

Recreating the Chapel

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In the 16th- and 17th-centuries, religion permeated every aspect of individual's lives. Religion determined who you were, who you married, who your friends were, your chances of political freedom and economic success, your very existence. These were times of extreme religious tumult in England and all of Europe. The Reformation and Counter-Reformation pitted Catholic against Protestant.

From the repression of the Huguenots in France to the 30 Years War which raged across the heart of Europe, religion was cause for war and mayhem. England's internal conflicts mirrored this dynamic. Bloody Mary, who attempted her own Counter-Reformation in England, earned her nickname by the execution of large numbers of religious dissidents. Her half-sister and successor, Elizabeth, swung the pendulum in the opposite direction and suppressed Roman Catholics with an equal ferocity. This suppression took the form of outright torture and death and extreme political and economic deprivation. Many of these laws stayed on the books in England until 1829. Elizabeth was never called Good Queen Bess by her Roman Catholic subjects.



The 17th century saw continued conflict in England driven by religious intolerance. This culminated in the Civil Wars which saw Anglican fighting Puritan. Although wrapped in arguments of absolutism and democracy, there was an ever present and dominant theme of religious intolerance. It is within this context of religious turmoil that the uniqueness of the Maryland colony must be viewed.

From its first settlement in 1634, the Maryland colony was an experiment in religious toleration. Founded by the Roman Catholic Lord Baltimore, the colony was envisioned as offering freedom of conscience and economic opportunity to Roman Catholics and other religious dissidents from England and eventually elsewhere in Europe. From 1634 until 1695 the first settlement, St. Mary's City, served as the colony's capital and principal town. The religious struggles which had given birth to St. Mary's City and Maryland led

to the Calvert family losing the colony in 1689 and the removal of the capital to the Protestant stronghold of Annapolis in 1695. St. Mary's City was abandoned and eventually converted to agricultural fields.

Since 1968, the Historic St. Mary's City Commission has been charged with the responsibility to preserve, protect, research and interpret this unique historic site by developing an outdoor museum. Historic and archaeological research has been ongoing since the founding of the museum.

In the 1980s, research by Henry Miller demonstrated that St. Mary's City in the later 17th-century was a designed town using sophisticated Renaissance principals derived from the Italian Baroque. The plan is dominated by two large brick buildings, the Maryland State House and the Roman Catholic chapel. The reconstruction of the State House was built in 1934 as part of the celebration of the three hundredth anniversary of the founding of the colony. Within the museum it provides the anchor for one end of the town.



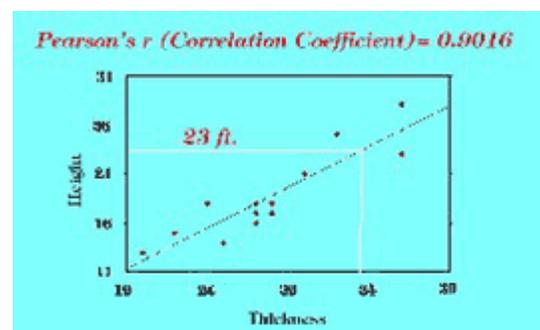
In 1988 the Research Department began a multi-year program to investigate the site of the brick chapel with eventual goal of reconstruction. With funding support provided by the National Endowment for the Humanities, we identified three distinct phases of activity in this area known as the Chapel Field. Today I wish to focus on only one of these, the Brick Chapel.



Dr. H. Chandlee Forman had identified the brick foundations of a large cruciform structure in 1938. His work had been very preliminary but had provided dimensional information and recovered architectural artifacts. Our work rediscovered this foundation and identified numerous features associated with the structure--including human burials within the church.

A range of observations concerning this building were made. First, the overall plan of the building was that of a Latin cross. Most contemporary Virginia churches were rectangular in plan. Second, the foundation was massive by 17th-century Chesapeake standards. The masonry was a full three feet in thickness and extended into the ground nearly five feet. Finally, the interior subsurface features provided detail about internal use of the building. Graves that appeared contemporary with the structure were limited to a zone in the nave, west of the top of the crossing arms of the church. A distinctive posthole further set-off the limits of the burial area and appeared to demarcate the limits of the nave.

