

SCALE: 2 chains to 1 inch

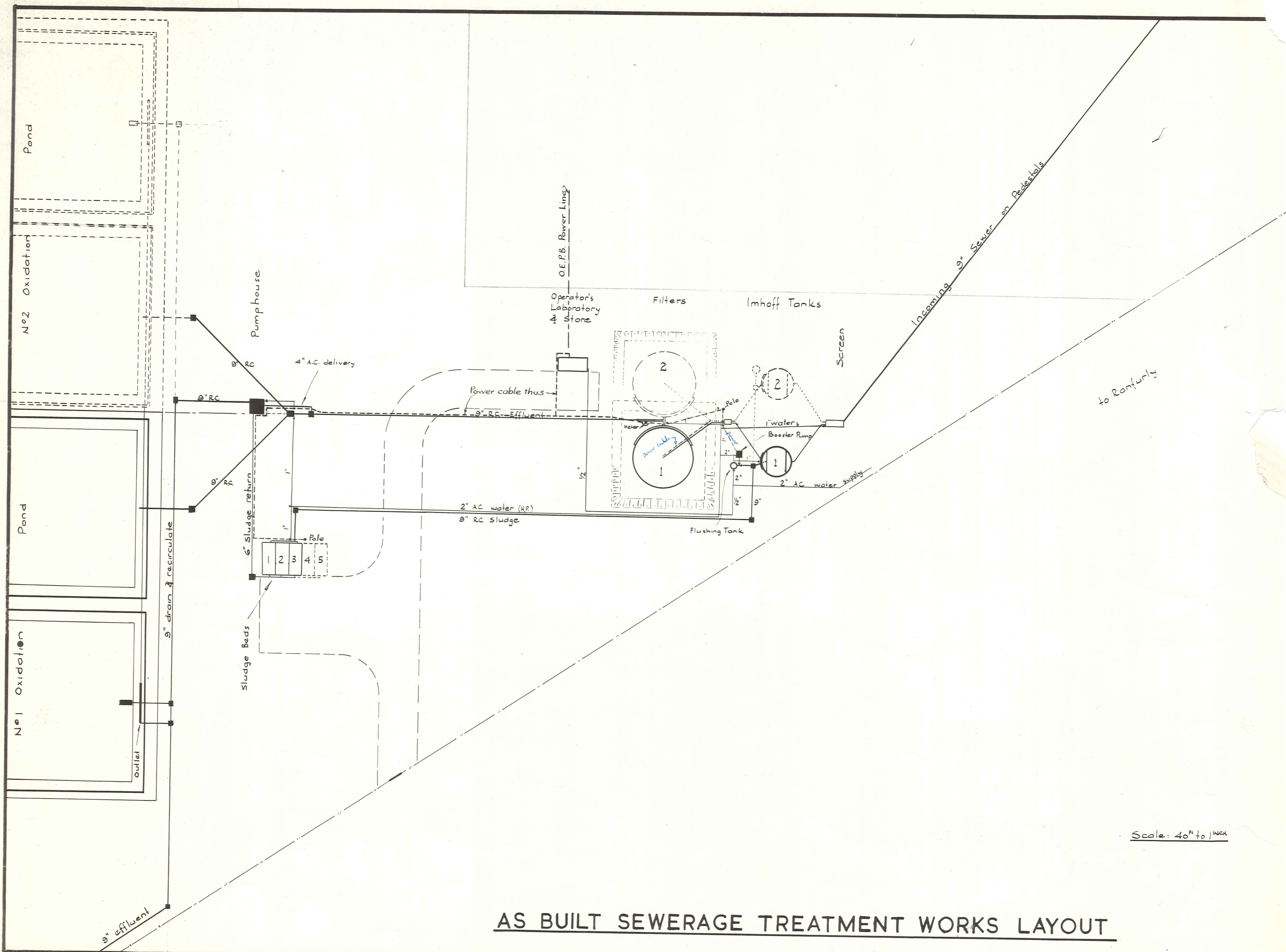
MANIOTOTO COUNTY COUNCIL

RANFURLY SEWERAGE SCHEME

DUFFILL, WATTS & KING
 CIVIL ENGINEERS AND SURVEYORS
 DUNEDIN and INVERCARGILL

APPROVED BY	DATE
<i>R. L. ...</i>	<i>Aug. 1960</i>
DESIGNED BY	
<i>R. Alwooden</i>	

JOB No.
2895/26
 FILE No.



Scale: 40' to 1" INCH

AS BUILT SEWERAGE TREATMENT WORKS LAYOUT

MANIOTOTO COUNTY COUNCIL

RANFURLY SEWERAGE SCHEME

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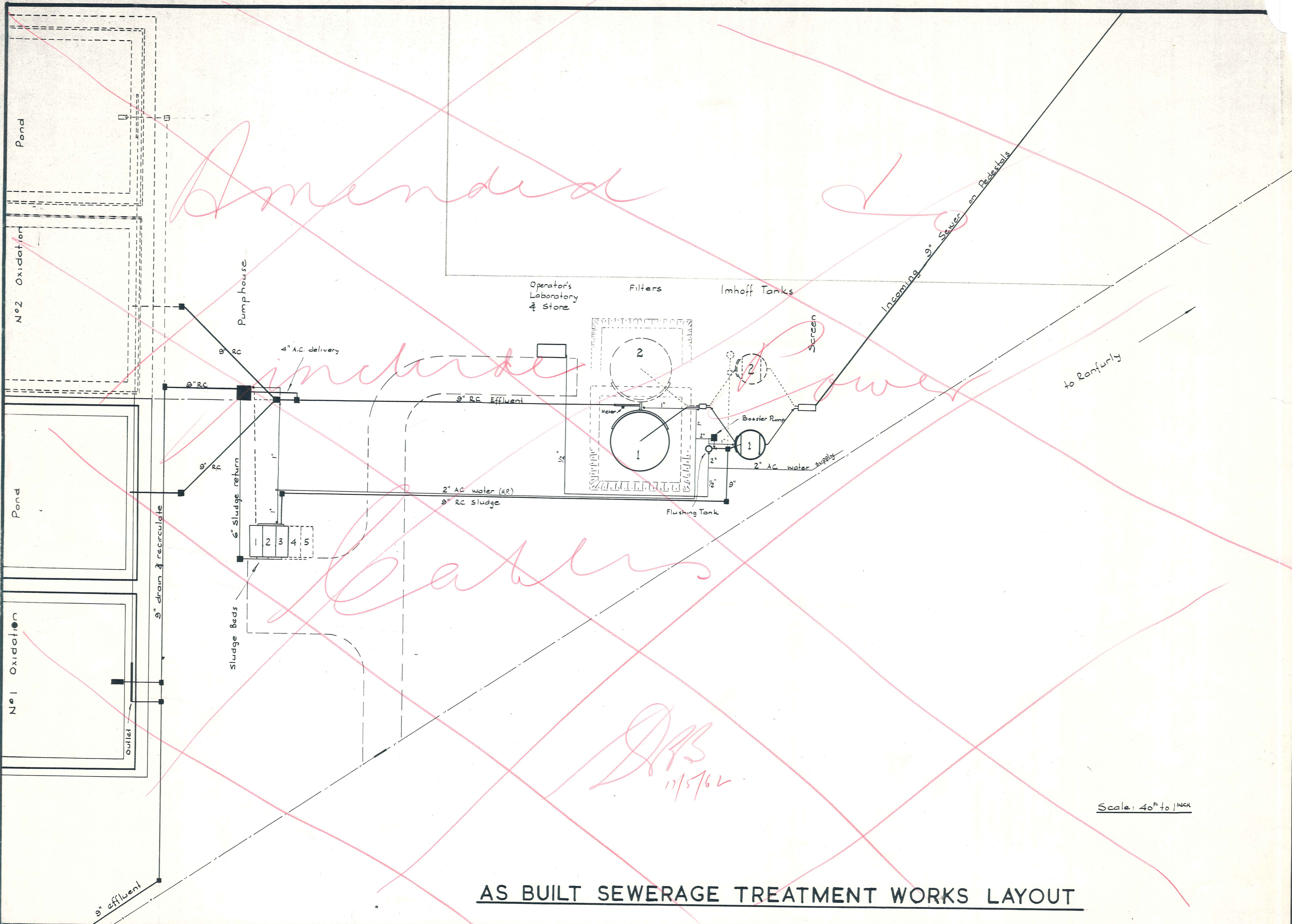
2895/40

Amended

included

Labels

*DJS
11/5/62*



to Ranfurly

Scale: 40' to 1" inch

AS BUILT SEWERAGE TREATMENT WORKS LAYOUT

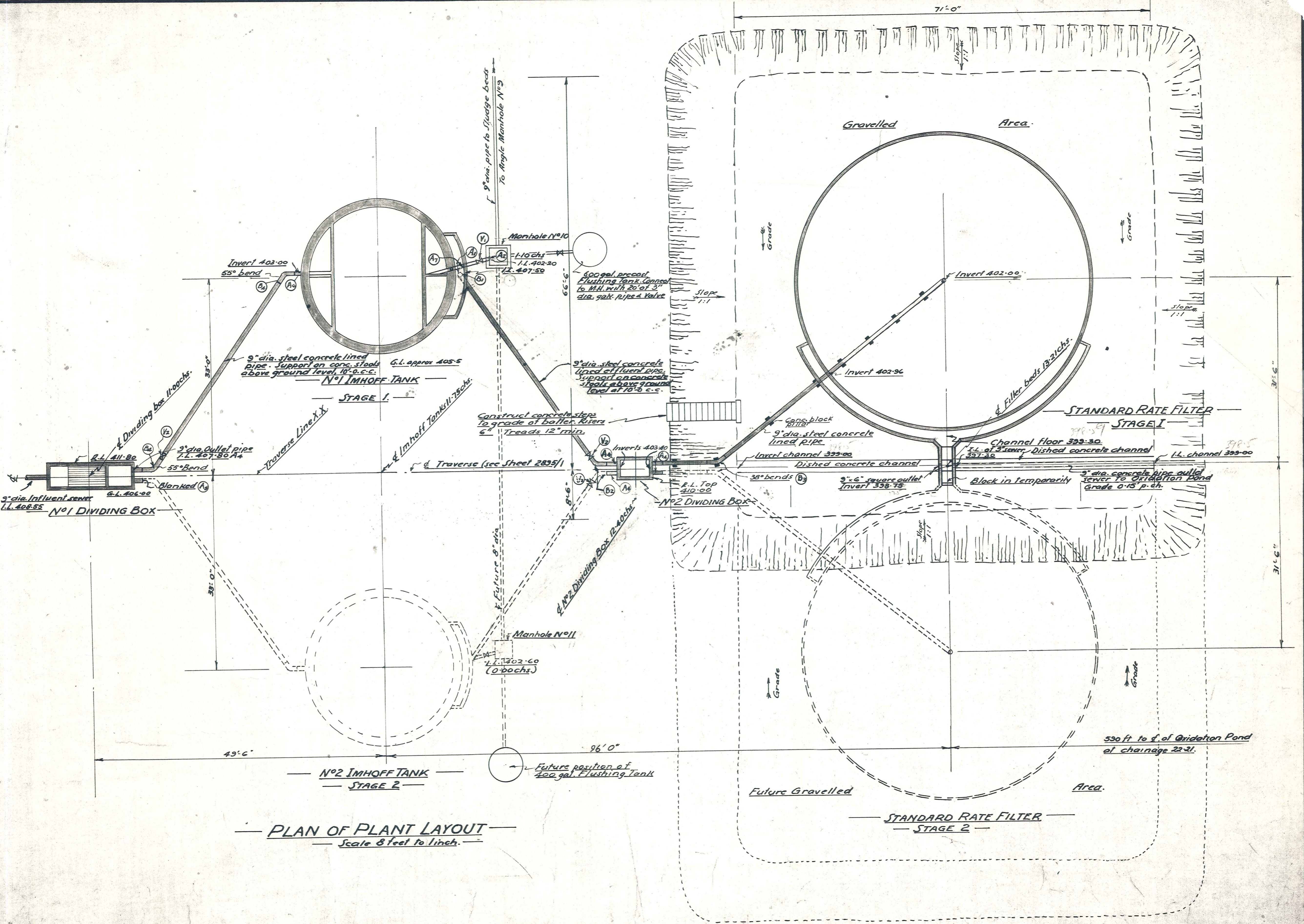
MANIOTOTO COUNTY COUNCIL

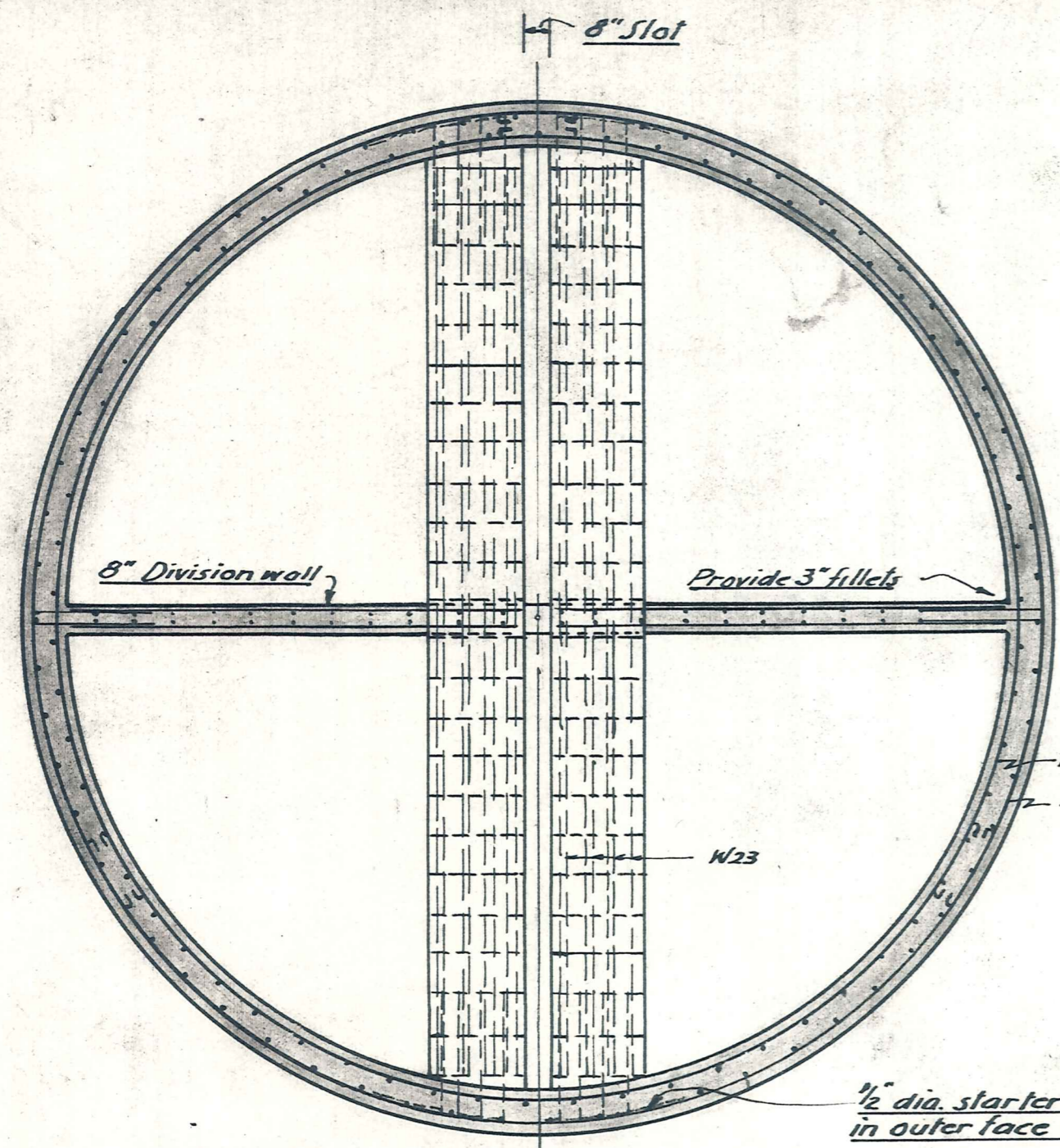
RANFURLY SEWERAGE SCHEME

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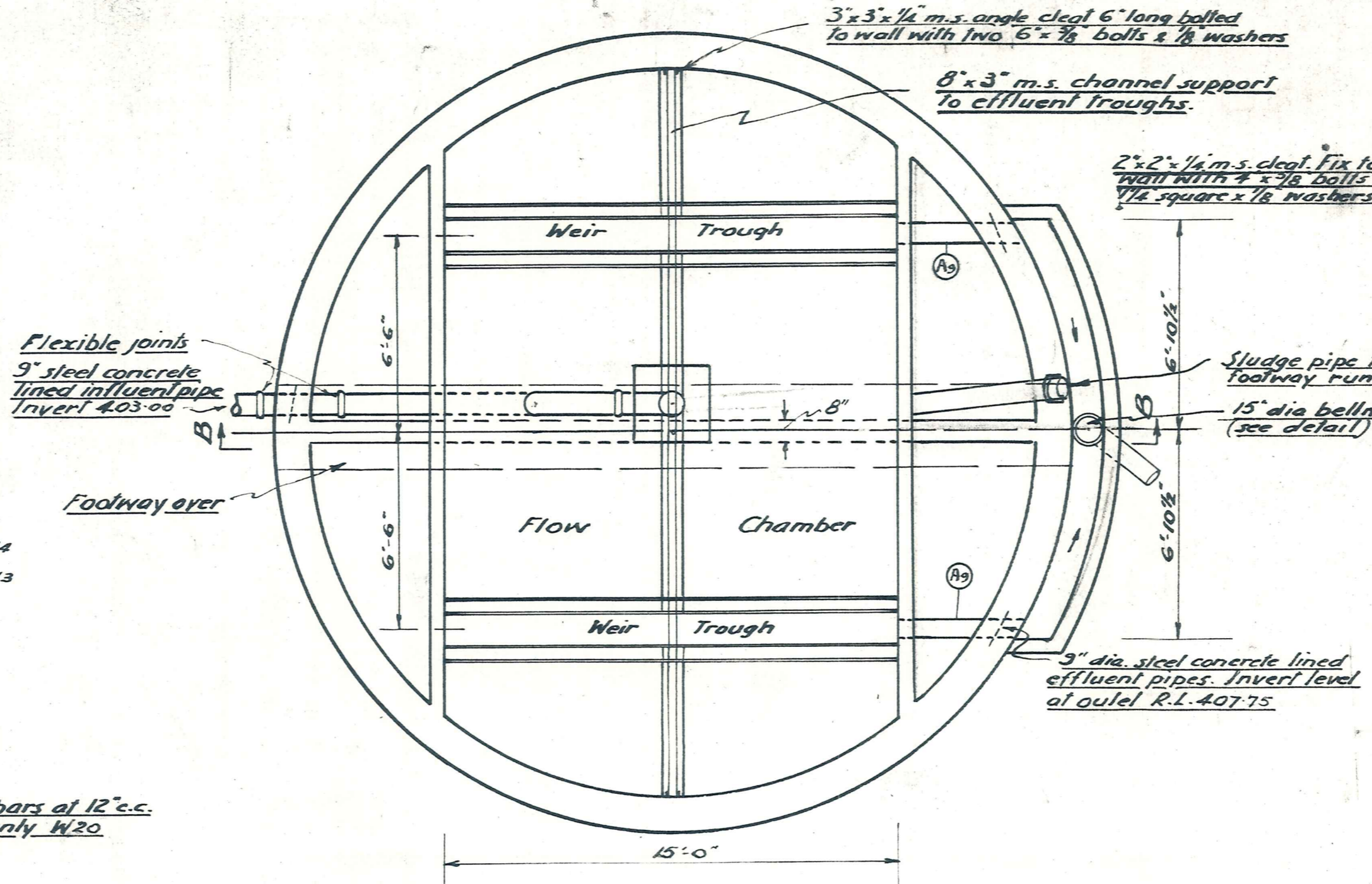
DESIGNED BY	DATE	JOB NO.
DRAWN BY	12/6	2895/40
CHECKED BY		
PROJECT		

