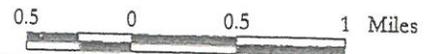


- Assisted Housing
 1. 30 Thaxter Street (existing)
(Ch. 667 Elderly Housing)
 2. Lincoln School Apartments (existing)
(Senior Housing)
 3. Whiting Street Condominiums
(under construction, Mixed Income Housing)
- 🏠 Market Rate Housing
 1. Hingham Commons
 2. The Meadows
 3. Hingham Woods
 4. Beal Cove Village
 5. Harbor Housing
 6. Hingham Shipyard Housing
(proposed to include some affordable housing)
- ⚠ Pending Comprehensive Permits
 1. Erickson Hingham (2000 units +/-)
 2. Scotland Green (42 units)
 3. Lincoln Hill (16 units)
 4. Brewer Meadows (27 units)



Town of Hingham Master Plan Phase II

Figure 1

Prepared by **BPG** Bluestone Planning Group
with John Brown Associates
and Bruce Campbell & Associates, Inc.

Housing

II. HOUSING: GOALS & RECOMMENDATIONS

INTRODUCTION

As a non-urban (but urbanizing) settlement, Hingham does not feel the extreme pressures for diversified housing that more urban communities experience. Such communities have large employment concentrations within their borders or are heavy commuting suburbs near such centers. In the past Hingham has had relatively little economic activity (other than retail and services to meet local needs), but is increasingly becoming a sub-regional office and light industrial center and commuting suburb (especially as regional transportation facilities are expanded).

The 1998 Zoning and Land Use Planning Survey and 1999 Needs Analysis and Visioning process identified a variety of issues and concerns relative to housing.

The 1998 Zoning and Land Use Planning Survey revealed the following local attitudes related to housing:

- The current number of condos and apartments in Hingham is appropriate.
- The current residential minimum lot size of 20,000 square feet is appropriate.
- The town should implement laws to regulate house size in relation to lot size.
- A majority say that accessory apartments should be allowed within existing homes.
- Hingham needs more housing choices for retired families.
- The high cost of housing was listed as the third most critical issue in Hingham (after “the cost of sewer and water” and “the loss of open land to development”).

The 1999 Needs Analysis and Visioning Process identified the following goals and policies related to housing:

Issue: Affordability

Interim Goal: Affordable housing for young families and seniors

Interim Policy: Develop additional strategies to lower housing costs

Issue: Diversity

Interim Goal: Housing options for families of all compositions

Interim Policy: Encourage senior housing, starter housing, bed & breakfasts

Issue: Buildable Lots

Interim Goal: Board of Health regulations

Interim Policy: Examine alternative sewage systems

In the **Land Use** section of the report, the diversity issue was also included:

Issue: Encourage diversity and balance of residents

Interim Goal: Smart growth

Interim Policy: Encourage diversity in housing and jobs

GOALS

Overall Goal

The primary goal identified for the town through the Master Planning Process is to develop a strategy within the ability of the community to provide adequately for senior, moderate income, and lower income housing needs as well as conventional housing needs, as appropriate, specifying the number of units needed and the financial means to provide for such units.

Goals Related to Conventional Housing Needs

Hingham is largely a community of single-family homes, with a limited amount of other housing types. Goals related to this type of housing include the following:

1. Preserve and strengthen the appearance of the town's neighborhoods and protect them from adverse influences.
2. Take care to carefully integrate any new or expanded housing into existing districts and neighborhoods so that it is compatible with the existing style and scale.
3. Regulate the replacement of older smaller homes by larger new houses ("teardowns").
4. Encourage the construction of houses of moderate size and cost so as to retain a diversity of families and individuals in the town.

Goals Related to Special Housing Needs

As discussed in the inventory section, there are segments of the existing and future population that require housing other than single-family homes. Goals related to these housing needs include the following:

1. Encourage independent living for elders, handicapped and others with special needs through affordable home care and affordable housing options.
2. Diversify housing options consistent with community character.
3. Determine the mix of assisted living options that is appropriate for the town and find means of accomplishing the stated goals.

POLICY RECOMMENDATIONS

1. Encourage a diversity of housing options in the town, appropriate to the scale, environmental conditions, and historic character of various areas in the town.

Designate certain areas of the town for future development of, condominium or townhouse development. Some areas that would be appropriate for such development were shown in the Guide Plan For Future Land Use (Phase I of the Master Plan). The Guide Plan may require some revisions based upon the Erickson proposal and other recent development proposals.

The town should designate other areas for use as needed in the future. Sites reviewed by the

Town as possible future Habitat house sites are included in Appendix 7-1, Part 1. Additional town-owned sites that should be considered for housing (if they are not needed for town facilities) include a portion of the so-called Depot Tract, adjacent to Bare Cove Park, The Hersey site at 229 North Street in the northern part of town, and the former Police Station at the corner of Route 3A and Lincoln Street. Other town-owned land should also be reviewed for potential housing suitability. By maintaining a list of potential sites and criteria for suitable sites, the Town can choose appropriate sites instead of responding to ad hoc proposals by developers. Criteria for selecting suitable sites for condominium, or townhouse development are provided in Appendix 7-1, Part 2.

2. Encourage creative use of older homes.

Encourage mixed use and viable reuse of older homes throughout the town which are too large to be maintained as typical single-family residences. Consider expansion of zoning provisions for accessory apartments and professional use in residential structures, especially those on main streets or near Hingham Square.

3. Provide types of housing that will enable citizens of all ages to stay in Hingham.

Develop alternative and lower cost forms of housing for young adults as well as seniors. These may include townhouses and mixed use developments. Use density bonuses to encourage lower cost housing. This need has already been addressed, in part, by the passage of Flexible Residential Development (FRD) by the April, 2001 Town Meeting.

4. Provide elderly housing and life-care facilities to meet the needs of Hingham's older population.

Determine the appropriate amount and mix of costs and services in assisted and market rate housing in accordance with the town's demographics and find means to accomplish the stated goals. Encourage independent living for elders, handicapped, and others with special needs.

5. Continue to seek federal / state or private assistance for senior and low and moderate income development.

Use the Housing Authority, The Housing Partnership Committee, or a new nonprofit housing trust or corporation to identify housing needs and pursue private or government assistance to meet these needs. Programs to meet these needs are described in Appendix 7-2, although funding for specific programs is not always available.

6. Discourage "teardowns" – the replacement of traditionally sized homes with overly large ones.

Establish a Demolition Delay Ordinance for non-historic as well as historic residential buildings. Also explore the modification of existing zoning to regulate lot coverage and building intensity in residential zones. Appendix 7-3 contains a demolition delay ordinance adopted by the Town of Duxbury and a sample by-law, which was proposed for the Town of Wayland to regulate residential gross floor area.

7. Encourage Mixed Uses In Hingham Square.

Encourage mixed use within Hingham Square. The addition of a modest number of dwelling units above existing commercial buildings will provide an economic stimulus to the Square and building owners and provide additional housing opportunities for small families, individuals, and seniors. Proper arrangements for accommodating parking would have to be made.

8. Use the Local Initiative Program.

As discussed in the housing needs assessment section above, the State's Local Initiative Program (LIP) allows communities to work with the State Department of Housing and Community Development and developers to create housing under Chapter 40B (using a comprehensive permit) that is acceptable to the Town and is eligible for credit under the Town's Chapter 40B requirement even if direct State or Federal subsidies are not used. At least 25% of the units must be affordable to households at or below 80% of area median income and developer profit is restricted to a return on investment no greater than 20%.

STRATEGIES TO MEET OVERALL HOUSING GOALS

Chapter 40B Requirements

Based upon State criteria, the town has a shortfall of approximately 546 units of low and moderate-income housing. Until this shortfall is eliminated, developers will continue to have access to Comprehensive Permits under Chapter 40B. Once the Year 2000 census figures are certified, this estimate will increase since required units are based on a percentage of year-round housing units. Unless the Town meets state requirements, it is subject to requests for approval of comprehensive permits for housing developments including at least 25% low and moderate-income units.

The town has already received comprehensive permit requests for five projects totaling 2,051 units (and a 324 bed skilled nursing facility), of which one (containing 24 units) has already been approved and is under construction and another, containing 2,027 units (and the nursing facility), have been preliminarily approved. The other two projects, totaling 89 units, are still under review.

In order to have more control over future comprehensive permit applications, it is recommended that the town:

- Seek to increase the amount of eligible low and moderate-income units in the town.
- Use the Local Initiative Program (LIP), described on page 7-10 and above, to better the type, design, and location of projects submitted.
- Develop clear but flexible criteria and goals for use in the review of comprehensive permit applications.

Other Town Initiatives

The policy recommendations described in Section 7.5 above will help the town toward meeting its long range housing goals and state mandates. Regardless of state mandates, the town and its citizens have expressed the desire to improve the diversity of its housing supply and to provide residential accommodations for its increasing number of senior citizens, its young individuals and families, and those of low and moderate income.

Recent actions by the Town Meeting demonstrate the town's desire to implement the goals set forth herein. These include the recent adoption of the Community Preservation Act (see page 7-6) and the Flexible Residential Development by-law. Taking additional steps as described in Section 7.5 and other actions as may be recommended periodically by local housing advocacy groups and the town's housing committees will help the town to meet its stated goals.

August 4, 2001

Appendix 7-1, Part 1

HINGHAM II HABITAT AD-HOC COMMITTEE

REVIEW OF POSSIBLE FUTURE HABITAT HOUSE SITES

At the June meeting of the Ad-Hoc Committee a small sub-committee was established consisting of Bob Snowber and Bob Broker, to identify possible sites for future Habitat house projects on Town owned land. The purpose of this was to explore the options which might require some advance actions (such as a responsible Department declaring the land surplus) and as an alternate to the Nakomis Road site, in the unlikely chance that the Land Court rules against the Town.

The site evaluations are presented below including critical data and actions that might be required before the site could be given serious consideration. The sites have been assigned a number merely for identification and not in order of preference.

SITE #1 – KILBY STREET Town of Hingham 30,336 sf Under Electric Light Plant

This site is directly behind the Sons of Italy Hall and was formerly used by the Light Plant as a transformer sub-station. Based on discussions with Mr. Christopher Cox, Mgr., they have no planned use for the property. Because of the transformers there could be PCB's in the ground and It must be checked. Coler and Colantonio does this work and they quoted a cost of \$200 to 500 to test each site. They might want to consider doing such tests on other sites as well in order to determine any required mitigation. There are no sewer lines in this part of Town. The site is near the Old Colony Rt. Of Way
Assesors Plan #64 Parcel #5

Actions Required: Undertake contamination tests (by Town)
Declare land surplus (by Light Plant)
Verify percability (by Habitat)

SITE #2 – TOWER BROOK ROAD Town of Hingham 5 lots @ 20,00 sf Under Bd of Sel.

These five lots are on the south side of Tower Brook Road, from Main Street east. The Electric Light plant has an overhead power easement on wooden poles going over the south side of each lot. Most of the southern part of each lot is obviously wetlands but the most westerly lot bears consideration. There is a small fenced enclosure at the rear which apparantly was a small sub-station and should be verified for PCB's. There are no sewers. Assesor's Plan #108 Parcel #10

**Actions Required - Identify wetlands limitation (by Habitat)
Verify percability (by Habitat)**

SITE #3 – DOWNER AVENUE Town of Hingham Possible 20,000 sf Under School Dept.

This property is a part of the Foster School property which totals 10 Acres. The easterly 400 ft frontage on Downer Avenue is all wooded and is rather steep. There is a likelihood of rock which could be easily determined. Downer Avenue is on Sewer. We talked with Ms Dorothy Gallo, the new Superintendent of Schools who advised that a new committee is looking into expanding the school with an auditorium and other facilities but she didn't think they would consider going east. She suggested Habitat writing her and she would be agreeable to taking the question to the Board. If they agreed to it they would have to consider a 100'x200' parcel surplus before a Town Warrant Item could be filed.

