped as an urban renewal area. Unfortunately, the urban renewal project brought new investment at the expense of many historic buildings. Hoping to arrest decline in adjacent neighborhoods before the homes deteriorated beyond repair, the Plymouth Redevelopment Authority (PRA) obtained Community Development Block Grant (CDBG) funds from the state in 1984 and launched a housing rehabilitation program in the Bradford-Green area. The program eventually expanded to serve three target areas and later, the entire town. Today, two local agencies – the Plymouth Community Development Office and PRA – offer a variety of housing rehabilitation loans to landlords and lower-income homeowners. In 2001, Plymouth became a CDBG entitlement community, which means the Town receives an annual CDBG allocation directly from HUD. Since 2001, Plymouth has received \$2.3 million in CDBG funds and invested more than half of

²¹ Massachusetts Department of Environmental Protection, Bureau of Waste Site Cleanup, "WSC Site Notifications and Status Database" in .dbf format, and "List of Sites with Activity Use Limitations" (January 2005), <<http://www.mass.gov/dep/bwsc/>>. Note: there is a predominantly residential area near the Revere Copper & Brass site on Water Street. The neighborhood is also classified as an Environmental Justice Population due to its large percentage of low-income households.

²² Massachusetts Department of Public Health, Childhood Lead Poisoning Prevention Program, "Screening and Incidence Statistics by Community, Fiscal Year 2003," <<http://www.mass.gov/dph/clppp/clppp.htm>>.

each year's allocation in housing rehabilitation loans, mainly to lower-income homeowners.²³ Despite the Town's long-standing efforts, however, there is statistical and visual evidence of poor housing quality in scattered locations. The building value of about 1,600 single-family homes falls below the 10th percentile for the Town as a whole, and property records show that for assessment purposes, 306 have been rated as fair to very poor condition. Approximately 10% of all two-family homes and 17% of three-family homes are also rated fair to poor, along with eight of Plymouth's older multi-family buildings, all located in Plymouth Center or North Plymouth.²⁴

Housing age is one of several factors that affect the condition of a building, but just as Plymouth's older neighborhoods have distressed properties, they also have many well-maintained historic residences. Homes built prior to the Civil War command values that are nearly as high as new homes. In addition to its large collection of historically significant single-family and multi-family homes, Plymouth has about 160 properties with two or more houses on a single lot parcel, e.g., a principal residence and a carriage house or guest quarters. Well over half of these buildings pre-date World War II. In many communities, multiple-residence properties have been lost as lot divisions and major renovations resulted in the conversion of once-affiliated buildings into separate single-family homes. In Plymouth, 8% of the structures in multiple-residence configurations are currently rated in fair to poor condition.²⁵

Occupancy & Tenure

Resistance to new housing development exists in virtually every city and town in the Commonwealth. However, while "not-in-my-backyard" or "NIMBY" is a disturbing trend, so is the daunting rate at which new housing development consumed vacant land after 1950. Slightly more than half of the state's 2.6 million housing units were built in the past 50 years; for Plymouth, the irony of being America's Hometown is that more than 70% of its 21,250 housing units were built in the same period. The demand for both year-round and seasonal housing is intense throughout Eastern Massachusetts. During the past decade, the statewide inventory of vacation homes increased by 3,400 units and in many resort communities on Cape Cod or in Berkshire County, some of the demand was met by converting former year-round housing to seasonal residences. However, the opposite occurred in Plymouth. In 1990, Plymouth had 2,797 seasonal or vacation dwelling units: homes in coastal neighborhoods, along the shorelines of ponds, or nestled in forested areas in the southern part of town. By 2000, Plymouth's inventory of seasonal homes had declined to 2,242 units, for a 19.8% loss in ten years. The current distribution of seasonally occupied homes is illustrated on Map 10.

²³ HUD Office of Community Planning and Development, Funding Allocations, "Formula Allocations by State: 2002-2005," "Historical Allocations 1993-2001," and "CDBG Disbursement Reports: Plymouth, Program Years 2001-2003," <<http://www.hud.gov/offices/cpd/>>.

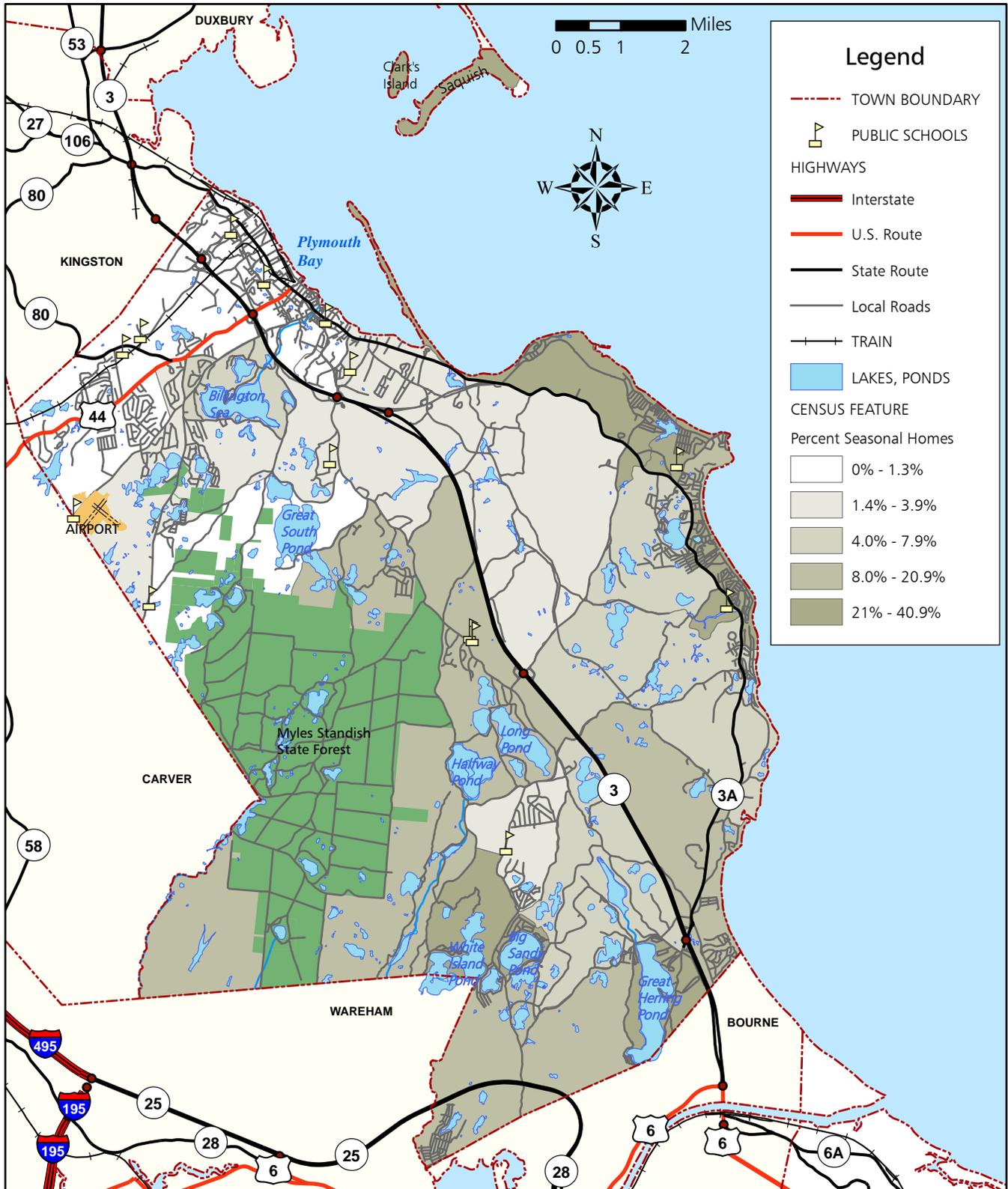
²⁴ Plymouth Department of Planning and Community Development, FY 2004 Assessor's Parcel Records in Excel format (1 July 2004).

²⁵ Ibid.

TOWN OF PLYMOUTH Housing Plan

Map 10: Seasonal & Vacation Housing Units

Community Opportunities Group, Inc.
Boston, Massachusetts



But for the year-round market's absorption of 550 seasonal units, it is not clear how Plymouth would have met the accelerated rate of demand that defined the regional market after 1995. In contrast to the Town's 8.1% increase in housing units from 1990-2000, the total number of households in Plymouth rose by 16%. Like most communities, Plymouth had many vacancies in 1990 due to the recession, but the rate of household formation far surpassed the supply of units that were available for sale or rent at the beginning of the decade. The result was not only a net loss of seasonal units but also a slight decline in rental units, presumably for condominium conversions. Moreover, very little new rental development occurred anywhere in Plymouth's region. As of Census 2000, only 6% of the decade's new dwelling units were occupied by renters in Plymouth and surrounding towns.

Table 19: Age of Housing Stock for All Units and Occupied Units by Tenure

Area	Year of Construction						Median Year Built
	1990-2000	1980-89	1970-79	1960-69	1950-59	Pre-1950	
All Units							
Massachusetts	218,407	292,701	336,814	314,855	337,660	1,121,552	1956
Plymouth County	19,636	22,913	31,170	24,554	24,199	59,052	1963
Bourne	1,267	1,575	1,773	1,049	1,514	2,470	1968
Carver	685	1,333	1,244	259	252	354	1980
Duxbury	666	1,061	1,277	594	511	1,236	1973
Kingston	1,003	894	501	374	538	1,215	1973
PLYMOUTH	3,032	3,682	5,312	2,158	2,034	5,032	1973
Wareham	805	1,134	2,144	1,476	1,722	3,389	1962
Owner-Occupied							
Massachusetts	160,306	185,869	170,437	184,833	216,870	589,933	1958
Plymouth County	16,816	17,698	21,892	17,831	16,907	36,095	1966
Bourne	996	1,105	978	549	502	1,191	1974
Carver	602	1,243	1,123	194	222	263	1980
Duxbury	558	884	1,142	493	395	926	1973
Kingston	932	688	453	265	349	783	1977
PLYMOUTH	2,692	2,880	4,066	1,205	968	2,480	1976
Wareham	529	807	1,354	798	815	1,890	1965
Renter-Occupied							
Massachusetts	41,107	85,539	143,880	108,874	99,279	456,653	1951
Plymouth County	1,659	4,117	8,038	5,135	4,758	17,415	1957
Bourne	124	244	450	174	616	510	1959
Carver	27	90	82	43	20	75	1974
Duxbury	75	148	109	47	65	104	1975
Kingston	71	152	48	87	123	297	1957
PLYMOUTH	121	403	854	573	441	1,740	1957
Wareham	118	129	534	309	351	566	1963

Source: Census 2000, Summary File 3, Tables H34, H35, H36, H37.

Tenure by Race, Age and Household Type

Nationally and in Massachusetts, minority households are more likely to be renters than homeowners. A similar pattern exists in Plymouth, where racial minorities comprise 2.5% of all households and 4.7% of all renters. Although more than half of the Town's minority households own the home they live in, minorities remain disproportionately concentrated in rental housing relative to their presence in the overall population of householders. Region-wide, there are 1,977 minority households and 68% are homeowners or renters in Wareham and Plymouth.

Table 20: Minority & Hispanic Households in Renter- and Owner-Occupied Housing Units

Area	Minority & Hispanic Households					
	Minorities			Hispanic		
	% All Households	% Renters	% Owners	% All Households	% Renters	% Owners
Massachusetts	12.5%	22.1%	6.5%	4.9%	10.1%	6.3%
Plymouth County	8.8%	19.0%	5.4%	1.7%	4.3%	1.4%
Bourne	4.2%	7.9%	2.7%	1.0%	2.3%	0.9%
Carver	3.5%	5.6%	3.3%	0.1%	0.0%	~0.0%
Duxbury	1.5%	3.4%	1.3%	1.4%	1.5%	0.2%
Kingston	2.2%	4.6%	1.6%	0.7%	0.0%	~0.0%
PLYMOUTH	2.9%	5.0%	2.3%	0.6%	1.3%	0.4%
Wareham	11.3%	17.0%	9.4%	0.9%	0.9%	0.3%

Source: Census 2000, Summary File 1, Table H14; Summary File 3, Tables H11, H12.

The elderly comprise a relatively small share of all households in Plymouth, but the percentage of elderly homeowners or renters is not much different from the percentage of elderly households overall. Specifically, 18.7% of the Town's households, 19.1% of its homeowners and 17.1% of its renters are households headed by a person over 65. Plymouth is the only town in the immediate region with a roughly proportional distribution of elderly renters and homeowners, which suggests that the Town offers a better balance of housing options for senior citizens. In neighboring communities, the percentage of elderly renters is smaller than the percentage of elderly households, except that in Duxbury, the elderly constitute a much larger percentage of all renters because the town has very little rental housing.²⁶

Duxbury stands out in a second way: it is the only town in the region with an unusually small representation of families in rental housing. In contrast, Plymouth modestly exceeds the state average for family rental units, but more significantly, it has the region's smallest percentage of renters living in single-family homes and townhouses – units traditionally built for homeowners. In general, while rental units comprise a smaller share of all housing in Plymouth than is the case statewide, its rental inventory is proportionally similar to the Plymouth County average. However, Plymouth has felt the effects of market pressure for homeownership housing. Its absolute decline in number of renter-occupied units from 1990-2000 occurred in all types of structures, notably condominiums that experienced sluggish sales activity during the recession

²⁶ Census 2000, Summary File 1, Tables P21, H16.

that began in the late 1980s.²⁷ In the absence of buyers, condominiums throughout the Commonwealth were temporarily rented, only to be sold when the market recovered in 1992-1993. As rental availability declined, the rate of household formation increased. The confluence of these events, coupled with constraints against new multi-family development, helps to explain the present statewide shortage of rental housing and modestly priced homeownership units.

Housing Market

Most of Plymouth's incoming homebuyers come from Plymouth County and the Boston metropolitan area in search of good neighborhoods with relatively affordable homes. Priced out of other coastal communities to the north, homebuyers consider Plymouth because it offers good schools, high-quality services, coastal beaches, and a much wider range of housing options. The Town's easy access to the regional highway system makes it attractive to people who commute to jobs in Boston or major employment centers along Route 128 and I-495. Furthermore, since Plymouth offers a continuum of home prices, it provides current homeowners with trade-up opportunities. Since 1990, the housing market throughout Massachusetts and in Plymouth has tightened considerably. Despite Plymouth's increase of nearly 1,600 housing units in the past decade, the number of vacant units declined by 25.3%. By 2000, the homeownership vacancy rate was only .8% and the rental vacancy rate was a very low 3%. On average, 620 homes sold in Plymouth each year from 1989-2000, with re-sales outpacing new home sales 2.6 to 1.²⁸ For every new housing unit built in Plymouth since 1990, the town has absorbed 1.60 new households.²⁹

Housing Sales and Sale Prices

A tour of Plymouth's newest subdivisions shows that the Town has not been immune to market pressure for large single-family homes. Regardless of declining household and family sizes, there is considerable demand for four-bedroom homes and rising land prices have encouraged developers to build what the higher end of the market wants. Plymouth is somewhat unusual in the region for its continued production of three-bedroom homes, yet even they are selling at prices well above what a household at the Town's median family income could afford to buy. Table 21 shows that Plymouth's median single-family home sale price has increased every year since 1995, for a decade-long increase of 189%. Sale prices for new homes are considerably higher than the median, however. In the past three years, homes in developments such as the Pine Hills and small rural-density subdivisions have comfortably sold for more than \$500,000. The arrival of so much new, high-end product has had two obvious impacts: a dramatic increase in resale prices for older homes, and a change in Plymouth's place in the regional housing market. A decade ago, Plymouth offered the region's second most affordable homes; by last year, housing sale prices had reduced its affordability ranking to third out of six communities.

²⁷ Census 2000, Summary File 3, Table H32; 1990 Census, Summary File 3, Table H022.

²⁸ Plymouth Department of Planning and Community Development, citing RKG Associates, March 2004.

²⁹ Census 2000, Summary File 1, Tables P15, H1; 1990 Census, Summary File 1, Tables P003, H001.

Table 21: Median Single-Family Sale Prices and Single-Family Home Development, 1995-2004

Year	Bourne	Carver	Duxbury	Kingston	Plymouth	Wareham
Sale Prices						
2004	\$334,000	\$305,500	\$602,500	\$350,000	\$325,450	\$249,900
2003	\$305,000	\$274,450	\$550,000	\$320,000	\$289,000	\$210,000
2002	\$254,000	\$225,000	\$434,000	\$265,000	\$250,000	\$178,400
2001	\$208,750	\$214,000	\$441,250	\$250,000	\$211,950	\$147,900
2000	\$177,750	\$169,075	\$381,500	\$236,250	\$175,000	\$122,700
1999	\$147,000	\$150,250	\$325,000	\$214,975	\$149,900	\$105,000
1998	\$130,000	\$136,000	\$278,000	\$178,000	\$133,000	\$91,500
1997	\$125,000	\$124,000	\$258,000	\$149,000	\$124,000	\$82,500
1996	\$115,000	\$117,000	\$243,625	\$154,900	\$118,000	\$81,000
1995	\$114,000	\$119,900	\$218,900	\$135,000	\$112,500	\$75,000
Change	193.0%	154.8%	175.2%	159.3%	189.3%	233.2%
Number of Single-Family Homes						
2004	7,414	2,930	4,770	3,525	16,551	8,866
1995	6,433	2,590	4,575	2,973	14,542	8,361
Change	15.2%	13.1%	4.3%	18.6%	13.8%	6.0%

Sources: The Warren Group, Mass. Department of Revenue.

Sale prices for condominiums in Plymouth have also changed, though not quite to the same degree. From 1995-2004, Plymouth's median condominium price rose from \$67,958 to \$187,500, or a 175.9% increase. The region's lowest-income community, Wareham, absorbed the second highest rate of condominium sales price growth and the largest percent gain in condominium units. Considering the region as a whole, Plymouth offers more condominium choices and the lowest condominium sale prices, and it is the only town that experienced a nearly proportional rate of growth in its single-family home and condominium inventories.

Table 22: Median Condominium Prices and Condominium Development, 1995-2004

	Bourne	Carver	Duxbury	Kingston	Plymouth	Wareham
Sale Prices						
2004	\$349,900	\$0	\$382,500	\$292,950	\$187,500	\$225,000
2003	\$194,500	\$0	\$316,481	\$216,000	\$173,000	\$174,500
2002	\$140,525	\$0	\$332,000	\$183,500	\$154,800	\$166,500
2001	\$131,000	\$0	\$275,000	\$166,000	\$109,500	\$139,900
2000	\$115,500	\$0	\$249,950	\$127,000	\$107,000	\$108,900
1999	\$89,900	\$0	\$248,950	\$123,950	\$100,000	\$96,750
1998	\$75,450	\$0	\$216,000	\$109,000	\$112,000	\$82,000
1997	\$75,750	\$0	\$188,500	\$115,000	\$95,000	\$65,000
1996	\$85,500	\$25,000	\$177,000	\$102,000	\$80,900	\$70,000
1995	\$75,500	\$17,500	\$186,800	\$105,000	\$67,958	\$60,000
Change	363.4%	N/A	104.8%	179.0%	175.9%	275.0%
Number of Condominiums						
2004	842	2	314	100	1,588	382
1995	773	2	234	95	1,386	242
Change	8.9%	0.0%	34.2%	5.3%	14.6%	57.9%

Sources: The Warren Group, Mass. Department of Revenue.

For the average single-family home or condominium owner, Tables 21-22 tell a comforting story: virtually all households that owned the same home in 1995 and 2004 saw their asset appreciate significantly in value over the course of the past decade. While the market value of homes sold increased from 150-200%, the average tax bill in Plymouth's area rose by 42-55% and only two of the six towns experienced tax bill growth in excess of the state average.

Table 23: Change in Single-Family Assessments and Property Tax Bills, 1995-2004³⁰

Town	Fiscal Year 1995			Fiscal Year 2004			Change	
	Assessed Value	Tax Rate	Tax Bill	Assessed Value	Tax Rate	Tax Bill	Assessed Value	Tax Bill
Bourne	\$145,682	\$12.30	\$1,792	\$347,540	\$7.37	\$2,561	138.6%	42.9%
Carver	\$112,571	\$17.60	\$1,981	\$229,224	\$14.01	\$3,211	103.6%	62.1%
Duxbury	\$215,980	\$18.10	\$3,909	\$510,324	\$11.33	\$5,782	136.3%	47.9%
Kingston	\$134,491	\$15.39	\$2,070	\$313,525	\$10.95	\$3,433	133.1%	65.8%
PLYMOUTH	\$110,784	\$19.06	\$2,112	\$273,821	\$11.81	\$3,234	147.2%	53.1%
Wareham	\$91,472	\$13.31	\$1,217	\$182,556	\$10.22	\$1,866	99.6%	53.3%
State Average	\$153,571	\$14.21	\$2,182	\$307,417	\$11.10	\$3,413	100.2%	56.4%

Source: Mass. Department of Revenue, Municipal Data Bank.

For prospective homebuyers, particularly people entering the market as first-time homebuyers, market conditions in Plymouth's area are far less comforting. Setting aside Duxbury's long-standing lack of affordability, communities like Plymouth, Bourne, Carver, Wareham and to some extent Kingston, have historically been affordable to a fairly broad segment of the market. Compared to suburbs closer to Boston, these communities still offer relatively affordable homes. However, since household and family incomes have not increased at the same rate as home values, purchasing a home has become much more difficult for new homebuyers in the moderate- to middle-income range, even with the multitude of homebuyer assistance programs that have evolved at the national, state and local level since the mid-1980s. Furthermore, no homebuyer assistance program is designed to address the impact of rising property tax bills on a homeowner's long-term ability to pay, yet tax bills have increased at a faster rate than household incomes in three of the six towns: Bourne, Kingston and Plymouth.³¹ Since the maximum affordable purchase price for mortgage loan applicants is partially determined by their estimated monthly payment for property taxes, local government expenditures for town and school services and dependence on the property tax have an impact on what is actually affordable to households looking for homes in a given community.

³⁰ Author's note: Average single-family assessed values shown in Table 23 reflect values for fiscal years ending June 30, 1995 and June 30, 2004, which means they reflect prior-year market conditions. As a result, they are not directly comparable to sale prices reported in Table 21, which are based on calendar year transactions. Moreover, the six towns are on different three-year revaluation cycles, so for some communities the assessed values are closer to actual market conditions. Variances due to three-year revaluation cycles should decrease somewhat with the advent of annual valuation updates now required by the Department of Revenue.

³¹ Census 2000, Summary File 3, Table P53, and 1990 Census, Summary File 3, Table P080A; and Massachusetts Department of Revenue, Municipal Data Bank.

Plymouth is large and the age and condition of its housing stock varies quite a bit, so it is not surprising to find that its home values are not uniform town-wide. Map 11 illustrates a pattern that is visually evident from the road and statistically evident in property assessment data. The Town's highest-value owner-occupied homes are found along portions of the Plymouth Harbor waterfront and Warren Avenue to Long Beach, the Federal Furnace neighborhoods around Billington Sea, and areas with relatively new single-family homes: the Pine Hills and Bourne Road in the vicinity of Long Pond. In contrast, there are pockets of lower-value homes in North Plymouth and Plymouth Center, generally east of Route 3A, and sections of Manomet. Homeowners paying fairly large percentages of their income for housing costs can be found in areas with both new and older homes, and homes of greater or lesser value, as shown in Map 12. In Plymouth, there is not a consistent pattern between high housing costs in relation to income and the age or value of owner-occupied dwelling units.

