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103

COMPLETION REPORT

WORK ORDER NO. _____ **DAY LABOR** _____

APOSTLE ISLANDS NATIONAL LAKESHORE
STABILIZATION OF THE RASPBERRY ISLAND
LIGHT STATION

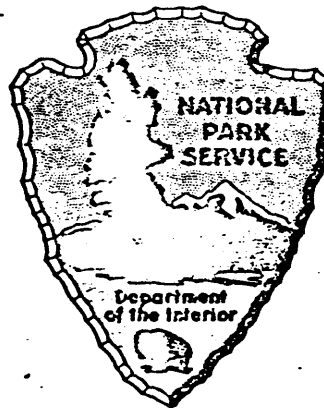
(work order title)

STABILIZATION ON HS-08-103A, HS-08-102C HS-08-102D

HS-08-102E, HS-08-102F, HS-08-102G, HS-08-102A

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

Park Apostle Islands National Lakeshore	Region Midwest	Year Programmed FY77
Location in Park Raspberry Island	State(s) Wisconsin	PCP No.
	County or Counties Bayfield/ Ashland	Master Plan No.
☐ Contract end/or ☒ Day Labor		Master Plan Corrected By
Work Order Title Stabilization of the Raspberry Light Station Apostle Islands NL		As Built Drawings By Ray Kunkel
		Date Started
		5-77 Date Completed

DESCRIPTION OF FIXED ASSETS (For completion by employee in charge of project)	TOTAL COSTS (For completion by FFO)
Historic Buildings:	(See cost breakdown on next two pages)
Lighthouse HS-08-103A	
First Quarters HS-08-102C	
Small Privy HS-08-102D	
Privy HS-08-102E	
Shed HS-08-102F	
Cabin HS-08-102G	
Boathouse HS-08-102A	
(B) Stabilization of these structures	
TOTAL	\$37,300.00

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		

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

COMPOSITION OF COST FOR COMPLETION REPORT

Order Number
DAY LABOR

Fund Symbol

Park
Apostle Islands National LakeshoreRegion
MidwestYear Programmed
FY 77

Location in Park

Raspberry Island

Work Order Title

Stabilization of Raspberry Island Light Station

COMPOSITION OF COST

COSTS CHARGED TO FUNDS ALLOTTED TO FIELD FINANCE OFFICE

(1) Personal Services.....	\$30,805.00	
(2) Travel.....		
(3) Contract Work.....	1,247.00	
(4) Supplies and Materials.....	5,248.00	
(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	\$37,300.00

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.

Raspberry Island

1. Raspberry Island Light Station: footing and basement repair and drainage.

Acct. 7101-404 - Personnel Serv.	15,226
Contract Work	887
Supplies & Mat'ls.	<u>2,887</u>
TOTAL	19,000

2. Raspberry Island: roofing of outbuildings, exterior repair, exterior painting of outbuildings, painting and roofing of boathouse, repair and replacement of dock.

Acct. 6601-300 - Personnel Serv.	15,579
Contract Work	360
Supplies & Mat'ls.	<u>2,361</u>
TOTAL	18,300

Grand Total - Raspberry Island - \$37,300.00

NARRATIVE STATEMENT

Stabilization of Raspberry Island Light Station

(name of project)

WORK ORDER NO. Day Labor

DESCRIPTION OF WORK The major project on the lighthouse was the
construction of the retainer wall for the north basement wall.
Improving the water drainage away from the structures. Replace-
ment of deteriorated walkways. Painting of all wooden utility
buildings. Reroofed all asphalt composition roof, all other metal
roofs had been painted, except for the main lighthouse roof. Repair
boathouse and dock facility.

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

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 5-77 and the
(date)
date of _____ was established as the first day of
the contract.

Construction work consisting of Stabilization of the Raspberry
Island Light Stations.

started on 5-77
(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.)

Stabilization work was started in the spring of 1976 and was
continued the following spring. Below is an outline of the
work completed to each structure during the 1977 season.

LIGHTHOUSE AND ATTACHED LIGHT TOWER HS-08-103A

- 1) Construction of a concrete block retainer wall on the north
side of the basement. The work was started by excavating the
ground down to the old footing. A concrete footing was poured
alongside the old, and the wall was constructed using 12" block
with reinforcing rods added for additional strength.
- 2) A masonry waterproofing was applied to the exterior existing
brick wall and to the new block wall, before the backfill was accomplished

3) Additional drain pipes were connected to the existing downspouts and buried below grade with a $\frac{1}{4}$ inch drop per foot.

4) The interior basement wall (north wall) had extensive tuckpoint done to correct the damage caused from the outside pressure. Areas of the wall that were badly damaged, the bricks were relaid. This work was accomplished after the retainer wall was constructed.

FIRST QUARTER HS-08-102C

1) Exterior of the structure had been scraped and painted. A primer was applied, followed by a top coat to the wood surfaces. The same procedure was applied to all windows, doors and trim work.

2) The metal shingle roof had been painted to eliminate further deterioration.

CABIN HS-08-102G 1) All exterior wood surfaces had been scraped, primed, and painted. 2) A roll asphalt roofing material was installed over the existing roof.

SHED HS-08-102F 1) All exterior wood surface had been scraped, primed and painted. 2) The metal shingle roof had been painted to eliminate further deterioration.

SMALL PRIVY HS-08-102D 1) Basically the same painting procedures were applied to the exterior wall and metal shingle roof.

PRIVY HS-08-102E 1) Same painting procedures were applied to the exterior wall. 2) A roll asphalt roofing material was installed over the existing roof.

BOATHOUSE - HS-08-102A 1) entire exterior structure had been scraped and painted. A primer was applied, followed by a top coat to the exterior surface.

2) A roll asphalt roofing material was installed over the existing roof.

3) All board and batten siding material was re-nailed wherever needed.

NOTE: 1) Replacement of the deteriorated walkway on the north side of the

Generator House HS-08-102B.

2) Improvement of water drainage and grade along main lighthouse and generator building.

