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Civil & Structural

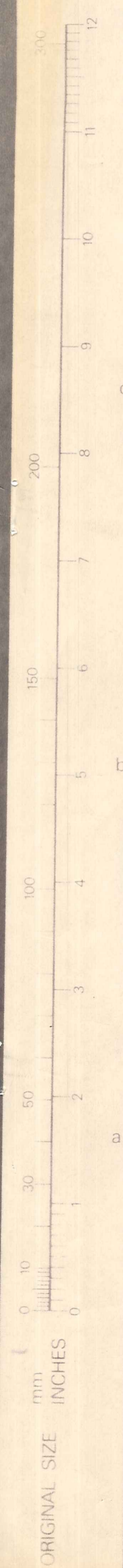
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- T2 Architectural Plan & Elevations
- T3 Structural Details
- T4 Architectural Details
- T5 Pipework Ducting & Ventilation
- T6 Treatment Filter
- T7 Hydraulic Structures & Connecting Pipework
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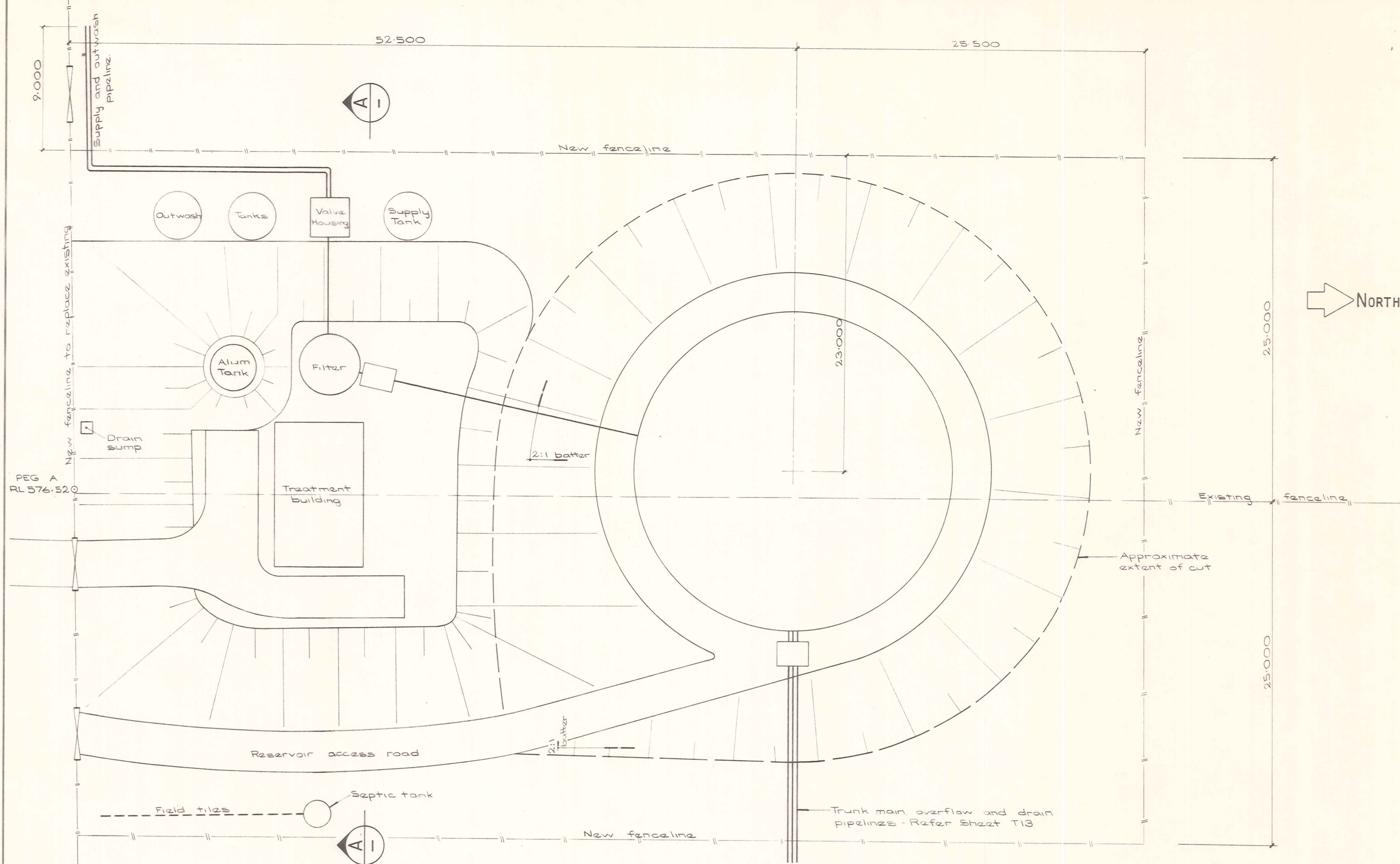
- E1
- E2
- E3

# RANFURLY WATER TREATMENT PLANT AND STORAGE RESERVOIR 1984

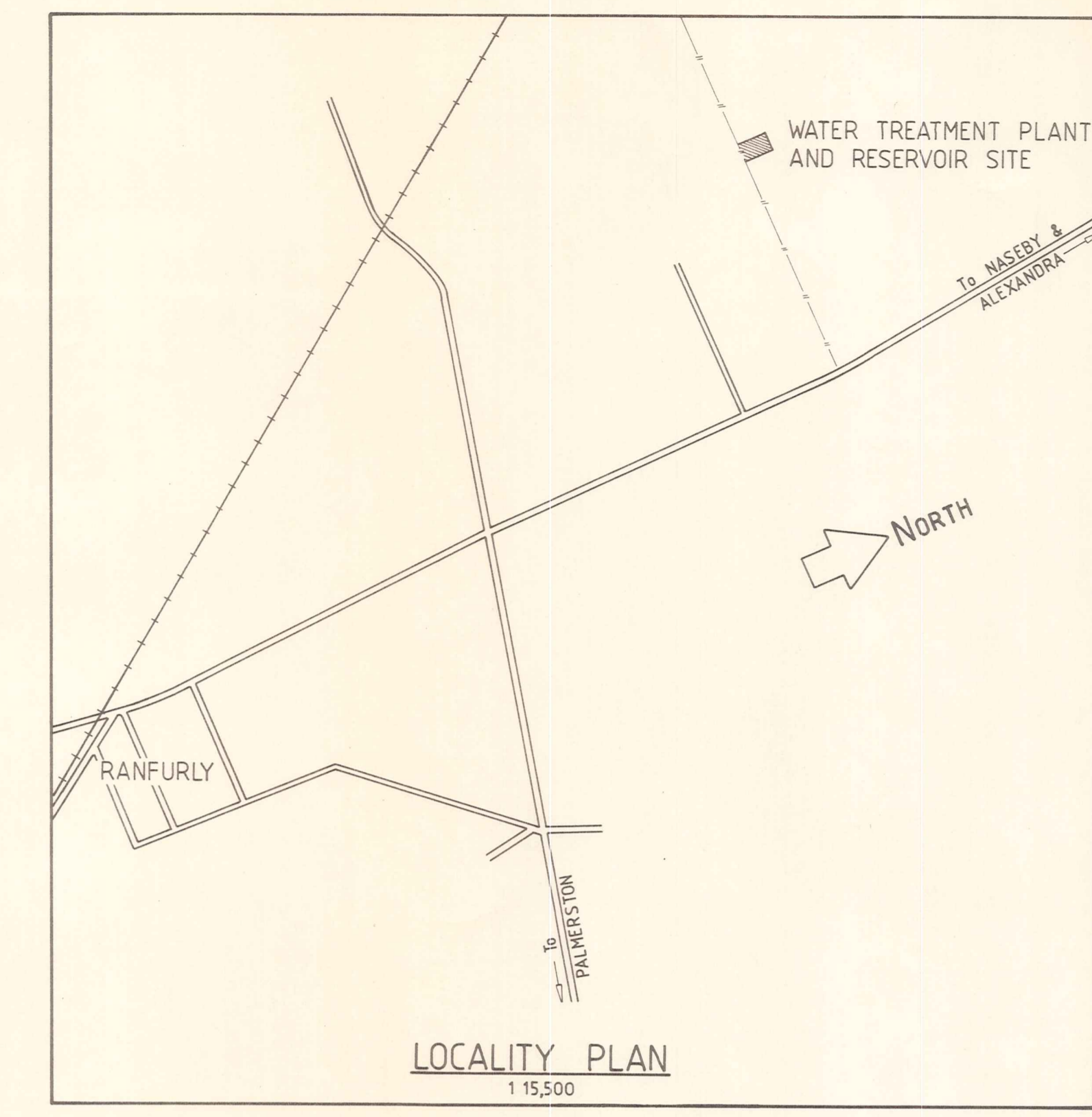
MANIOTOTO COUNTY COUNCIL



1 2 3 4 5 6 7 8 9

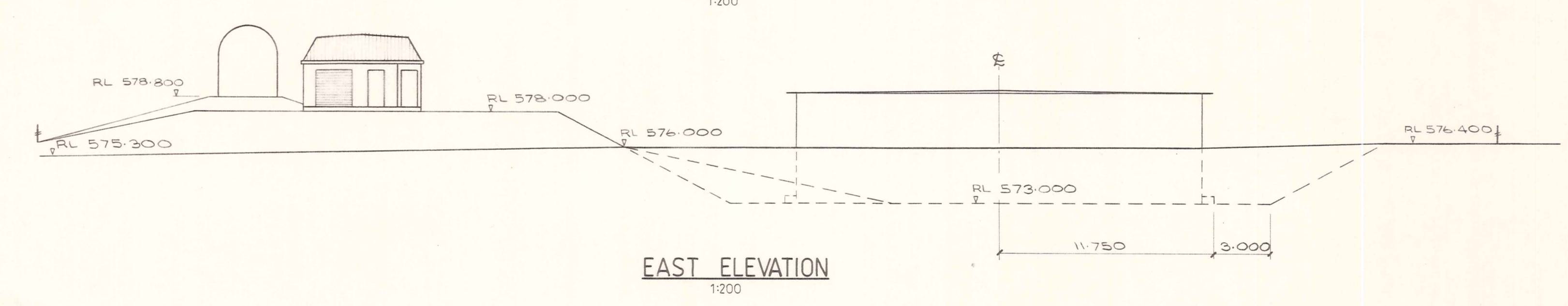


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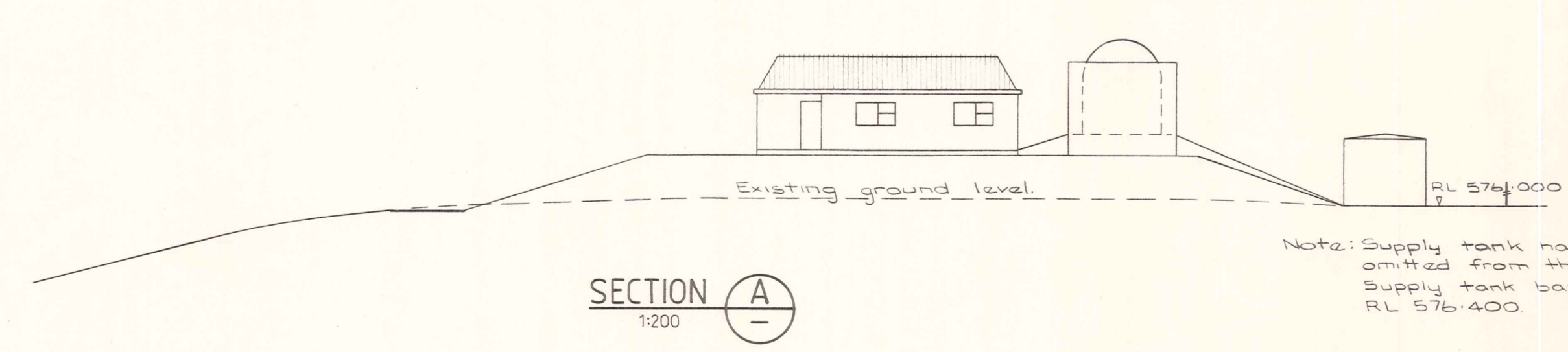


LOCALITY PLAN  
1:15,500

PLAN  
1:200



EAST ELEVATION  
1:200



SECTION A  
1:200

Note: Supply tank has been omitted from this Section  
Supply tank base at RL 576.400

300  
200  
150  
100  
50  
0  
mm  
INCHES

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*[Signature]*

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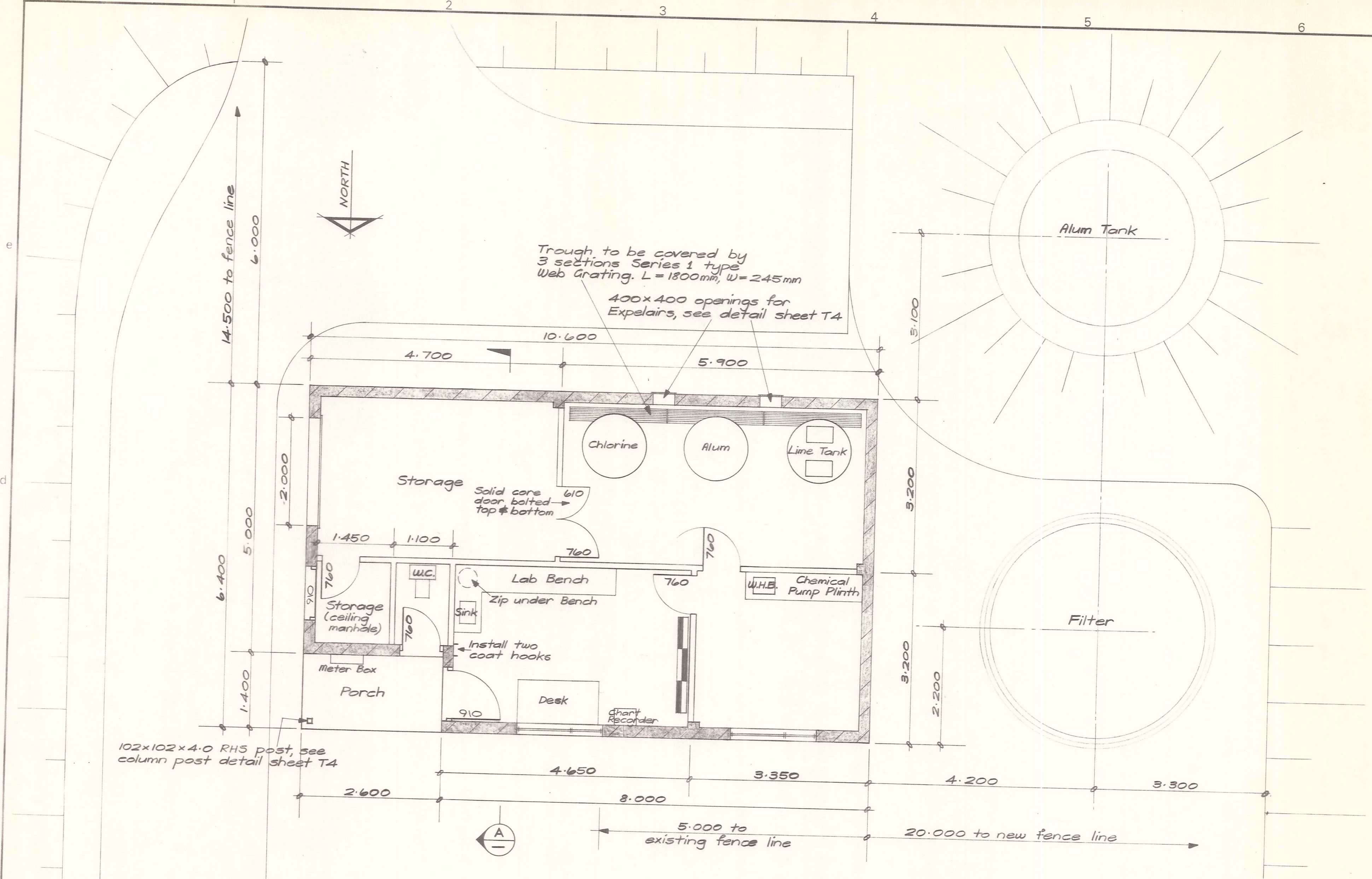
**RANFURLY WATER TREATMENT STATION AND RESERVOIR  
GENERAL LAYOUT AND LOCALITY PLAN**

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NO.	BY	DATE	Appvd.	Surveyed		10384	T 1		
				Drawn	C.G. Baxter June 84				
				Calculations	S. Newlands June 84				
				Traced	C.G. Baxter June 84				
				Checked	S. Newlands June 84				
				Approved	<i>[Signature]</i> June 84	File 6/5/B L.B.	F.B.		

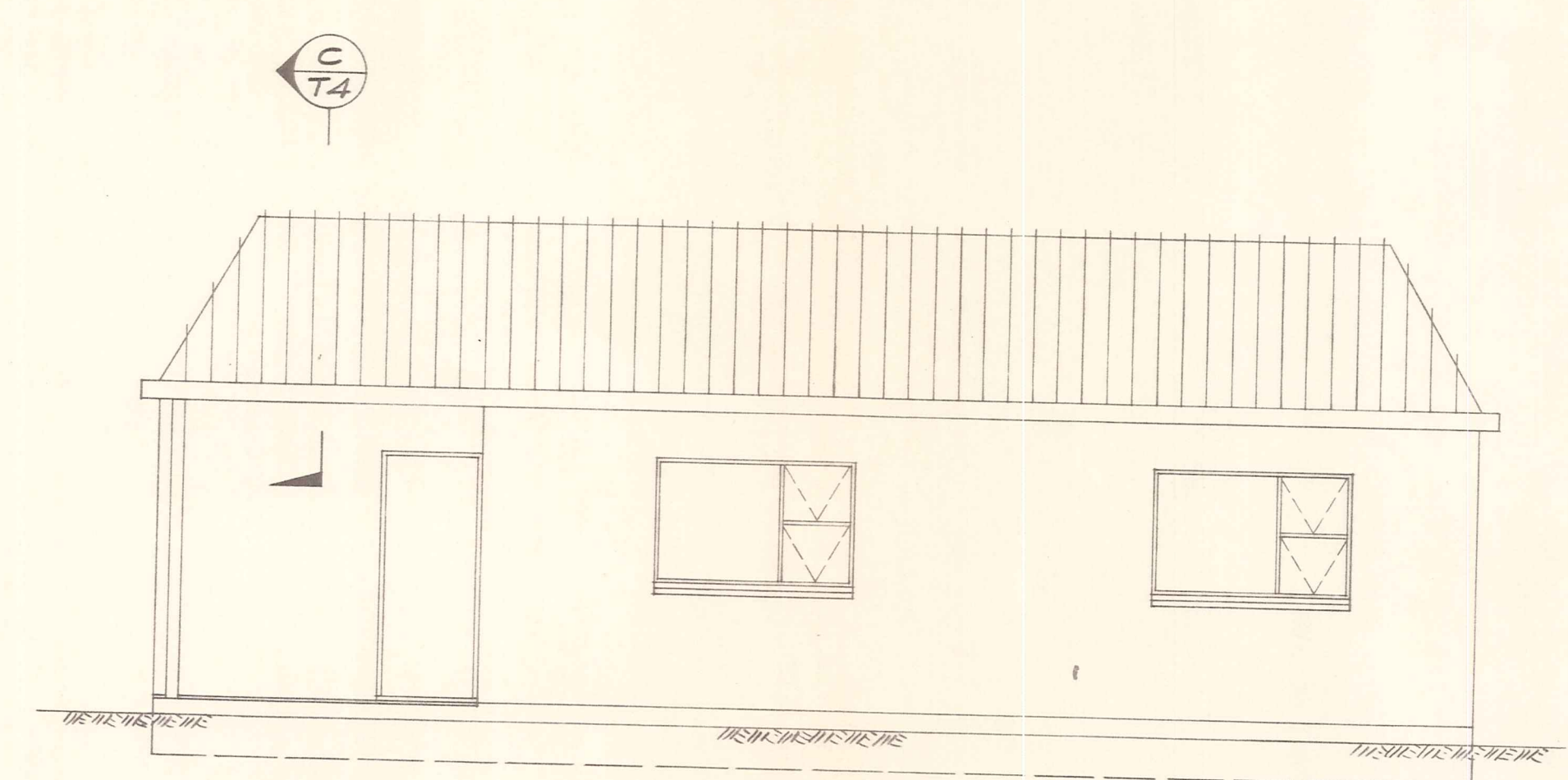
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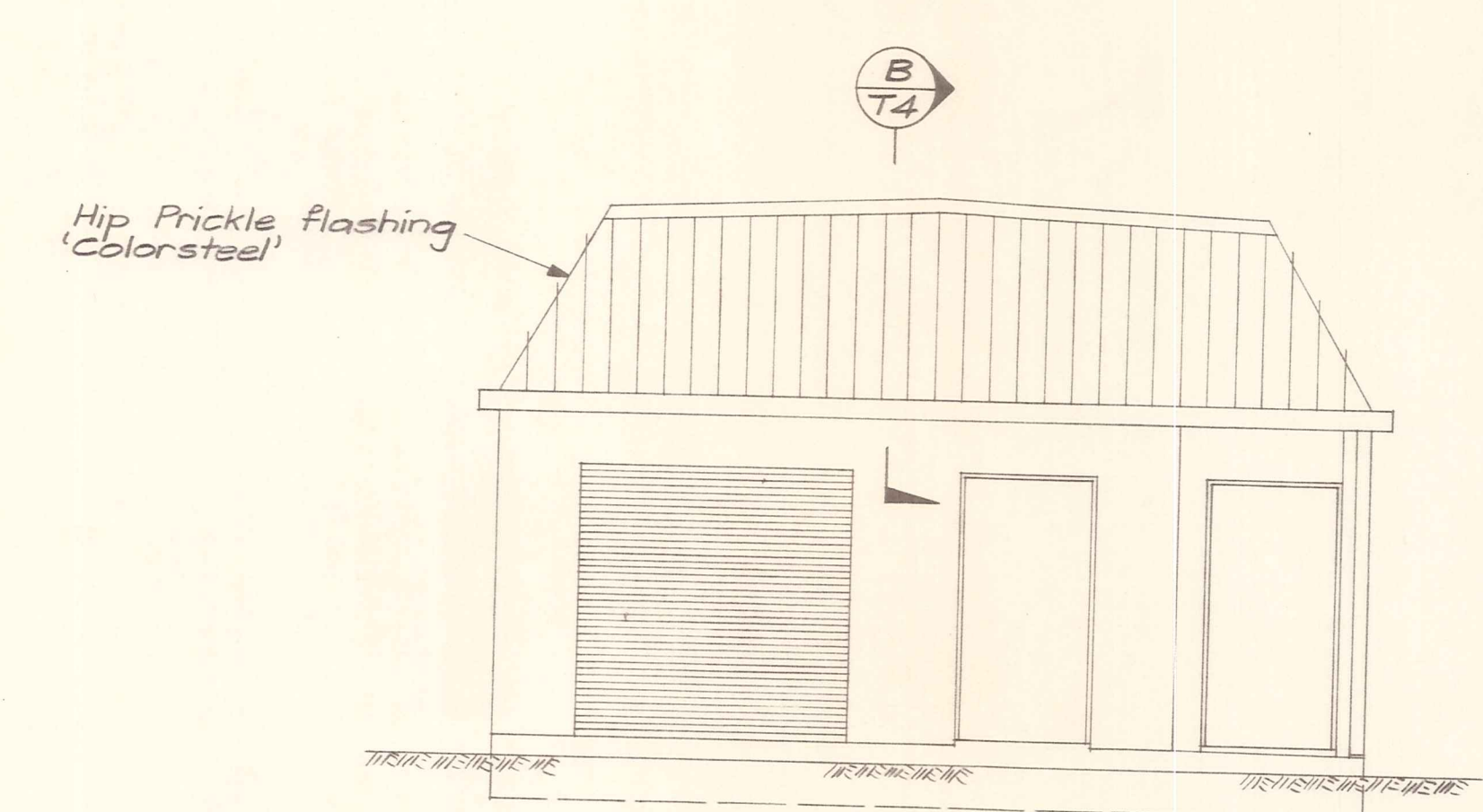
300  
200  
150  
100  
50  
30  
10  
0  
mm  
INCHES



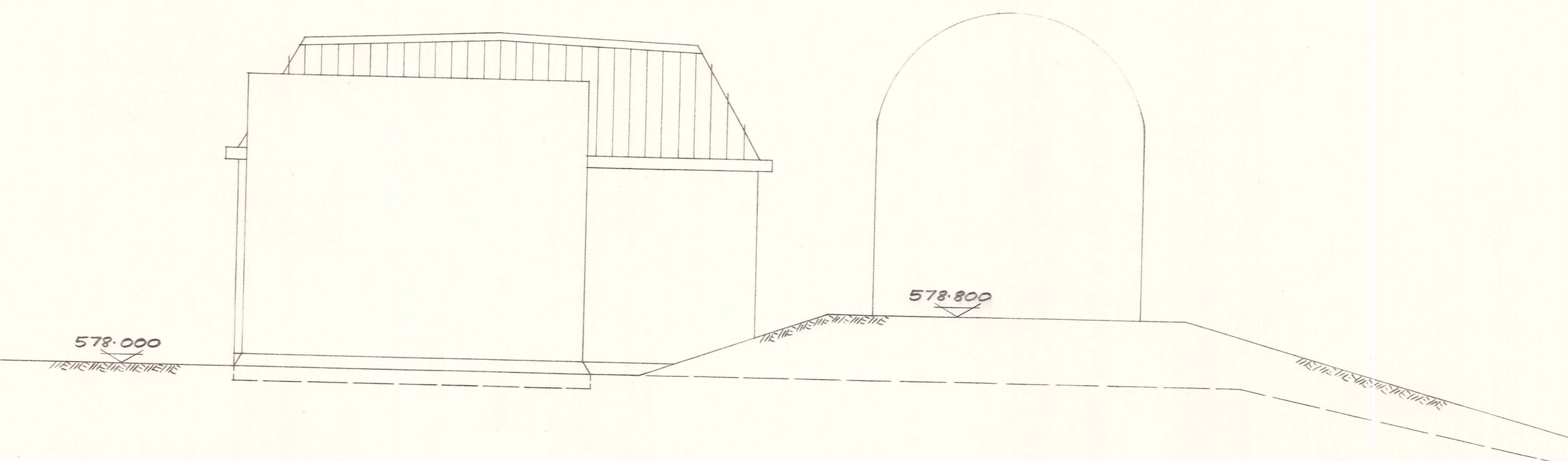
LOCATION PLAN  
1:50



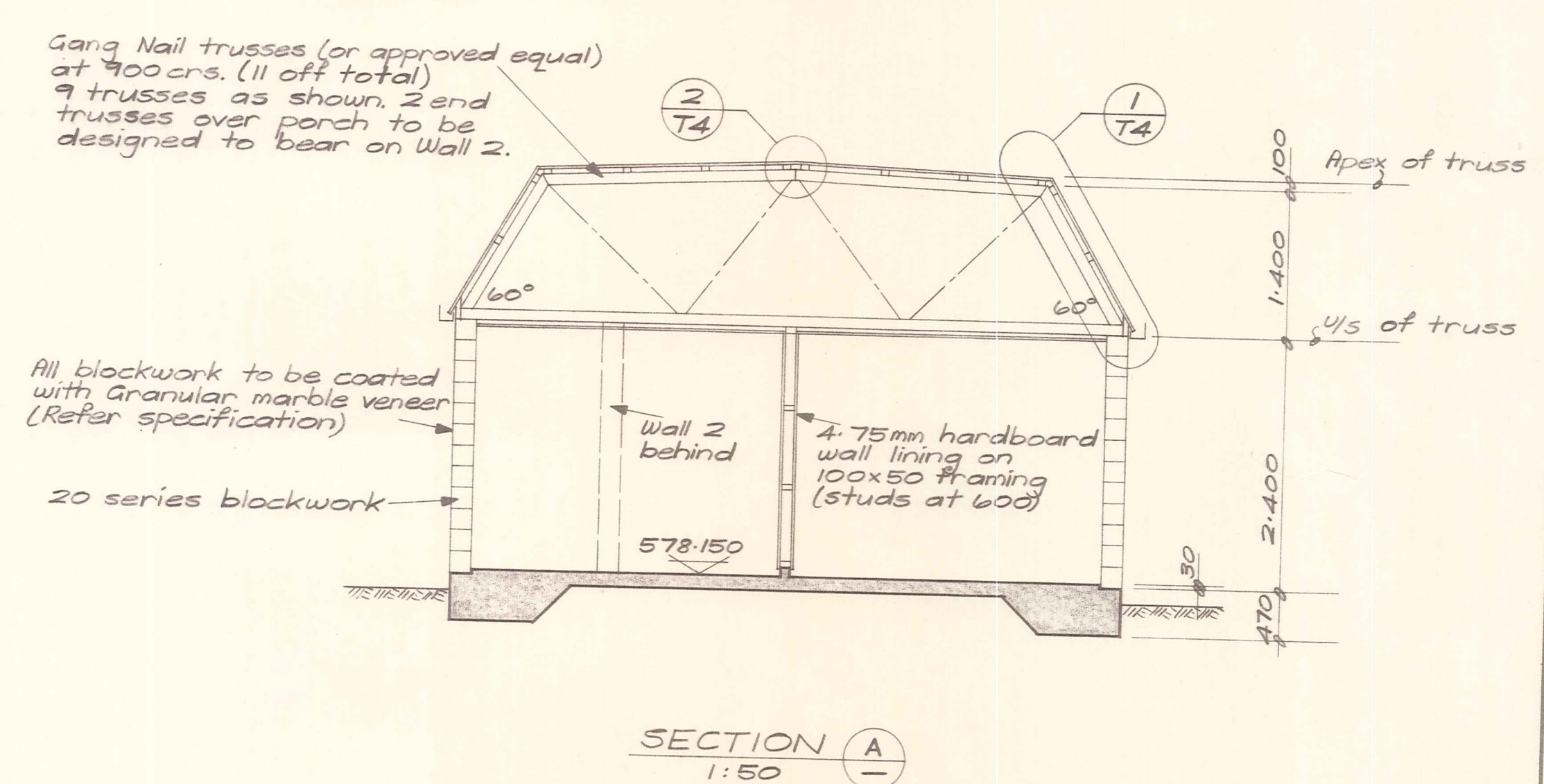
NORTH ELEVATION  
1:50



EAST ELEVATION  
1:50



WEST ELEVATION  
1:50



SECTION A  
1:50

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RANFURLY WATER TREATMENT STATION AND RESERVOIR  
TREATMENT BUILDING ARCHITECTURAL PLAN & ELEVATIONS

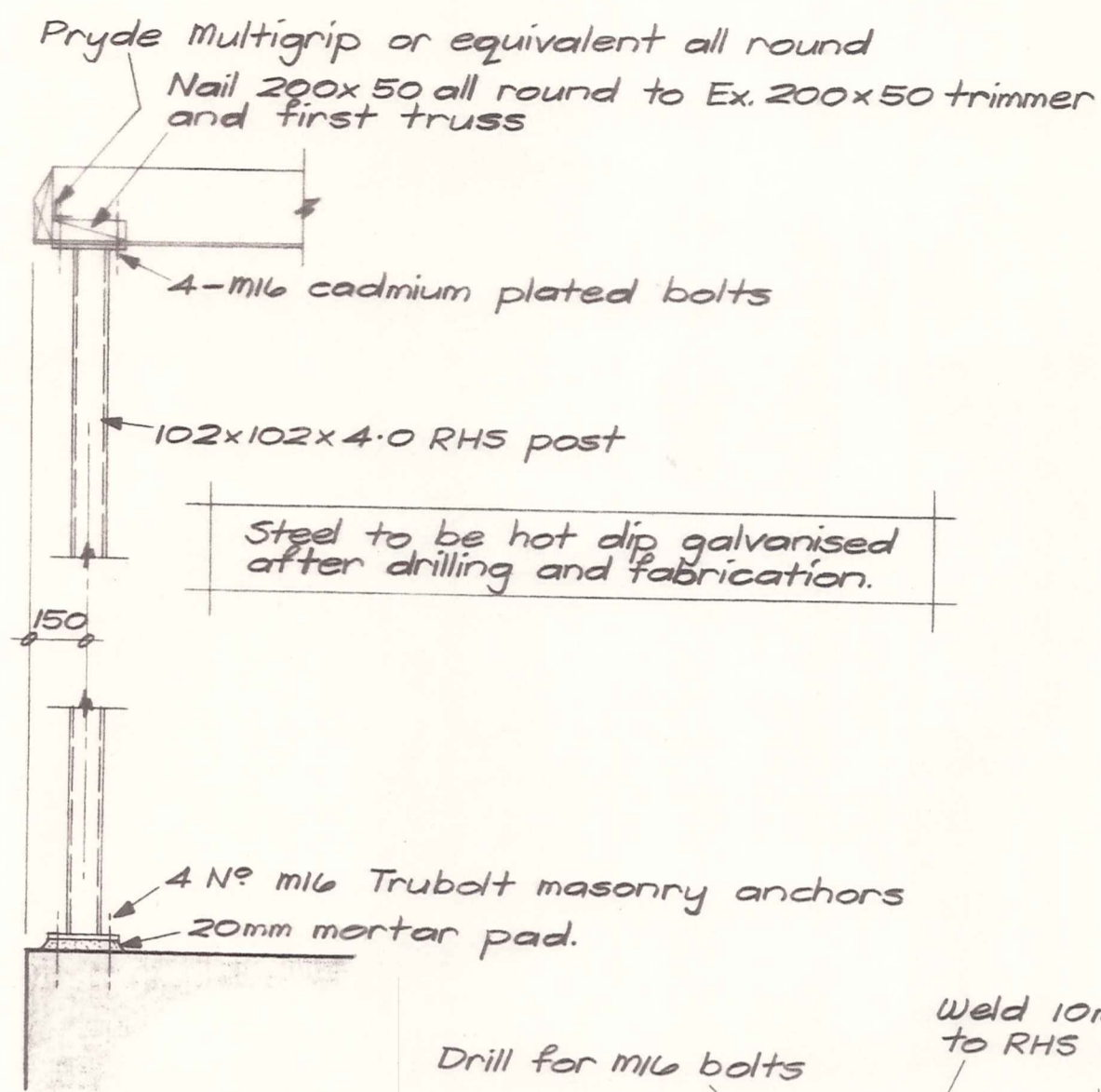
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PER B. J. Weir