Market Rents

Market rents are more difficult to determine because unlike housing sale prices, rents are not systematically reported, tracked or published. A survey of advertised rentals in Plymouth shows that from November 2004-January 2005, there were about 55 units available in any given month, primarily one- and two-bedroom apartments or condominiums. Except for rents at The Pinehills (AvalonBay Communities), market rents in Plymouth do not vary significantly by section of town, but they clearly differ by the types of units occupied by tenants, the inclusion of utilities in monthly rents, and unit amenities, such as in-unit laundry facilities, hardwood floors, and dedicated off-street parking. With these factors in mind, the rent differential between Plymouth Center's multi-family units or apartments above commercial space, newer apartments in West Plymouth, and single-family homes in South Plymouth or Ellisville makes sense. However, Plymouth Center has single-family homes that command rents nearly as high as the rents paid by single-family home renters in South Plymouth. More than location, the unit and its relative amenities determine the rents that tenants can expect to pay. Under current market conditions, the average asking rent for a studio unit in Plymouth is \$750; for a one-bedroom unit, \$830; for a two-bedroom unit, \$1,200, and a for three-bedroom unit, \$1,450. For about 75% of the available apartments, asking rents include some utility costs, usually heat and hot water.³² Market rents at the new Avalon at The Pinehills development are much higher, ranging from \$1,600 for a one-bedroom unit to \$2,300 for a three-bedroom unit.³³

Federal census data are not a good measure of the market because they reflect conditions that existed nearly five years ago. However, they can be used to describe a community's market position relative to other towns, and to estimate what renters are accustomed to paying for rent as a percentage of household income. Although rents across the lower South Shore are less expensive than in Boston and the west and north suburbs, there is a significant difference in

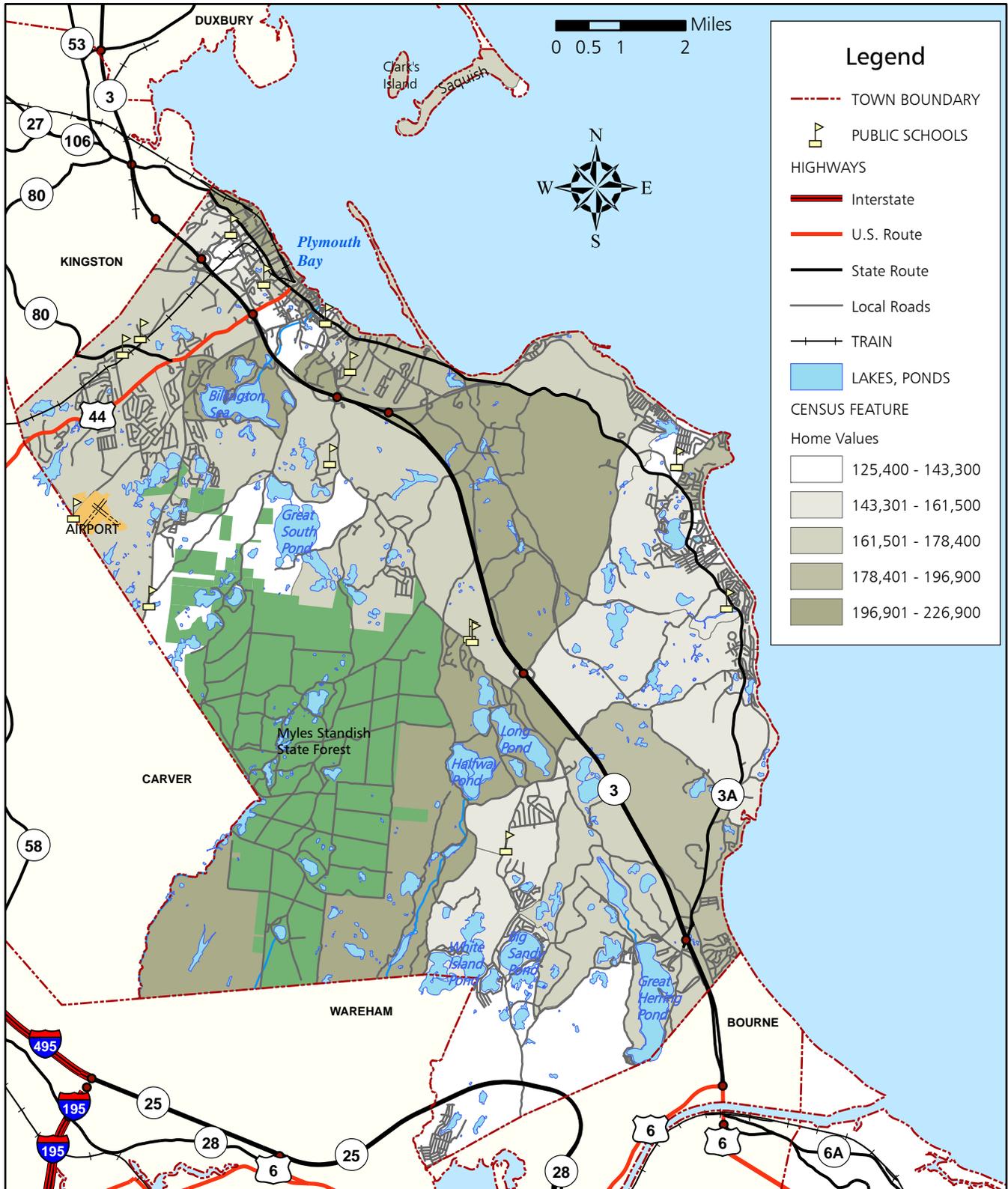
³² Apartment rental data obtained from Old Colony Memorial, The Brockton Enterprise, and the Boston Rental Exchange.

³³ AvalonBay Communities, <<http://www.avalonpinehills.com>>.

TOWN OF PLYMOUTH Housing Plan

Map 11: Range of Owner-Occupied Housing Values

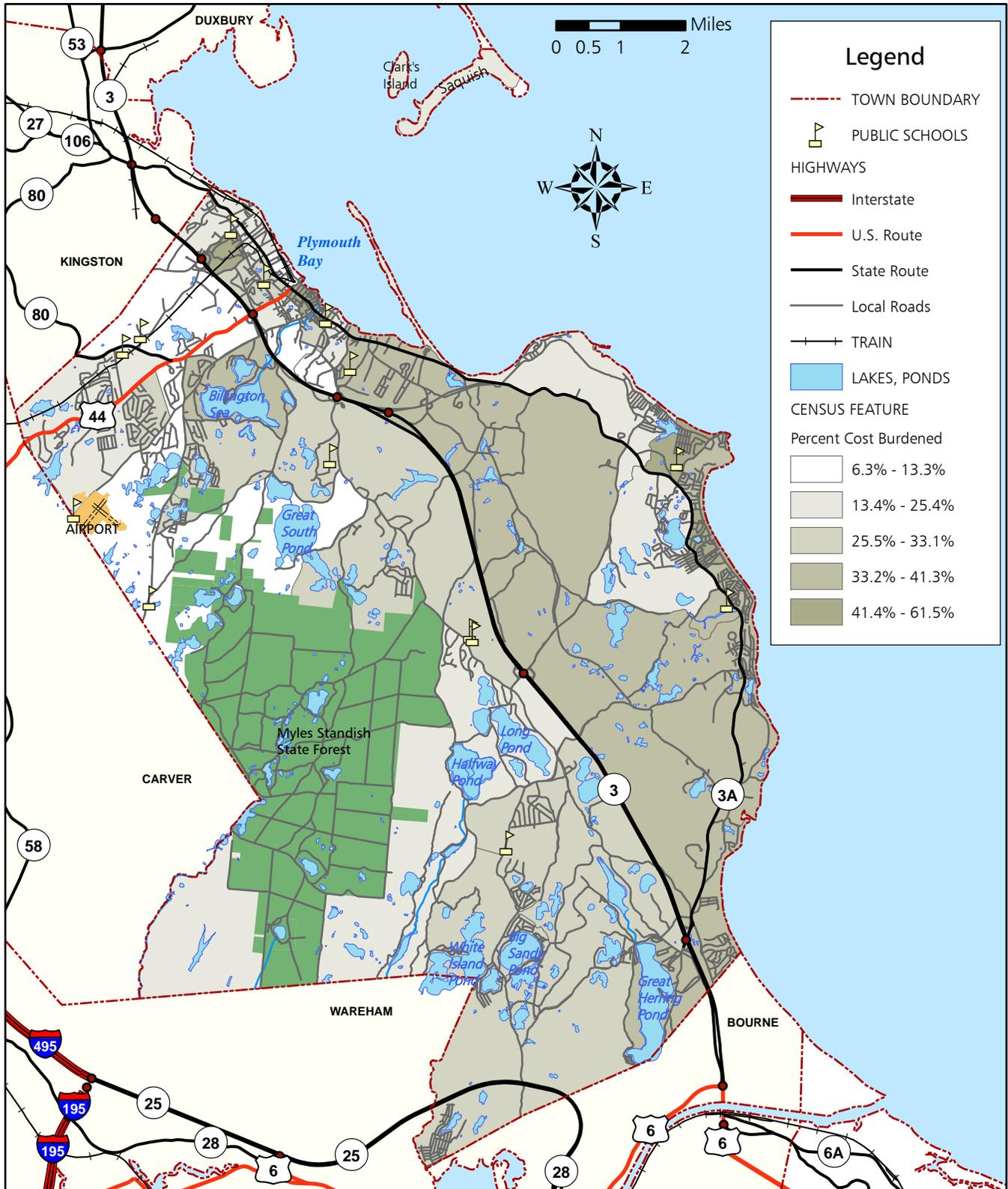
Community Opportunities Group, Inc.
Boston, Massachusetts



TOWN OF PLYMOUTH Housing Plan

Map 12: Housing Cost Burdened Homeowners

Community Opportunities Group, Inc.
Boston, Massachusetts



household and family incomes, especially among tenants. Rents in Plymouth generally rank at the top of the lower South Shore market and as a result, tenants pay a slightly larger share of their monthly income for rent and utilities than tenants in the Boston metropolitan area. However, they pay a smaller share of their income for rent and utilities than tenants in most surrounding towns, and the reason is that Plymouth's renters tend to have somewhat higher incomes. In addition to offering the region's largest inventory of rental housing, Plymouth has the smallest percentage of subsidized rental units even though its subsidized rental inventory is quite large. Accordingly, market rents in Plymouth are very important to the lower South Shore because the Town houses about half region's renter households and well over half of all renters in non-subsidized housing units.

Akin to the escalation in home values that occurred locally and regionally during the 1990s, the range of market rents narrowed in Plymouth such that by 2000, low-end rents had risen much faster than higher-end rents. Low-end market rents in Carver increased even more dramatically, but Carver has a very small collection of rental units and a substantial change in market rents there is more likely to have a localized than regionalized effect. From 1990-2000, the mid-point rent in Plymouth did not increase as rapidly as the mid-point rent for the state as a whole – a statistic that is heavily influenced by Boston-area market conditions – but Plymouth surpassed Plymouth County for both low-end and mid-market rent increases. Significantly, its higher-end rents rose at a rate well below that of Eastern Massachusetts. Table 24 provides comparison statistics for rents charged by landlords across the state, in Plymouth County and within Plymouth's six-town area in April 2000.

Table 24: Contract Rents for Occupied Units by Quartile and Percent Change, 1990-2000

Area	Renter Units	Contract Rent Quartiles (2000)			% Change 1990-2000		
		Lower	Median	Upper	Lower	Median	Upper
Massachusetts	935,528	\$407	\$605	\$838	26.0%	19.6%	25.4%
Plymouth County	41,095	\$423	\$601	\$757	19.5%	12.5%	13.2%
Bourne	2,115	\$419	\$579	\$760	3.2%	5.7%	14.6%
Carver	339	\$361	\$611	\$779	77.0%	28.6%	13.4%
Duxbury	552	\$333	\$545	\$1,109	-3.8%	-7.0%	28.7%
Kingston	775	\$420	\$647	\$794	9.9%	11.6%	13.9%
PLYMOUTH	4,131	\$518	\$670	\$797	26.3%	14.7%	10.4%
Wareham	1,999	\$323	\$508	\$669	-0.3%	3.0%	10.4%

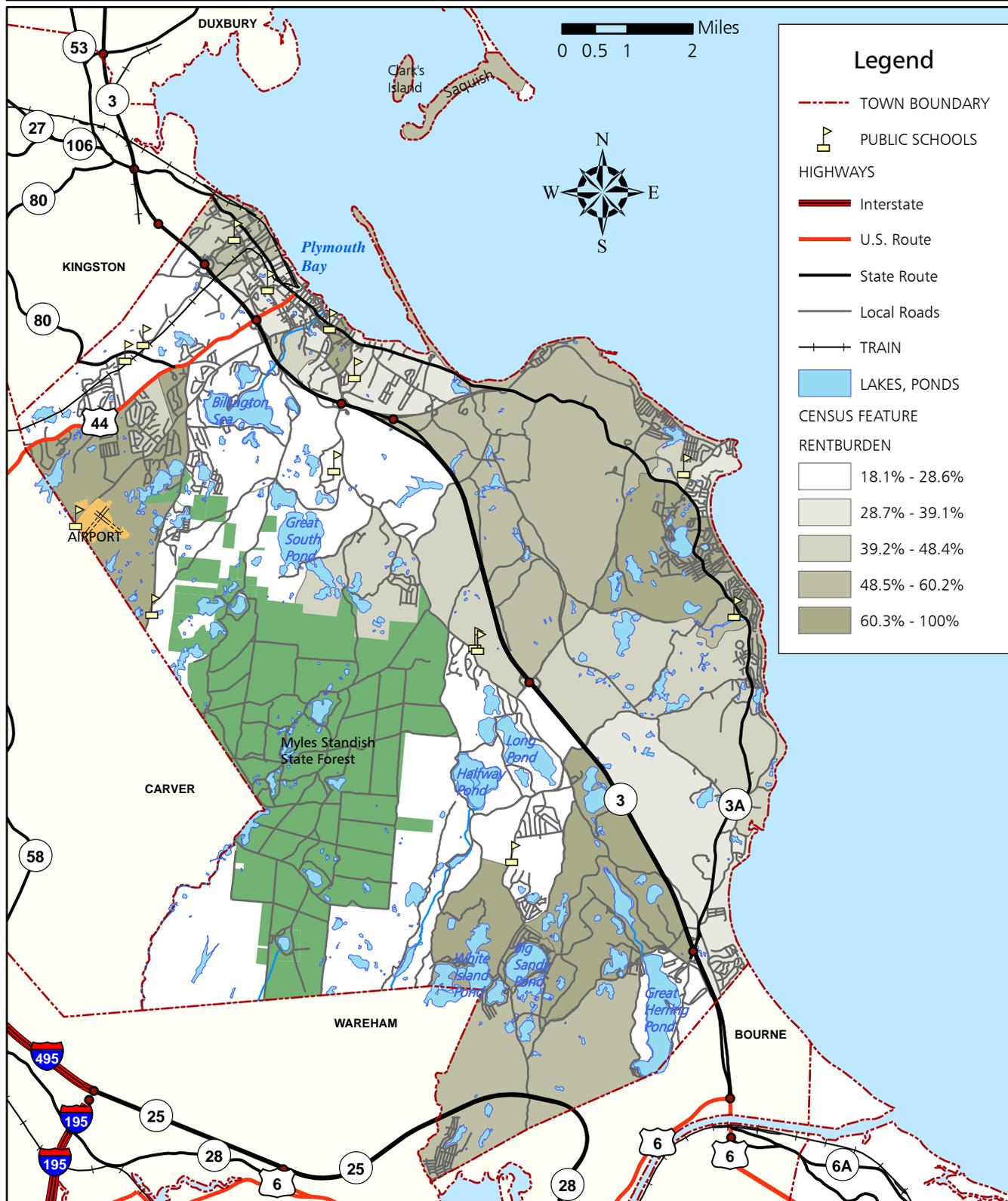
Source: Census 2000, Summary File 3, Tables H55-H57; 1990 Census, Summary File 1, Tables H032A-H032C.

The median gross rent (rent and utilities) in Plymouth is about 26% of renter household incomes overall, but there are substantial differences in the affordability of market rents in various parts of town even though the rents do not vary significantly. In general, the median gross rent constitutes a larger share of renter household incomes where tenants have incomes that are too high to qualify for subsidized housing and too low for market-rate rentals to be reasonably affordable. Map 13 identifies areas in Plymouth where tenants pay relatively large percentages of their income to live in rental housing.

TOWN OF PLYMOUTH Housing Plan

Map 13: Housing Cost Burdened Tenants

Community Opportunities Group, Inc.
Boston, Massachusetts



Housing Development Trends

Plymouth has absorbed a staggering amount of new residential development since the end of the 1980s, issuing an average of 239 building permits per year for new housing units from 1989-2000. More than 2,700 new housing units have been built since 1996, nearly all in rural areas and predominantly the Pine Hills. Except for luxury apartments in the Avalon at Pine Hills development, Plymouth has attracted no new investment in rental housing for many years. Table 25 shows that approximately 92% of Plymouth's most recent growth is comprised of detached single-family homes and that the average construction cost of new housing units has skyrocketed. A building permit cap adopted by town meeting in 1998 serves to regulate the amount of residential construction that occurs in Plymouth each year, but it has no impact on where new development takes place. The Town's abundant supply of vacant land in outlying areas and its zoning policies have effectively steered new growth away from its traditional village centers, causing average single-family lot sizes to double in the past 24 years.³⁴

Table 25: New Housing Units Built in Plymouth, 1996-2004

Year	Housing Units by Type				Total Units Permitted	Average Construction Cost Per Unit
	Single Family	Two Family	Three and Four Family	Five or More Family		
1996	279	2	0	14	295	\$81,657
1997	312	0	3	5	320	\$87,781
1998	314	0	0	6	320	\$96,255
1999	296	0	3	0	299	\$99,979
2000	263	14	0	64	341	\$114,158
2001	288	8	3	10	309	\$146,420
2002	289	2	0	10	301	\$153,389
2003	273	8	3	20	304	\$148,049
2004	277	10	0	15	302	\$149,896
Total	2,591	44	12	144	2,729	83.6%

Source: U.S. Census Bureau, Residential Construction Branch. 2004 units are estimated, not actual.

Housing Affordability, Attainability & Accessibility

Subsidized Housing

Federal housing policy and most state housing programs define "affordable housing" as homes that are priced for purchase or rent by lower-income households and subject to a deed restriction to protect long-term affordability. Plymouth has 771 housing units that qualify as "affordable" under the state's comprehensive permit law, Chapter 40B. The Plymouth Housing Authority owns and operates 349 public housing units, including 191 apartments for the elderly and 158

³⁴ For additional growth statistics, see Goody Clancy and RKG Associates, Growing Smarter in Plymouth's Fifth Century: A Strategic Action Plan for the Town of Plymouth, Massachusetts (October 2004), 4-7.

family units. The remaining Chapter 40B units are in privately owned and managed rental developments except for a small number of homeownership units at Ocean Point and owner-occupied units assisted with federal CDBG funds. Table 26 summarizes Plymouth's current Chapter 40B Subsidized Housing Inventory.

Table 26: Chapter 40B Subsidized Housing Inventory in Plymouth

Development & Type	Location	Chapter 40B Units	Expiration	Subsidy
Rental				
Plymouth Housing Authority				
High Cliff Apartments	23 Prince Street	82	Perpetual	HUD
Nick's Rock Road	Nick's Rock Road	30	Perpetual	HUD
Olmstead Terrace	Olmstead Terrace	40	Perpetual	DHCD
Castle Hill Elderly	Castle Court	50	Perpetual	DHCD
Cherry Hill Elderly	128 Court Street	81	Perpetual	DHCD
Southfield Elderly	105 South Street	60	Perpetual	DHCD
Scattered Sites	N/A	6	Perpetual	DHCD
Privately Owned Rental Developments				
Algonquin Heights	Algonquin Terrace	201	2019	MassHousing
Mayflower Village	South Street	100	2010	HUD
Mayflower Village II	Colonial Terrace	58	2013	HUD
Group Homes				
DMR Group Homes	Confidential	7		DMR
DMH Group Homes	Confidential	16		DMH
Other Rental Housing				
Section 8 Mod Rehab	Scattered Sites	12	2006-07	DHCD
Homeownership				
Ocean Point	2512 Highland Terr.	20	Perpetual	DHCD
Plymouth HOR Program	N/A	8	2008	DHCD
Total Subsidized Housing		771		
Total Year-Round Units		19,008		
Percent Subsidized		4.06%		

Source: Department of Housing and Community Development, February 2005.

According to DHCD, 8.95% of all dwelling units in Massachusetts meet the statutory definition of "low- and moderate-income housing," yet only 39 of the state's 351 communities have produced enough affordable housing to meet or exceed the 10% statutory minimum under Chapter 40B. While cities still dominate the Subsidized Housing Inventory, suburbs and small towns constitute half of the communities that exceed 10% on the state's most recently updated roster of Chapter 40B units. Many are located close to I-495, where most of the Commonwealth's recent new growth has occurred. In contrast, all of the towns in Plymouth's area fall well below 10%. Since the late 1990s, Bourne and Wareham have absorbed a modest increase in percentage of Chapter 40B units. However, the percentage has declined in Plymouth, Duxbury, Carver and Kingston because each of these communities experienced new housing growth without a corresponding increase in affordable units. Table 27 shows that the combined regional shortfall is 2,689 Chapter 40B units, including 1,130 in Plymouth.

Table 27: Regional Subsidized Housing Inventory

Town	Year-Round Units	Total		Chapter 40B Units	Chapter 40B Percent	Chapter 40B Shortfall
		Development Units				
Bourne	7,787	656		521	6.69%	258
Carver	4,063	80		80	1.97%	326
Duxbury	5,103	172		172	3.37%	338
Kingston	4,370	146		146	3.34%	291
PLYMOUTH	19,008	811		771	4.06%	1,130
Wareham	8,650	586		519	6.00%	346
Total	48,981	2,451		2,209	4.51%	2,689
Statewide ³⁵	2,526,963	240,410		226,283	8.95%	26,413

Source: Department of Housing and Community Development, February 2005.

Housing Cost Burden

The legislative intent of Chapter 40B is to assure a fair-share distribution of low-income housing across the state and within metropolitan areas, but housing policy analysts do not define affordable housing need on the basis of a fixed 10% standard. A home is affordable to its occupants if their monthly housing costs – a mortgage payment, property taxes, and house insurance, or rent and utilities – are equal to or less than 30% of their monthly gross income. Affordable housing need exists when households pay more than 30% of their gross income for housing costs. In housing industry parlance, they are classified as “housing-cost burdened.”