3) All paint that was determined for these structures are close to the historic color. These colors were used only until a complete paint analysis has been accomplished.

4) Mortar mix used for tuckpointing was of a soft texture. This was used only until a complete mortar analysis has been accomplished.

5) Mortar mix used for tuckpointed

One part of gray masonry cement

One part of hydrated lime

Seven parts sand

6) A half pint of boiled linseed oil was added to each gallon of primer.

7) Waterproofing agent used on the retainer wall consisted of a mixture of Portland Cement, water and sodium silicate.

8) Solid four inch plastic pipes were used for the underground drainage system.

9) General site cleanup.

10) All metal shingles were painted with an ironclad, rustproofing product.

Stop Order No. _____ was issued effective at the close of business on

_____ because of _____
(date)

Work was resumed on _____
(date)

(list additional Stop Orders, if any)

(List extension of time granted, if any) _____

On _____, Change Order No. 1 was issued
(date)

(describe Change Order and the reason)

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-08-103A - Two story duplex with four story wood frame

light tower. Roof has a metal shingle, hip design. Exterior siding

consists of narrow clapboard, double hung wooden windows, brick foundation,

3 brick chimney.

FIRST QUARTERS HS-08-102C - Two story residence, metal shingle gable

roof, metal chimney, exterior siding consists of board and batten, double

hung wooden windows.

SMALL PRIVY HS-08-102D - One story, one room, wood frame, metal shingle gable roof, clapboard siding, wood casement window, metal vent. Structure sitting on a concrete foundation.

PRIVY HS-08-102E - One story, one room, wood frame, roll asphalt roofing, gable roof, clapboard siding, wood casement window. Structure sitting on a brick foundation.

SHED HS-08-102E - One story, one room, wood frame, metal shingle gable roof, board and batten siding, one wooden casement and one double hung wooden window.

CABIN HS-08-102G - One story, one room, wood frame, roll asphalt roofing, gable roof, clapboard siding, wooden casement windows.

BOATHOUSE HS-08-102A - One story, one room boathouse, roll asphalt roofing, gable roof, wood frame, board and batten siding, Structure sitting on a concrete-stone, log foundation.

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

First Quarters Outside

Off-White 5Y. 9/1

Benjamin Moore (Rustic White) 100-00

First Quarters Window sashes, doors and screens

Black 25.R N. 0.5/

Hue

Benjamin Moore Black 131 80

First Quarters Metal shingle roof

Red Dark 10R 3/6

Benjamin Moore Iron Clad Deep Red 071 23

Shed Outside

Off-White 5Y. 9/1

Benjamin Moore (Rustic White) 100-00

Shed Window sashes and door

Black 25.R N. 0.5/

Hue

Benjamin Moore Black 131 80

Shed Metal shingle roof

Red Dark 10 R 3/6

Benjamin Moore Iron Clad Deep Red 071 23

Cabin Outside

Off-White 5Y 9/1

Benjamin Moore (Rustic White) 100-00

Cabin Window sashes and door

Black 25.R N. 0.5/

Hue

Benjamin Moore Black 131 80

Small Privy Outside

Off-White 5Y 9/1

Benjamin Moore (Rustic White) 100-00

Small Privy Window sashes and door

Black 25.R N. 0.5/

Hue

Benjamin Moore Black 131 80

Small Privy Metal shingle roof
Red Dark 10R 3/6
Benjamin Moore Iron Clad Deep Red 071 23

Privy Outside
Off-White 5Y. 9/1
Benjamin Moore (Rustic White) 100-00

Privy Window sashes and screens
Black 25.R N. 0.5/
Hue
Benjamin Moore Black 131 80

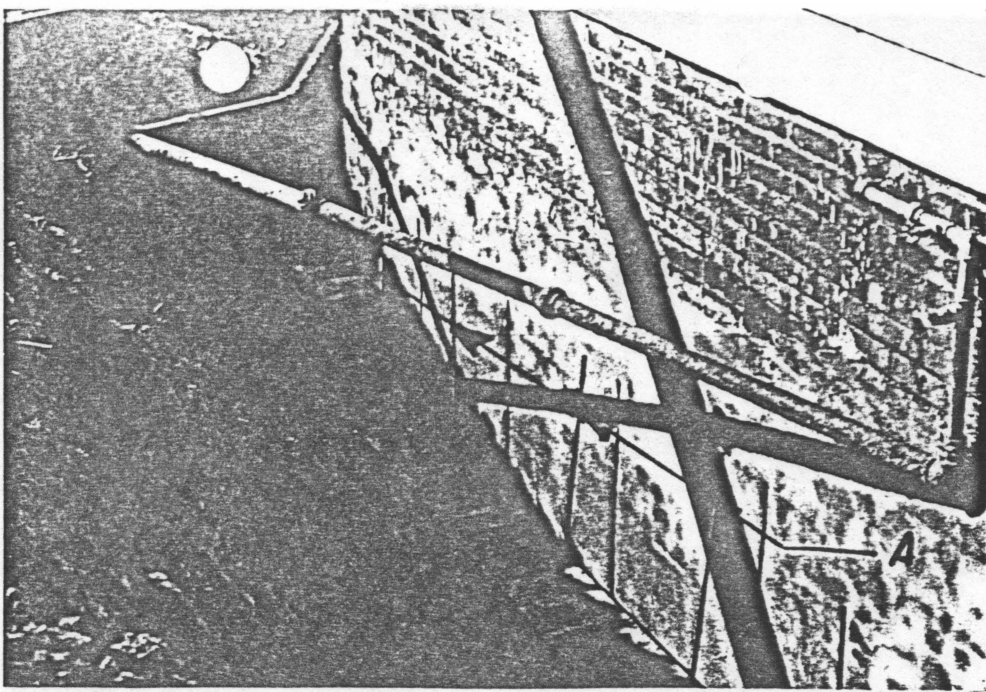
Boathouse Outside
Off-White 5Y. 9/1
Benjamin Moore (Rustic White) 100-00



