

**FEASIBILITY STUDY FOR THE ADAPTIVE REUSE OF THE
- STERLING TOWN HALL
STERLING, MASSACHUSETTS**

FOR THE STERLING BUILDING NEEDS COMMITTEE

Funded in part by a Grant from the National Trust of Historic Places

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INTRODUCTION

The Town of Sterling building Needs Committee was formed in January of 1994 to study alternative uses for the 1835 Town Hall after the relocation of the town offices into the newly renovated Butterick School. As part of an evaluation of all town facilities needs, the committee pursued several possibilities for reuse. Both the police and fire departments are in need of expanded space and willing to share some facilities. There has also been interest expressed by both public and private groups for various meeting, recreational and educational uses. In order to solicit town opinion, the committee distributed a questionnaire to townspeople. The results indicated overwhelming support for the continued public use of the building to serve a variety of community based needs and programs. This study is intended to address the feasibility of implementing this mandate.

PROJECT GOALS:

Consistent with the purpose of the Building Needs Committee, the long-term goal of the project is the adaptation of the old town hall into a self-supporting community center serving town and private community needs. This is to be accomplished in a way that retains the historical character of the building, yet upgrading the building to satisfy both ADA and Massachusetts Code requirements.

The short term goal is to complete a feasibility study examining the structural condition and capacity, code implications and design options for reuse of the building as a community center and to determine:

- The structural integrity of the structure
- How the space can best be used for community purposes
- How compliance with the American with Disabilities Act can be implemented without damaging the historical integrity of the building.
- The financial implications for use as a community center
- Adequacy of infrastructure and mechanical systems.

PROJECT APPROACH:

The first step was to provide a comprehensive inspection of the building, develop measured drawings, explore design solutions in conjunction with a building needs study, ADA and code requirements and requirements for historic preservation. The intent is to work with the Sterling Historical commission and the Sterling Building Needs Committee in a team effort to develop, review and finalized the various aspects of the project and to solicit comments and suggestions for interested officials and citizens of the town of Sterling. Findings are presented in this report to be presented to the Town for action includes:

- Description of historic significance
- Assessment and evaluation of existing conditions.
- Space needs program
- Analysis of occupancy, egress requirements and other code impacts.
- Preliminary design and space use drawings.
- Report on results and recommendations for development.
(Structural analysis and report by the Structural Engineer)

After completion of the feasibility study, the Building Needs Committee will be able to solicit potential users for the facility and prepare material for presentation to the town for funding for the project, and to determine a sequence of phasing the work if required before continuing with architectural, structural, mechanical and septic designs.

HISTORIC SIGNIFICANCE

The Sterling Town Hall is listed on the National Register of Historic Places and is a major contributing building to the Sterling Center Historic District.

The Town of Sterling is fortunate to have this outstanding example of an early, "high style" Greek Revival design serving as a landmark on the Sterling Town common. Designed and built in 1835 by John Springer, it is the oldest public building in Sterling. This 2 1/2 story classic temple front building features four handsome fluted Doric columns built by John Stevenson supporting a simple but heavy dentilated entablature and fully enclosed pediment with a deep coffered ceiling and capped Doric pilastered corner posts. The main façade is horizontal flush boarding with the side and rear walls clapboard. With the exception of the 1893 addition that gave the building a length of seven bays, the exterior has not changed from its original construction. An original fan shaped louver has been overlaid by a double hung window. The louver was left in the attic and is in good condition awaiting its return to the pediment. The columns sit directly on a base consisting of two granite steps bordering the sidewalk.

The existing structure stands on the site of an earlier town hall, built in 1800-01, which was purportedly the first Town Hall used exclusively for public purposes, not including church use, in Worcester county, on land deeded to the Town by Ebenezer Pope. Because of hard usage, the first town hall fell into disrepair and was sold in 1834 to cabinetmaker and builder, Col. John Ball Pratt who moved it to a new site on today's Route 12.

The new town hall was completed in November 1835 at a cost of \$2,857.85. An additional \$2000 was given to the Town by Jane Bailey Kilburn, widow of Capt. Eli Kilburn, for the enlargement and beautification of the Hall. This gift, which was accepted at the 1893 Town Meeting, became a bequest with the death of Mrs Kilburn several days later. When the addition was made, the architecture was not changed. The interior was improved and frescoed, a gallery was built at the front end of the second floor and a furnace and other modern conveniences were added. The Sterling Town Hall has had a long tradition of civic and community use. From its first construction, the first floor was used for such things as the exhibition hall during the cattle show, graduations, dinners and suppers, singing masters drilling students in the upper hall, antique fairs, and dances, in addition to annual and special town meetings.

Later additions of a fire escape and handicapped ramp at the rear and basement doors, remodeling to install handicapped toilets and a code complying stairway to the second floor have not altered the architectural significance of the building. The small brick "electric" building in the rear yard is not contributing to the historic significance and there are no other site amenities considered to be of historical value.

The Sterling common has preserved the flavor of a traditional small New England common because of the collection of handsome and well maintained historic buildings on its perimeter. The Town Hall anchors this architectural assemblage and provides a daily reminder of social, cultural and architectural history of Sterling.

ASSESSMENT AND EVALUATION OF THE EXISTING CONDITIONS

The exterior remains essentially in tact with an 1893 rear addition designed as an extension to match to existing building. As part of that work, all the second story window sash were changed to a 2/2 light configuration. And the triangular fan louver in the front pediment was replaced with a double hung window.

EXTERIOR

The building fronts on the street across from the common and opposite the library and former Church and is flanked by Maple Street to the left and a driveway to parking below to the right. There is no landscaping and asphalt paving surrounds the building. In general, the exterior appears to be in good condition with minimum deterioration to wood elements and siding. The paint is in fair condition. Original shutters have been replaced with baked enamel shutters (ouch!) that are out of proportion with the window sash. Aluminum combination storm sash on all the first and second story windows detract from the aesthetic purity of the building facades.

West Façade- Front facing on Main Street:

The large overhanging pediment appears to be structurally sound with gable and soffit woodwork in excellent condition. The four large Doric columns are in excellent condition. The venting system seems to be working well and there is no indication of deterioration in any of the elements. The boarding is also in good condition. Part of the granite platform has been replaced with concrete, but the overall effect of the granite steps and base has been retained.

North Façade- Along Maple Street

The cap of the front corner pilaster is missing and there is some damage to the water table and bottom clapboards. All wood needs painting. Granite veneer at foundation is in sound condition, however louvers and window fill is in poor condition.

The slate roof appears in good condition, but the chimney is listing dangerously and should be taken down to the roofline and rebuilt as soon as possible.

East Façade - Rear yard

A poured concrete handicapped ramp with a steel pipe rail leads to the rear door. Paint is deteriorated and badly in need of paint. Overhead electric service feeds from a pole in the back to the north wall and thence to an outside meter on the north wall.

South Façade - Side yard

The symmetry of the side wall fenestration is broken by a door and steel fire escape leading from the second floor to grade at basement level. Brick basement wall is in bad condition and needs repair. Windows and doors at basement are in poor condition. The railing design at west end door is not appropriate to the period. All wood needs painting.

INTERIOR

Structure: Substantial structural repairs appear to have been made as part of the 1979 renovation. These included adding masonry block piers in structural reinforcing in the basement to support columns (12" diameter, either concrete or steel encased) on the first floor to increase the design load capacity on the second floor meeting room. Despite having grade access on the south wall, the forest of piers in the basement makes the basement virtually unusable except for limited space uses such as toilets. At some point, probably part of the 1979 renovations, turnbuckles were installed in the attic, presumably to stabilize spreading at the top plates of the walls. This remedy failed and in 1987 a more substantial structural reinforcing was installed at the top of wall level. A 2'x4' suspended acoustical tile hides these structural repairs, but the original "cathedral" ceiling cased chamfered beams were exposed.

The first floor underwent major renovations in 1979, adding handicapped toilets, a janitors closet, and new concrete-filled, steel pan stairs to the second floor and basement. The original ceilings were removed and a new suspended acoustical tile ceiling installed throughout. New lighting was incorporated into the ceiling system. New wood panel doors were incorporated added as needed. Wood paneling and standing trim is original and in good condition. The floors are currently carpeted, presumably covering a hard wood floor.

The second floor: Other than the suspended acoustical tile ceiling the finishes on the second represent the 1890s renovation, with the stage apron and narrow vertical beaded wainscoting still in place. Hardwood floors are in good condition but are need refinishing.

The balcony added in the 1890s renovation was abandoned and closed off by the suspended ceiling in 1979. Restoring the ceiling and returning the balcony into use would make a splendid contribution to the restoration of the building.

Mechanical services were not investigated, only noting that the oil tank and two boilers supply a forced hot-water baseboard system. The size of the electric service was not recorded.

BUILDING USE NEEDS:

POTENTIAL USERS - SECOND FLOOR

Town of Sterling Recreation Department.

