ARCHITECTURE IN VIRGINIA (AIV)

THE CLERESTORY DWELLINGS OF SOUTHEASTERN VIRGINIA
UNIVERSITY OF VIRGINIA

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ABSTRACT

A vernacular architectural feature, commonly known as the clerestory, is indicative of a four county region in southeastern Virginia. The domestic dwellings incorporating this feature are identifiable by either a clerestory dormer window, or by a half story constructed as a clerestory. The clerestory dwellings appear to have been built c. 1820 through c. 1850. There are fourteen recorded examples of this house type in the counties of Surry, Isle of Wight, Nansemond (now City of Suffolk), and Southampton. To date, research has indicated the clerestory dwelling is confined to these counties. Of the fourteen previously recorded, all but two survive. An inventory of the fourteen, along with eight other dwellings in the area thought to have been influenced by clerestory construction is included in this report.

The clerestory dwellings were probably built by one or two builders who lived in the area. The use of a clerestory as a half story may have origins in New England which, during this period, was building cotton textile mills at a rapid rate. The single dominant feature of the cotton mills of New England was the trapdoor monitors and clerestories, utilized for lighting the upper floors. Cotton was being grown in southeast Virginia for shipment to New England between 1820 and 1850. In fact, the highest yields of production came from three of the four counties containing clerestory houses. Therefore, it is anticipated that future research may reveal a builder or builders with direct connections to the cotton industry of New England, or a connection to the utility of clerestories as demonstrated in New England.
Acknowledgments

Special thanks to Michael Lipford and Antony Opperman for assistance in the field. Appreciation also extended to the following owners of clerestory houses: Mrs. Virginia Faison, Mr. Marshall Seward, Mrs. Marie Wilson, Ed and Caroline Bickham, and Mr. James Beale.
**TABLE OF CONTENTS**

- Introduction ................................................. 1
- Clerestory Dormer Houses ..................................... 4
- Clerestory Houses ............................................. 7
- Variations of the Clerestories ............................... 11
- Possible Origins of the Southeast Virginia Clerestory ... 12
- Endnotes ....................................................... 20
- Bibliography .................................................. 22
- Inventory of Clerestory Dwellings ......................... 24
In the southeastern coastal plain of Virginia, there were fourteen dwellings constructed in a four county region with a distinctive architectural feature that distinguishes them from other vernacular domestic dwellings in Virginia and possibly the United States. Constructed between 1820 and 1850, this feature, known as a clearstory or clerestory (1), was constructed to define a half story for small and moderately sized farm dwellings in the counties of Surry, Isle of Wight, Southampton, and Nansemond (now City of Suffolk). The clerestory was fabricated in one of two ways (Figure 1). The more prevalent, with nine examples, is the clerestory dormer which consists of an extended shed dormer with consecutive windows. The other, with five examples, is the clerestory house in which the half story is constructed as a clerestory.

Most of these structures were recorded in the late 1970s, either by the Virginia Historic Landmarks Commission or in the local history and pictorial books. The Virginia clerestories have not been studied as a collection, nor have any had the benefit of comprehensive individual research. Therefore, the scope of this study was to accomplish the following: define the geographic range in Virginia, establish the period during which they were built, identify
Figure 1.

CLERESTORY DORMER

Front

Side

CLERESTORY HOUSE

Front

Side
similarities and variations in construction techniques, develop a probable theory or theories regarding the origin and influence of the clerestory, and compile an inventory of all identified examples. Research methods included review of the Department of Historic Resources architectural inventory, interviews with several architectural historians knowledgeable in Virginia's vernacular architecture, review of secondary resources, interviews with property owners, and review of primary documents such as deeds, plats, historic maps and land tax records. Field work included photographic documentation, sketches of the houses, and measurements of the windows when accessible. Unfortunately, the scope of this project did not allow for an in depth search for a builder or builders associated with this dwelling type; however, future research efforts will focus on identifying builders.

With the one exception, the clerestories are located in a tightly defined geographic band that is bounded on the west by western Surry County, the east by western Nansemond County, the north by the James River, and the south by the Blackwater River (see map on back page). The one exception, the Beale House (87-102), is located in Southampton County, south of both the Blackwater and Nottoway Rivers and north of the Virginia/North Carolina line. Two main kinds of clerestories are found and have been classified as clerestory houses and clerestory dormer houses. Fourteen
clerestories have been identified along with eight additional dwellings that appear to be a variation of the clerestory dormers and clerestory houses. The variant embodies the framing techniques of the clerestories but did not include a row of continuous windows. The distribution of each of the three types is as follows:

<table>
<thead>
<tr>
<th>County</th>
<th>Clerestory Dormer</th>
<th>Clerestory House</th>
<th>Variation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surry County</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Isle of Wight County</td>
<td>6</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>City of Suffolk</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Southampton County</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Total 22

Architectural evidence combined with primary document research indicates that the period during which the clerestories were constructed ranges from 1820 to 1850. The earliest clerestory house appears to be the Beale House (87-102), c.1820, in Southampton County which is also the one that is geographically removed from the others. Elmshade (90-7) and Floods (90-10), both located in Surry County at the northwest limit of clerestory range, appear to be the
earliest clerestory dormers with dates of c.1820. The Seward House (90-5), a clerestory house in Surry County, may be the latest with a date of c.1850. The remainder date from 1830 to 1840.

The clerestory houses and the clerestory dormer houses share many general characteristics. They are all frame, clad with weatherboard, and constructed on a brick foundation or brick piers. Without exception, each has one or more brick exterior end chimneys constructed in three, five, or seven-course American-bond. They all have gable roofs, some with a shed or salt-box type extension on the rear. None of the structures exemplify exceptional craftsmanship, although there is evidence in several that the builder or builders made attempts to incorporate current stylistic trends in woodwork and detailing. Floor plans consist of one-room, one-room with shed addition, hall-parlor, and a 2/3 Georgian-plan. Although sharing many similarities, observers can easily distinguish clerestory houses from clerestory dormer houses.

**Clerestory Dormer Houses** (Figure 2)

The construction of a clerestory dormer is similar to that of a shed dormer. It is a vertical window opening with flush horizontal boards on the side and a shed roof, located on the slope of a gable roof. It differentiates from the shed dormer by the row of continuous windows and the "hinged" appearance where the main roof ridge and dormer
Figure 2.
Houses with Clerestory Dormers Recorded 1992

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
<th>Date</th>
<th>Clerestory Original</th>
<th>No. of Stories</th>
<th>Original Plan</th>
<th>No. of windows</th>
<th>No. of Panes Per Window</th>
<th>Operation</th>
<th>Both Roof Slopes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elmshade</td>
<td>Surry</td>
<td>c.1820</td>
<td>possibly</td>
<td>1 1/2</td>
<td>hall-parlor</td>
<td>6 each side</td>
<td>4</td>
<td>fixed</td>
<td>yes</td>
</tr>
<tr>
<td>90-7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Floods</td>
<td>Surry</td>
<td>c.1810</td>
<td>no</td>
<td>1 1/2</td>
<td>one room</td>
<td>5</td>
<td>9</td>
<td>fixed</td>
<td>no</td>
</tr>
<tr>
<td>90-10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>House*</td>
<td>Surry</td>
<td>c.1840</td>
<td>no</td>
<td>1 1/2</td>
<td>one room</td>
<td>5</td>
<td>4</td>
<td>2/2 dble hung sash</td>
<td>no</td>
</tr>
<tr>
<td>90-48</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jordan House</td>
<td>Isle of Wight</td>
<td>c.1795</td>
<td>no</td>
<td>1 1/2</td>
<td>hall-parlor</td>
<td>4 original</td>
<td>18 original</td>
<td>replaced</td>
<td>no</td>
</tr>
<tr>
<td>46-82</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Atkinson - Wells House</td>
<td>Isle of Wight</td>
<td>c.1795</td>
<td>no</td>
<td>1 1/2</td>
<td>hall-parlor</td>
<td>8</td>
<td>8</td>
<td>slide sideways</td>
<td>no</td>
</tr>
<tr>
<td>46-108</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Demolished
(Figure 2 continued on next page)
Figure 2 (continued).

Houses with Clerestory Dormers Recorded 1992

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
<th>Date</th>
<th>Clerestory Original</th>
<th>No. of Stories</th>
<th>Original Plan</th>
<th>No. of windows</th>
<th>No. of Panes Per Window</th>
<th>Operation</th>
<th>Both Roof Slopes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carroll’s Shop</td>
<td>Isle of Wight</td>
<td>c.1830</td>
<td>unknown</td>
<td>2 1/2</td>
<td>unknown</td>
<td>5</td>
<td>6</td>
<td>3/3 dble hung sash</td>
<td>no</td>
</tr>
<tr>
<td>46-3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Joyner-Jordan House</td>
<td>Isle of Wight</td>
<td>c.1770</td>
<td>no c.1839</td>
<td>1 1/2</td>
<td>unknown</td>
<td>6</td>
<td>4</td>
<td>2/2 dble hung sash</td>
<td>no</td>
</tr>
<tr>
<td>46-15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hearn House</td>
<td>Isle of Wight</td>
<td>c.1840</td>
<td>unknown</td>
<td>2 1/2</td>
<td>unknown</td>
<td>9</td>
<td>4</td>
<td>2/2 dble hung sash</td>
<td>yes</td>
</tr>
<tr>
<td>46-13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eley House*</td>
<td>Isle of Wight</td>
<td>c.1736</td>
<td>no c.1830</td>
<td>1 1/2</td>
<td>hall-parlor</td>
<td>4 - 9 pane 1 - 6 pane</td>
<td>9</td>
<td>3/6 top sash fixed</td>
<td>no</td>
</tr>
<tr>
<td>46-11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Demolished
roof meet. Also coined the "trapdoor monitor", the clerestory dormer looks as if the entire unit could drop down into the roof much like a trapdoor (Figure 1).

