

COMPLETION REPORT

WORK ORDER NO. DAY LABOR

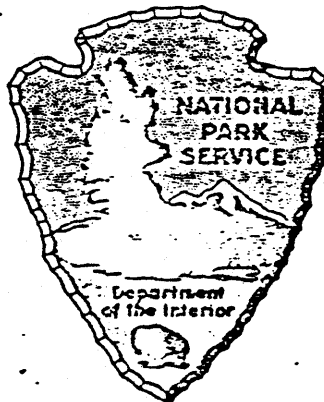
APOSTLE ISLANDS NATIONAL LAKESHORE
STABILIZATION OF THE MICHIGAN ISLAND LIGHTSTATION

(work order title)

STABILIZATION HS-23-103A, HS-23-103B, HS-23-103C,
HS-23-103D, HS-23-103F, HS-23-103G

MIDWEST REGIONAL OFFICE
RAY KUNKEL AND JOHN OCHMAN, PROJECT SUPERVISORS

CONTRACT NO. DAY LABOR



NATIONAL PARK SERVICE
UNITED STATES DEPARTMENT OF THE INTERIOR

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

Work Order No.
Day Labor
Fund Symbol

FACE SHEET FOR COMPLETION REPORT

Park	Region	Year Programmed
Apostle Islands National Lakeshore	Midwest	FY-75
Location in Park	State(s)	PCP No.
Michigan Island	Wisconsin	Master Plan No.
	County or Counties	Master Plan Corrected By
	Bayfield/ Ashland	As Built Drawings By
☐ Contract and/or ☒ Day Labor		Ray Kunkel
Work Order Title		Date Started
Stabilization of the Michigan Island Lightstation		7/75
		Date Completed
		11/75

DESCRIPTION OF FIXED ASSETS
(For completion by employee in charge of project)

TOTAL COSTS
(For completion by FFO)

Historic Buildings
Old Lighthouse HS-23-103A
Storage Shed HS-23-103B
Privy HS-23-103C
Generator Shed HS-23-103D
Assistnat Lightkeeper's House HS-23-103F
Keeper's Quarters HS-23-103G

(See cost breakdown
on next page)

(B) Stabilization of structures

TOTAL

\$ 50,177

DISTRIBUTION

THE FIXED ASSET DESCRIBED ABOVE HAS BEEN COMPLETED IN ACCORDANCE WITH APPROVED
DRAWINGS, SPECIFICATIONS, AND AUTHORIZED CHANGES

Submitted

Title:

Date:

By:

Approved

Title:

Date:

By:

COSTS VERIFIED

Title:

Date:

BY

COMPOSITION OF COST FOR COMPLETION REPORT

W Order Number

Day Labor

Fund Symbol

Park
Apostle Islands National Lakeshore

Region
Midwest

Year Programmed
FY75

Location in Park
Michigan Island

Work Order Title

Stabilization of the Michigan Island Light Station

COMPOSITION OF COST

COSTS CHARGED TO FUNDS ALLOTTED TO FIELD FINANCE OFFICE

(1) Personal Services..... \$ 38,693

(2) Travel..... 2,230

(3) Contract Work.....

(4) Supplies and Materials..... 4,572

(5) Other Direct Expenses.....

(6) Operation of Equipment.....

(7) Depreciation of Equipment.....

(8) Purchase of Construction Equipment..... 4,682

(9) Purchase of Other Accountable Equipment.....

(10) Other Costs:

(11) TOTAL COST CHARGED TO FFO FUNDS..... xxxxxxxxxx \$ 50,177

OTHER COSTS:

(12) PS&S, AP, and/or Facilitating Services @ _____ %..... \$

(13) Inventory and Other Non-Fund Costs

(14) GROSS WORK ORDER COSTS..... xxxxxxxxxx \$

LESS:

(15) Residual Value of Construction Equipment on Line 8..... \$

(16) Other Credits

(17) NET COST OF FIXED ASSETS..... xxxxxxxxxx \$

Identify other costs and other credits by line item entry, on an attached schedule, or explain in narrative.

NARRATIVE STATEMENT

Stabilization of the Michigan Island Lightstation

(name of project)

WORK ORDER NO. Day Labor

DESCRIPTION OF WORK Stabilization work was conducted on structures
except for the new light tower. Work ranged from general site
work, tuckpointing, whitewashing of the old lighthouse and
tower, scraping and painting, repairing the slate roofs,
installation of lexan panes in the light tower, general
carpentry, raising the storage shed and temporarily bracing the
structure, controlling the drainage along each structure and
constructing a temporary dock.

PLANS AND SPECIFICATIONS for this project were prepared (by the Design
Office of the San Francisco Service Center) or by Midwest Region

PROJECT ACTIVITIES

Preliminary Surveys were made by Midwest Region

Construction Layout was made by Ray Kunkel and John Ochman

(no.) bids were received and opened (date)

Award of Contract No. _____ was made to _____

for _____

Notice to Proceed was . sued on 7/75 and the
(date)
date of July 22, 1975 was established as the first day of
the contract.

Construction work consisting of stabilization of the Michigan
Island Lightstation

started on July 22, 1975
(date)

(NOTE: In the following space describe the actual construction work. Include unusual weather, geological and latent conditions encountered; list of subcontractors and what they did; new methods of construction or techniques used; new types equipment used, etc. If the work was ordinary standard construction with nothing unusual, say so and don't elaborate.

For construction projects involving water systems, include:

1. Water right applications, permits and license numbers to the extent they have been obtained.
2. If a well replaces or supplements a surface supply, or if a surface source replaces or supplements a well, or if the point of surface diversion is changed, the effect on existing water rights based on application, permit, license and/or decree will be a part of the report.
3. Name of the water source, available flow, and capacity of diversion works including pumps if not shown on construction plans.)

The main objective of the Michigan Island project was to stabilize
the historic buildings and provide adequate drainage and ground
maintenance. The project started out by clearing all brush and
tall grass away from the structures. Also removing all debris
that has accumulated through the years. A temporary dock
was constructed by the crew to facilitate the transfer of men
and supplies.

OLD LIGHTHOUSE HS-23-103A

The main objectives were to correct the masonry problem and to
correct any areas such as windows and roofs which are causing any

interior drainage of the structure. Work was started by removing the window sashes. All windows which were removed were marked as to the location they were removed from. All paint from sashes, window frames, door frames, casing eaves were removed by careful burning and scraping. The sashes after being stripped of its old paint were then soaked for 48 hours in a solution of 60 parts linseed oil and 40 parts turpentine. After several days of drying in warm weather, the wood was treated with Cuprinol and primed and sealed with one top coat. Extensive tuckpointing was accomplished on the house and tower. One note: After the structure had been tuckpointed, Hydrozo waterproofing was applied to the masonry. The waterproofing should have been applied after the whitewash was accomplished. Both the tower and the house had been whitewashed. All exposed unpainted wood was treated with Cuprinol, a wood preservative. The badly deteriorated chimney was capped off, first removing all loose bricks and mortar. All glass from the light tower had been removed and replaced with lexan panes. Temporary wooden shutters were constructed for all window and door openings. The shutters were primed and painted with Benjamin Moore Dark Green. The damaged slate roofing had been replaced with duplicate type of material. Proper drainage had been established along with correcting all deteriorated gutters and downspouts. General carpentry was accomplished to correct the deteriorated eaves, window jambs and exterior stairs to the house.

STORAGE SHED HS-23-103B

The storage shed at the rear of the old lighthouse was badly

deteriorated along the lower plate. The structure was raised and temporarily braced until the new foundation is constructed. The original base is in a serious state of deterioration. The roof was also in a bad state of deterioration and a temporary galvanized corrugated roof was installed to prevent any further damage.

GENERATOR SHED HS-23-103D

All missing or broken glass had been replaced and the steel window frames were all painted. General clean up of the interior was accomplished by removing all debris that had accumulated throughout the years.

PRIVY HS-23-103C

All overgrown brush had been removed. The exterior surface has only been cleaned and the surface was not painted. The interior was just cleaned with a broom. The structure was basically in sound condition.

ASSISTANT LIGHTKEEPER'S HOUSE HS-23-103F

The exterior siding had been primed and painted. Site work was accomplished by removing shrubs and small trees interfering with the structure. Adequate drainage was constructed along the house along with connecting all downspouts to divert water away from the structure.

