

MHC Reconnaissance Survey Town Report

SANDWICH

Report Date: 1984

Associated Regional Report: Cape Cod and the Islands

Reconnaissance Survey Town Reports, produced for MHC's Statewide Reconnaissance Survey between 1979 and 1987, introduce the historical development of each of the Commonwealth's municipalities. Each report begins with an historic overview, a description of topography, and political boundaries. For the purposes of the survey, the historic period has been subdivided into seven periods: Contact (1500–1620), Plantation (1620–1675), Colonial (1675–1775), Federal (1775–1830), Early Industrial (1830–1870), Late Industrial (1870–1915), and Early Modern (1915–1940/55). Each report concludes with survey observations that evaluate the town's existing historic properties inventory and highlight significant historic buildings, settlement patterns, and present threats to these resources. A bibliography lists key secondary resources.

Town reports are designed for use together with a series of town maps that demarcate settlement patterns, transportation corridors and industrial sites for each historic period. These maps are in the form of color-coded, polyester overlays to the USGS topographic base map for each town on file and available for consultation at MHC. For further information on the organization and preparation of town reports, readers should contact MHC.

Users should keep in mind that these reports are now two decades or more old. The information they contain, including assessments of existing knowledge, planning recommendations, understanding of local development, and bibliographic references all date to the time they were written. In some cases, information on certain topics was not completed. No attempt has been made to update this information.

Electronic text was not available for digital capture, and as a result most of the reports have been scanned as PDF files. While all have been processed with optical character recognition, there will inevitably be some character recognition errors.

The activity that is the subject of the MHC Reconnaissance Survey Town Report has been financed in part with Federal funds from the National Park Service, U.S. Department of the Interior. However, the contents and opinions do not necessarily reflect the views or policies of the Department of the Interior. This program receives Federal financial assistance for identification and protection of historic properties. Under Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, and the Age Discrimination Act of 1975, as amended, the U.S. Department of the Interior prohibits discrimination on the basis of race, color, national origin, disability or age in its federally assisted programs. If you believe you have been discriminated against in any program, activity or facility as described above, or if you desire further information please write to: Office of Equal Opportunity, National Park Service, 1849 C Street, N.W., Washington, D.C., 20240.



MASSACHUSETTS HISTORICAL COMMISSION
William Francis Galvin, Secretary of the Commonwealth
Chair, Massachusetts Historical Commission
220 Morrissey Blvd.
Boston, MA 02125
www.sec.state.ma.us/mhc
mhc@sec.state.ma.us / 617-727-8470

MHC RECONNAISSANCE SURVEY REPORT

DATE: May 1984

COMMUNITY: Sandwich

I. TOPOGRAPHY

Sandwich, once the most westerly township in Barnstable County, now abuts Bourne in the northwestern portion of that county. Land surfaces in the town can be characterized as hilly in northern areas along Route 6 and relatively level in central and southern sections of the town. Northern portions of town are characterized by the Sandwich Moraine, with elevations exceeding 200 feet and sloping to sea level along beach areas bordering Cape Cod Bay. To the south, the Sandwich Moraine abuts the Mashpee Outwash Plain with elevations averaging in the 100 to 150-foot range.

Drainage in the town of Sandwich is characterized by numerous creeks, ponds, and marshes. Tidal marshes and associated creeks border most of the northern portion of town between the Sandwich Moraine and Cape Cod Bay. These areas include the vicinities of the now extant Scusset River, Mill Creek, Dock Creek, Old Harbor Creek, Springhill Creek, and Scorton's Creek. Barrier beaches characterize the shoreline along the bay. Major ponds in Sandwich are south of the Moraine in the area of the Mashpee Outwash Plain. These ponds include Peters Pond, Spectacle Pond, Triangle Pond, and Lawrence Pond, as well as a number of smaller ponds.

Soils in the town of Sandwich can in general be classified as sandy loams with varying potentials for agricultural use. Good agricultural soil can be found in some northern areas of town along the coast (e.g., Old Scusset area). However, in general, soils are too light for grain crops except in the area of the Mashpee Outwash Plain, where good agricultural soils may be found.

II. POLITICAL BOUNDARIES

Sandwich was established as a town by 1638. Its eastern boundary with Barnstable was set by 1672, and was adjusted in 1916. Southern boundaries with Mashpee were confirmed in 1735, and were altered in 1859, 1860, 1872, and 1887. The southwestern boundary with Falmouth was established in 1880. Separation of the western part of Sandwich as the town of Bourne in 1884 created the western boundary.