What is interesting about the clerestory dormer is that most are not original features of the dwelling. Rather, they are a second or third quarter nineteenth century modification to an earlier house. Floods (90-10) in Surry County, due to its deteriorated state, provided good insight regarding the method of alteration. Constructed as a one-room, one-story house c. 1810, Floods received its clerestory dormer and shed addition c. 1820. The exterior siding was not replaced when the roof was altered therefore, the original roof line is still visible. When the shed was added, the rear rafters were raised and extended to form a saltbox type roof to cover the shed addition. The front rafters retained the original slope; however, they were cut off where the clerestory roof begins and raised to form the slope of the dormer roof. The dormer windows were supported by new studs mortised into the sill (Figure 3). The windows were fixed in place with decorative beaded mullions on the interior and exterior. The alteration transformed what was probably a small space with limited use into a well lit, full size room.

The clerestory dormer house on Route 618 in Surry County (90-48), now demolished, is another good example of a dwelling that was altered to accommodate the clerestory
Figure 3.

Floods (90-10), Surry County

Alterations to roof (original roof line indicated)

Source: Virginia Historic Landmarks Commission, 1974

Clerestory Dormer Framing from the Interior
dormer. Last surveyed in 1973 by Bernard Herman, the alteration was described as follows:

"As originally built the principals of the roof were connected through half dove tails by collars on every pair of rafters. When the house was altered for the clerestory addition and a simultaneous catslide extension to the immediate rear of the house, the collars were cut from the principals and the principals themselves were cut, reangled and spliced to frame the clerestory while conversely the rafters were also angled up at a lesser pitch to the rear to take the salt box addition. The most curious feature of this process was not the structure itself, but rather that instead of an entirely new roof, the builders reused as much material as possible." (2) (Figure 4)

This described alteration is very similar to how the alteration was accomplished at Floods. Given the similar rudimentary techniques employed for each along with the close proximity to each other, it seems quite likely the alterations were the work of the same builder.

Two eighteenth century dwellings in Isle of Wight County, less than a mile apart and within sight of one another, had clerestory dormers added in the second quarter nineteenth century. The Joseph Jordan House (46-82) and the Atkinson-Wells House (46-108) were originally constructed as one-story hall-parlor houses. The principal rafters at the Atkinson-Wells House were probably spliced similarly to the house described above with the exception of two rafters that were left in place and are now exposed in the second floor hall. More unusual, after the second floor was plastered the exposed rafters were chamfered (Figure 5).

There are two examples in Isle of Wight County,
Figure 4.

House (90-48)
Surry County

Source: Virginia Historic Landmarks Commission 1973

Figure 5.

Atkinson-Wells House (46-08)
Isle of Wight County

Exposed rafters in clerestory dormer, second floor hall
Carrol's Shop (46-3) and the Hearn House (46-13), on which the clerestory dormer is the half story on a two-and-a-half-story house. Carrol's Shop has the dormer on one roof slope, whereas, the Hearn House has a dormer on both roof slopes. The Hearn House stands apart from the others in that the dormer roof does not extend to the ridge; therefore, the trapdoor appearance is not quite as prevalent. It is not known if either of these examples of a clerestory dormer is original.

The clerestory dormers on Elmshade (90-7), in Surry County, may be original. According to earlier survey documentation on this structure, the roof system is standard lapped rafters with collar supports (3). There is no evidence to suggest the original roof system was altered to accommodate the clerestory dormers. There are dormers on both slopes of the gable roof lighting two rooms that are separated by a partition wall that intersects the second window on the north side. It appears as if the windows were originally fixed in place and later had hinges placed on the top exterior part of each window allowing the window to swing out. The interior of the house was not accessible for this study; therefore, early survey data could not be confirmed or expanded upon.

