

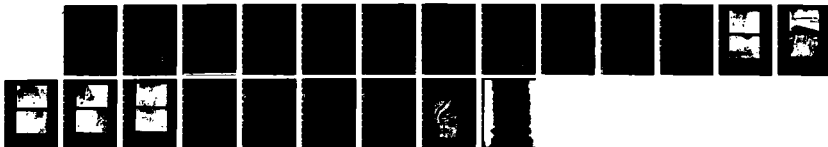
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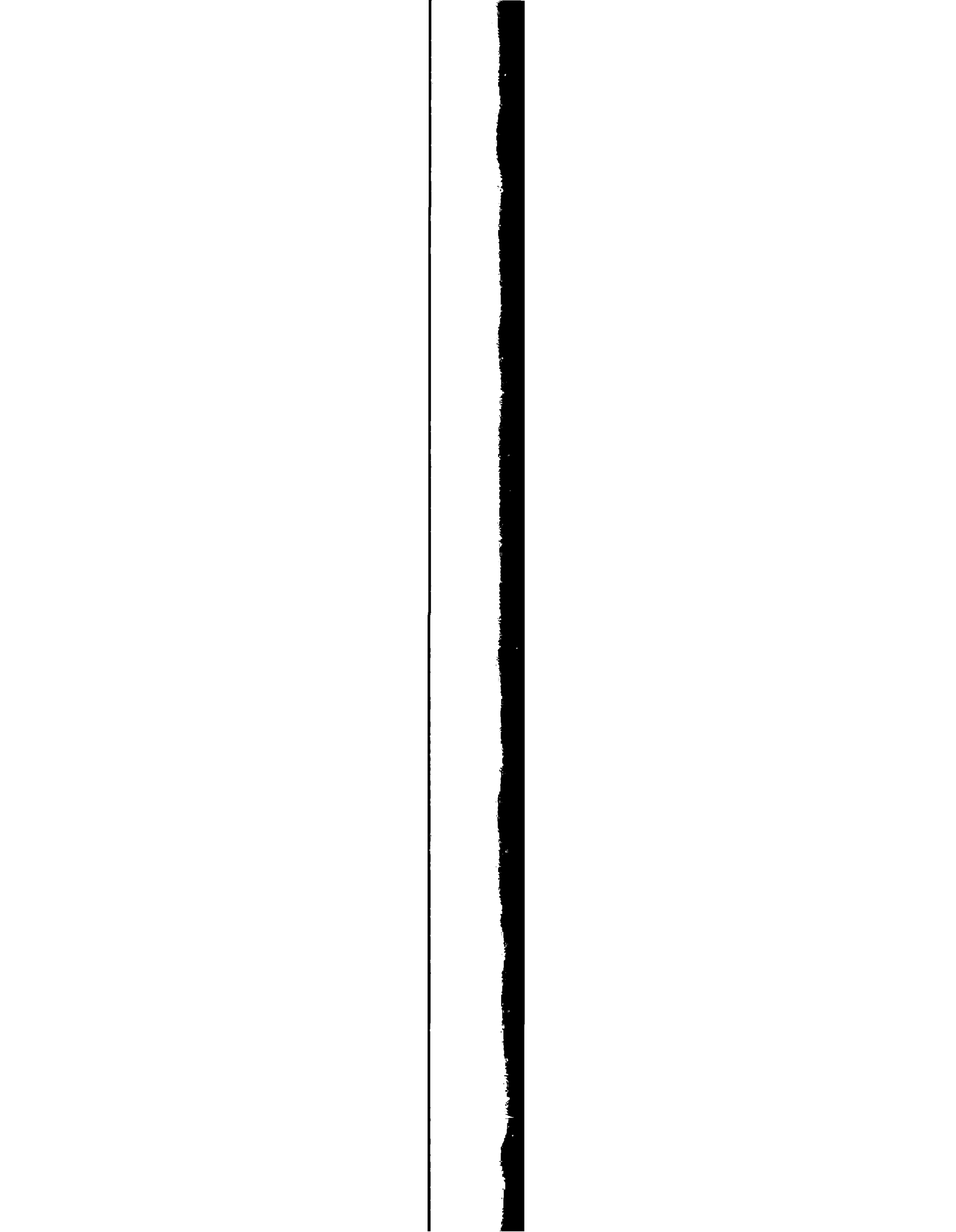
NATIONAL PROGRAM FOR INSPECTION OF NON-FEDERAL DAMS
GARNISS POND DAM (CT.) (U) CORPS OF ENGINEERS WALTHAM MA
NEW ENGLAND DIV NOV 79

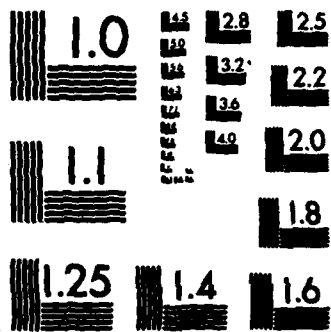
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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

AD-A143 062

EAST HAVEN, CONNECTICUT

(1)

