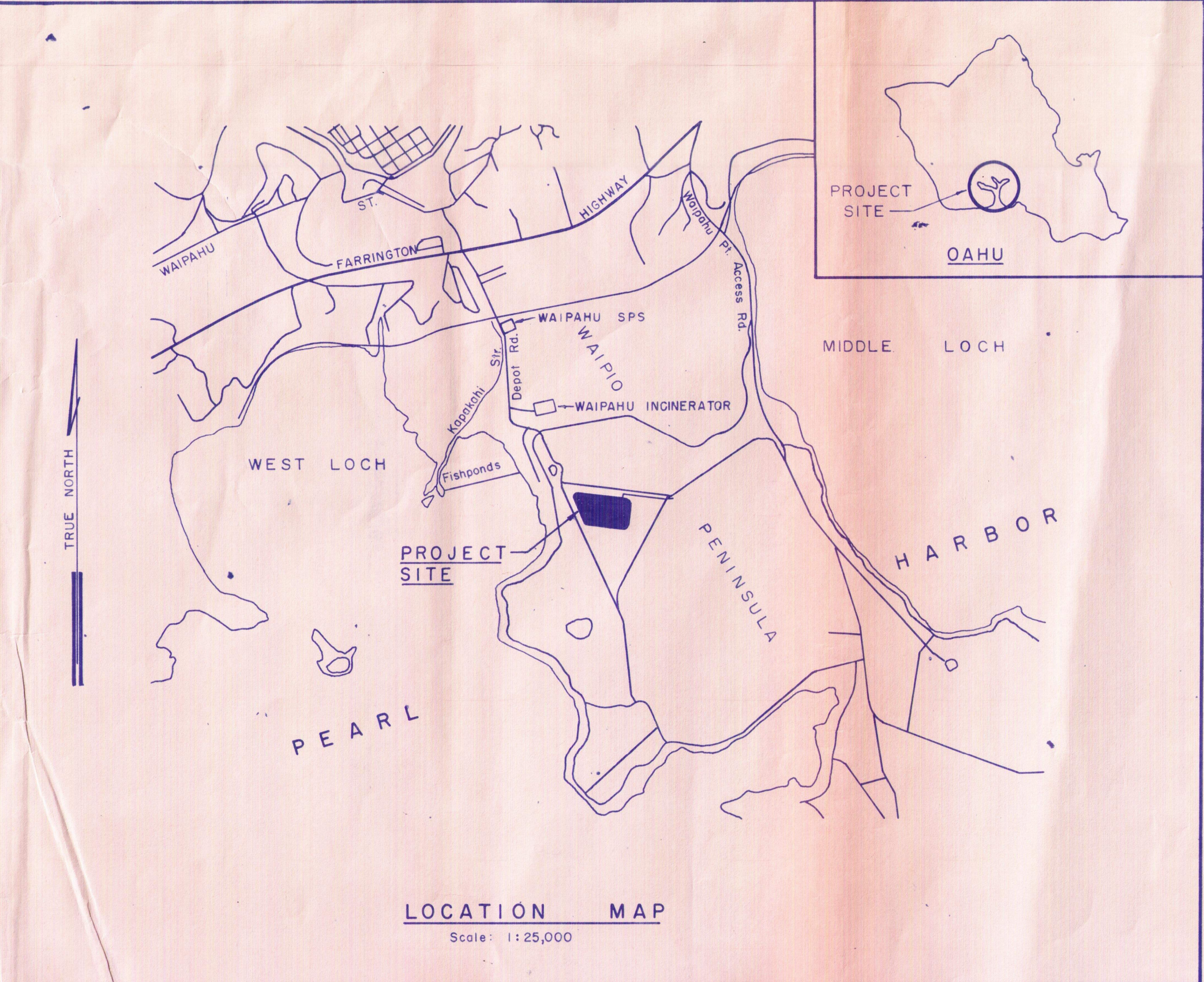


JOB NO. 45-70

WAIPAHU WASTE STABILIZATION POND

(WAIPAHU, EWA, OAHU, HAWAII)

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU
DIVISION OF SEWERS



APPROVED:

Robert C. Zane
REGISTERED PROFESSIONAL ENGINEER No. 581-E, HAWAII
DEPARTMENT OF PUBLIC WORKS
CITY & COUNTY OF HONOLULU, HAWAII

1/8/71
DATE

Howard Chang
REGISTERED PROFESSIONAL ENGINEER No. 632-E, HAWAII
DIVISION OF SEWERS
CITY & COUNTY OF HONOLULU, HAWAII

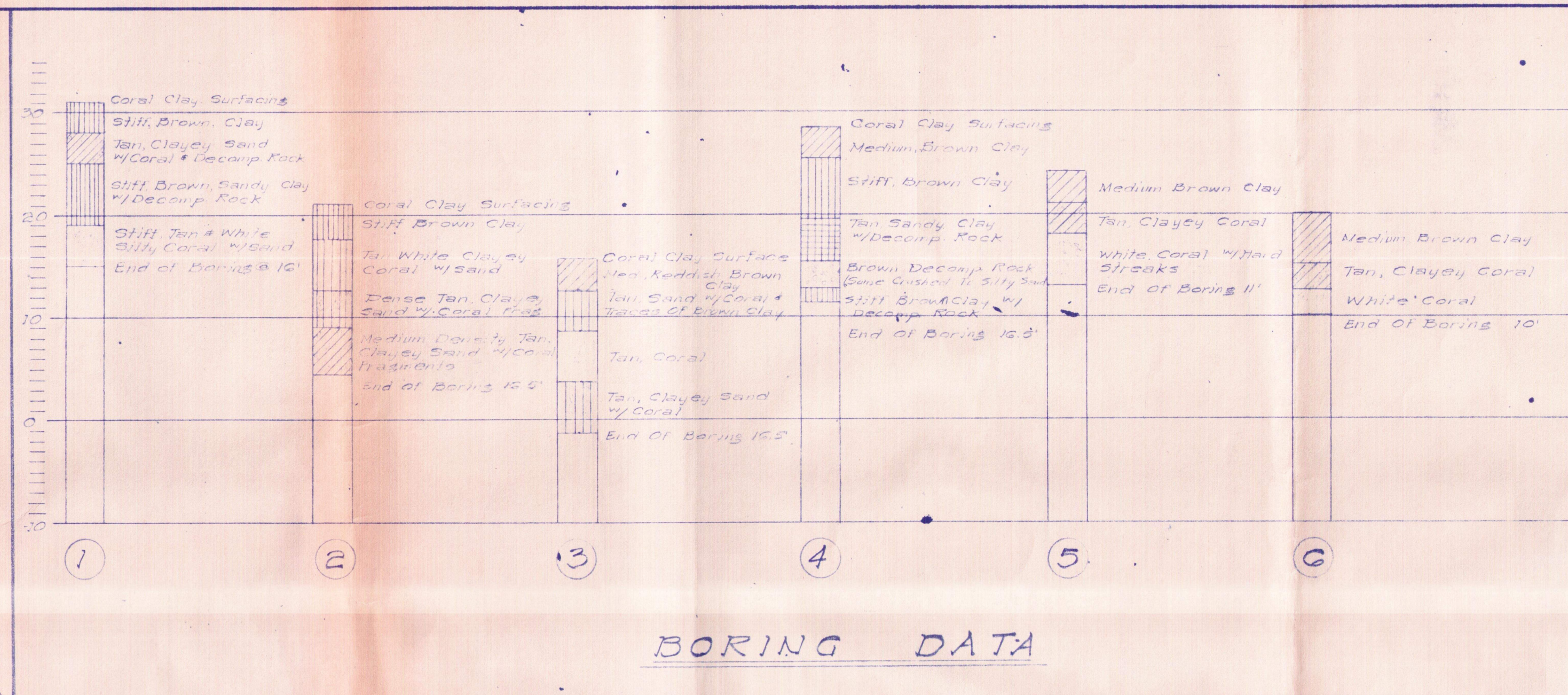
12/30/70
DATE

for *Walter B. Boggs*
CHIEF, ENVIRONMENTAL HEALTH DIVISION
DEPARTMENT OF HEALTH
STATE OF HAWAII

1-4-71
DATE

INDEX

DESCRIPTION	SHEET NO.
TITLE	1
LOCATION PLAN & BORING DATA	2
GENERAL SITE PLAN	3-4
INCOMING WATER LINE & CHLORINATOR	5
FORCE MAIN	6
WEIR STRUCTURES	7
UTILITY SHED	8
CHLORINATOR CONTACT CHAMBER	9
CROSS SECTIONS	10



BORING DATA

TRUE NORTH
SCALE: 1"=200'

PEARL HARBOR
(MIDDLE LOCH)

DESIGN DATA

Design Flows

Average Flow.....2.4 MGD
Peak Flow Rate.....5.2 MGD

Stabilization Pond

Surface Area.....10.2 Acres
BOD.....4,000 #/Day
Detention Period.....5.2 Days

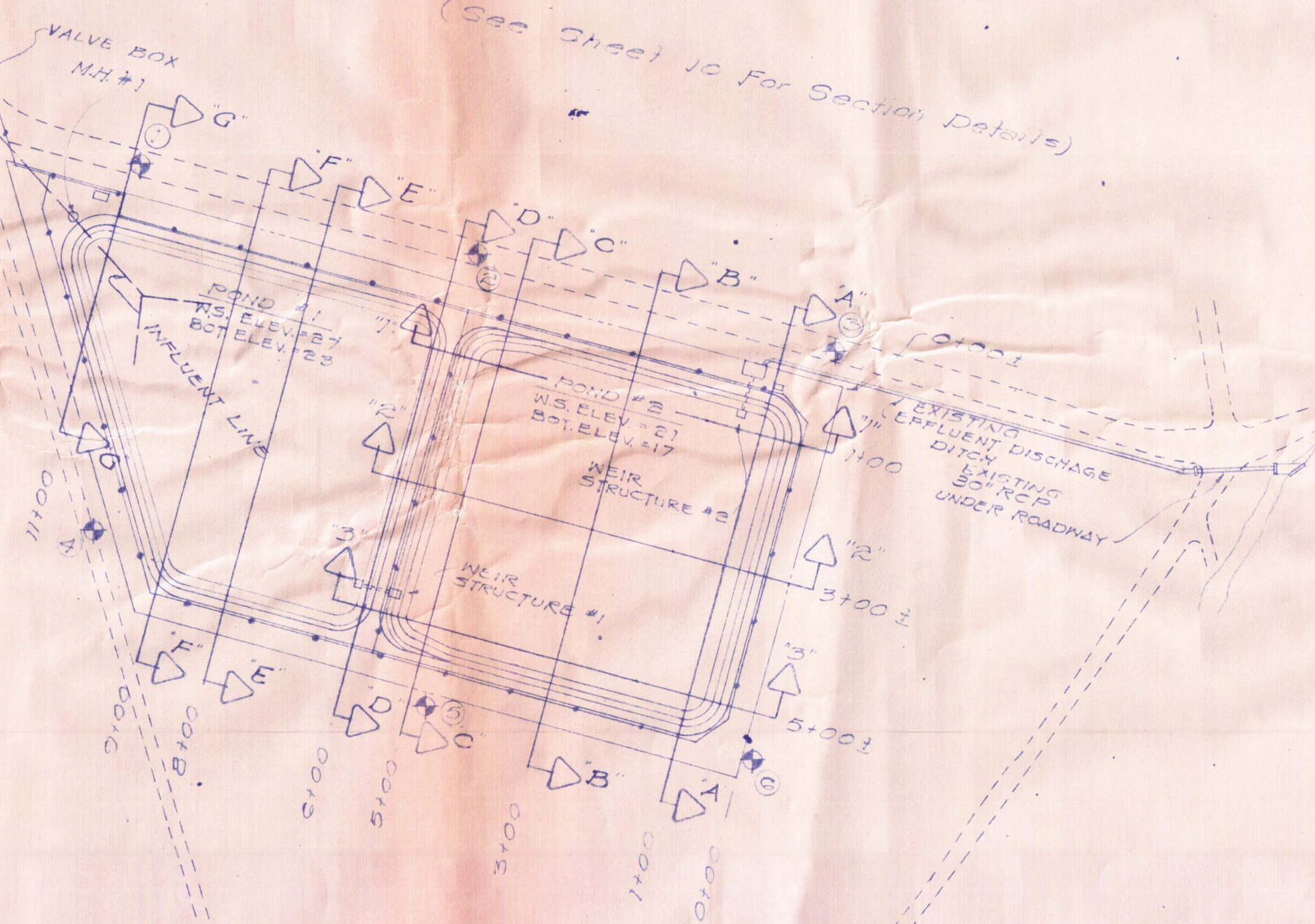
Chlorination

Tank Volume.....3,100 cu.ft.
Detention Time.....15 Min.
Dosage 10 PPM.....192 #/Day

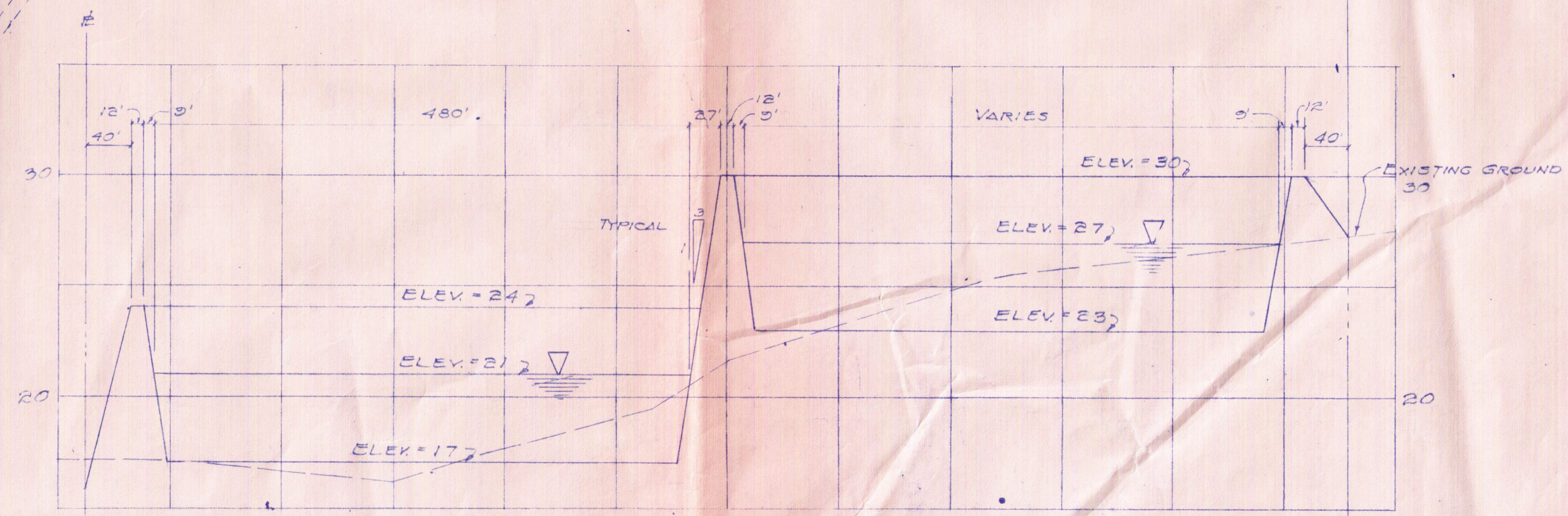
Estimated Earthwork

Excavation.....35,000 cy.
Embankment.....24,000 cy.
(See Sheet 10)

RES.
No. 25-A



Note:
1. Slope ground from edge of road on berm to property line as shown.