Table 28: Housing Cost Burdened Homeowners & Renters by Age and Income

Area	Homeowners			Renters		
	All	Elderly	Low- Income	All	Elderly	Low- Income
Massachusetts	26.2%	25.2%	56.0%	38.7%	50.5%	64.0%
Plymouth County	27.7%	29.5%	63.7%	39.1%	48.3%	64.4%
Bourne	34.5%	25.1%	56.5%	42.0%	34.4%	64.4%
Carver	27.6%	42.9%	83.5%	43.7%	65.3%	72.6%
Duxbury	23.4%	27.8%	78.8%	49.1%	47.0%	58.8%
Kingston	34.7%	38.4%	66.7%	36.6%	37.7%	55.9%
PLYMOUTH	29.1%	31.5%	67.6%	39.7%	57.5%	71.9%
Wareham	31.6%	37.0%	62.8%	43.2%	53.5%	61.3%

Source: Census 2000, Summary File 3, Tables H69, H71, H72, H94, H96, H97.

Table 28 shows that according to federal census data, 27.7% of all homeowners with a mortgage in Plymouth County and 29.1% in Plymouth qualify as housing-cost burdened. Cost burden usually poses a greater challenge for renters than homeowners, and this difference can be seen in Plymouth. Throughout Plymouth County, 39.1% of all renter households pay more than 30% of their monthly income for rent and utilities, and the same applies to 39.7% of all renters in

³⁵ Author’s Note: The Chapter 40B inventory is officially published as 9.00%, but this appears to be an error.

Plymouth. Compared to the state as a whole, the incidence of housing cost burden among renters is slightly higher in Plymouth County and Plymouth. The problem is far more pronounced among elderly and low-income households, however. Over 70% of the Town's low-income renters and 68% of its low-income homeowners pay more than 30% of their income on housing costs, and while the percentage of cost-burdened, low-income renters has declined somewhat since 1990, the percentage of cost-burdened homeowners has increased. Moreover, Plymouth's most severely cost-burdened households are low-income families of two to four people living in rental units: 77.5% pay more than 30% of their income for rent, and 25% pay more than 50%.³⁶

Attainable & Affordable Housing

In a competitive market like Plymouth's, the cost of housing poses a significant challenge to low- or moderate-income people. The measure of these terms varies by household size and region, but generally a household is low-income if its annual income is at or below 50% of area median income (AMI), and moderate-income if its annual income is between 51-80% AMI. For Plymouth, "area median income" refers to the median income for the Boston Primary Metropolitan Statistical Area (PMSA), which includes communities with much higher and lower incomes than Plymouth. Five years ago, Plymouth housing sale prices were attainable for middle-income homebuyers, yet the Town's traditional affordability to low and moderate-income people had already begun to wane in 2000. Today, the median single-family home sale price in Plymouth creates barriers not only for moderate-income households but also for households at the median for the Boston area.

Table 29 shows that a homebuyer at Plymouth's Census 2000 median household income (\$54,677) could have afforded a maximum purchase price of \$167,055.³⁷ In 2000, the Town's median single-family home sale price was \$175,000. When a community's housing sale prices exceed the price a typical homebuyer can afford, the result is known as a "housing affordability gap." In many cities and towns, an affordability gap exists not only for homebuyers region-wide but also for households already living in the community. However, Plymouth had a very small affordability gap in 2000, for its own median-income households or those living elsewhere in Plymouth County or the Greater Boston area. At the time, its for-sale units were priced at a level that would be considered attainable for local and regional median-income homebuyers. Furthermore, homes in Plymouth sold at a price that was almost affordable to moderate-income

³⁶ U.S. Department of Housing and Urban Development (HUD), Policy & Research Division (HUD/PDR), "Comprehensive Housing Affordability Strategy (CHAS) Data," [State of the Cities Data Systems <http://socds.huduser.org/index.html>](http://socds.huduser.org/index.html).

³⁷ Maximum affordable purchase price calculations assume a 30-year fixed-rate mortgage at 7.5% and a 5% downpayment, i.e., assumptions consistent with Fannie Mae affordability guidelines. A local affordability gap analysis is not feasible for 2004 because the Census Bureau publishes median household incomes by city or town for the decennial census. At mid-decade, analysts compare a community's housing sale prices to the maximum price affordable to a household at the region-wide median income, using metropolitan and non-metro income statistics updated by HUD.

homebuyers from the Boston area: for them, the Town's median sale price was only \$22,548 more than they could afford. By 2004, these conditions had changed. Plymouth's home values rose so dramatically after 2000 that last year's median sale price was \$67,316 higher than the maximum affordable purchase price for homebuyers at the Boston area median household income, and \$120,972 higher than the price affordable to a moderate-income family. Regardless of Plymouth's affordability relative to the regional housing market two years ago, the Town is no longer affordable to moderate-income households and at best, its single-family home sale prices are marginally attainable for median-income households.³⁸

Table 29: Decline in Housing Affordability of Single-Family Homes in Plymouth, 2000-2004

Housing Affordability in 2000					
Area	Median Household Income	Affordable Purchase Price	Median Sale Price (2000)	Local Affordability Gap	Plymouth's Affordability (+/- \$175,000 Sale Price)
Massachusetts	\$50,502	\$153,437			-\$21,563
Plymouth County	\$55,615	\$170,114			-\$4,886
Bourne	\$45,113	\$135,859	\$177,750	-\$41,891	-\$39,141
Carver	\$53,506	\$163,235	\$169,075	-\$5,840	-\$11,765
Duxbury	\$97,124	\$305,509	\$381,500	-\$75,991	\$130,509
Kingston	\$53,780	\$164,129	\$236,250	-\$72,121	-\$10,871
PLYMOUTH	\$54,677	\$167,055	\$175,000	-\$7,945	-\$7,945
Wareham	\$40,422	\$120,558	\$122,700	-\$2,142	-\$54,442
Boston PMSA	\$54,823	\$167,531			-\$7,469
80% Boston PMSA	\$50,200	\$152,452			-\$22,548
Housing Affordability in 2004					
Area	Median Household Income	Affordable Purchase Price			Plymouth's Affordability (+/- \$325,450 Sale Price)
Boston PMSA	\$82,600	\$245,228			-\$67,316
80% AMI	\$66,150	\$194,254			-\$120,972

Data Sources: Census 2000, The Warren Group, HUD.

For moderate-income homebuyers regardless of household size, the obstacles to homeownership have increased since 2000. A Boston area family of four with annual earnings of \$66,150 qualifies as moderate-income under the guidelines currently in effect for most housing assistance programs. For that family, the maximum affordable purchase price for a single-family home is about \$204,478, but a January 2005 survey of houses and condominiums for sale in Plymouth produced no single-family home listings and only one mobile home, one townhouse and four

³⁸ Bonnie Heudorfer, Barry Bluestone and Stein Helmrich, The Greater Boston Report Card: An Assessment of Progress on Housing in the Greater Boston Area, Center for Urban and Regional Policy (CURP), Northeastern University (April 2004), Appendix B: Affordability Gap.

condominium listings at or below \$210,000.³⁹ In addition, there are no Chapter 40B affordable homeownership units for sale in Plymouth or any town in the immediate region. According to the Subsidized Housing Inventory, there are about 70 affordable first-time homebuyer units in all six communities combined. Since rental units comprise the vast majority of the region's Chapter 40B housing, homeownership opportunities are scarce. It is little wonder that Plymouth's area has so few young households, i.e., people under 34 years of age. In fact, Plymouth is the only town on the lower South Shore that approximates the state's 21% average for under-34 households.⁴⁰ Together, the region's limited number of affordable first-time homebuyer units and relatively small inventory of rental housing mean that to live in Plymouth or any of the surrounding towns, young households have to be more affluent than their counterparts across the state. When they cannot find affordably priced single-family homes in a Chapter 40B development or older residential neighborhoods, first-time homebuyers look to condominiums for a solution to their affordable housing needs.

In 2000, the median sale price of condominiums in Plymouth was comfortably affordable to both moderate- and median-income homebuyers. Estimating the condominium price that is affordable to a given group of homebuyers is somewhat more complicated than estimating an affordable single-family home sale price because condominium fees have to be accounted for in the formula for determining monthly housing costs. Even after adjusting the maximum purchase price to reflect typical condominium fees, however, condominium units are generally much less expensive than single-family homes and they provide an important avenue to homeownership for one-person households, young couples and small families. Today, Plymouth's condominium inventory continues to offer affordably priced housing for families because last year's median condominium sale price was \$187,500.⁴¹ However, since condominiums are usually small units sized for two-person households, it is important to avoid basing affordability conclusions on household income statistics that reflect a four-person family – the standard that generally defines area median income. In Plymouth, the average household size for owner-occupied multi-family units is 2.29, and the larger the condominium building, the smaller the average household.⁴²

Table 30 summarizes the affordability of Plymouth condominiums to families, smaller households and single people earning the average weekly wage paid by Plymouth business establishments. Overall, it is clear that condominiums in Plymouth provide an attainable source of housing for small, median-income households and they remain somewhat affordable to moderate-income households. However, they are not affordable to Plymouth's renters or to single people earning the average wages paid by many local companies. Rental housing is still

³⁹ When a similar survey was conducted by the town in March 2004, there were 297 single-family homes for sale in Plymouth, along with 80 condominiums, 162 multi-unit homes, 1 mobile home and 31 house lots. Single-family homes comprised 75% of all 394 listings and only 25 units were offered at an asking price of \$140,000-\$263,000. Source: Plymouth Department of Planning and Community Development.

⁴⁰ Census 2000, Summary File 1, Table P21.

⁴¹ The Warren Group, [Town Stats](http://rers.thewarrengroup.com/townstats/) <<http://rers.thewarrengroup.com/townstats/>>.

⁴² Census 2000, Summary File 3, Tables H32, H33; cross-tabulations by author.

Plymouth's mainstay option for one-person households, workers earning modest wages and low-income households.

Table 30: Affordability of Condominiums in Plymouth

Condominium Affordability by Household Size and Income			
Household Income Measure	Median Household Income	Affordable Purchase Price	Plymouth's Affordability (+/- \$187,500 Sale Price)
Median Household Income (2004)	\$82,600	\$240,822	\$53,322
By Household Size			
4-Person @ 80% AMI	\$66,150	\$187,165	-\$335
4-Person at 100% AMI	\$82,688	\$241,107	\$53,607
3-Person @ 80% AMI	\$59,550	\$165,637	-\$21,863
3-Person @ 100% AMI	\$74,438	\$214,197	\$26,697
2-Person @ 80% AMI	\$52,950	\$144,109	-\$43,391
2-Person @ 100% AMI	\$66,188	\$187,287	-\$213
Plymouth Renter Households	\$39,800	\$101,216	-\$86,284
Condominium Affordability for One-Person Households at Average Local Wages			
Local Industry	Average Weekly Wage	Affordable Purchase Price	Plymouth's Affordability (+/- \$187,500 Sale Price)
Manufacturing	\$786	\$104,713	-\$82,787
Professional Services	\$1,114	\$160,346	-\$27,154
Health Care Services	\$732	\$95,554	-\$91,946

Data Sources: Census 2000, The Warren Group, HUD.

Rental Housing Needs

Chapter 40B developers are allowed to price affordable homes at the high end of the affordability range (80% AMI). However, the most difficult needs to address are not among moderate-income homebuyers but rather, low- and very-low-income renters: a four-person family with an income of less than \$41,350 or, quite often, a one- or two-person household with income below \$25,000.⁴³ In the 1980s, the state began to reduce spending on elderly apartments; since housing authorities could not obtain local support for family units, most applied for state or federal grants to build senior housing instead, thereby reducing some opposition to their projects. Since the need for family housing was so great, DHCD often approved senior housing grants on the condition that

⁴³ For an overview of the rental housing shortage and its impact on very-low-income people both nationally and by state, see Kathryn P. Nelson, et al., Trends in Worst Case Needs for Housing, 1978–1999, with 2001 Update: A Report to Congress in Worst Case Housing Needs (U.S. Department of Housing and Urban Development, Office of Policy Development and Research, December 2003), and Kathryn P. Nelson, "Whose Shortage of Affordable Housing?" Housing Policy Debate 5 (4; 1994): 401-402.

housing authorities would develop family units as well. In some towns, the elderly units went forward but the family units were delayed for many years because of neighborhood conflicts, resistance from local officials or litigation. The recession of the late 1980s and a change in administration resulted in deep cutbacks or the elimination of many public housing programs. Investments in new housing for very-low-income people have never recovered in Massachusetts, and the effects are evident in rising numbers of renters with severe housing cost burdens. In Plymouth, for example, nearly 90% of all renter families with incomes below 50% AMI are housing cost burdened.⁴⁴

Unfortunately, new Chapter 40B developments do not address many of the needs that exist among very-low-income people. State policies and the system of housing finance have changed considerably since Chapter 40B was enacted in 1969, so the very large “projects” that the general public associates with low-income housing are no longer built. Mixed-income rental developments are the norm today, and some can be found in South Shore communities. Hoping to encourage new rental production, DHCD has established a policy that all apartments in a comprehensive permit rental development will be added to a community’s Subsidized Housing Inventory even though only 25% are priced as affordable to households at or below 80% AMI. Since many suburbs prohibit multi-family housing or allow multi-family development only at a low density of units per acre, comprehensive permits continue to serve as the principal vehicle for developing new rental units in a majority of Eastern Massachusetts communities. In Plymouth, 66% of all renters live in housing units that were built prior to 1970. The prevalence of renters in older housing stock exists throughout Plymouth County, where communities also tend to have relatively large percentages of renters living in single-family homes.⁴⁵

Over the past 15 years, there has been little investment in new rental housing south of Boston, with or without comprehensive permits, except in towns along the northern edge of the region. DHCD recently updated the Chapter 40B Subsidized Housing Inventory and according to an analysis published by the Citizens Housing and Planning Association (CHAPA), most South Shore communities have experienced a decline in their percentage of Chapter 40B units since the late 1990s. In Plymouth’s area, the exceptions are Bourne, where the Chapter 40B inventory rose by less than 2% in the past eight years, and Wareham, with a <1% increase. Plymouth, Carver, Kingston and Duxbury all have smaller percentages of Chapter 40B housing today than in 1997,⁴⁶ yet communities along I-495 have experienced a considerable amount of comprehensive permit activity that resulted in new market-rate and subsidized housing. To some extent, this reflects the tendency of Chapter 40B to attract rental investment in very high-growth towns with a declining supply of developable land and very restrictive zoning. Since the feasibility of today’s comprehensive permit developments relies heavily on the inclusion of market-rate units, high

⁴⁴ HUD/PDR, “Comprehensive Housing Affordability Strategy (CHAS) Data,” State of the Cities Data Systems.

⁴⁵ Census 2000, Summary File 3, Tables H32, H36.

⁴⁶ Citizens Housing and Planning Association, “Analysis of 2005 Subsidized Housing Inventory,” January 15, 2005, <<http://www.chapa.org/chapter40b.html>>.

market demand coupled with significant constraints on development has more influence over decisions to apply for a comprehensive permit than other factors, including housing needs.

Where there is ample land and relatively few restrictions, most developers choose to build all-market housing and comply with a community's zoning regulations because it is easier and faster than risking exposure to the lengthy appeals process associated with a comprehensive permit. Moreover, very few rental developers will consider small-scale projects even though suburban officials often object to Chapter 40B rental developments precisely because the scale and density are out of character with established neighborhoods. When small rental developments are built at all today, they generally represent the work of non-profit development corporations that qualify for cash subsidies, while national developers such as AvalonBay Communities, Fairfield Development Corporation and JPI have become the main producers of comprehensive permit rental housing in Massachusetts.

As a rule, affordable rents in a comprehensive permit development may not exceed HUD Fair Market Rents (FMR), which the federal government establishes each year for metropolitan areas and rural counties, much like the income limits that govern eligibility for assisted housing. The FMR is intended to measure the average cost of modest, decent market-rate rental housing and correlate HUD's outlay for Section 8 vouchers to a reasonable market standard. In the Boston metro area, including Plymouth, the HUD Fair Market Rent for a two-bedroom apartment is currently \$1,266: a rent that is affordable to households with an annual income of at least \$50, 640 and slightly higher than market rents in Plymouth today. However, the estimated median household income among renters in Plymouth is only \$37,013.⁴⁷ For households at the local median, an affordable monthly rent is \$925. Without Section 8 rental assistance, a rent of \$1,266 is not affordable to a majority of the households that need rental housing. While there are about 518,000 low- and moderate-income renter households in Massachusetts, the state has only 70,000 HUD Section 8 vouchers. Very high rents in relation to income explain why Massachusetts was ranked the second least affordable state in the country last year.⁴⁸ Moreover, the Census Bureau estimates that as of 2003, 48% of all renters in Plymouth County are housing cost burdened – up significantly from 39% in 2000.⁴⁹

Another concern for Plymouth and many towns is the potential that currently-subsidized rental units will convert to market-rate housing when use restrictions imposed by housing finance

⁴⁷ Estimated median renter household income represents 2003 inflation-adjusted dollars as reported in the Census Bureau's American Community Survey (2003), Table P070: Median Household Income in the Past 12 Months. Note: household income growth is derived from data reported for Plymouth County. Unlike the decennial census, the American Community Survey (ACS) collects sample data at the city or town level only for a limited selection of major cities. However, all of the data sets are available for states, counties and metropolitan areas.

⁴⁸ National Low-Income Housing Coalition, Out of Reach 2004 (December 2004).

⁴⁹ Census Bureau, "Selected Housing Characteristics, Plymouth County," Data Profile Series, American Community Survey (2003), <<http://www.census.gov/acs/www/index.html>>.

agencies eventually expire. About half of Plymouth's subsidized rental units may be vulnerable to expiring use restrictions: Algonquin Heights, Mayflower Village I and II, and 12 units in small multi-family buildings that were renovated under a financing program that commits Section 8 rental assistance for low-income tenants living in the improved apartments. For older rental developments built during the 1960s and 1970s, the affordable housing restrictions are sometimes extended because the owners obtain subsidized financing for modernization or expansion, but this outcome is hardly guaranteed. Local officials in many communities assume that regardless of expiring use restrictions, a landmark decision by the Supreme Court in 2002 protects all subsidized rental housing from market-rate conversion and this, too, is not guaranteed.

A third rental housing concern involves the potential for an affordable housing "mismatch," a condition that occurs when the only units available to lower-income households are fairly expensive while renters with higher incomes occupy a community's modestly priced apartments. This is rarely a problem in Chapter 40B rental developments due to annual monitoring requirements, but privately owned and unsubsidized housing has no comparable government oversight: landlords may rent to any tenant regardless of income. In Plymouth, approximately 52% of all rental units are occupied by tenants paying less than 30% of their monthly income for rent and utilities, i.e., the rents are affordable to but not occupied by households with lower incomes. Access to low-rent apartments benefits not only to young renters trying to save for a downpayment, but also to households with unusually high expenses that would make spending 30% of their monthly income on rent a hardship. At the same time, this condition is detrimental to low-income households that need affordable apartments. The problem is most obvious among units for which rents are affordable to households with incomes between 31-50% AMI – units that are predominantly old and prone to housing quality issues. In 2000, the asking rents for 126 vacant apartments were affordable to households with incomes below 80% AMI, yet the characteristics of Plymouth's renter-occupied housing inventory suggest that many of the units probably were not rented to low- or moderate-income tenants.⁵⁰

Accessible Housing

Plymouth has several group homes for adults with severe disabilities, and its public housing developments meet federal accessibility standards. Since a large percentage of the population is not eligible for group homes or public housing units, however, these resources cannot meet all potential needs for barrier-free housing in any city or town, including Plymouth. Most people with a disability have to find accessible housing on their own, usually by making alterations to existing dwelling units. Whether they have to pay the full cost to retrofit a home or qualify for whole or partial financial assistance largely depends on their household income. According to data maintained by HUD for state and local community development plans, 15% of all renter households and 17% of all homeowner households in Plymouth have a family member with mobility or self-care impairments – categories that include the types of disabilities most likely to

⁵⁰ HUD/PDR, "Comprehensive Housing Affordability Strategy (CHAS) Data: Affordability Mismatch for All Households," [State of the Cities Data Systems](#).

require physical alterations to a dwelling unit. Slightly over half of the renters and more than one-third of the homeowners with a disabled family member live in units with some type of access barrier, e.g., stairs, narrow entrances and interior doorways, or inaccessible bedrooms, bathrooms or kitchens. A total of 970 renter and homeowner households have housing access problems for a family member with a disability, and an overwhelming majority of them also have incomes at or below 80% AMI. Less than one-third of the family members with a disability are senior citizens.⁵¹

Critical Issues

Potential Loss of Chapter 40B Units

According to the most recent Chapter 40B Subsidized Housing Inventory (February 2005), 379 of Plymouth's 771 subsidized units are subject to expiring use restrictions. To qualify for the Subsidized Housing Inventory, Chapter 40B units must be protected by a long-term affordable housing restriction that is recorded at the Registry of Deeds. An expiring use restriction means the deed restriction will terminate, and the investors in control of a multi-family development would be free to convert the units to market-rate housing. In Plymouth, some of the restrictions are scheduled to expire in two or three years while affordability in the largest expiring-use development, Algonquin Heights, is secure until 2019. Most or all of the units may be protected by Ardemore Apartments v. Wellesley Board of Appeals (2001), but it is not clear that this is the case, especially if the developments did not require a comprehensive permit. Plymouth needs to verify the status of each development and evaluate the risk of market-rate conversion. The issue is not only to prevent the loss of affordable housing, but also to assure that Plymouth does not lose more ground under Chapter 40B.

Preservation of Below-Market Affordability

About 35% of Plymouth's existing housing units have reached or are approaching their estimated usable life of 35-40 years.⁵² The Town can expect to see more of its older housing stock convert from below-market, unsubsidized affordable units to higher-end market rate housing as the units are recycled, renovated and expanded. This means a potential loss of units affordable to moderate-and middle-income owners and renters. On one hand, the turnover of older housing can be fiscally advantageous because value-added renovations increase the property tax yield of a dwelling unit. On the other hand, the same value-added renovations reduce the availability of unsubsidized affordable housing.

⁵¹ HUD/PDR, "Comprehensive Housing Affordability Strategy (CHAS) Data: Housing Problems for Self-Care and Mobility Limitation," State of the Cities Data Systems.

⁵² While 67% of the Town's Census 2000 housing units were built between 1960-March 2000, more than half of these 14,195 units were constructed from 1960-1979. Another one-third of the total housing stock was built before 1960.

Plymouth has several options for tailoring housing assistance to address the unique needs of older units occupied by empty-nester and elderly households. In addition to the Town's CDBG allocation, Plymouth has Community Preservation Act (CPA) revenue that could be used to create a program for homeowners with incomes between 80-100% AMI. This approach could help to preserve "market" affordability and control the community service cost impacts that often occur upon resale of older homes. Recently, some communities in Massachusetts have obtained special acts of the legislature to reduce or waive property taxes for landlords who rent high-quality, affordable units to lower-income households. A combination of low-cost financing and tax incentives may help to preserve some of Plymouth's unsubsidized but relatively affordable rental units in small, older multi-family buildings.