III. HISTORIC OVERVIEW

Sandwich is a residential and resort community on the east-west Cape Cod Bay corridor, with military base facilities in its southern interior. Native sites are likely at the Shawme Lake focus and at other coastal and interior pond locations. First permanent European settlement occurred in the northeast in 1637 from Saugus, with meetinghouse site established near Shawme Lake by 1640. Mid-17th century Quaker minority established meeting at

Spring Hill to the east. Agricultural settlement of 17th and 18th centuries concentrated along northern King's Highway corridor, with early 19th century milling focus at the meetinghouse center. Sandwich Village development was further stimulated by the establishment of the Boston and Sandwich Glass Works in 1825, with Irish worker housing cluster at Jarvesville, and by 1848 railroad connection. Mid-19th century village growth ends with the closing of the glass factory after a strike in 1888.

Introduction of cranberry cultivation in the mid 19th century stimulated new agricultural development. Some late 19th century summer home construction occurred at Springhill Beach and Scorton Neck. Wartime and postwar development of Otis Air Force Base occurred in the southwest.

Late 17th, 18th, and early 19th century farmhouses remain along Route 6A, Water Street, and Old County Road. Sandwich Village retains much of its mid 19th century character, with a surviving early 19th century glass worker district. Automobile tourist development pressures have been intense along Route 6A, although cranberry bog landscapes survive along the corridor. Modern summer house construction has concentrated along the north shore. More recent suburban growth has been most intense in the Great Hill Road-Chase Road area near the Route 6 interchange. Modern industrial fringe development (including the landmark Cape Cod Power Station) and local commercial shopping center growth has concentrated in the northeast. New industrial park construction is occurring along Route 130 south of Route 6.

IV. CONTACT PERIOD (1500-1620)

A. Transportation Routes

A regional trail focus developed in the Shawme Pond area along the primary, east-west Cape Cod corridor, with interior trails southwest to the Buzzards Bay coast and south to the Vineyard Sound coast. The east-west trail followed Main Street-Route 6A-Old County Road. Interior trails extended southwest along the now partly abandoned Pocasset Road west of Shawme Lake, and southeast along Water Street-Forestdale Road-Falmouth Sandwich Road east of Shawme Lake, with Sandwich Cotuit Road branch east of Peters Pond. A southwest to northeast connection is conjectured along Pimlico Pond Road-Ewer Road-Farmersville Road-Great Hill Road-Chase Road.

B. Settlement Pattern

No European settlements are known in Sandwich during this period. However, potential for Dutch trading settlements (ca. 1620) may exist, as they were trading with aboriginal populations in the Buzzards Bay area prior to the 1627 establishment of the Aptuxet trading post by Plymouth settlers.

Exact locations for aboriginal settlements (Wampanoag) during the Contact period are not known for the Sandwich area. However,

accounts of early sailors and settlers from Plymouth indicate the area (which then also included Bourne) was extensively settled during the period. Only two Late Woodland period archaeological sites are known for Sandwich. However, Woodland period artifacts of general town provenience exist and strongly indicate additional sites may be found. Nonetheless, Woodland period sites known in other Cape towns as well as those in Sandwich indicate a focus in most coastal areas. Sites tend to be concentrated on or near tidal estuaries, freshwater lakes and ponds and also streams. It seems reasonable to assume that later Contact period sites also followed similar site locations. It is presently unknown when and under what conditions plant domestication was introduced to aboriginal populations in this area. Therefore, it is unknown to what degree this factor influenced settlement locations.

While specific Contact period site locations are unknown for Sandwich, this problem is not unique to the Sandwich area. Many towns in Massachusetts and other regional areas also face this same problem. Therefore, Contact period settlements are given in terms of broadscale regional village terms. For example, in Sandwich (including the early Bourne area) Shawme is often noted as the principal village area and includes the Sandwich Center area near Shawme Lake. Other settlements included Manomet (Monument Beach area, now in Bourne), Pokesit (Pocasset area, now Bourne), Scusset (Scusset Beach area), Kittesumut, Scorton, and Comassekumkanet.

C. Subsistence Pattern

Both Europeans and aboriginals in the Sandwich area during this period subsisted in similar ways. Europeans did not permanently settle this area at this time. As a result, they either carried stores with them or, more probably, hunted and fished and bought or stole corn and beans from the Indians in the same way the Plymouth settlers did.

Aboriginal populations in the Sandwich area exploited the coastal environment in numerous ways. Fishing and shellfish exploitation were important. Numerous Late Woodland and reported Contact period sites are on or near tidal estuaries or freshwater pond locations with annual runs of alewives and other species of fish. On immediate coastal areas, shellfish beds were also noted near site locations, as attested to by numerous Late Woodland shell middens throughout the Cape in these areas. Quahoag, oyster, soft-shelled clam, and scallop were all important.

In addition to fish and shellfish, mammals such as deer, seal, and numerous fur-bearers were also available and exploited. Deer were plentiful in the Sandwich area and increased, as did agriculture and associated clearing. Woodland shell middens through the Cape contain faunal remains representative of these species.