Actions Required Verify impact of rock (by Habitat)
Request to School Dept. (by Habitat)

SITE #4 - UNION STREET Town of Hingham Poss. 20,000 sf Under Recreation Comm
The Town owns 11.7 Acres on the East side of Union Street, South of the High School and play-
ing fields, part of which is used for a Golf Driving Range. The parcel has 885 ft of frontage on
School Street, about half of which is devoted to the driving range and the other half is heavily
wooded. What might be considered is taking a 100 ft frontage (by 200 ft deep) from the south end of
the parcel adjacent to an existing residence. The street does not have a sewer but Brian MacSweeney
feels that there would be no perc problem.
Assesor's Plan # 110 Parcel#2

Actions Required Discuss availability with Rec. Comm (by Habitat)
Request consideration of declaring site surplus (by Habitat)

SITE #5 CENTRAL STREET Town of Hingham Possible 1-3 Lots Bd. Of Selectmen
This is adjacent to Habitat's first house on Central Street built in 1995. We tried to get the whole
2.3 Acre parcel the prior year and hoped to eventually build 3 houses. At many hearings, the object-
ions of several neighbors led the Advisory Committee to suggest that we only request one lot which
we agreed to. It passed Town meeting with a strong majority. At the time we stated that we would
not plan to go after the balance of the property (to pacify the neighbors) but I believe that we
would have the support of several Town Committees and Boards. The perc tests on the first house
Required us to set the house far off the street and could be a problem. We were aware that the next
house north has part of their septic system on part of the Town property and it is believed that the
woman wants to sell the house. The town is trying to work something out with her.
Assesor's Plan #

Actions Required - Decision on whether to proceed (by Habitat)
Discuss with Selectmen's office and other Depts. (by Habitat)

SITE #6 BEHIND 55 COLONIAL ROAD Inhabitants of Hingham & Boy Scouts of America
There are two large parcels owned separately by the Town of Hingham (7.17 Acres) and the
Boy Scouts (6.3 Acres) in the middle of the Liberty Pole area. They might be landlocked though
the Assessor's Plan shows what might be a right of way to Colonial Road. With all the development in
that area in the 60's and 70's it is a mystery why these parcels were not bought by a developer. The
land is heavily wooded, may have some wetlands with varying topography. There are no sewers in
the area and streets, utilities and access would have to be provided. It is a long shot
Assesor's Plan #167

Actions Required - Explore history and access (by Habitat)

SITE #7 ABINGTON STREET Town of Hingham 6 Acres Under Bd. of Selectmen
This large parcel is close to the Weymouth line and was difficult to find. There may be some wet
lands AND THE Town of Weymouth wells are nearby. It might be worth a second look to see why it
has not been developed.
Assesor's Plan #212

Action Required - Identify specific parcel (by Habitat)

OTHER SITES

Two other sites which had been considered in 1999 were given a second look. One consisted of
three lots at the end of Elizabeth Lane. Brian MacSweeney advised that 3 different developers had
failing perc tests and let the land go for taxes. He feels the land will stand empty until sewers are
built in that part of town.

The other is a parcel near the first Habitat house - on Cedar Street. There had been a house on
it which burned down but the property is almost all ledge. The estate gave up trying to sell it and
let it go for taxes in 1996.

Copies of this report will be given to the Executive Committee of the Ad-Hoc, Leo Hurley -
Chair of SSHH Site Selection, Cynthia Hargrove, SSHH Exec. Director and Mr. Charles
Cristello, Town Administrator

Appendix 7-1, Part 2 Criteria For Housing Site Selection

The ideal site is not usually available so that some compromises may have to be made. Most environmentally sound sites near the center of the community are acceptable. Sites to be avoided are those that are isolated from the community (physically and socially), are on marginal lands, or are imposed on neighborhoods of a different design scale.

Environmental Criteria

- Development should not be permitted in a flood plain or wetland.
- The proposed project should respect other natural features, such as hills and major tree stands, and the proposal should be designed to blend in with the existing topography of the site.
- Very steep sites are probably undesirable.

Land Use Criteria

- The adjacent land use should be appropriate, so that the proposed housing is not subject to undue adverse impacts. Sites should not be adversely impacted by heavy traffic, industrial noise or dirt, or visual pollution.
- The site, or the design of the proposed development, should not adversely affect existing adjacent residential uses. The external design and appearance should be compatible with adjacent properties.
- Multi-family developments should be scattered, in relatively small scale projects, throughout the town, assuming other criteria can be met, including compatibility with single family development.
- For assisted housing, sites conveniently located to shopping services is preferred. Some elderly and moderate income families may not have access to an automobile or may have only one automobile.
- The site should have a minimum of five acres, if possible.
- The site should have sufficient depth from the principal roadway to support the proposed development.
- The site should be capable of encouraging a housing design that will offer attractiveness, privacy, and protection from adverse impacts through the creative use of grade changes, landscaping, screening, building orientation and other design techniques.
- Sites should be developed with a density of approximately 8-12 units per acre.

Infrastructure

- The site should be served by public water facilities.
- The site should be served by public sewer facilities or have the septic capacity for on-site treatment.
- The site should be served by roadways that meet Town standards.

- Sites should not unduly impact already heavily congested roadways and intersections.

Appendix 7-2 State and Federal Resources to Provide Low and Moderate Income Housing

A. HOUSING - GENERAL

Home

The HOME initiative is designed to produce affordable housing units for rent or purchase by low or moderate income households. Established by the Cranston Gonzalez National Affordable Housing Act of 1990, the program is administered by HUD with Massachusetts as a participating jurisdiction and DHCD overseeing implementation.

Projects to be funded include those which will increase rental housing, provide first time homeownership assistance, rehabilitation assistance for existing homeowners and tenant-based rental assistance. DHCD is encouraging applications for moderate or substantial rehabilitation and/or completion of rehabilitation of distressed or failed properties as well as applications that will benefit distressed neighborhoods.

Fifteen percent (15%) of the funds will be set aside for nonprofit organizations constituted as community housing development organizations (CHDOs). Over 50 nonprofit organizations in Massachusetts have already qualified as CHDOs.

PROGRAM: Federal grant program.

ELIGIBILITY: For-profit developers; nonprofit developers; nonprofit organizations constituted as CHDOs; municipalities. All applications require the approval of the chief elected official of the community to benefit from the funds.

CONTACT: Division of Private Housing Programs (617) 727-7824.

Housing Appeals Committee Chapter 40B

To promote the creation of affordable housing, the Housing Appeals Committee adjudicates disputes arising under the state's comprehensive permit law, Chapter 40B Sections 20-23. This law allows a local zoning board of appeals to issue a comprehensive permit overriding town zoning and other local regulations. A developer, nonprofit organization or government agency that proposes to build or substantially rehabilitate subsidized low- or moderate income housing can appeal to the Housing Appeals Committee if the board either denies the comprehensive permit or grants the permit subject to conditions which make the proposal uneconomic.

PROGRAM: State Program.

ELIGIBILITY: Any developer denied an unconditional comprehensive permit by a ZBA in a city or town with less than 10% of its housing units affordable to low or moderate income persons.

CONTACT: Housing Appeals Committee (617) 727-6192.

Local Initiative Program

The Local Initiative Program (LIP) stimulates affordable housing production by allowing local governments to work in partnership with project sponsors.

Project applications include comprehensive permit projects and inclusionary zoning projects. Comprehensive permit projects must seek a comprehensive permit from the local zoning board of appeals after DHCD has reviewed and approved their applications and may build at a higher density than local zoning ordinarily allows. In addition such projects must reserve at least 25% of the units as low-income units. Inclusionary zoning projects must gain DHCD approval in addition to permits confirming that the proposal conforms to existing zoning. The project may include new or existing units and there is no minimum percentage of low-income units required for such applications.

PROGRAM: State program involving no direct dollars, but subsidizing technical assistance and project review costs.

ELIGIBILITY: For-profit developers, nonprofit developers and local government entities. All applications require the approval of the chief elected official in the community that will benefit from the funds.

CONTACT: Division of Private Housing Programs (617) 727-7824.

Manufactured Homes Commission

The Manufactured Homes Commission, created by the legislature, is responsible for studying and reporting on issues and problems relating to manufactured homes, manufactured home communities, and/or their tenants. The five member Commission meets monthly and files reports with the legislature including recommendations for proposed legislation.

PROGRAM: State-funded program.

ELIGIBILITY: Any resident of a manufactured home community or owner/operator of a mobile home community may bring issues before the Commission.

CONTACT: Division of Community Services (617) 727-7001, Ext. 405.

Homelessness Intercept Program

The Homelessness Intercept Program (HIP) provides a rich variety of support services for families and individuals designed to remove them from damaging motel/hotel placements and to help them retain stable housing. Implementation of HIP includes pursuing an aggressive housing placement program, family mediation, landlord dispute resolution, involvement of diverse community resources, job counseling and training in child care and money management. The intention of the program is preventive; offering the kind of support that allows families to undertake a larger share of responsibility for their own lives and helping them retain stable housing.

The goals of the program are carried out by a statewide network of housing and service providers, under contract to DHCD and directed by DHCD staff. HIP is funded substantially by the Department of Welfare and partially by DHCD.

PROGRAM: State-funded and DHCD-designed program.

ELIGIBILITY: Any low-income family in jeopardy of losing stable housing or in a shelter where the DHCD HIP Provider is under contract to perform housing search.

CONTACT: Division of Neighborhood Services (617) 727-7004, Ext. 134.

Lead Abatement Program

This program provides grants and loans for lead abatement in privately owned housing. Local and regional agencies assist owners to document income eligibility, arrange for an inspection, secure loans from local banks and procure the services of qualified deleading contractors. All inspection and abatement work must meet the requirements of the state's Lead Law.

Both owner-occupied and rental units can be assisted, but all units assisted must remain affordable to low and moderate income occupants for five years after the work is completed. Statewide, more than 2,000 units will be abated under the program, expected to continue until summer, 1998. Funds are primarily available in Brockton, Chelsea, Lawrence, Fall River and New Bedford.

PROGRAM: HUD funded grant and loan program.

ELIGIBILITY: Private residential units. Owner occupied units can be aided if owner income is no more than 95% of median income for area; rental units can be aided if occupant income is no more than 80% of median for area.

CONTACT: Division of Community Services, Lead Paint Abatement Program. Program Manager, Andrew Nelson at (617) 727-7001, Ext. 480.

B. HOUSING -HOME OWNERSHIP

Soft Second-Loan Program

The Soft Second Program increases affordable homeownership opportunities for low- and moderate-income first-time home buyers.

This DHCD/MHP program is a joint initiative of the public and private sectors and combines a conventional 30-year fixed rate first mortgage with a subsidized second mortgage. The down payment required is only 5% and the homeowner is allowed to borrow up to 20% (not to exceed \$25,000) of the purchase value, thus avoiding the additional expense of private mortgage insurance. The homeowner is required to pay interest only on the second mortgage for the first ten years. In addition, public funds are used to cover a substantial portion of the interest due on the first mortgage for the first five years. The public investment is secured by the junior mortgage repayable at the time of resale or refinancing.

PROGRAM: State loan program.

ELIGIBILITY: Municipalities are eligible to apply on behalf of buyers with household incomes below 80% of median income. Borrowers are expected to secure a conventional mortgage and to contribute no less than 28% and no more than 33% of their income for mortgages and all other housing expenses. The maximum purchase price allowed by the program is \$110,000 for a condominium and \$130,000 for a single family home.

CONTACT: Division of Private Housing Programs (617) 727-7824.

Homeownership Opportunity Program

The Homeownership Opportunity Program (HOP) encourages the development of mixed-income homeownership projects sponsored by community housing partnerships and developers.

HOP, jointly administered by DHCD and MHFA, allows either condominium or single family development with at least 30% of the units reserved for purchase by families below 80% of median income. Those eligible buyers receive below-market mortgages through MHFA as well as interest subsidy assistance from DHCD. Since many of the units are made available for 15% to 50% less than appraised value, the state imposes a deed restriction on all resales to preserve the affordability of the units for new buyers.

PROGRAM: State loan program. NOTE: As of this date all funds have been committed for projects and no new applications are being accepted. However, some HOP project sponsors are still marketing units and some units have become available for resale. These units are available to qualified buyers.

ELIGIBILITY: Eligible buyers of HOP affordable units must have incomes below 80% of median income and down payments of 5%.

CONTACT: Division Of Private Housing Programs (617) 727-7824.

C. HOUSING - RENTAL CONSTRUCTION/REHAB/OPERATION

Massachusetts Community Development Block, Grant Housing Development Support Program

The Housing Development Support Program (HDSP) is designed to assist smaller project-specific affordable housing initiatives. Communities may utilize HDSP funds to carry out a variety of activities to support the development, improvement and retention of public or private housing which is primarily affordable to low and moderate income persons. Typical project activities include: moderate and substantial rehabilitation and new construction (within HUD restrictions) of residential and mixed-use structures; home ownership initiatives; elderly transitional and special needs housing; reclamation of abandoned and/or foreclosed properties; preservation of "at risk" affordable housing; the conversion of under-utilized or obsolete structures to housing; and related acquisition, site preparation, infrastructure, and demolition.

Generally, the units in a HDSP project may be counted toward the municipality's 10% goal for low and moderate income housing; HDSP may also qualify as an eligible subsidy in conjunction with the Comprehensive Permit process.

Project grant amounts are generally limited to a maximum of \$400,000. Applications are reviewed for financial feasibility, affordability, readiness, developer capacity, site and design and cost-effectiveness. HDSP is now competitive with scheduled funding rounds; applications are no longer accepted on a rolling basis.

PROGRAM: Federally funded grant program through CDBG funds.

ELIGIBILITY: Cities and towns of less than 50,000 population which are not entitlement communities.

CONTACT: Division of Community Services (617) 727-7001.

Low Income Housing Tax Credits

The Low Income Housing Tax Credit Program (LIHTC) targets construction or acquisition and substantial rehabilitation of low-income family housing, as well as special needs housing and low-income housing preservation.

The program, created by the federal Tax Reform Act of 1986, awards federal tax credits to investors in low-income housing. At least 20% of the units must be reserved for and made affordable to persons with incomes 50% or less than the area median gross income or at least 40% of the units must be made affordable for persons with incomes 60% or less than the area median income. In addition, the project must be retained as low income housing for 30 years.

PROGRAM: Federal tax credit program.

ELIGIBILITY: For-profit and non-profit developers.