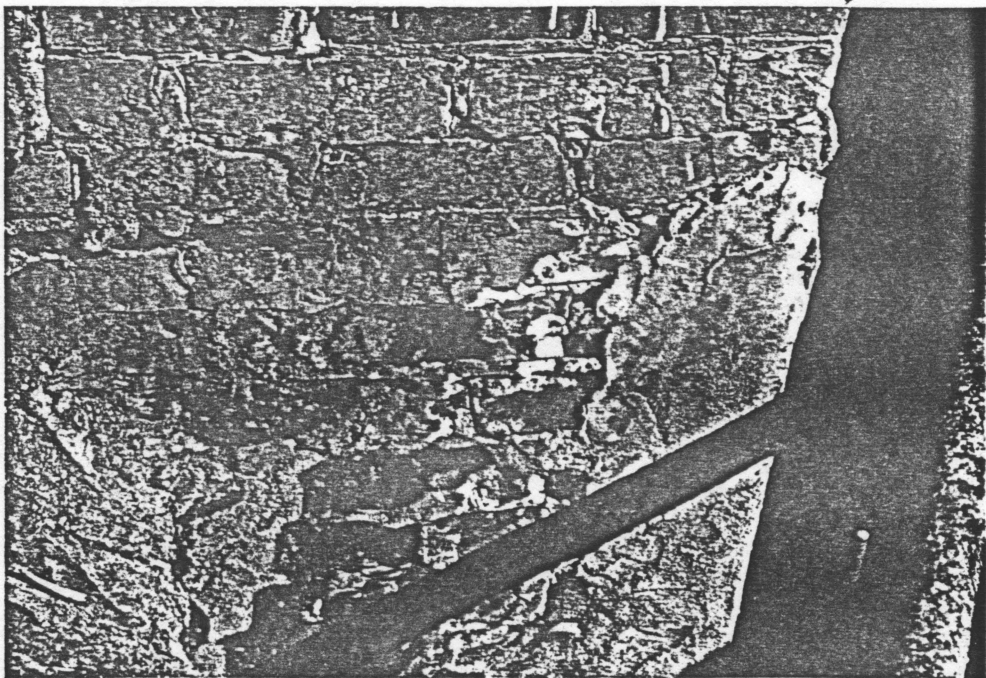
- 1) North side of lighthouse before the construction of the retainer wall.
(A) Shows temporary drainage system



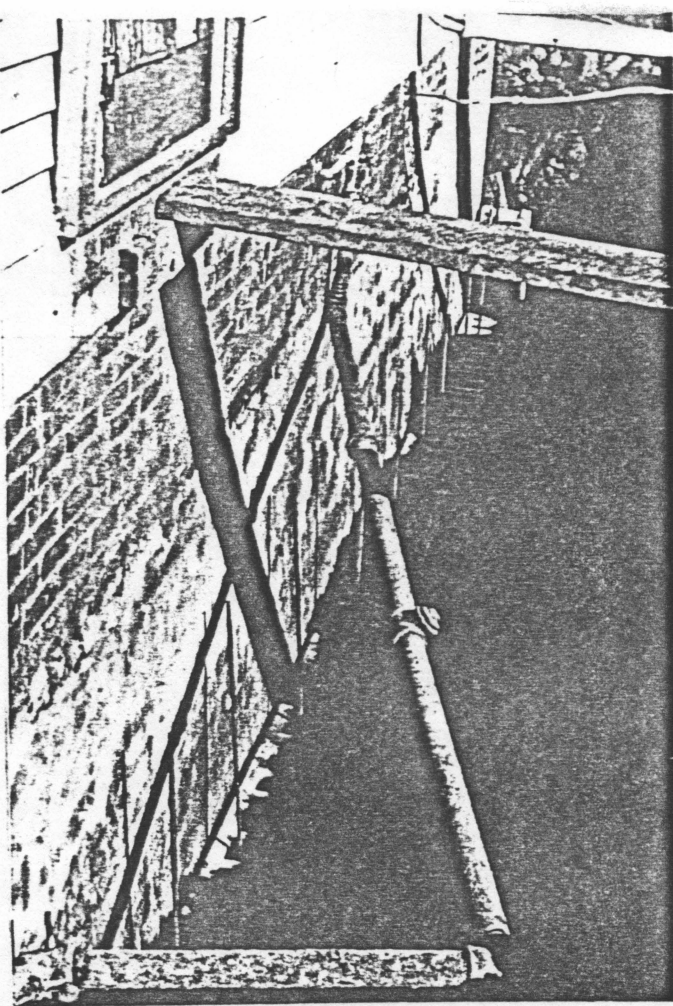
- 2) Workman excavating along north wall of lighthouse. All work was accomplished by hand methods.



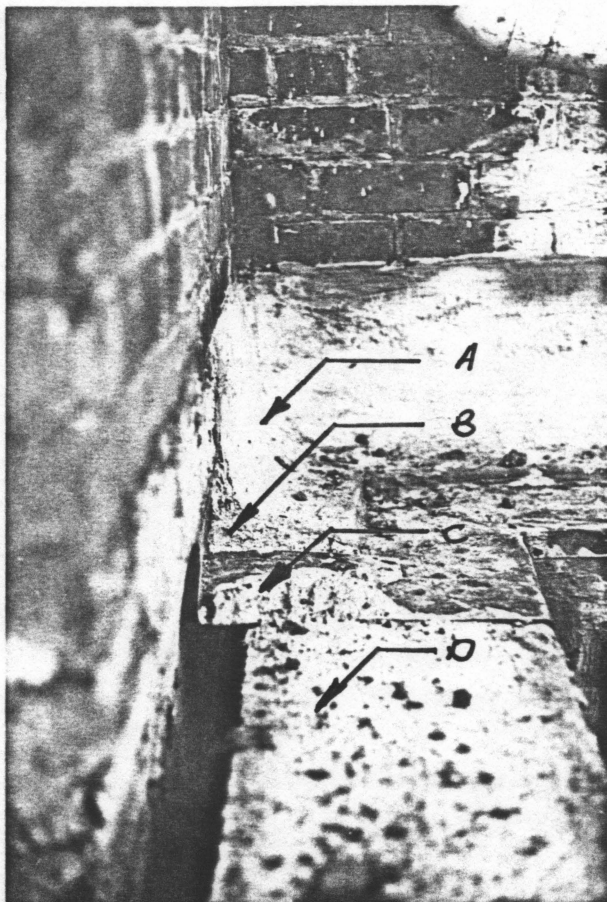
- 3) Note deterioration of exterior basement wall. A skim plaster was applied to the brick wall before the retainer wall was constructed.