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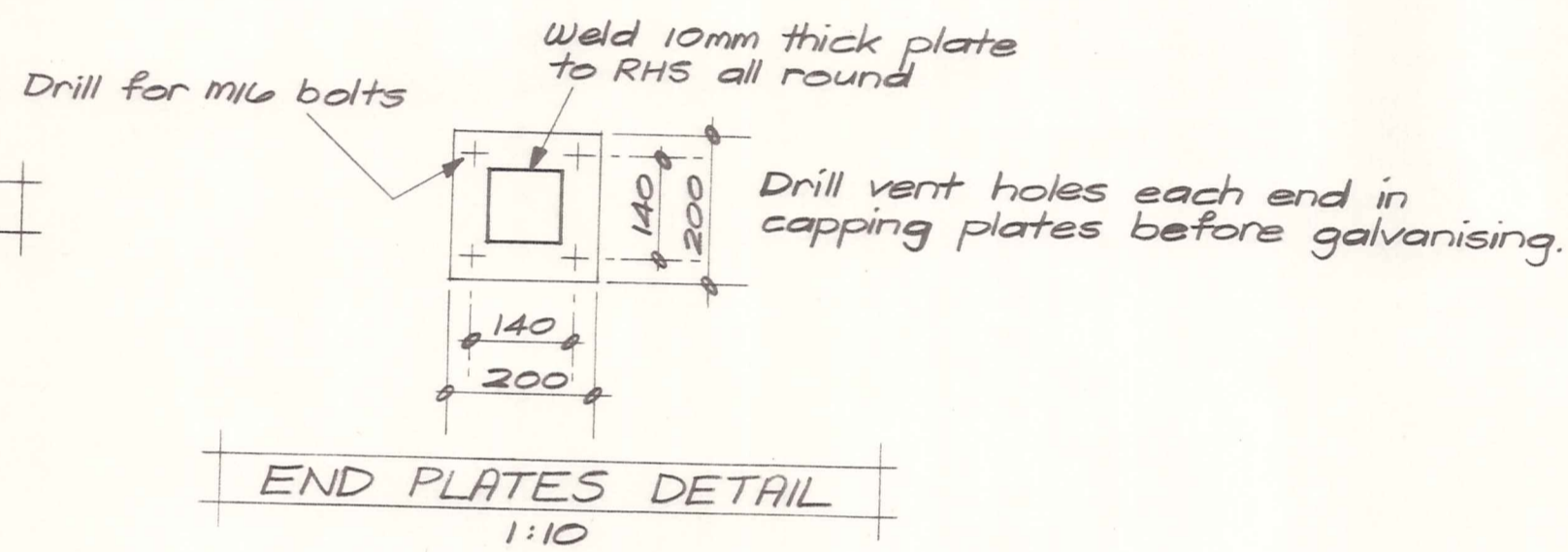
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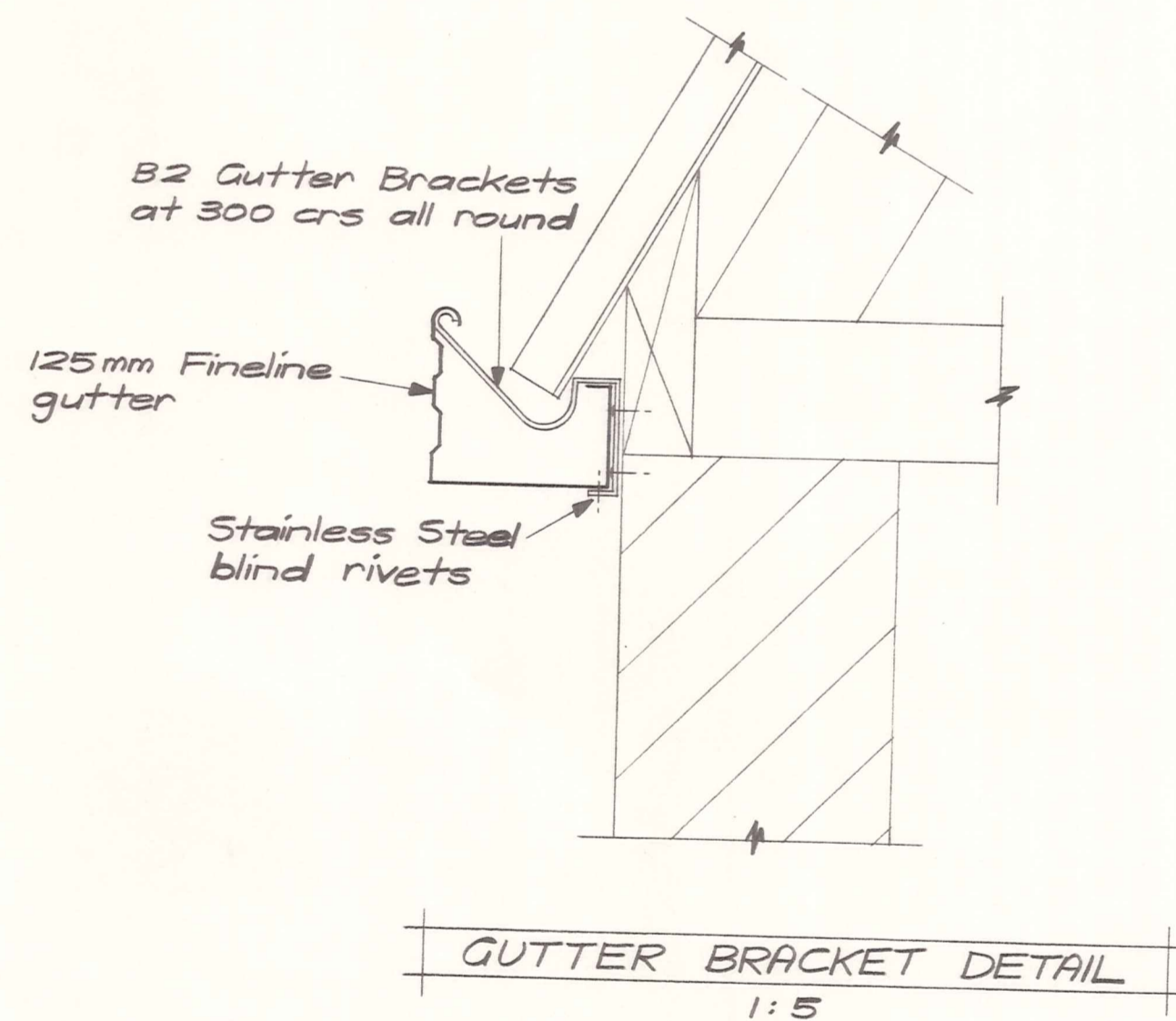
ORIGINAL SIZE  
mm INCHES  
0 10 20 30 40 50 60 70 80 90 100 150 200 300



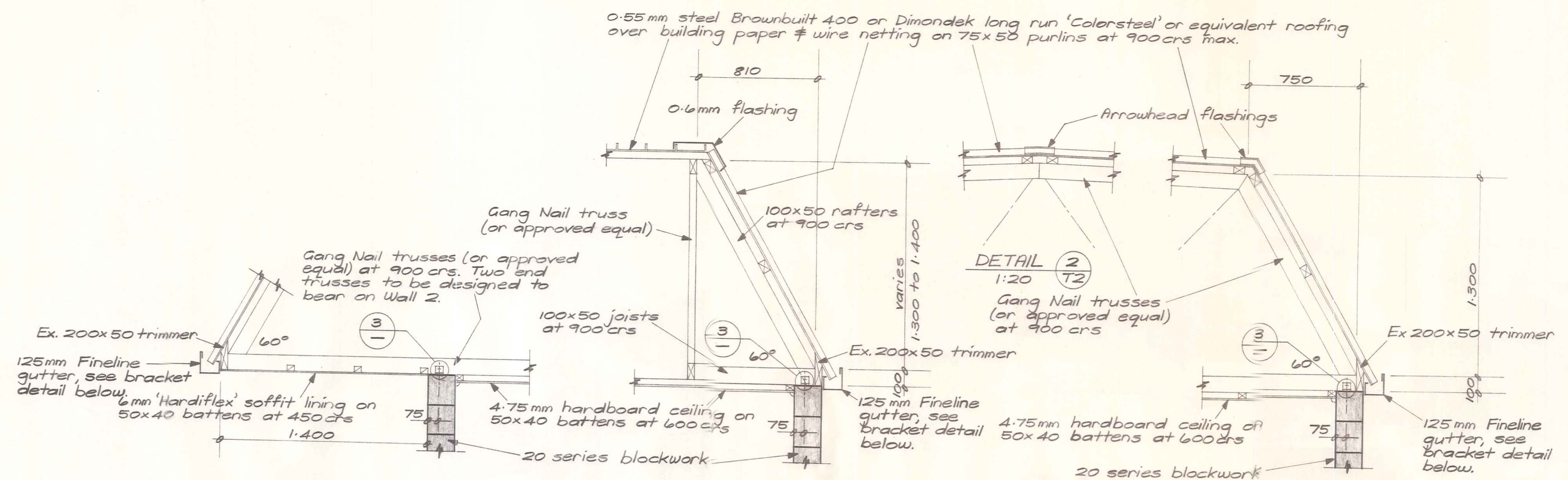
COLUMN POST DETAIL  
1:20



END PLATES DETAIL  
1:10



GUTTER BRACKET DETAIL  
1:5



SECTION C  
1:20

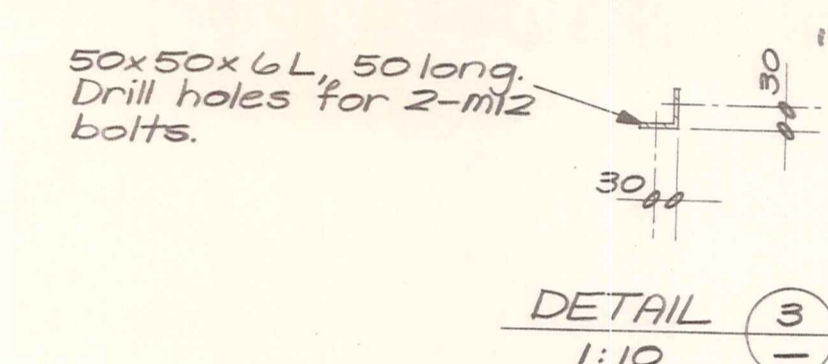
SECTION B  
1:20

DETAIL 2  
1:20

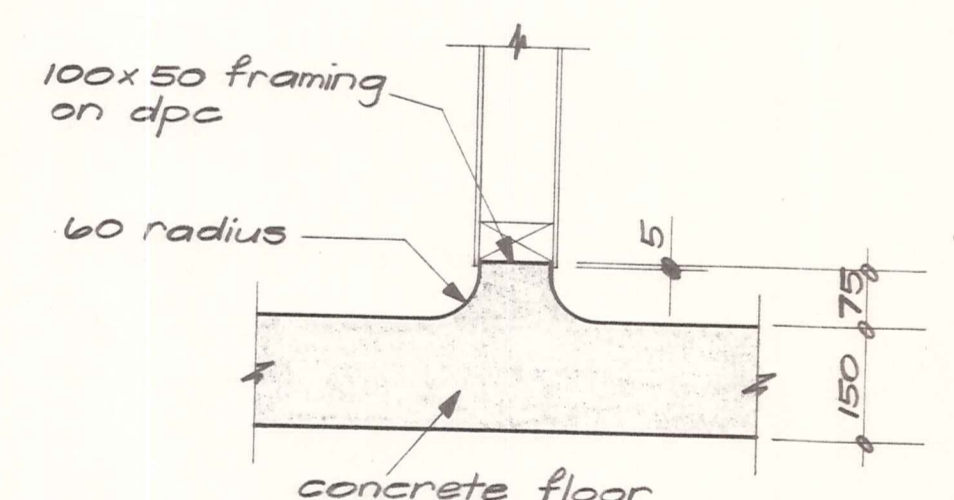
DETAIL 1  
1:20

NOTE: All roof gutters, flashings, etc. to be 'Colorsteel.'

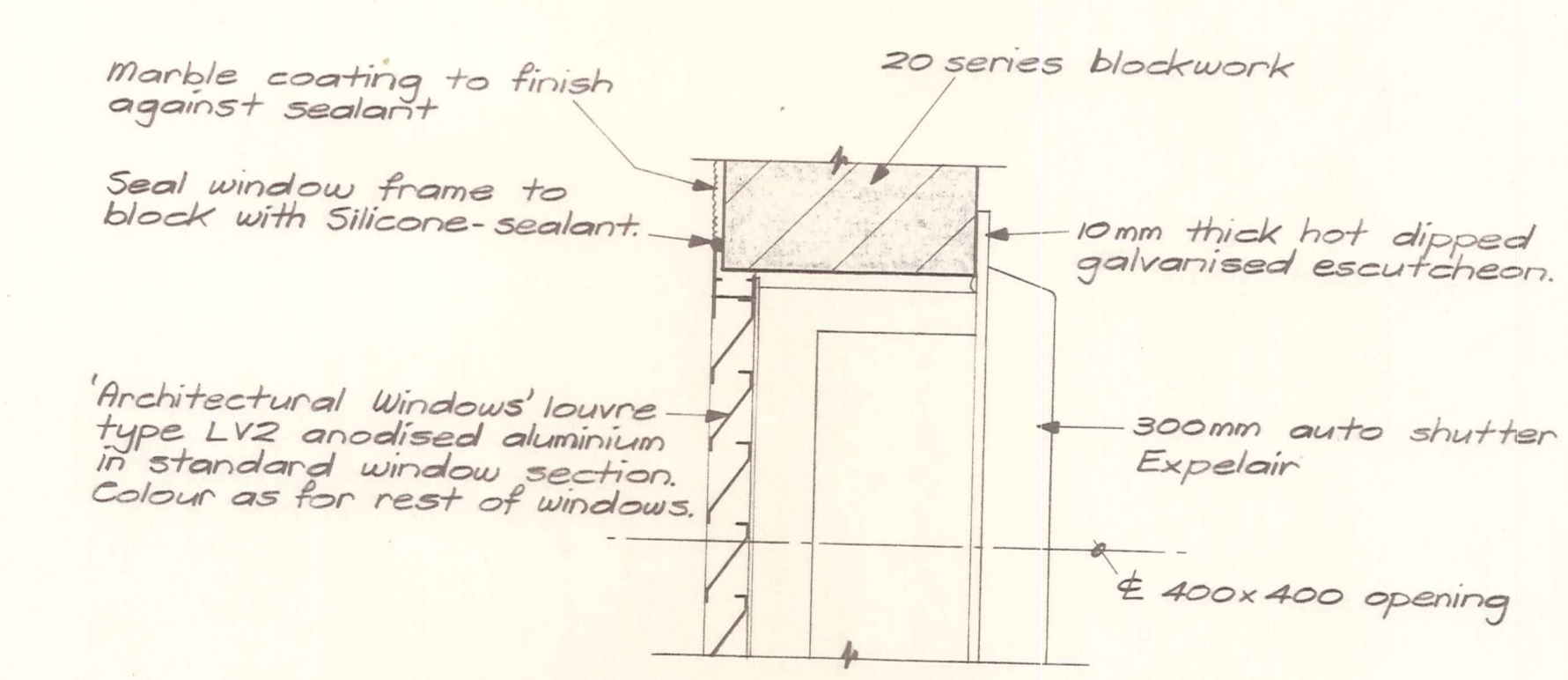
NOTE: Ceiling to be lined with Superbatts insulation.



DETAIL 3  
1:10



TIMBER WALL DETAIL  
1:10



DETAIL AT OPENINGS FOR EXPELAIRS  
1:5  
2 off total

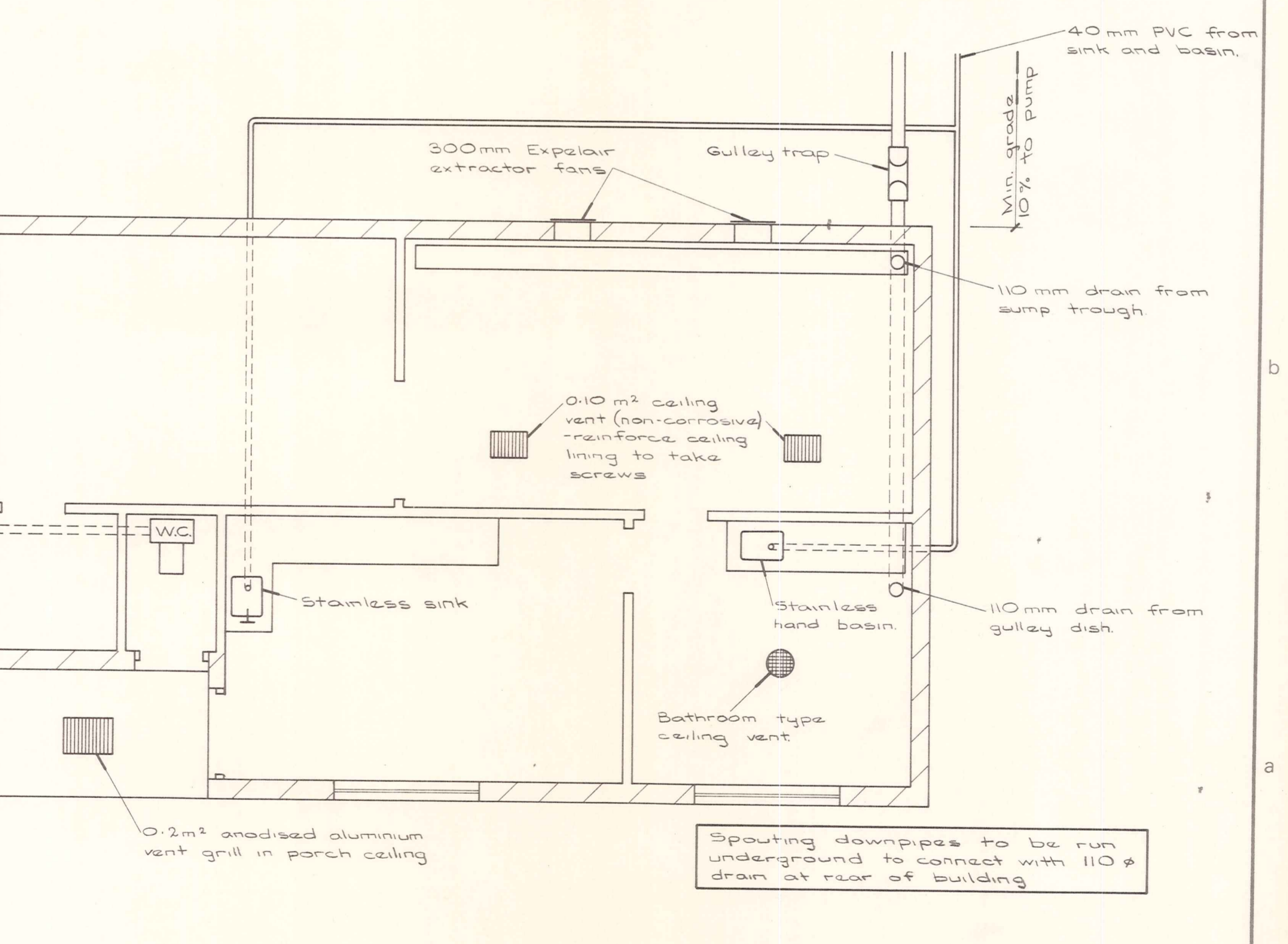
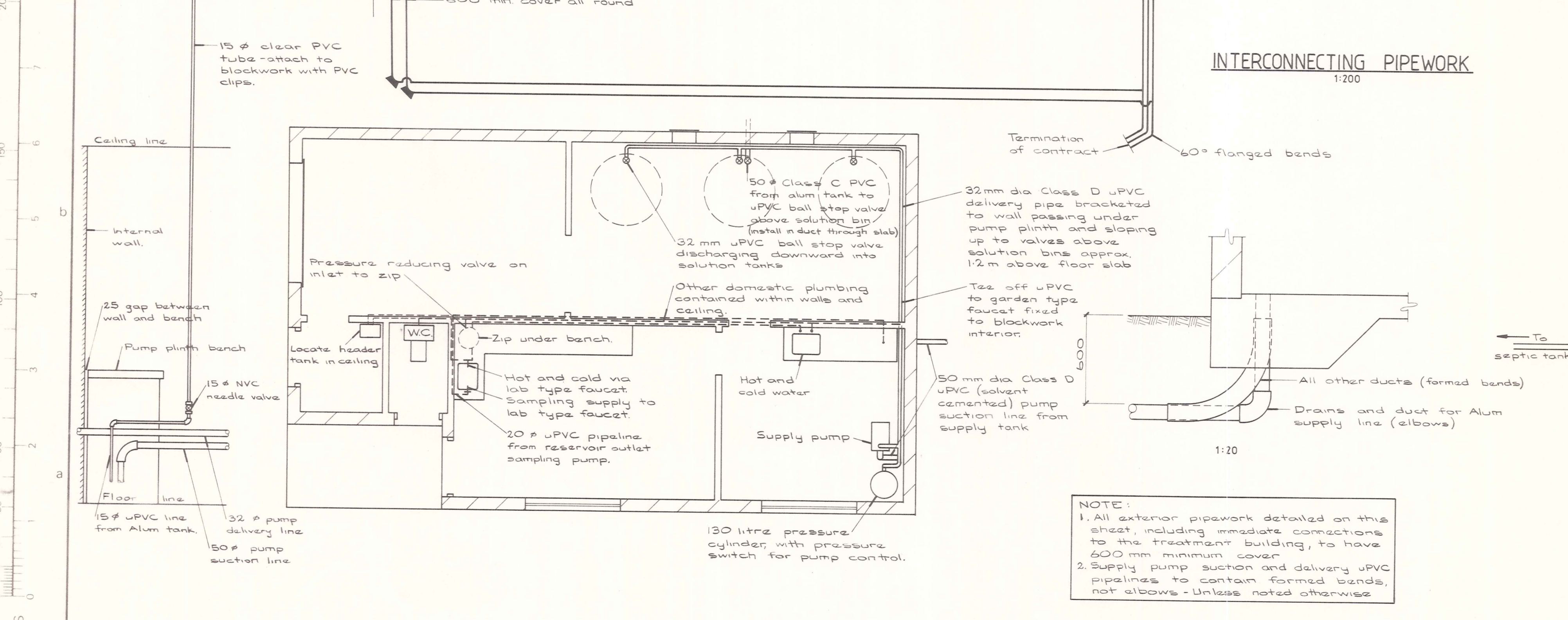
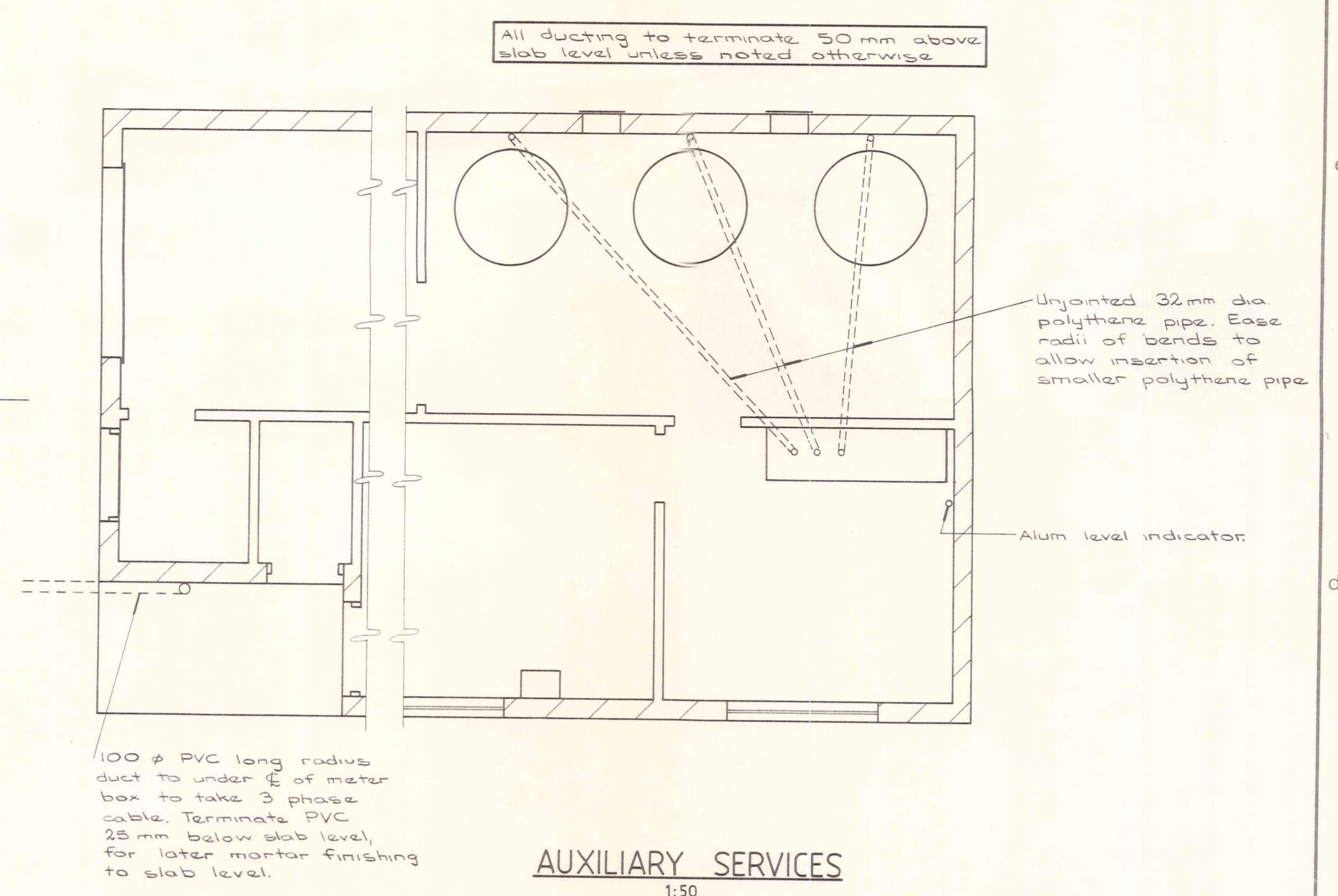
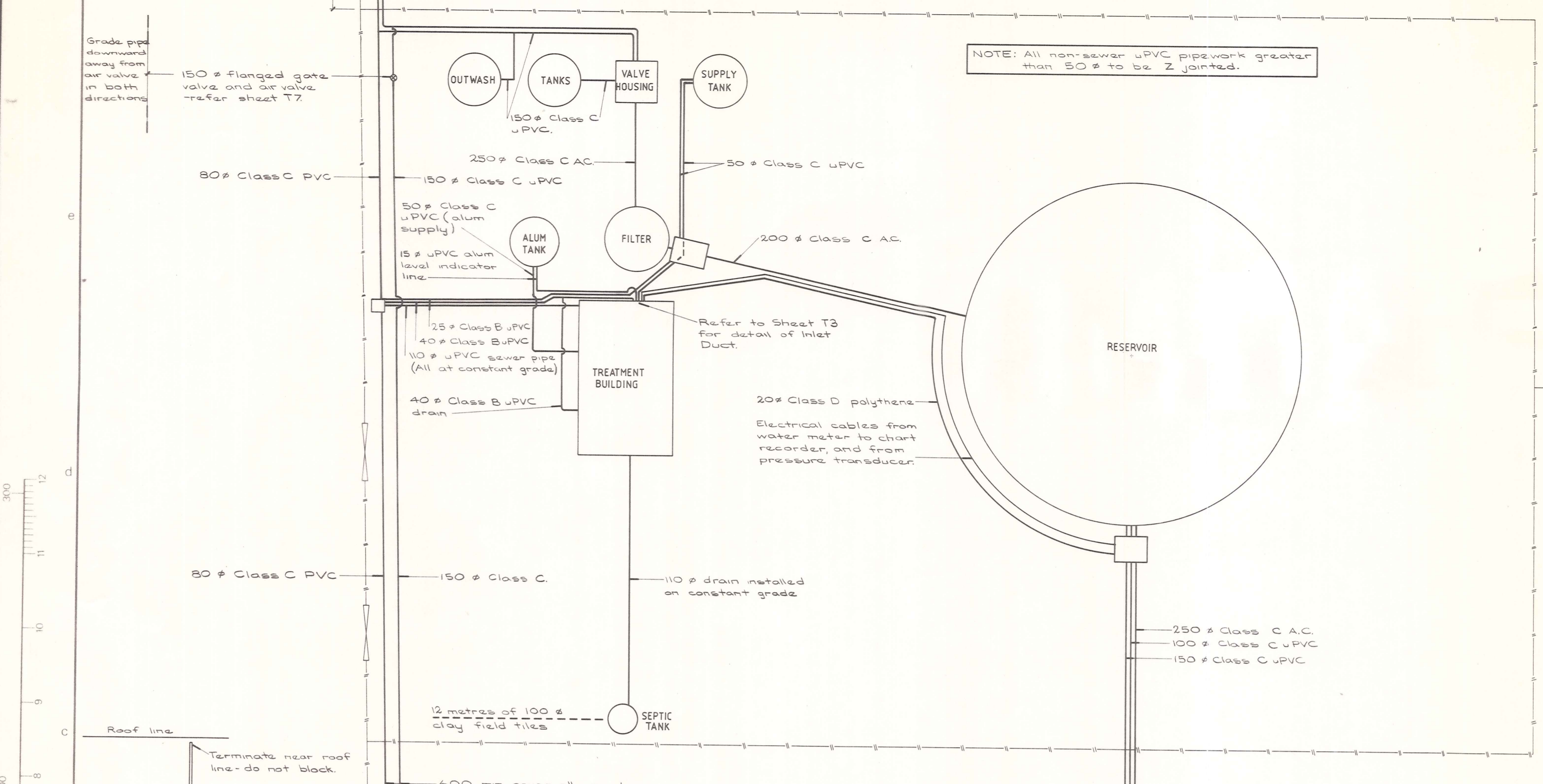
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RANFURLY WATER TREATMENT STATION AND RESERVOIR  
TREATMENT BUILDING ARCHITECTURAL DETAILS

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B. J. Weir

AMENDMENTS			NAME	DATE	JOB NO.	Sheet No	
NO.	BY	DATE			10384	T4	
			Drawn	M. Ferguson			July 1984
			Calculations	S. Newlands			"
			Traced	M. Ferguson			"
			Checked	S. Newlands			Aug
			Approved	B. J. Weir	File 6/6/8	L.B. F.B.	



ALUM LEVEL INDICATOR  
1:20

WATER SERVICES PLUMBING  
1:50

INTERCONNECTING PIPEWORK  
1:200

DRAINAGE AND VENTILATION PLAN  
1:50

ORIGINAL SIZE

300  
200  
150  
100  
50  
0

mm INCHES

1

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MANIOTOTO COUNTY COUNCIL

2

RANFURLY WATER TREATMENT STATION AND RESERVOIR  
PIPEWORK AND VENTILATION DETAILS

3

4

AMENDMENTS			NAME	DATE
NO.	BY	DATE		

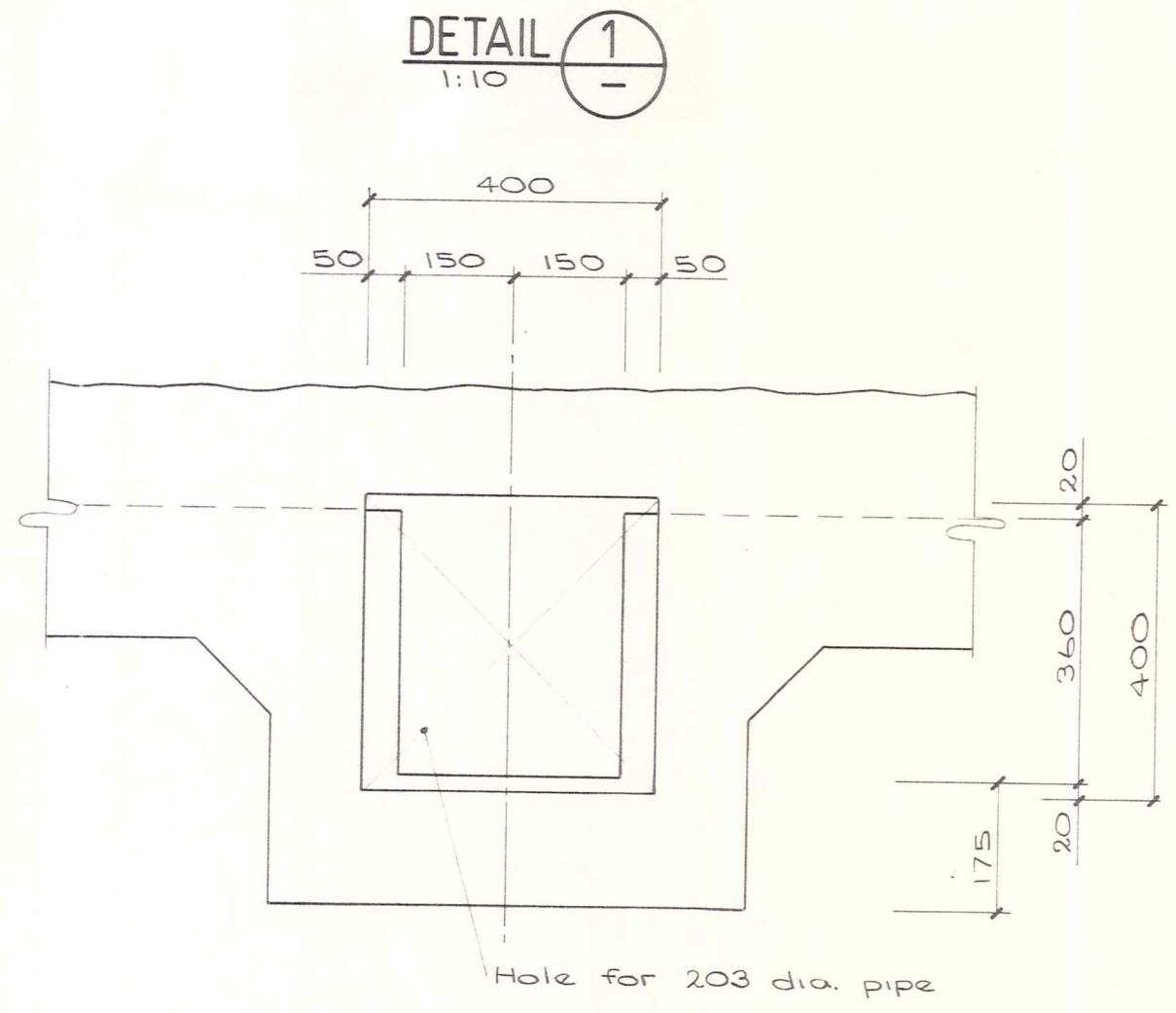
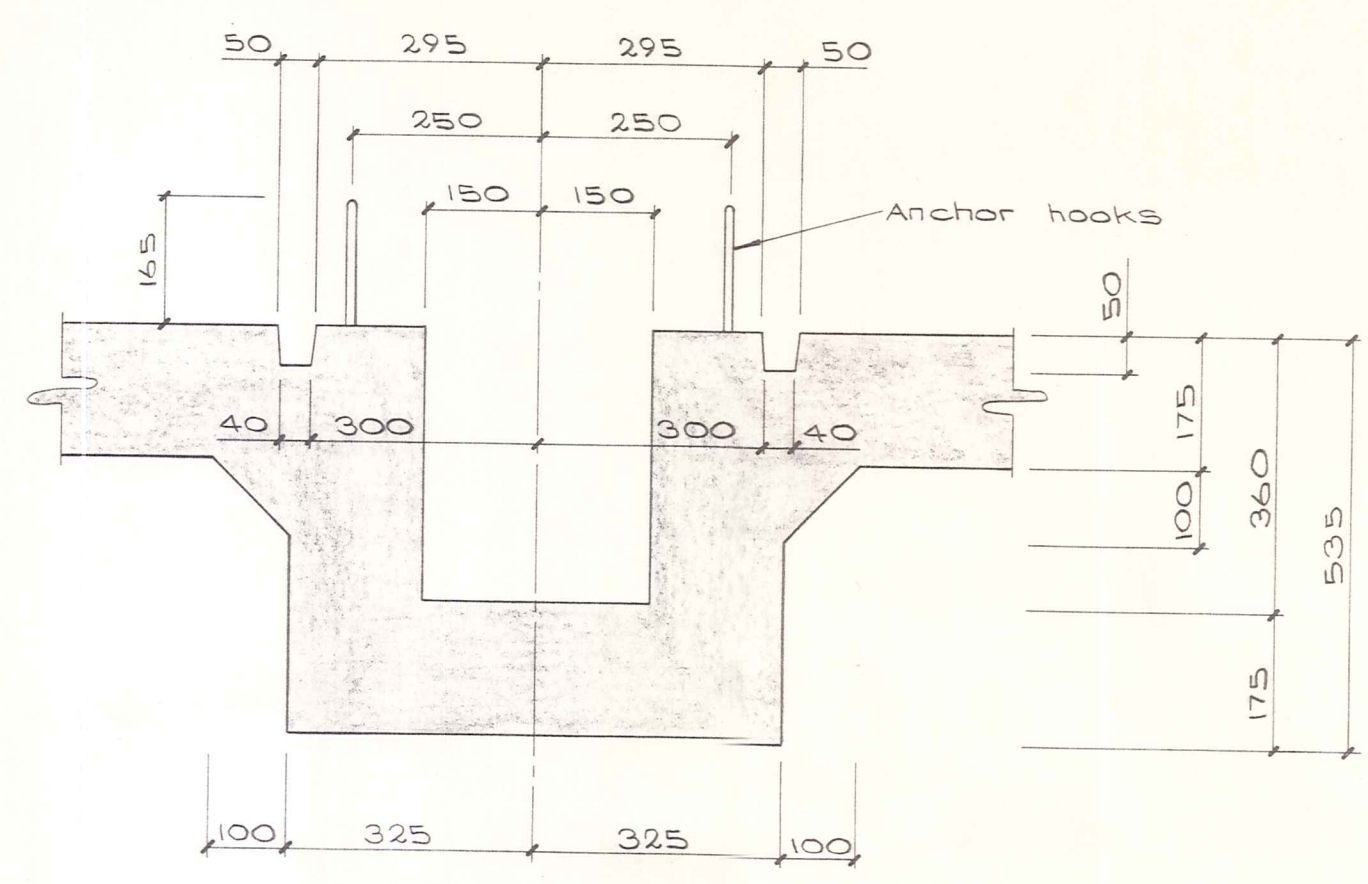
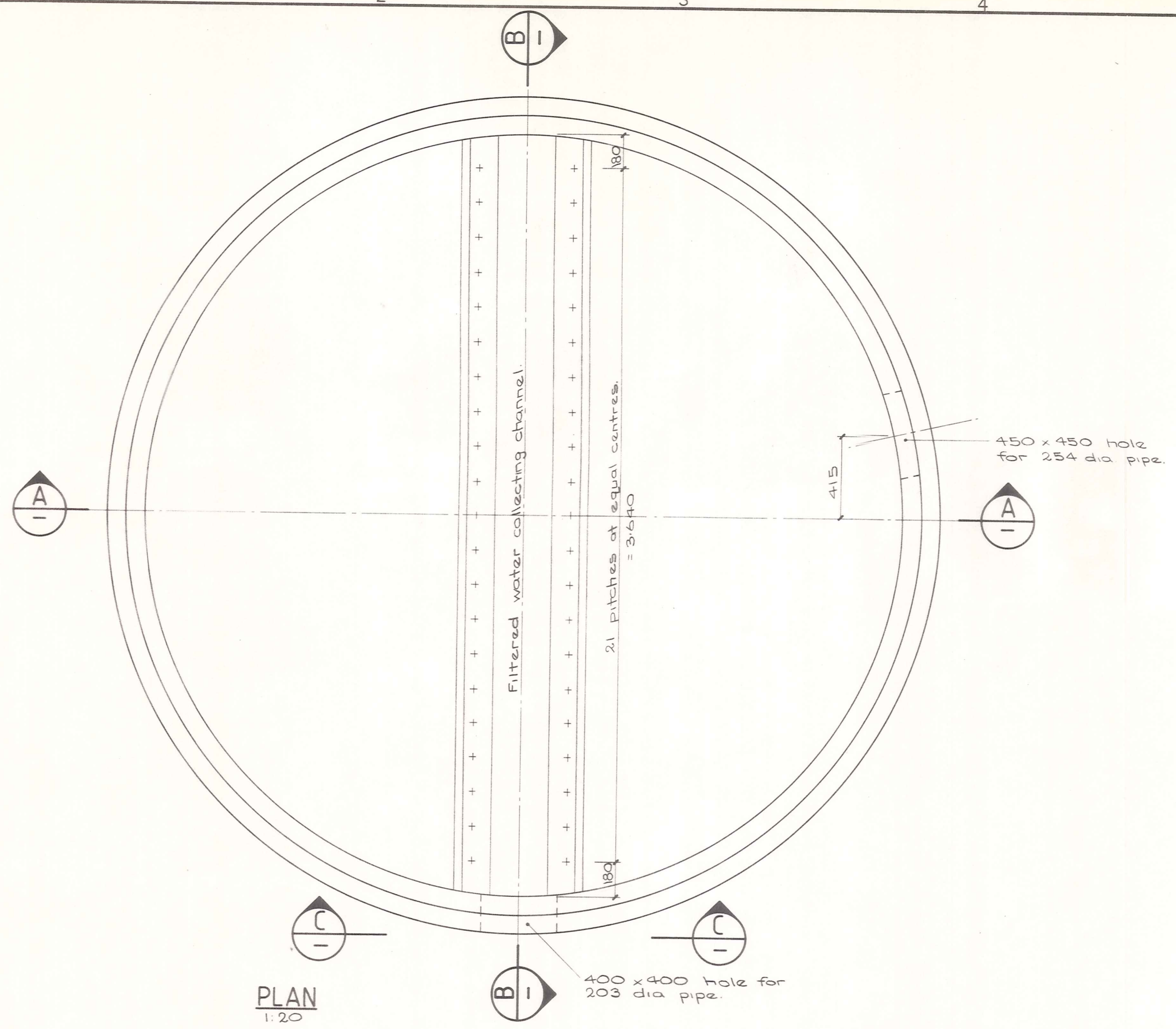
Appvd.	Surveyed	Drawn	Checked	Approved
		C. Baxter	S. Baxter	S. Baxter
		E. Newlands		

JOB NO. 10384  
Sheet No. T5  
of shts. F.B.

