

WOODS HOLE HISTORIC DISTRICT PLANNING STUDY

FINAL REPORT



SEPTEMBER 2018



CAPE COD
COMMISSION

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The information depicted on the maps in this document is for planning purposes only. It is not adequate for legal boundary definition, regulatory interpretation, or parcel level analysis. It should not substitute for actual on-site survey or supersede deed research. Data: parcel and zoning data from Cape Cod Commission data set and town assessor's data; land use data from Mass GIS; ponds and open space data from Mass GIS; FEMA Flood Zone data from FEMA; MACRIS data from Massachusetts Historical Commission; structures data from Cape Cod Commission planimetrics data set; pedestrian and bicyclist accommodations data from Cape Cod Commission data set and staff observations; aerial photos from Cape Cod Commission; road data from MassDOT. All photos by Cape Cod Commission staff.

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INTRODUCTION

01

kitchen
public house



NO
BIKE
PARKING

STOP

VEHICLES
MUST WAIT
FOR GREEN
LIGHT

GALLERY



STUDY AREA

- Study Area Boundary
- - - Historic District Boundary

INTRODUCTION

The purpose of the Woods Hole project is to develop recommendations to better protect historic resources and community character, and to enhance bicycle/pedestrian facilities in Woods Hole village. The town of Falmouth and the Falmouth Historical Commission chose Woods Hole village to begin evaluating the town's historic district boundaries and to identify potential conflicts between zoning regulations and historic and community character goals.

The project was initiated in part because of numerous recent development proposals in the village, including:

- replacement of existing buildings and expansion on the Coast Guard property,
- a new terminal and ferry slips on the Steamship Authority property,
- possible relocation or de-commission of the Fisheries building near the NOAA Aquarium,
- sale of the former rectory for the Church of the Messiah on Church Street, plus
- a feasibility study for the Woods Hole Historical Association property on Woods Hole Road, and
- a Strategic Facility Assessment for the Woods Hole Oceanographic Institute's (WHOI) Village Campus.

For Task 1 of the project, Cape Cod Commission (CCC) staff conducted site visits with town staff and committee members, compiled information on existing conditions, reviewed prior studies of the area, and produced a series of maps to illustrate existing conditions and observations. Existing conditions maps are presented in the individual topic areas of this report.

Task 2 included a review of historic resources inside and outside historic district boundaries, existing zoning and historic district regulations, and potential character and bicycle/pedestrian facility improvements.

Task 3 focused on gathering public comment through presentations, meetings with stakeholder groups, and a public workshop. Key comments received in this phase are discussed in the Public Process section of this report.

Task 4 involved developing the draft and final recommendations for the town's consideration. The recommendations were shaped by public comment and are presented in the individual topic areas of the report.



HISTORICAL DEVELOPMENT IN WOODS HOLE

There are several well-written histories of Woods Hole, including Mary Lou Smith's 'The Book of Falmouth' and Susan Fletcher Witzell's 'Walking Tour of Woods Hole Village,' that explain the area's evolution as a successful maritime industrial port and home to marine research institutions. This summary points out some of the larger physical changes in the landscape that are visible in aerial photographs of Woods Hole from the past century -- 1952, 1971, and 2002. The study area is outlined on each image.

Historic photographs reveal that by 1938 the area surrounding Eel Pond was already tightly

developed. To the north and west sides of Eel Pond were mostly small residential buildings, but the waterfront of Great Harbor was heavily developed near the drawbridge, including a railroad track leading right to the water's edge. The area north of Woods Hole Road was largely forested, though several buildings were visible along the road edge and high above Little Harbor. More broadly spaced development was visible along Church Street with large buildings, some with open fields around them.

By 1952, the most obvious change was a decrease in the amount of open land and a corresponding increase in trees and other vegetation around the edges of properties. Some large new buildings



area between Woods Hole Road and the railroad bed is mostly clear of vegetation, but some plantings are visible. A large building (MBL's Swope Center) has replaced several residential buildings on the northwest shore of Eel Pond, and another large structure (WHOI's Redfield Lab) has filled a previously cleared lot at the southeast corner of Eel Pond. The Coast Guard waterfront along the west side of Little Harbor has been extended further north. The footprint of a large hotel (Nautilus Hotel and Dome) is visible in previously cleared land north of Church Street. A neighborhood of small houses has developed north of Woods Hole Road in a mostly treed landscape. In addition, the golf course northeast of the study area has become more formal with clearly defined greens and fairways.

appeared – specifically at the end of the railroad line and on the southwest shore of Eel Pond. The 1952 aerial also shows the beginnings of development along the north side of Woods Hole Road east of Little Harbor, with clearings in areas that had previously been treed.

The most significant visible change in the 1971 aerial photo is the large Steamship Authority parking lot and ring road that replaced the railroad depot at the water's edge. What was previously an adjacent piece of farm land or open grassy landscape has been developed as additional parking and several small buildings. The railroad bed has been altered and become a parking lot along much of its length within the study area. The

The 2002 aerial photo has fewer obvious changes, but is taken during a different season so appears to have less tree cover. The photo shows a wider parking area along the old railroad bed, presumably for the bike trail. It also shows less formal landscaping on the Dome property, a few new houses north of Woods Hole Road along Harbor Hill Road, and a continued clear area between Woods Hole Road and the old railroad bed above Little Harbor.

While the railroad bed has evolved and the waterfront has seen new development, Woods Hole retains many of its original historic buildings and, in many areas, retains the density and character that defined it at the turn of the 20th century.

PUBLIC PROCESS

HISTORICAL COMMISSION PRESENTATION

Cape Cod Commission staff toured Woods Hole with Historical Commission members and town staff in the summer of 2017, then presented existing conditions maps and initial observations at a public meeting of the Historical Commission on October 24, 2017. Staff heard concerns about preserving the architectural character of the district, properties split by the district boundary, and large development proposals, especially at the Steamship Authority Terminal parcel and at the Nautilus Hotel/Dome parcel.

PUBLIC WORKSHOP

Staff coordinated a public workshop on November 9, 2017 at the Falmouth Library. Approximately 35 people attended and provided feedback in three areas of focus – historic resources, bicycle and pedestrian facilities, and visual character. All participants were asked to answer questions in each issue area and to mark up maps. The following is a summary of comments received.

Historic Resources Comments

Participants were asked to identify key historic buildings in the village and to suggest other areas where protection should be considered:

- Attendees consistently identified the following key historic buildings and called for their

protection -- Nobska Light, Airplane House, Crane Estate, Shore Cottage, Candle House, Church and Bell tower on Millfield Street, Community Hall and Fire Station, and residences on Albatross Street. Some also identified the Lillie Building/Lab, Rowe Tavern and adjacent building, and two buildings off Larches Way.

- Expand the historic district at least to include buildings west of the drawbridge.
- Expand the historic district to include the south side of Woods Hole Road as approaching the village.
- Protect the scale and identifying characteristics of Millfield Street and the areas around Eel Pond, but perhaps not an historic district.
- Consider ways to protect the character of Gansett Woods, the early science community around Buzzards Bay Avenue, where there is concern about the potential for teardowns.
- Use scenic road bylaw to expand street tree protection.

Bicycle and Pedestrian Comments

Workshop attendees focused on ways to facilitate pedestrian movement and to slow vehicle traffic in the area:

- Provide traffic calming at village entrance, such as flashing beacon and lower speed limit signage to slow traffic on Woods Hole Rd.
- Improve Woods Hole Road sidewalk by



BREAKOUT GROUPS PROVIDE FEEDBACK AT THE NOVEMBER 9, 2017 WORKSHOP IN THE FALMOUTH PUBLIC LIBRARY.

widening, removing obstacles (e.g., utility poles), and providing better separation from the travel lane.

- Pedestrian Crossings over Woods Hole Road at Standpipe Road, Harbor Hill Road, Church Street, and Crane Street, possibly with center island for pedestrian refuge, and electronic speed warning signs or flashing beacon.
- Address bicycle/automobile conflicts in the village: Widen Water Street to accommodate two-way automobile travel or convert Water Street to one-way operation or eliminate parking spaces on one side and keep it a two-way street.
- Shining Sea Bikeway improvements - surface needs repair (root damage); improve access to Nobska Rd; address dangerous intersection with Railroad Ave.
- Add better and more bike parking.
- Extend sidewalk on Church Street to Nobska Road; repaint crosswalk on Church Street.

- Consider adding a bike lane on School Street, extend sidewalk to the north, and add crosswalks.
- Convert Luscombe Avenue to pedestrian-only.
- Extend sidewalk to Stoney Beach.

Visual Character Comments

While Woods Hole village contains many elements of a cohesive village center, workshop participants identified several needs to improve or maintain village character. These issues can be generally grouped as follows:

- Vista improvements over Little Harbor and Eel Pond – participants expressed strong support for improvements to the vista over Little Harbor, which has become overgrown with invasive and/or noxious species. Several participants also suggested providing additional pedestrian access and amenities to the Little Harbor overlook, including a deck or stairs to the bike path below. Suggestions were made



to improve the viewshed to Eel Pond from School Street with sidewalk improvements, vegetation trimming, and railings.

- Bike path seating area – Suggestions were made to provide a small park/seating area adjacent to the bike path overlooking Little Harbor for bicyclists and/or walkers. Participants also expressed support for improved/formalized access to/from the bike path to Church Street.
- Dome property – Workshop participants expressed serious concerns about the future of the Dome property and potential changes to community character and traffic depending on how, and if, the property is to be redeveloped.
- Steamship Authority Terminal/Docks – Workshop participants expressed concerns about the proposed redevelopment of the Steamship Authority Terminal and blocked views of Vineyard Sound due to a taller building. There were also concerns about proposed new docks associated with the Terminal improvements and their potential to obstruct views from the Water Street Bridge.
- Zoning – Participants were concerned about possible changes to existing buildings that are allowed by zoning that may result in changes to the area's character.
- Signage – Participants expressed a need for improved signage within the village to destinations just outside such as Nobska Light or other nearby attractions.

MEETINGS WITH STAKEHOLDERS – WHOI, MBL, WOODS HOLE HISTORICAL COLLECTION

The Marine Biological Laboratory (MBL) and Woods Hole Oceanographic Institution (WHOI) are significant property owners within the study area. Commission staff met with representatives of MBL on December 11, 2017 to tour their facilities and discuss challenges involved with upgrading research buildings and housing. MBL's properties are currently all outside the historic district boundary, but include numerous historic structures of residential scale as well as larger laboratory and dormitory buildings. The best known are the Candle House and the Crane/Lillie Building on Water Street. Staff met with representatives of WHOI on January 9, 2018 to discuss the project. WHOI owns historic homes both inside and outside the historic district boundary, as well as other properties within the study area, including the WHOI dock/Iselin Marine Facility adjacent to the drawbridge. Staff also met with representatives of the Woods Hole Historical Collection on January 9, 2018. Following additional research and development of draft recommendations, Commission staff and town representatives met a second time with representatives of WHOI and MBL on March 27, 2018 to discuss draft recommendations and to answer questions regarding potential impacts on the institutions.

PRIOR STUDIES/REPORTS

The town of Falmouth has commissioned studies in the past that address historic resources in the Woods Hole area. Two previous studies examined historic resources town-wide and suggested improvements to benefit historic resource preservation: The 2006 study of Falmouth historic districts by Larson Fisher Associates; and the 2014 Falmouth Historic Preservation Plan by Heritage Strategies. The following is a summary of issues and recommendations identified in those studies and in the Town's Comprehensive Plan.

