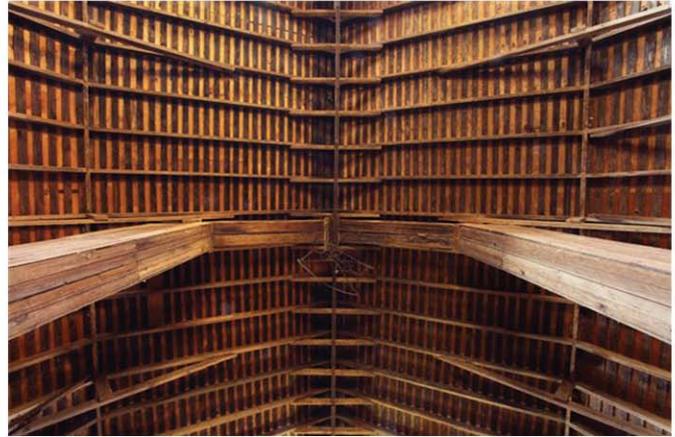


ALESSANDRO SECCHIAROLI BARN
LIMITED CONDITIONS ASSESSMENT STUDY



MAY 20, 2011

61 MINER LANE WATERFORD, CONNECTICUT

NELSON EDWARDS COMPANY ARCHITECTS, LLC
1156 MAIN STREET BRANFORD, CT 06450

ARCHAEOLOGICAL AND HISTORICAL SERVICES, INC
569 MIDDLE TURNPIKE P.O. BOX 543 STORRS, CT 06268

GIBBLE NORDEN CHAMPION BROWN CONSULTING ENGINEERS, INC
130 ELM STREET P.O. BOX 802 OLD SAYBROOK, CT 06475

TOWN OF WATERFORD MUNICIPAL HISTORIAN
15 ROPE FERRY ROAD WATERFORD, CT 06385



May 20, 2011

Mr. Robert M. Nye, Municipal Historian
Town of Waterford
15 Rope Ferry Road
Waterford Connecticut 06385-2806

Re: Limited Conditions Assessment Study and Feasibility Report
Alessandro Secchiaroli Barn, 61 Minor Lane Waterford, Connecticut

Dear Mr. Nye:

The enclosed report is a combined Limited Conditions Assessment Study and family history for the Alessandro Secchiaroli Barn. We thank you for your great patience in waiting for this document.

On behalf of all team members I want to thank you for the opportunity to come to know this building and to learn about this site and dairy farming in southeastern Connecticut. We appreciate that barns and sites, such as this one, are a rapidly disappearing resource both within the Town of Waterford and in the region as a whole. We hope the findings of this report will enable the Town to take pro-active steps to halt the deterioration of the barn and engage in plans for the future.

We appreciate and thank you for the opportunity to be of service.

Sincerely,

A handwritten signature in dark ink, appearing to read "Sara O. Nelson", with a long, sweeping underline.

Sara O. Nelson, AIA

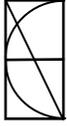


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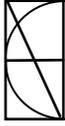
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ACKNOWLEDGEMENTS

Nelson Edwards Company Architects, LLC



ACKNOWLEDGEMENTS



The consultant team would like to thank Robert M. Nye, Waterford Town Clerk and Municipal Historian for his scholarship, detailed history of Alessandro Secchiaroli and his family, and his overarching desire to document an important piece of Waterford history for future generations. On behalf of Robert Nye we wish to acknowledge the generous contributions of Alessandro Secchiaroli's grandson, Michael, who made his family research available and Michael's father, Thomas B. Secchiaroli Sr. who provided a wealth of recollections, stories and details, Vivian Brooks for her research assistance and Kathya Landeros for her color photographs which are included on the cover of this report.

The study was partially funded by a grant from the Connecticut Trust for Historic Preservation as well as a grant from the Connecticut Commission on Culture and Tourism.

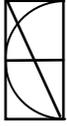
The activity that is the subject of this report has been financed in part by the Commission on Culture & Tourism with federal funds from the Historic Preservation Fund of the National Park Service, U.S. Department of the Interior.

However, the contents and opinions do not necessarily reflect the views or policies of the Commission or the Department of the Interior, nor does the mention of trade names or commercial products constitute endorsement or recommendation by the Commission or the Department of the Interior.

This program receives Federal financial assistance through the Commission for identification and protection of historic properties. Under Title VI of the Civil Rights Act of 1964 and Section 504 of the Rehabilitation Act of 1973, the U.S. Department of the Interior prohibits discrimination on the basis of race, color, sex, national origin, or handicap in its federally assisted programs. If you believe that you have been discriminated against in any program, activity, or facility described above, please write to: Office of Equal Opportunity, U.S. National Park Service, 1849 C Street, NW, Washington, DC 20240.

INTRODUCTION AND METHODOLOGY

Nelson Edwards Company Architects, LLC



INTRODUCTION

In June, 2010 The Town of Waterford hired a consultant team with historic building experience to prepare a Limited Conditions Assessment Study and family history for the Alessandro Secchiaroli barn at 61 Minor Lane in Waterford, Connecticut.

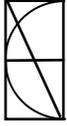
The consultant team was headed by Nelson Edwards Company Architects, LLC of Branford, Connecticut who provided project oversight as well as evaluation of non-structural existing conditions. Working with Nelson Edwards Company Architects was Gible Norden Champion Brown Consulting Engineers, Inc., of Old Saybrook, Connecticut who provided structural review of the barn, and Archaeological and Historical Services, Inc. (Bruce Clouette, Ph.D.) of Mansfield, Connecticut who provided a review of the barn relative to the evolution of Connecticut agricultural building design. Robert M. Nye Town of Waterford, Connecticut Municipal Historian and Town Clerk prepared and provided research assistance the family history of the Secchiaroli family and with the history of agricultural buildings and practices. Flamand Builders of Guilford, Connecticut provided the opinion of probable costs for identified work items. The consultant team worked on this project from September, 2010 through April, 2011.

METHODOLOGY

Structural review of the Secchiaroli barn began with detailed field measurements that formed the basis of measured drawings for the ground level and loft area. Once complete the measured drawings were annotated for framing size member, as well as location and condition. Safety hazards and areas of inadequacy were identified and recommendations for repair prepared.

Nelson Edwards Company Architects prepared a conditions assessment for non-structural systems including exterior envelop (roof, windows, doors, exterior wood siding) and interior finishes. The architectural assessment was made by detailed field observation in February, 2011.

In keeping with the goals of this study the information contained in this report is general in nature and is intended to communicate general condition and required repairs. The conditions assessment does not include a review of electrical, plumbing, water supply and waste systems.



INTRODUCTION AND METHODOLOGY

To help the Town prioritize the required repairs the work items were ranked as follows:

Immediate: Work needs to be done immediately to prevent future deterioration or to correct a safety hazard.

Urgent: Work needs to be done within one year to maintain building integrity.

Necessary: Work needs to be done within a three to five year period.

Maintenance: Work needs to be done within the next ten years, or on a periodic basis.

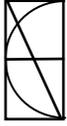
Cosmetic: Work needs to be done to restore general building aesthetics.

With regard to the condition of the barn, the findings of the consultant team are based on visible information on hand at the time of their work. Given that the timeframe for the identified repairs is unknown, no guarantee, express or implied, can be made that the documented condition of the structure may not change.

Suggestions for adaptive reuse of the barn were prepared by Nelson Edwards Company Architects and are in keeping with the long history of agricultural use in this area, and the type and size of agricultural building. The opinions expressed in this section are those of the study team. Before any plans for adaptive re-use are considered, consensus of the property stakeholders should be gathered and established.

SUMMARY OF FINDINGS AND RECOMMENDATIONS

Nelson Edwards Company Architects, LLC



GENERAL

The structural and architectural condition assessment studies indicate that the Secchiaroli barn is currently in fair condition due to years of deferred maintenance (siding, windows and roof.) The identified items are not uncommon for a building of this age and can be successfully corrected in a careful maintenance and restoration plan.

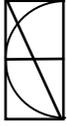
The work that has been identified has been prioritized on an individual line item basis. However, corrective work is best executed as part of holistic packages that simultaneously address all items in a given area. An example of this is repair of windows, doors and siding – all items that are interrelated and form the exterior building envelope.

Gibble Norden Champion Brown, the structural engineer, identifies some additional structural investigations that should be undertaken which were outside the scope of this initial review. One area for additional investigation is the loft level (floor) framing. This investigation can only be undertaken when all deteriorated ceiling and floor finishes are removed. The second area of investigation is analysis of the current roof framing system vis-à-vis current building code requirements for structures in proximate location to hurricane prone coastlines. Once a future use of the building is identified the code requirements for the proposed use will need to be reviewed against current building design.

The recommendations for repair will allow the Town to provide a weather-tight envelope which will dramatically slow down the accelerating deterioration of the barn. While there will always be on-going maintenance with any structure, the barn, if stabilized, should remain in good condition while plans for adaptive re-use are finalized. Once the plans are finalized additional work items can be undertaken specifically related to the proposed use.

BUILDING DESCRIPTION

Nelson Edwards Company Architects, LLC



GENERAL

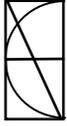
The Alessandro Secchiaroli barn at 61 Miner Lane exemplifies an early 20th-century farm building known as a “ground-level stable barn”. The structure which was constructed in 1923 is a 2-1/2 story masonry and wood frame structure. The barn measures 35 feet x 40 feet and was constructed to house dairy cows.

The ground level, used to house the cows, was constructed of brick masonry walls with articulated corners and piers. The loft floor is framed with timber and supported by two lines of columns. While the present columns are predominantly timber it is likely that the original columns were steel set on footings below the concrete floor. The floor is poured concrete with manure trenches for two rows of stanchions (no longer in place). There were ten stanchions per row for a total of twenty stanchions in the lower level. Automatic water cups were placed along the row of stanchions with one water cup for every two stanchions. A manure trolley was suspended from a track that ran from inside the barn approximately 100 feet to a cart or wagon in the field west of the gable end. The brick walls are whitewashed, and the ceiling is formed of tongue and groove beaded boards (milled so that each board gives the appearance of two).

The loft area was constructed of wood frame walls with a modified braced-rafter gambrel roof set on top of wood-frame knee walls that rest on the masonry walls below. The use of gambrel roofs was common for dairy barns as the shape allowed for maximum storage of hay.

Two vertical wood clad ventilation shafts run from the loft floor level to the roof ridge where they met and terminated at a metal roof ventilator. The ventilator no longer survives but the ventilation shafts remain. The exterior of the rectangular-section shafts are formed of beaded boards; typical construction consisted of two layers of tongue-and-groove boards nailed to corner posts, with tarpaper in between the layers. The hinged door openings to the shafts in the ceiling of the lower level have been blocked off.

The barn's framing is visible on the interior of the upper or loft level. Along the sides, there is a four-foot high knee wall, with diagonal braces to the floor joists every four feet and an un-braced intermediate stud. Resting on the knee wall are the rafters for the gambrel roof, spaced at two-foot intervals. Attached to the lower rafters, just above the knee wall, are the outriggers for



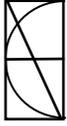
BUILDING DESCRIPTION

the overhang. Purlin boards and a ridge board are found where the roof's slope changes. Every fourth set of rafters (not counting the end sets) are braced with two trusses: the upper trusses have a bottom chord connecting the midpoints of the rafters for the roof's top and bottom slopes and a king-post connecting the midpoint of the lower chord to the purlin. The lower trusses have the bottom chord running from the midpoint of the rafter for the lower slope to the base of the knee wall, with the kingpost nailed just below the top of the knee wall. All rafter pairs are connected by collar ties near the top of the roof, from which is suspended the rail for the hay fork.

