CAPE COD
COMMISSION

2016 REGIONAL TRANSPORTATION PLAN

Technical Appendix A: Historical Context

Draft
June 15, 2015

COUNTY OF BARNSTABLE
MASSACHUSETTS

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Technical Appendix A: Historical Context

Cape Cod and its transportation system is a story of a continually evolving community with ever-changing transportation needs. This appendix will touch on how the region arrived where it is today, what today's transportation landscape looks like, and what are the challenges and opportunities that lie ahead is maintaining the region's connection to the past while looking toward the future.

Additional information on the region's development and land use patterns over time has been compiled by the Cape Cod Commission and is available in an online Chronology Viewer. The Cape Cod Commission Chronology Viewer is available at:

www.capecodcommission.org/chronology/

The Chronology Viewer explores how the population is changed over time, where and when houses where constructed, and when key infrastructure was developed.

RESOURCE DEPLETION, TECHNOLOGICAL CHANGE, AND GOVERNMENT POLICY

Cape Cod's development and economy have been heavily influenced by three factors:

- Resource depletion,
- Technological change, and
- Government policy.

The Cape has seen many ways of making a living come and go as a result of these three factors. These include agriculture, fin fishing, shell fishing, whaling, salt, limited clothing and shoe manufacturing, and glass manufacturing. The Cape's current economy is dominated by tourism.

At the time the Cape was settled by Europeans in the colonial period it was rich in natural resources including hardwood forests, fertile soil, and waters teaming with marine life. By the end of the Colonial period the region has been clear cut and the soils exhausted.

The overcutting of woodlands and excessive farming had reduced soil fertility, resulting in lower than average crop yields. The lack of ground cover, combined with the effects of wind and water, resulted in topsoils being eroded away, to one-third or one-half their 17th-century depths. This erosion may have been in part responsible for the silting in of numerous harbors and for the death of oyster beds.

Historical & Archaeological Resources of Cape Cod & the Islands, Massachusetts Historical Commission, 1986

The region had to import wood to heat homes and cook. Whaling on the Cape started with salvaging dead or stranded whales off the beach; by the end of that industry ships were sailing all the way to the South Pacific to find whales. Fishing peaked in 1851, employing over 3,200 in the industry. Like whaling, fishing was initially a near shore activity but gradually moved farther off shore as stocks where depleted. Today we face the near if not complete collapse of the cod fishery for which the peninsula is named. Even tourism is now threatened by environmental damage due to over development. Ponds and estuaries that were once pristine are clouded, mucky, and in some cases, devoid of marine life. Shell fishing beds are gone and swimming is no longer desirable in some places. Time will tell the fate of the tourism industry on Cape Cod.

Changes in technology have had a major impact on the economic and social history of the Cape. Technology has changed the scale of commercial activity everywhere by increasing both productivity and distribution. Advances in productivity, have in some cases accelerated the resource depletion discussed above.

By the early 1890s, Barnstable, Brewster, Wellfleet, Truro, and Province town had all built large numbers of these traps and weirs to supply both fish for market as well as bait for fishing vessels. Extensive trapping, however, had a severe effect on fish populations. When the mackerel disappeared from New England waters in the mid 1880s, many blamed the use of these traps.

Historical & Archaeological Resources of Cape Cod & the Islands, Massachusetts Historical Commission, 1986

The discovery of new resources elsewhere also had a great impact on major regional industries. For example, the opening of the first commercial oil well in Pennsylvania in 1859 significantly reduced the demand for whale oil for lighting. But transportation technology has possibly the greatest impact on the way of life, economy, and level of development on Cape Cod. The railroads brought the first significant influx of tourist, particularly summer residents, to the Cape as early as 1870.

None, however, were more prominent in their resort success than the Woods Hole Branch, opening in 1872. Although organized initially to serve the guano works at Woods Hole, the line quickly became instrumental in the development of Bourne, Falmouth, and, through the ferry terminal at Woods Hole, Martha's Vineyard and Nantucket. Small villages from Buzzards Bay to Woods Hole sprouted hotels and resort communities almost overnight.

Historical & Archaeological Resources of Cape Cod & the Islands, Massachusetts Historical Commission, 1986

The salt industry is perhaps the best example of how government action impacts the economy. The industry was made viable by a tariff placed on imported salt by the US government along with a subsidy to domestic manufacturers. Combine with improvements to the evaporation process, this led to a thriving salt industry on the Cape from the late 1700's to 1840's. At its peak, every town except for Mashpee and Bourne had multiple saltworks lining their beaches.