KEEPER'S QUARTERS HS-23-103G (brick living quarters)

The Keeper's quarters was virtually in sound condition. All windows, doors, jambs, eaves, trim and siding were scraped, brushed and painted with one coat of top coat. All bare wood was first primed and sealed with a top coat. All missing or

broken glass had been replaced to prevent any more damage from occurring. First floor joists were reinforced by placing another joist along side the existing joist.

Extensive masonry had been accomplished on both porches.

Portions of the rear concrete porch landing had been broken off and were missing. A form was constructed to the original site and filled with concrete. The job looked beautiful. Also, the brick wall along the porch landing (rear) and the front porch sidewall needed to be replaced and corrected. Portions of wall had missing and deteriorated bricks. In these areas, the deteriorated bricks were removed to the solid course and bricks duplicate of kind were used. The deteriorated walkways along the north and west side of the house were also replaced.

All overgrown trees and shrubs that had been growing into the structure had been removed. All other debris along the structure had also been removed. All drain pipes and gutters were connected along with connecting the downspouts to the existing underground drainage system. Fill was brought in along some areas of the house to divert the water away from the structure. Temporary plywood shutters were constructed for all window openings. All shutters were primed and painted, before being installed.

Overruns and Underruns on Contract Bid Schedule

(NOTE: List major overruns and underruns on contract and give reason)

LIMITS OF PROJECT

(NOTE: Include the following:

1. Utility Systems

- a. Water Systems-to facilitate the preparation of water rights proofs, separate the diversion system including reservoir from the distribution system.
- b. Length, type and sizes of lines.
- c. Size, capacity and type of treatment plants, pumping stations, etc.

2. Roads and Trails

- a. Length, width, and type of road or trail. EXAMPLE: 5.6 Miles, plant mix, surfaced secondary road with 6" crushed stone base and 20 ft. paved width.
- b. Size, in sq.yds. or sq.ft. and capacity of parking areas.
- c. Length of roads, trails and parking areas. Obliterated.

3. Buildings

Number of buildings, the NPS building number, square footage, principal building materials and furnishings, if any.

OLD LIGHTHOUSE HS-23-103A - The 1½ story Keeper's house

foundation consists of sandstone and rubble, exterior wall

is sandstone rubble with brick trim along windows and door

openings. Roof is a gable design with a shed addition. The

main roof has two dormers, one on each side. The roof is composed

of random slate shingles. Windows are wood and basically

double hung design.

Light tower is a cylindrical sandstone rubble design with a polygonal metal roof on light.

STORAGE SHED HS-23-103B - One-story, one room structure, grade foundation, wood frame construction with a board and batten design. Roof is a shingle gable roof badly deteriorated. Roof is temporarily protected by a corrugated metal roof. (structure was built with the original lighthouse).

PRIVY HS-23-103C - One-story, one room structure. Foundation consists of concrete piers located at the corners. Wood frame construction, clapboard siding with corner trim boards. Roof is a metal shingle gable roof with a metal ventilation flue.

GENERATOR HOUSE HS-23-103D - A 2½ story structure. Foundation consists of poured concrete. Exterior wall was constructed with 4" face brick. Windows are metal casement, 8 lights. Asbestos gable roof design with deep eaves and exposed rafter ends. Brick chimney with a concrete cap.

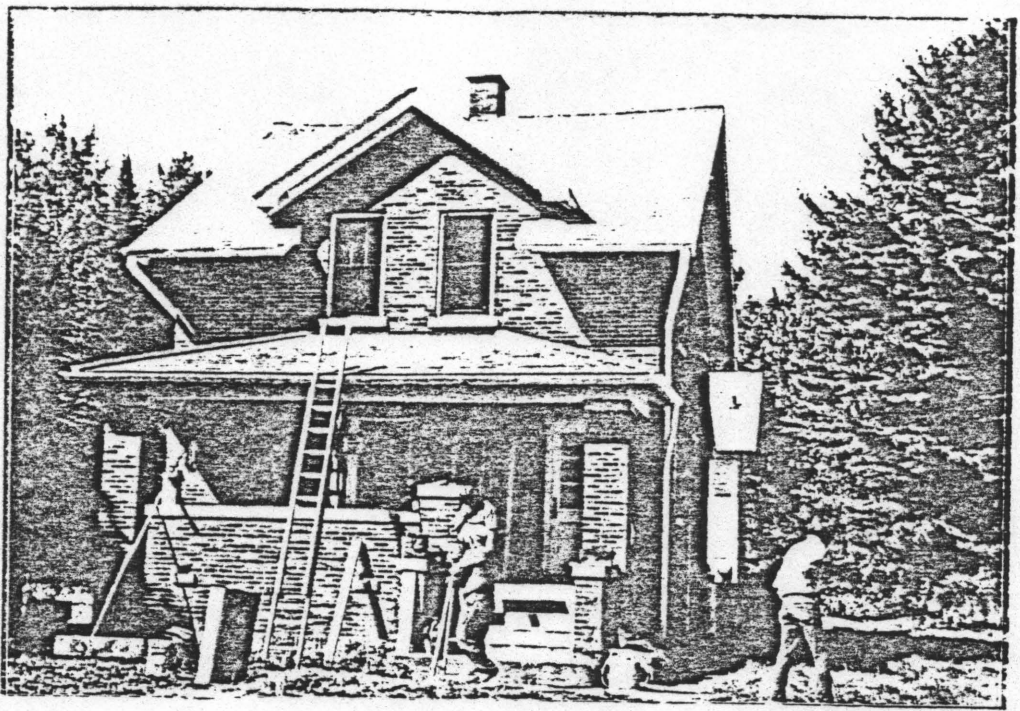
ASSISTANT LIGHTKEEPERS HOUSE HS-23-103F - Two-story house with a poured concrete foundation, Wood frame construction, clapboard siding with corner trim board. Asbestos gable roof design with a shed type dormer in the front. Roof has deep

~~the~~ eaves with exposed rafters. Windows are wood and are constructed under this work order (has) or (has not) resulted in a usable unit. -- (NOTE: -- If it is not a usable unit, explain.) --

double hung design. One brick chimney with a concrete cap.

KEEPER'S QUARTERS HS-23-103G - 2½ story structure foundation consists of common brick. External walls are brick except for the shiplap siding on the rear porch.

All windows are . d and are double hung de gn. Roof is
an asphalt shingle gable roof with gable dormers in front
and rear. One brick chimney with a concrete cap.



South view of the Keeper's Quarters, HS-23-103G. Majority of the masonry problems had been corrected along with painting the exterior trim, reinforcing the interior floor joists and controlling the drainage along the structure.



East view of Keeper's Quarters. Arrow shows the deterioration in the rear porch.

