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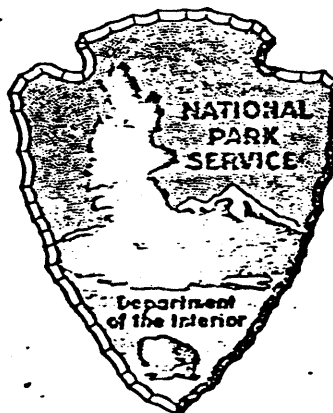
COMPLETION REPORT

WORK ORDER NO. DAY LABOR

APOSTLE ISLANDS NATIONAL LAKESHORE
STABILIZATION OF THE OUTER ISLAND LIGHTSTATION
(work order title)

STABILIZATION ON HS-22-105A, HS-22-104B, HS-22-104C
MIDWEST REGIONAL OFFICE
RAY KUNKEL AND JOHN OCHMAN, PROJECT SUPERVISORS

CONTRACT NO. DAY LABOR



NATIONAL PARK SERVICE
UNITED STATES DEPARTMENT OF THE INTERIOR

FACE SHEET FOR COMPLETION REPORT

Fund Symbol

Park Apostle Islands National Lakeshore	Region Midwest	Year Programmed FY77
Location in Park Outer Island	State(s) Wisconsin	PCP No.
	County or Counties	Master Plan No.
☐ Contract and/or ☒ Day Labor	Bayfield/ Ashland	Master Plan Corrected By
Work Order Title Stabilization of the Outer Island Lighthouse, Apostle Islands NL		As Built Drawings By Raymond Kunkel
		Date Started 10/76
		Date Completed 9/77

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

TOTAL COSTS
(For completion by FFO)

Historic Buildings

Lighthouse HS-22-105A
Generator Shed HS-22-104B
Magazine HS-22-104C

(B) Stabilization of structures

(See cost breakdown on
next two pages)

TOTAL

\$ 33,250.00

DISTRIBUTION		THE FIXED ASSET DESCRIBED ABOVE HAS BEEN COMPLETED IN ACCORDANCE WITH APPROVED DRAWINGS, SPECIFICATIONS, AND AUTHORIZED CHANGES	
No.	To		
		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

FY77

Location In Park

Outer Island

Work Order Title

Stabilization of Outer Island Light Station

COMPOSITION OF COST

COSTS CHARGED TO FUNDS ALLOTTED TO FIELD FINANCE OFFICE

(1) Personal Services.....	\$ 26,966.00	
(2) Travel.....		
(3) Contract Work.....	1,030.00	
(4) Supplies and Materials.....	5,254.00	
(5) Other Direct Expenses.....		
(6) Operation of Equipment.....		
(7) Depreciation of Equipment.....		
(8) Purchase of Construction Equipment.....		
(9) Purchase of Other Accountable Equipment.....		
(10) Other Costs:		
(11) TOTAL COST CHARGED TO FFO FUNDS	xxxxxxxxxx	\$ 33,250.00
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.

Outer Island

Stabilization of Outer Island Light Station:

- 1.) Reroofing of lighthouse & fog signal building.
- 2.) Painting of exterior trim, 3 buildings.
- 3.) Replace windows, install shutters.
- 4.) Tuckpointing.
- 5.) Correct drainage.

cct. 6801-305	Personnel Serv.	21,470
	Contract Work	930
	Supplies & Materials	<u>3,600</u>
	TOTAL	26,000

Outer Island Coastguard Tower:

- 1.) Tuckpointing, whitewashing, & painting.
- 2.) Repair of windows.

cct. 5085-454	Personnel Services	2,802
	Contract Work	100
	Supplies & Materials	<u>848</u>
	TOTAL	3,750

Outer Island Tower Windows (Lexan):

cct. 6601-300	Personnel Services	2,694
	Supplies & materials	<u>806</u>
	TOTAL	3,500

Grand Total - Outer Island - \$33,250.00

NARRATIVE STATEMENT

Stabilization of the Outer Island Light Station

(name of project)

WORK ORDER NO. Day Labor

DESCRIPTION OF WORK Stabilization work was conducted on the lighthouse,
light tower, generator building and magazine. Reroofing of the lighthouse
and generator building. Painted exterior trim, replaced deteriorated windows,
installed shutters, tuckpointed, whitewashed, installed Lexan in the tower and
corrected the drainage around the site.

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

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

Award of Contract No. Day Labor was made to

Apostle Islands National Lakeshore

for

Notice to Proceed was issued on 8/76 and the
(date)
date of 8/76 was established as the first day of
the contract.

Construction work consisting of Stabilization on the Outer Island Light Station

started on 8/76
(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.)

Actual stabilization work started October of 1976 on the lighthouse structures.

All of the wooden window sashes from the structures were removed and taken to the mainland to get repaired, removal of old paint and painted during the winter months.

May of 1977, stabilization work was continued on the Lighthouse. Below is an outline of the work completed on each building:

Lighthouse: (Keepers quarters) HS-22-105A

1. Scraped and removed all loose and scaling paint.
2. All wood and metal surfaces had been primed and painted. The paint determined for these structures are close to the historic colors. These colors were used only until a complete paint analysis had been accomplished.

3. All the deteriorated and broken window glass and sashes have been corrected and temporarily shutters had been made.

4. The entire roof had been reroofed.

5. Caulked along all windows and door openings.

6. General cleaning of the interior structure.

7. Corrected flashing over kitchen section.

8. Reroofed the entire structure.

Light Tower: HS-22-105A

1. Scraped all loose and scaling whitewash and paint from all surfaces. All wood and metal surfaces were primed and painted.

2. All windows in the tower were painted and any broken or missing glass replaced. Also constructed temporary shutters.

3. Installation of Lexan in the lookout section of the tower.

4. Tuckpointing of the deteriorated areas of the tower.

5. Whitewashing of the tower.

6. Removal of all loose and flaking whitewash from the interior of the tower.

7. The staircase was wire brushed and a preservative applied.

8. General cleaning of the interior structure.

Magazine: HS-22-104C

1. Entire structure had been repainted.

2. All loose and scaling paint was removed.

3. General cleaning of the interior.

Generator Building: HS-22-104B

1. All windows were stripped and painted. Any deteriorated sashes were corrected or rebuilt.

2. All damage or missing glass was replaced.

3. Scraped and removed all loose and scaling paint.

4. All wood and metal surfaces had been primed and painted.
5. The entire chimney had been tuckpointed and a new cap had to be made to correct the badly deteriorated cap.
6. Foundation wall along the exterior was tuckpointed and then a thin cement mix was plastered over to match the existing construction design.
7. New flashing was installed around the entire chimney.
8. A new roof was installed over the entire building.
9. Shutters were constructed over all windows and door openings.

NOTE:

1. Removal of all shrubbery and vines that has been growing up along and interfering with the structure.
2. All debris and trash which had been accumulated throughout the years had been removed.
3. Flag pole has been scraped and painted, and laced for use of the flag.
4. Fuel storage tank had been scraped and painted.
5. All paint that was determined for these structures are close to the historic color. These colors were used only until a complete paint analysis had been accomplished.
6. Mortar mixture used for tuckpointing:

One part of white masonry cement, one part of hydrated lime and seven parts sand
7. Whitewash mixture used for tower:

One bag of slake lime (90 lbs.) w/40 gallons of water. One pound of white masonry cement was added to each five gallon whitewash mixture.
8. A half pint of boiled linseed oil was added to each gallon of primer.
9. Temporarily corrected the surface water drainage at the head of the tramway staircase.

10. Mortar mix used was of a soft texture. This was used only until a complete mortar analysis had been accomplished.

Overruns and Underruns on Contract Bid Schedule

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

Underrun on day labor project, job went well and no major problems.