A foundation three feet thick and nearly five feet deep suggested a very tall building. We were told by architectural historians that there was no relationship between the strength of the foundation and wall height. In the labor-starved setting of the 17th century



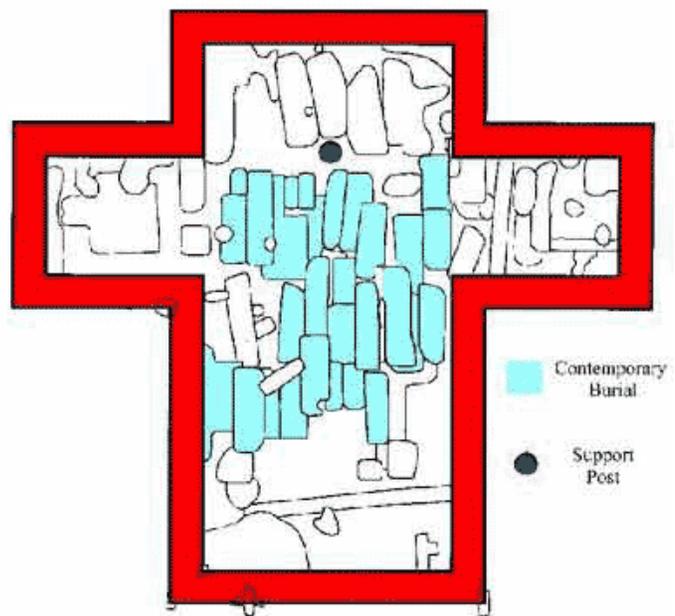
Chesapeake this did not seem to be a rational use of resources. Tim Riordan collected data on other brick churches from the colonial era and undertook a correlation analysis.

As you can see in this scatter plot there really is a strong correlation between foundation thickness and wall height for churches. Based on the chapel's foundation we would predict a building 23 feet high at the eaves.

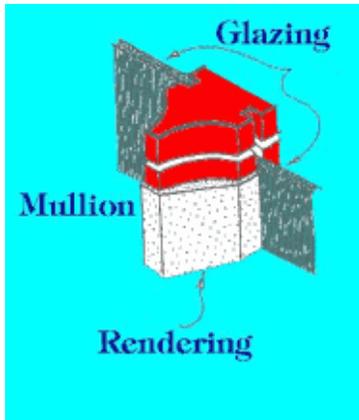
The relationship between foundation depth and wall height is a bit more problematic. Since foundation depth information is generally more available from archaeological examples we often do not know the height of the buildings. However, early building guides do suggest a relationship between wall height and foundation depth. *Neve's Builders Dictionary* first published in 1703 credits Andrea Palladio as proposing a rule which states that one sixth part of the building wall should be below grade as a foundation. For the St. Mary's City chapel this would predict a wall height of nearly 25 feet.

Leaving aside questions of building height, field observations suggested details about the internal use of space. The Chapel Field has burials which pre-date the brick chapel, burials contemporary with chapel, and burials after the chapel was demolished. These can be divided based on orientation and surface content analysis of the graves.

Burials contemporary to the building only occur west of the structural post mentioned earlier. We interpreted the post as an underpinning for a sommer beam which helped support a raised area for the altar with burials restricted to the nave. An additional area without burials, just below the left hand transept, suggested the location of the pulpit.



Analysis of architectural artifacts recovered provided additional detail. Mortar with ruled joints suggested a fairly standard colonial practice of creating shadow lines which had the effect of regularizing the highly irregular handmade brick. Plaster was recovered from the excavations but it all bore evidence of having been applied directly onto brick rather than wooden lath. Fragments of flat roofing tile of the same fabric as the brick suggested a tile roof. Numerous pieces of a distinctive building stone were recovered in the excavation. Examination of these specimens by Dr. Jonathan Edwards of the Maryland Geological Survey suggests an Old World origin. Research into 17th-century estate accounts note charges against the estate of Richard and Elizabeth Moy for the lifting of flooring stones for their burial in the Chapel. Clearly we had an imported stone floor.



Some of the most distinctive artifacts recovered from the excavation were special purpose-molded bricks. These occur in two forms at the Chapel site, jamb bricks and mullion bricks. Jamb bricks are used to outline window openings while mullion bricks provide window divides. Purpose molded bricks of these distinctive types have been found on only one other 17th-century site in the Chesapeake - the brick church at Jamestown. These bricks are molded with a quarter circle concavity in their corners and are known as cavetto bricks. Correspondence with Gerard Lynch, an English mason who authored the book *Brickwork: History, Technology, and Practice* suggests these cavetto-type bricks were designed for rendering in mortar. The concavity holds the mortar so that the finished look is that of stone framed and divided windows rather than brick.

