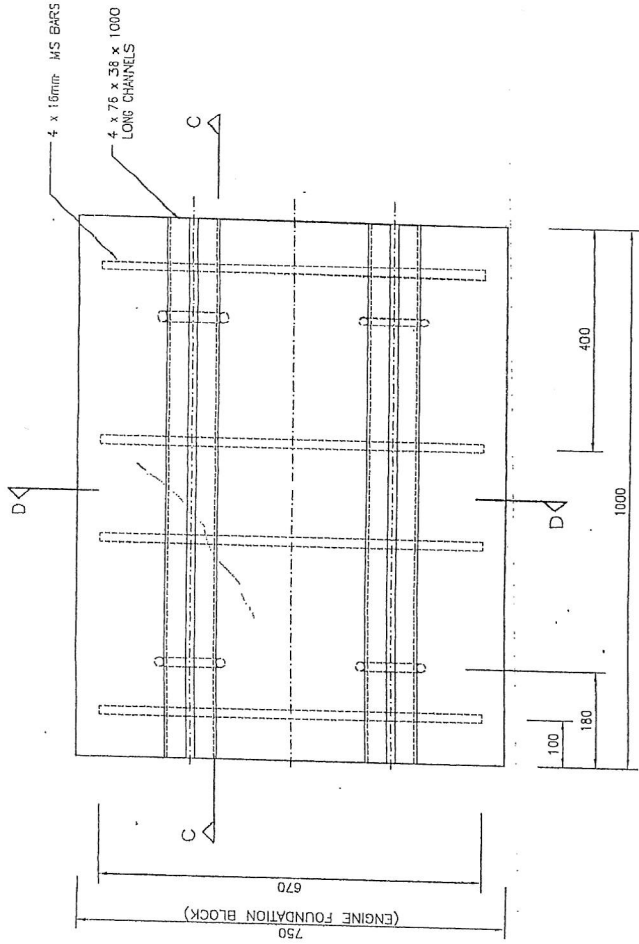
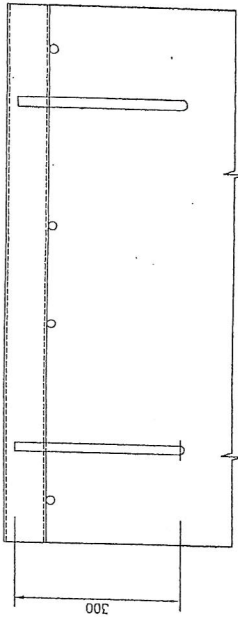
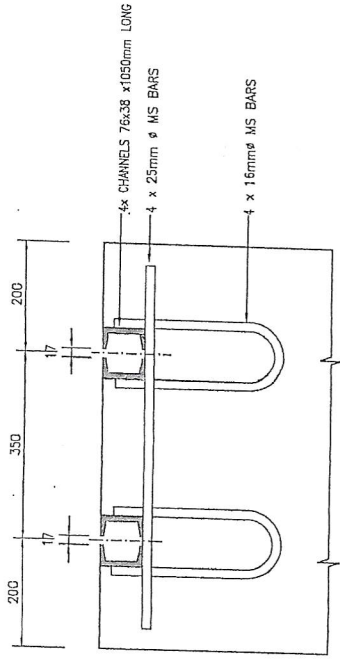




