1. Overview

In 1714 a nine-square grid Anglican church with groin-vault and triple-gable roof was built in Marblehead, Massachusetts, a colony dominated by Puritan and Congregational hegemony (Fig. 1). Founded by Sir Francis Nicholson (1655-1728), British military officer and colonial governor, and twenty-nine British sea captains, historian Stuart Feld described St. Michael’s Church as a “simplified memory image conveyed by a person familiar with … several of the smaller parish churches Christopher Wren [and Robert Hooke] rebuilt at the foot of St. Paul’s Cathedral in London after the Great Fire of 1666”¹. To Nicholson and the visiting sea captains, this wood-framed interpretation of its masonry antecedents across the Atlantic may have reinforced the collective memory of their spiritual homeland. The London parish churches, in turn, can trace similar features to earlier 17th century examples of Dutch classicism based on a groin-vaulted Greek cross within a square plan, reflecting the simplicity of the ancient primitive churches.

During its 300-year history, significant changes were made to St. Michael’s. What features have been retained or meant to evoke the original design? And how has the church evolved with new modes of worship, architectural sensibility “tastes”, and means of construction, yet still manage to provide a strong sense of colonial history and original design?

2. Origins

In the spring of 1714, a fledgling building committee solicited support from Nicholson to present to the proper authorities in London their petition to erect an Anglican church in Marblehead (Fig. 2). Nicholson was St. Michael’s sponsor and largest benefactor, and between 1688 and 1725 governor of 4 colonies, Maryland, Virginia, Nova Scotia, and South Carolina, and before that, lieutenant governor of the Dominion of NE. He is identified with designs for the layout of Williamsburg, Virginia, and Annapolis, Maryland. Prof. James Kornwolf of the College of William and Mary described Nicholson as:

the country’s first great patron of architecture, landscape architecture, and town planning. …The moneys Nicholson gave, a sum then unrivaled, helped pay for
construction, endowment, or repair of at least seventy-one church buildings in eleven colonies. …Through his patronage, he helped to steer … architecture away from the … medieval, vernacular sources toward those identified with the … English baroque, although his forced reliance on native craftsmen gave some buildings a continued vernacular cast.²

Could the design of St. Michael’s Church have come from Nicholson? Most likely, the origin of the design was a collaborative effort among the four members of the building committee, Capt. John Calley, Capt. James Calley, Mr. John Oulton, and Mr. George Jackson who, on July 20, 1714, were appointed “to be a Standing Committee for the carrying on that affair in building a Handsome Church.” Their authorship may be inferred by a letter they sent to Nicholson the following November wherein the committee:

erected and raised a church Sept. 2nd of ye Dimensions following - 48-foot square, 23-foot had ye Tower, being 50-foot from ye ground, and 17-foot square. And we design ye spire 53-foot above ye Tower, October 16, the Church Being now inclosed.³

3. Christopher Wren, Robert Hooke, and Jacob van Campen

There is an obvious similarity between St. Michael’s and several London City Churches designed by Christopher Wren’s office during the late 1670s (Fig. 3). A handful of these churches are based on a nine-square grid floor plan and intersecting cross-vaults strikingly similar to St. Michael’s, the most similar being that of St. Martin, Ludgate. From 1675-1710 Wren was very busy building St. Paul’s Cathedral, and often assisted by his architectural and Royal Society colleague Dr. Robert Hooke (1635-1703). Hooke is ascribed by scholars to have been the likely designer of these London City churches. Of the many projects that Hooke collaborated with Wren, St. Martin’s is the most visited London city church by Hooke (31 times) during its rebuilding after the Great Fire.⁴

These London churches may owe inspiration from an earlier Dutch church in Haarlem, the Nieuwe Kerk, built in 1649 and designed by Jacob Van Campen (Fig. 4). Wren and, to a larger extent, Robert Hooke were very aware of Dutch Classicism and the influence is evident both in general layout and detailing.⁵ Almost as important a design symbol or feature in the Nieuwe Kerk along with the vaulted ceiling are the lower flat ceiling panels in the four corners. According to Wouter Kuyper:
The structural weight is focused on these outer squares, called tempietti because they resembled small temples – each united by architraves and connected by barrel vaults… and by the central crossing. Kuyper adds that when Wren heard Hooke’s account of Nieuwe Kerk he was “struck by the idea of creating a central Greek Cross within the square area of the whole church utilizing square temple-constructions in each corner.” To some, this feature is a symbol of the vault of heaven drawing together the four corners of the world.