**Clerestory Houses** (Figure 6)

Of the five clerestory houses documented in this study,
Figure 6.

Clerestory Houses Recorded 1992

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
<th>Date</th>
<th>Clerestory Original</th>
<th>No. of Stories</th>
<th>Original Plan</th>
<th>No. of windows</th>
<th>No. of Panes Per Window</th>
<th>Operation</th>
<th>Both Roof Slopes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seward Farm</td>
<td>Surry</td>
<td>c.1850</td>
<td>yes</td>
<td>1 1/2</td>
<td>hall-parlor</td>
<td>10 - 6 panes</td>
<td>6</td>
<td>slide sideways</td>
<td>yes</td>
</tr>
<tr>
<td>90-5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 - 4 panes</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elmwood</td>
<td>Isle of Wight</td>
<td>c.1830</td>
<td>yes</td>
<td>1 1/2</td>
<td>one room</td>
<td>7</td>
<td>4</td>
<td>2/2 dble hung sash</td>
<td>no</td>
</tr>
<tr>
<td>46-52</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Edward House</td>
<td>Isle of Wight</td>
<td>c.1837</td>
<td>yes</td>
<td>1 1/2</td>
<td>one room</td>
<td>5</td>
<td>6</td>
<td>3/3 dble hung sash</td>
<td>yes</td>
</tr>
<tr>
<td>46-107</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percy-Pitt House</td>
<td>Suffolk</td>
<td>c.1840</td>
<td>no</td>
<td>1 1/2</td>
<td>2/3 Georgian</td>
<td>9</td>
<td>9</td>
<td>slide sideways</td>
<td>no</td>
</tr>
<tr>
<td>133-34</td>
<td></td>
<td>c.1842</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beale House</td>
<td>Southampton</td>
<td>c.1820</td>
<td>yes</td>
<td>1 1/2</td>
<td>hall-parlor</td>
<td>12</td>
<td>4</td>
<td>2/2 dble hung sash</td>
<td>no</td>
</tr>
<tr>
<td>87-102</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
it appears each was consciously constructed in this manner originally. One reason for assuming this is because the construction involves the entire framing system of the second floor, as opposed to just the roof system. Irrespective of assumptions, none of the examples have evidence that indicates the clerestory is a modification of an original half story. It should also be noted that the clerestory, whether it is constructed on one facade or both, creates a distinctive side profile (Figure 1).

Two of the five have clerestories on both sides of the house. The Seward Farm (90-5) in Surry County is the larger, with a hall-parlor plan and eleven windows on each facade. Similar to Floods (90-10) and Elmshade (90-7) mentioned previously, partition walls on the second floor randomly intersect windows. However conceived, this type of half story construction obviously offers less space than a full second story. The continuous windows, with sills located approximately two feet from the floor, further limit the use of the space in that there is little wall space. In reality, the clerestory dwelling offers its occupants a one-and-a-half story dwelling with usable attic space.

The John Edwards House (46-107) in Isle of Wight County has the clerestory on both elevations as well. It appears that the original clerestory had a one-room plan with a shed addition. The house now includes a two-story addition on one side that appears to date to c. 1840. When added, the
front door was centered on the entire facade and the siding was replaced with beaded weatherboards. There is no evidence of a door in the original clerestory portion; however, one of the present windows may have been a door originally. If there were stairs in the clerestory house, they were removed when the formal stair was built in the hall of the two-story addition.

This plan is almost identical to Elmwood (46-52) located less than a mile from the Edwards House. Elmwood does not have a clerestory on the rear facade, instead the salt box roof extends over the rear shed addition. It too, has a two-story addition on one side with a centered front entrance and a formal stair in the central hall. Identical to the Edwards House, no stair presently exists in the clerestory part of the house. Further investigation into the modifications to the Wilson and Edwards House may reveal some interesting details regarding the original character of these two clerestory dwellings.

The remaining two examples exhibit the highest level of craftsmanship of the fourteen dwellings recorded in this study. The Percy-Pitt House (133-34) in Suffolk was originally a one-story single pile house built on a raised brick basement before 1840 (4). In 1842 it was raised to a clerestory with a 2/3 Georgian-plan. The front facade is a full clerestory and the rear facade has a salt box roof with a clerestory dormer at each end. Also the largest of the
fourteen, with three rooms on the second floor, it works as a full second story. One of the examples of a clerestory house variation is located nearby. The Mills Darden Farm (46-85) in Isle of Wight County, although modified and deteriorated, is similar in plan and proportions.