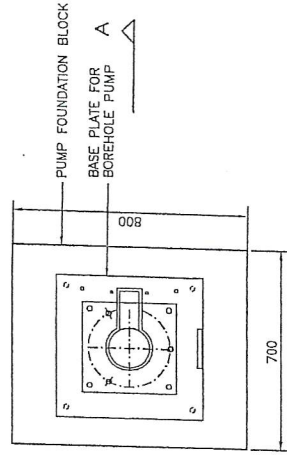
ENGINE FOUNDATION GRID
SCALE 1 : 7.5



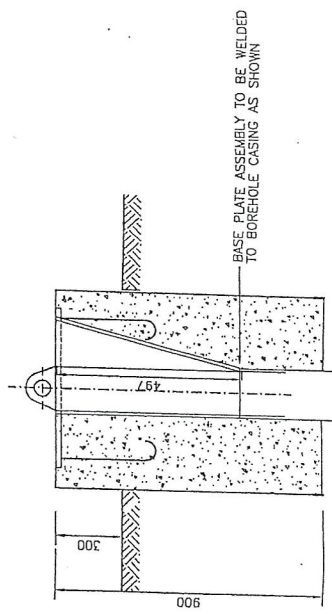
SECTION C - C
SCALE 1 : 7.5



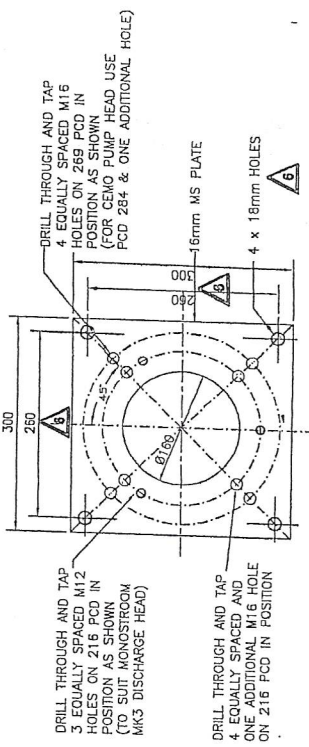
SECTION D - D



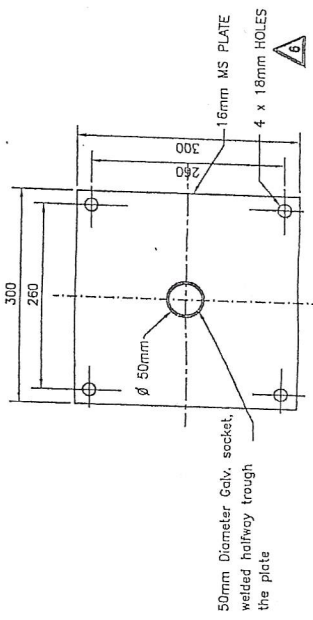
BASE PLATE ASSEMBLY IN FOUNDATION
SCALE NTS



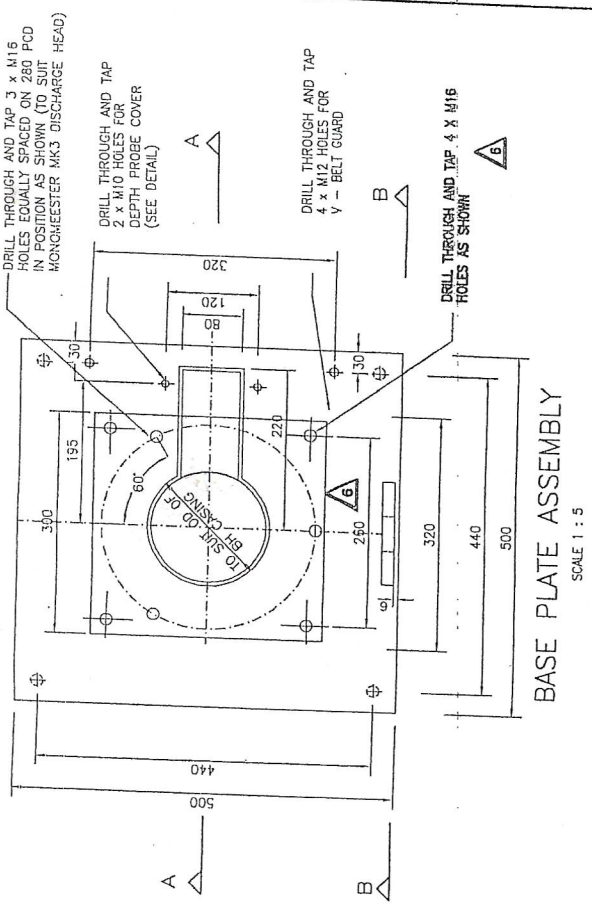
SECTION A - A
SCALE NTS



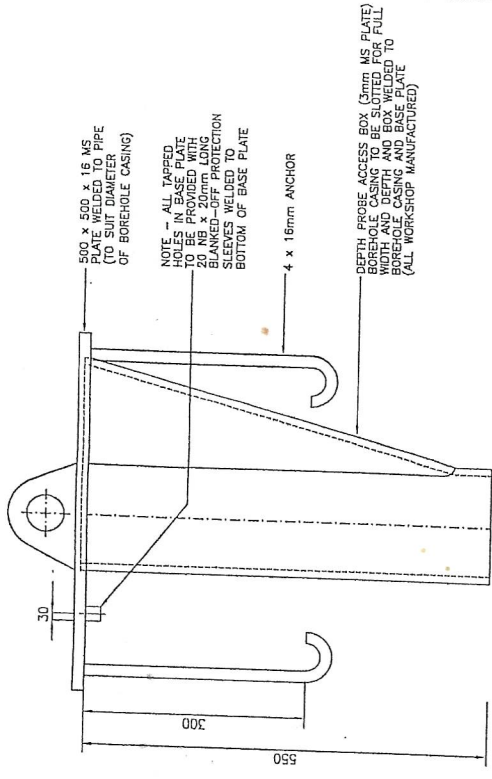
ADAPTOR PLATE TO SUIT MONOSTROOM,
CEMO AND ORBIT DISCHARGE HEAD
SCALE 1 : 5



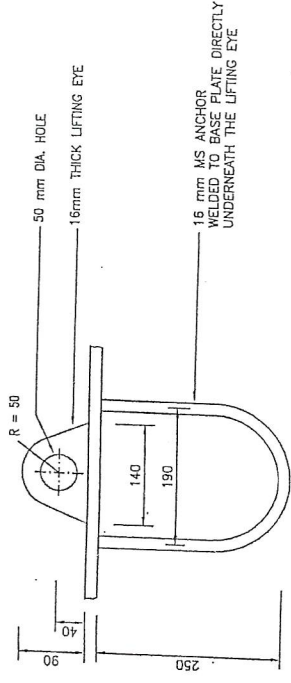
ADAPTOR PLATE TO SUIT ELECTRICAL AND
SOLAR INSTALLATION
SCALE 1 : 5



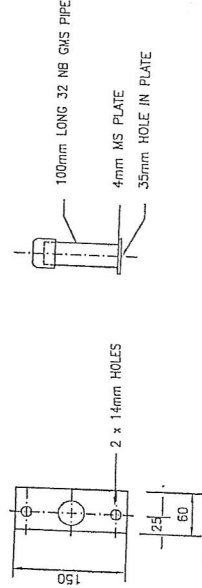
BASE PLATE ASSEMBLY
SCALE 1 : 5



SECTION A - A



SECTION B - B



DETAIL OF COVER PLATE
SCALE 1 : 5

- NOTES :
1. PREPARATION OF STEELWORKS FOR PAINTING:
(1) REMOVE ANY OIL BY MEANS OF PAINT THINNERS
(2) REMOVE ANY RUST BY WIRE BRUSHING
 2. PAINTING OF STEELWORKS:
PRIOR TO CASTING CONCRETE, THE ITEMS (INCLUDING THE TOP OF THE BOREHOLE CASING) SHALL BE COATED TO A DEPTH OF 50mm FROM THE FINAL CONCRETE SURFACE WITH TWO COATS OF ZINC RICH EPOXY PRIMER TO SABS 926 FOLLOWED BY TWO COATS OF INDUSTRIAL ALUMINIUM PAINT
 3. ALL WELDS SHALL BE 6mm CONTINUOUS FILLET WELDS
 4. CONCRETE SHALL BE CLASS 25/19
 5. THE ADAPTER PLATE FOR THE CEMO PUMP HEAD SHALL ONLY BE MANUFACTURED IF SPECIFIED.

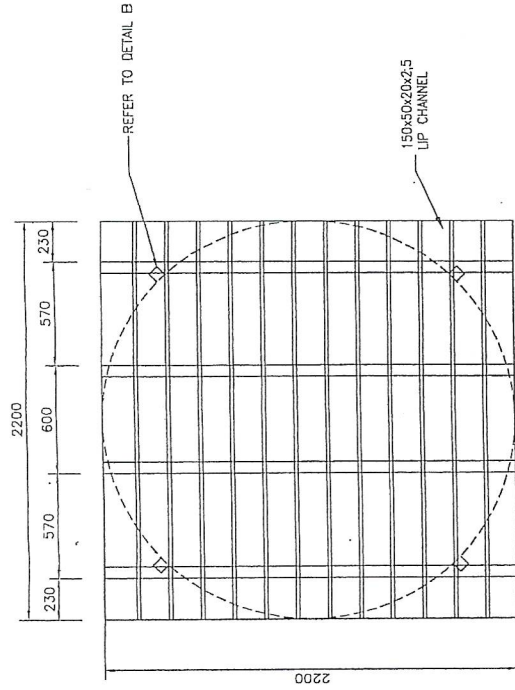
NO.	AMENDMENTS	DATE	BY
6.	VARIOUS CHANGES	4/01	L.N.
5.	CHANGE FOUNDATION ANCHOR	3/00	R.A.
4.	CHANGE FOR PLATE FOR SOLAR	8/99	B.W.
3.	CHANGE OF LIFTING EYE	2/99	K.E.
2.	CHANGE POSITION OF LIFTING HOLES	3/98	S.K.
1.		7/97	S.K.

DEPARTMENT
OF
WATER AFFAIRS
NAMIBIA

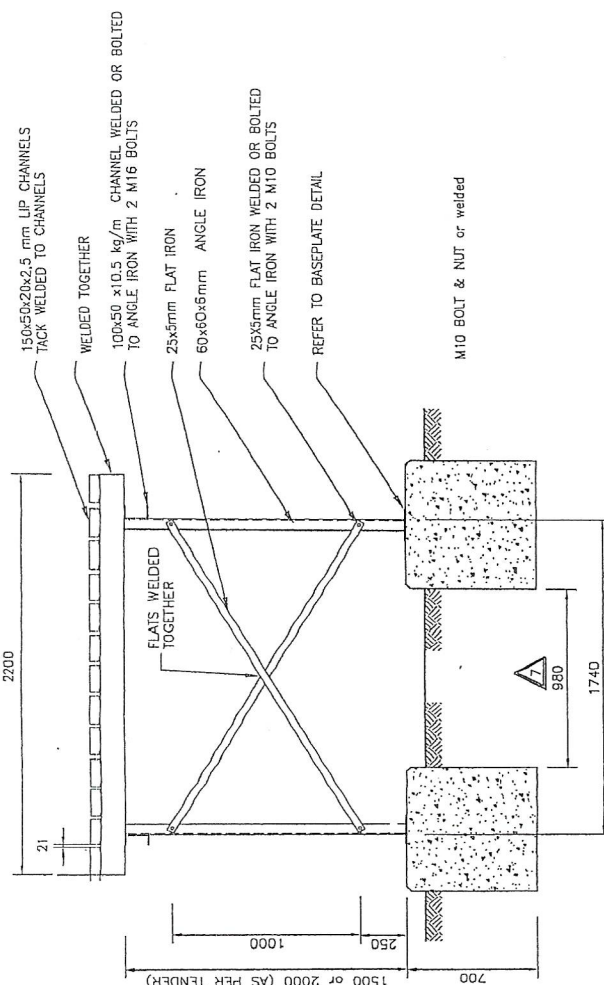
TYPE DRAWING

DRAWING BOREHOLE INSTALLATION: FOUNDATION GRID AND BASE & ADAPTOR PLATES FOR DIESEL ENGINE DRIVEN MONO MK3 AND ORBIT DISCHARGE HEADS			
SURVEYED	DESIGNED	CHECKED	DEPUTY DIR. RW
D. TOLKE	D. TOLKE	D. TOLKE	
DRAWN	CHECKED	REVIEWED	
D. TOLKE	B. BEGER	RA ALEXANDER	
TRACED			

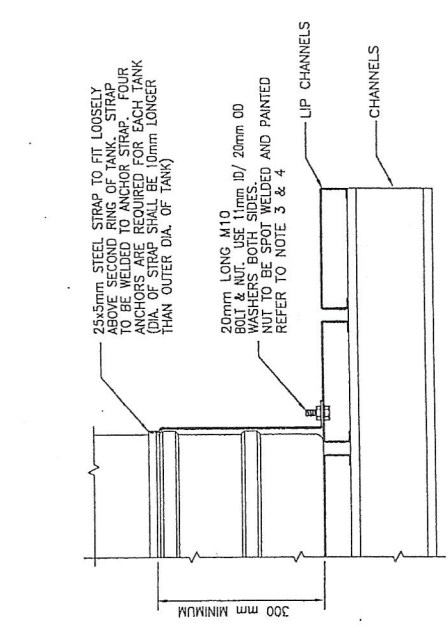
DIRECTOR: RURAL WATER SUPPLY			
DATE	SCALE	SHEET NO.	REGISTRATION NO.
SEPTEMBER 1997	AS SHOWN	1 OF 1	21/1 - 4/73 R8