2895/40

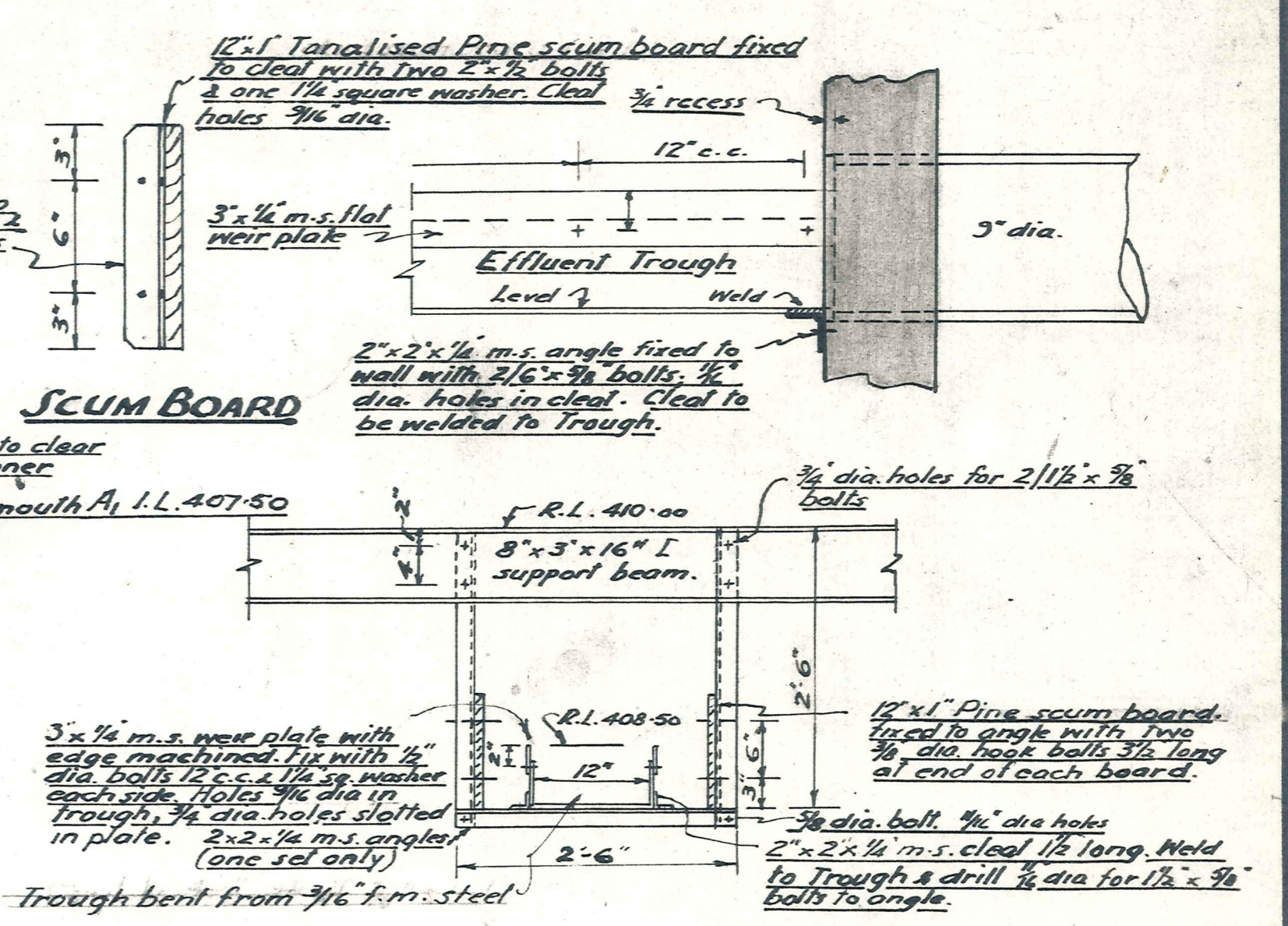




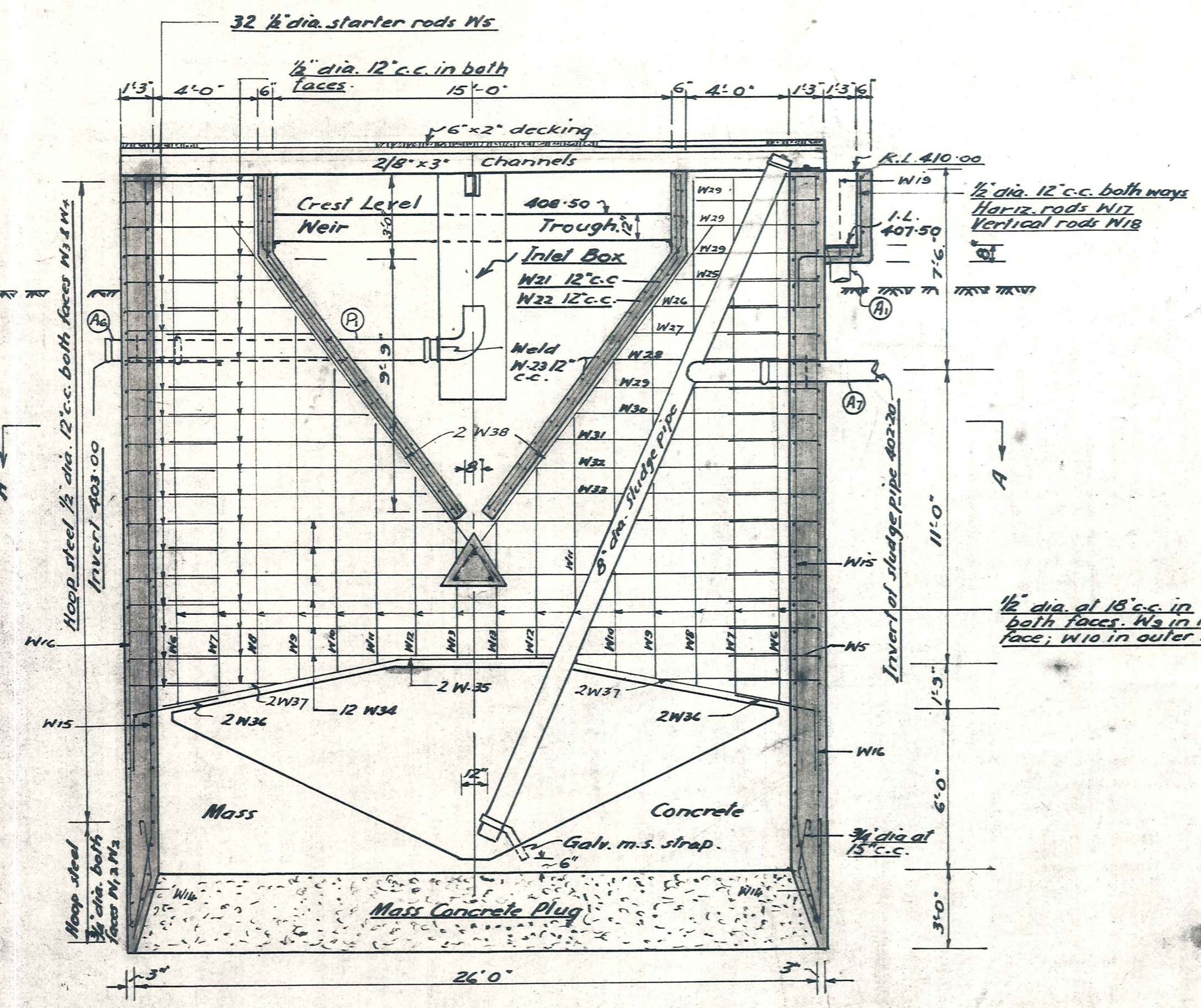
SECTION ON AA.



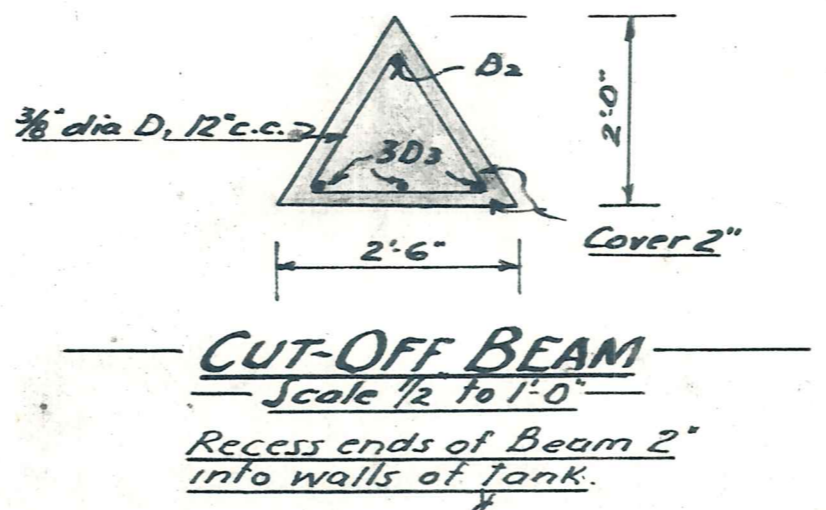
PLAN OF TANK
(Footway not shown)



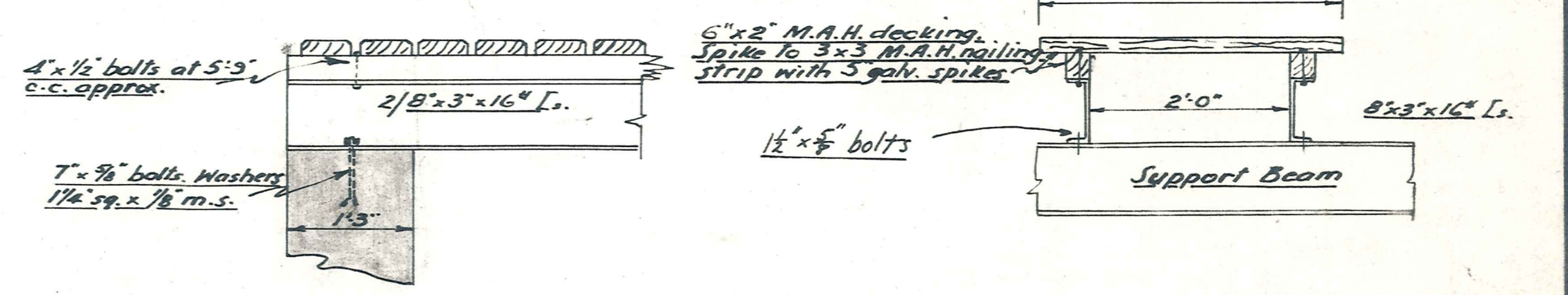
DETAIL OF EFFLUENT WEIR TROUGH
— Scale 3/4\"/>



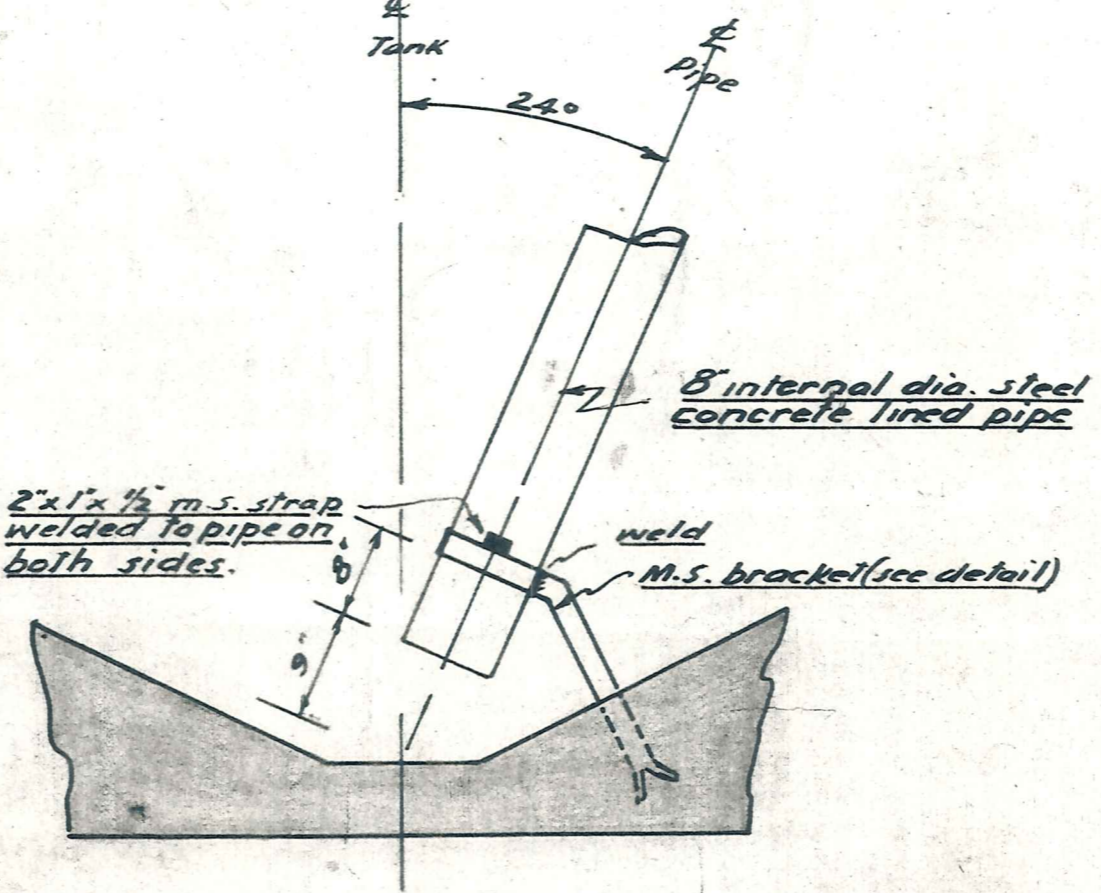
SECTION ON B.B.
— Scale 1/4\"/>



CUT-OFF BEAM
— Scale 1/2\"/>

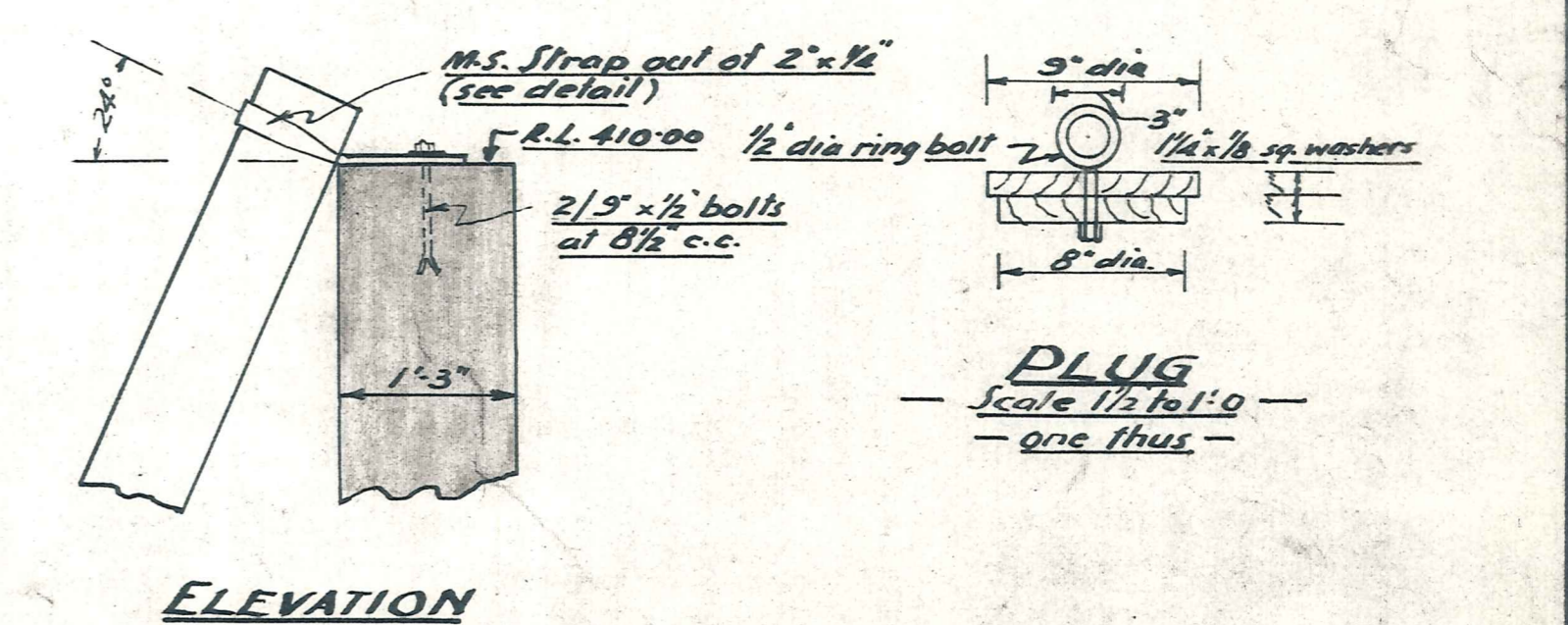


FOOTWAY DETAILS
— Scale 3/4\"/>



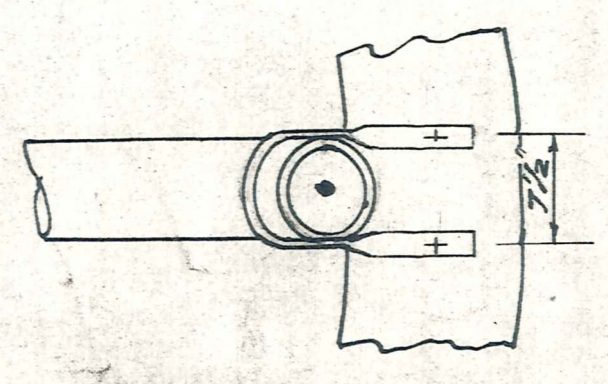
DETAIL AT BOTTOM

DETAILS OF SLUDGE PIPE FIXING
— Scale 3/4\"/>

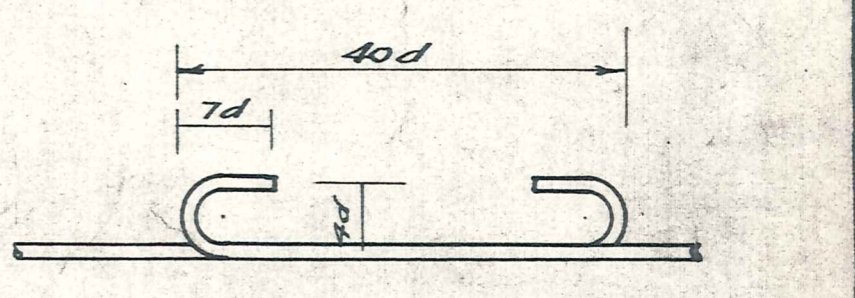


ELEVATION

PLUG
— Scale 1 1/2\"/>

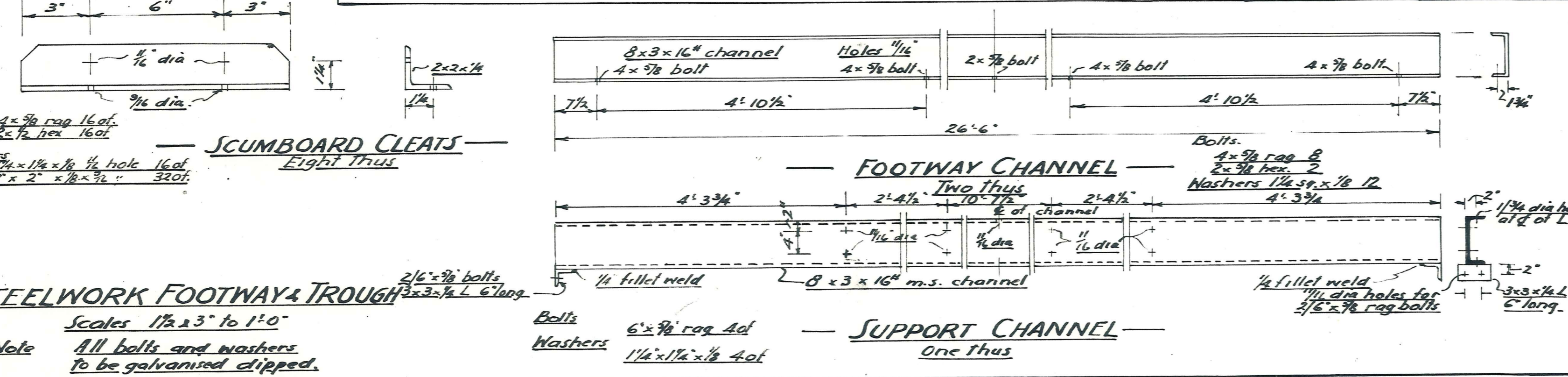
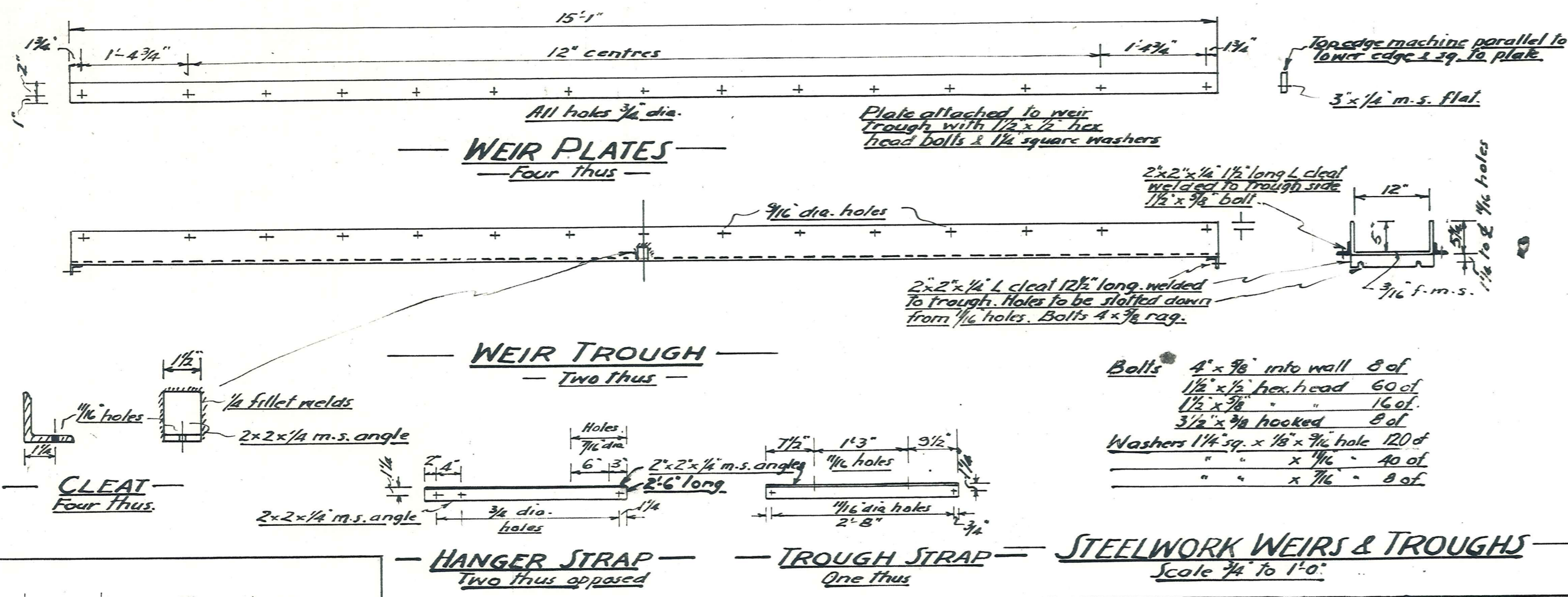