CONTACT: Division of Private Housing Programs (617.) 727-7924.

Rental Development Action Loan

The Rental Development Action Loan program (RDAL) supports rental housing and limited equity cooperatives for low and moderate income families.

An RDAL loan is a 15-year subsidy which reduces ongoing operating costs such as debt service for small to medium size developments. Long term financing may be provided by MHFA or a private lender. It is used for new construction, preservation, or rehabilitation of partially occupied buildings and low-income affordability is required for 15 to 20 years. At least 50% of the units must contain two or more bedrooms and at least half of those must be reserved for low income families.

PROGRAM: State loan program. NOTE: As of this date, all funds have been committed to projects and no further applications are being accepted.

ELIGIBILITY: Private, limited dividend, for-profit or nonprofit entities.

CONTACT: Division of Private Housing Programs (617) 727-7824.

Housing Innovations Fund

The Housing Innovations Fund (HIF) was created to finance innovative housing needs in the Commonwealth such as single room occupancy housing (SRO), limited equity cooperatives and special needs housing for the terminally ill, victims of immunological deficiencies and those recovering from substance abuse.

HIF provides long term investment in housing with a deferred payment capital loan and has been newly recapitalized under the 1994 Housing Bond bill. As long as the property remains affordable to low-income persons and meets other guaranteed conditions, the loan does not need to be repaid for 30 years. At least 50% of the residents of HIF projects must be low income.

PROGRAM: State loan program.

ELIGIBILITY: Nonprofit entities only.

CONTACT: Division of Private Housing Programs (617) 727-7824.

State Housing Assistance For Rental Production

The State Housing Assistance for Rental Production program (SHARP) is used to generate mixed income family housing production, 25% of which must be affordable.

The loan program combines long term financing through issuance of tax exempt bonds by the Massachusetts Housing Finance Agency (MHFA) with a state subsidy to reduce financing costs to 5%. SHARP loans have a term of 15 years but the affordability requirement is preserved for a longer term. If the private owner does not want to maintain the development as affordable housing, the SHARP option allows the state to acquire the property for the lower of the determined price or market value or to arrange for its sale to another owner who will preserve the low income affordability.

PROGRAM: State loan program. NOTE: As of this date, all funds have been committed to projects and no new applications are being accepted.

ELIGIBILITY: For-profit and nonprofit developers.

CONTACT: Division of Private Housing Programs (617) 727-7824.

Family Low Income Housing

The intention of the Chapter 705 program is to provide housing for low-income families which allows integration into existing neighborhood settings.

The program, operated through LHAs, typically develops properties with a small number of units. The LHA may, in certain circumstances, acquire existing homes or condominium units instead of constructing new units.

PROGRAM: State grant program.

ELIGIBILITY: LHAs on behalf of tenants meeting tenant eligibility criteria.

CONTACT: Division of Public Housing and Rental Assistance. For " development, Bureau of Housing Development and Construction (617) 727-7130, Ext. 695. For occupancy, LHA or Bureau of Asset Management (617) 727-7130, Ext. 665.

Elderly/Handicapped Low Income Housing Ch.667

The Chapter 667 program provides housing for qualified low income elderly and qualified low income handicapped persons as defined in MGL C.121B.

The program affords LHAs the opportunity to construct or acquire and rehabilitate conventional housing. Chapter 667 was originally passed by the legislature in 1954.

PROGRAM: State grant program.

ELIGIBILITY: LHAs on behalf of tenants who are at least 60 years of age meeting the income criteria, and persons regardless of age meeting the criteria for "handicapped".

CONTACT: Division of Public Housing and Rental Assistance. For development, Bureau of Housing Development and Construction (617) 727-7130, Ext. 695. For occupancy, LHA or Bureau of Asset Management (617) 727-7130, Ext. 665.

Public Housing Modernization

The goal of the housing modernization program is to protect the investment made in public housing by the state over the last forty years by providing funds for capital maintenance of these developments.

The 1993 bond authorization of \$130 million passed by the legislature was awarded by DHCD to local housing authorities (LHAs) with the most serious conditions affecting health and safety of residents. All of the funding was committed, to be spent in the next four years. No new funding will be available until there is another bond authorization.

PROGRAM: State grant program.

ELIGIBILITY: Local housing authorities.

CONTACT: Division of Public Housing and Rental Assistance, Bureau of Housing Development and Construction, (617) 727-7130, Ext. 695.

State Aided Federal Public Housing Modernization

The goal of the State Aided Federal Public Housing Modernization program (SAFPHM) is to rehabilitate and modernize federally funded public housing projects using both state and federal funds. SAFPHM seeks to achieve renovation and modernization in distressed federally assisted projects under the terms of the Comprehensive Housing Act of 1987.

PROGRAM: Federal matching grant demonstration program. No new funding available.

ELIGIBILITY: LHAs for federally funded public housing projects in need of renovation, repair, rehabilitation, or modernization of major systems.

CONTACT: Division of Public Housing and Rental Assistance, Bureau of Housing Development and Construction (617) 727-7130, Ext. 695.

Public Housing Operating Subsidy Chapters 200, 667, 689 705

The Housing Operating Subsidy Program provides annual funding commitments for the operation of DHCD funded public housing stock. In addition, for most of the units under the legislative chapters listed above, DHCD works with other appropriate state agencies to supply a wide variety of support services. These include some physical adaptations of the living units, congregate living support, and special elderly services.

PROGRAM: State operating subsidy/service subsidy.

ELIGIBILITY: LHAs on behalf of tenants in DHCD funded LHA housing are eligible for a wide variety of programs. Please see listings under Social Services.

CONTACT: Division of Public Housing and Rental Assistance, Bureau of Asset Management (617) 727-3240, Ext. 665.

Section 8 New Construction 167, 667, 689 705

The purpose of the Section 8 program is to provide affordable housing to low-income families and the elderly. Tenants pay 30% of their adjusted gross income for rent and the federal government subsidizes the difference between this amount and the total contract rent.

The program is a unique combination of state and federal initiatives which provide 35 to 40 year mortgages through HUD funding to amortize construction costs, pay the administrative costs of the program and subsidize tenant rents. The Commonwealth, as its contribution to the program, funds construction and permanent mortgage financing as well as administering the 18 developments and is repaid the development and rehab costs of these projects from the project income. The developments themselves are owned by LHAs.

Under this overall Section 8 program are individual housing initiatives. Please See: Special Needs Housing Production (Ch. 689 and 167), Elderly Low Income Housing Production (Ch. 667) and Family Housing Production (Ch. 705).

PROGRAM: Combined federal and state funding. As of this date, all funds are committed and no new production will be undertaken.

ELIGIBILITY: See tenant eligibility criteria listed under the individual housing programs.

CONTACT: Division of Public Housing and Rental Assistance, Bureau of Asset Management (617) 727-3240, Ext. 665.

Section 8 Substantial Rehabilitation - Chapters 200, 667, 689, 705 5'

Section 8 Substantial Rehabilitation Program, provides reconstruction funds for substandard or aging subsidized housing units within individual housing programs such as:

- Chapter 200 veterans family housing
- Chapter 667 elderly housing
- Chapter 689 special needs housing
- Chapter 705 family housing

Under this program as with Section 8 New Construction, tenants pay 30% of their adjusted gross income for rent while the federal government subsidizes the difference between that amount and the total contract rent.

The program involves both public and quasi-public entities with HUD usually committing 35 to 40 years of rent subsidies and amortization of rehab costs and the Commonwealth contributing rehabilitation funds and permanent mortgage financing. The Commonwealth is repaid the development and rehab costs from the project income. MHFA funded the rehab of the largest single project.

PROGRAM: Joint federal and state program with some financial involvement by MHFA. As of this date all funds are committed and no further programs will be undertaken

ELIGIBILITY: See tenant eligibility criteria listed under the individual housing programs

CONTACT: Division of Public Housing and Rental Assistance. For development, Bureau of Housing Development and Construction (617) 727-7130, Ext. 695. For occupancy, LHA or Bureau of Asset Management (617) 727-7130, Ext. 665.

HOUSING STABILIZATION FUND

The Housing Stabilization Fund (HSF) supports three DHCD goals: comprehensive neighborhood redevelopment efforts, the preservation and rehabilitation of affordable housing and creation of affordable homeownership opportunities. Special emphasis is placed on re-use of foreclosed and distressed properties and new construction is prohibited.

The program consists of three major initiatives:

- The Neighborhood Restoration Initiative (NRI) supports affordable rental housing and homeownership units and in some cases, demolition
- The Rehabilitation Initiative (RI) rehabilitates properties for re-use as affordable rental or ownership housing
- The Soft Second Loan Program (Soft Second) helps low or moderate-income people qualify for mortgages

PROGRAM: State funded competitive loan program

ELIGIBILITY: NRI - Municipalities alone or in partnership with for-profit or non-profit developers; communities must first prepare and submit to DHCD a comprehensive neighborhood revitalization plan for the targeted neighborhood that must be approved by DHCD before application for NRI funds can be submitted

RI - Municipalities, for-profit or nonprofit developers, local housing authorities in partnership with municipalities to rehabilitate distressed, foreclosed or abandoned properties for reuse as affordable rental or ownership housing.

RI funds may be single source financing or in combination with other public funds

Soft Second - Municipalities 4 partnership with lending institutions

CONTACT: Division Of Private Housing Program, (617) 727-7824.

D. HOUSING –RENTAL ASSISTANCE

Section 8 Voucher

This tenant-based rental assistance program, provides a subsidy to very low income individuals and families that allows them to select a rental unit that meets HUD and DHCD requirements anywhere in the country that a housing agency administers the program.

The subsidy, which is adjusted for family size and location, is equal to the difference between the payment standard and 30% of the adjusted family income. There is no limit on the rent the tenant can pay provided it is reasonable in comparison to comparable rents in the same community.

DHCD administers its Section 8 Voucher Program/Existing Certificate Program through nine regional and one local administering agencies located throughout the Commonwealth.

PROGRAM: Federally funded program.

ELIGIBILITY: Households whose income is less than 50% of the median in the area in which they live. Priority is given to the homeless, those at risk of becoming homeless, those in sub-standard housing, those facing displacement through no fault of their own and those paying more than 50% of their income for rent.

CONTACT: Division of Public Housing and Rental Assistance, Bureau of Federal Rental Assistance (617) 727-7130 Ext. 655.

Section 8 Existing Certificate

The Section 8 existing Certificate Program provides a tenant-based rental subsidy in the form of a certificate to low income individuals and families which allows them to select any rental unit which meets HUD and DHCD requirements anywhere in the country. HUD determines a Fair Market rent limit by geographic area and tenants may not pay more or less than 30% of adjusted income toward their total housing cost (rent plus tenant paid utilities).

DHCD administers its Section 8 Voucher Program/Existing Certificate Program through nine regional and one local administering agencies located throughout the Commonwealth.

PROGRAM: Federally funded program.

ELIGIBILITY: Identical to eligibility for Section 8 Vouchers, see above.

CONTACT: Division of Public Housing and Rental Assistance, Bureau of Federal Rental Assistance (617) 727-7130, Ext. 655

Section 8 Project-Based Certificates

Section 8 Project-Based Certificates (PBC) is subsidy that is committed to specific projects for a minimum period of five years. Most PBC projects have other tenant eligibility requirements, in addition to the basics, that are related to human service needs.

Tenants pay 30% of their adjusted monthly income toward the rent and utilities.

PROGRAM: Federally funded program.

ELIGIBILITY: Generally DHCD will only develop PBC where special conditions or populations indicate that this is the best way to serve the community. Due to the intensive workload associated with developing PBC there is a moratorium on new initiatives. Very low income applicants on DHCD administrators' waiting lists that meet the program requirements are eligible for available units.

CONTACT: Division of Public Housing and Rental Assistance, Bureau of Federal Rental Assistance (617) 727-7130 Ext. 655.

Section 8 Moderate Rehab Single Room Occupancy

The Stewart B. McKinney Section 8 Moderate Rehabilitation Single Room Occupancy (SRO) Program is a project-based rental assistance program. The project sponsor arranges for the provision of services to tenants and the housing is administered by the regional housing agency. The tenant pays no more than 30% of adjusted family income toward the total housing cost.

PROGRAM: Federal program funded on a competitive basis.

ELIGIBILITY: Property owners whose rental units require a minimum of \$3,000 rehabilitation; households whose income is less than 50% of the median income in the area where they live.

CONTACT: Division of Public Housing and Rental Assistance, Bureau of Federal Rental Assistance (617) 727-7130 Ext. 655

McKinney Shelter + Care

The McKinney Shelter + Care Program provides rental assistance and services to homeless individuals and families with disabilities, primarily those with severe mental illness, chronic substance abuse problems and/or AIDS. Rental assistance can be in a single room occupancy setting, sponsor-based, project or tenant-based. In all four forms, the tenant is selected by a human service provider who assures that clients are linked with appropriate services. Tenants pay no more than 30% of adjusted income toward the total housing cost and necessary services are provided through a network of public and private entities.

PROGRAM: Federal program funded on a competitive basis.

ELIGIBILITY: Homeless disabled individuals and families whose income falls below 50% of the area's median income, selected by a human service provider.