Arts and Cultural Programs

Children's Theater

Dance classes

Aerobics and sports training classes.

Musical Performances (Band Practice)

Civic Programs (Awards, Banquets, etc.

Lectures, Conferences

Private non-profits (PNP)

Fund raisers (Auctions, Rummage Sales, Fairs)

Lectures and Conferences

Individuals

Wedding Receptions

Family Reunions

Birthday and Anniversary parties.

NEEDS:

Large Meeting Room:

Catering kitchen

Table and chair storage

Platform (not proscenium stage) with modest lighting and audio capabilities.

Available in the building

Theater seating for 200 to 250 people -or-

Table seating for up to 120 people 1800 sq.ft.

POTENTIAL USERS - FIRST FLOOR

Town of Sterling Recreation Department

Arts and Cultural Programs

Art classes

Music classes

Sports training classes

Private non-profits (PNP)

Meeting Rooms (Scouts, Senior Groups)

Clubs (Garden, Sewing, Specialty crafts)

Individuals

Private Art and Music Classes

NEEDS:

Classrooms

Office Space

Sinks for arts and crafts

Available in the building

918 sq ft - 2 classrooms at 350 sq.ft plus 218 sq.ft office space.

Town of Sterling

Building Management

Informal uses (drop -in-center, special exhibits, receptions)

NEEDS:

Open space

Office space

Available in the building

1080 sq.ft -building manager, lounge/exhibit space & Caterers Kitchen

Ancillary spaces

Hallways, elevator, toilets, mechanical spaces.

CODE AND OCCUPANCY REQUIREMENTS

Building use- A-3 Assembly (Buildings used for public assembly by more than 50 people, lecture Halls, recreation centers, etc.)

Construction classification: Type 5 - Wood

Height and area limitations: 1. Stories -(20 ft) 4,200 sq.ft.

Existing 2 1/2 stories (26 ft.) 6,080 sq.ft

With an automatic fire suppression system the height limitation increased to 40' and the area limitation increases to 12,600 sq.ft.

Occupant loads

Design square feet:

Assembly (concentrated) 7 sq.ft per/person

Assembly (uncentrated 15 sq.ft.per/person

Lobby .15sq.ft per person in assembly area

Classroom 20 sq.ft per/person

Office 100 sq.ft.per/person

Design loads (number of people):

First floor:

| Assembly (concentrated) | | (Unconcentrated) | |
|-------------------------------|--------------------|------------------|-------------------|
| Lounge (exhibit hall) | | | |
| 720 sq ft/7= | 103 persons | 720 sq.ft /15 = | 48 persons |
| Classroom area -720 sq.ft/20= | 36 persons | | |
| Office -218sq. ft./100 = | 2 persons | | |
| Total | 141 persons | | 86 persons |

Second floor:

| Assembly (concentrated) | | (Unconcentrated) | |
|-------------------------------|--------------------|---------------------|--------------------|
| Hall 1800 sq.ft /7 = | 257 persons | Hall 1800 sq.ft/15= | 120 persons |
| Stage 290 sq.ft (usable)/ 7 = | 41 persons | Stage 290 sq.ft./15 | 19 persons |
| Total | 298 persons | | 139 persons |
| Grand total | 439 persons | | 225 persons |

EGRESS REQUIREMENTS:

Length of travel: 200 ft. Existing no more than 80 ft.

Egress width per occupant

Stairways @ .3" of width per person; from 2nd floor = 92" or 2 - 46" wide stairs. Hall opens directly on to the Lobby which discharges directly into stair.

Hall from 1st floor @ .2" of width per person = 28". The minimum requirement of 2 - 36" wide doors would apply.

In addition to complying with the Massachusetts State building code, the building would need to be upgraded to full handicapped access on the second floor. Because of its listing on the National Register of Historic Places and Federal funds are used, all new work must conform to the Secretary of the Interior's Standards for Historic Preservation.

PLUMBING FIXTURE REQUIREMENTS:

| | | |
|---------------|--------------------|------------|
| Water closets | Women (1 per 50) | 5 |
| | Men (1 per 100) | 2 |
| Urinals | Men (50%) | 1 |
| Lavatories | Each sex 1 per 200 | 3 for each |

SITE RESTRAINTS:

The site is bounded on the west by Main Street and on the north by Maple Street. The south side (rear) has a shallow rear yard and the east side yard is a paved drive extending to the adjacent building with a steep grade down to basement grade parking located behind abutting property.

Septic System: The existing septic system adjacent to the building is inadequate for projected occupancies, current code and zoning requirements and Title 5 compliance. In order to accommodate current requirements, a new location would need to be identified which would satisfy legal requirements. Because of the low elevation of the town Hall basement, sewerage would probably need to be pumped to any new system. Determination of probable cost, which is beyond the scope of this study, would require the advise of a qualified design professional experienced with this type of problem. Certainly, the resolution of the septic system design and location would have a substantial impact on the implementation of the project and would require coordination with and cooperation of the Planning Department and the Board of Health.

Parking and traffic: Town owned land at the site would allow for only two or three handicapped drop off/parking places. Other parking might be available at the Butterick School or to the rear of the abutter on the south side. On street parking is available around the common, but none of the available would provide enough parking to satisfy zoning requirement and a special permit would be required. There is concern that the project would also increase traffic in the center of town.

These questions need to be resolved before the project proceeds much farther. Both situations could be mitigated by reducing the occupancy load of the building. These strategies would need to be analyzed for cost-benefit implications and the value of preserving the town's most significant landmark.

EVALUATION AND RECOMMENDATIONS

As expected in a treasured old building, the town hall has suffered from intensive use, but remains structurally sound, has been generally well maintained and is an excellent candidate for continued use. In order to continue use, a new space layout to accommodate new space use needs must be developed and several areas of code compliance must be addressed.

SPACE USE:

Over the course of several years, the Town Building Needs Committee studied alternate uses for the building. One candidate considered was joint use by the town Police and Fire Departments. This use is not recommended because of difficulty of vehicular access for emergency and security vehicles and the extensive work (major demolition, lowering the floor and building a new floor framing systems to utilize the basement which would be necessary to accommodate the needs of these departments. Adapting the remainder of the building to fit modern police and fire departments needs would conflict with the requirements of the Secretary on the Interior's Standards for Historic Preservation.

The Building Needs Committee conducted a community wide survey soliciting input from the town's people on their feelings for the future use of the building. A good cross section of the population responded representing almost 14% or 250 people. From the results of the survey, it was clear that for the most part, the town's people preferred that the town hall be converted into a Community Center or mixed-use facility. Townspeople wanted the rural and historic character of the center district to not only be preserved, but also enhanced. They also felt that traffic and parking in the center is a growing concern and that steps should be taken now to forestall future problems.

Based on the needs several preliminary plans were developed to represent space requirements. The enclosed plan represents the final version of a preliminary plan, which is compared for reference with a plan showing existing conditions.

AMERICANS WITH DISABILITIES ACT & OTHER CODE IMPACTS.

In order to satisfy the guidelines of ADA (Americans with Disabilities Act), and to provide convenient access (thus greater use), of the second floor an elevator is mandatory. A three stop elevator directly accessible from the basement level, where handicapped parking could be provided, to both the first and second floors.

Massachusetts State code: Egress from the second floor does not meet current code requirements, and a new fire rated enclosed stair is required to achieve compliance. A fire suppression system (sprinklers) would also be required. Although handicapped toilets were provided on the first floor in 1979, fixture requirements have increased since that time and a substantial increase in toilet facilities would also be necessary. A more detailed code review would reveal other areas needing attention.

STRUCTURAL INTEGRITY

Some structural reinforcement may be required at the front bay on the second floor to increase loading capacity for that section and is addressed in the structural report.

INFRASTRUCTURE

For discussion of exterior see comment on site restraints above.

With the exception of plumbing systems, the mechanical systems seem adequate. Further investigation, which is beyond the scope of this report, would determine the degree of modification to heating and electrical systems needed to accommodate the increased occupancy of the building.

OTHER CONSIDERATIONS AFFECTING THE SCOPE OF WORK.

Refer to the proposed plan for continued use of the Sterling Town Hall for room layouts and proposed modifications to the building. The scope of work proposed could be expanded to include restoration of the front bay to its original configuration with paired stairs to the second floor if sufficient interest developed and funding was available.

The interior finished surfaces all need refurbishing. The extent of work would be dependent on funds available and user requirements

The exterior also needs general maintenance; preparation and painting, repair or replacement of windows. Replacement windows would be costly and would be required to meet the Secretary of the Interiors Standards for Historic Preservation. This decision could wait until it is possible to analyze usage and heat loss versus pay back period for the cost of insulated historically appropriate windows. The chimney, however need immediate attention, and should be taken down to the roof and rebuilt.