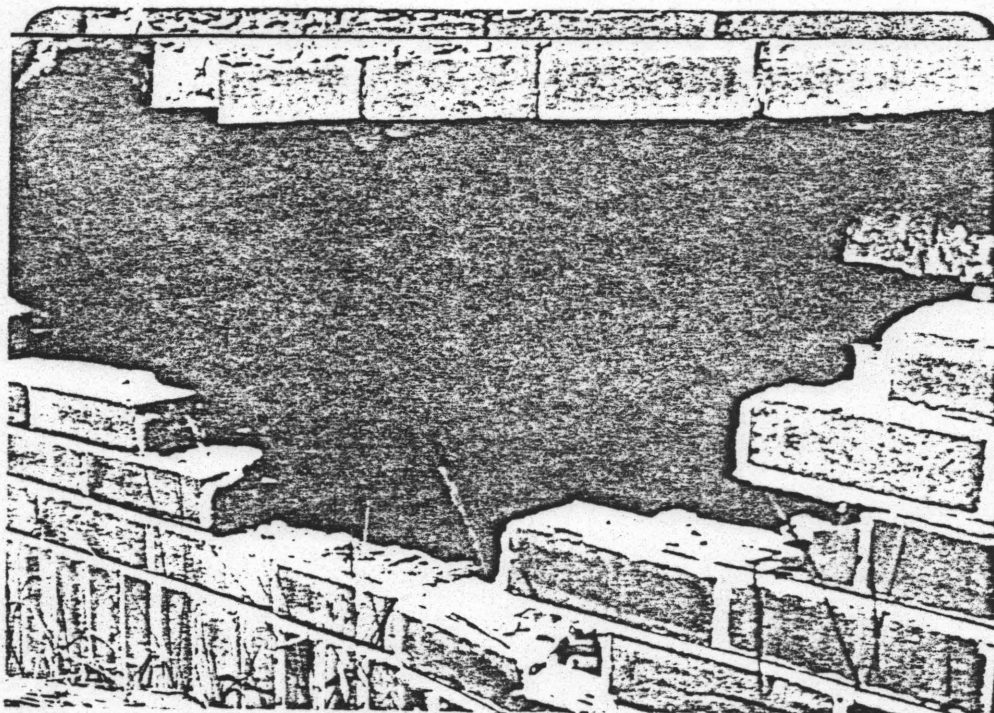
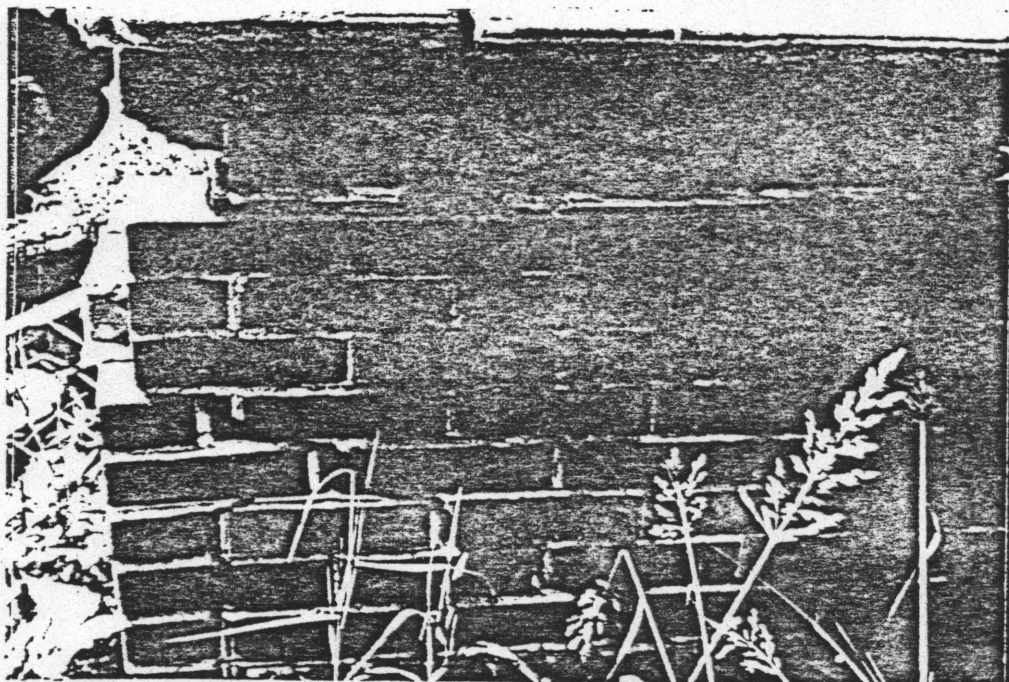


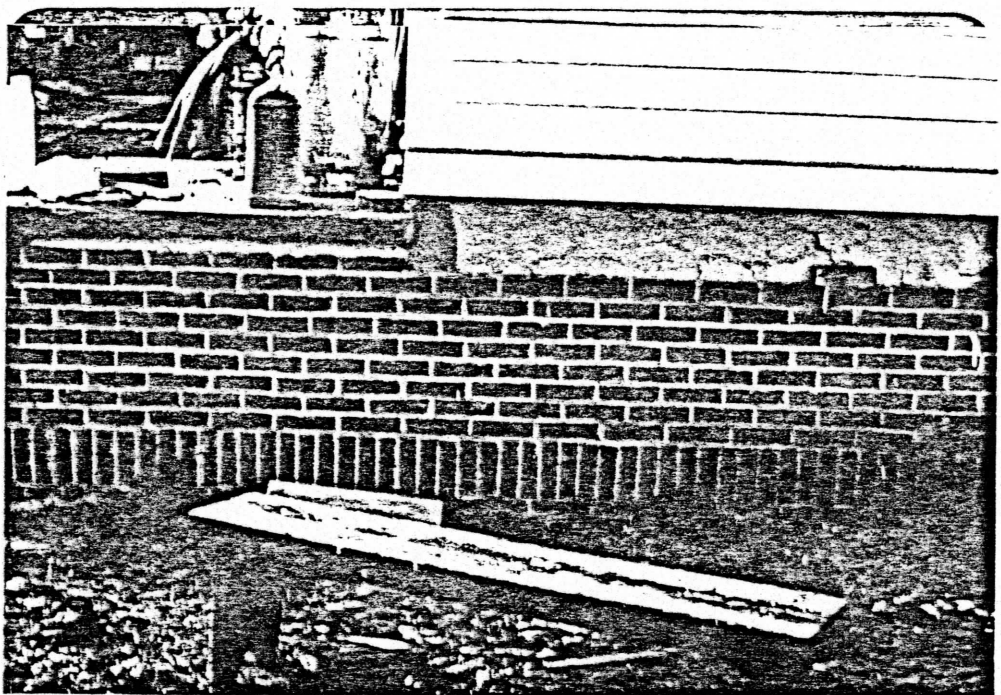
Photo showing condition of rear porch before work was started. Extensive masonry was needed to correct this problem.



A typical condition showing the masonry problem on the Keeper's Quarters. The structure had several areas in this badly deteriorated state.



Photo showing the deterioration in the brick work along the front approach. Also, the sidewalk along the front and to the rear entry had been replaced.



Bricks being layed back along rear porch. Duplicate bricks were used and matched very well to the existing.

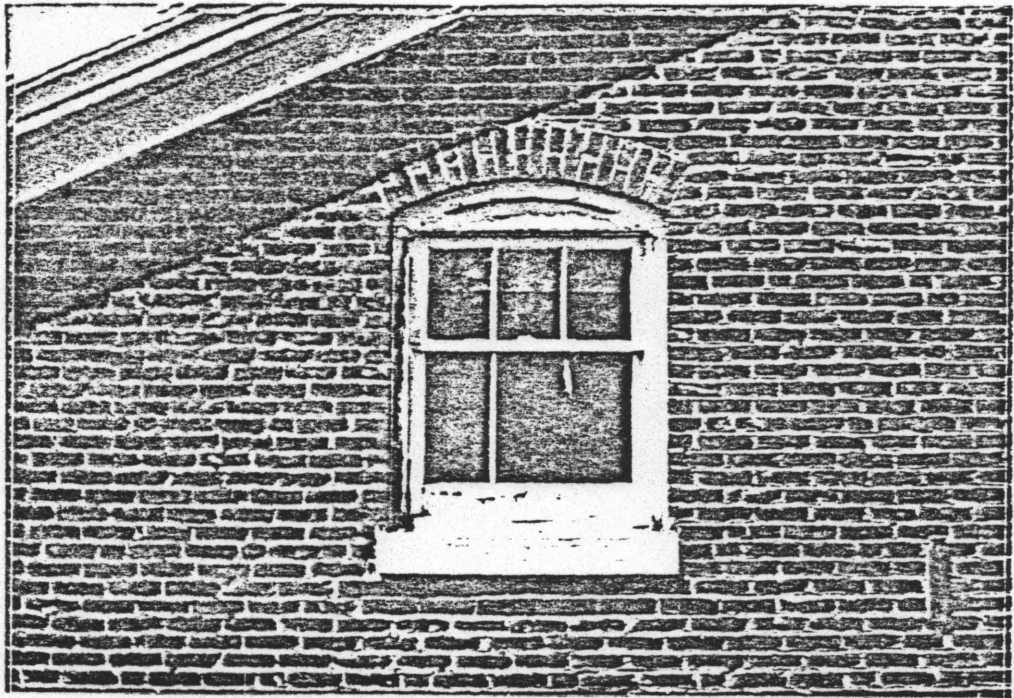


Photo showing a sash vandalized and historic material destroyed. Windows in these conditions were temporarily repaired and new glass installed.