GARNISS

GARNISS POND DAM
CT-00114

DTIC FILE COPY

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S JUL 12 1984
A

NATIONAL DAM INSPECTION PROGRAM
CORPS OF ENGINEERS

84 07 11 080

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UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER CT 00114	2. GOVT ACCESSION NO. GRANISS AD-A143062	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) East Haven, Conn. Garniss Pond Dam NATIONAL PROGRAM FOR INSPECTION OF NON-FEDERAL DAMS		5. TYPE OF REPORT & PERIOD COVERED INSPECTION REPORT
7. AUTHOR(s) U.S. ARMY CORPS OF ENGINEERS NEW ENGLAND DIVISION		6. PERFORMING ORG. REPORT NUMBER
9. PERFORMING ORGANIZATION NAME AND ADDRESS		8. CONTRACT OR GRANT NUMBER(s)
11. CONTROLLING OFFICE NAME AND ADDRESS DEPT. OF THE ARMY, CORPS OF ENGINEERS NEW ENGLAND DIVISION, NEDED 424 TRAPELO ROAD, WALTHAM, MA. 02254		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		12. REPORT DATE November 1979
		13. NUMBER OF PAGES 35
		15. SECURITY CLASS. (of this report) UNCLASSIFIED
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report) APPROVAL FOR PUBLIC RELEASE: DISTRIBUTION UNLIMITED		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES Cover program reads: Phase I Inspection Report, National Dam Inspection Program; however, the official title of the program is: National Program for Inspection of Non-Federal Dams; use cover date for date of report.		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) DAMS, INSPECTION, DAM SAFETY, East Haven, Conn. Garniss Pond Dam GRANISS		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) The dam is an earthfill embankment approx. 600' intotal length. Graniss Street is located directly downstream. The height of the dam is taken from the outlet invert elevation to the crest elevation and is equal to 10+ ft. The crest width varies from 10+ ft. along most of the dam to 35+ ft. at the spillway. The apillway is a 10+ ft. wide channel at the left end of the dam. There is a concrete weir at the upstream end of the channel and another concrete weir a 12 in. outlet valve at the downstream end.		

84 07 11 080

This letter is to confirm instructions from the Corps that the Graniss Pond Dam has been reclassified to low hazard, and also to present our findings to date. ATT further work on the project shall be terminated. The following work has been completed:

- a. Data Collection
- b. Preparation for and the actual field inspection including survey.
- c. Partial preparation and plotting for drawings of the dam.

Description of Project

The dam is an earthfill embankment approximately 600' in total length. Graniss Street is located directly downstream. The height of the dam is taken from the outlet invert elevation to the crest elevation and is equal to 10+ feet. The crest width varies from 10+ feet along most of the dam to 35+ feet at the spillway. The spillway is a 10+ foot wide channel at the left end of the dam. There is a concrete weir at the upstream end of the channel and another concrete weir with a 12 inch outlet valve at the downstream end. A stone wall is located along the right side of the channel. Water from the 12 inch outlet flows in a small open channel to a 15 inch RCP under Grannis Street.

The owner is the YMCA at 52 Howe Street, East Haven, Connecticut. The purpose of the dam is to provide a recreational pond for three camps located at the pond. The operator at the dam is Walter Allen, 4 Grannis Street, East Haven. There are no plans for the dam. According to the operator, the dam was built and owned by a Mr. Hubinger who donated the dam and property to the YMCA.

The dam impounds less than 1000 acre feet of water and the height of the dam is 10+ feet taken from the outlet invert to the top of the dam. According to recommended guidelines, the dam is classified as small in size. The dam has a low hazard classification based upon the impoundment capacity and discussions with the Corps which indicates that a breach of the dam would probably not cause loss of life or extensive property damage.

The findings of our visual inspection revealed that the condition of the dam is poor. The upstream weir is deteriorated and has fallen to a state of disrepair (Photo Page 3). The downstream weir has several areas of seepage at the downstream side (photo 5 and 6). The crest and slopes are overgrown with trees and brush (photos 1 and 2).

We are enclosing the following items:

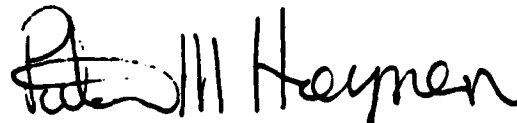
1. Plans from survey done by Storch Engineers, 161 Main Street, Wethersfield, Connecticut
2. A map showing location of dam
3. Selected photographs with descriptions
4. Cahn Engineers visual inspection checklist
5. Inventory sheets compiled by Cahn Engineers, Inc.
6. The inventory sheet from State Board for the Supervision of Dams.
7. The Corps' inventory sheet
8. Other photographs of dam
9. Plotting of survey done by Cahn Engineers, Inc.
10. Notes from field inspection

We wish to express our appreciation for the cooperation of your staff in this matter and further appreciate the opportunity to be of continued service to the Corps of Engineers.

If you have any questions, please feel free to contact us.

Very truly yours,

CAHN ENGINEERS, INC.