RECOMMENDATIONS

Before design work for the restoration of the building can proceed, the Building Needs Committee in conjunction with the Planning Board and the Board of Health must resolve the questions of location, size, capacity, and probable cost of a new septic system. The town must also come to terms with parking concerns and agree on a solution.

Left empty and unheated, the building materials will begin to deteriorate and is only a cost burden to the town. We recommend that the Town consider the steps required to prepare the building for interim use. This would help defray maintenance costs and would also serve as a pilot project for testing potential cost benefits of development and levels of interest in using the building for community activities.

With these challenges resolved, the following chronology would apply:

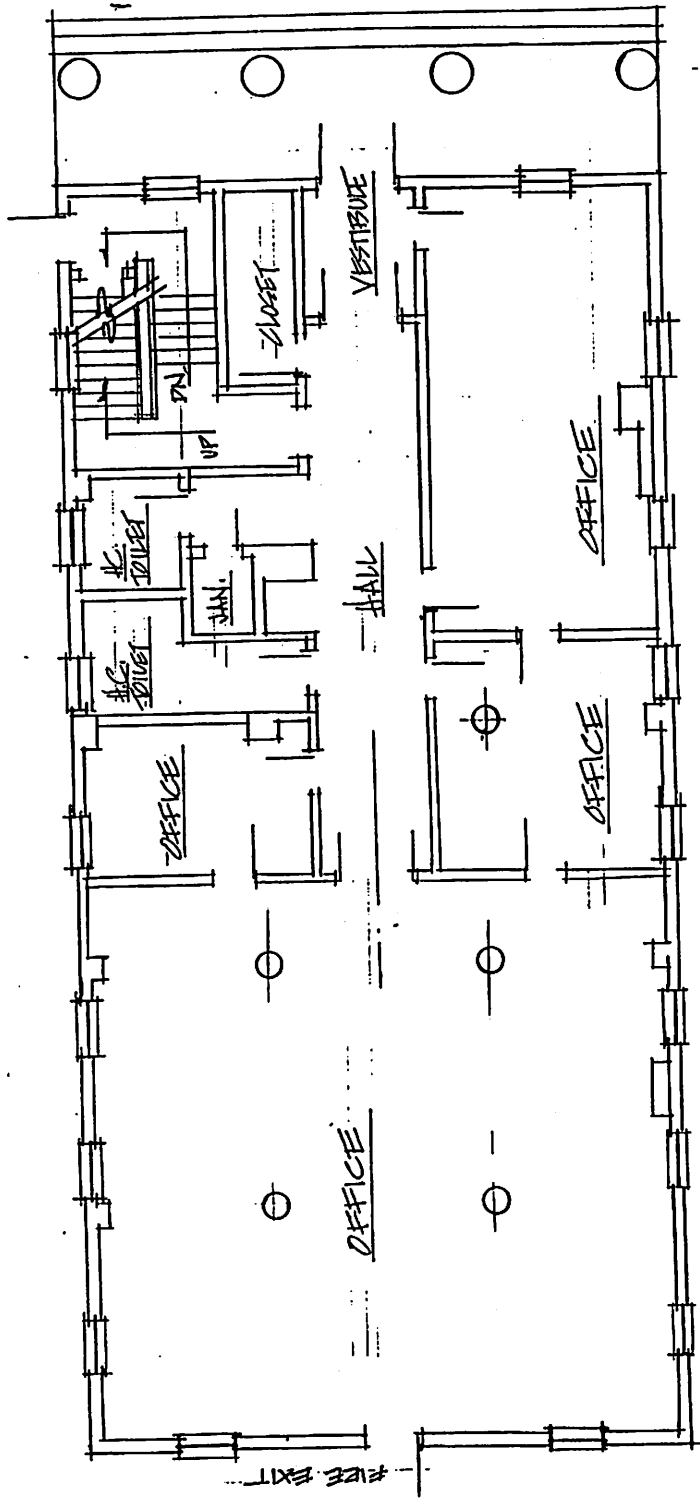
PROJECT CHRONOLOGY

1. Solicit Town approval.
2. Identify funding sources
3. Identify future tenants and develop income pro-forma statements.
4. Select Design Team (architect, structural, mechanical, septic, and electrical consultants).
5. Determine realistic scope of work based on probable project costs and subsequent income.
6. Complete Design Development phase of Design work.
7. Solicit town approval for the project strategy and for funding.
8. Complete construction documents, solicit bids, and begin construction.
9. Complete construction and begin tenant occupancy and community use.

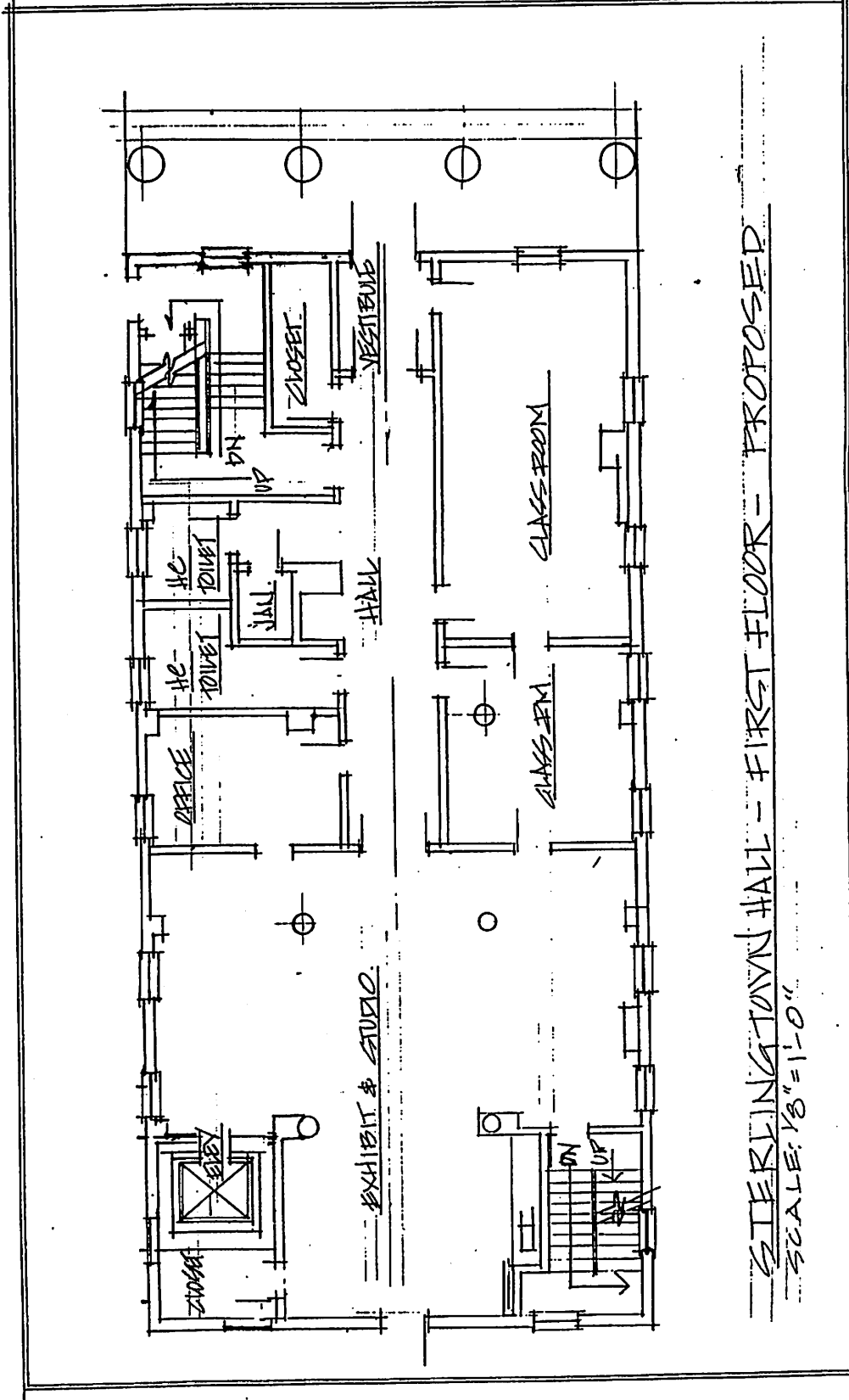
We also present a possible chronology of phasing the construction of the project:

1. Make modifications for interim use of the building.
2. Chimney repairs and exterior restoration.
3. New septic system
4. Install elevator, stairs, toilets and other code compliance items.
5. Interior finishes and tenant fit-up