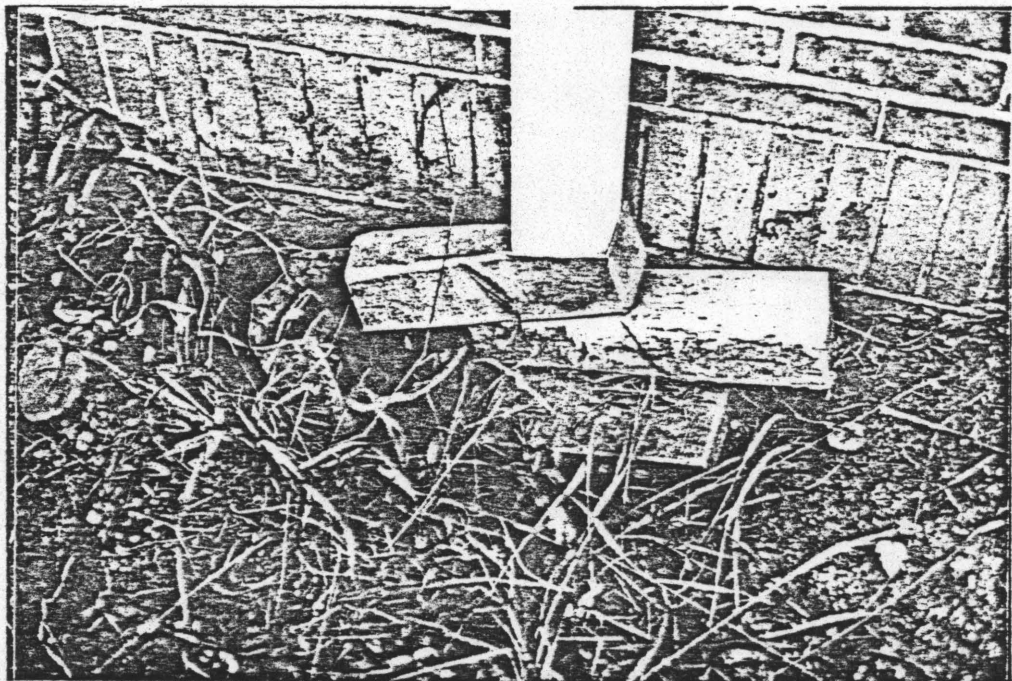


Photo showing temporarily correcting the drainage problem along the Keeper's Quarters. Later, drain pipe was dug up and centered under down spout.

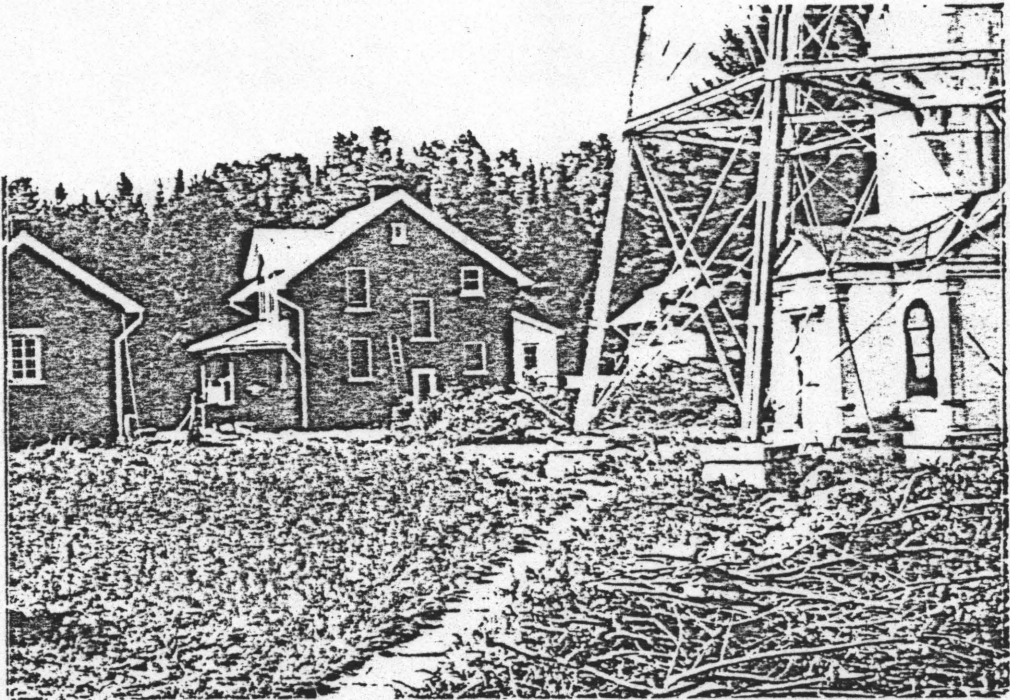
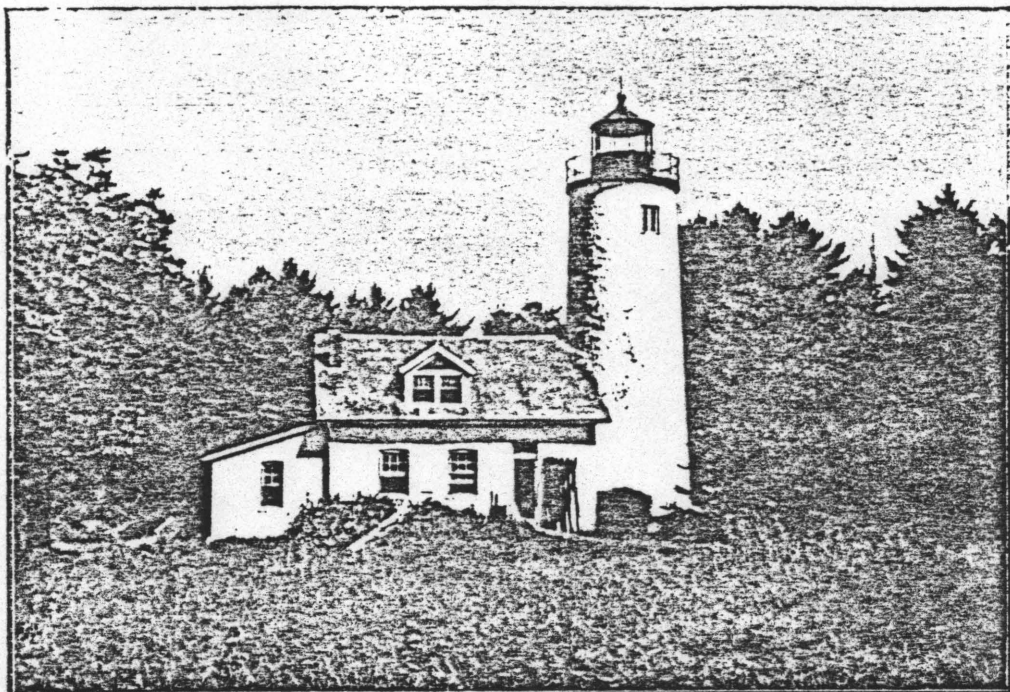


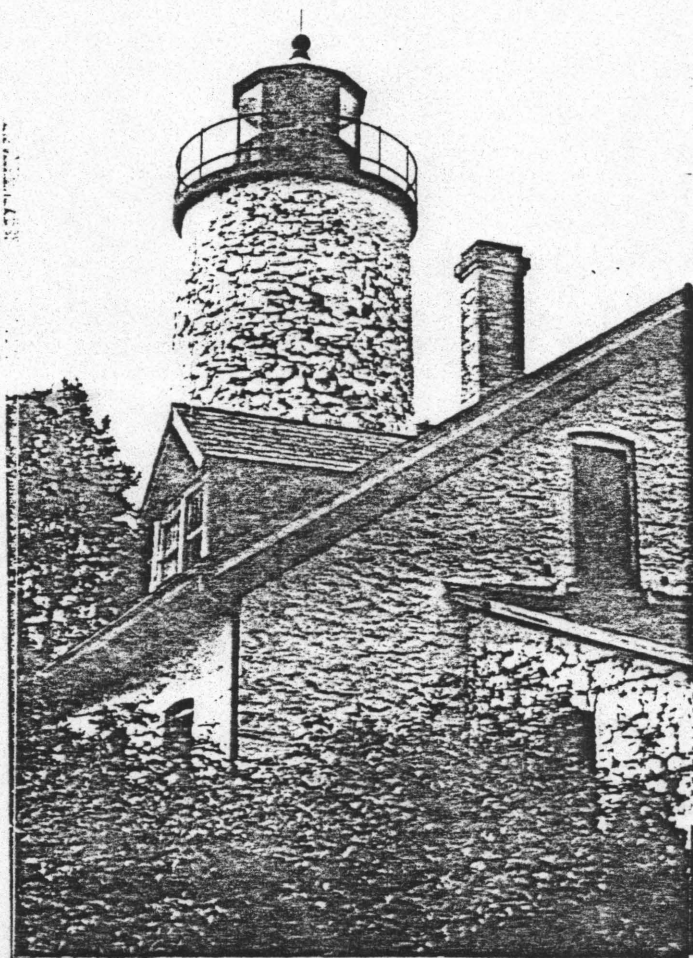
Photo showing debris and brush piles which was gathered during the general site clean-up.