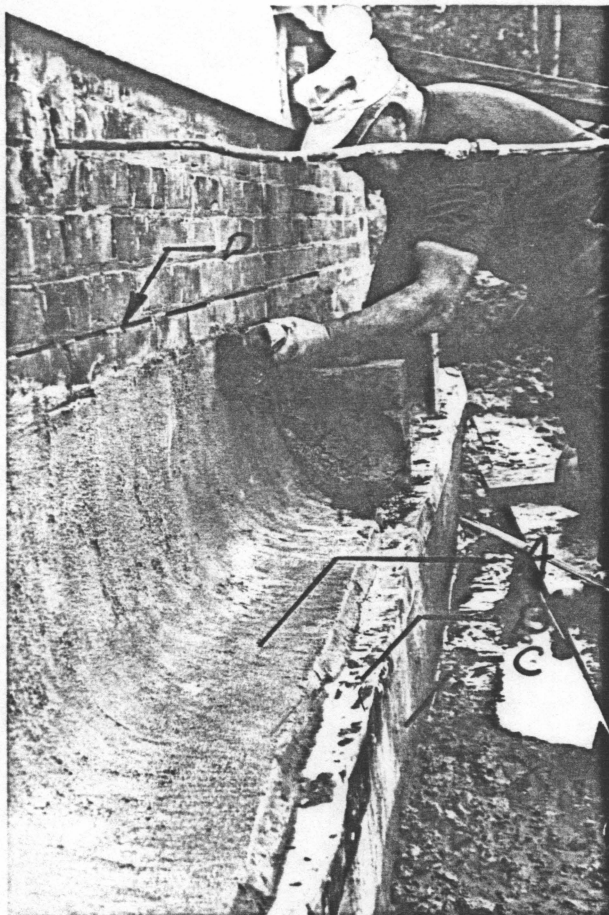
- 4) Photo showing the start of constructing the retainer wall. Reinforcing rods were placed 24" on center (A). Existing brick wall had a cement plaster applied along with a waterproofing agent.



- 5) Another view showing the construction of the retainer wall.



- 6) Photo showing side view of flashing detail.
- A. Sodium silicate water proofing
 - B. Cant
 - C. Copper flashing.
 - D. Retainer wall

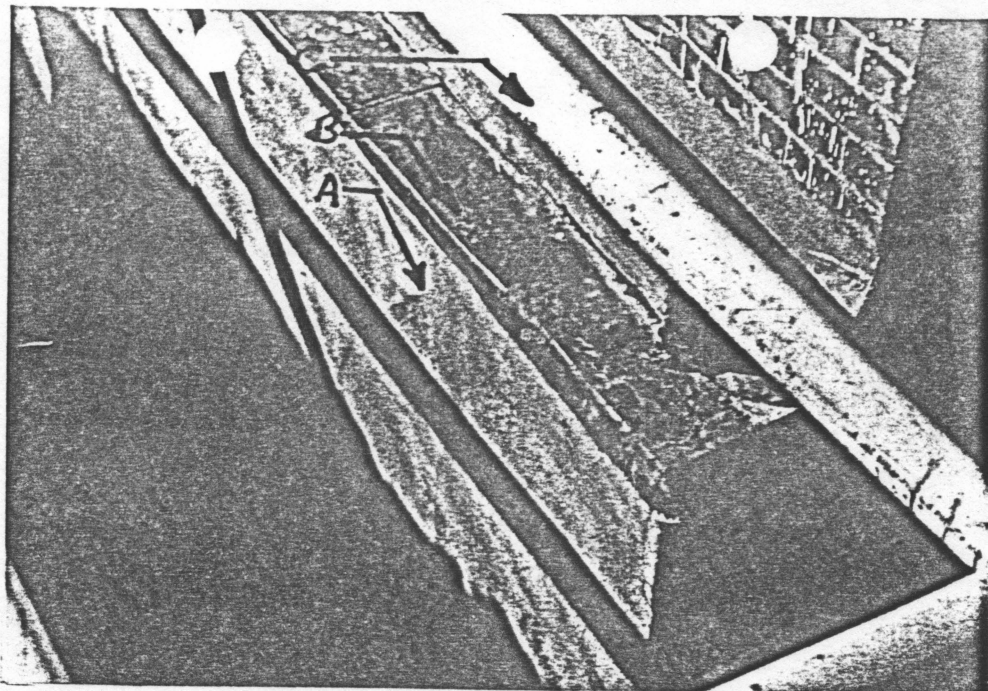


7) Photo showing the water-
proofing being applied to
the cant.