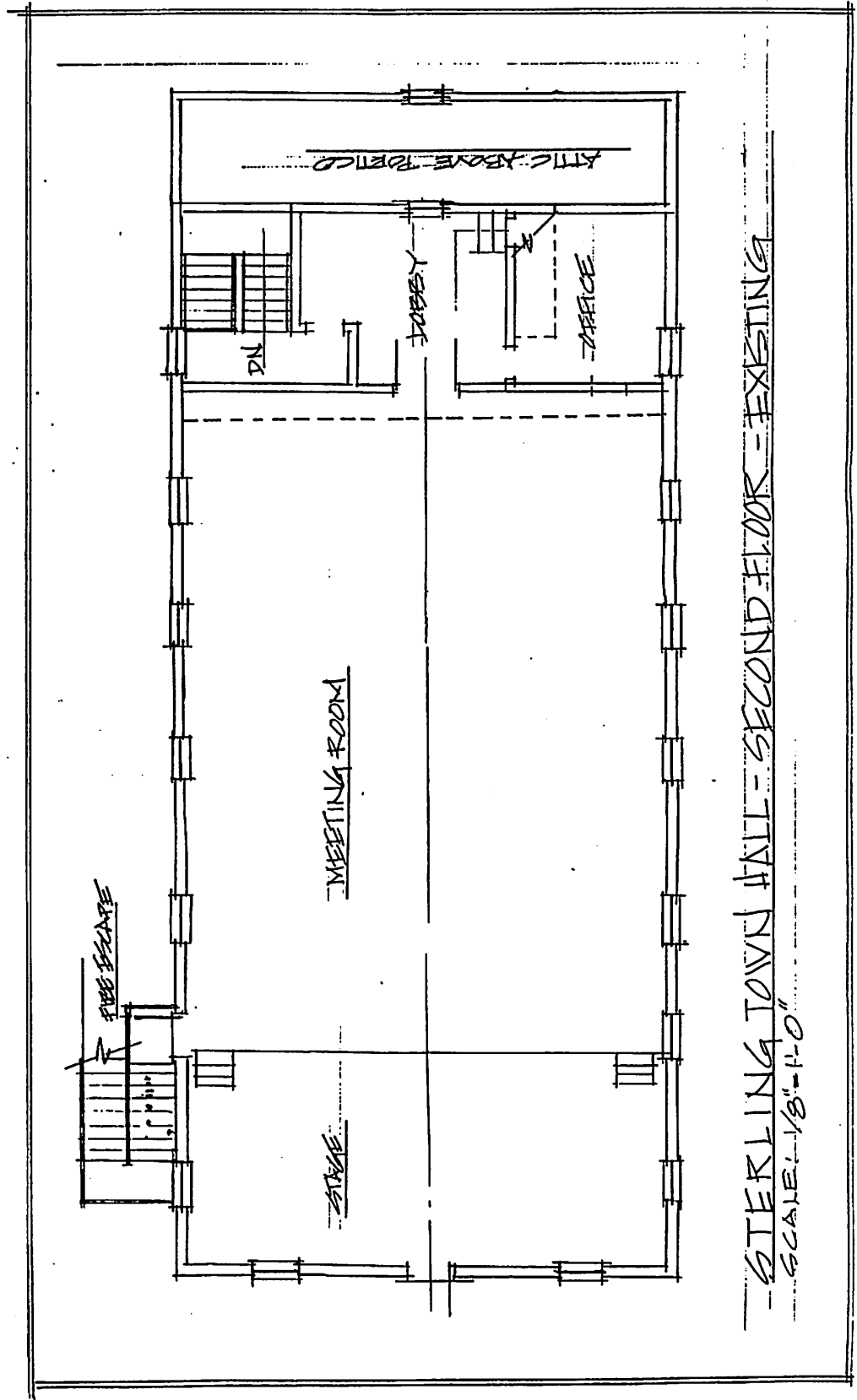
Acknowledgements: Thanks to all the members of the Building Needs Committee for their assistance, hard work and dedication to this project and to other members of the Town Government for their interest, comments, criticisms and helpful input. Special thanks to Maryanne MacLeod for help, support, advice and bed and breakfast during my trips to Sterling.



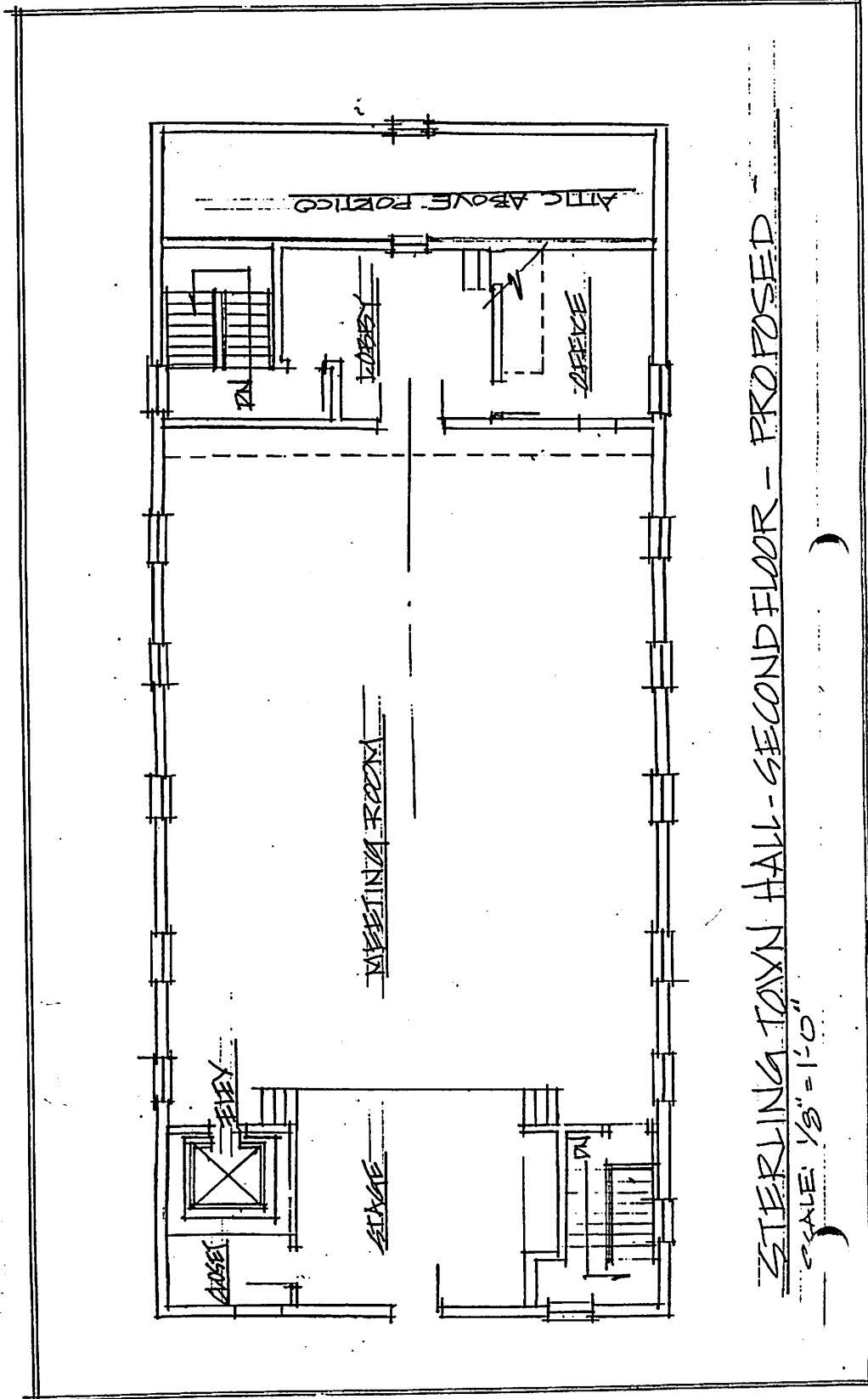
STEERLING TOWN HALL - FIRST FLOOR - EXISTING
 SCALE: 1/8" = 1'-0"



STERLINGTOWN HALL - FIRST FLOOR - PROPOSED
 SCALE: 1/8" = 1'-0"