The roof forms a wide overhang at the ends, where it is finished with plain face rafters, and along the sides, where the overhang is created by a short break in the slope of the roof carried on outrigger rafters. The barn's current roofing material is asphalt shingles nailed to a plywood underlayment; the spacing of the roofing boards, visible on the interior, indicates that the roof originally was covered with wood shingles (as can be seen in early photos.)

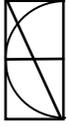
The west end wall has a large wagon opening in its center; the east end wall appears to have had a corresponding opening but has been bricked up. A doorway on the south elevation, constructed with a segmental-arched head and pilasters, has also been bricked up. On the east elevation, there is a small loading door at the loft-floor level and a larger door in the peak, where a beam and rail for a hay fork protrudes (the hayfork is still in place inside). Two small rectangular windows flank the upper loft door. The other end elevation also has two windows in the upper part of the loft, but in place of the loft door, a small horizontally mounted third window.

The original wood windows were double hung of 2 over 2 sash design with concrete window sills and brick soldier course headers supported by steel angle lintels. At some point during the 1940s the original double hung windows were removed and replaced with single sash transom windows. The original window openings under the transom windows were filled with brick masonry. Both the east and west ends of the ground level had double barn doors. The original opening on the east end which is visible in a historic photo was filled with brick masonry and only the opening on the west end remains.



BUILDING DESCRIPTION

The barn ceased to function as a dairy barn in 1943. The building's silo, located at the west end of the building, was blown over in the 1940s.

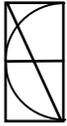


BUILDING DESCRIPTION

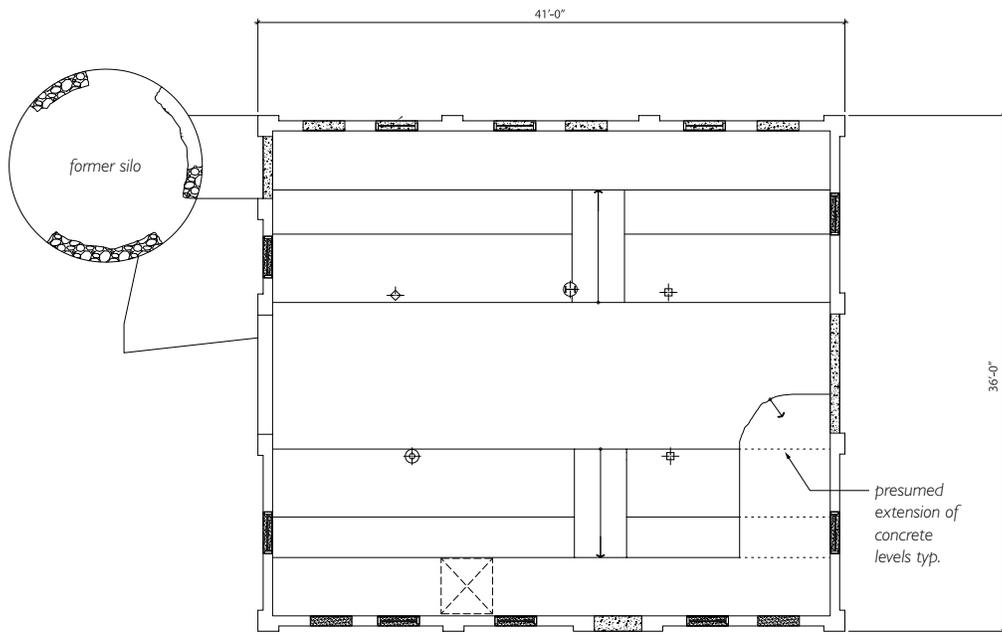


East gable end of the Alessandro Secchiaroli Barn, c. 1937.

Note the metal ventilator (no longer extant) at the upper left corner of the photo.



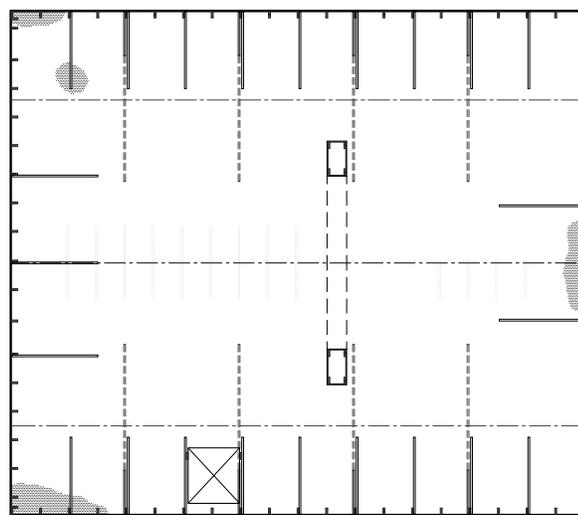
BARN PLANS



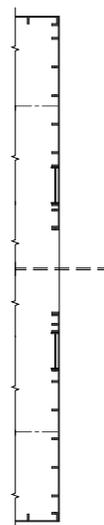
Ground Level Plan 



Plan at Upper West Gable End

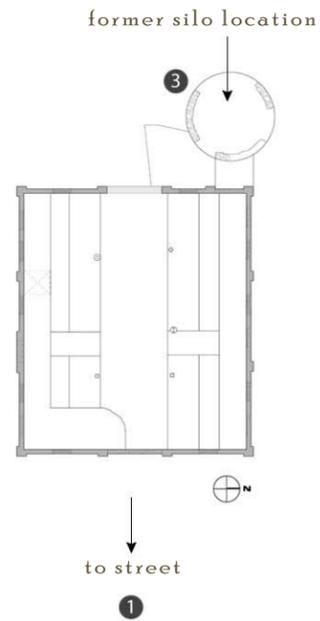


Loft Level Plan 

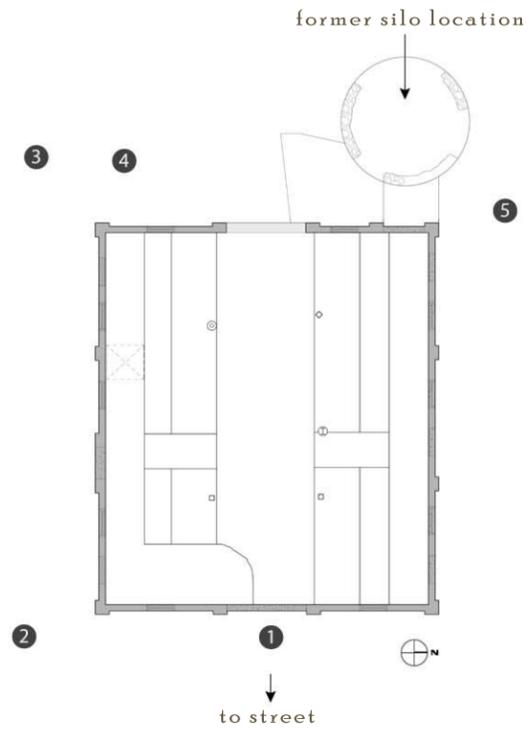


Plan at Upper East Gable End

ALESSANDRO SECCHIAROLI BARN
61 MINER LANE WATERFORD, CT 06385



ALESSANDRO SECCHIAROLI BARN
61 MINER LANE WATERFORD, CT 06385



**HISTORICAL AND ARCHITECTURAL
CONTEXT OF SECCHIAROLI BARN**

Archaeological and Historical Services, Inc.



HISTORICAL CONTEXT

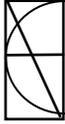
The Alessandro Secchiaroli Barn is a model small dairy barn of its period. The barn was constructed as a ground-level stable barn – a type of barn designed by agricultural engineers primarily in response to government health regulations in the years after 1910. The most notable features of this type of design included improved ventilation to reduce dust levels (tuberculosis-causing bacteria passing through the digestive system and can remain active in the airborne duct of manure), concrete floors to facilitate cleaning, and increased window area to permit more light in the barn which in turn reduced bacterial growth.

Before World War I, New England barns were still being built with post-and-beam frames, an expensive and time-consuming construction method. Although by the early 20th century the side and end walls could be made of readily available lumber, the actual structural framing required the custom sawing¹ of large timbers and skillful preparation of mortise-and-tenon joints. The resulting bents were heavy and could only be lifted in place by a sizeable crew of workers.

After World War I the tide turned to two construction methods that used readily available standard lumber and nailed connections: the plank-truss and braced-rafter systems. With gambrel roofs, both techniques could provide a large, unobstructed loft space for storage; in effect, the roof became the major part of the barn. The principal difference was that the plank-truss form used somewhat heavier members spaced 10-16 feet apart, with smaller rafter sets in between, while the braced-rafter method used lighter members and (usually) each set of rafters was braced to form a truss. Another difference was that typically the trusses for each rafter set overlapped in the plank-truss method, while with the braced-rafter method, the trusses were set end-to-end. Either way, the resulting rafter sets were light enough to be readily erected by a small crew. In the late 1910s and 1920s, federal and state departments of agriculture, university extension services, independent scientific-agriculture writers, and commercial manufacturers of barns all sung the praises of the new techniques and declared the post-and-beam barn passé. Most gave the edge to the braced-rafter barn in terms of ease of erection, lower material cost, and less obstruction to the interior. According to a 1923 U. S. Department of Agriculture bulletin a crew of just two or three men could frame up such a barn, far different from the traditional communal barn-raising (Parks, *Dairy-Barn Construction*, p. 18),

The Secchiaroli Barn can be considered a modified braced-rafter barn because only every fourth rafter set is braced. This would have resulted in even greater cost savings, apparently with only minimal structural

¹ Some lumber companies got into the business of providing a complete set of timbers for barns, as well as all the other lumber, undoubtedly achieving some economy from standardization and the scale of production.



HISTORICAL AND ARCHITECTURAL CONTEXT

sacrifice. In a review of period literature, the project historian has not found any precedent for this practice, but there are so many plan books, government reports, and extension-service bulletins promoting modern barn construction in the early 20th century that no conclusion about its origin or prevalence can be reached without much more intensive research.

The Secchiaroli Barn's interior features are also typical of the period. Connecticut farms were not highly mechanized in the 1920s, and rather than being baled, hay was harvested and stored as loose hay. The hay fork, or horse fork, made the task of unloading hay wagons and storing the hay in the loft easier. The hay fork rode on a trolley along a rail attached to the collar ties of the barn and could access a hay wagon outside the barn by means of an extension beam. The fork would be lowered to the load in the wagon, where the jaws could close around a great quantity of hay. Then, a horse-powered line would lift the fork back up to the level of the rail and it would be pulled inside the barn. Once in position, a trip line would cause the jaws to open and the hay will fall into place. With a man at the wagon, another in the barn's loft, and a horse, a load of hay could be transferred quickly and with little physical effort. Most early 20th-century Connecticut barns show some evidence of having had a hay fork, though in many only the rail remains, the mechanism itself having been discarded.