It is unknown at what time agriculture, or more specifically, horticulture, was introduced to the southern New England or Cape area. However, we can assume it was introduced sometime during

the Woodland period, as it was quite developed during the Contact period. Corn was the primary crop, supplemented by beans and squash. Herring was used for fertilizer in corn agriculture and was introduced to the Plymouth settlers quite early.

While domestic crops were grown during the Contact period, some gathering undoubtedly also took place. Numerous wild plants exist in the Sandwich area, which were used by both Indian populations and early colonial settlers. For example, one plant, sassafras, was used by the Indians for its medicinal qualities and it was even exported to Europe.

V. PLANTATION PERIOD (1620-1675)

A. Transportation Routes

Contact period trails remained in use and were improved by European settlers, and the east-west Cape Cod Bay route to Plymouth remained the primary local roadway.

B. Settlement Pattern

Sandwich as we know it today was first settled in 1637 and incorporated in 1639. However, the town's original boundaries included those of present-day Bourne, extending the original settlement of old Sandwich back to at least 1627. At that time, the colonists at Plymouth established the Aptucxet Trading Post on the southern shore of the Monument River near Buzzard's Bay. The settlement at Aptucxet was established primarily for trading, and in that respect was different from later residential/agricultural settlements in North Sandwich.

Following the 1627 establishment of Aptucxet, several families from Lynn (Saugus), Duxbury, and Plymouth settled the area first known as Shawme in the area of Sandwich Center (Village of Sandwich) as it exists today. From this locus, settlement quickly spread easterly and westerly along present-day Route 6A to Cape Cod Bay. The area of the Village of Sandwich came to be known as the First Precinct. Its meetinghouse was built at the junction of River Street and Old North Street. Approximately three miles west of Sandwich Village was a group of houses known as Scusset around Scusset Creek. East of Sandwich Village a group of homes was called Spring Hill, also the location of the Quaker Meetinghouse. Other areas settled included areas along present-day Route 6A in East Sandwich and Scorton's Neck area. In that part of Sandwich now included in Bourne, two early settlements were started along Buzzards Bay, one at Pocasset, the other at Manomet.

D. Economic Base

This period witnessed the first extensive settlement of the Sandwich area by European settlers. Accordingly, agricultural development increased steadily with corn followed by other grains such as oats, rye, and wheat. Livestock, particularly sheep, were important from the first settlement. Cattle were also raised.

Fish and shellfish were also important during this period. Shellfish beds were present along both shores on Cape Cod and Buzzard's Bay. Alewives were exploited at numerous locations, with cod, haddock, flounder, and lobsters, etc. being found in coastal bays and offshore areas.

Aboriginal populations, while declining during this period, continued their subsistence base much the same as during the earlier Contact period. Agriculture formed the basis of subsistence with hunting, fishing, and the gathering of shellfish and plants as additional sources of food.

Trade was also important to Sandwich during the Plantation period. Plymouth settlers established the Aptucxet Trading Post in what is now Bourne in 1627. This post linked interests in Plymouth with southern and western European and Indian settlements through the Buzzard's Bay area.

VI. COLONIAL PERIOD (1675-1775)

A. Transportation Routes

The earlier roads and trails continued to be improved, and the east-west Cape Cod Bay route through Sandwich continued to be the town's primary transportation corridor. This road was upgraded in 1684 as the King's Highway. Roads from Sandwich meetinghouse are also improved to the southwest to Pocasset and to the southeast to Falmouth and Cotuit (Barnstable).

B. Population

Little identifiable change over Plantation period. 136 heads of families reported in 1730 "exclusive of Quakers." Although this figure includes what later became the town of Bourne, most of the population was probably in what is today Sandwich. By 1765, the total number of families was reported as 245, represented by 1,449 individuals. Following Barnstable, Yarmouth, and Harwich, Sandwich was then the fourth most populous town in the county. Five percent of the population, as in Falmouth and Harwich, were made up of natives (73 men and women). At that time, 200 houses sheltered the town's 245 families.

C. Settlement Pattern

Settlement patterns in Sandwich during the Colonial period did not differ greatly from those areas settled during the Plantation period. The area around Sandwich Center, or the Village of Sandwich, remained the central focus of development. East of Sandwich Center settlement continued along the Route 6A area in the vicinity of Spring Hill, East Sandwich, and Scorton's Neck. West of Sandwich Center settlement continued along the area of Route 6A toward the Scusset area.