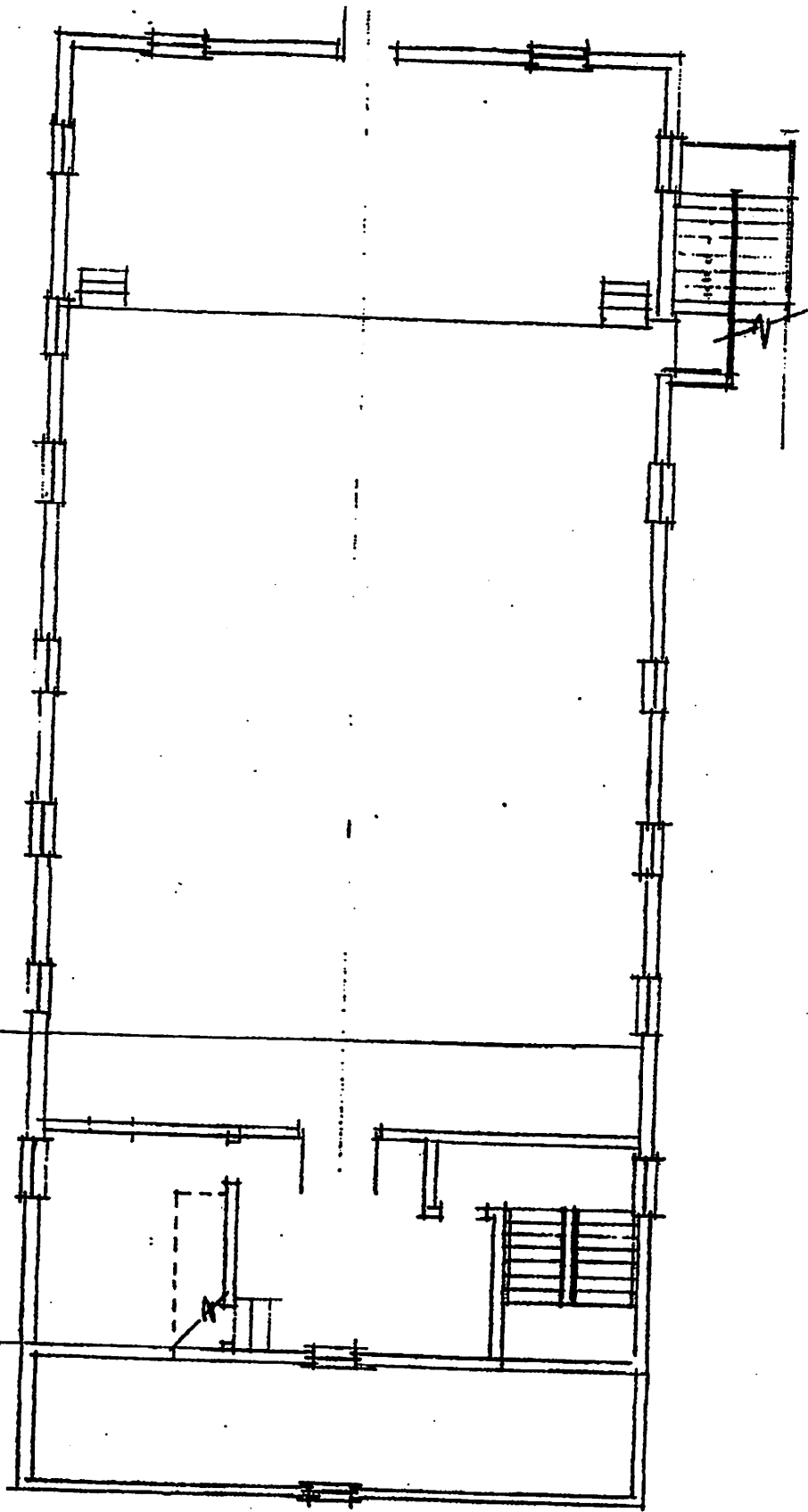
STERLING TOWN HALL - SECOND FLOOR - EXISTING
SCALE: 1/8" = 1'-0"



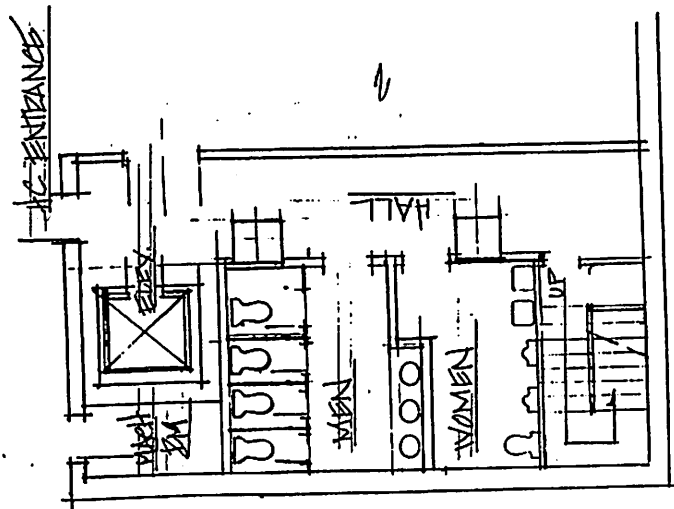
STERLING TOWN HALL - SECOND FLOOR - PROPOSED

SCALE: 1/8" = 1'-0"

Approx Area of 2nd
Floor where
FRAMING MODIFICATIONS
HAVE NOT BEEN MADE

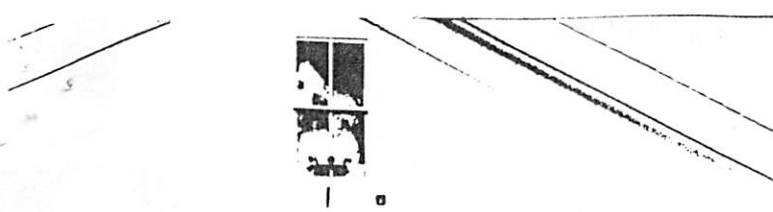


Sterling Floor Plan
1/2" = 1'-0"
Sterling Town Hall

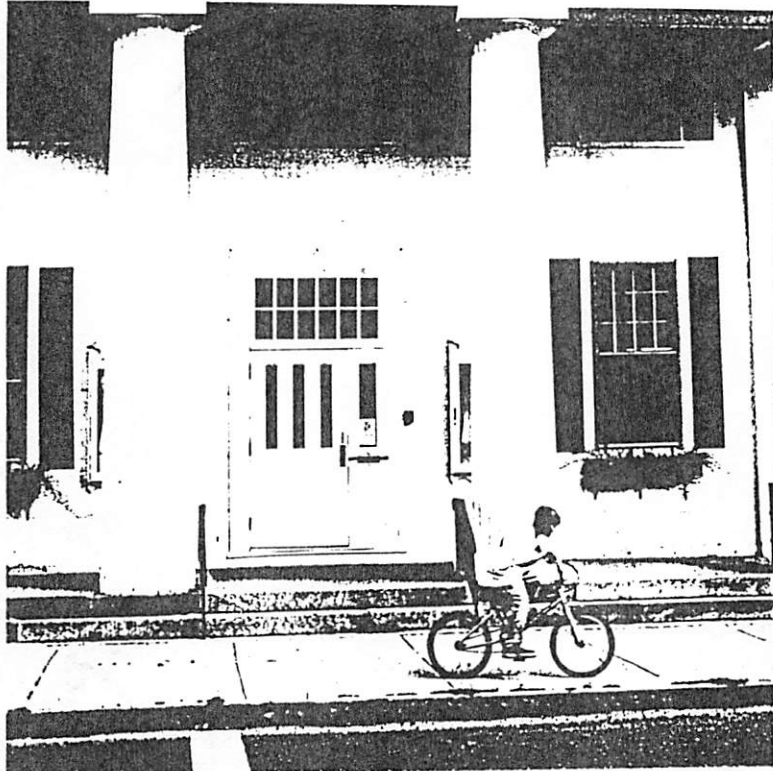


STERLING TOWN HALL PARTIAL BASEMENT - PROPOSED -

SCALE: 1/8" = 1'-0"