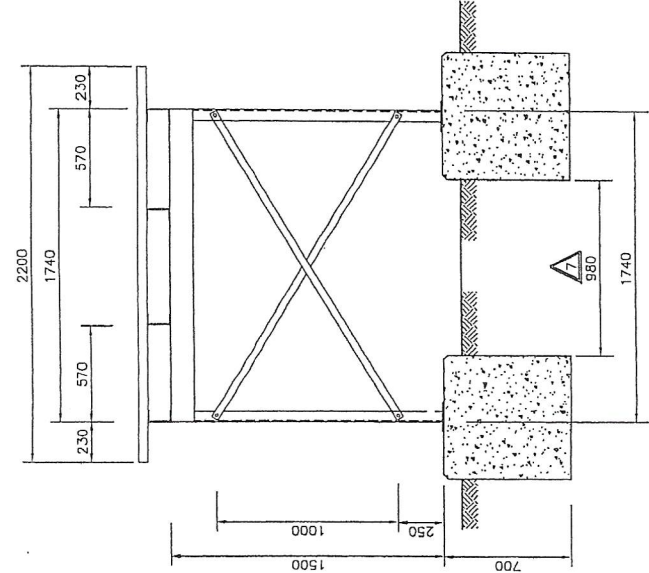
PLAN
SCALE 1: 20



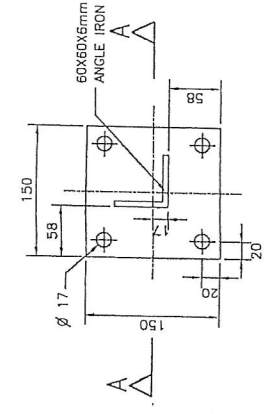
SIDE ELEVATION
SCALE 1: 20



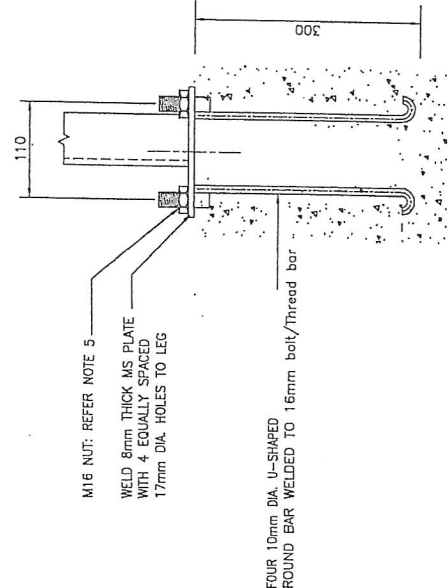
DETAIL B: HOLD DOWN BRACKET AROUND TANK
(REFER DRW NO. 21/1- 4/36)
NOT TO SCALE



FRONT ELEVATION
SCALE 1: 20



PLAN
NOT TO SCALE

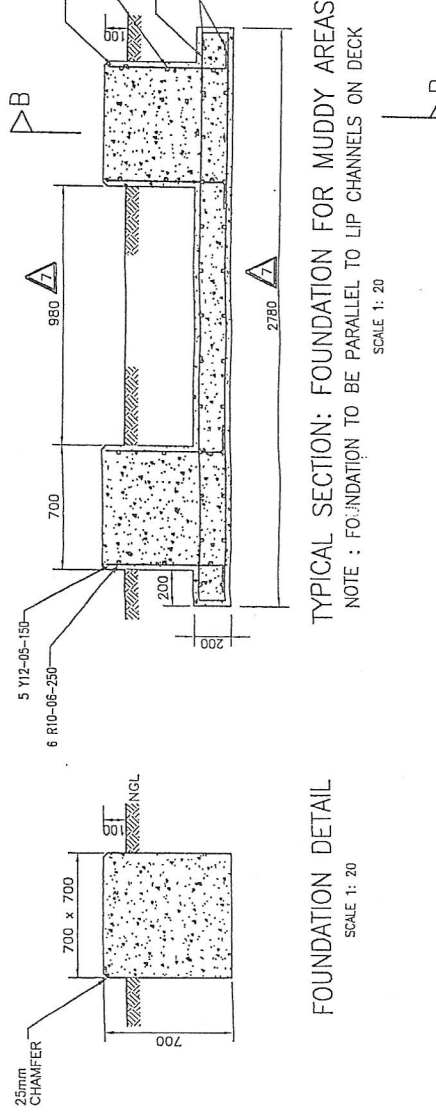


SECTION A-A
NOT TO SCALE

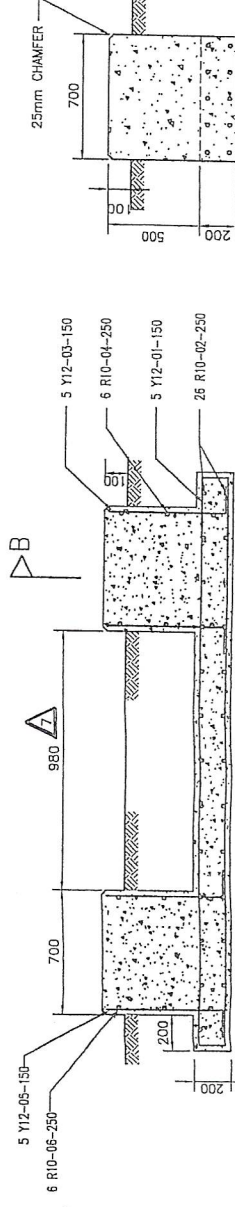
BASEPLATE

BENDING SCHEDULE

MEMBER	REINFORCEMENT			REINFORCEMENT					FIXING & NON STANDARD BENDING DETAILS	
	No. in Each	Type & Size	Mark No.	Total Length	Shape A Code	B	C	D	E	
RAFT FOUNDATION	10	Δ Y12	01	5	6100	60	140	2780		
RAFT FOUNDATION	26	R10	02	26	600	20	600			
RAFT FOUNDATION	5	Y12	03	10	750	37	640	150		
RAFT FOUNDATION	6	R10	04	6	600	20	600			
RAFT FOUNDATION	5	Y12	05	10	750	37	640	150		
RAFT FOUNDATION	6	R10	06	6	600	20	600			



FOUNDATION DETAIL
SCALE 1: 20



TYPICAL SECTION: FOUNDATION FOR MUDDY AREAS
NOTE : FOUNDATION TO BE PARALLEL TO LIP CHANNELS ON DECK
SCALE 1: 20

SECTION B-B
SCALE 1: 20

- NOTES :**
- THIS DRAWING TO BE READ IN CONJUNCTION WITH DRWG. 21/1-4/36
 - CONCRETE SHALL BE CLASS 25/19
 - PREPARATION OF STEELWORK AND PAINTING:
(1) REMOVE ALL OIL WITH PAINT THINNERS
(2) REMOVE RUST BY WIRE-BRUSHING
PAINTING OF STEEL:
APPLY ONE COAT OF SELF - ETCHING PRIMER AND TWO COATS OF INDUSTRIAL ALUMINIUM
 - ALL WELDS TO BE 6 mm ALL ROUND CONTINUOUS FILLET WELDS
 - SPOTWELD ALL NUTS AFTER INSTALLATION OF STRUCTURE.
 - MINIMUM BEARING CAPACITY OF THE SOIL TO BE: 50 kN/m²
 - ALL STEEL REINFORCING TO BE ACCORDING TO SABS 82
CONCRETE COVER TO STEEL : 30mm
 - ALL STRUCTURAL STEEL TO BE GRADE 300W
 - THE SAME DIMENSIONS ARE APPLICABLE TO THE 2.5m TANKSTAND LEGS TO BE 60x60x8mm ANGLE IRON. ALL CHANNELS TO BE 100x50x10.5kg/m

NO.	AMENDMENTS	DATE	BY
7	VARIOUS CHANGES	9/01	L.N
6	VARIOUS CHANGES	3/03	RAA
5	CHANGED DETAIL A	8/93	KE
4	COMPLETELY REDESIGNED	3/93	KE

DEPARTMENT
OF
WATER AFFAIRS
NAMIBIA

SCHEME
TYPE DRAWING

DRAWING TANK STAND - 10 m POLYETHYLENE TANK: STEEL & FOUNDATION DETAIL			
SURVEYED	DESIGNED	CHECKED	
DRAWN	CHECKED	REVISED	
TRACED	AutoCAD Lt 97	RA ALEXANDER	

DIRECTOR RURAL WATER SUPPLY	
DATE March 1999	SCALE AS SHOWN
SHEET NO. 1 OF 1	REGISTRATION NO. 21/1-4/65 R8

NOTES :

1. ALL STEELWORKS TO BE THOROUGHLY WIRE BRUSHED, CLEANED AND PAINTED WITH :
INSIDE : AS PER TENDER
OUTSIDE : ZINC CHROMATE PRIMER PLUS TWO COATS OF HIGH GLOSS ENAMEL PAINT, COLOUR BEIGE
2. DIA 40 mm SANDWICHES (OR EQUIVALENT) DIAPHRAGM VALVE WITH METAL HANDWHEEL TO BE POSITIONED AT THE RESERVOIR OR TANK OUTLETS.
3. CONCRETE GRADE 25
4. CHANNEL STEEL GRADE 300 W
5. HOLDING DOWN BOLTS : GRADE 4.3
6. TROUGH WILL BE INSTALLED HORIZONTAL.
7. SUPPLY AND FIT BRACKETS FOR LOWER AND TOP U-BOLT.
8. ALL GMS PIPEWORK TO BE HEAVY DUTY.
9. MINIMUM DISTANCE FROM RESERVOIR 25 m UNLESS OTHERWISE SPECIFIED IN THE TENDER.
10. ALL FITTINGS TO BE COMPRESSION FITTINGS.
11. ALL CONCRETE TO BE WOODEN FLOAT FINISH.
12. ALL PIPES WILL BE 50 mm HDPE CLASS 6 UNLESS OTHERWISE SPECIFIED.
13. PIPES WILL BE LAID 600 mm MINIMUM UNDERGROUND.
14. ALL CORNERS, EDGES OF CONCRETE SLAB WILL BE CHAMFERED TO 25 x 25 mm.
15. THE LONGITUDINAL FALL OF THE SLAB SHALL BE 80 mm IN TOTAL.
16. TROUGH PROTECTION:
(A) EXTERNALLY: ALL CHANNELS AND SQUARE TUBING TO BE PAINTED WITH:
ZINC CHROMATE PRIMER PLUS TWO COATS OF HIGH GLOSS ENAMEL PAINT COLOUR: BLACK SQUARE TUBING ENDS TO BE CLOSED (WELDED).
(B) INTERNALLY: THE INTERNALLY BOTTOM SIDES AND UP TO THE END OF THE BEND UP OF THE TROUGH WILL BE SANDBLASTED AND PAINTED WITH ZINC GALVANISED FILM.
17. CONCRETE COVER: 40mm.
18. TROUGH STEEL PLATES TO BE 3 mm THICK.
19. WELD HOLLOW SECTIONS OR CHANNEL (AT B-B) TO TROUGH AND WELD HOLLOW SECTION TO CHANNEL.
20. ALL WELDS TO BE FILLED WELDS.