CONTACT: Division of Public Housing and Rental Assistance, Bureau of Federal Rental Assistance (617) 727-7130, Ext. 353.

Home Tenant-Based Rental Assistance

The HOME Tenant Based Rental Assistance Program (HOME TBRA) provides temporary subsidies (a maximum of two years) in any unit of the tenant's choice which meets program requirements. Tenants pay no more than 30% of adjusted income toward the total housing cost and retain whatever eligibility they previously had for other Section 8 programs. DHCD contracts with some local housing authorities and regional administering agencies to manage the program.

There are three program components. HOME TBRA I targeted those who met one of the three federal preferences for selection, such as homeless people in shelters or motels. This component ended February, 1997. HOME TBRA II targets homeless families in Boston and Cambridge who reside in Department of Transitional Assistance funded shelter site transitional apartments. This program is ending April, 1998. HOME TBRA III targets households where one or more members has AIDS or HIV disease; no further applications are being accepted.

PROGRAM: Federally funded program

ELIGIBILITY: Households with incomes less than 60% of the median in the area in which they live; one-third of program is targeted for persons with AIDS or who are HIV positive.

CONTACT: Division of Public Housing and Rental Assistance, Bureau of Federal Rental Assistance (617) 727-7130 Ext. 655.

Family Self Sufficiency Section 8 Program

The Family Self Sufficiency Program is designed to coordinate Section 8 rental assistance, through vouchers and certificates, with public and private resources to enable families to achieve economic independence and self-sufficiency. The effort will provide job training, educational and other services to clients over a five year period to alleviate the clients' need for public assistance.

Authorized by the 1990 National Affordable Housing Act, the program establishes a 5-year contract between willing clients and DHCD, with the commitment of the client to undertake an array of activities designed to foster economic independence. This program is now a permanent on-going federal requirement for all future federal housing dollars.

PROGRAM: Federal program.

ELIGIBILITY: Only current DHCD Section 8 participants who hold an active certificate or voucher are eligible to participate in the Family Self Sufficiency Program.
CONTACT: Division of Public Housing and Rental Assistance, Bureau of Federal Rental Assistance (617) 727-7130, Ext. 655.

Massachusetts Rental Voucher Program

(Formerly known as the 707 Program)

The Massachusetts Rental Voucher Program (MRVP) increases the flexibility with which DHCD can service low-income families' and individuals' housing needs by offering rental subsidies which are either tenant or project based. In both cases, the program is administered by local or regional housing authorities.

The MRVP voucher can be used for two purposes:

- Mobile tenant-based vouchers are valid for any housing unit that meets DHCD's housing quality standards. They are assigned to the tenant rather than to a particular location.
- Project based vouchers are assigned to a particular housing development. Owners of these developments agree to rent each unit to an eligible low income tenant and the voucher doesn't move from the designated location even if the tenant chooses to move.

PROGRAM: State-funded program; the mobile portion of the program has been closed to new participants.

ELIGIBILITY: Mobility vouchers have been frozen and cannot be reissued to another applicant when a household leaves the program. However, Project Based units are filled upon vacancy, with individuals or households whose income does not exceed 200% of the federal poverty standards.

CONTACT: Local or regional housing authorities, or Division of Public Housing and Rental Assistance, Bureau of State Rental Assistance (617) 727-7130, Ext. 655.

Alternative Housing Vouchers

The new Alternative Housing Voucher Program (AHVP) is an additional housing resource available from DHCD. The program provides rental vouchers to disabled applicants who are not elderly and who have been determined eligible for Chapter 667 housing and have applied for the AHVP. Once fully leased, there will be approximately 800 AHVP vouchers throughout the Commonwealth administered by many of the same housing agencies that currently administer the Massachusetts Rental Voucher Program (MRVP).

The legislation establishing AHVP was passed by the Massachusetts Legislature in October 1995. This additional resource will improve housing opportunities for disabled persons who are not elderly.

PROGRAM: State funded program.

ELIGIBILITY: Eligibility for the program is identical to the eligibility criteria for Chapter 667 housing.

CONTACT: Division of Public Housing and Rental Assistance, Bureau of State Rental Assistance (617) 727-7130, Ext. 655.

E. HOUSING, - SPECIAL NEEDS

Special Needs Housing Chapters 689, 167

The Chapter 689 and Chapter 167 programs are designed to provide for the specialized housing needs of LHA tenants who have mental illness or mental or physical disabilities. The intention is to help individuals maintain maximum personal independence by providing on-site services.

Such housing is developed by the Local Housing Authority (LHA) in conjunction with those state agencies under the Executive Office of Health and Human Services that provide specialized services to the target population. The original program was enacted in 1974, while certain capital grant funding for housing for the chronically mentally ill was passed in 1987.

PROGRAM: State grant program to deliver housing with EOHS providing, support services for the program participants.

ELIGIBILITY: Any LHA on behalf of EOHS program participants with mental or developmental illness, developmental disabilities, or substance abuse problems, as well as abused adolescents, pregnant and parenting teens and persons with mobility and/or sensory impairments.

CONTACT: For information on development, call the Division of Housing and Community Development, Bureau of Housing Development and Construction (617) 727-7130, Ext 695. For information on occupancy, call LHA or Division of Public Housing and Rental Assistance, Bureau of Asset Management (617) 727-7130, Ext 665.

Appendix 7-3, Part 1 Duxbury By-Law Relating to Demolition Delay

Section 609.1 Purpose

"This bylaw is adopted to protect and preserve buildings and structures within the Town which reflect or constitute distinctive features of the architectural, cultural, economic, political or social history of the Town and to encourage the preservation and restoration rather than the demolition of such buildings and structures. By furthering these purposes the public welfare shall be promoted making the Town a more attractive and desirable place in to live, learn and work.

To achieve this purpose the Duxbury Historic Commission is empowered to advise the Director of Inspectional Services with respect to the issuance of permits for demolition. The Commission is mandated to offer its advice and expertise to owners of any building or structure within the Town.

Section 609.2 Definitions.

"Demolition" - the intentional act of pulling down, destroying, removing or razing a building or structure or commencing the work of total or substantial destruction with the intent of completing same.

"Regulated Buildings or Structures" - the provisions of this bylaw shall apply only to buildings or structures which in whole or in part were built seventy-five (75) years or more prior to the date of the application for a demolition permit and are:

- a) listed or eligible to be listed on the National Register of Historic places, or on the State Register of Historic Places; or
- b) is associated with one or more historic persons or events, or with broad architectural, cultural, economic, political or social history of the Town; or
- c) is historically or architecturally significant in terms of period style, method of building construction or association with a significant architect or builder either by itself or as part of a group of buildings.

Section 609.3 Procedures

No permit for the demolition of any building or structure shall be issued other than in conformity with this bylaw. Upon receipt of an application for a demolition permit, the Director of Inspectional Services shall forward a copy to the Historic Commission and to the Planning Director.

Within ten (10) business days of receipt of the application from the Director of Inspectional Services to the Commission, the Commission shall make a determination whether or not the building or structure is a "regulated building or structure." If the Commission determines that the building or structure is not regulated by this bylaw, it shall sign the permit immediately and forward it to the Director of Inspectional Services whom shall issue the permit.

If a determination is made that the building or structure is historically significant meeting one of the three criteria of a "regulated building or structure", the Director of Inspectional Services shall not issue a demolition permit for a period of six (6) months from the date of notification to the Director of Inspectional Services, unless the Commission informs the Director of Inspectional Services in writing prior to the expiration of the six (6) month period that the Commission is satisfied that the applicant has made a reasonable but unsuccessful effort to locate a purchaser to preserve, relocate or rehabilitate the building or structure.

In an emergency, nothing in this bylaw shall prohibit The Director of Inspectional Services from exercising the authority of Mass General Laws, Chapter 143 but the Director of Inspectional Services shall make every reasonable effort to inform the Commission of his actions in such an emergency."

Appendix 7-3, Part 2
Proposed Petition to Regulate Residential Gross Floor Area
Wayland, Massachusetts

Proposed: That the Zoning By-Laws of the Code of the Township of Wayland be amended in order to control the density of population and regulate the gross floor area of new single family dwellings by adding to Article 1, General Provisions, Section 198-104.2, Definitions, the following:

RESIDENTIAL GROSS FLOOR AREA ("RGFA") - The sum of the horizontal area(s) of the above-grade floors in the residential building(s) on a lot, excluding unfinished attics but including attached or detached garages. The RGFA shall be measured from the exterior face of the exterior walls.

and

amending Article 10, Area, Yard and Bulk Regulations Section 198-1004.1.1 by deleting "Residence Districts: 20%" and inserting:

Residence Districts: for any new single family residence constructed pursuant to a building permit issued on or after June 1, 1998, the greater of 3,500 square feet of Residential Gross Floor Area ("RGFA") or 10% of the lot up to a maximum of 6,000 square feet of RGFA. Any single family residence constructed in excess of 6,000 square feet of RGFA shall require site plan approval by the Planning Board in accordance with Section 198-1202.

FINANCE COMMITTEE COMMENTS.- This article proposes to limit the gross floor area of a structure on a residential lot to 3,500 square feet of Residential Gross Floor Area (RGFA) or 10% of the lot up to a maximum of 6,000 square feet of RGFA. This article only applies to new single family residences.

The existing requirement states that the percentage of a lot that can be covered by any building shall not exceed 20% in all residential districts. This has been interpreted to include pavement. The proposed article would not control lot coverage including pavement.

ARGUMENTS IN FAVOR (FINANCE COMMITTEE): The proposed limits on residential structures' RGFA will help the Town keep its semi-rural character by trying to prohibit dense neighborhoods.

Section 8: TRANSPORTATION

1. INVENTORY & ANALYSES

INTRODUCTION

Significant changes are taking place or are anticipated to take place in Hingham--the arrival of re-activated commuter rail service, redevelopment of the Shipyard, potential development of a large-scale senior housing campus, and the general aging of the Hingham population, just to name a few. These changes will create new and different demands on the transportation infrastructure in Hingham in the future. The purpose of the transportation component of the Master Plan is to provide Hingham with a long-range planning tool to evaluate and prioritize necessary roadway improvements and changing transit and parking needs and to ensure that these improvements are consistent with the goals of the community.

The Town of Hingham is bordered by Weymouth to the west, Cohasset and Hull to the east, Norwell and Rockland to the south and the Boston Harbor to the north. Hingham has a land area of approximately 22 square miles with roughly 130 miles of public roads. A site location map, **Figure 8.1**, shows the Hingham roadway network. Hingham is accessed regionally by Route 3, Route 3A, Route 53 and Route 228. Route 3 runs through the southwest corner of the town and serves Hingham by an interchange at Derby Street and an interchange (located in Norwell) at Route 228. Route 228 is the primary north-south roadway. Two secondary north-south routes could be made up of the combination of Cushing Street /Ward Street/French Street to the west of Route 228, and the combination of Charles Street /Lazell Street-Union Street to the east of Route 228. In addition to the roadway network, Hingham is also serviced by several transit options - including the commuter boat, MBTA bus routes, and the upcoming Greenbush commuter rail line.

Access¹

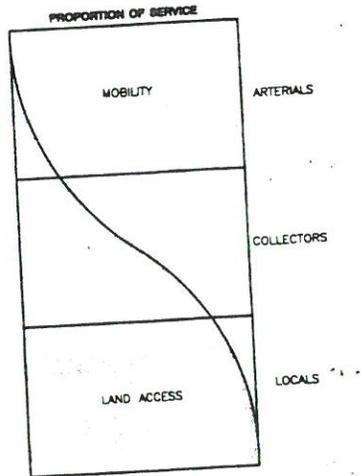
Based on the 1990 Journey-to-Work file, from the U.S. Census, and recognizing that a lot has changed since then, there were 9,602 Hingham residents who work. Of those, slightly more than 21% worked in Hingham. Nearly 88% of all Hingham residents used automobiles (drive alone, carpool or taxi) to reach their jobs, 9.3% used public transportation (ferry, train and bus), and the rest walked or rode their bicycles to work. According to the 1990 Census, there are 8,948 jobs within Hingham (The *Hingham Master Plan*¹ puts that figure at 11,045 for 1999). Hingham residents fill approximately 20% of those jobs. Ninety-six (96%) percent of all jobs in Hingham are accessed by automobile (drive alone, carpool or taxi), less than 2% utilized public transportation to reach their Hingham jobs and the remaining 2% of all jobs in Hingham are accessed by walking or bicycle.

The 1990 U.S. census Journey-to-work data is the latest information currently available. It should be noted that the total number of Hingham residents and jobs have increased since the 1990 Census, and it is assumed that the relative percentage of mode split (transportation mode used to access jobs) may have also changed due to the changes that have taken place in the past 10 years (increased use of the ferry, HOV lanes on I-93 northbound, etc.)

¹Hingham Master Plan prepared by John Brown Associates Inc. August 2000

Classification of Roadways

The two basic functions of any roadway are land access and traffic movement. Usually based on their primary function (although this is not always the case), roadways are classified into three groups: arterials, collectors and local roadways. The graphic, shown at left, demonstrates the function of each roadway type. An arterial is a roadway that primarily serves through traffic and provides access as a secondary function. The highest level of arterial is an interstate freeway or expressway with a limited number of access points.