PLAN

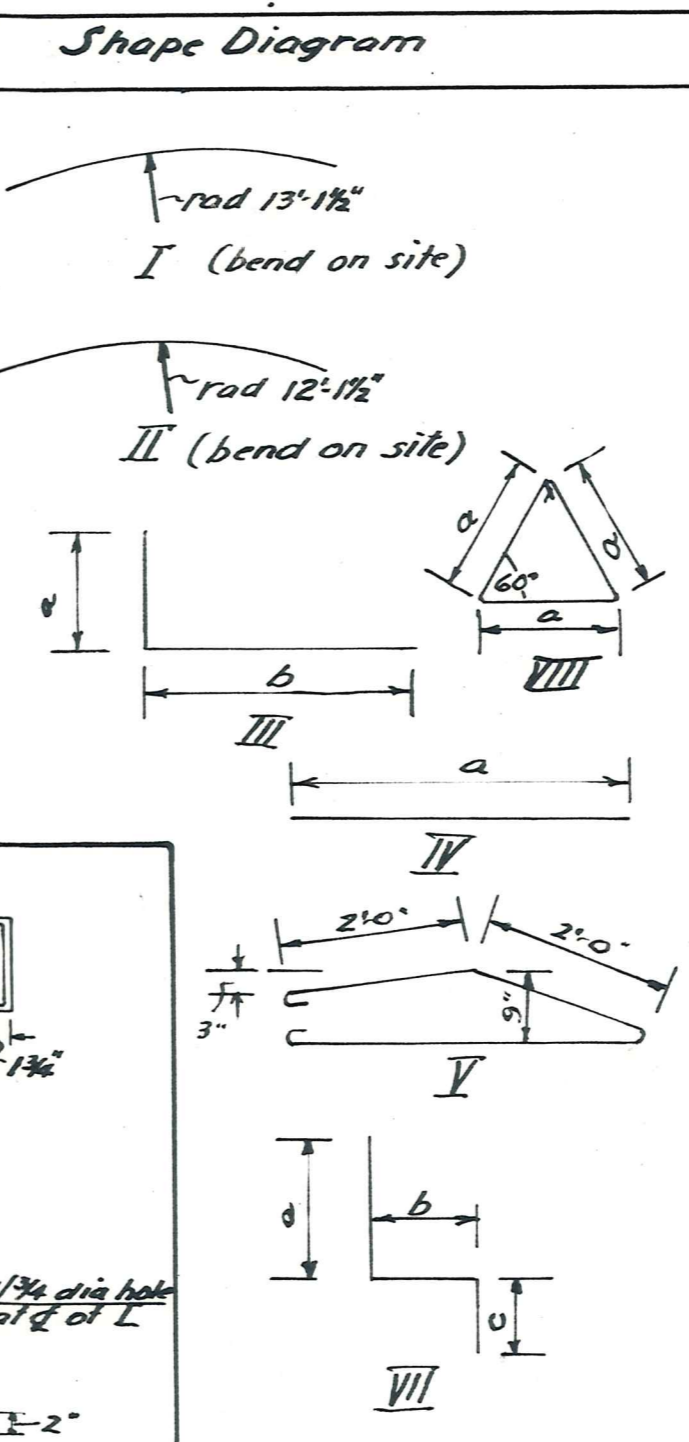


TYPICAL HOOK & LAP
— Not to scale —

Note: Unless otherwise shown minimum cover on steel to be 1 1/2"

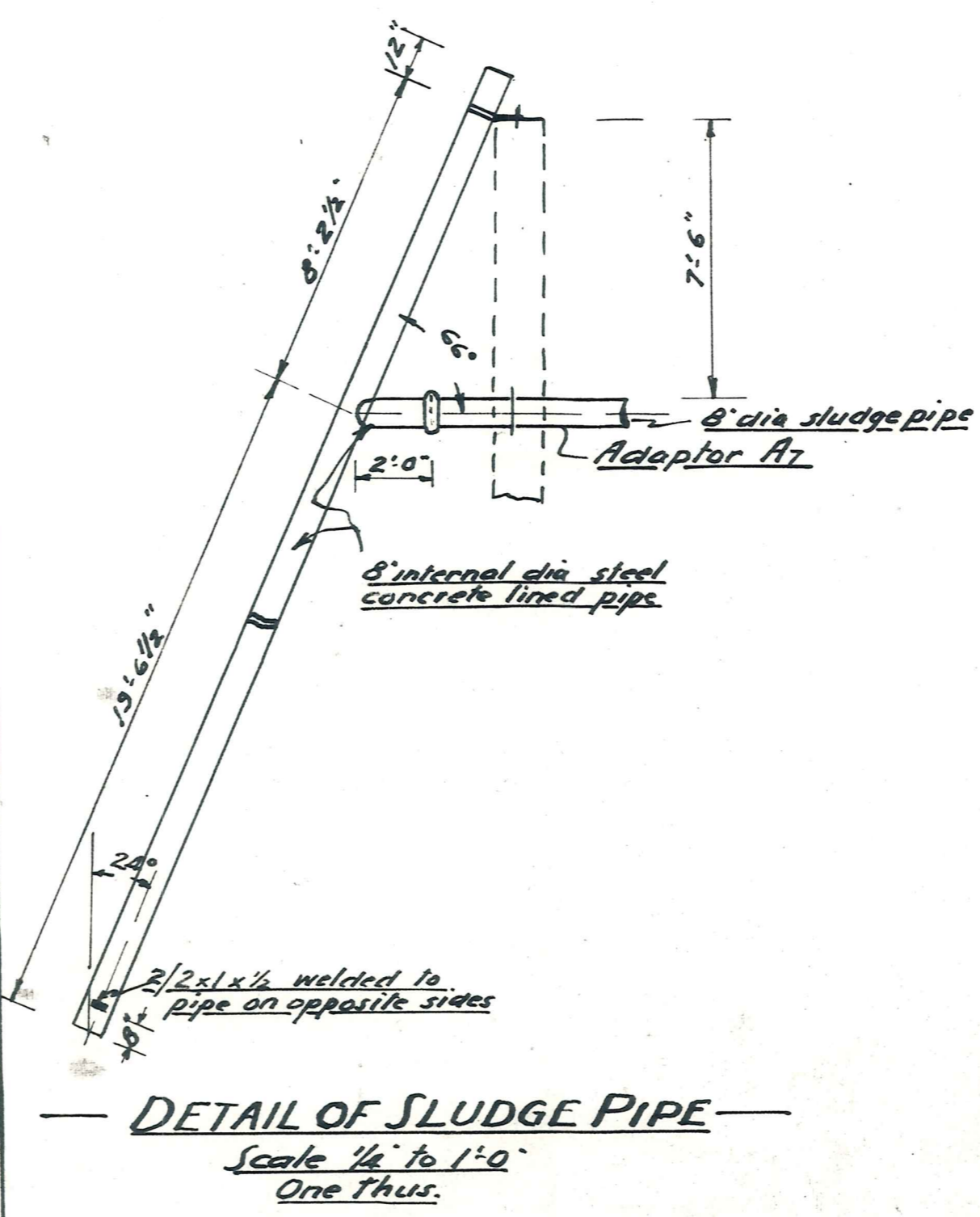
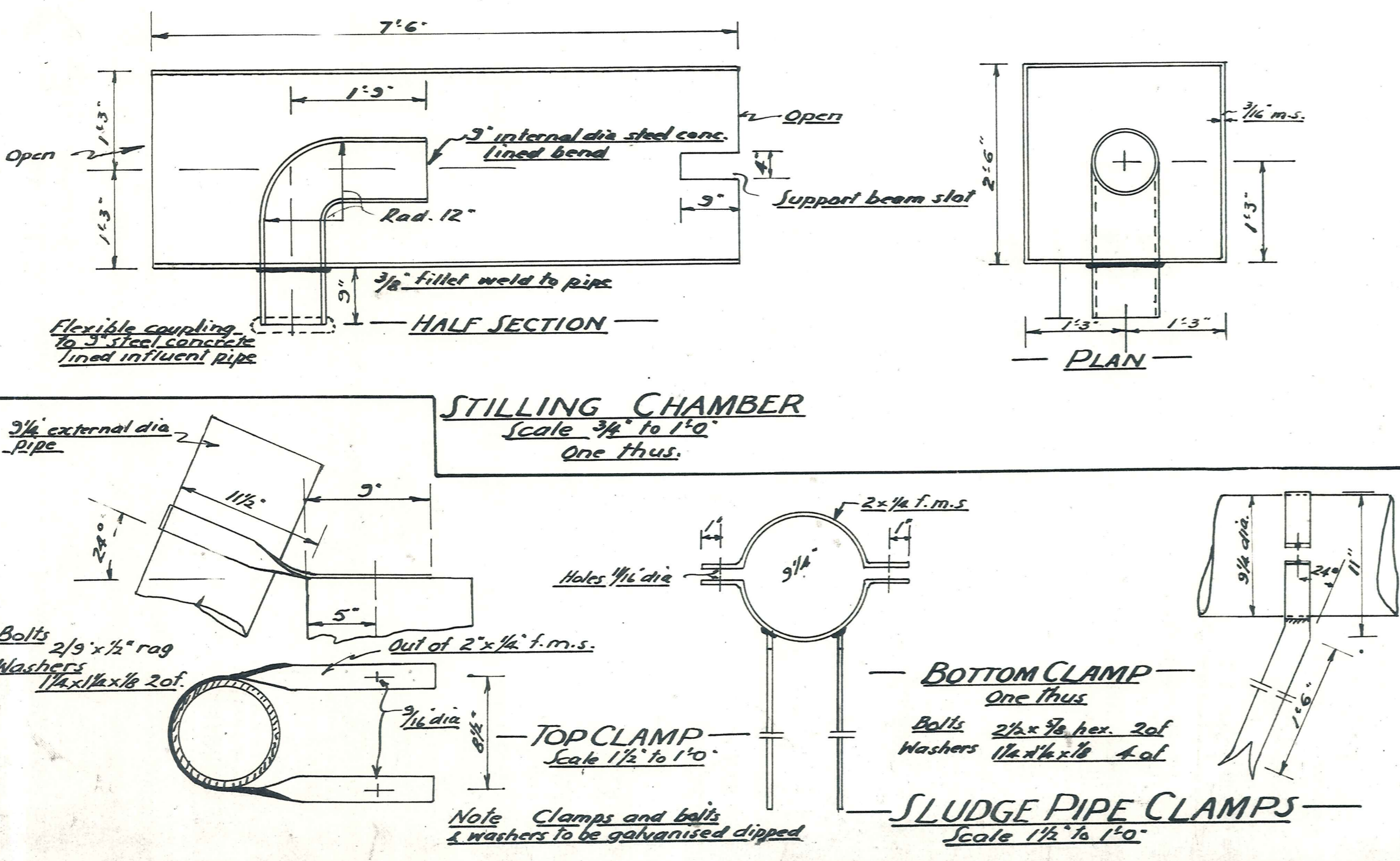


REINFORCING SCHEDULE

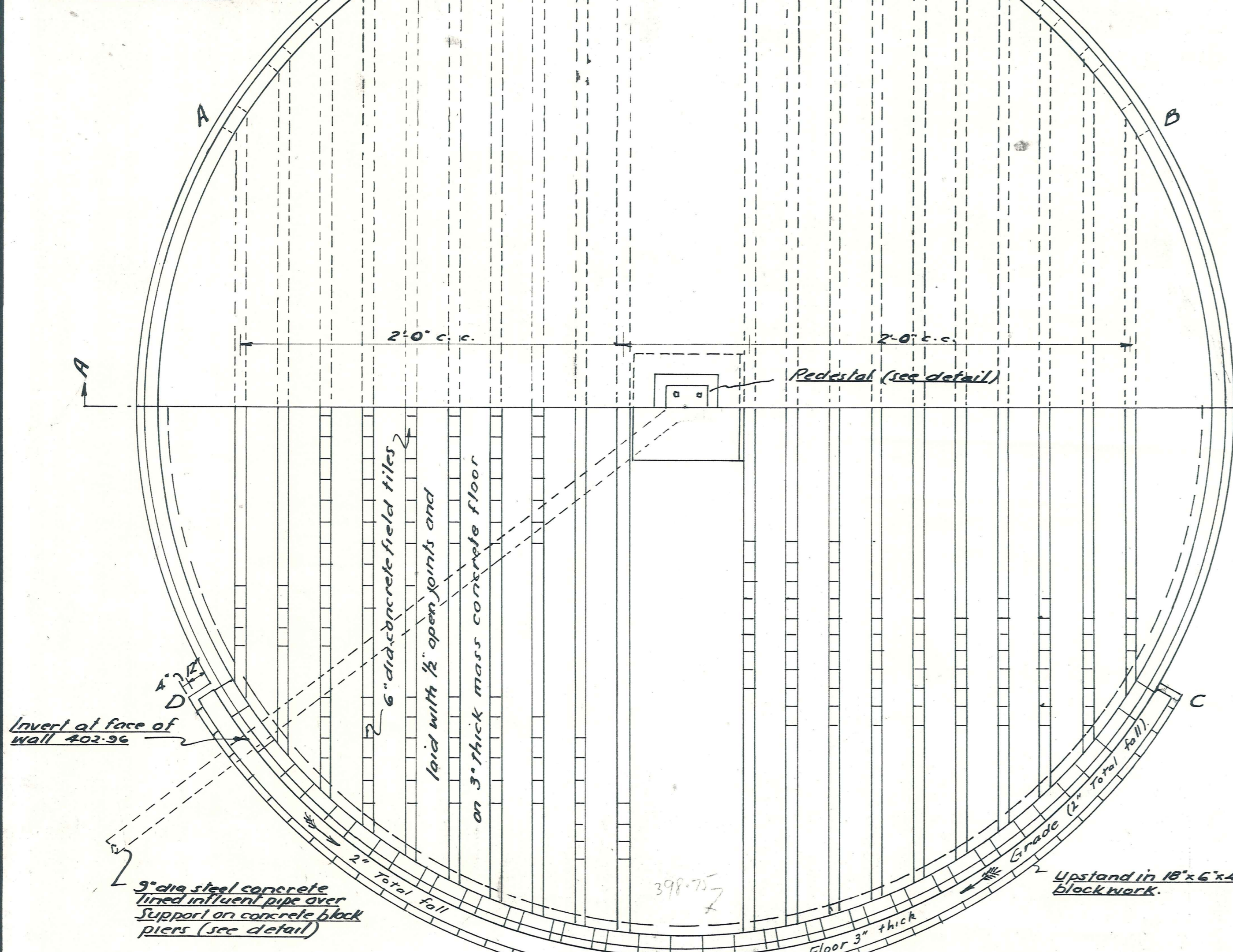


Mark	Location	Dia.	Shape	No off	Cut Length	Dimensions a b c
W1	Walls (outer)	3/4"	I	15	30'-9"	- - -
W2	" (inner)	"	II	12	28'-6"	- - -
W3	" (outer)	3/8"	I	72	30'-9"	- - -
W4	" (inner)	"	II	72	28'-6"	- - -
N5	Walls	1/2"	III	64	5'-0"	1'-9" 3'-3" -
W6	Crosswall	"	IV	4	19'-6"	19'-6" - -
W7	"	"	"	4	19'-3"	19'-3" - -
W8	"	"	"	4	19'-0"	19'-0" - -
W9	"	1/2"	"	4	13'-9"	13'-9" - -
W10	"	"	"	4	11'-6"	11'-6" - -
W11	"	"	"	4	9'-0"	9'-0" - -
W12	"	"	"	4	6'-9"	6'-9" - -
W13	"	"	"	4	5'-3"	5'-3" - -
W14	Cutting edge	3/4"	V	62	9'-3"	- - -
N15	Walls (inner)	3/8"	IV	62	28'-6"	28'-6" - -
N16	" (outer)	"	"	62	27'-0"	27'-0" - -
W17	Outlet	1/2"	III	4	17'-9"	2'-9" 15'-0" -
W18	"	"	VII	16	6'-11"	3'-0" 2'-3" 1'-8" -
W19	"	"	III	2	4'-8"	3'-0" 1'-8" -
W20	flow Cham.	"	III	60	5'-0"	1'-9" 3'-3" -
W21	"	"	IV	48	15'-0"	15'-0" - -
W22	"	"	"	48	15'-0"	15'-0" - -
W23	"	"	IV	62	22'-6"	22'-6" - -
W24	Crosswall	"	"	16	4'-9"	4'-9" - -
W25	"	"	"	4	4'-0"	4'-0" - -
W26	"	"	"	4	4'-6"	4'-6" - -
W27	"	"	"	4	5'-3"	5'-3" - -
W28	"	"	"	4	6'-0"	6'-0" - -
W29	"	"	"	4	6'-9"	6'-9" - -
W30	"	"	"	4	7'-6"	7'-6" - -
W31	"	"	"	4	8'-3"	8'-3" - -
W32	"	"	"	4	9'-0"	9'-0" - -
W33	"	"	"	4	9'-9"	9'-9" - -
W34	"	"	"	12	23'-0"	23'-0" - -
W35	"	1"	"	2	24'-0"	24'-0" bend on site
W36	"	3/8"	III	4	5'-6"	3'-3" 2'-3" -
D1	Δ Beam	3/8"	VIII	25	5'-10"	1'-9" 1'-9" 1'-9" -
D2	"	1/2"	IV	1	24'-2"	24'-2" - -
D3	"	1"	IV	3	24'-2"	24'-2" - -
W37	Crosswall	1/2"	V	4	4'-3"	4'-3" - -
W38	"	"	"	4	14'-9"	14'-9" - -

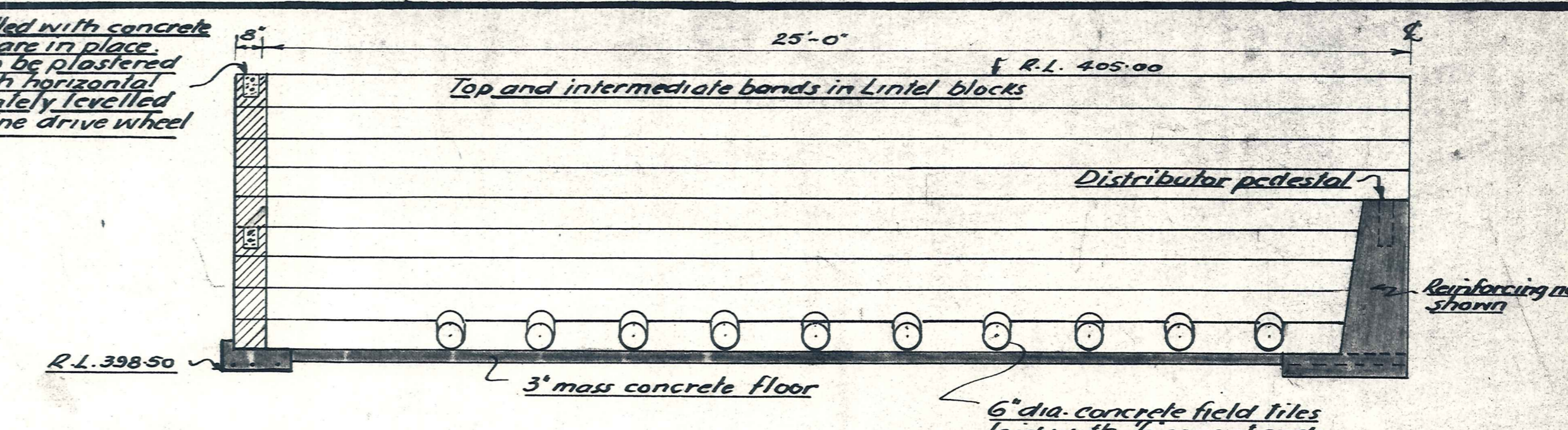
Note
No hooks except type II
Steel to be bent on a mandrel at least 3d.



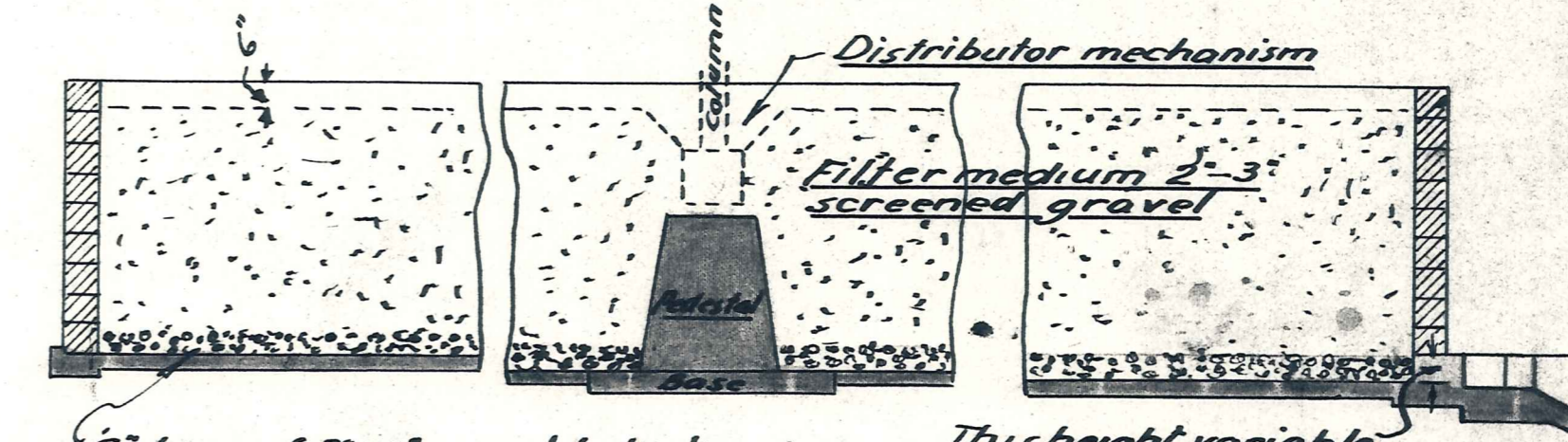
HALF PLAN OF FILTER
Scale 1/4" to 1'-0"



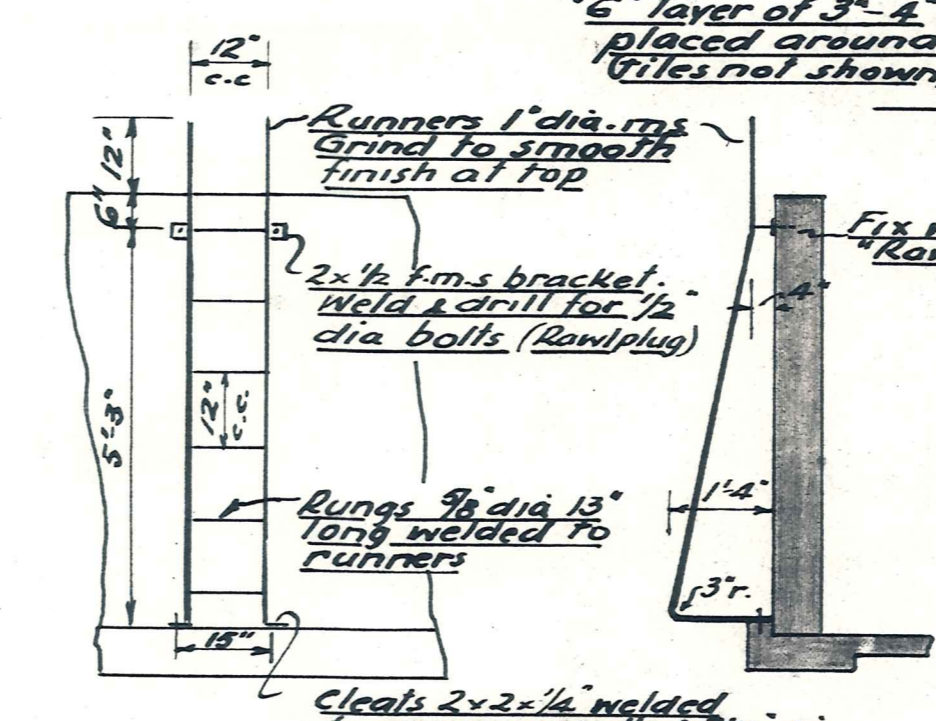
Cavity to be filled with concrete when rods are in place. Top of wall to be plastered to give smooth horizontal surface accurately levelled to take turbine drive wheel