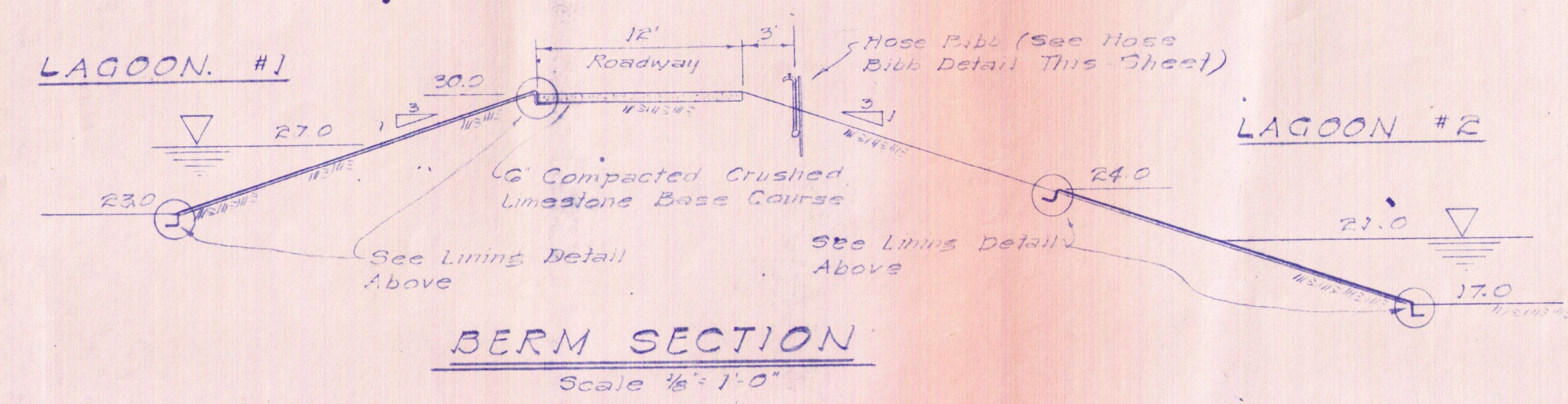
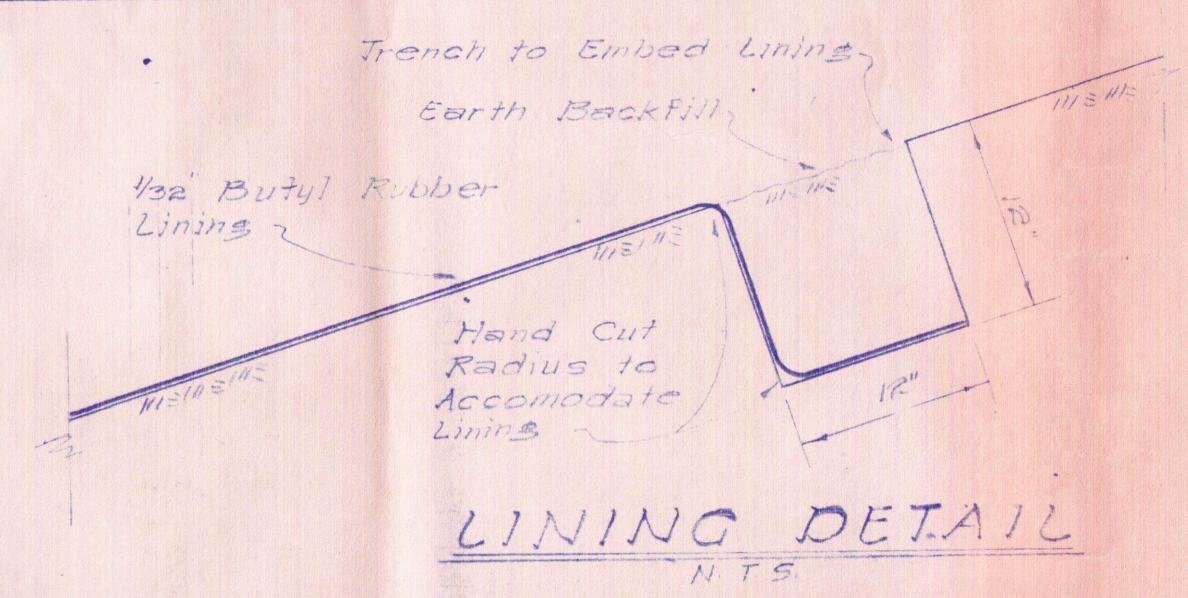
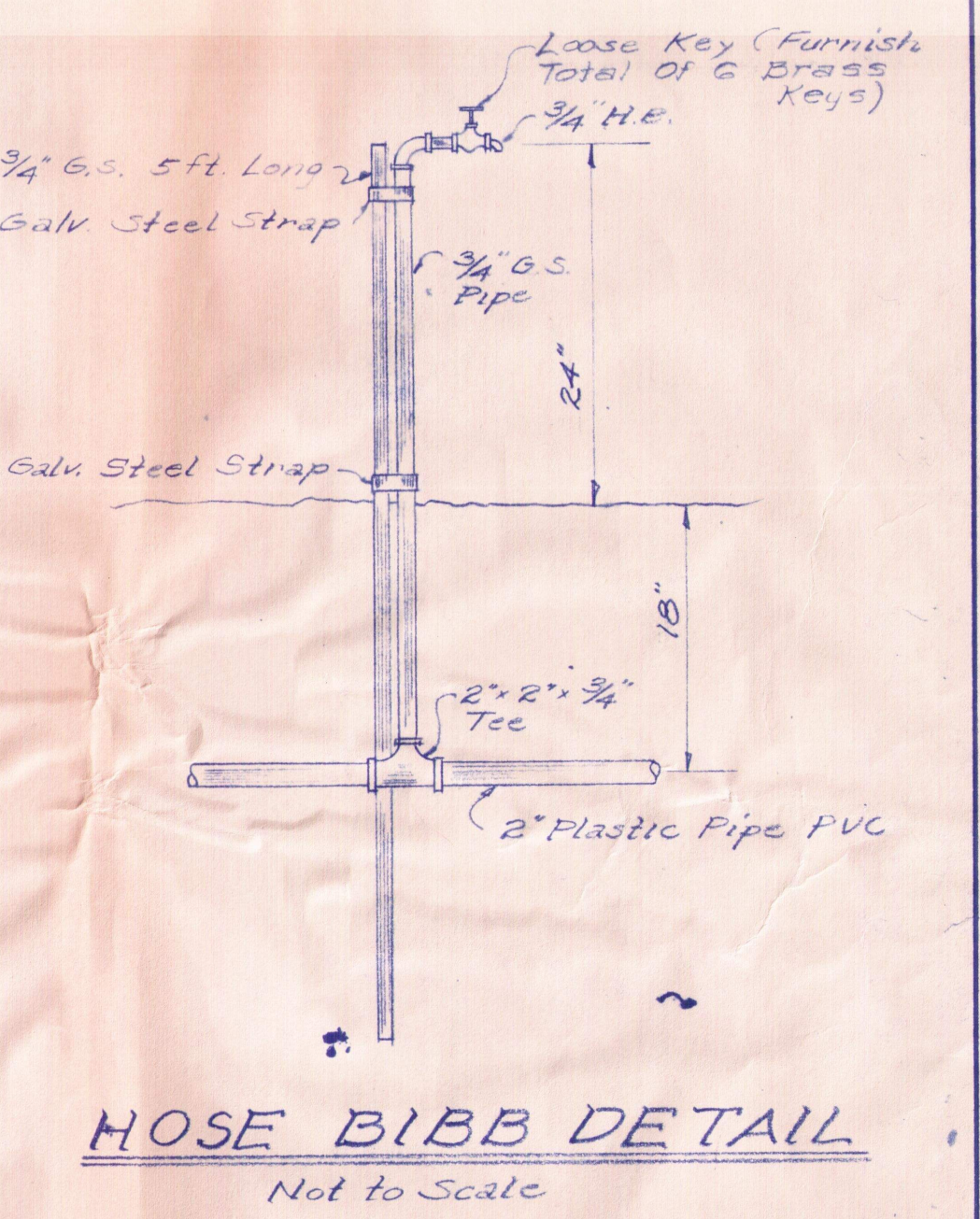
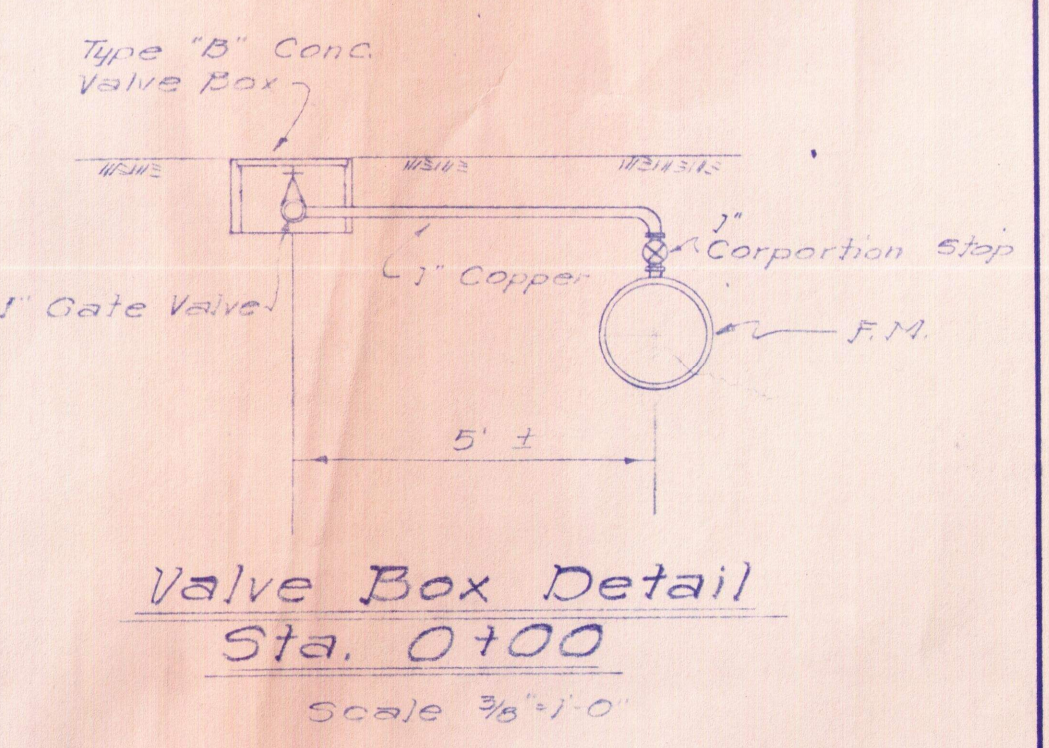
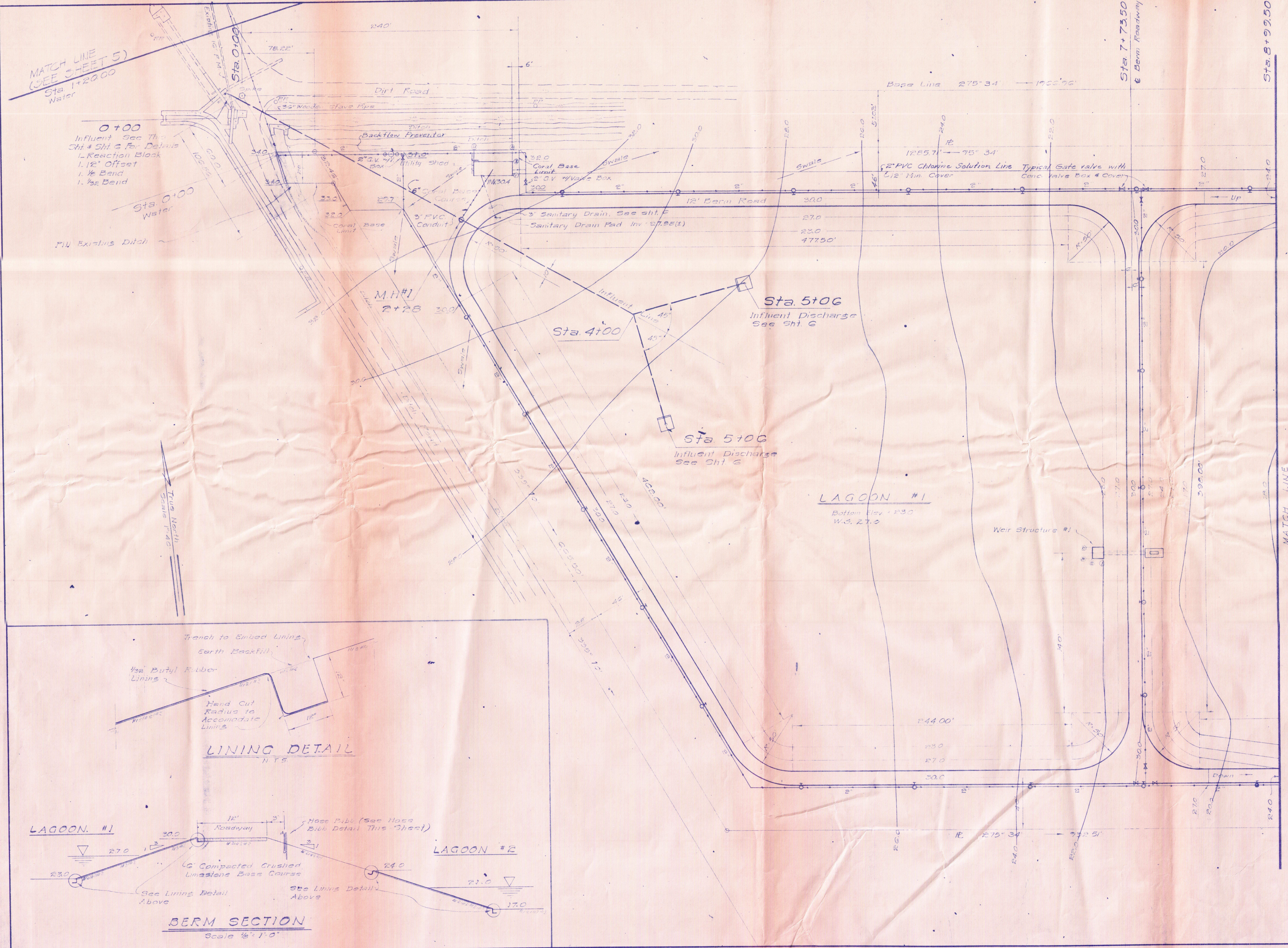


STABILIZATION POND
LONGITUDINAL SECTION
SCALE: HORIZ. 1"=100'
VERT. 1"=5'

SCALE IN FEET
SCALE 1"=200'

REVISION	DATE	BRIEF	BY	APPROVED
DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU DIVISION OF SEWERS WAIPAHU WASTE STABILIZATION POND (WAIPAHU, EWA, OAHU, HAWAII) LOCATION PLAN & BORING DATA				
ENGINEER	DATE	CHECKED BY	APPROVED:	
DRAFTSMAN		TRACER	DIVISION ENGINEER	
SCALE				
W. S.	PROFILE	C. S.		
C. S.	P. S.	S. S.		
W. H. BY	P. W. BY	S. BY		

JOB NO. 45-70



REVISION	DATE	BRIEF	BY	APPROVED
DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU DIVISION OF SEWERS WAIPAHU WASTE STABILIZATION POND (WAIPAHU, EWA, OAHU, HAWAII) GENERAL SITE PLAN				
ENGINEER	C. Y. K.	DATE	12/30/10	
DRAFTSMAN	W. L. C.	CHECKED BY	W. L. C.	
SCALE	AS SHOWN	TRACER	W. L. C.	
APPROVED: <i>[Signature]</i> DIVISION ENGINEER				
W. S.	PROFILE	C. S.		
CH. SEC.	F. W. BY:	S. B.		
W. M. BY:	F. W. BY:	S. BY:		
JOB NO. 45-70				
FILE	POCKET	FOLDER	NO.	
17	5	1	43	

Sta. 8+99.50

MATCH LINE

Base Line 275°34' → 1966.96'

Base Line 'A'
Ditch
Sta. 12+20.50Sta. 13+47.51
Property Line

Existing Unlined Ditch

GRM Ditch
See Sht. 9Chlorination
Chamber
See Sht. 92" PVC Chlorine
Solution Line
12" Min. Cover

Weir Structure #2

LAGOON #2

Bottom Elev. = 17.0'
W.S. E1.0TRUE NORTH
Scale: 1"=40'

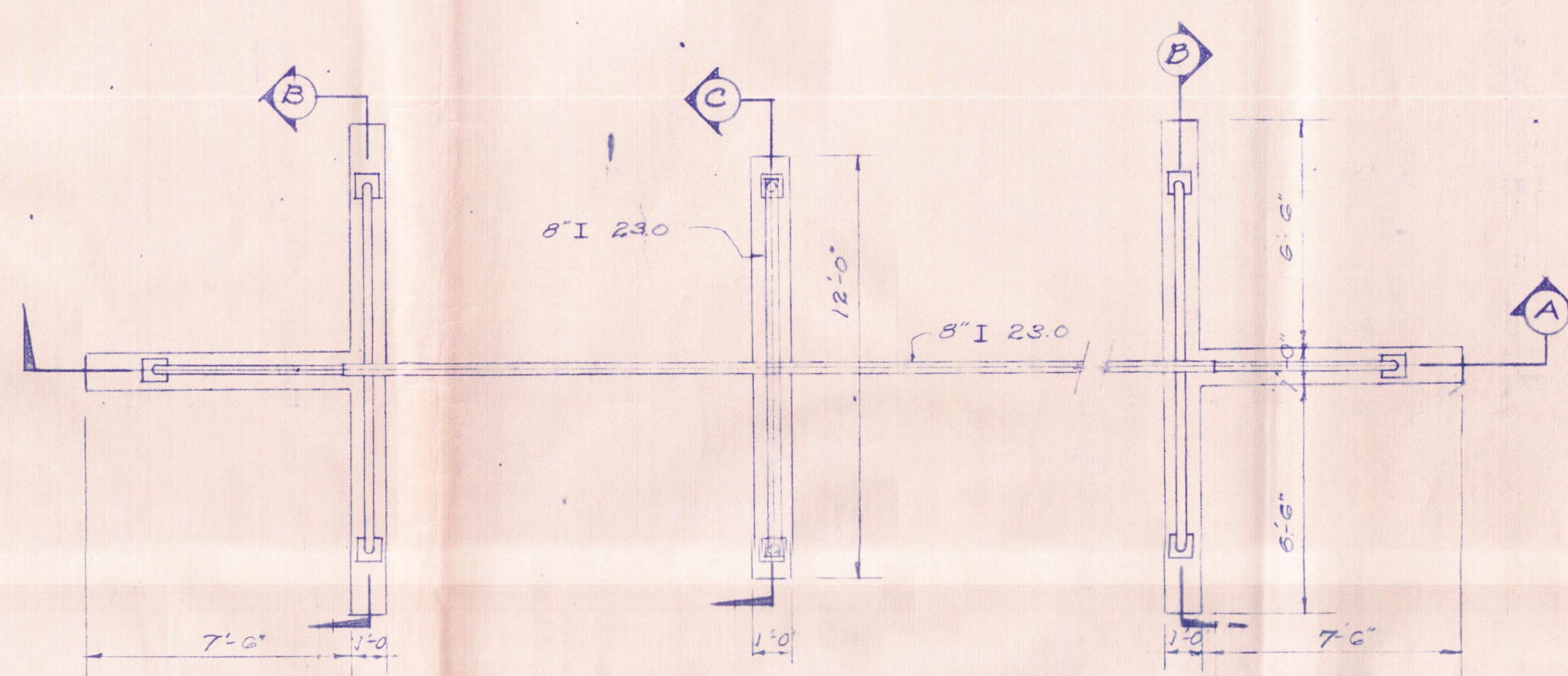
410.00'