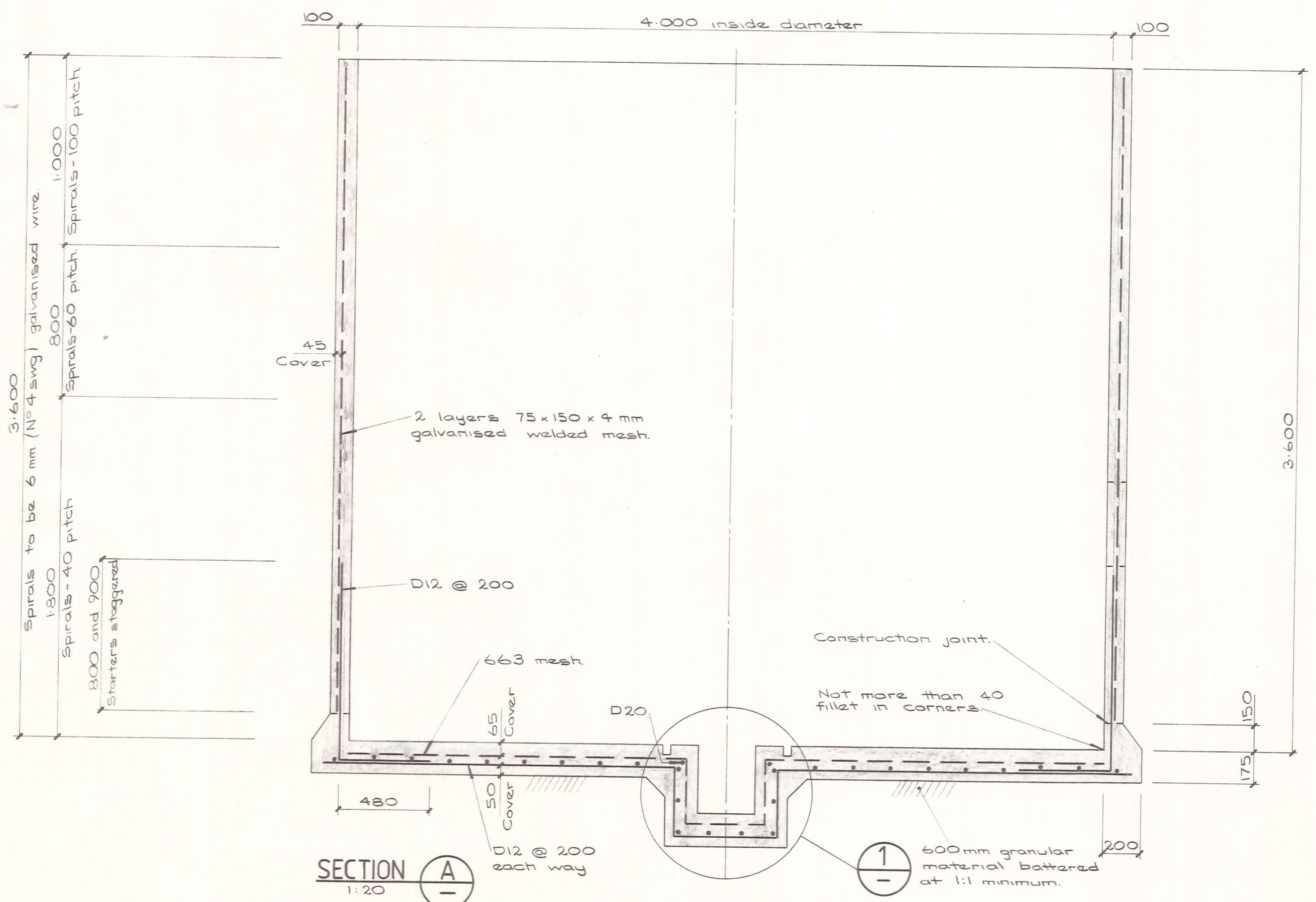
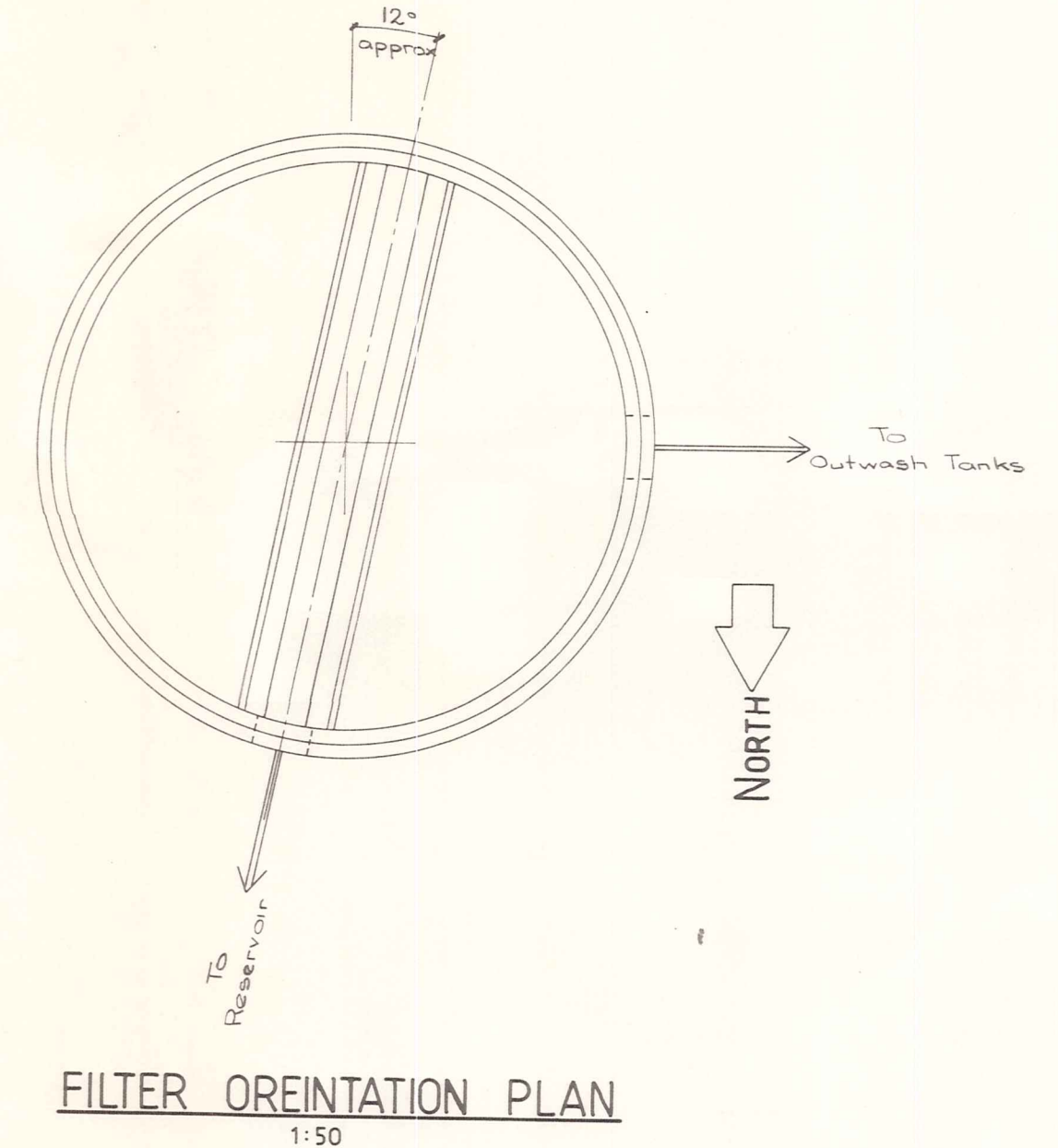
WEIR AND FRENCH LTD.  
PER *K. J. Weir*

File 6/b/B L.B.

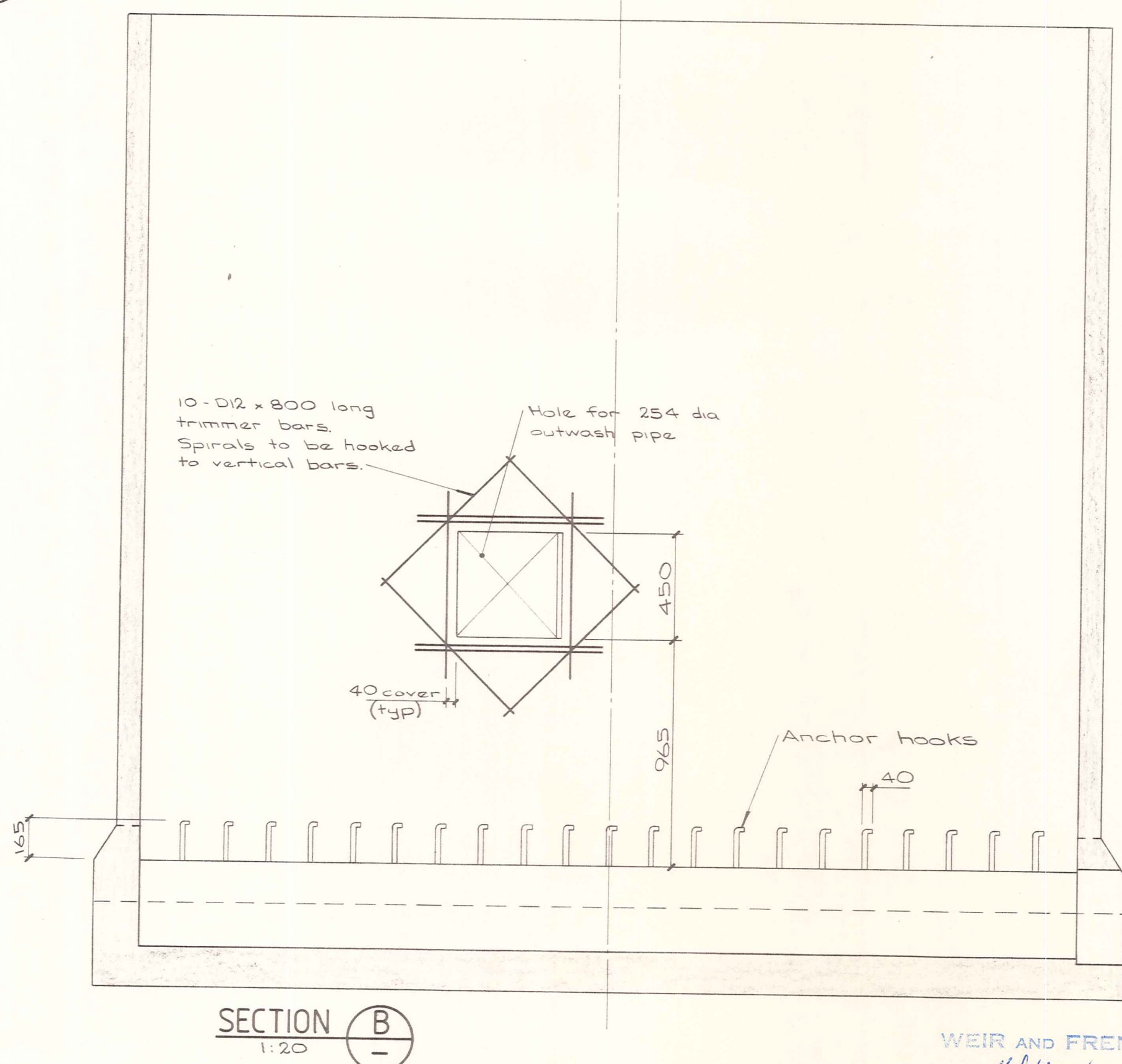
9



NOTE  
1. Refer to Dwg T2 for orientation of inlet and outlet.



NOTE:  
25 MPa concrete strength  
275 grade reinforcing steel.



ORIGINAL SIZE  
mm INCHES  
300  
200  
150  
100  
50  
30  
20  
10  
0

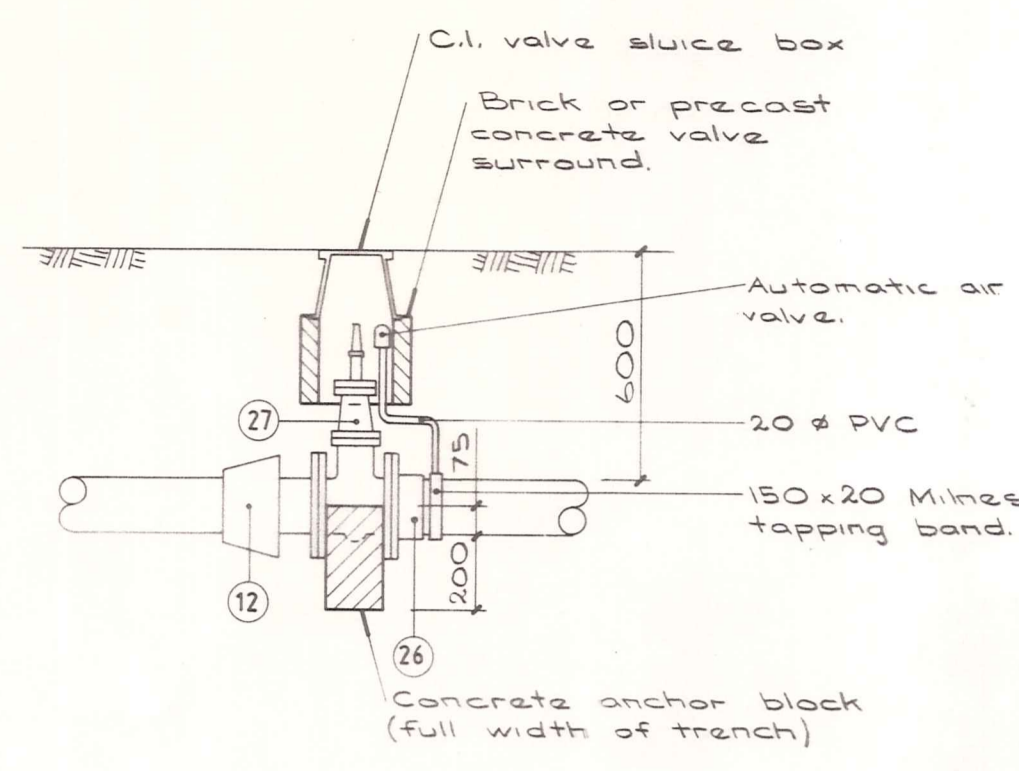
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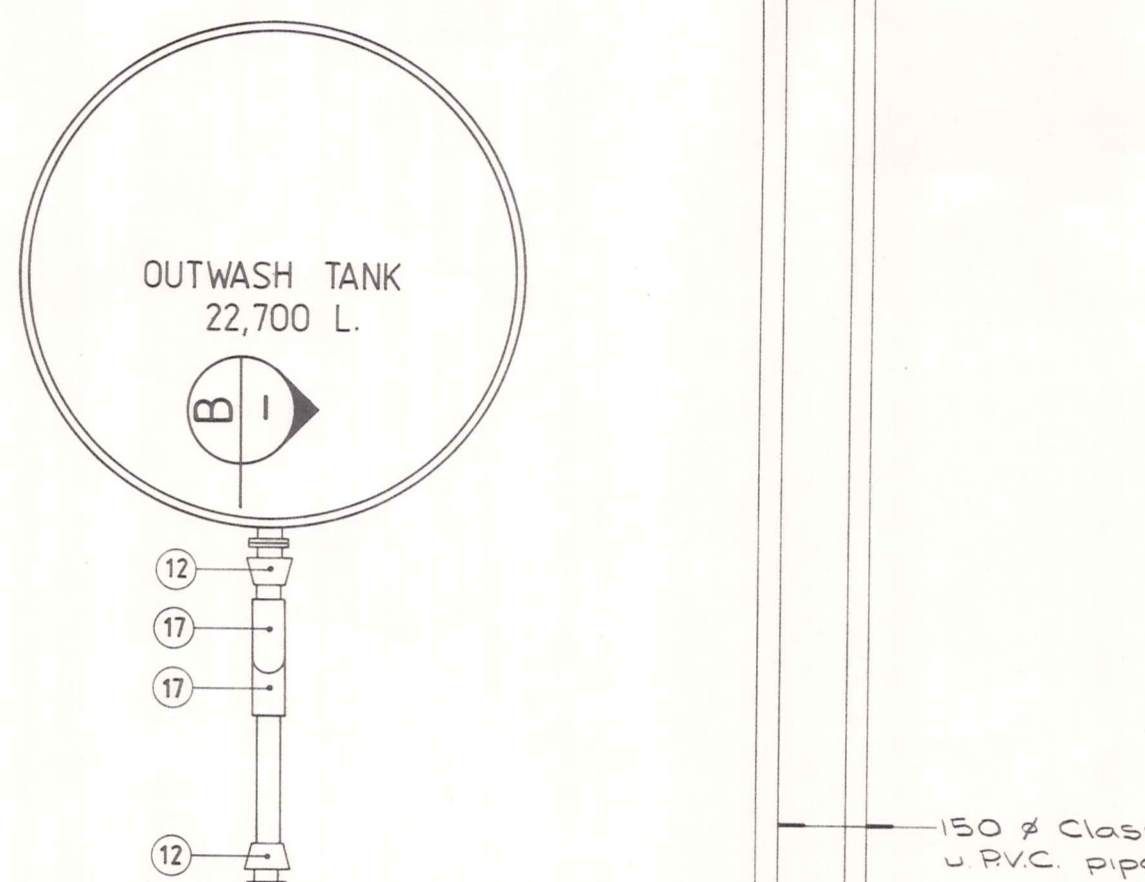
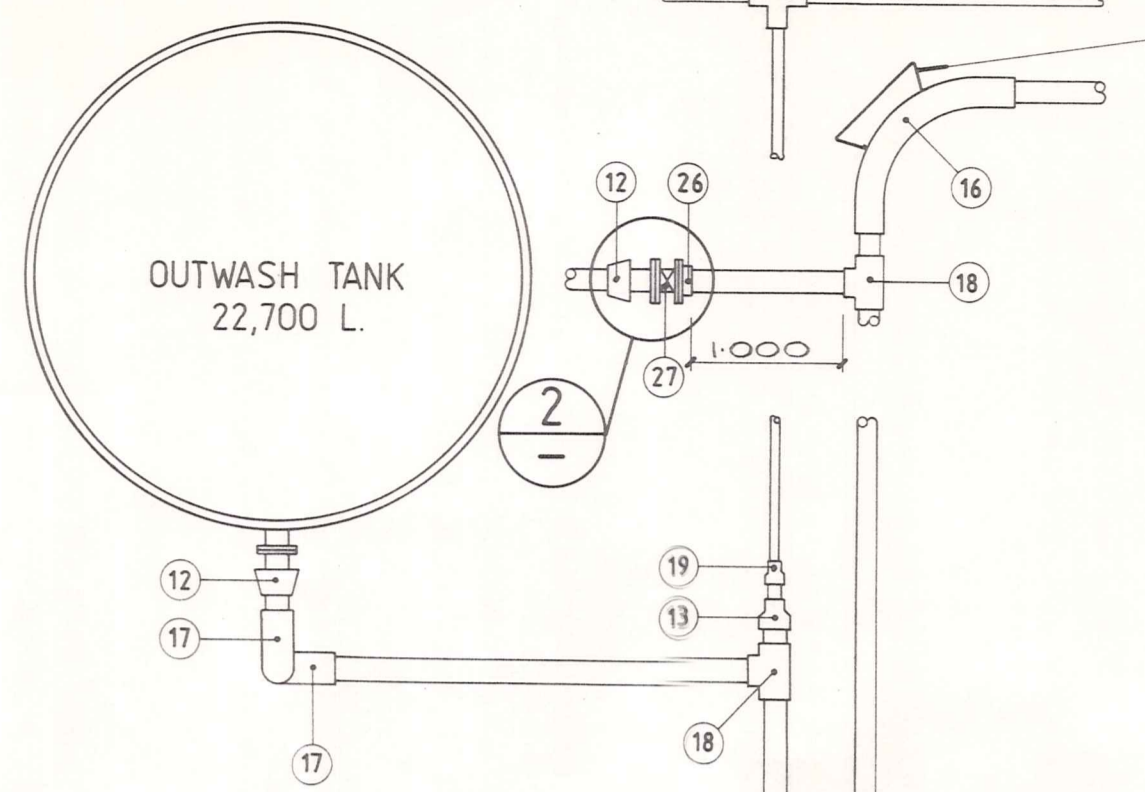
**RANFURLY WATER TREATMENT STATION AND RESERVOIR TREATMENT FILTER**

WEIR AND FRENCH LTD.  
PER *B. New*

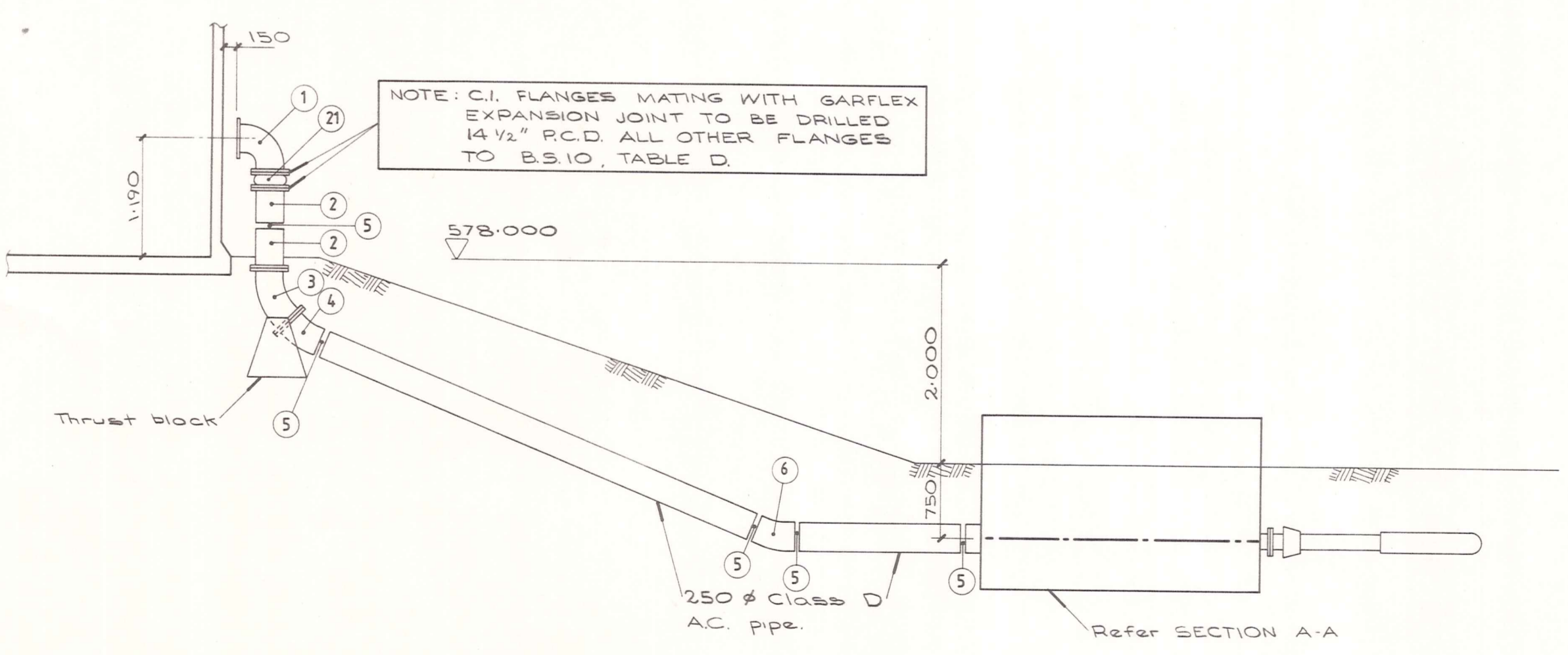
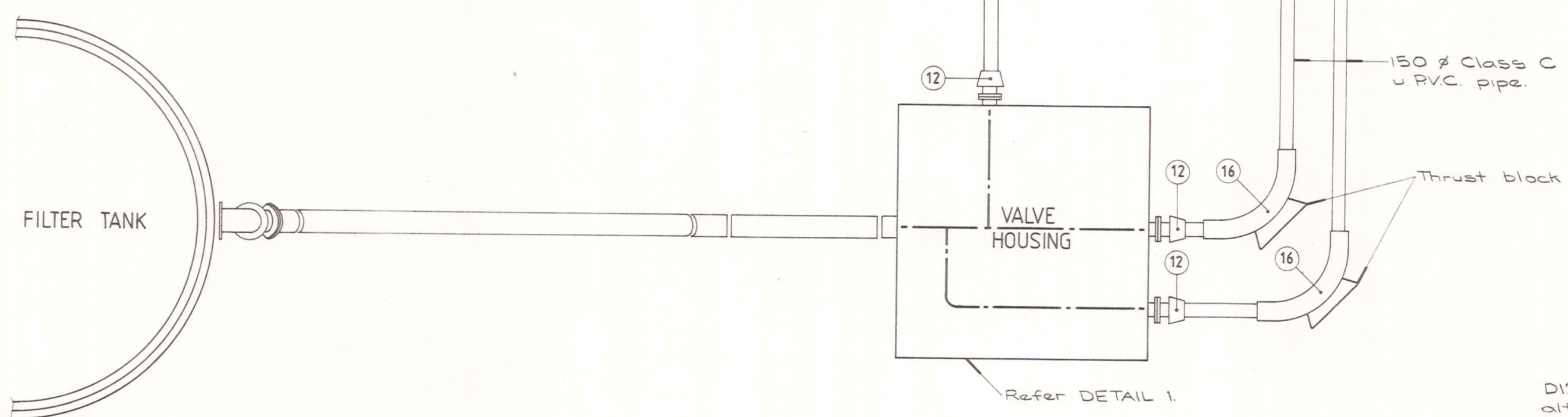
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				Traced	C. G. Baxter	6-84			
				Checked	S. Newlands	6-84			
				Approved	<i>[Signature]</i>				
							File 6/6/8	L.B.	F.B.



DETAIL 2  
1:20



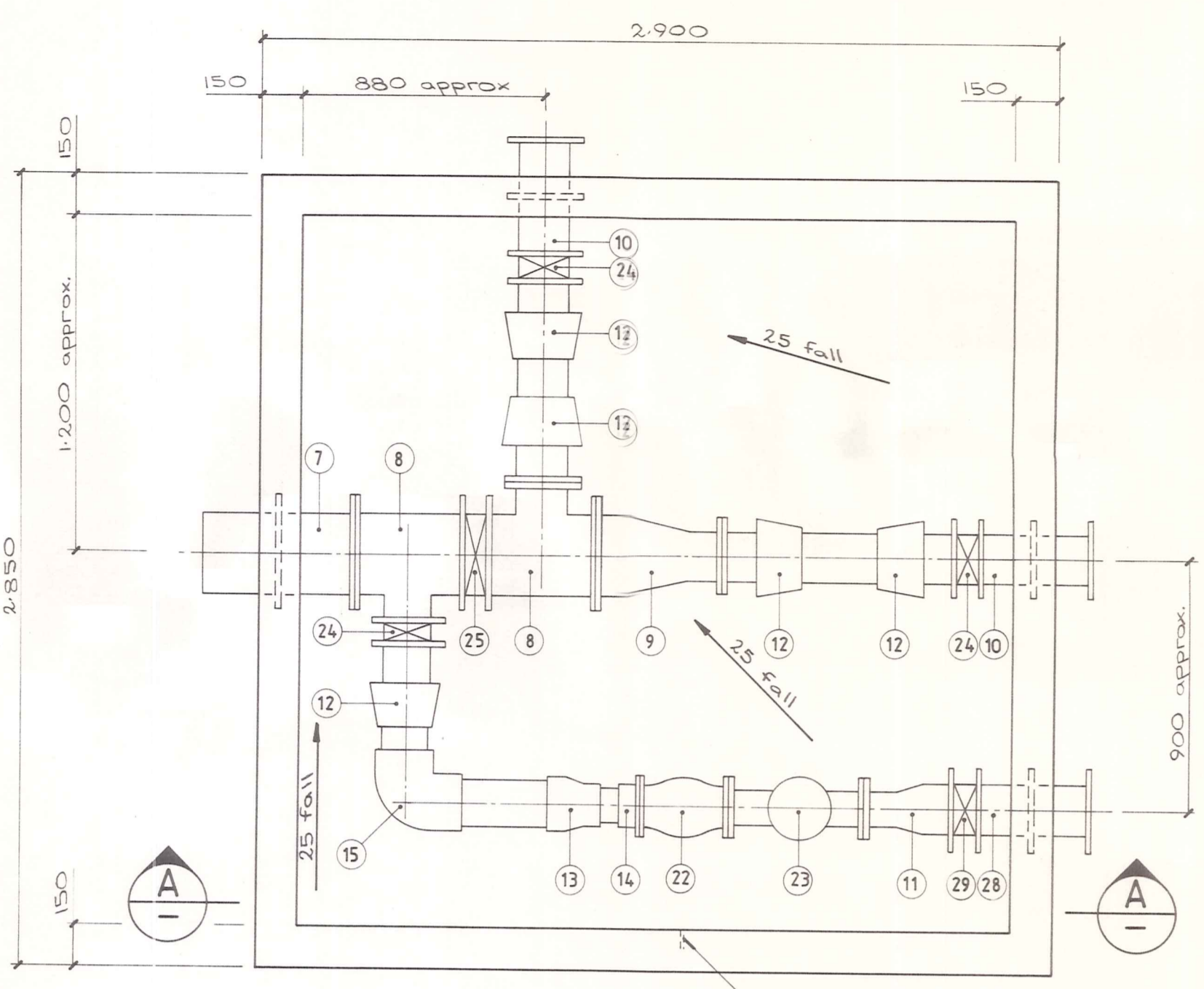
PLAN  
1:50



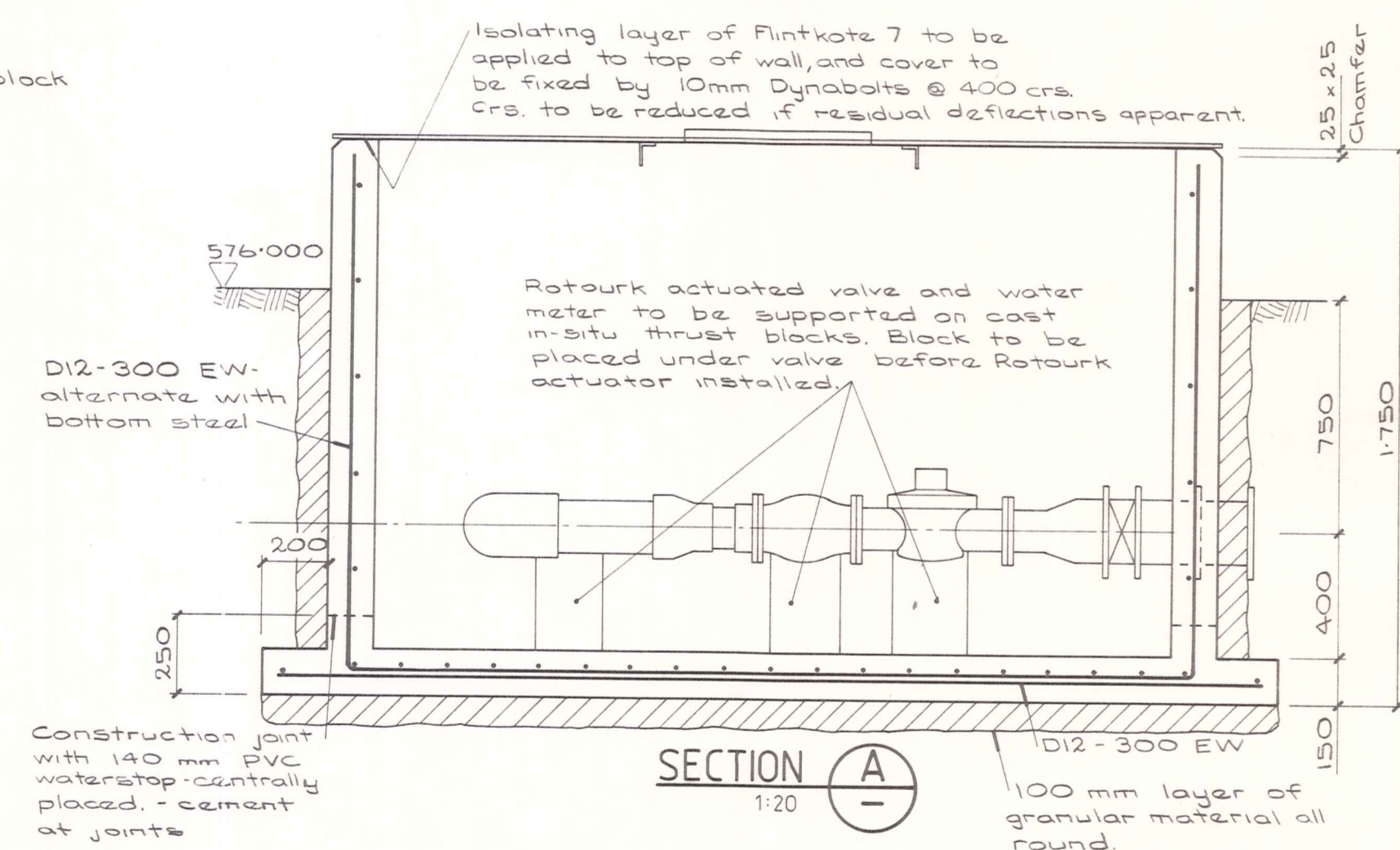
ELEVATION  
1:50

NOTE  
25 MPa concrete strength  
275 grade reinforcing steel

NOTE: Dimensions described on Valve Housing Plan are based on 'standard' fittings dimensions. Fittings dimensions to be confirmed before casting - pipework.