Concurrently with the archaeological research on the site, Dr. Lois Carr, staff historian for Historic St. Mary's City, directed extensive historical research into the brick chapel. Specific evidence for a construction date was not forthcoming but circumstantial evidence points to sometime around 1667. As previously mentioned we had the estate account that suggested the presence of a stone floor. Additionally, we knew from a court case that one Robert Pennywell was charged in 1670 with breaking the windows of the chapel. We found numerous window glass fragments which confirmed glazed windows and allowed us to suggest the shape of the individual quarrels which made up the windows. Historical research supported the archaeology in some of these details but provided little additional information about the look of the chapel.

Given the ever tenuous position of Roman Catholics in England, it seems likely that there was an attempt to leave as little paper trail as possible. Only one contemporary description of the brick chapel is known. Governor Francis Nicholson in 1697 described the building as "a good brick chappell". Nicholson was one of the Royal Governors who ruled Maryland after the Calverts lost control of the Colony in 1689. He was responsible for the removal of the capital from St. Mary's to Annapolis. For him to call the building "a good brick chappell" it must have been one truly good brick chapel.

In parallel with this building-specific historical research, we undertook study of the context of public brick construction in Maryland in the 17th century. Building contracts for the Maryland State House of 1676 and St. Anne's Church in Annapolis survive, and reoccurring themes do emerge. These buildings were generally tall and included elaborate embellishments. Specifically, both building contracts call for "pyramids" on the corners of the structures.

"...with Basboards att the
Gable Ends & Piramedes..."
Maryland Statehouse, 1676

"...with Piramedes att the
four corners of the topp ..."
St. Annes Church, 1699

The form these "pyramids" took will be more fully described below.

With this collection of details and observations we sought out the assistance of architectural historians to aid in designing a reconstruction. Early help was provided by Carl Lounsbury and other specialists from Colonial Williamsburg. He suggested the only way to create a defensible reconstruction of a building for which we had no depiction was to determine a pattern based on surviving prototypes. Dr. Lounsbury suggested using surviving English parish churches to derive this pattern. We had the difficulty, however, of there being no Roman Catholic churches built in England in the 17th century which have survived.

Only one or two Catholic chapels were actually built in England during the period and these were Chapels Royal for the Catholic wives of Stuart Monarchs. How do you determine a pattern for the only brick Roman Catholic building constructed in the American British colonies? We decided we had to look farther afield to Catholic nations on the continent for precedence. We also decided we had to look deeply into the individuals who built and ministered in this church. This brought us to examining the architectural vocabulary of the resident Roman Catholic priests, who were members of the Society of Jesus, also known as the Jesuits. We were given great help in this quest by the assistance of Dr. Thomas Lucas, Jesuit priest and architectural historian who had assisted in the restoration of the home of Ignatius Loyola, the founder of the Jesuits.

The Society of Jesus had been organized by Ignatius Loyola in 1534. They have been characterized by Father Lucas as the "the shock troops of the Counter-Reformation". Intellectual enquiry and classical study were the hallmarks of their training. The Jesuits established colleges and universities throughout Europe. It is to these schools that English Roman Catholic gentry sent their children to be educated in the ways of the church. The very priests who came to minister in the Maryland missions were the same men who had served as university professors or chaplains to noble houses.



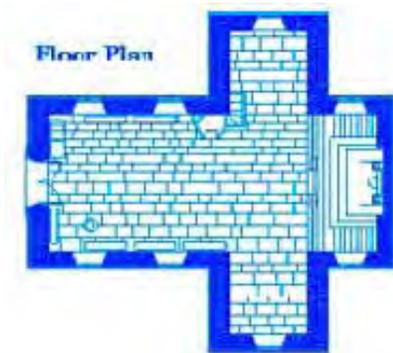
The Jesuits dominated church design in Europe in the later 16th and 17th centuries. Blomfield stated in his seminal study of French architecture "I express no opinion as to the value of what the Jesuit Order did, only the historical fact that in the seventeenth century, they practically revolutionized church architecture in every civilized country of the world except England".