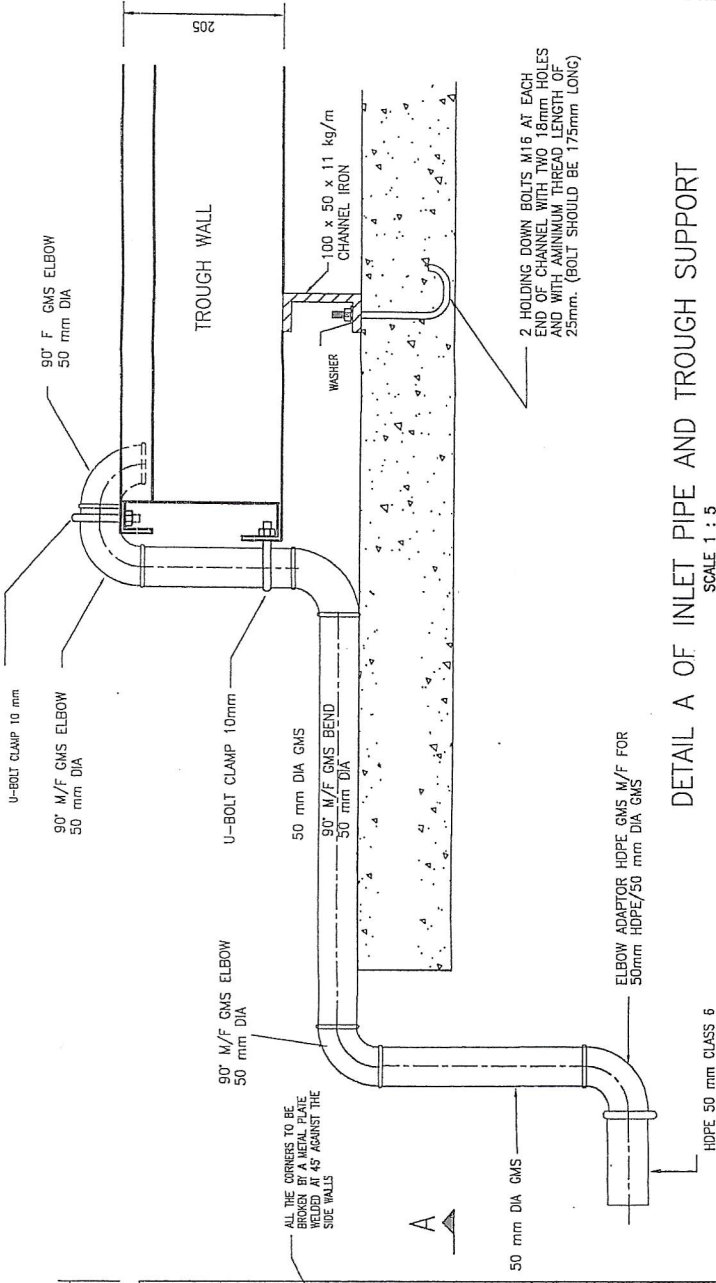
2. UPDATED VERSION 09/98 BG
1. CHANGE OF MOUNTING BLOCKS SPECIFICATION 3/98 S.K.

DEPARTMENT
OF
WATER AFFAIRS
NAMIBIA

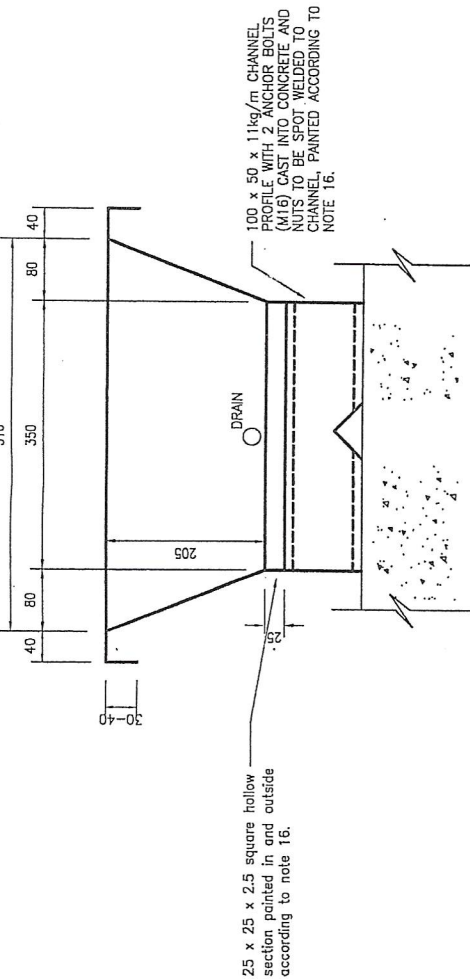
TYPE DRAWING

DRAWING STEEL ANIMAL TROUGH WITH SLAB			
SURVEYED	DESIGNED	DEPUTY DIR. RWD	
DRAWN L. KAPOLO	CHECKED GEGER	CHAIRMAN TECH. COMMITTEE	
TRACED	Auto CAD	DIRECTOR RWS	

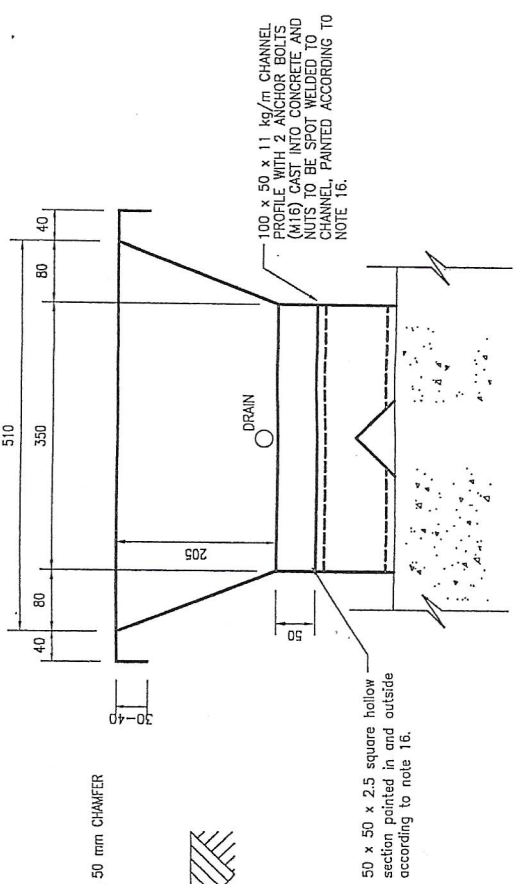
DATE JUNE 1997	SCALE AS SHOWN	SHEET NO. 1 OF 1
REGISTRATION NO. 21/1 - 4/42 R2		



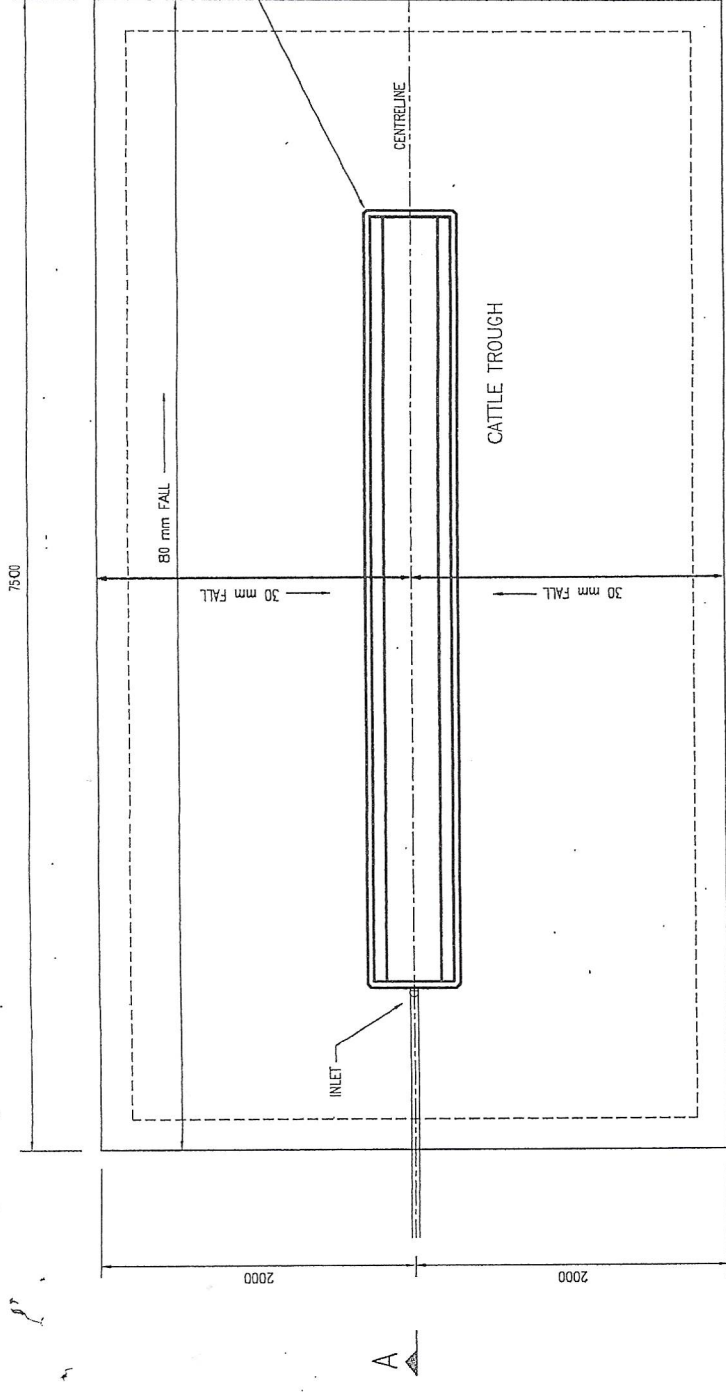
DETAIL A OF INLET PIPE AND TROUGH SUPPORT
SCALE 1 : 5