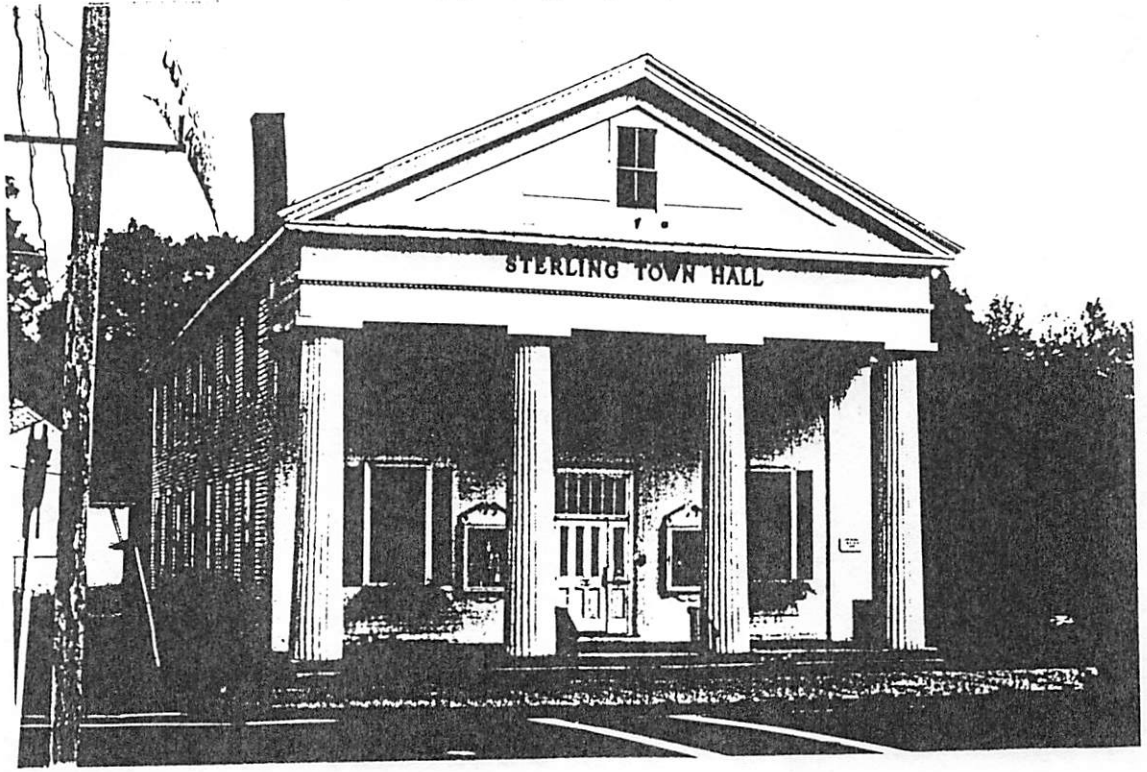


STERLING TOWN HALL



STERLING TOWN HALL

WEST ELEVATION

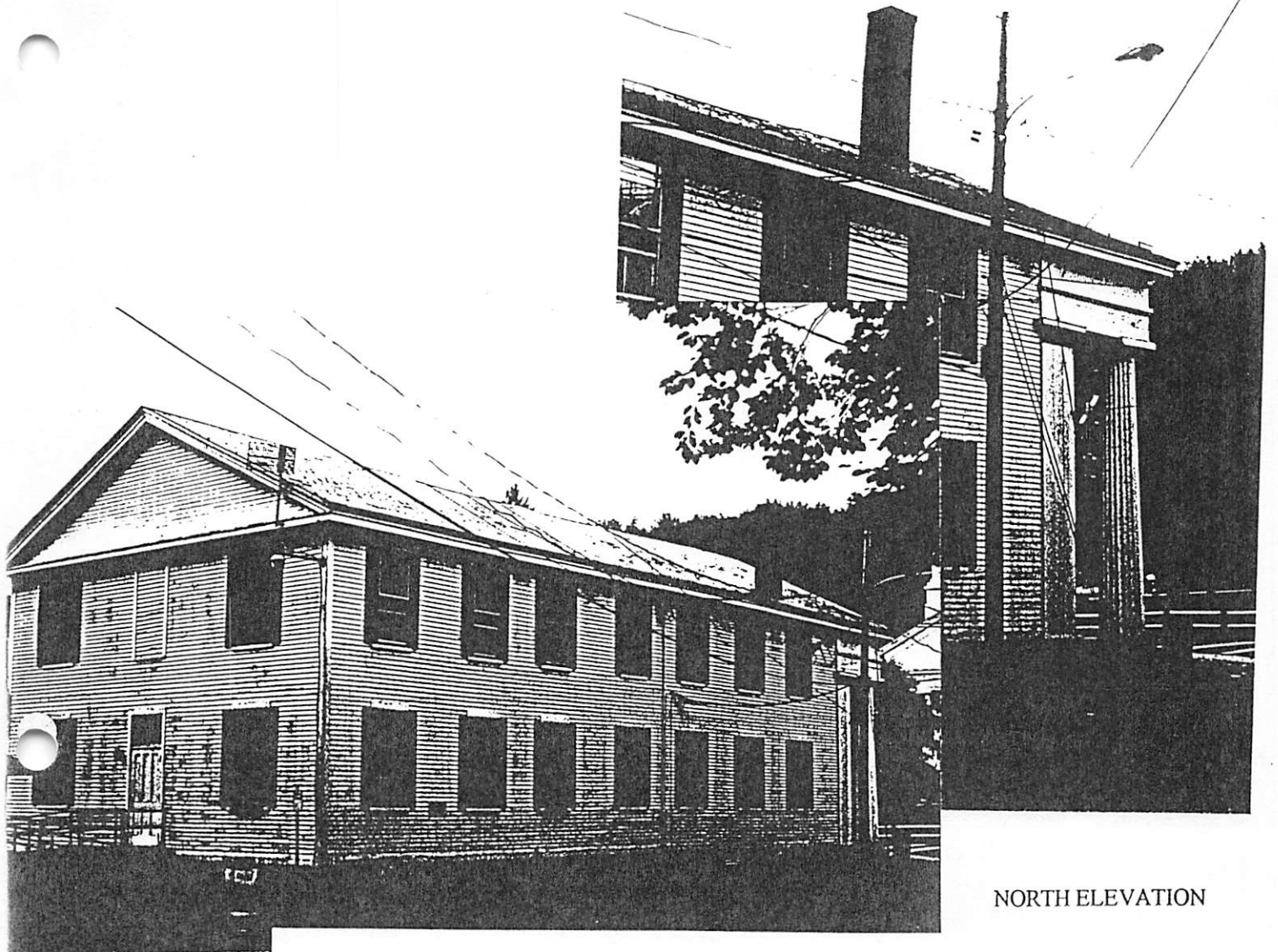


STERLING TOWN HALL

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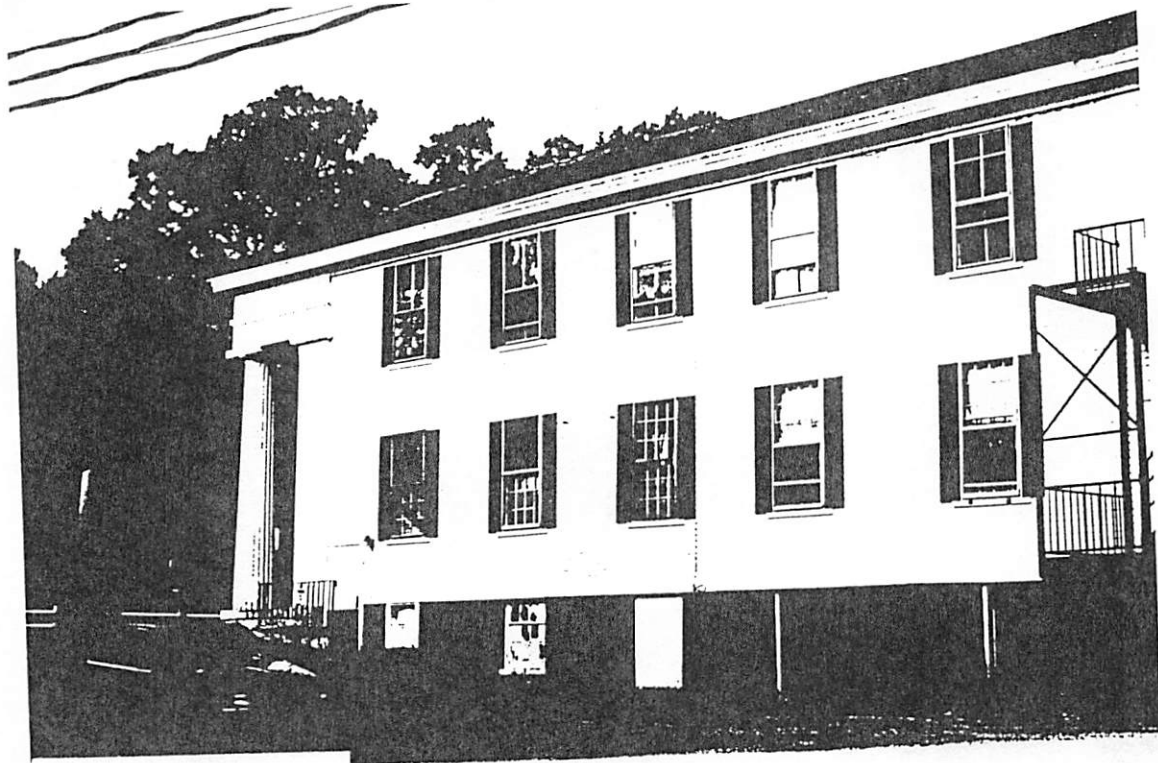
e-mail: krosspt@lincoln.midcoast.com