The other distinctive interior feature, the two-shaft ventilator system, reflects the period's solution of a problem that had bothered proponents of scientific agriculture since the middle of the 19th century when outside milking became impractical. For a variety of reasons, including ease of access and manure removal, it was efficient to have the cows on the lowest level of the barn. But at the same time, something had to be done about the build-up in moisture that came from having so many animals together in a space already prone to dampness. The Secchiaroli Barn ventilation closely follows what was known as the Rutherford system, after J. G. Rutherford, Veterinary Director General and Livestock Commissioner of Canada (for a comparison with another popular system, see Smith, "A Comparison of the King and Rutherford Systems"). There were two main types of ventilator shafts, sheet iron and wood, and two types of installation, either freestanding or built into the walls and roof. Sheet iron had to be insulated, whereas the wood-and-tarpaper layered type provided a barrier to the passage of both moisture and heat. In some barns, air intake was provided by special flues with vents low on the side walls, but in this barn, the side-wall windows appear to have served as intake openings. Air flow was regulated by hinged doors at the openings to the shafts in the ceiling of the lower level (boarded up in this barn).



SIGNIFICANCE

The Secchiaroli Barn is significant because it embodies the defining characteristics of a major agricultural architecture type of its period, the braced rafter barn: use of standard lumber, nailed connections, and lightly braced rafter sets. The interior ventilation system (though missing some components, such as the roof ventilator) and the hay fork are two features that reflect the influence of scientific agriculture in that period that, once common, have now become scarce.

Because the major part of the barn in the braced-rafter method was the self-supporting roof, the actual base it was placed upon - wood, concrete block, stone, brick, or some combination - was secondary. It is interesting, however, that this barn has a brick base. The ongoing survey of Connecticut's historic barns being undertaken by the Connecticut Trust for Historic Preservation will result in a more definitive picture, but brick appears to have been a relatively uncommon barn material. Surveys of historic architecture in towns such as Berlin and Hamden have demonstrated Italian immigrants' preference for brick construction and masonry in general in the early 20th century, and it may be that Alessandro Secchiaroli's Italian heritage influenced his choice of materials.

In any case, the barn's history reflects an important social trend in Connecticut in that period: the purchase of formerly Yankee-owned farms by recently arrived immigrants from Europe, particularly Italy, Poland, and the Jewish areas of Eastern Europe. For several generations, those drawn to farming had left the state for cheaper and/or better farmland elsewhere. Farming further declined in Connecticut as people sought economic opportunity in the state's cities and large industrial towns. The hard work and frugal living of families such as the Secchiarolis gave a new lease on life to the state's farms, preserving the Connecticut countryside for at least another generation.

References

Buchanan, Frank A. *Twenty Lessons on Dairying for Dairy Club Members*. Virginia Polytechnic Institute, Bulletin No. 72, January 1922.

Parks, K. E. *Dairy-Barn Construction*. U.S. Department of Agriculture Farmers Bulletin No. 1342. Washington, DC: 1923.

Seymour, E. L. D. *Farm Knowledge, a Complete Manual of Successful Farming*. Garden City, NY: Doubleday, Page & Company, 1919. Rev. ed., "Prepared exclusively for the Sears, Roebuck & Co."

Smith, L. J. "A Comparison of the King and Rutherford Systems of Barn Ventilation," *Transactions of the American Society of Agricultural Engineers* 8 (December 1914): 42-56.

Visser, Thomas Durant. *Field Guide to New England Barns and Farm Buildings*. University Press of New England. Hanover and London: 1997.



HISTORICAL AND ARCHITECTURAL CONTEXT

FIGURE I: A comparison of the braced-rafter (left) and plank-truss (right) methods of construction, from Buchanan (1922), p. 54. In each illustration, the left-hand side shows a gambrel roof like the Secchiaroli Barn, while the right side shows clerestory roof.

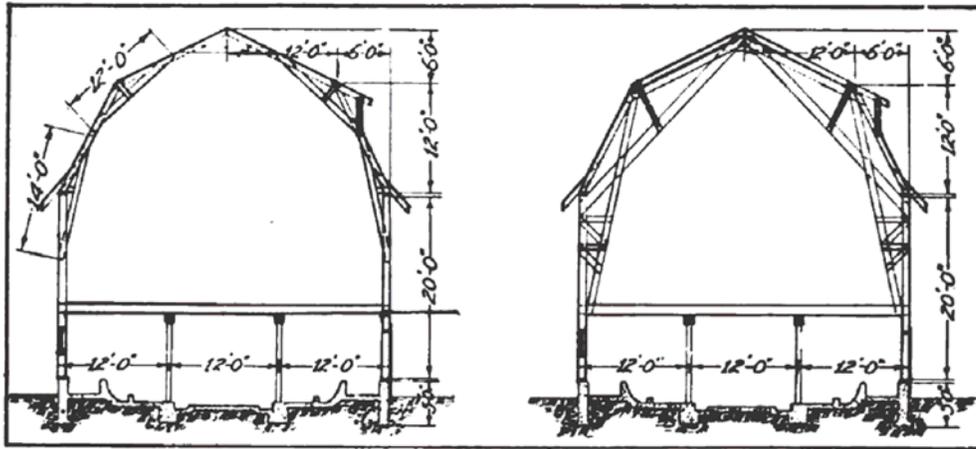
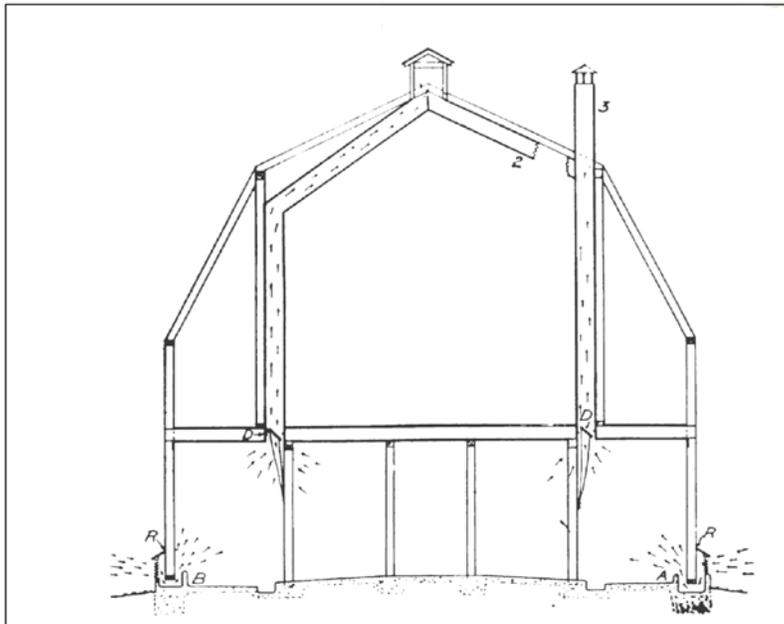


FIGURE II: A schematic of the Rutherford system of ventilation, with the variant shown on the left similar to that of the Secchiaroli Barn, from Smith (1914), p. 48. R-A and R-B are the inlets, D indicates dampers, 2 is a ridge-ventilated arrangement like that of the Secchiaroli Barn, and 3 is straight-to-the-roof method.



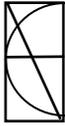
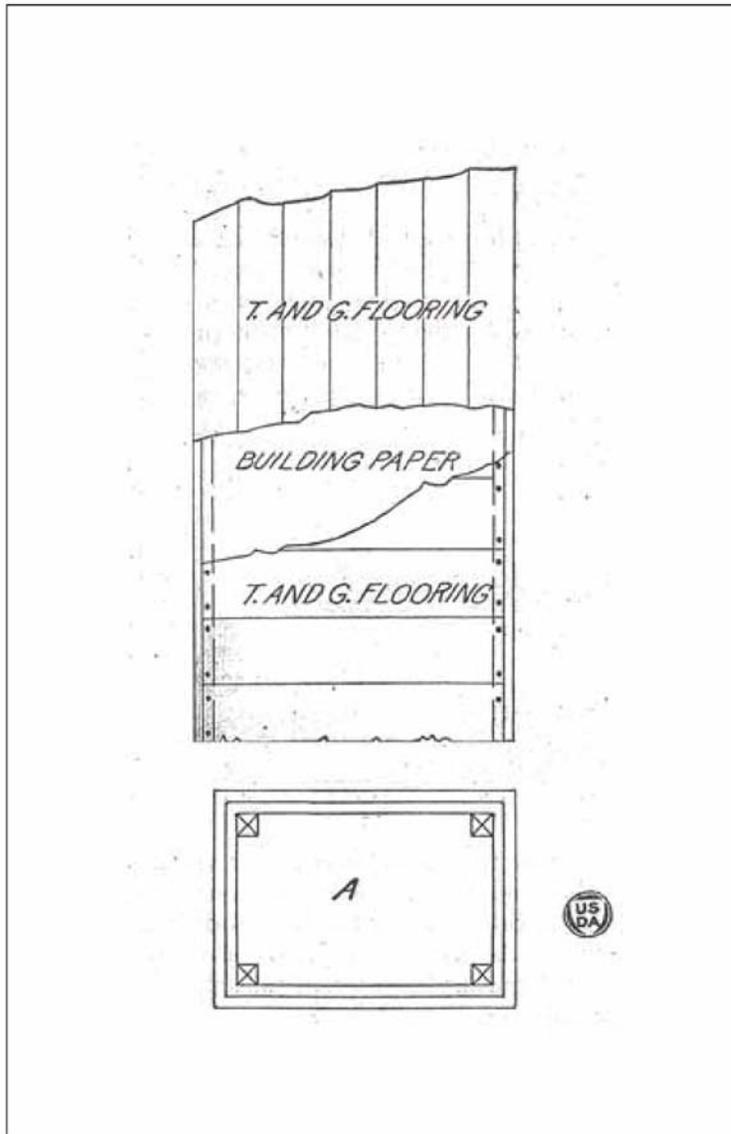


FIGURE III: Illustration of the construction of wooden ventilation shafts, showing the two layers of wood with tarpaper in between (top) and the cross-section (bottom), from Parks (1923), p. 11.





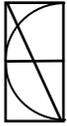
HISTORICAL AND ARCHITECTURAL CONTEXT

FIGURE IV: Hay fork in use on an early 20th-century Connecticut farm. The horse lifting the hay is not visible. The line that the man holds is the trip line for releasing the load once inside the barn (People at Work Collection, Quinebaug Valley Community College, Danielson, CT).



**ALESSANDRO SECCHIAROLI:
WITH ELEVEN DOLLARS IN HIS POCKET**

Robert M. Nye, Town of Waterford Municipal Historian



ALESSANDRO SECCHIAROLI: With Eleven Dollars In His Pocket

Alessandro Girolamo Giovanni Secchiaroli came to America in 1904. He was 17 years old. He was born December 20, 1886 in Castelvechio di Monte Porzio in the Marche region of north-central Italy, the youngest of Crescentino and Teresa Pierpaoli Secchiaroli's four children – three boys and a girl. When he was a small boy the family moved to nearby Corinaldo where his parents sharecropped land owned by a hospital. They raised grapes and other fruit, chickens, cows and pigs. The hospital received half the share.¹

"I came over to the United States like the other people did, to try to make a better living," Alessandro said years later.² For some the plan was to work and save enough money to eventually return. Alessandro himself sent home \$500 for his family to buy land according to the story that's come down to the great-grand children. The money was spent it was told – but not on land.³ The family back in Corinaldo used it just to meet basic needs. Alessandro did go back – fifty years later – for a visit. Like most of the others, regardless of intention – or because of circumstance – he was in America to stay.