Peter M. Heynen, P.E.
Chief Geotechnical Engineer

PMH/na



Accession No.	
NTIS	
DIST	
Unnumbered	
Justification	
By	
Distribution	
AVAILABILITY	
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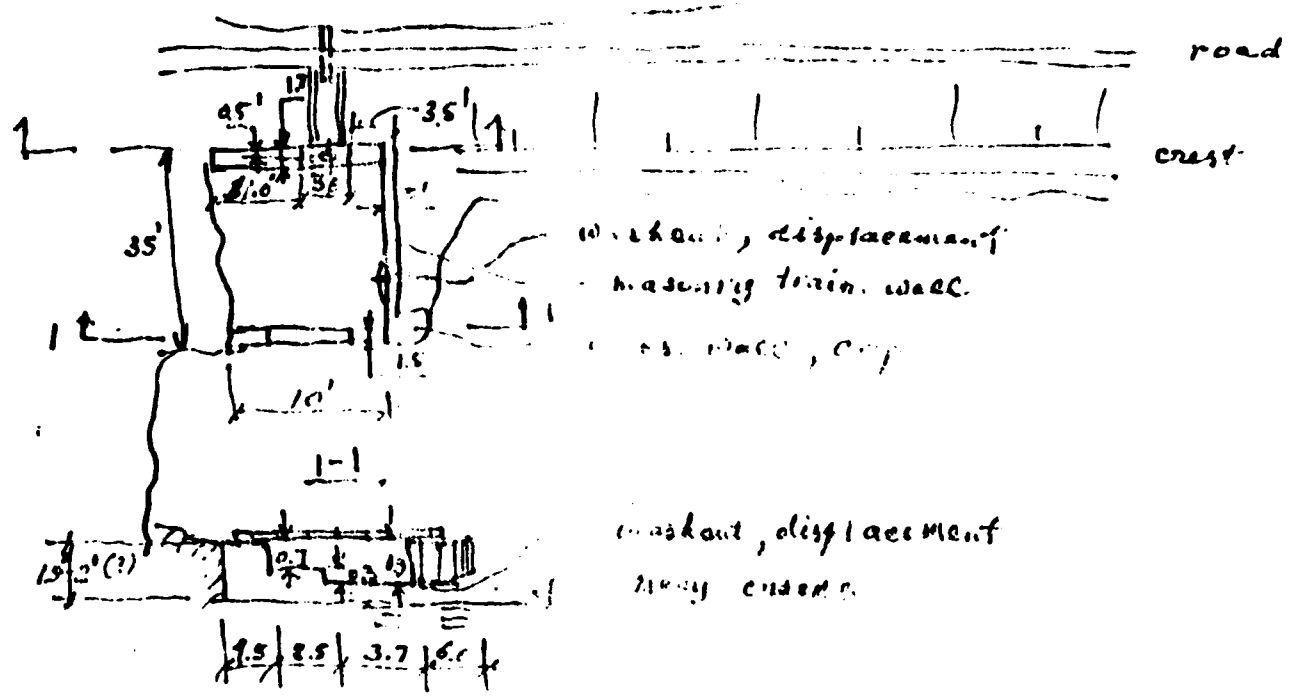
St. Louis

8/15/79

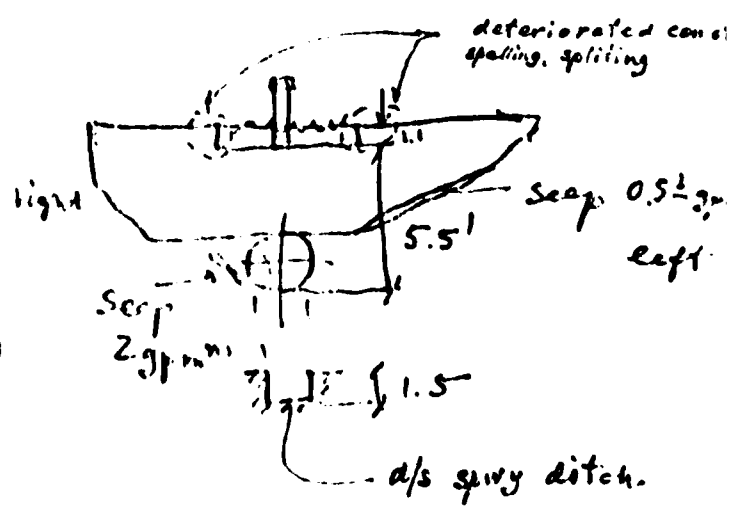
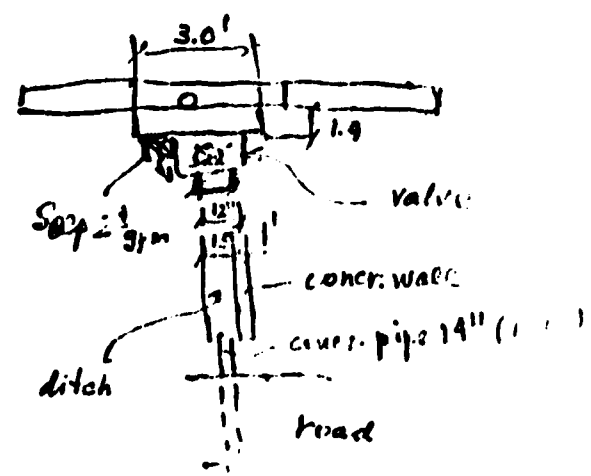
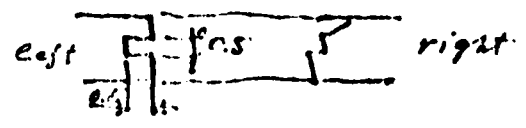
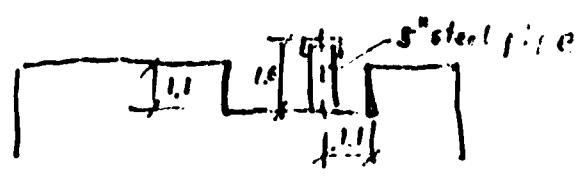
1:15 pm - 4:30

