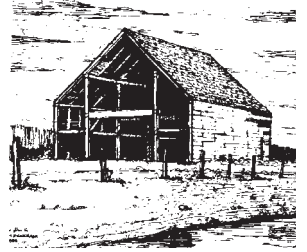


DUTCH BARN PRESERVATION SOCIETY NEWSLETTER

SPRING 2009

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A Rare One-Aisle Barn with Basement

By Gregory D. Huber

A rare and important barn form of Dutch-American type is located on the west side of Route 32 at the old LeFevre farm a few miles south of Kingston and just south of Bloomington in Ulster County, New York. The farm sits a little to the east of the New York Thruway. The barn is located directly across the street from an eighteenth century Dutch stone house. The present owner, Phyllis Noreen, bought the farm with 22 acres from a member of the LeFevre family in August 1979. Subsequent purchases increased her holdings to 130 contiguous acres, 95 of which were put into a conservation easement in 2001.

Visits to the Barn

The barn was visited by the author and his father John Huber, Jr. in the summer of 1986 (Photo 1). At a later date a call from Ted Hilscher of Greene County, New York to Robert Ensminger, the well-known author of *The Pennsylvania Barn*, prompted a visit by Ensminger.¹ Hilscher had noted that a basement level longitudinal wall was set back a few feet from the front line of the barn. This recessed wall was suggestive of the cantilevers common to certain Pennsylvania fore-bay barns, which are not known to have been built in the Hudson River Valley.

Bob called me and I told him that the barn was strictly of Dutch-American design. Remaining curious, he visited the structure in November 1996 and was satisfied that it was not at all a Pennsylvania fore-bay type barn. In April 2003 the author returned to the site and documented the barn by measuring it and taking photographs of its exterior. The structure was then in generally good condition but it is now in a ruinous state with a collapsed roof and partially ruined exterior walls (Photos 2 and 3).

LeFevre Stone House

The associated stone house on the east side of Route 32 underwent a major alteration a number of decades ago when its roof was modified from a gable to a gambrel form. The ridgeline of the house is basically parallel to the road.

The house may date back to the first half of the eighteenth century and was possibly built in two sections as there is an interior transverse stone wall in the basement. The present owner stated that one (un-named) researcher, after looking at the house, believed that the narrow room in the basement represented the original portion of the house. Much of the interior has been modified but a good deal of original flooring exists along with



Photo 1. The LeFevre barn in April 2003. Wood roof shingles are plainly seen along with horizontal weather-boarding. At left on the basement level is the recess which initially suggested a possible connection to Pennsylvania fore-bay barns.

(continued on page 2)

One-Aisle Barn with Basement (continued from page 1)



Photo 2. The LeFevre barn with roof collapsed, May 2009. The side walls remain mostly intact but the south end wall has fallen. Trees have been encroaching on the barn for a number of years.

an original divided door that survives in the basement.

LeFevre Barn

The LeFevre barn has an interesting, complex and perhaps unique history, which is revealed after a close scrutiny of its fabric and construction details. The now-ruinous barn is located about 75 feet west of Route 32, at the bottom of a thickly-wooded hill to the west. In its final form the barn was a four-bay two-level banked timber framed structure of two distinct sections: a three-bay part at the south that was recycled from the components of a one-aisle one-level barn, and a newer one-bay section located at the north end.

This barn represents one of five forms discussed in the second edition of *The New World Dutch Barn*.² In the first edition of 1968, Fitcher confined his study to the basic characteristics of the classic three-aisle barn type. In the last 20 years a greater awareness of the range of forms utilized by Dutch-American barn builders has developed.

Perhaps 30 or more Dutch-American farmsteads in New York and New Jersey retain one-aisle barns. It is not presently known how widespread the form was in the eighteenth and first third of the nineteenth centuries but it is apparent that the one-aisle barn had

to have played at least a fairly significant role on a number of Dutch-American farms. While the precise function of these barns has yet to be determined, it would appear that a number of these barns served as storage facilities for farm crops along with possibly stabling at least some farm animals.³

Exterior of Barn

The exterior dimensions of the barn, including both sections, are 49'-8" by 26'-7". The barn is oriented so that the side wall facing the main road basically fronts east. The height of the side walls (from the top of the wall plate to the bottom of the sill) is 15 feet. The roof slope is moderate. The exterior originally had horizontal pine weatherboarding, 9 to 10 inches wide, secured with cut nails. Almost the entire north end wall and the west or bank wall retains the original siding while the east and south walls have replacement horizontal siding which is secured with wire nails. The north bay of the three-bay section has a sliding wagon door. At the basement level, the front or east wall is open to the interior. The south basement



Photo 3. Detail of barn, showing anchorbeam, August 2009.