In these layouts there was a desire to return to the simple forms of antiquity (Fig. 5). Unlike many similar-sized but rectangular meeting houses and churches in New England, St. Michael’s is a deliberate square form with cross-shaped vaulting such as found in several city churches in Haarlem during the 1650s and in London during the 1680s.

4. 17th Century Symbolism

This design motif was popularized in a widely influential treatise by the Spanish architectural theorist Juan Bautista Villalpando who in 1596 and 1604 wrote on the Temple of Solomon, along with a full commentary on the building as described by the prophet Ezekiel in chapters 40-42. Van Campen was particularly interested in Villalpando’s treatise and incorporated details of the latter’s imagery into the Nieuwe Kerk (Fig. 6).

In addition to the sanctuary, a principal element in the work is the nine-bay ground plan that the twelve outer nodes represent the Twelve Tribes of Israel. The four central nodes correspond to the Levitical families. Several eastern European synagogues built in the 1620’s feature this symbol of a square nine-bay ground plan with four center columns.

According to historian Sergy Kravtsov, the different meanings of Villalpando’s imagery depended upon the cultural context. Different faith communities gave different meanings to the diverse symbols. “In the [Dutch] Reform churches, Villalpando’s imagery symbolized a return to the genuine roots of religion following the concept of the New Children of Israel.” Three decades later, both Wren and Hooke were interested in the theme of Solomon’s Temple and its geometric properties with London as the site of the New Jerusalem.
In addition to the religious symbolism, some viewed Solomon’s Temple as a political symbol to justify the reigning monarchy. For examples, historian Howard Carlton notes “a particular view of Scottish history held that the Scots were descended from the ancient Israelites and that the Stuart dynasty was to be viewed as both the logical and physical heirs of the House of David.”

Antecedents to van Campen’s Nieuwe Kerk, are evident in a bird’s-eye view of the Temple Mount, from Villalpando’s 1604 treatise showing a nine-square grid ground plan and flared buttresses similar to the Nieuwe Kerk (Fig. 7). Van Campen’s immersion in the Temple story can be seen also in a comparison between Hebrew scholar Francois Vatable’s 1540s reconstruction of the Temple Sanctuary and the Nieuwe Kerk.

St. Michael’s original floor plan reflects the nine-square grid and the Greek cross shape of the vaulted ceiling (Fig. 8). A center aisle connected the main south entry door to the pulpit on the north wall, and a second west entry door under the bell tower faced the chancel (altarpiece and table) in its traditional east wall location.

5. Expanding the Footprint

In 1728 extensive preparations were made for the reception of a new rector, and with the growing population, the church was enlarged by an additional fifteen feet on the northern side (Fig. 9). The existing north wall was replaced by a pair of columns matching and aligning with the four central columns, thus giving the plan a more longitudinal axis. Extending the central aisle and the pulpit further back to the ‘new’ north wall provided room for additional box pews, and a flat ceiling over this new section (Fig. 10). A contemporary view of St. Michael’s displays cross-vault within a nine-square grid as viewed from the 1728 addition.

The asymmetrical addition was an opportunity to cover the triple-gable valleys that were prone to leaks in winter conditions – a problem less common in England’s milder climate. (Fig. 11). The new roof design placed roughly-made trusses atop the existing triple-gables and extended the new roof over the addition to form a “lean-to.” Without an underlying beam under the gable ridges, the trusses were supported only by the gable’s sheathing boards (Fig. 12). In 1995 it was determined that the truss connections needed reinforcement to more closely align with today’s safety code.
After the American Revolution, with the local economy struggling, maintenance was an increasing problem, and on July 1st, 1793 the 53-foot steeple was pre-emptively “taken down, being rotten” (Fig. 13). In the aftermath of the war, with an anti-monarchy sentiment, it was probably also a good idea to keep a low profile as an Anglican Church.