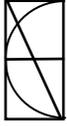
In the company of Giovanni Landini, age 28, and Guiseppe Troviani, age 21, Alessandro left the seaport city of Pesaro on the Adriatic for Bremen, Germany. The three signed on in steerage aboard the Barbarossa bound for New York City, March 18, 1904. How well Alessandro knew the other two is not known. Regardless he was not alone. Presumably Landini was the lead. He'd been in the United States before and was the only one who could read and write. The ship arrived in New York on March 24⁴ and like the hundreds of thousands both before and after him, Alessandro passed through Ellis Island, America's main point of entry for immigrants.

The decade 1900 to 1910 witnessed the heaviest immigration in American history and Connecticut's proximity to the port of New York made the state all the more attractive as a destination. Indeed the state's population of 1,114,756 in 1910 was 30% foreign-born – 5.1% were from Italy.⁵ Locally, the city of New London, population 11,963, was 6.5% Italian-born. The town of Waterford, population 3,097, was 4.3%. In Waterford the majority of Italian-born either worked in the granite quarries or found farm or farm-related employment.⁶

According to the ships manifest Alessandro and his two companions were to join a friend by the name of Erstagustari Mariani in New London.⁷ It is likely through this New London connection that he secured work in construction (with other Italian immigrants) at Fort Terry on Plum Island.⁸ Established in 1879, Fort Terry defended approaches to Long Island Sound and was in use off and on from the Spanish-American War through World War II. Apparently Alessandro had a job waiting for him. All three in fact were listed in the manifest as laborers – perhaps the other two were on their way to Plum Island as well.



Alessandro and Redenta Secchiaroli
wedding picture, 1908



In 1908 Alessandro left Fort Terry and returned to New London - to Walbach Street in the Fort Trumbull section, popularly called “the Fort,” heart of the city’s northern Italian community.⁹ On August 15 of the same year he married Redenta Montesi, the third child of Tomasso and Domenica Antognetti Montesi. According to their marriage license, Redenta’s occupation was “mill-hand.”¹⁰ She was 17 years old, the oldest of four sisters.¹¹ She had two older brothers, one of whom preceded her to the Fort. She arrived in 1907, the year before her marriage. Eventually all but the youngest sister made their way to New London. The Montesis were also from the village of Monte Porzio.¹² Did Alessandro and Redenta know one another in the home country? Another story from the family is that one day he saw her washing clothes at a stream. Not likely - but the stuff of family myth nonetheless.



Meanwhile Alessandro got a job as a molder in the foundry at the D.E. Whiton Machine Company on near-by Howard Street. As he later recalled, the “gas and smoke . . . drove him out . . . , sick from breathing them.” More than anything he wanted “clean, country air again, the air of his boyhood.”¹³ So it was in March 1911 with the help of a \$1,000 mortgage

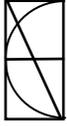
Alessandro was able to purchase 15 acres with a small house and barn on the west side of Miner Lane in Waterford.¹⁴ In the meantime he continued to work at D.E. Whiton during the transition, perhaps for another year or so.

Northwest of barn, stone wall is northern boundary of property. Alessandro Secchiaroli’s grandson Thomas is in the foreground. c. 1937

By this time the Secchiarolis had two sons, Guido, born January 8, 1910, and Julius born December 28, 1910.¹⁵ After they moved to Waterford, a third son, Gino, was born March 12, 1912, but died six months later. Their fourth son, also named Gino, was born January 26, 1914.¹⁶

The land on Miner Lane was marginal at best, dotted with boulders and bounded on the north by wetlands – well enough suited though for a dairy farm.¹⁷ Over the course of the next decade Alessandro’s taxable livestock grew from eight cows and one horse in 1912 to sixteen cows and four horses by 1921.¹⁸ Alessandro delivered the milk house-to-house out of a horse-drawn, glass-enclosed wagon.¹⁹

South of the house were two chicken coops, approximately thirty by fifty feet, and the orchard – some thirty or more trees – apple, pear and cherry. To the west, behind the house was the vineyard. (Needless to say Alessandro made his own wine). Beyond the vineyard Alessandro planted oats for the horses. He cut hay for the cows off a number of mowing lots in town.²⁰



Redenta meanwhile more than held up her end, picking vegetables, milking the cows, cooking the meals, and keeping track of three young boys. Like her husband she was a worker. The day Gino was born she had milked the cows that morning, then went into the house, gave birth, and was back in the barn milking the next morning.²¹

For Alessandro opportunity was not to be denied for lack of schooling or the fact that he could not read or write. He collected garbage in New London and took it to the city's piggery on Clark Lane in Waterford.²² He hauled ash and cinders from New London's hotels selling the cinders to the town of Waterford for their roads.²³ Occasionally he leased out his team. Often he worked late into the night – he was known as the “night whistler.”²⁴

For Redenta and three growing boys the house on Miner Lane had simply become too small. Around 1920 Alessandro added a front porch and off the back another bedroom, bath and kitchen. He installed a walk-in milk room in the grade-level basement below. Ice kept the milk cool until refrigeration was installed in the mid-1930s.²⁵

In 1922 Alessandro doubled his holdings with the purchase of approximately 15 acres on the east side of Miner Lane where he established his own piggery.²⁶ He also planted peach trees on the site.²⁷ According to the grand list it is apparent the following year that the extant ground-level stable barn was built, just northeast of the house. 1923 was also the year Alessandro acquired his first motor vehicle – most likely a pick-up truck for milk delivery. In 1924 he reported a second vehicle, a flat-bed truck with side boards.²⁸



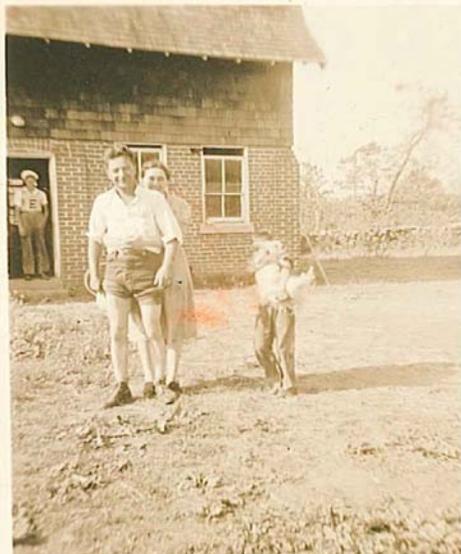
House addition at rear of house starts at the chimney. The white door is the door to the milk room below.

In 1924 Alessandro acquired still another parcel of land, approximately twelve acres further to the east and south of the Post Road off Jordan Road (Willetts Avenue Extension).²⁹ Not only did he expand the piggery but he was also able to increase tillage for vegetables which he grew for market. One of his clients was the Mohican Hotel for which he supplied seasonal greens and fruit as well as milk and eggs.³⁰

In 1931 – the year Alessandro became a naturalized citizen³¹ – he and Redenta moved back to New London, to Faire Harbour Place, near the Lawrence & Memorial Hospital.³² Their three sons remained in the house in Waterford, however – along with Guido's new wife, Marceline “Mary” Cameron. (They were married that year in August).³³ All three boys, meanwhile, would share more and more of the responsibilities associated with their father's enterprise. Julius, for example, was primarily a teamster. In addition to farm chores he worked on the roads from time to time and hauled cinders and collected garbage. Even Guido's son, Thomas, born in 1932, had his own responsibilities as the Depression years wore on. He and his mother, Mary, did the milk route for a



ALESSANDRO SECCHIAROLI: With Eleven Dollars In His Pocket



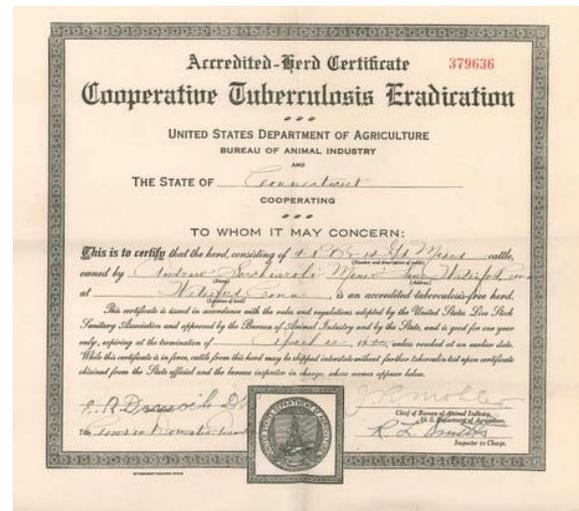
Guido and Mary Secchiaroli and son, Thomas
c. 1937

time. He remembers delivering milk the morning of the '38 hurricane (September 21) on his way to St. Joseph School in New London.³³ Thomas also recalls filling feed bags with coal along the railroad tracks. Back then there were sidings each side of the tracks that ran from Ocean Avenue in New London to the Great Neck road. That's where the freight trains would "shake their box" and it was Thomas' job to fill two bags with un-burned coal along the stretch west of Miner Lane and another two bags eastward. Later his father or one of his uncles on horseback would pick up the bags.³⁵

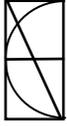
In 1928, the same year Alessandro declared his intention to become a citizen of the United States,³⁶ he began a 13-year run of perfect night school attendance. At the closing exercises on February 27, 1941, at Jennings School in New London, he was awarded a special prize of a flag code by the chairman of the Americanization Committee of the Daughters of the American

Revolution. It was a state record. He was also chosen to be one of six speakers from Nameaug School. His topic was Louis Pasteur.³⁷

Considering the subject of Alessandro's speech, it is no small irony that two years later he was out of the milk business. His taxable livestock in 1943 included swine and chickens – but no cows.³⁸ Indeed by the mid-1940s many of the smaller dairy farmers found that the costs of production exceeded the prices received. Many others were little more than marginal operations. In 1923, the year he built his new dairy barn, Alessandro was one of thirty-three Waterford dairymen with between ten and nineteen cows. Only eleven had twenty or more cows. Twenty years later there were only eighteen in the ten to nineteen category and the number with twenty or more cows rose to seventeen. During the same period the number of families with five or fewer cows declined as well - from 187 to 67.³⁹ Dairy farming was clearly becoming more competitive. Pigs and garbage, however, were another matter.



"Accredited Tuberculosis Free Herd" 4 purebred Guernsey, 14 Guemsey mixed, 1925



By the mid-1930s Alessandro had become one of the largest private collectors of garbage in the city of New London with contracts that included the Coast Guard and Navy.⁴⁰ In addition to his own piggery he ran the city piggery for a time on Clark Lane in Waterford, the property for which was purchased by New London back in 1914.⁴¹ The piggery ceased operating around 1940 and the town of Waterford bought the property in 1951.⁴² Clark Lane School was built on the site two years later.