Reference: "A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS" AASHTO, 1994

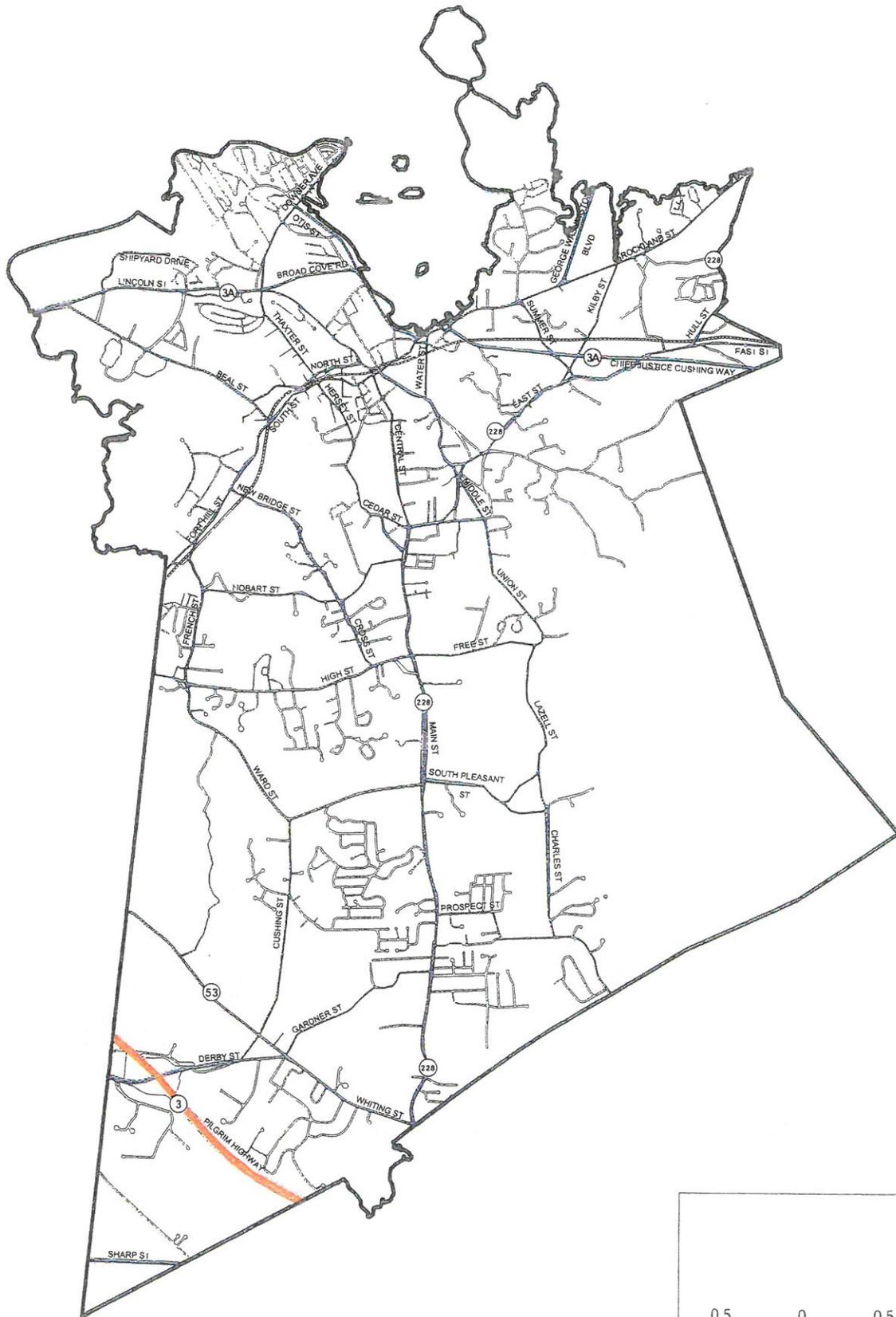
Collector roadways primarily collect and distribute traffic between local streets and arterial systems and secondarily provide land access. Local roadways primarily provide land access to adjacent properties and have minor value in accommodating through traffic. The Massachusetts Highway Department (MassHighway) through the Bureau of Transportation Planning and Development (BTPD) has classified all roadways in Hingham according to functional characteristics. This classification was performed with input from the town level and the national level. The above graphic shows how arterial roadways exist mostly for mobility while local roads are designed mostly for access.

In urban areas (and Hingham is defined as an urbanized area by BTPD), streets and highways are classified into four functional highway systems: Principal Arterials, Minor Arterials, Collector Streets and Local Streets. These systems are grouped according to the function they perform.

Principal Arterials

The urban principal arterials are multi-lane roadways that connect major activity centers in urbanized areas. These arterials carry the highest volumes of traffic at high speeds and are mostly fully and partially controlled access facilities with interchanges or grade separations at major crossings. In Massachusetts communities, principal arterials carry a major portion of trips entering and leaving the community, as well as a good percentage of the through traffic passing through the community.

In functional classification, principal arterials are generally streets that carry the highest volumes. Routes with the next highest volumes fall in the descending order of functional classification, although this is not always a firm rule. In Massachusetts, traffic volumes on principal arterials are usually in excess of 25,000 vehicles per day. Because the function of principal arterials is to mostly provide mobility at a high level of service, service to abutting land is of secondary importance. Parking along principal arterials is usually forbidden or discouraged; driveway access onto principal arterials is also discouraged. In Hingham, Route 3 is a principal arterial. On the statewide basis, principal arterials carry a high proportion of total urban area travel (40% to 65%) on minimum mileage (5% to 10% of the total roadway mileage).



Town of Hingham Master Plan Phase II

Prepared by **BPG** Bluestone Planning Group
with John Brown Associates
and Bruce Campbell & Associates, Inc.

Figure 8.1

Hingham Roadway Network

Minor Arterials

Minor arterials connect with principal arterials and serve the dual function of carrying high volumes and providing access to adjacent businesses. Minor arterials place more emphasis on land access; on-street parking is generally permitted but is heavily regulated to assure the street's traffic carrying capacity during the peak periods of travel. Minor arterials generally have two or four travel lanes and widen out with turn lanes at signalized intersections. Minor arterials generally carry traffic volumes in the range of 10,000-40,000 Average Daily Travelers (ADT).

Minor arterials serve as a distribution network to geographic areas smaller than the principal arterials. Trip lengths associated with minor arterials are of a moderate length and travel is at a lower level of mobility than the principal arterial. The principal arterials and the minor arterials carry a great majority (65% to 80%) of traffic in the community, while they generally occupy less than 25% of the total roadway mileage. In Hingham, several roads fit the minor arterial classification; Route 3A, Route 228, Route 53, Derby Street, High Street, Main Street, Kilby Street, Fort Hill Street, South Street, Central Street, Lincoln Street, Summer Street and Rockland Street are all classified as minor arterials by BTPD.

Collector Streets

Collector streets collect traffic from local streets and channel it into the arterial street system. Although collectors also serve the dual function of carrying relatively high volumes and providing access to adjacent businesses, the focus of collectors is more on land access than mobility. Collector streets provide traffic circulation within neighborhoods, commercial and industrial areas; collectors often penetrate residential neighborhoods, distributing trips to their ultimate destination. Travel speeds are generally lower and parking restrictions are fewer than on minor arterial streets.

Collectors are usually two-lane roadways with minor widening at intersections with arterial streets. Collectors carry traffic volumes in the range of 3,000 to 20,000 ADT. The higher flows are associated with collectors that are over two miles in length and where some element of through traffic between arterials is present. The lower range is associated with short length collectors that funnel traffic from two or three neighborhoods into a minor arterial. In Hingham, Cushing Street, Gardner Street, Prospect Street, Charles Street, Ward Street, Cross Street, Hobart Street, French Street, Free Street, Lazell Street, South Pleasant Street, New Bridge Street, Hersey Street, Middle Street, North Street, Beal Street, Summer Street (between Rockland Street and Route 3A), Thaxter Street, Otis Street, Downer Avenue and Shipyard Drive are examples of collector roads.

The collector streets constitute approximately 5%-10% of the mileage in a typical community and they carry an estimated 5%-10% of the traffic volume.

Local Streets

The local streets are all the remaining streets not appearing in one of the higher systems. Local streets could be residential or industrial in character or be access roads to recreation areas or parks. Traffic volumes on local streets are generally 4,000 ADT or less. A great majority of residential streets have volumes of 500 ADT or less. The high volume local streets are very long residential roadways (over one mile in length) with access to subdivisions; subdivisions that tie into other residential streets have low volume roadways with ADTs of 300 or less.

The main function of local streets is to provide land access. Travel speeds on local streets are generally the lowest and parking restrictions generally do not apply. Through travel on residential streets is discouraged through design or through traffic calming measures. Although local streets carry relatively

minor traffic volumes overall (10%-30%), they constitute by far the greatest network (mileage-wise) in a typical community. Local streets typically account for 65% to 80% of roadway mileage. The roadway classifications are shown graphically in **Figure 8.2**.

Roadway Classification Dispute

The roadway classifications were developed by the Massachusetts Highway Department (MassHighway) through the Bureau of Transportation Planning and Development (BTPD) with input from both the town level and the national level. The National Highway System developed this system of classification so that all areas would have similar percentages of each roadway classification and that funding for roadway improvements would be more equitable. As a result, not every roadway classification matches a roadway's actual function. There has been a history of contention regarding roadway classification of Main Street between the State (MassHighway) and town residents / some officials. While Main Street is classified as an Urban Minor Arterial, residents and some town officials contend that the road is mostly residential and should be classified as such (local). Therefore, any proposed roadway improvements should be in line with roadway improvements for local streets (such as focus on safety, eliminating "cut through" traffic and slowing travel speeds).

Jurisdiction

Route 3, Route 3A, Route 53, Derby Street, Summer Street (west of Rockland Street), Rockland Street and George Washington Boulevard are State-owned roadways. All other roadways are town-owned.

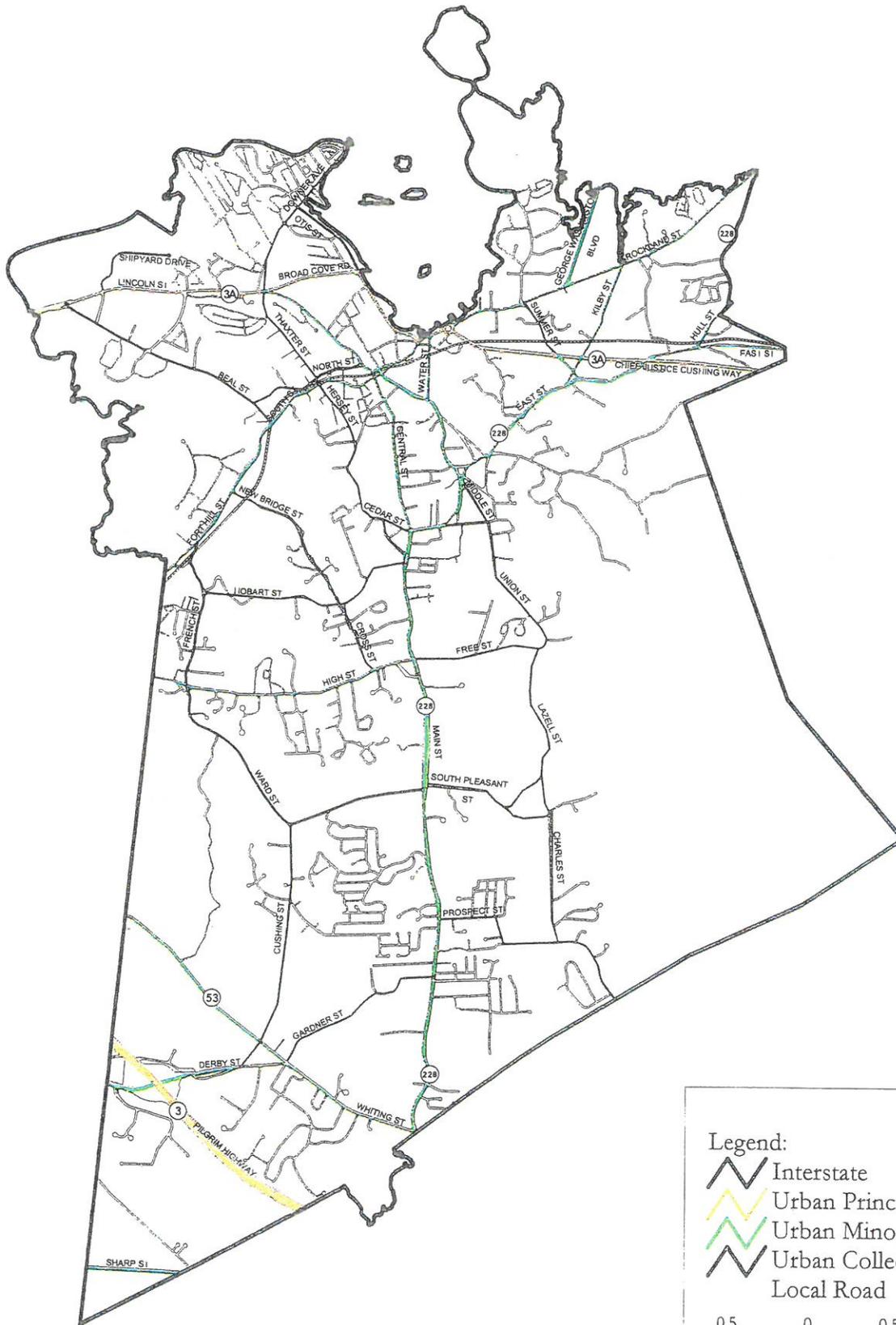
EXISTING CONDITIONS

Existing Pavement Conditions and Planned Roadway Work

A detailed inventory of the pavement conditions of Hingham roadways is not available at this time due to discrepancies between inventory and actual field conditions. It should be noted that there are plans to improve the Route 228 corridor extending from the Hingham/Hull town line to the Hingham/Norwell line. The commencement of this two-phase improvement plan is indefinite. The first phase will cover the segment of Route 228 extending from the Hingham/Hull line to the intersection of Route 228/Tower Brook Road while the second phase will cover the segment extending from Route 228/Tower Brook Road to the Hingham/Norwell town line. This comprehensive improvement plan consists of intersection geometric changes including widening and realignment, as well as drainage and sidewalk improvements along the corridor. In addition, the Director of Public Works in Hingham indicated that downtown Hingham Square is also in need of improvements, including enhancements and repair of the roadways and sidewalks.