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.

Lighthouse HS-22-105A: This consists of a large three-story brick residence with a tall brick light tower. Foundation wall was built with native brownstone. Windows are wooden, double hung design, roof consists of seal-tap asphalt shingle, all soffit and fascia trim are wood and have been painted.

Generator Building HS-22-104B: This is a 1½-story building, exterior material consists of a texture asbestos siding, roof has a seal-tap asphalt shingles.

This structure has wooden double hung windows. Foundation wall is constructed

from common bricks with a skim cement plaster finish.

Magazine HS-22-104C: This is a 1-story brick structure with a galvanized metal roof. Foundation is constructed from common bricks. The entry door is steel with brass hardware.

The _____

constructed under this work order (has) or (has not) resulted in a usable unit. (NOTE: If it is not a usable unit, explain.) _____

RECOMMENDED COLORS

The recommended paint colors were all keyed to the Munsell Color System. The paints were purchased from the Benjamin Moore Paint Company.

- 1) Generator Building, Outside. Window sashes, doors, trim and sills.
Black 25.R N. 0.5/
Hue
Benjamin Moore Black 131 80
- 2) Generator Building, Outside. Bottom trim and concrete foundation
Gray Dark 2.5R N. 3.5/
Hue
Benjamin Moore Slate Gray (Porch & Floor Enamel)
- 3) Fuel Storage Building, Outside
Red Dark 10R 3/6
Benjamin Moore Iron Clad Deep Red 071 23
- 4) Fuel Storage Building Outside. Bottom trim and concrete foundation.
Gray Light 2.5R N. 4.5/
Hue
Benjamin Moore Light Gray (Porch & Floor Enamel)
- 5) Lighthouse Outside. Window sashes, trim, sills and doors.
Off-White 5Y. 9/1
Benjamin Moore Spanish White
- 6) Storm Shutters Outside
Park Green 10G. 3/4
Benjamin Moore Park Green 131-40

Breakdown of Colors by Layers from Samples

Generator Building, outside. Bottom trim and concrete foundation.

Coats:

1. 2.5R N. 3.5/ Gray dark
Hue
2. Same
3. 2.5R N. 4.5/ Gray light
Hue
4. N. 3.5/ Gray dark
5. N. 4.5/ Gray light
6. N. 3.5/ Gray dark
7. N. 4.5/ Gray light - present color.

Generator Building, outside. Window sashes, doors, trim and sills.

Coats:

1. 25R N. 0.5/ Black
Hue
2. Same
3. Same
4. 2.5R N. 4.5/ Gray light
Hue
5. 10GY 3/4 Park green
Hue
6. 2.5R N. 4.5/ Gray light
Hue
7. Same
8. 2.5R N. 3.5/ Gray dark
Hue
9. 2.5R N. 4.5/ Gray dark
Hue
10. 2.5R N. 3.5/ Gray dark
Hue
11. 2.5R N. 9.5/ Present color white.
Hue

Fuel Storage Building, outside.

Coats:

1. 10R 3/6 Red dark. Primer on metal.
2. 2.5R N. 4.5/ Gray dark
Hue

3. 5Y 9/1 Off-white
4. 10G 3/2 Green
5. 1.25Y 8/16 Yellow - present color.

Fuel Storage, outside. Bottom trim and concrete foundation.

Coats:

1. 2.5R N. 4.5/ Gray light
Hue
2. 2.5R N. 5.5/ Gray
Hue
3. 2.5R N. 4.5/ Gray light
Hue
4. Same
5. Same
6. 10R 3/6 Red dark
7. 2.5R N. 4.5/ Gray light
Hue
8. 2.5Y 8/16 Yellow
9. 2.5R N. 5.5/ Gray - present color.
Hue

Lighthouse, outside. Window sashes, trim, sills and doors.

Coats:

1. First or primer coat 5Y 9/1 Off-white
2. 2.5R N. 3.5/ Dark gray
Hue
3. Same
4. 2.5R N. 4.5/ Light gray
Hue
5. Same
6. 2.5R 9.5/ White - present color.
Hue

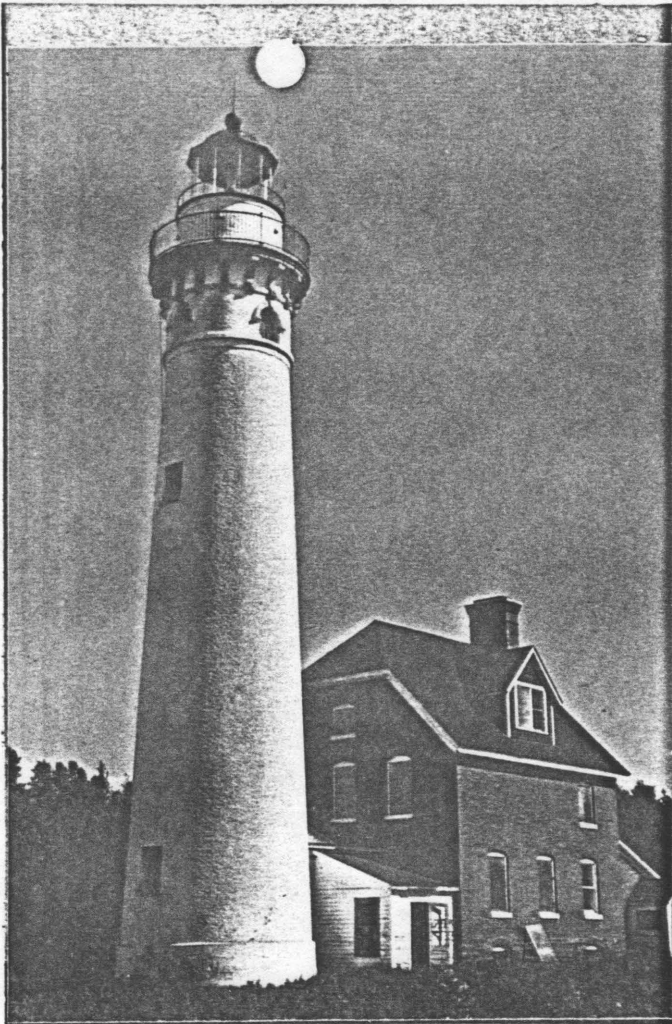
Outhouse, brick. All layers whitewash - present color.

Lighthouse tower. All layers whitewash - present color.

Storm shutters, outside.

Coats:

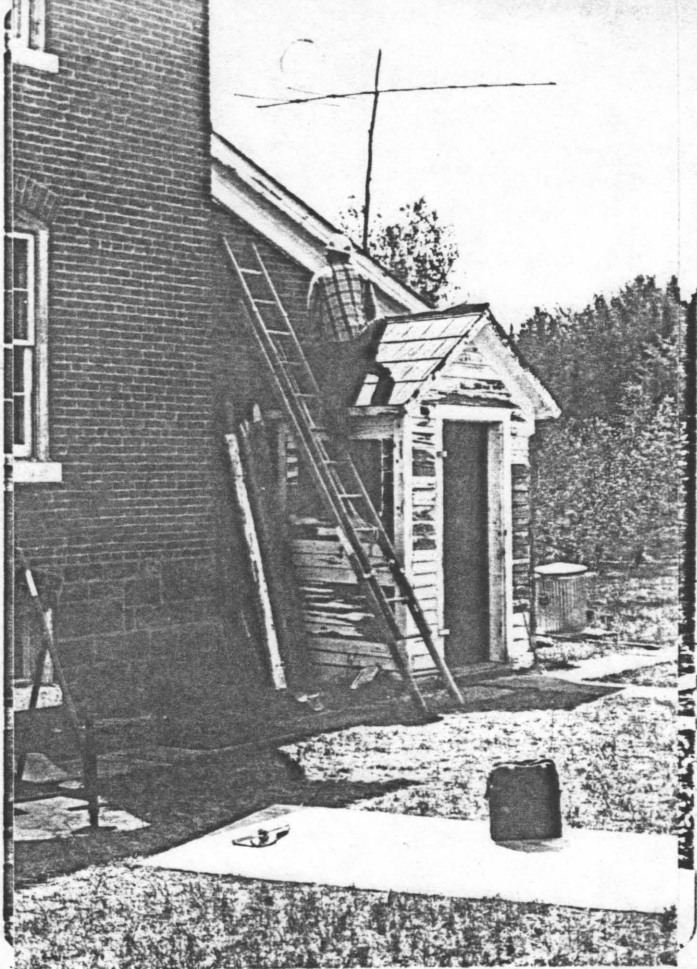
1. 10G 3/4 Park green
2. Same
3. 5GY 5/2 Gray-green - present color.