But the industry virtually collapsed when the subsidy was removed and the US reduced the tariff on imports of salt.

Probably the chief reason for the decline in production, however, was the lowering of the duty on imported salt. Ever since 1790 there had been a duty of at least ten cents a bushel… In 1842, the duty on imported salt fell to 8C a bushel, and in 1846 it was changed to a 20% ad valorem scale, greatly to the advantage of foreign sources.

Historical & Archaeological Resources of Cape Cod & the Islands, Massachusetts Historical Commission, 1986

Another example of the government's role in the Cape's economy is its investment in roads, particularly interstates, in the 1950's. This changed the nature tourism on Cape Cod as well as the development patterns which to date had been fairly concentrated in villages accessible by rail. This coincided with a stronger middle class with disposable income and a reduction in the cost of construction. Sprawling auto oriented development has dominated since that time and been reinforced by zoning rules.

TRANSPORTATION INFRASTRUCTURE DEVELOPMENT

Cape Cod's transportation system has both shaped and been shaped by development patterns of the region. As our regional economy has evolved so too has our transportation infrastructure. From a reliance on ports and marine transport, to a steady growth by rail, and explosion of change fueled by the automobile – our region has undergone dramatic changes.

The first recorded European expedition to Cape Cod was led by Bartholomew Gosnold, who was credited with naming the peninsula in 1602. In 1620, the Pilgrims landed at Provincetown. This was different than previous European appearances because the Pilgrims were more interested in settling somewhere, rather than exploring and trading with the native Wampanoag tribe. Although this is how we traditionally tell the story of Cape Cod's history, it actually extends long before that.

EARLY TRAIL AND ROAD NETWORK

Contact (1500 - 1620) and Plantation (1620 - 1692) Periods

By the time the Pilgrims arrived, there was an extensive trail network stretching from one end of the region to the other as shown in Contact Period map in Figure 1. Even this far back, we can see connections that would eventually become the road network of Cape Cod. As Native Americans and Europeans used the network more extensively, trails were upgraded to cartpaths or roadways. As shown in Figure 1 portions of present day Route 6A took shape as County Road.[1]