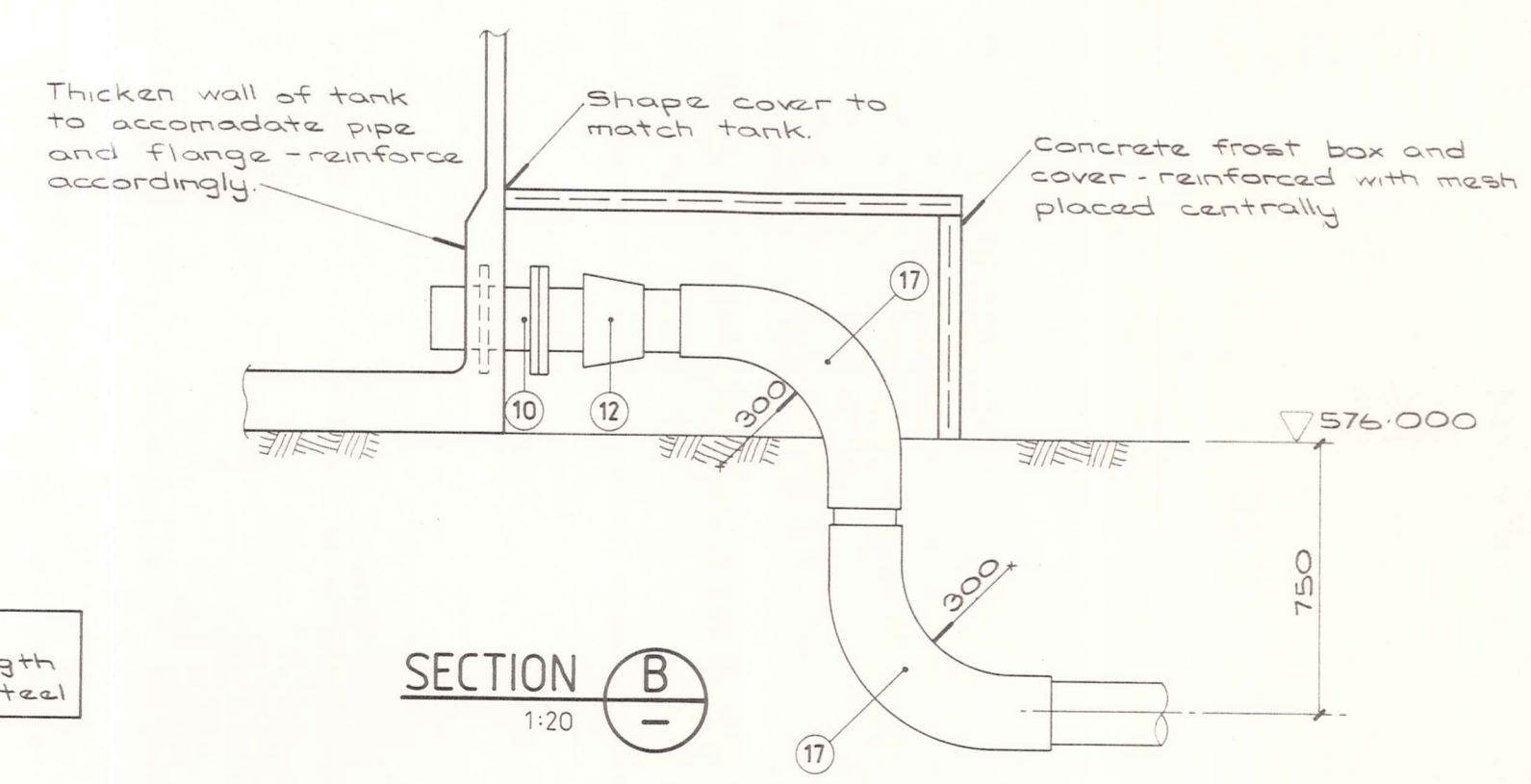


DETAIL 1 - VALVE HOUSING  
1:20

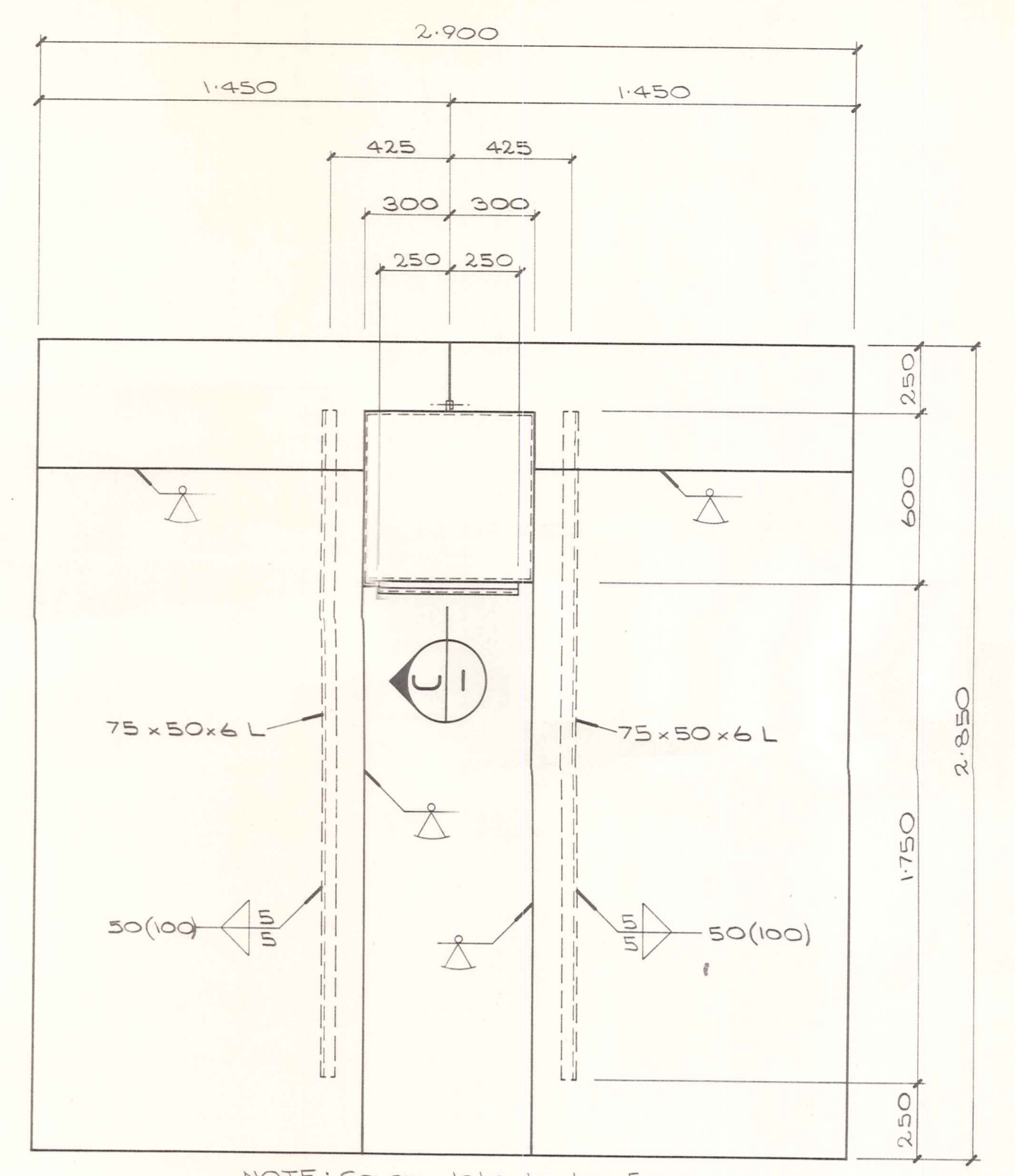


SECTION A  
1:20

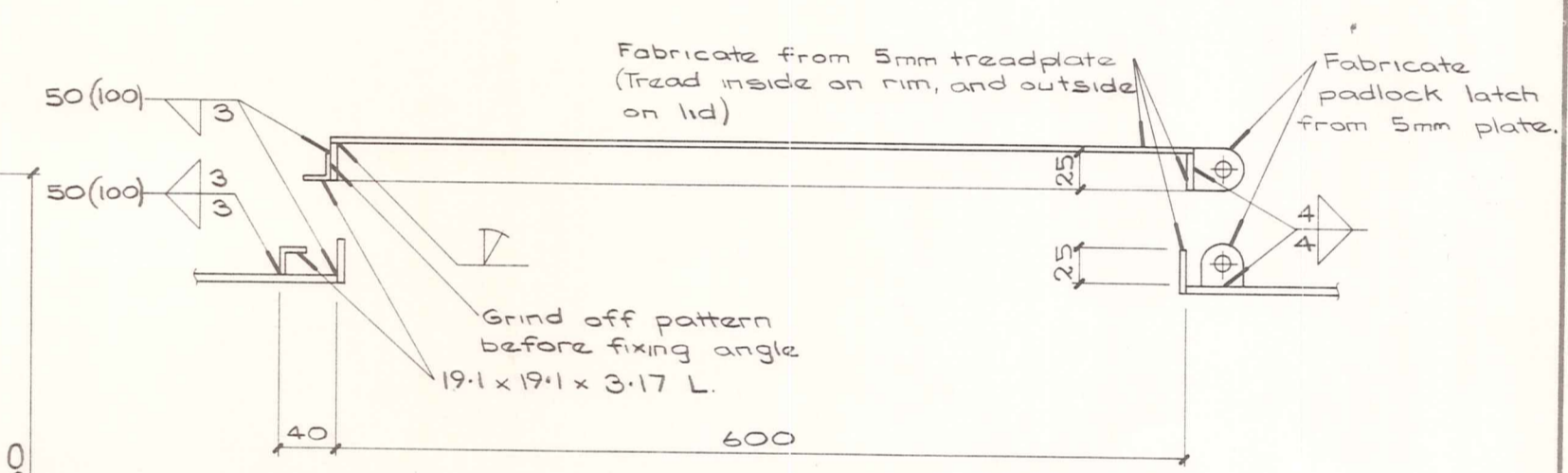
Construction joint with 140 mm PVC waterstop - centrally placed - cement at joints



SECTION B  
1:20



VALVE HOUSING COVER  
1:20



SECTION C  
1:5

NOTE: All materials to be of aluminium

ITEM NO	DESCRIPTION	NO OFF
1	250 # C.I. short radius bend	1
2	0.40 m 250 # C.I. straight (flanged one end)	2
3	250 # C.I. 45° bend (flanged)	1
4	250 # C.I. 22 1/2° bend (flange one end)	1
5	250 # Gibault coupling	5
6	250 # C.I. 22 1/2° bend (plain end)	1
7	0.55 m 250 # C.I. straight (flange one end and puddle flange)	1
8	250/150 C.I. tee (flanged)	2
9	250/150 C.I. reducer (flanged)	1
10	0.40 m 150 # C.I. straight (flanged and puddle flange)	2
11	150/100 C.I. reducer (flanged)	1
12	150 # 'Minis' flange to Gibault adaptor	11
13	150/100 uPVC reducing socket	2
14	100 # uPVC stub flange, backing ring & gasket	1
15	150 # uPVC elbow	1
16	150 # uPVC formed bend (standard)	3
17	150 # uPVC bend (300 throat radius)	4
18	150 # uPVC tee	2
19	100/80 uPVC reducing socket	1
20	80 # uPVC tee	1
21	250 # Garflex Style 8100 expansion joint	1
22	Bermod 100 # 770-Rate of Flow valve	1
23	Kent 100 # Heli 2000 R water meter and sender unit (Electrical sub-contractor)	1
24	150 # Desurik lugged butterfly valve	4
25	Desurik butterfly valve and Rotork actuator. Note: this item is to be supplied by Portals for installation by the Contractor	1
26	150 # stub flange, backing ring & gasket	1
27	150 # C.I. gate valve (cap top)	1
28	0.60 m 150 # C.I. straight (flanged & puddle flange)	1
29	150 # C.I. gate valve (with hand wheel)	1

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PER *K. J. Newlands*

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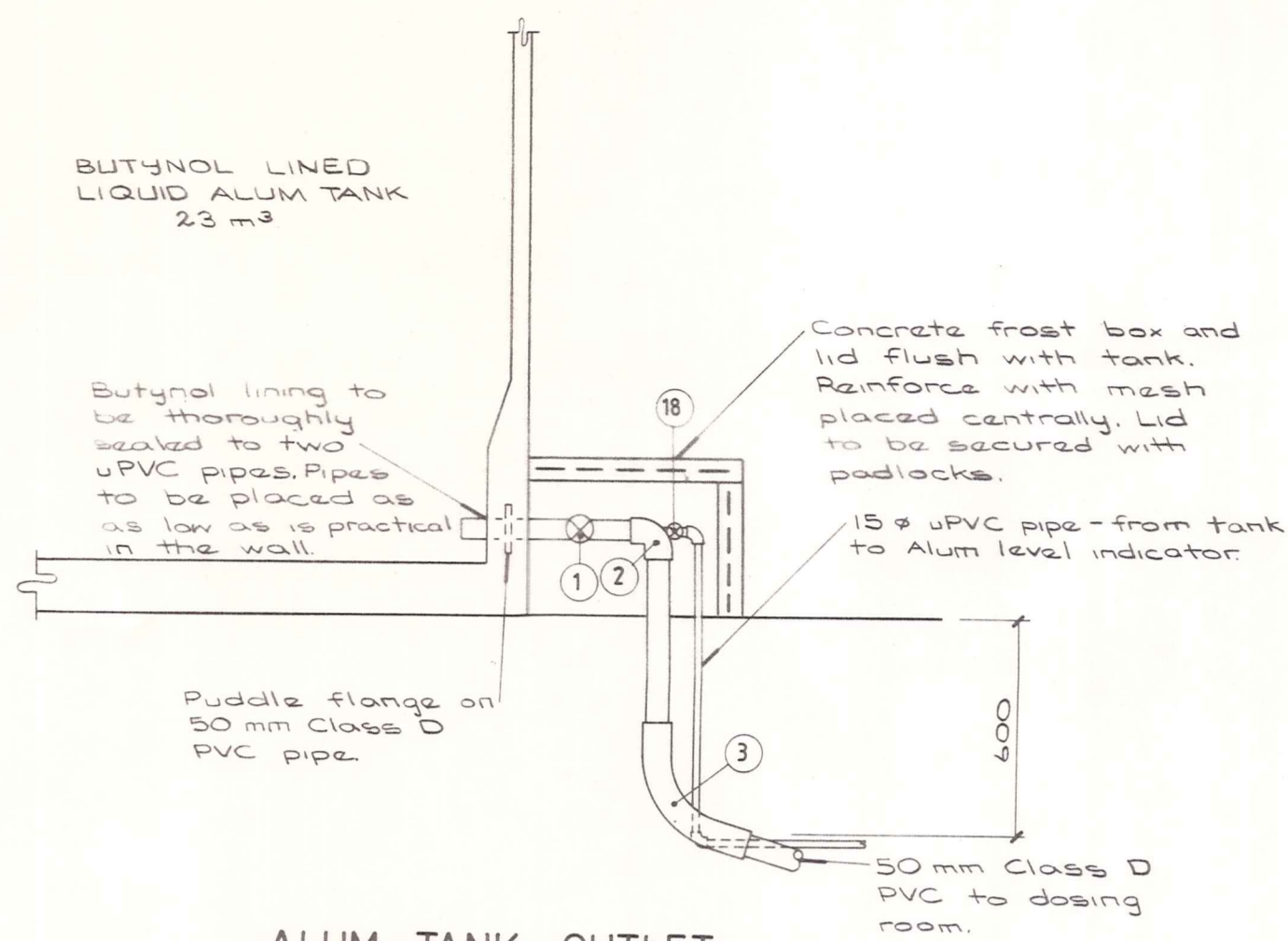
MANIOTOTO  
COUNTY COUNCIL

RANFURLY WATER TREATMENT STATION AND RESERVOIR  
FILTER INLET / OUTWASH AND VALVE HOUSING DETAILS

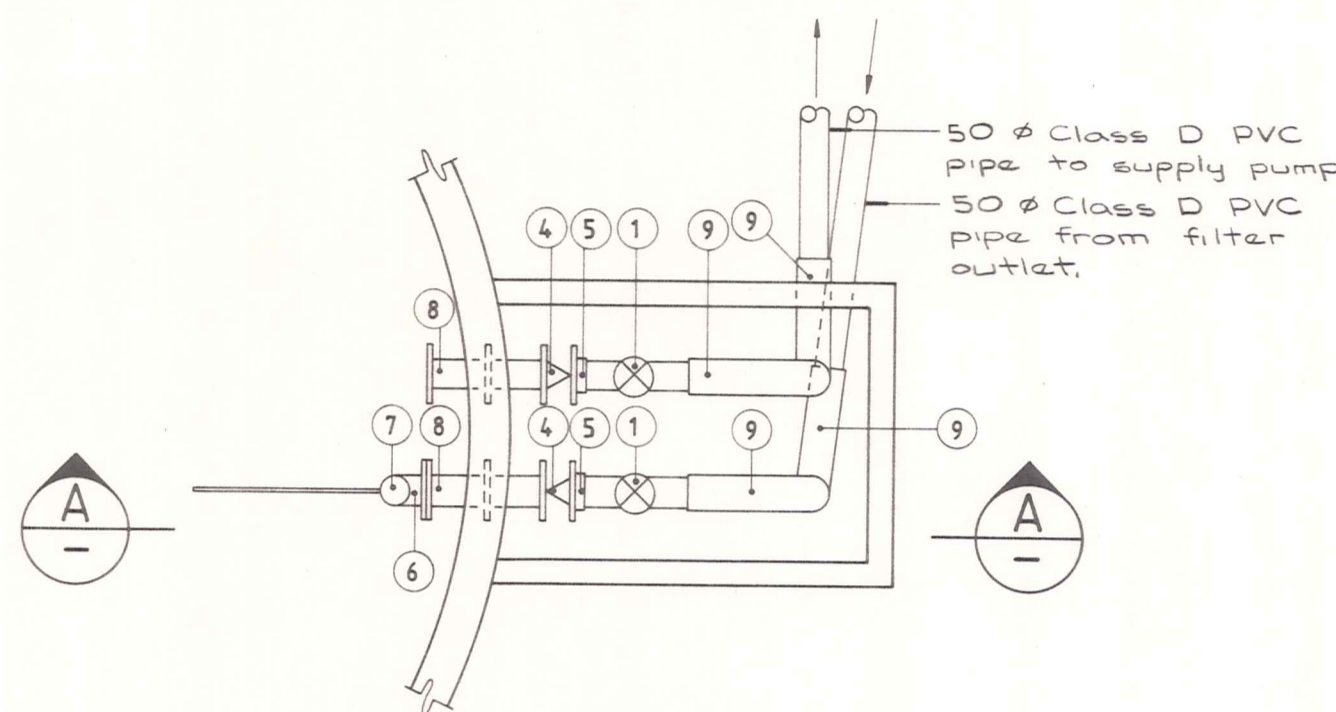
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			Calculations	S. Newlands	June 84
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			Checked	S. Newlands	Aug 84
			Approved		

10384  
T7  
of 8 sheets  
F.B.

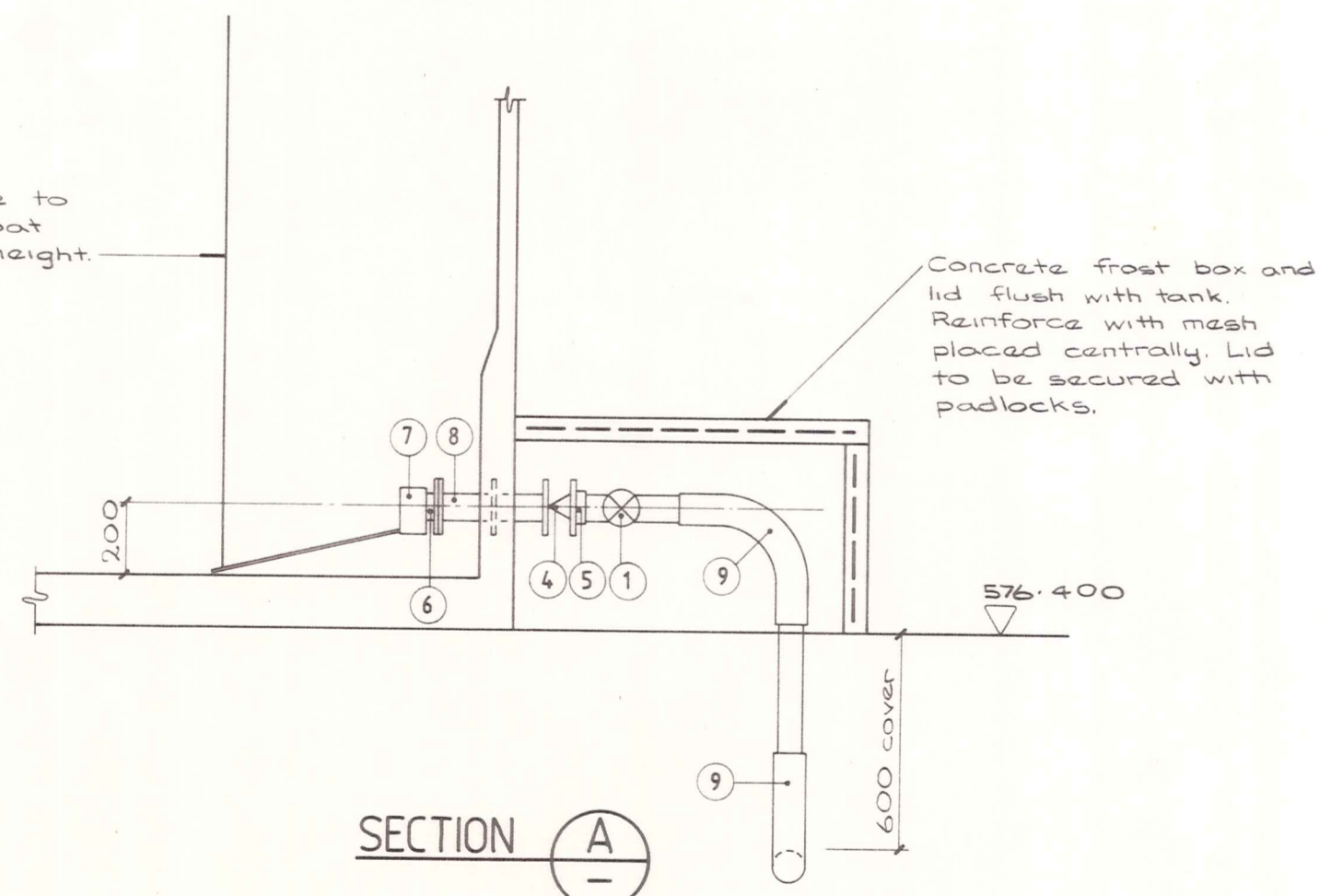




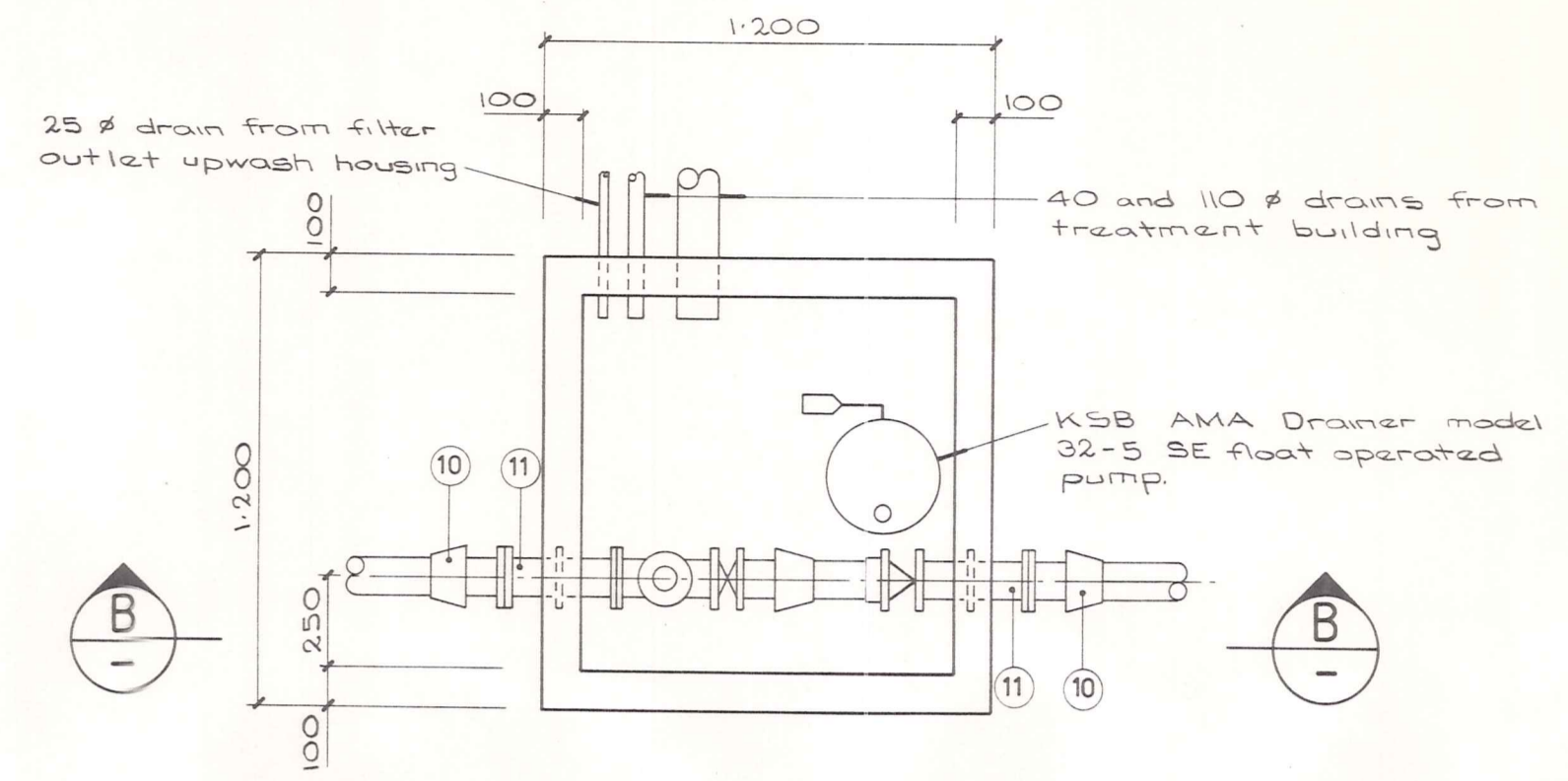
**ALUM TANK OUTLET**  
1:20



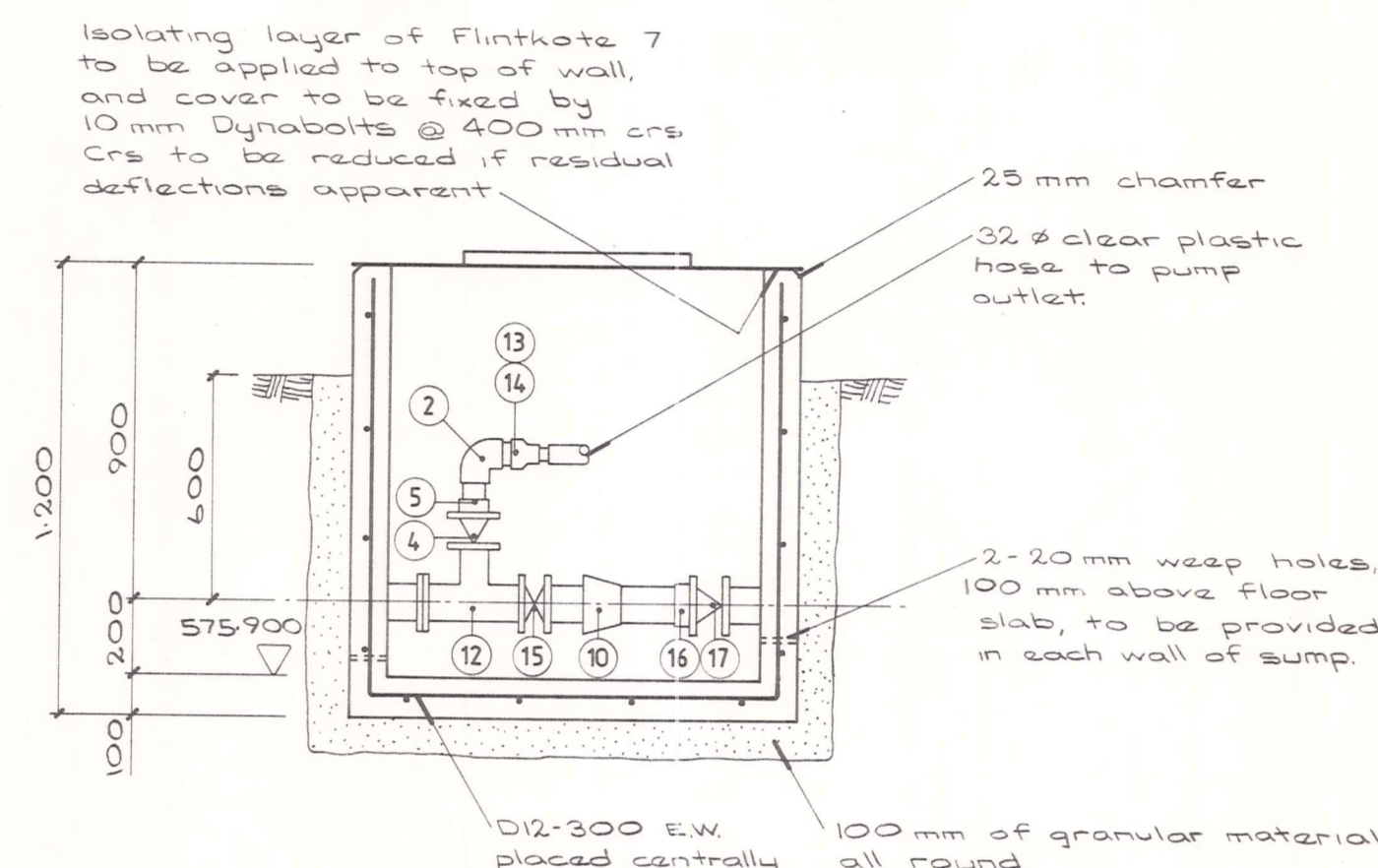
**SUPPLY TANK INLET/OUTLET**  
1:20



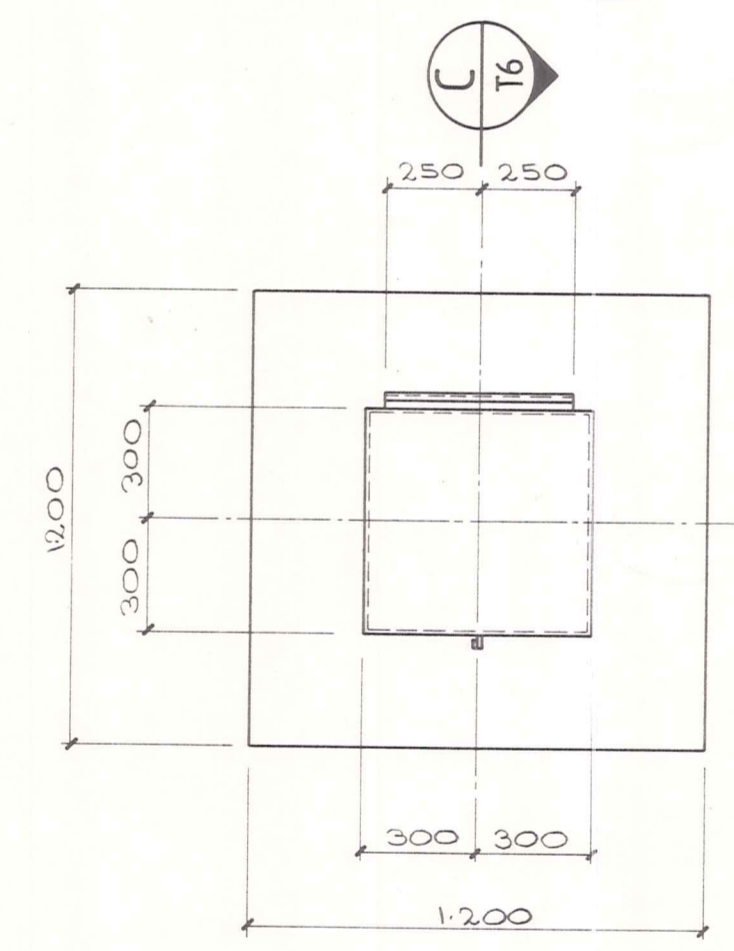
**SECTION A-A**



**DRAIN SUMP PLAN**  
1:20



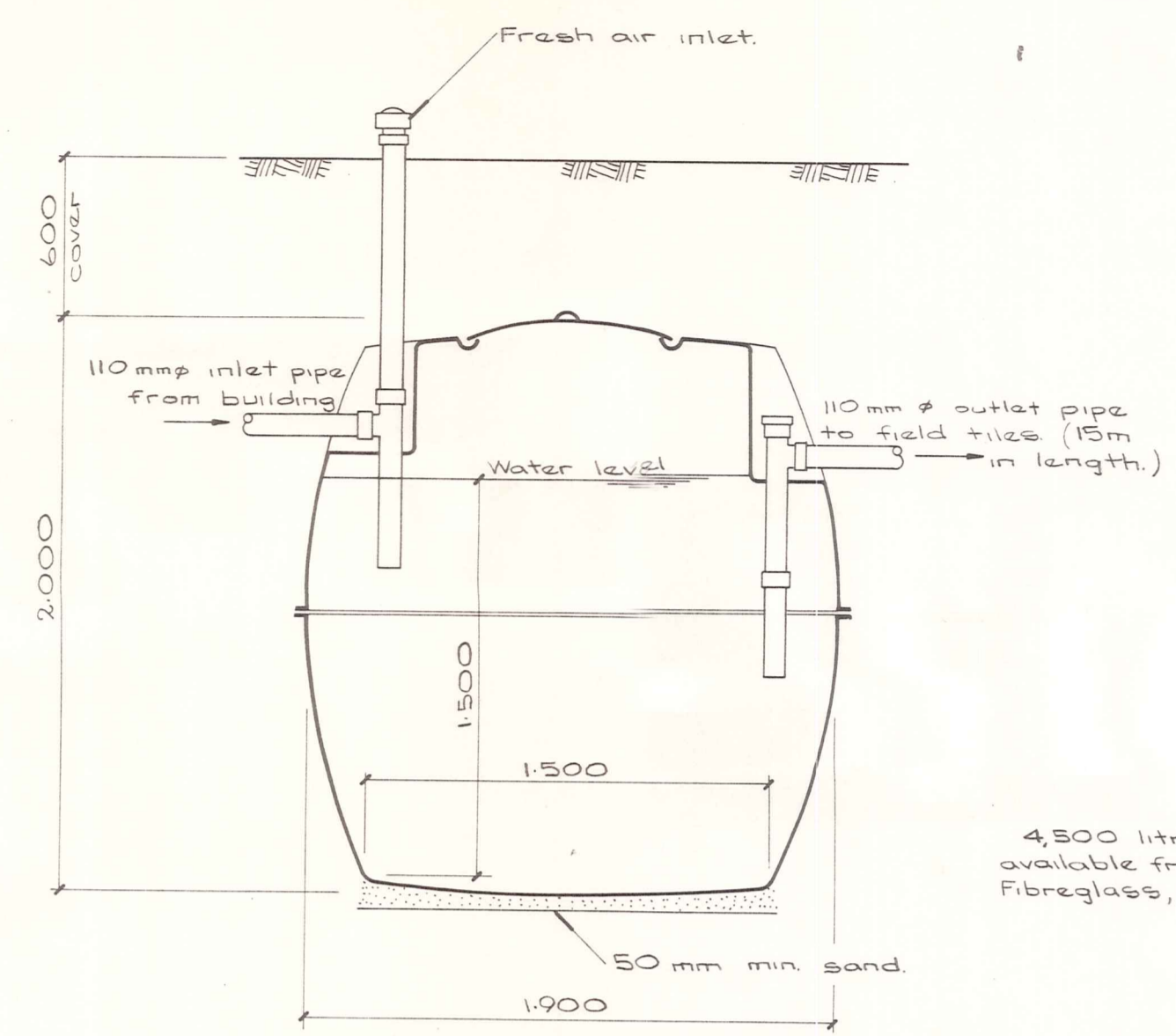
**SECTION B-B**



**DRAIN SUMP COVER**  
1:20

NOTE: Cover and access hatch to be 5mm aluminium tread plate. Refer to Dwg T7 for construction and installation details.

NOTE: 25 MPa concrete strength 275 grade reinforcing steel.



**SECTION THROUGH SEPTIC TANK**  
1:25

NOTE: Refer to specification for installation procedure.