An 1818 drawing of the church’s exterior shows round-top windows typical of colonial Anglican churches, side-light windows beside the doors, widened bell-tower openings, porch canopy, and the west entry under the bell tower. A re-clapboarding project in 1978 verified many of these features and revealed that some of the round-top windows were not real, but painted trompe l’oeil semi-circular panels above square windows.

6. 19th Century Deterioration and Renewal

The building fabric at St. Michael’s continued to deteriorate in the early 19th century such that a major upgrade was needed in 1833, especially as the church was beginning to flourish (Fig. 14). The nineteenth century brought significant architectural change. Carl Lounsbury notes:

In the second and third decades of the nineteenth century, a number of Episcopal vestries selected Gothic as an appropriate historical form for their new buildings…. Gothic churches conjured powerful images of continuity with the devout spirit of medieval Christianity, forging an emotional link between contemporary Protestantism and an idealized era.

In Massachusetts, the 1833 separation of church and state hastened the trend towards Gothic Revival that would, in effect, symbolize and differentiate ecclesiastical from secular buildings. Local examples of Gothic Revival buildings and motifs, such as lancet windows, include St. Ann’s Church, Lowell, 1824, St. Stephen’s, Methodist Church, 1833, just down the street from St. Michael’s renovation of the same year, and in adjacent Salem, St. Peter’s Church, 1833 and the First Church, 1836.

Vestry records indicate that the old windows and box pews were taken away and new “Gothic windows” together with 66 new slip pews added (Fig. 15). The pulpit, altar, and original 1718 altar-piece now occupied the center bay of the north wall, likely with a two-tiered pulpit above a small vestry room. Installing Gothic windows at St. Michael’s was not a minor detail. It required cutting of the horizontal timber girts framing the east and west exterior walls (Fig. 16).
compensate for this, additional bracing was provided by the newly furred out walls, 16-inches inboard of the original walls (Fig. 17). Including the plaster vaulted ceiling, the building’s three layers of roof and double-wall construction provided welcome thermal insulation to the building envelope.

In 1844 construction of an adjacent chapel, vestry, and lecture room addition enabled St. Michael’s to remove the vestry room from the chancel to the new addition, and also provide a new wine-glass shaped pulpit to the left of the chancel, as shown in the interior photo, circa 1870 (Fig. 18). This gave primary focus and more room to the altar in the central bay just below the altar-piece.

In preparation for its 175th anniversary, St Michael’s Church underwent a dramatic transformation (Fig. 19). As Rev. John L. Egbert described:

> These plans included the replacing of the old clear glass windows with elegant stained glass ones of different designs illuminating various Scripture scenes; the painting of the walls and ceiling with four coats of oil colors, and then frescoing them in oil colors, with symbols in gold of the four Evangelists around the old chandelier where it joined the ceiling; the placing of broad wooden beams at different angles across the ceiling so as to bring out most prominently the “Greek Cross” which forms almost the entire ceiling, and is now of its chief architectural beauties.\(^{17}\)

The 1888 ceremony commemorating the church’s restoration included a presentation by the individual members of the Massachusetts State Senate of a stained-glass window they had funded. This window depicts Moses presenting the tablets representing the Ten Commandments – ‘The Law of Moses,’ and is located on the east wall at the original location of the altar-piece. The window also includes an image of the Massachusetts State seal. A photo from 1891 shows the polychrome interior and ceiling pattern with color stenciling (Fig. 20).

The early 20th century Colonial Revival brought the addition of two wooden pilasters on the north wall matching the octagonal columns that emphasized the column grid and longitudinal axis (Fig. 21). A decade later, the corner bay pews were removed and the altar rail extended from east wall to west wall, allowing the pulpit to be repositioned to the center of the corner bay and given an added sounding board. Mid-20th century changes include white-washing of walls and painting a
four-inch wide dark band where the ceiling meets the wall to visually simulate exposed framing members that further demarcate the extended nine-square grid.