Rental Housing Needs

Several indicators reinforce Plymouth's need to expand its inventory of rental housing. In addition to a very low rental vacancy rate, there is a long waiting list for subsidized units, there has been little rental housing production in the last decade, and renter-occupied units comprise only 22.4% of all occupied units in the community. Furthermore, a substantial portion of the Town's renters pay more than 30% of gross income for rent – a condition that is magnified for low-income renters – and there is no guarantee that where modestly priced apartments exist, they will actually meet the affordable housing needs of low- or moderate-income people.

Family size in relation to available units suggests a shortage of apartments suitable for one-person households and small families. Rental demand from larger families appears to be met by the more costly rental of single-family homes and townhouses. In 2000, the average rent in Plymouth was 120 % higher than the average rent for the state as a whole, yet the average wage was 30% lower. While rents have continued to rise through 2004, wages have not increased at the same rate. It is very difficult to rent and work in Plymouth, especially on one income. Substantial demographic changes are underway in Plymouth and they point to an older, higher-income population. This type of change brings hope to the task of balancing the revenue and community service costs associated with housing, yet it also creates obstacles to retaining a skilled and unskilled workforce that can support a diverse, growing economy. Even at the higher end of the wage spectrum, the average weekly wages paid by local employers are not adequate to carry a mortgage payment, taxes and house insurance given prevailing sale prices in Plymouth today. To attract and maintain a vital workforce, the Town needs more moderately priced rental housing for young one-person households and couples.

According to the Plymouth Housing Authority, waiting lists for subsidized units in Plymouth run from six months for local senior citizens to seven years or more for families. Using Chapter 40B comprehensive permits to create new rental housing that can address needs at all market levels should be considered, but lower-impact strategies are available if the Town establishes adequate capacity to use them. For example, partnering with a non-profit housing development corporation or a community development corporation could position Plymouth to compete for grants and low-interest loans from state and federal programs that specialize in preserving affordable housing for low-income people.

Expanded Homeownership Efforts

In 2000, many of Plymouth's renter households were within reach of purchasing a home or condominium if they had access to subsidized financing. The median renter household income of \$39,800 was adequate for a maximum purchase price of \$124,571. First-time homebuyer assistance with HOME Investment Partnership funds, the Soft Second Loan Program or USDA would have put these households in the lower end of the single-family home market and nearly at mid-market for condominiums. Many first-time homebuyers who received assistance from these programs are now successful homeowners. However, current household income statistics give a more realistic analysis of today's market. The buying power of a four-person household at the Boston PMSA median income (2004) is about \$245,000. Even with subsidized financing, many households cannot afford to buy a single-family home unless they are trading up and have equity to invest from the proceeds of selling their first house. Condominiums are the only option for young families and smaller households.

The Greater Boston Housing Report Card rated Plymouth as relatively affordable in 2002-2003. The Town's estimated median household income in 2003 was \$61,522, and its median single-family home price of \$289,000 was nearly affordable to households at the local median. Since Plymouth has some single-family homes and condominiums at the lower end of the market, it has been able to provide homeownership opportunities to first-time homebuyers. In 2003, for example, the estimated maximum purchase price affordable to first-time homebuyers was \$191,162. By the end of 2004, the Town's median single-family home sale price had jumped to \$325,450: a 12.6% increase in one year, and not matched by comparable growth in household income.

The median household income for renters in 2000 was not enough to purchase a home, even at the lower-quartile value, without some form of homebuyer assistance. Given the increase in housing sale prices since 2000, it is reasonable to assume that renters have less access to homeownership today than five years ago. A household with 1.5 workers earning median wages in 2000 could have purchased a house in Plymouth, and a majority of Plymouth's first-time homebuyers have been households with more than one wage earner. Ownership housing is not affordable for single-person households earning average local wages. Housing sale prices have far outpaced increases in wages, making homeownership even less affordable.

Senior Housing Needs

Measured by household income or degree of housing cost burden, Plymouth does not have enough affordable rental units for senior citizens. The number of seniors with incomes below \$30,000 is more than twice the number of subsidized elderly housing units. The same applies to seniors paying more than 30% of their income for rent. Plymouth has a regionally low percentage of elderly households. While this is largely attributable to the rate of new housing growth and a corresponding influx of younger families, the percentage of cost-burdened senior citizens in Plymouth far exceeds the state or county average. The Town has an undeniable need for rental units affordable to low- and very-low-income seniors, and unfortunately there are very few public resources available to finance new rental housing development for elderly

households. Partnerships with non-profit housing developers may be the only realistic means to address this need.

Housing for Persons with Disabilities

About 7,600 Plymouth residents have a disability. Physical impairments, e.g., restricted mobility, are the most commonly reported disabilities in Plymouth, but the Town also has a fairly large population of adults with mental and cognitive disabilities. The Departments of Mental Retardation and Mental Health have enough group home units for only 23 people in Plymouth, and new funding for special needs housing is very limited. According to the Massachusetts Housing Registry, there are no accessible or adaptable apartments vacant and available for rent in Plymouth today. Moreover, all of the accessible or adaptable units on record in Plymouth are located in subsidized, primarily elderly housing developments, so a household with income over 80% AMI would not have access to these units even if they were available for rent.

The more significant problem is that while 1,100 Plymouth residents with a mobility or self-care limitation live in housing units with some type of access barrier, the vast majority are in owner-occupied homes, not rental units, and senior citizens are not the primary population that needs accessible housing. Creating more barrier-free rental units will benefit tenants with existing access problems, but it will not address the needs of homeowners with a mobility-impaired family member.

Adequate Local Capacity

Plymouth does not have a long, well-established tradition of efforts to maintain and increase its supply of affordable housing. The Plymouth Housing Authority, Redevelopment Authority and Community Development Department have led the Town's affordable housing initiatives, including new construction, rehabilitation, rental housing management, and administration of rental assistance vouchers. About 11% of Plymouth's existing housing stock represents a potential opportunity to help meet the 10% statutory minimum of Chapter 40B if the units can be protected by a long-term use restriction that guarantees affordability to future owners or renters. Unfortunately, while three dedicated agencies have worked to address local housing needs over a long period of time, each operates under certain constraints and the Town has not had an overarching housing policy to guide its development.

GOALS & STRATEGIES

Affordable Housing Goals

Today, 771 housing units in Plymouth are listed in the Chapter 40B Subsidized Housing Inventory. Calculated on the basis of Plymouth's Census 2000 profile, these 771 units represent 4.06% of the Town's 19,008 year-round homes. To meet the 10% statutory minimum, Plymouth would need an additional 1,130 Chapter 40B before 2011, when the state calibrates the Subsidized Housing Inventory to the next decennial census. By then, however, Plymouth's housing stock will have increased by more than 3,100 new units. Unless the Town begins to make progress toward the 10% statutory minimum, Plymouth will face a Chapter 40B shortfall of approximately 1,440 units in 2011, assuming all of the Town's post-2000 residential growth consists of year-round units and there is no change to the existing supply of seasonal housing.

The Affordable Housing Committee strives not to focus only on the objectives of Chapter 40B in establishing goals for affordable housing. The Town estimates that its total housing inventory includes 21,250 units as of June 2003, including 872 units that are affordable and appear to meet Chapter 30B criteria.

The Affordable Housing Committee adopted the following charge based on the Board of Selectmen's directive:

- Develop a Strategic Housing Plan for Plymouth.
- Identify housing challenges within the community.
- Work with Plymouth boards, committees and staff who deal with housing issues to:
 - Identify opportunities to coordinate and streamline Town permitting and administrative services associated with the creation of affordable housing.
 - Identify opportunities for converting vacant, under-utilized, deteriorated or publicly-owned property (local, state and county) for the creation of affordable housing.
 - Identify zoning, regulations, and permit procedures that may act as barriers to the creation of affordable housing units.
 - Conduct community outreach and educational programs to develop a broader constituency for the creation of affordable housing opportunities.
 - Explore the establishment of a non-profit entity within the community or identify an existing non-profit partner with skills in housing development, rehabilitation and financing.

- Become knowledgeable with Chapter 40B and become an official part of the review process for all proposals at the local level.
- Become knowledgeable on pending legislation at the local, state and federal level that directly impacts affordable housing development in Plymouth.

Estimate of Need

Since 2000, Plymouth has issued building permits for an average of 353 new housing units per year. Most of these new units are associated with The Pine Hills Community. Assuming the Town continues to absorb 353 units each year for the next five years, Plymouth's total housing inventory will grow by 1,765 housing units. Making 10% of all new units affordable to low- or moderate-income households would require at least 36 per year. However, in the next 5-10 years, Plymouth expects to issue building permits for about 300 units per year in The Pine Hills alone, which means 1,500 new market-rate units without any contribution to the Town's affordable housing inventory. If all new developments were targeted to increase Plymouth's affordable housing by 10%, approximately 70% (36 of every 53) of all new dwelling units outside The Pinehills Community would have to be restricted as affordable units. This is not only an unrealistic goal, but also one that fails to move the Town closer to the 10% minimum. In fact, it would barely maintain the status quo.

According to Census 2000, the median family income in Plymouth ranges from \$38,380 in the North Plymouth area to \$50,344-\$76,688 in other parts of town. Households between 80%-150% AMI would be able to purchase units ranging from \$140,000 to about \$263,000, based Executive Order 418 calculations. The Town estimates that less than one-third of its households could afford the January 2003 median single-family home sale price of \$276,500; by the end of 2004, the median single-family home sale price was \$325,450. Every indicator shows that housing affordability will continue to decline during the next decade unless the Town takes steps to address housing needs.

A draft of the new master plan indicates that in 2000, about 11% of Plymouth's housing stock appeared to be inexpensive owner-occupied housing. These units represent a potential opportunity to work toward the 10% goal, but they must be identified and confirmed, and the Town needs to establish programs to protect their affordability. As Plymouth continues to grow, an increasingly large percentage of its housing stock will be comprised of detached single-family homes on large lots due to current zoning regulations. These homes are not only unaffordable, but also fiscally detrimental to the Town, as shown in Table 31. Efforts to correct this imbalance should be a major growth management objective for the Town's Housing Plan. The Town needs ways to balance the impacts of new residential construction and simultaneously compensate for existing housing development that does not pay its own way. Overall, Plymouth should focus on higher-density affordable homes in growth areas to meet the fiscal needs of the Town while working to improve the availability of affordable housing.

Table 31: Cost of Community Service Impacts by Type of Residential Use: 2001⁵³

Unit Type	Total Estimated Service Cost	Break-Even Property Tax	Minimum Break-Even Assessed Value(5)
Single-Family Rural(1)	\$8,641	\$7,829	\$474,500
Single-Family High Density(2)	\$4,186	\$3,595	\$217,900
Multi-Family(3)	\$3,233	\$2,825	\$171,200
Empty Nesters(4)	\$2,215	\$1,773	\$107,500

Source: RKG Associates. Data based on FY 2001 conditions.

Housing Objectives

Housing Production Priorities

Measure to provide the most appropriate mix of housing should respond to a priority ranking system that defines what the Town wants to encourage, guides local officials in their evaluation of housing proposals, and provides a framework for public investment in affordable housing production. The following describe Plymouth's housing production priorities.

- Low - Any housing located outside the Town's designated growth areas.
- Average - Any housing located within a designated growth area but designed to have a negative municipal revenue impact.
- Above Average - Any housing that is designed to have a positive municipal revenue impact and is located within a designated growth area, and/or includes Local Initiative⁵⁴ affordable housing inside a designated growth area.

With these rankings and appropriate incentives and requirements, the Town and private developers can collaborate to produce the best mix of housing types for Plymouth's optimal fiscal and social well being. In addition, these priorities are integral to implementing many of the Town's land use objectives, such as linking zoning bonuses with development proposals that contribute to priority housing production. The priority classes provide a valid basis for determining the merit of different proposals, based on a measurable public benefit.

⁵³ RKG Associates, Plymouth Economic Development Strategy (2001). (1) Single-family homes on lots > 1 acre; (2) single-family homes on lots < 1 acre; (3) all residential and mixed-use property containing two or more dwelling units; (4) condominiums, mobile homes, or age-restricted housing. Based on representative tax rate of \$16.50/thousand.

⁵⁴ Local Initiative Program (LIP) The Local Initiative Plan (LIP) is a State housing program that gives municipalities flexibility in their efforts to provide low and moderate-income housing. The Town through a variety of entities sponsors LIP projects, such as: a Housing Authority, non-profit, municipal department, municipal authority and the Board of Selectmen. An example of this is the production of a single family home in the Shallow Pond Estates subdivision (in Plymouth) by the Redevelopment Authority.

Town-Wide Objectives

GENERAL HOUSING OBJECTIVES

- Establish zoning provisions for allowing more efficient alternatives to single-family detached housing, especially accessory units.
- Allow and encourage transfers of development rights from priority protection areas to any of the growth areas, where adequate infrastructure can be provided.
- Commission a study to determine the approximate market value of a single development right in each market area of the Town. Then use this information to calculate appropriate density or equity incentives for transferring development rights.
- Establish incentives and regulatory provisions to encourage Above-Average and High Priority housing production. Incentives should include density bonuses and growth rate cap exemptions.
- Develop a mechanism to monitor quarterly the market demand for the various housing types in greater Plymouth region.
- Form a community development corporation (CDC)* to raise money and secure sites in most acceptable locations for housing accommodation.⁵⁵
- Use new CDC to help relocate and convert housing potential to higher density, revenue-positive housing in preferred growth areas.
- Use proceeds from CDC sales of value-added development sites to buy land or development rights in priority protection areas.
- Adopt reliable protection measures to compensate landowners who do not develop the number of home sites allowable under 2003 zoning.
- Limit housing densities in priority protection areas outside of growth areas to ten acres per unit where compensatory protection options are available; provide for special permit for higher density if protection assistance is not available.
- Establish maximum residential density levels within each growth area level.
- Allow attached housing, and other forms of efficient land utilization as alternatives to single-family sprawl housing in priority protection areas, where land cannot otherwise be protected.

⁵⁵ *Note: A CDC is not a town entity, rather, it is a private, community-based non-profit created under state regulations.

TOWN-WIDE AFFORDABILITY OBJECTIVES

- Provide for staff, for the Town housing office or a non-profit housing agency to initiate and implement the Affordable Housing Plan.
- Encourage the creation of at least 10 affordable housing units per year, split between retention and production approaches; exempt new affordable construction units from growth rate cap until town reaches at least a minimum of 0.75% increase of affordable units annually (affordable units =10% of year-round housing supply).
- Adopt an inclusionary housing bylaw to require private and town actions resulting in proportionate share of developed units as affordable.
- Establish an AFFORDABLE HOUSING TRUST as required for EO418 certification to receive and expend contributions to affordable housing production.
- Establish a policy to distribute affordable housing units throughout all of the growth areas; include mechanism for assuring this result.
- Document and prioritize local housing need every five years; tailor housing assistance programs to meet the priority needs.
- Authorize density bonuses to encourage market production of affordable housing; integrate with other development incentives (TDR, resource protection, etc.).
- Target public infrastructure upgrades to encourage siting/production of higher density housing that includes some affordable units.
- For all affordable units created, encourage styling and quality of construction similar to market units.

Housing Objectives for Villages

GENERAL VILLAGE HOUSING OBJECTIVES

- Adopt design guidelines and size & siting controls that promote compatibility of new housing in existing neighborhoods.
- Allocate quantities of new housing units in each village according to gross densities; allow greater quantities in North Plymouth and Plymouth Center, where higher densities prevail and Town sewer service is available.
- Encourage diversity in the mix of housing types in each village area
- Encourage mixed use in village commercial centers.

- Allow vertical housing construction to five stories and density bonus where infrastructure can accommodate such growth and historic resources will not be impacted.

VILLAGE AFFORDABILITY OBJECTIVES

- Encourage creation/production of affordable housing up to 10% of year-round housing stock in each village area.
- Provide zoning bonus for affordable housing that demonstrates reasonable availability of efficient transportation options for occupants.
- Emphasize geographic dispersion of affordable units within village areas; avoid 100% affordable projects.

Housing Objectives for Rural Areas

- Allow only low-density housing in rural areas that cannot be preserved.
- Along scenic rural and gravel roads, promote "estate lots" of ten or more acres with density incentive and/or installment buy-outs of development rights over time; make such incentives available to those who preserve a wooded buffer from roadway.
- Limit in-fill density in rural village areas to prevailing levels in the immediate surroundings.
- Discourage siting of higher density affordable housing in rural village areas.
- Encourage creative land use planning on parcels to limit density over the long-term, such as conservation restrictions, clustering, and other alternatives.
- Explore feasibility with developers of conversion of affordable market units to "countable" subsidized units, up to 10% of area units, in delineated rural village areas.

Affordable Housing Strategy

The Town's affordable housing strategy will be consistent with the goals and recommendations of the Comprehensive Master Plan. The Affordable Housing Committee has established overall priorities and an implementation schedule, and has evaluated a number of potential approaches to reach the overall objective of increasing affordable housing in the community:

- Highest Priority – the creation of new affordable housing units, and the conversion of existing units to affordable housing (whether or not the new units are deed-restricted) are the highest priorities of the Committee. These include acquisition of land and creation of additional zoning incentives to create opportunities for new affordable housing units. The

committee recognizes the need to create more affordable units in the near term and that conversion of existing housing stock has been identified as a feasible approach. The Committee also recognizes the need to create incentives and opportunities for new units to be created through zoning incentives for new construction and accessory apartments.

- High Priority – the conversion and retention of existing affordable housing units, including fiscal incentives to accomplish this goal.
- Priority – establishment of programs that will assist with retention and creation of affordable housing in the community over the long term.

Table 32 translates these priorities into specific action steps by type, officials or agencies responsible for implementation, and overall timeline.

Description of Use Restrictions

Affordable apartments and homeownership units in Plymouth will be affordable in perpetuity or for a pre-determined timeframe of at least 30 years. Affordability of rental units will be secured through a regulatory agreement with the development lender. The affordable for-sale homes will be protected by a perpetual deed restriction that meets DHCD requirements and preserves affordability for future buyers.

In general, any accessory housing units created by the Planning Board or Board of Appeals through the special permit process will also be deed restricted whenever possible, with the ability to revoke the affordability requirement on sale or transfer of ownership. If Plymouth decides to proceed with an illegal apartment amnesty program modeled after Barnstable's, the goal would be to assure that all amnesty apartments are brought up to code and protected by an affordable housing deed restriction.

PLYMOUTH HOUSING STRATEGY-SUMMARY TABLE

Action Item	Responsible Agency		Expected Impact on Affordable Housing Percentage/Goals	Timeframe
	Initiate	Adopt		
Land acquisition, either through purchase, deed restriction or donation, for creation of affordable housing and new units in village centers	AHC, CPC; PRA; NP	Board of Selectmen, RDA, CDC; NP; Town Meeting		2004 - 2005
Identification opportunities to convert vacant, underutilized, deteriorated or publicly-owned properties for creation of affordable housing primarily in village centers, including brownfield sites, Cordage Park, the abandoned K-Mart building and Revere Copper	CPC, AHC	Town Meeting or Selectmen		2004
ZONING CONTROLS				Ongoing
Inclusionary zoning	PB	Town Meeting		Fall 2004 Town Meeting
Demolition delay bylaw with incentives for creation of affordable housing or donations of structures for affordable housing	AHC, Historic District Commission	Town Meeting		2005-2006

Note: CPC – Community Preservation Committee; PHA – Plymouth Housing Authority; PRA – Redevelopment Authority; AHC – Affordable Housing Committee; NP = non profit; PB = Planning Board

PLYMOUTH HOUSING STRATEGY-SUMMARY TABLE

Action Item	Responsible Agency		Expected Impact on Affordable Housing Percentage/Goals	Timeframe
	Initiate	Adopt		
Identify barriers to affordable housing in the local permitting process, such as exempting affordable units from the building cap	PB, PRA, AHC	Town Meeting		2004-2005
Creation of affordable housing overlay districts and/or mixed use zoning districts in existing and new village centers (if any)	PB with AHC	Town Meeting		2005-2006
Create zoning incentives for affordable housing and affordable accessory dwelling units, such as allowing for teacher housing on "excess" municipal land	PB with AHC	Town Meeting		2005-2006

PLYMOUTH HOUSING STRATEGY-SUMMARY TABLE

Action Item	Responsible Agency		Expected Impact on Affordable Housing Percentage/Goals	Timeframe
	Initiate	Adopt		
Create flexible zoning standards for affordable housing, such as in the development of substandard lots through a special permit process to create affordable units	PB with AHC	Town Meeting		2005-2007
Allow density bonuses, with mitigation requirements, including coordination with the TDR option in the bylaw	Planning Board with AHC	Town Meeting		2005-2007
Impact fees	Planning Board, AHC	Town Meeting, State		2005
Village center open space cluster-style development	Planning Board	Town Meeting		Spring 2004 Town Meeting
Secure existing units with potential for affordable housing with affordable housing deed restrictions	CPC, AHC	Town Meeting; Various		2005-2006
Identify resources, needs and priorities for the preservation of existing affordable housing	CPC, AHC	Town Meeting; Various		2005-2007

PLYMOUTH HOUSING STRATEGY-SUMMARY TABLE

Action Item	Responsible Agency		Expected Impact on Affordable Housing Percentage/Goals	Timeframe
	Initiate	Adopt		
Expand Rental and Homeowner rehabilitation and repair programs if feasible	AHC; PRA; Community Dvpt. Dept.	Various		2005-2007
Retention of project-based Section 8 or Massachusetts Rental Voucher Program units	PHA; AHC	Various		2005-2008
Identify resources and needs for expanding homeownership opportunities in the Town, if feasible	AHC, PRA, Community Dvpt. Dept., PHA	Various		2005-2008
Explore tax incentives for creation of affordable housing	AHC, PRA, Community Dvpt. Dept., PHA	Various		2005-2008
Explore amnesty program for illegal apartments if deed-restricted (Barnstable model)	AHC; PRA; Community Dvpt. Dept.	Town Meeting		2005-2008
Identify potential alternative development and ownership models for affordable housing	AHC, PRA, Community Dvpt. Dept., PHA	Various		2006-2009
Explore property tax relief for owners of affordable housing	Assessors, PB; AHC	Town Meeting		2004-2005

PLYMOUTH HOUSING STRATEGY-SUMMARY TABLE

Action Item	Responsible Agency		Expected Impact on Affordable Housing Percentage/Goals	Timeframe
	Initiate	Adopt		
Conduct Community Outreach and educational programs to develop a broader constituency for the creation of affordable housing opportunities	AHC	Various		2005-2009, ongoing
Explore a transfer tax on real estate sales to create an affordable housing funds pool for Plymouth	PB, PRA, Community Dvpt. Dept., PHA; AHC	Town Meeting		2005-2008
Create an Affordable Housing Trust Fund that serves as a legal mechanism to account for and report housing-related revenue separate from the Town's General Fund: -Home Rule Petition, e.g., Lexington and Acton, <u>or</u> -Chapter 491 of the Acts of 2004	PB, AHC, Community Dvpt. Dept.	Town Meeting		
Explore expansion of home-sharing and congregate housing expansion opportunities	PHA, private sector; AHC	Various		2005-2009

APPENDIX A

Plymouth Comprehensive Master Plan

Plymouth has met the requirements of a Comprehensive Needs Assessment through the creation of an update of the Comprehensive Master Plan in 2002-2004. In addition to covering housing and affordable housing needs, the Master Plan assesses and recommends policies for land use, economic development, the protection of natural and cultural resources, open space, public services and facilities, and transportation. Plymouth's first Master Plan was completed in 1966. In 1998, the Town convened a Master Plan Committee to update the 1980 Master Plan and determine if it was in compliance with Massachusetts General Laws, Chapter 41, Section D. The Committee began its work in 1999 and, utilizing a grant from the Executive Office of Communities and Development, held several public forums that drew many participants.