LARSON FISHER ASSOCIATES STUDY

This report, a town-wide historic district study completed in 2006, identified some concerns that apply to all Falmouth historic districts (items 1-5), and others that are specific to the Woods Hole historic district (item 6):

1. District boundary is too shallow from the road to include some historic buildings and to protect historic district character, especially when large lots are involved. They suggest having all of lot touched by historic district be subject to review, OR expanding boundary of historic district to include key resources
2. Historic District Commission should have input into Planning Board review of subdivisions within historic districts. They suggest the town make zoning changes to

support historic preservation goals by adding historic resource protection to special permit criteria and creating a formal process for HDC to comment on ZBA/PB reviews within historic districts (Section 240-216.I).

3. Reconsider allowed land uses in the historic district, especially those allowed by special permit. They noted concern about commercial accommodations and parking of trucks/boats.
4. Consider limiting building heights to be more consistent with existing historic buildings, with exceptions for architectural features.
5. Adopt incentives for historic preservation. They suggest allowing a second structure on a lot by special permit; property tax abatement on "A list" properties; and CPA funds for historic district projects.
6. Recommended changes to zoning in Woods Hole: Consolidate Zones RC & GR to HD-R3 with front setback of 25-35 ft, flexible side and rear setbacks, plus flexible lot coverage with 50% max impervious; Change Zone RAA to HD-R1 with front setback of 35 ft, flexible side and rear setbacks, flexible lot coverage with 40% max impervious. Suggested B1 zone is adequate for business area.

HERITAGE STRATEGIES REPORT

This report, a town-wide historic preservation plan, completed in 2014, includes recommendations to enhance historic resource protection. Perhaps most significantly, it recommended converting Falmouth's special legislation historic districts to Massachusetts General Law Chapter 40C historic districts, which was voted by town meeting and approved by the Attorney General in 2016. Other recommendations include:

1. Prepare cultural landscape report for villages;
2. Prepare master plan for the village with public process/design charrette; use it to guide review of new development by town boards;
3. Develop recommendations for 'zones of sensitivity' based on existing character and significance;
4. Prepare design guidelines and use them to coordinate review;
5. Modify historic district boundaries to include whole properties;
6. Eliminate zoning conflicts – require preservation and re-use of historic buildings;
7. Consider single property historic districts, or conservation districts;
8. Make preservation of authentic historic building fabric a primary goal of review;
9. Historic District Commission should review site plans to help protect historic settings;
10. Historic District Commission should provide

recommendations to PB and ZBA regarding impact of development within and adjacent to historic districts;

11. Provide guidance to property owners for appropriate treatment of historic buildings.

FALMOUTH COMPREHENSIVE PLAN

Falmouth's Local Comprehensive Plan, completed in 2016, addresses historic resources and community character in its chapters on Land Use and Historic Character. The LCP includes the following action items:

1. Adopt design review guidelines to be administered by the Planning Board.
2. Revise the boundaries of Falmouth's 7 historic districts to encompass the entirety of the individual properties located within the district.
3. Implement the Historic District Overlay Initiative in Falmouth's 7 historic districts to protect the physical form, scale and setting of each district's character.
4. Create distinct wayfinding methods to promote and inform residents and visitors about historic sites, events and historic districts.
5. Consider historic property tax abatement to encourage adaptive re-use or rehabilitation of designated historic structures.
6. Create a more efficient permitting process that provides owners of designated historic properties more predictability when performing work.

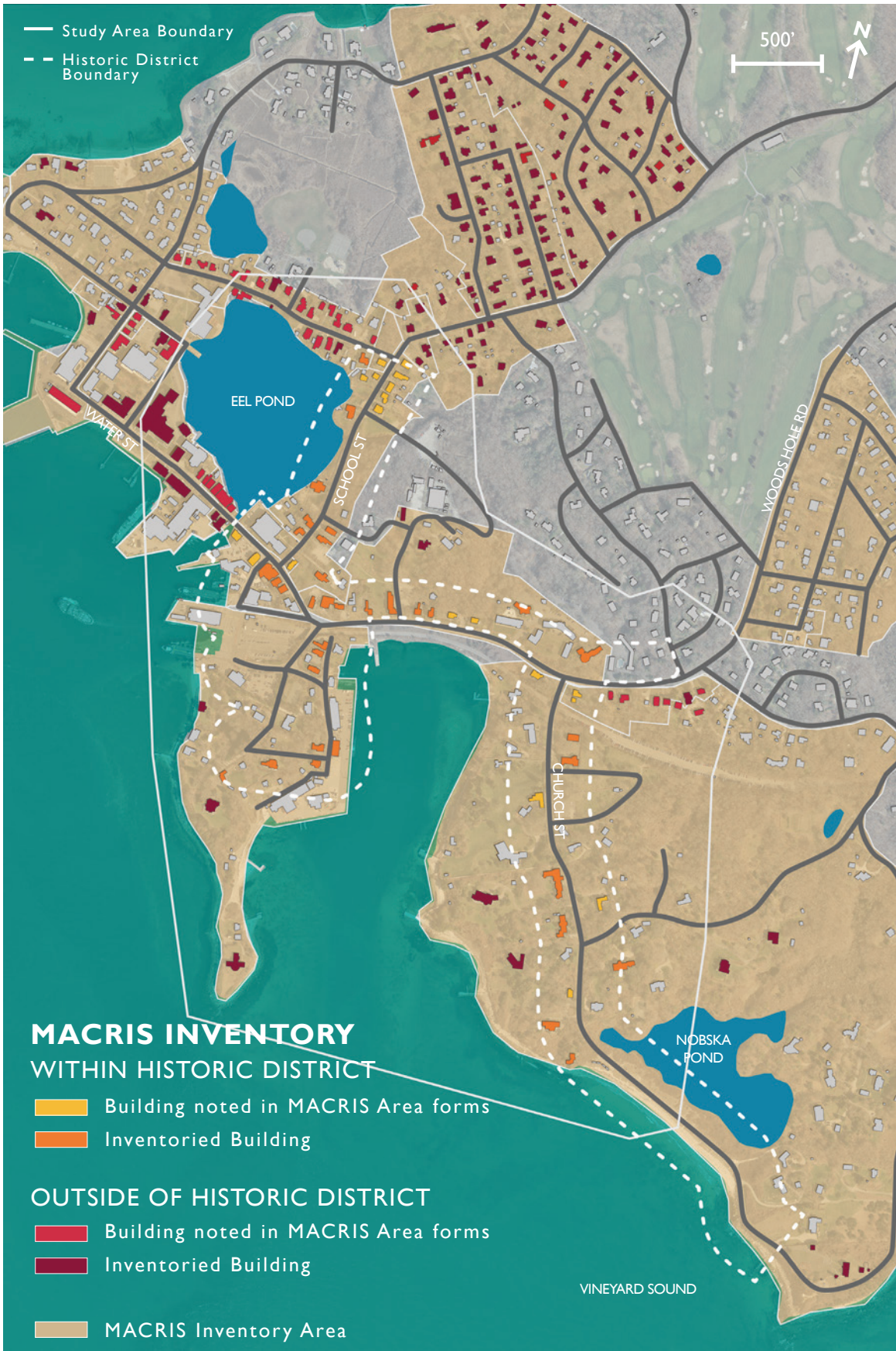
HISTORIC RESOURCES

02



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HISTORIC RESOURCES

HISTORIC INVENTORIES

Woods Hole includes many historic buildings that have been inventoried in the Massachusetts Cultural Resource Inventory System (MACRIS), some on individual building inventory forms (Form Bs) and others on area forms (Form As). Buildings within the historic district boundary are well documented with Form Bs. Many historic properties, however, are located outside of the historic district, including concentrations of inventoried properties on the south side of Woods Hole Road east of Church Street, west of the drawbridge on Water Street, and along Millfield Street. Some inventoried buildings outside the district boundary are set well back from Church Street, Larches Way, Challenger Drive, and Juniper Point, including the well-known “Airplane House.” Additional concentrated areas of historic properties are found outside the study area along Albatross Street/North Street and off Quisset Avenue as shown on the MACRIS Inventory map.

AGE OF BUILDINGS

Two sources of information are used to show the age of historic structures on the following pages: MACRIS inventory data and Assessors data. MACRIS data comes from inventory forms and is typically based on historic research so is considered accurate, but does not cover all buildings.

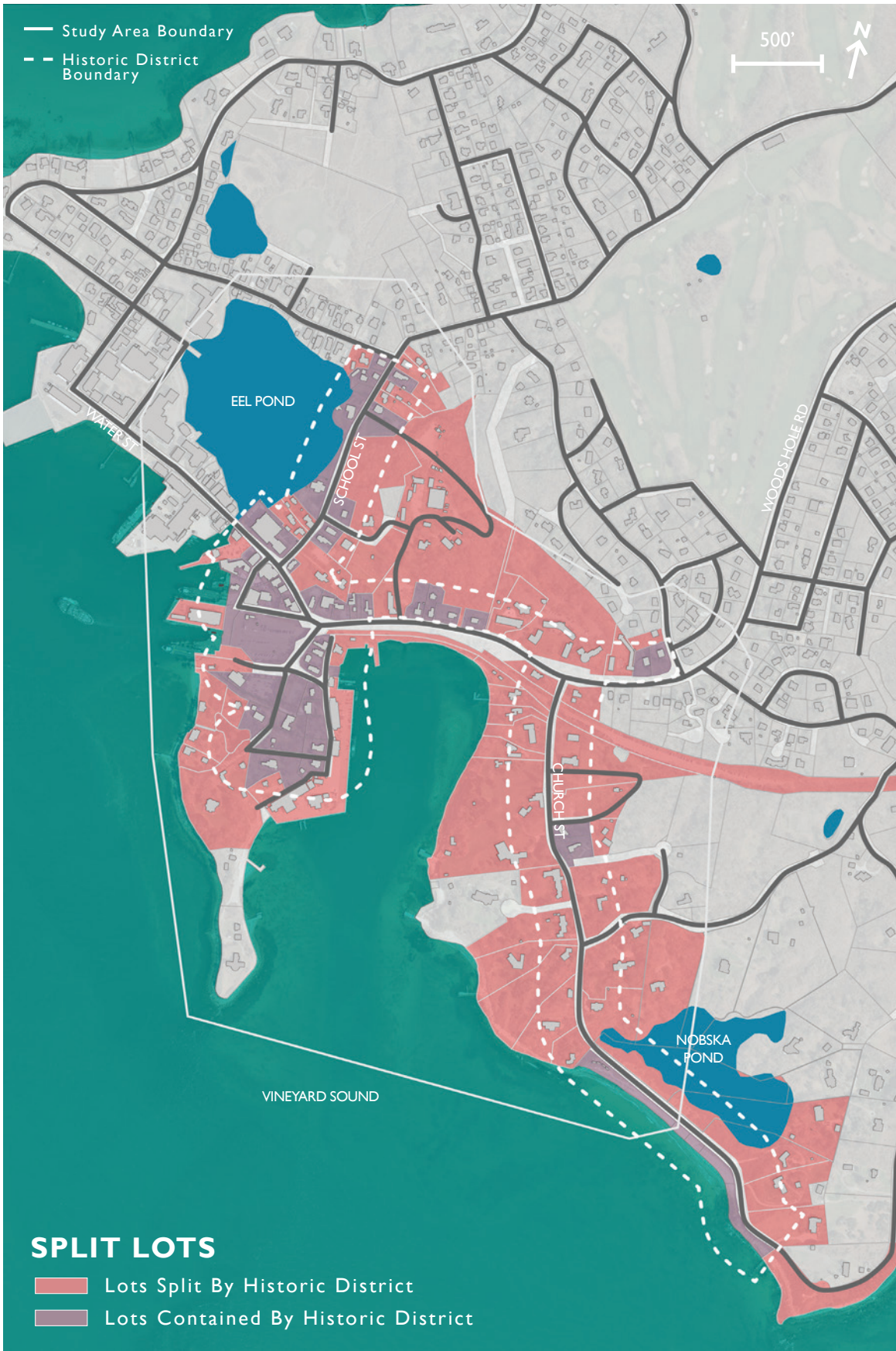
Inventories done on Area forms do not include dates for all buildings in the area. Assessor’s data covers all buildings in the town, but some of the dates are incorrect. One example is the Stone Candle Building on Water Street, which MACRIS dates to the early 1800s while the Assessors database shows it as mid- to late-1900s (possibly because it is lumped together with an adjacent building). The Challenger House on Woods Hole Road (circa 1765, also known as the Swift/Parker/Fay House) is another example that the Assessors data incorrectly dates to the early 1900s.