Existing 2001 Traffic Volumes

In order to develop an existing traffic conditions map, traffic data was researched. Numerous traffic counts were available from developers, state and local officials. The daily (24 hour) traffic volumes, where available, were plotted. The 2001 Average Daily Traffic Volumes for the study area Hingham roadways are shown in **Figure 8.3**.



Legend:

-  Interstate
-  Urban Principal Arterial
-  Urban Minor Arterial
-  Urban Collector
-  Local Road



0.5 0 0.5 1 Miles



Town of Hingham Master Plan Phase II

Figure 8.2

Prepared by **BPG** Bluestone Planning Group
with John Brown Associates
and Bruce Campbell & Associates, Inc.

Functional Classification Map

Existing 2001 Traffic Operations

Traffic operation analysis may be performed a number of ways. One way is to base it on intersection analysis and another is to deal with roadway links. Intersection analysis is the accepted procedure in traffic impact studies and area/neighborhood studies where an evaluation of short-term (five-year horizon) traffic problems and solutions to these problems is the primary objective. In planning studies and Master Plans, the traffic operation analysis is evaluated on a long-term basis (20 years) and is commonly performed on a roadway link basis. Since localized intersection improvements can mitigate an over-capacity situation at most locations, failure on the link is an indication to the community of a much more serious problem. Longer range improvements, such as widening a roadway or adding a new roadway involve long-term planning which is the basis of a Master Plan.

The measure of effectiveness used to define link capacity is the service flow rate for a specific level of service (LOS). By using the service flow rate for LOS E, a link capacity is defined. When comparing the actual volumes or projected volumes to the capacity of a roadway link, a v/c ratio offers a clear indication of the operation of the roadway link. Capacity standards are developed for all local roadways and the volumes are superimposed to generate a volume to capacity (v/c) ratio. The v/c ratio is the most useful indicator of roadway traffic operations available to the town. It provides a worthwhile tool to be able to quantify and prioritize necessary improvements. It should be noted that this analysis does NOT cover intersection analysis. Capacity constraints occur mostly at intersection and those are relatively easier to mitigate in a shorter time frame than whole roadway segments that may require widening. Therefore, this analysis covers only those of roadway segments and not intersections.

Based on Chapter 8 of the 1997 *Highway Capacity Manual*, the traffic operations for a roadway link is defined by an ideal flow rate of 2800 vehicles per hour (vph) for a two-lane link. To properly define existing conditions of Hingham roadway links, adjustments were made for geometric and other factors such as roadway width, directional distribution of traffic, terrain and heavy vehicle percentage. In addition, the presence of parking also has an impact in some areas, and was taken into account.

A v/c ratio map was developed for the entire Hingham arterial and collector roadway system. Again, the capacity of a roadway link was assumed to be the service flow rate at a LOS E condition. The existing volume is based on the actual traffic counts. The resulting existing v/c ratios are summarized in **Figure 8.4** and **Table 8.1**. Roadway links with v/c ratios of greater than 0.9 are considered to be in need of some type of capacity improvements. Once again, it should be noted that this analysis evaluates the roadway links and not the intersections, and therefore, capacity constraints deal only with links.

For the multilane section of Route 3A (between the Weymouth town line and the rotary), Derby Street (between Route 3 and Whiting Street) and Whiting Street (between Gardner Street and Route 228) a different method was needed to define the capacity of the roadway segments. A level of service (LOS) analysis was conducted for the multilane sections using the procedures outlined in the 1997 *Highway Capacity Manual*². The newest methodology for multilane rural and suburban highway levels of service (A-F) was used and is based on density. Density is defined as passenger cars per mile per lane. The LOS results utilizing the Highway Capacity Software (HCS) program are noted in **Table 8.2** below showing the LOS results in addition to the density for the weekday AM and PM peak hours. The LOS analysis worksheets are included in the Appendix.

²1997 *Highway Capacity Manual*; Transportation Research Board.

Table 8.1: Existing Operations (in Descending Order of V/C) for Two-Lane Sections

Roadway	Segment	V/C Ratio
Rte 3A Broad Cove	near Otis Street (two-lane section)	0.92
Route 3A	east of Kilby Street	0.74
Route 3A	between Summer & Kilby	0.74
Route 228	north of Gardner Street	0.72
Route 3A	west of Summer Street	0.71
Derby Street	west of Whiting Street	0.70
Derby Street	west of Route 3 SB on/off ramp	0.70
Whiting Street	west of Old Ward Street	0.65
Whiting Street	east of town line	0.65
Derby Street	east of Cushing Street	0.65
Whiting Street	east of Old Ward Street	0.65
Route 228	north of South Pleasant St	0.64
Route 3A	west of Kilby Street	0.63
Route 3A	east of Kilby Street	0.63
Route 228	south of Scotland Street	0.62
Route 228	south of Route 53	0.62
Derby Street	east of town line	0.61
Whiting Street	west of Gardner Street	0.59
Route 228	south of Cushing Street	0.56
Whiting Street	west of Cushing Street	0.55
Beal Street	west of West Street	0.55
Grove Street	north of Route 53	0.51
Route 228	north of Route 53	0.50

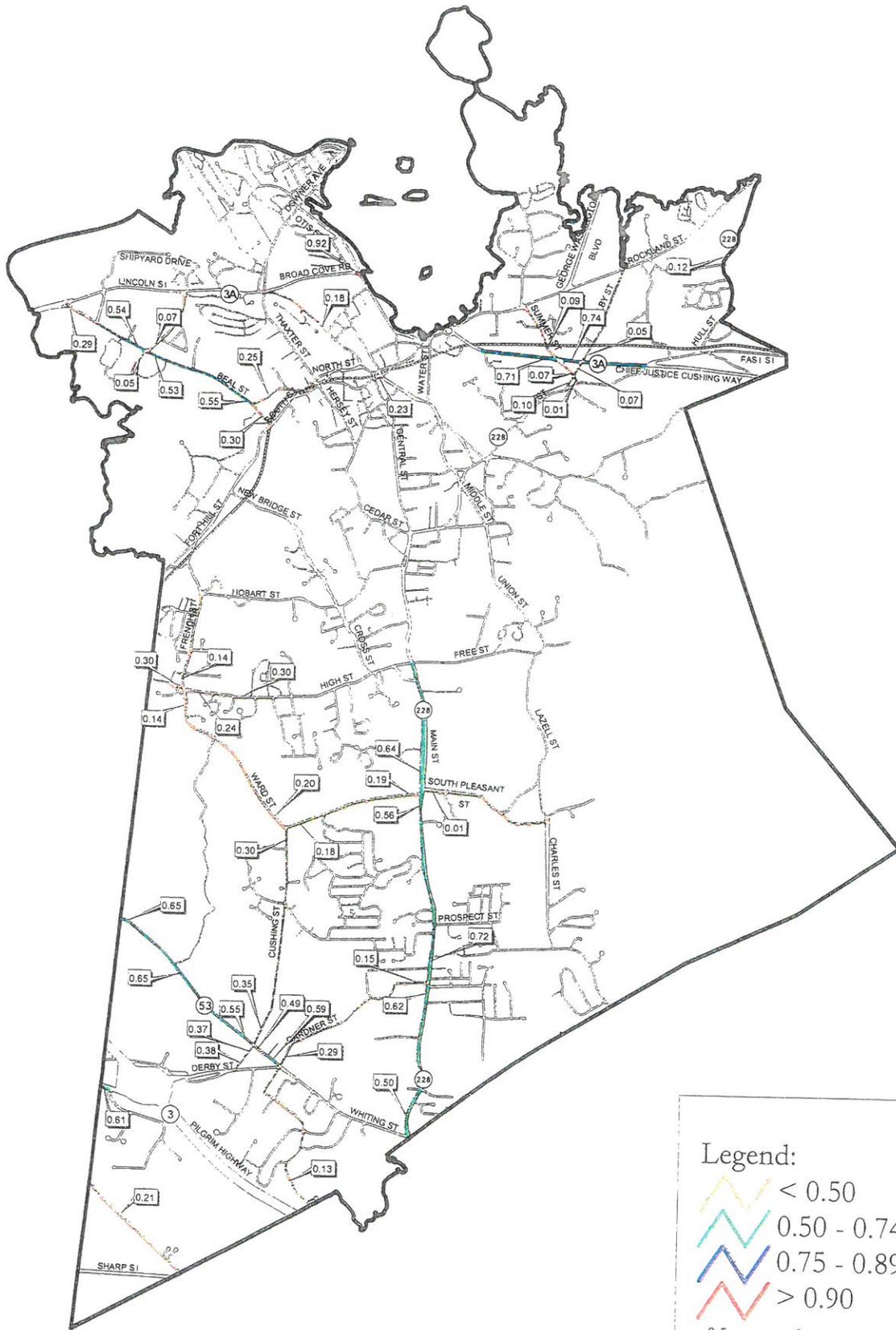
Table 8.2: Existing Operations for Multilane Sections

Roadway	Section	Results (LOS & Density)			
		AM Peak Hour		PM Peak Hour	
		EB	WB	EB	WB
Route 3A	North to Broad Cove	A 10.8	C 26.1	C 23.2	B 14.6
Route 3A	Otis to Thaxter	A 3.3	C 23.9	B 16.9	A 5.5
Route 3A	Thaxter to Fottler	A 7.5	D 32.0	C 25.2	B 13.8
Route 3A	Fottler to Weymouth line	A 6.9	D 31.3	C 25.1	B 13.0
Derby Street	Route 3 to Cushing	B 11.8	B 13.3	B 17.7	B 15.1
Derby Street	Cushing to Gardner	A 5.1	B 13.7	B 11.3	A 8.5
Derby Street	By Route 3 ramps	A 8.9	B 15.4	C 19.8	A 9.4
Whiting St	East of Gardner Street	A 5.2	B 17.2	B 12.6	A 7.9
Whiting St	West of Route 228	B 14.0	A 5.0	A 8.8	B 12.0

Density = number of passenger cars per mile per lane

Existing Crash Records / History

The crash history of Hingham intersections and roadways was researched from the Hingham Police Department records. After reviewing the crash records for the three most recent years, 1998 – 2000, it appeared that the records do not match the general perception of town personnel. It was mentioned that certain locations experience a significant number of crashes annually; however, the Police Department crash records do not substantiate this. In order to resolve this difference, State records from the



Legend:

- ▬ < 0.50
- ▬ 0.50 - 0.74
- ▬ 0.75 - 0.89
- ▬ > 0.90

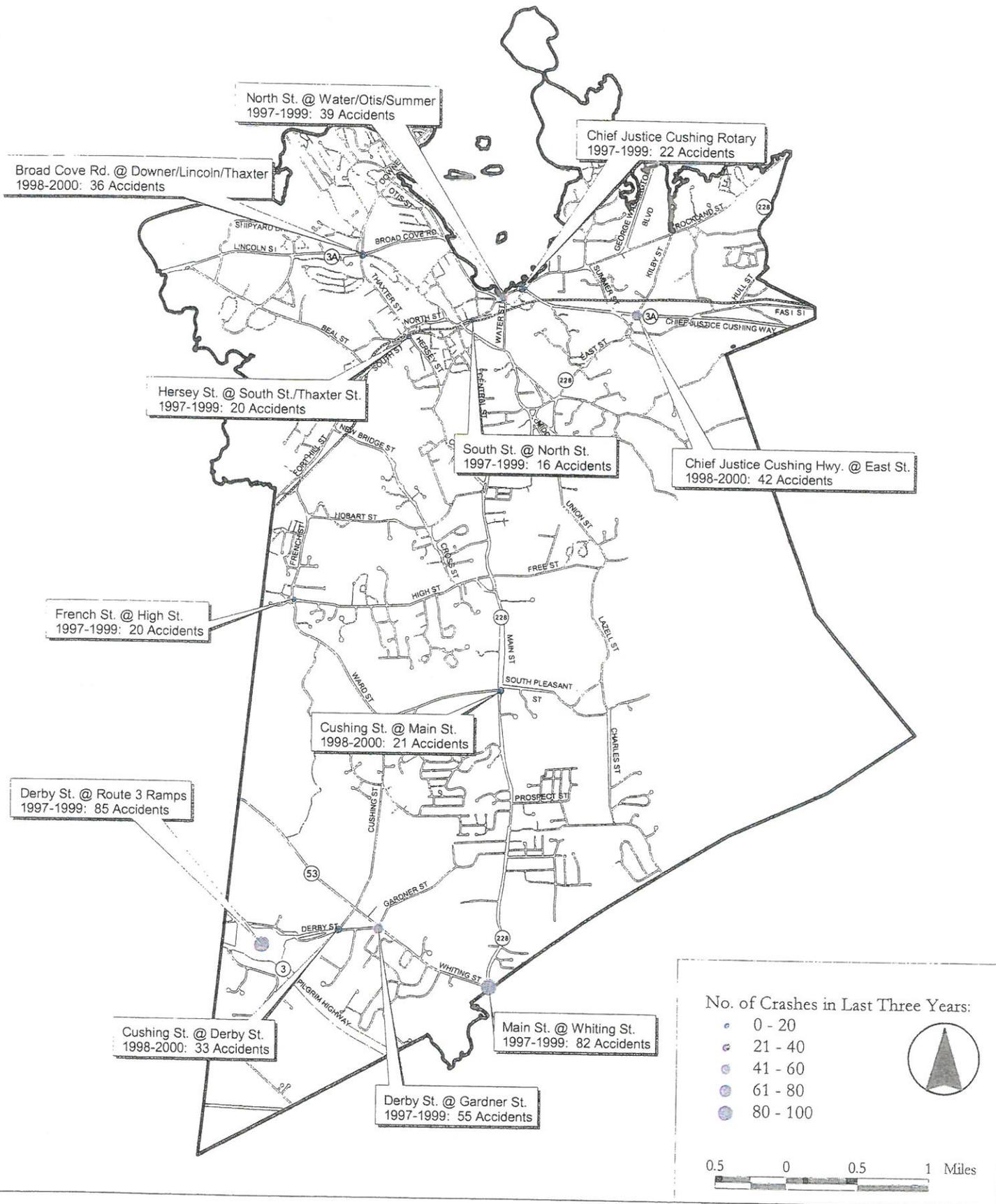
0.5 0 0.5 1 Miles

Town of Hingham Master Plan Phase II

Figure 8.4

Prepared by **BPG** Bluestone Planning Group
with John Brown Associates
and Bruce Campbell & Associates, Inc.

2001 Volume-to-Capacity Ratios



Town of Hingham Master Plan Phase II

Figure 8.5

Prepared by **BPG** Bluestone Planning Group
with John Brown Associates
and Bruce Campbell & Associates, Inc.

**Intersections with 5 or More
Crashes per Year**

Massachusetts Highway Department (MassHighway) were also researched. The State records contain significantly more crash data than the town records on the arterial and collector roadways, but the crashes indicated by the town records on the local roadways are underreported in the State records. Because of this discrepancy with the records, town and state records were compared for each location and the more detailed records included. Furthermore, at Queen Anne's Corner (Route 228 / Route 53) there was a discrepancy of reporting in that some crashes were reported to the Town of Norwell and not Hingham. Therefore, based on feedback from the community, crash records in Norwell were also used for this location.

About 700 crashes per year are reported on Hingham roadways. **Figure 8.5** illustrates the intersections where five or more crashes per year have occurred over the past three years. Because the absolute number of crashes does in itself not indicate a high crash location, the crash rate (accidents per million entering vehicles) is a far better tool in evaluating relative safety. MassHighway has assembled average crash rates for signalized (0.89 accidents per million entering vehicles) and unsignalized (0.65 accidents per million entering vehicles) intersections within the state. By comparing the crash rates at the Hingham intersections to the state averages, hazardous locations may be identified. For intersections at which traffic volume data are available, the crash rate per million entering vehicles has been summarized (**Table 8.3**). In cases where traffic volume data are not available, crash rates are not presented. Detailed crash information, by intersection, is contained in the Appendix. It should be noted that roadway changes have recently been made to several intersections in town. Because the crash records are historic in nature, they do not reflect improvements to safety that has recently been constructed.

In addition to crashes occurring at intersections, records were obtained for crashes occurring on roadway segments. Again, the same issue arose with the town records vs. the state records, so both databases were researched. Typically, in order to understand the relative safety of the roadway segments, the crash rates are calculated in terms of crashes per million vehicle-miles traveled. However, crash records do not always specify the location of the crashes and might just include a roadway name. The crash could have occurred anywhere along that roadway (including at an unspecified intersection). In Hingham, the exact location of the crash was not described in many of the records. Therefore, it was difficult to compute crash rates for specific segments. While average crash rates per roadway are not as useful as rates per segment because roadway segments can vary greatly in geometry and volumes, this document presents the average crash rate per roadway. Along various segments of the roadway, however, the crash rates may vary considerably. It should also be noted that when looking at crash rates along a roadway, crashes at intersections are removed from the calculations and are treated separately. **Table 8.4** summarizes the crashes along roadways.

Table 8.3: Crash Data Summary For Intersections With More Than 5 Crashes Per Year (1)

Intersection Name	Year	Total	Angle	Rear End	Head On	Other/Unknown	Property	Injury	Fatality	Crash Rate
Broad Cove @ Downer/Lincoln/ Thaxter	1998	7	5	2	0	0	6	1	0	
	1999	18	9	7	0	2	13	5	0	
	2000	11	7	1	1	2	8	3	0	
	TOTAL	36	21	10	1	4	27	9	0	N/A
Chief Justice Cushing Hwy @ East	1998	12	4	5	1	2	12	0	0	
	1999	16	2	11	0	3	12	4	0	
	2000	14	2	8	1	0	7	7	0	
	TOTAL	42	8	24	2	5	31	11	0	N/A
Cushing @ Route 228 (Main Street)	1998	7	3	3	0	1	3	4	0	
	1999	6	3	2	0	1	5	1	0	
	2000	8	8	0	0	0	7	1	0	
	TOTAL	21	14	5	0	2	15	6	0	0.65
Cushing @ Derby	1998	13	8	3	1	1	8	5	0	
	1999	7	5	0	1	1	3	4	0	
	2000	13	10	3	0	0	8	5	0	
	TOTAL	33	23	6	2	2	19	14	0	0.76
Derby @ Gardner	1997	19	11	2	3	3	12	7	0	
	1998	19	6	7	0	6	9	10	0	
	1999	17	8	4	0	5	11	6	0	
	TOTAL	55	25	13	3	14	32	23	0	1.29
Derby @ Route 3 on/off Ramps	1997	31	6	20	1	4	17	14	0	
	1998	28	8	11	1	8	13	15	0	
	1999	26	7	16	0	3	18	8	0	
	TOTAL	85	21	47	2	15	48	37	0	N/A
French @ High	1997	7	6	0	1	0	4	3	0	
	1998	5	4	1	0	0	4	1	0	
	1999	8	7	0	0	1	6	2	0	
	TOTAL	20	17	1	1	1	14	6	0	1.28
Hersey @ South/Thaxter	1997	7	7	0	0	0	4	3	0	
	1998	6	5	1	0	0	4	2	0	
	1999	7	4	0	1	2	5	2	0	
	TOTAL	20	16	1	1	2	13	7	0	N/A
Main Rt 228 @	1997	22	11	9	0	2	15	7	0	

Table 8.3: Crash Data Summary For Intersections With More Than 5 Crashes Per Year (1)

Intersection Name	Year	Total	Angle	Rear End	Head On	Other/ Unknown	Property	Injury	Fatality	Crash Rate
Whiting Rt 53 (2)	1998	39	16	18	1	4	26	13	0	N/A
	1999	21	12	6	0	3	13	8	0	
	TOTAL	82	39	33	1	9	54	28	0	
North @ Water/Otis/ Summer	1997	19	4	10	1	4	9	10	0	N/A
	1998	13	2	9	0	2	6	7	0	
	1999	7	5	1	0	1	6	1	0	
	TOTAL	39	11	20	1	7	21	18	0	
South @ North	1997	6	5	1	0	0	5	1	0	N/A
	1998	5	1	2	0	2	3	2	0	
	1999	5	3	1	0	1	5	0	0	
	TOTAL	16	9	4	0	3	13	3	0	
Chief Justice Cushing Rotary	1997	10	4	2	4	0	5	5	0	N/A
	1998	7	5	0	0	2	7	0	0	
	1999	5	4	0	0	1	3	2	0	
	TOTAL	22	13	2	4	3	15	7	0	

Crash Rate expressed as accidents per millions of entering vehicles

State Average = 0.65 for unsignalized intersections and 0.89 for signalized intersections

(1) Source: MassHighway and/or Town Records

(2) Source: includes records listed from Hingham and Norwell for Queen Anne's Corner

Note that the intersection of High /Free / Main Street averages 8 crashes per year (4 in 1997, 11 in 1998 and 8 in 1999) but that a criteria for this table is that there are more than 5 crashes per year and in 1997 there were 4 crashes at this intersection. Therefore, this intersection was not included in the above table.

Table 8.4: Highest Crash Rates (Crashes per Mile per Year) for Roadways

Roadway	Average # of Accidents / Year	Length of Roadway (miles)	Crash Rate (crashes / mile / year)
Derby Street	70	1	25
Route 3	20	0.8	25
Lincoln Street	98	3.1	20
Whiting Street	50	1.6	15
South Street	19	0.7	8
Cushing Street	13	2.4	7
East Street	19	1.5	7
Main Street	113	6.45	7
Summer Street	36	2.73	6
Beal Street	11	1.4	5
Central Street	9	1.1	4
North Street	36	1.95	4
Otis Street	17	1	4

MassHighway is in the process of establishing average crash rates per roadway segment (Last calculated in 1986 – now outdated.).

Records on fatal crashes are of particular importance. Because of the severity of this crash type, it is particularly important to track trends. Of the six fatal crashes that occurred over three years, three occurred on roadways with the highest crash rates while three did not. **Table 8.5** summarizes the fatal crashes reported under the State records between 1997 – 1999.

Table 8.5: Fatal Crash Data Summary (1)

Location	Year	Number Vehicles	Manner	Collision With	Weather	Road Surface	Lighting	Total Fatality
Central Street @ Weston Road	1997	1	Unknown	Tree	Clear	Dry	Daylight	1
Prospect Street	1997	1	Unknown	Tree	Clear	Dry	Dark (Road Lit)	1
High Street @ Tower Road	1998	1	Unknown	Embankment	Clear	Dry	Dark (Road Lit)	1
Chief Justice Cushing @ Kilby	1998	2	Angle	Signpost	Rain	Wet	Daylight	1
Lincoln Street	1999	1	Unknown	Unknown	Clear	Dry	Daylight	1
Chief Justice Cushing Hwy	1999	1	Unknown	Unknown	Rain	Wet	Dark (Road Lit)	1

(1) Source: MassHighway

Existing Public Transportation Network and Use

Two MBTA bus routes have been identified as serving the Town of Hingham: Route #220 and Route #714. The "Ride", a para-transit service, offered by the MBTA provides on-call services within Hingham for those unable to take public transportation because of physical limitations. Plymouth & Brockton provides limited scheduled service through Hingham, one bus in the morning and one in the afternoon.

Bus #220 starts at Quincy Center and ends at the intersection of Station Street/Water Street in downtown Hingham. The first bus of the outbound route (from Quincy Center) departs at 5:06 AM with the last bus leaving at 12:30 AM on weekdays. The outbound route runs between every 25 minutes and every 10 minutes during the weekday AM peak. During the PM peak, it runs between every 15 minutes and every 20 minutes. The inbound route (towards Quincy Center) begins at 5:33 AM and runs until the last bus departs at 1:55 AM. The inbound route runs at least every 30 minutes and at most every 10 minutes during the AM peak. During the PM peak, it runs at least every 20 minutes and at most every 15 minutes. On Saturday the bus runs every 30 minutes with the outbound route beginning at 5:35 AM and ending at 12:30 AM, and the inbound route beginning at 6:00 AM and ending at 12:55 AM. On Sunday the bus runs every hour with the outbound route beginning at 8:07 AM and ending at 12:10 AM, and the inbound route beginning at 8:25 AM and ending at 12:34 AM.

Some of the buses on Route # 220 actually travel through the Hingham Shipyard area. In the inbound direction, 4 out of 5 of the earliest bus routes pass through the Shipyard and then only 2 more buses pass through the Shipyard during the morning inbound runs. In the afternoon / evening, no buses pass through the Shipyard until after 9:00 PM and then only ½ of the buses pass through the Shipyard. For the outbound service, there are no morning buses that pass through the Shipyard. The first bus does not pass through the Shipyard until after 4:00 PM, and then about ½ of the buses pass through the shipyard area.