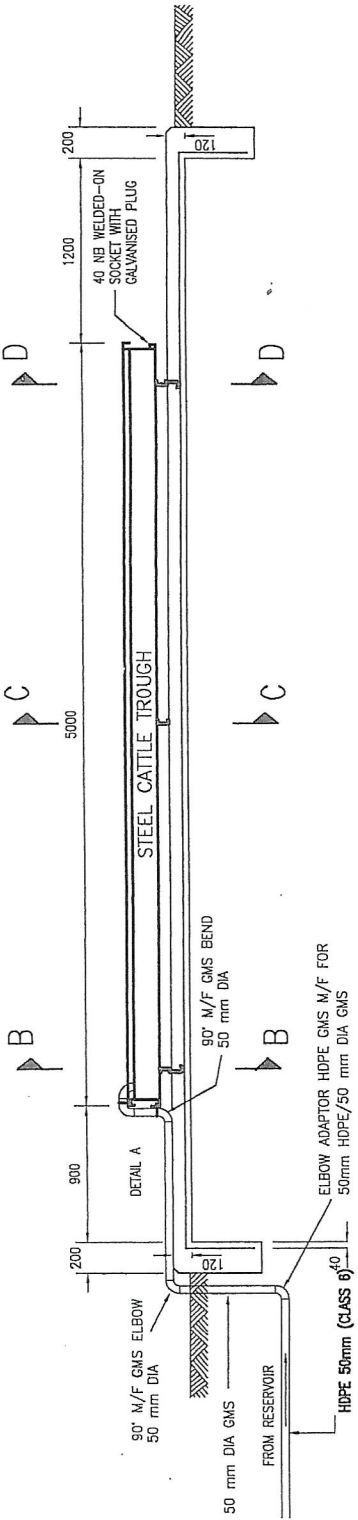
CROSS-SECTION C-C
SCALE 1 : 5



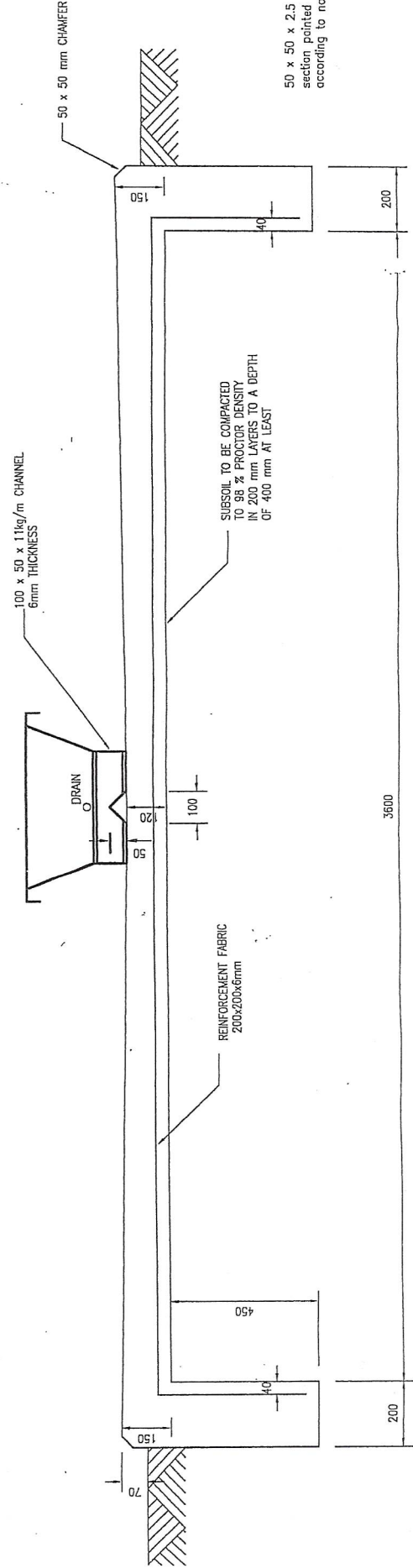
CROSS-SECTION D-D
SCALE 1 : 5



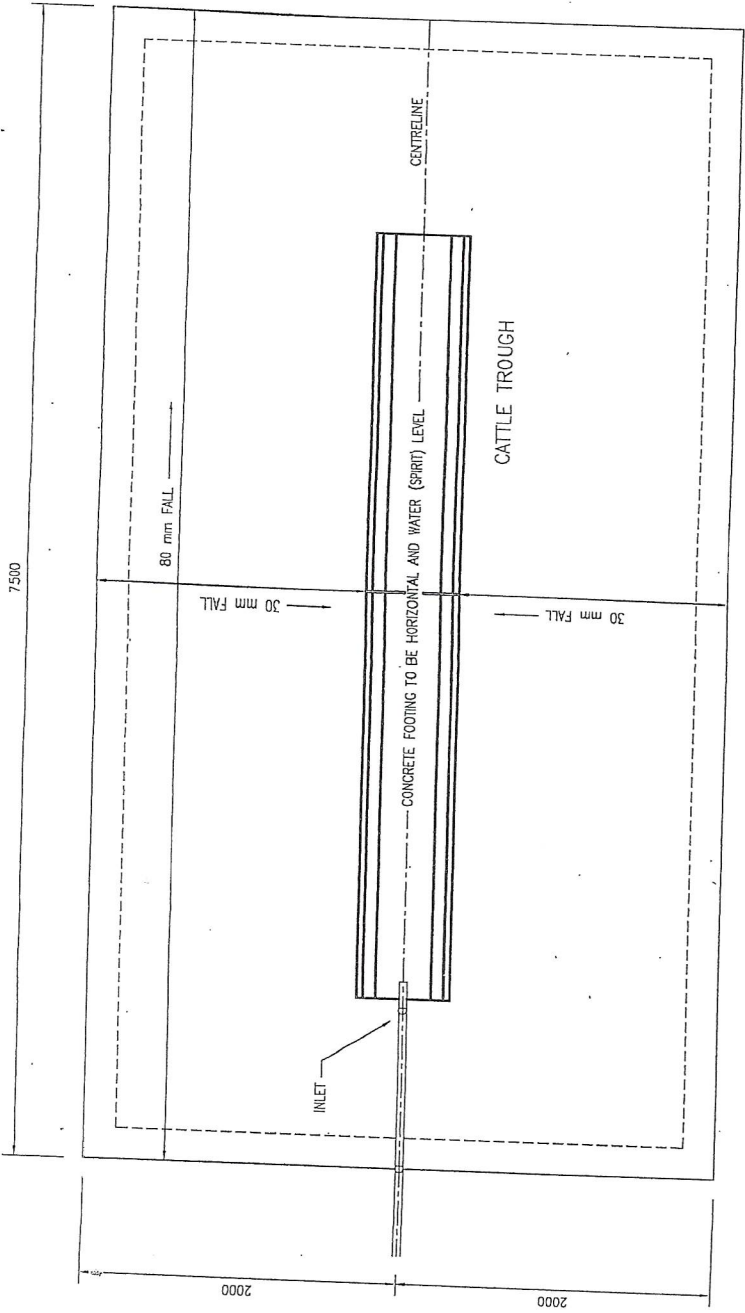
LAYOUT PLAN
SCALE 1 : 25



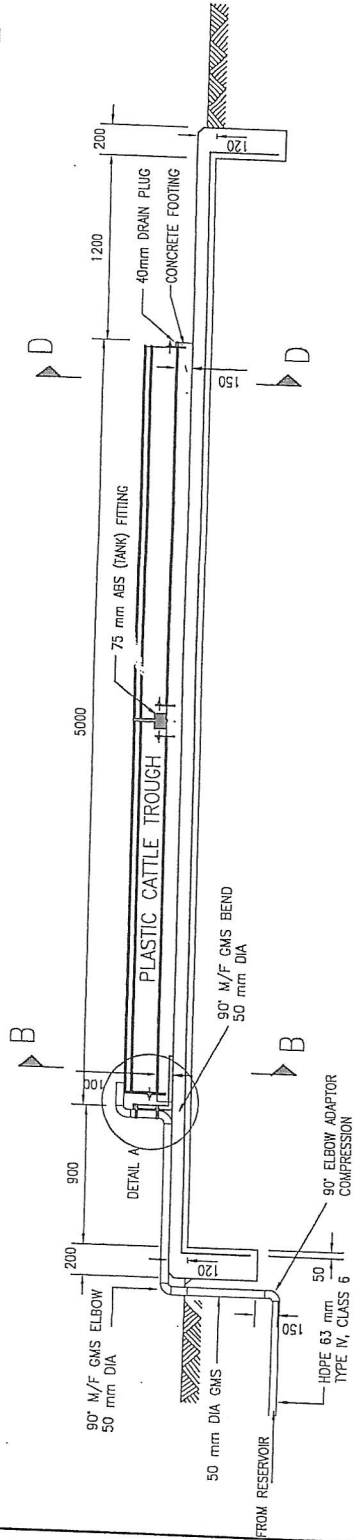
LONGITUDINAL SECTION A-A
SCALE 1 : 25



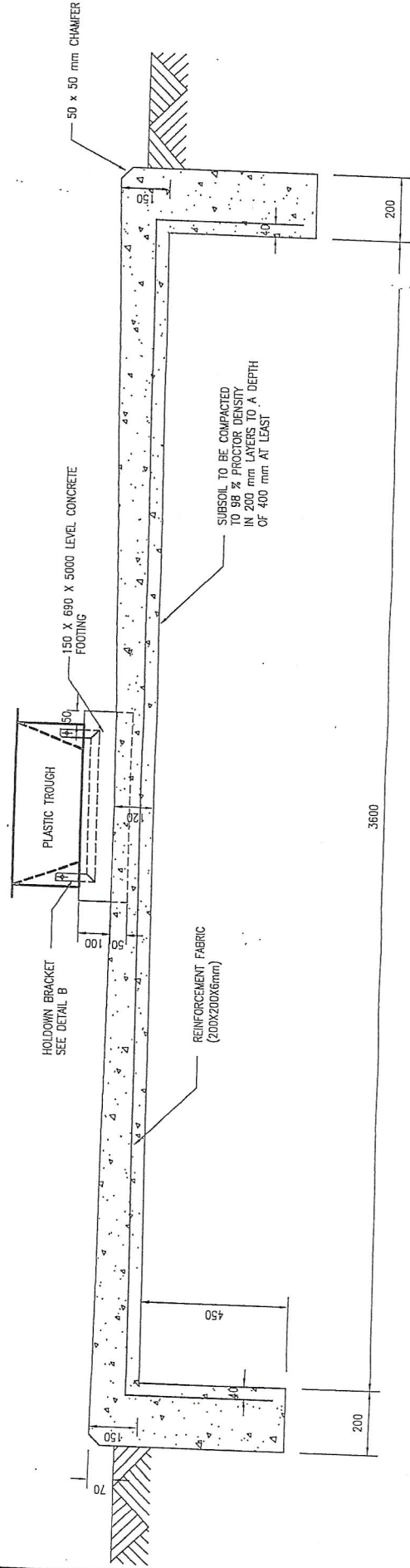