ITEM NO	DESCRIPTION	NO OFF
1	50 # uPVC ball valve	3
2	50 # uPVC elbow	2
3	50 # uPVC 80° formed bend-special	1
4	50 mm water check valve	3
5	50 # uPVC stub flange, backing ring and gasket	3
6	50 mm steel flange-threaded 50mm BSP	1
7	50 mm Wilkes Fullway ballcock	1
8	50 # flanged C.I. straight with puddle flange (L:300)	2
9	50 # uPVC 90° formed bends	4
10	80 # uPVC flange to gibault adaptor	3
11	80 # flanged C.I. straight with puddle flange (L:300)	2
12	80/50 C.I. flanged unequal Tee	1
13	50/40 uPVC reducing socket	1
14	40/32 uPVC reducing bush	1
15	80 # Desurik butterfly valve	1
16	80 # uPVC stub flange, backing ring and gasket	1
17	80 # water check valve	1
18	15 # uPVC ball valve	1

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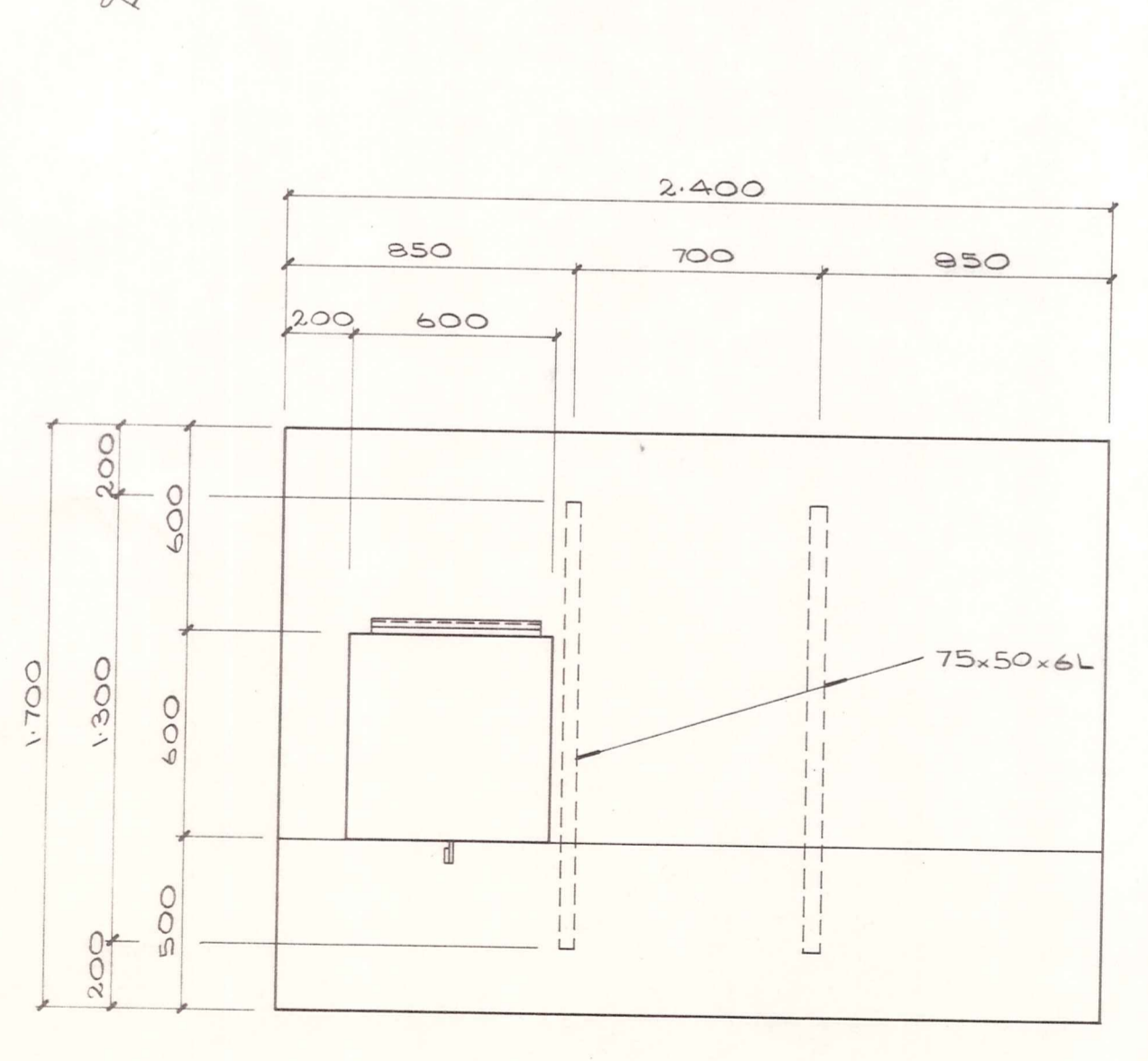
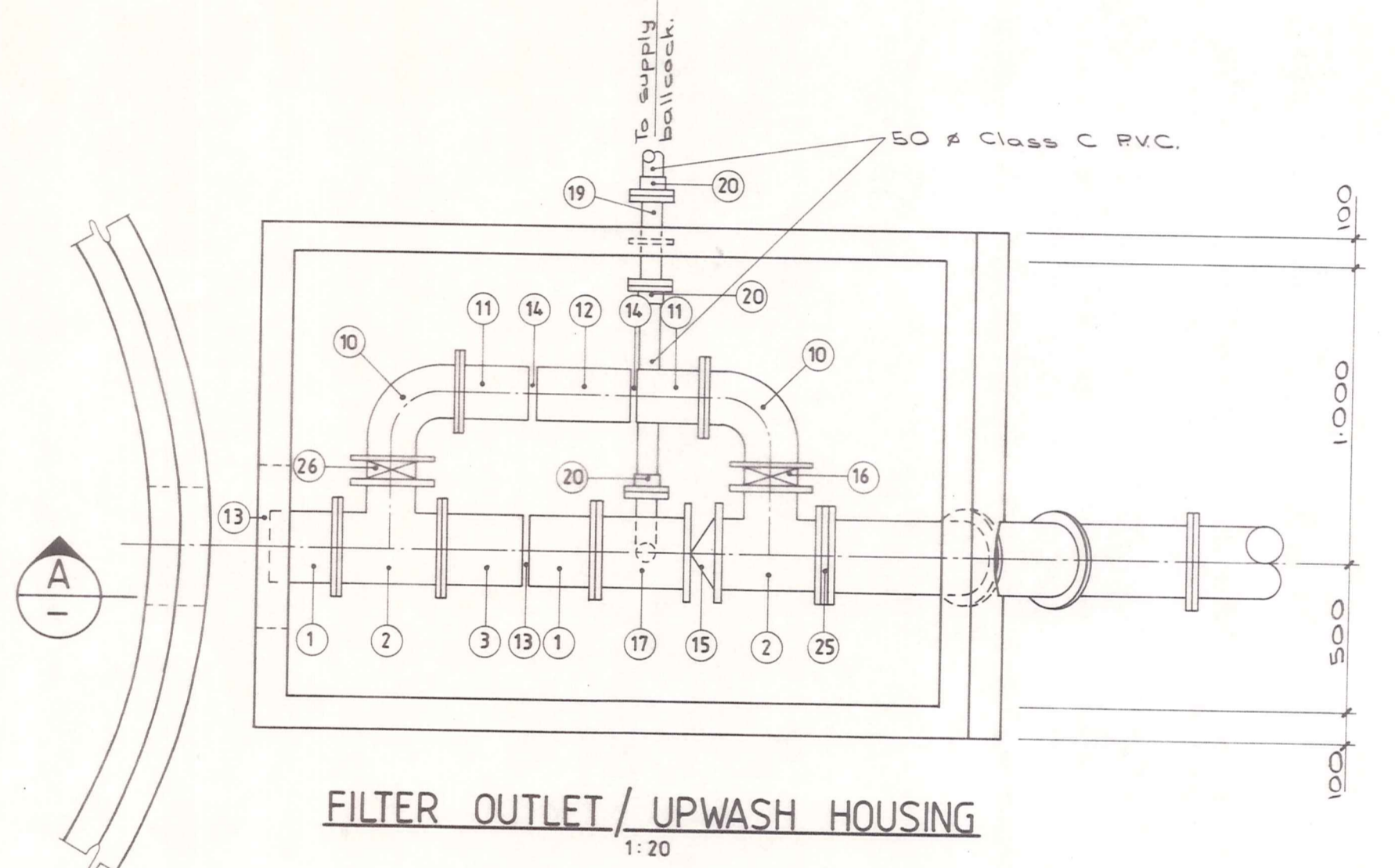
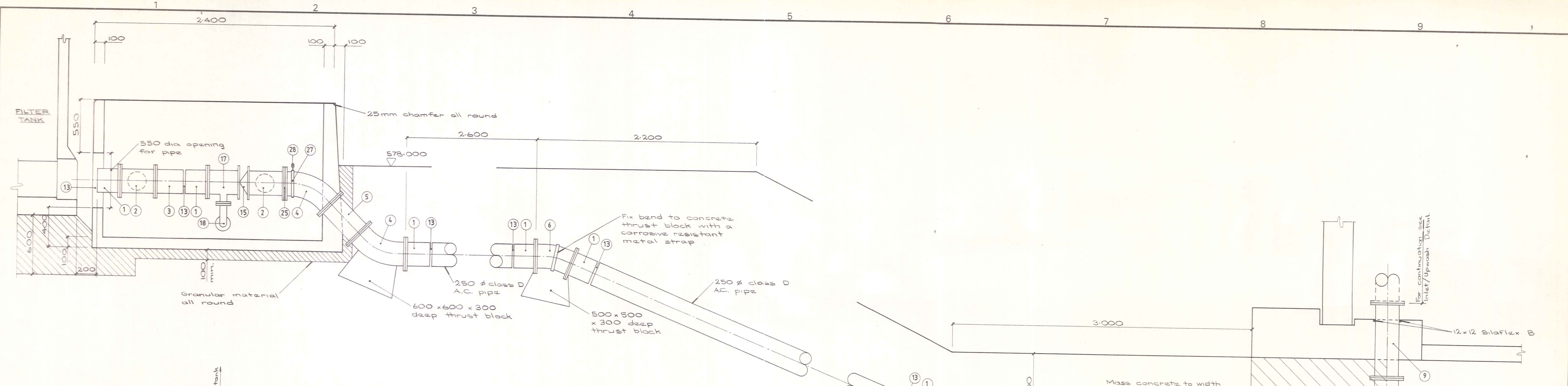
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**RANFURLY WATER TREATMENT PLANT AND RESERVOIR  
HYDRAULIC STRUCTURES AND CONNECTING PIPEWORK**

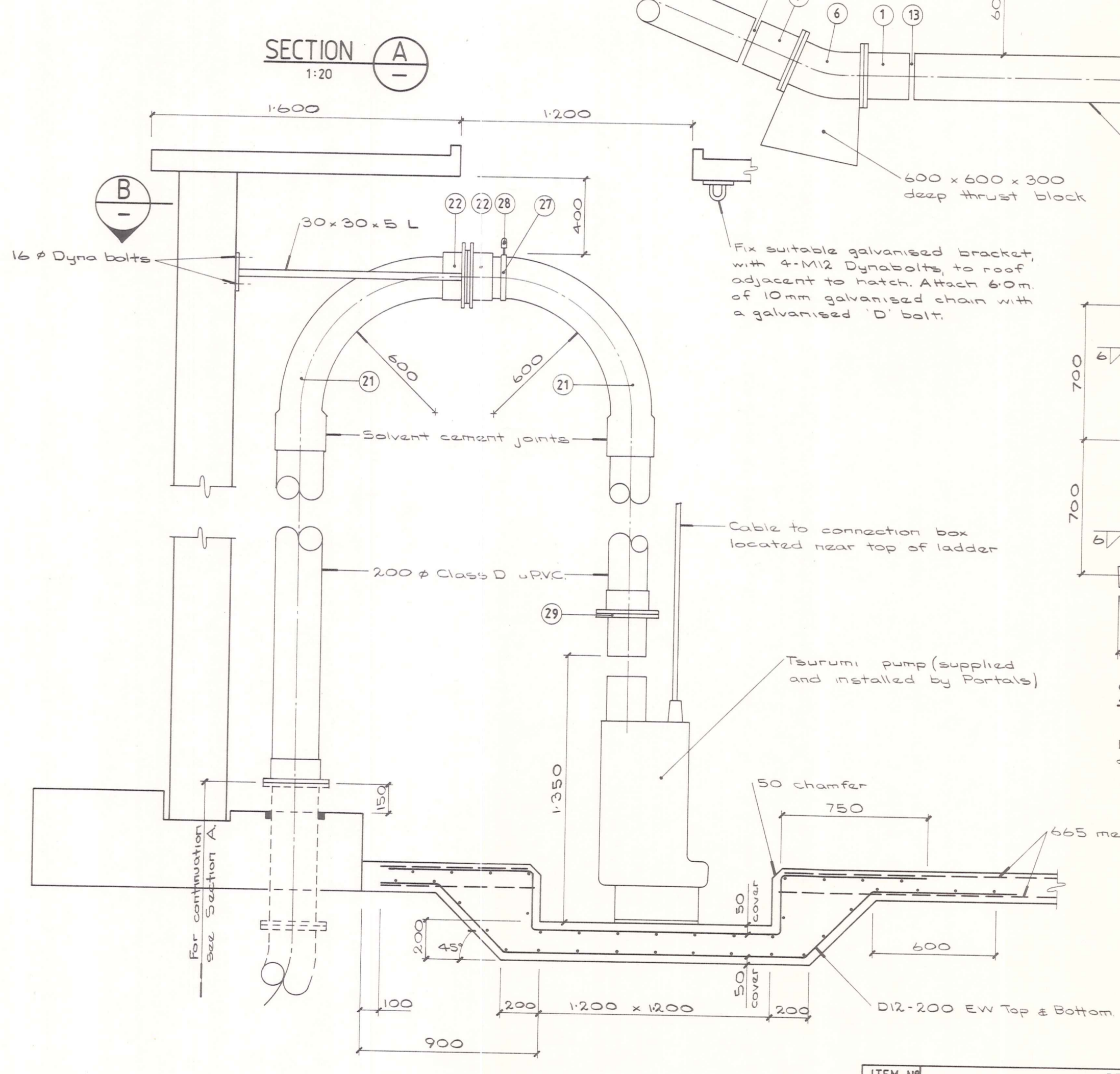
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NO.	BY	DATE	Appvd.	Survised	Drawn	10384	T8
				Calculations	C. Baxter July 84		
				Traced	S. Newlands July 84		
				Checked	C. Baxter July 84		
				Approved	Jeffrey King	File 4/6/8	L.B. F.B.

ORIGINAL SIZE  
mm INCHES  
300  
200  
150  
100  
50  
0

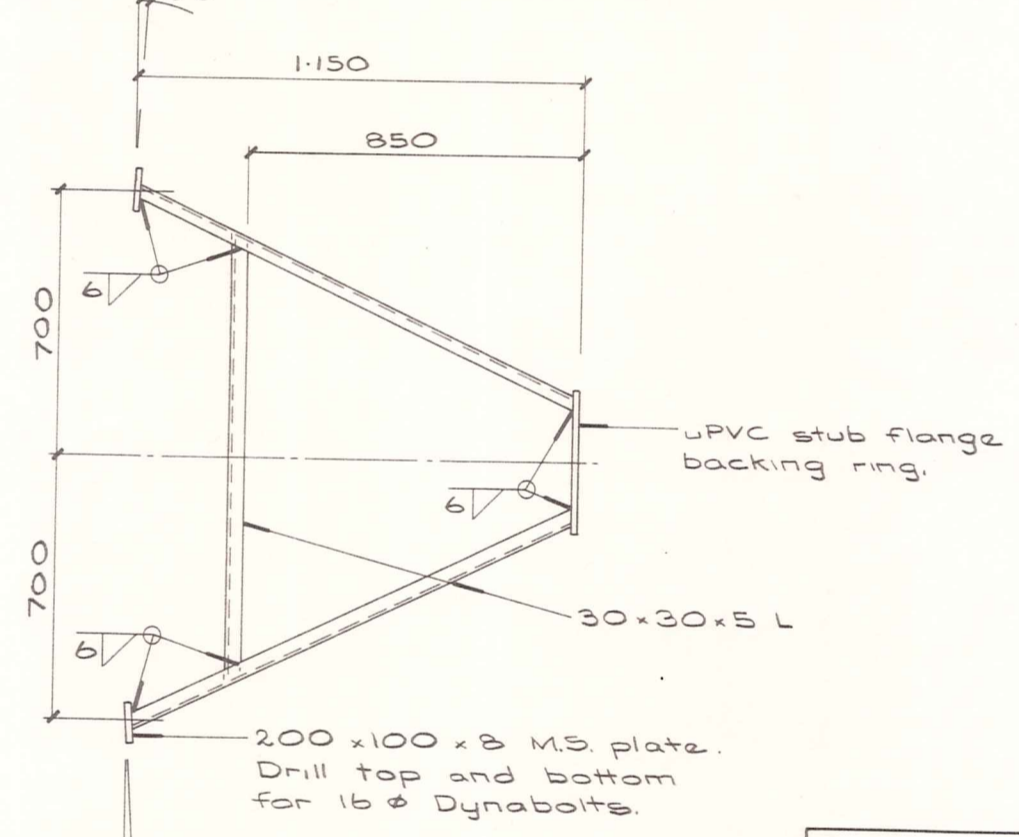


**HOUSING COVER**  
1:20

NOTE: Cover and access hatch to be 5mm aluminium tread plate. Refer to dwg. T7 for construction and installation details.



**RESERVOIR INLET/UPWASH DETAIL**  
1:20



**SECTION B - BRACKET**  
1:20

Note: Bracket to be hot dip galvanised after fabrication.

NOTE:  
25 MPa concrete strength  
275 grade reinforcing steel.

ITEM NO	DESCRIPTION	Nº OFF
1	200 # C.I. flange adaptor	8
2	200/150 C.I. flanged Tee	2
3	200 # C.I. straight (flanged one end)	1
4	200 # C.I. 45° flanged band	2
5	200 # C.I. 400 mm flanged straight	1
6	200 # C.I. 22 1/2" flanged bend	2
7	200 # C.I. 900 mm flanged straight	1
8	200 # C.I. standard radius 90° bend	3
9	200 # C.I. flanged straight	1
10	150 # C.I. short radius 90° bend	1
11	150 # C.I. flange adaptor	2
12	150 # C.I. 300 mm plain end straight	1
13	200 # gibault joint	9
14	150 # gibault joint	2
15	200 # wafer check valve	1
16	150 # Desurik butterfly valve	1
17	200/50 C.I. flanged tee	1
18	50 # C.I. standard radius 90° bend	1
19	50 # C.I. 0.3m straight with puddle flange	1
20	50 # uPVC stub flange and backing ring	3
21	200 # special radius uPVC band	2
22	200 # uPVC stub flange, backing ring and gasket	2
23	200 # Kamick 633C and 633F adaptors	1 ea.
24	200 # reinforced rubber hose	1
25	200 # orifice plate	-
26	150 # Desurik butterfly valve	-
27	200 # x 20 tapping band	2
28	20 # Bermad automatic air valve	2
29	200 # screwed steel flange	1

NOTE: Items 24 & 25 supplied by Portals.

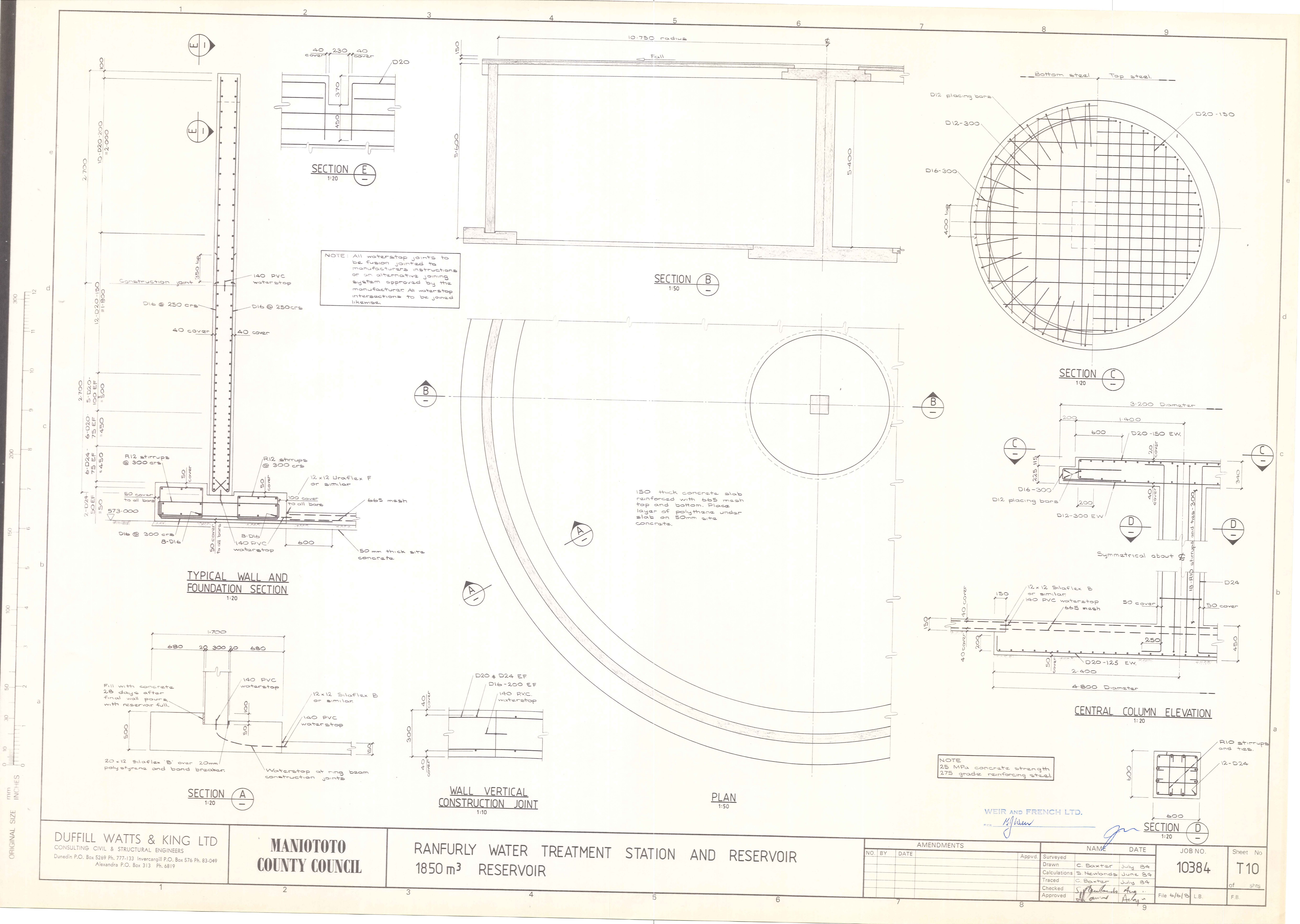
WEIR AND FRENCH LTD.

**DUFFILL WATTS & KING LTD**  
CONSULTING CIVIL & STRUCTURAL ENGINEERS  
Dunedin P.O., Box 5269 Ph. 777-133 Invercargill P.O., Box 576 Ph. 83-049  
Alexandra P.O., Box 313 Ph. 6819

**MANIOTOTO COUNTY COUNCIL**

**RANFURLY WATER TREATMENT STATION AND RESERVOIR  
HYDRAULIC STRUCTURES AND CONNECTING PIPEWORK**

AMENDMENTS			JOB NO.		Sheet No	
NO.	BY	DATE	NAME	DATE		
					10384	T9
					of	shts
					File 6/6/8	L.B. F.B.



NOTE: All waterstop joints to be fusion jointed to manufacturers instructions or an alternative joining system approved by the manufacturer. All waterstop intersections to be joined likewise.

150 thick concrete slab reinforced with 665 mesh top and bottom. Place layer of polythene under slab on 50mm size concrete.

NOTE  
25 MPa concrete strength  
275 grade reinforcing steel

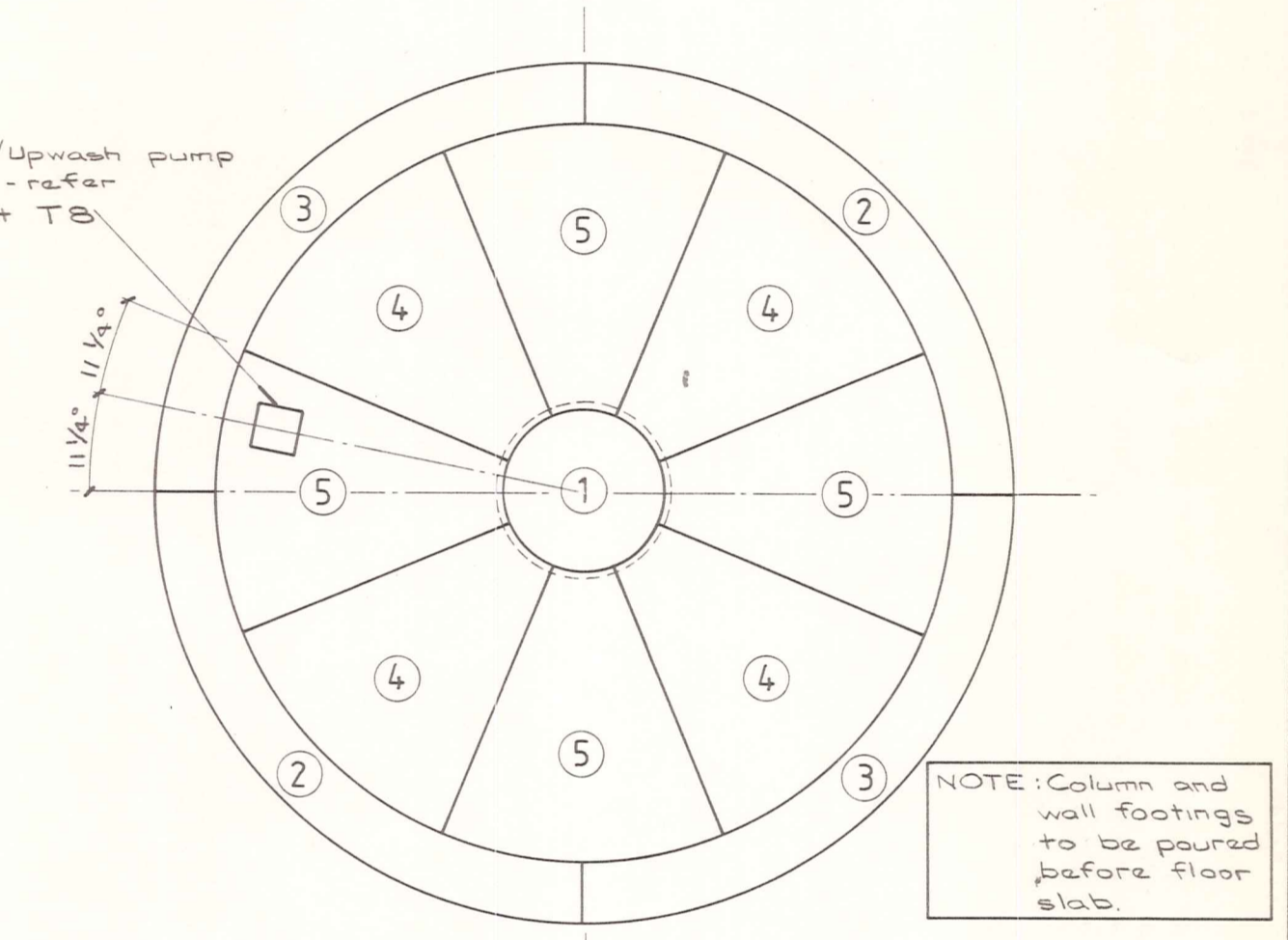
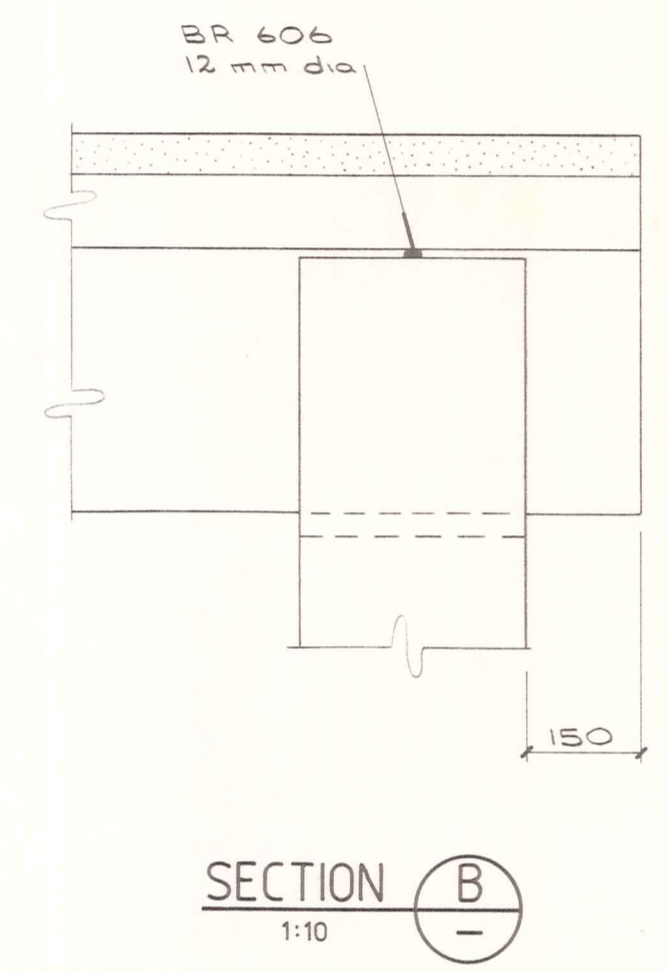
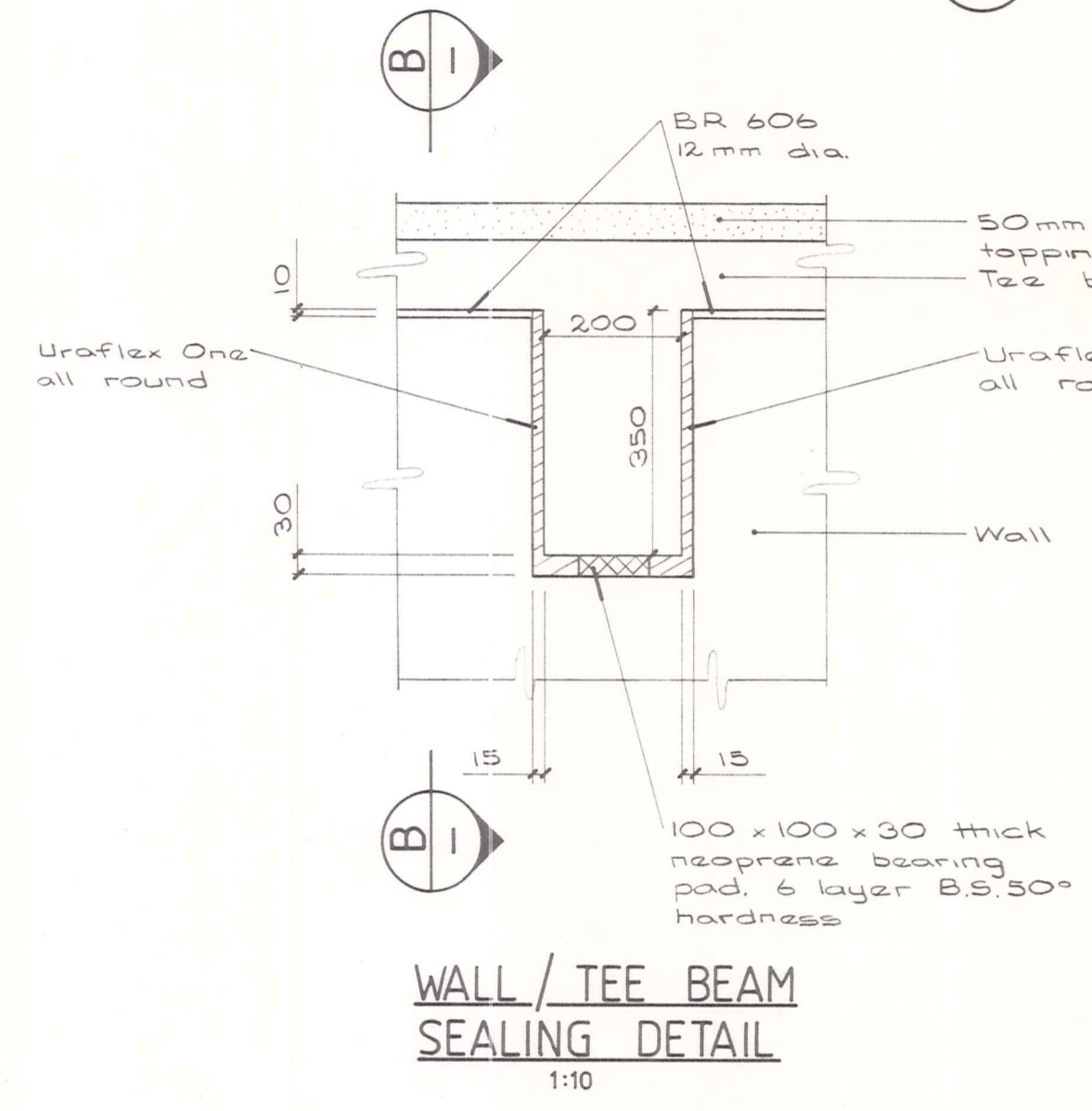
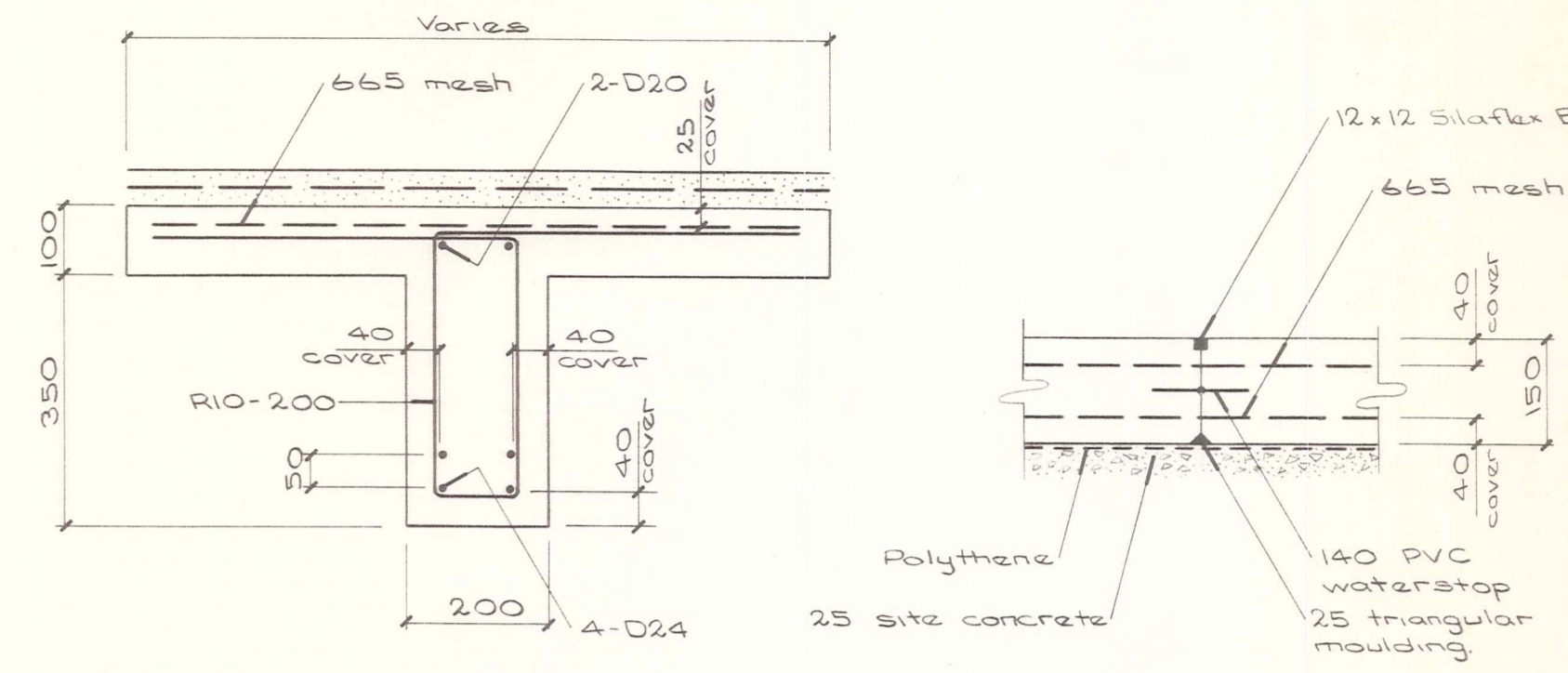
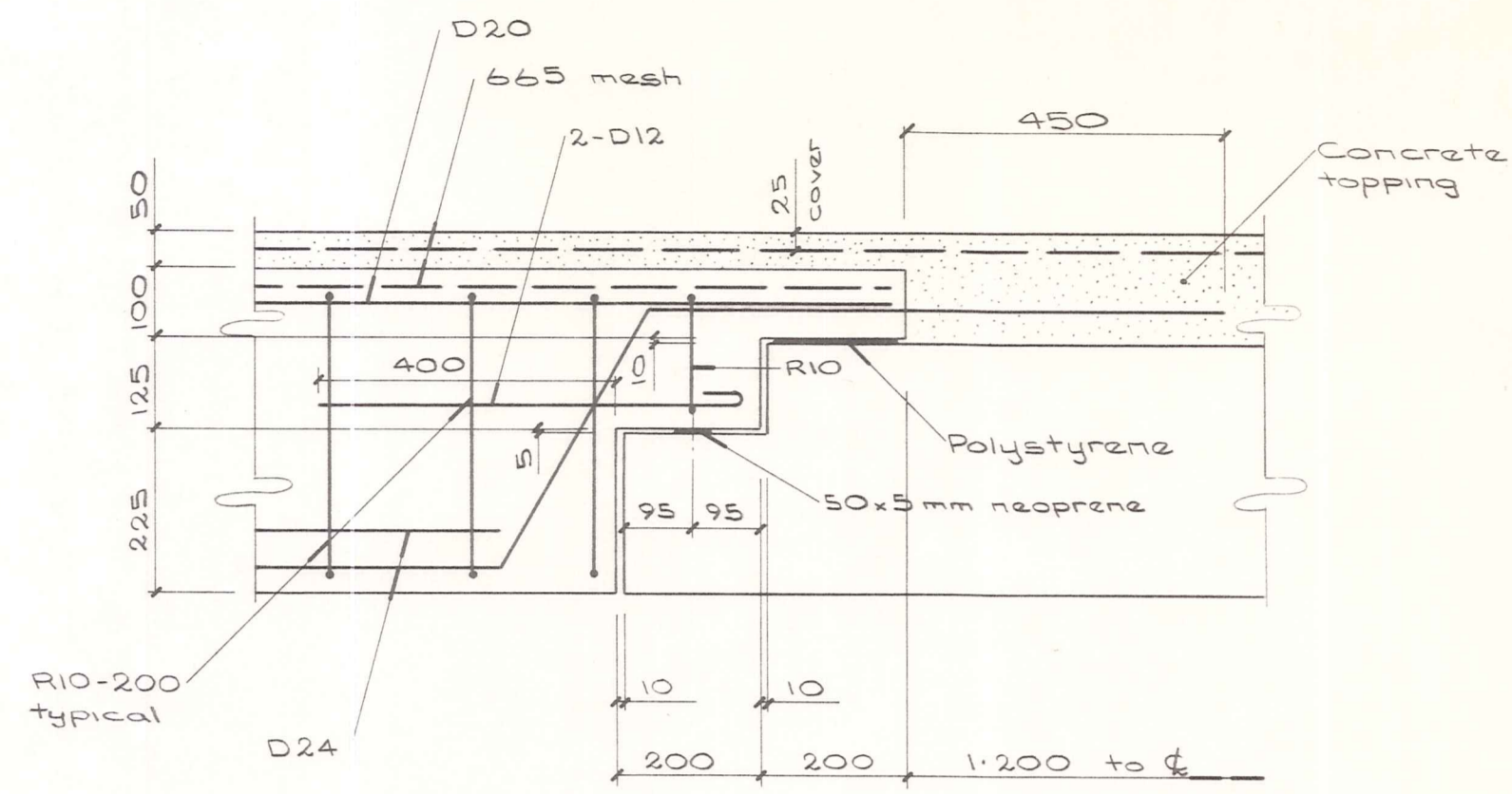
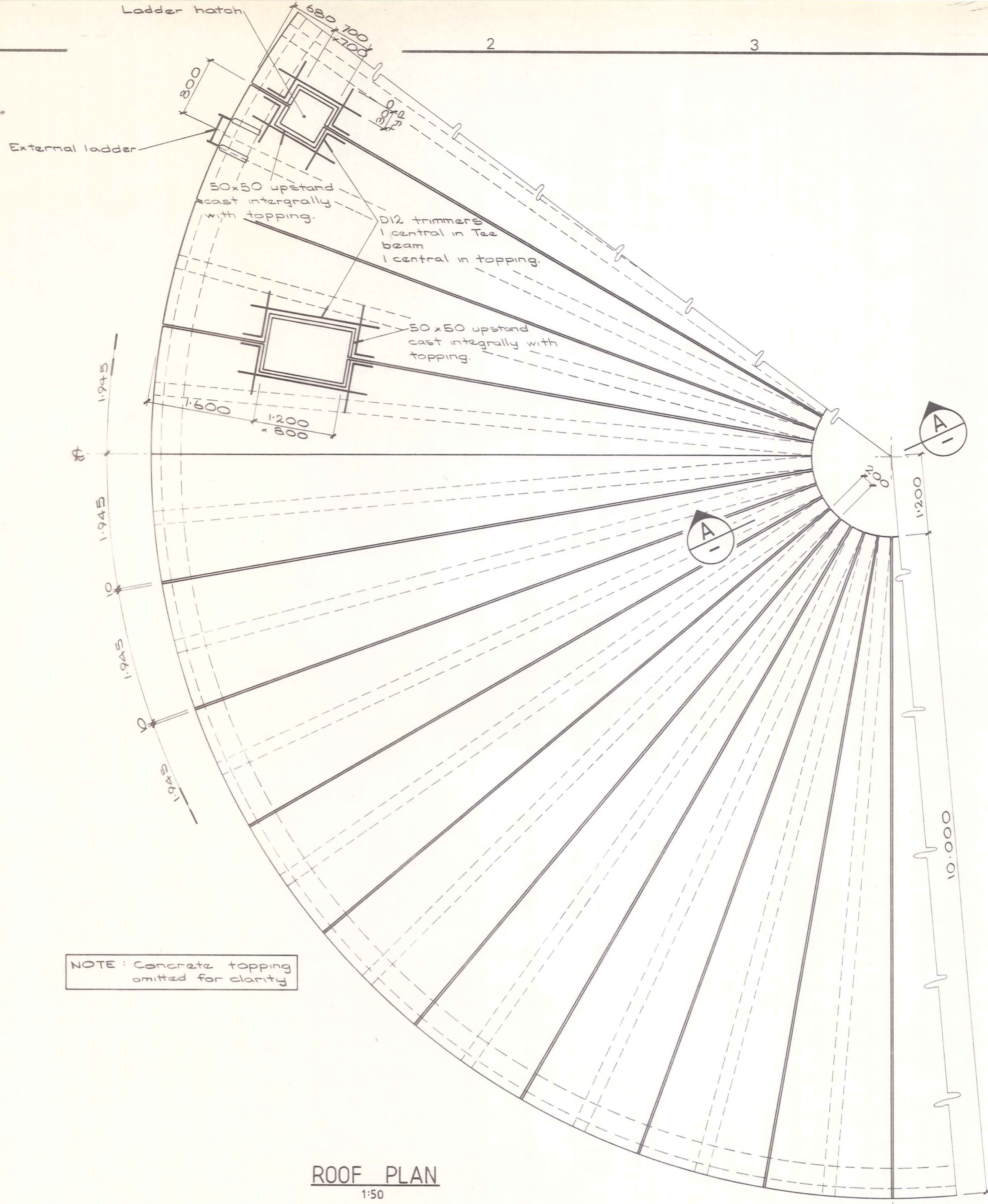
DUFFILL WATTS & KING LTD  
CONSULTING CIVIL & STRUCTURAL ENGINEERS  
Dunedin P.O. Box 5269 Ph. 777-133 Invercargill P.O. Box 576 Ph. 83-049  
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**MANIOTOTO COUNTY COUNCIL**