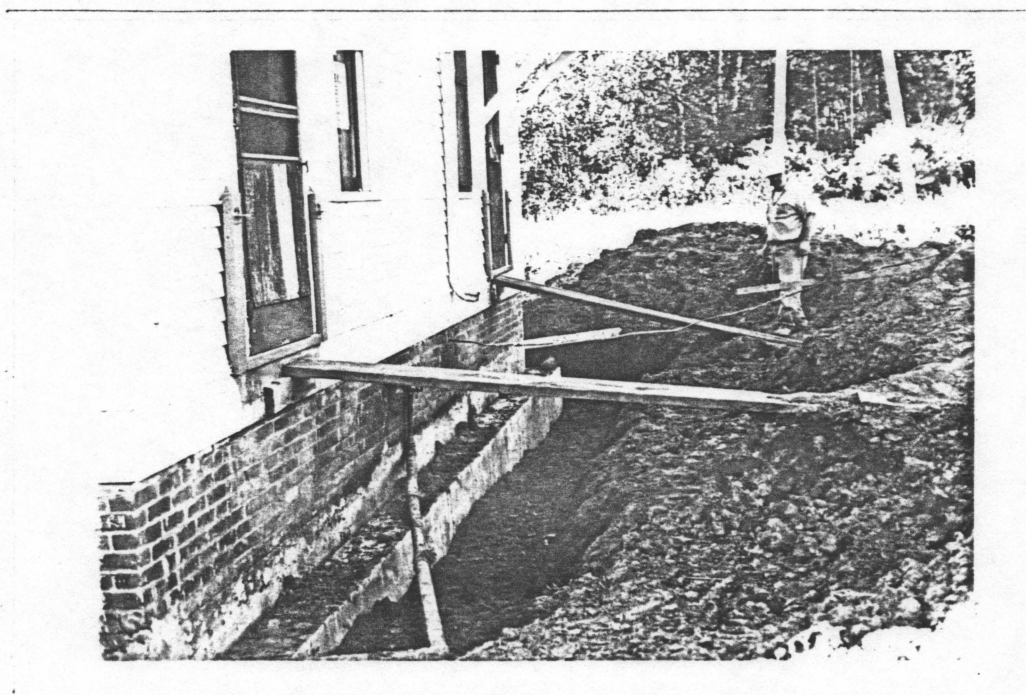
- A. Cant
- B. Flashing
- C. Retainer wall
- D. Grade line



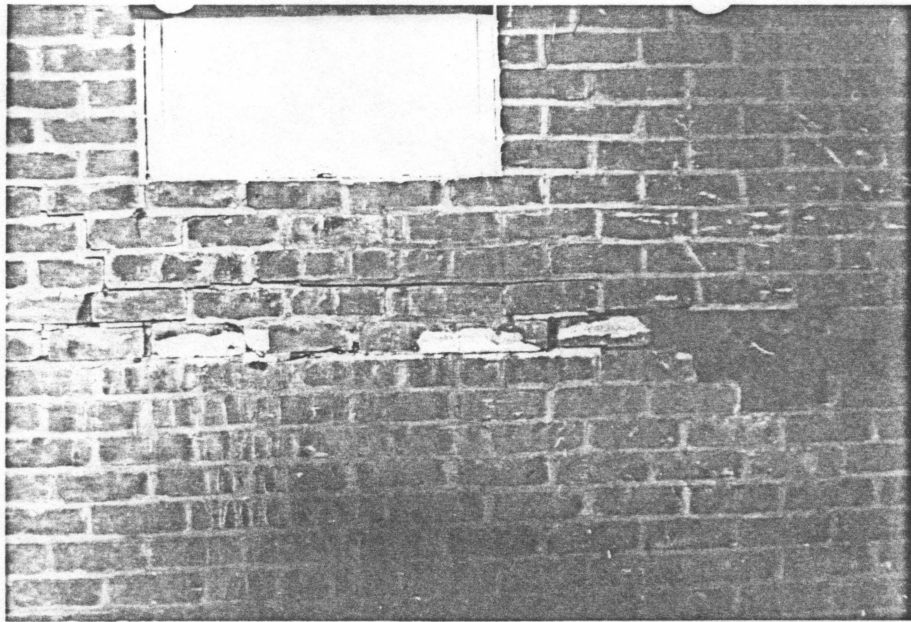
8) Photo showing workman apply-
ing the waterproofing to
the cant section of the wall



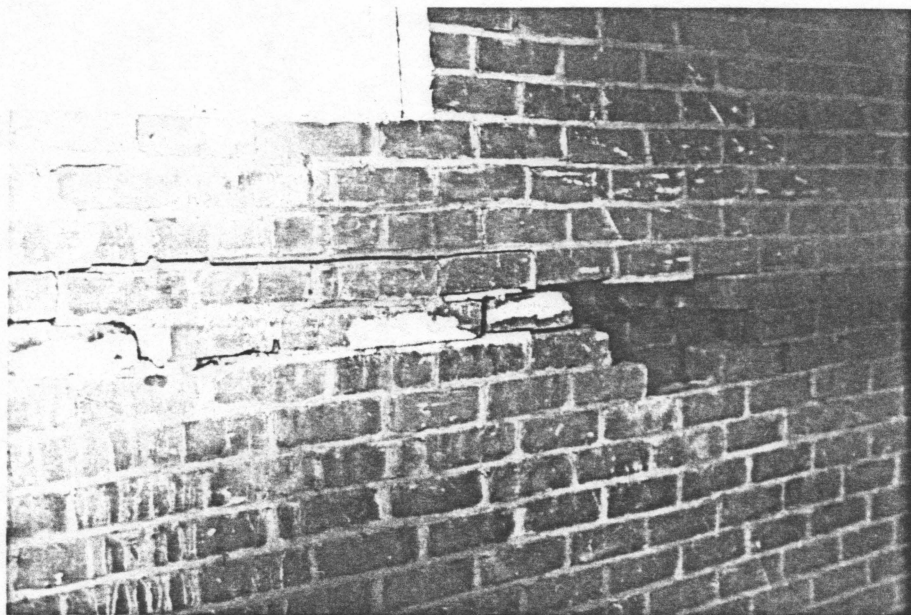
- 9) Photo showing: A. Retainer wall, B. Copper flashing and, C. Drain pipe, which will all be buried.