TROUGH AND FOUNDATION SECTION B-B
SCALE 1 : 10



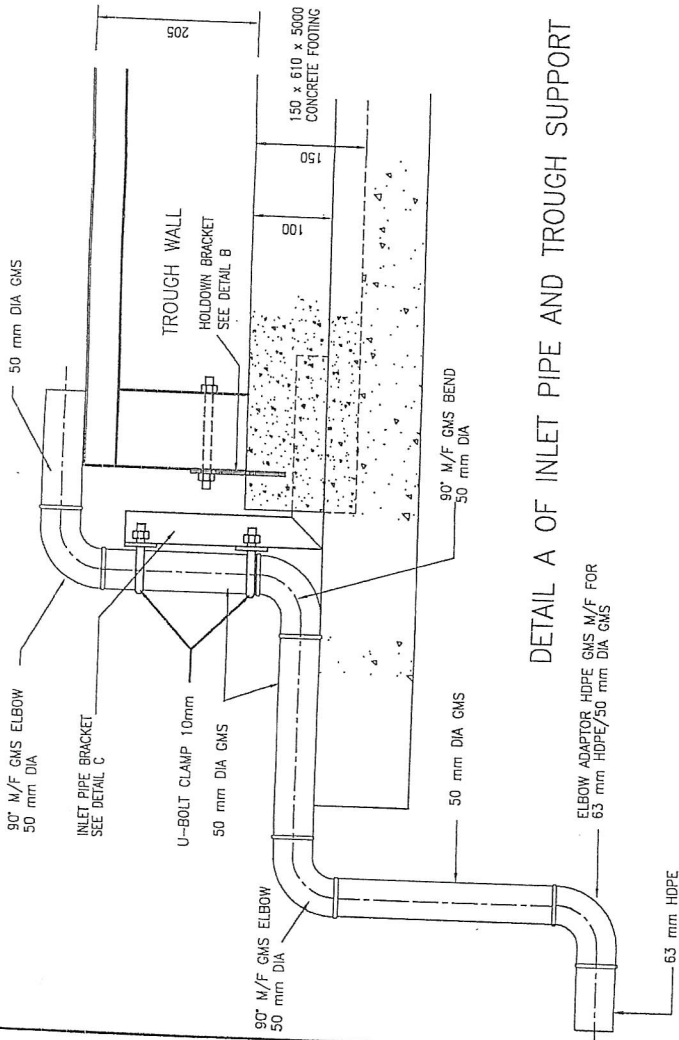
LAYOUT PLAN
SCALE 1 : 25



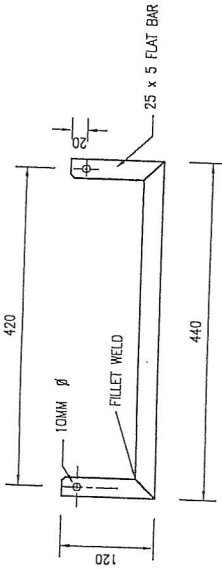
SECTION A-A
SCALE 1 : 25



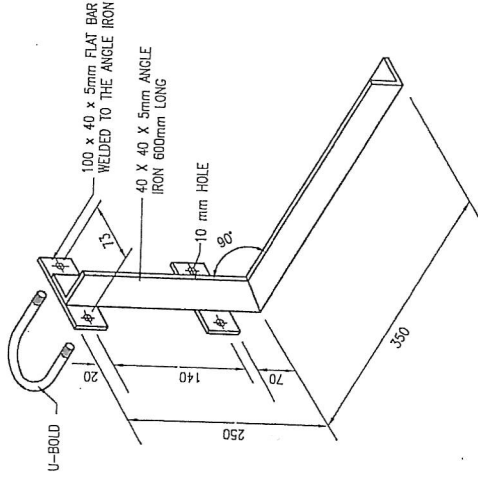
SECTION B-B
SCALE 1 : 10



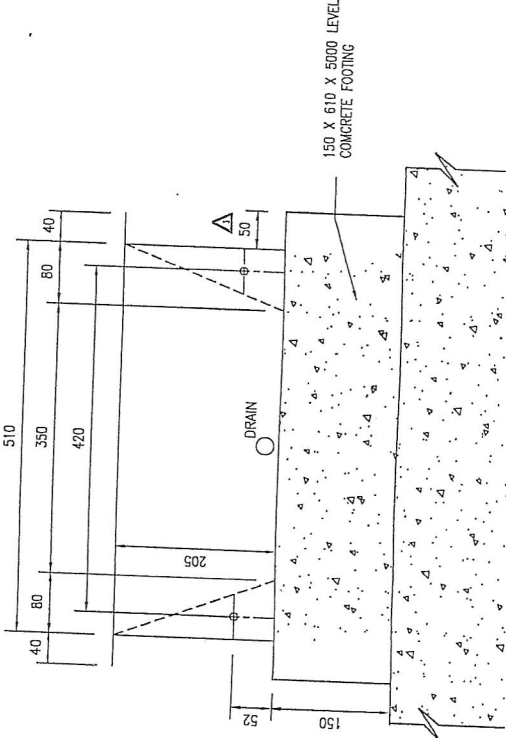
DETAIL A OF INLET PIPE AND TROUGH SUPPORT