The Beale House (87-102) in Southampton County was built c. 1820. The clerestory is on the front facade only, with a salt box rear. It appears to have been constructed this way originally as there is no evidence on the exterior or interior indicating a rear shed addition. Although having the appearance of a half story, the clerestory has two large rooms separated by a partition wall that intersects one of the windows. A Greek Revival I-House was added onto the clerestory house c. 1840 at which time all the woodwork and mantels were replaced in the clerestory portion. This house offers an interesting opportunity for study. Situated close to North Carolina in Sunbeam, Virginia, it is removed from the other clerestories. Second, the craftsmanship exhibits a higher level of sophistication than the others and the entire structure is on a grander scale. It also appears to be one of the earliest examples.

As is the case with most vernacular structures, no two are exactly alike. Each of the fourteen identified sets of clerestory windows varies in size, length, height, number of windows, and method of operation. The number of windows
range from five to nine with the number of lights ranging from four to nine. Three modes of operation are exhibited. These consist of fixed in place, alternating fixed and sliding sashes that move sideways, and the double-hung sash. In each case, all the individual windows were pegged together. If nails were evident in the framing they were usually cut nails with machine cut heads. For those windows that were measured, the muttons consistently measured 3\(\frac{1}{4}\)" in width.

**Variation of the Clerestories**

As mentioned before, eight dwellings located in close proximity to the clerestories have characteristics that indicate their construction may have been influenced by the clerestories, or vice versa. These structures are identified on the map on the back page and photographs have been included for illustration (see inventory); however, time restraints did not allow for further analysis. The Warren's Crossroads House (90-36) in Surry County and the Faison Farm (90-72) in Surry County are variations of the clerestory dormer. The other six resemble the clerestory dwellings in that the second story is framed like a clerestory and the side profile is identical (Figure 1). The difference for both types of variations is the absence of contiguous windows.
Possible Origins of the Southeast Virginia Clerestory

The definition and the approach to the study of vernacular architecture always raises interesting questions. In general terms, vernacular architecture can be described as those structures and buildings built by the common man for the common man for the purpose of accommodating the perceived needs and functions of its occupant with limitations defined by the availability of local materials and skilled artisans. How then do the mid-nineteenth century clerestories of southeastern Virginia fit into this framework?

Their modest size combined with their inland locations within each county signifies that these were the dwellings of the middling farmer as opposed to the river plantation elite. The distinctiveness of the physical appearance of the clerestories, the compactness of location in the region, combined with the moderate level of craftsmanship all suggest these to be the work of one builder or perhaps two working in conjunction. Given that no two are identical, the clerestory builder or builders may have introduced the concept to clients and then allowed them define dimensions, number of windows, and mode of operation. It was not uncommon for an artisan or carpenter to employ personal detailing in their work, leaving behind a "trademark" that identifies them. Normally it is a bit more subtle, such as particular paint graining techniques or a variation in
A look at a recent comprehensive study of traditional building practices in North Carolina may offer some support to the idea that only one or two builders were involved with clerestory construction in Virginia. With specific reference to the habits of the rural builder, Catherine Bishir states "The rural setting also required the country workman to be mobile. ....even the most stable rural artisan operated in a pattern of circular mobility. North Carolina examples of this period (1730-1830) suggest that builders commonly worked over a range of two or three counties around a home base, with occasional ventures to distant communities if a big project appeared" (5). Perhaps the clerestory builder resided in central Isle of Wight County and his one "big project" was the larger and grander Beale House in southern Southampton County.

Use, benefit, and function always come to mind when questioning why a structure was built the way it was. Dell Upton suggests that the clerestory construction represents an intermediate step between a half story with dormer windows and a full second story (6). This would certainly seem true when referring to the one-story dwellings that were very intentionally converted to a half story by the addition of the clerestory dormer. Resulting in maximum light capacity and full head room, the clerestory dormer modification transformed a one-story dwelling to a one-and-
a-half story dwelling that had all the benefits of a full second story. For those who may not have the means or the skills to build a full second story, clerestory dormer construction offered an interesting solution to dwelling expansion. It is interesting that, for the most part, the clerestory dormers were not original. It may be that the clerestory house was introduced first and it influenced builders or property owners to make a similar type of alteration to existing buildings in an attempt to achieve the same results.