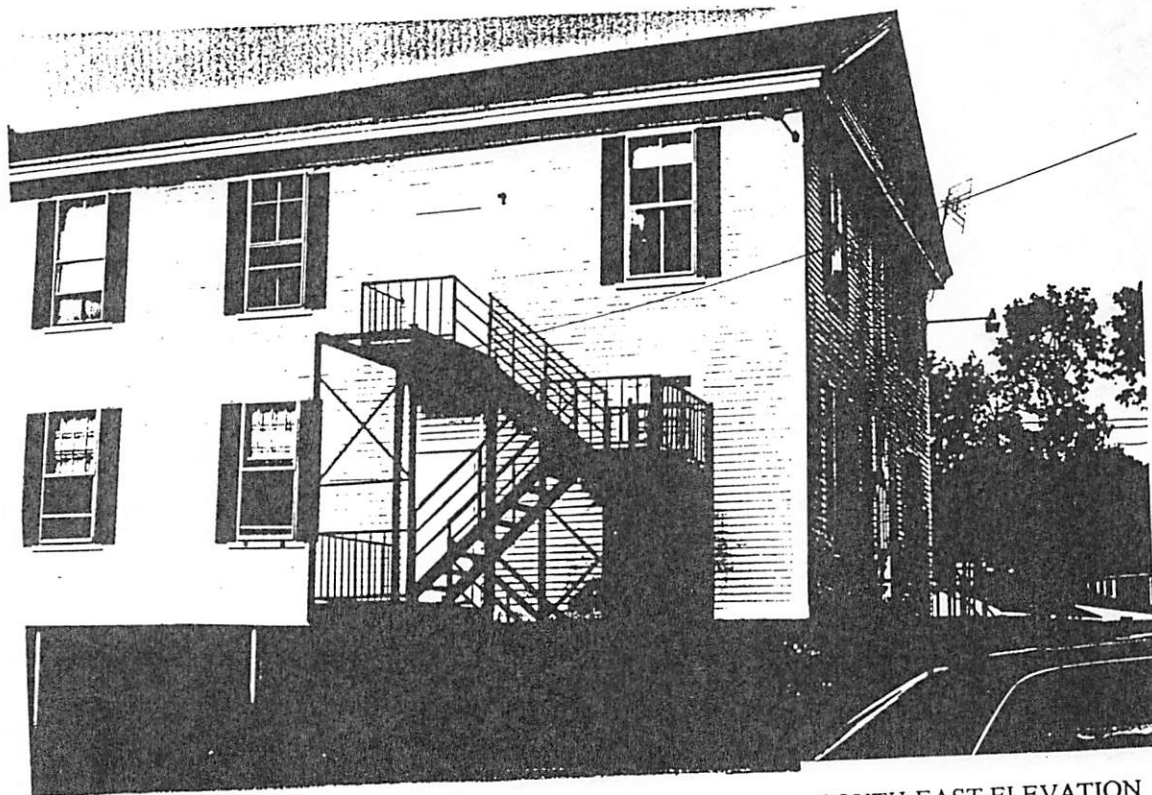
NORTH ELEVATION



EAST ELEVATION



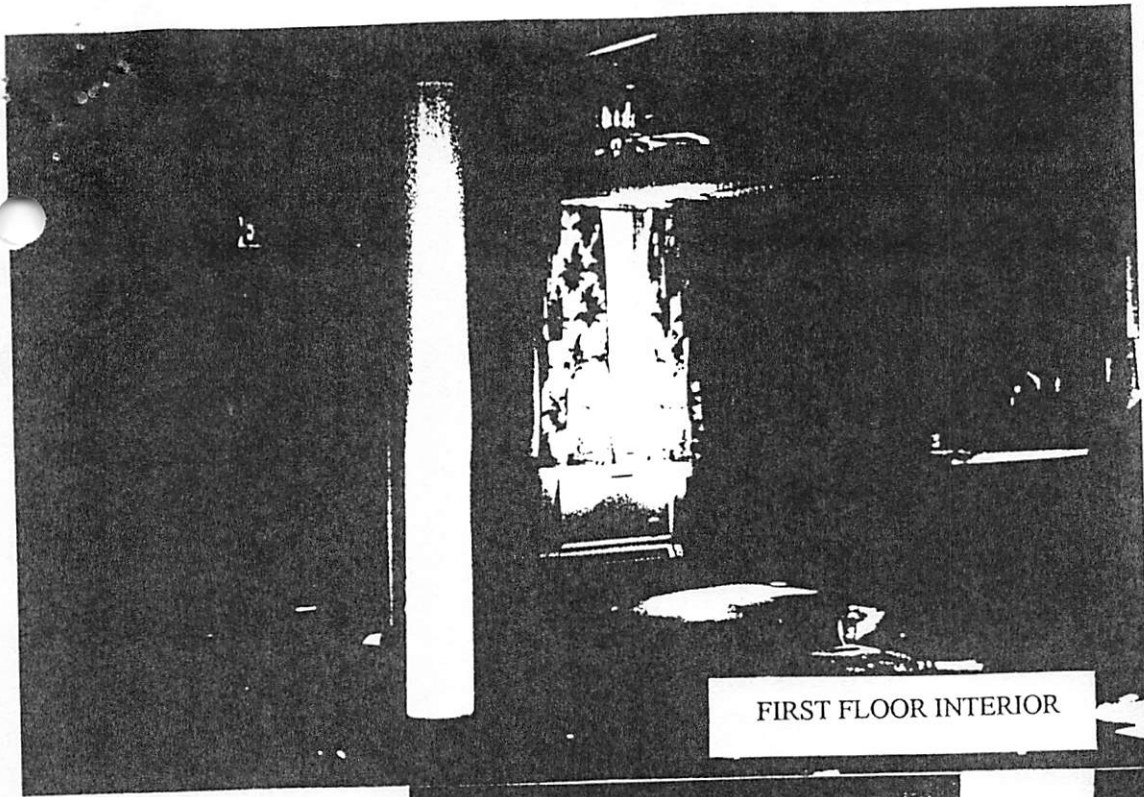
SOUTH ELEVATION



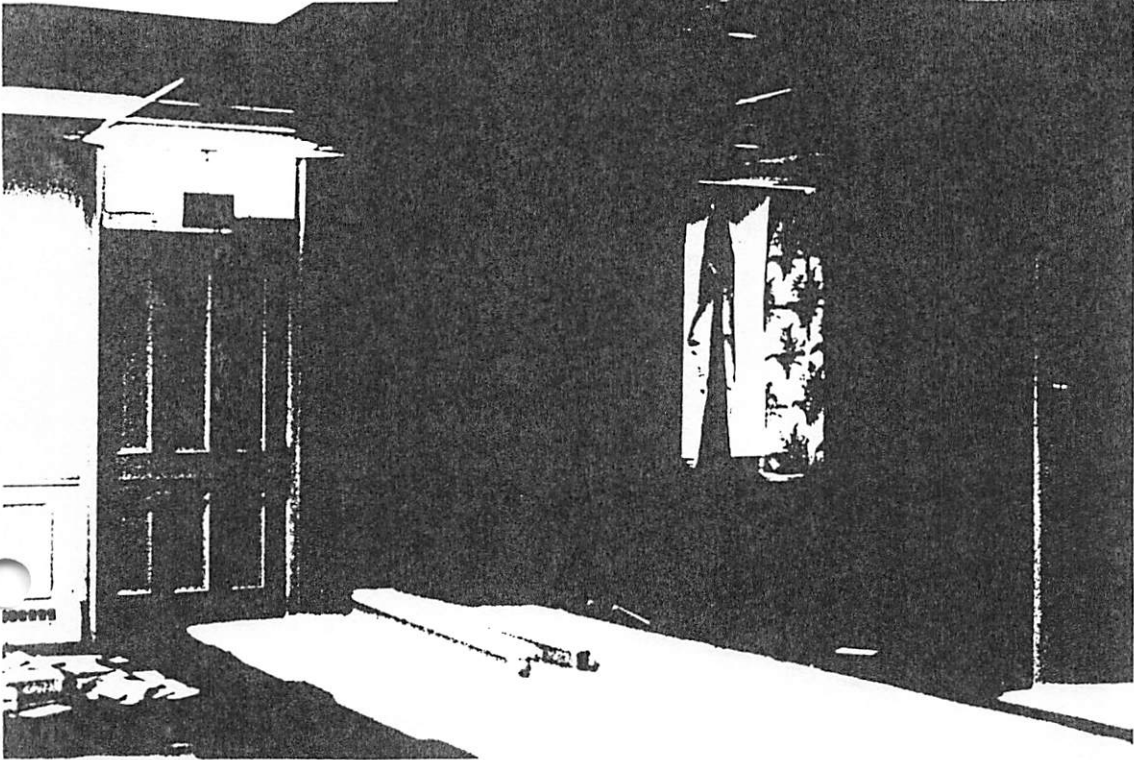
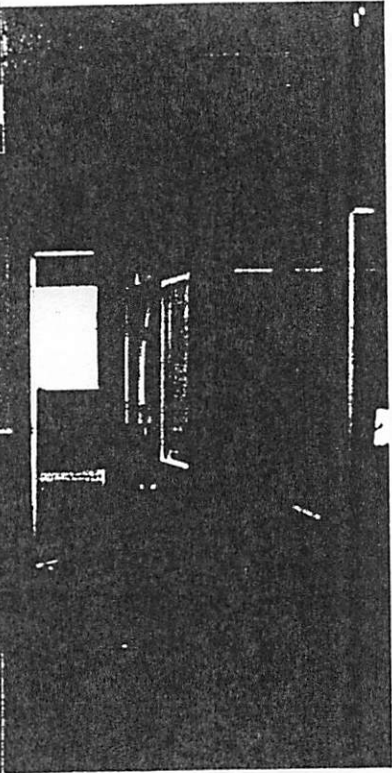
SOUTH-EAST ELEVATION