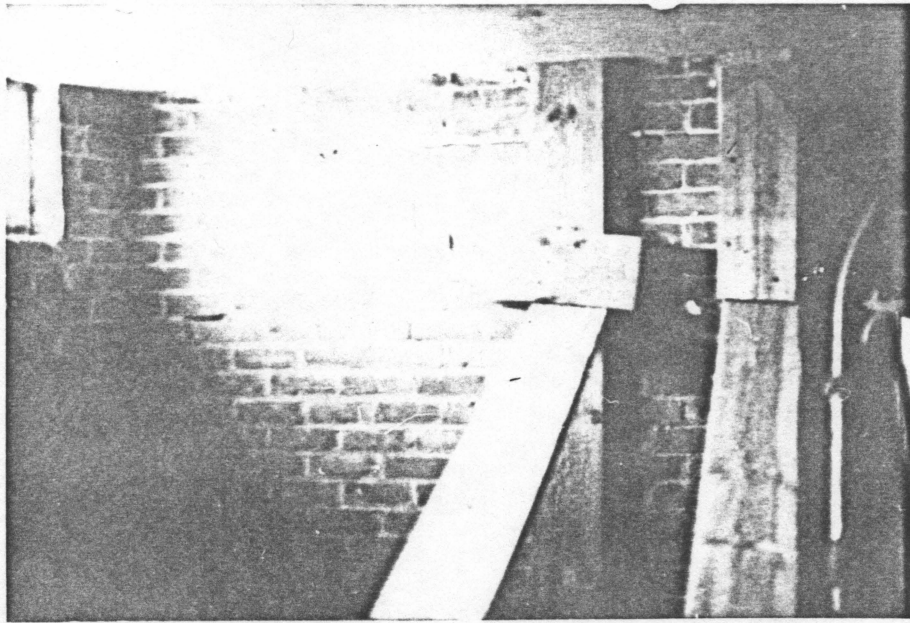
- 10) North side of house being backfilled.



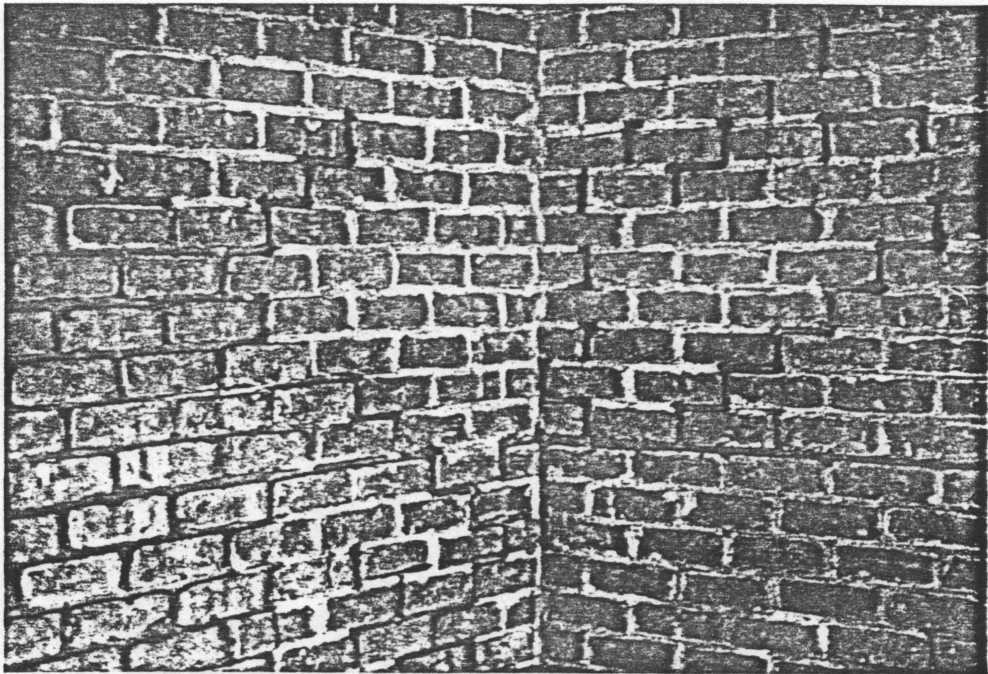
11) Photo showing interior of basement wall. Note damage caused by the outside pressure. (North Wall)



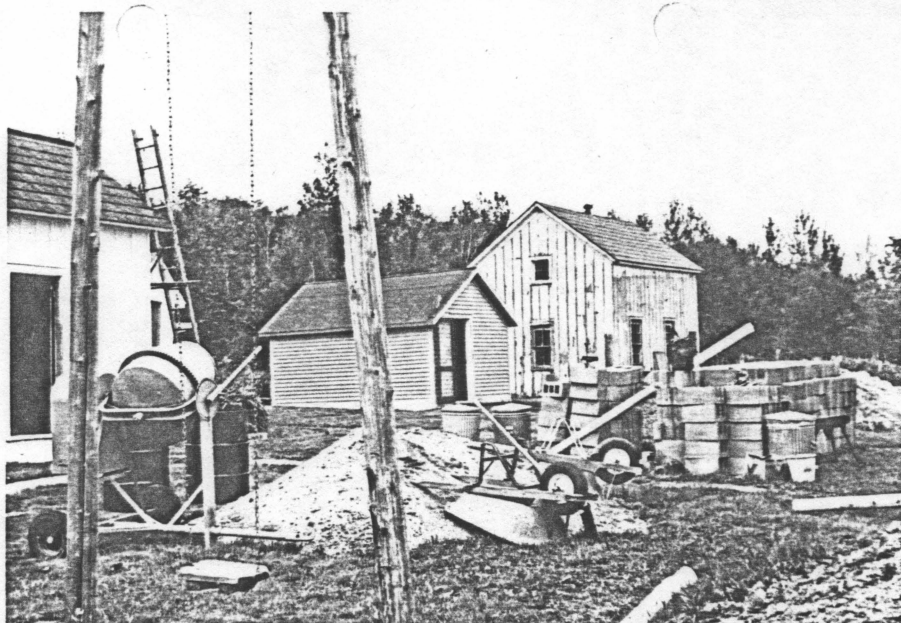
12) Another view showing the extent of damage to the interior basement wall.



- 13) Temporary supports were used to prevent any further damage from accruing.