The following pages contain information that is excerpted and summarized from Executive Summary and Recommendations Section of the draft update of the Town of Plymouth Comprehensive Growth Management Plan, dated October 2003, with edits from February 2004. The Master Plan is not yet adopted, but is in the final stages of editing. These excerpts deal specifically with housing-related framework issues, although other priorities are also listed, they are not presented in great detail for purposes of this Affordable Housing Plan. The Master Plan represents hundreds of hours of community input and professional expertise, and presents a framework for the future in which any plan for affordable housing should be developed. Development of affordable housing is listed as a high short-term and long-term priority in the Master Plan recommendations. [The Affordable Housing Committee recognizes that this document is in draft form, and that amendments to the final Comprehensive Growth Management Plan will over-ride draft information contained in this document.]

Plymouth's Master Plan represents a revised framework for both preservation and growth. This framework sets forth what is most important to preserve, where growth is most acceptable, and how growth shall be accommodated. It also expresses specific roles of the Town and expectations of private property owners in terms of what each can do to help achieve this vision of both preservation and growth. The Plymouth Master Plan provides a policy framework for future preservation and growth efforts. The Plan is intended to guide the Town's land use, development, and conservation decisions for the next 15 to 20 years.

Priority Goals and Vision Statement

Priority Goals

Throughout the master planning process, the Committee continually considered issues that squarely fell into six fundamental priority categories, which have now become the foundation blocks of this Plan. These priorities served as the basis for the formulation of Plymouth's vision for the future and for prioritizing the various recommendations. The six planning priorities are as follows:

- Control Sprawl
- Encourage Economic Development
- Balance Costs and Growth
- Preserve Character
- Protect the Environment
- Improve Quality of Life

Master Plan Vision Statement

While each Plymouth citizen holds a unique dream for his or her own future, there are several common desires for the community as a whole, which have been repeatedly expressed through many different forums. First, the Town will retain its outstanding visual character, which is defined by its vast natural areas, pristine ponds, rivers, and wetlands, extensive coastline, and wooded ambiance. Second, the Town will efficiently provide a full array of services and amenities through its success in achieving and sustaining smart growth. Third, economic prosperity will prevail through abundant opportunities for desirable business investment, employment, shopping, tourism, housing choice, and entrepreneurship. The successes in plan-making and plan implementation will be reflected in a beautiful, maturing community with something for everyone. With vibrant and pleasant village centers, a preserved and enhanced historic heritage, long stretches of accessible coastline, integrated areas of commerce and compact housing, and vast, connected areas for open space, outdoor activities, and appreciation of nature, Plymouth will be an even more desirable town to live in than it is today.

Strategies for Addressing Priority Goals

Control Sprawl

Sprawl can be controlled by guiding future growth to specific, compact areas where it is most acceptable and can be most efficiently accommodated by existing infrastructure and services. Concurrently, aggressive initiatives to preserve priority natural areas and the rural landscape, in general, can complement the growth guiding mechanisms. These mechanisms include incentives and regulations aimed at redirecting potential housing away from valuable resource areas to the designated growth areas. The growth accommodation areas consist largely of the five village areas (plus the Pinehills Community) as well as portions of current and future commercial zones where mixed use is recommended. Growth may also occur as discreet, smaller versions of the Pinehills, where private infrastructure, compact development, revenue positive housing, and preserved open space converge to make nearly self-sustained communities, provided they do not threaten the priority resources this Plan seeks to protect.

This strategy also recommends accommodating higher residential densities than traditional

zoning currently allows with the highest allowable densities in mixed use zones and moderate densities as infill within the five traditional village areas. The density and development patterns for the Pinehills have already been established.

Since new growth within existing developed areas would strain current transportation resources, this Plan recommends a significant investment in creating an efficient transportation network that includes convenient transit and fewer reasons to use a car within the growth areas. It also recommends focusing infrastructure spending within the growth areas and avoiding extension of new municipal infrastructure outside the village and commercial/industrial growth areas.

Growth can also be further encouraged to locate in the growth areas by lowering the allowable density in the preservation areas but with equitable options for affected properties. One such option recommended herein is transferable development rights, which allow some or all development potential to be shifted from one site to a more suitable location.

In the course of preserving land, the Town should track the number of housing units avoided through permanent protections and use up to 50% of such units as a pool from which permitting boards can disburse density bonuses in exchange for developer/owner cooperation in implementing this Plan.

Encourage Economic Development

The recommended approach to improving local economic and fiscal conditions consists of four major elements: new commercial and industrial development, re-development, tourism enhancement, and cost containment. The Town should allow market forces to continue the build-out of commercial and industrial zones while reserving options for additional commercial and industrial growth areas. It should encourage and support re-development efforts at Cordage Park, prime commercial highway locations, and the village areas, in general.

Balance Costs and Growth

First, the "smart growth" principles recommended above for controlling sprawl will enable the Town to avoid significant infrastructure costs by eliminating the need for hundreds of miles of additional roadway and water mains to maintain and replace. Second, the new emphasis on compact development will lead to construction of a greater percentage of housing types that cost the Town less to service than the sprawl pattern driven by current zoning that emphasizes detached single-family homes on large lots. A recent detailed cost of community services study for Plymouth has shown conclusively that the average detached single-family home annually costs more in services than it generates in tax revenue, a finding that matches results of similar studies done across the country.

In addition to the smart growth initiatives and adjustments to the housing type mix, the Town can realize savings from encouraging/requiring the provision of privately built and maintained infrastructure, as provided at the Pinehills Community. Density bonuses and municipal

infrastructure expansion limits are also recommended to facilitate private infrastructure.

Higher density residential uses will require new wastewater treatment where public sewer service is not available. These facilities would be provided by each project until a more regional solution can be feasibly implemented through a realistic sewer district rate structure. Betterment assessments and impact fees are also recommended as options that could help defray municipal infrastructure costs.

Preserve Character

If Plymouth is to retain its semi-rural historic appeal and serve as a highly memorable destination, the Town should invest a variety of resources in preserving the remnants of its past and integrate them into the normal visitor's experience.

Protect Environment

Successful environmental stewardship requires widespread participation by landowners and State/town agencies and officials. For this reason, the right approach requires a blending of incentives, guidelines, coordination, and regulation to optimize the "pull together" effect. The majority of at-risk resources lie within the mapped priority protection areas. So the recommended approach here is similar to the approach for controlling sprawl, which is to guide new growth into acceptable areas and away from sensitive resources while focusing resources on protecting priority resources.

The most promising and cost-effective tool for protecting Plymouth's vast natural areas is TDR or Transferable Development Rights. With such system in place in the Town's by-laws, development potential can be transferred from sensitive preservation areas to areas where growth is more acceptable and better served by infrastructure and services. An evaluation of incentives for use of this tool is encouraged.

Improve Quality of Life

Progress made toward addressing virtually all of the above goals will help improve the quality of life in Plymouth. Other specific recommended measures would also have direct benefits for residents. These include expanding coastal and pond access, increasing recreation options, improving the appearance and vitality of village centers, increasing the number and variety of eating establishments, and increasing cultural venues. The recommendations are varied but they involve the same general approaches as previous priority goals: incentives, guidelines, coordination, and regulation.

Short-Range Recommendations (1 to 5 Years)

The following recommendations are deemed to be of greatest immediate importance in advancing the planning objectives. These actions should be initiated in the order presented and completed as the existing and future resources the Town can realistically allow. Note: Many of the specific tasks will be ongoing, but early initiation/recognition is of utmost importance.

Gauging community support for implementation actions should precede their initiation.

Designate areas for preservation and areas for growth.

The Planning Board should revise the zoning map to establish preservation and growth overlay districts.

Focus growth intensity around current and future transit hubs.

The Planning Board should include in its zoning recommendations incentives and requirements to guide growth to locations nearest transportation hubs to enhance the efficiency and sustainability of local transit service.

Establish Town infrastructure expansion limits.

The Board of Selectmen, Capital Outlay Committee, and Finance Committee should adopt a joint policy resolution to substantially limit the extension of town infrastructure to village centers. Maintenance of existing infrastructure investments, public health emergencies, and infrastructure for town facilities should be exempt from this policy.

Establish framework for balancing housing mix.

The inventory and analysis has shown that annual housing production in Plymouth typically creates mostly sprawl-style housing and few, if any, affordable housing units. This imbalance is very costly in terms of high annual municipal service costs required for the inefficient, sprawl pattern of housing. The lack of affordable housing undermines economic development initiatives while forcing hardship and change on a large segment of the population. Correcting this imbalance is the single most important challenge before the Town, as it will mean the difference between financial sustainability and courting a severe fiscal crisis (service cuts and higher taxes and insufficient resources for community preservation or improvement).

Adopt new standards for development in growth and preservation areas.

Mixed use should also be facilitated in certain highway commercial zones to allow high density residential uses to be integrated with commercial uses, pursuant to appropriate design criteria. This approach makes for optimal use of commercial areas while providing efficient locations for transferred housing units.

Prevent incompatible development in economic expansion areas.

The Town should assure that areas designated for future economic opportunities do not fill in with incompatible residential development. To this end, the following steps should be taken:

The Planning Board should prepare zoning amendments to restrict single-family development in the designated economic growth areas, allowing for just compensation through deferred development incentives or transfer (away) of single-family development rights until the permanent zoning is in place in such areas, following adequate provision for infrastructure.

Facilitate new growth patterns and increased tourism with adequate transportation resources. The Board of Selectmen should create and appoint a new volunteer Transportation Advisory Committee (TAC) to explore transportation options and annually report its recommendations to the Board.

Encourage Cordage Park redevelopment.

Pursue the use of impact fees.

Address wastewater treatment issues.

The Town should retain a consultant to assist the Planning Board and Board of Health in exploring the options and costs for providing wastewater treatment solutions for the designated growth areas that lack current and future access to the Town's current sewer system. While a town-wide wastewater solution is being explored, new high-density development will require individual treatment systems or connection to the Town sewer system. The Planning Board and Board of Health should collaborate with MA DEP to evolve a consistent policy approach to small-scale private sewage treatment plants. Such systems should be permitted in nitrogen-sensitive areas only if the following conditions are met:

The addition of the plant will improve the current groundwater quality of the affected area
The plant discharge is more than 2,000 feet from a sensitive pollutant receptor including any pond, stream, Zone I well head area or private well.

Encourage growth to provide its own infrastructure.

Due to the inherent cost savings from privately built and maintained infrastructure, especially wastewater treatment, the Planning Board should prepare zoning amendments aimed at encouraging this manner of growth while the ultimate complement of Town infrastructure comes into being. Encouragement through density bonus incentives and attached development options should be added to the existing "adequate facilities" provisions in the Zoning Bylaw.

Match growth capacity to capacity of available infrastructure.

The Planning Board should prepare zoning amendments that aim to permit development that meets or exceeds standards for infrastructure capacity and reasonable function. Since the Town will benefit from the long-term cost savings of compact growth in appropriate locations, incentives to assist developers in meeting the capacity challenges are warranted. In addition to incentive bonuses, the Town permitting agencies can permit additional development capacity and advise the capital planning process of the need to include certain improvements within a certain time frame in order to cost share with the developer. Impact fees, as discussed above in section 5.4.1.17, would help the Town to take this approach in a more balanced manner.

Promote historic resources.

The Town has the substance available for abundant connections with the past through its historic structures and places. However, the lack of a coordinated effort to restore, maintain, and promote the Town's historic treasures has limited the Town's success with heritage tourism.

Protect priority natural resources.

Provide density bonuses for planned growth development that provides remedial water quality benefits to adjoining areas (i.e. for projects that will provide advanced wastewater treatment for adjacent land uses). Preserve scenic roads, scenery related to water features, and the quality of coastal environment. Expand coastal access in all four coastal villages; increase pond access town-wide. Encourage pedestrian and bicycle travel. Establish new recreation areas.

APPENDIX B

Village and Rural Area Summaries

North Plymouth Center

North Plymouth is an established community characterized by a dense mixed-use development pattern. It has historically been a center of population and employment. The center extends from the town's boundary with Kingston on the north, Nelson Memorial Park to the south, Route 3 to the west and Plymouth Harbor to the east. Municipal sewer and water service this section of the Town, although many dwellings and commercial buildings do not utilize both services. The focal point of this village is Cordage Park, which is undergoing a shift from a retail center to an office complex and marina.

Commercial uses are clustered on Court Street. Additional commercial uses mixed with high-density residential uses can be found along each of the principal streets leading to the Center. Dense residential development, consisting of multiple family dwellings, is typically located adjacent to or within one block of commercial development on Court Street. Although most of the area is zoned for high density residential and commercial development, the population has been fairly stable over the past ten years, increasing from 4,029 in 1980 to 4,314 in 1990 and 4,395 in 2000. This stability is due in large part to the lack of available land for new development.

Plymouth Center

Plymouth Center is bounded to the north by North Plymouth (Nelson Street), to the south by the Pilgrim Plantation Highway, to the west by Route 3 and to the east by Cape Cod Bay. This area grew by an estimated 30.8 percent from 6,024 in 1970 to 7,880 in 1980, and by only 8 percent from 1980 to 8,537 in 1990. The 2000 population is estimated to be 8,941, a 4.7 percent increase since 1990. Land use has historically been of large single and two family homes located off the Main Street/Court Street commercial area. Waterfront and tourist related uses along Water Street near Plymouth Rock have also been long established.

The Plymouth Center/Waterfront area has been blessed with both natural and man-made features that make it attractive for both visitors and residents. From its waterfront to its many parks, gardens, beaches, athletic fields, and commons, the environment is particularly cordial. The central feature of the area is Plymouth Harbor. Anchored by Nelson Memorial Park to the north and Stephens Field to the south, it compares favorably in natural beauty to many locations worldwide. This protected harbor shelters an active commercial fishing fleet, as well as pleasure boating and tour-boat operations. The waterfront was identified as the favorite spot by residents surveyed by the Master Plan Committee in the past year.

In recognition of the unique character of downtown/waterfront area, the Town passed several significant changes to the bylaws regulating development in this area. The Town has expanded

the Historic District to include most of the Downtown/Waterfront area. In addition, a Downtown/Harbor zoning district was created. This district is designed to assist in revitalizing the downtown/harbor area. The district increases the flexibility in the types of uses allowed. Municipal services are available throughout this area. The Downtown/Harbor District is recognized as the primary commercial, cultural, and governmental center of Plymouth. In April of 2002, the Plymouth Downtown Waterfront & Business Development Plan was completed, which provides a comprehensive plan for improvements to this portion of Plymouth, and the Downtown/Harborfront Plan update is scheduled for Town meeting adoption in the Spring of 2004. Many renovations of historic buildings have taken place in the last five years in this area, improving the quality of the visual and cultural experience of the downtown area.

Manomet

Manomet is roughly bounded by the Pilgrim Power Plant Access Road and the Pine Hills to the north, Cape Cod Bay to the east, the cranberry bogs to the west, and Indian Brook to the south. Manomet retains a rural/historic feel along the single arterial roadway, Route 3A. Manomet's recreational character thrives with intensive summer activity at the White Horse and Taylor Avenue beaches.

The development that has occurred in Manomet can generally be categorized by the following trends. The first trend was established during a period from the 1920s to the 1950s. During this thirty-year period many small lot, seasonal, single family settlements were created along the shoreline. Much of Manomet's housing stock was originally built as vacation homes for Boston area residents. The second trend has been the ongoing conversion of many of these older seasonal homes to year-round use. The next trend that has been occurring is the construction of scattered, large lot, single family dwellings on existing roads within the village. The fourth trend is the development of several single-family residential subdivisions throughout Manomet. The final trend is the continued commercial development occurring in the village center. The increase in the retail stores, banks, and service businesses is a result of the steady increase of population. The 2000 population, according to the U.S. Census, is 6,479, an increase of 12.6 percent since 1990 (according to the 1990 U.S. Census, the population of Manomet was 5,753).

Most of the land areas along Route 3A are serviced by the Town's public water system. The Indian Brook Elementary School serves the central and southern portions of Manomet, and the Manomet Elementary School located on Manomet Point Road serves the northern section. State Road (Route 3A) is the principal arterial roadway through the Village. Access to Route 3 is indirect but not difficult via State Road or Beaver Dam Road. Current zoning provisions allow for medium and small lot residential development east of State Road.

Cedarville

Ellisville Road and Hedges Pond bound Cedarville to the north, to the south by the Town of Bourne, to the west by Little and Great Herring Ponds, and to the east by Cape Cod Bay. The

area was designated as a village center due to the proximity of Exit 2 and the absence of a village service area in the southern area of town. This village had the largest percentage population increase in the 1970s and the 1980s when compared to the four other villages. The population increased by eighty-five percent from 705 in 1970 to 1,304 in 1980 and by seventy percent from 1980 to 2,211 in 1990. The population is estimated at 2,737 in 2000, a 23.8 percent increase since 1990.

With small lot zoning and direct accessibility to Route 3, residential development has been explosive. The growth is expected to continue with particularly heavy pressure in the area near Long Pond Road, Route 3 and the Hedges Pond area. The zoning in Cedarville allows for single and two family dwellings on lots ranging in size from 20,000 and 35,000 square foot lots. The State Road corridor is the only area with public water. There is no public sewerage in Cedarville. This does not generally constrain development within the village.

The Village Center is located at the junction of Routes 3 and 3A, providing immediate access to the highway. This accessibility is expected to continue to stimulate new growth. The most recent developments include the construction of a Shaw's Supermarket, White Cliffs (402 condominiums and an 18-hole golf course) and construction of several other commercial businesses. A 175,000 square-foot retail shopping center has recently received a special permit for construction in this location, but is currently under appeal by a third party. If constructed, there will be improved vehicular and pedestrian access in the highway intersection area. Additionally, 2003 Town Meeting has approved expansion of the commercial zone to allow for more commercial/industrial office space in this area.

West Plymouth

West Plymouth is bounded to the north by the Town of Kingston, to the south by Billington Sea and Myles Standish State Forest, to the west by Plymouth Airport, and to the east by Route 3.

Unlike Plymouth's other village centers, West Plymouth does not have a "traditional" or historical commercial center. In fact, this village exemplifies the impact that automobile transportation has had on the pattern of residential, commercial, and industrial development. During the ten-year period from 1970 to 1980, West Plymouth's population increased by 478 percent from 1,793 in 1970 to 8,569 in 1980. Although less dramatic, the population grew at a rate of 29 percent from 8,569 in 1980 to 11,067 in 1990. The population as of 2000 is estimated to be 11,534, an increase of 4 percent since 1990. Before 1965, land use within this area was confined to forestry and agricultural uses, with seasonal residences on Clear Pond and Pine Wood Lake and scattered low-density year-round residential development along each side of Route 44. West Plymouth has strong recreation roots associated with its ponds and woods, but many former camps and cottages are being converted to year-round use. The growth rate in this area is expected to remain relatively stable given the limited amount of remaining developable land.

Arterial Commercial Zoning at the intersection of Route 44 and Route 3 is designed to encourage

vehicle-oriented uses near this infrastructure. Route 44 is undergoing an upgrade to a divided highway. A portion of this area, adjacent to the West and North Plymouth Village Centers, has been zoned Mixed Commerce, and is the site of an 865,000 square-foot retail shopping center which is expected to become a regional shopping destination. It serves residents within West, North and downtown Plymouth as well as many other residential areas throughout Plymouth. The Plymouth North Triangle Industrial Park is located in the northern portion of the village.

More than any other portion of Town, the Village of West Plymouth and its development pattern was affected by the demand for suburban homes in the late 1960s and 1970s. The immediate access to Route 3 and the availability of inexpensive developable land along such major roads as Route 44, Federal Furnace Road and South Meadow Road were the main catalysts of this growth.

Pine Hills Area

The Pine Hills area is bounded by Plymouth Center to the North, Manomet Center to the south, Route 3 to the west and Cape Cod Bay to the east. The population of the area was estimated to be 1,076 in 1980 and 1,672 in 1990. According to this information, the population of the Pine Hills Area appears to have grown by a whopping rate of 55 percent. A more plausible explanation is that in 1980 the Pine Hills population was over-estimated, and the Manomet population was under-estimated, in 1980. This error was a result of the less defined nature of the 1980 census information. The population is estimated to be 1,836 in 2000, a 9.8 percent increase since 1990.

The northern section of this area is commonly known as Chiltonville. The majority of the Pine Hills Area is zoned for 120,000 square foot density development. Slightly denser development is allowed in the Chiltonville area where 40,000 square foot lots are allowed.

A large undeveloped tract of rural residential land, commonly referred to as the geographic Pine Hills, acts as a buffer between the Villages of Plymouth and Manomet. The western boundary of this area is Old Sandwich Road, the southern boundary is Beaver Dam Road, the northern boundary is Clifford Road and the eastern boundary is Cape Cod Bay. The Pine Hills, with an elevation of 395 feet above mean sea level, are the highest coastal hills on the East coast, south of Maine's Acadia National Park. The hills have been a geologic landmark for navigation for hundreds of years. Entergy (the power company) owns 1,600 acres in the Pine Hills area. These tracts include much of the Pine Hills from Old Sandwich Road to Cape Cod Bay, and this land is not permanently protected, although it serves as an important security buffer to the nuclear power plant operated by Entergy.

In 1996, Town Meeting adopted the Open Space Mixed Used Development (OSMUD) special permit process. A mix of residential, retail, and industrial uses are permitted through the OSMUD, and in return, seventy percent of the property must be set aside as open space. The OSMUD process was developed to provide an alternative for 3,500 acres of the Pine Hills property, which was owned by Digital Equipment but identified for potential development at the time. The Digital Equipment land was purchased by Pinehills, LLC in 2000. A Master Plan for

the 3,500 acres under the OSMUD special permit process was adopted, using a community name of "The Pinehills." The Pinehills community is permitted to have up to 3,000 households, although the homes are required to have the master bedroom on the first floor to limit the number of families with young children purchasing in the community, and a portion are age-restricted. Approximately 400 homes have been constructed as of autumn 2003, and build-out is expected over roughly a twenty-year horizon.

Bourne Road Area

The Bourne Road Area (also known as South Plymouth) is bounded to the north by Myles Standish State Forest, to the south by the Towns of Bourne and Wareham, to the west by the Towns of Carver and Wareham, and to the east by Route 3 and Great Herring Pond. The Six Ponds region is included in this general area (Long Pond, Bloody Pond, Halfway Pond, Gallows Pond, Little Long Pond and Round Pond).

The population of this section of Town grew by 113 percent from 3,028 in 1980 to 6,453 in 1990. The population as of January 1, 2000 is estimated at 8,200, a 27 percent increase since 1990. This population change represents the largest numerical increase for any section of Town. The high growth rate is expected to continue in the coming years.

Historically, development in South Plymouth (Long Pond Road and Bourne Road) was seasonal in nature. Development occurred around Big Sandy, Great Herring and White Island Ponds. Dominant land uses were cottages, summer camps, cranberry production and forestry.