Assessors data is helpful, however, in filling in some gaps in the MACRIS Area forms, such as on Millfield and Water Streets, and along the south side of Woods Hole Road. Looking at both sources allows us to identify the oldest buildings in the study area.

Many of the oldest buildings are clustered along the north side of Woods Hole Road above Little Harbor. Other significant old buildings include the stone Candle House at 127 Water Street (1837), the Davis Tavern at 73 Church Street (one part dates to 1685), the Hatch House at 9 Quisset Avenue (1730), and several mid 19th century residences at the corner of Albatross Street and Bar Neck Road, outside the historic district.







WOODS HOLE HISTORIC DISTRICT

The Woods Hole historic district was established in 1975 by a Special Act of the Massachusetts Legislature, and was one of Cape Cod's first historic districts. The initial Woods Hole historic district boundary was established in 1975 and included only a 200-foot deep strip on the north side of Woods Hole Road from Harbor Hill Road to School Street. The district was expanded in 1985 to include a 200-foot deep strip on both sides of the following roads: Water Street east of the drawbridge, School Street south of Millfield Street, Church Street north of Nobska Road, Little Harbor Road, Cowdry Road, Luscombe Road, Butler Street, and Railroad Ave.

In 2015, the town of Falmouth voted to adopt the more commonly used historic district regulations of Massachusetts General Law Chapter 40C, but retained the same historic district boundaries.

The Falmouth Historical Commission worked with a consultant to develop a design guidance document for the town's historic districts in 2011. The Falmouth Historic District Design Review Guidelines are detailed with specific recommendations for all exterior building elements. The guidelines include illustrations and descriptions of the town's main historic architectural styles and have been updated through 2018.

SPLIT LOTS

The historic district boundary in Woods Hole bisects many lots, both large and small. The map titled "Split Lots" highlights in orange the large number of lots that are divided by the historic district boundary and shows the location of buildings on those lots. While in many cases the historic buildings are within the portion of the lot covered by the historic district, several historic buildings on bisected lots are sited partially or fully outside the district boundary. Examples are found on large lots along both sides of Church Street, on the southwestern shore of Juniper Point, in buildings set well back along Challenger Drive, and also at the northern tip of the historic district on School Street.

While the expansion of the district boundary in 1985 increased the number of protected buildings, many historic buildings that contribute significantly to the character of Woods Hole village are still located outside the district boundary. Most are located west of the drawbridge on Water Street, though groupings of historic buildings are also found along the south side of Woods Hole Road on the east end of the study area, and to the north and west of Eel Pond.



ARCHITECTURAL SIGNIFICANCE AND STREET IMPACT OF STRUCTURES

To help determine which historic buildings have the greatest significance in Woods Hole, Commission staff evaluated the street impact, architectural significance and age of historic structures inside and outside the historic district.

In evaluating a building's 'street impact,' staff considered the building's proximity to the road edge, its height at the road edge, and its prominence relative to other buildings nearby. Many buildings deemed to have high 'street impact' are located within the current historic district boundaries, but numerous others are outside the district, particularly west of the drawbridge on Water Street and west of Eel Pond on Albatross Street. These buildings typically define the road edge and the street's character because their architectural features are so close to the viewer.

Assessing 'architectural significance' considered items such as the age of the building (using MACRIS data), its architectural uniqueness, and level of architectural detailing. Many buildings of high 'architectural significance' are within the historic district boundaries, but several are located outside the district, some west of the drawbridge on Water Street and along Albatross Street and North Street. Others are north of the district on Millfield Street and Quisset Avenue, or south

on Juniper Point. While these buildings may not be all be close to the street edge, their unique architectural form and rarity give them significant impact on the surrounding neighborhood.

The map graphic on page 26 illustrates each building's street impact in the color of upper half of the circle, and its architectural significance in the color of the lower half of the circle. The highest ranked buildings in each category are shown in the darkest red and orange colors.

Properties that scored high in both categories display a full dark red circle over the building. Several of these high-ranking buildings were also called out by workshop attendees as the most important historic buildings in Woods Hole. The location of significant properties helps to identify areas that should be considered in any potential expansion of the historic district boundaries.

INSTITUTIONALLY OWNED HISTORIC BUILDINGS

Marine research institutions own a large percentage of the buildings in Woods Hole, including historic buildings both inside and outside the historic district boundaries. Institutions have generally been good stewards of these buildings and have made improvements in sympathetic ways. Past improvements by MBL include a significant rehabilitation of the Candle House that retained

the building's historic exterior and street character. MBL has also constructed new laboratory buildings (1992 Marine Resource Center and 2001 Starr Lab) on sites that were previously open or recreational lands and thus did not impact historic structures. The 1971 SWOPE building was an exception as it replaced several small residences along the northwest shore of Eel Pond.

Both MBL and WHOI have voiced concern about their ability to upgrade buildings to meet research and housing needs, and to address flood protection if the historic district boundaries were expanded. They are concerned about how possible limitations in exterior changes and added time to get regulatory approvals might affect their ability to get grants and to make improvements. Because these institutions are an important part of Woods Hole, these concerns should be addressed carefully. It should be possible to define key building characteristics that warrant preservation in advance of any regulatory filing, enabling the institutions to incorporate these goals into their long-range planning.

OPTIONS FOR PROTECTING HISTORIC STRUCTURES OUTSIDE WOODS HOLE HISTORIC DISTRICT

There are numerous ways that historic property protection can be improved in Woods Hole, including through historic structure designations, enhancements to local review procedures, improved public information, and incentives as described below.

Expand Local Historic District

Many historic buildings located outside the existing district boundary could be included in an expanded historic district. Any change to the historic district boundary must follow the process outlined in Mass General Law Chapter 40C, requiring a study report, review by Mass Historical Commission staff, and approval at Town Meeting. If the district boundaries were changed to include all portions of split lots in the district, approximately ten additional inventoried historic buildings could come under the jurisdiction of the historic district. Some of these buildings are not visible from the roadway due to either the large size of the lots, topography or vegetation. Some, however, are visible from the water. If the historic district boundary were changed to include views from the water as in the Quissett Historic District, it could add historic buildings on Juniper Point and along the east shore of Little Harbor. It could also catch the rear-facing portions of those properties on the

west side of School Street which are visible from Eel Pond.

As part of any work to expand the district, it would be helpful to identify and describe key character-defining features of newly included properties, especially any large institutional buildings that have both significant public facades and less important areas where change should be allowed.

Single Property Local Historic Districts

Several Massachusetts towns have established single property local historic districts. This allows individual significant properties to be protected even if the surrounding area does not warrant designation as a local historic district or if property owners are not supportive of creating a larger historic district. As with the extension of local historic district boundaries described above, the proposal must be reviewed by Massachusetts Historical Commission staff and approved at town meeting. Administration of the district could be done by the existing local historic district commission.

National Register of Historic Places

Significant historic buildings, structures, or districts could be nominated for listing on the National Register of Historic Places, which is administered by the National Park Service/U.S. Department of the Interior. The nomination process includes a clear set of evaluation criteria

and requires a detailed narrative describing the properties. Nominated properties are reviewed by the Massachusetts Historical Commission and ultimately by the National Park Service.

National Register designation can provide access to certain state and federal grants programs and tax credits, such as the Massachusetts Preservation Properties Fund (MPPF) administered by the Massachusetts Historical Commission. National Register designation also provides some protection from federal or state grants and permits that might negatively impact the property. On Cape Cod, National Register properties outside of Local Historic Districts are also offered some protection by the Cape Cod Commission Act. Any proposal to demolish or “substantially alter” a property that is individually listed or that contributes to a National Register Historic District requires Cape Cod Commission review and compliance with historic preservation standards in the Cape Cod Regional Policy Plan.

Architectural Preservation District

Architectural Preservation Districts (sometimes called Conservation Districts) provide a more flexible alternative to Historic Districts established under MGL Chapter 40C. These districts are appropriate for neighborhoods where there is concern about the scale and character of the area, but where review of small alterations and specific



architectural details is not desired. There are several examples of Architectural Preservation Districts adopted by towns in Massachusetts. For example, the town of Ipswich adopted a district in 2014 that includes non-binding review for items like window and siding replacement, and binding review for demolition, exterior additions over a certain size, and new buildings. Architectural Preservation Districts are less restrictive and, because they are adopted under the Home Rule Amendment, require only a simple majority to pass Town Meeting rather than the 2/3 majority required to adopt an Historic District or zoning amendment.