HALF SECTION ON A.A.
Scale 3/8" to 1'-0"



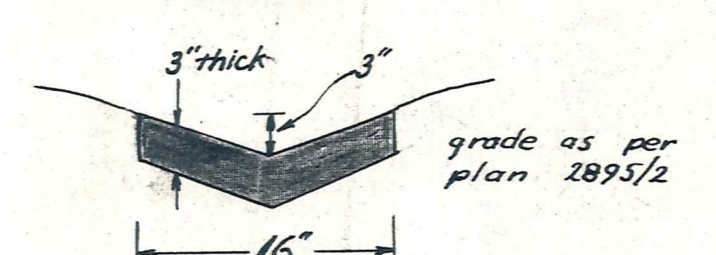
SECTION OF FILTER



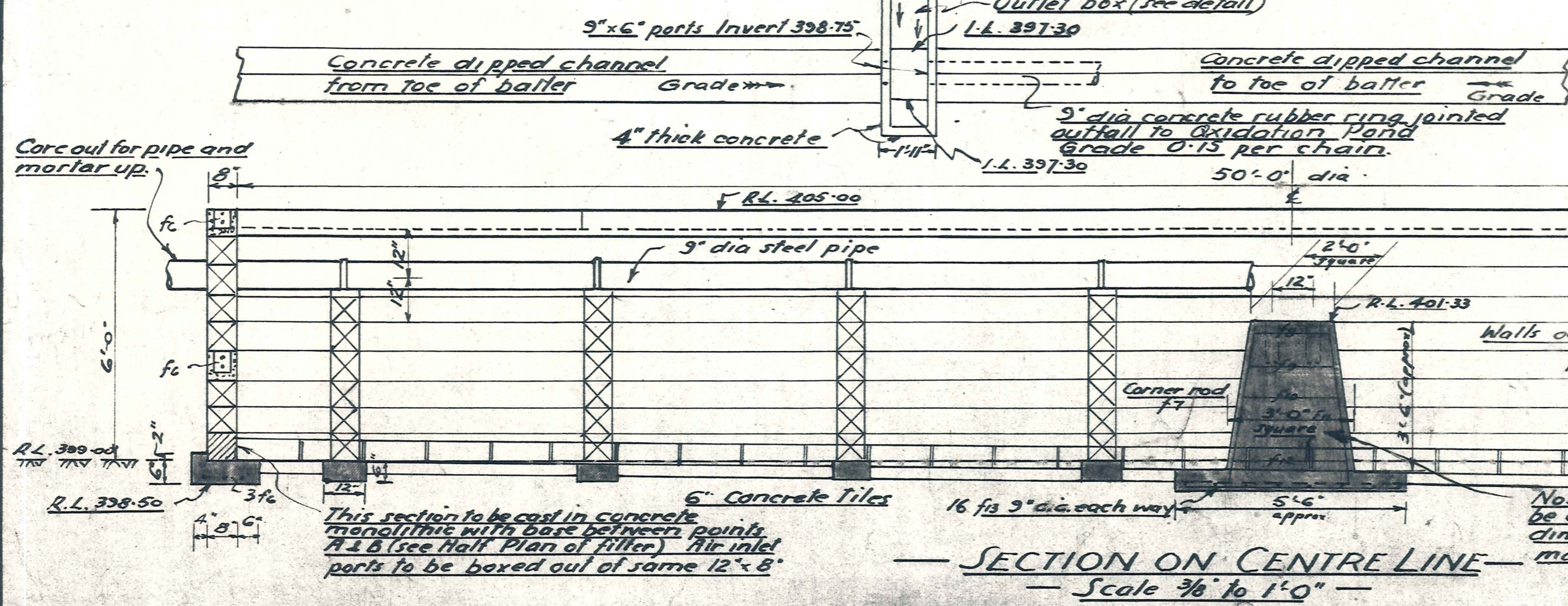
ACCESS LADDER DETAIL
One Thus

STEEL LIST					
Rod Dia	Type	No	Cut Length	a	b
f1	3/8	I	3	12'-6"	
f2	3/8	II	2	5'-8"	1'-8" 2'-0"
f3	"	III	3	7'-2"	1'-8" 2'-3"
f4	"	IV	2	6'-6"	6'-6" -
f5	"	V	2	2'-11"	1'-8" 1'-3"
f6	3/8	VI	56	23'-0"	23'-0" -
f7	3/8	VII	4	4'-9"	3'-9" -
f8	3/8	VIII	1	8'-1"	1'-0" 1'-0"
f9	"	IX	1	8'-8"	2'-0" 2'-0"
f10	"	X	1	9'-6"	2'-2" 2'-2"
f11	"	XI	1	10'-6"	2'-2" 2'-2"
f12	"	XII	1	11'-4"	2'-8" 2'-8"
f13	3/8	XIII	16	5'-9"	5'-0" -

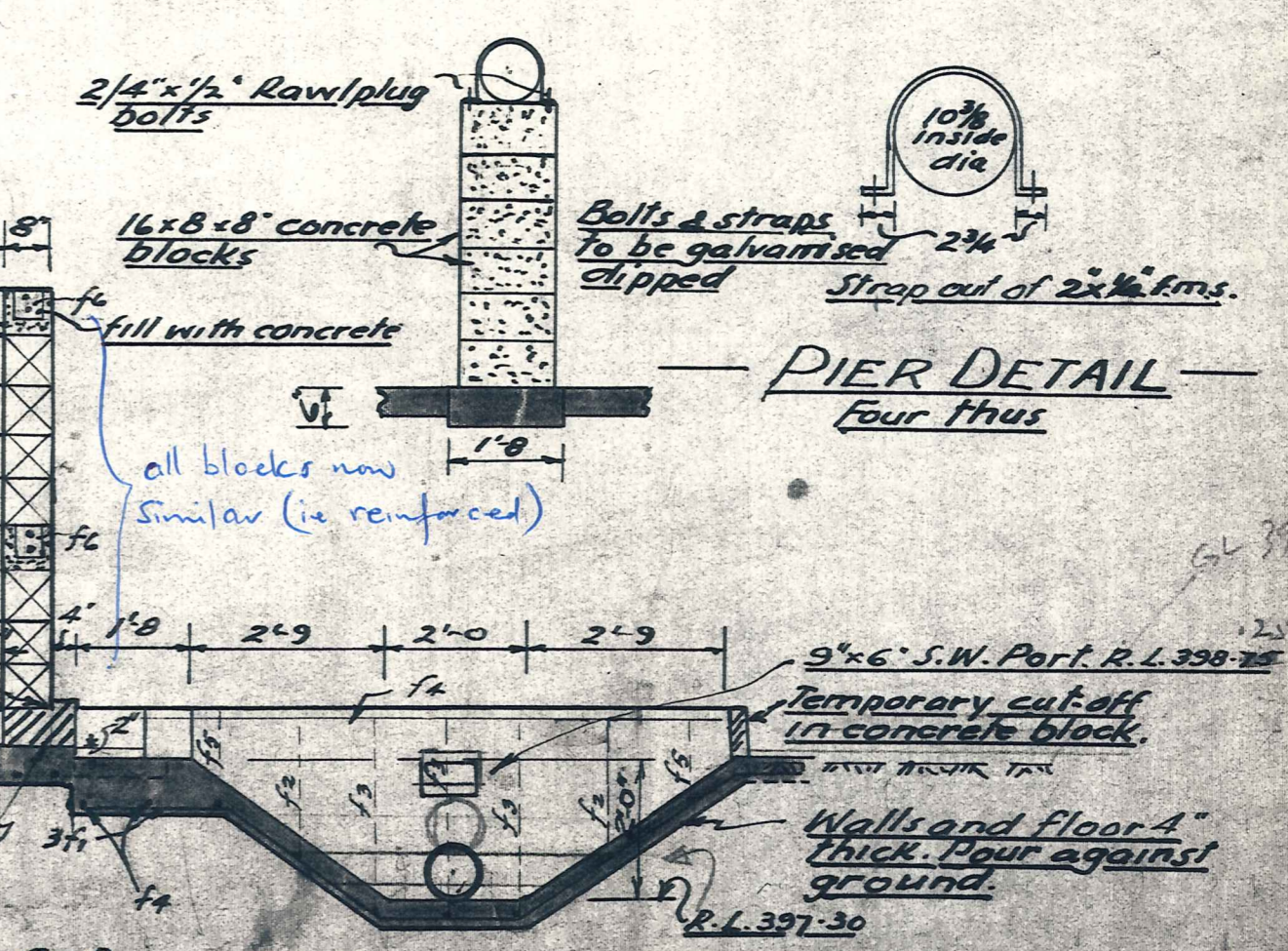
DETAIL OF DISHED CHANNEL TO DRAIN FILTER EXCAVATION
SCALE: 1 in to 1 ft.



HALF SECTION OF BED
Scale 1/4" to 1'-0"



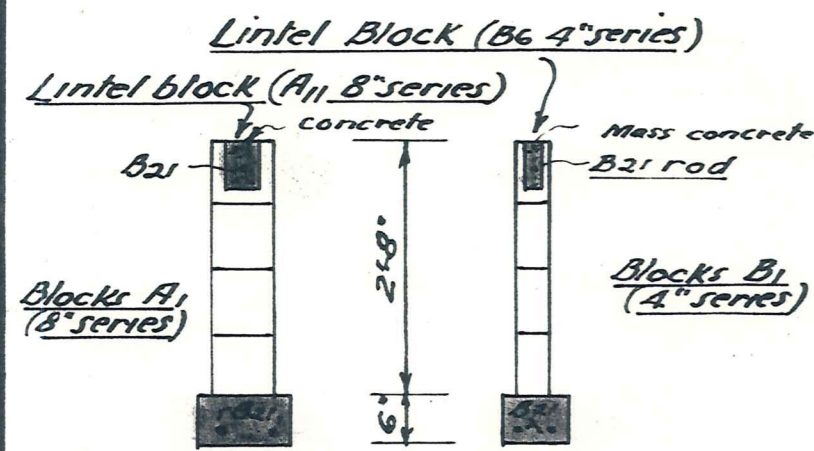
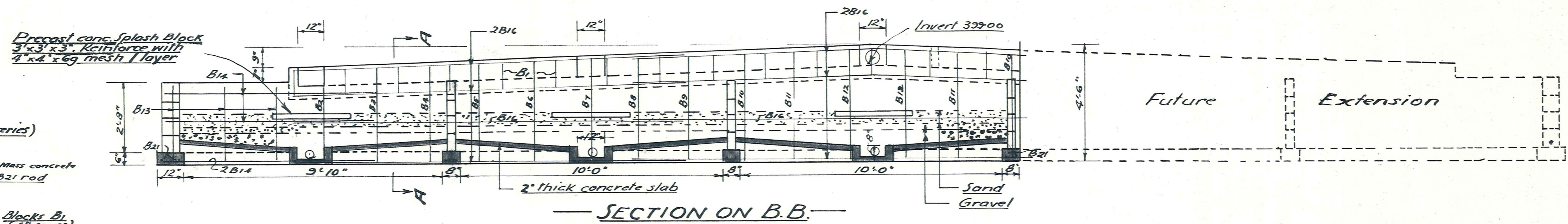
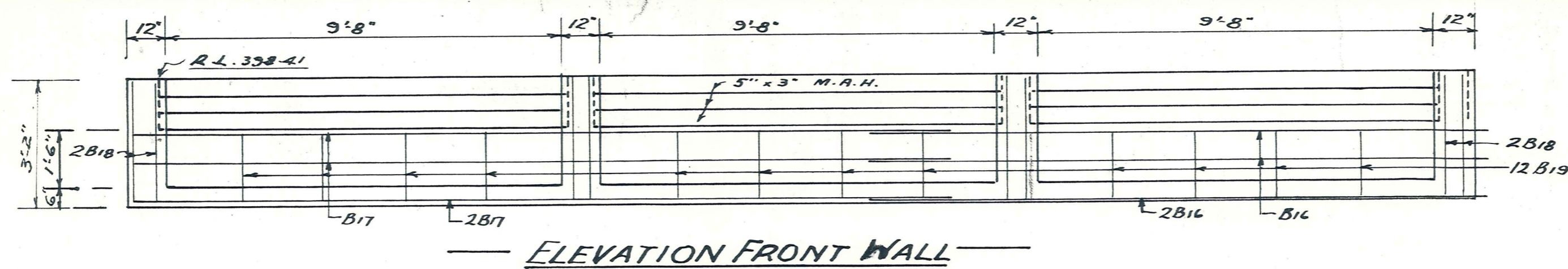
These rows in lintel blocks reinforced as shown. Other bands plain blocks



PIER DETAIL
Four Thus

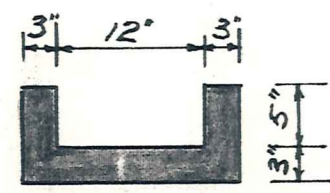
SECTION ON CENTRE LINE
Scale 3/8" to 1'-0"

Note Dimensions of Pedestal given to be used for tendering. Final detail dimensions awaited from distributor manufacturer
This section to be cast monolithic with footing and outlet parts 1'6" x 6" cased out between points C & D (see Half Plan of filter)

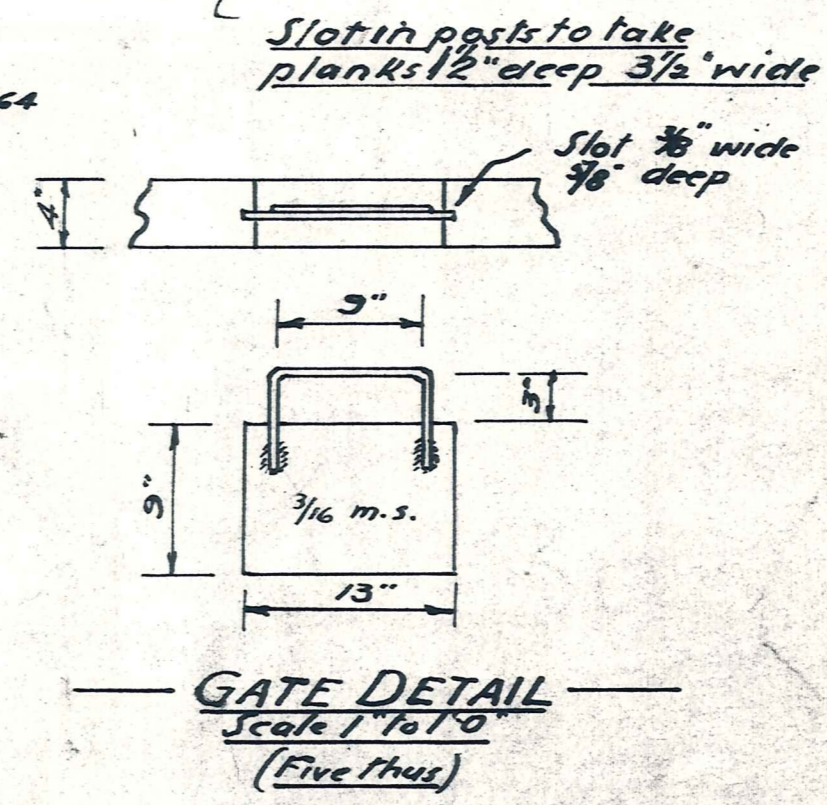
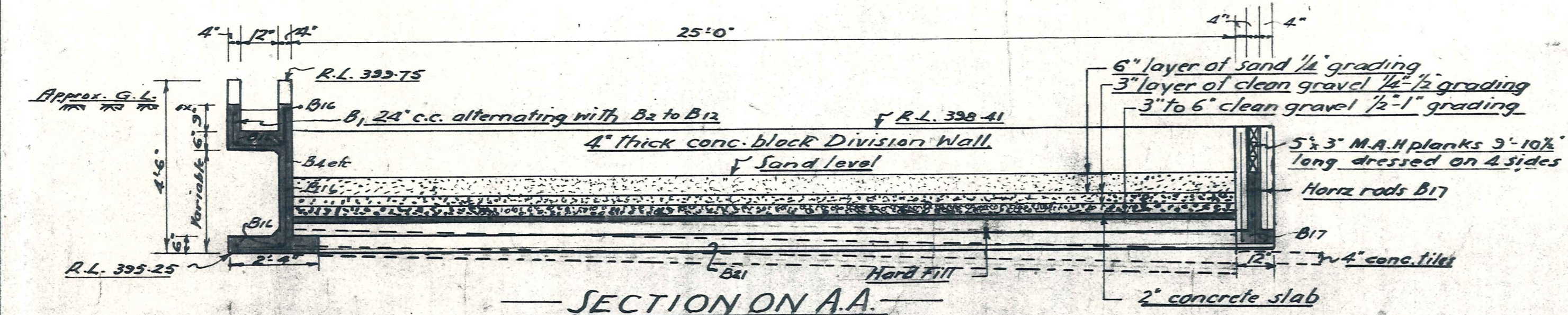
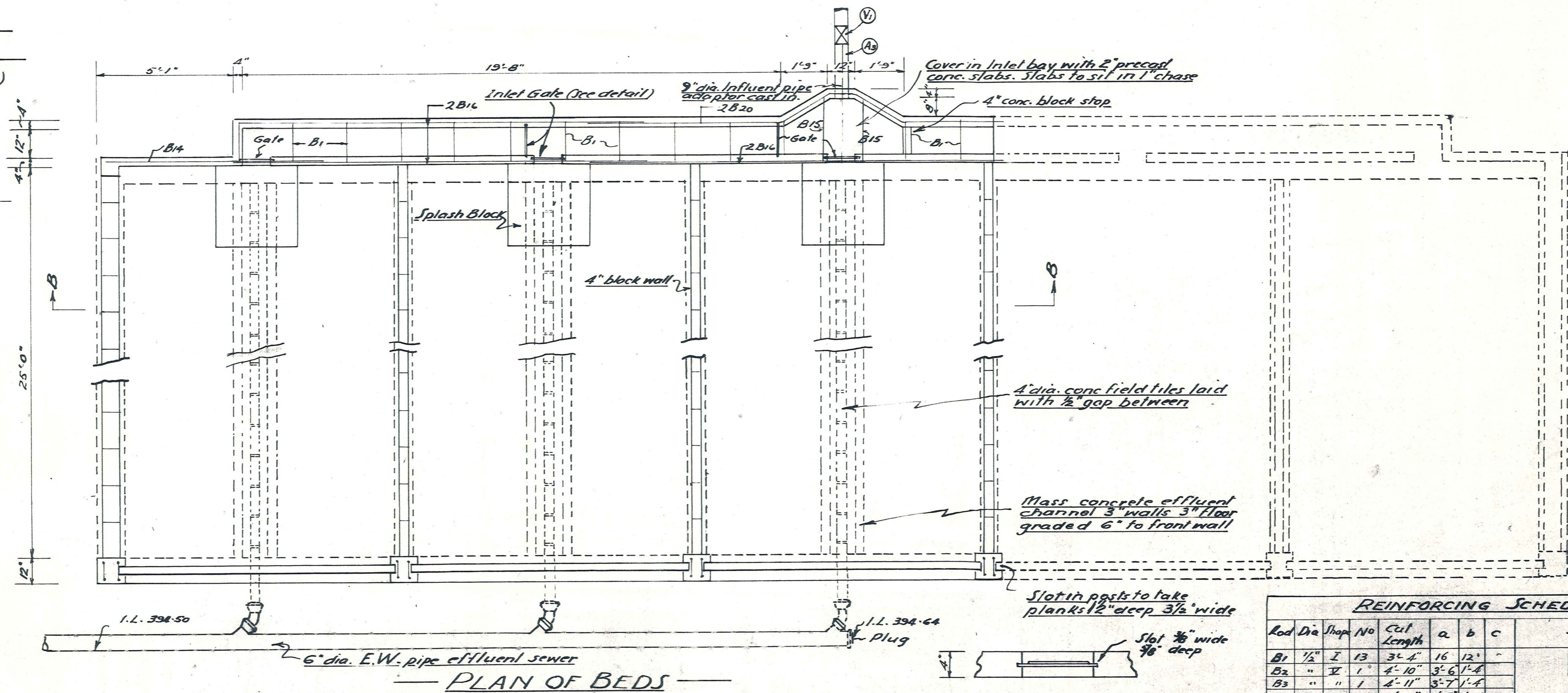