Sunny, 75°F

Highway



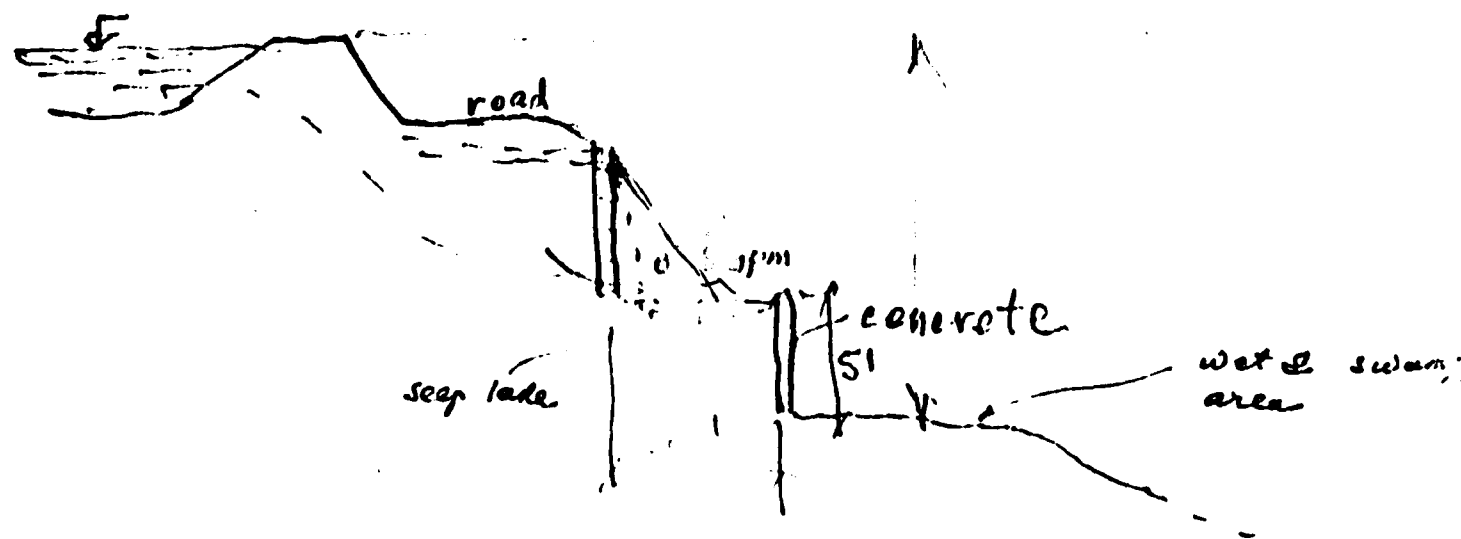
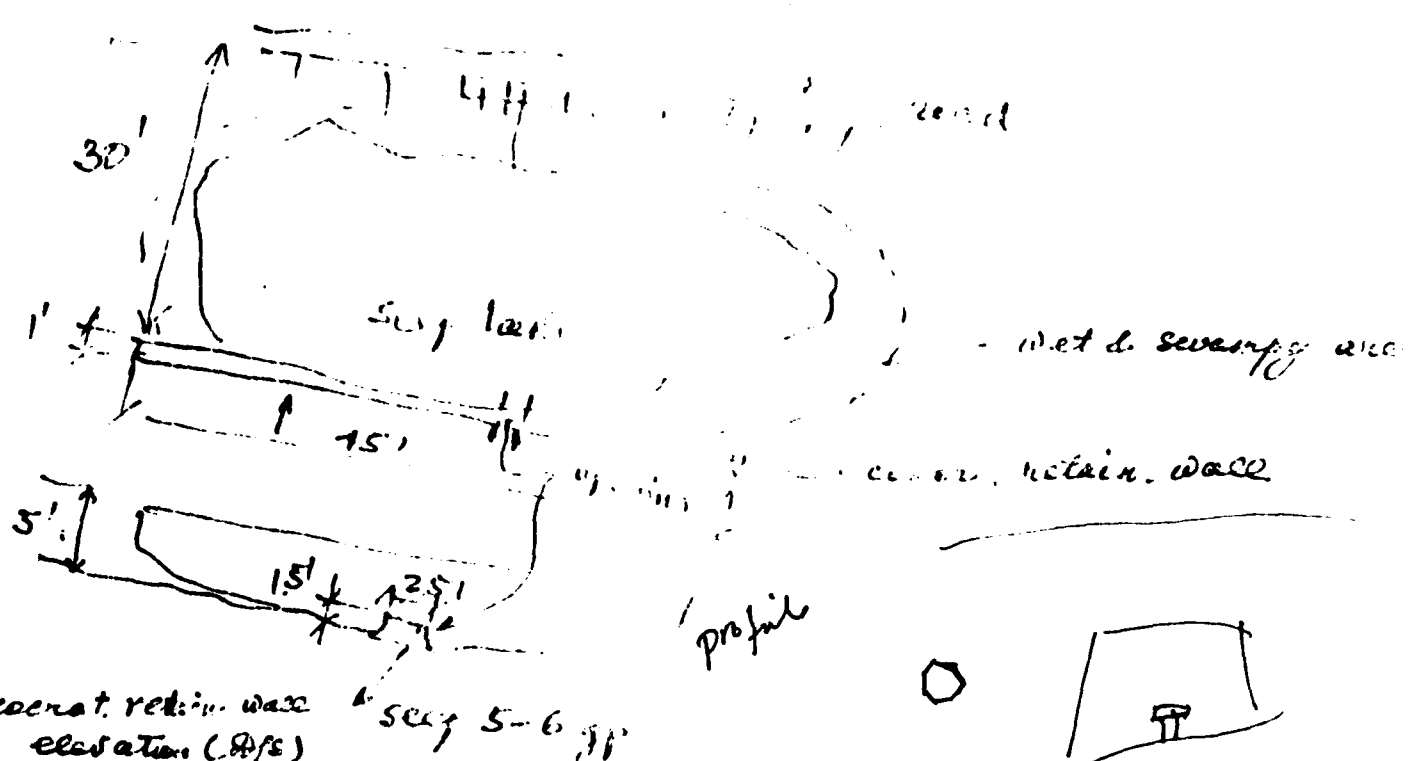
2-2