17.0

21.0

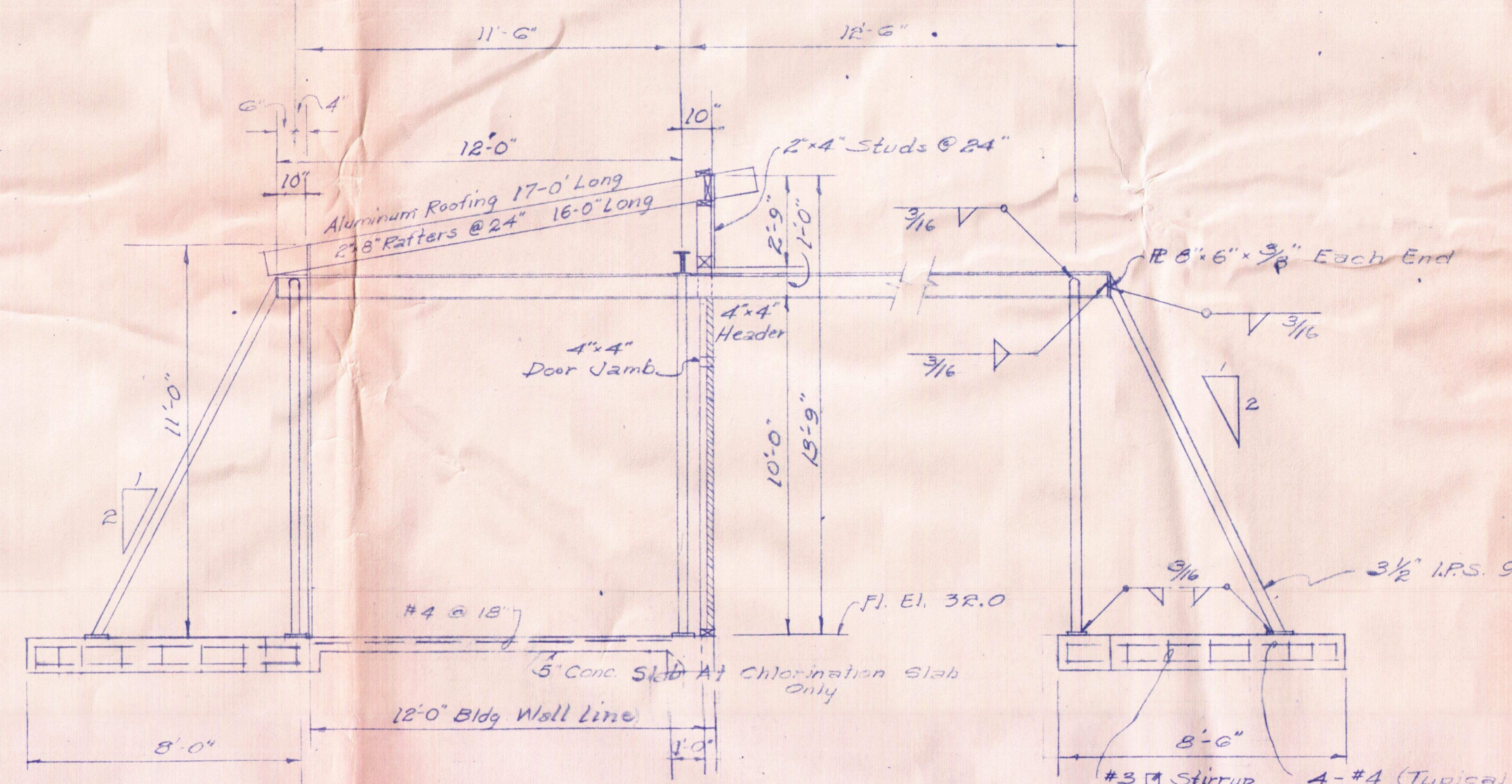
24.0

275°34' → 932.51'

Typical Hose Bibb
Detail on Sht. 3

PLAN

Scale 1/4"=1'-0"

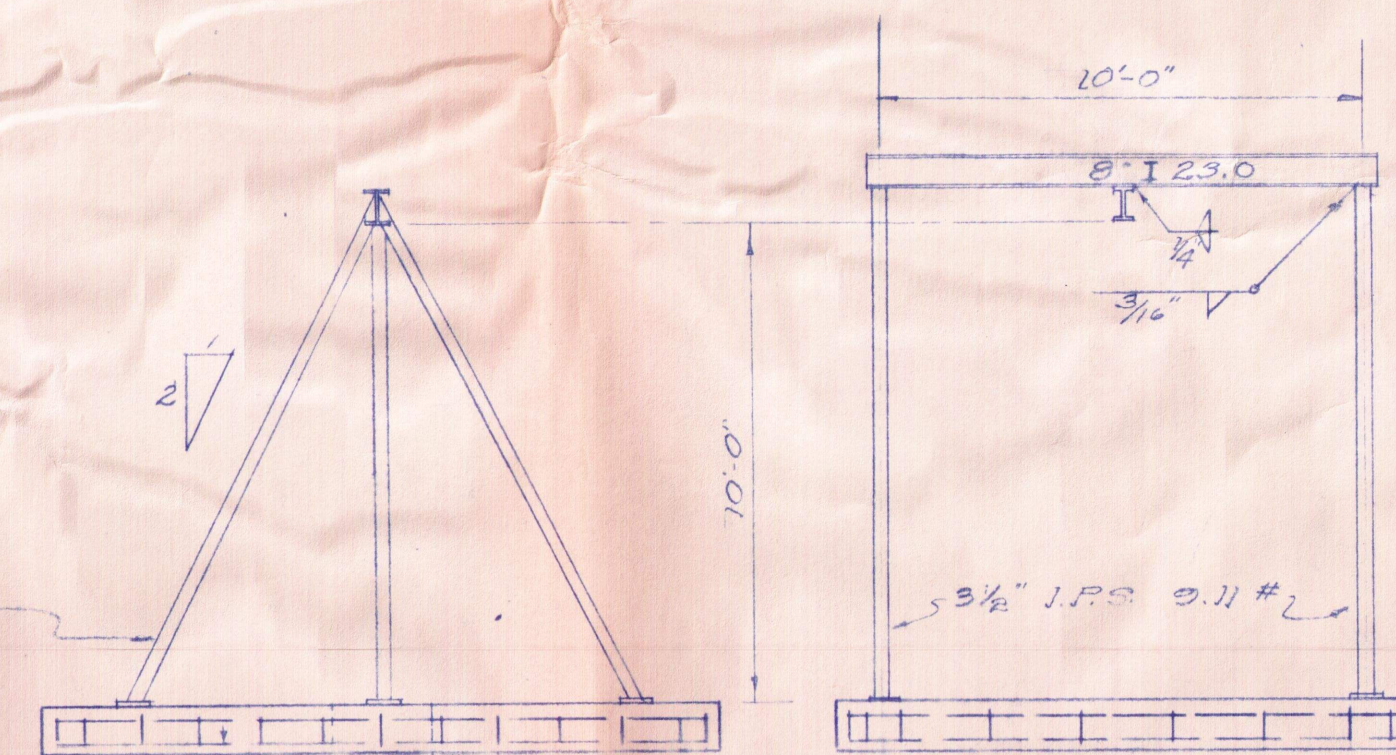


SECTION "A"

Scale 1/4"=1'-0"

MONORAIL DETAIL

See Sheet 8 For Utility Shed

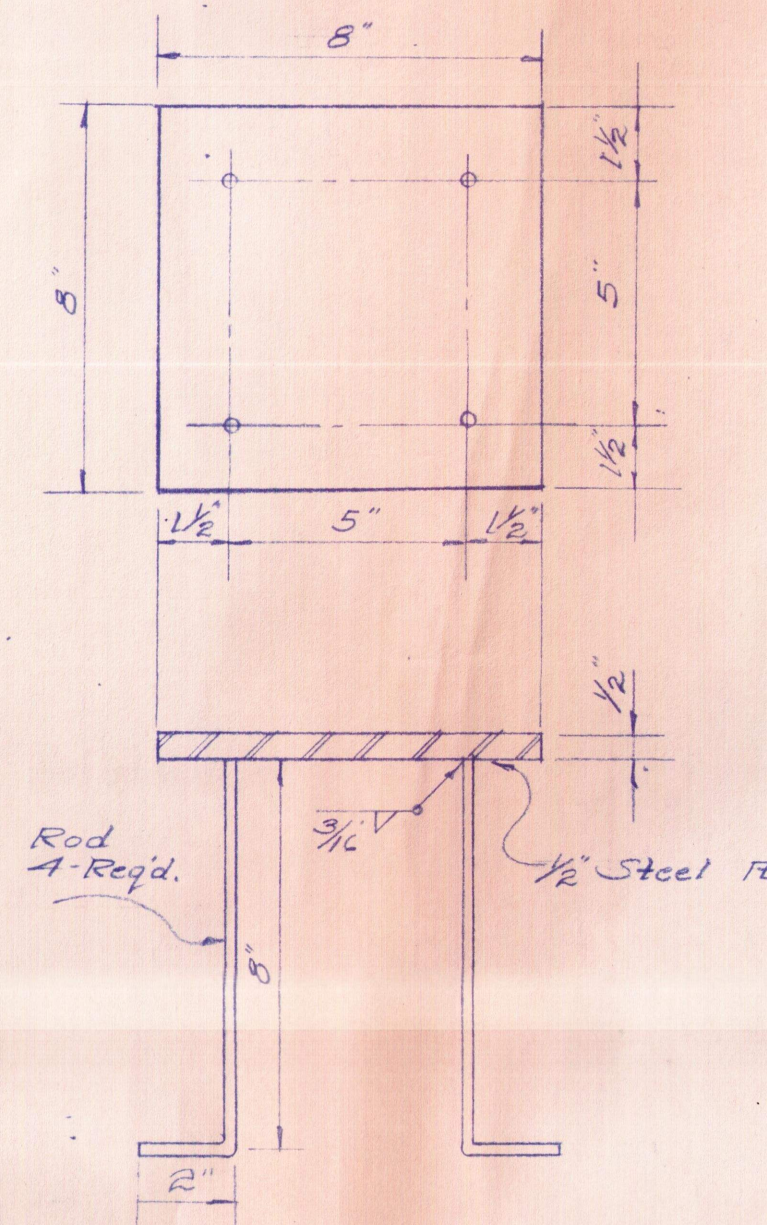


SECTION "B"

Scale 1/4"=1'-0"

SECTION "C"

Scale 1/4"=1'-0"



ANCHOR PLATE DETAIL

Scale 3"=1'-0"

REVISION	DATE	BRIEF	BY	APPROVED
DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU DIVISION OF SEWERS WAIPAHU WASTE STABILIZATION POND (WAIPAHU, EWA, OAHU, HAWAII) GENERAL SITE PLAN				
ENGINEER	W.M. CY	DATE	12/30/70	
DRAFTSMAN	A.M.	CHECKED BY	W.M.	
SCALE	AS SHOWN	TRACER	A.M.	
APPROVED:				
W. S. PROFILE C. S. CH. SEC. T. S. W. M. BY. F. W. BY. S. BY.				

JOB NO. 45-70

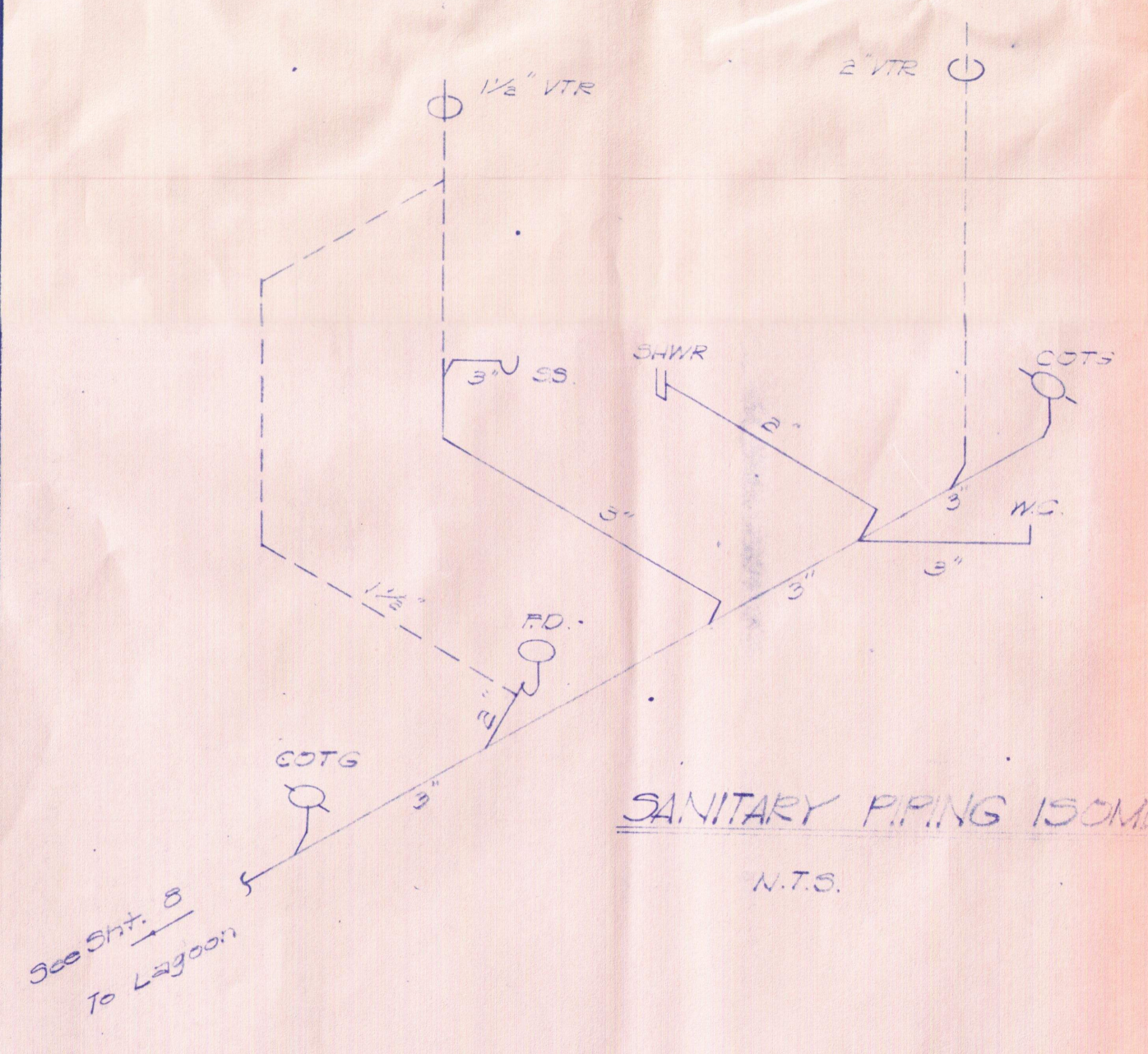


- WATER LINE NOTES**
1. Unless otherwise noted, minimum cover over 2" water line in roadway area shall be 24"
 2. Backfill material surrounding water lines for 3" shall be saturated material passing 30" sieve
 3. Install gate valve box w/cover at each controlling gate valve.

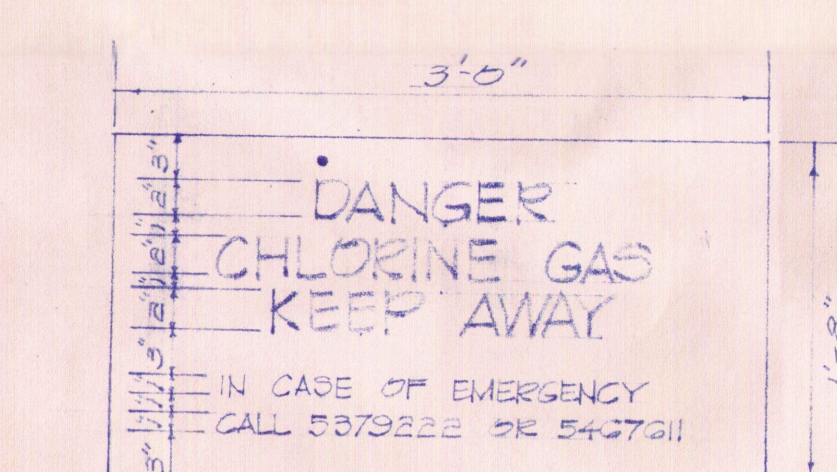
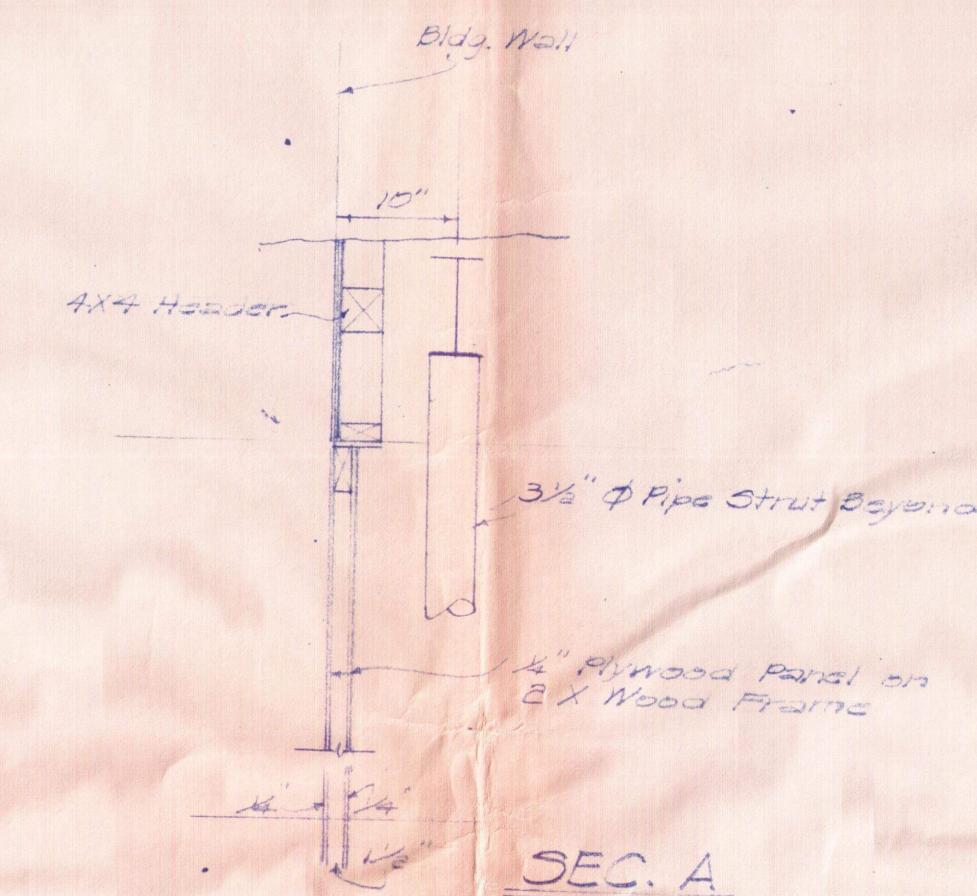
WATER PIPING ISOMETRIC
N.T.S.

CHLORINATOR PIPING ISOMETRIC
N.T.S.

SANITARY PIPING ISOMETRIC
N.T.S.