OUTER WALL - INNER WALL

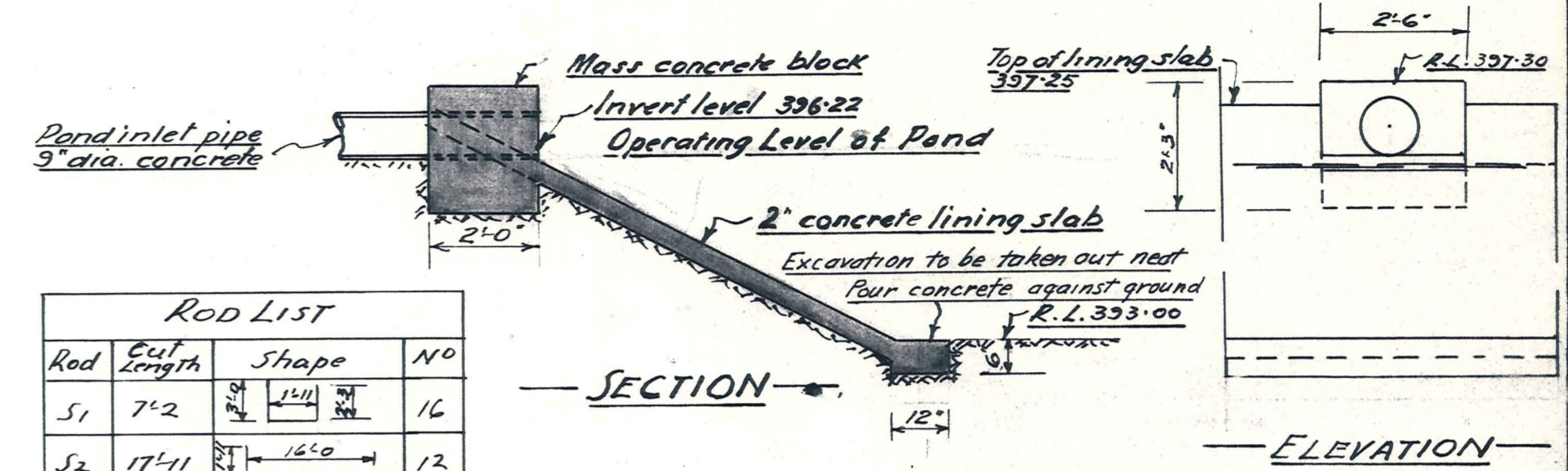
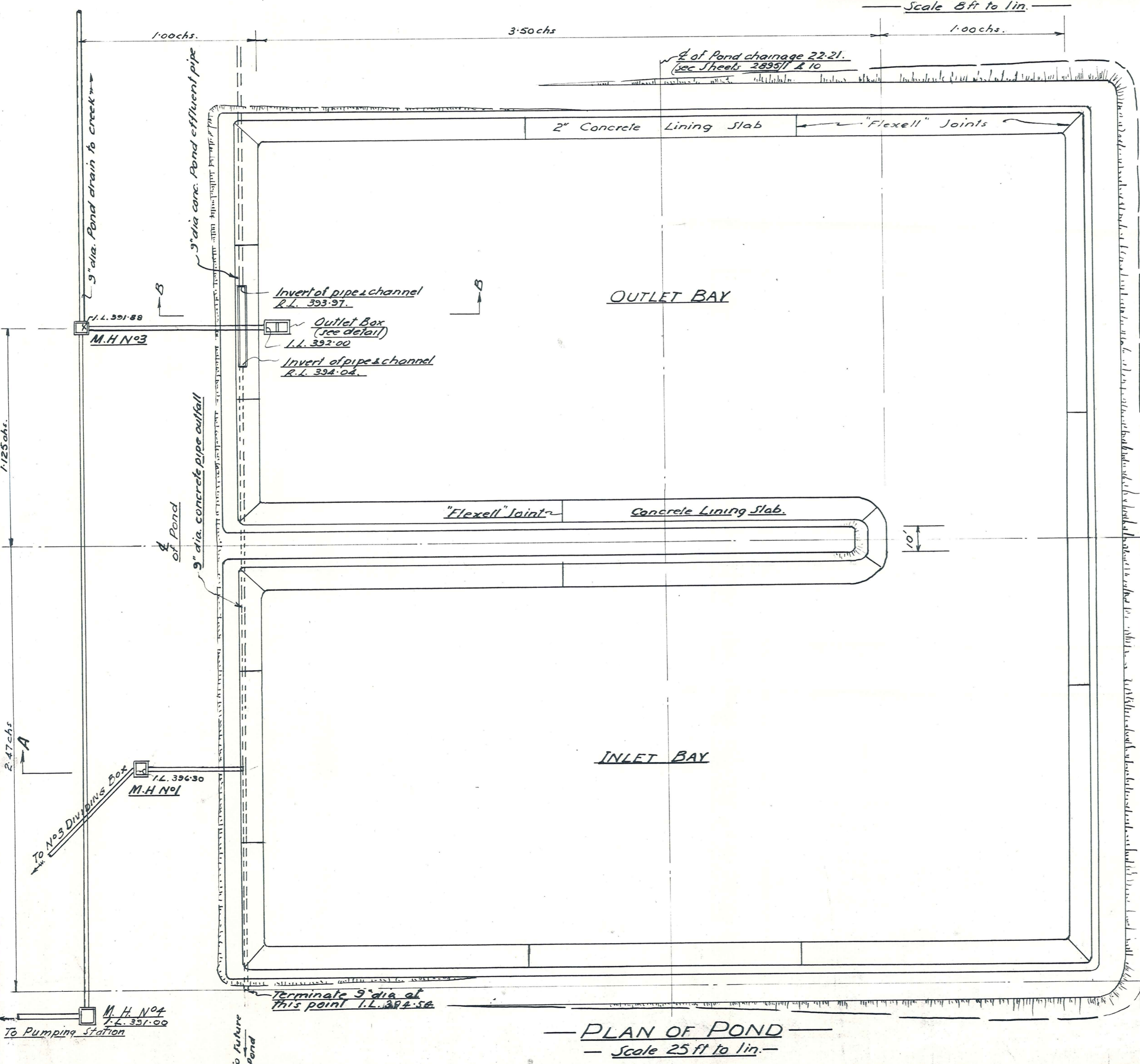
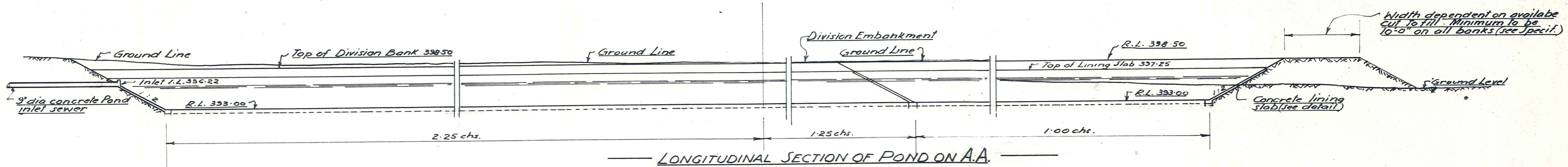
BLOCK WALL DETAIL
(Blocks in "Vibrapac Series")



TILE TROUGH DETAIL
Scale 3/4 in to 1 ft.

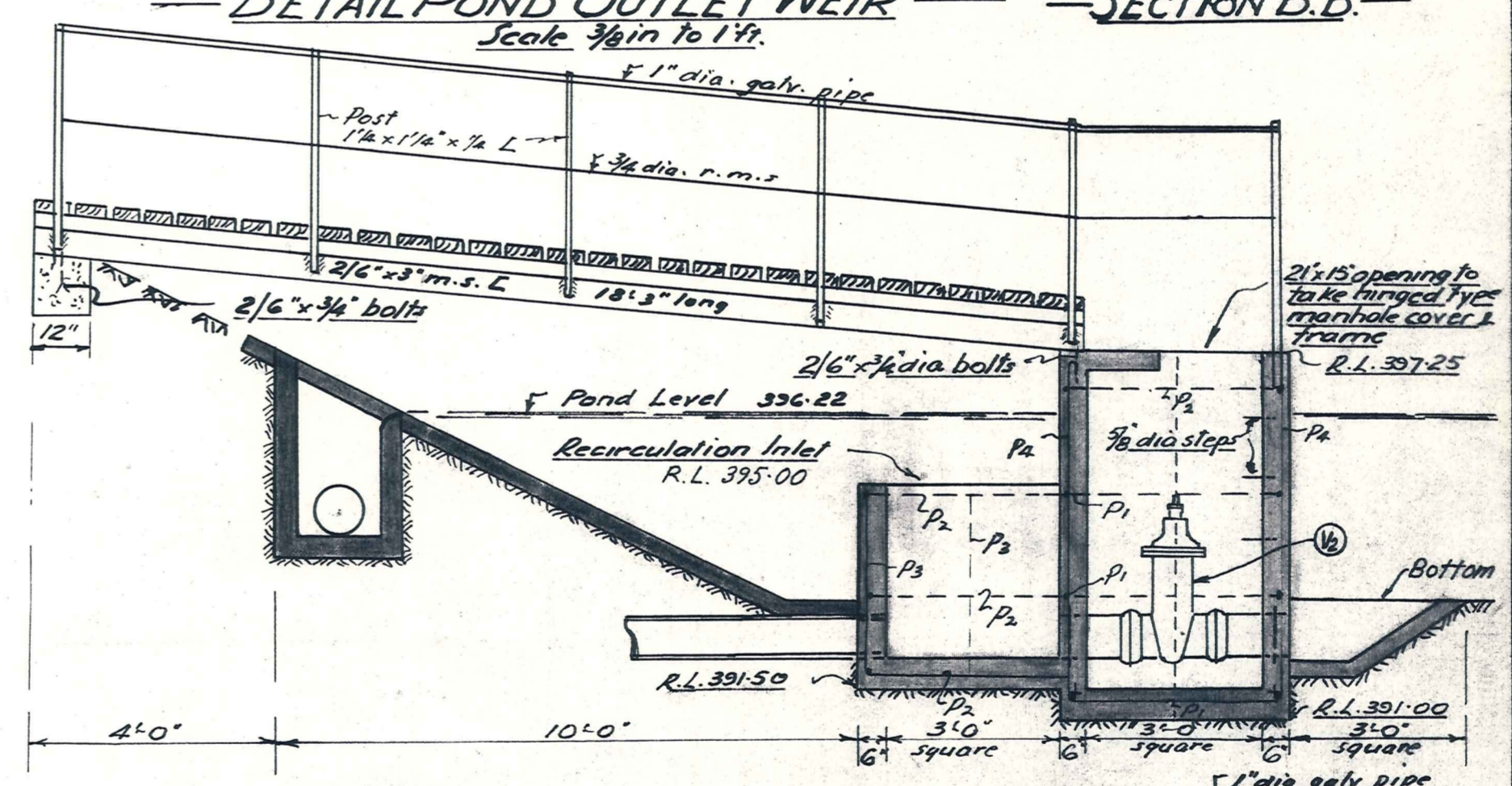
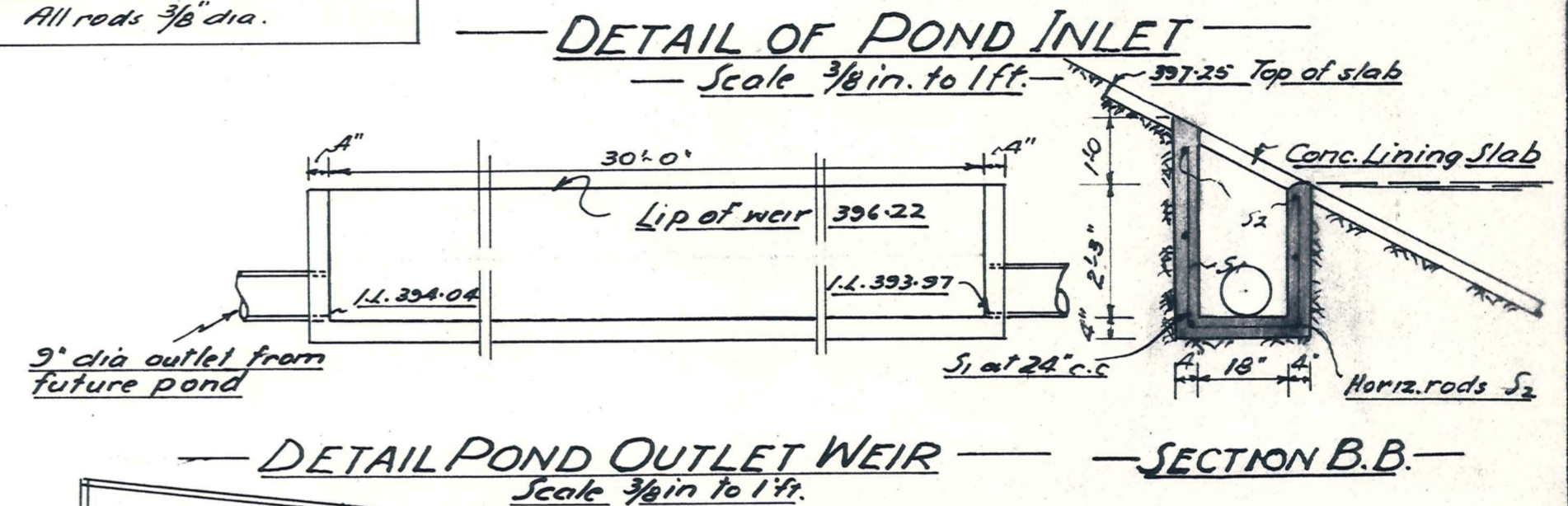


REINFORCING SCHEDULE								
Rod	Dia	Shape	No	Cell Length	a	b	c	Shape Diagram
B1	1/2"	I	13	3'-4"	16	12"		
B2	"	II	1	4'-10"	3'-6"	1'-4"		
B3	"	"	1	4'-11"	3'-7"	1'-4"		
B4	"	"	1	5'-0"	3'-8"	1'-4"		
B5	"	"	1	5'-1"	3'-9"	1'-4"		
B6	"	"	1	5'-2"	3'-10"	1'-4"		
B7	"	"	1	5'-3"	3'-11"	1'-4"		
B8	"	"	1	5'-4"	4'-0"	1'-4"		
B9	"	"	1	5'-5"	4'-1"	1'-4"		
B10	"	"	2	5'-6"	4'-2"	1'-4"		
B11	"	"	2	5'-7"	4'-3"	1'-4"		
B12	"	"	2	5'-7"	4'-3"	1'-4"		
B13	"	"	3	4'-2"	2'-10"	1'-4"		
B14	"	"	4	8'-0"				
B15	"	"	2	4'-5"	2'-5"	1'-0"		
B16	"	"	16	15'-0"				
B17	"	"	4	20'-0"				
B18	"	"	8	6'-7"	2'-11"	9"		
B19	"	"	12	1'-8"				
B20	"	"	2	15'-6"				
B21	"	"	12	26'-0"				



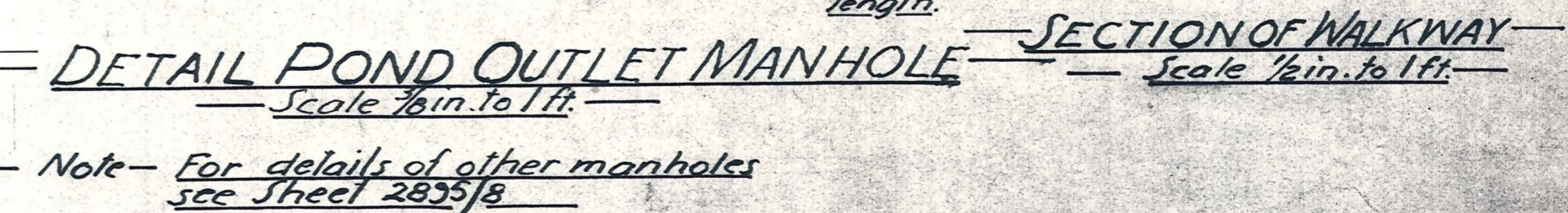
ROD LIST			
Rod	Cut Length	Shape	NO
S1	7'-2"		16
S2	17'-11"		12

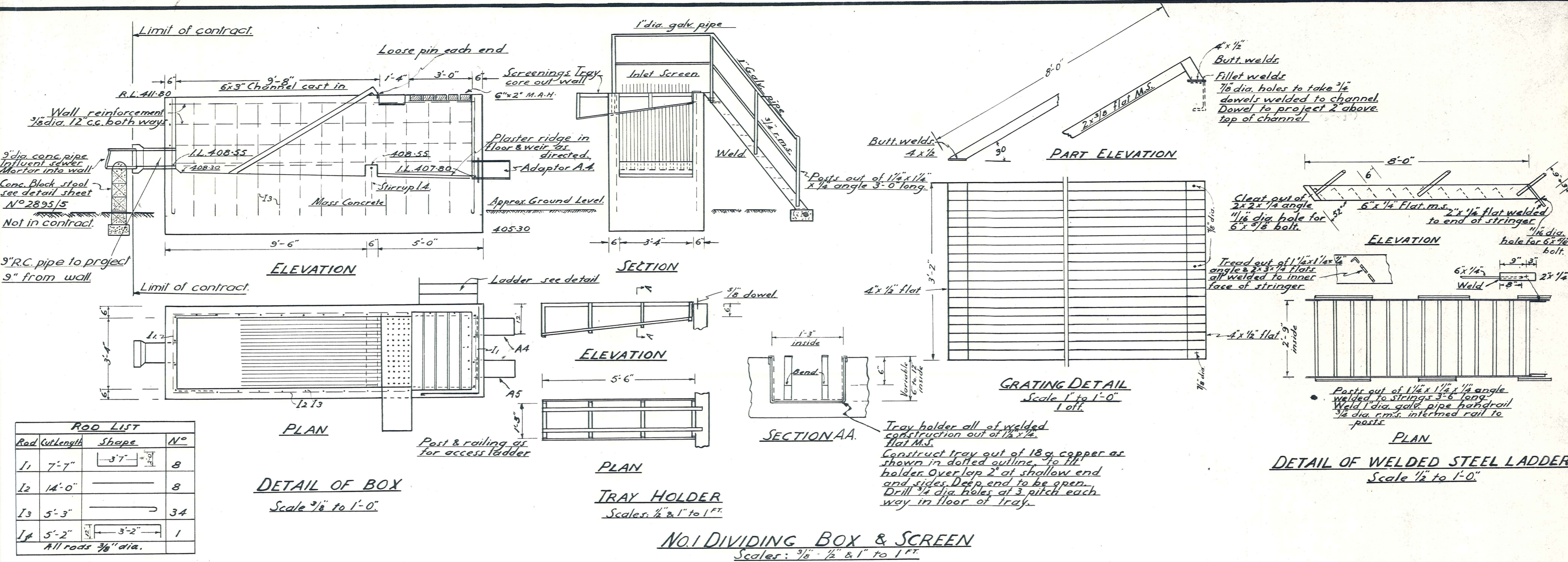
All rods 3/8" dia.



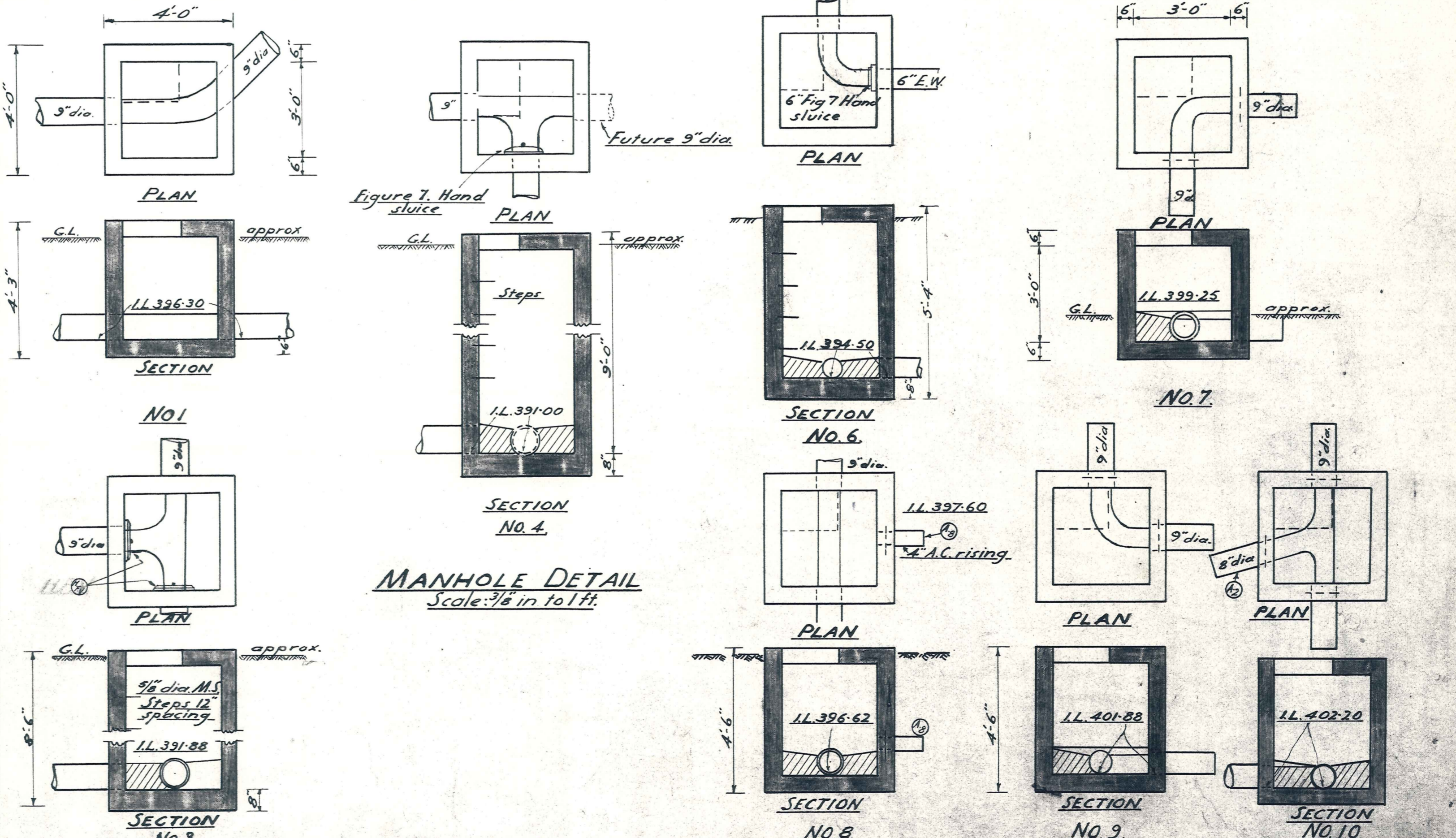
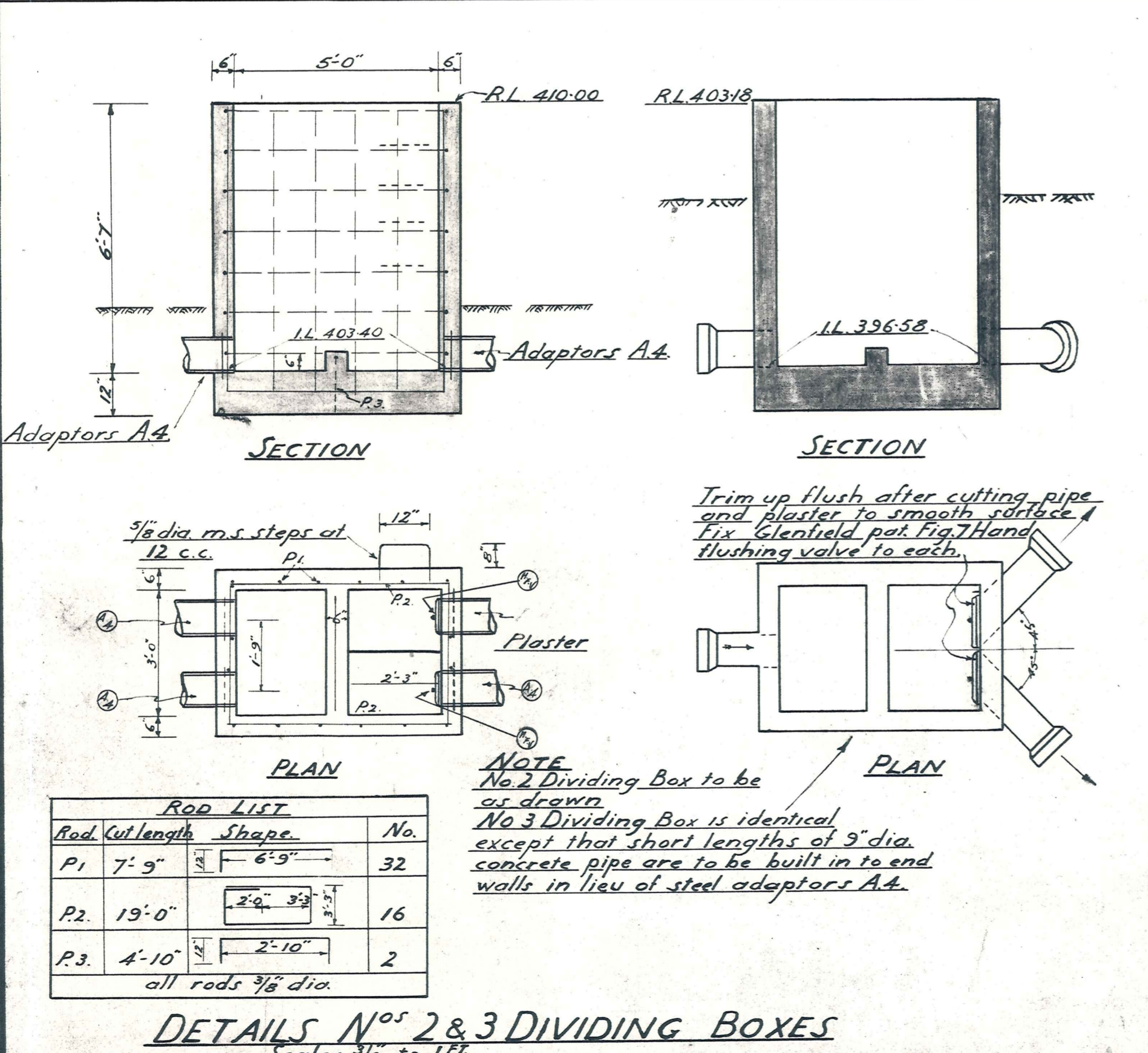
ROD LIST			
Rod	Cut Length	Shape	NO
P1	11'-10"	I	8
P2	15'-7"	II	4
P3	3'-0"	III	4
P4	5'-0"	III	8