Site plan

(2)

Site plan

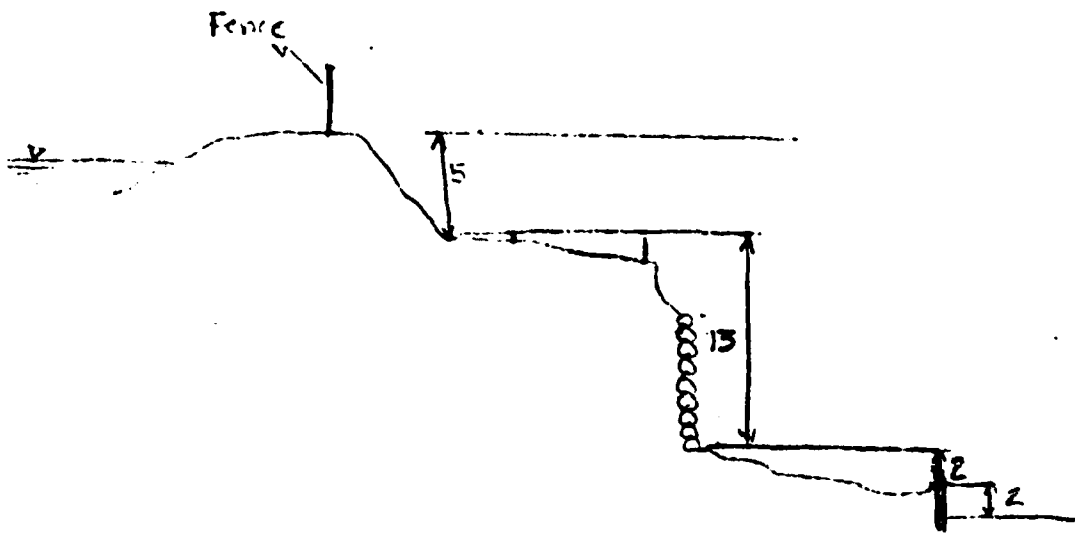


Grass Pond Dam

- Dam is: YMCA - East River 845-1211
- Operator: Walter Allen 467-0331
- Operation facilities:
 - 12" valve (low level) - operable - d/s side dam
 - 6" runoff (top of dam)
 - no maintenance for valve
 - 15" R.C.F. under Grass Street
 - Gates opened in anticipation of storms but not readily available in high water.
 - Valve kept closed except during spring thaw when its opened for 1 day max.
 - Operator at dam during storms - calls YMCA if a problem - no procedure for emergencies
 - No lake level readings
 - No seepage or flow monitoring
- 1) No maintenance procedures
- 2) 1st owner - Hukinger
 - 3 camps at pond
- 3) Gate for flashboards but not used
- 4) Dam not patrolled
- 5) No maintenance for dam
- 6)

Granite Pond Dam

1. Height of dam... 22' total



Maximum width $\approx 15'$ @ center of pond

Proposed by...

Highway w/ side of filling

New 15" RCP under Granite St.