Over the past twenty years, South Plymouth has been the fastest growing non-village center area in the Town. The growth has been from both new construction and conversion of summer cottages to year-round dwellings. The Ponds at Plymouth, an 824-lot subdivision, is located in this area. Town services are limited in this rural section of Plymouth. The low purchase price of existing seasonal homes, the availability of undeveloped lakefront property, and the recreational potential within this large geographical area have created an environment favorable for year-round living.

Accessibility to this area is via Bourne Road, Long Pond Road, Hedges Pond Road, Lunn's Way and Herring Pond Road. Many of the area's older residential neighborhoods are serviced by poor-quality asphalt or gravel roads. New roads, especially Lunn's Way and Amanda Avenue built in the Ponds at Plymouth subdivision, have created a new east-west connection between Bourne Road and Long Pond Road, improving access to the south central portion of Plymouth.

Most development in the northern portion of this area, along Long Pond Road from the State Forest to Herring Pond, and along the northern portion of Bourne Road, occurred during the late 1970s and the early 1980s. This area was almost completely wooded 25 years ago. Presumably the proximity of Myles Standish State Forest, easy accessibility to Route 3 via Long Pond Road and Beaver Dam Road, comparatively low land prices and the desire for remoteness from the more popular residential areas in Plymouth has encouraged development.

A.D. Makepeace, a large cranberry company, is proposing to develop approximately 3,400 acres of land in this general area, located primarily around Halfway Pond and between Bourne Road and the Wareham/Carver town line to the west. Currently, the area is zoned for rural residential 120,000 square foot lots. There is a community and Town effort to try to work with A.D. Makepeace to focus the potential development in ways that will protect and enhance open space and environmentally sensitive areas while limiting the impacts on town services.

Ellisville Area

Ellisville Harbor, located just north of Cedarville, is one of the most picturesque sections of Plymouth. It is bounded to the north by Manomet, to the south by Cedarville, to the west by Route 3, and to the east by Cape Cod Bay. Growth in the Ellisville Area has been heavy over the past twenty years. The population increased by 125 percent from 1980 to 1990 (from 1,113 to 2,506). The population is estimated to be 3,372 as of 2000, a 34 percent increase in the last decade, and a 203 percent increase since 1980. The area still retains much of its rural character through many acres of undeveloped woodlands and cranberry bogs; however, several small single-family subdivisions have been constructed in recent years, scattered throughout the area.

Federal Furnace Area

The Federal Furnace Area is generally located in the area between the Village of West Plymouth, Route 3 and Myles Standish State Forest. The Federal Furnace Area has grown at a relatively slow rate in comparison to the rest of the community. The population increased by 5.6 percent from 2,931 in 1980 to 3,095 in 1990. The population is estimated to be 3,413 in 2000, a 10 percent increase since 1990. The availability to lakes, ponds, and accessibility to commercial services has encouraged single-family residential development.

PLYMOUTH BOARD OF SELECTMEN
NOTICE OF PUBLIC HEARING

AMENDMENTS TO ZONING BYLAWS

Notice is hereby given that a PUBLIC HEARING will be held by the Plymouth Board of Selectmen in the Mayflower Hearing Room, Town Hall, at 7:45 p.m. on TUESDAY, January 31, 2006 to consider and hear comments on proposed amendments to the ZONING BYLAW OF THE TOWN OF PLYMOUTH pursuant to M.G.L. c.40R and 760 CMR 59.05(1). The public is encouraged to submit any comments to the Board of Selectmen in writing to Plymouth Board of Selectmen, Town Hall, 11 Lincoln Street, Plymouth, MA 02360, or in person at the hearing.

The Board of Selectmen will consider whether the provisions of M.G.L. c.40R and 760 CMR 59.00 and M.G.L. c.40S, "smart growth zoning" inclusive, shall be adopted as an overlay zoning district applicable to the existing Light Industrial/Waterfront (LI/WF) Zoning District, including Cordage Park. The Cordage Park Smart Growth District would allow mixed-use development and as-of-right mixed-income residential development at a density of twenty (20) units per acre that complies with design standards included within the overlay zoning bylaw. Twenty percent (20%) of all residential units in the Cordage Park Smart Growth District would be deed-restricted affordable housing. Adoption of a smart growth zoning district would entitle the Town of Plymouth to receive financial incentives provided for in M.G.L. c.40R Sec. 9 and 760 CMR 59.06 and M.G.L. c.40S.

The Board of Selectmen will consider all written and verbal testimony presented prior to the close of the public hearing, and will vote at the conclusion of the hearing on whether to recommend that the Planning Board proceed with consideration of the Cordage Park Smart Growth District at public hearings prior to the May 20, 2006 Special Town Meeting.

Map and text of all materials being considered at the public hearing will be available on January 23, 2006 and after that time may be viewed during regular business hours at the office of the Town Clerk, the Planning Board and the Board of Selectmen.

PLEASE DO NOT PRINT BELOW THIS LINE

Please print in the Old Colony Memorial newspaper on Saturday, January 21 and Wednesday, January 25, 2006. Please bill and send tear sheets of the above notices to:

Plymouth Board of Selectmen
c/o Department of Planning & Development
Town Hall
11 Lincoln Street
Plymouth, MA 02360
508-747-1620 x106

North Plymouth Steering Committee
January 11, 2006

RECEIVED

JAN 25 2006

PLANNING BOARD
PLYMOUTH, MA.

Plymouth Planning Board
11 Lincoln Street
Plymouth MA 02360

Gentlemen:

re: Cordage Park

On this date, the Committee met with Jerry and Lou Jannetty, owners of the Cordage Park property, and with Angus Jennings and Ted Carman of Concord Square Development Company, planners, to review and discuss the conceptual plans for the future development of Cordage Park.

In general, the Committee **supports the plans as presented so far, and particularly endorse** the facilities for public use and enjoyment on the water side of the property and the tie-in to the Seaside Trail.

There is concern over the fate of the tall smokestack attached to the **proposed-for-demolition Mill #2**. This chimney, which can be seen for miles, has been **an icon on the** Plymouth skyline for a century or more, and should be retained. We realize that to restore it to original condition will be an expense but if it enables it to endure **another 100 years** it would be worth it.

Another concern expressed was the need to **plan for traffic and development of Hedge Road and Boundary Street**, which will inevitably be impacted by the increased activity along the waterfront. Both of these streets are **relatively unoccupied at the present time** and provide an ideal opportunity to lay out **plans and guidelines rather than waiting for** the first individual building cases to apply.

Sincerely yours,



Charles F. Vandini, Chairman

Pc: Mr. Jerry Jannetty, PCC
10 Cordage Circle
Plymouth MA 02360

North Plymouth Steering Committee

January 11, 2006

Members present: Charles Vandini; John Handrahan; Kevin Leary;
Enzo Monti; Joan Tassinari

Absent: Paul Barcellos, Mary Cash

Also present: Lucile Leary; William Rudolph

The meeting was opened at 7:00 PM in the Loring Center by Chairman Charles Vandini.
Minutes of December 14, 2005, were accepted.

RECEIVED
JAN 25 2006
PLANNING BOARD
PLYMOUTH, MA

The meeting was devoted to the presentation and discussion of the conceptual plans for the future development of Cordage Park by Jerry and Lou Jannetty, principal owners over the last five years, and Angus Jennings and Ted Carman of Concord Square Development Company, planners. Also present were Lee Hartmann, Plymouth Director of Planning and Development, and Nick Fila and Loring Tripp of the Plymouth Planning Board.

In general, Mills #1 and #3 would continue as office spaces, Mill #2 and the former Walmart building would probably be razed, and a new entrance road would be located to provide a **straight view through** the complex to the harbor. Approximately 500-700 **residential units** would be created in both new and rehabilitated buildings, and **the waterside portion** would also include consumer-oriented facilities which would be open to the public and tied into the Seaside Trail.

The project is being considered for application of the recently-enacted legislation 40R which provides **incentives for communities** which follow "smart-growth" principles by locating development in areas with a concentration of infra-structure, preferably already in place, and which reserve **20%** of the units for affordable housing. For projects which meet the appropriate criteria, the state will pay to the community a per-unit amount upon approval of the **plans**, a larger amount upon the completion of construction, and a continuing **formula-based subsidy** for any school-aged children residing in the eventual complex. Once participation is approved by the state, priority is granted for state capital expenditures, and construction attains "as of right" status, although the community can set design standards.

The Committee supported the project in general. Concerns were voiced regarding the tall smokestack which has been a landmark of the Plymouth skyline for over 100 years and its retention is strongly urged. Planning should address the traffic patterns not only on Court Street but also on Hedge Road and Boundary Street; this committee has drawn attention to this need to the Department of Public Works in the past. A public hearing on this proposal is planned for January 31.

Meeting adjourned at 8:40 PM.

NEXT MEETING: Wednesday, February 8, 2006, 7:00 PM Loring Center
Cordage Historical Society meets same date, 5:30 PM, in the Museum

- Enzo Monti





TOWN OF PLYMOUTH

Department of Public Works
11 Lincoln Street
Plymouth, Massachusetts 02360
(508) 747-1620

George Crombie
Director of Public Works

December 16, 2005

Mr. Joseph Jannetty
Cordage Commerce Center
10 Cordage Park Circle, Suite 201
Plymouth, MA 02360

COPY

Subject: Cordage Park Sewer Bank Allotment
Permit #SB245

Dear Mr. Jannetty:

This letter is to confirm your recently completed negotiations with the Town of Plymouth regarding the Sewer Bank flow allotment for Cordage Park.

The agreement stipulates that Cordage Development LLC is entitled to 98,000 gallons per day (GPD) of Sewer Bank flow less any development since the implementation of the Sewer Administrative Consent Decree.

You will still be required to submit Sewer Bank applications with **flow calculations** for any building construction or modification projects with Cordage Park. **The fees will be waived** until this allotment is used; all development beyond that point will be subject to whatever Sewer Bank fees are in effect at the time of application.

We have assigned Permit #SB245 to cover all of your building projects until **this allotment is used up**.

If you have any questions regarding this matter, please call me at 508-747-1620, ext. 129.

Sincerely,

Paul Wohler
Utilities Superintendent
Plymouth Department of Public Works

Cc: George Crombie, Director of Public Works
Mark Sylvania, Town Manager

Ref: 4406

December 27, 2005

Ms. Ellen Remlinger
 Office Manager
 Cordage Commerce Center
 10 Cordage Park Circle, Suite 235
 Plymouth, MA 02360

Re: Court Street (Route 3A) and Cordage Commerce Center
 2005 Traffic Volume Observations
 Plymouth, Massachusetts

Dear Ms. Remlinger:

Vanasse & Associates, Inc. (VAI) has completed the collection of traffic volume data along Court Street (Route 3A) and on the primary driveway serving the Cordage Commerce Center located at 10 Cordage Park Circle in Plymouth, Massachusetts. The traffic volumes were collected by means of an automatic traffic recorder (ATR) over a continuous 48-hour period from Friday, December 16, 2005 through Saturday, December 17, 2005. Tables 1 and 2 summarize the daily and peak hour traffic volume data for the Route 3A and the primary driveway serving the Cordage Commerce Center, respectively, with the detailed traffic counts attached.

**Table 1
 DECEMBER 2005 TRAFFIC VOLUMES
 COURT STREET (ROUTE 3A)
 PLYMOUTH, MASSACHUSETTS**

Time Period	Friday/Saturday			
	Daily (Vehicles)	Morning Peak ^a (vph)	Midday Peak ^b (vph)	Evening Peak ^c (vph)
Route 3A, South of Boundary Street	13,125/11,385	680/486	1,002/1,058	1,124/747
Route 3A, South of the Cordage Commerce Center Exit Only Drive	11,810/10,440	607/461	895/960	978/675
Route 3A, North of Hedge Road	12,990/10,985	684/516	1,027/1,027	1,077/700

vph = vehicles per hour.

^aHighest traffic volume hour between 7:00 and 9:00 AM.

^bHighest traffic volume hour between 11:00 AM and 2:00 PM.

^cHighest traffic volume hour between 4:00 and 6:00 PM

Table 2
DECEMBER 2005 TRAFFIC VOLUMES
CORDAGE COMMERCE CENTER PRIMARY DRIVEWAY
PLYMOUTH, MASSACHUSETTS

Time Period	Friday/Saturday			
	Daily (Vehicles)	Morning Peak ^a (vph)	Midday Peak ^b (vph)	Evening Peak ^c (vph)
Cordage Commerce Center Primary Driveway	3,267/2,118	274/91	320/224	253/127

vph = vehicles per hour.

^aHighest traffic volume hour between 7:00 and 9:00 AM.

^bHighest traffic volume hour between 11:00 AM and 2:00 PM.

^cHighest traffic volume hour between 4:00 and 6:00 PM

As can be seen in Table 1, Route 3A, south of Boundary Street, was found to accommodate approximately 13,125 vehicles on a Friday and 11,385 vehicles on a Saturday in **December**. Friday peak hour volumes varied between 680 vehicles per hour (vph) during the morning peak hour and 1,124 vph during the evening peak hour. Saturday peak hour traffic volumes varied between 486 vph during the morning peak hour and 1,058 vph during the midday peak hour. Route 3A, south of the Cordage Commerce Center exit only driveway, was found to accommodate approximately 11,810 vehicles on a Friday and 10,440 vehicles on a Saturday. Friday peak hour volumes varied between 607 vph during the morning peak hour and 978 vph during the evening peak hour. Saturday peak hour traffic volumes varied between 461 vph during the morning peak hour and 960 vph during the midday peak hour. Route 3A, north of Hedge Road, was found to accommodate approximately 12,990 vehicles on a Friday and 10,985 vehicles on a Saturday. Friday peak hour volumes varied between 684 vph during the morning peak hour and 1,077 vph during the evening peak hour. Saturday peak hour traffic volumes varied between 516 vph during the morning peak hour and 1,027 vph during the midday peak hour.

As can be seen in Table 2, the primary driveway serving the Cordage Commerce Center was found to accommodate approximately 3,265 vehicles on a Friday and 2,118 vehicles on a Saturday in December. Friday peak hour volumes varied between 274 vph during the morning peak hour and 320 vph during the midday peak hour. Saturday peak hour traffic volumes varied between 91 vph during the morning peak hour and 224 vph during the midday peak hour.

Based on a review of traffic volumes for the nearest Massachusetts Highway Department (MassHighway) permanent count station,¹ December traffic volumes are approximately **0.7 percent below average month (April) traffic volumes** and approximately **9.1 percent below peak month (June) traffic volumes**.

¹MassHighway Traffic Volumes for the Commonwealth of Massachusetts; Permanent Count Station 28 located on Route 53, east of the Weymouth town line, in Hingham; 2004.

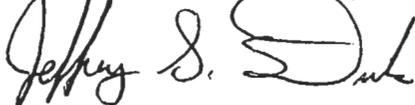
Ms. Ellen Remlinger
December 27, 2005
Page 3 of 3

In comparison to the December 2004 traffic volumes, Friday traffic volumes along Route 3A were shown to decrease between 27 and 34 percent, with peak hour traffic volumes shown to decrease between 24 and 38 percent. Saturday traffic volumes were shown to decrease between 26 and 33 percent, with peak hour traffic volumes shown to decrease between 12 and 37 percent. Traffic volumes along the primary driveway serving the Cordage Commerce Center were shown to decrease by approximately 65 percent over December 2004 conditions on a Friday, with peak hour traffic volumes shown to decrease between 46 and 65 percent. On a Saturday, traffic volumes were shown to decrease by approximately 74 percent over December 2004 conditions, with peak hour traffic volumes shown to decrease between 71 and 79 percent.

We appreciate the opportunity to assist you on this project. If you should have any questions regarding this information, please feel free to contact me.

Sincerely,

VANASSE & ASSOCIATES, INC.



Jeffrey S. Dirk, P.E., PTOE
Associate

JSD/jsd

Attachment

cc: RDV, File

APPENDIX

**AUTOMATIC TRAFFIC RECORDER COUNTS
SEASONAL ADJUSTMENT DATA**

AUTOMATIC TRAFFIC RECORDER COUNTS

Route 3A, South of Boundary Street

Route 3A, South of the Cordage Commerce Center Exit Only Driveway

Route 3A, North of Hedge Street

Cordage Commerce Center Primary Driveway

Route 3A, South of Boundary Street



PRECISION
D A T A
INDUSTRIES, LLC

Main Street (Route 3A)
South of Boundry Street
City, State : North Plymouth, MA
Client : VAI/ A. Arseneault

50460AVOLUME
Site Code: 4406

P.O. Box 301 Berlin, MA 01503
Office: 508-481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

Start Time	SB		NB		Combined		16-Dec-05 Fri					
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.						
12:00	18	128	11	124	29	252						
12:15	8	109	3	116	11	225						
12:30	5	100	8	116	13	216						
12:45	8	116	453	7	29	130	486	15	68	246	939	
01:00	5	132	12	143	17	275						
01:15	2	127	3	124	5	251						
01:30	1	116	4	144	5	260						
01:45	1	94	469	4	23	122	533	5	32	216	1002	
02:00	4	102	6	132	10	234						
02:15	2	116	0	134	2	250						
02:30	4	114	2	141	6	255						
02:45	0	137	469	1	9	166	573	1	19	303	1042	
03:00	1	110	2	137	3	247						
03:15	1	131	6	126	7	257						
03:30	4	154	6	188	10	342						
03:45	2	140	535	6	20	134	585	8	28	274	1120	
04:00	2	158	8	175	10	333						
04:15	2	124	2	142	4	266						
04:30	3	120	11	162	14	282						
04:45	6	98	500	11	32	145	624	17	45	243	1124	
05:00	6	123	20	143	26	266						
05:15	11	112	20	127	31	239						
05:30	12	133	20	114	32	247						
05:45	10	112	480	32	92	96	480	42	131	208	960	
06:00	20	108	50	110	70	218						
06:15	20	128	52	104	72	232						
06:30	18	87	52	92	70	179						
06:45	38	82	405	84	238	81	387	122	334	163	792	
07:00	48	86	58	92	106	178						
07:15	61	80	72	69	133	149						
07:30	62	63	71	58	133	121						
07:45	66	51	280	82	283	69	288	148	520	120	568	
08:00	77	61	91	72	168	133						
08:15	92	67	60	60	152	127						
08:30	95	66	82	62	177	128						
08:45	100	364	51	245	83	316	56	250	183	680	107	495
09:00	88	38	83	57	171	95						
09:15	94	45	92	52	186	97						
09:30	90	51	90	42	180	93						
09:45	95	367	48	182	108	373	46	197	203	740	94	379
10:00	67	38	98	44	165	82						
10:15	89	41	100	40	189	81						
10:30	81	40	85	33	166	73						
10:45	104	341	35	154	105	388	36	153	209	729	71	307
11:00	88	42	118	23	206	65						
11:15	81	32	101	27	182	59						
11:30	93	27	125	25	218	52						
11:45	128	390	27	128	117	461	14	89	245	851	41	217
Total	1913	4300	2264	4645	4177	8945						
Percent	45.8%	48.1%	54.2%	51.9%								
Day Total		6213		6909		13122						
Peak Vol.	11:00	03:15	11:00	03:30	11:00	03:30						
P.H.F.	390	583	461	639	851	1215						
	0.762	0.922	0.922	0.850	0.868	0.888						



PRECISION
D A T A
INDUSTRIES, LLC

P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

50460AVOLUME
Site Code: 4406

Main Street (Route 3A)
South of Boundry Street
City, State : North Plymouth, MA
Client : VAI/ A. Arseneault

Start Time	SB		NB		Combined		17-Dec-05 Sat					
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.						
12:00	28	109	21	156	49	265	1088					
12:15	25	112	20	112	45	224						
12:30	17	124	22	160	39	284						
12:45	16	86	112	457	20	83	142	570	36	169	254	1027
01:00	6	118	14	133	20	251						
01:15	3	134	8	138	11	272						
01:30	10	128	10	106	20	234						
01:45	6	25	118	498	9	41	138	515	15	66	256	1013
02:00	4	93	5	122	9	215						
02:15	0	113	2	95	2	208						
02:30	10	90	2	104	12	194						
02:45	3	17	96	392	5	14	98	419	8	31	194	811
03:00	5	106	3	120	8	226						
03:15	5	113	7	108	12	221						
03:30	6	94	2	116	8	210						
03:45	4	20	101	414	7	19	99	443	11	39	200	857
04:00	1	96	3	106	4	202						
04:15	1	74	10	90	11	164						
04:30	4	93	3	94	7	187						
04:45	1	7	94	357	2	18	100	390	3	25	194	747
05:00	1	81	4	96	5	177						
05:15	4	82	6	105	10	187						
05:30	7	74	12	73	19	147						
05:45	6	18	74	311	12	34	97	371	18	52	171	682
06:00	12	76	18	77	30	153						
06:15	8	85	15	71	23	156						
06:30	12	71	19	74	31	145						
06:45	20	52	61	293	29	81	64	286	49	133	125	579
07:00	18	65	30	62	48	127						
07:15	26	73	40	68	66	141						
07:30	32	56	48	60	80	116						
07:45	38	114	43	237	50	168	56	246	88	282	99	483
08:00	48	58	50	58	98	116						
08:15	55	58	54	61	109	119						
08:30	50	44	66	42	116	86						
08:45	85	238	45	205	78	248	44	205	163	486	89	410
09:00	57	35	71	50	128	85						
09:15	78	37	90	34	168	71						
09:30	83	37	98	49	181	86						
09:45	102	320	35	144	109	368	44	177	211	688	79	321
10:00	99	30	132	35	231	65						
10:15	104	31	124	34	228	65						
10:30	110	45	122	30	232	75						
10:45	120	433	29	135	138	516	32	131	258	949	61	266
11:00	108	33	139	32	247	65						
11:15	110	41	148	21	258	62						
11:30	128	37	143	24	271	61						
11:45	120	466	20	131	144	574	18	95	264	1040	38	226
Total	1796	3574	2164	3848	3960	7422						
Percent	45.4%	48.2%	54.6%	51.8%								
Day Total		5370		6012		11382						
Peak	10:45	01:00	11:00	00:30	11:00	00:30						
Vol.	466	498	574	573	1040	1061						
P.H.F.	0.910	0.929	0.970	0.895	0.959	0.934						

Route 3A, South of the Cordage Force C

ter Exit Only Driveway



PRECISION
D A T A
INDUSTRIES, LLC

P.O. Box 301 Berlin, MA 01503
Office: 508.481.2999 Fax: 508.545.1234
Email: datarequests@pdillc.com

Main Street (Route 3A)
South of Cordage Center Exit Only Drive
City, State: North Plymouth, MA
Client: VAI/ A. Arseneault