During the war years Alessandro became increasingly involved in New London real estate (another reason why he gave up dairy farming). In 1943 he purchased Lighthouse Inn and hired his daughter-in-law, Mary, as manager.⁴³ Housing came with the job – for Guido and young Thomas as well. Meanwhile Gino, who left Miner Lane when he got married in 1941, moved back in along with his wife, the former Natalie Boska.⁴⁴ (Julius moved out when he married the former Emma M. Lassonde in 1937).⁴⁵ The Lighthouse Inn venture proved to be very time consuming. Furthermore, during the war “it was too hard to get help,” according to Alessandro.⁴⁶ Three years later the inn was sold. Meanwhile Alessandro continued buying properties – and with great success. He had “the Midas touch,” according to a business associate, “a perceptive eye for an investment.”⁴⁷

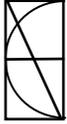
On Miner Lane Julius returned to the farmhouse with his wife and son, Julio, after Gino and his wife and daughter, Redenta, moved back to New London. After the sale of Lighthouse Inn Guido and his family relocated elsewhere in the city. Julius and his wife remained at Miner Lane until two years before his death in 1984.⁴⁸

On October 18, 1949, Alessandro's wife, Redenta, died unexpectedly. Though she had been ill some months earlier it appeared her health had improved. She was 58.⁴⁹ On March 27, 1951, Alessandro married the former Margaret Satti Carino.⁵⁰



Horse barn and garage. Mary Secchiaroli and son Thomas, ca. 1940.

In 1955 Alessandro and his sons purchased 14 acres abutting the southern bound of the original farmstead.⁵¹ Guido's son, Thomas, and his wife and children moved into the house on the property. Four years later Alessandro transferred all three Miner Lane parcels to his sons who incorporated as A. Secchiaroli and Sons.⁵² He remained involved in the business for a few more years, but most of his energies went into his properties, managing the apartments and doing all the maintenance himself. Around 1963 and well into his seventies he built a house on Lower Boulevard for himself and his wife, Margaret.⁵³



In the late 1950s Alessandro went back to Italy to visit. Except for certain conveniences like running water and electricity little had changed. "Nothing like Italia," said Alessandro repeatedly according to Margaret before the visit. Then after the visit, it was "Nothing like America." For the man who came over as a teenager to try to make a better living – and who succeeded beyond whatever he may have imagined in 1904 – the United States was "the best country in the world." Alessandro concluded matter of factly, "I like it here and I'm going to die here."⁵⁴ On May 30, 1979, Alessandro Girolamo Giovanni Secchiaroli died, less than a year after being admitted to a local nursing home. He was 92.⁵⁵

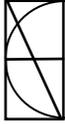


Alessandro Secchiaroli Miners Lane Dairy
Waterford, CT

ACKNOWLEDGMENTS

Thanks first and foremost to Alessandro Secchiaroli's great-grandson, Michael, for making available all his family research. He and I have corresponded regularly for the past year and have met on two occasions, most recently on February 12, 2011. Michael has posted a number of documents, newspaper articles and photographs on his website, all of which contributed in one way or another to the success of this project. (<http://picasaweb.google.com/msecchiaroli/secchiaroli>).

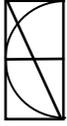
To Alessandro's grandson and Michael's father, Thomas B. Secchiaroli, Sr., my thanks for patiently answering questions, sharing stories and providing details that otherwise would have been lost to the ages. He and I have conversed several times and met twice, the last time with his son, Michael.



Last, but certainly not least, my thanks to Vivian Brooks for her research assistance, most particularly for providing Federal Census statistics for 1910 and 1920.

NOTES

1. "Alessandro Secchiaroli: Transplanted from Italy, he grew roots here," The Day (New London, January 6, 1978).
2. "Alessandro Secchiaroli," The Day, (January 6, 1978).
3. According to Michael Secchiaroli, Alessandro's brother, Pompeo, who immigrated in 1902, was able to purchase farmland in Ripe which is owned today by his descendants. Pompeo returned to Italy more than once – some of his children were born in the United States, others in Italy. He turns up in the 1920 Federal Census, living with Alessandro and his family in Waterford. His occupation: machinist. Mysteriously, Pompeo disappears in Argentina, sometime around 1932.
4. "List or Manifest of Alien Passengers for the U.S. Immigration Officer at Port of Arrival." S.S.Barbarossa, sailing from Bremen, March 18, 1904, arriving at Port of New York, March 24, 1904. Alessandro arrived in possession of \$11.
5. Albert E. Van Dusen, Connecticut: A Fully Illustrated History of the State from the Seventeenth Century to the Present, (New York, Random House, 1961), 264.
6. 1910 Federal Census. According to Van Dusen, even though by 1920 over one-third of the state's farmers were foreign born, the northwest and southeast corners of the state remained "overwhelmingly native-born." 254.
7. Though the Mariani name is relatively common today in the greater New London area, Michael Secchiaroli was unable to track down Erstagustari Mariani.
8. "Alessandro Secchiaroli," The Day, (January 6, 1978). According to Alessandro's grandson, Thomas Secchiaroli, Alessandro worked sunrise to sunup, earning \$1 a day. The pay earned by Italian laborers working in Waterford's Millstone Quarry was about the same.
9. "Alessandro Secchiaroli," The Day, (January 6, 1978).
10. New London Vital Records. Redenta's place of employment is not known. Among the mills in New London at the time were Brainard & Armstrong Company (silk mill), Palmer Quilting Machine (bed comforters), New London Steam Woolen Mill, New London Wash Silk Company, and Mohegan Cotton Mills. Robert Owen Decker, The Whaling City: A History of New London, (Chester, Connecticut, The Pequod Press, 1976),pp. 125-26, 130-31, 134.
11. New London Vital Records. Redenta stated her age as the legal age of 21 on the marriage certificate.
12. "Mrs. Redenta Secchiaroli," Obituary, The Day, (October 19, 1949). Redenta's birthplace was given as Fano. Michael Secchiaroli, however, has documented her birthplace as Monte Porzio. Many of the Italian immigrants living at "the Fort" were in fact from Fano. To become a member of the Italian Dramatic Club one had to be from Fano or be married to, or related to, someone from there. Alessandro later became a member.
13. "Alessandro Secchiaroli," The Day, (January 6, 1978).



14. Waterford Land Records. Vol. 30, Pg. 393 and Vol. 31, Pg. 102. Alessandro Secchiaroli's name is spelled a number of ways in the records: Alexander, Andrew. Secarolli, Siccarelli, Sicaroli, Siccoroli, Siccarolia, Sicerella. Curiously, Alessandro does not appear in the 1910 Federal Census.
15. New London Vital Records.
16. Waterford Vital Records.
17. Waterford Town Planner. Aerial map, (Sanborn Map Company, April 2009).
18. Waterford Grand Lists, (1913 and 1922).
19. "Milkman Upsets in Viets Street," The Day, (February 16, 1922). The article begins with the following paragraph: "Andrew Sechoriola, a milkman of the Miner's Lane section of Waterford, met with an accident at an early hour this morning, in which his delivery equipage was overturned on Viets street, and a number of local families went without their usual breakfast supply of milk. Considerable damage was done the wagon and, in consequence Mr. Sechoriola suffered a badly cut hand."
20. Thomas Secchiaroli, notes.
21. Thomas Secchiaroli, notes.
22. "Tells Council He Can Run City Piggery at Profit under Present Garbage Collection Conditions," The Day, (December 21, 1937).
23. Town Reports, Town of Waterford, (1922 – 1934).
24. Thomas Secchiaroli, notes.
25. Thomas Secchiaroli, notes.
26. Waterford Land Records. Vol. 38, Pg. 326.
27. Thomas Secchiaroli, notes.
28. Waterford Grand Lists, (1924 and 1925). According to Thomas Secchiaroli, the flat-bed was used primarily for collecting garbage.
29. Waterford Land Records. Vol. 35, Pg. 580.
30. Thomas Secchiaroli, notes.
31. "Alessandro Secchiaroli," The Day, (January 6, 1978).
32. "Alessandro Secchiaroli," The Day, (January 6, 1978).
33. "Marceline Secchiaroli," Obituary, The Day, (October 16, 2001).
34. According to Thomas Secchiaroli he went to St. Joseph because of the discrimination his father Guido experienced at Jordan School in Waterford. Neither Guido nor Julius spoke English upon entering first grade. Guido stuck it out, however, graduating in 1925.
35. According to Thomas Secchiaroli, the freight trains were so long (120 cars more or less) that when they pulled off to the siding they had to split the cars at Miner Lane so as not to block road traffic.
36. U.S. Department of Labor, Declaration of Intention. (New London Superior Court, December 5, 1928). Alessandro gave his occupation as "farmer." He had "dark complexion," was 5'-8 1/2", weighed 145 lbs., had black hair, and brown eyes. He renounced allegiance to Victor Emanuel III, King of Italy, and swore that he was not an anarchist or a polygamist and that he intended to become a citizen and live in the United States permanently.
37. "Night School Closing Exercises and Work Displays Attract Large Audience," The Day, (February 28, 1941).
38. Waterford Grand List, (1944).



39. Waterford Grand Lists, (1924 and 1944). The figures cited are probably on the conservative side but useful nonetheless in terms of the relative scale of dairy farming in the town of Waterford.
40. "Tells Council He Can Run City Piggery," The Day, (December 21, 1937).
41. Waterford Land Records, Vol. 32, Pg. 320. "Selectman White New Piggery Manager," The Day, (September 29, 1938).
42. Waterford Land Records, Vol. 93, Pg. 228.
43. "Alessandro Secchiaroli", The Day, (January 6, 1978). "Marceline Secchiaroli," Obituary, (October 16, 2001).
44. "Gino Secchiaroli," Obituary, The Day, (October 18, 1996).
45. "Julius Secchiaroli," Obituary, The Day, (March 22, 1984).
46. "Alessandro Secchiaroli," The Day, (January 6, 1978).
47. Thomas Secchiaroli, notes. "Alessandro Secchiaroli," The Day, (January 6, 1978).
48. Thomas Secchiaroli, notes.
49. "Mrs. Redenta Secchiaroli," Obituary, The Day, (October 19, 1949).
50. "Mr. Secchiaroli, 92; retired businessman," Obituary, The Day, (May 30, 1979).
51. Waterford Land Records, Vol. 102, Pg. 525.
52. Waterford Land Records, Vol. 128, Pp. 612 and 614. A. Secchiaroli & Sons, Inc. conveyed the Miner Lane property to Thomas and his son, Thomas, in 1989 (Waterford Land Records, Vol. 364, Pg. 906). In 2008 Thomas, Sr. and Thomas, Jr. conveyed the two abutting parcels on the west side of Miner Lane to the Town of Waterford (Waterford Land Records, Vol. 1034, Pg. 139).
53. "Alessandro Secchiaroli," The Day, (January 6, 1978).
54. "Alessandro Secchiaroli," The Day, (January 6, 1978).
55. "Mr. Secchiaroli, 92; retired businessman," Obituary, The Day, (May 30, 1979).

STRUCTURAL REVIEW OF SECCHIAROLI BARN

Gibble Norden Champion Brown Consulting Engineers, Inc.