Lighthouse and tower, HS-22-105A, before stabilization project was started. Photo showing west side of the lighthouse.

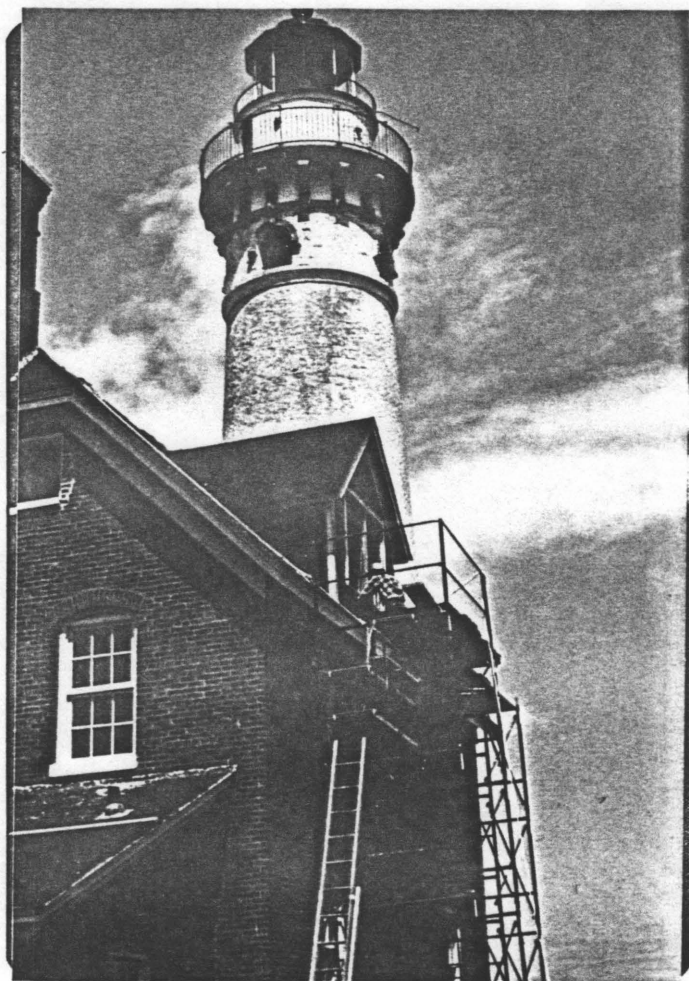
Workman preparing the lighthouse for painting, HS-22-105A.

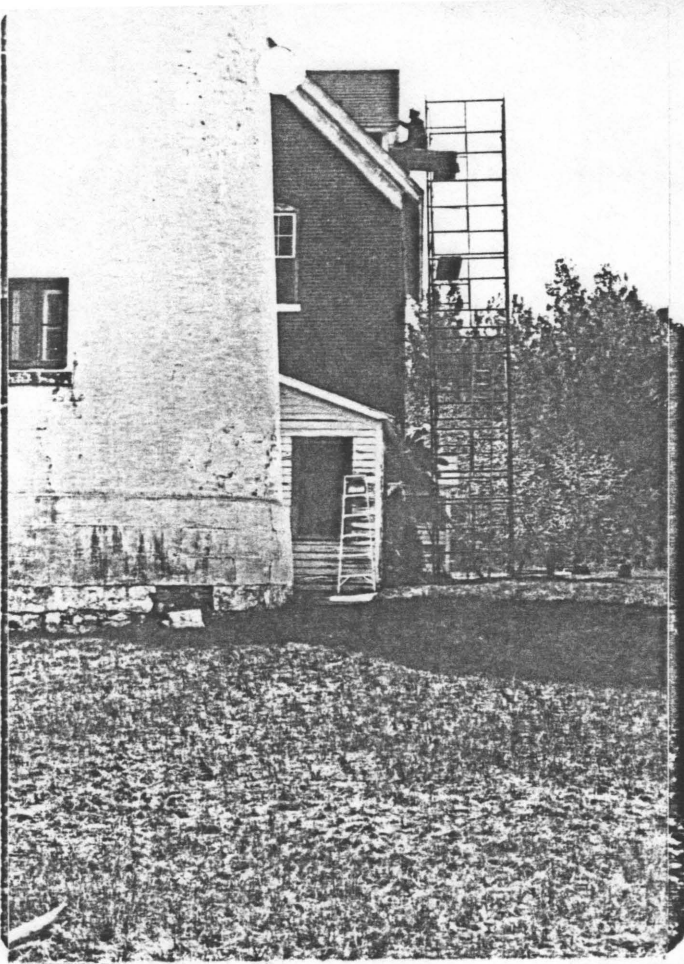




Entrance wing is being prepared for painting. Metal shingle being wire brushed while on the siding. Only loose and scaling paint was removed.

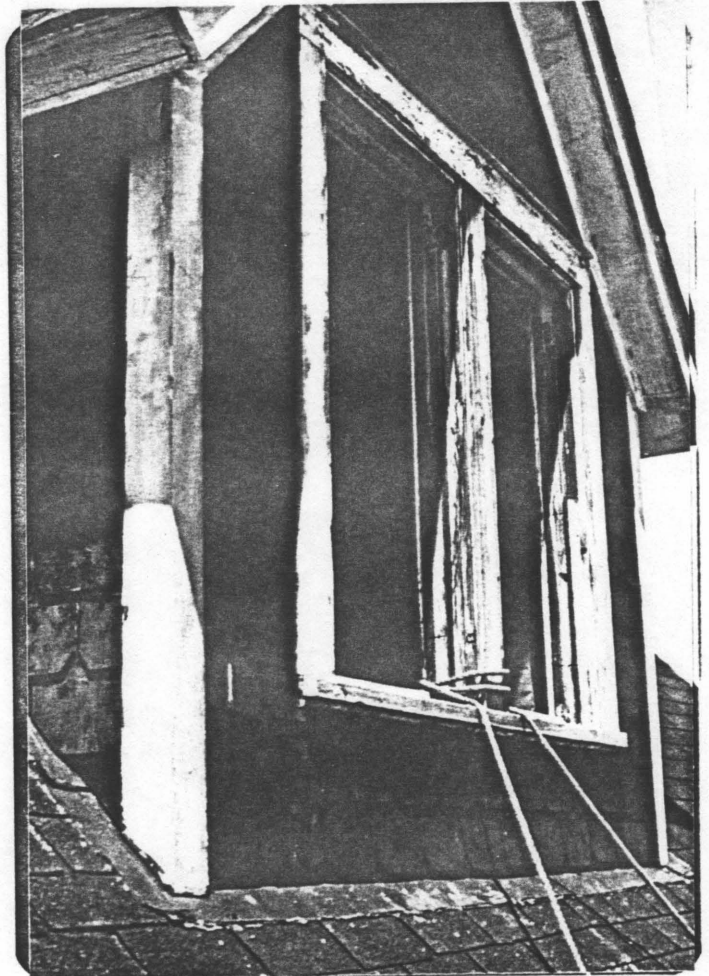
Southeast view of the lighthouse. East side of roof was being reroofed.