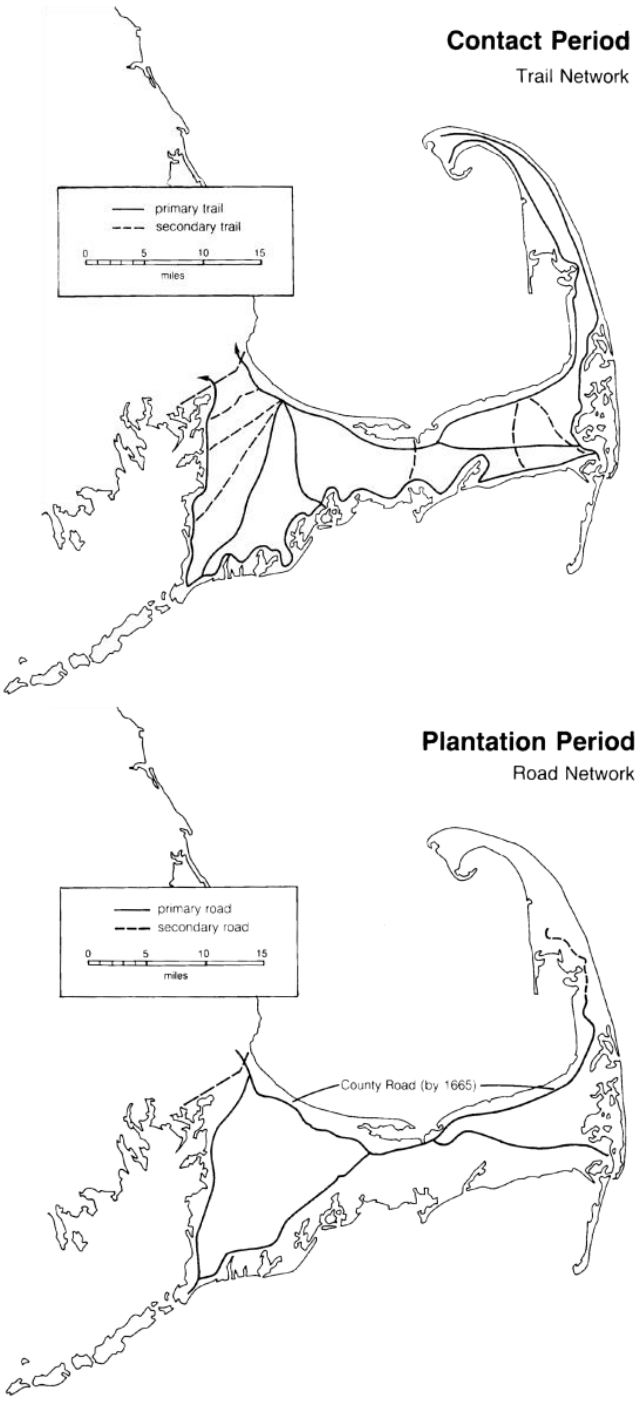

FIGURE 1. EARLY TRAIL AND ROAD NETWORK[1]

[1] Historic & Archeological Resources of Cape Cod & the I
Originally published August 1986. PDF reprint version, 2007.

EXPANSION OF WATER ROUTES

Colonial (1692 - 1775) and Federal (1775-1830) Periods

As local transportation and commerce increased, water routes were the life blood of the region. Land routes were improved, widened, and expanded to support connection to the ports. Figure 2 shows the expansion of the road network and connection to water routes in these periods.[1]

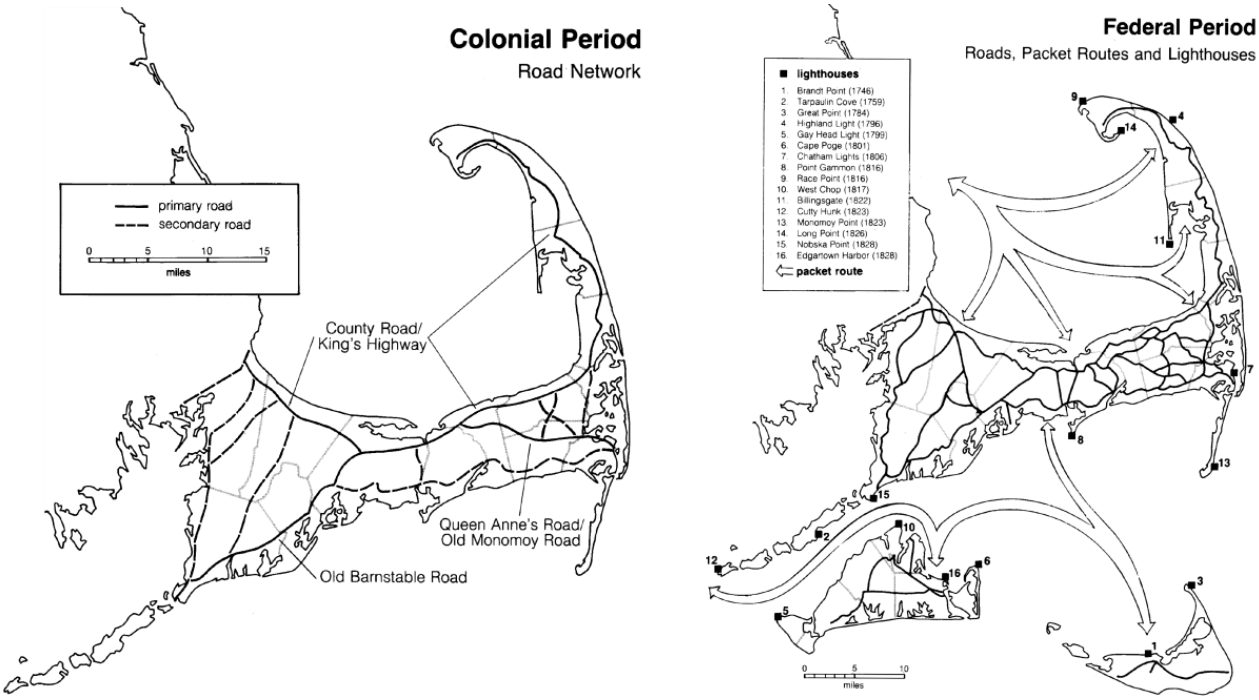

FIGURE 2. EXPANSION OF WATER ROUTES AND LAND CONNECTIONS[1]

EXPANSION OF RAILROADS

Early and Late Industrial Periods (1830-1915)