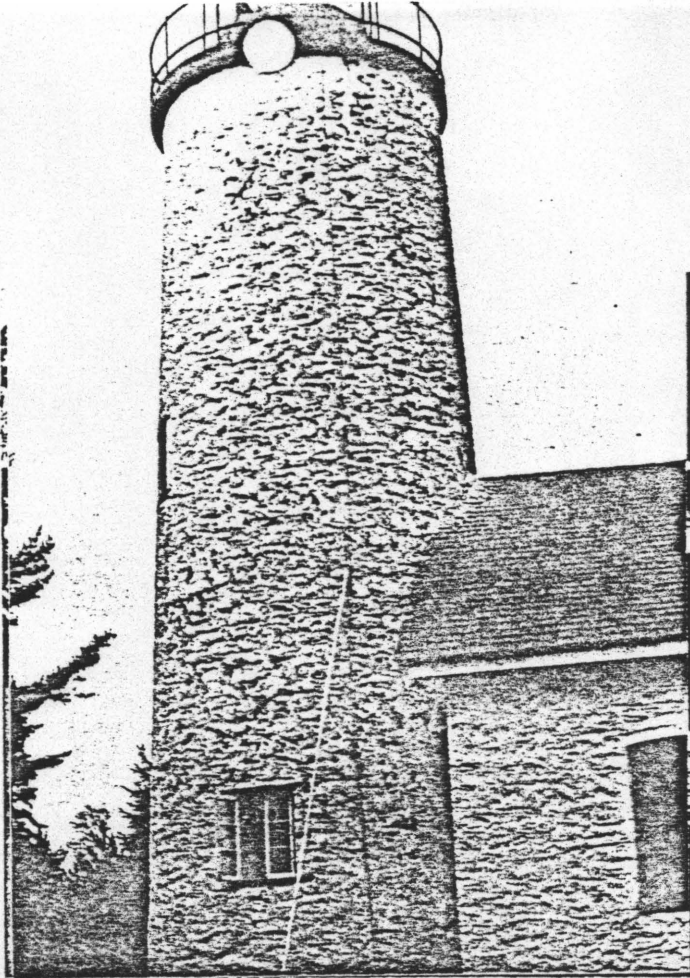
A poster designed by the Park to prevent any further vandalism to the historic properties.



West view of the old lighthouse HS-23-103A showing the condition of the structure before the stabilization project was started.



Northeast side of lighthouse showing the high brush and small trees growing along side of the structure. This was one of the problems causing the deterioration in the masonry wall.



East view of lighthouse and tower. Photo showing corner of house which had been tuck-pointed and whitewashed compared to the condition of the light tower.

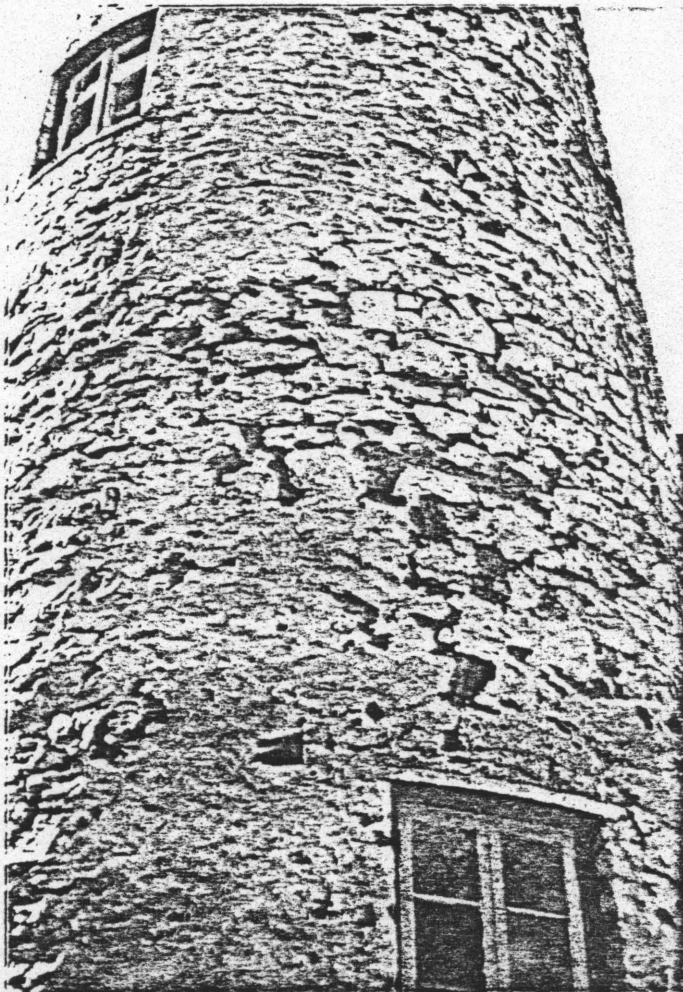
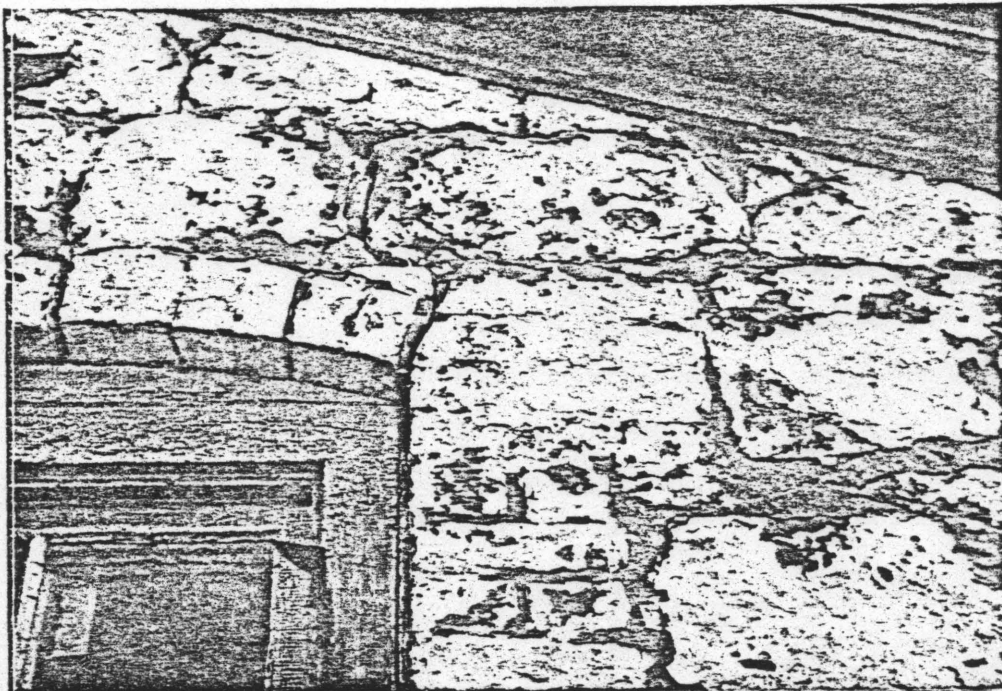


Photo showing general conditions of the deterioration in the tower. All major joints were corrected along with resetting of some of the stones.



The entire structures of the old Lighthouse had major masonry deterioration. This photo shows deterioration between the window and fascia trim.



Typical window jamb showing the build up of paint and the extense of paint checking. All old paint had been scraped and burned off before painting.