DETAIL B 4 X HOLDOWN BRACKET
SCALE 1 : 5



DETAIL C INLET PIPE BRACKET



SECTION D-D
SCALE 1 : 5

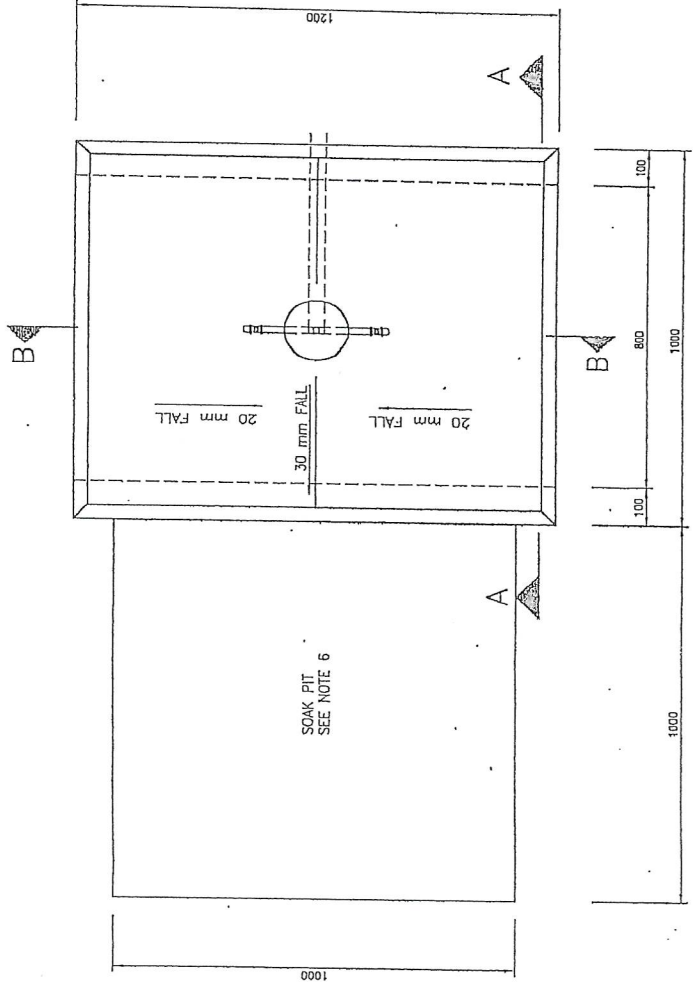
NOTES :

1. DIA 50MM SAUNDERS (OR EQUIVALENT) DIAPHRAGM WITH METAL HANDWHEEL TO BE POSITIONED AT THE RESERVOIR OR TANK OUTLETS
2. CONCRETE GRADE 25 MPa
3. HOLDING DOWN BOLDS: 10mm
4. TROUGH WILL BE INSTALLED HORIZONTAL
5. SUPPLY AND FIT BRACKETS FOR LOWER AND TOP U-BOLT.
6. ALL GMS PIPEWORK TO BE HEAVY DUTY.
7. MINIMUM DISTANCE FROM RESERVOIR 30 m UNLESS OTHERWISE SPECIFIED IN THE TENDER.
8. ALL FITTINGS TO BE COMPRESSION FITTINGS.
9. ALL CONCRETE TO BE WOODEN FLOAT FINISH.
10. ALL PIPES WILL BE 50 mm HOPE CLASS 6 UNLESS OTHERWISE SPECIFIED.
11. PIPES WILL BE LAD 600 mm MINIMUM UNDERGROUND
12. ALL CORNERS, EDGES OF CONCRETE SLAB WILL BE CHAMFERED TO 50 x 50 mm.
13. THE LONGITUDINAL FALL OF THE SLAB SHALL BE 80 mm IN TOTAL.
14. ALL STEEL WORK TO BE PAINTED WITH: TWO COATS WITH ZINC CHROMATE PRIMER AND INDUSTRIAL SILVER ENAMEL PAINT
15. CONCRETE COVER: 40mm.
16. ALL WELDS TO BE FILLET WELDS.
17. TROUGH TO BE ASSEMBLED USING 10mm RUST PROTECTED THREADED ROD AND NUTS. Δ

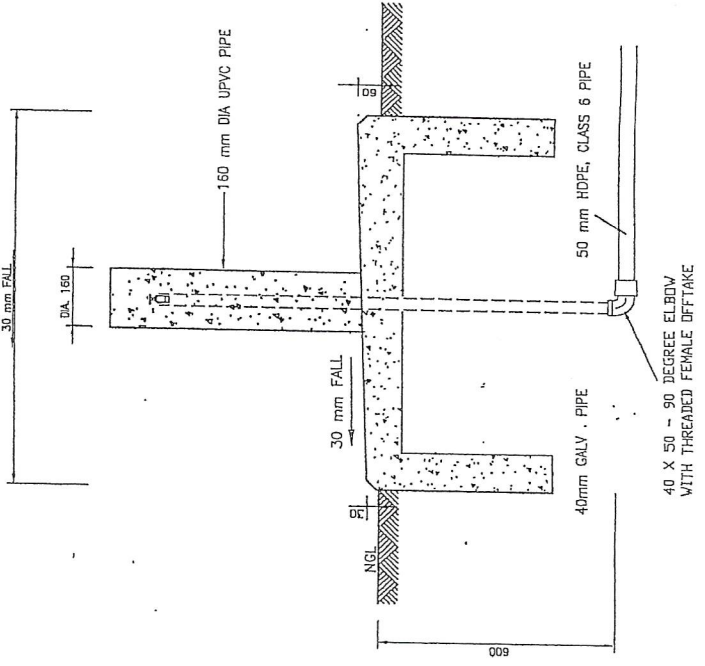
NO.		REVISION		DATE BY	
1		VARIUS CHANGES MARKED Δ		07/06 LN	

DEPARTMENT OF WATER AFFAIRS NAMIBIA		
TYPE DRAWING		
DRAWING PLASTIC ANIMAL TROUGH WITH SLAB		
SURVEYED	DESIGNED	DEPUTY DIR. RWD
DRAWN	CHECKED	CHAIRMAN TECH. COMMITTEE
TRACED	DIRECTOR RWS	
Auto CAD		

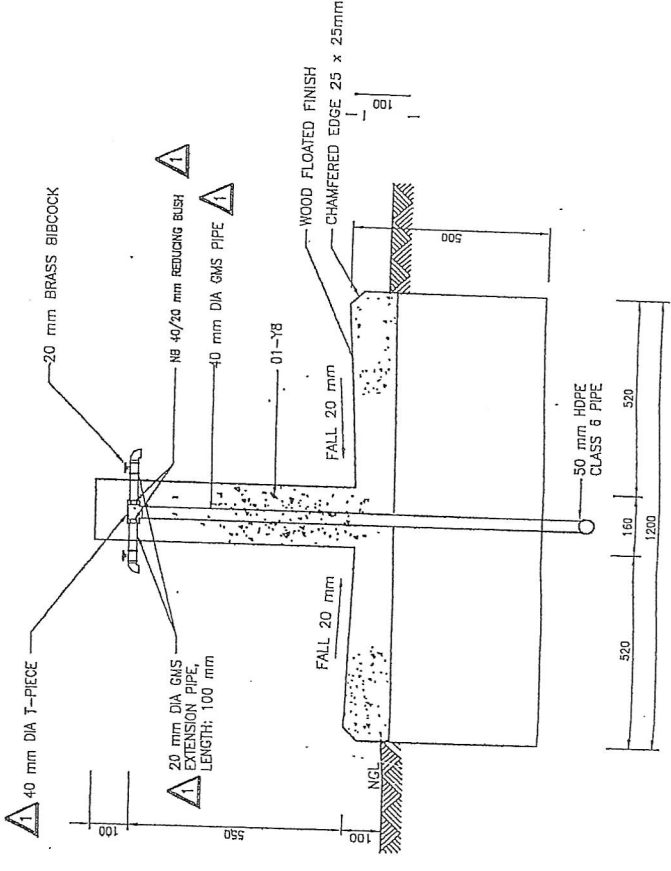
UNDER SECRETARY FOR WATER AFFAIRS	
DATE	SCALE
23 MARCH 2001	AS SHOWN
SHEET NO. 1 OF 1	
REGISTRATION No. 21/1 - 4/67R2	



LAYOUT OF WATER POINT
SCALE 1 : 10



SECTION A - A
SCALE 1 : 10



SECTION B - B
SCALE 1 : 10

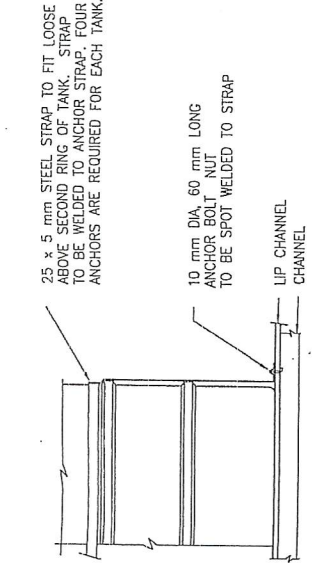
NOTES :

1. CONCRETE GRADE 25
2. CONCRETE COVER : 30 mm
3. CHAMFER TO BE 25 x 25 mm
4. ALL HOPE FITTINGS TO BE COMPRESSION FITTINGS, TO SABS 533
5. ALL GMS PIPEWORK TO BE MEDIUM DUTY AND ALL FITTINGS TO BE GALVANISED CAST IRON
6. SOAK PIT TO BE CONSTRUCTED NEXT TO SLAB AS SHOWN, 1 x 1 x 0.6 m DEEP, FILLED WITH GRAVEL, GRAIN SIZE 19 mm
7. MINIMUM DEPTH OF PIPELINE TO BE 600 mm BELOW NGL, OR AS SPECIFIED IN TENDER