The largest question remains, where did it come from and what are its influences? Clerestories are not unfamiliar on the American landscape; however, they postdate the Virginia clerestory dwellings by fifty or sixty years. Built with massed produced parts, the Craftsman dwellings of the early twentieth century often incorporate a dormer that is similar to the clerestory dormer. Industrial buildings and train sheds from the early twentieth century also have large clerestories. These later adaptations were obviously not influenced by the small collection of clerestories in southeast Virginia, instead they were modeled after a specific early nineteenth century industrial structure: the New England cotton mill. Comprehensive analysis may demonstrate that the mid-nineteenth century clerestories in Virginia were the first direct offshoot of this structural form.
The trapdoor monitor and the clerestory were first introduced in this country in the new cotton textile mills in southern New England in the late eighteenth century. Samuel Slate, an Englishman, brought his knowledge of English textile technology to America in 1789. He built his first mill in Pawtucket, Rhode Island in 1793 (7). The mill was a simple rectangular frame structure, similar in appearance to the common grist mill with the exception of a new curious feature: the trapdoor or eyebrow monitor (Figure 7). Along with his expertise in cotton manufacture Slater brought with him his knowledge of cotton mill construction. The cotton mills of southern New England represented this country's entrance into industry and the mill structures themselves set the precedent for the factory architecture for the next century (8).

The buildings were designed specifically to hold long rows of machines. Typical features required by each manufacturer included a rectangular edifice, long and narrow, multi-story, numerous windows, and a simple unbroken interior plan (9). In almost every instance, the attic space was lit by a trapdoor monitor. As the industry grew and the mills became larger, they were often constructed of stone as opposed to wood and the trapdoor monitor eventually gave way to the full clerestory (Figure 8). The full clerestory allowed for maximum light and was described as creating "an intriguing silhouette" (10). It was
Figure 7

Samuel Slater Mill, Pawtucket, Rhode Island

Source: *Early American Mills*
by Martha and Murray Zimiles

The Old Slater Mill, Pawtucket Rhode Island.
Figure 8

Davisville cotton mill, Rhode Island, 1848
Source: Early American Mills by Martha and Murray Zimiles

Uxbridge Cotton Mills, Massachusetts, 1825-1829
Source: Early American Mills by Martha and Murray Zimiles
acknowledged that the space was not as wide as the floors below; however, for the purposes of textile production it was more usable. The Carolina Mill in Rhode Island utilized both the clerestory and the trapdoor monitor (Figure 9). Another particularly interesting example was the Phoenix Mill, also in Rhode Island, which had a double clerestory monitor. Martha and Murry Zimiles state the clerestory "became one of the outstanding features of mills from the first half of the nineteenth century" (11).

By 1810 there were one hundred cotton mills in New England. This number continued to grow throughout the nineteenth century as New England became the center of American textile manufactory. By 1830, New England was second to Great Britain in textile manufacturing (12). Mill architecture never became excessive in its employment of stylistic features of the century except in the detailing on the central tower which held the stairs. Most mills were designed by engineers, not architects and function was the driving force behind the form. Although interesting in appearance, the clerestory was not designed for aesthetic reasons. When turbine power was introduced after 1850 the mill structures became even larger and the clerestory feature was dropped for a flat roof.

Cotton textile mill companies often built company housing for its employees. Probably also designed by mill engineers, most mill worker housing was one to one-and-a-
Figure 9

Carolina mill, Rhode Island, 1841

Source: *Early American Mills* by Martha and Murray Zimiles
half-stories with a side entrance and a small trapdoor monitor to light the attic (13). Research to date has indicated that the remaining examples of mill housing in New England and the examples in Virginia may be the only dwellings in the United States that have clerestory dormers.

The height of construction of the cotton clerestory mills of New England coincides with the period of clerestory construction in Virginia. Figure 10 illustrates the major mills for the period and the type of clerestory construction employed. This period also coincides with what may be the direct link between New England and southeastern Virginia: cotton.

Simply stated, the southern states grew cotton and New England manufactured cotton. The majority of the cotton was grown in North Carolina and states further south; however, by 1839 cotton was grown in fifty-nine counties in Virginia (14). Most of these counties were east of the Blue Ridge with the largest production coming out of the southeastern counties. More specifically, in 1839 the largest production came out of Southampton County, Surry County, Greensville County, and Nansemond County (City of Suffolk) (15). Figure 11 more clearly illustrates the concentration of cotton production in Virginia from 1820 to 1850. Note that none of the Virginia clerestory dwellings pre-date or post-date the cotton production years of this region.

The southern states grew the cotton because they had
Figure 10.