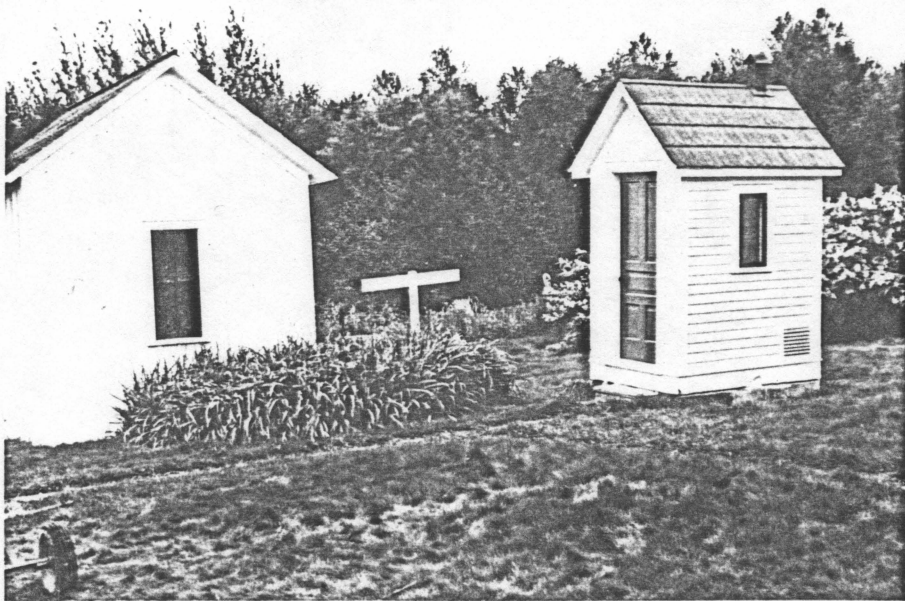
- 14) Photo showing interior of the north wall after tuckpointing. Mortar was not fully cured when photo was taken.



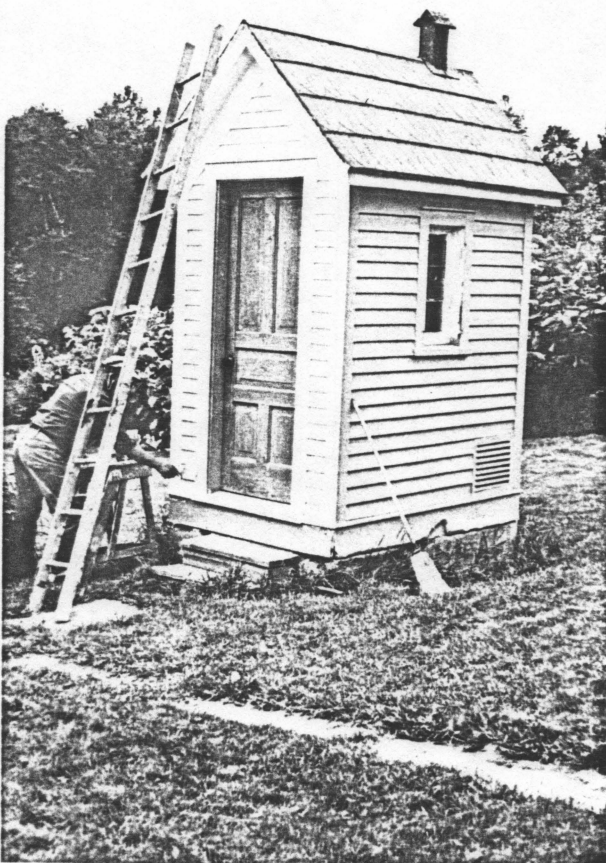
15) Photo showing the rear of lighthouse during construction.



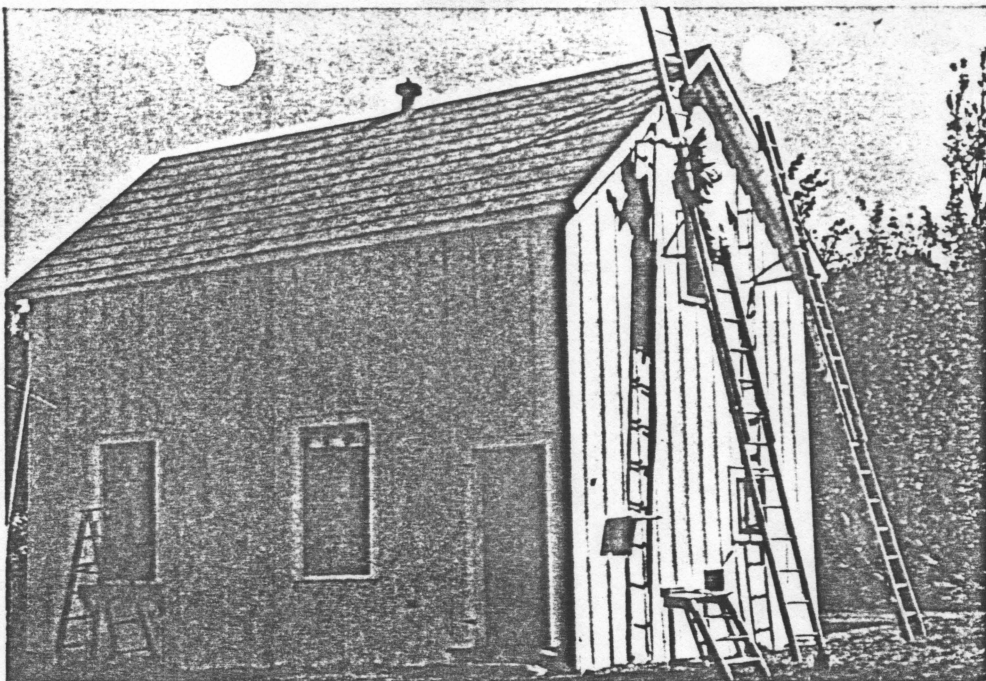
16) Photo showing primer being applied to the shed HS-08-102F. The building to the left is Privy HS-08-102E and to the right the small privy HS-08-102D.



17) Both the shed and small privy is shown here after structures were painted.