Bus #714 starts at Main Street at Pemberton Point in Hull and ends at Hingham Depot. The first bus of the inbound route (towards Hingham Depot) departs at 5:55 AM with the last bus leaving at 7:25 PM on weekdays. The inbound route runs at least every 45 - 50 minutes during the AM peak. During the PM peak, it runs every 50 - 60 minutes. The outbound route begins at 6:20 AM and runs until 7:00 PM. The outbound route runs every 40 - 50 minutes during the AM peak. During the PM peak, it runs every 55 - 60 minutes. On Saturday and Sunday the bus runs every hour. The inbound route begins at 10:00 AM and ends at 6:00 PM (except for a two-hour lapse from 1:00 - 3:00 PM), and the outbound route begins at 9:35 AM and ends at 5:35 PM (except for a two-hour lapse from 12:35 - 2:35 PM).

In addition, a ferry service is provided for those commuting to Boston. On average, close to 4,000 trips are made on this form of transportation on a weekday daily basis (2,000 inbound and 2,000 outbound). Parking at the commuter boat includes a combination of free and paid parking. However, there is insufficient parking and the lot is often at capacity by 8:30 AM. The boat service operates during weekday AM and PM periods, traveling between Hingham Harbor and Rowes Wharf in downtown Boston. The first inbound AM boat (towards Boston) leaves at 6:00 AM and runs every 15 - 30 minutes until 12:00 noon. The first inbound PM boat leaves at 3:15 PM and runs every 15 - 50 minutes until 7:15 PM. The first outbound AM boat leaves at 6:45 AM, running every 15 - 90 minutes until 11:00 AM and the first outbound PM boat leaves at 1:00 PM, running every 15 - 90 minutes until 8:30 PM. The average duration of the trip is 33 minutes.

Boarding information for the two bus routes is presented below in **Tables 8.6 and 8.7**.

Table 8.6: Hingham Bus Routes – Existing Boardings (1)

Bus Route	Weekday Boardings		Saturday Boardings		Sunday Boardings	
	Inbound(2)	Outbound	Inbound	Outbound	Inbound	Outbound
#220						
Hingham	41	290	13	145	7	65
Quincy	784	338	376	126	200	52
Weymouth	54	162	40	89	14	50

Bus Route	Weekday Boardings		Saturday Boardings		Sunday Boardings	
	Inbound(3)	Outbound	Inbound	Outbound	Inbound	Outbound
#714						
Hingham	3	81	1	40	NA	NA
Hull	121	37	56	12	NA	NA

(1) Source: MBTA

(2) towards downtown Hingham

(3) towards Hingham Depot

NA Not Available

Table 8.7: Hingham Bus Routes – On-Time Performance (1)

Bus Route	Weekday On Time %				Saturday On Time %				Sunday On Time %			
	Inbound		Outbound		Inbound		Outbound		Inbound		Outbound	
	O*	D**	O	D	O	D	O	D	O	D	O	D
#220	96%	73%	91%	64%	100%	87%	97%	90%	82%	76%	81%	75%
#714	87%	NA	86%	NA	100%	NA	100%	NA	NA	NA	NA	NA

• Origin (Departure) – percentage of buses that depart on-time

• **Destination (Arrival) – percentage of the time that buses arrive at their destination on-time

• (1) Source: MBTA

FUTURE CONDITIONS

Future Commuting Pattern Changes

Future commuting patterns will change with the new MBTA Greenbush Line. The latest plans call for two stations in Hingham -- at West Hingham Station and at Nantasket Junction Station. The line will pass through Hingham Square in a tunnel. Access to West Hingham Station will be from Fort Hill Street and access to Nantasket Junction Station will be from Summer Street, near Route 3A with a secondary entrance from Kilby Street.

The anticipated commuter rail station passenger ridership in 2010 is 140 boardings during the AM peak period at the West Hingham Station and 400 boardings during the AM peak period at the Nantasket Junction Station. Of the 140 total AM peak boarding (7:00 – 9:00 AM) passengers at West Hingham Station, it is anticipated that 90 (64%) will drive to and park at the station. The latest plans call for a supply of 190 parking spaces. Of the 400 total AM peak passengers at Nantasket Station, 270 (68%) will drive to and park at the station. The latest plans call for up to 485 parking spaces. While it appears that the parking supply will exceed demand, there may be commuters who would rather park on-street (for free) than park in an MBTA parking lot. Therefore, the true parking impacts cannot be determined.

The full traffic study was performed nearly ten years ago. The traffic counts have not been updated since that time. Based on the information in the Final Environmental Impact Report, “*Under the commuter rail alternatives, the commuter boat ridership is expected to decline by 29% by 2010, as many boat riders would shift to commuter rail services offered closer to their homes, and often more convenient to Boston and Cambridge work destinations (FEIR Chapter IV page 26).*” This information is rather confusing in that presently 1,700 commuters board the boats in Hingham between 6:30 – 9:00 AM and alight in Boston (nearly 2,000 on a daily basis). If present boat ridership were to decline 29%, that would translate to the entire anticipated population of commuter rail users. Elsewhere in the FEIR, it depicts a reduction of 245 Hingham resident vehicles driving into the Boston area during the AM peak period (7:00-9:00 AM). Therefore, the current anticipated impacts of the commuter rail on the Hingham mode share cannot be derived from the available documents and are not readily available.

Traffic Growth/Land Use Changes And Future Traffic Volumes

Several large-scale commercial / industrial and residential projects are planned and are under some stage of review, within Hingham. These projects include:

- Baker Hill Residential Development (under construction)
- Black Rock Golf Community with access to Ward Street, north of the intersection of Cushing Street/Ward Street (under construction)
- Hingham Senior Campus – located at Route 53/Ward Street (approved)
- Brandon Woods Residential Development – located north of Charles Street between Saw Mill Pond Road and Pleasant Street (under construction)
- Brewer Meadows Residential Development – located north of Route 3A and between Summer Street and Kilby Street (pending)
- Lincoln Hill Residential Development – located at West Street/Beal Street (approved)
- Shipyard Development Project (pending approval)
- Whiting Street Condominium Development (under construction)
- Hingham Plaza Upgrade Project (approved/under construction)
- MBTA Greenbush Commuter Rail Line – Nantasket Junction Station and Hingham

- West Station (approved)
- Scotland Green Residential Development (pending)
- French Street Residential Development (pending)

Trip generation and assignment information for the above projects was obtained from a variety of sources. Trip assignments for the Baker Hill Development on Thaxter Street came from *Addendum No. 2 Traffic Impact and Access Study Baker Hill* prepared by Vanasse & Associates, Inc. At locations where the trip assignments did not extend throughout town, traffic was assigned based on familiarity with the area.

The project impacts of the Black Rock Golf Community were based on the daily trip generation and distribution estimates contained in the *Black Rock Golf Community Traffic Analysis* prepared by The BSC Group, Inc.

The traffic impacts from the Proposed Retirement Community were provided in the *Traffic Impact and Access Study, Proposed Retirement Community*, prepared by Vanasse & Associates, Inc.

The trip assignments for the Brandon Woods residential development, the Brewer Meadows residential development, and the Lincoln Hill residential development came from the *Traffic Impact Study, Brandon Woods*, the *Traffic Impact and Access Study, Brewer Meadows Route 3A*, and the *Traffic Impact and Access Study, Lincoln Hill Development West Street*, respectively. Highway and Traffic Signal Design, Inc. prepared all three studies. At locations where the trip assignments did not extend throughout the Town, traffic was assigned based on familiarity with the area.

Traffic generated by the Shipyard Development Project was based on the *Hingham Shipyard Redevelopment Project – Preliminary Traffic Evaluation* prepared by BSC Group, Inc. Traffic generated by the MBTA Greenbush Commuter Rail Station was identified from the EIR prepared by Jacobs-Sverdrup, Inc.

For the Whiting Street Condominium Development, the Scotland Green Residential Development and the French Street Residential Development, traffic was generated using *Trip Generation*³, published by the Institute of Transportation Engineers (ITE), which contains equations to formulate trip generation rates for hundreds of land uses. Land use code #220 – Apartment was used to calculate the future number of trips of the proposed residential developments. The future traffic generated by the Hingham Plaza Upgrade Project was generated based on Land use code #820 – Shopping Center. Traffic was assigned based on familiarity with the area.

Once trip assignments were assembled for each of the project components listed above, they were added together to yield a background projects network.

In addition to the large-scale development, there may be several small-scale projects or even projects outside of Hingham that will have an impact on traffic growth on Hingham roadways. To account for this unspecified growth, a background annual growth rate of 1% was assumed. By compounding the 1% annual growth over 10 years, the resulting background growth for 2011 is 10.46%. To obtain the 2011 volumes, the background projects that are already in the planning stages were added to the increased existing volumes (existing volumes were increased by 10.46%). The resulting 2011 volumes averaged an

³ *Trip Generation*, Institute of Transportation Engineers, 6th Edition, Washington D.C., 1997

annual growth rate of slightly more than 2.6% or a total average traffic volume increase of 26.9% over the ten-year period. **Figure 8.6** illustrates the 2011 daily traffic volumes along the roadway links.

Future Traffic Operations

As for existing conditions, v/c ratios were calculated for all Hingham two-lane study area roadways where future 2011 traffic volumes have been projected. The projected future traffic v/c ratio operations are summarized below in **Table 8.8**:

Table 8.8: Future Operations (Sorted by V/C Ratio in Descending Order) for Two-Lane Roadways

Roadway	Segment	V/C Ratio
Rte 3A Broad Cove	near Otis Street (two-lane section)	>1.0
Route 228	north of Gardner Street	>1.0
Route 228	north of South Pleasant Street	0.98
Route 228	south of Scotland Street	0.96
Route 228	south of Cushing Street	0.88
Whiting Street	east of Old Ward Street	0.84
Derby Street	west of Route 3 SB of/off ramp	0.83
Beal Street	west of West Street	0.80
Beal Street	east of Fottler Street	0.80
Route 3A	east of Kilby Street	0.79
Whiting Street	west of Old Ward Street	0.78
Whiting Street	east of town line	0.78
Route 3A	between Summer Street and Kilby Street	0.76
Route 3A	west of Summer Street	0.75
Route 228	south of Route 53	0.75
Derby Street	east of town line	0.72
Whiting Street	west of Cushing Street	0.71
Whiting Street	west of Gardner Street	0.70
Route 3A	east of Kilby Street	0.66
Route 3A	west of Kilby Street	0.65
Route 228	north of Route 53	0.63

II. TRANSPORTATION: RECOMMENDATIONS

Many roadways in Hingham are currently experiencing traffic congestion during the peak commuting hours and even during off-peak hours. Existing crash records indicate areas with high crash rates. Based on the anticipated future developments, traffic conditions in the near future will worsen. This section outlines some of the broad-based recommendations to attempt to deal with some of the traffic issues.

□ *Focus Roadway Improvements on Safety Improvements Not Capacity Improvements*

Concern has been expressed that the increase in development and in traffic in general is causing a change in Hingham. As noted earlier, many roadway segments are presently operating at or near capacity, and in the future the number of roadway segments at capacity is expected to increase. If roadway improvements are made to increase capacity, by widening roadways, there is a concern that “if you build it, they will come”. By increasing the capacity of roadways, further development may be spurred.

An alternative improvement idea is to make roadway improvements but focus on safety improvements. At intersections with particularly high incidence of crashes, turn lanes could be added and alignment and visibility improved rather than adding additional through lanes. Improvements could be designed to accommodate pedestrian and bicycle movements rather than facilitate vehicular movement only. These types of improvements will not only discourage traffic passing through congested areas but also promote safer movement of traffic. As an example, several iterations of roadway improvements have been proposed for Main Street. Here too, based on input from many of the residents and town officials, Main Street improvements should be focused on safety and not capacity.

Also to consider is the relationship of a proposed improvement to the adjacent roadway links and intersections. If there are several intersections within a corridor in need of capacity and safety improvements, it would not make sense to make capacity improvements at only one location, resulting in the transference of congestion to the other locations. Assuming, for funding or other issues, improvements can only be made at one location, the proposed approach would therefore be to make safety improvements at the one location. If, on the other hand, the one location in need of capacity improvements is surrounded by a network of intersections that operate well, it would make sense to provide capacity improvements at this location.

□ *Look for Roadway Improvements that Maintain Character of the Community*

A philosophy has emerged, and with it certain engineering tools, where roadway improvements have resulted in reinforcement and the maintenance of the character of the community. As an example, in some communities roundabouts have been installed or are planned instead of traffic signals, even though the signals have been warranted. In all examples, adequate right-of-way existed to build the rotaries. These roundabouts act as traffic control devices to process vehicles through an intersection without the use of traffic signals. Traffic signals, when warranted, could be installed in areas where other signalized intersections exist and where the Town character is not an issue. As an example, traffic signals in areas such as Hingham Square or at the intersection of Main Street (Route 228) / Central Street should be avoided. In cases where space is available, roundabouts should be considered.

□ *Prioritize Roadway Improvements*

Funding is obviously an issue when trying to evaluate roadway improvements. There are several locations in Hingham that warrant roadway improvements because they are presently operating at capacity and the crash records indicate a high incidence of crashes. With funding constraints, not all roadways in need of improvement can be improved at the same time. A method must be devised to