While residential settlement did not change significantly during the Colonial period, economic settlement did. Again, North

Sandwich was the focus of change. The general location of Route 6A today was in different areas known as the road to Barnstable, the road to Boston, and the road to Plymouth. In the Village of Sandwich shops began to appear as well as public inns. Grist mills and fulling mills were also present throughout the North Sandwich area, particularly in the Sandwich Village area. Tidal harbors were also receiving increased settlement. Numerous inlets to Cape Cod Bay became ports of exchange for small coasting vessels shipping lumber and crops to the Boston and Plymouth area. Town Harbor, or Old Harbor, in the Sandwich Village area, as well as Scusset and Spring Hill, were important areas.

D. Economic Base

Probably by the mid 18th century, three gristmills were in operation: at East Sandwich, Spring Hill, and the village of Sandwich itself. The town's extensive woodlands already were known, and cattle and sheep raising were extensive. Salt hay, wheat, rye, oats, and corn were plentiful.

E. Architecture

Residential: The town's inventory attributes a large number of houses to the Colonial period. Of particular importance is the Hoxie House (1676), a restored two-story, three-bay house with lobby entrance into the side chimney bay, lean-to in the rear, and smaller side additions. Other early buildings of traditional form, two-story, center entry, five-bay houses with rear lean-tos, are also known from the late 17th century, including the Tobey House on Main Street (1690). The town's most commonly surviving two-story residence form is the 18th century development of this type, center entry, five-bay houses, but with a double pile of rooms under a symmetrical gable roof. The Moody House on Tupper Road is the town's earliest example (1699), and the form continued to be built throughout the 18th century. Both three-bay and four-bay examples of two-story, lobby entrance, double pile houses survive in small numbers. One-story houses survive in nearly equal numbers in the town. Like its two-story counterpart, the five-bay, center lobby entrance center chimney, double pile house is most common. Isolated three- and four-bay examples are also known. At least six bow roofs, with curved roof rafters, are known, one on a 1727 two-story house on the Old County Road. Few examples are known of the high style Georgian plan, employing double interior chimneys clearing the way for a center hall; two of two stories and possibly two of a single story. Little period ornamentation survives on these houses; exceptions include the clustered chimney in the town center, as well as the modillion blocked, pedimented door on the Timothy Bourne House.

Institutional: The town built its first meetinghouse in 1638, small rectangular with a thatched roof. It was rebuilt in 1656, and again in 1703. At that time it measured 36 x 45 feet with a tower on the west end. It was expanded by 15 feet in length in 1756 and its tower raised. A 17 x 13 foot house for the poor was constructed in 1726; a powder house was built in 1767; and a schoolhouse in 1713.

Commercial: The Fessenden Tavern operated in the town from the late 18th century, in the original town parsonage (1694); it was a two-story, five-bay center chimney, lobby entrance building. Added to over the years, and serving successively as the Central House and the Daniel Webster Inn, the structure was destroyed by fire in 1971.

VII. FEDERAL PERIOD (1775-1830)

A. Transportation Routes

The Colonial period roadways continued in use. Wharf facilities were developed along Dock Creek for the Sandwich Glass Company. Packet service continued between Sandwich and Boston on Cape Cod Bay.

B. Population

Sandwich's population rose 68% between 1790 and 1830, its greatest rise in any historic period in Sandwich. Much of this rise took place in the two decades 1800-1810 (amounting to 35.8 persons per year) and 1820-1830 (represented by 87.7 persons annually). The latter period, representing Sandwich's single largest period of growth, was almost entirely due to the development of the Boston & Sandwich Glass Company. The new industry brought the first substantial group of Irish immigrants to the county, and for a good part of the century, Sandwich had the largest Irish population of any town in the county. With the new population came the establishment of the first Catholic Church in the county in the late 1820s.

Jesse Lee established the town on the Cape Methodist circuit in 1796, and a society was formed in 1811. The Congregationalists' minister became more evangelical in theology and the church experienced a revival (1808-09); disagreement grew up within the parish until the evangelicals were forced to withdraw (1813), and the First Parish society aligned with the Unitarians (1825). Further splits resulted in the short-lived Puritan Congregational Society in 1846. The arrival of immigrant glass workers brought Roman Catholic services to the town early; a church was formed in 1830. An Academy was organized here in 1804. Temperance activities were popular here.

C. Settlement Pattern

In the late 18th and early 19th centuries, development continued at the meetinghouse center, as a small industrial focus emerged around Shawme Lake. Grist and fulling mills, and a cotton factory (1812) located around the lake, as did a number of residences, the academy (1804), and two inns. A Calvinist church built in 1814. In 1825, the Boston and Sandwich Glass Company built a factory to the northeast, and Jarves Village--a group of company-built worker cottages--was established nearby in the State/Freeman Street area. The Irish immigrant glassworkers built St. Peter's Catholic Church on Jarves Street in 1829. A Methodist Church was also

built at this time on Main Street east of the Congregational meetinghouse.