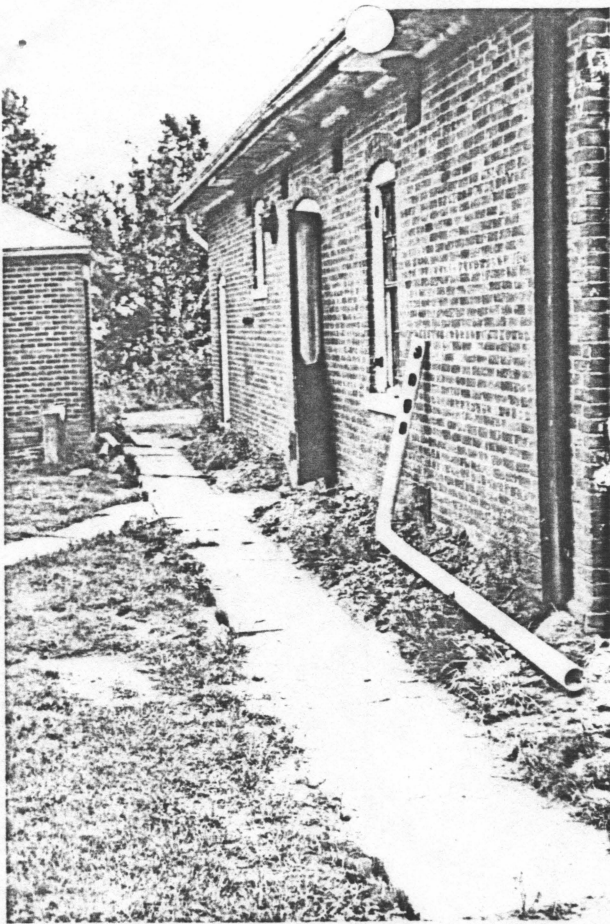
18) Small privy HS-08-102D is shown here receiving its final coat of paint.



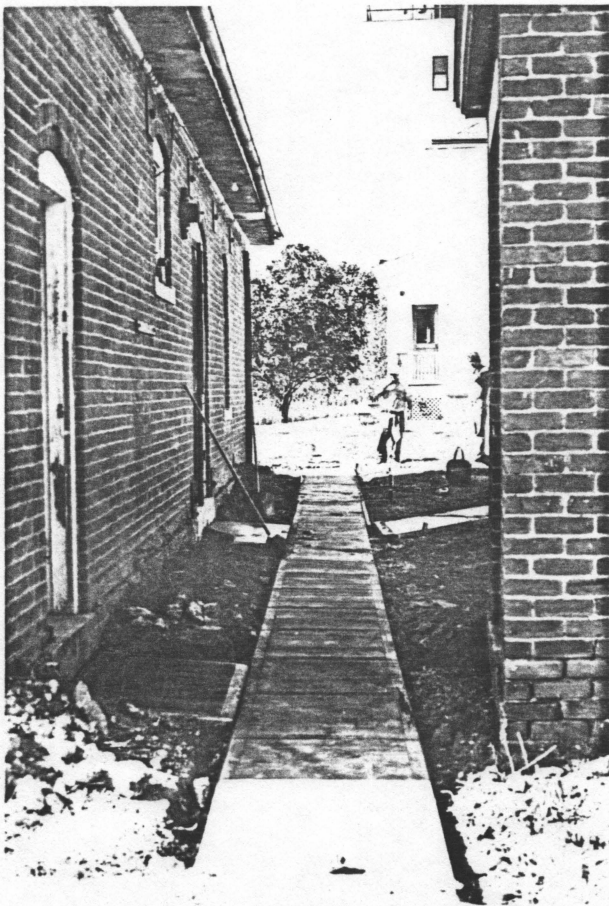
19) Final coat of paint being applied to first quarter resident.



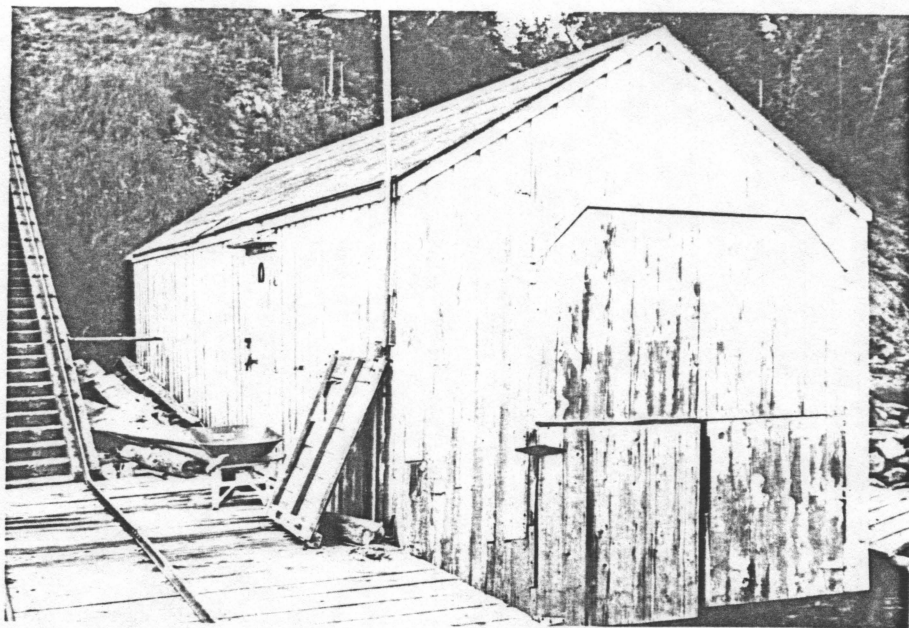
20), Photo shows work on the first quarter resident completed.



21) North side of generator building before drainage and sidewalk were corrected.



22) View showing the sidewalk and drainage problem corrected along generator building



23) Photo showing the condition of the boat house before stabilization took place.



24) Photo showing the approach to the Raspberry Lightstation. Note boat house below had just been painted.



25) Workman applying rolled roofing over the existing roof of the boat house.



26) South view of the light house showing the project completed.