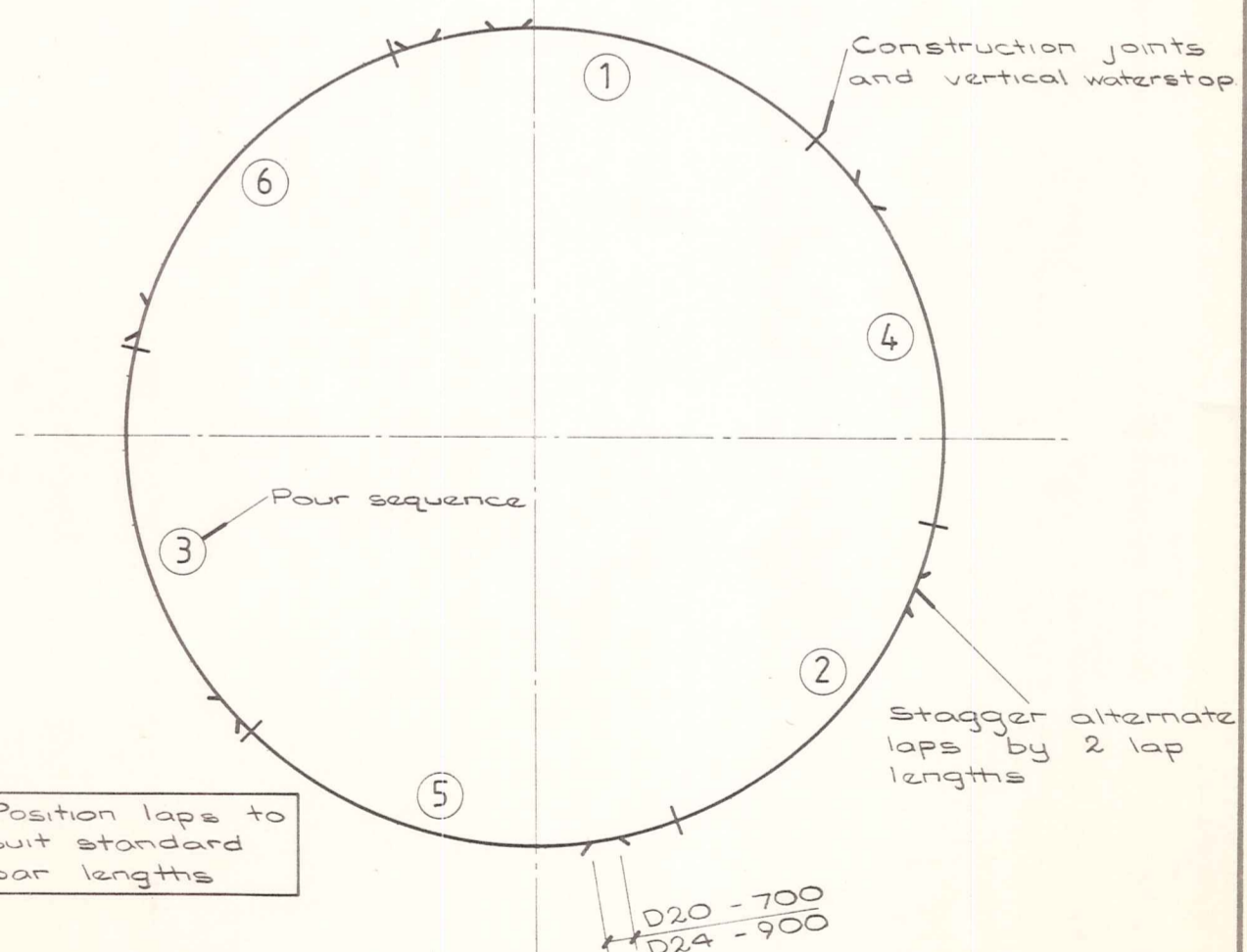
**RANFURLY WATER TREATMENT STATION AND RESERVOIR**  
1850 m<sup>3</sup> RESERVOIR

WEIR AND FRENCH LTD.

AMENDMENTS			NAME		DATE	JOB NO.		Sheet No
NO.	BY	DATE	Appvd	Surveyed		10384		T 10
				C Baxter	July 84			of shts
				B Newlands	June 84			F.B.
				C Baxter	July 84			
				Checked				
				Approved				

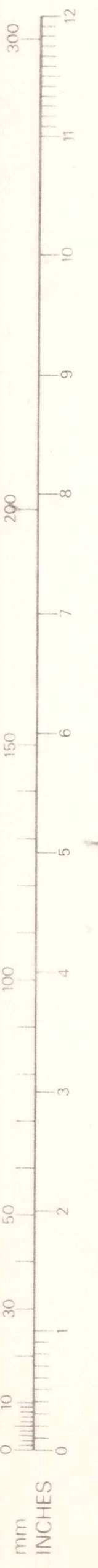


1. Column footing  
2 & 3 Wall footing  
4 & 5 Floor slab.



NOTE: Position laps to suit standard bar lengths

NOTE: 25 MPa concrete strength  
275 grade reinforcing steel



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MANIOTOTO  
COUNTY COUNCIL

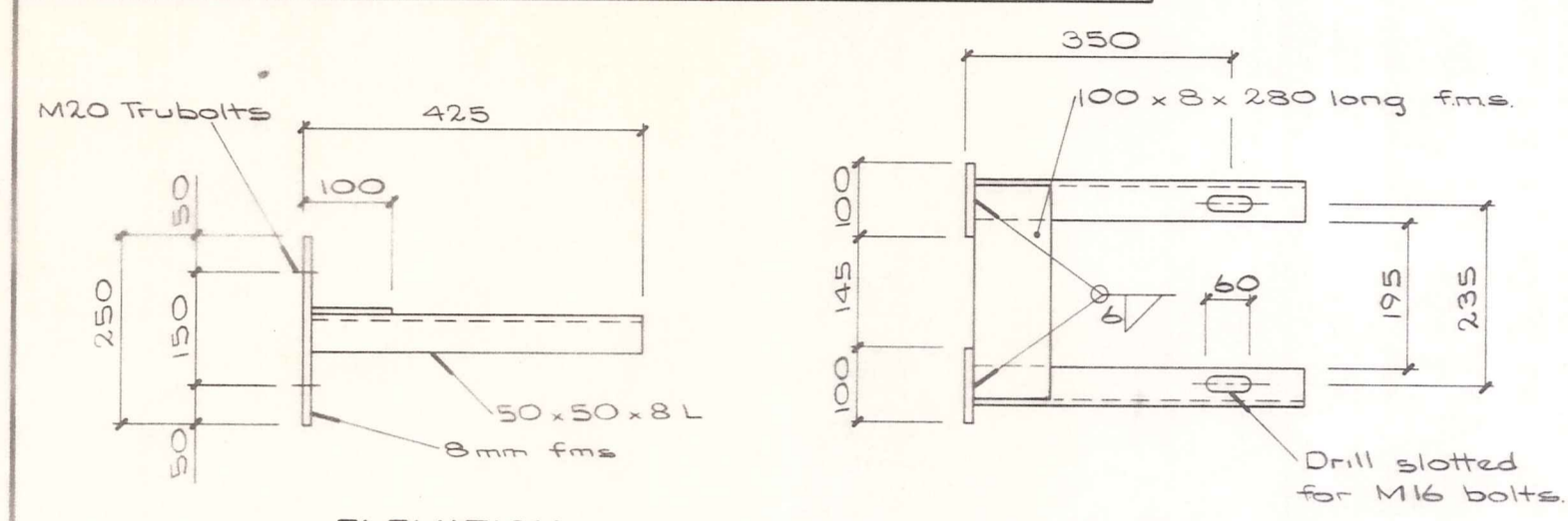
RANFURLY WATER TREATMENT PLANT AND RESERVOIR  
1850 m<sup>3</sup> RESERVOIR - DETAILS

AMENDMENTS			NAME		DATE	JOB NO.	Sheet No
NO.	BY	DATE	Appvd.	Surveyed	DATE		
A	C.G.B.	9-10-84	Wall footing pour sequence detailed	JN	Drawn	C. Baxter	July 84
					Calculations	S. Newlands	June 84
					Traced	C. Baxter	July 84
					Checked	S. Newlands	Aug 84
					Approved	J. Baxter	Aug 84

WEIR AND FRENCH LTD,  
PER: J. Baxter

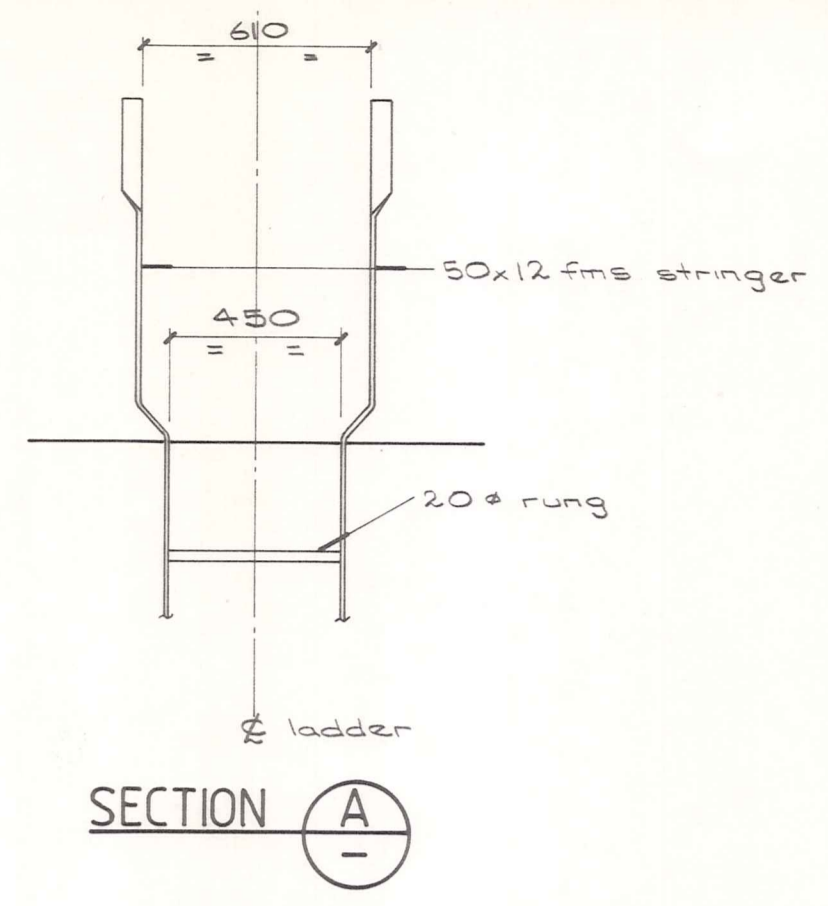
10384  
T11A  
of 5/15  
F.B.

ITEM NO	DESCRIPTION	NO OFF
1	150 # C.I. 0.70m straight flanged	1
2	150 # C.I. straight flanged	4
3	200/150 C.I. reducer flanged	1
4	200 # C.I. bellmouth	1
5	150/50 C.I. tapping band	1
6	50 # uPVC valve socket	1
7	50 # uPVC formed bend	1



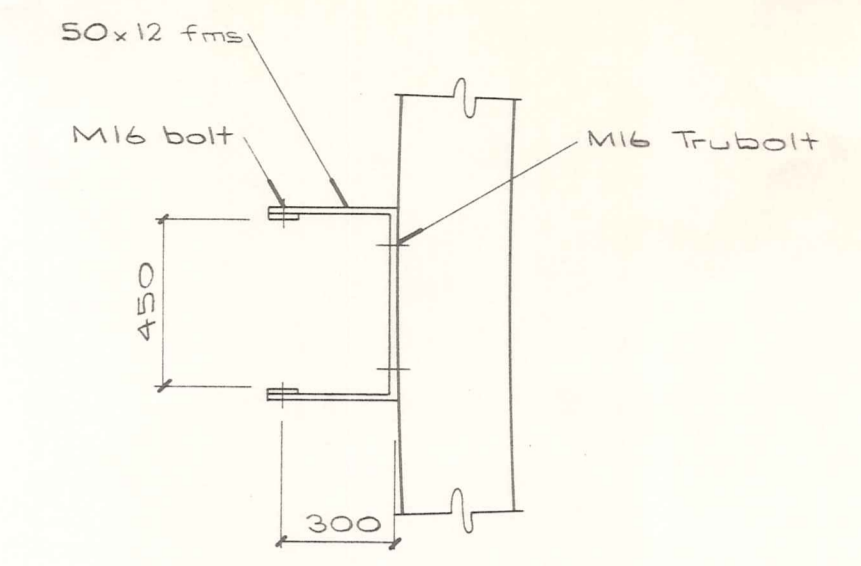
**ELEVATION PLAN**  
**OVERFLOW PIPE SUPPORT BRACKET**  
1:10

NOTE: Bracket to be hot dipped galvanized after fabrication.

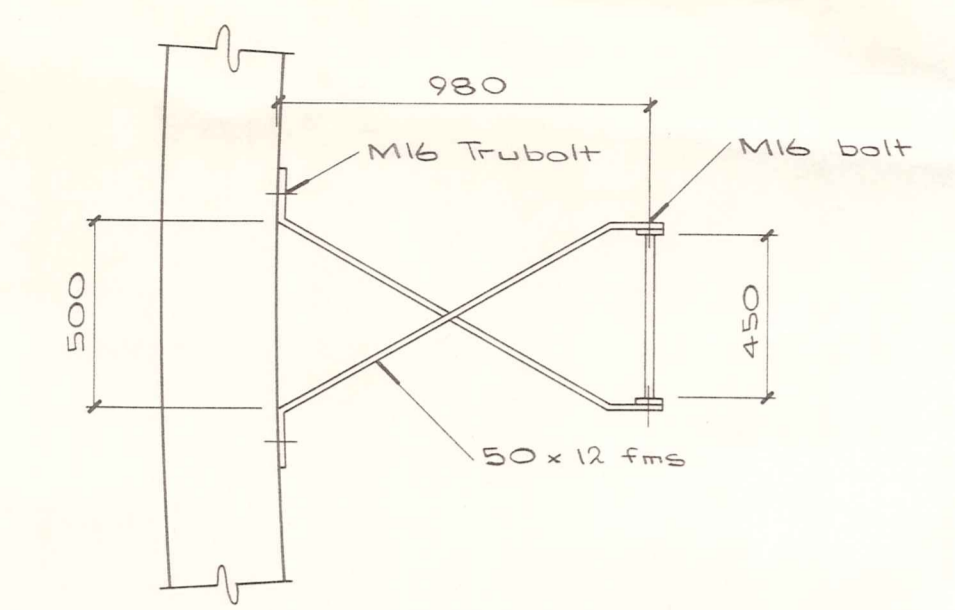


**SECTION A**  
1:20

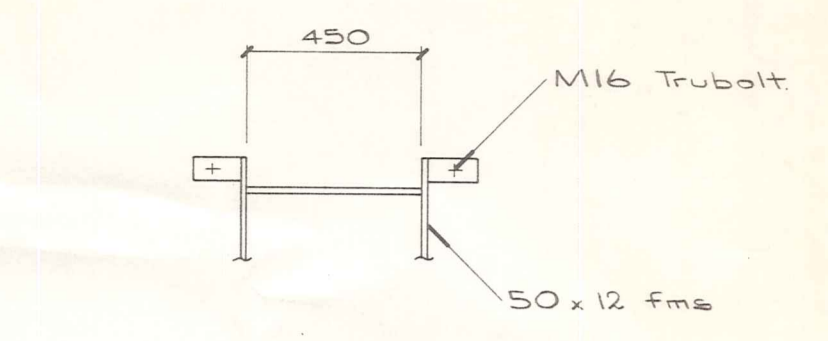
NOTE: After fabrication, all steel components to be thoroughly cleaned, hot dipped galvanized and painted with one coat of 'Epiest' primer and one coat of 'Epiest' top coat applied in accordance with the manufacturers directions.



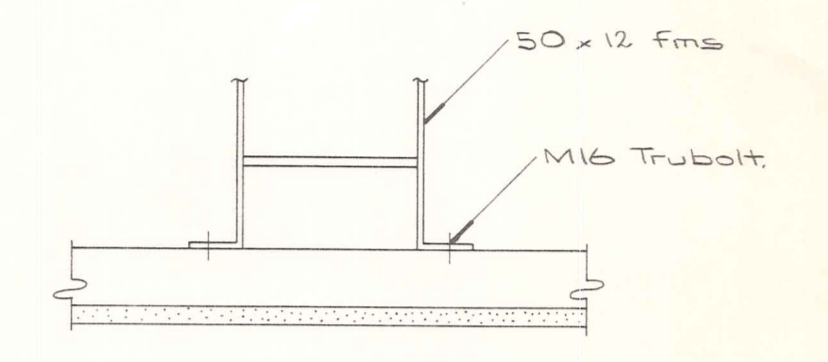
**SECTION B**  
1:20



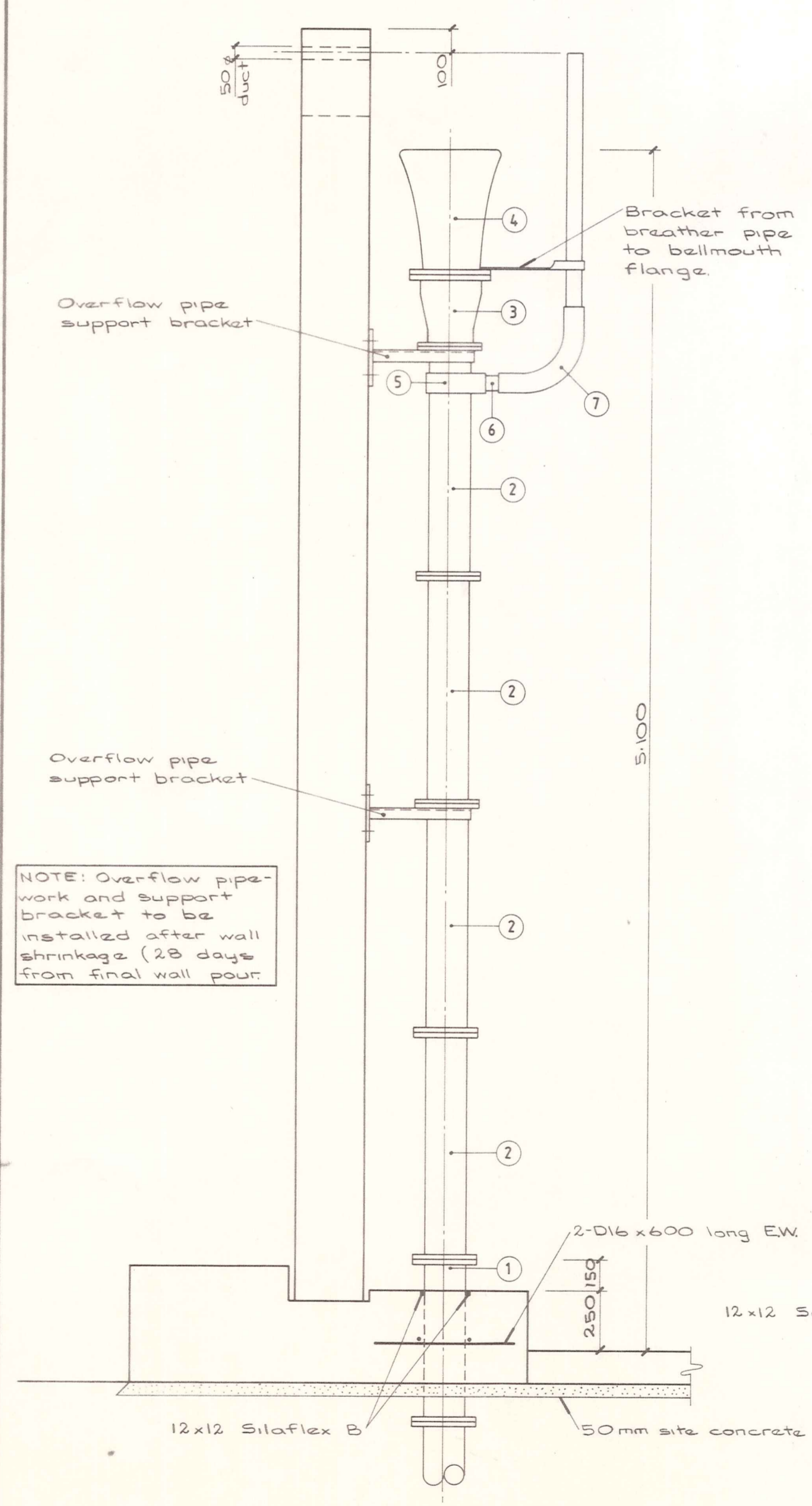
**SECTION C**  
1:20



**DETAIL 1**  
1:20

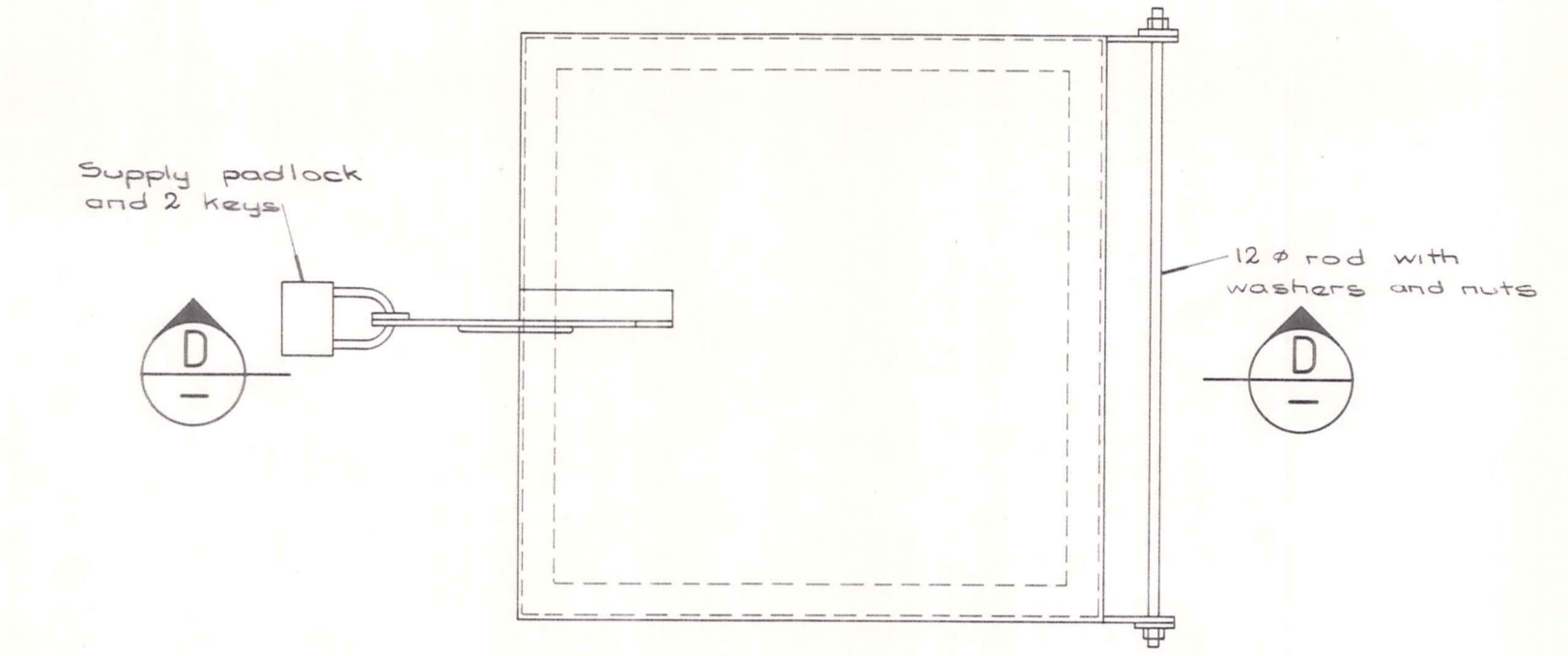


**DETAIL 2**  
1:20

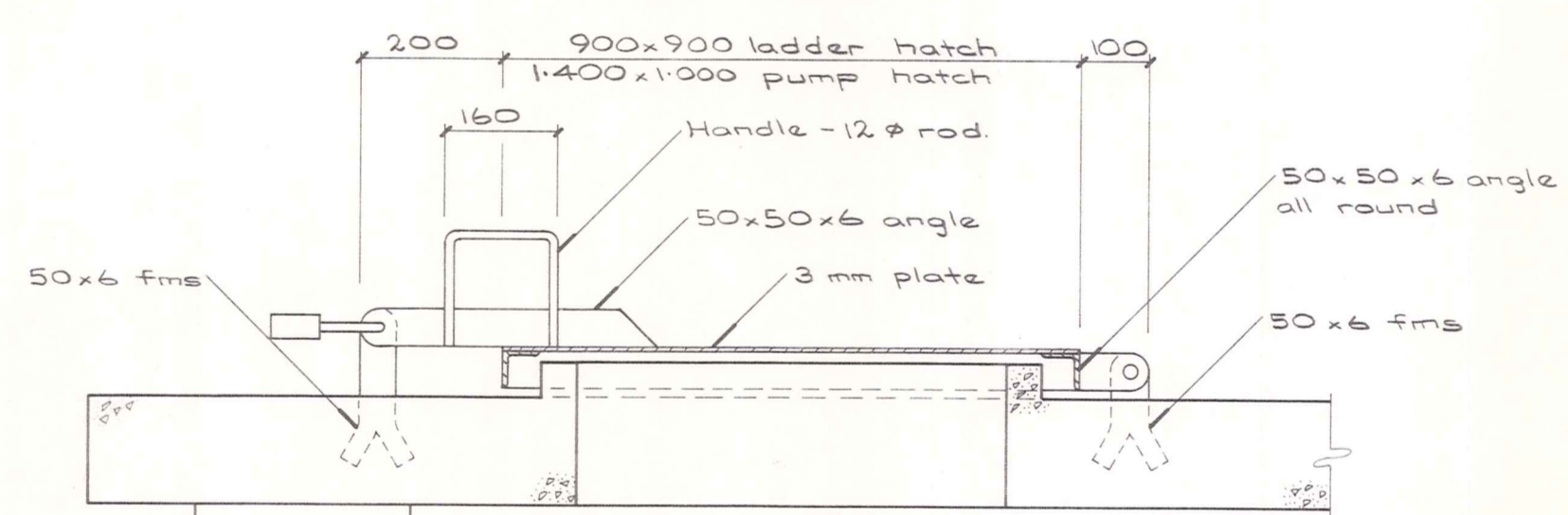


**RESERVOIR OVERFLOW**  
1:20

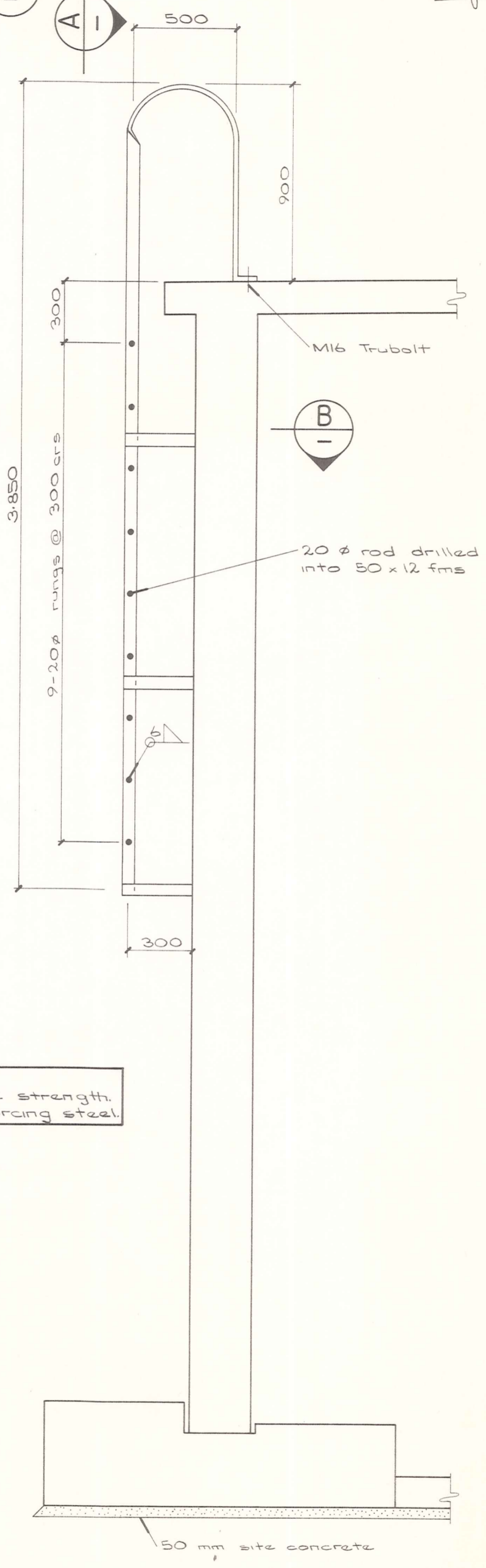
NOTE: Overflow pipe-work and support bracket to be installed after wall shrinkage (28 days from final wall pour)



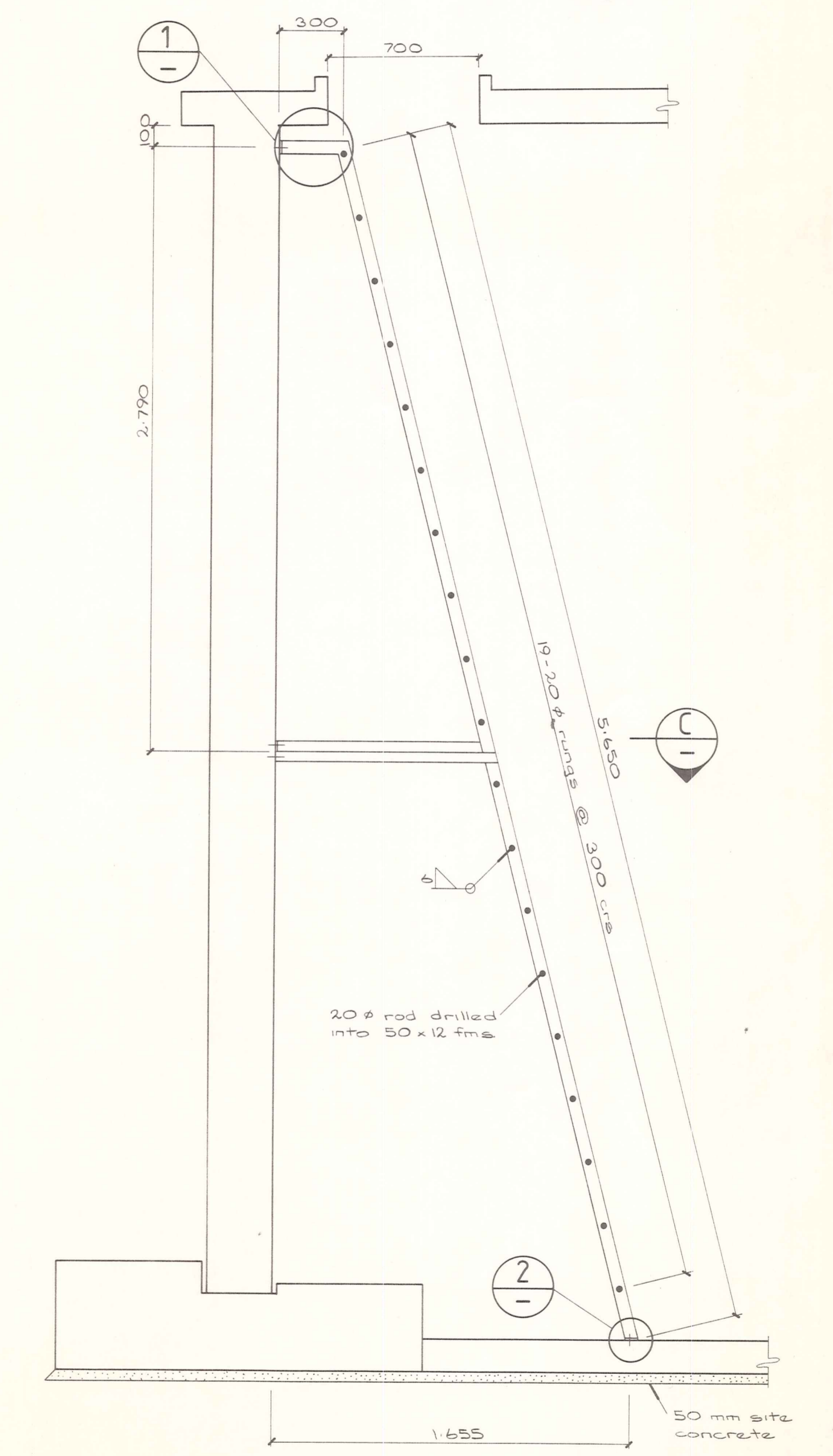
**PLAN-LADDER HATCH COVER**  
**PUMP HATCH COVER SIMILAR**  
1:10



**SECTION D**  
1:10



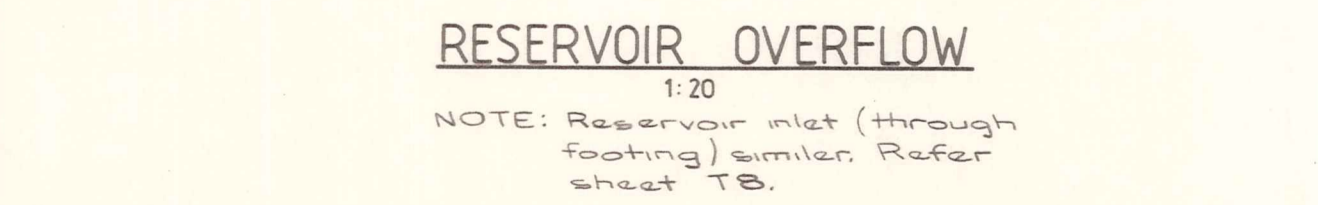
**EXTERNAL LADDER**  
1:20



**INTERNAL LADDER**  
1:20

**ACCESS LADDERS**

WEIR AND FRENCH LTD.