Outside the center, agricultural settlement continued to concentrate in the northern part of town along the County Road. The third Quaker meetinghouse was built on Spring Hill in 1810. The small mill/inn focus continued at East Sandwich north of Nye Road. The only concentration in the south was a small cluster at Greendale (now Forestdale) along the Falmouth Road.

D. Economic Base

The establishment of land transportation routes to Boston made the village of Sandwich the principal connection between overland routes north to Plymouth and Boston, and east to the rest of the Cape. The town developed a commercial presence which made it a popular watering hole--the Cape's first resort--for Boston residents down for hunting or fishing. The first packets to Cape Cod from Boston also docked in Sandwich.

In 1802 Wendell Davis described the employment of the people as "both maritime and agricultural."

The town in its general character [he went on] is more agricultural, however, than otherwise, and more so than any other in the county. . . . [The inhabitants] generally occupy small farms, and till them to the best advantage, and with far less labor than a stubborn soil would require. All sorts of grain are raised with facility, and on spots of ground apparently the most unpromising to the eye of the husbandman. The great extent and excellence of the meadows and marshes in this place is a great source of wealth and improving husbandry. By means of them, they are enabled to keep large stocks of cattle in the winter, and food for their subsistence through the remainder of the year, if necessary. It is computed that about 100 loads of salt hay are annually sold to supply the wants of neighboring towns to the westward of Sandwich. Then township is excellent for the raising of sheep of the best kind, which run at large in the forests and plains. [Davis, pp. 121-122]

In 1820, 326 persons were employed in agricultural pursuits, the largest number, but for Barnstable, of any town in the county. Despite the growth of the county's largest manufacturing industry, Sandwich retained this reputation for most of the century.

Sandwich's first factory was a small cotton mill begun 1811, at the upper end of what is today Shawme Lake, by Samuel Wing. It remained in operation through the early 1830s, though its employment (one person reported in 1831) appears to have been insignificant.

Sandwich's principal industry in this as in succeeding periods was the glass works begun by Deming Jarves (1790-1869), one of the

early organizers of the New England Glass Company, the Cambridge firm which he developed into one of the largest in the country. In 1823, it had 140 employees, but because of friction with his associates, Jarves withdrew the following year. Jarves was attracted to Sandwich because of the extensive tracts of pine timber for fuel. By 1830 the firm's 130 employees already outnumbered the total number of persons engaged in manufacturing in the rest of the county put together, and the value of its product, in plain and cut glass, amounted to \$250,000. With housing provided by the company, the village became one of the earliest factory communities with a Boston orientation that was not typical of other Cape Cod towns.

E. Architecture

Residential: the most common building types of this period remained the five-bay, center lobby entrance, center chimney, double pile house of both one and two stories. although most employ the traditional gable roof, two examples of hip roofs are known for center chimney, two-story buildings. Larger numbers of single-story, three- and four-bay houses survive. Georgian plan houses are more common. Two gable roof examples and five hip roof examples are known of double pile houses, as well as two end chimney, double pile houses. Of particular significance is the Seth Freeman House, with an unusually elaborated doorway and center second-story window, with finely detailed fan and sidelights, as well as ornamental surrounds. Two-story, single pile houses with rear ells are known for this period, employing both center and rear wall chimneys. A single brick example is a single pile with a frame rear ell, two stories, five bays, end chimneys, center entry and hip roof.

Institutional: Congregationalists expanded their meetinghouse by 15 feet in width in 1804; four years later a clock was added to the tower. The Trinitarians built a meetinghouse after their withdrawal from the First Parish, but its appearance is unknown. The town's Friends built a meetinghouse during this period, 2 1/2 stories in height with a large 1 1/2-story entry porch on its long side, devoid of ornament. Methodists built a meetinghouse in 1829, but its appearance is unknown. A pest house was built in 1778. In 1804, the Sandwich Academy was organized, meeting in a gable entry 1 1/2 story building with center door on a three-bay facade and small bell cupola at the entry end.

Industrial: The first Boston and Sandwich Glass Company building was a rectangular wooden structure with a low bell tower.

VIII. EARLY INDUSTRIAL PERIOD (1830-1870)

A. Transportation Routes

Improvements continued in the early 19th century roadways. The Cape Cod Branch Railroad was completed to Sandwich Station in the northwest in 1848, and it was extended east through East Sandwich to Hyannis in 1854.

B. Population

Sandwich, like most of the towns on the Cape, reached its peak population in the Early Industrial period. Thirty-three years before the glass works finally closed, Sandwich stopped growing, when in 1855, 4,496 people were counted in the State Census. For most of the period, Sandwich retained its position as the second most populous town in the county, falling to third behind Provincetown only in 1870.

In 1855, 13 percent of the population were foreign born -- more than twice the number in any other town. Of that number, 537 claimed Ireland as their birthplace, half the entire county total of Irish in that census year.