North side of lighthouse. (A)
shows some of the deterioration
along the base of the light tower.

Typical window and dormer detail
showing the condition before
work was started. Photo taken
of west side dormer of light-
house.



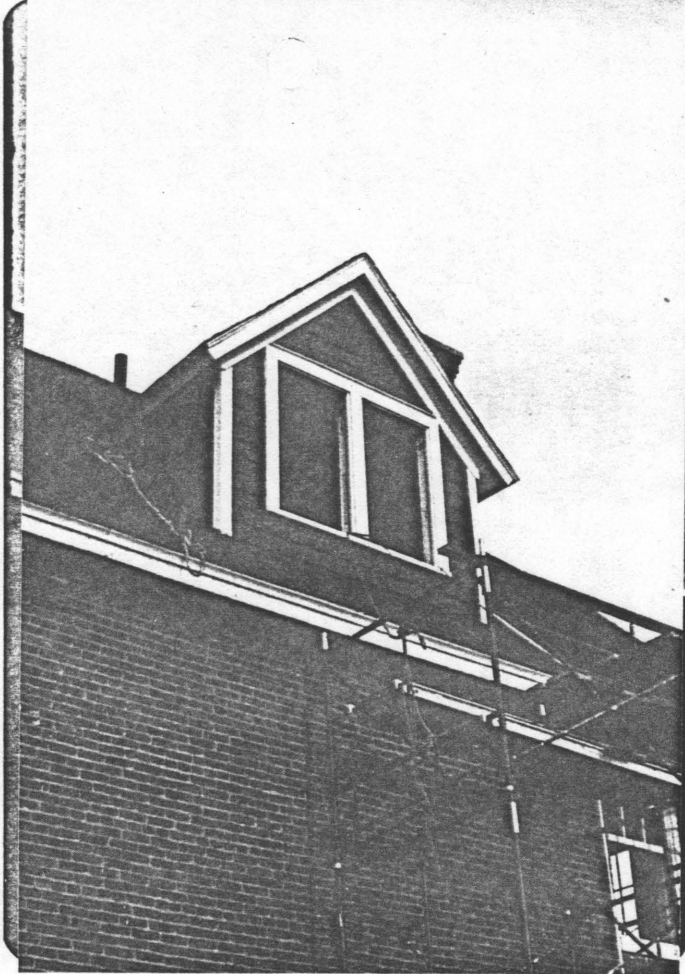
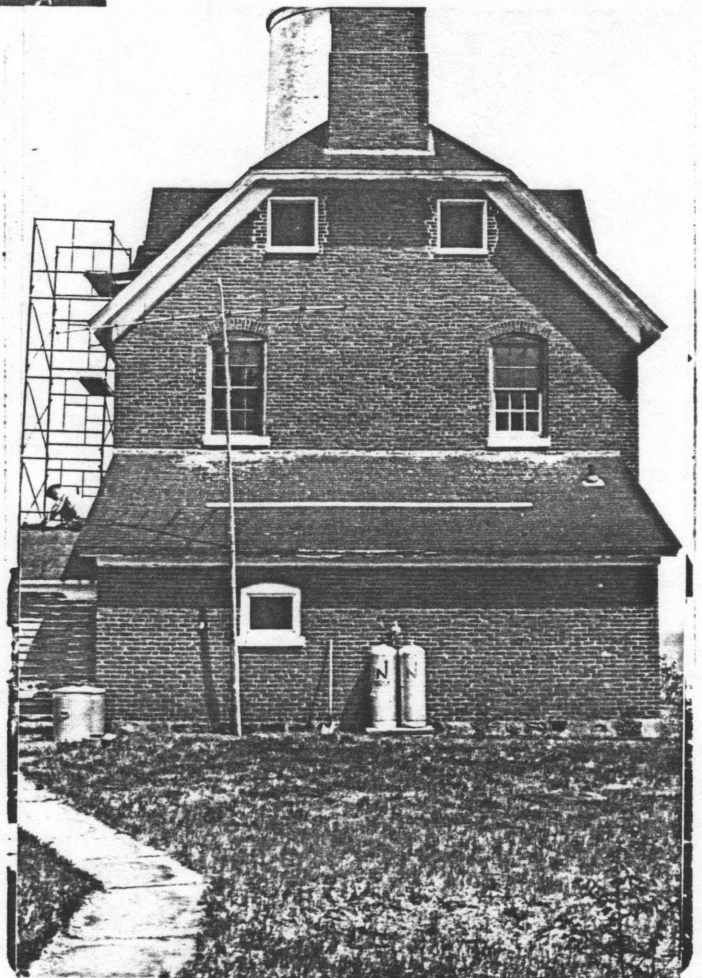
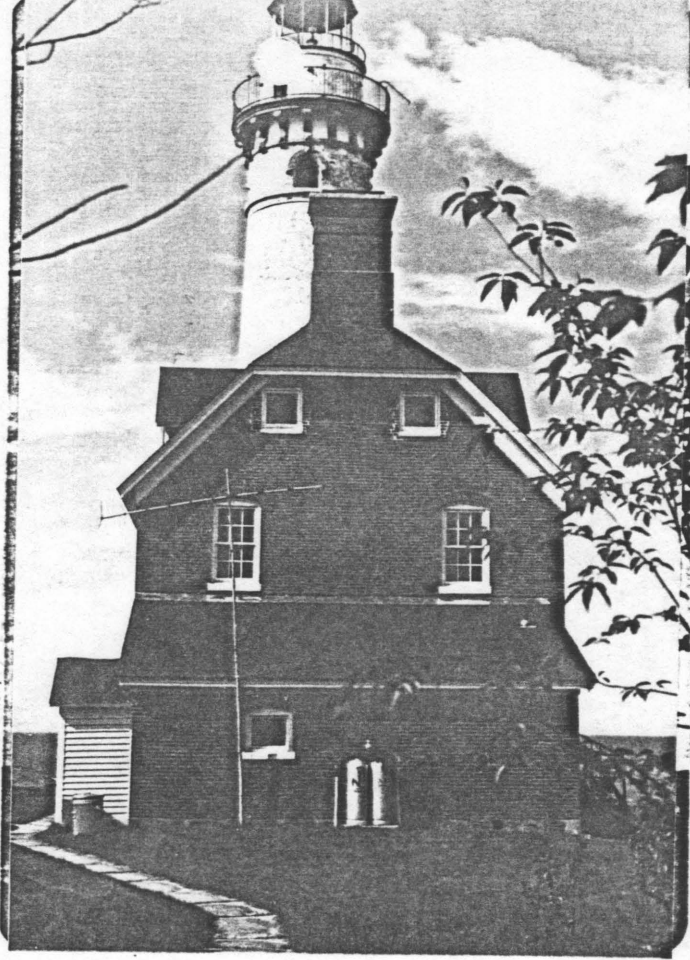