The prototypical Jesuit church is the Gesu, the mother church of the Society in Rome. The basic plan follows the form of a Latin cross, with volumes of well-lit space dominating the design. Although adapting to local building materials and construction techniques, there is no mistaking a Jesuit church around the world. Similar distinctive buildings were constructed in Paraguay, the Philippines, Macao and anywhere else the Jesuits built



churches. In design they are quite tall with unobstructed interior views. Light dominates the design and focuses attention on the altar as a scene for sacred theater.

Jesuit design principles provided us with the pattern which we needed, but how much of this could be achieved on the Atlantic frontier of the 17th century? John Mesick and Jeffrey Baker of Albany, New York served as principal consultants on this phase of the planning of the reconstruction. They examined numerous extant colonial buildings and reviewed contemporary documents and European precedents. They envisioned the Latin cross plan as being made-up of 11 foot square interior modules.



Two of these 11 foot squares defined the interior of the nave. They argued that turning these modules into volumes of space suggested a building which was about 22 feet tall at the eaves. This fit rather well into our prediction of wall height based on foundation thickness and depth. They agreed that the burial pattern and placement of the interior post demarcated a raised altar area at the head of the cross, probably raised by three steps above the stone floor of the nave. Altar design and pulpit placement were suggested based on European precedents and proportions. Design elements for the tabernacle were taken from a surviving colonial tabernacle which tradition holds was used in the church in St. Mary's City.

One challenge which faced all designers of large, open interior spaces is how to support the roof without directly spanning the tops of the walls. Our consultants suggest the use of a series of scissors trusses which create a greater sense of internal volume by allowing a vaulted ceiling. The scissors truss is in red in these section through the building. Finish of the ceiling again relies on precedence. The absence of lath marks on any recovered plaster argues against a plastered vault. However, Yeocomico Church, built in 1703 in Westmoreland County Virginia, uses a timber sheathed vault demonstrating that this construction technique is within the bag of tricks of English colonial builders. Further precedents is offered by the Church of the Recollects in Quebec. In an 18th century engraving made after the Battle of Quebec, one can clearly see the timbered vault.

Exterior details for our proposed reconstruction are quite defensible. Mesick and Baker suggested a raised parapet design which allows the building facade to rise above the roof line. Several churches in Virginia used gables which extend above the roof line often as stepped or shaped gables such as this example from St. Peter's Church in Talleyville Virginia built in 1700, or the first Bruton Parish Church in Williamsburg (no longer extant) which can be seen in a contemporary depiction.



Elaboration of the exterior design is supported by cut brick details on colonial churches. The quoining on St. Luke's in Smithfield Virginia built around 1682 is created completely with cut brick. Additional

embellishment, especially the windows and door surround details is supported by the use of rendering on 17th century structures. Again, St. Luke's uses a rendered tripediment above the door.



Finally, the pyramids which seem from building contracts to be part and parcel of elaborate Maryland building designs, are interpreted as pyramidal spires. Inigo Jones' St. Paul's Cathedral in London provides this precedent. Among the definitions for pyramid offered by the Oxford English Dictionary is spire. The dictionary then quotes a contemporary account of a spire of St. Paul's being struck by lightning "a most rare pyramid of the Cathedral Church of St. Paul in London, was struck with fire from Heaven".

Taking all these design elements and combining them into a final pattern yields a very striking building. The internal plan has a stone-paved nave, a raised altar area and an offset pulpit. The longitudinal section shows the relationship between the altar, the pulpit, and the nave. Moving to the most formal, west facade we see the elaboration of the door surround and quoining created by outset brick and rendering. And sailing above are pyramidal spires, also rendered white to appear as stone.



This painting depicts the chapel as it may have appeared towards the end of the 17th century; a very tall, elaborate structure - truly monumental by 17th-century Chesapeake standards. A structure which will serve as a perfect counterbalance to the State House of 1676.



As we open the door and look in we see a massive well-lit volume of space with a soaring vault. A stone-paved nave gives way to a raised chancel surmounted with an elaborate altar. Certainly an appropriate stage for the performance of sacred theater.

Hundreds of details are yet to be worked out. Many questions will only be answered as we begin construction. The reconstruction of this building will allow us to better tell the story of how significant religion was in early Maryland and how it affected every colonist's life. We hope sometime in the not too distant future that visitors to St. Mary's City will be able to see this "good brick chappell" in all its glory.