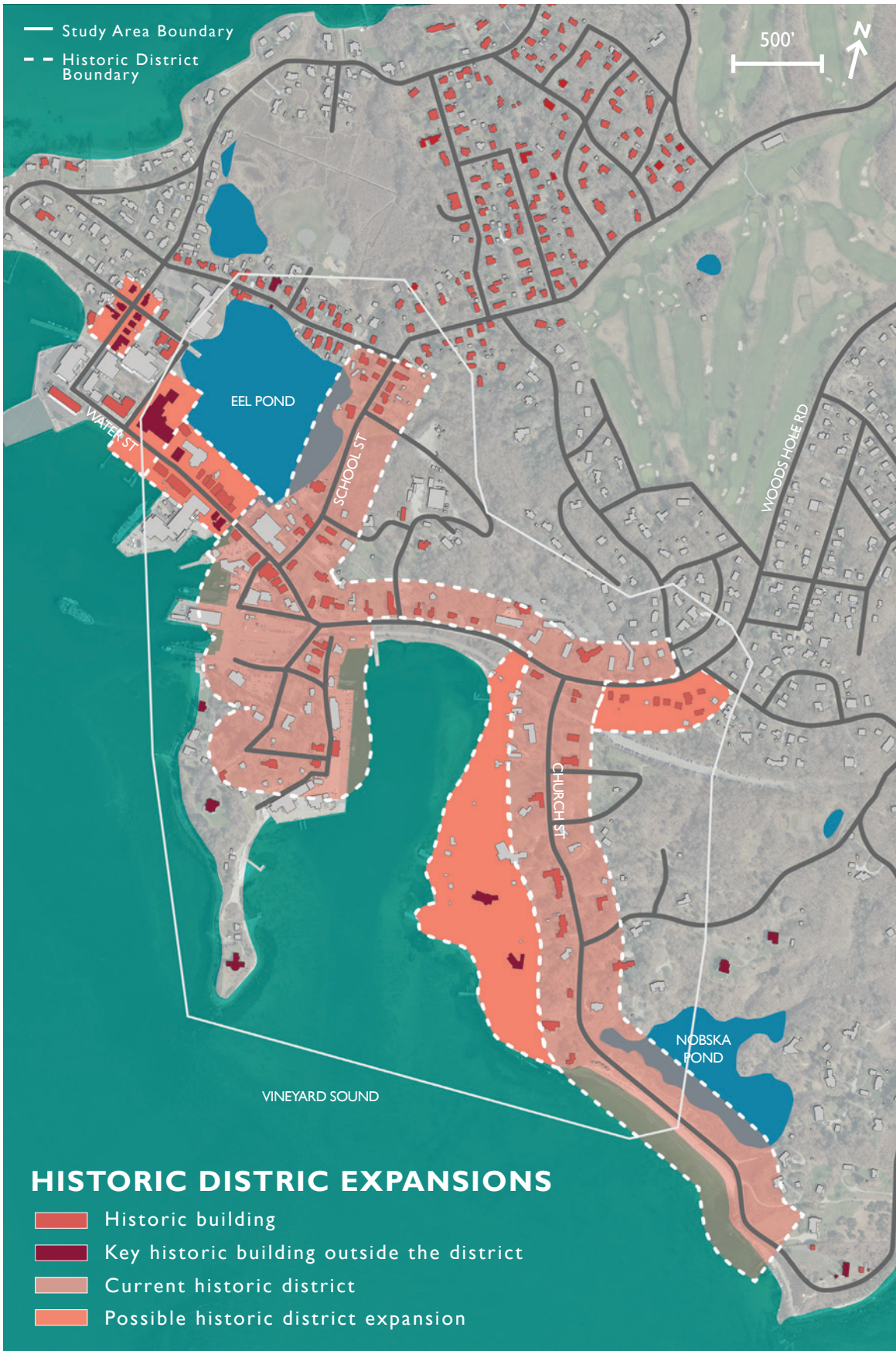
Preservation Restrictions

A Preservation Restriction is a legal agreement in perpetuity to protect an historic building's significant architectural features. The restriction runs with the land and requires both owner consent and Massachusetts Historical Commission approval per MGL Chapter 184 sections 31-33. Over 1,200 properties in Massachusetts have [reservation restrictions and many were established as a condition of receiving grant funds to support rehabilitation work. Some restrictions have been donated by preservation-minded property owners or purchased by preservation organizations. All preservation restrictions must be held by a non-profit or government entity with historic preservation in their mission statement. While

Falmouth has a few preservation restrictions acknowledged in the State Register of Historic Places, there are none in Woods Hole. Preservation restrictions could be a useful tool for protecting a few key buildings in Woods Hole, especially if they can provide access to rehabilitation grant monies for non-profit or municipal owners. They can also meet the needs of private property owners who have a goal of long-term preservation of their historic property.

Demolition Delay Bylaw

Falmouth currently has a Demolition Delay Bylaw that requires property owners to spend 6 months exploring alternatives to demolition of an historic property before they can receive a building permit. This delay applies to buildings included on the town's List of Significant Buildings outside of historic districts. Most Cape Cod towns have a demolition delay period of 12 months or 18 months, which provides a more effective amount of time to address the planning and permitting requirements that often arise when considering alternatives to demolition. The town of Chatham, which has an 18-month delay period, has had the most success on Cape in working with property owners to find viable alternatives to demolition of historic structures. Lengthening the delay period in Falmouth would require amending the bylaw at town meeting. As a General Bylaw, any amendment would require a simple majority vote.



Update Historic Resource Inventory

Updating Falmouth's historic resource inventory provides a better baseline of information for the Historical Commission, Planning Board and other regulatory boards to consider in their review of projects effecting historic structures. It also provides a good foundation for public education programs. The town is currently working to update their historic resource inventory and has received Community Preservation Act funding to contract with a preservation consultant.

Additional considerations for zoning incentives and Planning Board/Zoning Board of Appeals criteria to address historic resources are also discussed in the Community Character/Zoning section of this report.

HISTORIC RECOMMENDATIONS

Expand Local Historic District boundaries

Any expansion of the Historic District boundary will require review of proposed boundary changes by MHC and amending the town's Chapter 40C district with a 2/3 vote of Town Meeting. Historic District expansion will address changes to exterior building features and new construction. Consider expansion to the following areas:

1. Water Street west of drawbridge to Candle House,
2. Water Street further to Crane/Lillie Laboratory
3. South side of Woods Hole Road between Church and Nobska
4. Albatross Street at North Street
5. Deeper boundary on Church Street.

Protect Individual Historic Properties

If key historic properties such as the Community Hall, Fire Station, Candle House, Airplane House, Crane Estate and Church/Bell Tower on Millfield Street are located outside of historic district boundaries, pursue individual protections through one of the following means:

- Create single property local historic districts to be administered by the Falmouth Historical Commission;
- Consider listing on the National Register of Historic Places to provide review of demolition and substantial alterations by the



Cape Cod Commission; or

- Pursue a preservation restriction with the property owner to protect key building features into the future.

Include Views from the Water

Consider granting historic district authority over public views from the water in Little Harbor and Eel Pond. Following the example of Quisset's Historic District, the Woods Hole Historic District could include "a strip adjacent to the waters of Little Harbor and Eel Pond extending back 500 ft or subject to the public view from the Waterway."

Address Historic Areas of Concern

Millfield Street, Buzzards Bay Avenue and the intersection of Albatross and North Street all have concentrations of historic buildings and concern about potential change in neighborhood character. Millfield Street in particular has a strong collection of historic structures on the north shore of Eel Pond. There was no consensus about expanding the historic district to these locations, but other means of limiting change should be considered:

- Incorporate historic resource criteria and Historical Commission comments in Planning Board special permit criteria and site plan review criteria (*see discussion in zoning section*);
- Adopt zoning incentives such as flexibility in dimensional regulations and use regulations

for preserved historic structures (*see discussion in zoning section*);

- Architectural Preservation Districts

Extend demolition delay bylaw

Increase the demolition delay period to 12 months or 18 months to allow more time to identify alternatives to demolition of significant buildings. This will require Town Meeting approval.

Continued Training and Support

Some Historical Commission members requested additional guidance for the review process, but the existing guidelines appear to have sufficient detail. More direction in identifying a building's key character-defining features and using Form B inventory forms to guide decision-making may be helpful.

COMMUNITY CHARACTER

03





LAND USE AND ZONING

EXISTING LAND USES

The Land Use map shows the location of the types of land use in the study area, including commercial, residential, educational, and government, and open space classifications. Educational and commercial uses are the predominant uses in the downtown area, with a concentration of commercial properties fronting on or behind Water Street and others on the north side of Woods Hole Road. Educational uses (primarily research institutions) are located throughout the downtown, on Water Street and School Street, Bar Neck Road, and Woods Hole Road. Residential neighborhoods are located outside the downtown, north of Eel Pond; and to the south on Juniper Point and off Church Street. Government entities are located throughout the study area, most on the waterfront (Steamship Authority, NOAA). The map also identifies protected open space parcels in the study area. Open views to the water and large lawns at both public and private buildings give the impression of open space, but few parcels are permanently protected from future development by conservation restriction.

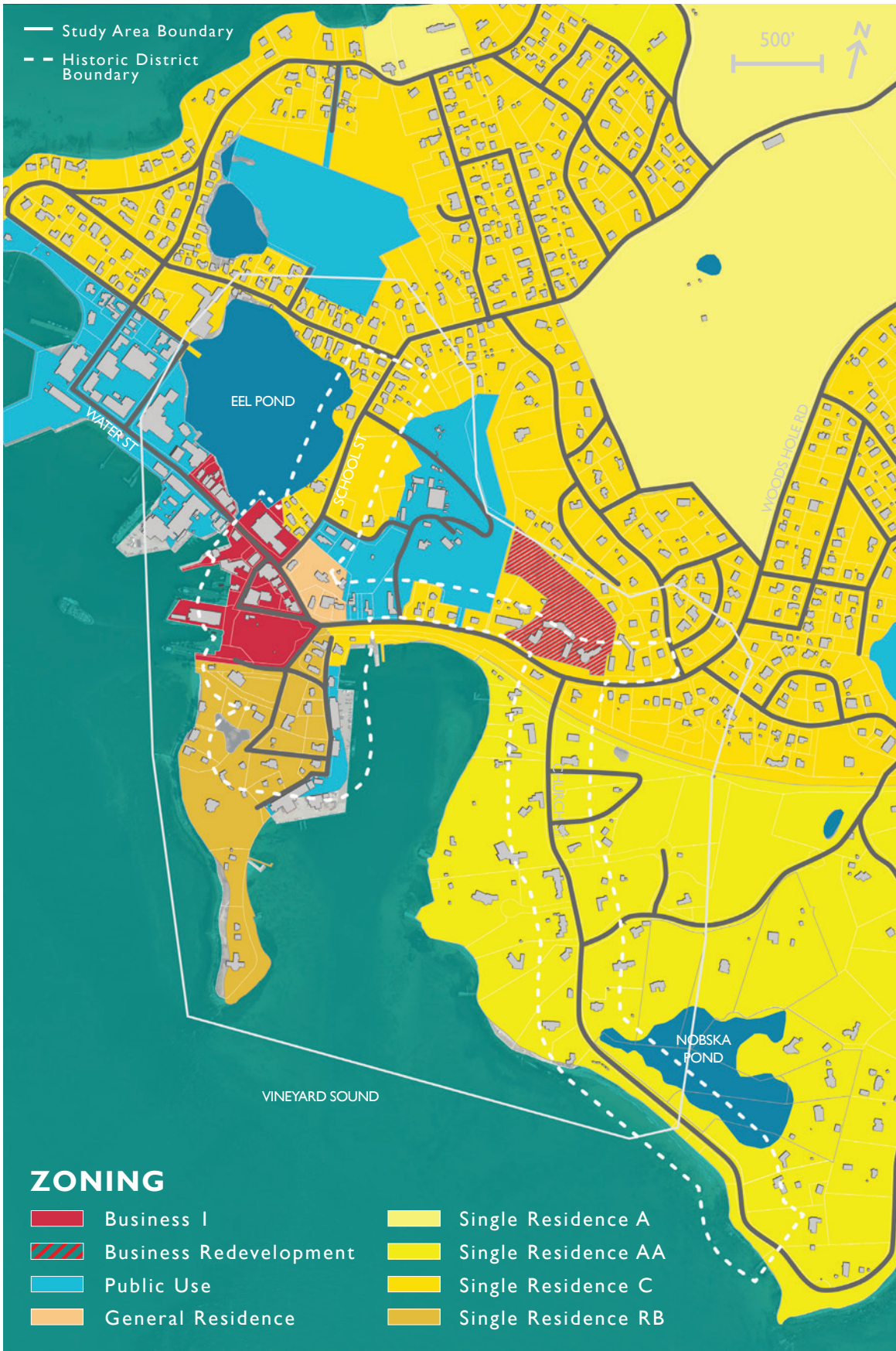
ZONING DISTRICTS

The study area includes multiple zoning districts: “Business 1,” “Business Redevelopment,” “Public Use”, “Single Residence AA,” “Single Residence

A”, “Single Residence B”, “Single Residence C,” and “General Residence.” The primary commercial district is Business 1, which encompasses the heart of the commercial area on Water Street and includes a majority of the 4.5-acre Steamship Authority property. The Business Redevelopment district is located on a 5-acre parcel on the north side of Woods Hole Road and includes the former Nautilus hotel property and the geodesic Dome.

Residence C and Residence AA are the largest residential districts in the study area, incorporating the more tightly developed residential areas north of Eel Pond (Residence C) and the large lot areas along Church Street (Residence AA). The two smaller residential districts cover Juniper Point (Residence B) and the corner of Water Street and School Street (General Residence). This General Residence district currently has only one residence and is primarily educational and government uses. The Residence B district includes a large parcel owned by the Steamship Authority.

While most of the educational/institutional uses are located within areas zoned Public Use, both WHOI and MBL own properties in residential zoning districts. WHOI owns a cluster of residential properties at the corner of Woods Hole Road and Nobska Road, and several along School Street in the Residence C district. It also owns a



building in the General Residence district. MBL owns buildings zoned Residence C along Millfield Street, Albatross Street and North Street.