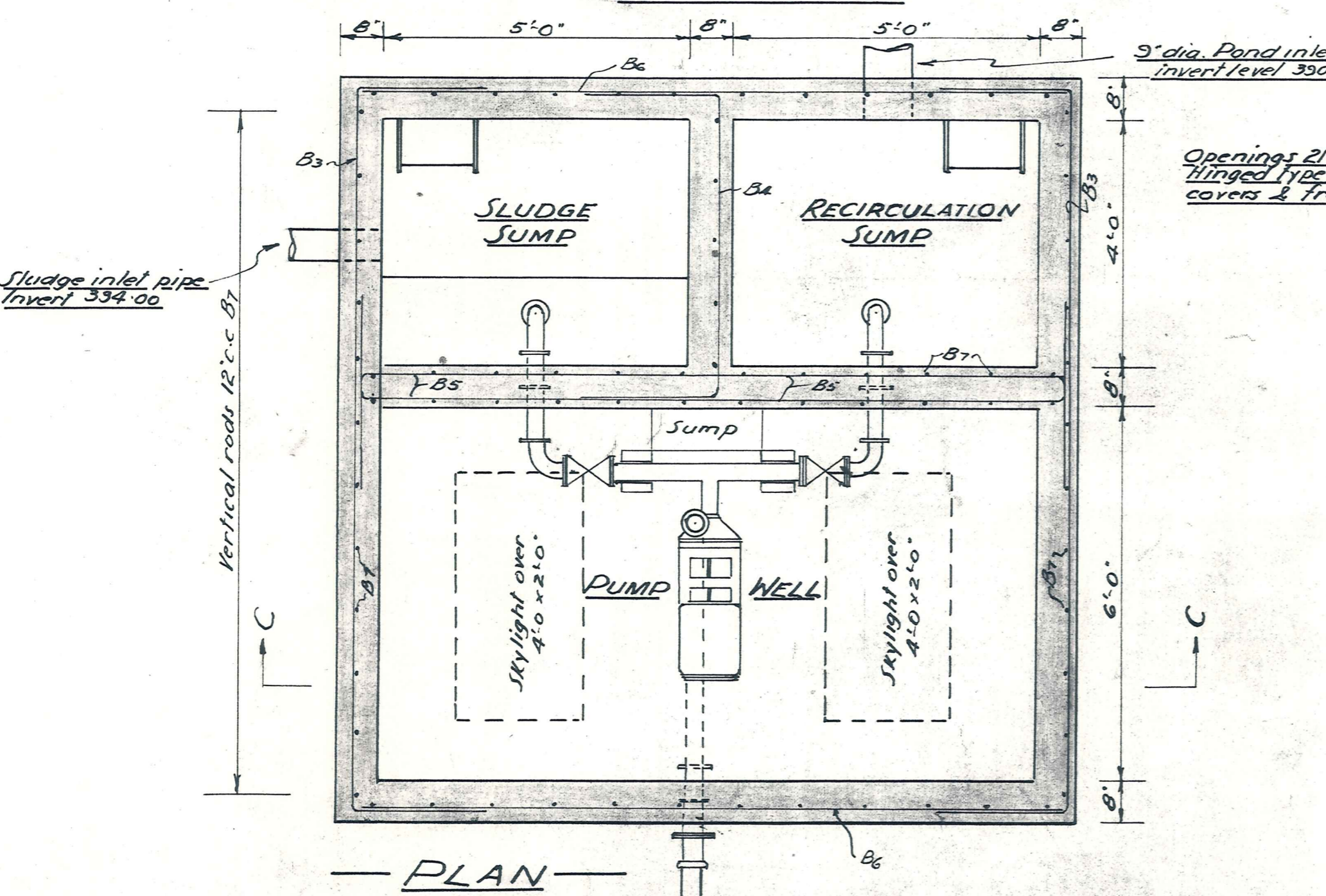
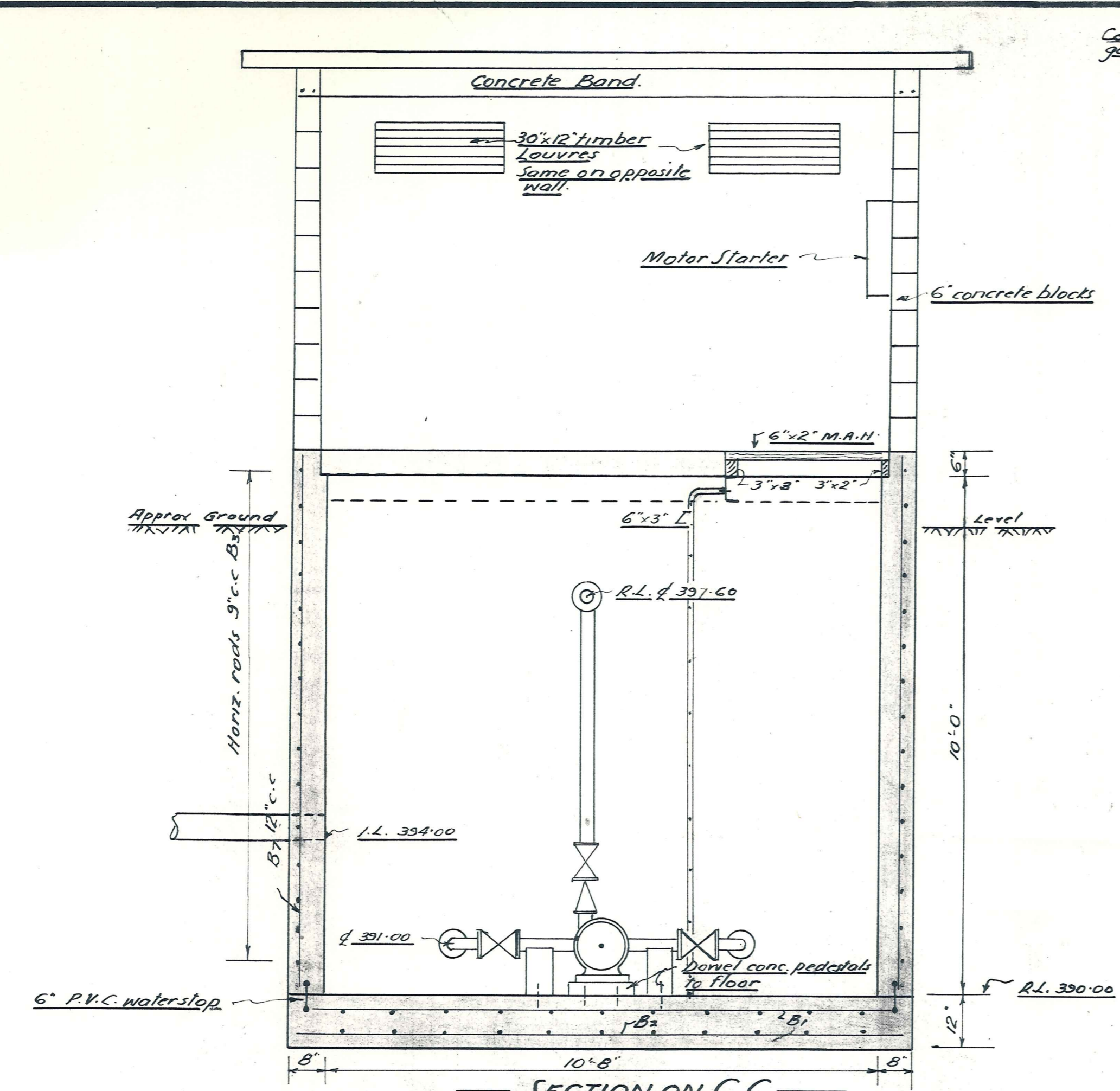
All rods 3/8" dia.





No. 1 DIVIDING BOX & SCREEN
Scale: 3/8", 1/2" & 1" to 1' ft.



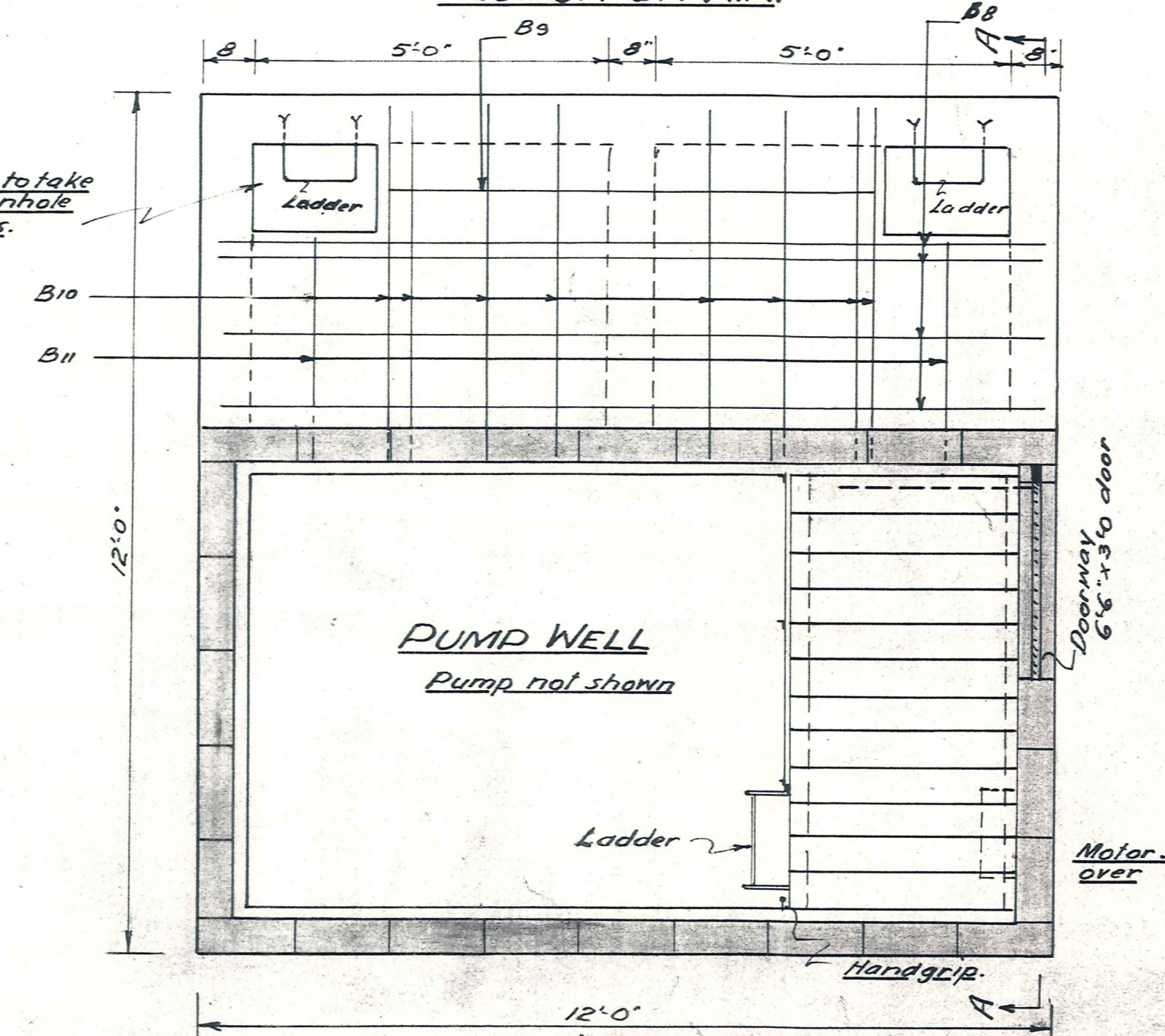
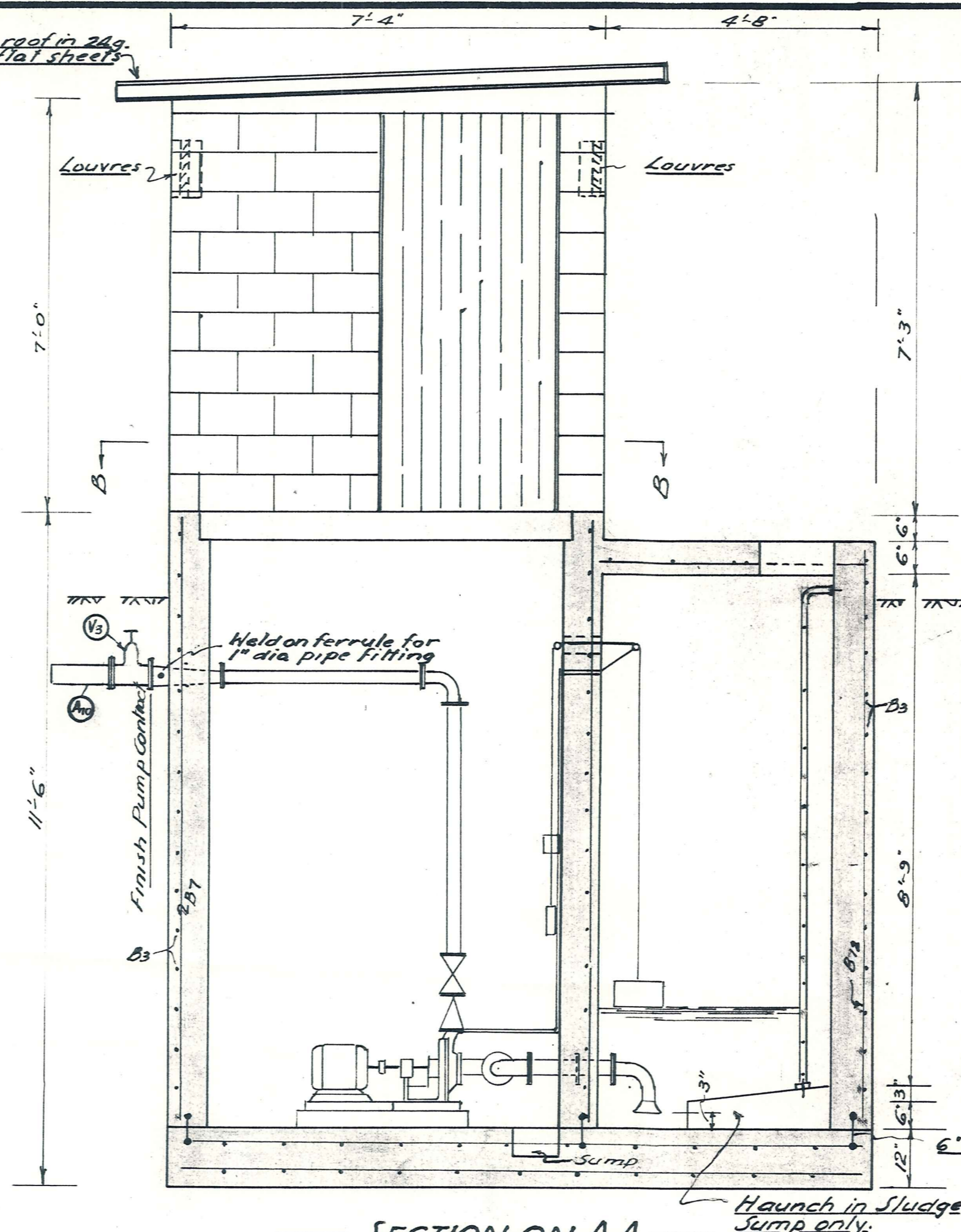


PLAN

Note
Pump installation shown is approx only.
Manufacturers drawings will be supplied
to contractor when available.

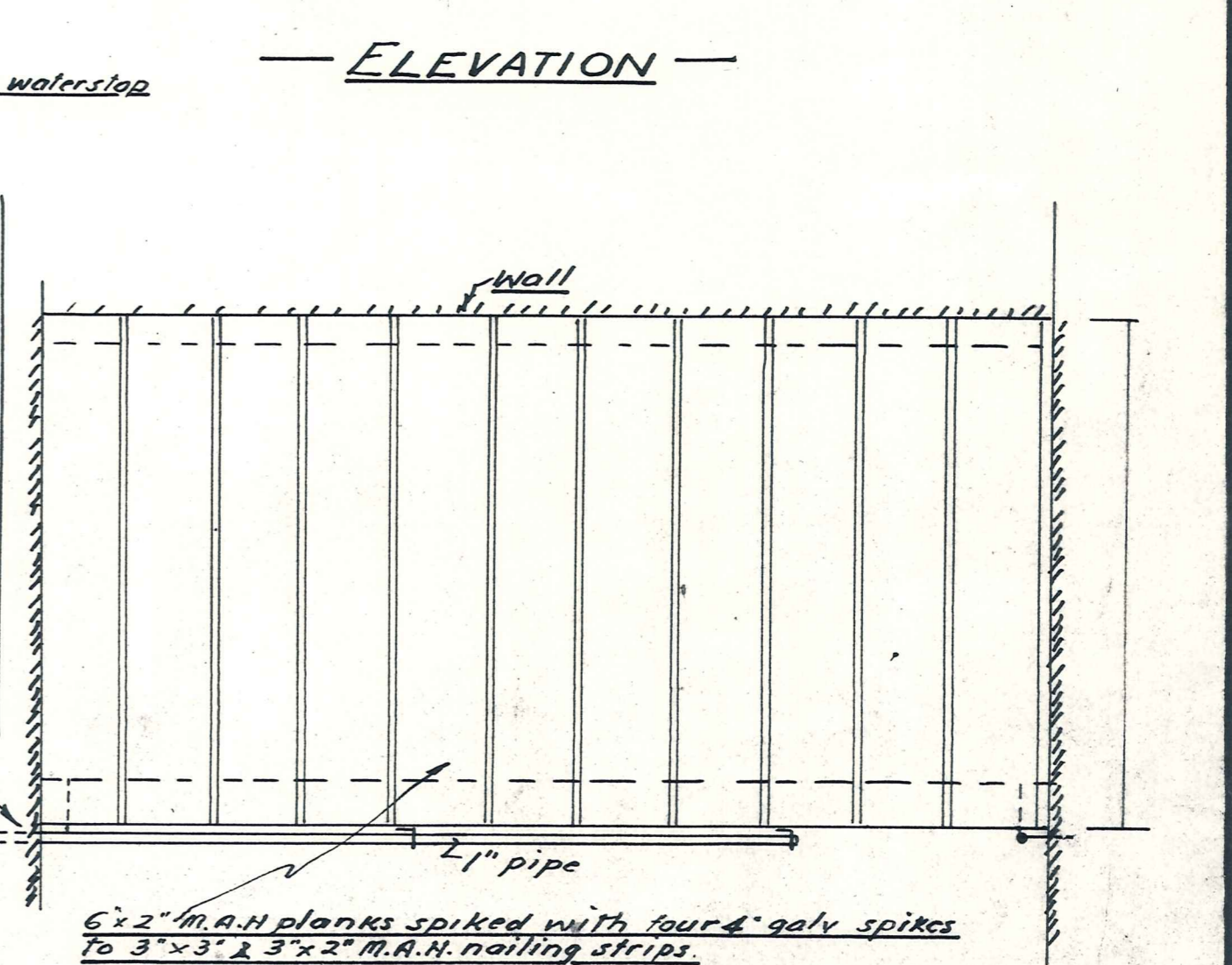
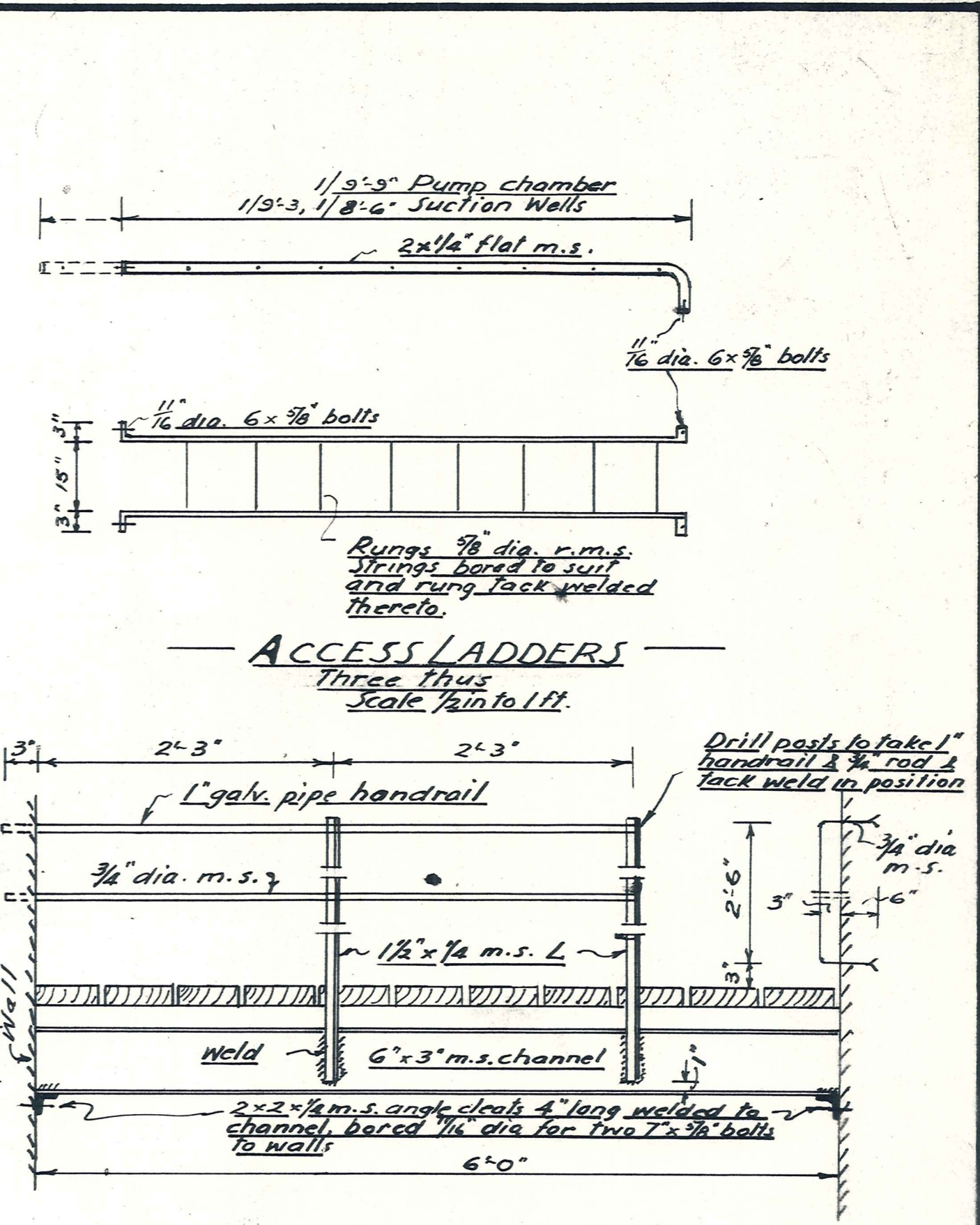
4" dia. A.C. Rising Main
to M.H. N° 6

C.I. bend



SECTION ON B.B.