Minor changes occurred in the late 1960s with a second altar brought back and placed outside the chancel area so that the rector could face the congregation (Fig. 22). And by 1997, after decades of discussion, two rows of pews in the center bay were removed for increased liturgical space for weddings, funerals, baptisms, etc.

7. St. Michael’s Steeple and Recent Discoveries

Several historical surveys of colonial churches had stated that St. Michael’s planned steeple was never implemented, however, two rediscovered watercolor renderings by noted sailor, shoreman, and parishioner Ashley Bowen (1728-1813) and a diary entry provided proof of the early steeple’s existence. St. Michael’s became part of a growing trend of churches and meetinghouses introducing steeples in the Boston area, beginning with the Brattle St. Church in 1699 (Fig. 23 upper right). Historian Kirk Shivell notes that the Brattle St. Church may have been patterned after Christopher Wren’s least assertive steeple in London, - St. Swithin’s Church - a simple octagonal spire, and a likely model also for St. Michael’s in 1714.

In 2004, looking toward its 300th anniversary in 2014, a study committee was formed to explore rebuilding St. Michael’s steeple and concluded it was both economically and technically feasible, guided by the National Park Service Standards of Reconstruction (Fig. 24).

To reinforce the steeple, required special braces to anchor the wood tower frame to the foundation (Fig. 25). Upon opening the exterior double wall to install the braces, an unknown mural was discovered on the outer sheathing. The 6 ft. x 3 ft. multi-color mural appears to coincide with the location of one of the original box pews and contains a cartouche with letters CW, perhaps that of Charles Wheden, one of St. Michael’s early Church Wardens. The decorative style of lettering is similar to the monogram of Henry Humphris, the 1714 Surveyor of the Works, that was found on the interior surface of a sheathing board during the 1978 re-clapboarding. Could such monograms identify an owner’s pew, and are there more in other areas?

8. Conclusion
In describing the church, 19th century Marblehead historian Samuel Roads stated that “The frame and all the materials used in the construction of the building were brought from England” (Fig. 26). This may be true but not in the way Roads meant. A 20th-century analysis of the wood frame revealed the framing timbers are a native white pine, a type frequently cut on the North Shore of Massachusetts in the eighteenth century.²¹ The design, with its religious and political symbolism, rather than the actual building material, may well have been what was brought from England in the early 1700s.

St. Michael’s addition, steeple removal, and Gothic style renovation greatly changed the building’s appearance (Fig. 27). The reconstructed steeple, however, helps restore symmetry, visibility, and also St. Michael’s colonial era silhouette within a local historic district containing nearly 300 structures that date, wholly or in part, from before the American Revolution. The symbolic form of Greek cross-vaulted ceiling within a nine-square plan, important to van Campen, Wren, and Hooke in designing Reformation-era churches in the 17th century, was extended to this side of the Atlantic and is still evident, though modified over the centuries as each generation of parishioners brought its approach to renewal and interpretation.
NOTES:


6. Ibid, 16.

7. Ibid, 46.

8. In historian Louis Nelson’s description of 18th century Anglican churches in Virginia he notes that “the barrel-vaulted ceiling hovering over the rectilinear pews created in the church interior a liminal space between the mortal and the divine,” the vaulted ceiling symbolizing the heavens.


10. Ibid, 334.


17. Parish Register 1852 – 1860 with additions thru 1903. Egbert’s Notes: 97-118.


The Evolution of a Working Church’s Trans-Atlantic Symbolism

Edward O. Nilsson, AIA

Marblehead Harbor and St. Michael’s Church (left), 1763, by Ashley Bowen. Courtesy of Marblehead Museum
Sir Francis Nicholson - 1655-1728

St. Michael’s Church – 1714 floor plan

Assumed 18th century view and framing axonometric
Nieuwe Kerk, Haarlem 1645-49 – Interior rendering of groin vault by Pieter Saenredam