Under Granite St. fill

Installation of 24" - 30" RCP w/ splash pad

Impact area 400 sq. ft. d/s

CT-1.7

No. EHV-3

WATER RESOURCES COMMISSION
SUPERVISION OF DAMS
INVENTORY DATA

LONG 76-51.3

Inventoried
By WPS

Lat 41-18.2

Date 27 MAY 1964

Name of Dam or Pond GRANISS POND (Lake Hubinger)

Code No. EH 2.7 FM 2.5 U 01

Nearest Street Location GRANISS STREET

Town EAST HAVEN

U.S.G.S. Quad. BRANFORD

Name of Stream UNNAMED TR FARM POND

Owner CAMP HUBINGER - YMCA

Address EAST HAVEN

965-3161

OK 6/73

Ther's call back

Pond Used For RECREATION DA 0.165M

Dimensions of Pond: Width 600 FEET Length 1400 FEET Area 20 ACRES

Total Length of Dam 600 FEET Length of Spillway 4 FEET

Location of Spillway EAST END OF DAM

Height of Pond Above Stream Bed 20 FEET SLOPES RAPIDLY

1900?

Height of Embankment Above Spillway 4 FEET

Type of Spillway Construction CONCRETE

Type of Dike Construction EARTH

Downstream Conditions NORTH HIGH STREET

Summary of File Data _____

Remarks TREES GROWING ON DIKE

Would Failure Cause Damage? YES Class B

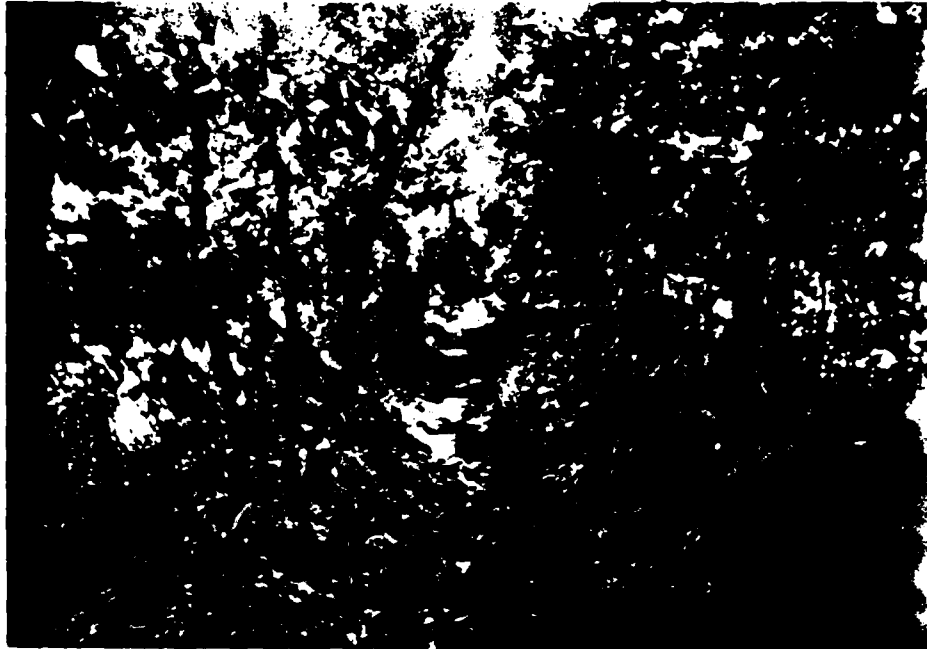


Photo 1 - Crest of dam. Runoff pipe over crest in background.



Photo 2 - Downstream Slope of dam. Runoff (6") in center and Graniss Street in foreground.

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CAMN ENGINEERS INC.
WALLINGFORD, CONN.
ENGINEER

NATIONAL PROGRAM OF
INSPECTION OF
NON-FED. DAMS

Graniss Pond Dam
TR - Farm River
East Haven, Connecticut
CE# 27 660 KD
DATE 9/18/79 PAGE C-1

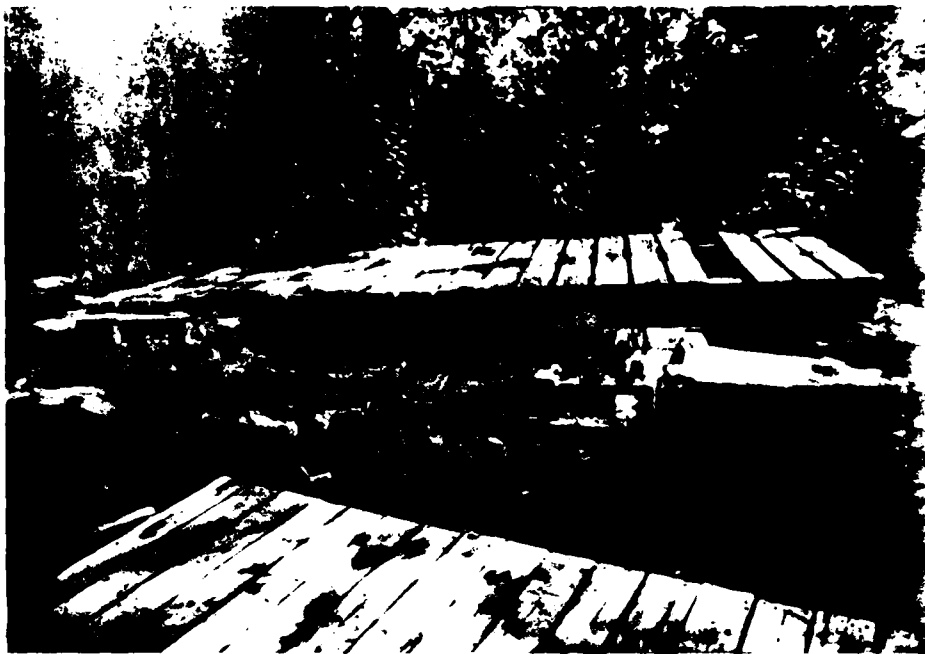


Photo 3 - Upstream weir and spillway channel. Downstream weir in background.