Allowed Uses by District

All zoning districts in the study area allow single family detached houses, community services uses such as churches, schools, libraries, parks, and fire stations, and agricultural uses as principal permitted uses. Home occupation is an allowed accessory use or special permit use in all districts. Commercial accommodations and conversion of a dwelling unit into up to four dwelling units is allowed by special permit in the districts as well.

Business I District

In addition to uses allowed in all districts (as listed above), Business 1 allows semidetached and duplex housing, hospitals, research institutions, and numerous general commercial and retail uses. Accessory boarding uses is allowed as accessory use.

Business Redevelopment District

In addition to uses allowed in all districts (as listed above), Business Redevelopment allows retail sales under 4,000 sf, offices, banks, medical clinics, personal services under 4,000 sf, restaurants, and mixed residential and commercial uses including any combination of community service, business, or commercial uses with residential uses (less than

6 DUA), with some stipulations. Multi-family development is allowed by special permit.

Public Use

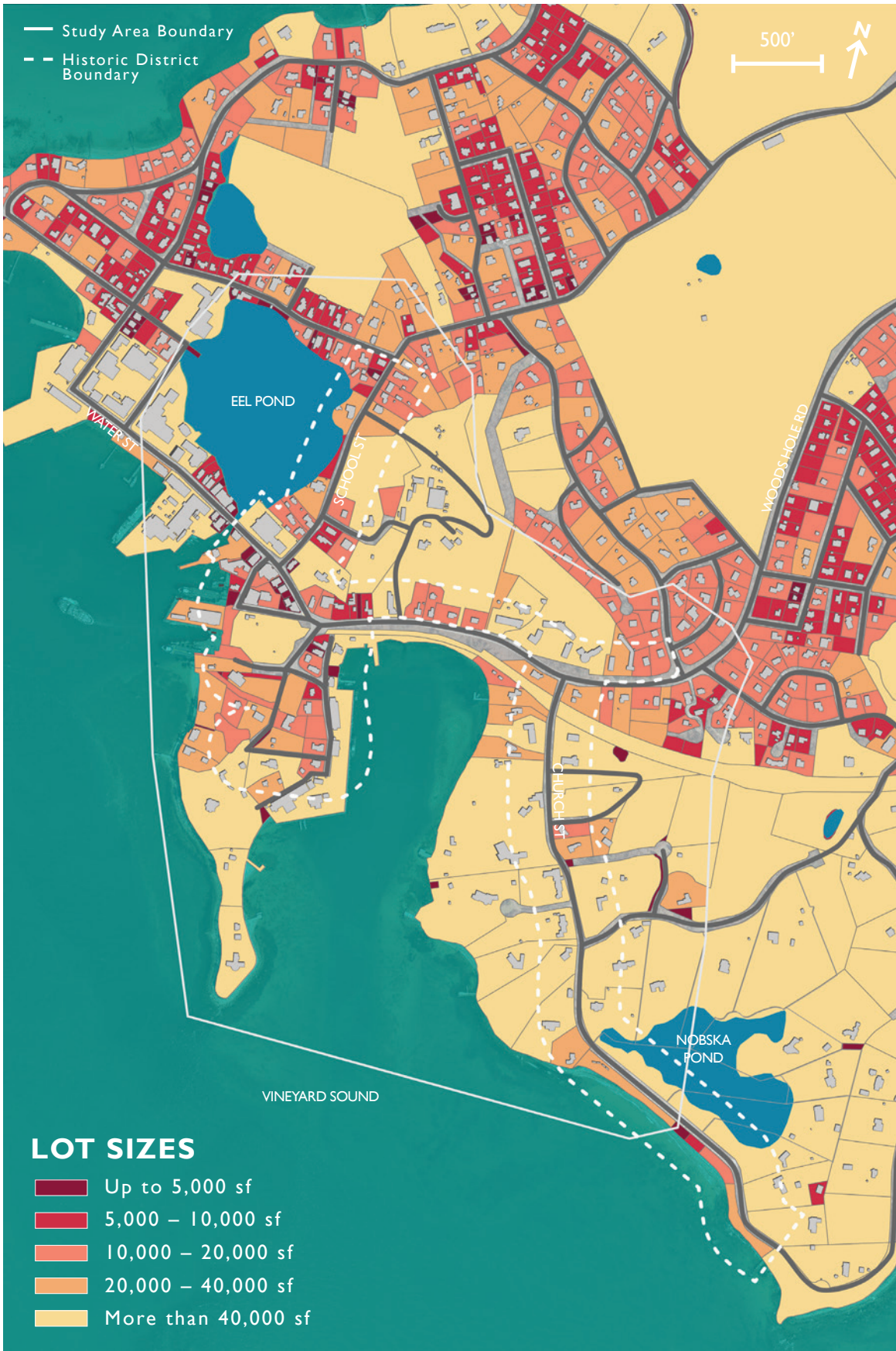
In addition to uses allowed in all districts (as listed above), Public Use allows single family semidetached and two-family dwellings, public or nonprofit elderly housing, and home occupation by right. Accessory science and technology R&D are allowed accessory uses (on 40 contiguous acres and not within 100 feet of residential districts). Additional uses are allowed by special permit

General Residence

In addition to uses allowed in all districts (as listed above), General Residence allows by right semidetached and two-family houses and a variety of services uses. Multifamily uses of up to three units are allowed if one unit is affordable.

Single Residence A, Single Residence AA, Single Residence B, Single Residence C

The most restrictive districts, these only allow single family detached houses, community service uses such as churches, schools, libraries, parks, and fire stations, and agricultural uses. Hospitals and accessory apartments are allowed by special permit in these districts, as is conversion of a dwelling into up to four dwelling units (with no change to exterior architectural features). In the A and AA districts only, wind energy systems are allowed by special permit.



Dimensional Requirements

Dimensional standards for the districts are listed below. (Exceptions may apply; see Falmouth Zoning Bylaw Article XIV Dimensional Regulations.)

Minimum Lot Size:

20,000 s.f. in General Residence; 40,000 s.f. in Residential B and C; 80,000 s.f. in Residential AA.

Minimum Frontage:

100 feet in residential districts, except 150 feet in Residential AA. No requirement in commercial districts, except 100 feet in Public Use.

Maximum Building Coverage:

20% lot area in residential districts; 20% in Business Redevelopment, 40% in Public Use; and 70% in Business 1.

Maximum Lot Coverage:

40% lot area in residential districts, except 50% in General Residence; 60% in Business Redevelopment; 70% in Public Use, and 90% in Business 1.

Maximum Building Height:

35 feet; 2.5 stories in all zoning districts, except 50 feet, 3 stories in Public Use.

Front Building Setbacks (minimum):

25 feet, except 100 feet for multifamily buildings and commercial accommodations over 2.5 stories. No front building setback in Business 1. No front

setback in Public Use for municipal structures under 3,000 s.f.

Side and Rear Building Setbacks:

10 feet for residences, except 100 feet for multifamily buildings and commercial accommodations over 2.5 stories. For principal structures other than dwellings in residential districts, 20 feet minimum. For other structures in Public Use and Business 1 Districts, no requirement.

Parking/Setbacks:

Business 1 district, no parking or vehicular use access within any front or side yard. Public Use and Business Redevelopment no parking area of 5 or more spaces allowed within a front yard area unless by special permit from Planning Board.

LAND USE AND ZONING ANALYSIS

The mix of commercial, educational, institutional, and residential uses and scale of development in the Woods Hole study area creates an active village area that is pedestrian friendly and visually appealing, with surrounding residential neighborhoods of distinctive character. An important step in developing a strategy to preserve and protect village character is to understand how current zoning standards reflect and support existing development patterns and land uses that create the character. Conducting a comparison between the zoning requirements and existing



conditions, including building characteristics, setbacks, lot sizes and land uses helps to identify where current requirements and standards may be inconsistent or conflict with the existing character and the development patterns the community wishes to preserve. A community might not be aware that its zoning allows for future development and redevelopment in form or use that is inconsistent with existing character.

The project team reviewed building and lot dimensional characteristics and existing land uses in the study area and identified locations where future redevelopment and changes of use could impact the character of the village.

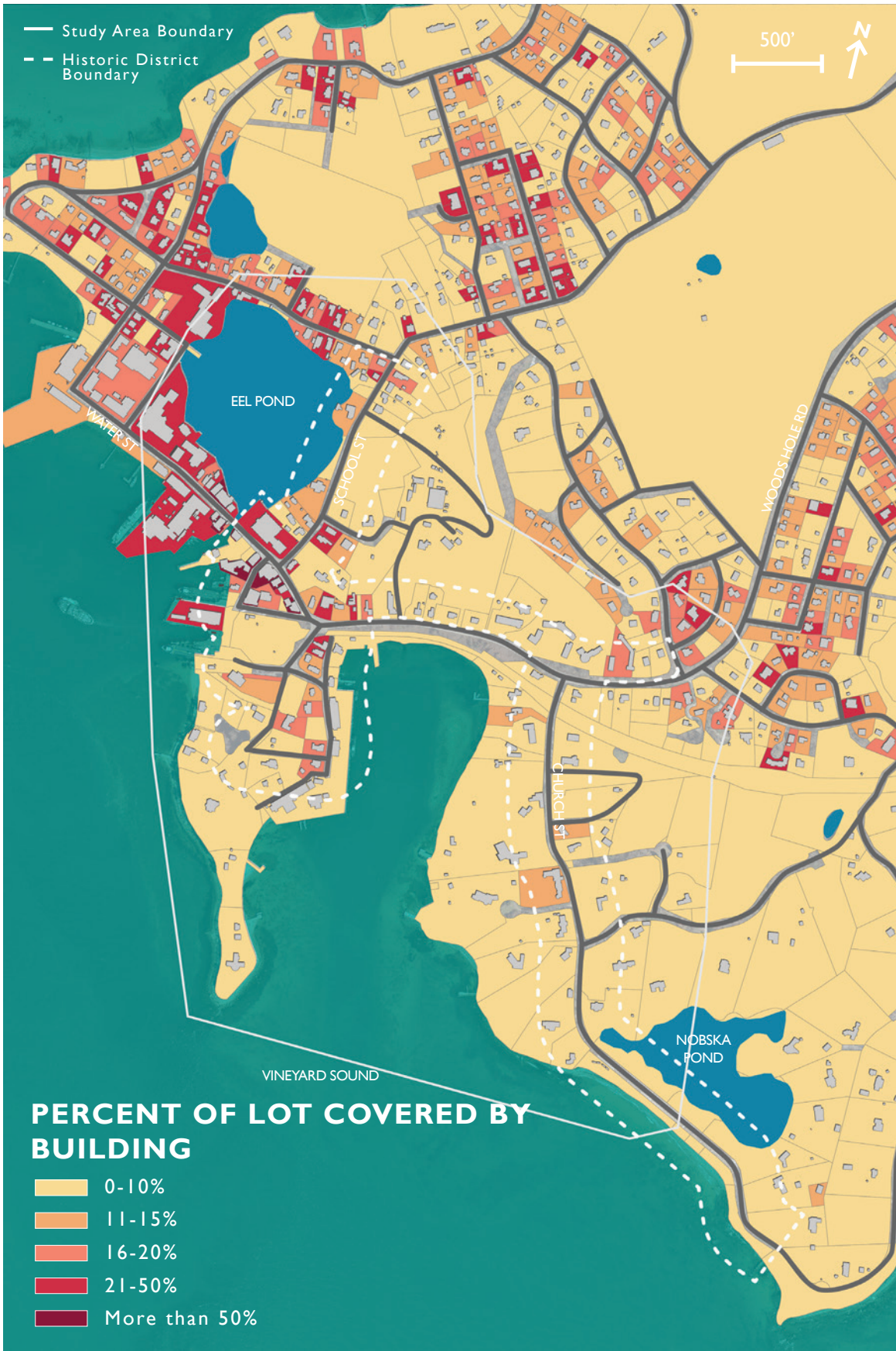
Dome Parcel

The town approved a zoning change for the 5+ acre from Residential C to Business Redevelopment in 2007 (to allow for an age-restricted multi-family residential development that was not built). Business Redevelopment allows for higher lot coverage, higher density residential development and more commercial uses than allowed in RC. The more intensive Business Redevelopment zoning could impact the character of the neighborhood. To help limit such impacts, the property owner entered into a covenant with the town and the Woods Hole Community Association to limit the use of the property to only uses allowed in RC or existing

uses (hotel, restaurant) that would be allowed to continue under G.L. 40A , except for a multi-family age-restricted housing development with a maximum of 43 units. The covenant also retains lot coverage and setback limitations and retains the Dome as an independent parcel. The covenant generally restricts development of the parcel to its previous RC zoning, except for allowance of the proposed housing development. This would prevent the additional uses intensification allowed in Business Redevelopment, but it would allow for a greater density and use intensification than the surrounding residential neighborhood.