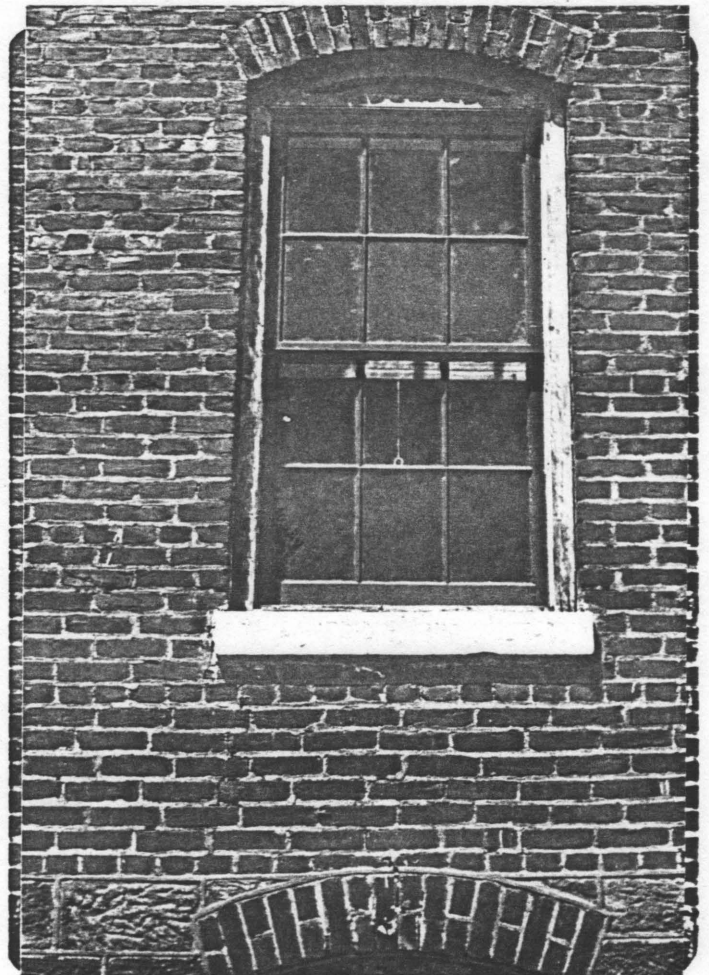
Photo showing dormer after surface has been prepared and painted. Photo taken of west side dormer of lighthouse.

View showing the conditions of the south side of the lighthouse during the beginning stabilization stage.





South side of lighthouse after stabilization work was accomplished.



Typical window detail of main lighthouse.



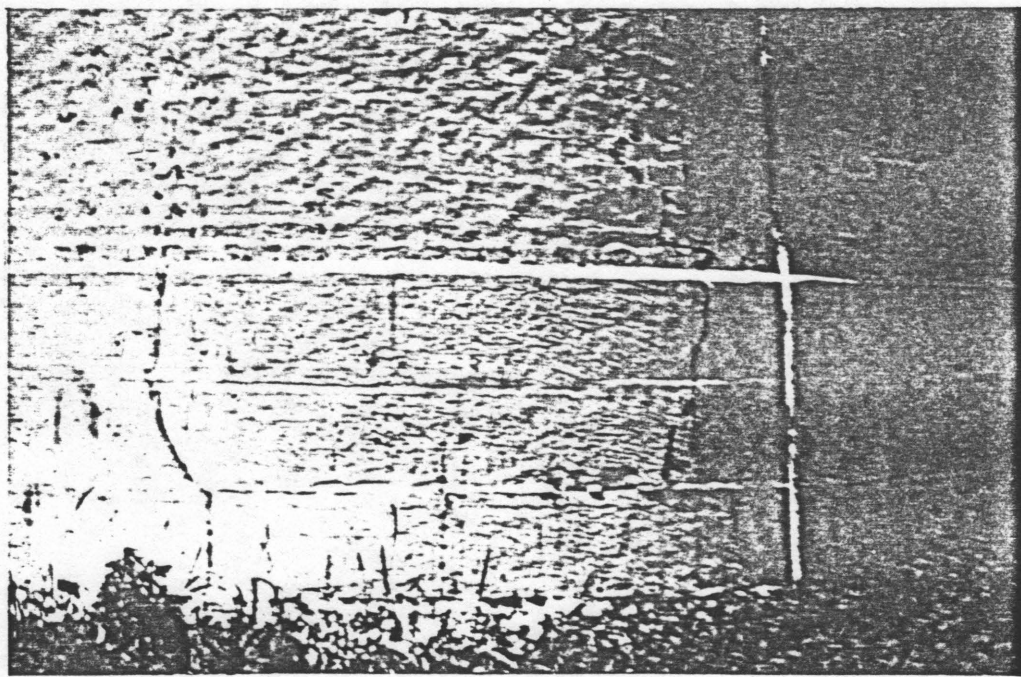
New flashing being installed along lean-to section over kitchen wing (south side).



Decorative trim has been painted and workmen proceeding in the white-washing of the tower.



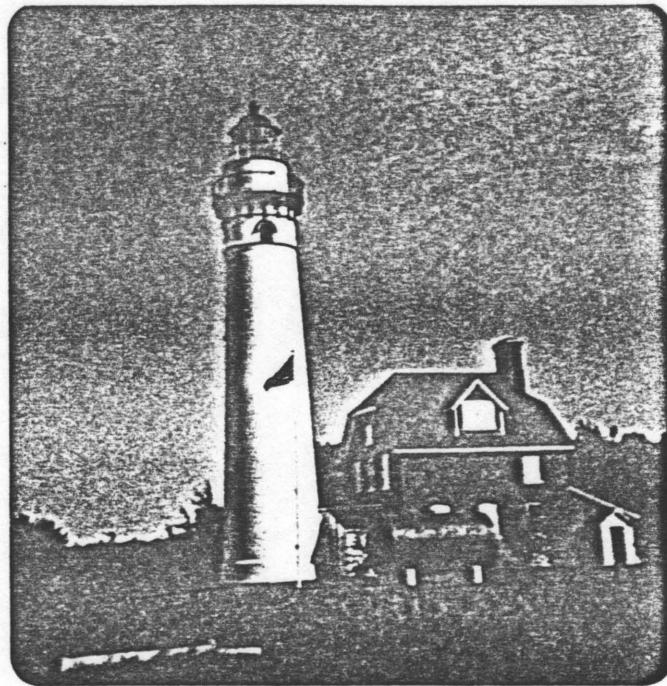
Workman preparing the painting surface along underside of the observation platform.



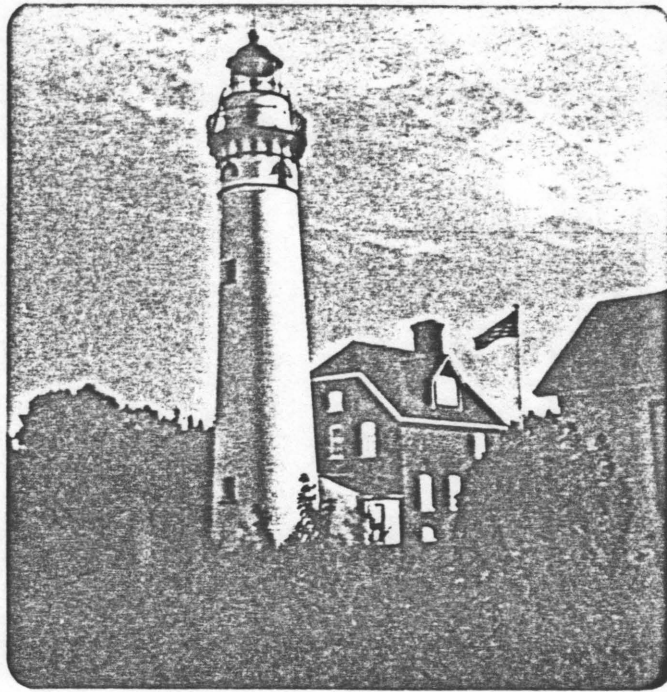
Showing the deterioration in the masonry wall of the light tower.
Photo was taken at the base of the tower.