Nieuwe Kerk, Haarlem – plan showing ceiling framing

Nieuwe Kerk, Haarlem – view of model Photos: E. Nilsson
Theological Objectives for 17th Century Protestant Churches

- Return to simple forms of antiquity
- Early churches as models
- Liturgical focus on sermons
- Ability to hear and observe liturgy

Nieuwe Kerk in Haarlem
The Netherlands, 1645-1649
- Greek cross in a square
- Groin vaults (intersecting barrel vaults)
- Four columns
- Flat ceilings in corners
- Dutch Classicism

Sir Christopher Wren's London City Churches
After the Fire of 1666 over 50 churches were rebuilt during the construction of St. Paul's Cathedral, 1675-1710. Three have features similar to St. Michael's:
- St. Martin's Ludgate, 1677-1684
- St. Anne and St. Agnes, 1677-1680
- St. Benet's, 1677-1683

Source of image a,b,and d: Eduard Sekler, "Wren and His Place in European Architecture."
Villalpando, chart showing symbolism of the Temple of Jerusalem. Plan – Great Suburban Synagogue, L'viv

Nieuwe Kerk, Haarlem (1649) northeast corner view and floor plan.

Detail of bird’s-eye view of Temple Mount, from Villalpando (1604) showing nine-square grid.

François Vatable’s reconstruction of the Temple (1540s) (left) and the model for van Campen’s Nieuwe Kerk, Haarlem. Sources: Carlton, Howard, Vision, Archetype and Microcosm: The Temple at Jerusalem in the Seventeenth Century.
St. Michael’s – 1714 floor plan

- Chancel (altar piece and table)
- Pulpit
- West entry door under bell tower
- South entry door
St. Michael's – digital image of 1728 building and pattern of triple gable structural frame with "lean to" addition

West wall framing 1714 and 1728

Ashley Bowen rendering – 1754 showing St. Michael's at left.
Sketch of 1728 trusses sitting atop triple gable ridges and photos of framing. Photos: E. Nilsson
St. Michael’s Church – digital image of 1793 building with steeple removed.

St. Michael’s Church – from a drawing dated 1818, showing widened bell tower opening, added south porch canopy, and second entrance under bell tower.
St. Michael’s Church – pre-1888 photo showing first parish hall, built in 1844, and extended in 1886, to left of building. Source: St. Michael’s Archive

St. Anne’s Church, Lowell, 1824, example of Gothic Revival. Design based on St. Michael’s Church, Derby, England.

St. Stephen’s Methodist Church on Summer St., built 1833.
St. Michael’s Church – digital image of 1833 building showing new clear glass Gothic lancet windows in lieu of upper round top and lower rectangular windows.

Drawing showing interruption of structural framing system for Installation of Gothic lancet windows.
1979 re-clapboarding project revealed previous window openings and view of exterior double wall construction.

Source: St. Michael's Archive
Assumed plan of St. Michael's – after 1845 renovation

Interior photo circa 1870. Source: St. Michael’s Archive.
Interior photo after 1888 renovations. Photo courtesy Peabody Essex Museum

View of the Moses window, given by members of the Massachusetts Senate 1888. Photo: E. Nilsson
Interior photo – 1891  
Source: St. Michael’s Archive
Mid-20th C view of Colonial white-washed walls and simulated timber framing at intersection of wall and ceiling.

Source: St. Michael's Archive
Schematic plan showing 1997 removal of two front rows of pews for increased liturgical space.
(Above) 1763 watercolor by Ashley Bowen; and detail of drawing showing Brattle St. Church steeple, 1699.
Pre-2014 view of St. Michaels

View of completed steeple

Photos: E. Nilsson
Monogram of Henry Humphris Surveyor of the Works, above, found on sheathing board during 1979 re-clapboarding.

Detail of mural with letters “CW,” likely that of Church Warden Charles Wheden, a contemporary of Henry Humphris.

Wall mural with cartouche “CW” discovered on exterior wall when interior wall opened for installing steeple support brace.

Photos: E. Nilsson
The Evolution of a Working Church’s Trans-Atlantic Symbolism

Edward O. Nilsson, AIA  enilsson@nsaarch.com