Photo 4. The LeFevre house, August 2009.

wall sill is supported by several hewn posts, two of which are tenoned into the sill.

A lean-to shed with an open area on the first floor is located on the west elevation. No field notes were taken on the interior of this part of the building, and so it is difficult to know when this section was added. At the south end it can be seen that there is horizontal siding but it is not continuous with that on the south wall of the one-aisle barn.

Three-Bay Section

The original site of the three-bay one-aisle barn is unknown. With the exception of the rafter system, the three-bay section now incorporated into the second level of the barn is largely original. That the original rafters, probably hewn, were replaced is documented by the series of empty notches in the wall plates. Presently there are twelve pairs of pole rafters, each pair pegged at the top. They are likely pine (*Pinus strobus*). The end wall rafter pairs each had a collar beam; only the pair adjacent to the south end wall is intact at present.

Tree Species Used

The three-bay section consists of four bents or framing units along with the connecting wall plates and girts. Each bent is comprised

of two hewn oak (*Quercus spp.*) posts that average about 9" by 10½". In addition, each bent has a horizontal beam that might be called an anchor-beam, its top surface at an elevation 2'-8" below the bottom surface of the wall plate, and they average 11" by 8½" in size. The tops of these beams are 11'-6" above the floor. The beams are hardwood; two or three may be of tulipwood (*Liriodendron tulipifera*) and one may be oak. The union of each beam to post is by means of regular housed mortise and tenon joinery and is formed by angled cuts also referred to as diminished haunched housing. This is a common early nineteenth century style of joinery. Each beam-to-post union is double pegged. Two hewn oak end braces average 5½" by 3½" in cross-section. They attach to both beam and post four feet from the point where the beam and post meet and thus are set at 45 degree angles.