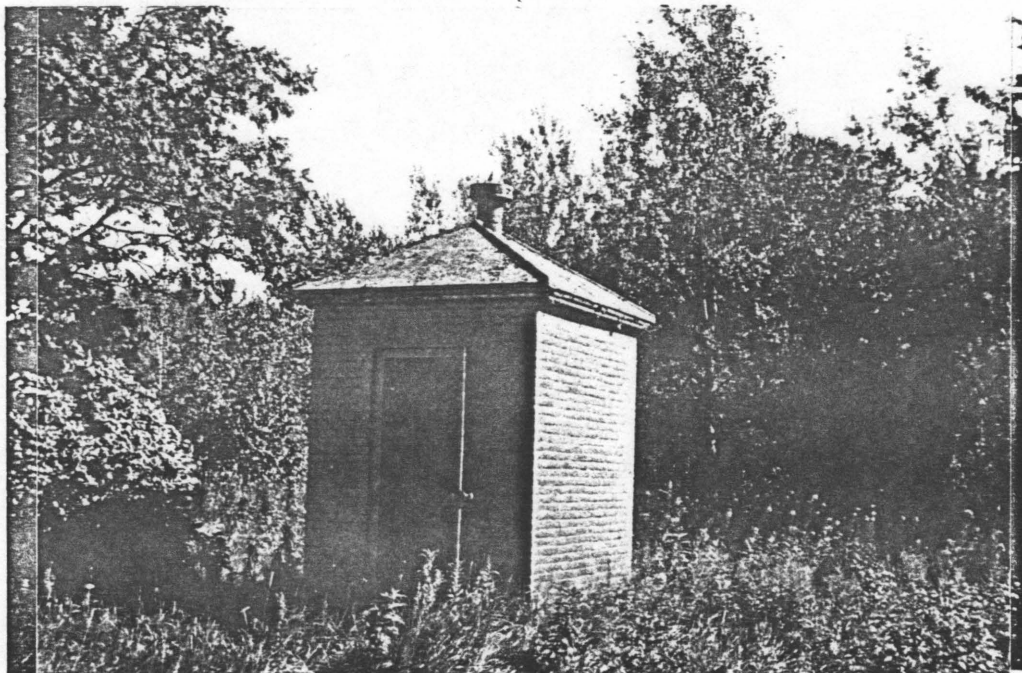
Northwest view of the lighthouse during one of the construction stages. Majority of the work had been completed on the house.



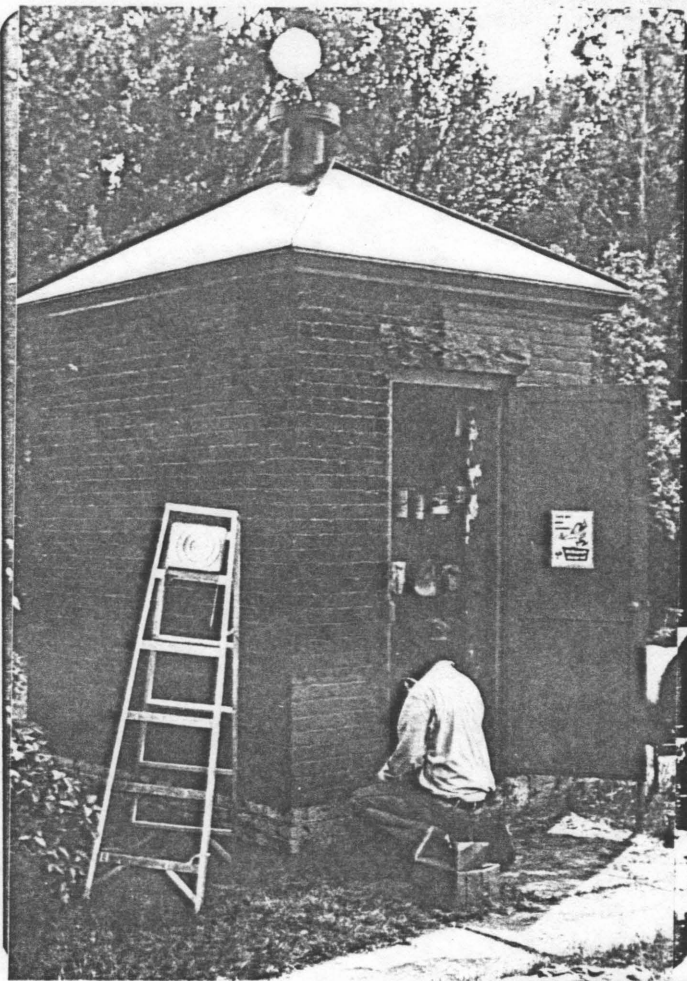
West view of the lighthouse after work was completed.



Northwest view of the lighthouse after work was completed.