Photo 4 - Downstream weir, outlet valve and channel to 15" R.C.P. from downstream.

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CAHN ENGINEERS INC.
WALLINGFORD, CONN.
ENGINEER

NATIONAL PROGRAM OF
INSPECTION OF
NON-FED. DAMS

Granias Pond Dam
TR-Farm River
East Haven, Connecticut
SE# 27 660 KD
DATE 9/18/79 PAGE C-2



Photo 5 - Seepage, efflorescence and cracking at downstream weir.

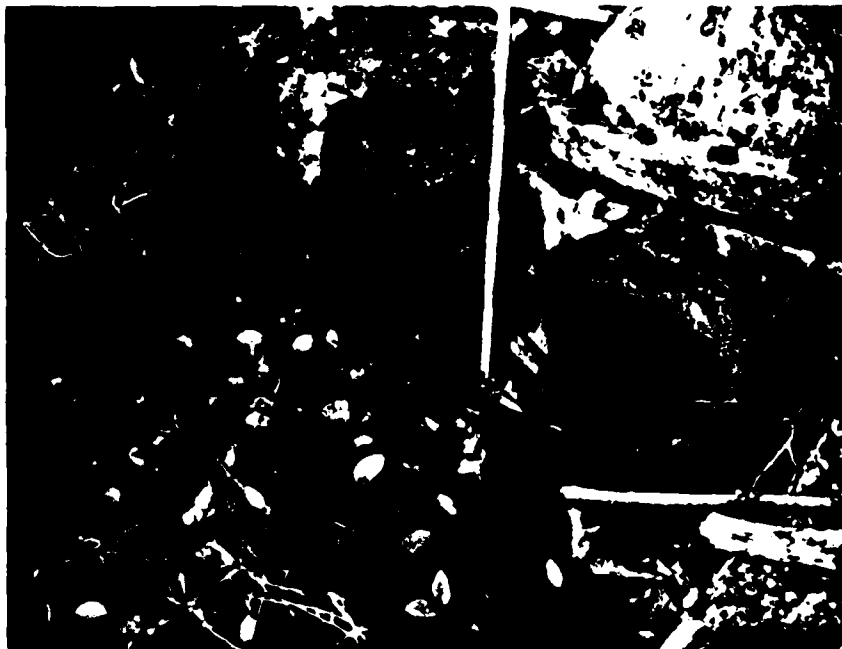


Photo 6 - 12" outlet valve below downstream weir. No seepage to left of valve opening.

REGISTERED PROFESSIONAL ENGINEER DIV. NEW ENGLAND
 SOCIETY OF PROFESSIONAL ENGINEERS
 WALTHAM, MASS.

CAHN ENGINEERS INC.
 WALLINGFORD, CONN.
 ENGINEER

NATIONAL PROGRAM OF
 INSPECTION OF
 NON-FED. DAMS

Graniss Pt
TR-Farm
East Haven
 GE# 2766
 DATE 9/18/79



Photo 7 - Channel to 15" R.C.P. under Graniss Street. Valve stem in foreground.



Photo B - 15" R.C.P. outlet and riprap at downstream side of Graniss Street.

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NATIONAL PROGRAM OF
INSPECTION OF
NON-FED. DAMS

Graniss Pond Dam

TR - Farm River

East Haven, Connecticut

CE# 27-660KD

DATE 9/18/79 PAGE C-4



Photo 9 - Stone wall at downstream side of Graniss Street.



Photo 10 - Ponded water and concrete retaining wall at downstream side of Graniss Street.

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NATIONAL PROGRAM OF
INSPECTION OF
NON-FED. DAMS

Graniss Pond Dam
TR - Farm River
East Haven, Connecticut
SE# 27 660 KD
DATE 9/10/79 PAGE C-5

VISUAL INSPECTION CHECK LIST

A-1

PARTY ORGANIZATION

PROJECT Graniss Pond Dam

DATE: 9/18/79

TIME: 1:15 P.M. - 1:00 P.M.