Structural Engineering
Geotechnical Engineering
Historic Preservation
Construction Support

February 23, 2011

Sara O. Nelson, AIA
Nelson Edwards Architects LLC.
1156 Main Street
Branford, CT 06405
nelson@nec-architects.com

Re: Secchiaroli Barn – Structural Observations
Waterford, CT

Dear Sara:

After our walk-thru of this date at the Secchiaroli Barn in Waterford, the following are my observations and comments.

Exterior

1. The first story brick is in generally good condition with only minor weathering and mortar loss in some of the joints.
2. The mortared rubble stone frost foundation walls are in good condition with no apparent signs of settlement. One exception is at the side wall in the north east corner where some brick cracking may indicate a minor settlement problem. It would be prudent to further investigate this area as well as determine the frost depth of this walls footing.
3. The cedar shingles are heavily weathered and cupping and may be considered for replacement depending upon the building's planned use. Some eave damage is present, noticeably at the south west corner which will need minor replacement and repair.
4. The exposed 2nd floor timber sill is rotting at the east facing 2nd floor door. Replacement will be required.

Interior

1. The on grade level floor is the concrete slab on grade of the old barn stalls & troughs. Once cleaned off a more thorough survey can be made. Consideration should be given to providing a more usable level slab without troughs and depressions.
2. The 2nd floor framing is 2x8 floor joist construction spanning in the transverse direction from exterior brick bearing walls to two central heavy timber girders. Some areas of structural deterioration are noted in this framing near the exterior walls. The girders supporting posts vary in size, spacing and

material. Closer investigation and analysis is required here.

3. The wood bead board ceiling above the lower level is becoming detached from the 2x8 second floor joist and should be removed and saved if desired. This will allow for a closer inspection of this floor's framing and clean out all the trapped debris.
4. The large, gambrel roofed timber barn from the second level up is lightly framed stud and rafter construction. It is in generally good repair with new plywood roof sheathing over the original wood skip sheathing boards. A more thorough analysis can be made as to its capacity in the next investigation and analysis phase.
5. The tall end walls are stud framed with an intermediate double top plate at the roof eave level. It appears in good repair.
6. Some timber bracing is in place to give this tall barn some lateral strength against high wind loads. While it appears in good repair it is light framing very intermittently spaced. This entire system should be reviewed in more depth to determine its structural adequacy in light of the buildings proximity to a hurricane coastline. This would be of high importance if any plans are made for this structure use beyond an agricultural structure.

The above comments are from a cursory walk-thru on this date. While the overall building structure is not in desperate condition at this time, it will not be many years in the future where, if the proper maintenance is not undertaken, the barn will begin to deteriorate rapidly.

We welcome the opportunity to more thoroughly investigate this large structure and to assist in developing the necessary plans for its long term preservation.

Very truly yours,

James F. Norden, P.E.

**ARCHITECTURAL CONDITIONS ASSESSMENT
OF SECCHIAROLI BARN**

Nelson Edwards Company Architects, LLC



Figure 1.1: view of east facade looking west



Figure 1.2: view of southeast corner of barn looking northwest showing brick window infill



Figure 1.3: view of southwest corner of barn looking northeast showing deterioration of roof near southwest corner

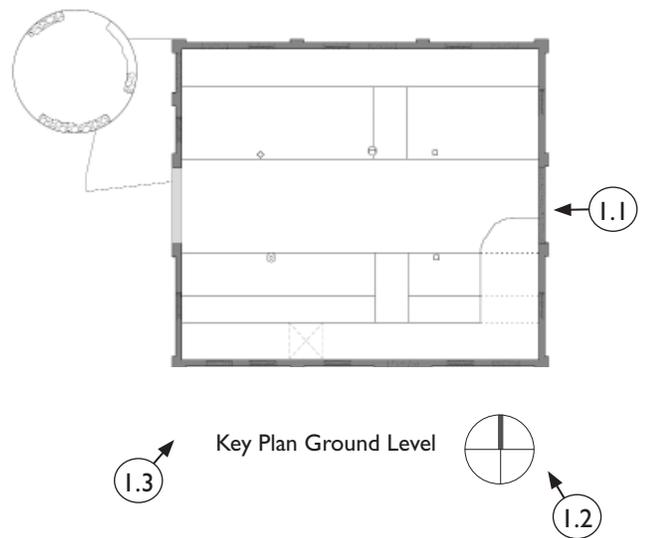




Figure 2.1: view of west facade looking east



Figure 2.2: view of northwest corner of barn looking south-east showing cmu window infill



Figure 2.3: view of north facade looking south, taken from wetlands

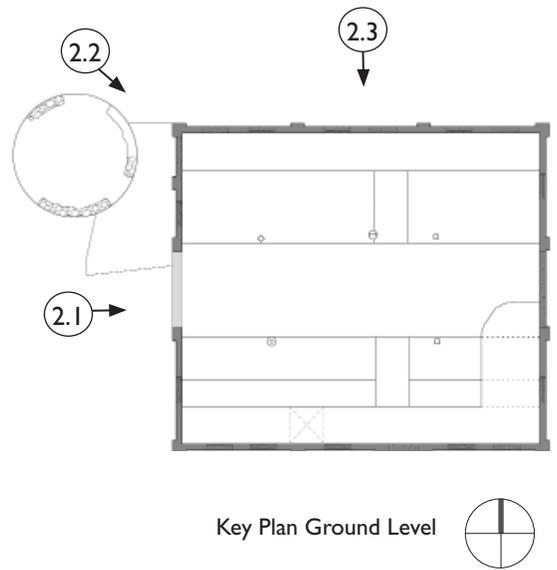




Figure 3.1: view of upper level loft opening on east facade. Deterioration of exterior envelope and doorway has lead to significant deterioration of loft floor structure in this area.



Figure 3.2: significant deterioration on upper east facade includes broken glazing, loft doors, missing or cupped shingles.



Figure 3.1: detail of entrance infill showing distance from header on south facade

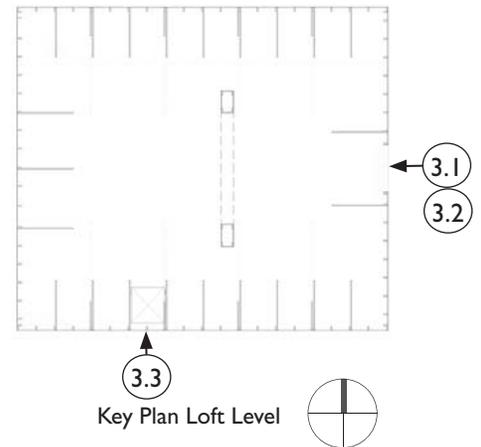




Figure 4.1: note the way the siding shingles meet at building corners, as well as the use of shingles as "rake boards" under eaves. Both of these details contribute to the architectural character of the building.



Figure 4.2: deterioration of blocking near rafters on southwest corner of barn



Figure 4.3: corner detail at southwest corner of barn taken from ground level

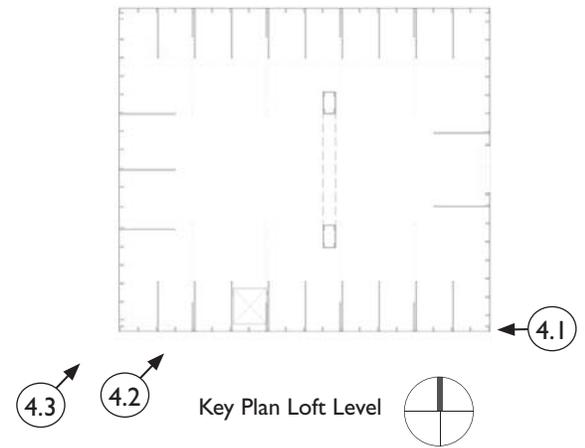




Figure 5.1: detail of upper right corner of barn entrance taken from exterior of west facade



Figure 5.2: remains of grain silo on northwest corner of barn



Figure 5.3: deterioration of elements on west facade

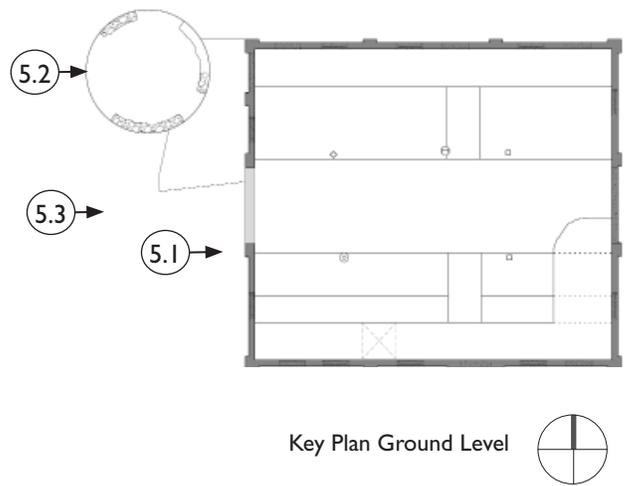




Figure 6.1: stress fracture near foundation on northwest corner of barn near grain silo



Figure 6.2: stress fracture near window sill on west facade



Figure 6.3: stress fracture near window sill on north facade

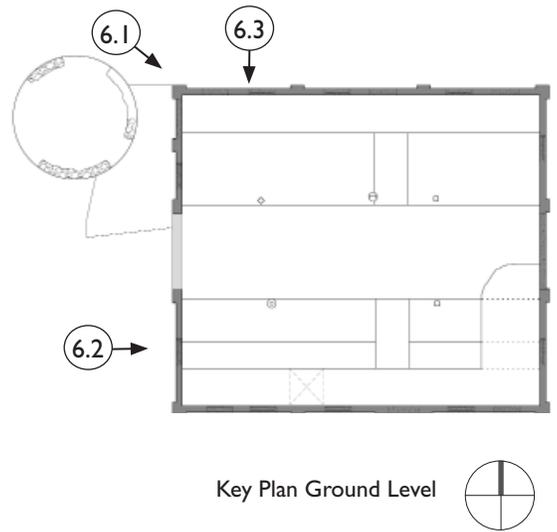
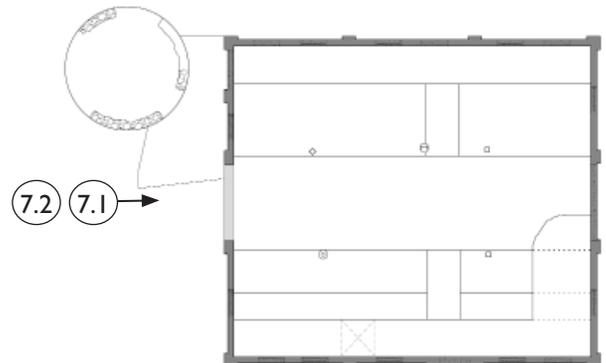