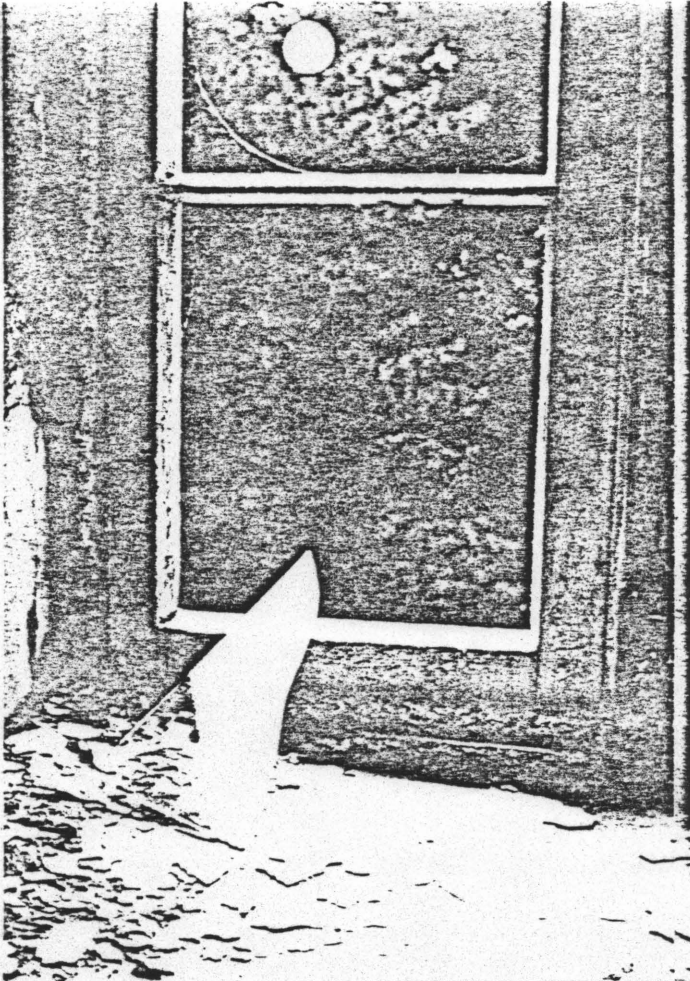


Photo showing condition of the windows of the old Lighthouse. All missing or broken glass had been replaced to prevent further damage to the interior of the structure.

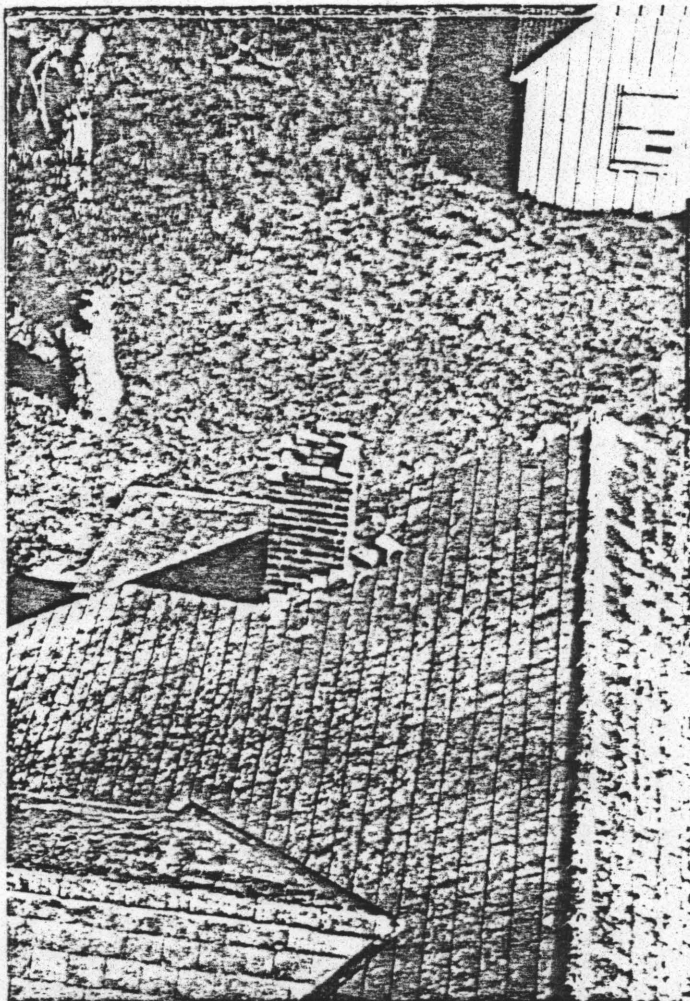
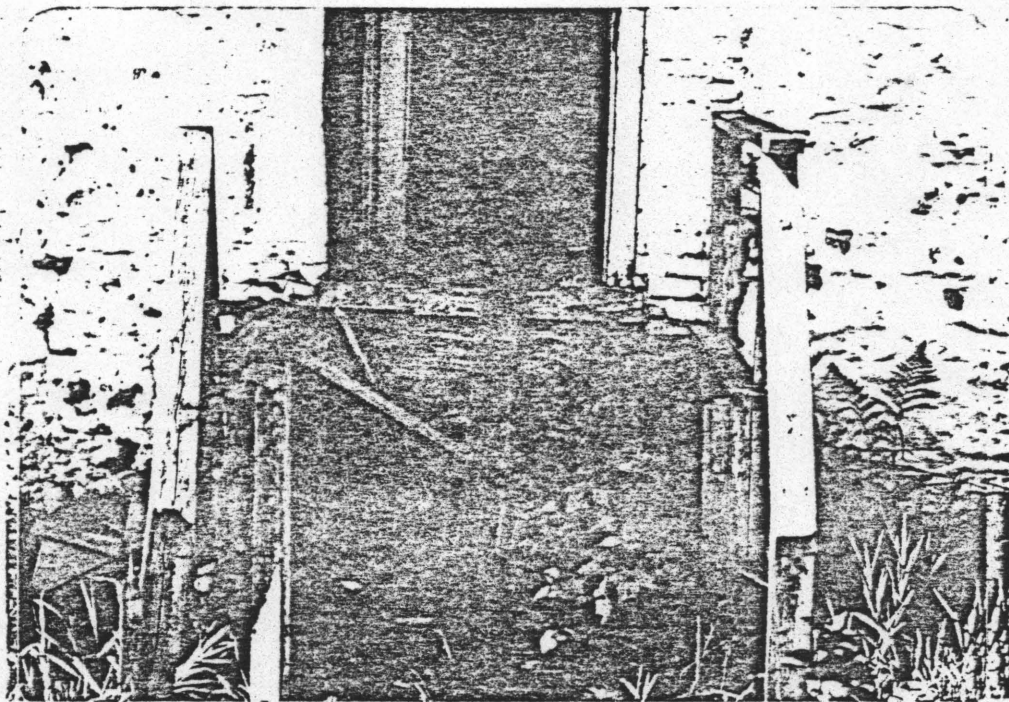


Photo looking down on to the roof of the old Lighthouse. The chimney problem was stabilized along with replacing any missing slate roofing material.



Photos showing the deterioration of the rear stair case of the old Lighthouse.

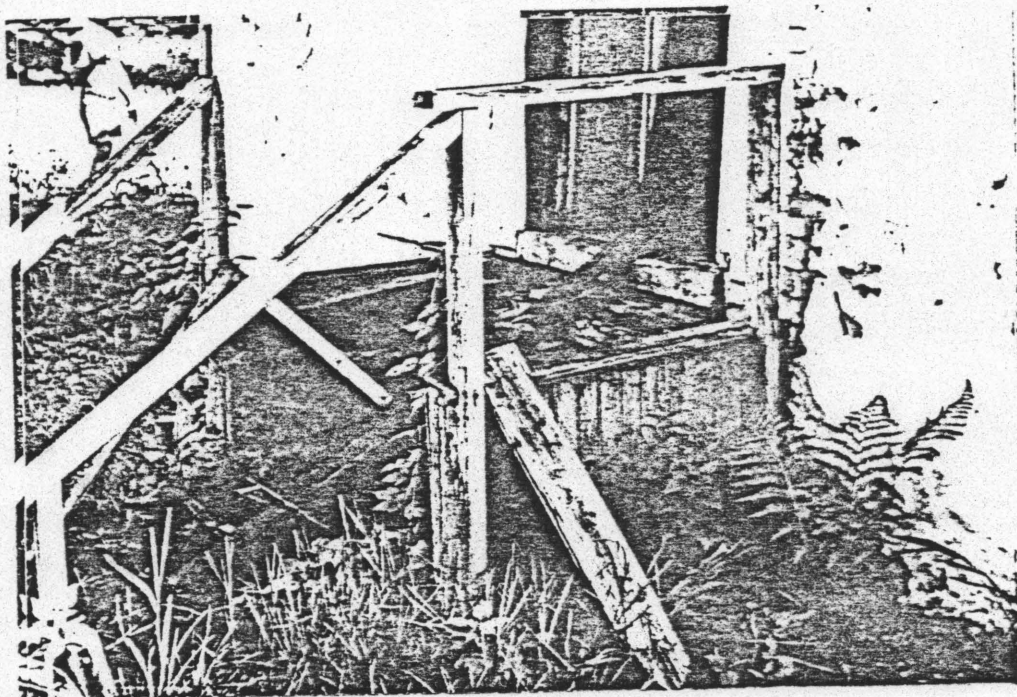




Photo shows east side of Lighthouse after whitewash was applied. Temporary shutters were constructed for all windows and door openings.