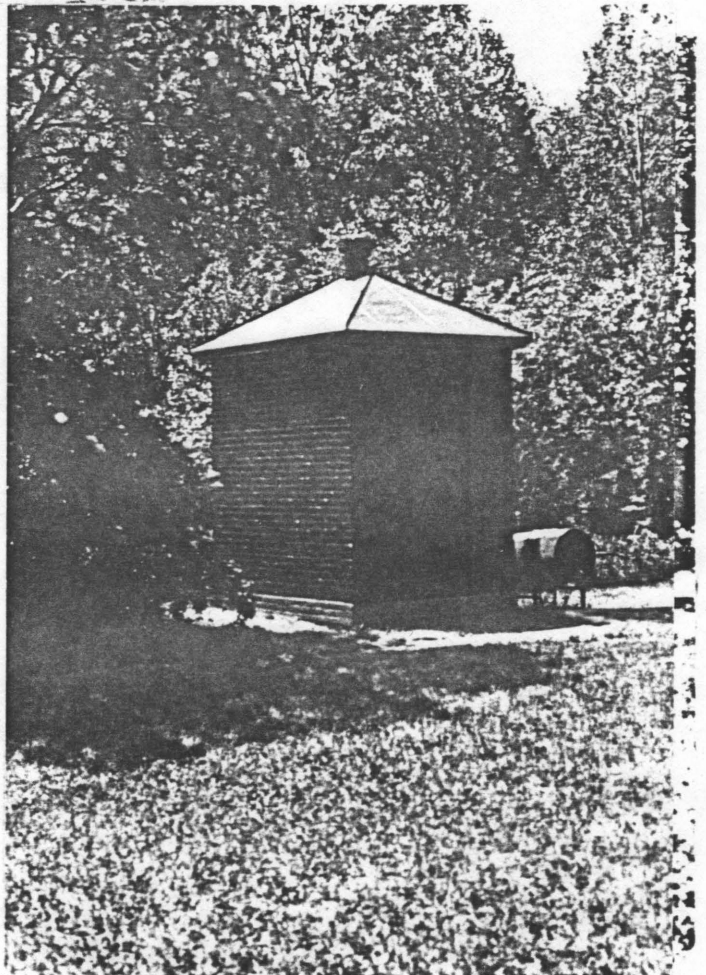


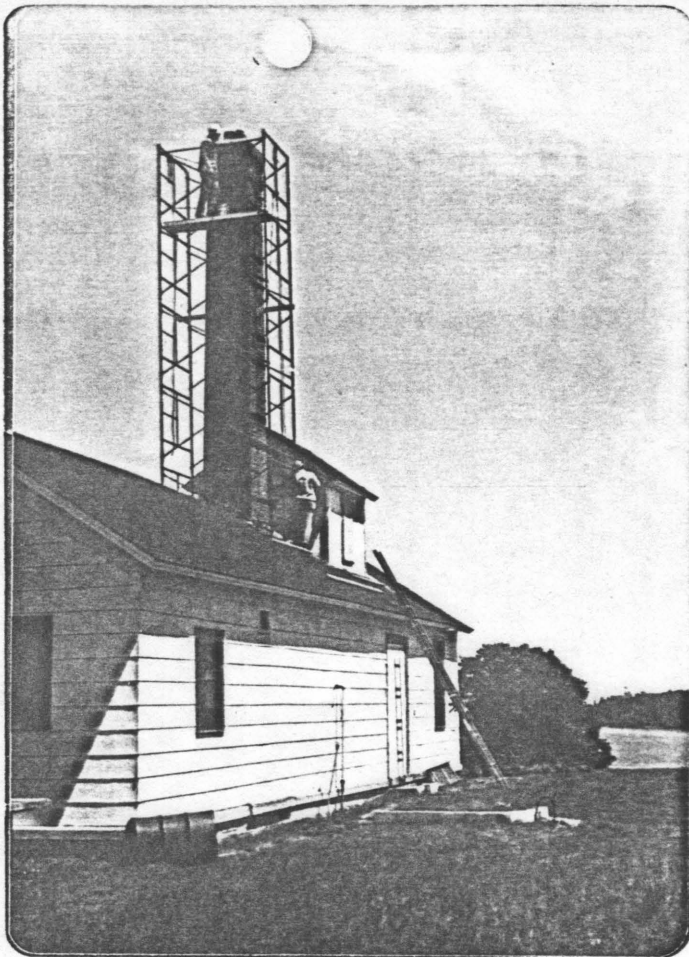
Magazine HS-22-14C. Condition of structure before work was started (north side).



Exterior surface had been prepared and being painted.

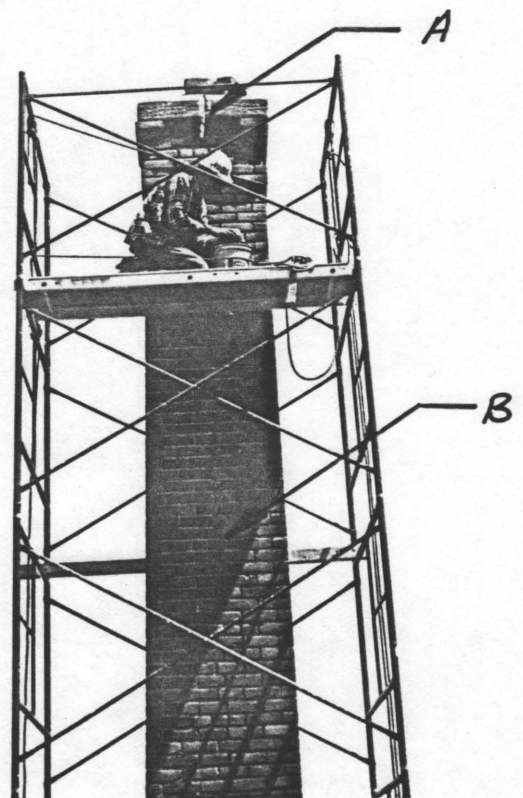
Photo showing the work completed on the magazine building.

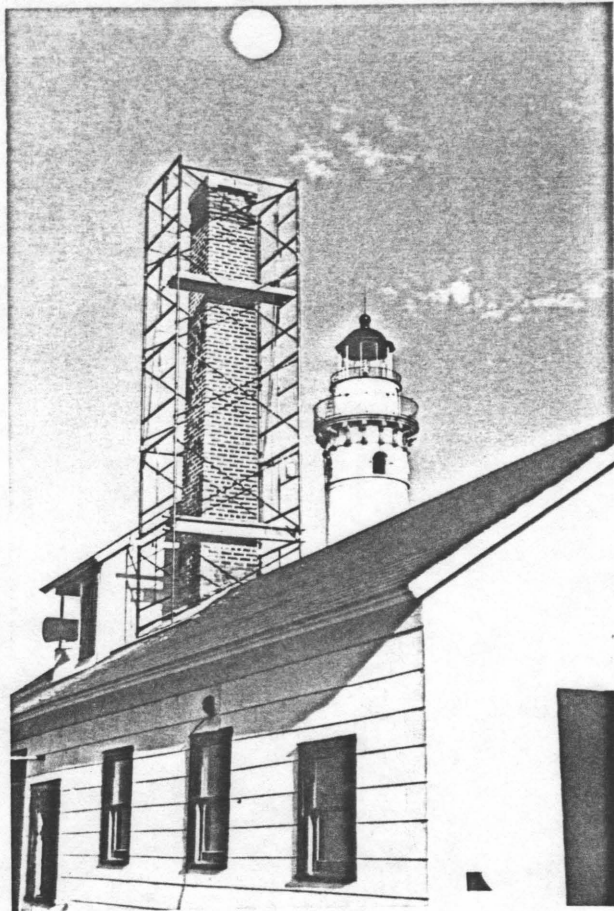




South side of generator building showing dormer being prepared for painting and tuckpointing, which is underway.

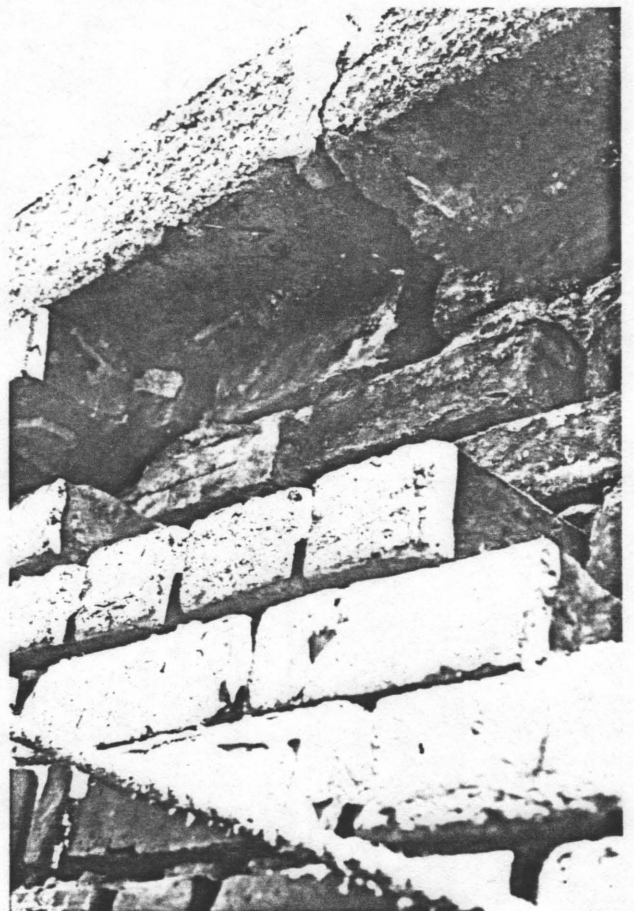
Workman starting tuckpointing the badly deteriorated chimney of the generator building.
 (A) Shows the break in the cap.
 (B) The break from the cap follows through down to the roof line.