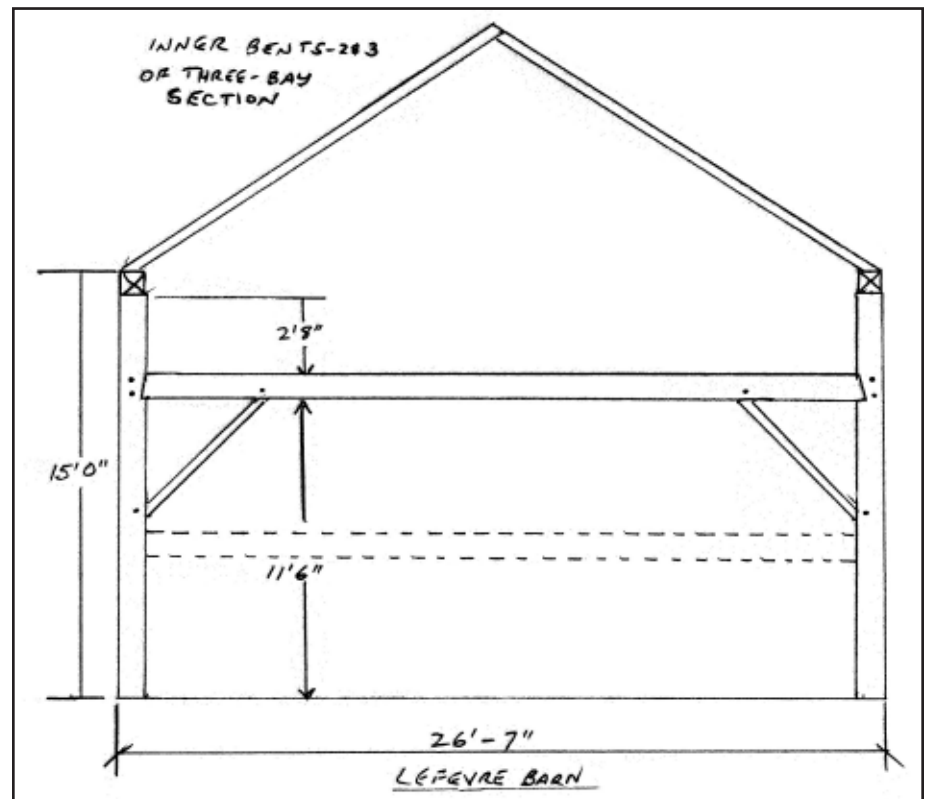


Figure 1. Section showing an inner bent of the three-bay section, with a high-placed beam with end braces and side wall posts. Below the beam, indicated by dashed lines, is the former position of a second beam.