Zoning and Educational Uses

The state Zoning Act (G.L. Ch 40A, Sec.3) makes it illegal for Massachusetts towns and cities to prohibit, restrict, or regulate the use of land or structures used for educational purposes on land owned or leased by a nonprofit educational organization. Such uses and structures may be subject to reasonable dimensional regulations such as bulk and height of structures, yard sizes, lot area, setbacks, open space, parking requirements, and building coverage requirements. Design guidelines that are specific to these concerns would be helpful.



Formula Businesses

Woods Hole village area has a distinctive character. An influx of formula retail or national “chain” stores could alter that. The town may want to adopt formula business zoning regulations for Woods Hole, either through design requirements that address visual impacts or by limiting their ability to locate in the Woods Hole commercial districts to protect the unique village character.

Building Coverage

Lot coverage allowance/limitation in all residential zoning districts is 20 percent. The existing building coverage map shows that the building coverage for a significant number of residential properties in (or adjacent to) the study area is less than 10%. Future redevelopment of these properties could result in building expansions of a larger scale than existing development. This may not be an issue on small lots under 5,000 s.f., where setback limitations may affect/control building footprint expansion, but for larger lots, the generous building coverage allowance could encourage teardowns of smaller buildings and replacement with buildings having larger footprints. Several lots in historic areas along Millfield Street, Buzzards Bay Avenue, and Woods Hole Road have less than 10% building coverage, as do properties with larger lots on Juniper Point and Church Street.

Other communities in the region have addressed

concerns about teardowns/expansions and gradual “mansionization” of neighborhoods by reducing/revising current lot coverage allowance with scaled lot coverage allowances based on lot size.

Setbacks

The front building setback requirement is 25 feet. The building setback map shows that most of the buildings in the study area have much smaller setbacks (less than 10 feet to 20 feet). As properties are redeveloped, new buildings would be required to be located at least 25 feet back, which would alter the existing development pattern and streetscape character. Adding a maximum setback to the minimum requirement would help maintain the existing neighborhood character.

Historic Resource Criteria for Planning Board Review

The Falmouth Planning Board and Zoning Board of Appeals address numerous resources in their regulatory reviews of proposed projects. As suggested by previous consultants noted earlier in this report, Falmouth could increase historic resource protection by requiring these boards to consider significant historic resources in their reviews. This could be done by soliciting comments from the Historical Commission every time a proposed project impacts a significant historic resource. The Historical Commission could be included in the list of town boards whose

recommendations will be considered prior to taking final action on a special permit application (Section 240-219A of the Falmouth zoning code). Historic resource protection criteria could also be added to the special permit process. Specifically, Decision parts D and I (Section 240-216) could be amended to include impacts to historic resources. The town could also require historic resources to be identified on plans submitted in the Site Plan Review process (Section 240-194A).

Zoning Incentives

Zoning Incentives such as allowing relief from setbacks, greater lot coverage, or additional dwelling units should be considered to facilitate preservation of historically significant buildings. Several Massachusetts towns have adopted bylaws which allow historic structures relief by special permit if that relief is necessary to prevent demolition or loss of a significant historic building. The towns of Andover, Framingham and Lexington, MA allow the Planning Board to grant relief from use and dimensional regulations (with the support of the Historical Commission) to preserve an historic structure. The town of Hopkinton allows lots that don't meet setback and size requirements to be created by special permit

if they will contain an historic structure that would otherwise be demolished in a subdivision development. This type of flexibility may also be helpful if there is an effort to move historic structures out of flood hazard areas in the future.

ZONING RECOMMENDATIONS

Reduce Building Coverage

Reduce building coverage allowances in residential districts to match existing development patterns. A scaled building coverage allowance depending on lot size (for example a maximum of 15% on lots under 10,000 s.f and gradual decreases in allowance as lot size increases) would allow for minor expansions on smaller lots while helping to control for mansionization on larger lots.

Maximum Setback Requirements

Provide a maximum setback requirement (in addition to minimum setback) to match existing development patterns, e.g. a maximum of 25 feet, with a minimum of 10 feet.

Involve Historical Commission in Planning Board Reviews

Involve the Historic Commission in site plan review and special permit reviews by formally soliciting their comments when projects are proposed on or adjacent to historic properties. Add historic resource criteria to the Planning Board's site plan review process and the Zoning Board of Appeals' special permit criteria. Use historic inventory forms (Form Bs) as a supporting resource when they are available.

Zoning Incentive for Preservation

Adopt zoning incentives or overlay district with additional incentive to preserve/re-use historic buildings to preserve historic structures (see Lexington, Arlington, and Hopkinton, MA examples cited in analysis).

Design Guidelines for Institutions

Adopt Design Guidelines for institutional areas. Address concerns about character of potential future institutional buildings either due to loss of historic buildings or incompatibility with adjacent historic buildings. Create Design Guidance for institutions that discusses how new buildings relate to adjacent residential scale buildings, such as maintaining the relationship of large buildings to the street, and maintaining the scale and massing of small buildings in residential areas.

Formula Business Zoning

Adopt formulas business zoning regulations either by addressing their aesthetic/visual impacts through a special permit process or prohibiting them from Woods Hole village (but still allowing for them in other commercial districts).



VISUAL CHARACTER

Woods Hole is a tightly-knit cohesive village with a well-defined streetscape. Within the village, there are distinct sub-areas or neighborhoods with different building scales, streetscape, and open space characteristics. After completing walking tours and a desktop analysis, Commission staff identified six distinct character areas within the Woods Hole village study area as noted on the character area map.

First, highlighted in purple, the Woods Hole Road area serves as the gateway to the village with well-maintained residences and modest, verdant, well-landscaped front yard setbacks and tree-lined streets. After Nobska Road, the vegetation along Woods Hole Road becomes less dense and historic buildings along the roadway become more visible.

Beginning at Church Street, and shown in yellow, Woods Hole Road includes some larger structures that are more visible from the roadway, including two hotels and the Joseph Story Fay House on the north side of the road, as well as more modest residential buildings. The south side of the roadway is mostly open to Little Harbor. This area provides visitors to the area with their first views of the water and the heart of the village.

At the intersection of Woods Hole Road, Crane Street, and Railroad Avenue, the area gives way to multi-story historic buildings that are more densely developed. This character area, shown in red, extends along Water Street from Woods Hole Road to the Candle House. It is the core of the village, with tightly clustered commercial and institutional buildings of different size and scale that are set very close to the road edge and to each other, with zero side setbacks for several of the buildings. The buildings provide a very strongly defined and continuous street edge, with few breaks in it. This area experiences increased pedestrian activity and slower traffic than along Woods Hole Road.

Continuing around west of Eel Pond, the area shown in green around MBL Street and Albatross Road consists of a mix of small residences and larger institutional and industrial scaled buildings used by MBL and the National Oceanic and Atmospheric Administration (NOAA).

On the north side of Eel Pond, tree-lined Millfield Street, shown in orange, is primarily a small-scale residential neighborhood with buildings set close to each other and the street edge, though MBL's Swope Center is an exception.

Finally, School Street, shown in blue, contains a mix of residential-scale buildings with modest



setbacks used for both residential and institutional purposes, with larger lawns and landscaped areas as well as a large wooded area on the eastern side. Views in this area look out over Eel Pond.

Development along Church Street is also distinct in its large lawn areas and in the larger scale and highly decorated form of several buildings close to the roadway. Some of this variation in character is reflected in the underlying zoning districts, but some districts span several character areas.

Woods Hole is distinctive for the number and variety of public water views it offers, its working waterfront, and the variety of open lawns and informal seating areas, giving the village a natural and welcoming atmosphere and tightly weaving water throughout its identity. Few villages on Cape Cod boast so many and varied views of the water that are accessible to anyone within a short walking distance.

As noted on the visual amenities map, the Woods Hole village study area includes several inland and coastal water views throughout the village, including views of Eel Pond, Little Harbor, and Vineyard Sound. These vistas help define and reinforce the village's unique maritime character but also vary in their depth and breadth of view. For example, views along Woods Hole Road and

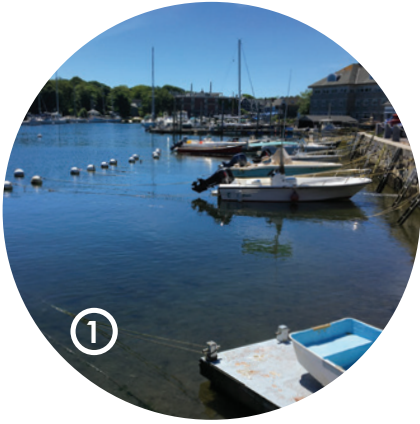
the Crane Street Bridge provide views out over the water, allowing a broad view of the seascape, while those around Eel Pond and along Water Street are more enclosed and across water to land and the built environment. Both views are of distinctive landscapes/seascapes unique to Cape Cod.

A walking path around the west side of Eel Pond provides a nice walking loop around the core of the village; however, the only comfortable seating area for pedestrians and/or bicyclists is located at Waterfront Park on Water Street. This waterfront park provides views of Vineyard Sound and frequent shipping activity in this busy harbor. All other vistas are experienced only while passing through the area. Opportunities exist to make these areas focal points and small gathering spots for residents and visitors.

VISUAL CHARACTER ANALYSIS

As shown on the Vistas and Public Spaces graphic, most of the village water views take place close to the water and virtually at water level. Two key vistas, however, are at a high elevation -- the view from Crane Street bridge across the Steamship Authority site to the water, and the view from Woods Hole Road looking down across Little Harbor and out to Vineyard Sound. Invasive vegetation including Bittersweet, Multiflora Rose, Norway Maple, and other species partially obscure the view across Little Harbor. A sidewalk runs







along the roadway, but a steep slope and retaining wall limit the potential for a pedestrian overlook, and the existing guardrail and sidewalk offer no pedestrian refuge from the heavily-traveled roadway. By selectively removing invasive species from the hillside and replacing these species with native grasses and shrubs, people traveling along the roadway could enjoy a more expansive view of Little Harbor along Woods Hole Road.

The hillside is within the State highway layout and therefore under the control of MassDOT. Any changes to the landscape in this location would require an application for a Highway Access permit from MassDOT and would involve preparation of plans and protocol/methods for invasive species and revegetation of the site. In addition, consultation and/or approval from the Falmouth Conservation Commission would likely be required. Despite the significant undertaking required to implement this project, improving this overlook is worth exploring as this was identified by many workshop participants as a prime asset and gateway into the Woods Hole village.