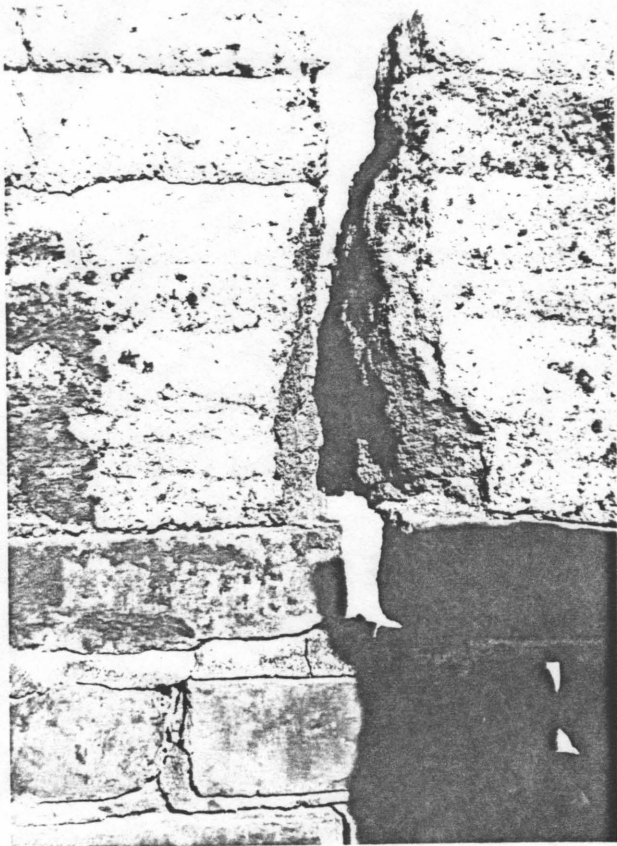




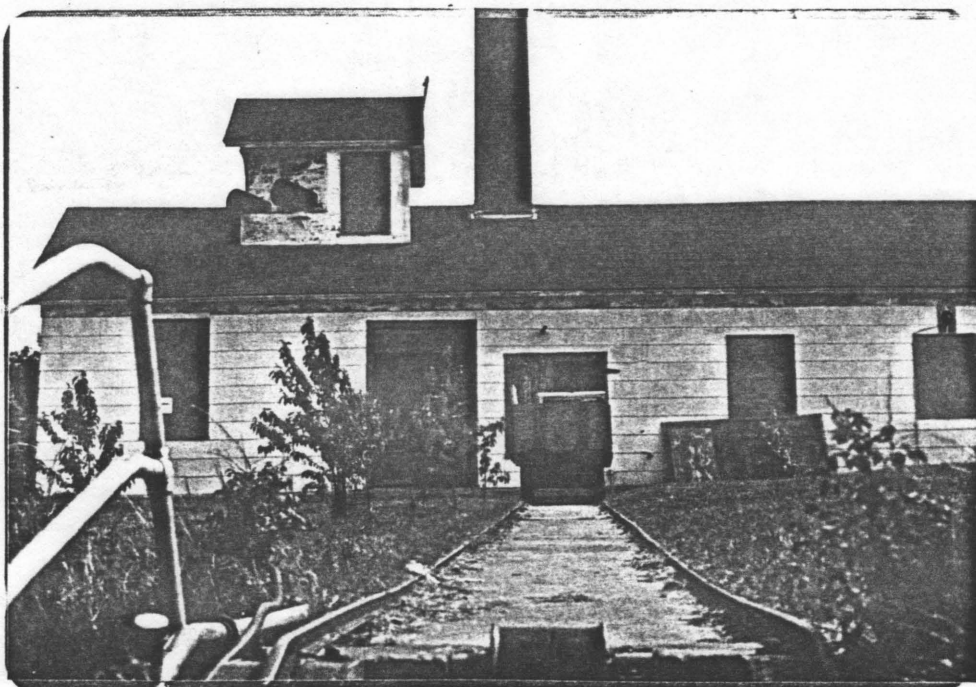
Majority of the tuckpointing had been completed on the generator building chimney. The top 8 courses were relaid and a new cap was constructed in place.

Detail showing conditons of the top 7 courses of brick of the generator chimney.

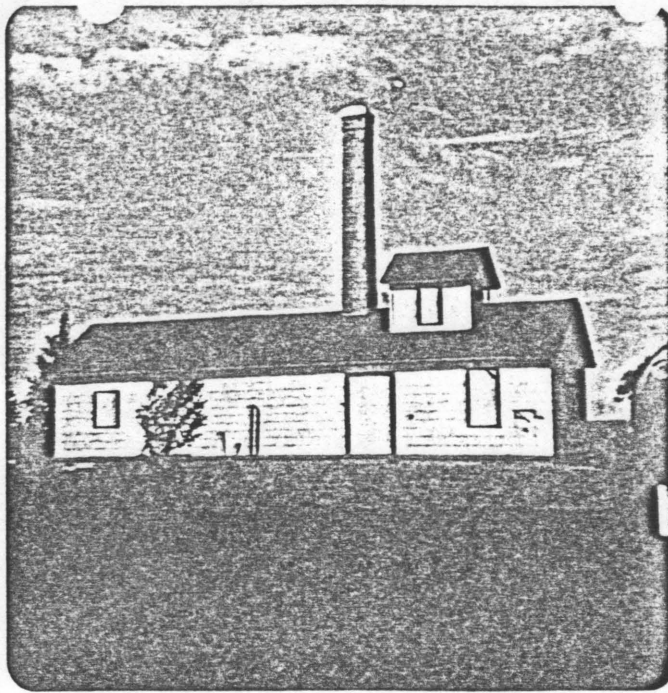




Detail showing deteriorated area of chimney cap and bricks of the generator building chimney. Interior view.



View showing the condition of the north side of the generator building before stabilization work took place. H-22-104B



South view of the generator building after work was completed.

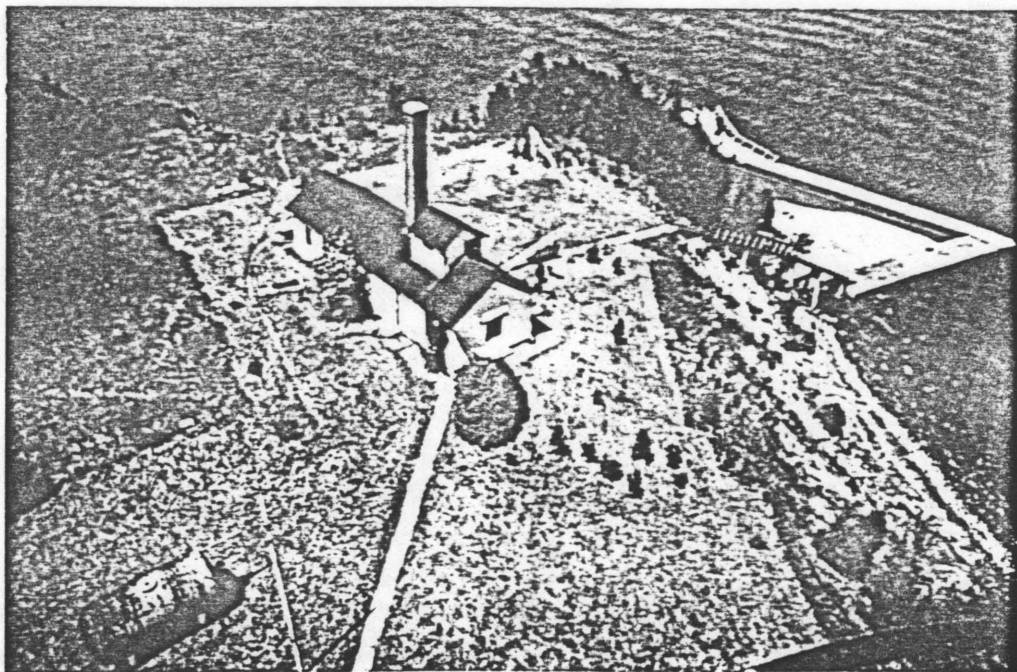


Photo taken from top of light tower showing an aerial view of the dock, tramway, and generator building.