The coming of the glass works transformed the community as more of the growing community became dependent on a single employer. In addition, the company actively and successfully continued to reduce the need for highly skilled workers as the manufacturing process was simplified. Conflict arose between the workers, an early and well organized craft, and the factory management on several instances. The company continued to attract the peripatetic glass workers from other U.S. companies as well as Europe. The workers hived together near the factory, and formed a band to compete with that of the town's businessmen and clerks. Temperance continued to be an issue, though the town was no longer dry. A second Methodist society was organized in Forestdale, which later became Baptist in denomination. The Universalists worshipped in the town briefly (1845). Episcopalians organized a church in 1854.

C. Settlement Pattern

Sandwich Center continued to be the focus of local growth with the expansion of the glass industry and the establishment of rail service in 1848. The center's status as rail terminus until 1854 further stimulated local commercial development. By period's end, stores and residences lined Main Street east and west of the meetinghouse site. Civic and religious additions were made in the early 1830s, with the town hall north of Shawme Lake and the new Unitarian church. With the coming of the railroad in 1848, the Calvinist and Methodist churches were replaced, and in 1851 a new Catholic church was built north of the railroad at Church and Willow Street, adjacent to the expanding worker tenement district. South of the railroad, residential development filled the area north of Main Street between Jarves Street and Liberty Street. Commercial development extended on Jarves Street toward the railroad depot, and residential growth pushed north on Tupper Road to Town Neck. North of the railroad, the Boston and Sandwich Glass Co. continued to expand, and the competing Cape Cod Glass Company located to the west on the rail corridor.

Outside the center, dispersed settlement continued, mostly along County Road and Spring Hill Road in the north. In the south, linear development continued at Forestdale on the Falmouth Road,

and a small Methodist Church located here. Little development occurred in the central part of town.

D. Economic Base

By 1855, the glass works employed 500 men with a glassware product valued at \$600,000, more than the value of manufactured products for the rest of the county put together. Encouraged by the prominence of the glass works, the Cape Cod Railroad was pushed through to Sandwich in 1848, though it was several years before the company switched from coastal vessels for shipping, which still brought in the company's sand. Small ancillary industries developed--barrel staves, marble lamp stands, and a cottage industry in cutting and polishing glass blanks. In 1859, Jarves split with his old associates and formed a rival concern, the Cape Cod Glass Company, establishing works only a few blocks away. The new company, however, lasted barely a decade, closing on Jarves' death in 1869.

The town's second largest manufacturing industry, though only a fraction the size of the glass business, was the making of iron and copper tacks, begun in Wing's old cotton mill at the foot of Shawme Pond.

Despite Sandwich's manufacturing presence, it retained its predominant agricultural base. In 1865, while reporting 590 men at work in two glass factories, it also reported 242 farms--the largest number of any in the county. The town's 33,597 acres of woodland (at that time including Bourne's share) was more than three times the acreage of the next nearest town, Barnstable, and amounted to nearly half the total area of woodland in the county. Thus the collection of firewood for commercial sale was also a major business, employing 139 men in the winter months. The value of firewood sold, \$15,328, was more than any other town in the county.

E. Architecture

Residential: The expansion of population with the coming of the Boston and Sandwich Glass Company brought construction of a large number of dwellings. Single-story, five-bay, center lobby entrance, center chimney houses remain very common. End chimneys are an occasional modification of this house type. Both three- and four-bay related examples survive in increasing numbers; although these retain chimney placement to the rear of the entry bay, the three-bay examples occasionally place the chimney between the window bays. A small number of small, single pile, three-bay, center entry examples also survive. The adoption of Greek Revival ornaments is quite common on these related house types. Of particular importance is the raising of the stud height, opening a space between cornice and window top that was often ornamented by small windows or a wide molded cornice board.

The greatest change of the period came with the addition of gable entry house forms with the Greek Revival style, in keeping with

the temple form model. By far the most common type was 1 1/2 stories high, side entry plan, with front facade most commonly including two full windows above the first floor, crossing the cornice line. Over 40 examples of this house type survive in the town. Variations of this type come from increasing the number of windows above the first floor, shaping them as half rounds on one side, recessing the entry, or reducing the number of bays to two. Smaller numbers of houses of this type reach 2 1/2 stories, occasionally supplemented by single- and two-story wings. Also appearing in small numbers were L-plan buildings, in both 1 1/2 and 2 1/2 story heights, entry near the junction of the two masses; these large buildings were some of the most elaborate in the town. A small number of Georgian plan houses were built with Greek Revival ornament.

