

**Preliminary Report  
on the  
Architectural Survey  
of the  
Old Court House  
Barnstable, MA**

Prepared for  
Tales of Cape Cod

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The Plymouth Archaeological Rediscovery Project's work at the Sturgis Library in 2014, led to PARP being invited by Tales of Cape Cod to conduct a one day pro bonum architectural survey at the Old Court House in Barnstable, Massachusetts. On October 13, 2014, archaeologists David Wheelock and Craig Chartier of PARP inspected the building. The foci of our investigations were the attic and the crawlspace beneath the main portion of the building. The purpose of our investigation was to assess how much of the original 18<sup>th</sup> century fabric survives in the accessible portions of the building and what the potential was of discerning details regarding its original appearance.

### **Attic**

We gained access to the attic through a small hatch in the choir at the west end of the building and the survey started at the northwest corner. It became immediately apparent that the majority of what was visible in the attic dated to the 19<sup>th</sup> century and was related to the replacement of the original roof and the installation of an elaborate support structure for a vaulted plastered ceiling. This ceiling was installed when the Baptist church acquired the building in the middle 19<sup>th</sup> century.

Clues to the original roof shape were present at the corners where the footings for corner rafters, consistent with those used for a hipped or gabled roof, were found (**Figure 1**). The installation of the original roof apparently began at the northwest corner where a drawing was found that represented the original carpenter's calculations of the angles needed for these corner rafters was found (**Figure 2**). Once the carpenter had calculated at this corner the correct angle needed, he then transferred that angle to the other corners. As a result, we did not find similar evidence of calculations at the other corners. Along the south and north sides of the top plate, what may be the footings for the original common rafters were found to have been reused in the 19<sup>th</sup> century as the footings for the present rafter system. We did not think of it at the time, but one of things that needs to be checked is to see if rafter pockets exist on the east and west sides. The framing system for a modern hipped roof includes rafters on all four sides. The original roof may have been of a lighter frame than the present one and could have consisted of only four corner rafters that were strengthened by the roof boards joining them, but some rafters would have needed to be present on at least the north and south sides.

Evidence of what looks like a classic 18<sup>th</sup> century soffit, the projecting cornice of the original building, were found on the north and south sides and it is hypothesized that it once encircled the roof. The original water sawn external sheathing of the building was visible along the north and south walls. The original plate appears to be white oak and is hewn while all of the 19<sup>th</sup> century rafters are water sawn. Some of the most interesting findings were pieces of what are interpreted as original interior paneling that had been reused as scantling to help support the 19<sup>th</sup> century vaulted ceiling and as patches along the south wall. The paneling appears to be 18<sup>th</sup> century in date and was put together with mortise and tenon construction. It bears traces of what may be the original paint, a light gray green, and originally was probably affixed around the interior of the court house to chair rail height, although it could have extended right up the walls (**Figure 3**). Some pieces may have been used for the court bench and docket.

Close to the center of the building, between the two large 19<sup>th</sup> century trusses associated with the vaulted ceiling, is what appears to be a covered hole in the roof (**Figure 4**). A platform had been built beneath the hole using what appear to be reused stair risers (**Figure 5**). The roof hole and platform are conjectured to have been related either to a flagpole located at this point or simply to gain access to the roof for some other purpose.

Large mortises for an east to west running girt were found at the center of the east and west tie beams (**Figure 6**). This beam was probably supported by pillars extending from the beam to the floor of the courthouse. The presence of this beam may indicate that the original ceiling was flat and probably plastered.

### **Crawlspace**

The crawlspace beneath the main portion of the building is accessed through a hole in the floor of the closet at the northwest corner of the main floor. The total depth of the crawl space was over two feet, making it very comfortable to crawl around in. The first thing noticed upon entering it was a collection of mid-19<sup>th</sup> century case bottles and pottery that is assumed to have been deposited here during the building's conversion from a court house to a Baptist church. These artifacts were just below and to the south of the access hole. The foundation for a late 19<sup>th</sup> to 20<sup>th</sup> century chimney were visible south of the entry hole along the west wall (**Figure 7**). The base of the prick post in the center of the west wall was also visible. No evidence of an 18<sup>th</sup> century chimney was found.