The industrial period saw the development and expansion of railroads across the region. Still tied to major ports, as shown in Figure 3, rail served both freight needs as well as the emerging tourism market. This period saw multiple expansions of the rail network ultimately including connections to almost every town on Cape Cod. As the rail network expanded, development grew up around the train depot. These pockets of development thrived while rail transportation dominated the region. As the predominance of rail waned, some of these developments evolved to meet new needs while others did not.[1]

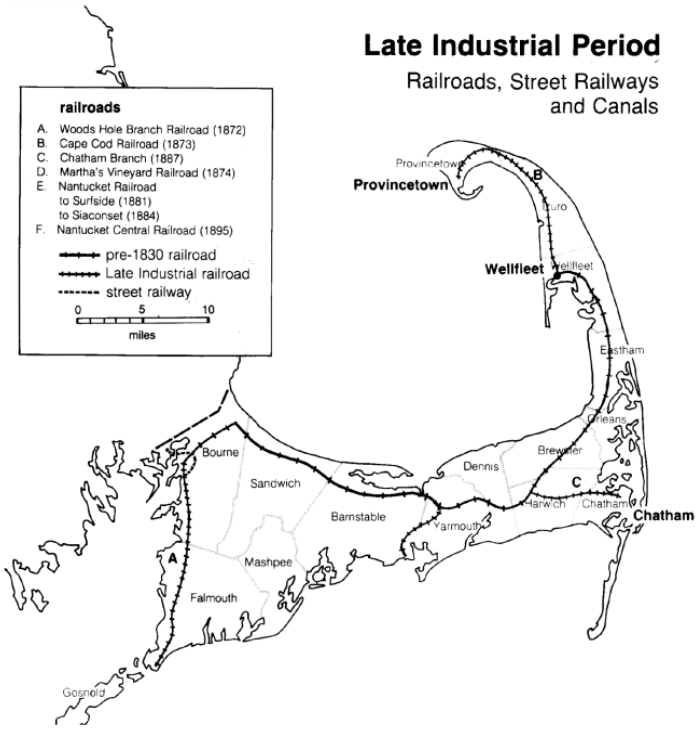

FIGURE 3. RAIL EXPANSION[1]

AGE OF THE AUTOMOBILE

Modern Period to Present Day (1915-)

The emergence of the automobile and tourism industry on Cape Cod forever changed the transportation network of the region. Construction of the Cape Cod Canal redefined the transportation landscape of the region. Expanding from the Cape Cod Canal, the transportation system was significantly expanded and modernized during the 20th century. As shown in the Table 1, some of greatest expansions occurred in the 1950's.

TABLE 1: INDUSTRIAL PERIOD RAIL EXPANSION

YEAR	MILESTONE
1935	Bourne, Sagamore, and Railroad bridges over the Cape Cod Canal
1950	Rt. 6: Sagamore Bridge to Hyannis (exit 6) – 2 lanes
1954	Rt. 6: Sagamore Bridge to Hyannis (exit 6) – 4 lanes
1955	Rt. 6: Hyannis (exit 6) to Dennis (exit 9) – 2 lanes
1956	Rt. 6: Dennis (exit 9) to Harwich/Brewster (exit 11) – 2 lanes
1958	Rt. 6: Harwich/Brewster (exit 11) to Orleans (exit 12) – 2 lanes
1959	Rt. 6: Orleans (exit 12) to Orleans/Eastham Rotary – 2 lanes
1967	Rt. 6: Hyannis (exit 6) to Yarmouth (exit 7) – 4 lanes
1971	Rt. 6: Yarmouth (exit 7) to Dennis (exit 9) – 4 lanes

HISTORIC PRESERVATION TOOLS

Cape Cod towns utilize a wide variety of tools to protect their historic resources. The most commonly used are local historic districts and demolition delay bylaws, though many towns have also adopted more specialized regulations. Some historic resource protections are initiated by town historical commissions, while others are spurred by planning boards, nonprofit historic societies, and neighborhood groups. Key information about tools such as historic inventories and districts is available at the Massachusetts Historical Commission (MHC)[2].

While these preservation tools are primarily applied to the demolition or modification of structures, a number of the tools apply to roadway work as well.