50+60B VOLUME
Site Code: 4406

Start Time	SB		NB		Combined		18-Dec-05 Fri
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	
12:00	14	131	9	113	23	244	
12:15	10	118	5	108	16	226	
12:30	5	96	9	111	14	207	
12:45	7	106	3	112	15	218	895
01:00	2	107	2	118	14	225	
01:15	1	124	5	102	6	226	
01:30	2	108	3	111	5	219	
01:45	1	74	5	127	7	201	871
02:00	3	64	5	148	9	212	
02:15	1	84	0	140	1	224	
02:30	2	66	0	162	2	228	
02:45	1	76	1	206	2	282	946
03:00	1	57	1	195	2	252	
03:15	3	48	5	164	9	212	
03:30	4	74	3	234	7	308	
03:45	2	70	4	186	6	256	1028
04:00	3	60	9	209	12	269	
04:15	3	53	2	186	5	239	
04:30	2	38	5	210	8	248	
04:45	6	42	9	180	15	222	978
05:00	7	36	10	192	17	228	
05:15	10	28	6	180	26	208	
05:30	15	35	15	180	30	215	
05:45	13	32	13	156	36	188	839
06:00	13	19	13	156	51	175	
06:15	21	26	14	161	55	187	
06:30	18	14	13	144	66	158	
06:45	42	20	13	134	105	154	674
07:00	54	18	16	153	110	171	
07:15	58	19	13	110	111	129	
07:30	61	8	17	107	108	115	
07:45	71	8	11	118	132	126	541
08:00	69	6	12	116	131	122	
08:15	82	10	15	105	138	115	
08:30	100	6	11	103	171	109	
08:45	99	6	13	97	167	103	449
09:00	80	0	12	88	162	88	
09:15	83	1	14	75	157	76	
09:30	84	1	12	74	156	75	
09:45	86	4	10	86	187	90	329
10:00	80	2	15	72	166	74	
10:15	76	1	19	74	165	75	
10:30	84	2	10	58	174	60	
10:45	98	1	16	76	194	77	286
11:00	97	2	14	60	191	62	
11:15	78	2	10	52	184	54	
11:30	84	0	10	46	190	46	
11:45	111	0	12	40	213	40	202
Total	1847	1903	1924	6135	3771	8038	
Percent	49.0%	23.7%	51.0%	76.3%			
Day Total		3750		8059		11809	
Peak Vol.	11:00	12:00	11:00	03:30	11:00	03:30	
P.H.F.	0.833	0.861	0.962	0.871	0.913	0.870	

Route 3A, North of Hedge Street



PRECISION
D A T A
INDUSTRIES, LLC

P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

Main Street (Route 3A)
North of South Sponer Street
City, State : North Plymouth, MA
Client : VAI/ A. Arseneault

50460CVOLUME
Site Code: 4106

Start Time	SB		NB		Combined		18-Dec-05 Fri					
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.						
12:00	15	8	12	256	27	264						
12:15	9	3	6	267	15	270						
12:30	5	6	9	239	14	245						
12:45	7	36	2	19	10	37	246	1008	17	73	248	1027
01:00	2		5		13		243		15		244	
01:15	2		4		5		240		7		228	
01:30	2		4		5		224		7		239	959
01:45	1	7	3	16	5	28	236	943	6	35	231	
02:00	3		3		4		228		7		253	
02:15	1		4		0		249		1		278	
02:30	3		4		0		274		3		288	1050
02:45	0	7	4	15	1	5	284	1035	1	12	292	
03:00	1		0		2		292		3		240	
03:15	3		0		5		240		8		351	
03:30	2		1		4		350		6		279	1162
03:45	3	9	1	2	9	20	278	1160	12	29	296	
04:00	2		2		6		294		8		266	
04:15	1		0		4		266		5		284	
04:30	2		4		8		280		10		231	1077
04:45	5	10	0	6	11	29	231	1071	16	39	252	
05:00	4		0		10		252		14		228	
05:15	10		0		19		228		29		230	
05:30	9		0		26		230		35		190	900
05:45	6	29	0	0	32	87	190	900	38	116	197	
06:00	4		1		52		196		56		184	
06:15	1		0		68		184		69		177	
06:30	1		1		80		176		81		174	732
06:45	0	6	0	2	113	313	174	730	113	319	169	
07:00	0		0		109		169		109		138	
07:15	1		1		124		137		125		114	
07:30	0		1		122		113		122		118	539
07:45	0	1	2	4	140	495	116	535	140	496	134	
08:00	0		0		154		124		154		98	
08:15	0		1		149		133		149		121	477
08:30	0		0		194		98		194		86	
08:45	0	0	0	1	187	684	121	476	187	684	94	
09:00	0		0		177		86		177		76	
09:15	0		0		179		94		179		78	
09:30	2		0		186		76		188		83	339
09:45	0	2	0	0	210	752	83	339	210	754	78	
10:00	0		0		184		86		184		78	
10:15	2		0		191		74		193		78	
10:30	3		0		176		78		179		78	
10:45	2	7	0	0	208	759	78	316	210	766	78	316
11:00	4		0		210		60		214		58	
11:15	4		0		212		56		216		58	
11:30	2		0		214		58		216		40	214
11:45	10	20	0	0	219	855	40	214	229	875	40	214
Total	134	65	4064	8727	4198	8792						
Percent	3.2%	0.7%	96.8%	99.3%								
Day Total		199		12791		12990						
Peak	12:00	12:00	11:00	03:30	11:00	03:30						
Vol.	36	19	855	1188	875	1192						
P.H.F.	0.600	0.594	0.976	0.849	0.955	0.849						



PRECISION
D A T A
INDUSTRIES, LLC

P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

Main Street (Route 3A)
North of South Sponer Street
City, State : North Plymouth, MA
Client : VAI/ A. Arseneault

50460CVOLUME
Site Code: 4406

Start Time	SB		NB		Combined		17-Dec-05
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	
12:00	0	4	54	256	54	260	
12:15	0	2	41	232	41	234	
12:30	0	0	39	241	39	241	1027
12:45	0	0	6	42	176	238	967
01:00	0	4	27	238	42	238	176
01:15	0	6	28	248	27	242	
01:30	0	2	23	226	28	254	
01:45	0	6	18	12	90	225	937
02:00	0	1	6	208	12	231	955
02:15	0	1	3	188	6	209	
02:30	0	1	18	194	3	189	
02:45	0	4	7	14	41	182	772
03:00	0	2	16	193	14	186	779
03:15	0	2	11	210	16	195	
03:30	0	2	7	196	11	212	
03:45	0	1	7	13	47	180	779
04:00	0	2	6	186	13	181	786
04:15	0	0	10	156	6	188	
04:30	0	0	8	168	10	156	
04:45	0	0	2	8	32	188	698
05:00	0	0	5	182	8	188	700
05:15	0	0	14	150	5	182	
05:30	0	0	12	152	14	150	
05:45	0	0	0	18	49	169	653
06:00	0	0	25	154	18	169	653
06:15	0	0	22	137	25	154	
06:30	0	0	27	134	22	137	
06:45	0	0	0	42	116	158	583
07:00	0	0	35	117	42	158	583
07:15	0	0	66	139	35	117	
07:30	0	0	85	112	66	139	
07:45	0	0	0	94	280	96	464
08:00	0	0	98	108	94	96	464
08:15	0	0	118	98	98	108	
08:30	0	0	124	79	118	98	
08:45	0	0	0	176	516	78	363
09:00	0	0	137	78	176	78	363
09:15	0	0	171	78	137	78	
09:30	0	0	170	82	171	78	
09:45	0	0	0	206	684	82	320
10:00	0	0	216	62	206	82	320
10:15	0	0	202	60	216	62	
10:30	0	0	228	74	202	60	
10:45	0	0	0	250	896	70	266
11:00	2	0	250	65	250	70	266
11:15	4	0	208	57	252	65	
11:30	2	0	267	54	212	57	
11:45	4	12	0	260	985	42	218
Total	12	40	3912	7020	3924	7060	
Percent	0.3%	0.6%	99.7%	99.4%			
Day Total		52		10932		10984	
Peak Vol.	11:00	01:00	11:00	12:00	11:00	00:30	
P.H.F.	12	18	985	967	997	975	
	0.750	0.750	0.922	0.944	0.927	0.938	

Cordage Commerce Center Primary Driveway



PRECISION
D A T A
INDUSTRIES, LLC

P.O. Box 101 Berlin, MA 01503
Office: 508-481-1999 Fax: 508-545-1234
Email: datarequests@pdillc.com

Cordage Commerce Center Main Drive
East of Main Street (Route 3A)
City, State : North Plymouth, MA
Client : VAI/ A. Arseneault

50-460DVOLUME
Site Code: 4406

Start Time	EB		WB		Combined		16-Dec-05 Fri					
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.						
12:00	0	33	0	29	0	62						
12:15	2	40	2	39	4	79						
12:30	0	31	0	31	0	62						
12:45	0	2	48	152	2	4	138	6	87	290		
01:00	0	48	0	30	0	78						
01:15	1	50	1	43	2	93	320					
01:30	0	29	0	26	0	55						
01:45	0	1	29	156	0	1	25	124	2	54	280	
02:00	0	47	2	35	2	82						
02:15	0	33	0	29	0	62						
02:30	0	43	0	28	0	71						
02:45	0	0	30	153	0	2	23	115	0	53	268	
03:00	0	31	0	36	0	67						
03:15	0	28	0	26	0	54						
03:30	0	46	0	33	0	79						
03:45	0	0	36	141	0	0	39	134	0	75	275	
04:00	0	40	0	47	0	87						
04:15	1	16	0	29	1	45						
04:30	0	24	0	39	0	63						
04:45	0	1	16	96	0	0	42	157	1	58	253	
05:00	1	20	0	25	1	45						
05:15	2	17	0	25	2	42						
05:30	4	18	0	30	4	48						
05:45	3	10	14	69	0	0	13	93	3	27	162	
06:00	6	16	2	17	8	33						
06:15	2	13	1	13	3	26						
06:30	5	18	2	13	7	31						
06:45	20	33	29	76	3	8	12	55	23	41	131	
07:00	21	27	4	10	25	37						
07:15	32	17	5	11	37	28						
07:30	34	15	4	12	38	27						
07:45	39	126	14	73	8	21	7	40	47	147	21	113
08:00	64	3	8	6	72	9						
08:15	53	13	8	20	61	33						
08:30	56	11	11	4	67	15						
08:45	58	231	14	41	16	43	17	47	74	274	31	88
09:00	51	3	18	8	69	11						
09:15	46	7	24	5	70	12						
09:30	36	2	24	3	60	5						
09:45	42	175	11	23	28	94	5	21	70	269	16	44
10:00	32	3	31	15	63	18						
10:15	35	5	25	9	60	14						
10:30	29	3	25	10	54	13						
10:45	39	135	3	14	27	108	7	41	66	243	10	55
11:00	28	9	32	7	60	16						
11:15	30	5	25	6	55	11						
11:30	38	4	25	11	63	15						
11:45	41	137	3	21	38	120	9	33	79	257	12	54
Total	851	1015	401	998	1252	2013						
Percent	68.0%	50.4%	32.0%	49.6%								
Day Total		1866		1399		3265						
Peak Vol.	08:00	00:30	11:00	04:00	08:30	00:30						
P.H.F.	0.902	0.885	0.789	0.835	0.886	0.860						



PRECISION
D A T A
INDUSTRIES, LLC

P.O. Box 301 Berlin, MA 01503
Office: 508-881-3999 Fax: 508-545-1334
Email: datarequests@pdillc.com

50460DVOLUME
Site Code: 4406

Cordage Commerce Center Main Drive
East of Main Street (Route 3A)
City, State : North Plymouth, MA
Client : VAI/ A. Arseneault

Start Time	EB		WB		Combined		17-Dec-05 Sat
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	
12:00	3	18	4	16	7	34	
12:15	7	33	13	28	20	61	
12:30	5	31	6	30	11	61	
12:45	1	16	29	111	6	61	
01:00	1	17	12	29	34	108	45
01:15	0	38	9	22	13	39	219
01:30	5	37	7	20	9	58	224
01:45	0	6	37	129	5	59	
02:00	1	13	3	33	22	59	215
02:15	0	22	0	21	4	34	
02:30	0	20	1	18	0	40	
02:45	0	1	23	78	1	38	
03:00	0	23	3	5	20	43	155
03:15	1	23	0	34	3	57	
03:30	0	16	0	24	1	47	
03:45	0	1	8	70	0	33	
04:00	0	22	0	3	10	18	155
04:15	0	13	0	12	0	34	
04:30	0	13	0	11	0	24	
04:45	0	0	14	62	0	31	
05:00	2	18	2	0	14	28	117
05:15	0	18	0	17	4	35	
05:30	1	10	0	15	0	33	127
05:45	0	3	5	51	1	24	
06:00	1	10	0	3	7	12	104
06:15	1	11	0	11	1	21	
06:30	1	26	0	7	1	18	
06:45	2	5	15	62	0	37	
07:00	5	8	0	0	12	27	103
07:15	5	16	3	5	5	13	
07:30	6	11	3	4	8	20	
07:45	11	27	7	42	1	21	
08:00	12	15	2	6	7	14	68
08:15	14	11	0	9	13	24	
08:30	17	6	2	10	16	21	
08:45	28	71	4	34	7	13	
09:00	26	6	14	20	4	6	64
09:15	22	7	9	5	35	11	
09:30	33	7	11	3	33	10	
09:45	47	128	15	22	4	11	
10:00	27	4	9	44	2	4	36
10:15	24	0	19	4	14	8	
10:30	31	5	22	5	46	5	
10:45	26	108	22	12	6	11	
11:00	27	3	27	90	17	20	44
11:15	22	2	24	3	51	6	
11:30	29	1	25	5	47	7	
11:45	39	117	18	9	47	5	
		3	26	93	4	20	29
Total	483	682	326	627	809	1309	
Percent	59.7%	52.1%	40.3%	47.9%			
Day Total		1165		953		2118	
Peak	09:30	01:00	10:30	00:15	11:00	00:15	
Vol.	131	129	98	114	210	224	
P.H.F.	0.697	0.849	0.907	0.838	0.808	0.889	

SEASONAL ADJUSTMENT DATA

SECTION I - CONTINUOUS COUNTING STATION MONTHLY AVERAGE DAILY TRAFFIC

STATION 28 - HINGHAM - RTE.53 - EAST OF THE WEYMOUTH T.L.

YR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
00	9,437 4%	9,971 1%	10,300 -7%	11,138 1%	12,020 3%	11,700 9%	11,393 -4%	11,674 7%	11,429 4%	11,459 4%	10,867 -6%	10,791 7%	11,015 2%
01	9,853 7%	10,032 6%	9,585 17%	11,300 8%	12,375 4%	12,709 1%	10,985 13%	12,538 2%	11,867 6%	11,944 4%	10,245 14%	11,574 2%	11,251 7%
02	10,505 1%	10,588 -3%	11,253 -3%	12,183 -6%	12,867 -4%	12,882 -3%	12,381 0%	12,734 -3%	12,600 -3%	12,399 -4%	11,662 0%	11,855 -4%	11,992 -2%
03	10,658	10,266	10,970	11,509	12,406	12,468	12,420	12,415	12,263	11,853	11,700	11,400	11,694
												AVERAGE:	11,405
													11,488

↑
PEAK
MONTH

Ref: 4406

December 28, 2004

Ms. Ellen Remlinger
Office Manager
Cordage Commerce Center
10 Cordage Park Circle, Suite 235
Plymouth, MA 02360

Re: Court Street (Route 3A) and Cordage Commerce Center
Traffic Volume Observations
Plymouth, Massachusetts

Dear Ms. Remlinger:

Vanasse & Associates, Inc. (VAI) has completed the collection of traffic volume data along Court Street (Route 3A) and on the primary driveway serving the Cordage Commerce Center located at 10 Cordage Park Circle in Plymouth, Massachusetts. The traffic volumes were collected by means of an automatic traffic recorder (ATR) over a continuous 48-hour period from Friday, December 17, 2004 through Saturday, December 18, 2004. Tables 1 and 2 summarize the daily and peak hour traffic volume data for the Route 3A and the primary driveway serving the Cordage Commerce Center, respectively, with the detailed traffic counts attached.

**Table 1
DECEMBER 2004 TRAFFIC VOLUMES
COURT STREET (ROUTE 3A)
PLYMOUTH, MASSACHUSETTS**

Time Period	Friday/Saturday			
	Daily (Vehicles)	Morning Peak ^a (vph)	Midday Peak ^b (vph)	Evening Peak ^c (vph)
Route 3A, South of Boundary Street	18,130/15,730	892/573	1,476/1,483	1,528/1,082
Route 3A, South of the Cordage Commerce Center Exit Only Drive	16,170/14,065	798/521	1,304/1,313	1,403/965
Route 3A, North of Hedge Road	19,820/16,340	951/592	1,668/1,579	1,604/1,112

vph = vehicles per hour.

^aHighest traffic volume hour between 7:00 and 9:00 AM.

^bHighest traffic volume hour between 11:00 AM and 2:00 PM.

^cHighest traffic volume hour between 4:00 and 6:00 PM

**Table 2
 DECEMBER 2004 TRAFFIC VOLUMES
 CORDAGE COMMERCE CENTER PRIMARY DRIVEWAY
 PLYMOUTH, MASSACHUSETTS**

Time Period	Friday/Saturday			
	Daily (Vehicles)	Morning Peak ^a (vph)	Midday Peak ^b (vph)	Evening Peak ^c (vph)
Cordage Commerce Center Primary Driveway	9,435/8,080	506/314	899/912	713/591

vph = vehicles per hour.

^aHighest traffic volume hour between 7:00 and 9:00 AM.

^bHighest traffic volume hour between 11:00 AM and 2:00 PM.

^cHighest traffic volume hour between 4:00 and 6:00 PM

As can be seen in Table 1, Route 3A, south of Boundary Street, was found to accommodate approximately 18,130 vehicles on a Friday and 15,730 vehicles on a Saturday in December. Friday peak hour volumes varied between 892 vehicles per hour (vph) during the morning peak hour and 1,528 vph during the evening peak hour. Saturday peak hour traffic volumes varied between 573 vph during the morning peak hour and 1,483 vph during the midday peak hour. Route 3A, south of the Cordage Commerce Center exit only driveway, was found to accommodate approximately 16,170 vehicles on a Friday and 14,065 vehicles on a Saturday. Friday peak hour volumes varied between 798 vph during the morning peak hour and 1,403 vph during the evening peak hour. Saturday peak hour traffic volumes varied between 521 vph during the morning peak hour and 1,313 vph during the midday peak hour. Route 3A, north of Hedge Road, was found to accommodate approximately 19,820 vehicles on a Friday and 16,340 vehicles on a Saturday. Friday peak hour volumes varied between 951 vph during the morning peak hour and 1,668 vph during the midday peak hour. Saturday peak hour traffic volumes varied between 592 vph during the morning peak hour and 1,579 vph during the midday peak hour.

As can be seen in Table 2, the primary driveway serving the Cordage Commerce Center was found to accommodate approximately 9,435 vehicles on a Friday and 8,080 vehicles on a Saturday in December. Friday peak hour volumes varied between 506 vph during the morning peak hour and 899 vph during the midday peak hour. Saturday peak hour traffic volumes varied between 314 vph during the morning peak hour and 912 vph during the midday peak hour.

Based on a review of traffic volumes for the nearest Massachusetts Highway Department (MassHighway) permanent count station,¹ December traffic volumes are approximately 0.8 percent below average month (April) traffic volumes and approximately 9.1 percent below peak month (June) traffic volumes.

¹MassHighway Traffic Volumes for the Commonwealth of Massachusetts; Permanent Count Station 28 located on Route 53, east of the Weymouth town line, in Hingham, 2003.

Ms. Ellen Remlinger
December 28, 2004
Page 3 of 3

We appreciate the opportunity to assist you in your evaluation of traffic volumes at and in the vicinity of the Cordage Commerce Center, and are available to assist in the preparation of a more detailed assessment of permitting issues relative to MassHighway and the Town of Plymouth regarding the redevelopment of the project site. If you should have any questions regarding this information or would like a proposal to perform additional services, please feel free to contact me.

Sincerely,

VANASSE & ASSOCIATES, INC.