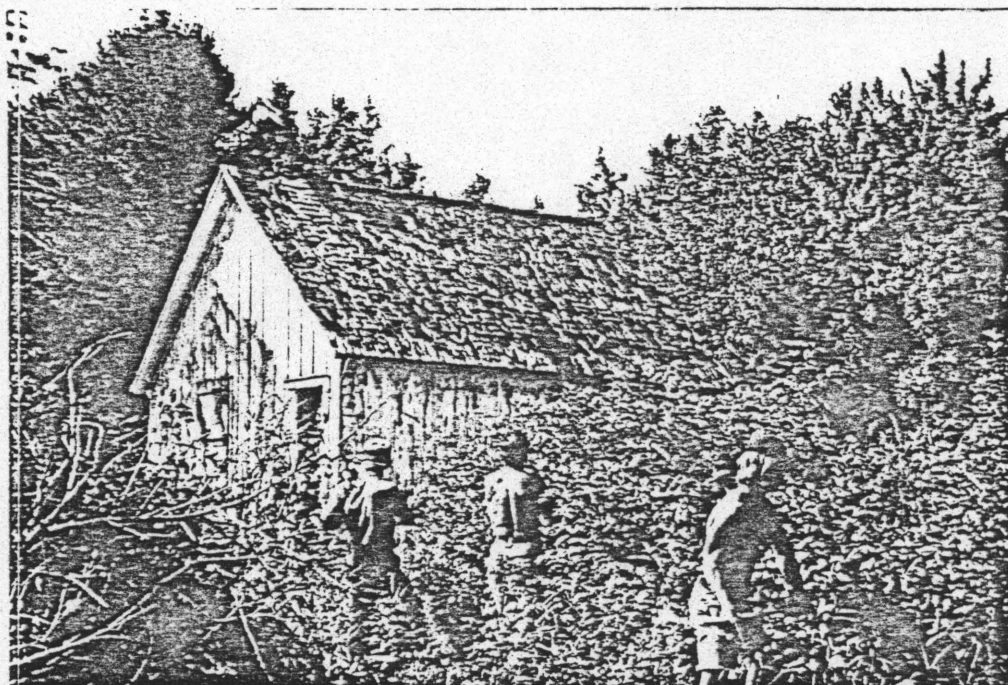
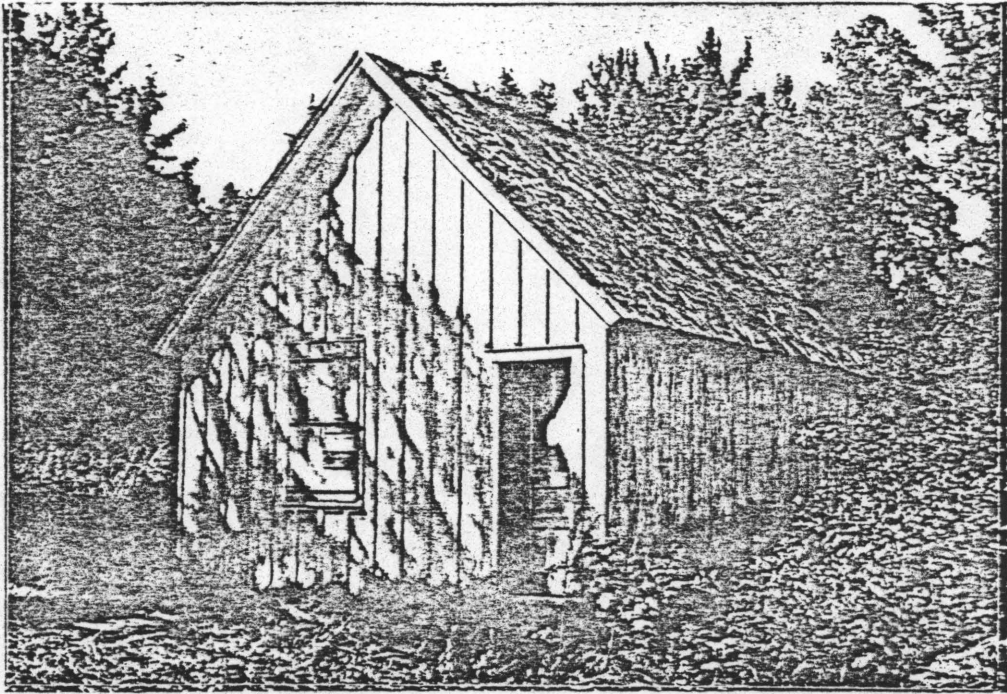


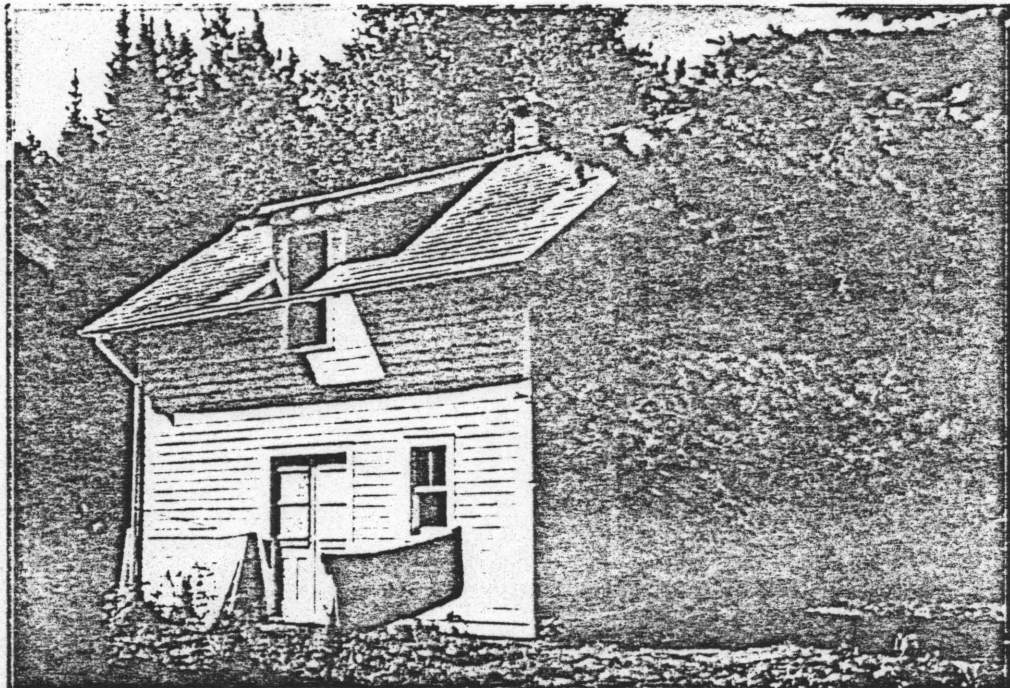
Photo showing workmen removing overgrown brush along storage shed (HS-23-103B). Note the deterioration in the cedar shingles. A temporary corrugated metal roof was installed to prevent further damage.



Majority of the overgrown brush and debris has been removed away from the storage shed.



Photo showing storage shed HS-23-103B. Structure had been raised to prevent further deterioration to siding and frame work. Interior and exterior had been temporarily braced.



Southeast view of the Assistant Lightkeeper's House HS-23-103F.