Scale 1/2" to 1'-0"

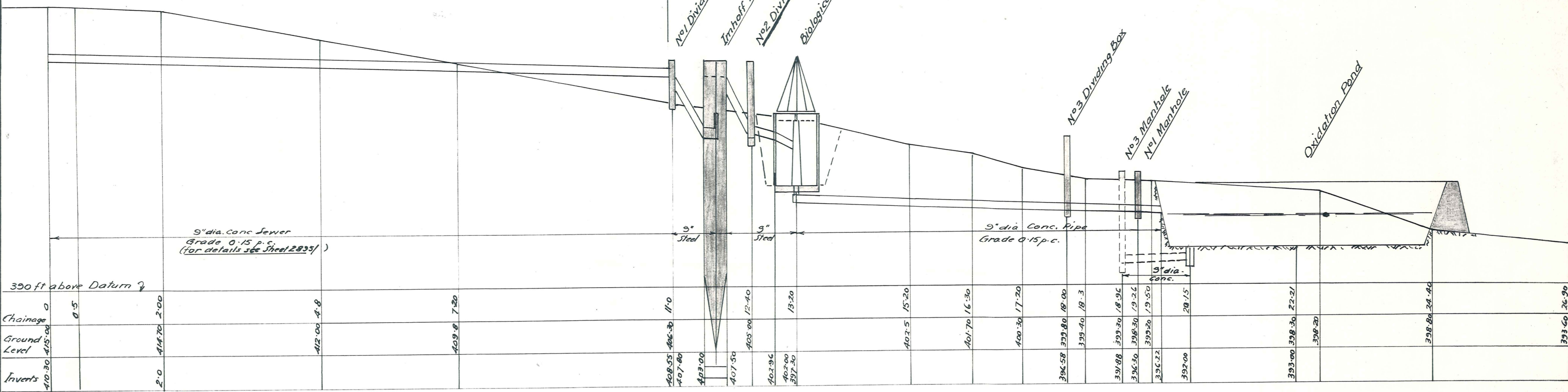


PLAN
PLATFORM DETAILS
Scale 1 in. to 1 foot

ROD LIST						
Rod	Cut Length	Shape	No	a	b	Shape Diagram
B1	11'-0"	I	22	11'-0"		
B2	11'-9"	I	22	11'-9"		
B3	16'-3"	II	30	11'-9"	2'-3"	
B4	9'-6"	II	15	5'-0"	2'-3"	
B5	15'-3"	II	30	11'-9"	1'-9"	
B6	11'-9"	I	30	11'-9"		
B7	10'-3"	I	50	10'-3"		
B8	11'-9"	I	4	11'-9"		
B9	6'-9"	I	1	6'-9"		
B10	4'-9"	I	8	4'-9"		
B11	3'-0"	I	2	3'-0"		
B12	9'-9"	I	27	9'-9"		

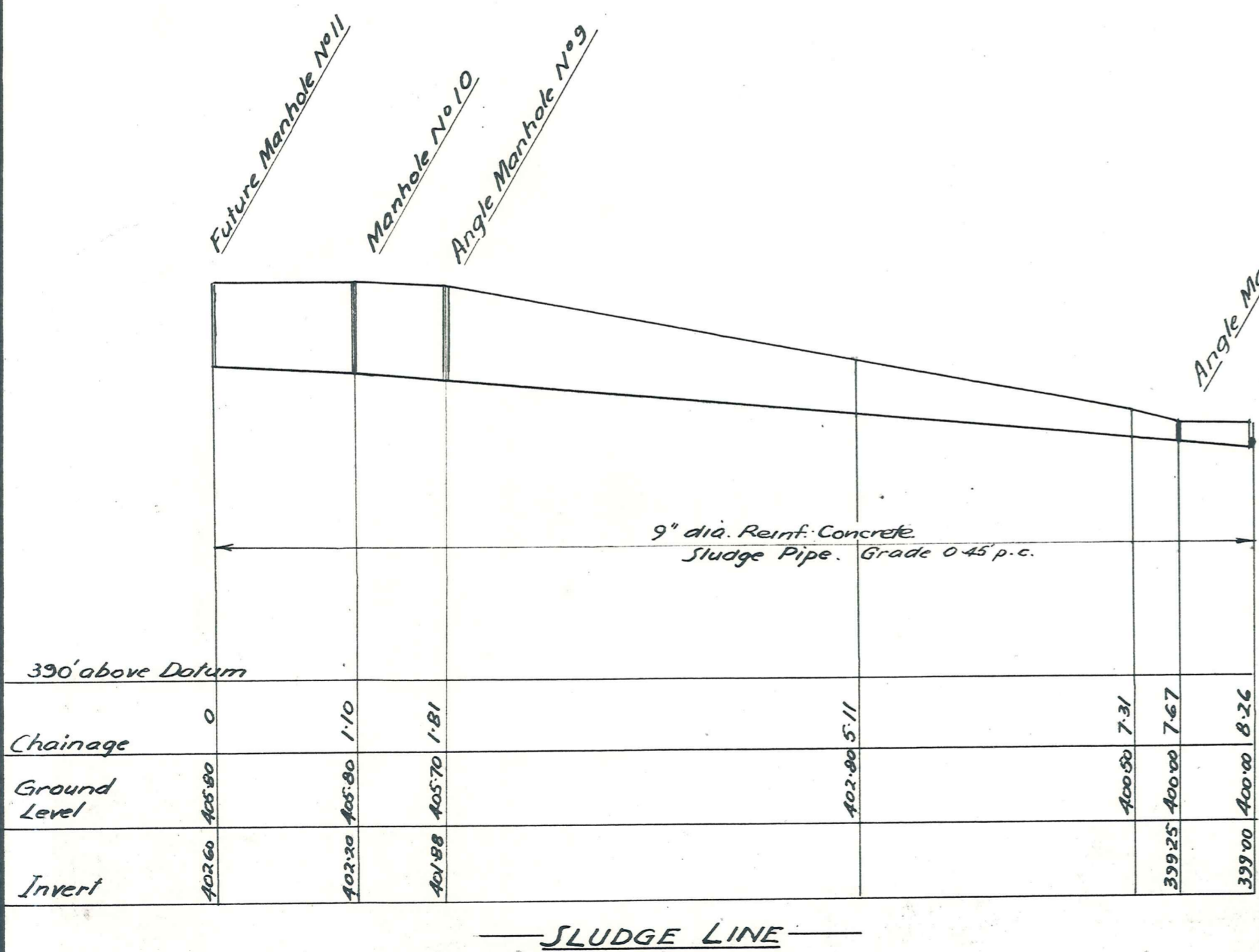
All rods 1/2" dia.

Sewer Reticulation Contract Terminal Point
Sewage Treatment Wks Contract Terminal Point

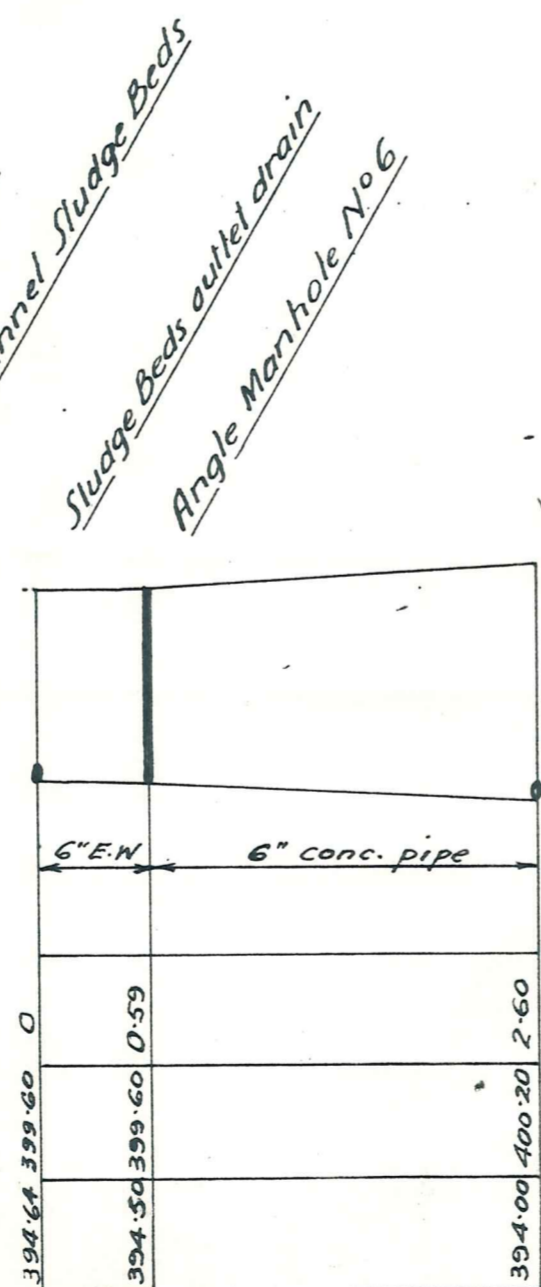


SECTION THROUGH PLANT ON LINE X.X.

Scales — Horiz. 1ch. to lin.
Vert. 5ft. to lin.
(Chainages are along X.X.)

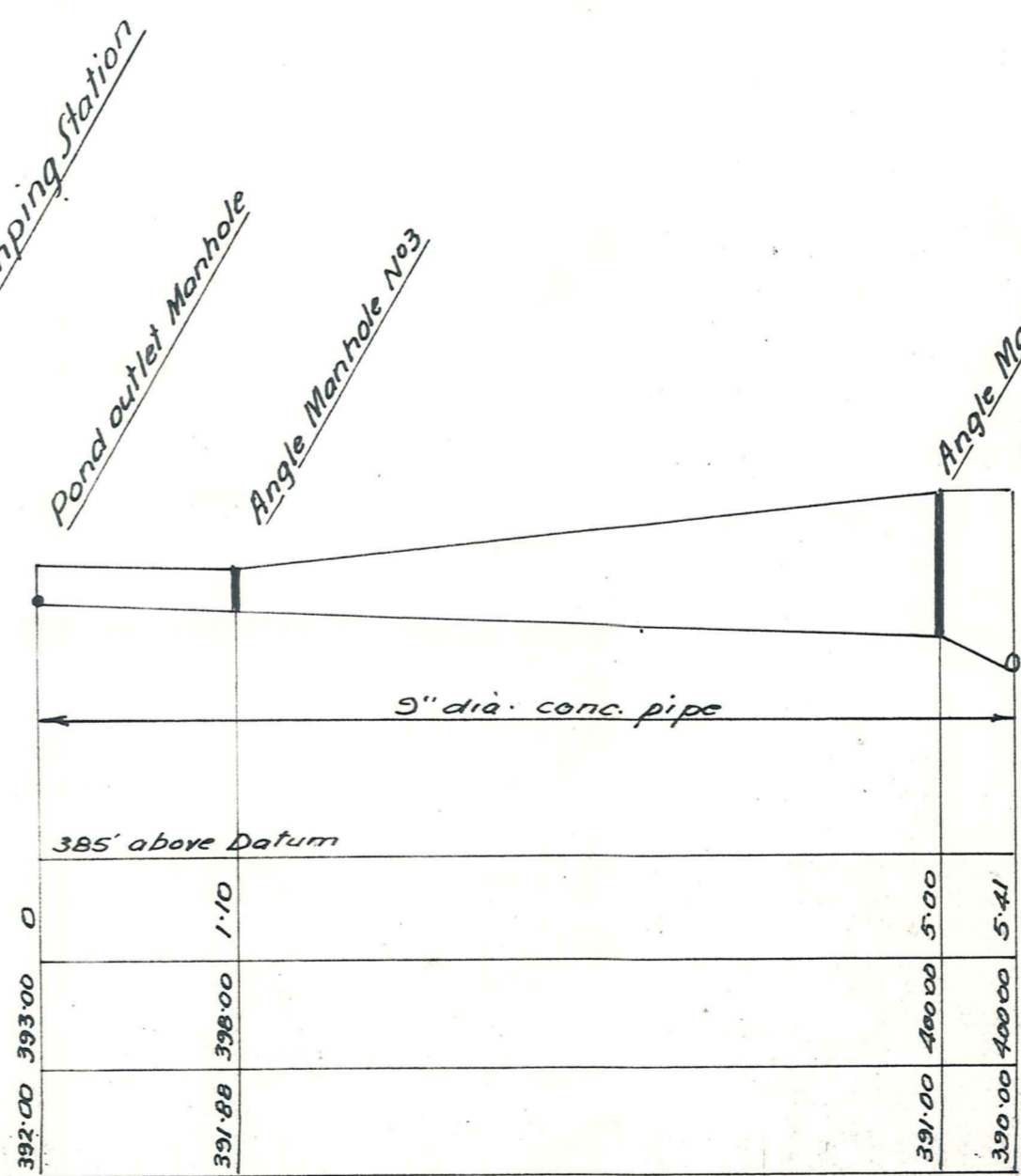


SLUDGE LINE

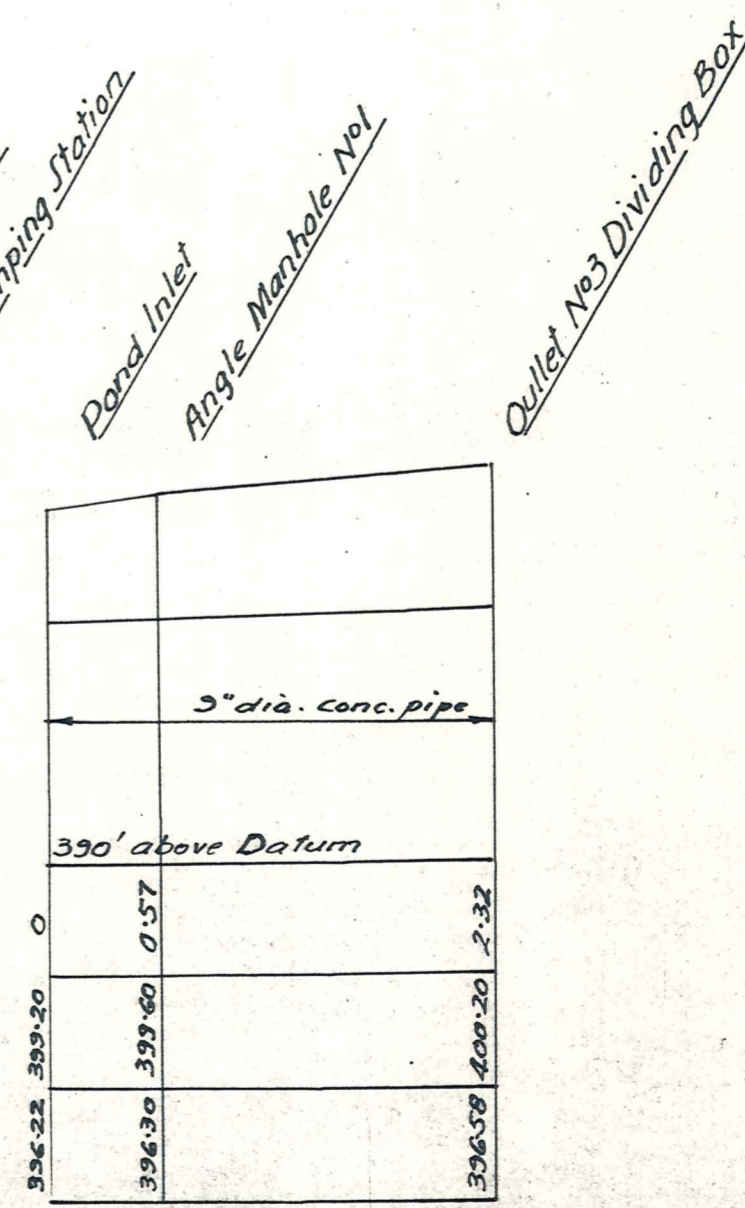


SLUDGE RETURN LINE
LONGITUDINAL SECTIONS

Scales — Horiz. 1ch. to lin.
Vert. 5ft. to lin.