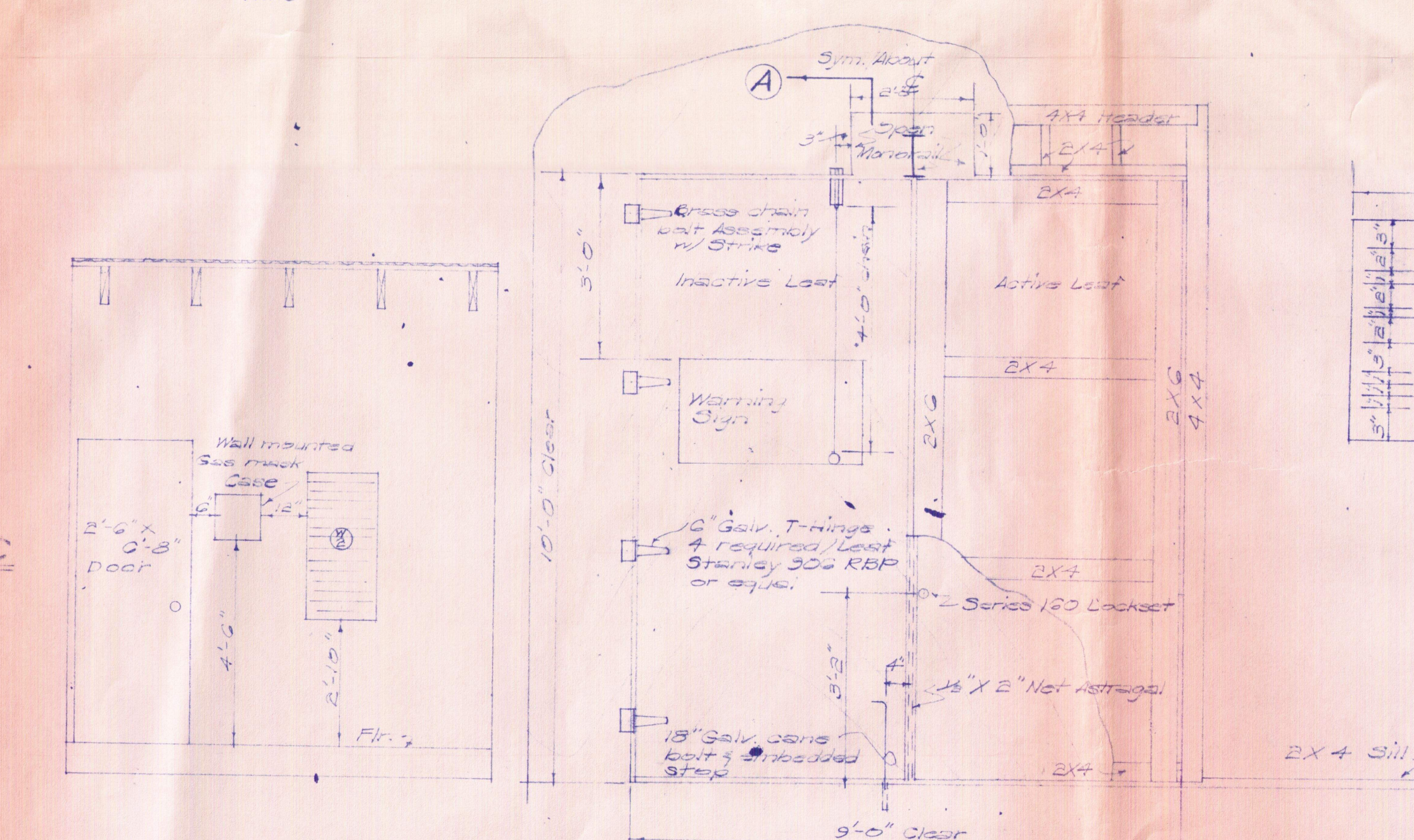
SEC. A
Scale: 3/4" = 1'-0"



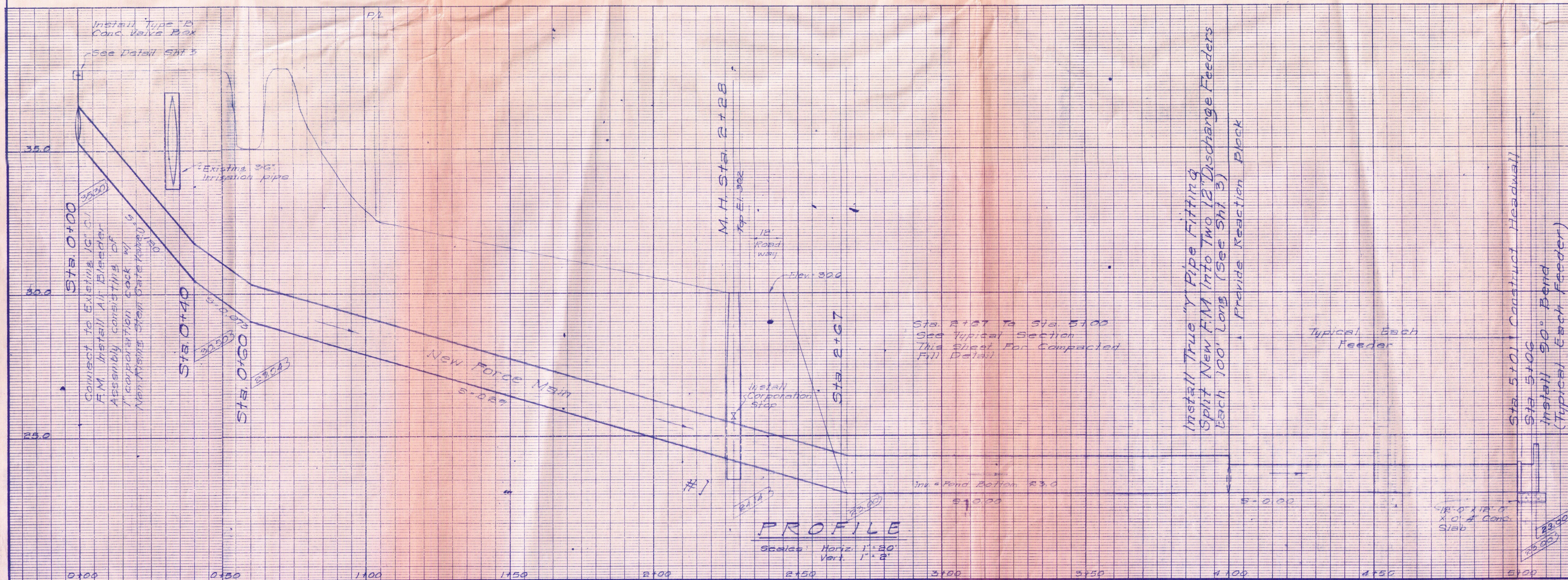
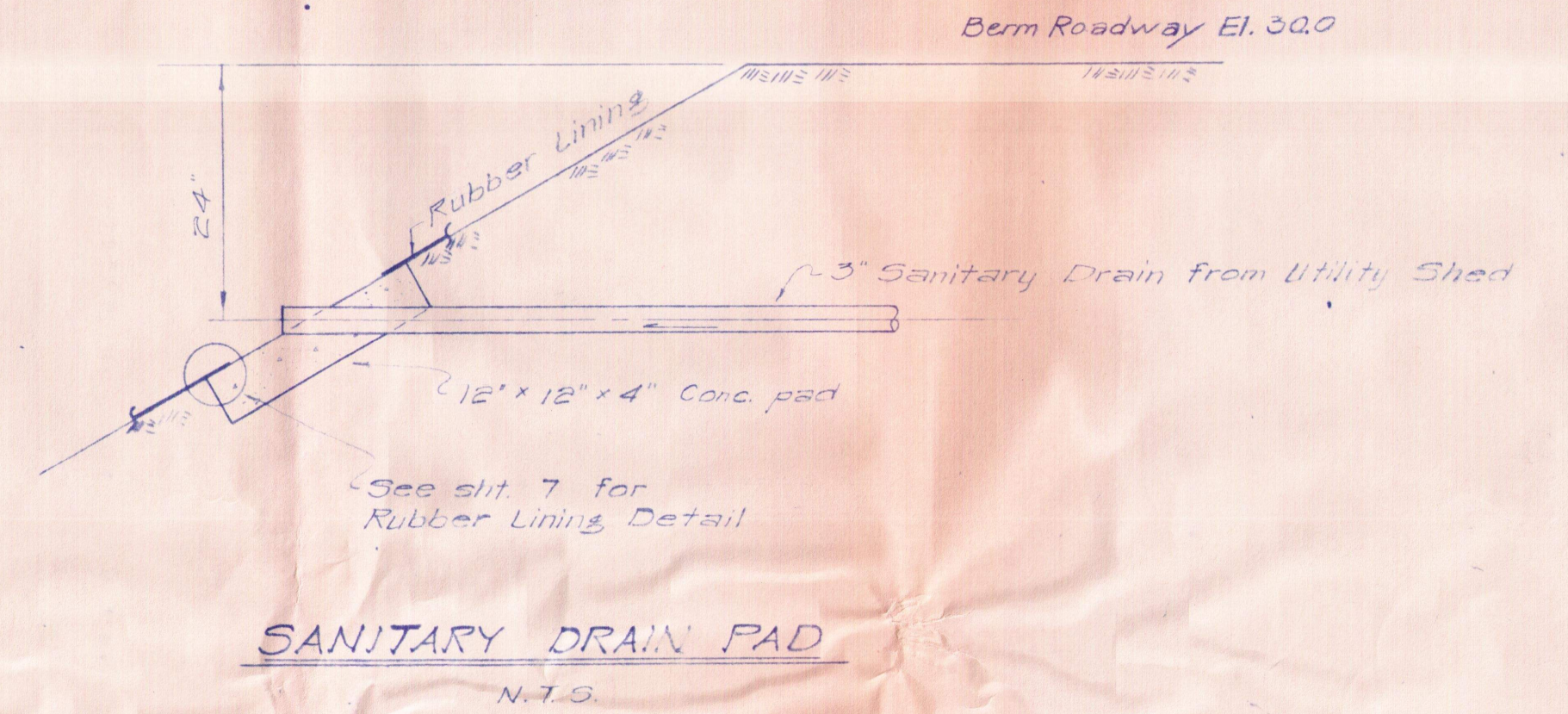
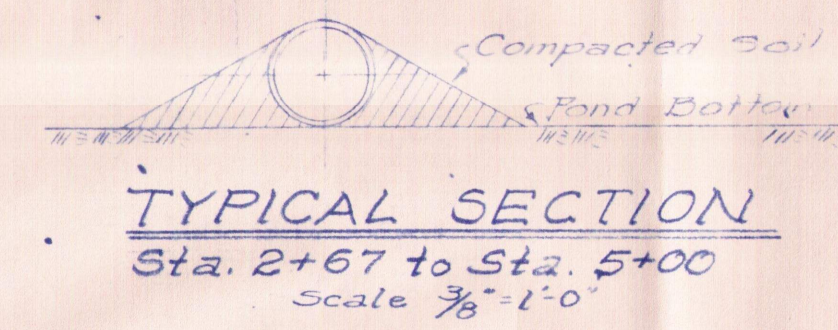
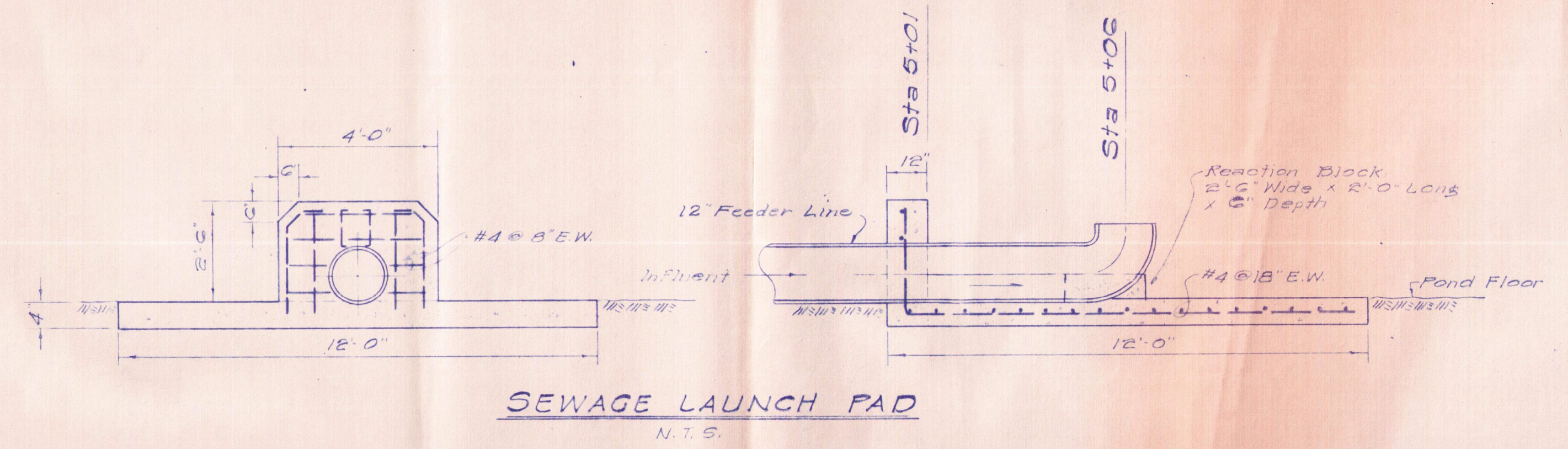
WARNING SIGN
N.T.S. NOTE: 3/4" exterior grade plywood w/white letters on red field. Sign shall be mounted as shown.

FRONT ELEV. STORAGE ROOM
Scale: 3/8" = 1'-0"

FRONT ELEV. CHLORINATION ROOM
Scale: 1/8" = 1'-0"