The original floor appears to have been supported by half round white oak joists that originally ran north to south, as joist pockets are present along the north and south sills (**Figure 8**). The orientation of the joists was possibly flipped in the 19<sup>th</sup> century so that it ran east to west with the joists resting on top of the east and west sills and added white pine sleepers that ran north to south. The joists rested on top of the original sill. What may be original east to west running sleepers were positioned near the 19<sup>th</sup> century joists. The sleepers had “ship knee” reinforcements that were joined to the sill along the walls (**Figure 9**). These ship knees were white oak and were secured with iron pins to the sill and the sleepers. At various points the sleepers and joists were supported by stones and vertical timbers. Ship knees were present along the south wall.

Various pieces of architectural debris were found beneath the building. These included a pile of wall plaster, probably 18<sup>th</sup> century, along the south wall (possibly relating to the addition of the bell tower at that end in the 19<sup>th</sup> century), a piece of 19<sup>th</sup> century window molding found along the east wall, a riven shingle with red paint, and reused light green gray painted boards.

The south wall foundation was found to be stepped out where the bell tower was positioned and evidence of large iron pins was present, indicating that the sill of the bell tower was pinned to the original court house sill. The floor boards of the original court house appear to have been flipped in the 19<sup>th</sup> century and evidence of shadow lines from something- a docket or cupboard, were present on some.

The foundation was found to be field stone on the north and west sides and brick on the south and east. This probably means that those were the sides that people most commonly saw on the court house and that the brick was meant to serve as a means of conveying the prestige of the building. Possibly to save money, the brick was only used on 2 sides though.

Another interesting finding was the presence of what looks like, but probably isn't, a poured cement “crypt” beneath the western half of the main building. The construction measures approximately 6' east to west by 2' north to south and is about 1.5-2' deep. There are no pipes leading into it so it is not a cistern. It may be a sump as there is evidence that water collected (collects?) in it.

## **Summary**

This quick one day architectural survey found the following:

- the original roof has been removed and the only traces of it that are still present are the pockets for the rafters and the girt that ran along the ceiling of the court house
- a soffit originally ran all around the building
- the present roof and roofing system was installed in the 19<sup>th</sup> century, presumably when the Baptist church purchased the building, and elaborate truss system present in the attic was installed to support a plastered vaulted ceiling
- pieces of what are probably the original court house wall paneling survive in the attic, having been reused as scantling associated with the vaulted ceiling and as a patch along the south wall
- the floor of the court house had been renovated in the 19<sup>th</sup> century with the joists being flipped from north to south to east to west and the being raised up by placing the ends of the joists on top of the sill as opposed to being flush with the top of it, and by flipping the floor boards
- the original building appears to have had a brick foundation on only two sides, possibly indicating a desire by the town to have a fine, “modern” looking court house but not having the financial means to be able to pay for everything they would have wanted
- at one point the building may have been painted red, as a single 18<sup>th</sup> century shingle was found with red paint on it
- no evidence of an original 18<sup>th</sup> century chimney was found

## **Recommendations**

Our preliminary architectural evaluation should not be seen as the final word in the architectural and archaeological study of the building. I guarantee that if we, or any other qualified architectural historians, spend more time in the attic and under the floors of the building, some of the conclusions reached in this report will need to be modified and much more information will be gathered. We recommend that a full architectural archaeological survey be conducted of the building and the surrounding grounds. This would include:

- taking core samples of key timbers and having dendrochronological studies conducted to help date the construction of the building and document the changes that have occurred
- conducting an archaeological survey around the building to look for evidence of the use of the property prior to the construction of the court house and to help date the period of construction
- the creation of measured drawing of the building showing original elements and changes that were made during the building's life
- extensive background research in the town records and the creation of a comprehensive narrative of the documented history of the building and the findings from the archaeological and architectural studies

It is also recommended that any further changes made to the building be fully documented through the creation of detailed reports and photographs and the collection of samples of removed materials so that additional information regarding architectural details won't be lost. A qualified architectural historian should also be on hand during any work that involves tearing things out or cutting holes in walls and floors. Often details are revealed during such activities that can be recorded and may help to answer some of the questions that remain about the building.



Figure 1. Pocket for original hip roof corner rafter



Figure 2. Carpenter drawing in attic at NW corner



Figure 3. 18<sup>th</sup> century paneling on south wall



Figure 4. Roof hole



Figure 5. Platform made with reused risers beneath hole in roof



Figure 6. Girt mortise in attic



Figure 7. 20<sup>th</sup> century chimney base in crawlspace



Figure 8. Original joist pocket in south sill



Figure 9. White oak ship's knee brace