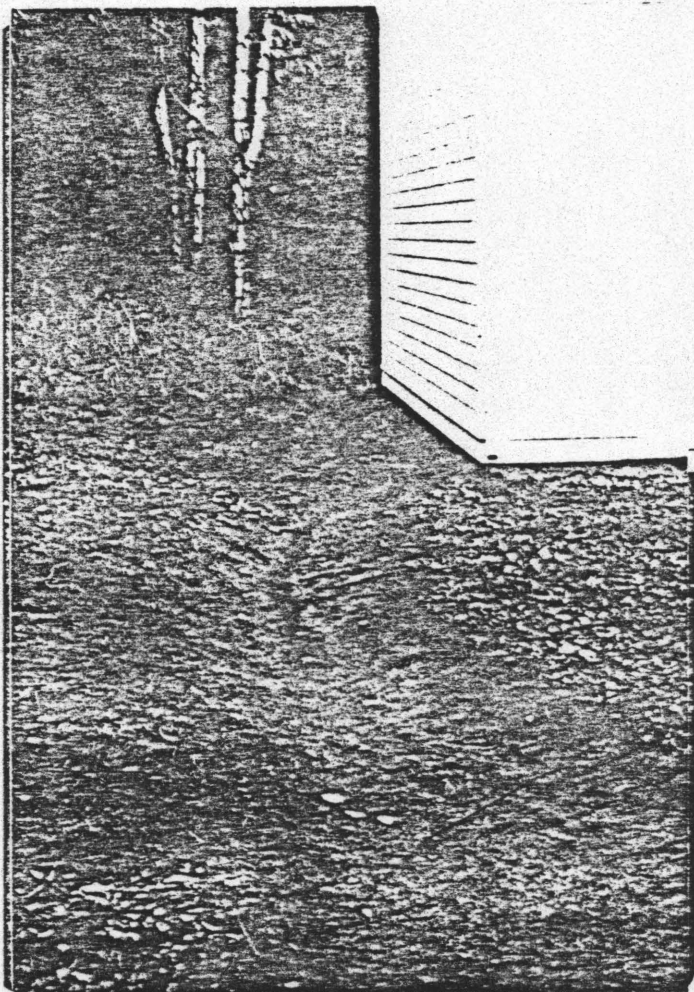
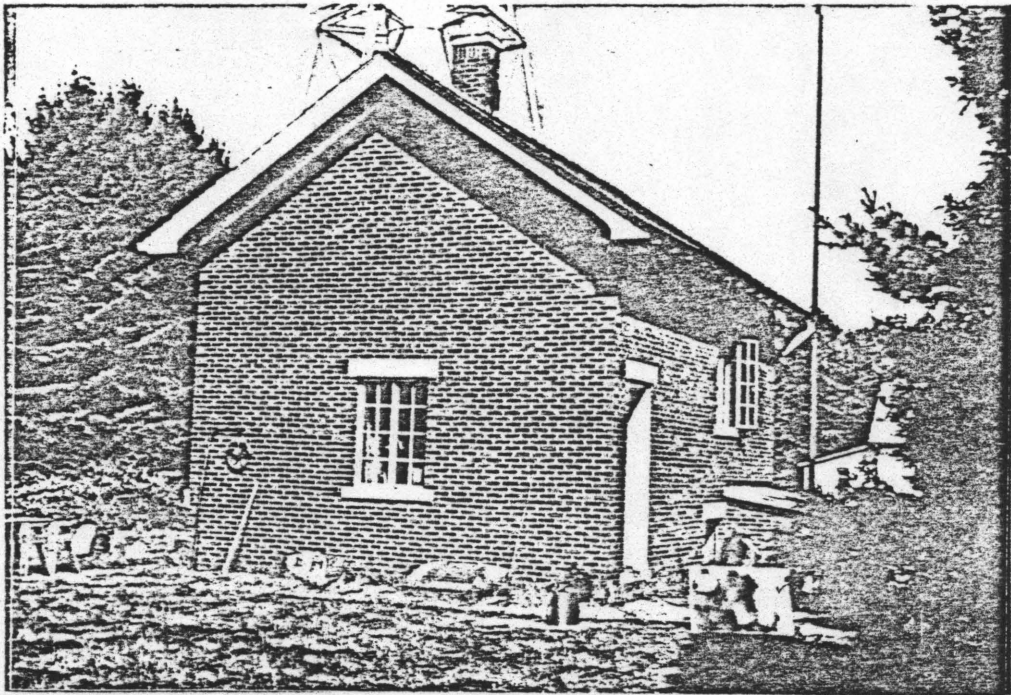
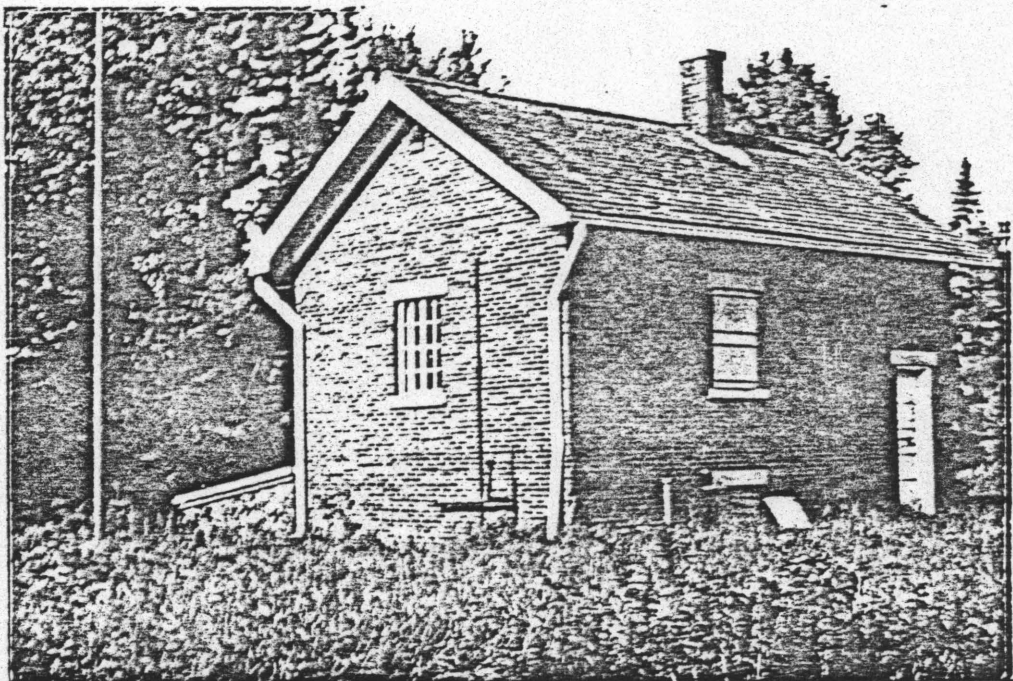


Photo showing a trench which was constructed to divert the water away from the Assistant Lightkeeper's House.



Southwest view of the generator shed HS-23-103D structure was basically in sound condition. All missing or broken glass had been replaced along with painting of all exterior windows and trim.



Northeast view of the generator shed. All overgrown brush and debris had been removed. Drainage problem had been controlled along with connecting all downspouts.

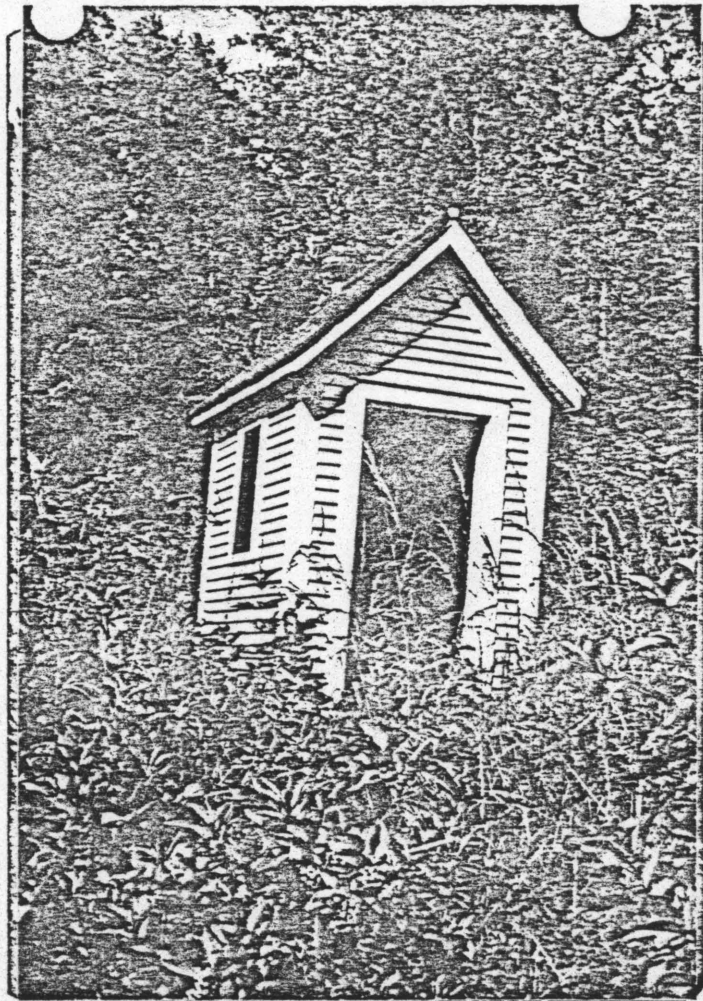


Photo showing privy HS-23-103C. Structure was in sound condition.