INVENTORIES

Inventory is an important first step toward protecting a community's historic resources. Historic inventories can be used to teach people about their community's history and to guide town boards in future land use decisions. The MHC provides standardized inventory forms for different types of historic resources. The forms are typically filled out by local historical commission members, volunteers, or private consultants, and many Cape towns have sought grants to support this work. Completed forms are kept both in the town and at MHC, which provides online access through its MACRIS database.[3]

LOCAL HISTORIC DISTRICTS

Local Historic Districts require review by a historic district commission for any exterior alteration to buildings and structures visible from a public way.

On Cape Cod, local historic districts in the towns of Barnstable, Dennis, Eastham, Harwich, and Provincetown were created under Chapter 40C (the Historic Districts Act) of Massachusetts General Law. The towns of Chatham and Falmouth have established local historic districts under special legislation. The Old Kings Highway Regional Historic District, covering portions of Sandwich, Barnstable, Yarmouth, Dennis, Brewster and Orleans, was also created by a special act of legislation. (See Figure 4)

NATIONAL REGISTER BUILDINGS AND DISTRICTS

The National Register of Historic Places is the official list of the Nation's historic places worthy of preservation. Authorized by the National Historic Preservation Act of 1966, the National Park Service's National Register of Historic Places is part of a national program to coordinate and

[2] http://www.sec.state.ma.us/mhc/mhcidx.htm
[3] http://mhc-macris.net/

support public and private efforts to identify, evaluate, and protect America's historic and archeological resources.[4]

National Register of Historic Places offers special protection for individual historic buildings and properties in historic districts on Cape Cod. As shown in Figure 4, historic properties are spread across Cape Cod In addition to protections under local historic districts; the Cape Cod Commission Act[5] provides additional protections. Under the Cape Cod Commission Act, demolition or substantial alteration of National Register properties, whether individually listed or part of a National Register Historic District, are subject to review by the Cape Cod Commission if there is no other historic district protection in place.