Figure 7.1: entrance to barn on west facade



Figure 7.2: deterioration of header at barn entrance on west facade



Key Plan Ground Level 



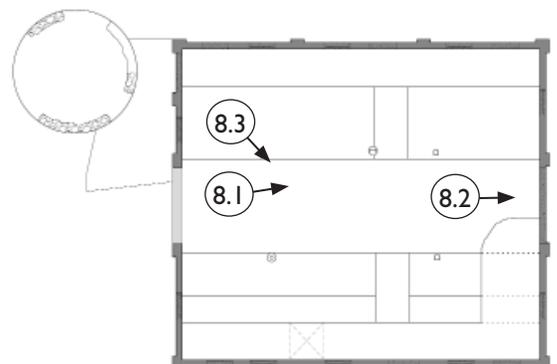
Figure 8.1: interior view of lower level taken from entrance



Figure 8.2: interior view of lower level looking east taken from entrance



Figure 8.3: interior view of lower level taken from entrance



Key Plan Ground Level 



Figure 9.1: interior view of lower level ceiling showing missing boards and structure above



Figure 9.2: displacement and deterioration of structural post, lower level



Figure 9.3: interior view showing missing mortar near foundation at northeast corner;

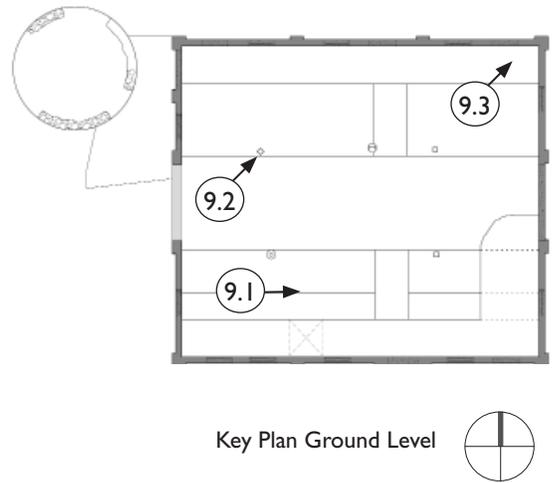




Figure 10.1: interior view showing missing mortar near southwest corner



Figure 10.2: detail of old electrical system



Figure 10.3: access to upper level

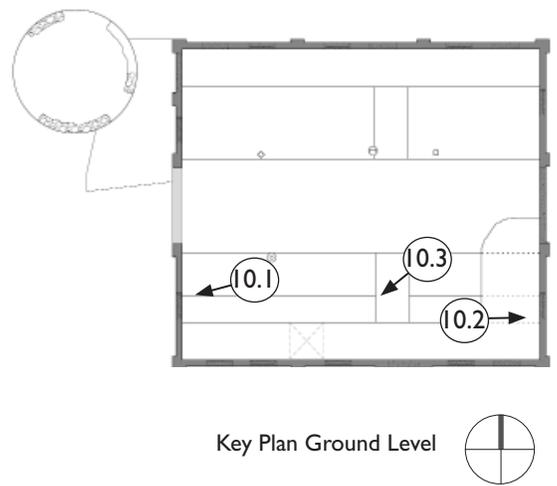




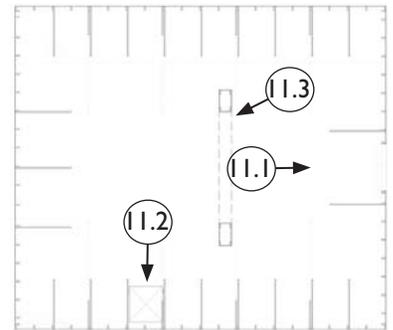
Figure 11.1: interior view of upper level looking east



Figure 11.2: entrance hatch to lower level



Figure 11.3: interior view of upper level looking west



Key Plan Loft Level 



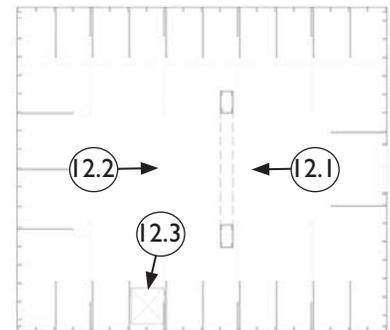
Figure 12.1: interior view of roof structure and ventilation shaft, taken from upper level



Figure 12.2: interior view of roof structure and ventilation shaft taken from upper level



Figure 12.3: unused access to upper level



Key Plan Loft Level 



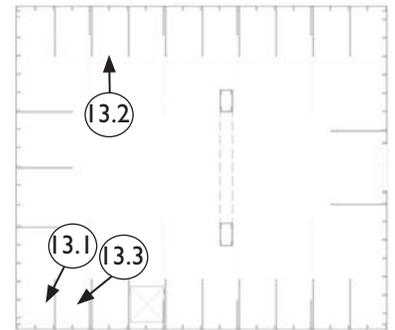
Figure 13.1: upper level detail of deterioration at southwest corner of barn



Figure 13.2: upper level interior view showing missing floor boards at northwest corner of barn



Figure 13.3: upper level view showing missing sheathing and shingles at southwest corner



Key Plan Loft Level 



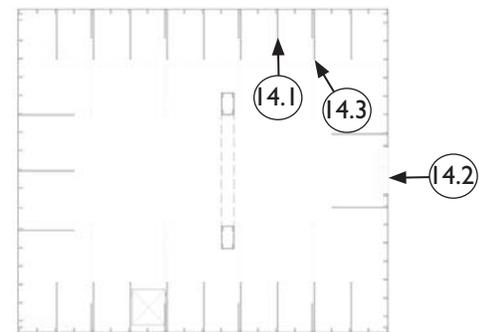
Figure 14.1: upper level interior detail view showing extension of wall framing through upper level floor structure



Figure 14.2: deterioration of sill on west facade, taken from upper level interior



Figure 14.3: upper level interior detail view showing extension of wall support through upper level floor structure



Key Plan Loft Level 



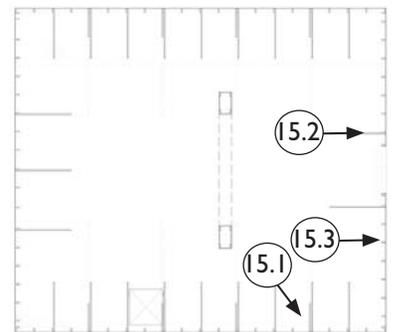
Figure 15.1: upper level construction detail



Figure 15.2: insect damage of upper level east wall supports

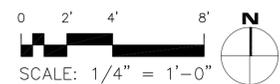
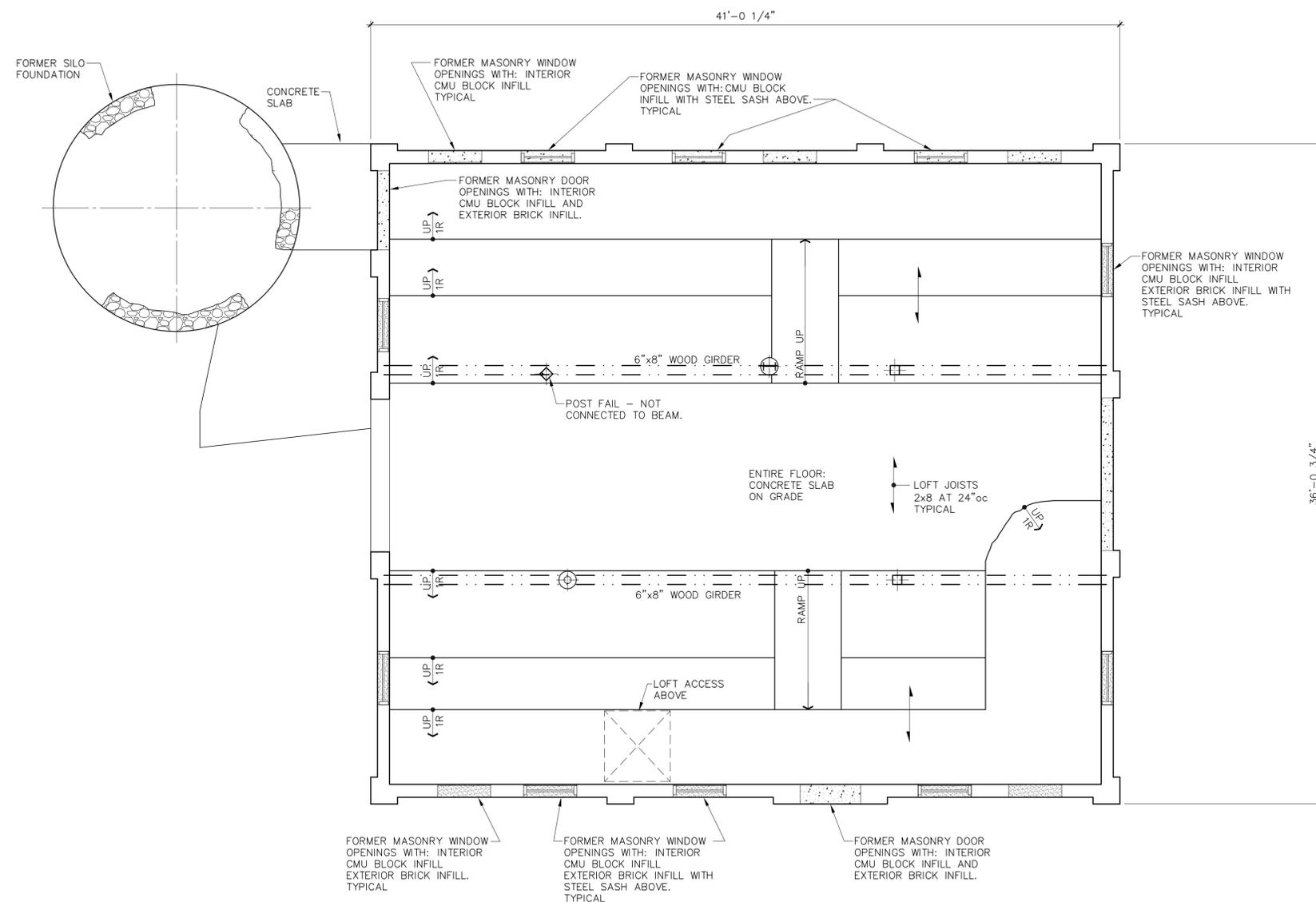


Figure 15.3: insect damage of east wall framing, showing sistered support structure



Key Plan Loft Level 

Keynotes / General Notes:



LOWER LEVEL PLAN

SCALE: 1/4" = 1'-0"