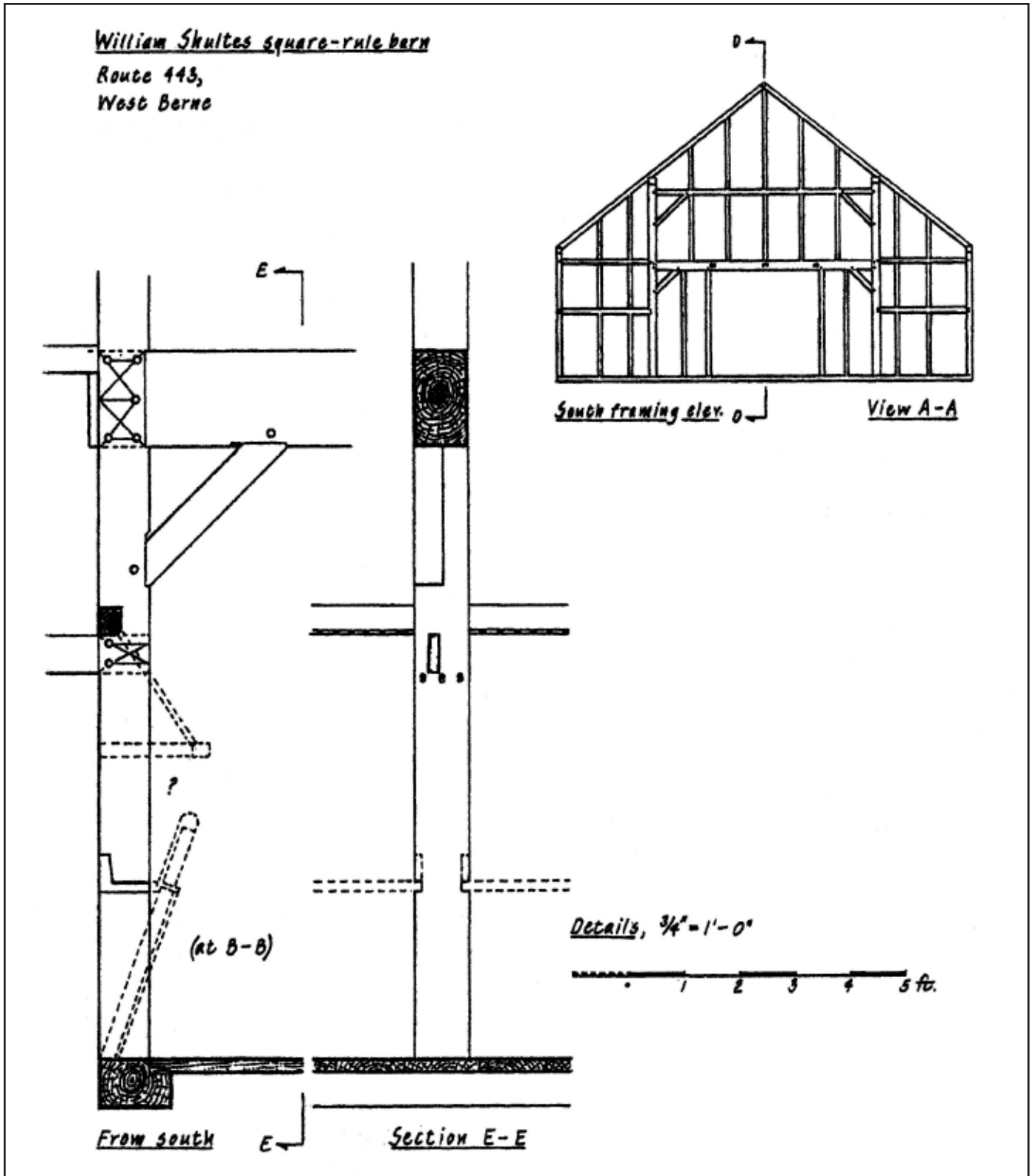
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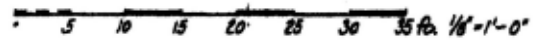
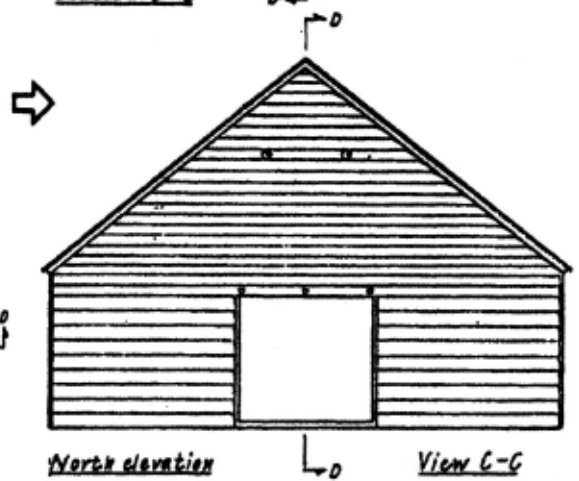
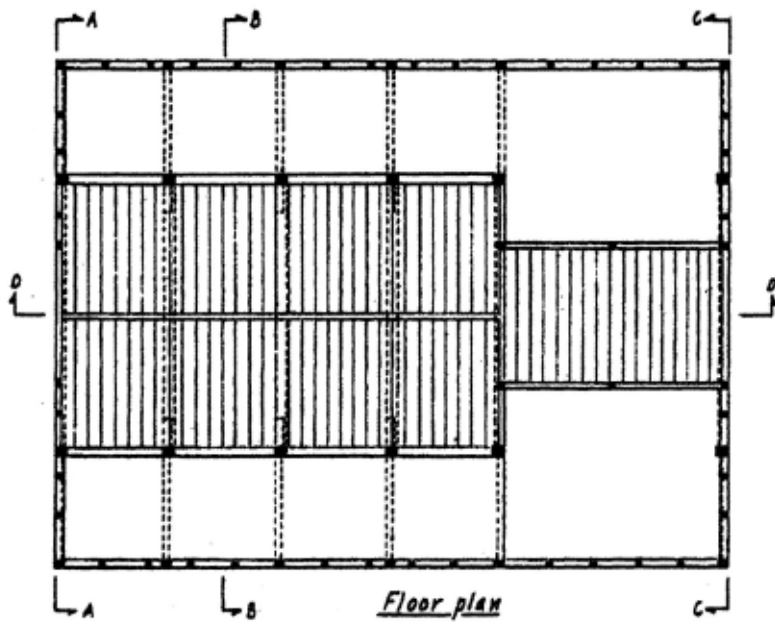
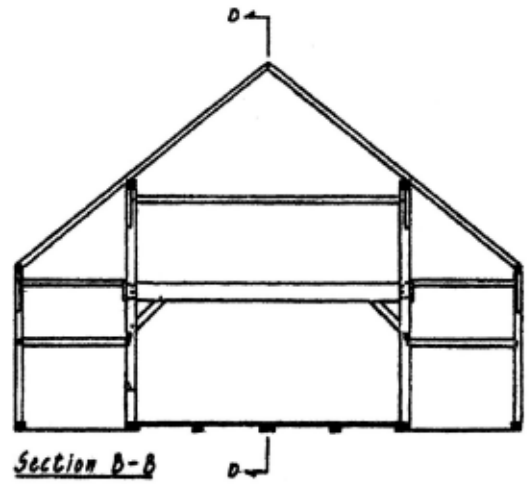
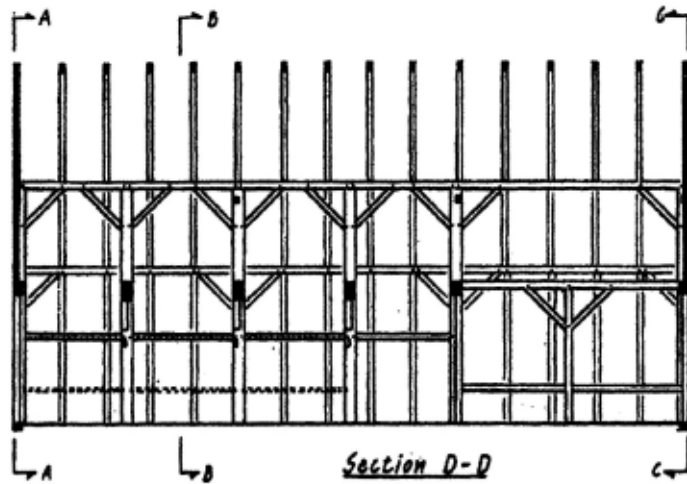
Drawings of the Shultes-Malcolm Barn