WEATHER: Sunny - warm - 75°F

W.S. ELEV. _____ U.S. _____ DN.S _____

<u>PARTY:</u>	<u>INITIALS:</u>	<u>DISCIPLINE:</u>
1. <u>Jay Costello</u>	<u>J.C.</u>	<u>Cahn Engineers, Inc.</u>
2. <u>Peter M. Heynen</u>	<u>P.M.H.</u>	<u>Cahn Engineers, Inc.</u>
3. <u>Miron Petrovsky</u>	<u>M.P.</u>	<u>Cahn Engineers, Inc.</u>
4. <u>Bob Jahn</u>	<u>B.J.</u>	<u>Cahn Engineers, Inc.</u>
5. <u>Hector Moreno</u>	<u>H.M.</u>	<u>Cahn Engineers, Inc.</u>
6. _____	_____	_____

<u>PROJECT FEATURE</u>	<u>INSPECTED BY</u>	<u>REMARKS</u>
1. <u>Dam Embankment</u>	<u>P.M.H., J.C., M.P., B.J., H.M.</u>	
2. <u>Spillway channel</u>	<u>P.M.H., J.C., M.P., H.M.</u>	
3. <u>Upstream weir</u>	<u>P.M.H., J.C., M.P., B.J.</u>	
4. <u>Downstream weir</u>	<u>P.M.H., J.C., M.P., B.J.</u>	
5. _____	_____	_____
6. _____	_____	_____
7. _____	_____	_____
8. _____	_____	_____
9. _____	_____	_____
10. _____	_____	_____
11. _____	_____	_____
12. _____	_____	_____

PERIODIC INSPECTION CHECK LIST

Page A-2

PROJECT Graniss Pond Dam

DATE 9/18/79

PROJECT FEATURE Dam Embankment

BY P.M.H., J.C., M.P., H.M.

AREA EVALUATED	CONDITION
<u>DAM EMBANKMENT</u>	
Crest Elevation	203 ± } C.E datum
Current Pool Elevation	202 ± } top of valve stem = 200.00
Maximum Impoundment to Date	Unknown
Surface Cracks	none observed
Pavement Condition	N/A
Movement or Settlement of Crest	none observed
Lateral Movement	none observed
Vertical Alignment	} good
Horizontal Alignment	
Condition at Abutment and at Concrete Structures	
Indications of Movement of Structural Items on Slopes	none
Trespassing on Slopes	some
Sloughing or Erosion of Slopes or Abutments	some erosion from trespassing
Rock Slope Protection-Riprap Failures	displacement and vegetation
Unusual Movement or Cracking at or Near Toes	none
Unusual Embankment or Downstream Seepage	seepage and ponded water below road. Also in vicinity of 6" runoff pipe.
Piping or Boils	
Foundation Drainage Features	N/A
Toe Drains	N/A
Instrumentation System	N/A

PERIODIC INSPECTION CHECK LIST

Page A-3

PROJECT Graniss Pond Dam

DATE 9/18/79

PROJECT FEATURE Spillway weirs and Channel

BY J.C. M.P. PMH

AREA EVALUATED	CONDITION
<p><u>OUTLET WORKS-SPILLWAY WEIR, APPROACH AND DISCHARGE CHANNELS</u></p>	<p><i>u/s weir, channel, d/s weir</i></p>
<p>a) <u>Approach Channel</u></p> <p>General Condition</p> <p>Loose Rock Overhanging Channel</p> <p>Trees Overhanging Channel</p> <p>Floor of Approach Channel</p>	<p><i>poor - needs dredging</i></p> <p><i>none - right channel wall decay</i></p> <p><i>none</i></p> <p><i>not observed</i></p>
<p>b) <u>Weir and Training Walls</u></p> <p>General Condition of Concrete</p> <p>Rust or Staining</p> <p>Spalling</p> <p>Any Visible Reinforcing</p> <p>Any Seepage or Efflorescence</p> <p>Drain Holes</p>	<p><i>two weirs</i></p> <p><i>u/s - very poor d/s - fair</i></p> <p><i>none observed</i></p> <p><i>u/s - total collapse d/s - some</i></p> <p><i>none</i></p> <p><i>d/s - at base</i></p> <p><i>none observed</i></p>
<p>c) <u>Discharge Channel</u></p> <p>General Condition</p> <p>Loose Rock Overhanging Channel</p> <p>Trees Overhanging Channel</p> <p>Floor of Channel</p> <p>Other Obstructions</p>	<p><i>poor</i></p> <p><i>none</i></p> <p><i>yes</i></p> <p><i>debris in channel</i></p> <p><i>N/A</i></p>

PERIODIC INSPECTION CHECK LIST

Page A-4

PROJECT Graniss Pond Dam

DATE 9/18/79

PROJECT FEATURE _____

BY J.C. M.P., P.M.H.

AREA EVALUATED	CONDITION
<p><u>OUTLET WORKS-OUTLET STRUCTURE AND OUTLET CHANNEL</u></p> <p>General Condition of Concrete</p> <p>Rust or Staining</p> <p>Spalling</p> <p>Erosion or Cavitation</p> <p>Visible Reinforcing</p> <p>Any Seepage or Efflorescence</p> <p>Condition at Joints</p> <p>Drain Holes</p> <p>Channel</p> <p>Loose Rock or Trees Overhanging Channel</p> <p>Condition of Discharge Channel</p>	<p>12" low level valve d/s side</p> <p>d/s weir</p> <p>poor</p> <p>efflorescence</p> <p>some</p> <p>cracking</p> <p>none observed</p> <p>base of weir and at valve opening</p> <p>N/A</p> <p>some trees</p> <p>rocks and debris in channel between weir and 15" R.C.P.</p> <p>R.C.P. empties to d/s slope road embankment. Some riprap.</p>



Stanford Quad.

END

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8

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