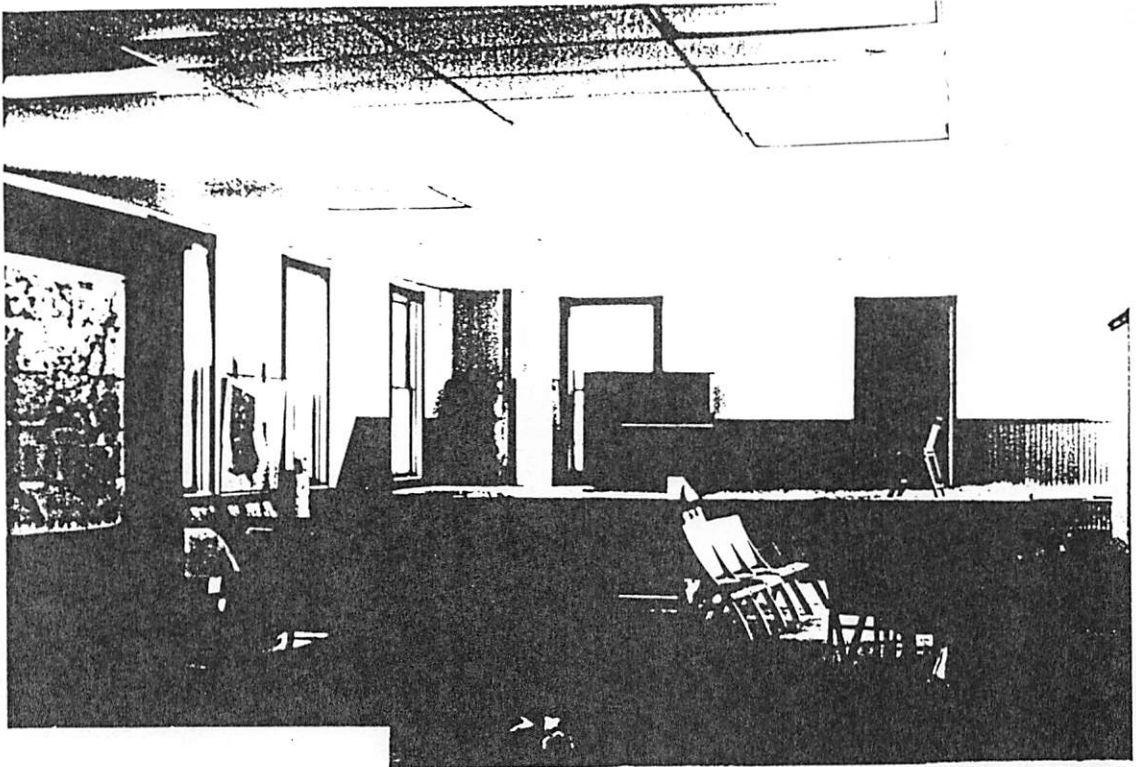
WINDOW DETAILS
NORTH ELEVATION



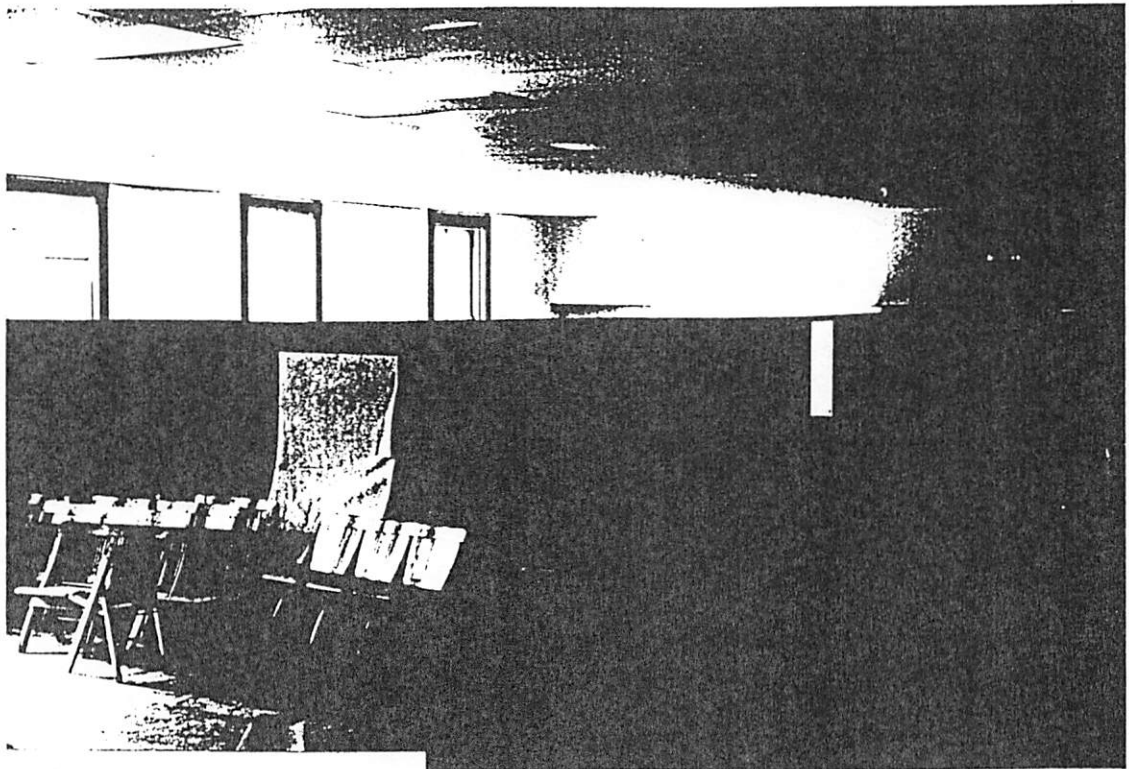
FIRST FLOOR INTERIOR



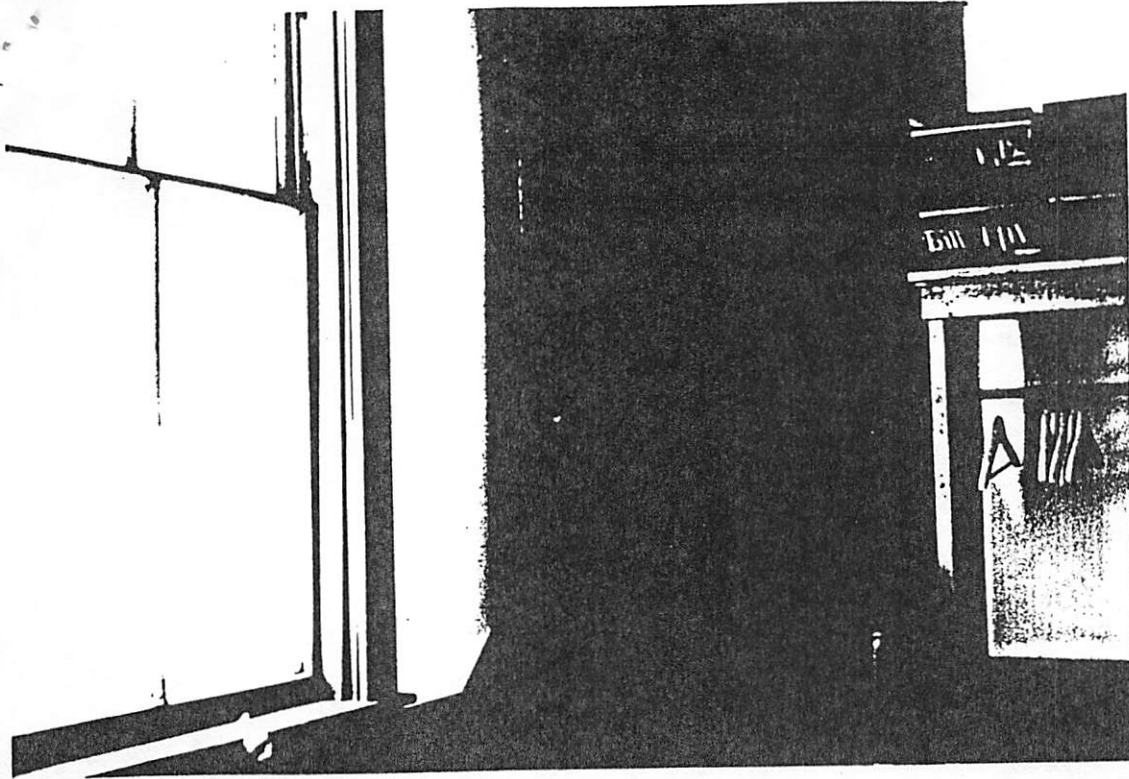
FIRST FLOOR INTERIOR



SECOND FLOOR INTERIOR



SECOND FLOOR INTERIOR



SECOND FLOOR INTERIOR