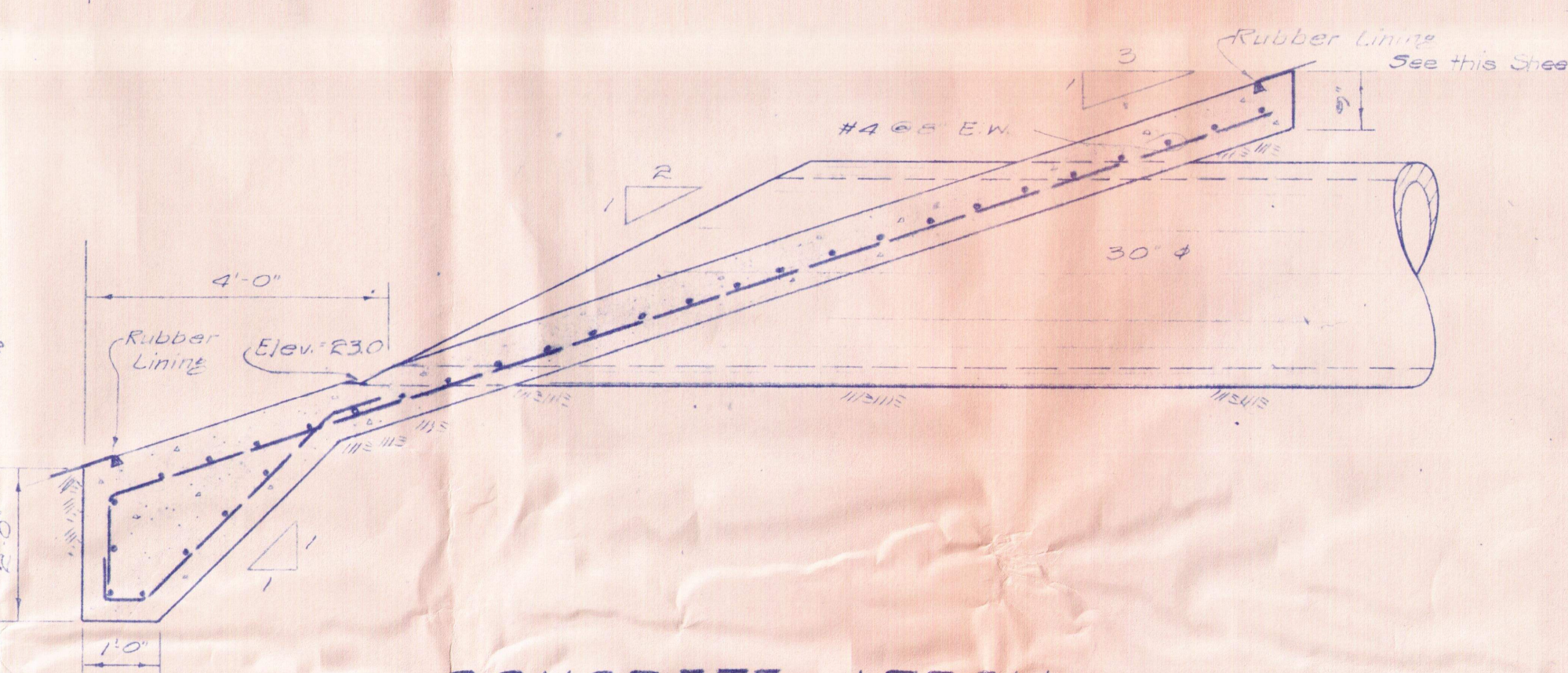
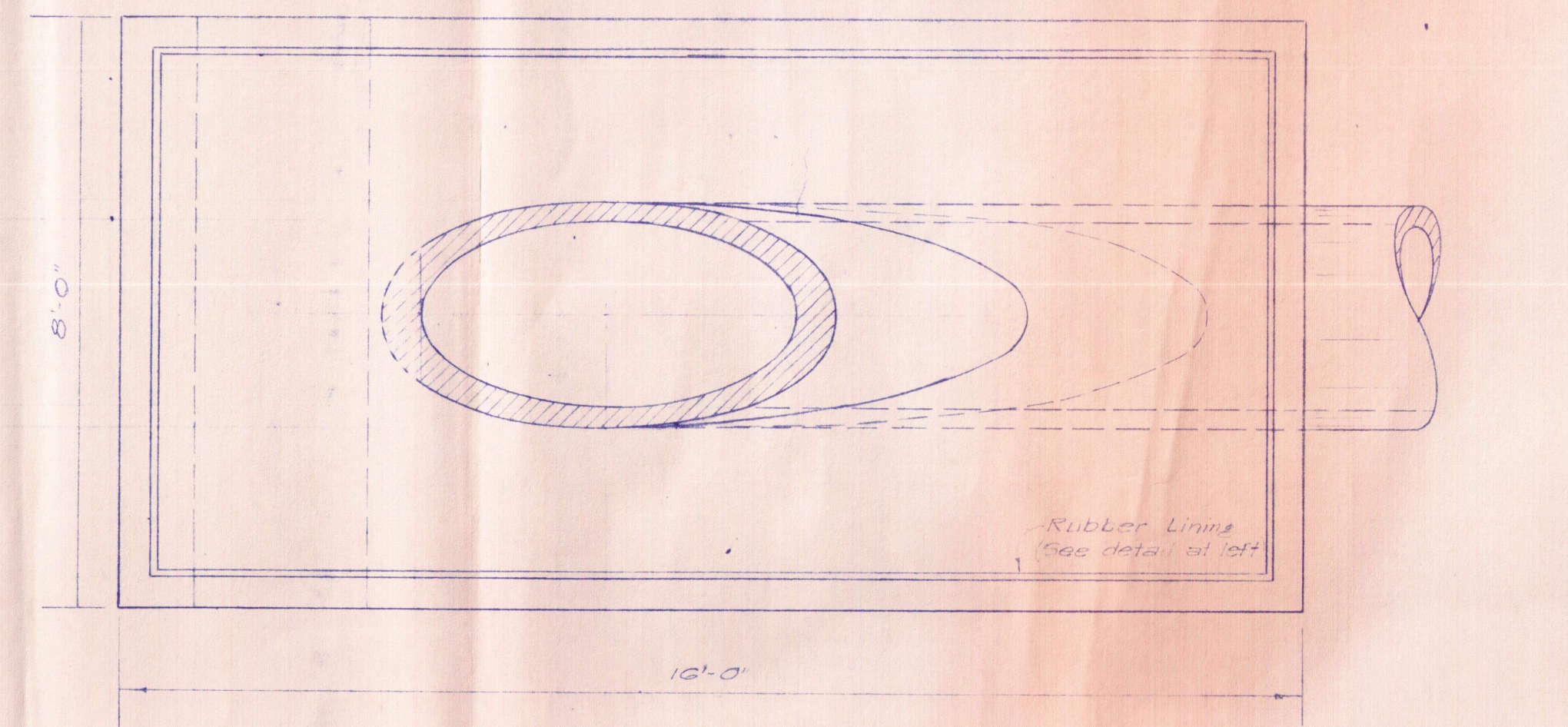
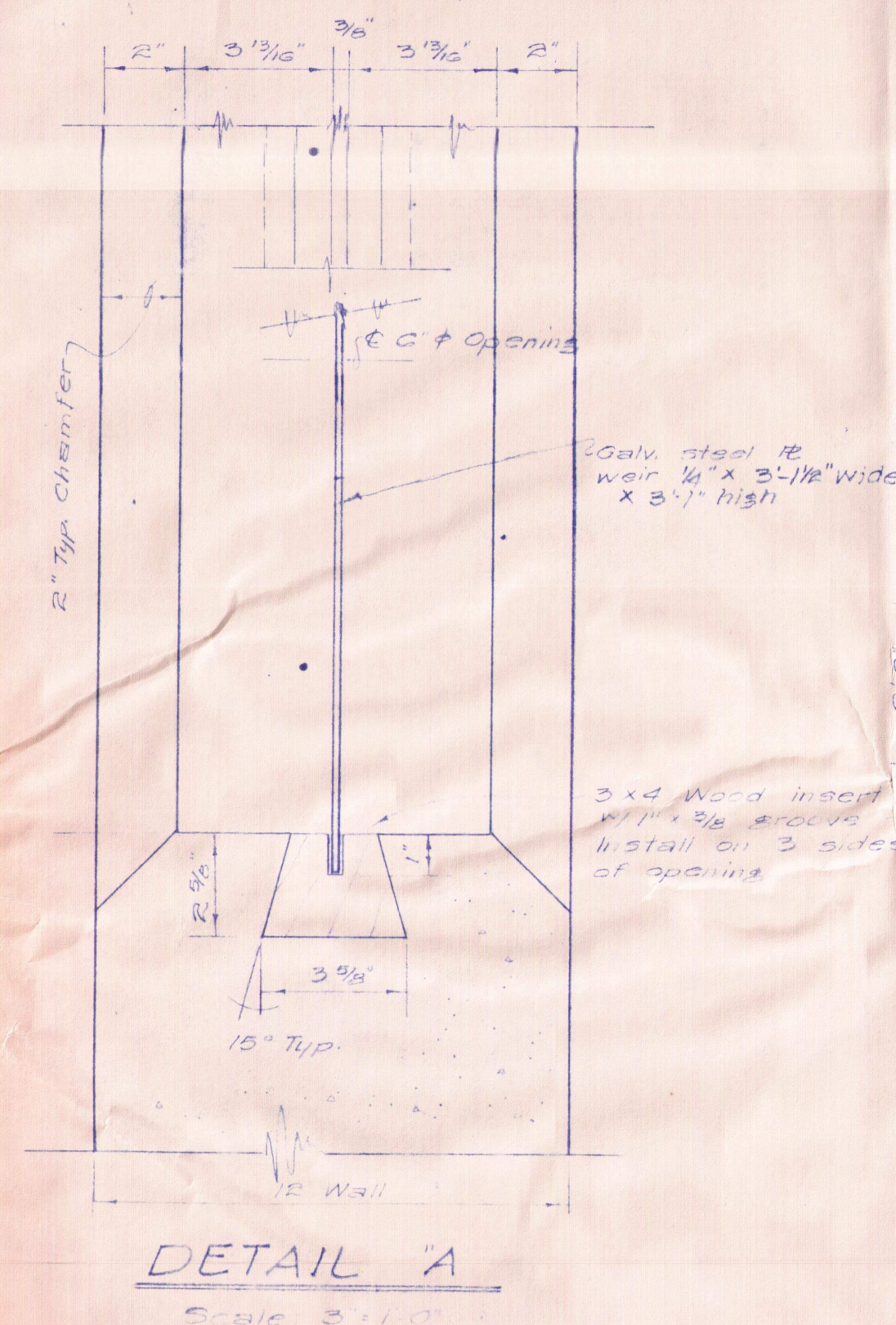
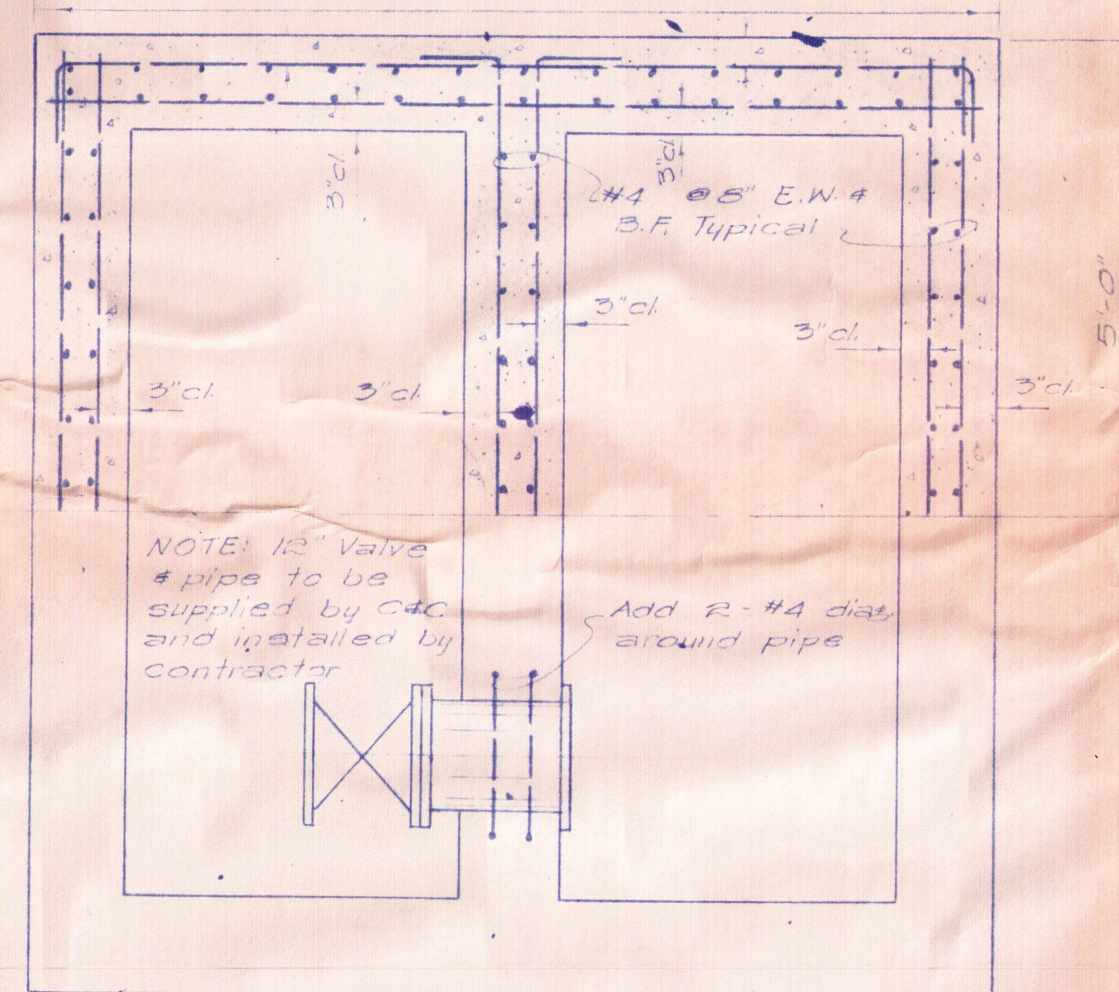
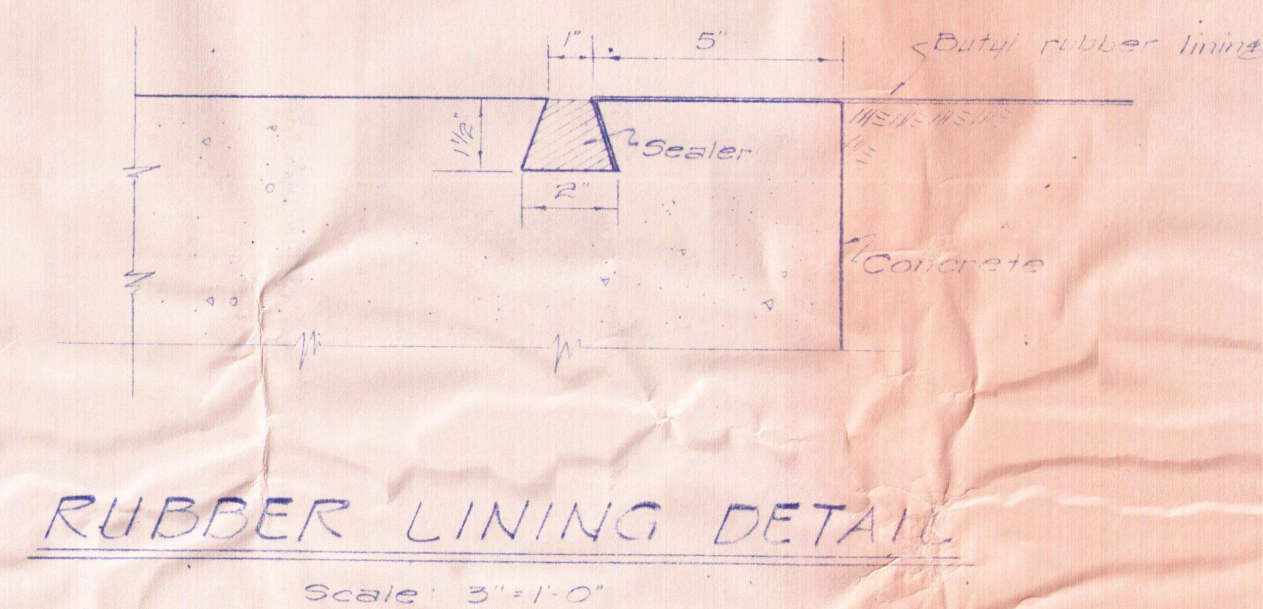
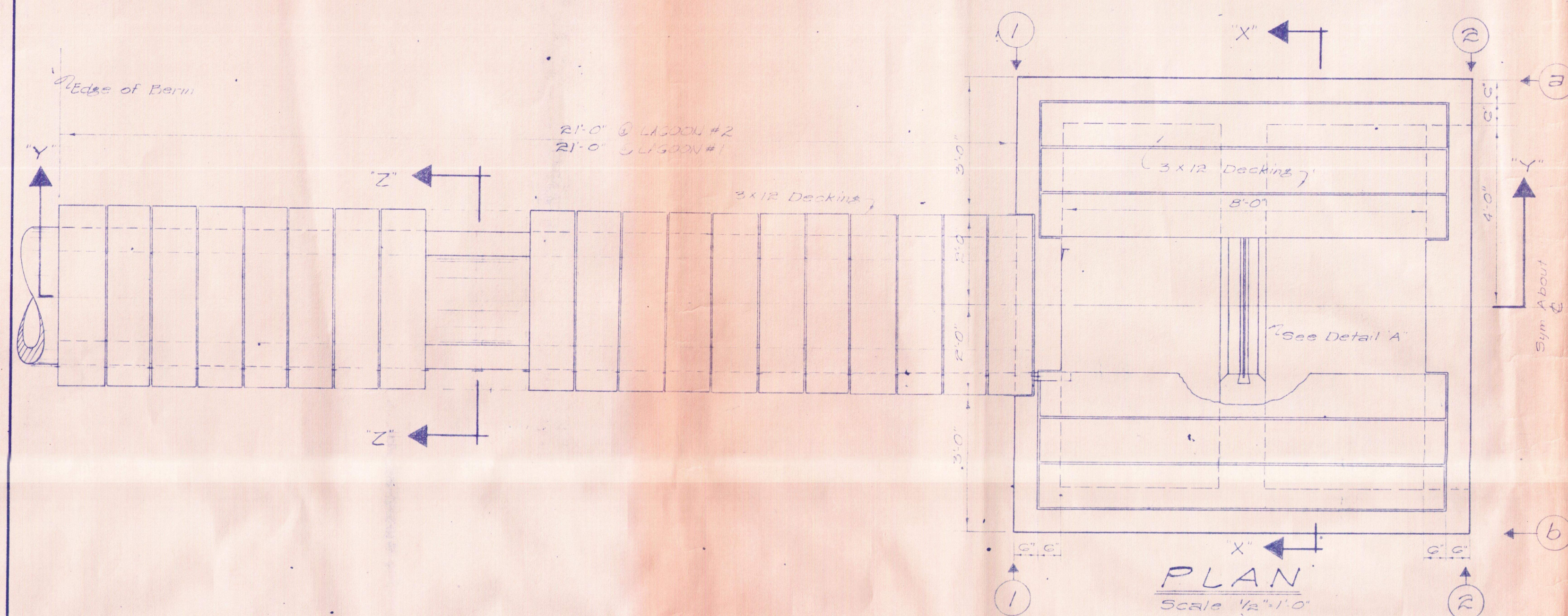


REVISION	DATE	BRIEF	BY	APPROVED
DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU DIVISION OF SEWERS WAIPAHU WASTE STABILIZATION POND (WAIPAHU, EWA, OAHU, HAWAII) INCOMING WATER LINE & CHLORINATOR				
ENGINEER	DATE	CHECKED BY	APPROVED	
DRAFTSMAN	12/30/10	140	for DIVISION ENGINEER	
SCALE	AS SHOWN	TRACER	D.C.	
W.S.	PROFILE	C.B.		
C.R. SEC.	F.B.	S.B.		
W.M. BY:	F.W. BY:	S. BY:		
JOB NO. 45-70				