John Stevens

Editor's note:

After publication in the Fall 2008 Newsletter, featuring articles on the Shultes-Malcolm barn, DBPS member John Stevens contacted me with the news that he had worked up an extensive set of measured drawings of the barn and offered them for publication. Thanks John!





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(continued from page 3)

Each end bent also has a mid-span oak post below the high placed horizontal beam. Horizontal oak beams joined at either side of the post are located 4'-7" below the bottom of the upper beam. The two inner bents each had a single lower beam that spanned the width of the barn, also located 4'-7" below the upper beam. Only empty mortises in the posts indicate their former presence. It is important to note that there is no vertical queen post and purlin plate system in this barn section. If such a system had been present, it could be said that an English framing source might be indicated.

The south end wall braces and the disposition of the vertical wall studs were not recorded at the time documentation was undertaken. While there may not have been braces, there were undoubtedly wall studs as they would have been necessary as nailing surfaces for exterior weather-boarding.

A wall plate (rafter plate) connects the tops of all the bent posts, providing longitudinal stability. Each post-to-plate union is double pegged. In addition, there is one horizontal girt about half way up each bay of the side walls, to provide extra longitudinal stability. These girts are indicative of the original siding, which appears to have been vertical, and their location excludes the possibility of side wall wagon doors. The original side wall braces were hewn. A main wagon entry is now located on the bank side at the end bay, adjacent to the one-bay barn section. The door locations in the original configuration of the barn were not determined. As the barn now stands, there are a number of vertical wall studs both of sawn and round pole type (secured with