Examples of major cotton mills in New England that utilized clerestory construction

Source: *Early American Mills* by Martha and Murray Zimiles

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
<th>Date</th>
<th>Construction</th>
<th>Type of clerestory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slater Mill</td>
<td>Rhode Island</td>
<td>c.1793</td>
<td>wood frame</td>
<td>trapdoor monitor</td>
</tr>
<tr>
<td>Freeman Company</td>
<td>Massachusetts</td>
<td>?</td>
<td>stone</td>
<td>clerestory</td>
</tr>
<tr>
<td>Carolina Mill</td>
<td>Rhode Island</td>
<td>1841</td>
<td>stone</td>
<td>both</td>
</tr>
<tr>
<td>Davisville Mill</td>
<td>Rhode Island</td>
<td>1848</td>
<td>wood frame</td>
<td>clerestory</td>
</tr>
<tr>
<td>Crown &amp; Eagle</td>
<td>Massachusetts</td>
<td>1825</td>
<td>stone</td>
<td>both</td>
</tr>
<tr>
<td>Quidnick Mill</td>
<td>Rhode Island</td>
<td>1848</td>
<td>?</td>
<td>clerestory</td>
</tr>
<tr>
<td>Governor Harris</td>
<td>Rhode Island</td>
<td>1851</td>
<td>stone</td>
<td>clerestory</td>
</tr>
<tr>
<td>Hampton Mill</td>
<td>Rhode Island</td>
<td>?</td>
<td>stone</td>
<td>double clerestory</td>
</tr>
<tr>
<td>Northbridge Mill</td>
<td>Massachusetts</td>
<td>1831</td>
<td>?</td>
<td>clerestory</td>
</tr>
</tbody>
</table>
Figure 11

Cotton Production in the South, 1820-1850

Figure 11 (continued)

COTTON PRODUCTION
1840
EACH DOT REPRESENTS 2,000 BALES
MAP 97

COTTON PRODUCTION
1850
EACH DOT REPRESENTS 2,000 BALES
MAP 99
the labor to do it. Southern labor consisted primarily of slave labor which was not considered effective in large scale manufacturing of goods. Skilled immigrant labor avoided the southern states because they could not compete with slave labor, therefore, settling in New England and providing the mills with labor (16). The majority of the raw cotton was shipped to New England and Great Britain. After the War of 1812 began, cotton was shipped exclusively to New England which launched the large-scale construction of cotton textile mills (17). The north and south continued this dependent relationship until the beginning of the Civil War. The sudden loss of its raw material caused many New England mills to close which resulted in massive unemployment. The south, by loss of its market experienced similar types of negative economic effects.

There is a clear connection between southeastern Virginia and New England during the early and mid-nineteenth century. Did a builder from this region of Virginia have an opportunity to visit New England and become interested in the new types of industrial architecture? Or did a builder or engineer from New England, skilled in clerestory construction settle in one of the four counties in Virginia? Many of these questions can probably be answered if further research identifies a builder or builders. Until then one can continue to admire the architectural distinctiveness of the clerestories; and speculate on the motivations and
influences on the builders of clerestory dwellings in southeastern Virginia in the first half of the nineteenth century.
ENDNOTES


8. Ibid. 106.


10. Ibid. 109.

11. Ibid. 109.


15. Ibid. 44.


17. Ibid. 87.
Bibliography


INVENTORY OF CLERESTORY DWELLINGS IN SOUTHEAST VIRGINIA
MAY, 1992
**ELMSHADE (90-7)**

**Type:** Clerestory Dormer House  
**Location:** Route 10, Cabin Point, Surry County  
**Date:** c. 1820  
**Condition:** Good  
**USGS Quad:** Savage  
**UTM:** 18/319580/4117140
ELMSHADE (90-7)

(Continued)

South facade
FLOODS (90-10)

Type: Clerestory Dormer House
Location: Route 610, Surry County
Date: c. 1810, Dormer - c. 1820
Condition: Very Poor
USGS Quad: Claremont
UTM: 18/330740/4117690

Note: wall intersecting clerestory window
(Continued)

Second floor
Interior
Stair hall
Wall intersecting
clerestory window

FLOODS (90-10)

Fixed window,
now removed
Note: pegged
construction
SEWARD FARM (90-5)

Type: Clerestory House
Location: Route 10, Surry County
Date: c. 1850
Condition: Good
USGS Quad: Runnymeade
UTM: 18/336370/4109740

West facade

East facade
**HOUSE (90-48)**

<table>
<thead>
<tr>
<th>Type</th>
<th>Clerestory Dormer House</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>Route 618, Surry County</td>
</tr>
<tr>
<td>Date</td>
<td>?, Dormer - c.1840</td>
</tr>
<tr>
<td>Condition</td>
<td>Demolished</td>
</tr>
<tr>
<td>USGS Quad</td>
<td>Dendron</td>
</tr>
<tr>
<td>UTM</td>
<td>18/331790/4109680</td>
</tr>
</tbody>
</table>