In addition to the vista along Woods Hole Road, two other vistas could benefit from amenities and improvements: the area around the Crane Street bridge and the Eel Pond overlook from School Street. The Crane Street bridge area provides

a unique view over Vineyard Sound across the Steamship Authority ferry terminal. Additional amenities for pedestrians or bicyclists such as benches could help create an inviting place for people to sit and take in the view. The intersection at Crane Street and Water Street is currently very wide and with incomplete crosswalks. Potential modifications to this intersection to neck down the intersection and provide additional crosswalks could help make this intersection more pedestrian-friendly and would also improve this viewshed.

A parklet along School Street, overlooking Eel Pond, would provide another unique amenity for the village, creating a place for people to stay for a while and enjoy the distinctive view across Eel Pond. Existing vegetation partially blocks views across the pond. In addition, available land at this location is very constrained. Pedestrian improvements in this area would require coordination with Town departments and private property owners. At a minimum, management of existing vegetation would help improve views to the water.

In addition to enhancing the visual amenities and viewpoints of the village, maintaining unique vistas is a key component of the Woods Hole village and maritime character. By providing input on projects outside local review, the Town can work

to ensure that important views and vistas are not obscured by new development or expansion. The development of design guidelines to address building height and scale within important vistas and viewsheds can help ensure that future development within the village is compatible with surrounding development and maintains existing views of the water. Additionally, encouraging projects to incorporate materials and building forms already seen in the village will help reinforce and maintain the unique visual character of the area and keep new development in scale with existing character. The institutional presence in Woods Hole is a unique facet of the village and the community should seek to engage the institutions and government entities in dialogues on project and buildings designs for the area so that they maintain and contribute to the character of the village valued by residents and visitors of Woods Hole alike.

VISUAL CHARACTER RECOMMENDATIONS

Manage Vista above Little Harbor

Manage vista above Little Harbor (requires permit from Mass Highway/design plans and invasive species removal protocol/methods and maintenance protocol).

Create Parklets

Establish Parklets or Pocket Parks on Crane Street bridge and School Street at the edge of Eel Pond to provide additional locations for enjoying Woods Hole's distinctive water views (requires design and implementation).

Steamship Authority Design Comments

Give input on Steamship Authority design and other Federal Projects outside review – keep building low to limit its impact on water views and incorporate materials and forms seen in Woods Hole. One schematic design has lower height and blocks views to water less from Crane Street and other public viewing areas.

Maintain Dialogue with Institutions

Keep up dialogue with Institutions regarding building projects that may have an impact on streetscapes and views to the water in Woods Hole. Coordinate on project designs and clarify community design goals early in the process.

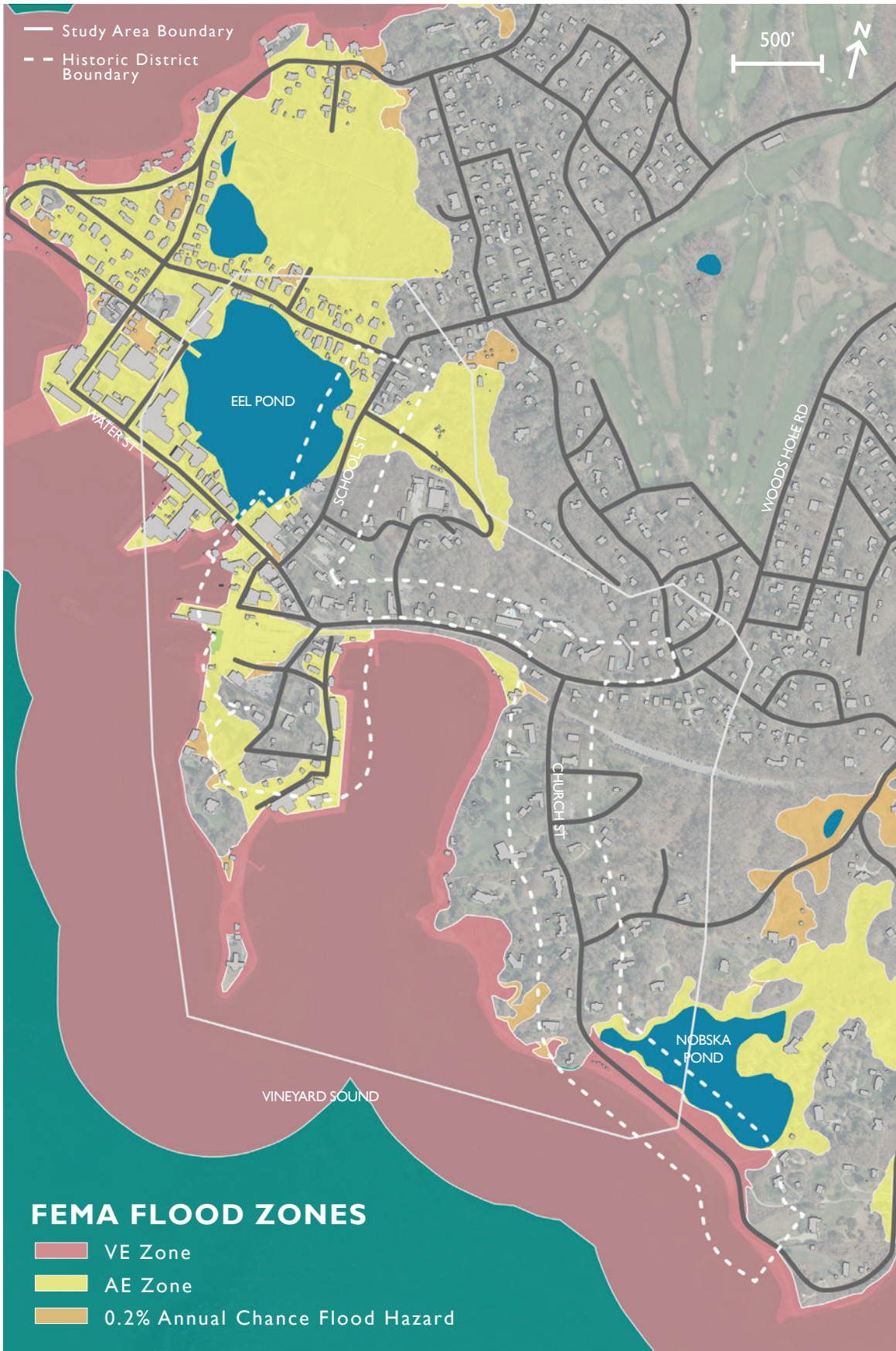
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FLOOD THREAT



Handworks

NO
DUMPING
HERE TO
BRIDGE



FLOOD HAZARD AREAS

As shown on the adjacent map, many Woods Hole buildings are in the floodplain. Flood hazards are primarily along the coastal areas and north and west of Eel Pond, where most of the street network, residential buildings and educational buildings are within the AE zone. There is a known history of flooding in this area, and past residents recalled having to relocate to other areas several times during storm events. Much of the commercially zoned area is within the AE zone, though the buildings facing Water Street between Luscombe Ave and Railroad Ave are outside the flood zone.

Flooding can cause costly structural damage. For example, an assessment of the Point neighborhood of Newport, RI, found that 968 buildings were at risk from flooding, with a combined assessed value of \$560 million. Though a similar assessment was not conducted for the flood zones of Woods Hole, it is safe to say potential damage from flooding to this area could have significant economic impacts.

There are several strategies building owners may employ to make their buildings more resilient in the face of storms and flooding. These may include raising houses and buildings above the base flood elevation, floodproofing basements or parts of the houses, or potentially new construction of

buildings. These structural changes could change the character of the neighborhood and village. With many of the buildings in the floodplain core to the character of the village, it is important that any actions undertaken to make the area more resilient to storms also strive to maintain the character of the area. For example, one way to do this is to ensure that each neighborhood has a standard level of height increase, to maintain some consistency among the various buildings. In conjunction with this, height regulations should be established to preserve the height and massing relationship between individual buildings and the neighborhood.

Some of the challenges involved with elevating buildings in dense communities like Woods Hole with a mix of uses are: changes to architectural character, changing scale of the pedestrian environment, reduced interest at the street level and thus the ability of retailers to draw pedestrians into their shops, and increased costs of ADA compliance and accessibility.

While some buildings may only need to be elevated a few feet to be above Base Flood Elevation (BFE), others may need to be lifted much higher. When buildings are lifted significantly, guidelines for treatment of new front entries and front yards can help maintain unique neighborhood characteristics and relationships.

FLOOD HAZARD RECOMMENDATIONS

Design Guidelines

Create design guidelines for flood hazard areas that address:

- Standard height increase level for each neighborhood area;
- Design suggestions for new access stairs or terraces that make the transition from street level to buildings at greater height and match the architectural character of the neighborhood. The Woods Hole Community Hall is an example of an historic building designed with an elevated floor level and entry stairs that could serve as a model for other structures.
- Guidelines for elevating buildings and sites. MBL's Broderick House property at Albatross and North Street as a good example of an elevated landscape that fits with the character of the neighborhood. This design of a yard raised on a stone block retaining wall is historic, but keeps this property outside the flood area. It could serve as a model for surrounding structures that need to be raised.
- CPA funds may be available for mitigation efforts to the extent that they will protect historic properties.

Height Regulations

Allow height increases above existing height regulations only for the purpose of elevating above Base Flood Elevation.

Highlight Buildings at Risk

Acknowledge those buildings at greatest risk -- at the water's edge, in the velocity zone, and at the lowest elevations. Many key historic buildings are in flood hazard areas, including the Candle House, Community Hall, Fire House, Crane/Lillie Laboratory, and church and bell tower on Millfield Street. Identify the most significant and most unique properties and prioritize them for documentation. Photo document historic resources before potential loss.

Work with Falmouth's Coastal Resilience Action

Work with Falmouth's Coastal Resilience Action Committee to plan ahead for a future with greater flood impacts in areas of Woods Hole.

- Explore potential mitigation strategies for historic buildings, from wet and dry flood-proofing to elevating to identifying vacant parcels on higher ground where historic structures might be relocated.
- Consider global protections for densely developed areas or water-dependent structures where relocation is infeasible. This could include drainage improvements and temporary storm gates to block inundation pathways.

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PEDESTRIAN + BICYCLIST FACILITIES

05





PEDESTRIAN AND BICYCLIST FACILITIES

EXISTING CONDITIONS

The bicycle and pedestrian facility maps show the location of sidewalks, crosswalks, and bicycle facilities in the study area. The sidewalk network is well connected through the downtown village area and extends down Woods Hole Road to Glendon Road. Numerous crosswalks are located in the commercial and institutional area, with fewer outside the village center. The Shining Sea bike path follows the old railroad bed and has access points at Nobska Road and the Steamship Authority lot. An on-street bike route follows Church Street, Woods Hole Road and Water Street through the commercial center, and School Street.

The town of Falmouth's 2015 Bike Plan includes two recommendations for Woods Hole village:

- Construct wide sidewalk from Route 28 to Woods Hole along Locust Street and Woods Hole Road. The wide sidewalk would be designed to allow for use by bicycles; and
- Improve pavement markings and signs designating the bikeway through the Steamship Authority parking area.

The plan also recommends installing bike racks throughout the town.