Jeffrey S. Dirk, P.E., PTOE
Associate

JSD/jsd

Attachment

cc: RDV, RJK, File

APPENDIX

**AUTOMATIC TRAFFIC RECORDER COUNTS
SEASONAL ADJUSTMENT DATA**

AUTOMATIC TRAFFIC RECORD & COUNTS

Route 3A, South of Boundary Street

Route 3A, South of the Cordage Commerce Center Exit Only Driveway

Route 3A, North of Hedge Street

Cordage Commerce Center Primary Driveway

Route 3A, South of Boundary Street



PRECISION
D A T A
INDUSTRIES, LLC

P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Toll Free: 888.734.7344
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Court Street (Route 3A)
south of Boundry Street
City, State: Plymouth, MA
Client: VAI/R. Kelly

40081B volume
Site Code: 4406

Start Time	NB		SB		Combined		17-Dec-04 Fri						
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.							
12:00	11	192	26	155	37	347							
12:15	6	212	18	180	24	392							
12:30	11	205	11	156	22	361							
12:45	14	42	191	800	5	60	149	640	19	102	340	1440	
01:00	8	222	7	167	15	389							
01:15	10	199	7	181	17	380							
01:30	8	200	4	160	12	360							
01:45	5	31	195	816	4	22	152	660	9	53	347	1476	
02:00	6	194	3	162	9	356							
02:15	5	215	7	160	12	375							
02:30	4	171	3	195	7	366							
02:45	3	18	178	758	3	16	163	680	6	34	341	1438	
03:00	4	175	1	165	5	340							
03:15	5	205	3	212	8	417							
03:30	1	209	3	200	4	409							
03:45	3	13	195	784	1	8	184	761	4	21	379	1545	
04:00	2	211	2	184	4	395							
04:15	9	210	2	188	11	398							
04:30	8	217	2	167	10	384							
04:45	10	29	179	817	7	13	172	711	17	42	351	1528	
05:00	21	188	9	150	30	338							
05:15	15	175	16	140	31	315							
05:30	23	146	12	141	35	287							
05:45	37	96	121	630	13	50	147	578	50	146	268	1208	
06:00	45	129	10	141	55	270							
06:15	46	130	36	146	82	276							
06:30	61	127	38	125	99	252							
06:45	100	252	118	504	54	138	114	526	154	390	232	1030	
07:00	84	129	55	120	139	249							
07:15	69	107	60	117	129	224							
07:30	98	94	68	84	166	178							
07:45	102	353	84	414	87	270	98	419	189	623	182	833	
08:00	102	101	114	91	216	192							
08:15	87	83	109	70	196	153							
08:30	107	90	116	73	223	163							
08:45	116	412	66	340	141	480	60	294	257	892	126	634	
09:00	140	61	110	50	250	111							
09:15	131	51	118	67	249	118							
09:30	149	75	119	56	268	131							
09:45	115	535	61	248	130	477	61	234	245	1012	122	482	
10:00	161	56	118	61	279	117							
10:15	153	66	129	69	282	135							
10:30	148	45	126	41	274	86							
10:45	181	643	41	208	146	519	56	227	327	1162	97	435	
11:00	145	42	144	52	289	94							
11:15	173	27	149	41	322	68							
11:30	179	34	165	54	344	88							
11:45	173	670	23	126	171	629	28	175	344	1299	51	301	
Total	3094	6445	2682	5905	5776	12350							
Percent	53.6%	52.2%	46.4%	47.8%									
Day Total		9539		8587		18126							
Peak Vol.	10:45	03:45	11:00	03:15	11:00	03:15							
P.H.F.	0.936	0.938	0.920	0.920	0.944	0.959							



PRECISION
D A T A
INDUSTRIES, LLC

P.O. Box 301 Berlin, MA 01503
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40081Bvolume
Site Code: 4406

Court Street (Route 3A)
south of Boundry Street
City, State: Plymouth, MA
Client: VAI/R. Kelly

Start Time	NB		SB		Combined		18-Dec-04 Sat
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	
12:00	18	181	23	151	41	332	
12:15	27	169	26	158	53	327	
12:30	18	200	21	149	39	349	
12:45	27	193	13	184	40	377	1385
01:00	20	192	17	179	37	371	
01:15	24	193	8	173	32	366	
01:30	12	186	9	187	21	373	
01:45	11	180	16	193	27	373	1483
02:00	8	192	6	173	14	365	
02:15	4	215	8	168	12	383	
02:30	4	167	4	163	8	330	
02:45	10	170	5	152	15	322	1400
03:00	4	195	2	161	6	356	
03:15	3	159	5	153	8	312	
03:30	7	166	5	169	12	335	
03:45	3	149	6	144	9	293	1296
04:00	8	135	3	138	11	273	
04:15	7	143	1	108	8	251	
04:30	5	133	4	146	9	279	
04:45	8	150	5	129	13	279	1082
05:00	7	136	7	133	14	269	
05:15	1	108	4	115	5	223	
05:30	12	125	11	107	23	232	
05:45	20	139	12	93	32	232	956
06:00	16	110	16	109	32	219	
06:15	26	107	8	72	34	179	
06:30	33	81	16	89	49	170	
06:45	36	100	26	93	62	193	761
07:00	37	94	27	89	64	183	
07:15	41	74	36	79	77	153	
07:30	47	85	34	75	81	160	
07:45	71	85	49	72	120	157	653
08:00	57	79	58	64	115	143	
08:15	69	64	64	67	133	131	
08:30	84	46	72	53	156	99	
08:45	76	67	93	69	169	136	509
09:00	102	62	90	58	192	120	
09:15	149	73	107	60	256	133	
09:30	114	47	89	68	203	115	
09:45	110	50	121	54	231	104	472
10:00	152	37	125	60	277	97	
10:15	146	48	114	54	260	102	
10:30	153	49	158	49	311	98	
10:45	201	42	149	546	45	87	384
11:00	182	40	162	46	344	86	
11:15	186	46	156	42	342	88	
11:30	192	30	176	34	368	64	
11:45	185	26	142	159	344	52	290
Total	2733	5518	2326	5153	5059	10671	
Percent	54.0%	51.7%	46.0%	48.3%			
Day Total		8251		7479		15730	
Peak	10:45	00:30	11:00	01:00	10:45	01:30	
Vol.	761	778	653	732	1404	1494	
P.H.F.	0.947	0.905	0.928	0.948	0.954	0.975	

Route 3A, South of the Cordage Commerce Center Exit Only Driveway



PRECISION
DATA
INDUSTRIES, LLC

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Court Street (Route 3A) south of
Cordage Commerce Center exit only dr.
City, State: Plymouth, MA
Client: VAI/R. Kelly

40081Cvolume
Site Code: 4406

Start Time	SB		NB		Combined		17-Dec-04 Fri					
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.						
12:00	25	177	9	136	34	313						
12:15	17	188	9	149	26	337						
12:30	12	179	10	151	22	330						
12:45	7	61	175	719	8	36	130	566	15	97	305	1285
01:00	7	188	10	140	17	328						
01:15	7	187	10	140	17	327						
01:30	3	198	7	146	10	344	1304					
01:45	2	19	157	730	3	30	133	559	5	49	290	1289
02:00	3	185	5	135	8	320						
02:15	8	175	2	145	10	320						
02:30	4	197	2	129	6	326						
02:45	2	17	190	747	3	12	130	539	5	29	320	1286
03:00	3	183	3	131	6	314						
03:15	2	216	4	123	6	339						
03:30	4	233	1	150	5	383						
03:45	1	10	197	829	2	10	119	523	3	20	316	1352
04:00	6	201	2	149	8	350	1388					
04:15	3	202	8	152	11	354	1403					
04:30	5	184	6	156	11	340	1300					
04:45	5	19	165	752	5	21	127	584	10	40	292	1336
05:00	9	158	11	146	20	304						
05:15	13	155	15	130	28	285						
05:30	14	154	15	103	29	257						
05:45	11	47	142	609	26	67	103	482	37	114	245	1091
06:00	11	164	30	93	41	257						
06:15	40	152	25	96	65	248						
06:30	34	141	44	83	78	224						
06:45	59	144	121	578	72	171	79	351	131	315	200	929
07:00	58	121	65	96	123	217						
07:15	68	122	49	67	117	189						
07:30	77	92	68	72	145	164						
07:45	86	289	108	443	77	259	52	287	163	548	160	730
08:00	119	111	66	74	185	185						
08:15	110	80	59	65	169	145						
08:30	133	90	84	70	217	160						
08:45	143	505	71	352	84	293	51	260	227	798	122	612
09:00	122	61	116	43	238	104						
09:15	129	77	100	38	229	115						
09:30	130	69	103	57	233	126						
09:45	153	534	61	268	75	394	48	186	228	928	109	454
10:00	127	66	120	43	247	109						
10:15	137	73	117	47	254	120						
10:30	144	50	102	37	246	87						
10:45	163	571	51	240	122	461	30	157	285	1032	81	397
11:00	160	53	111	30	271	83						
11:15	172	47	117	19	289	66						
11:30	181	42	122	29	303	71						
11:45	192	705	26	168	122	472	16	94	314	1177	42	262
Total	2921	6435	2226	4588	5147	11023						
Percent	56.8%	58.4%	43.2%	41.6%								
Day Total		9356		6814		16170						
Peak	11:00	03:15	10:45	04:00	11:00	03:30						
Vol.	705	847	472	584	1177	1403						
P.H.F.	0.918	0.909	0.967	0.936	0.937	0.916						



PRECISION
D A T A
INDUSTRIES, LLC

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40081Cvolume
Site Code: 4406

Court Street (Route 3A) south of
Cordage Commerce Center exit only dr.
City, State: Plymouth, MA
Client: VAI/R. Kelly

Time	SB		NB		Combined		18-Dec-04 Sat					
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.						
12:00	20	184	23	99	43	283						
12:15	24	195	25	113	49	308						
12:30	23	177	13	138	36	315						
12:45	22	89	218	774	28	89	128	478	50	178	346	1252
01:00	25	194	19	120	44	314						
01:15	11	190	24	127	35	317	1292					
01:30	13	218	7	118	20	336	1313					
01:45	11	60	210	812	7	57	115	480	18	117	325	1292
02:00	7	203	7	138	14	341						
02:15	7	188	7	123	14	311						
02:30	5	178	7	123	12	301						
02:45	6	25	189	758	9	30	121	505	15	55	310	1263
03:00	3	184	2	126	5	310						
03:15	6	173	3	99	9	272						
03:30	4	175	4	118	8	293						
03:45	4	17	161	693	1	10	100	443	5	27	261	1136
04:00	3	151	6	78	9	229						
04:15	1	146	7	97	8	243						
04:30	4	150	3	86	7	236						
04:45	4	12	152	599	7	23	93	354	11	35	245	953
05:00	7	142	3	99	10	241	965					
05:15	5	130	2	81	7	211						
05:30	8	117	9	85	17	202						
05:45	14	34	105	494	18	32	98	363	32	66	203	857
06:00	17	118	14	68	31	186						
06:15	8	97	21	81	29	178						
06:30	22	89	23	64	45	153						
06:45	30	77	112	416	23	81	62	275	53	158	174	691
07:00	26	102	31	66	57	168						
07:15	34	100	32	46	66	146						
07:30	31	79	30	59	61	138						
07:45	54	145	75	356	46	139	48	219	100	284	123	575
08:00	63	80	39	57	102	137						
08:15	73	79	52	43	125	122						
08:30	81	65	56	34	137	99						
08:45	98	315	75	299	59	206	45	179	157	521	120	478
09:00	104	67	69	47	173	114						
09:15	112	68	93	43	205	111						
09:30	105	83	74	29	179	112						
09:45	133	454	55	273	89	325	35	154	222	779	90	427
10:00	138	61	89	25	227	86						
10:15	136	61	98	38	234	99						
10:30	180	42	109	39	289	81						
10:45	179	633	44	208	127	423	27	129	306	1056	71	337
11:00	185	47	118	28	303	75						
11:15	175	44	136	41	311	85						
11:30	206	28	144	31	350	59						
11:45	173	739	25	144	128	526	17	117	301	1265	42	261
Total	2600	5826	1941	3696	4541	9522						
Percent	57.3%	61.2%	42.7%	38.8%								
Day Total		8426		5637		14063						
Peak Vol.	10:45	01:15	11:00	00:30	10:45	01:15						
P.H.F.	0.904	0.942	0.913	0.929	0.907	0.953						

Route 3A, North of Hedge Street



PRECISION
D A T A
INDUSTRIES, LLC

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Court Street (Route 3A) north of
Hedge Street
City, State: Plymouth, MA
Client: VAI/R. Kelly

40081Dvolume
Site Code: 4106

Start Time	NB		SB		Combined		17-Dec-04 Fri					
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.						
12:00	23	240	26	194	49	434						
12:15	13	254	20	200	33	454						
12:30	12	206	16	180	28	386						
12:45	11	59	223	923	13	75	171	745	24	134	394	1668
01:00	14	221	11	179	25	400						
01:15	12	216	11	194	23	410						
01:30	8	218	4	195	12	413						
01:45	3	37	194	849	3	29	166	734	6	66	360	1583
02:00	7	208	4	187	11	395						
02:15	4	226	7	177	11	403						
02:30	3	184	5	190	8	374						
02:45	5	19	199	817	3	19	190	744	8	38	389	1561
03:00	3	186	4	180	7	366						
03:15	6	227	4	196	10	423						
03:30	1	242	4	229	5	471						
03:45	4	14	218	873	2	14	199	804	6	28	417	1677
04:00	2	218	6	219	8	437						
04:15	15	208	3	220	18	428						
04:30	4	198	2	186	6	384						
04:45	9	30	173	797	5	16	182	807	14	46	355	1604
05:00	14	189	9	183	23	372						
05:15	17	169	13	159	30	328						
05:30	21	155	16	155	37	310						
05:45	37	89	149	662	12	50	137	634	49	139	286	1296
06:00	35	137	13	157	48	294						
06:15	38	142	36	156	74	298						
06:30	62	143	33	132	95	275						
06:45	115	250	116	538	57	139	113	558	172	389	229	1096
07:00	94	142	39	113	133	255						
07:15	94	105	66	121	160	226						
07:30	116	97	64	92	180	189						
07:45	114	418	94	438	81	250	99	425	195	668	193	863
08:00	136	121	88	114	224	235						
08:15	110	103	89	85	199	188						
08:30	155	96	113	103	268	199						
08:45	142	543	71	391	118	408	76	378	260	951	147	769
09:00	185	71	113	68	298	139						
09:15	151	64	109	78	260	142						
09:30	182	79	142	68	324	147						
09:45	158	676	61	275	152	516	55	269	310	1192	116	544
10:00	188	49	130	80	318	129						
10:15	187	49	119	76	306	125						
10:30	160	46	146	62	306	108						
10:45	182	717	37	181	146	541	55	273	328	1258	92	454
11:00	201	37	162	57	363	94						
11:15	199	26	169	50	368	76						
11:30	196	33	186	43	382	76						
11:45	204	800	22	118	180	697	28	178	384	1497	50	296
Total	3652	6862	2754	6549	6406	13411						
Percent	57.0%	51.2%	43.0%	48.8%								
Day Total		10514		9303		19817						
Peak Vol.	11:00	12:00	11:00	03:30	11:00	03:30						
P.H.F.	0.980	0.908	0.937	0.947	0.975	0.930						



PRECISION
D A T A
INDUSTRIES, LLC

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40081Dvolume
Site Code: 4406

Court Street (Route 3A) north of
Hedge Street
City, State: Plymouth, MA
Client: VAI/R. Kelly

Start Time	NB		SB		Combined		18-Dec-04 Sat					
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.						
12:00	29	167	29	150	58	317						
12:15	29	191	28	165	57	356						
12:30	15	231	25	146	40	377						
12:45	29	102	197	786	30	112	180	641	59	214	377	1427
01:00	19	196	25	194	44	390						
01:15	26	219	13	188	39	407						
01:30	8	206	15	190	23	396						
01:45	6	59	191	812	9	62	195	767	15	121	386	1579
02:00	5	201	11	169	16	370						
02:15	10	174	9	167	19	341						
02:30	12	178	12	149	24	327						
02:45	9	36	175	728	6	38	167	652	15	74	342	1380
03:00	4	212	4	165	8	377						
03:15	3	141	7	170	10	311						
03:30	3	167	4	155	7	322						
03:45	1	11	166	686	3	18	151	641	4	29	317	1327
04:00	7	126	3	156	10	282						
04:15	8	140	0	147	8	287						
04:30	2	122	5	134	7	256						
04:45	7	24	129	517	3	11	158	595	10	35	287	1112
05:00	4	139	7	136	11	275						
05:15	2	124	4	135	6	259						
05:30	8	107	9	97	17	204						
05:45	22	36	126	496	13	33	99	467	35	69	225	963
06:00	20	97	16	116	36	213						
06:15	25	115	7	85	32	200						
06:30	30	96	19	75	49	171						
06:45	37	112	107	415	25	67	93	369	62	179	200	764
07:00	50	98	27	105	77	203						
07:15	57	84	33	95	90	179						
07:30	45	87	24	72	69	159						
07:45	70	222	72	341	51	135	73	345	121	357	145	686
08:00	63	81	57	82	120	163						
08:15	79	61	66	72	145	133						
08:30	89	54	59	57	148	111						
08:45	101	332	66	262	78	260	72	283	179	592	138	545
09:00	108	51	86	79	194	130						
09:15	145	61	99	76	244	137						
09:30	138	47	88	74	226	121						
09:45	157	548	48	207	120	393	64	293	277	941	112	500
10:00	157	39	120	64	277	103						
10:15	159	45	128	60	287	105						
10:30	182	45	161	52	343	97						
10:45	206	704	38	167	149	558	44	220	355	1262	82	387
11:00	190	36	156	41	346	77						
11:15	219	50	171	45	390	95						
11:30	209	36	191	33	400	69						
11:45	186	804	20	142	166	684	26	145	352	1488	46	287
Total	2990	5559	2371	5418	5361	10977						
Percent	55.8%	50.6%	44.2%	49.4%								
Day Total		8549		7789		16338						
Peak Vol.	10:45	824	00:30	843	11:00	684	01:00	1579				
P.H.F.	0.941	0.912	0.895	0.983	0.932	0.970						

Cordage Commerce Center Primary Driveway



PRECISION
D A T A
INDUSTRIES, LLC

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40081A Volume
Site Code: 4406

Cordage Commerce Center Driveway
south of East Access Road
City, State: Plymouth, MA
Client: VAI/R. Kelly

Start Time	NB (IN)		SB (OUT)		Combined		17-Dec-04 Fri				
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.					
12:00	10	161		72	12	233-					
12:15	3	155		66	6	221-					
12:30	1	133		75	2	208-	699				
12:45	0	14	155	604	10	57	270	24	212	874	
01:00	2	164		77	7	241-					
01:15	1	128		75	1	203					
01:30	2	142		70	4	212					
01:45	0	5	128	562	8	66	288	13	194	850	
02:00	2	126		61	4	187					
02:15	3	128		61	3	189					
02:30	0	128		62	0	190					
02:45	1	6	128	510	2	62	246	8	190	756	
03:00	0	113		65	1	178					
03:15	0	170		47	0	217-					
03:30	1	162		71	2	233					
03:45	2	3	152	597	3	55	238	6	207	835	
04:00	0	136		86	0	222					
04:15	5	102		77	6	179					
04:30	4	102		58	9	160-					
04:45	6	15	90	430	6	62	283	21	152-	713	
05:00	2	84		72	2	156-					
05:15	2	76		48	3	124					
05:30	4	89		33	4	122					
05:45	9	17	92	341	1	29	182	9	121	523	
06:00	5	79		23	6	102					
06:15	10	88		42	11	130					
06:30	21	108		23	28	131					
06:45	49	85	71	346	18	20	108	58	103	91	454
07:00	49	91		30	52	121					
07:15	56	73		29	71	102					
07:30	67	59		27	75	86					
07:45	63	235	79	302	15	24	110	78	276	103	412
08:00	115	75		27	129	102					
08:15	93	66		25	116	91					
08:30	119	55		35	139	90					
08:45	97	424	40	236	25	19	106	122	506	59	342
09:00	117	51		27	149	78					
09:15	98	46		17	129	63					
09:30	117	50		25	160	75					
09:45	130	462	42	189	44	22	91	174	612	64	280
10:00	124	31		52	30	176					
10:15	134	34		28	186	62					
10:30	107	14		19	149	33					
10:45	131	496	23	102	50	15	92	181	692	38	194
11:00	130	19		52	16	182					
11:15	140	14		11	201	25					
11:30	143	12		5	199	17					
11:45	162	575	14	59	75	9	41	237-	819	23	100
Total	2337	4278	761	2055	3098	6333					
Percent	75.4%	67.6%	24.6%	32.4%							
Day Total		6515		2816		9431					
Peak	11:00	03:15	11:00	03:30	11:00	00:15					
Vol.	575	620	244	289	819	882					
P.H.F.	0.887	0.912	0.813	0.840	0.864	0.915					



PRECISION
D A T A
INDUSTRIES, LLC

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Office: 508.481.3999 Toll Free: 888.734.7344
Fax: 508.481.0716 Email: info@pdillc.com

Cordage Commerce Center Driveway
south of East Access Road
City, State: Plymouth, MA
Client: VAI/R. Kelly

40081A volume
Site Code: 4406

Start Time	NB (IN)		SB (OUT)				Combined		18-Dec-04 Sat
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.			
12:00	6	135	6	41	12	176			
12:15	8	155	8	41	16	196			
12:30	4	164	6	46	10	210			
12:45	3	153	5	55	8	208	790		
01:00	3	164	5	64	8	228			
01:15	6	162	4	69	10	231			
01:30	1	173	2	57	3	230			
01:45	2	161	1	62	3	223	912		
02:00	1	144	6	54	7	198			
02:15	3	137	4	48	7	185			
02:30	3	134	0	46	3	180			
02:45	0	138	1	55	1	193	756		
03:00	3	143	0	52	3	195			
03:15	0	116	1	62	1	178			
03:30	0	122	0	46	0	168			
03:45	0	122	0	38	0	160	701		
04:00	1	100	0	58	1	158			
04:15	0	98	0	41	0	139			
04:30	1	100	1	39	2	139			
04:45	1	95	0	60	1	155	591		
05:00	1	87	0	31	1	118			
05:15	0	78	0	35	0	113			
05:30	0	83	0	31	0	114			
05:45	5	59	0	24	5	83	428		
06:00	2	63	0	24	2	87			
06:15	5	66	1	22	6	88			
06:30	14	73	1	24	15	97			
06:45	23	79	2	22	25	101	373		
07:00	27	66	4	26	31	92			
07:15	35	70	6	18	41	88			
07:30	26	50	4	15	30	65			
07:45	40	46	9	23	49	69	314		
08:00	45	44	12	20	57	64			
08:15	47	58	12	22	59	80			
08:30	74	44	19	12	93	56			
08:45	82	44	23	66	105	61	314	261	
09:00	75	21	21	27	96	48			
09:15	86	34	26	20	112	54			
09:30	108	45	28	16	136	61			
09:45	115	36	37	20	152	56	219		
10:00	119	27	25	19	144	46			
10:15	107	24	35	11	142	35			
10:30	136	15	36	18	172	33			
10:45	149	24	45	14	194	38	152		
11:00	136	19	43	8	179	27			
11:15	152	18	55	12	207	30			
11:30	139	10	49	8	188	18			
11:45	106	6	50	5	156	11	86		
Total	1900	4005	593	1578	2493	5583			
Percent	76.2%	71.7%	23.8%	28.3%					
Day Total		5905		2171		8076			
Peak	10:45	01:00	11:00	01:00	10:45	01:00			
Vol.	576	660	197	252	768	912			
P.H.F.	0.947	0.954	0.895	0.913	0.928	0.987			

SEASONAL ADJUSTMENT DATA

Plymouth, MA

STATION 28 - HINGHAM - RTE.53 - EAST OF THE WEYMOUTH T.I.

YR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
99	9,758	10,612	10,300	11,138	12,020	11,700	11,643	11,739	11,743	11,219	10,913	11,248	11,015
	-3%	-3%	-7%	1%	3%	9%	-2%	-1%	-3%	2%	0%	-4%	2%
00	9,437	9,971	10,300	11,138	12,020	11,700	11,393	11,674	11,429	11,459	10,867	10,791	11,015
	4%	1%	-7%	1%	3%	9%	-4%	7%	4%	4%	-6%	7%	2%
01	9,853	10,032	9,585	11,300	12,375	12,709	10,985	12,538	11,867	11,944	10,245	11,574	11,251
	7%	6%	17%	8%	4%	1%	13%	2%	6%	4%	14%	2%	7%
02	10,505	10,588	11,253	12,183	12,867	12,882	12,381	12,734	12,600	12,399	11,662	11,855	11,992
	1%	-3%	-3%	-6%	-4%	-3%	0%	-3%	-3%	-4%	0%	-4%	-2%
03	10,658	10,266	10,970	11,509	12,406	12,468	12,420	12,415	12,263	11,853	11,700	11,400	11,694
Average	10,042	10,214	10,544	11,533	12,417	12,440	11,764	12,220	11,980	11,775	11,077	11,374	11,488

ADJUSTMENT TO AVERAGE MONTH FROM:

YR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
00	16.721%	10.470%	6.941%	-1.105%	-8.362%	-5.855%	-3.319%	-5.646%	-3.623%	-3.875%	1.361%	2.075%
01	14.184%	12.147%	17.377%	-0.437%	-9.086%	-11.475%	2.418%	-10.268%	-5.194%	-5.806%	9.815%	-2.794%
02	14.159%	13.264%	6.571%	-1.564%	-6.797%	-6.906%	-3.139%	-5.824%	-4.822%	-3.279%	2.833%	1.159%
03	9.720%	13.910%	6.600%	1.607%	-5.739%	-6.208%	-5.845%	-5.807%	-4.640%	-1.341%	-0.051%	2.579%
Average	13.696%	12.448%	9.372%	-0.375%	-7.496%	-7.611%	-2.471%	-6.886%	-4.570%	-3.575%	3.490%	0.755%

OVERALL ADJUSTMENT TO AVERAGE MONTH FROM:

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
13.696%	12.448%	9.372%	-0.375%	-7.496%	-7.611%	-2.471%	-6.886%	-4.570%	-3.575%	3.490%	0.755%

OVERALL ADJUSTMENT TO PEAK MONTH FROM:

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
23.063%	21.711%	18.382%	7.832%	0.125%	0.000%	5.563%	0.785%	3.292%	4.368%	12.015%	9.055%