Northwest facade

Photograph: B. Herman, 1973, VHLC
JORDAN FARM (46-82)

Type: Clerestory Dormer House
Location: Route 683, Isle of Wight County
Date: C. 1795, Dormer - c. 1820-1840
Condition: Good
USGS Quad: Raynor
UTM: 18/342460/4093090

North facade

Clerestory Dormer detail
ATKINSON-WELLS HOUSE (46-108)

Type: Clerestory Dormer House
Location: Route 681, Isle of Wight County
Date: C. 1795, Dormer - c. 1842
Condition: Good
USGS Quad: Raynor
UTM: 18/343840/4094040

East facade

Clerestory Dormer detail
ATKINSON-WELLS HOUSE (46-108)

(Continued)

Second floor interior

Southwest facade
HEARN HOUSE (46-13)

Type: Clerestory Dormer House
Location: Route 258, Isle of Wight County
Date: c.1840
Condition: Fair
USGS Quad: Smithfield
UTM: 18/353370/4093020

West facade
Note: Clerestory windows covered
CARROLL'S SHOP (46-3)

Type: Clerestory Dormer House
Location: Route 665, Isle of Wight County
Date: c.1830
Condition: Good
USGS Quad: Benn's Church
UTM: 18/361000/4089900

West facade

Northwest facade
Clerestory dormer detail
JOHN EDWARD'S HOUSE (46-107)

Type: Clerestory House
Location: Route 652, Isle of Wight County
Date: c.1837
Condition: Good
USGS Quad: Smithfield
UTM: 18/348060/4087170

North facade

South facade
JOHN EDWARD'S HOUSE (46-107)

(Continued)

East facade
WILSON (ELMWOOD) (46-52)

Type: Clerestory House
Location: Route 258, Isle of Wight County
Date: c.1830
Condition: Good
USGS Quad: Smithfield
UTM: 18/349640/4087040

West facade

Clerestory detail
<table>
<thead>
<tr>
<th>Type:</th>
<th>Clerestory Dormer House</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location:</td>
<td>Route 637, Isle of Wight County</td>
</tr>
<tr>
<td>Date:</td>
<td>c.1770, Clerestory Addition - c. 1839</td>
</tr>
<tr>
<td>Condition:</td>
<td>Good</td>
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<tr>
<td>USGS Quad:</td>
<td>Windsor</td>
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<tr>
<td>UTM:</td>
<td>18/350780/4079490</td>
</tr>
</tbody>
</table>

**West facade Photograph:**
Gary M. Williams 1968, VHLC

**Clerestory Dormer Detail Photograph:**
Gary M. Williams 1968, VHLC
PERCY-PITT HOUSE (133-34)

Type: Clerestory House with Clerestory Dormers on rear
Location: Route 10/32, Suffolk
Date: c.1842
Condition: Excellent
USGS Quad: Chuckatuck
UTM: 18/358720/4081880

East facade

West facade
ELEY HOUSE (46-11)

Type: Clerestory Dormer House
Location: Route 607, Isle of Wight County
Date: c.1736, Clerestory Addition - c. 1830
Condition: Demolished
USGS Quad: Windsor
UTM: 18/347980/4072560

Photograph: Calder Loth 1969, VHLC

Photograph: Calder Loth 1969, VHLC
BEALE HOUSE (87-102)

Type: Clerestory House
Location: Route 684, Sunbeam, Southampton County
Date: c.1820
Condition: Very Good
USGS Quad: Sunbeam
UTM: 18/318730/4050960

Southwest facade

Southeast facade
BEALE HOUSE (87-102)

(Continued)

South facade
BEALE HOUSE (87-102)

(Continued)

Clerestory detail

Interior Clerestory
CLERESTORY VARIATIONS

Warrens' Crossroads House (90-36), Surry County, Rt. 10

Faison Farm (90-72), Surry County, Route 31
CLERESTORY VARIATIONS

Bill Sykes House (46-75), Isle of Wight County, Rt. 620
Photograph: Ed Chappell, 1975, VHLC

Mills Darden Farm (46-85), Isle of Wight County, Rt. 606
Photograph: Bernard Herman, 1973, VHLC
CLERESTORY VARIATIONS

Cedar Acres (46-4), Isle of Wight County, Rt. 644
Photograph: Gary Williams, 1968, VHLC

Seeds House (46-21), Isle of Wight County, Rt. 644
Photograph: Gary Williams, 1968, VHLC
CLERESTORY VARIATIONS

Spady House (46-133-35), Suffolk, Route 10/32

Holmes School (87-28), Southampton County, Rt. 635