BICYCLE AND PEDESTRIAN ACCOMMODATION ANALYSIS

Based on site visits, bicycle/pedestrian facilities mapping, and input received from public meetings, Commission staff identified several problem areas/issues and potential solutions:

Sidewalks

The overall sidewalk network is well laid-out; except for a short section of Woods Hole Road near Nobska Road. There is no sidewalk northerly on Woods Hole Road to connect Woods Hole village with downtown Falmouth, which encourages automobile-dependent neighborhoods along most of the roadway. Sidewalk condition varies from ADA-compliant to poor condition (uneven surfaces, narrow width, obstructions such as utility poles). Members of the public expressed interest in better separation of pedestrians from high speed traffic on Woods Hole Road (either by sidewalk widening or provision of a buffer). Workshop participants noted a lack of sidewalks on Church Street and that the road can be hazardous for pedestrians. Several workshop participants requested continuing the sidewalk to Nobska Pond.

Crosswalks

Several crosswalks are located throughout the study area, although members of the public identified a need for additional crosswalks on Woods Hole Road to serve neighborhoods on the north side of



Woods Hole Road and to connect to roads and the bike path south of the road.

Access to the Shining Sea Bikeway

There are only two “official” access points to the bike path: at Nobska Road and at the terminus near the Steamship Authority. Users also “unofficially” access the bikeway via a steep unpaved footpath adjacent to Church Street.

Bike Parking

Bicycle parking facilities provided by the Steamship Authority seem to be effective. Public meeting participants noted a lack of bike parking near Pie in the Sky.

Traffic Speeds on Woods Hole Road

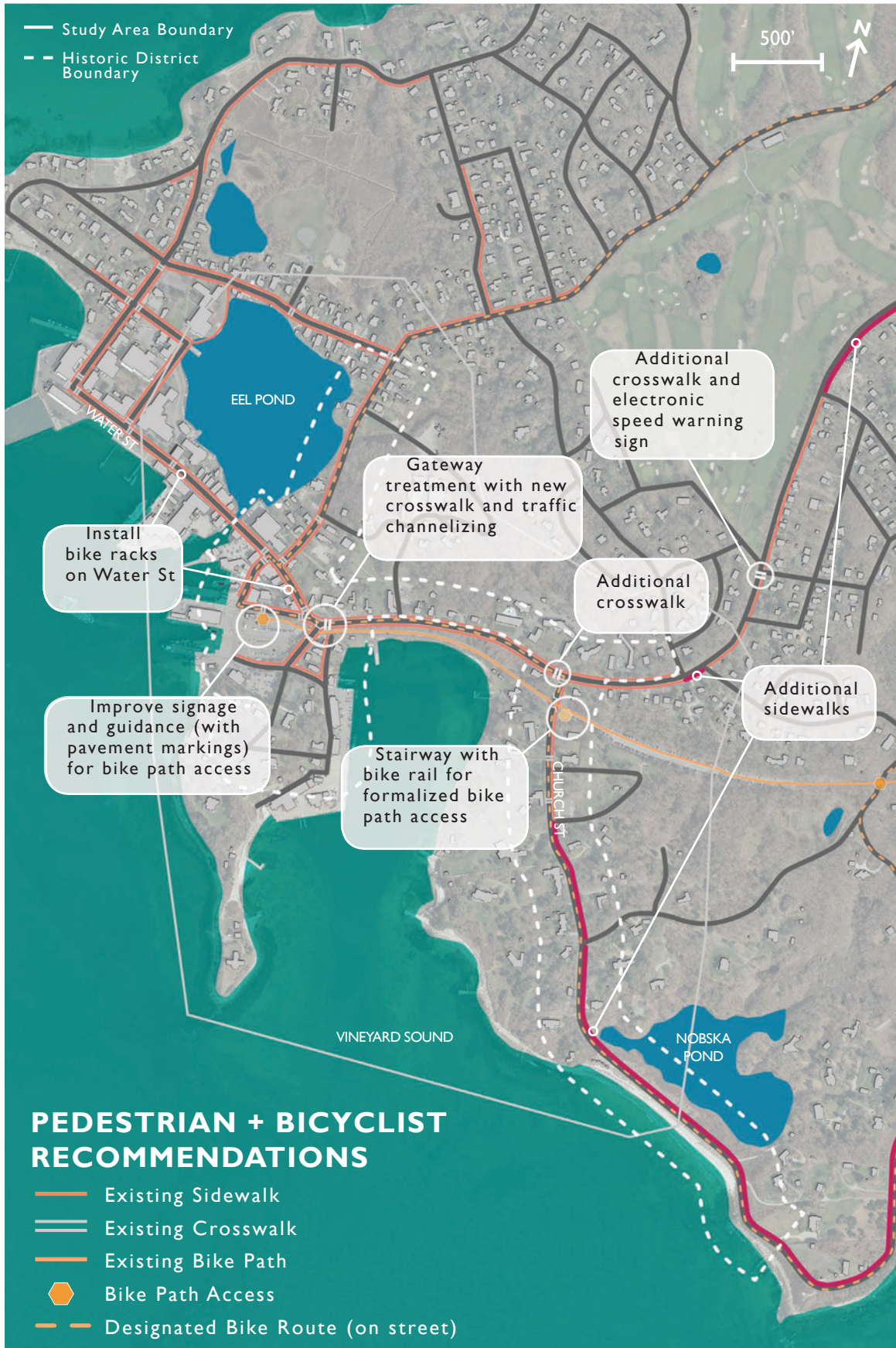
One of the biggest concerns for bicyclist/ pedestrian safety and comfort is high speed traffic on Woods Hole Road. Public workshop attendees provided numerous suggestions for “calming” automobile traffic, including:

- Electronic speed warning signs
- Lower speed limits
- Install flashing beacons at crosswalks and at entrance to Woods Hole village
- Construct pedestrian refuge islands at crosswalks
- Installation of a roundabout at the Crane Street intersection to slow traffic

AUTOMOBILE TRAFFIC CIRCULATION/ ROADWAY CHANGES

Several workshop participants mentioned the traffic congestion on Water Street between Woods Hole Road and School Street. The current cross section/configuration restricts westbound motorists due to a 13’ wide lane for travel and parking. There is high pedestrian activity in this area due to the location of shops and the Post Office on the south side of the street.

Westbound vehicles are often forced to wait for gaps in eastbound traffic flow to proceed (and must cross into the eastbound lane to avoid parked vehicles on the north side of the roadway). Workshop participants suggested converting Water Street to one-way (westbound operations) and possibly Luscombe Avenue as well, creating in effect a large triangular roundabout with Railroad Avenue as the third leg. A review of crash history on Water Street revealed six crashes (only one of which involved injury) for the years 2012-2014 (the most recent 3 years available data from Mass DOT). None of the crashes involved pedestrians or bicyclists. The project team and some members of the public expressed concern that one-way operations would result in higher vehicle speeds and a decrease in pedestrian safety and comfort.



PEDESTRIAN/BIKE RECOMMENDATIONS

Sidewalk Improvements

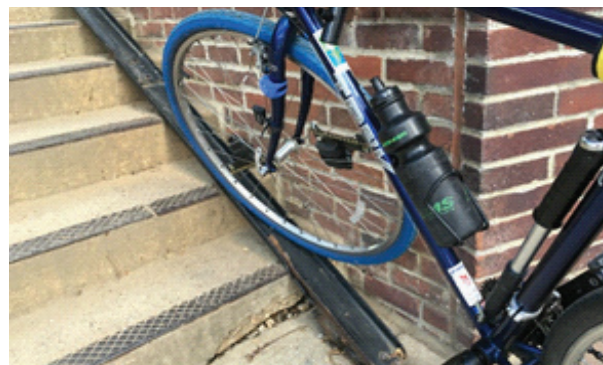
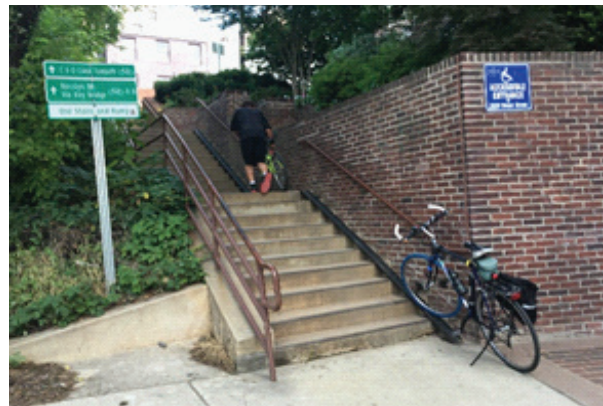
Improve sidewalks and extend them at village edges, including Woods Hole Road and Church Street. The sidewalk network is well connected, but the Woods Hole Road sidewalk ends at Glendon Road, leaving neighborhoods north of the village without safe pedestrian access. Sidewalks along Millfield Street are in fair or poor condition and should be improved to help alleviate conflicts between pedestrians and parked cars. The Church Street sidewalk extends just a little over one-tenth of a mile from Woods Hole Road and could be extended to Nobska Road.

Woods Hole Road Crossings

Add crosswalks and bump outs on Woods Hole Road to slow traffic speed. Adding crosswalks with pedestrian refuge islands at Church Street and other locations (such as Stand Pipe Hill) on Woods Hole Road would improve pedestrian safety and help to slow motor vehicle speeds. Install flashing beacons at crosswalks and at entrance to Woods Hole village. As motor vehicles head down the Woods Hole Road hill into the village, a flashing beacon at the crosswalk would help alert motorists to the upcoming change in road and traffic characteristics at the approach to the village and encourage them to slow down.

Church Street Access to Bike Path

Improve access from Church Street to Shining Sea bike path with installation of a bike rail. Bicyclists and pedestrians seeking convenient access to Church Street from the bike path (and vice versa) have created an informal foot path on the slope. Installation of steps with a bike rail would make it easier for more people to carry/push their bikes up and down the hill.



EXAMPLE OF STAIRWAY WITH A BIKE RAIL; POTENTIAL DESIGN FOR ACCESS FROM CHURCH STREET TO SHINING SEA BIKEWAY.

Improve Bike Route and Trail Signage

Visitors to Woods Hole may have difficulty finding the bike path and which roads are the best for bicycling. Adding signage to direct bicyclists to both the Shining Sea bike path and the on-road bike routes would help guide them to the best routes and also indicate to motorists that bicyclists may be on the road.

Electronic Speed Warning Signage

Install electronic speed warning signs on Woods Hole Road. Using electronic speed signs may be a useful tool for slowing drivers on Woods Hole Road as they head into the village. There are a variety of designs and some are quite small and portable, which may be most appropriate within the historic district.

Crane Street Intersection

Consider installation of a roundabout or narrowed pavement area at the Crane Street intersection to slow traffic. The Crane Street intersection could be reconfigured with a roundabout to slow travel speeds and improve circulation at the entrance to the village with landscaping. It could also be an attractive “gateway” feature.

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ACTION PLAN

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The Falmouth Historical Commission identified the following initial priorities for action from among the recommendations in this report:

Expand Local Historic District Boundary

Extend the Woods Hole Historic District west along Water Street from the drawbridge to MBL Street, protecting key historic buildings in the heart of Woods Hole on both the north and south sides of Water Street. The proposed expansion will require review by MHC and approval at Town Meeting. (See Historic Resources Section.)

Woods Hole Road Crossings

Add pedestrian crosswalks, bump outs, and refuge islands at Church Street and other locations on Woods Hole Road to slow traffic speed and improve pedestrian safety. (See Pedestrian and Bicyclist Facilities section.)

Improve Church Street Access to Bike Path

Install a stairway with bike rail to create more convenient access from Church Street to Shining Sea bike path for pedestrians and cyclists. (See Pedestrian and Bicyclist Facilities section.)

Manage Vista above Little Harbor

Work with Mass Highway to get permission to manage vegetation on the south side of Woods Hole Road above Little Harbor. Managing the vegetation will help keep the vista to Little Harbor open and will provide a public amenity. (See Visual Character section.)



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