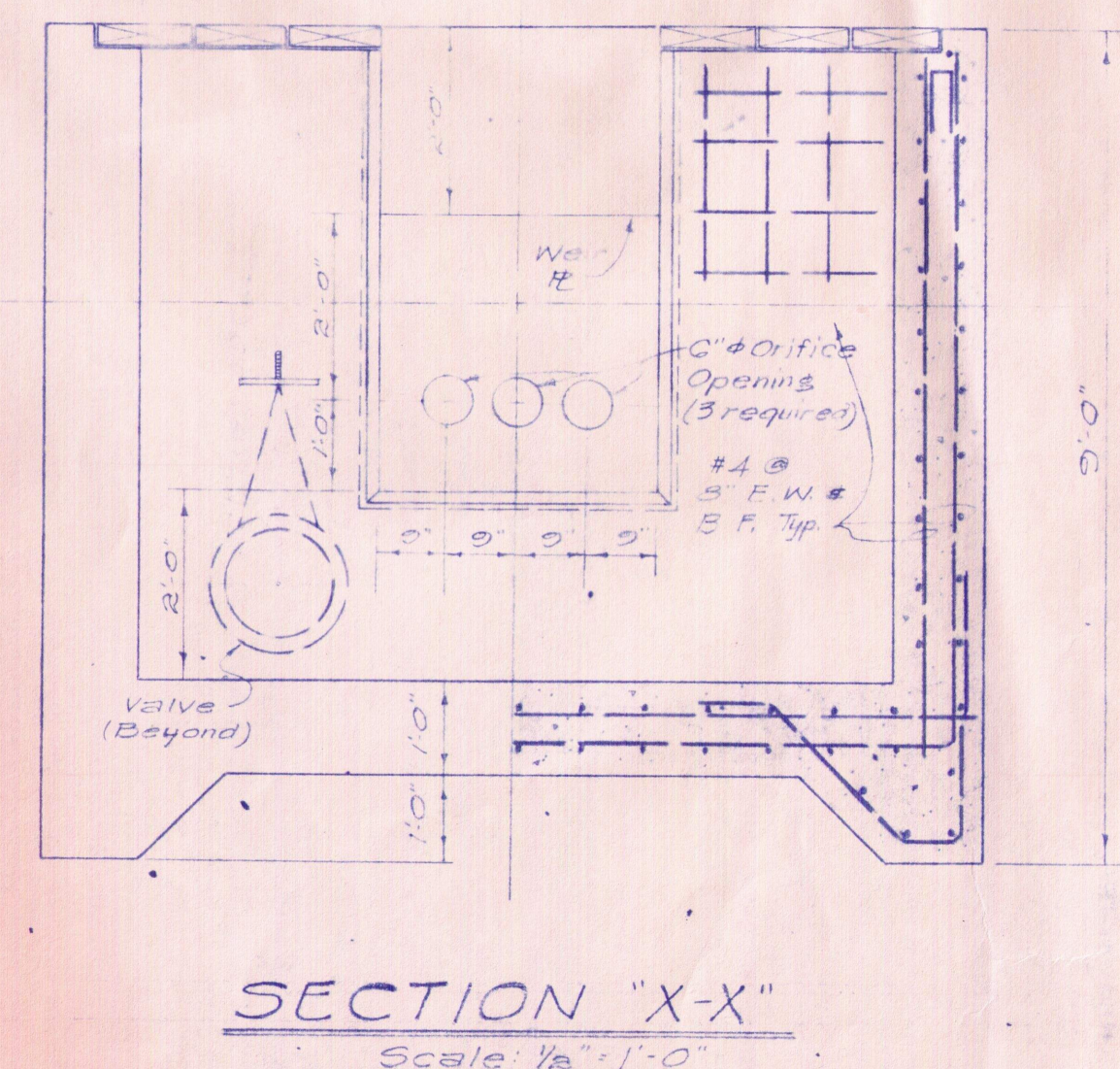
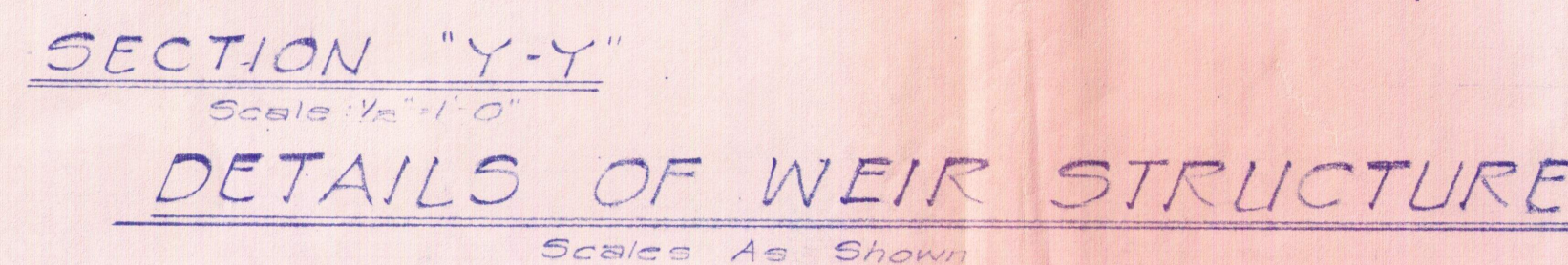
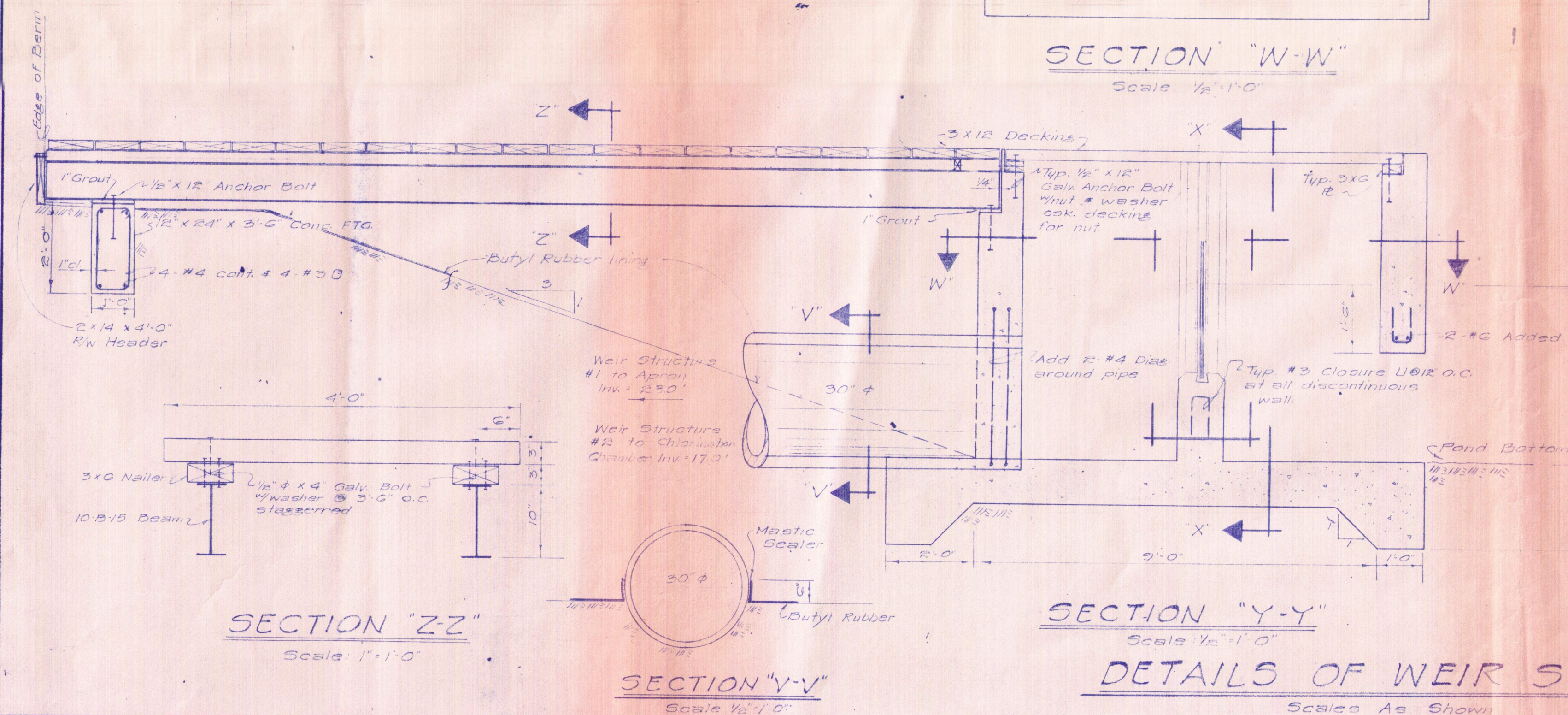


REVISION	DATE	BRIEF	BY	APPROVED
DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU DIVISION OF SEWERS WAIPAHU WASTE STABILIZATION POND (WAIPAHU, EWA, OAHU, HAWAII) FORCE MAIN				
ENGINEER	DATE	CHECKED BY	APPROVED	
DRAFTSMAN		TRACER		
SCALE				
W. M. BY	PROFILE	F. B.	G. S.	
		P. W. BY	S. B.	
			S. BY	

JOB NO. 45-70

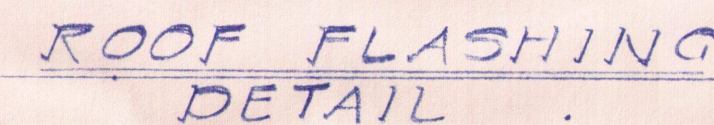
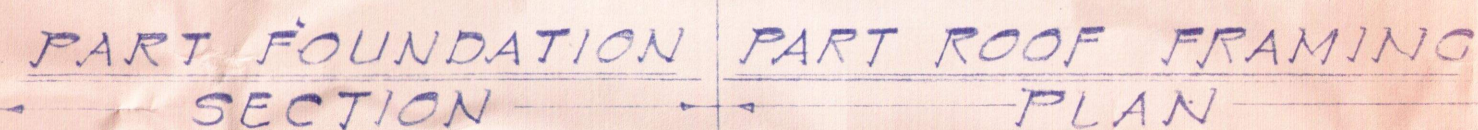


- GENERAL NOTES**
- Concrete shall be C#2 class 5 (2500 PSI @ 28 days)
 - Rein steel shall be intermediate grade 60 (20,000 PSI)
Provide 3" clearance from face of concrete.
Provide lap splice @ 24 bar diameters, but not less than 12"
 - All permanent lumber in place shall be clear heart rough redwood
 - 30" Ø Pipe shall be reinf conc. class III

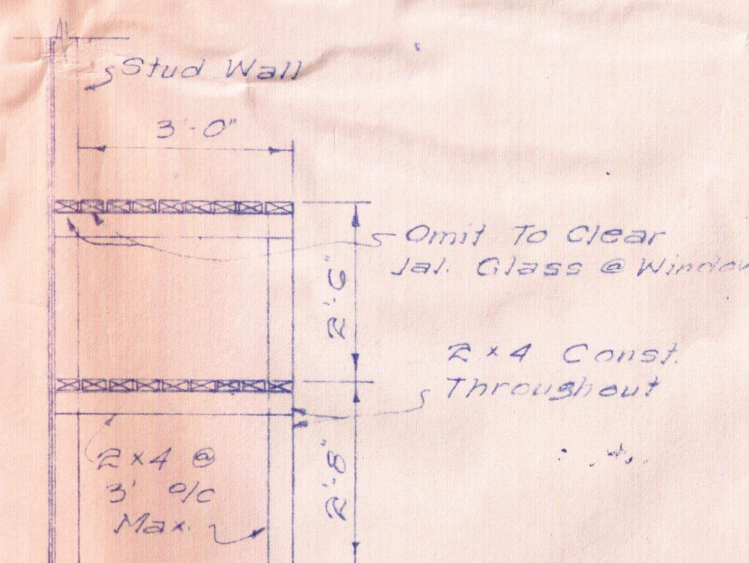
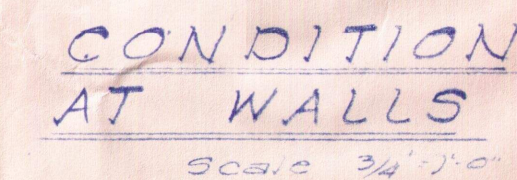
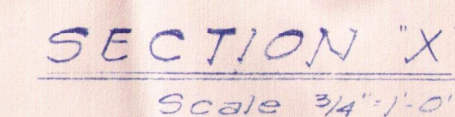


REVISION	DATE	BRIEF	BY	APPROVED
DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU DIVISION OF SEWERS WAIPAHU WASTE STABILIZATION POND (WAIPAHU, EWA, OAHU, HAWAII) WEIR STRUCTURES				
ENGINEER	W.M.	C.Y.	DATE	12/30/10
DRAFTSMAN	W.L.C.		CHECKED BY	W.L.C.
SCALE	As Shown		TRACER	W.L.C.
			APPROVED:	
			DIVISION ENGINEER	
W.S.	PROFILE	C.B.		
CR. SEC.	F.B.	S.B.		
W.M. BY:	F.W. BY:	S. BY:		

JOB NO. 45-70



Scale $\frac{3}{16}'' = 1'-0''$



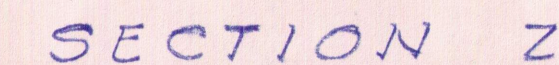
Shelving

SECTION Y

Scale $\frac{3}{8}'' = 1'-0''$



Scale $\frac{3}{8}'' = 1'-0''$



Scale $3/8" = 1'-0"$

			
REVISION	DATE	BRIEF	BY APPROVE

DEPARTMENT OF PUBLIC WORKS
 CITY AND COUNTY OF HONOLULU

DESIGN OF SEWERS

**WAIPAHU WASTE
 STABILIZATION POND**

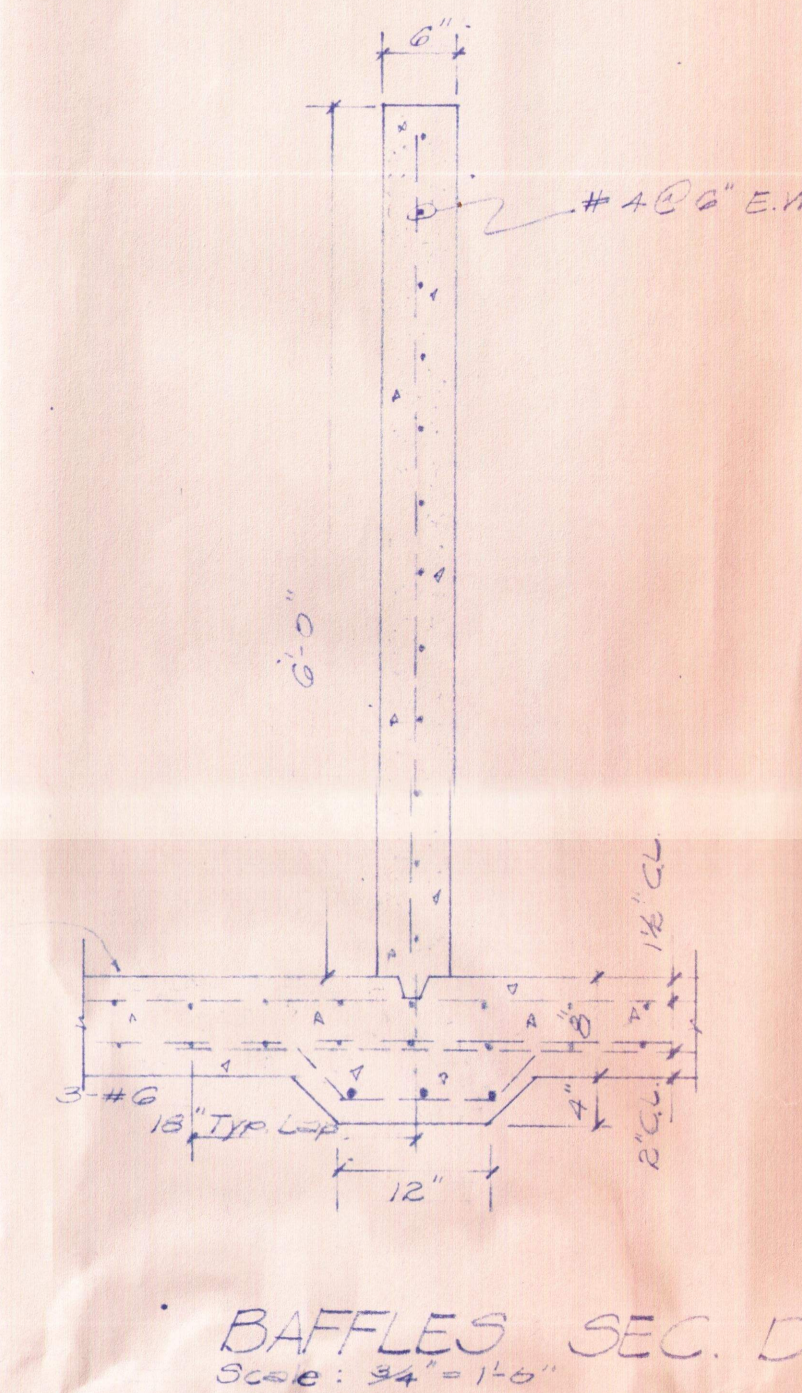
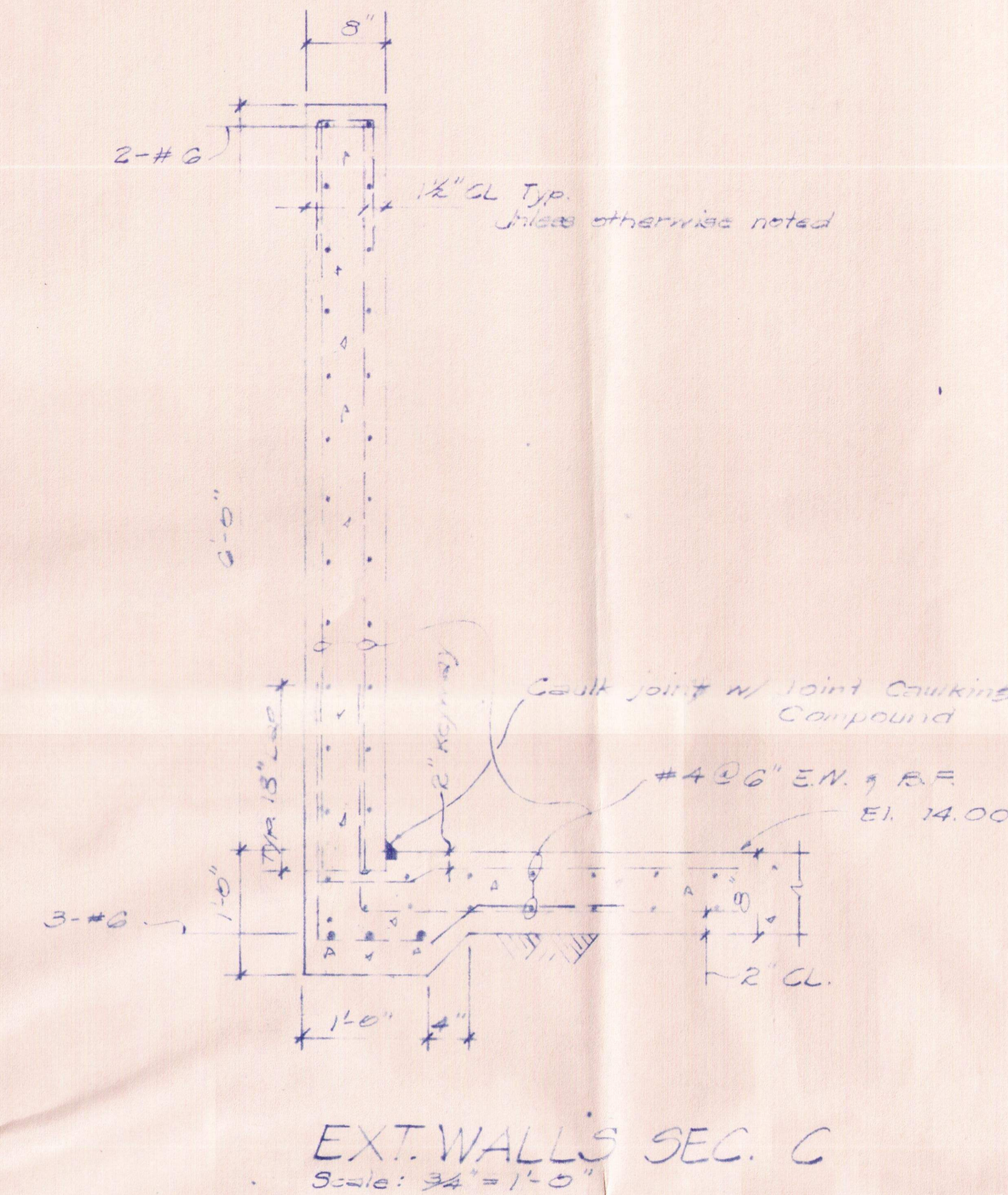
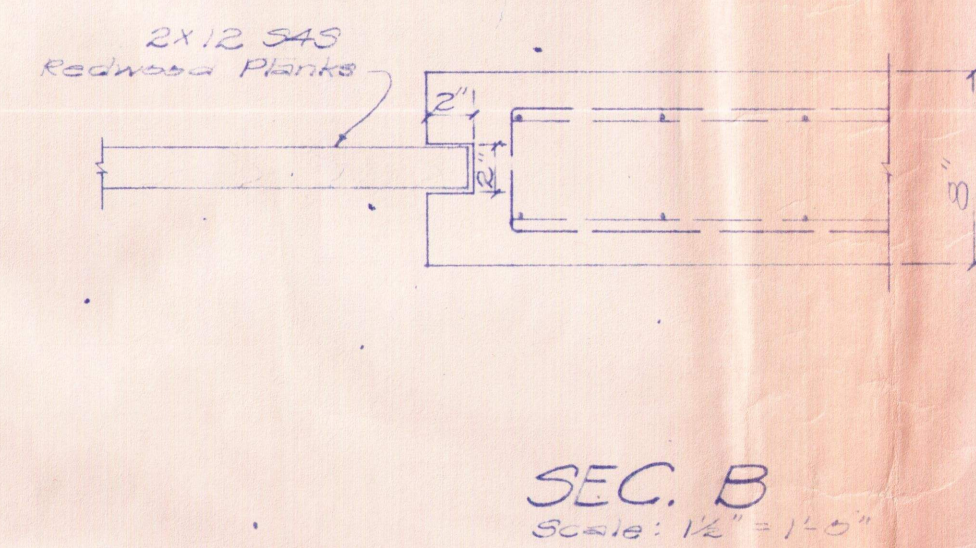
(WAIPAHU, EWA, OAHU, HAWAII)