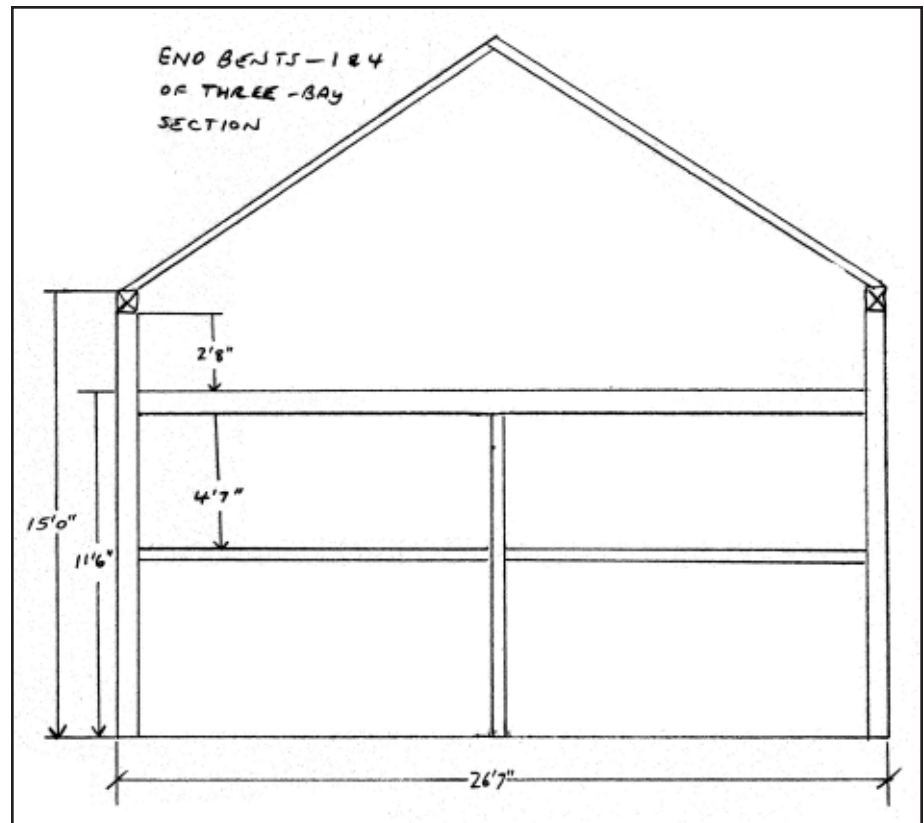


Figure 2. An end wall bent of the three-bay section, depicting the anchor beam and side wall posts along with lower half-span beams that join to a mid-span vertical post. No braces or end wall studs were recorded, but they likely existed.

cut nails) at both side walls and the south end wall that were installed after the barn conversion. Both the middle and north bays are floored with 2" thick planks that average about 10 to 14 inches wide. The south bay has no floor.

Bay widths in the three-bay section measure 10'-1" (south bay), 13'-7½" (middle bay) and 13'-8" (north bay) wide. The bays are each 26'-7" long and span the entire width of the barn. Sapling poles were used to support crop storage above the middle and north bays.

One-Bay Section

The 12'-0" long one-bay section, with no floor, is immediately adjacent and north of the three-bay section and has the same width as the three-bay part. Four round pole rafter pairs are seen that are each pegged at top. The bay is composed of two bents – one adjacent to the north end bent

of the three-bay section and the other at the north end wall. The inner bent is composed of a high placed beam at the same height as the high beams in the three-bay part and end posts without raising holes and there are no braces. The end wall bent has end posts with both a high placed beam with milled braces and a lower full bay width beam with milled braces. The two bents are connected by wall plates at each side wall that are not positively joined to the wall plates in the three-bay section. In a number of cases when barn sections are united there are positive connections. All major structural members are hewn and oak. Most vertical wall studs are milled; a few studs are hewn. A metal hay track runs almost the entire length of the barn just under the peak.

Basement

The basement area has a ceiling height of seven feet under the mid-

dle and north bays of the three-bay section. In this area are seven large round staggered ceiling joists supported by a summer beam. The joists, mostly oak, are received into spliced sill plates at both the front and back walls of the barn. The one-bay part only has a floor at the basement level that is about three feet below the planked floor level of the two bays in the three-bay part. Both side walls and back walls at the foundation level are of solid native stone construction measuring 1'-10" thick.

Dates of Construction

The three-bay barn section was originally constructed as a one-aisle one-level (non-banked) barn. All available evidence indicates that it was most likely built in the era 1810 to 1820 and unlikely before that time frame. The general date may be indicated by the angled unions at the horizontal beam to post joints in the three-bay part and the fact that the braces of the bents and the walls are hewn. In addition, the original boards were secured with cut nails. Length of time the three-bay barn stood at its original location is difficult to determine. However, there is a wall post with a quite weathered surface in the three-bay section that indicates the post must have been subject to the action of rain for 40 to 50 years. If the three-bay one-level barn was immediately recycled at that point into the present day four-bay banked structure, the one-level barn likely stood at its original location until about 1850 to 1870.

From all of the above it can be said that the barn in its final evolution form dates to about the era of the Civil War. The round pole rafters and the new braces and wall studs in both barn sections with milled surfaces attest to this general time frame of construction. The basement sills, each spliced at the mid-point with a neatly made scarf joint, indicate