Later in the period, small numbers of buildings were constructed in other styles. The Gothic style was employed occasionally in the upper stories of these buildings, ornamental bargeboard, and small facade gables. Large Italianate examples employed the addition of an ell, the L-plan, or the three-bay modification of the Georgian plan. Smaller examples were 2 1/2 story, gable front, side entry in plan. Ornament came from bracketed cornices, occasional roundheaded windows, and porches. Two buildings in the town employ the Second Empire style: three- and two-story mansard roof examples.

The glass company constructed multifamily houses during this period on Church and Canary Streets. Duplexes consisted of joined three-bay, side entry, 1 1/2-story or 2 1/2-story houses. A second type were on Harbor Street joined back to back with entry into the three-bay gable end, with shed dormers over second-story windows in the same plane as the side wall. One large six-unit building combined several three-bay units under a hip roof. All were simple Greek Revival in ornament, except for a single Gothic duplex on Cross Street.

Institutional: Population growth contributed to the construction of a large number of institutional buildings. Each church was rebuilt during this period: in 1833 the First Parish (Unitarian) constructed a gable entry meetinghouse with lancet windows and square tower with spire. In 1847, both the Methodists and the Orthodox Congregationalists rebuilt. The former group built a gable front square towered meetinghouse with central entry and four plain pilaster ornamentation. The latter built in a more common New England vocabulary, employing Wittemore Peterson of Duxbury. Its entry was located in a large projecting porch with four Ionic pilasters and a full pediment with modillion blocks, topped by a square tower and columned spire. The presence of increasing numbers of immigrants brought the formation of a Roman Catholic church, whose first chapel, built in 1830, was a gable entry frame 30 x 40 feet building later converted to commercial space in the town. A second brick church was constructed in 1851. A Universalist meetinghouse (1845) was also moved to Jarves Street, converted to stores downstairs and meeting hall above. Another meetinghouse was located in the south of the town, small

gable entry frame building, Methodist in denomination. In 1834 immediately following disestablishment, the town built a town hall, 2 1/2 stories in height, gable front with a Doric columns in antis, corner pilasters, wide entablature, and low pediment. A number of schoolhouses were constructed, gable entry, single-story, side entry structures; a double door examples survives in Forestdale.

Commercial: Several frame buildings were constructed on Main and Jarves Streets, gable entry, single and two stories, occasionally with side ells. The railroad station (1857-60) on Jarves Street (demolished?) was of brick, single-story, topped by a bracketed hip roof with a wide overhang.

The Boston and Sandwich Glass Company constructed a large brick factory (1849), as well as expanding the support plant of grist, saw, planing, and stove mills, bake house, storage, hammer, and pattern shops. Cape Cod Glass employed semicircular roofs on their factories.

IX. LATE INDUSTRIAL PERIOD (1870-1915)

A. Transportation Routes

The 19th century highway and railroad system remained in use. In 1880 the Cape Cod Canal Company was chartered, with part of the canal route surveyed through the northwest corner of town. After repeated failures to complete construction, the canal was officially opened in 1914, with the Cape Cod Bay entrance in Sandwich.

B. Population

Sandwich's population continued to decline in this period, although a portion of this shrinkage was due to the severing of Bourne from old Sandwich. From a population of 3,694 in 1870, by 1915 this figure had shrunk to 1,500 -- about the size of the town prior to the Revolution. The only small period of growth occurred in the period 1909-1914, probably attributed to the influx of construction workers on the canal.

The town's ethnic population underwent a marked change. From being predominantly Irish born in 1870, by 1915 the largest group of immigrants were 59 Finns, about a third the number which had settled in Barnstable to the east.

C. Settlement Pattern

Infill and some small-scale industrial development occurred at Sandwich Center, but the extent of the village remained essentially the same. The central commercial area was rebuilt after an 1870 fire. St. John's Episcopal Church was added on Main Street in 1899, and a storm-damaged St. Peter's Church was replaced by the Corpus Christi Catholic Church on Jarves Street in 1901. A high school was built in 1882, and a library located

opposite the Unitarian Church. No major development occurred outside the center. The East Sandwich Grange Hall was built in 1887, and a railroad station was built between East Sandwich and Spring Hill in 1889. Some resort development began on Springhill Beach in the early 20th century. Widespread cranberry bog creation took place from the 1870s onward.

D. Economic Base

The principal economic event was the closing of the glass works in 1888. Although the immediate cause was a strike by glassworkers, its timing was symptomatic of glassworks throughout New England in the 1880s, as cheaper midwestern fuel and cheaper labor made continued operation of eastern glass furnaces prohibitive. There were several attempts to restart the glass works, mostly characterized by insufficient capital.