**RESERVOIR OUTLET**  
1:20



**RESERVOIR DRAIN**  
1:20

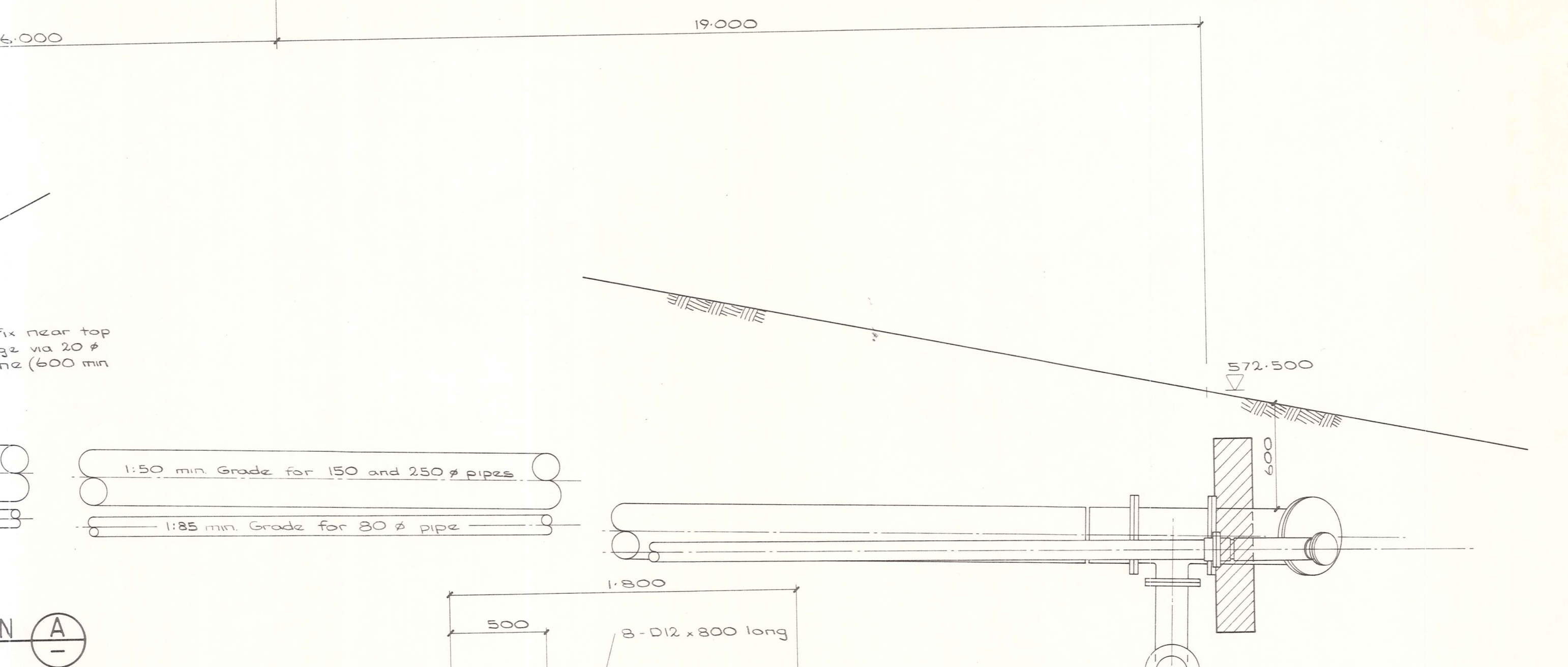
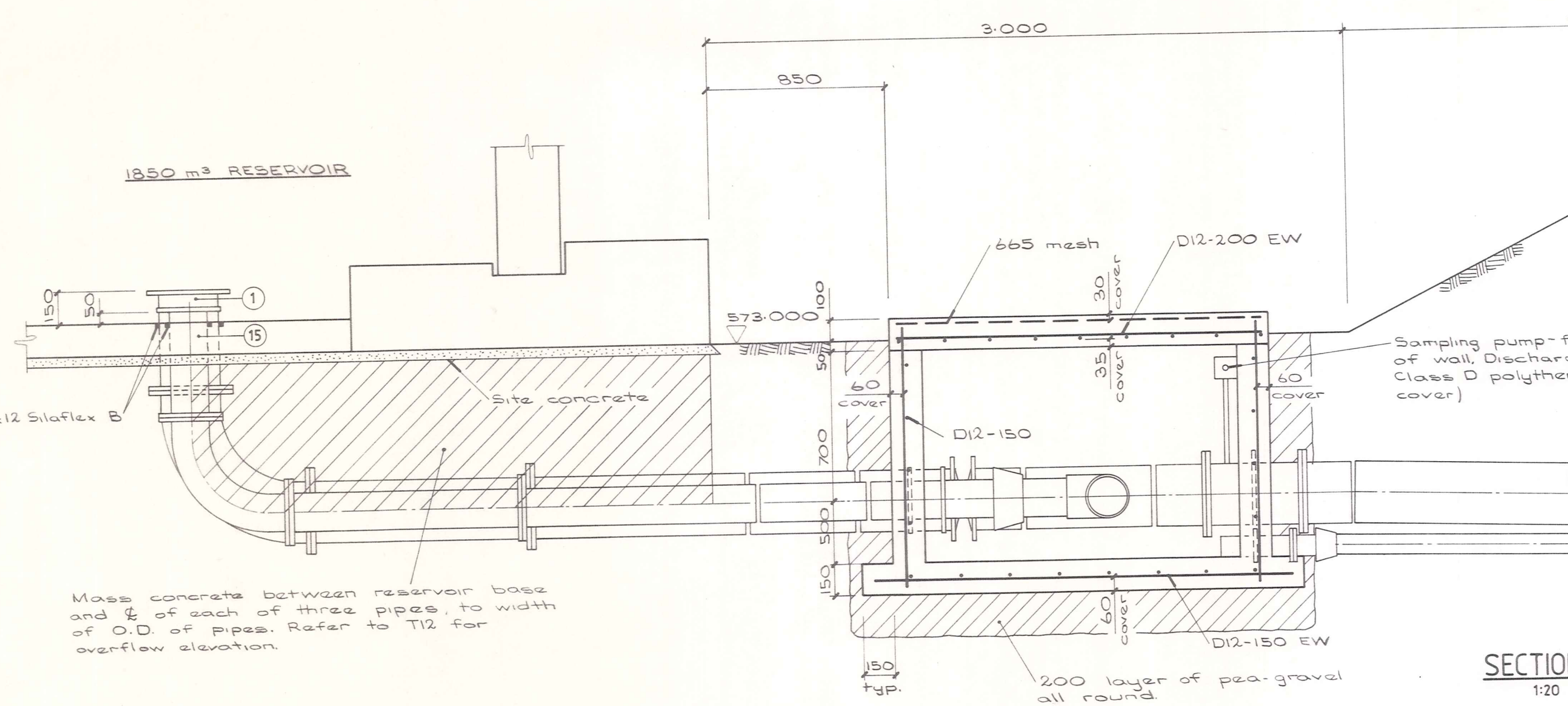
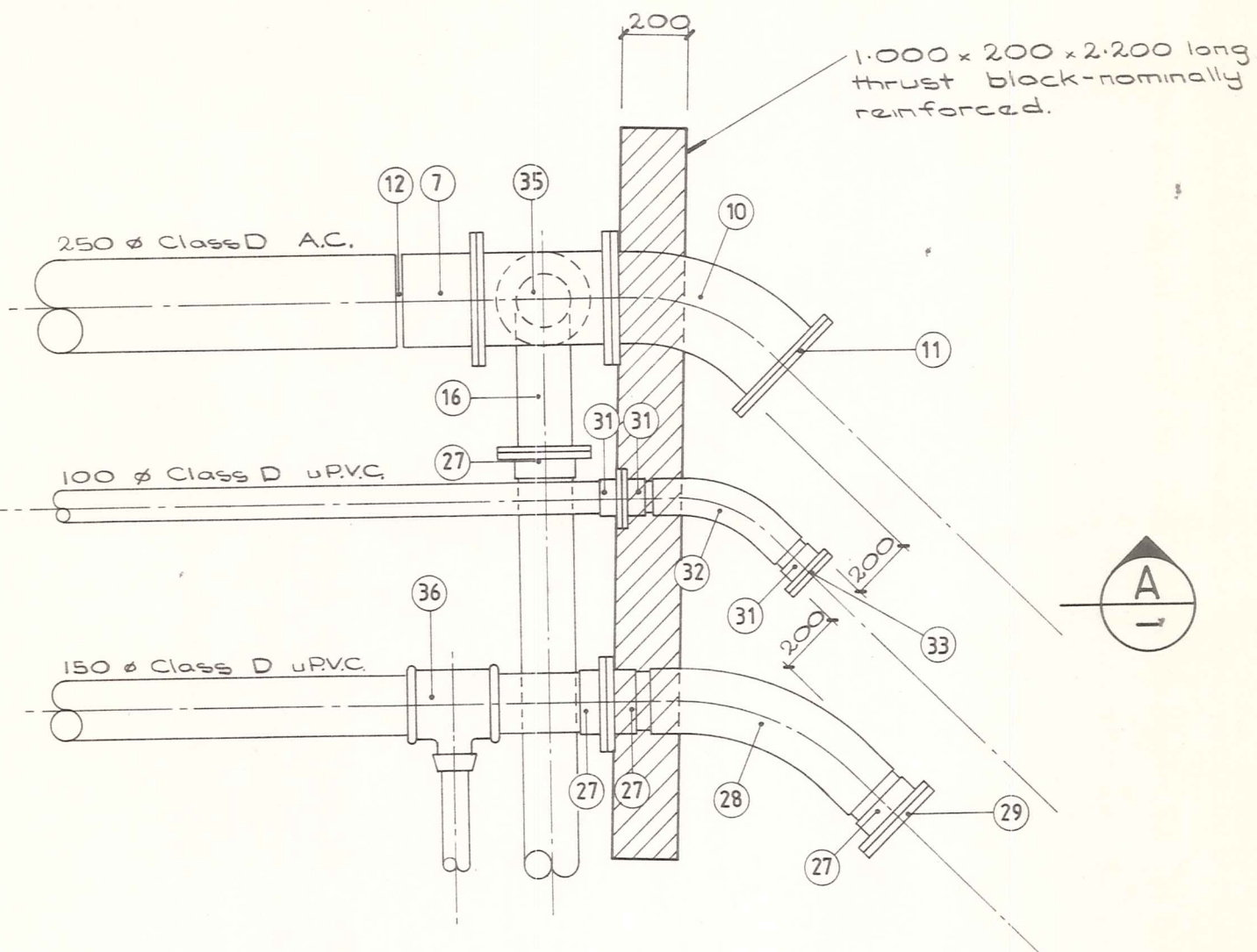
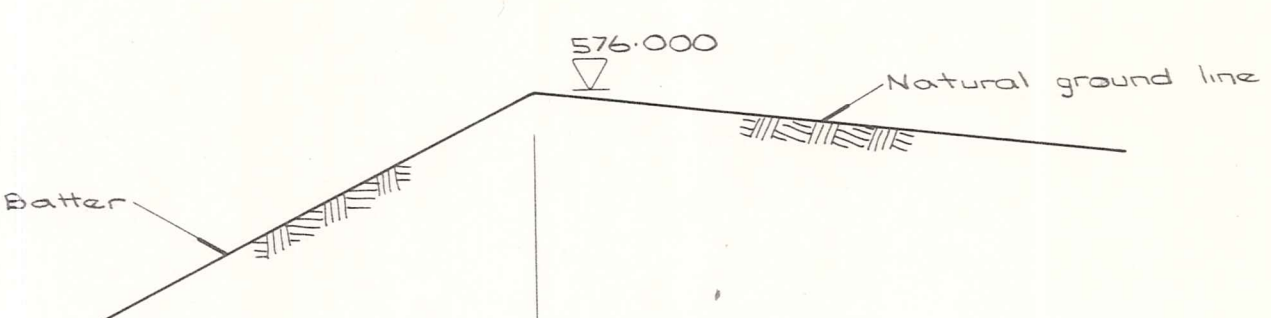
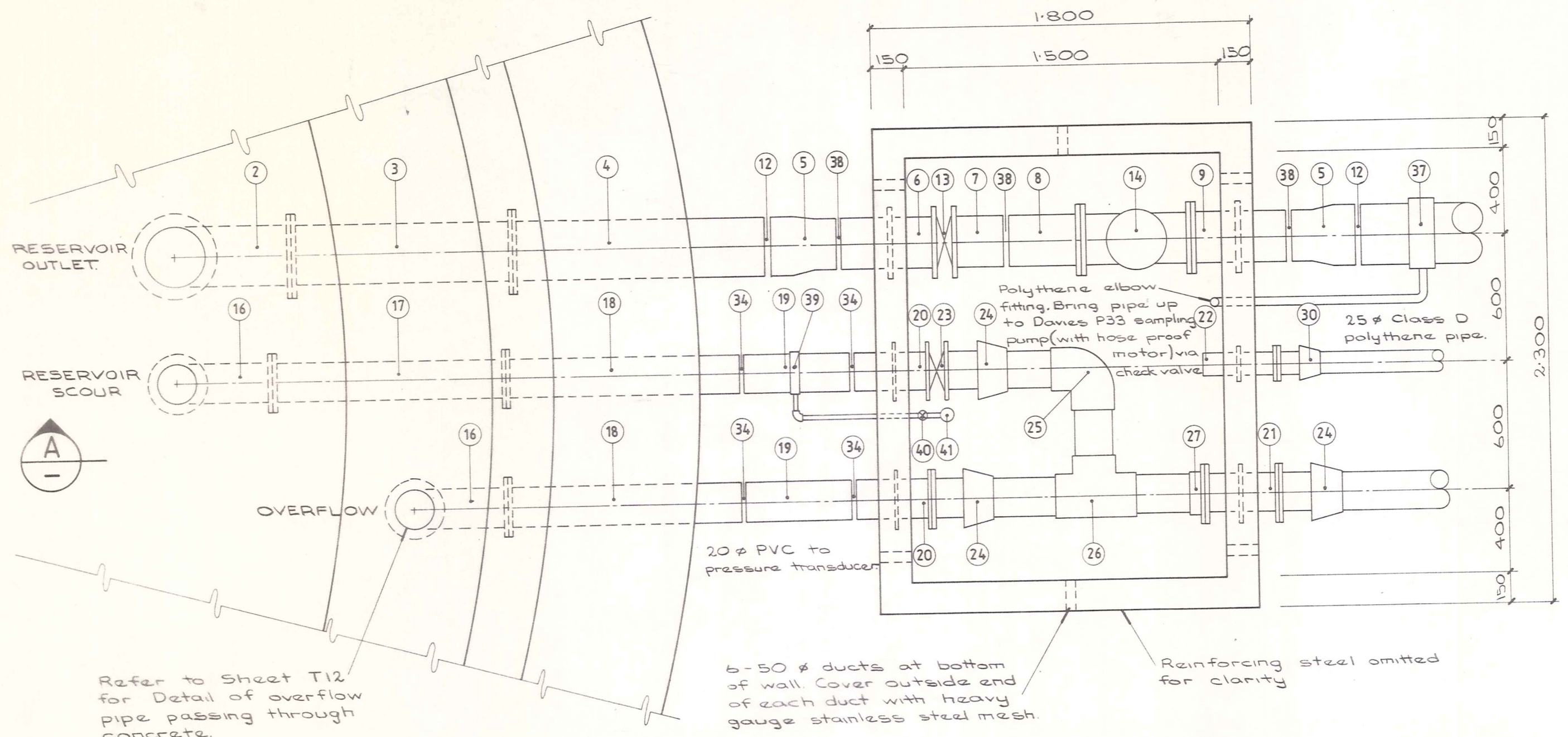
DUFFILL WATTS & KING LTD  
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Dunedin P.O. Box 5269 Ph. 777-1133 Invercargill P.O. Box 576 Ph. 83-049  
Alexandra P.O. Box 313 Ph. 6819

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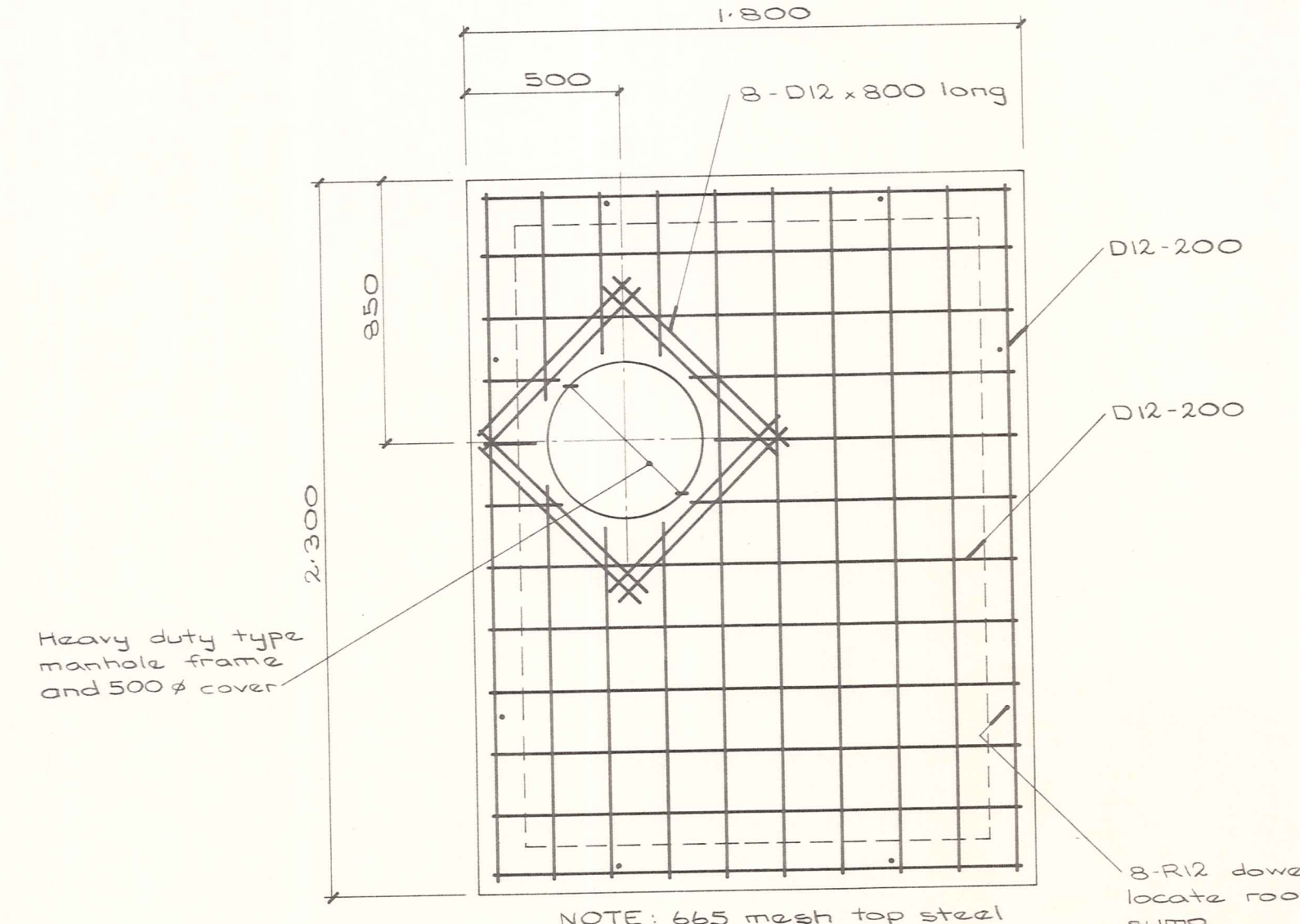
**RANFURLY WATER TREATMENT STATION AND RESERVOIR**

AMENDMENTS			NAME	DATE	JOB NO.	Sheet No
NO.	BY	DATE	Appvd.	Surveyed	10384	T12
				Drawn		
				Calculations		
				Traced		
				Checked		
				Approved	File 6/6/B L.B.	F.B.

ORIGINAL SIZE  
mm INCHES  
300  
200  
150  
100  
50  
30  
10  
0



ITEM NO	DESCRIPTION	NO OFF	ITEM NO	DESCRIPTION	NO OFF
1	250 # C.I. 0.50 m straight flanged	1	21	150 # C.I. 0.35m straight flanged and puddle flange	1
2	250 # C.I. 90° bend flanged	1	22	100 # C.I. 0.35m straight plain one end and puddle flange	1
3	250 # C.I. straight flanged	1	23	150 # Dezurik butterfly valve	1
4	250 # C.I. straight plain one end	1	24	150 # Milnes flange to gibault adaptor	3
5	250/200 C.I. reducer	2	25	150 # uPVC elbow	1
6	200 # C.I. 0.45 m straight plain one end and puddle flange	1	26	150 # uPVC Tee	1
7	200 # C.I. flange adaptor	2	27	150 # uPVC stub flange, backing ring and gasket	5
8	200 # C.I. straight plain one end	1	28	150 # uPVC 45° formed bend	1
9	200 # C.I. 0.5m straight flanged and puddle flange	1	29	100 # blank flange	1
10	250 # C.I. 45° bend flanged	1	30	100 # Milnes flange to gibault adaptor	1
11	250 # C.I. blank flange	1	31	100 # uPVC stub flange, backing ring and gasket	3
12	250 # C.I. gibault joint	2	32	100 # uPVC 45° formed bend	1
13	200 # gear operated Fig 660 Dezurik butterfly valve	1	33	100 # blank flange	1
14	Kent 200 # 2000 R water meter and sender unit (supplied by electrical sub-contractor)	1	34	150 # C.I. gibault joint	2
15	150 # C.I. 0.45 m straight flanged one end.	1	35	250 x 150 C.I. flanged Tee	1
16	150 # C.I. 90° bend flanged	3	36	150 x 80 Milnes gibault Tee	1
17	150 # C.I. 110 m straight flanged	1	37	250 # tapping band (250x20)	1
18	150 # C.I. 110 m straight plain one end	2	38	200 # C.I. gibault joint	3
19	150 # C.I. 0.5m straight	2	39	150 x 20 tapping band	1
20	150 # C.I. 0.35m straight plain one end and puddle flange	2	40	20 # gate valve	1
			41	Reservoir level pressure transducer (electrical spec)	1



PLAN - RESERVOIR OUTLET SUMP COVER 1:20

WEIR AND FRENCH LTD.  
PER 13 Jwan

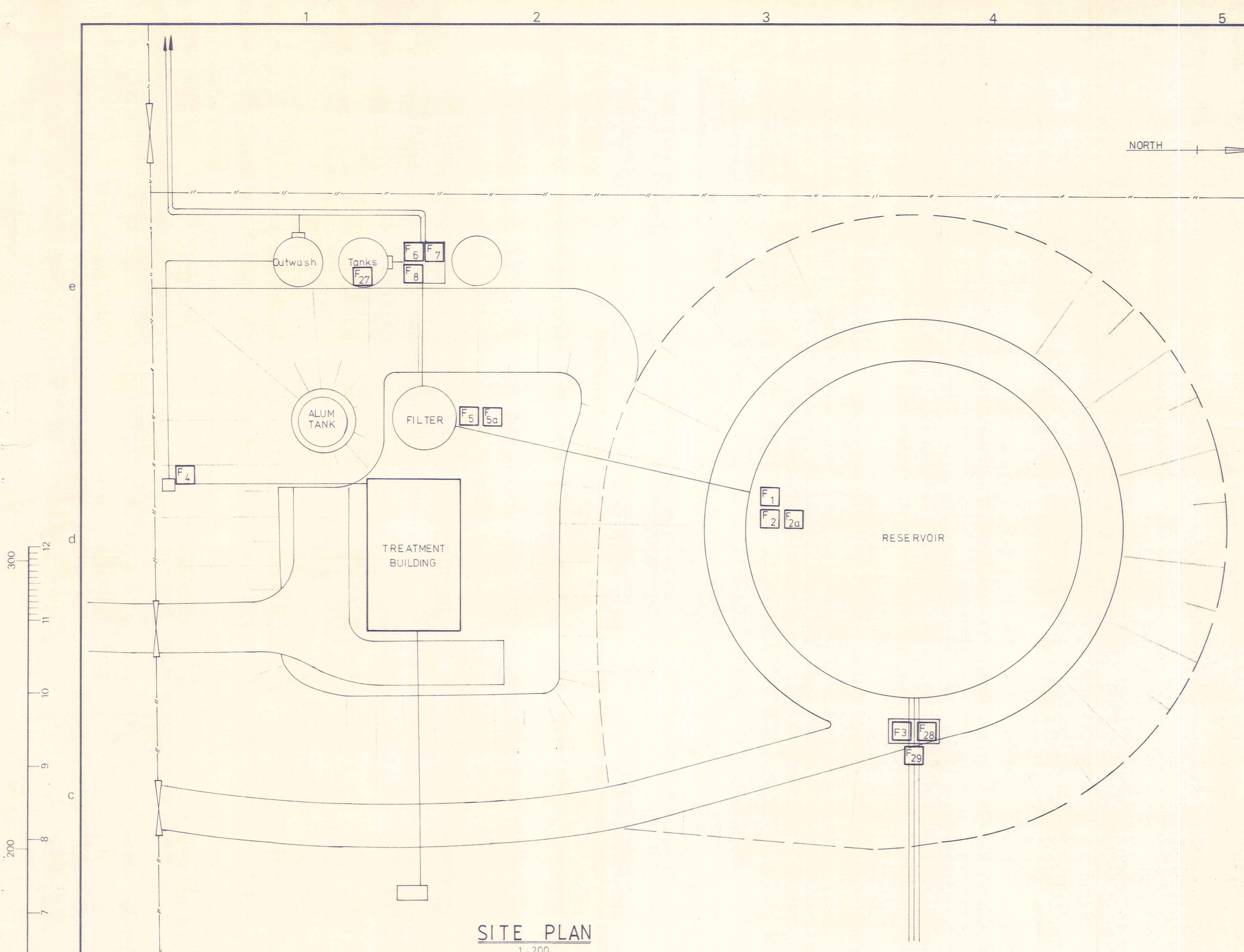
DUFFILL WATTS & KING LTD  
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Alexandra P.O. Box 313 Ph. 6819

MANIOTOTO COUNTY COUNCIL

RANFURLY WATER TREATMENT STATION AND RESERVOIR  
RESERVOIR OUTLETS DETAIL

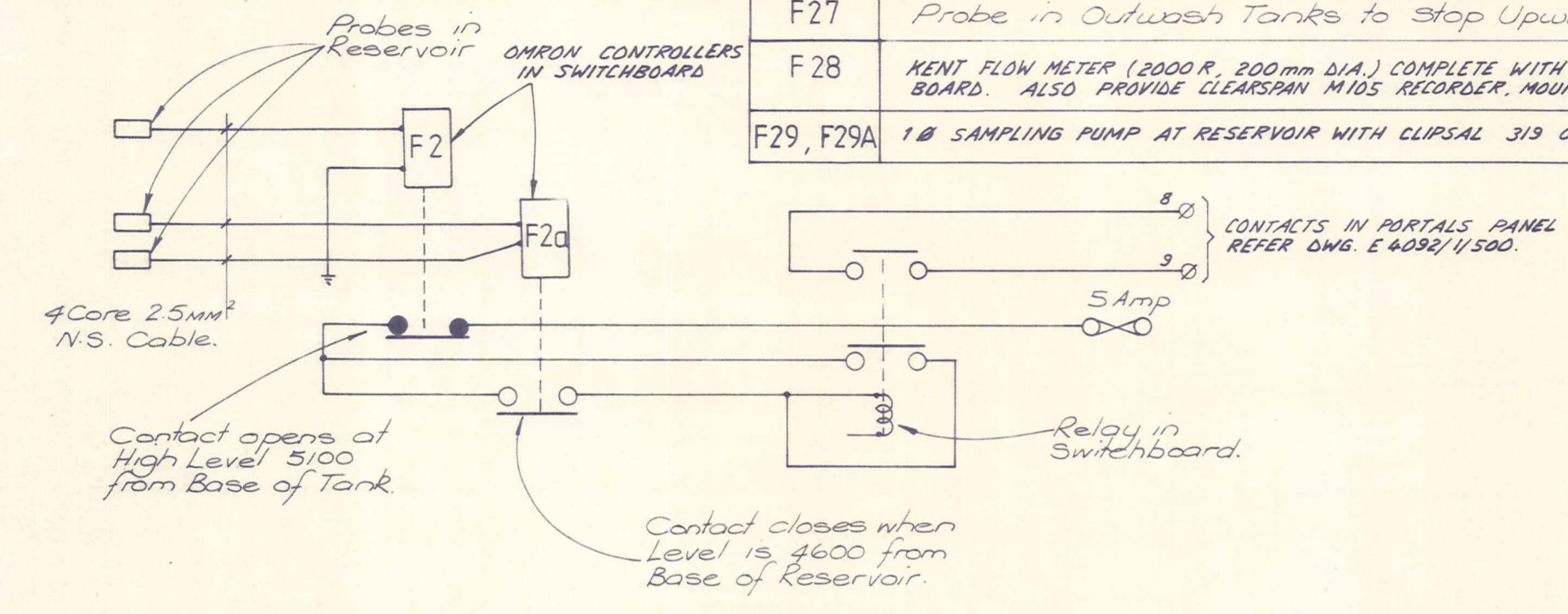
AMENDMENTS			NAME	DATE	JOB NO.	Sheet No
NO.	BY	DATE			10384	T13
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			Calculations	S Newlands July 84		
			Traced	C Baxter July 84		
			Checked	S Newlands Aug 84	File 6/6/8 L.B.	FB
			Approved	J Jwan Aug 84		

ORIGINAL SIZE  
mm INCHES  
300  
200  
150  
100  
50  
30  
10  
0

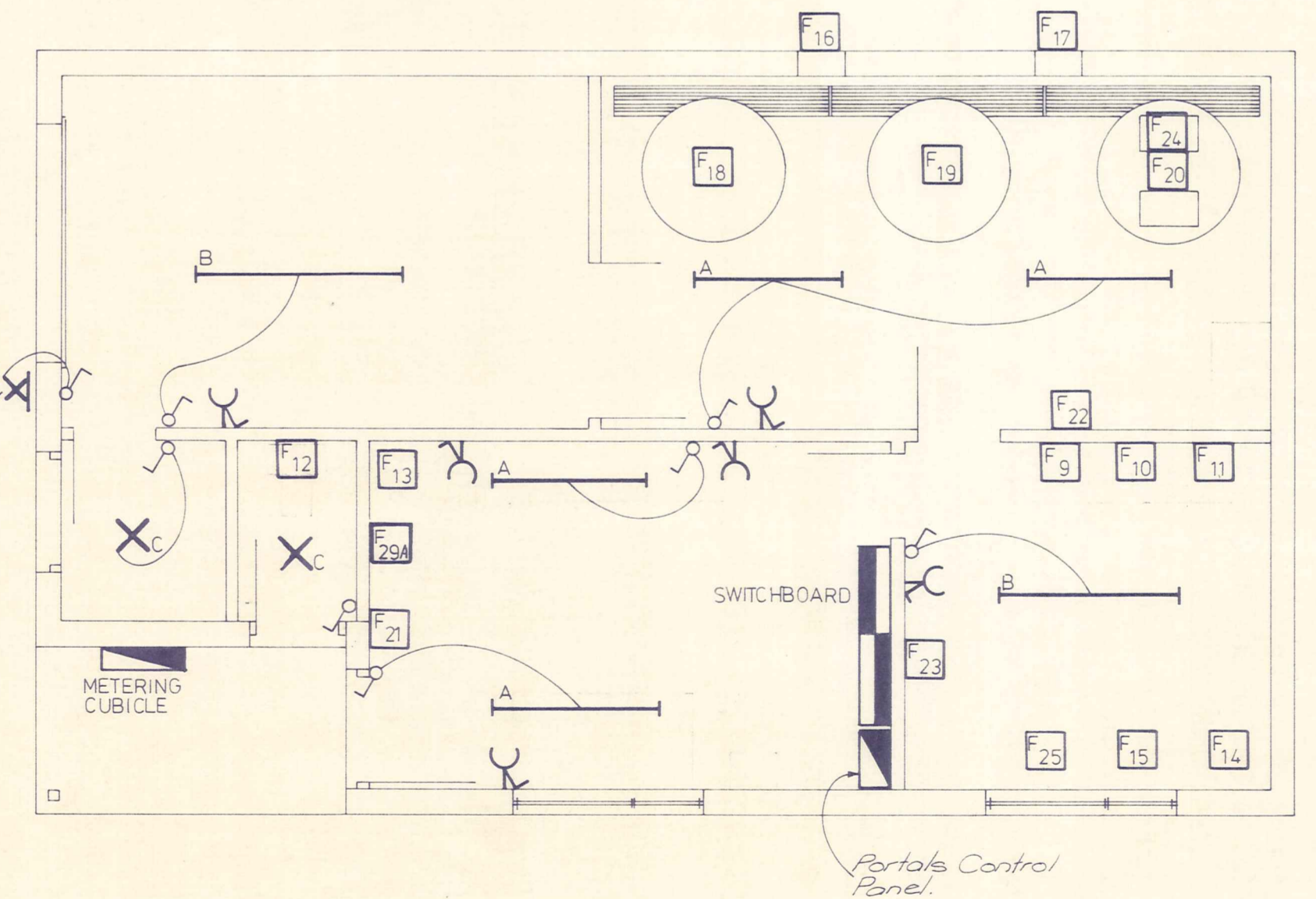


SITE PLAN  
1:200

FIXED CONNECTION LEGEND	
F1	22 kW Upwash Pump
F2 & F2a	Reservoir High & Inlet Valve Control Probe 500 Below High Level.
F3	Reservoir Level Sensor for 0-5.2 M Indication
F4	0.5 kW Sump Pump 1φ
F5 & F5a	Filter Level Control Contacts on Outlet Valve.
F6	Rotark Actuator (Washout Valve)
F7	Bermad Valve (Inlet Valve)
F8	Kent Flow Meter (2000 R with Sender & Rate of Flow Indicator on Switchboard)
F9-F11	Dosing Pumps Provide Plug Socket adjacent fed through Portals Panel Wire in 2.5mm <sup>2</sup>
F12	600 W Heatway Tubular Heater under Toilet Cistern.
F13	Underbench Zip.
F14	0.95 kW Supply Pump.
F15	Pressure Vessel.
F16 & F17	Expelair Fans.
F18-F20	Chemical Tank Stirrers. Provide 1φ Plug Sockets on Wall.
F21-F23	3 kW Kosyair Fan Heaters controlled by Room Thermostat.
F24	Bag Ventilation Unit over Lime Tank (1φ Supply)
F25	5.5 kW Air Scour Blower
F26	Low Level Probe in Reservoir connected in Backwash Pump Circuit
F27	Probe in Outwash Tanks to Stop Upwash Pump.
F28	KENT FLOW METER (2000 R, 200 mm DIA.) COMPLETE WITH SENDER & RATE OF FLOW INDICATOR ON SWITCHBOARD. ALSO PROVIDE CLEARSPAN M.I.D.S. RECORDER, MOUNTED ADJACENT TO SWITCHBOARD.
F29, F29A	1φ SAMPLING PUMP AT RESERVOIR WITH CLIPCAL 319 OPERATOR IN TREATMENT BUILDING.