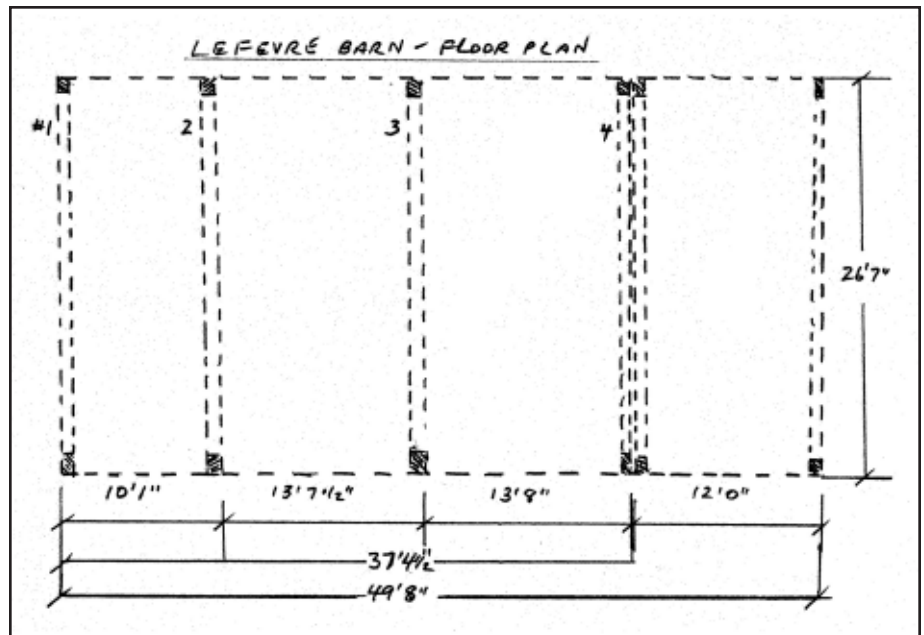


Figure 3. Floor plan showing the original three-bay section at left and the one-bay-wide addition on the right. This sketch does not depict the side-wall wagon entries or the mid-span posts at the end bents of the three bay section.

that the two sections were joined at the time of the rebuilding.

Summary of Genesis of Four-Bay Banked Two-Level Barn

The manner in which the four-bay structure with basement was constructed followed these basic steps. The roof of the original barn was removed and the remainder of the structure was disassembled, raised, or moved to a new site. The remnant one-aisle barn was either disassembled or moved to its new location. A basement nearly 50 feet in length was constructed. The original three-bay barn was then erected on top of the newly constructed basement. Following this a new 12 foot long single-bay was positioned adjacent to the three-bay barn part at its north end. Finally an entirely new roof composed of 16 pairs of round pole rafters was erected over both barn sections. New horizontal siding was installed on the east and south walls along with a new outermost roof covering.

Summary

The alterations to the barn outlined above resulted in a new four-

bay two-section two-level banked barn. In the entire Dutch-American culture area, a possibly unique transformation took place. No other example of this specific type of barn conversion has been observed at any other Dutch-American farmstead in either New York or New Jersey by this writer nor has one been reported to him. A farmer—most likely a LeFevre—saw an opportunity around 1860 to take a barn that had outlived its original use and to extend its usefulness by remodeling it. As modified, the LeFevre barn represents one of the unusual forms that New World Dutch barns took as their owners attempted to extend their usefulness.

Deterioration of Barn

At the time the barn was documented it was in reasonably satisfactory shape. There were a few areas that needed immediate attention. The entire west wall plate in the one-bay section, together with the northern half of the west wall plate of the three-bay section required replacement. In addition, one of the wall posts near the wagon doors had deteriorated at

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its top end and needed replacing. Foundation work needed to be done, particularly at the south wall. These were the major areas that in 2003 required attention. This restoration work could have brought the barn into an excellent state of repair.

A sincere effort by the present owner to find necessary outside

funding to restore the barn unfortunately did not come to fruition. In the past year or two the roof collapsed destroying many of the major timbers. Fortunately the LeFevre barn owner by virtue of their deep interest and concern allowed the barn to be recorded in 2003; it is now impossible to do any really meaningful recording of the barn.

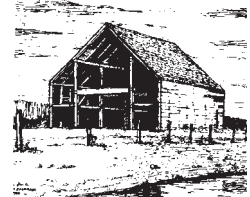
1 Robert F. Ensminger, *The Pennsylvania Barn: Its Origins,*

Evolution and Distribution in North America (Baltimore and London: The Johns Hopkins University Press.)

2 John Fitchen and Gregory D. Huber, *The New World Dutch Barn: The Evolution, Forms and Structure of a Disappearing Icon* (Syracuse, New York: Syracuse University Press, 2001), xxx-xxxii.

3 I wrote a lengthy article of the traits and physical appearances of the one-aisle barn form for the NWDB2000 Survey.

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