RECIRCULATION LINE



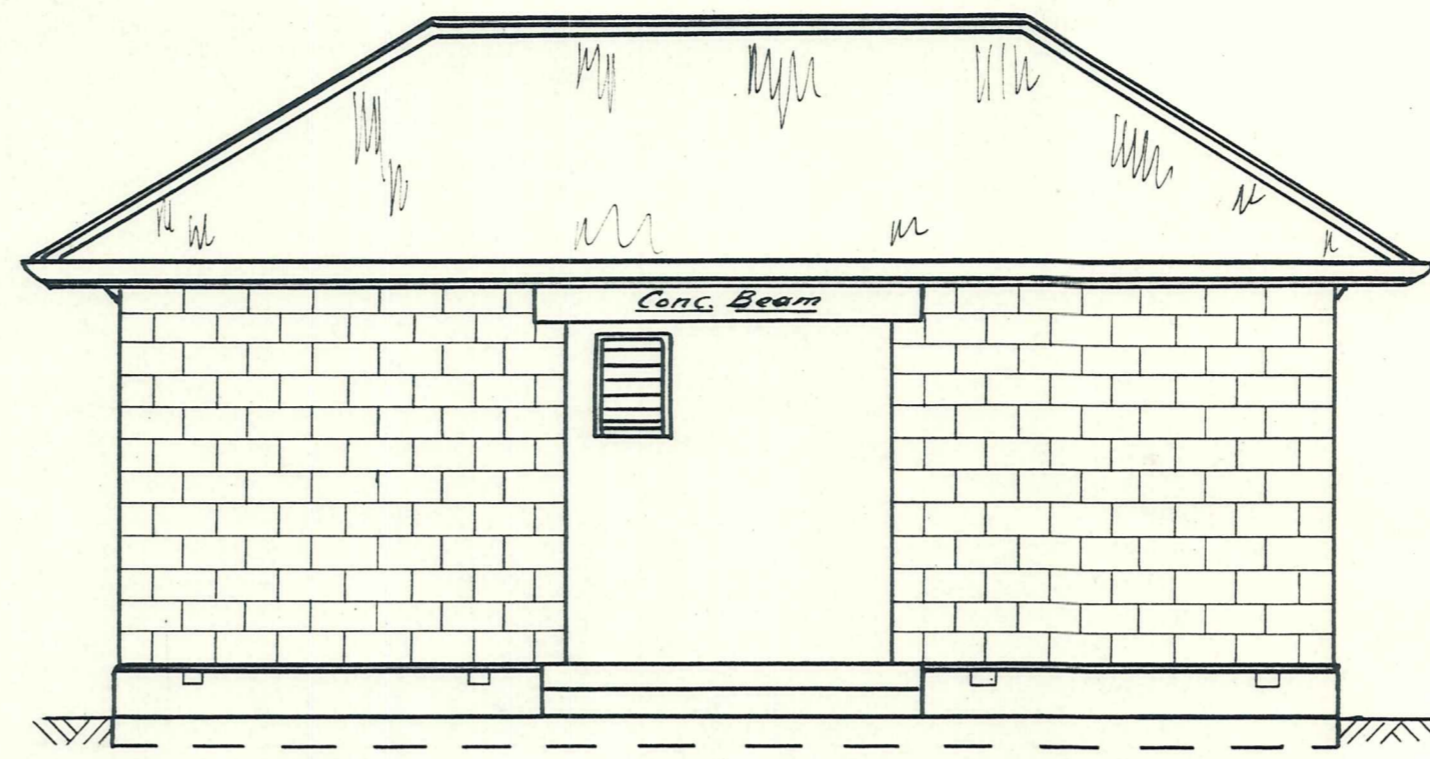
POND INLET LINE

SCHEDULE OF PIPE SPECIALS

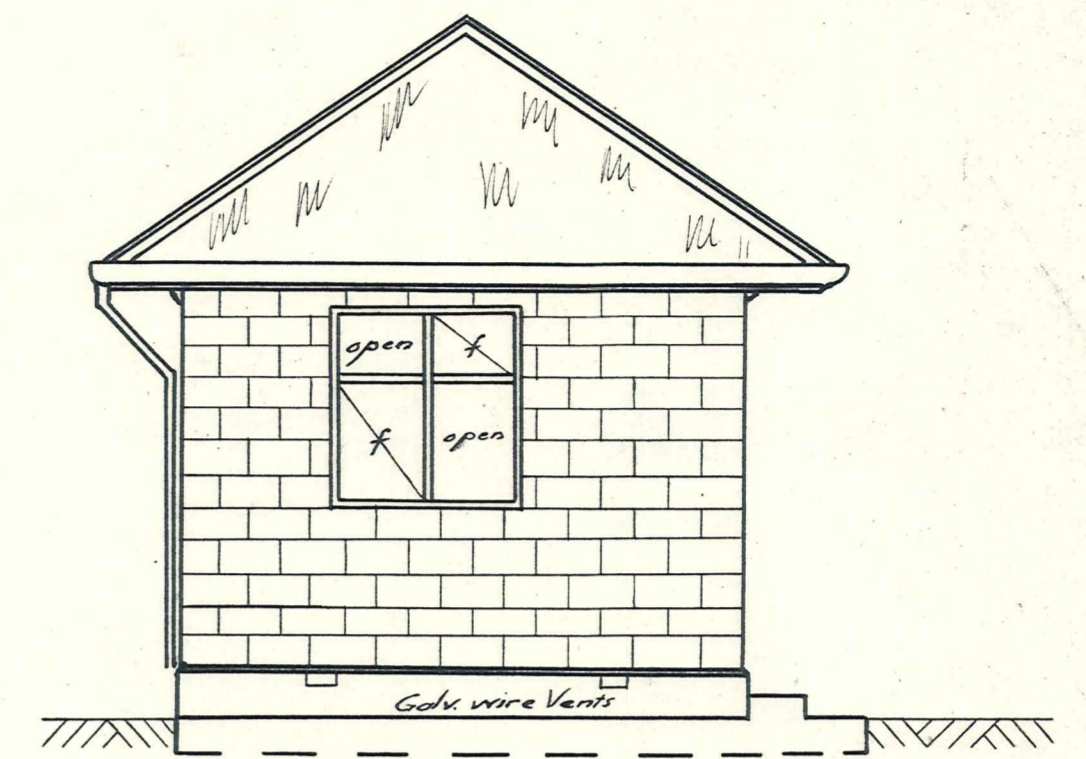
Type of Special	Sheet No.	Size	Mark	No of	Location	Diagram
Main Influent Line						
Adaptor	2 & 8	9" int. dia. steel	A4	1	Nº1 Dividing Box.	A4
Adaptor	2 & 8	ditto	A5	1	ditto	A5
Bend	2	ditto	B4	1	ditto	B4
Valve	2	9" for gib joint	V2	1	Inlet Nº1 Imhoff	B2
Bend	2	9" int. dia. steel	B4	1	ditto	B4
Adaptor	2	9" int. dia. steel	A6	1	ditto	A6
Pipe	3	9" int. dia. steel	P1	1	ditto	P1
Adaptor	2 & 3	ditto	A1	1	Outlet Nº1 Imhoff	A1
Bend	2	ditto	B1	1	ditto	B1
Valve	2 & 7	9" for gib joint	V2	2	Pond Outlet Manhole Inlet Nº2 Dividing Box.	B3
Bend	2	9" int. dia. steel	B2	1	ditto	B2
Adaptor	2 & 8	ditto	A4	4	Inlet Outlet Nº2 D.B.	A7
Bends	2	9" int. dia. steel	B3	1	Outlet Nº2 Dividing Box.	B3
Sludge Line						
Adaptor	3 & 2	8" int. dia. steel	A7	1	Sludge outlet Imhoff.	A2
Adaptor	2 & 8	ditto	A2	1	Manhole Nº10.	A3
Valve	2 & 8	8" for gib joint	V1	1	ditto	A8
Adaptors*	2 & 8	9" int. dia. steel	A3	2	ditto	A9
Adaptors*	8	ditto	A3	2	Manhole Nº7.	A10
Adaptors*	6	ditto	A3	1	Inlet Sludge Beds	
Valve*	9	4" Hanged	V3	1	Outlet Pumping Str.	
Valve*	6	9" for gib joints	V2	1	Inlet to sludge Beds.	
Adaptor*	8	4" for gib joint	A8	1	Manhole Nº8.	
Adaptor*	9	4" steel for gib joint	A10	1	Pumping station delivery	
Bend*	1 & 9	4" cast iron	B5	1	Standard C.I. Bend for 4" Fibrolite gib joint Outlet Pumping Str.	
Adaptor	3	9" steel	A2	2	Imhoff Tank.	

Note:
All specials are to be clearly marked and are to be supplied with the required size and number of Gibault joints complete with bolts.

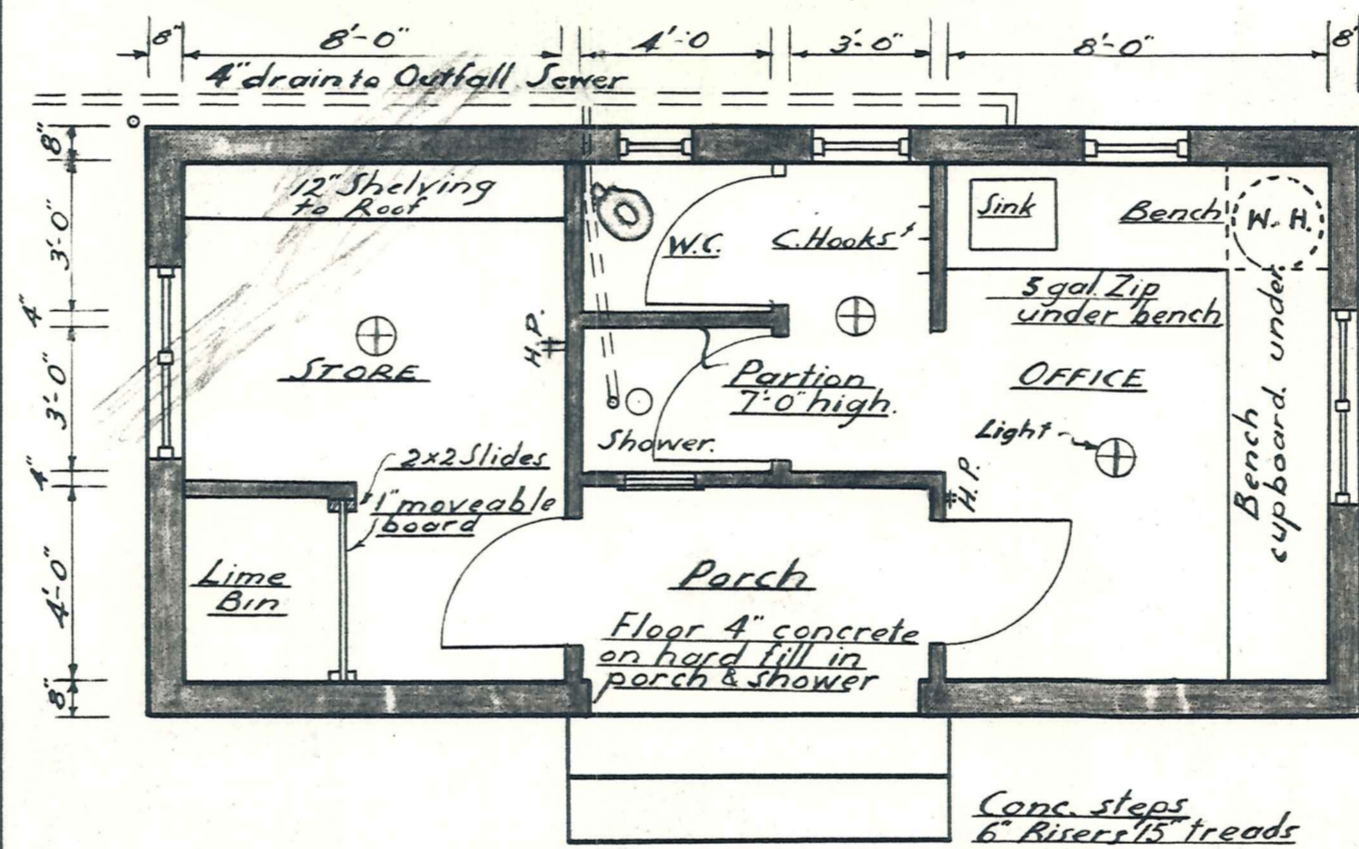
Note: Fitting so marked * to joint with Fibrolite pipe of same size.



EAST ELEVATION

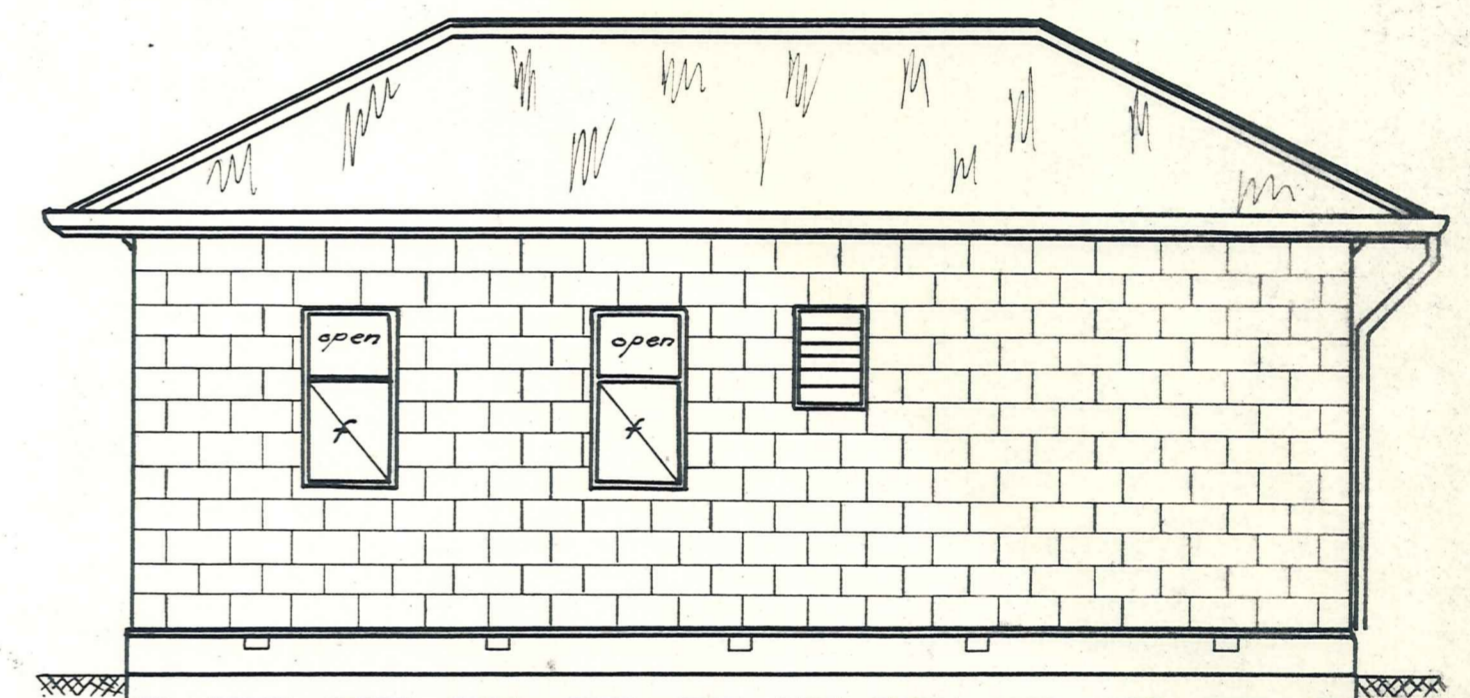


SOUTH ELEVATION

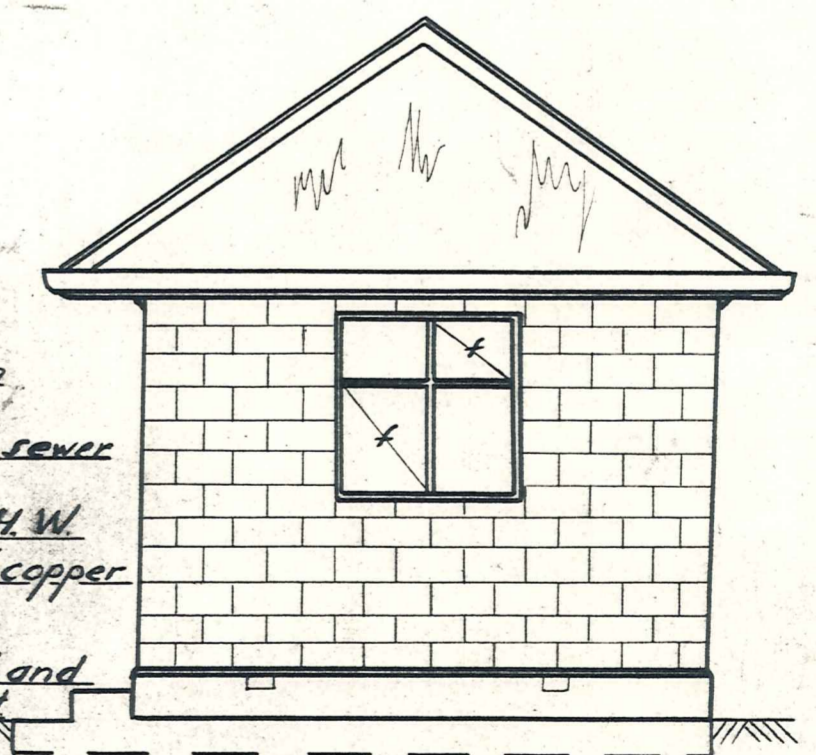


PLAN

GENERAL SPECIFICATION



WEST ELEVATION



NORTH ELEVATION

Scale: 1/4" to 1 Ft.

Construction 3" concrete foundation galv. wire ventilators. Framing 4"x2" locally grown Radiata. Galv. iron roof (26g). Copper D.P. & spouting all in accordance with N.Z.S.S. 95 pt. 7.

Linings Porch and Eaves Masonite, batten moulding at wall and fascia. Office, Flame-proof Pipex ceiling (Vee grooved) Walls Gibraltar Board Shower Cabinet and elsewhere N.Z. Hardboard Store Pipex ceiling, Hardboard on walls. Lime Bin. Frame up 3'-6" high in 6"x1" Radiata and line both sides in hardboard Floors Porch and shower concrete. Other floors Radiata.

Lights Ceiling fittings opal plastic shades thus ⊕. Globes 100 watt office and store. 75 watt Shower.

Power Heating points (two at) thus #

Painting Paint to be to N.Z.S.S. 521. Ceilings two coats of approved paint. Walls. Store walls not to be painted. Other walls 1 coat undercoat. Two coats of enamel. Office fittings. Seal and two coats clear.

Windows

Joinery

All panes 20oz. glass. casement stays bronze. Fixed sashes shown thus. f.

Windows 4"x2" casement in Totara or Oregon.

Louvers 2x1'-6" obscure glass slats.

Shower window 26 oz. obscure glass.

Doors Exterior 1 1/2" G. Totara or Oregon 6'8"x2'-8".

Interior R.P. flush 6'x6"x2'6".

Moulding, Heart Red Pine.

Office Fittings in Red Pine

Bench on West wall plain front with toe recess.

Bench on North wall with cupboards under full length copper cistern and connect and 18" wide shelf.

Sink 2 1/2" 18"x10" in Stainless steel 1/2" Hot Cold Chrome Taps.

Water Heater 5 galls. under West wall bench.

Connect to a supply tank in roof and to sink and shower in copper piping 1/2".

Store Shelving to roof open in 8"x1" & 3"x2" Radiata.

Painting (continued)

Exterior woodwork one coat of red lead, two coats approved paint.

Eaves One undercoat. Two coats of approved paint.

Drains Allow 100' 4" exterior drain from shower, sink and W.C. connect to 3" outfall sewer and saddle thereto.

Plumber Provide supply tank and H.W. cylinder and connect in 1/2" copper to shower and sink.

Provide and fix 2" R. W.C. and connect to W.C. and connect.

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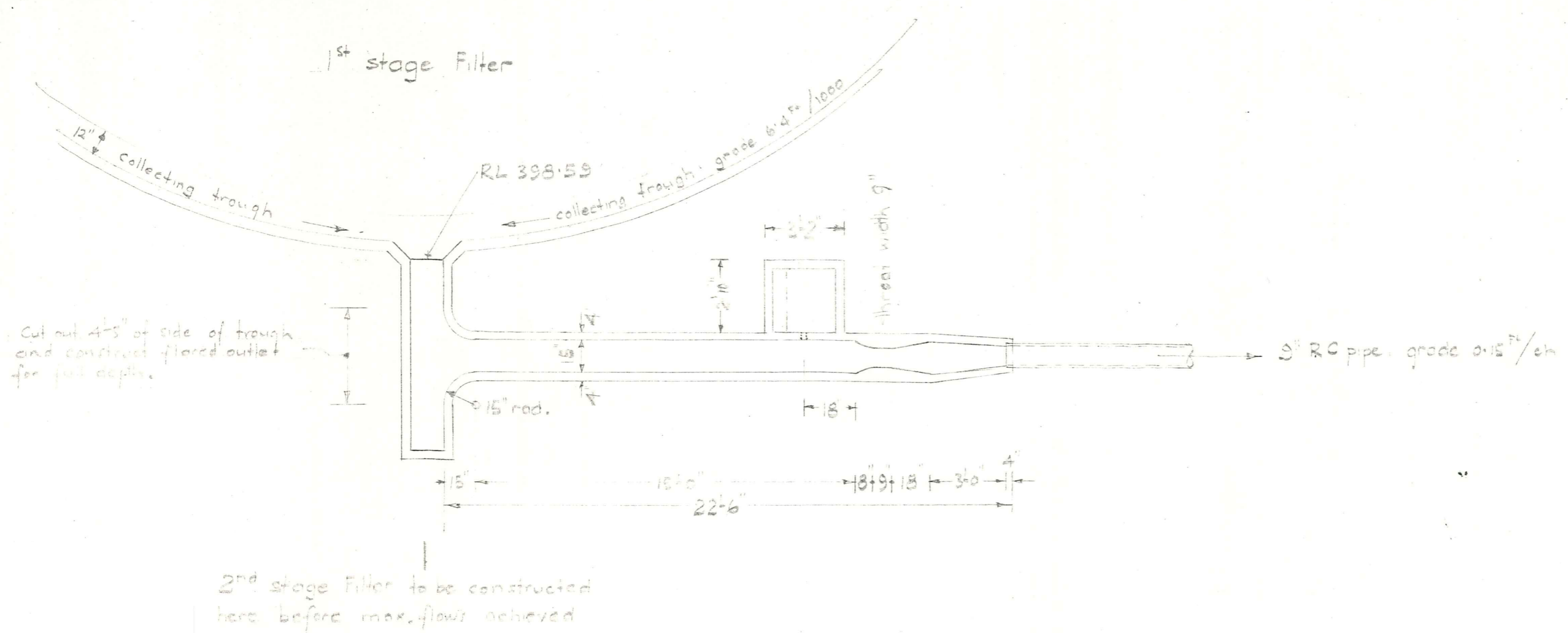
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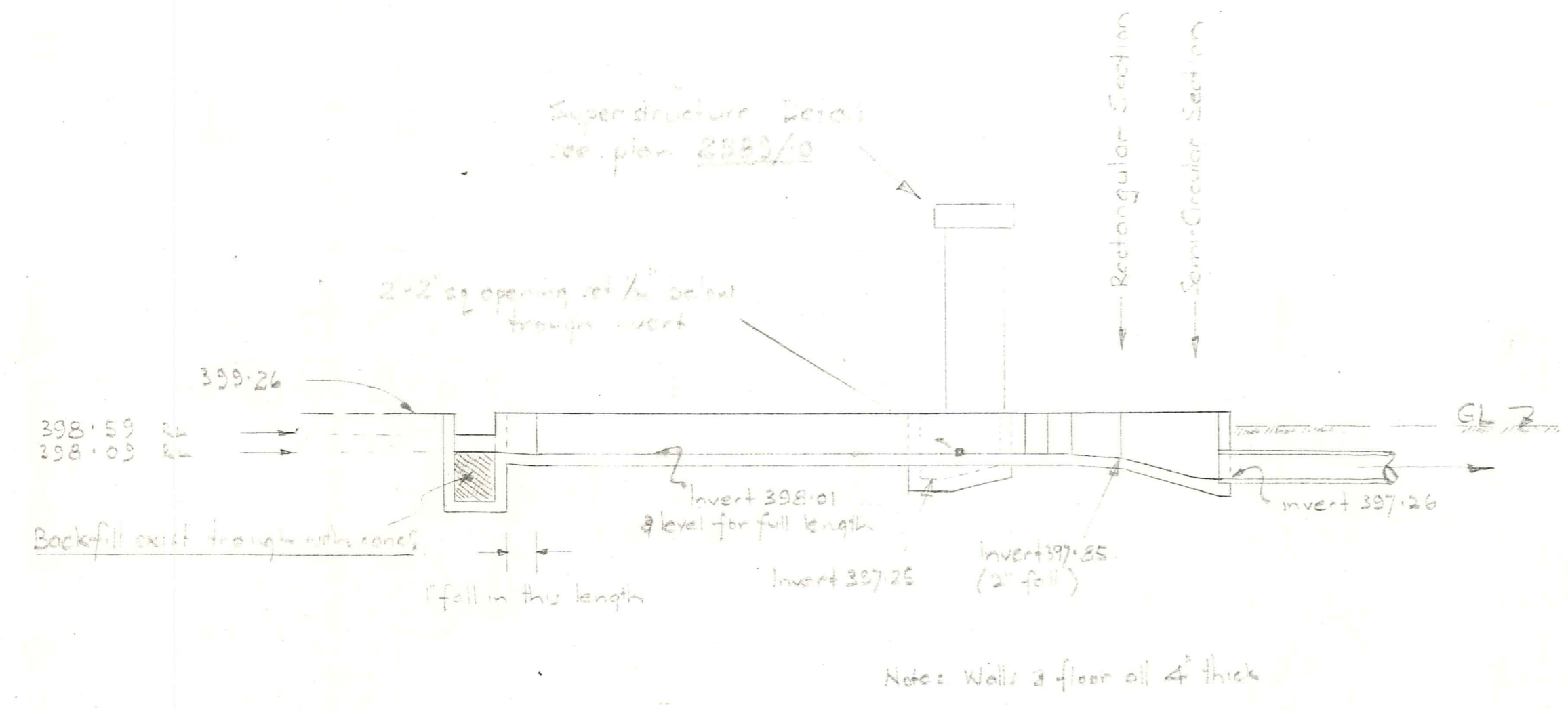
Provide and fix 2" R. W.C. and connect to W.C. and connect.

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Plan



Elevation

Layout of Standing Wave Flume & Leo Recorder
1/4" to 1"