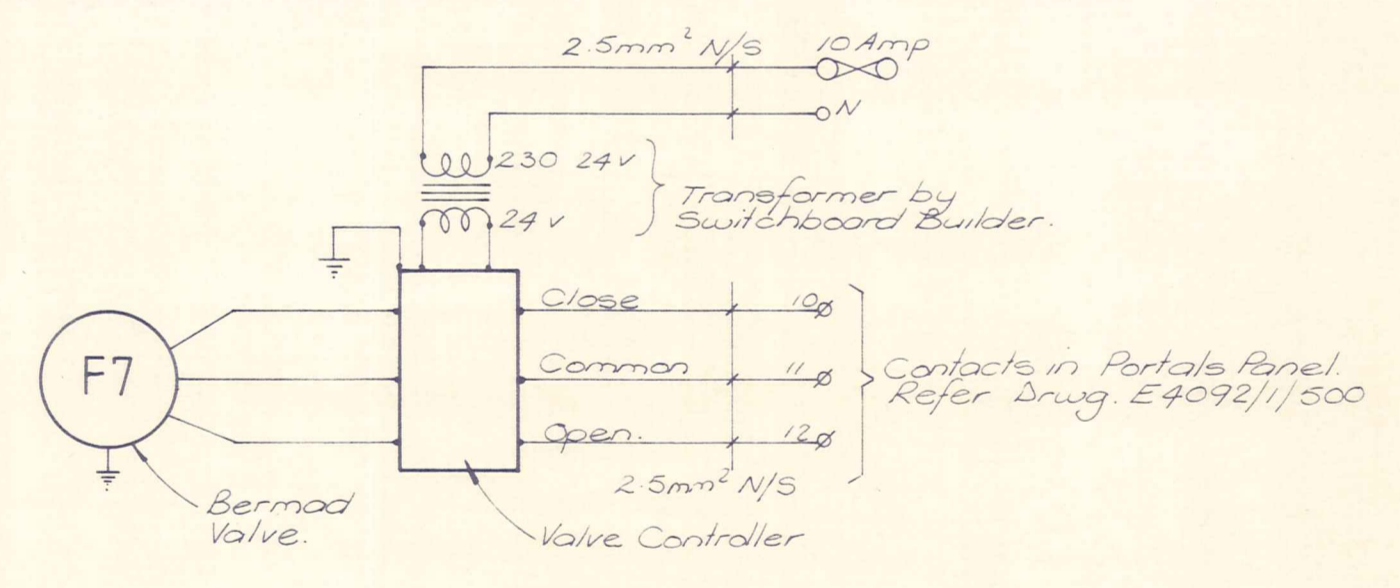


LEVEL CONTROL DIAGRAM FOR "BERMAD" INLET VALVE PROBES F2 and F2a

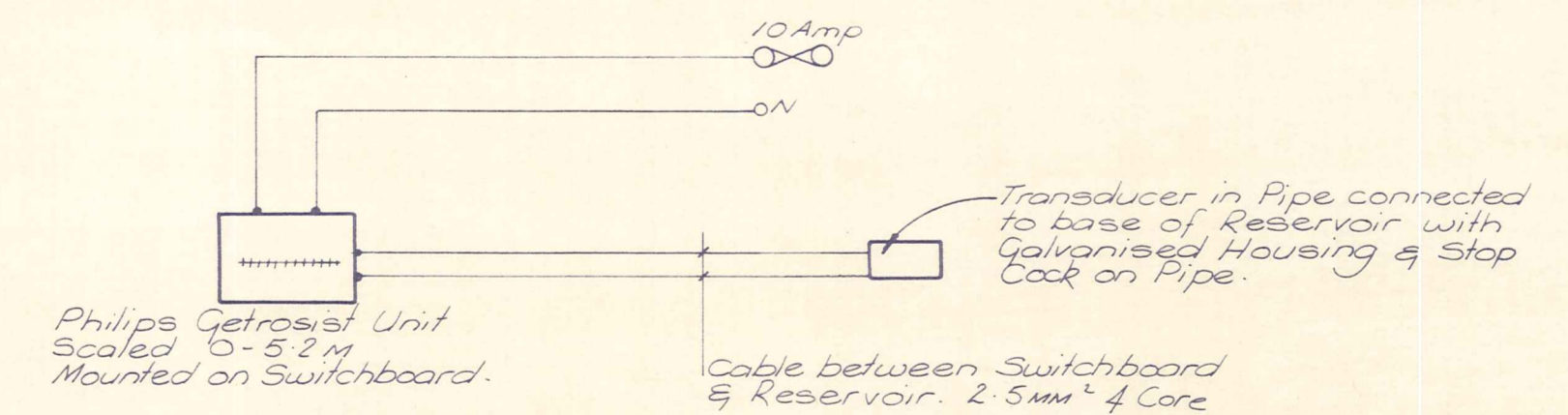


TREATMENT BUILDING LIGHTING AND POWER LAYOUT

A	1200 MM GEC PRO420R with 2 N° Colour 33 tubes
B	1500 MM GEC PRO520R with 2 N° Colour 33 tubes
C	GEC 100 Watt F64090 Bulkhead
⊗	Plug Socket at 1300 MM above floor level.
⊕	Light Switch at 1300 MM above floor level



CONNECTION DIAGRAM FOR BERMAD VALVE F7



RESERVOIR LEVEL CONTROL INDICATION F3

WEIR AND FRENCH LTD.  
PER: *B. J. Dewar* 7 SEP 1984

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Dunedin PO Box 5269 Ph 777-133 Invercargill PO Box 576 Ph 83049  
Cromwell PO Box 82 Ph 50-391

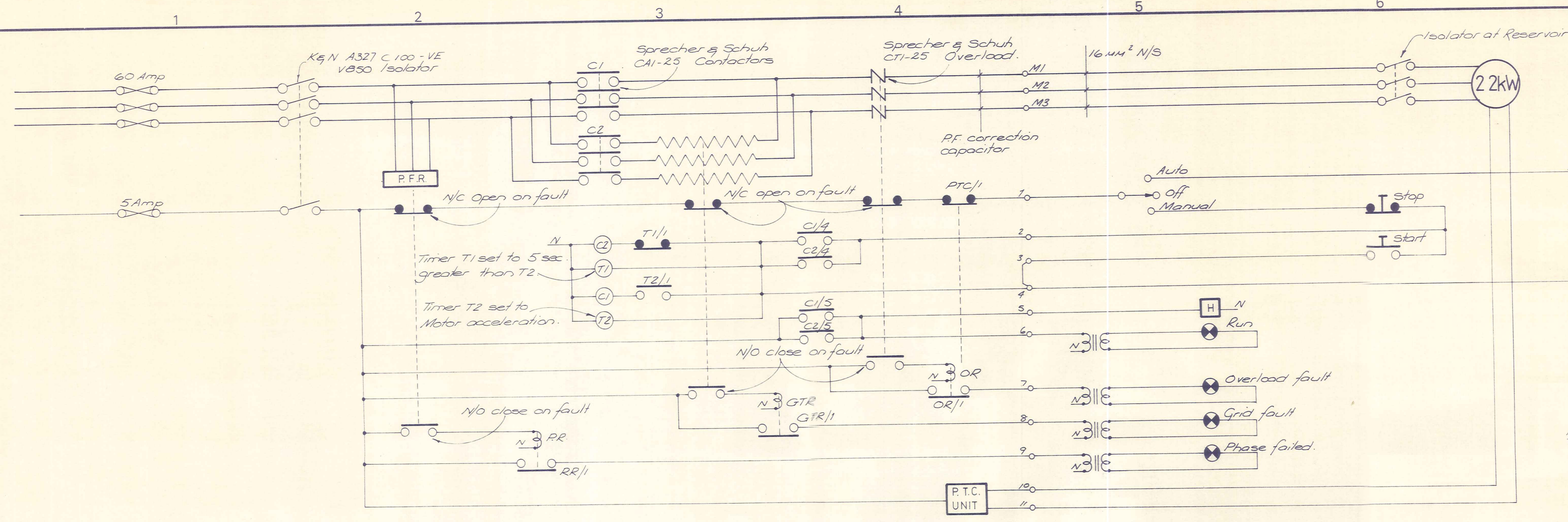
PEDERSEN & PARTNERS LTD  
CONSULTING ELECTRICAL ENGINEERS  
DUNEDIN CHRISTCHURCH

MANIOTOTO COUNTY COUNCIL

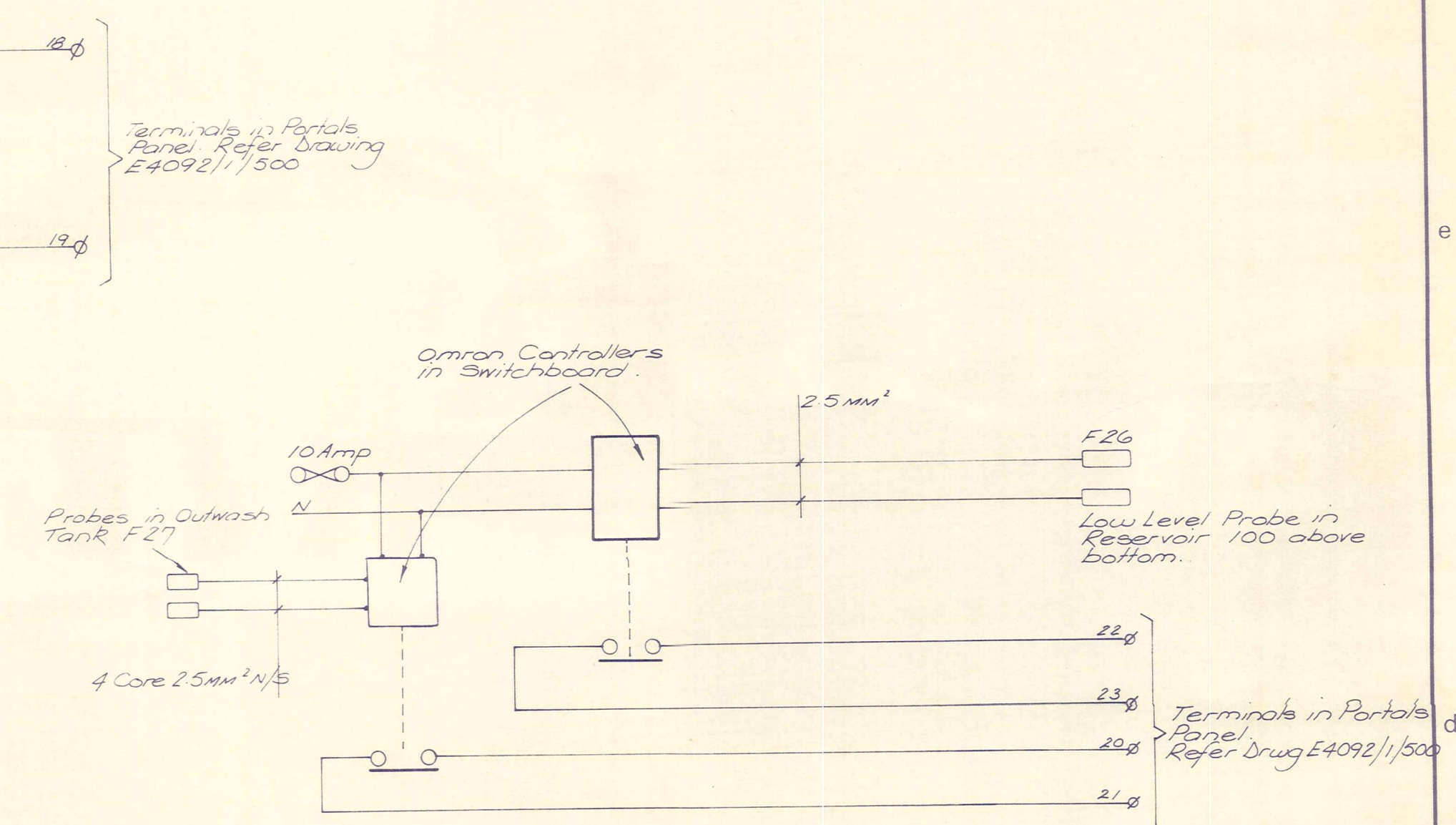
RANFURLY WATER TREATMENT STATION and RESERVOIR

AMENDMENTS				NAME		DATE	JOB NO.	Sheet No
NO.	BY	DATE	Appvd.	Surveyed	Drawn		10384	E1
				Calculations				of 3 shts
				Traced	M. GILL	JULY 1984		
				Checked				
				Approved				
							File	L.B. F.B.

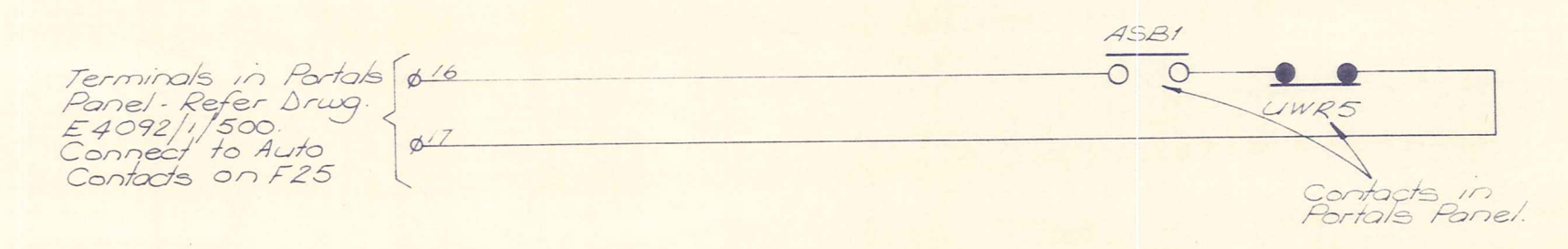
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12  
11  
10  
9  
8  
7  
6  
5  
4  
3  
2  
1  
0



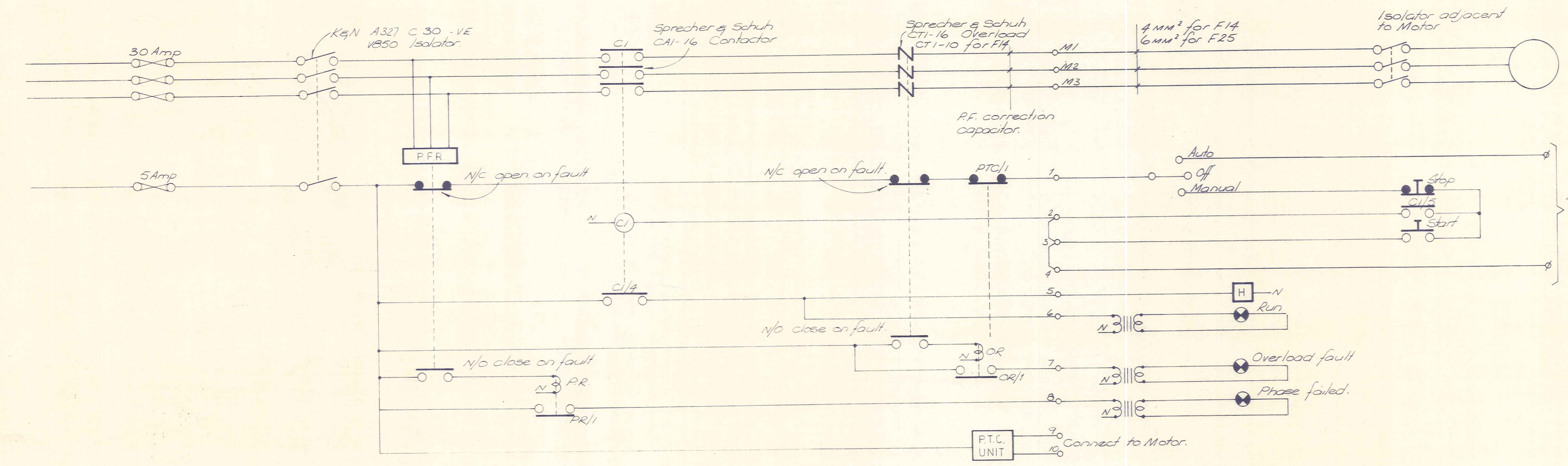
**SCHEMATIC DIAGRAM FOR 22kW BACKWASH PUMP F1**



**CONNECTION DIAGRAM FOR F26 LOW LEVEL PROBE IN RESERVOIR**

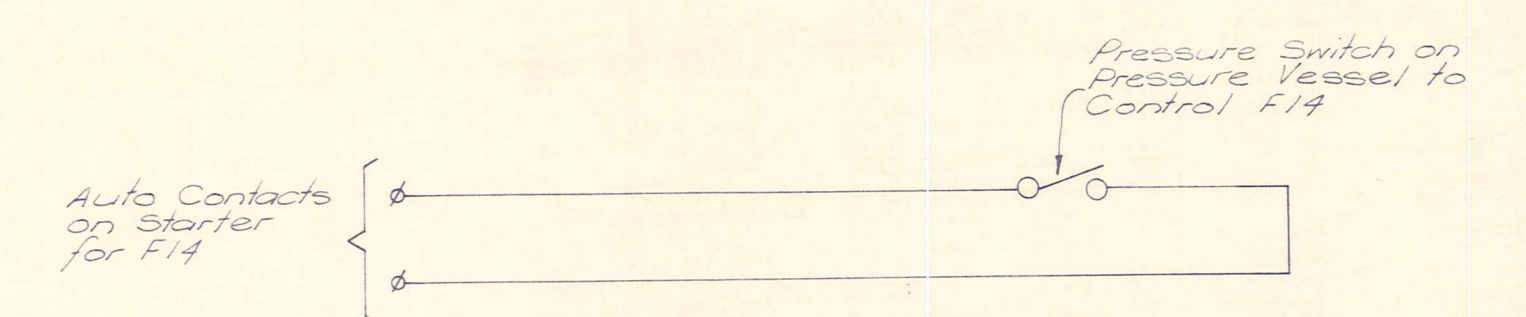


**AUTO CONTROL DIAGRAM FOR F25 AIR SCOUR PUMP**



**TYPICAL DOL STARTER REQUIRED FOR F14 and F25**

Auto Contacts. Refer to adjacent diagrams.



**AUTO CONTROL DIAGRAM FOR F14**

ORIGINAL SIZE mm INCHES

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Cromwell PO Box 82 Ph 50 391

**PEDERSEN & PARTNERS LTD**  
CONSULTING ELECTRICAL ENGINEERS  
DUNEDIN CHRISTCHURCH

**MANIOTOTO COUNTY COUNCIL**

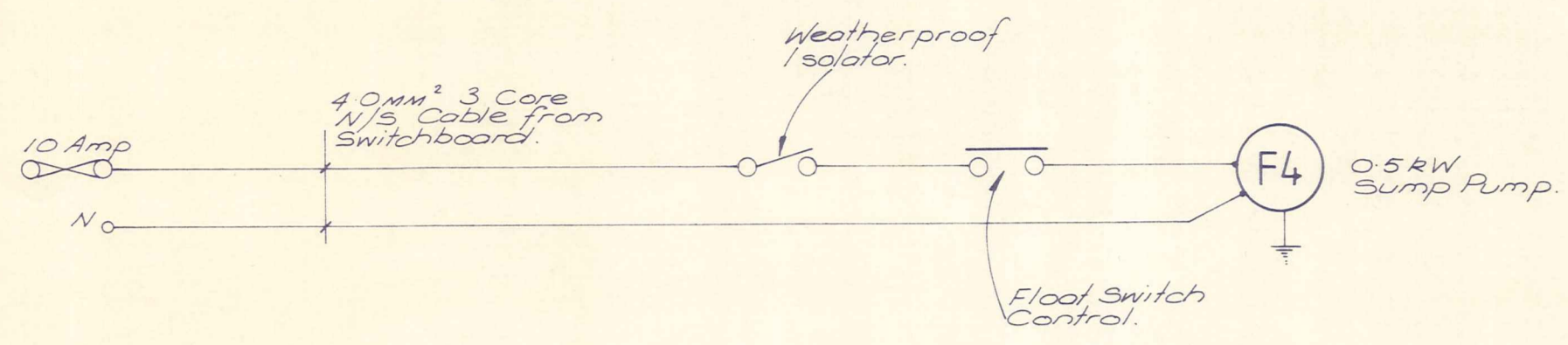
**RANFURLY WATER TREATMENT STATION and RESERVOIR**

WEIR AND FRENCH LTD. - 7 SEP 1984

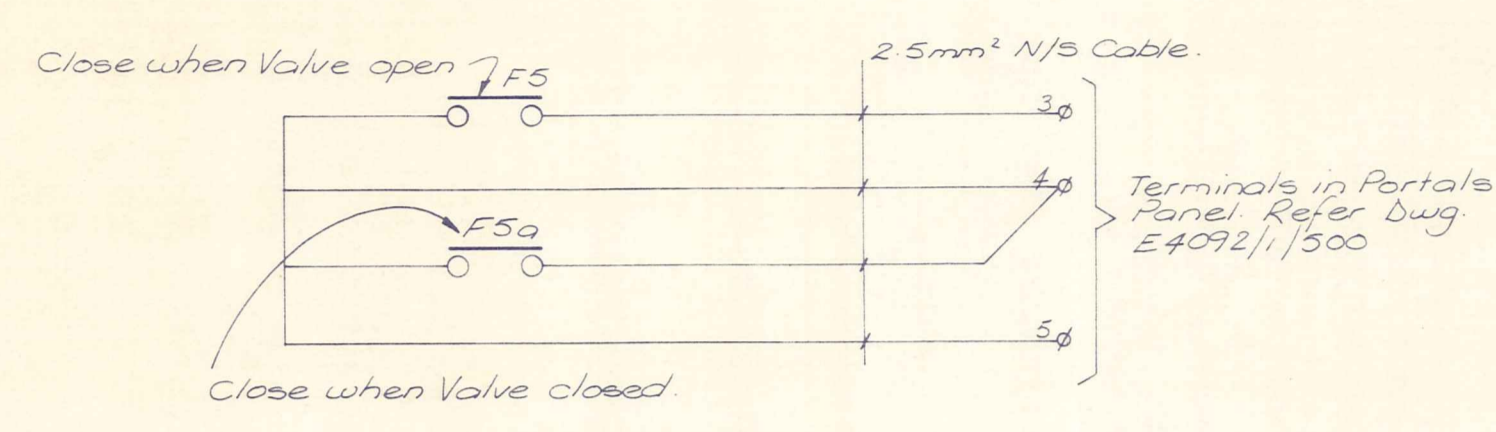
AMENDMENTS			NAME		DATE		JOB NO.		Sheet No			
NO	BY	DATE	Appvd.	Surveyed	Drawn	Calculations	Traced	Checked	Approved	File	LB	F.B.
					M. GILL	JULY '84						

10384  
E2  
of 3 shts

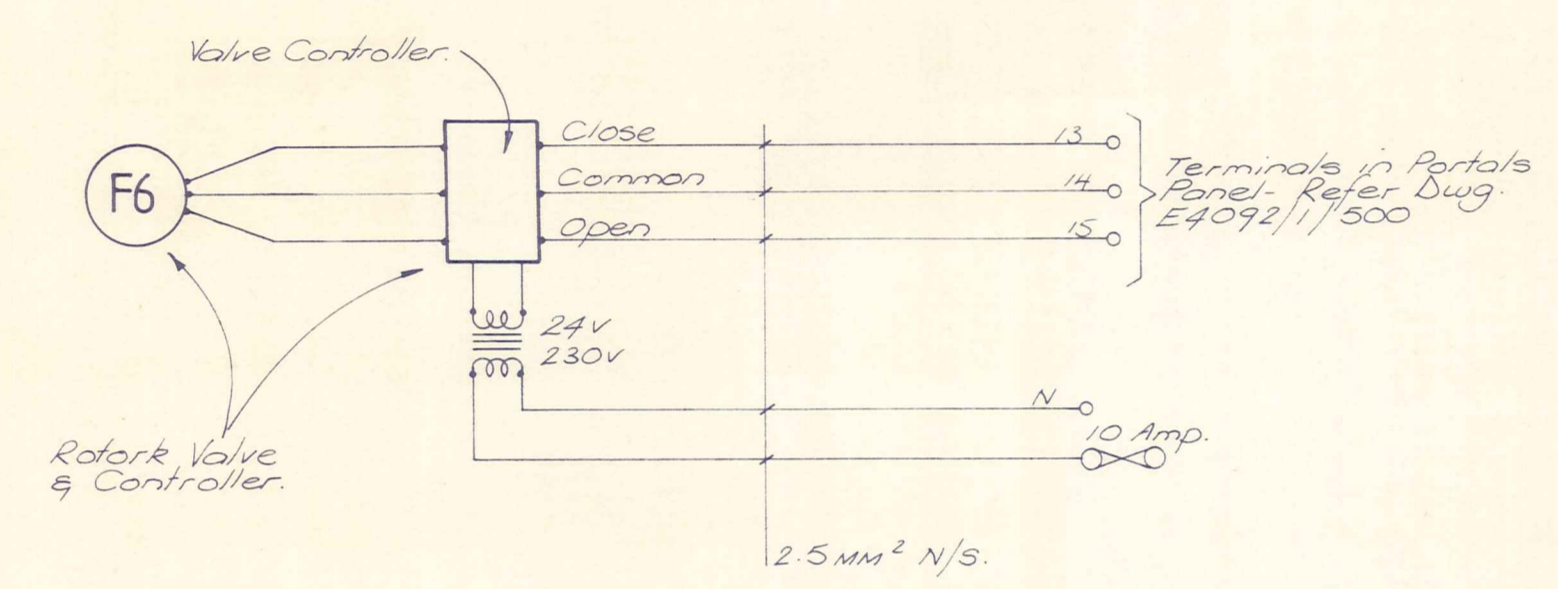




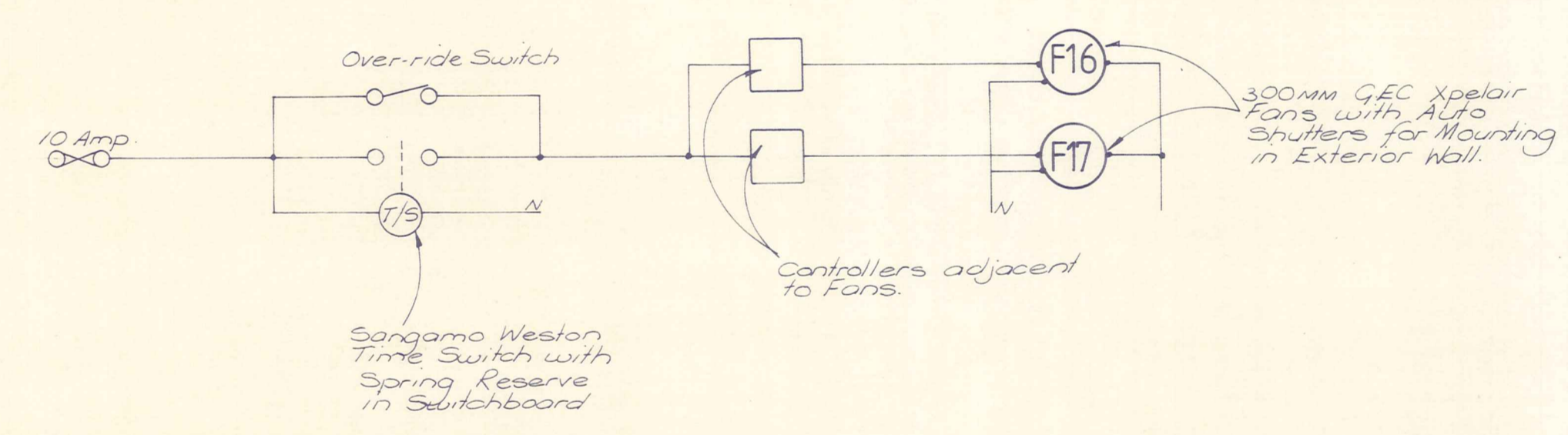
SUMP PUMP CONTROL CIRCUIT F4



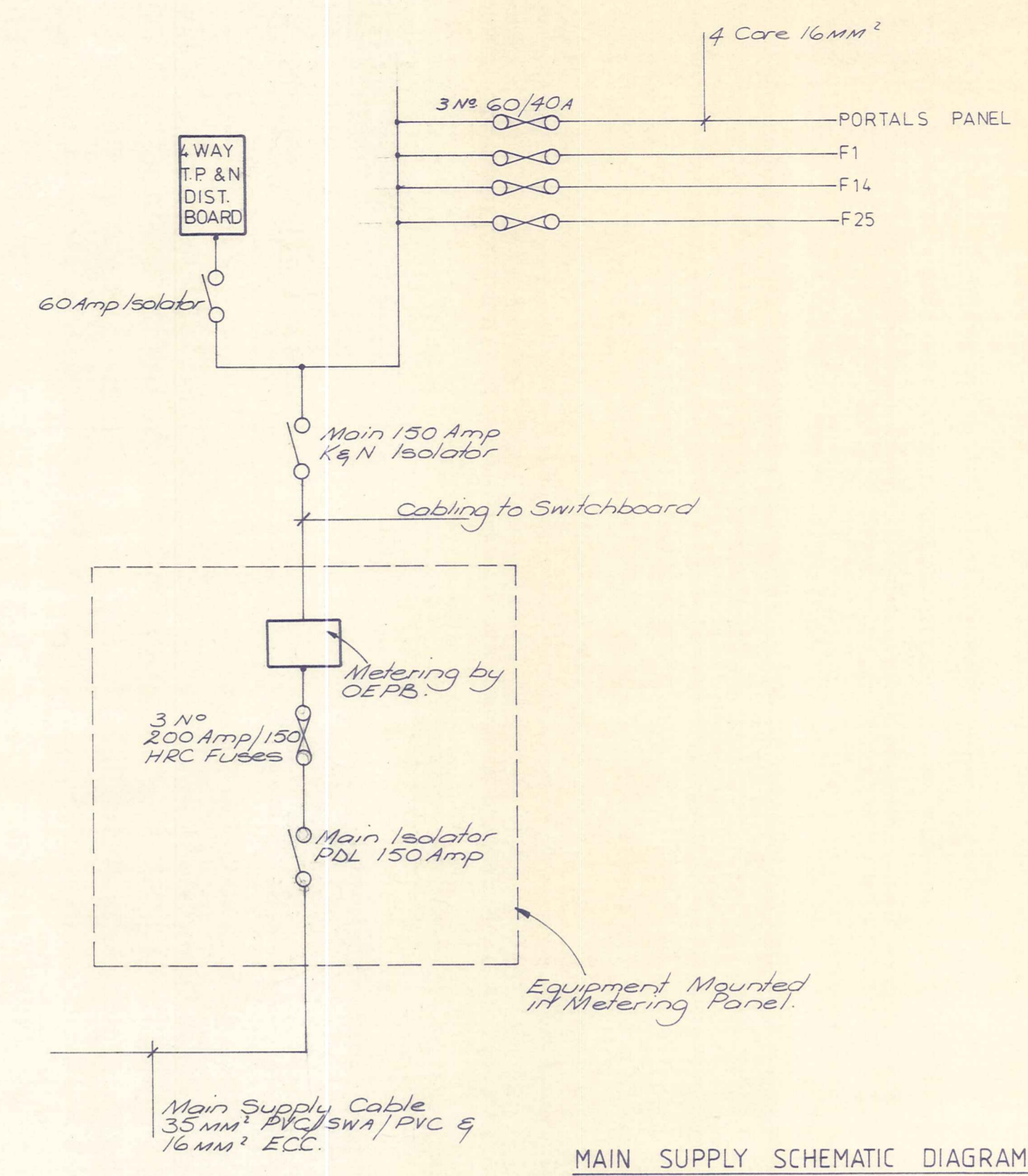
FILTER OUTLET VALVE CONTACTS F5 and F5a



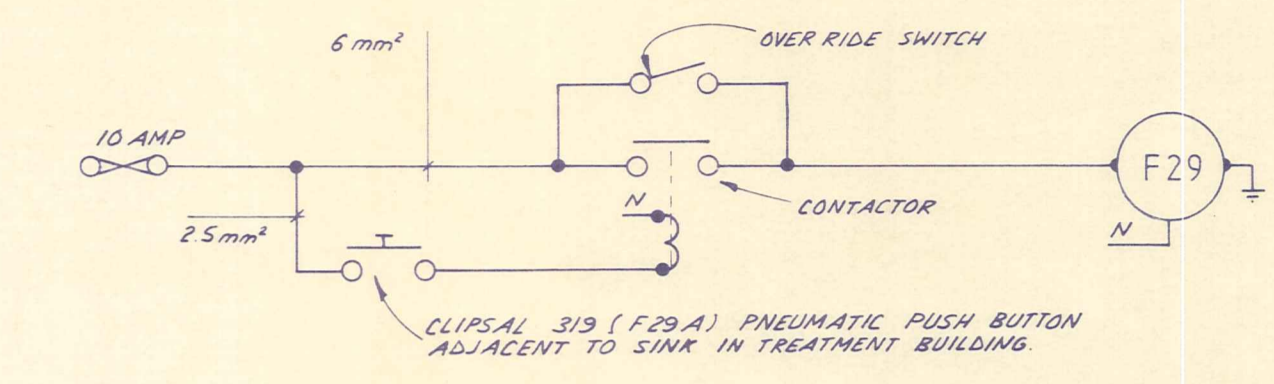
ROTOROK VALVE CONTROL CIRCUIT F6



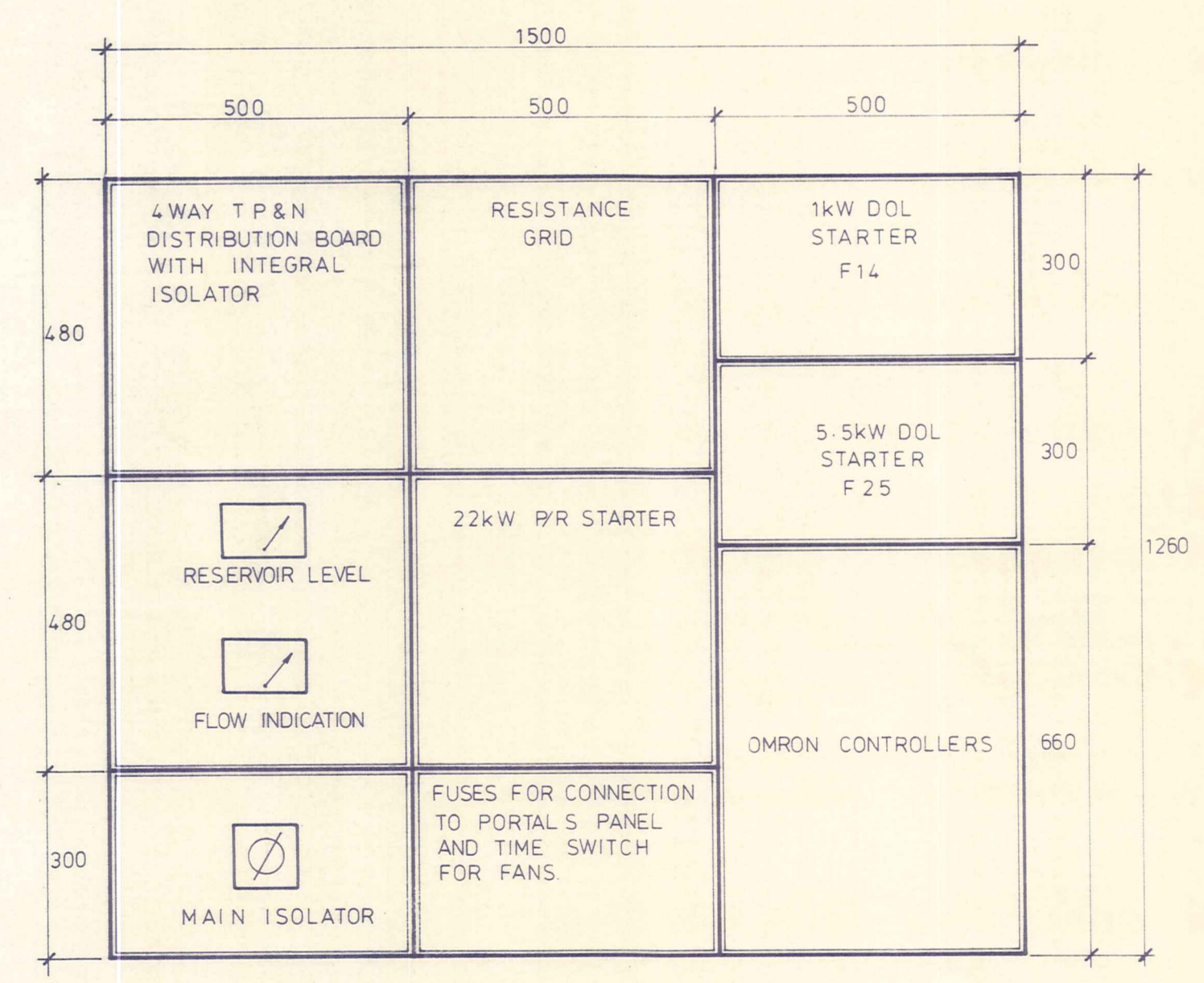
CONTROL DIAGRAM FOR EXPELAIR FANS F16 and F17



MAIN SUPPLY SCHEMATIC DIAGRAM



CONTROL SCHEMATIC FOR SAMPLING PUMP F29



SWITCHBOARD LAYOUT

300  
12  
11  
10  
9  
8  
7  
6  
5  
4  
3  
2  
1  
0  
mm  
INCHES  
ORIGINAL SIZE

WEIR AND FRENCH LTD. - 7 SEP 1984

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MANIOTOTO COUNTY COUNCIL

RANFURLY WATER TREATMENT STATION and RESERVOIR

AMENDMENTS				NAME	DATE	JOB NO.	Sheet No
NO.	BY	DATE	Appvd			10384	E3
				Surveyed			of 3 shts
				Drawn			
				Calculations			
				Traced	M. GILL	JULY '84	
				Checked			
				Approved			
				File			
				L.B.			
				F.B.			