LOWER LEVEL PLAN

SECCHIAROLI BARN
MINER LANE
WATERFORD, CT

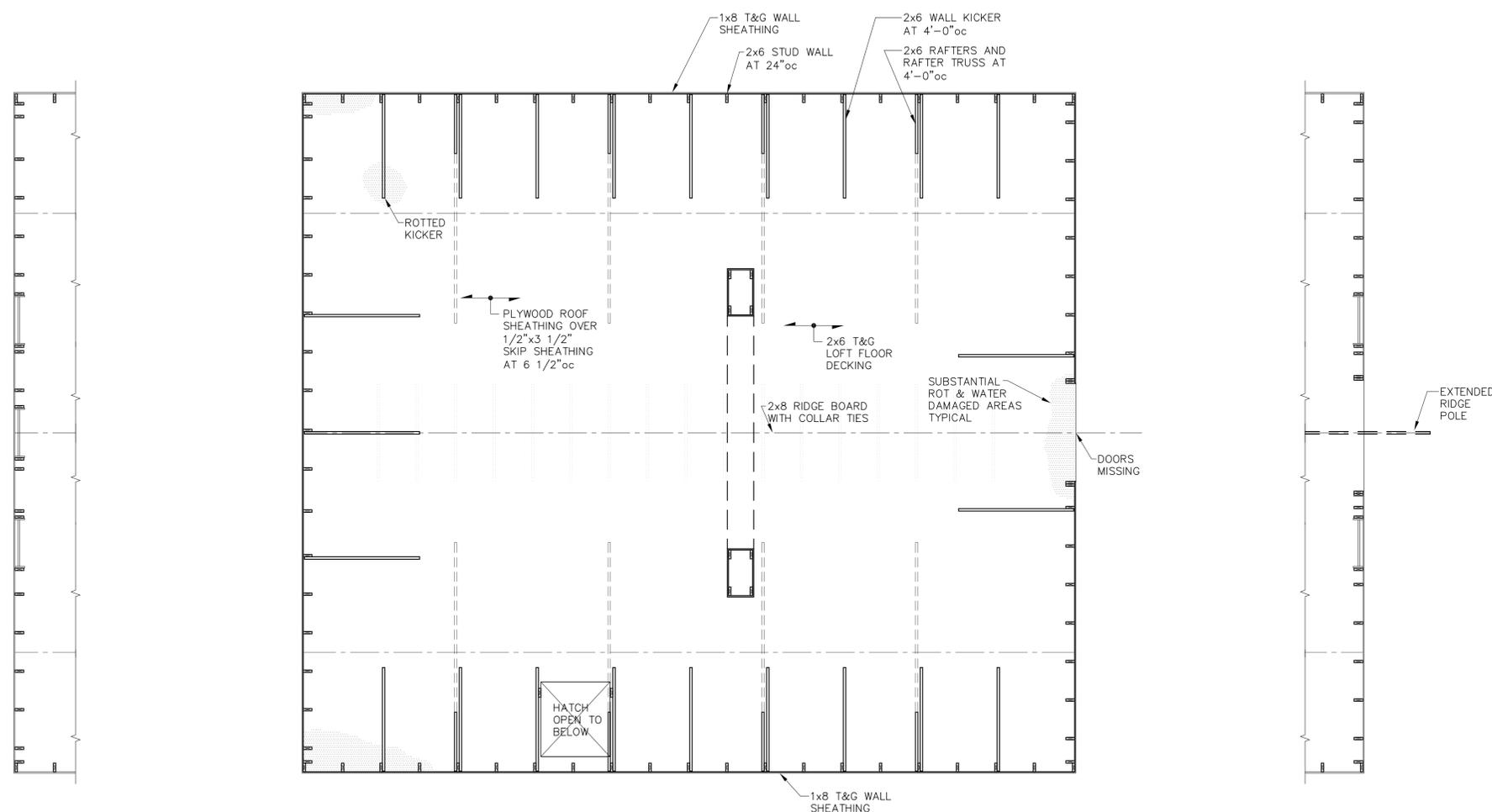
EXISTING CONDITIONS

DATE: 10/13/2010
PROJECT: 10086
SCALE: AS NOTED
DRAWN BY: JJS
CHECKED BY: JFN

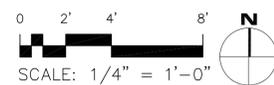
DRAWING NO.

A1.1

Keynotes / General Notes:



UPPER WEST
WALL DETAIL



UPPER LOFT PLAN

UPPER EAST
WALL DETAIL

UPPER LOFT PLAN

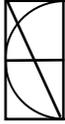
SECCHIAROLI BARN
MINER LANE
WATERFORD, CT

EXISTING CONDITIONS

DATE:	10/13/2010	DRAWING NO.
PROJECT:	10086	A1.2
SCALE:	AS NOTED	
DRAWN BY:	JJS	
CHECKED BY:	JFN	

FEASIBILITY FOR ADAPTIVE REUSE

Nelson Edwards Company Architects, LLC



SIGNIFICANCE

The land within the Town of Waterford has served as agricultural farmland dating back to the 1700s when Waterford was known as “West Farms” as was the land surrounding and supporting the City of New London. The Secchiaroli property at Miner Lane served as agricultural use until the Town of Waterford’s purchase of the tract. The Secchiaroli barn is a model small dairy barn of the early 20th century and has survived when many agricultural buildings have succumbed to development or benign neglect.

The present location continues to be surrounded by open vistas, and in the case of the farm across the street, agricultural use. The Town’s land management objectives for the property include maintaining the property as pasture land and preserving the barn. The property is located within walking distance of the High School and Civic Center, and is less than one mile from the Historical Society.

FRAMEWORK

Before one can address the “future use” of a historic site or building in a meaningful way the property owner / stakeholders must simultaneously identify those uses that promote continued financial viability for the building / site and those programmatic uses that allow for continued preservation and understanding of those elements that relate to the period of significance.

There is much support evidenced for the continued maintenance of the pasture land and the preservation of the barn. Some suggestions for barn use include gathering area for public outreach and educational efforts or display of vintage farm machinery. In our opinion, the range of proposed uses is in keeping with the heritage and significance of the barn and site.

The presence of the landfill at the west end of the property has caused localized ground water contamination. Before any future use can be proposed the soil itself needs be tested to determine if remediation efforts are required.

Influencing considerations for future use are questions about the suitability of a space for an identified programmatic use and the requirements of Life Safety and Accessibility codes for proposed or continued uses. While many of these items cannot be solved in the context of this study we hope that a general discussion of the issues will help guide future planning efforts.

BUILDING and LIFE SAFETY CODES General

To understand the impact of building codes on building design and renovation one first has to become familiar with the concept of “use” as defined by the Building and Fire codes. Building “use” relates to a specific classification of occupancy for a given building. Each building “use” has specific requirements in the Codes that govern everything from design of



the structural systems, to life safety requirements. As an agricultural building the barn is currently considered to be "Utility" use, as defined by the State of Connecticut Building Code. Should the barn be renovated for another use such as display area the barn would become a "Business" use. Should the barn have an area that could hold 50 or more people the barn would be considered to have an Assembly area (within the context of another use.). It is possible for a building to have two or more uses (for example, a Business use with Assembly area) where one use is the primary use, and the other is the incidental use.

Buildings constructed before the adoption of the current State of Connecticut Building Code are "grand-fathered" with respect to the requirements of the current code. With respect to the State Building Code, previously grand-fathered conditions do not need to be changed unless there is a "change of use" of the building (i.e. Utility use to Business use), or renovations take place. In the case of "change of use" all areas of the building must meet current code requirements for the new use, even if the building is not architecturally altered. In the case of renovations without a "change of use," only those areas that are renovated need comply with the current code; areas that remain un-renovated do not need to be brought up to meet current code standards. Often times the greatest limiting factors in any conversion from one use to another is the capacity of the framing system to support the live loads designated by the Building Code for the intended use.

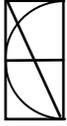
The application of the Fire Code is considered to be retroactive as the code relates to basic life safety. In this instance a building must meet the requirements of the then current code even if the building was constructed prior to the current regulations. Local code officials having jurisdiction have some ability to interpret the code with regard to a specific item.

Structural Modifications

Each use listed in the Building Code has related requirements for structural design (i.e. the size of floor framing members and the capacity of the designed system to withstand a specified level of "live load". Once a proposed use for a building has been decided, the existing structural systems need to be reviewed to ensure conformance with the code requirements for the new use. In the case of the loft level floor structure it would be relatively easy to affect the modifications from the underside of the floor system once the finishes are removed.

Health Code

The barn is not currently served by a septic system. Should the use of the barn be changed a new septic system will need to be installed to meet current State of Connecticut Health Code.



The number of restroom facilities required for a public building is a function of the size of the spaces and the occupancy count for the building area.

The application of Building, Life Safety and Accessibility Codes falls under the purview of the local Building Official and Fire Marshall as well as the local Health Official. The next step in an adaptive reuse effort is to develop plans that illustrate the range of proposed uses and then review the plans with local officials to develop a conceptual framework for addressing the myriad of building issues attendant with a change of use.

CONCLUSION

The decision of how to best use the property is complicated by many considerations. The consultant team is happy to participate in further discussions and planning efforts as we realize that there are many wonderful possibilities, but no simple solutions.

Whichever direction the Town of Waterford elects to follow, we recommend that a preservation plan be drawn up for the building and site that identifies the character defining elements that contribute to the historic read and value of the site and additionally, establishes a framework for future renovations.

APPENDIX

Prioritized List of Repairs
Opinion of Probable Cost

Alessandro Secchiaroli Barn - Prioritized List of Repairs

Location	Item	Repair Needed	Immediate	Urgent	Necessary	Maintenance	Cosmetic	Coordination of Work
Structure	Masonry Wall and slab	Repair settlement cracks in masonry wall			X			
		Consider replacement of concrete slab				X		
	Loft Level Framing	Remove deteriorated ceiling finish	X					
		Inspect loft level framing members	X					
		Repair / replace deteriorated framing members	X					
		Remove and replace support columns	X					
	Building Envelope	Exterior Envelope	Repair deteriorated side wall areas		X			
Re-shingle				X				
Replace deteriorated windows and door areas				X				
Remove and replace deteriorated sill on top of masonry wall				X				
Repaint exterior areas previously painted			X				Needs to be done to protect wood	
Attic / Roof Framing		Repair deteriorated roof eave			X			
		Remove roofing material and inspect roof			X			
	Re-shingle roof			X				

Immediate: In danger of failing

Urgent: Should be done within 1 year to maintain integrity

Necessary: Accomplish within a 3 to 5 year period but not currently urgent

Maintenance: Issue to be addressed within next 10 year (maximum) period

Cosmetic: Improvement to general building aesthetics

Opinion of Probable Cost - Secchiaroli Barn

Evaluation of the Owner’s estimated project budget of construction costs represent project team member's best judgment as professionals familiar with the construction industry. It is recognized, however, that NEC does not have control over the cost of labor, materials or equipment, over the Contractor’s methods of determining bid prices nor over competitive bidding, market or negotiating conditions. Accordingly, NEC cannot, and does not warrant or represent that bids or negotiated prices will not vary from the estimated project budget proposed, established or approved by the Owner, if any, or from any statements of probable construction, cost or other cost estimate or evaluation prepared by NEC.

Building Area	Repair	Cost	Priority
Masonry / First Floor Framing			
Lower Level Masonry Walls / Slab	Re-pointing	\$2,000.00	Maintenance
	Slab Replacement	\$8,000.00	Maintenance
Loft level Framing	Remove ceiling and deteriorated loft level flooring and replace	\$10,500.00	Immediate
	Post Replacement		
	Miscellaneous carpentry for framing		
Building Envelope			
Roof, Eave and Flashings	Re-shingling and related carpentry	\$18,000.00	Immediate
Siding	Side wall re-shingling	\$19,000.00	Urgent
Windows	Window replacement	\$3,000.00	Urgent
Doors	New doors and trim	\$4,000.00	Urgent
Painting	Exterior painting	\$5,000.00	Necessary
Sub-Total Architectural Repairs:		\$64,500.00	
15% Contingency:		\$9,675.00	
Total, Opinion for Probable Cost (construction) for Architectural Repairs:		\$74,175.00	