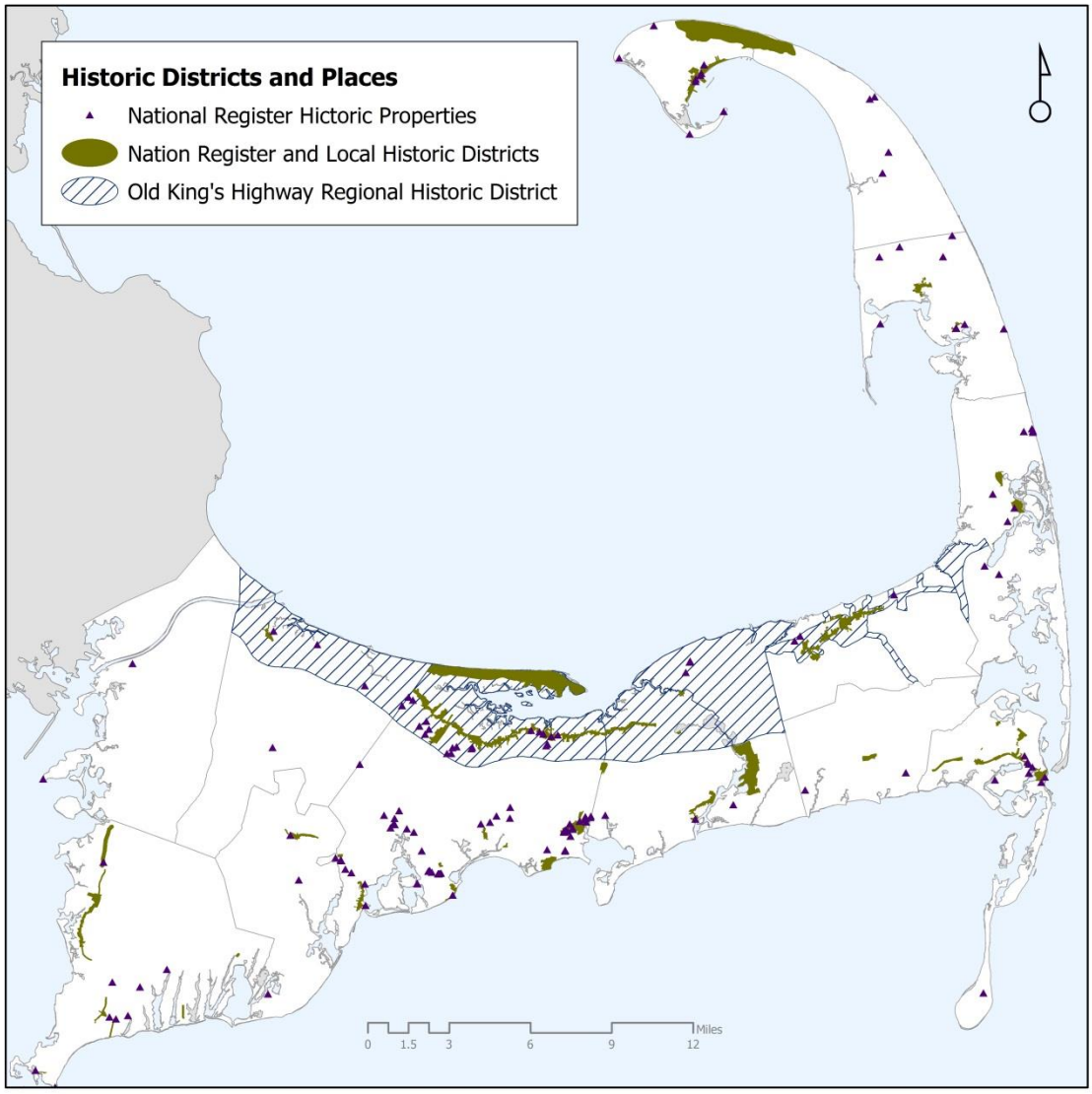

FIGURE 4. STATE REGISTERED HISTORIC DISTRICTS AND PLACES

[4] http://www.nps.gov/nr/
[5] http://www.capecodcommission.org/aboutccc/act

PRESERVATION BYLAWS

- **Demolition Delay Bylaws** create time to explore alternatives to demolition of historically significant buildings. Any demolition permit request is reviewed by the Historical Commission to determine if a building is "preferably preserved" and if a delay period should be imposed. On Cape Cod, delay periods range from 6 to 18 months. See the Cape Cod Commission's Demolition Delay Network[6].
- **Overlay Districts** create special zoning regulations for unique areas. Brewster's Corridor Overlay Protection District limits the scale and massing of commercial buildings along historic Route 6A. The Village Commercial Overlay District in Harwichport allows smaller setbacks and mixed uses consistent with historic development patterns. The Cape Cod Commission's Village Development Model Bylaw[7] guides small-scale, mixed-use development in village centers. It can be established as an overlay district or as a stand-alone zoning district.
- **Archaeological Resource Districts** aim to protect archaeological sites by limiting ground disturbance in sensitive areas. The towns of Barnstable and Brewster protect historic values in their Wetland Protection Bylaws, using Massachusetts Historical Commission review to help determine if an area is likely to have archaeological significance.
- **Scenic Road Bylaws** protect trees, stone walls, and features that fall within the right-of-way of designated roads. A planning board hearing is required prior to repair, maintenance, reconstruction, or paving work if it would involve removal or cutting of trees, or destruction of stone walls within the road right-of-way. It does not address trees or walls on adjacent private property. Barnstable, Falmouth, and Sandwich coordinate their scenic road reviews with the Planning Board, Department of Public Works, Tree Warden, and Historical Commission.
- **Districts of Critical Planning Concern** are a tool created by the Cape Cod Commission Act to protect special resource areas. Towns nominate an area to the Cape Cod Commission and work with Commission staff to craft regulations that protect the district. The Designated DCPCs page[8] describes the Centerville Village, Craigville Beach, and Sandwich Three Ponds DCPC regulations to protect cultural and scenic resources.

PRESERVATION RESTRICTIONS

Preservation Restrictions and Conservation Restrictions are legal agreements used to protect historic buildings and lands from change. The restrictions are drawn up by the property owner and a nonprofit preservation group or a government entity that is in charge of their enforcement. Restrictions can be placed on buildings or on land, and may also be used to protect archaeological resources hidden beneath the surface of the land.

The Massachusetts Historical Commission holds Preservation Restrictions on numerous Cape properties that have received preservation grant monies. Preservation Restrictions are required for some projects that use Community Preservation Act (CPA) funding, and many of these restrictions are held by conservation trusts and local historical commissions.

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6 http://www.capecodcommission.org/resources/regulatory/HistoricPreservation_CCCActandNationalRegister.pdf

7 http://www.capecodcommission.org/resources/bylaws/village.doc

8 http://www.capecodcommission.org/departments/planning/DCPC/designated

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