The construction of the Cape Cod Canal, planned since 1624, was begun in earnest in 1883-89 by the Cape Cod Ship Canal Company, which succeeded in excavating a 7,000-foot ditch before going bankrupt. In 1899 the company's rights were acquired by the Boston, Cape Cod & New York Canal Company, backed, and later acquired by the New York subway builder, August Belmont. The 8-mile canal, engineered by William Barclay Parsons, formerly civil engineer on the Panama Canal Commission, opened for business as a toll route. Three drawbridges, high tolls, shallow depth, and narrow width all discouraged the traffic by which Belmont hoped to make the canal pay.

Sandwich never developed the summer colonies that the neighboring towns sustained, though in the 1890s the old Quaker settlement of Spring Hill became a favorite watering hole for out-of-town summer visitors.

E. Architecture

Residential: The demise of the glass industry halted building for the town. Only isolated examples survive from this period in the form of large residences of the wealthy in picturesque eclectic styles. On Grove Street, a High Victorian Gothic house of 2 1/2 stories with gable on hip roof, canted corners with windows, a central projecting bay with side entry and surrounding porch. Several shingled houses are noted: on Main Street a large three-story hipped roof house sits on a fieldstone foundation, with a full surrounding porch, porte-coucher, and towered barn; Masthead (1898) has 2 1/2 stories with full tower and porch.

Institutional: In 1871 the First Parish (Unitarian) raised a basement to house a vestry and added a four-faced clock. The Orthodox replaced a blown-down steeple with a new Stick Style spire in 1898. St. John's Episcopal church constructed a shingled nave plan church with entry into the side square tower (1889), the double door and windows are lancet in shape. In 1901, Corpus Christi church was built to replace St. Peter's, damaged in the Portland gale; of brick, the church is nave in plan with single

original entry into a square side tower, small roundheaded windows, and large round window in the upper gable. In 1909 the town constructed a public library of masonry, single story, Beaux Arts Classical in design.

Commercial: A commercial block was constructed on Jarves Street in 1883, of brick with a story above the storefronts and little ornamentation. A boathouse survives, shingled with a pyramidal roof, kicked and bracketed overhang, roundheaded doorway. A Grange was constructed in 1889.

X. EARLY MODERN PERIOD (1915-1940)

A. Transportation Routes

Improvements followed the federal government's purchase of the Cape Cod Canal in 1928, and dredging to widen and deepen the canal took place. The northern, east-west highway was improved by the mid 1920s as part of U. S. Route 6, the primary automobile tourist route through Cape Cod, and by the mid 1930s, a bypass was built north of Sandwich Village. Route 130, connecting to the southeast, was improved along Main Street-Water Street-New Forestdale Road-Falmouth Sandwich Road. Otis Air Field was established in the south in 1937.

B. Population

Sandwich's population continued to decline in the Early Modern period, but for pauses in the early '20s and early '30s. The latter period may be a consequence of the presence of work crews expanding the Canal. By 1940, the town's population stood at 1,360.

The ratio of foreign-born residents also declined. Although Sandwich retained the third highest percentage of immigrants in the town (after Provincetown and Falmouth), the figure declined from 17.9 percent in 1915 to 11.6 percent in 1940.

C. Settlement Pattern

Period development took the form of resort and tourist oriented activities. Shoreline development took place along Cape Cod Bay along Springhill Beach, Beach Road and Wing Boulevard. Along the Route 6 auto corridor, a motor cottage cluster developed at East Sandwich by period's end. The main grounds of Otis Air Force Base were built in the southwest corner of town.

D. Economic Base

The completion of the canal failed to bring the prosperity which Sandwich and Bourne had hoped for. Two of the Cape's seven fish-freezing plants located in Sandwich; and in 1921 a large pulp mill was constructed by the Sagamore Corporation of Boston.

The canal was taken over by the U.S. government in 1918, but not purchased for another decade. The last major project of the period

was the widening of the canal undertaken as a WPA project (1933-35) and the construction of three bridges. With a new 480-foot width, the canal became the widest sea-level canal in the world. The Bourne and Sagamore Bridges, designed by the engineering firm of Fay, Spofford & Thorndike with the architectural guidance of Cram & Ferguson, won design awards from the American Institute of Steel in the year of their construction.

E. Architecture

Residential: Few buildings added during this period; those known consist of 2 1/2-story pyramidal roofed houses, many with large central dormers and porches; some bungalows survive. Small beachfront gable roofed, one- and two-story shingled buildings also survive from this period.

Institutional: The Town Hall annex (1927) is brick with masonry ornament, 1 1/2 stories in height, and Colonial Revival. Similar in style is the three-story brick Wing School of 1927.

Commercial: The clusters of tourist cabins, single-story, single pile structures on Route 6A, date from this period.

XI. SURVEY OBSERVATIONS

Although the inventory appears nearly complete, some omissions should be noted. Some institutional buildings, as well as beachfront properties, have not been considered. In addition, the 20th century structures have not been dated or subdivided by style or plan.

XII. SOURCES

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