UTILITY SHED

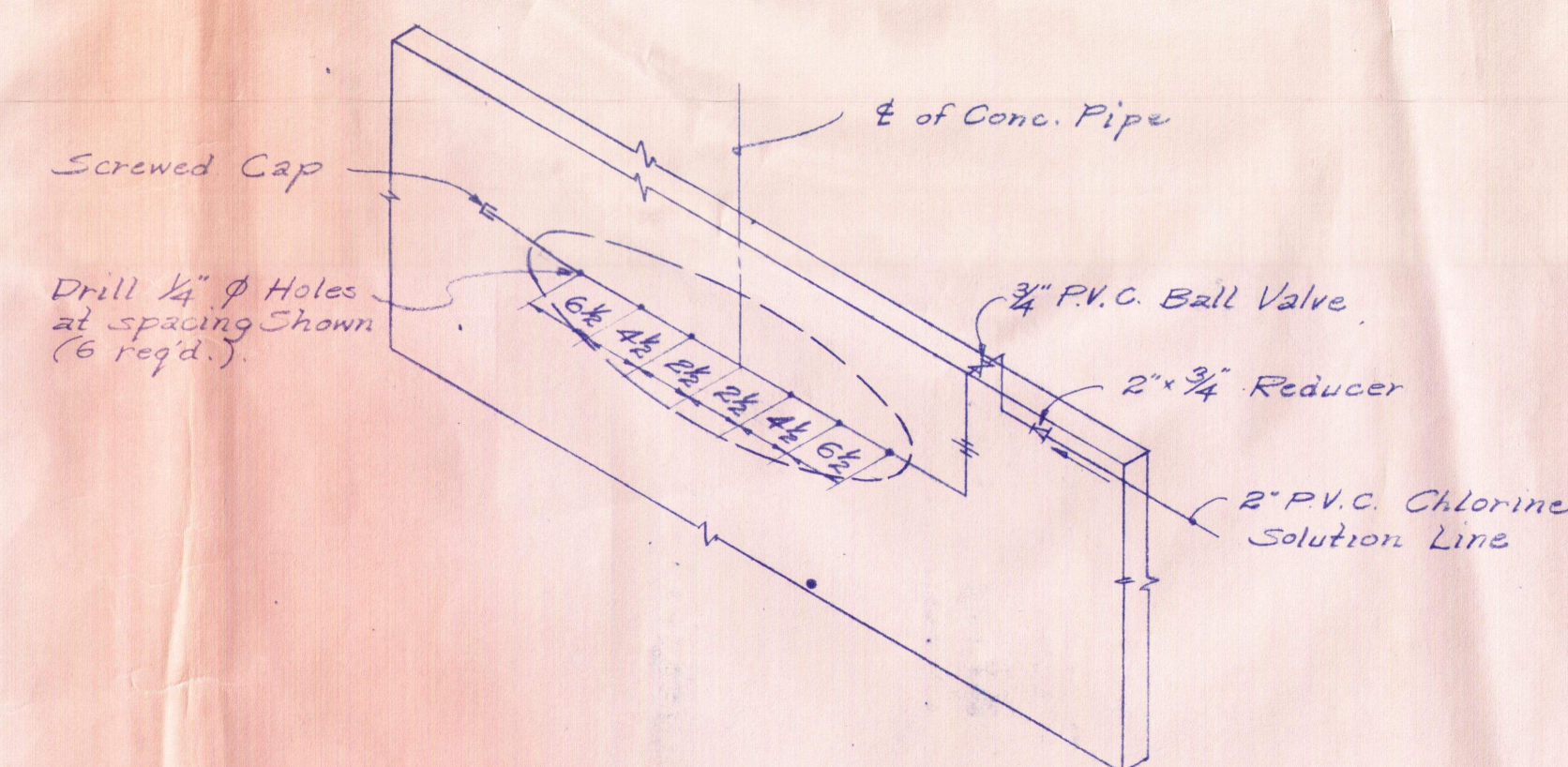
ENGINEER	<i>W.M.</i>	DATE	<i>12/10/77</i>
DRAFTSMAN	<i>W.L.C.</i>	CHECKED BY	<i>W.L.C.</i>
SCALE	<i>AS SHOWN</i>	APPROVED:	<i>W.M.</i>
		<i>City and County of Honolulu</i> DIVISION ENGINEER	

W. S.	PROFILE	C. S.
CR. SEC.	F. S.	S. S.
W. M. BY:	F. W. BY:	S. BY:

JOB NO. 45-70



1. Conc. shall be C.G.G. class B (2520 psi)
① 23 days
2. Reinf. steel shall be intermediate grade $f_y = 20,000$ psi.
3. Unless otherwise noted, Provide $1/2"$ clearance between steel & face of conc., lap bars 13" min. @ splices
4. Chamfer all exterior edges $2\frac{1}{2}"$.
5. Provide pipe clamps and supports as required (not shown).



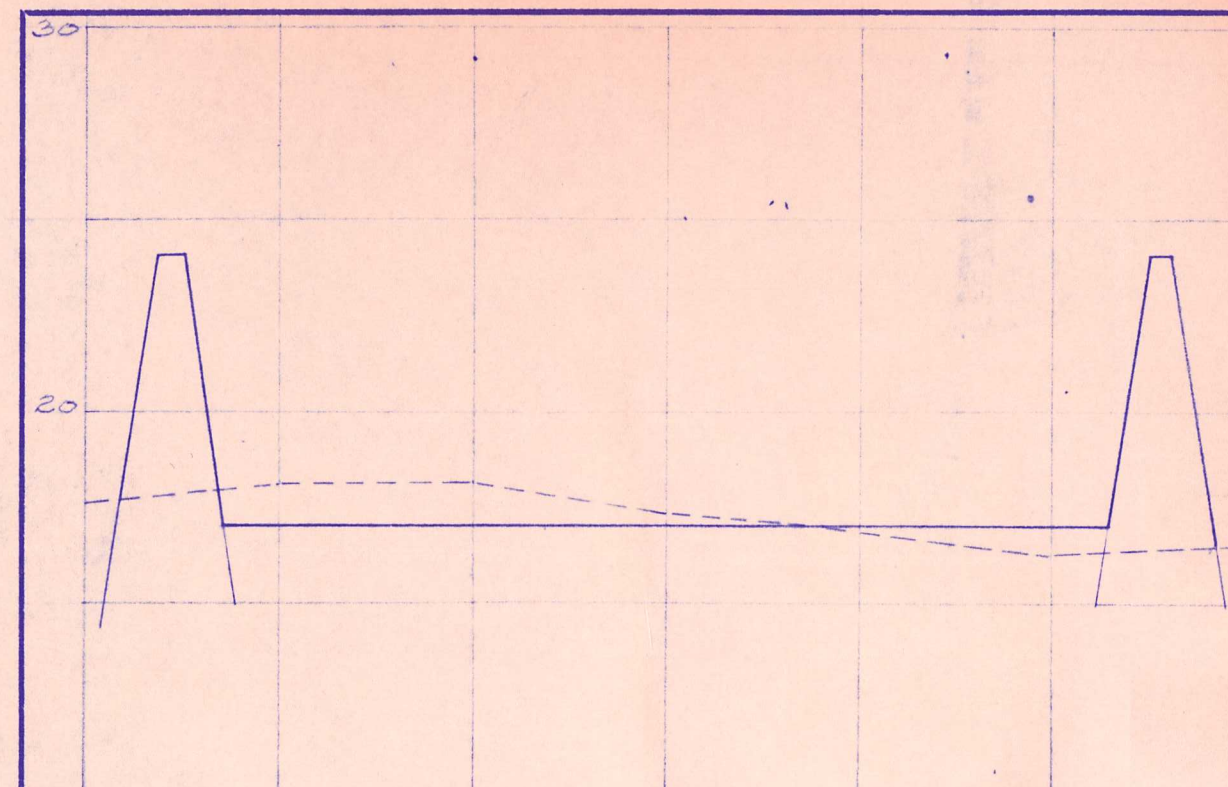
			
REVISION	DATE	BRIEF	BY APPROVED

DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU DIVISION OF SEWERS WAIPAHU WASTE STABILIZATION POND (WAIPAHU, EWA, OAHU, HAWAII) CHLORINATOR CONTACT CHAMBER	
ENGINEER	C.Y. W.N.
DRAFTSMAN	D.S. A.M.
SCALE	AS SHOWN
DATE	12/20/70
CHECKED BY	HW
TRACER	D.S. A.M.
APPROVED	 DIVISION ENGINEER

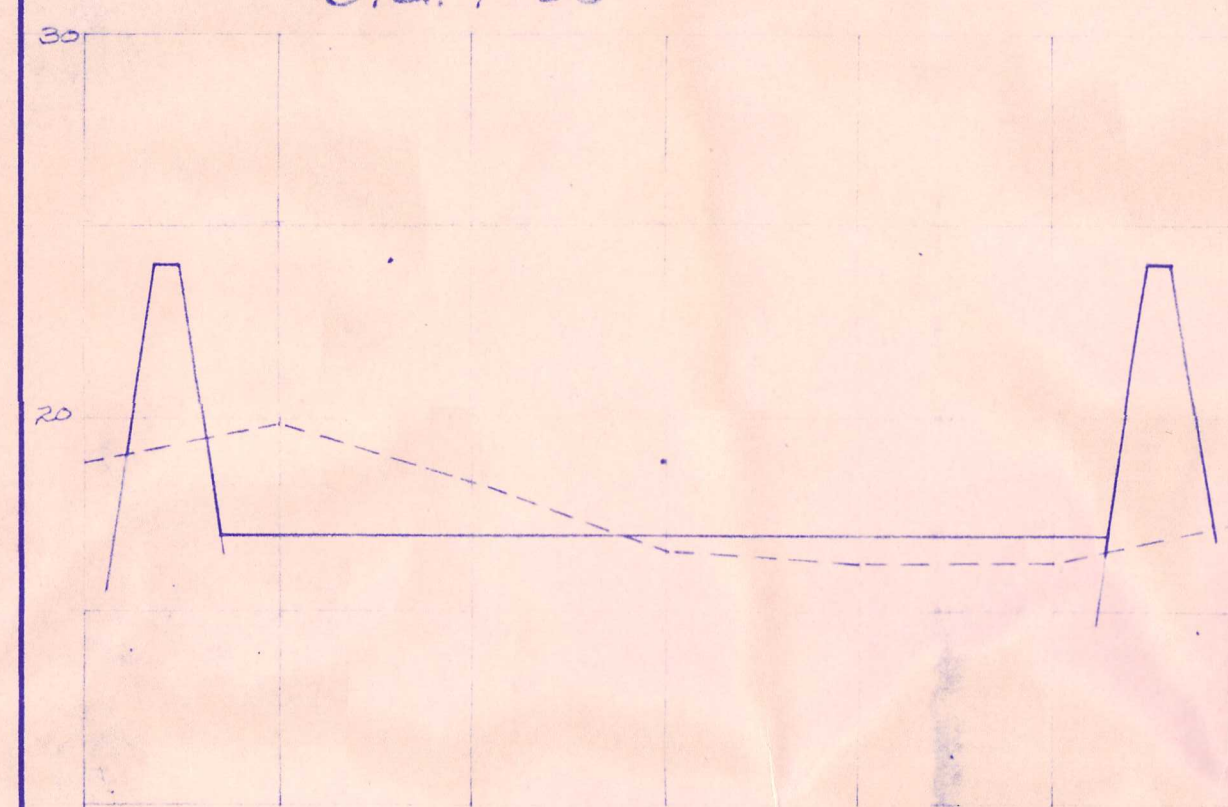
W. S.	PROFILE	C. B.
C. R. SEC.	F. S.	S. B.
W. M. BY:	F. W. BY:	S. BY:

JOB NO. 45-70

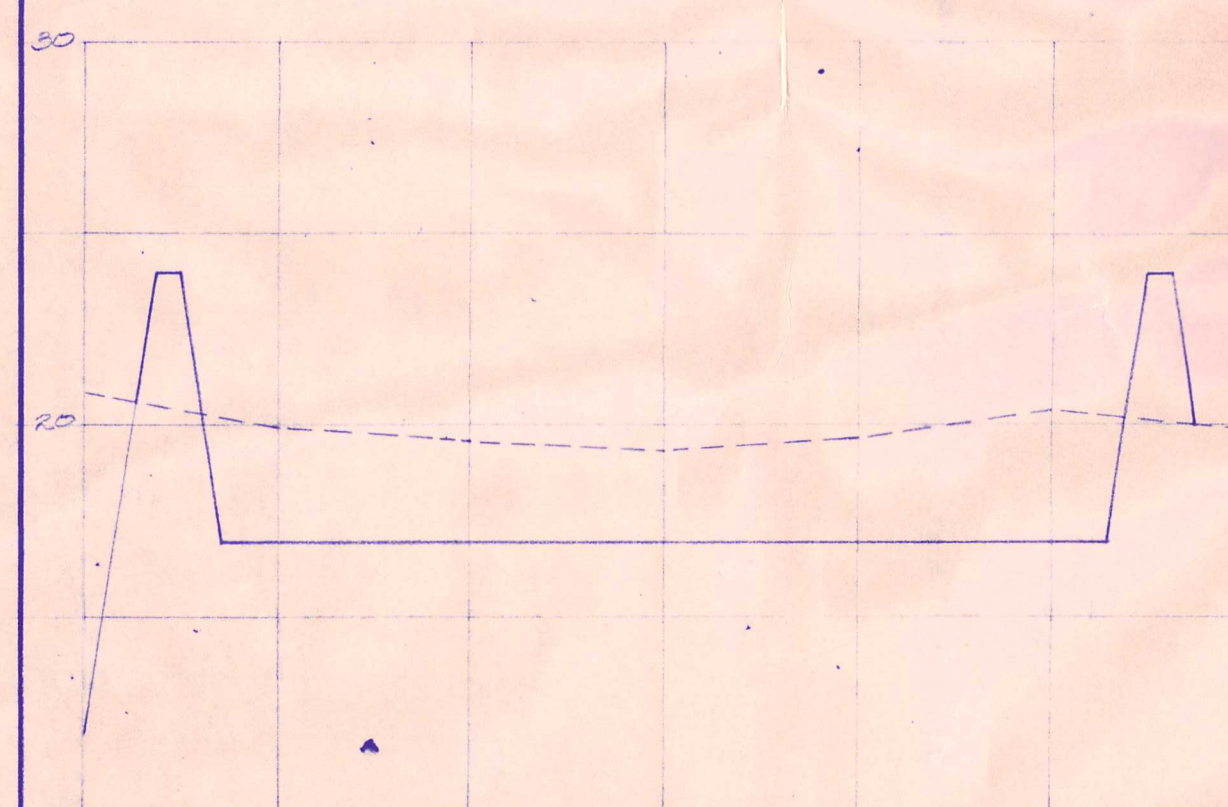
FILE	POCKET	FOLDER	NO.
17	5	1	49



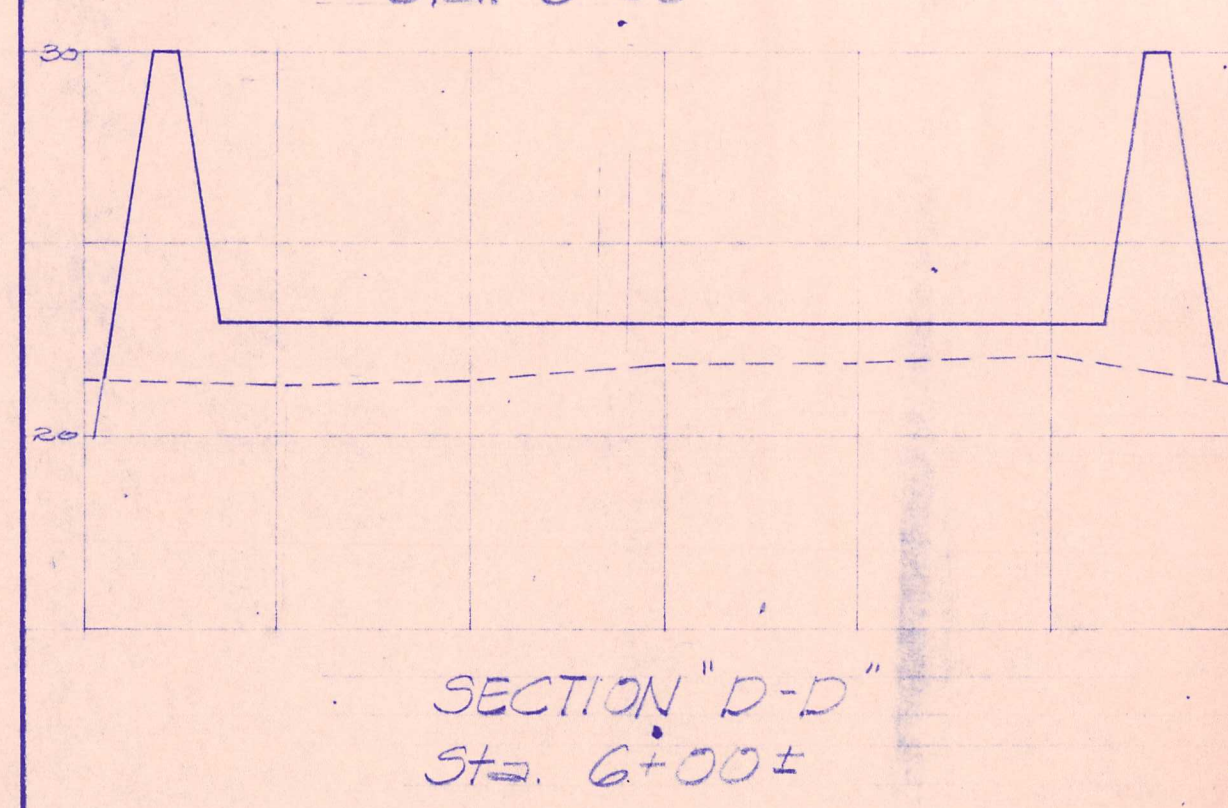
SECTION "A-A"
Sta. 1+00±



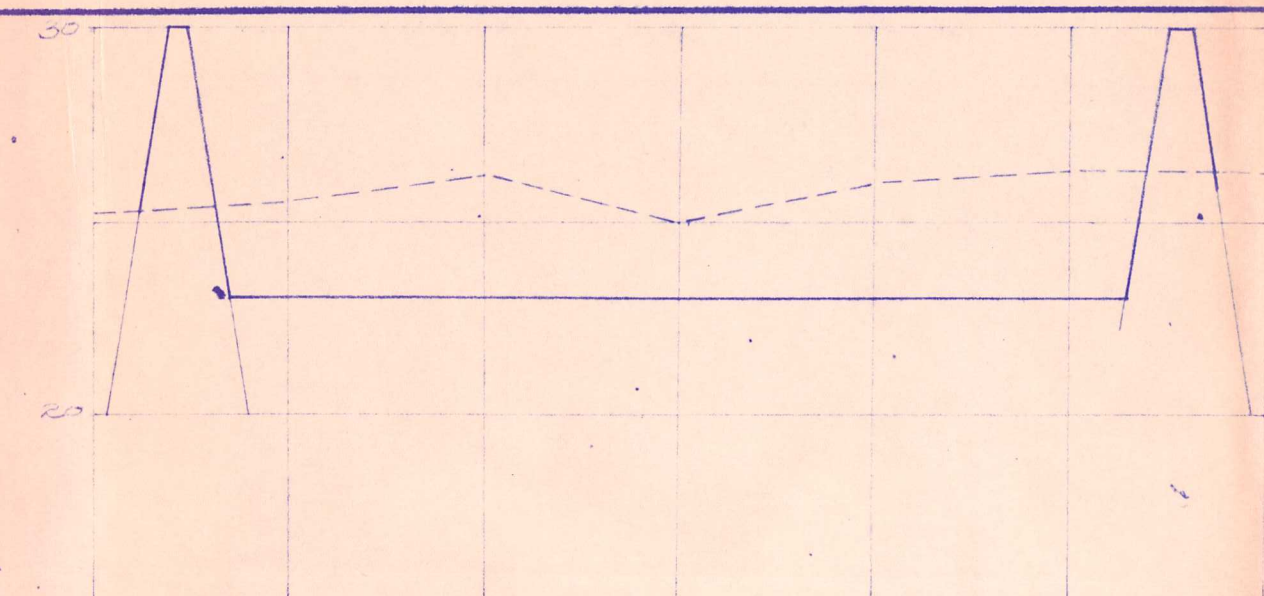
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Sta. 3+00±



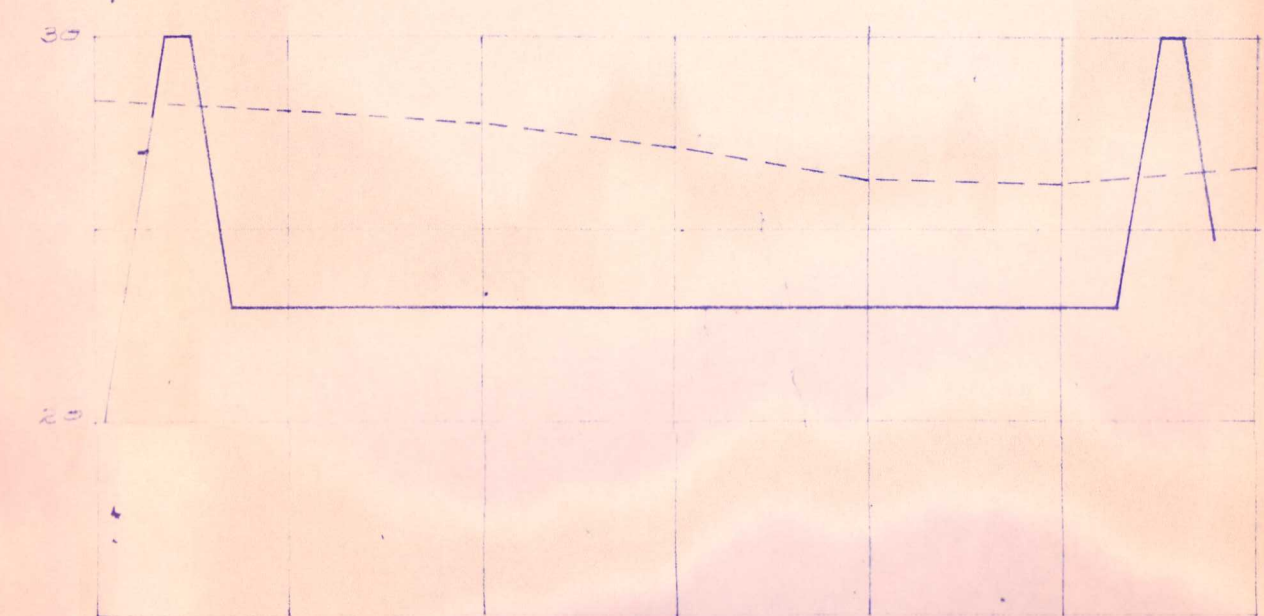
SECTION "C-C"
Sta. 5+00±



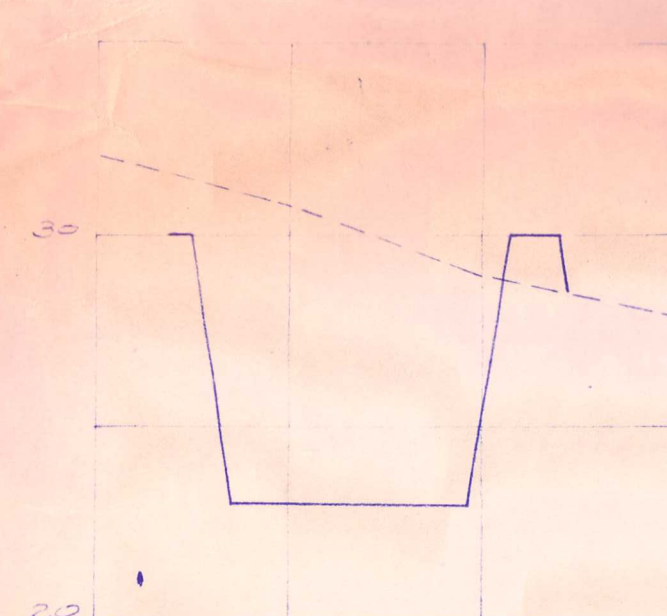
SECTION "D-D"
Sta. 6+00±



SECTION "E-E"
Sta. 8+00±



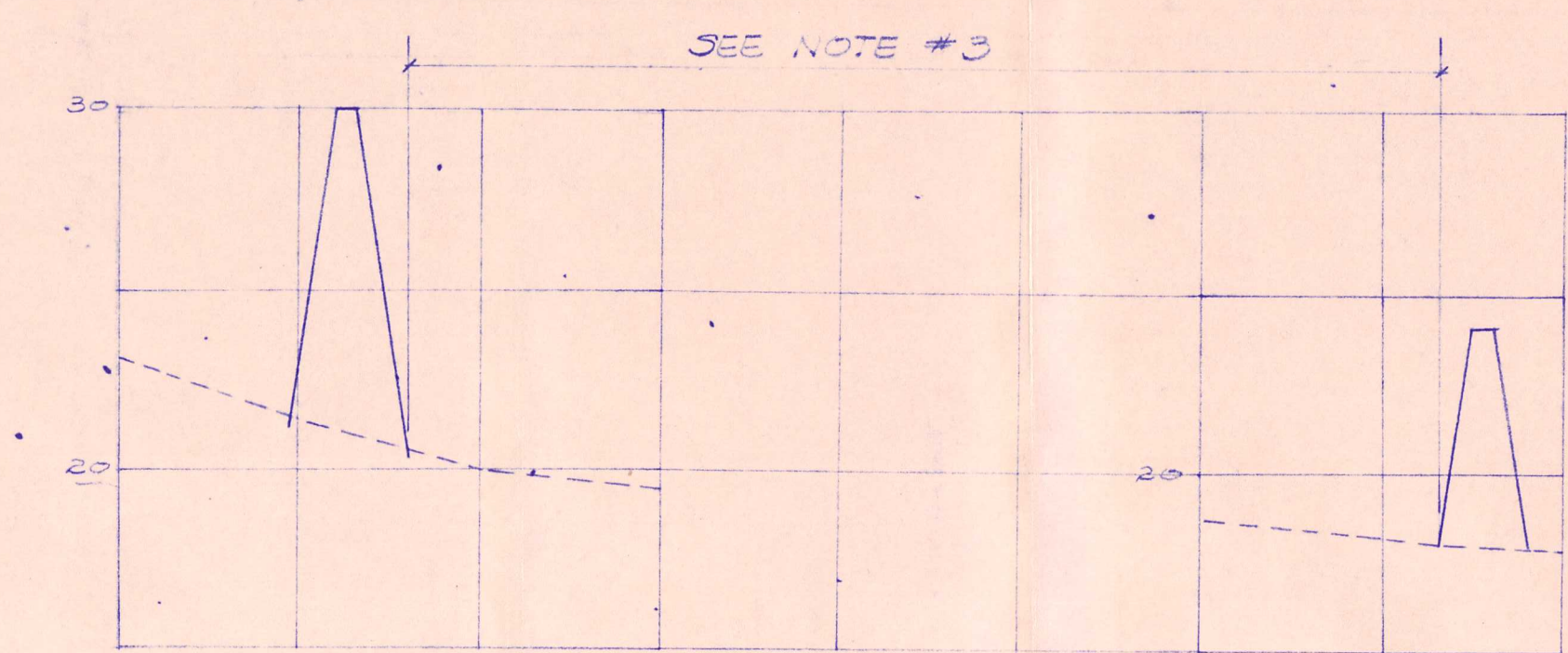
SECTION "F-F"
Sta. 9+00±



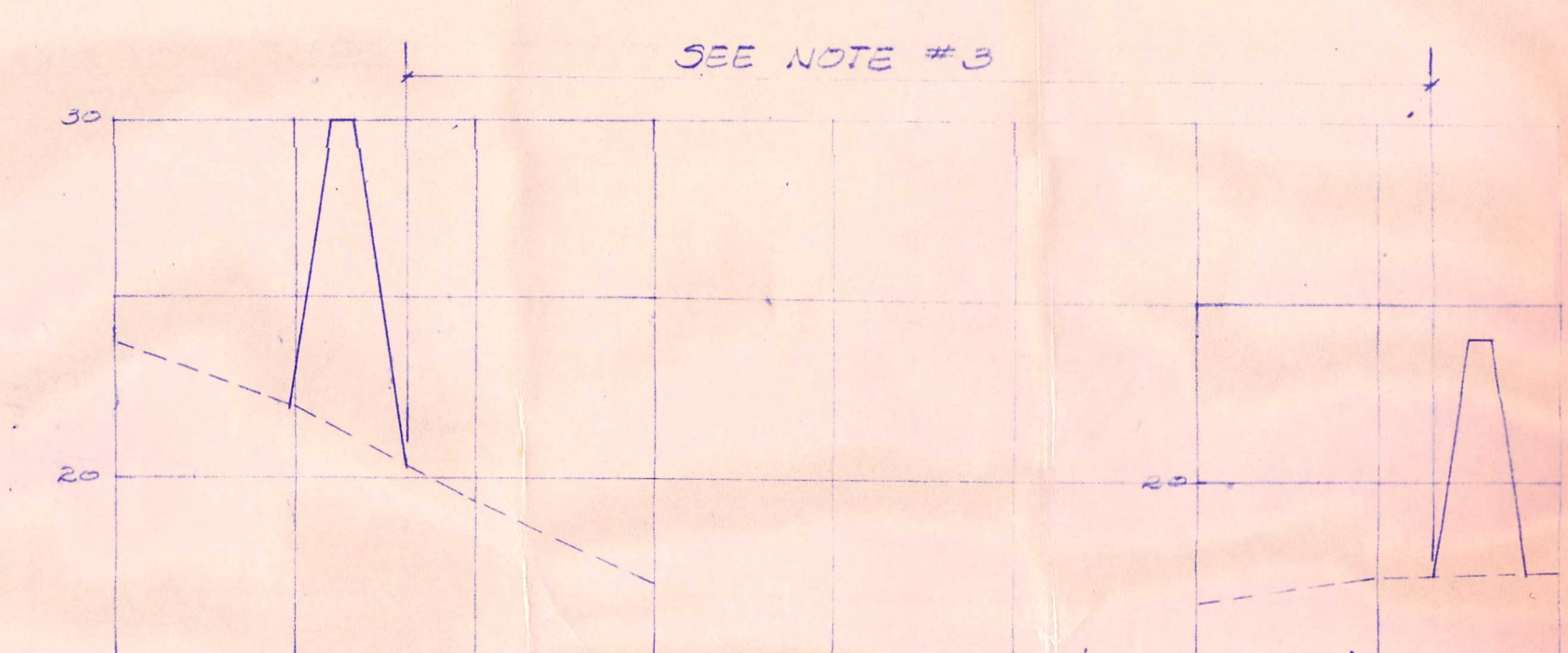
SECTION "G-G"
Sta. 11+00±

NOTES:

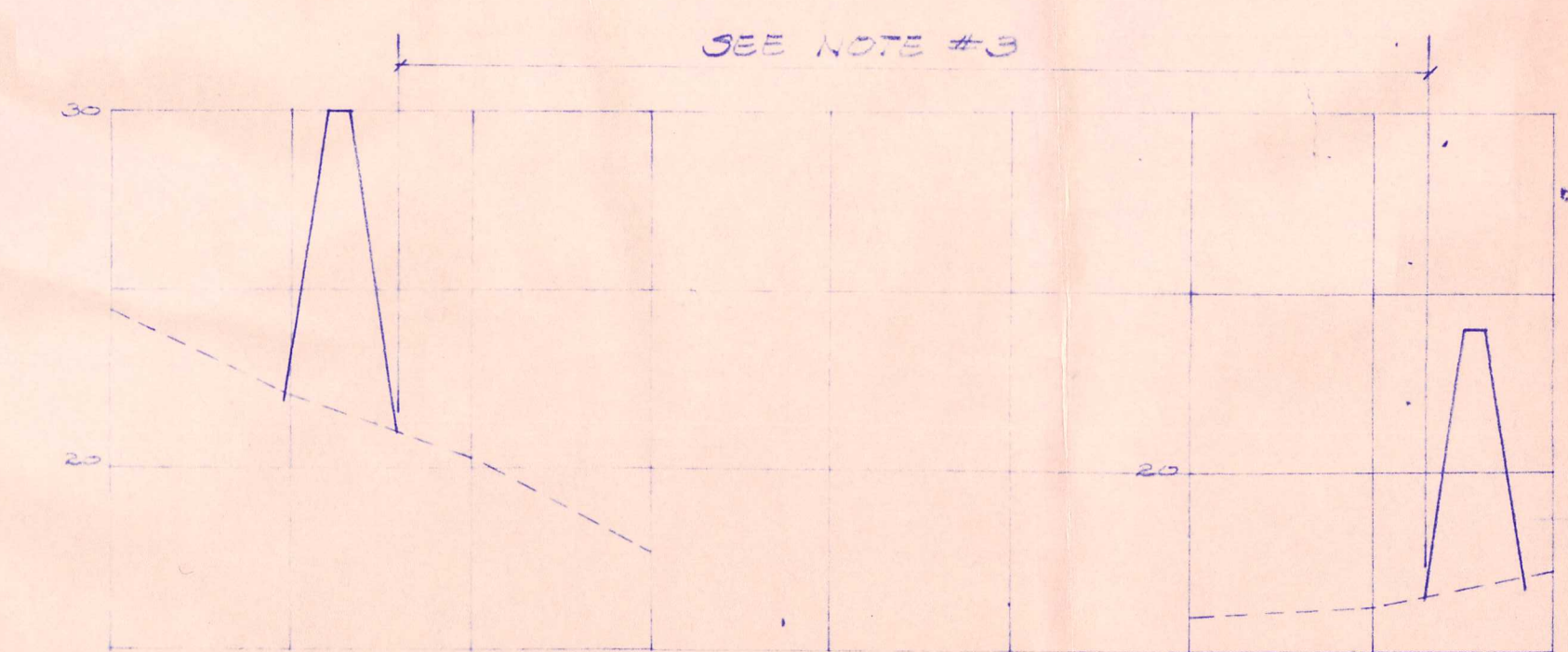
1. The sections shown on this sheet were used to determine the earthwork listed on sheet 2.
2. Refer to plan on sheet 2.
3. Sections "1-1" to "3-3" were used to determine the center and berm quantities only.
4. Excavation & Embankment quantities for overexcavating the bottom 6 inches in this pond area not included in these sections.



SECTION "1-1"
Sta. 1+00±



SECTION "2-2"
Sta. 3+00±



SECTION "3-3"
Sta. 5+00±

Scale:
Horiz. 1"=100'
Vert. 1"=5'

REVISION	DATE	BRIEF	BY	APPROVED
DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU DIVISION OF SEWERS WAIPAHU WASTE STABILIZATION POND (WAIPAHU, EWA, OAHU, HAWAII) CROSS SECTIONS ENGINEER: <u>D. C. K.</u> DATE: <u>12/30/70</u> DRAFTSMAN: <u>D. C.</u> CHECKED BY: <u>W. M.</u> SCALE: <u>As Shown</u> TRACER: <u>D. C.</u> APPROVED: <u>W. M.</u> DIVISION ENGINEER				
W. S.	PROFILE	C. S.		
CR. SEC.	F. S.	S. S.		
W. M. BY:	F. W. BY:	S. BY:		

JOB NO.

SP71-96 DEPT. OF PUBLIC WORKS