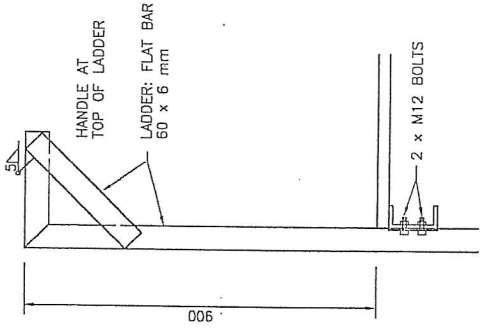
2. VARIOUS CHANGES MARKED		05/01 LN
1. CHANGE OF TAP SPECIFICATIONS		15/06 BC
NO.	AMENDMENTS	DATE BY
DEPARTMENT OF WATER AFFAIRS NAMIBIA		
TYPE DRAWING		
TAP STAND		
DESIGNED	DESIGNED CIVIL	DEPUTY DIR RD
DRAWN	TOLKE/GEIGER	CHAIRMAN TECH COUNCIL
CHECKED	M. Shoolulunga	B. GEIGER
TRACED		DIRECTOR PWS
UNDER SECRETARY FOR WATER AFFAIRS		
DATE	SCALE	SHEET NO.
11/01/07	1:10	1007

- NOTES :
- 50 mm DIA SANDWICH DIAPHRAGM ISOLATING VALVE TYPE 'A' (FLANGED), PROVIDED WITH A FLANGE ADAPTOR
 - ALL GMS PIPE FITTINGS TO BE GALVANIZED CAST IRON AND ALL PIPES TO BE HEAVY DUTY
 - FOUNDATION : GRADE 25 CONCRETE
 - CONCRETE COVER: 30 mm
 - REINFORCEMENT FOR FOUNDATIONS: Y16 (EQUIVALENT TO TYPE C, CLASS 1, GRADE 1 TO SABS 920)
 - NB32 EQUILIBRIUM FLOAT VALVE WITH BRASS CASING AND PLASTIC FLOAT FIT A WOODEN SPACER TO THE BOTTOM END OF THE GMS PIPE, SUCH THAT THE GMS PIPE IS PARALLEL TO THE TANK WALL
 - ALL BOLT CONNECTIONS ARE M10 UNLESS OTHERWISE STATED
 - STANCHIONS AND HAND RAILINGS TO BE COATED WITH A SELF-ETCHING ZINC CHROMATE PRIMER FINISH AND TWO COATS OF HIGH GLOSS ENAMEL PAINT - COLOUR: BEIGE
 - ALL PIPES TO BE SECURELY FITTED
 - FOR WATER LEVEL INDICATOR SEE DRAWING NO. 21/1 - 4/86 R7, INSTALLED ONLY IF SPECIFIED IN TENDER.
 - STEEL TO BE GRADE 300W, SABS 1431
 - ALL STEEL PARTS TO BE COVERED WITH TWO COATS OF RED LEAD PRIMER, TYPE 1 GRADE 2 TO SABS 312 AND ONE COAT OF HIGH GLOSS ENAMEL PAINT COLOUR : SILVER.
 - THE PIPE MATERIAL FOR THE INLET AND THE OVERFLOW PIPES SHALL CHANGE FROM GMS TO HDPE BETWEEN THE PLATFORM GRID AND THE ELBOW LEADING TO THE TANK.
 - CODE OF PRACTICE FOR WELDING: SABS 044
 - ALL WELDS SHALL BE ALL-ROUND FILLET WELDS.
 - THE GRATING PANELS ARE TO BE SECURELY FIXED TO THE CHANNELS BY SADDLE CLAMPS WITH BOLT, NUT AND WASHER.
 - MINIMUM BEARING CAPACITY OF SOIL OF 50 KN/m² TO BE CONFIRMED BEFORE CONSTRUCTION STARTS
 - ALL NUTS TO BE SPOT WELDED
 - GRID PANELS TO BE GALVANIZED.
 - FOR PIPE DETAIL AND GENERAL LAYOUT SEE DRAWING NO. 21/1 - 4/86 R7 (INLET, OUTLET AND OVERFLOW DETAIL)

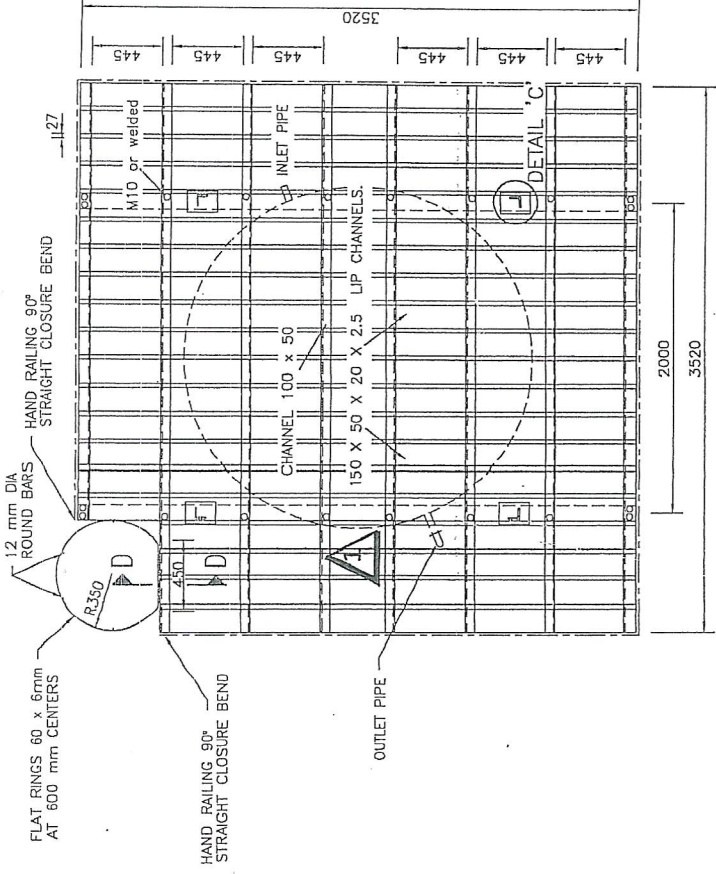
VARIOUS CHANGES MARKED A 07/06 L.N		
NO.	AMENDMENTS	
DATE BY		
DEPARTMENT OF WATER AFFAIRS		
NAMIBIA		
SCHEME		
TYPE DRAWING		
DRAWING ELEVATED 10 m ³ TANK : 6m HIGH: SECTIONS & DETAIL		
SURVEYED	DESIGNED	DEPUTY DIR. RW&AP
DRAWN	CHECKED	CHAIRMAN TECH. COMMITTEE
TRACED	DIRECTOR RWS	
UNDER SECRETARY FOR WATER AFFAIRS		
DATE	SCALE	SHEET NO.
AUG 1997	AS SHOWN	1 OF 1



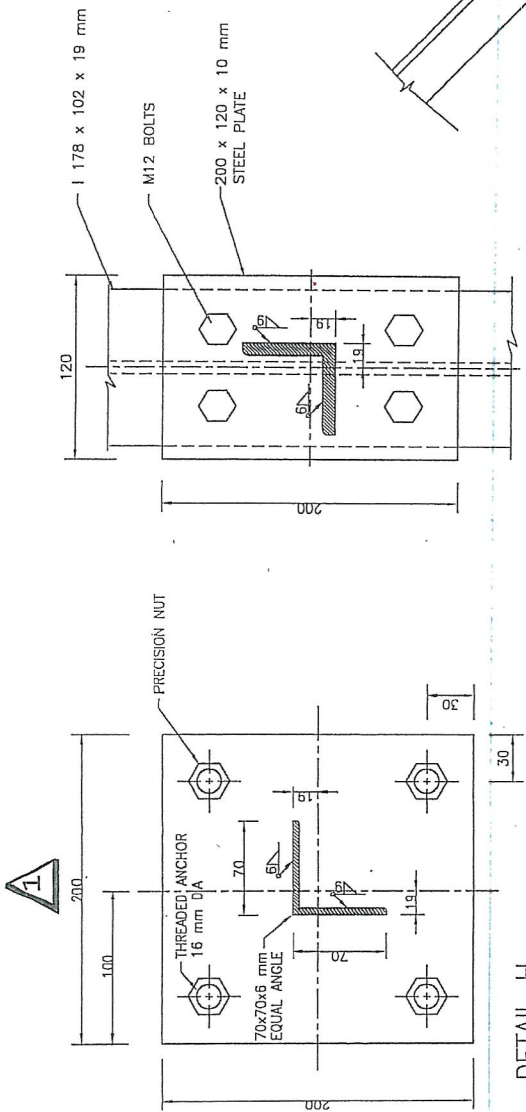
DETAIL G : STEEL STRAP AROUND TANK : FIXING DETAIL
NOT TO SCALE



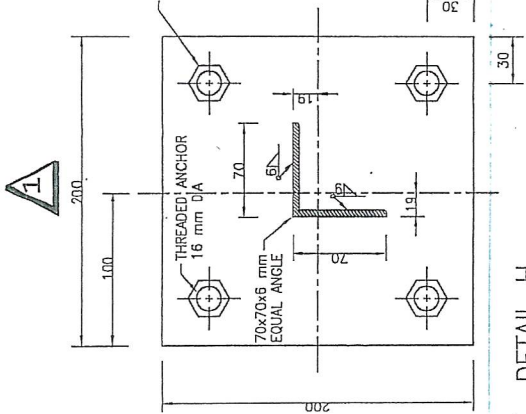
SECTION D-D
SCALE 1 : 10



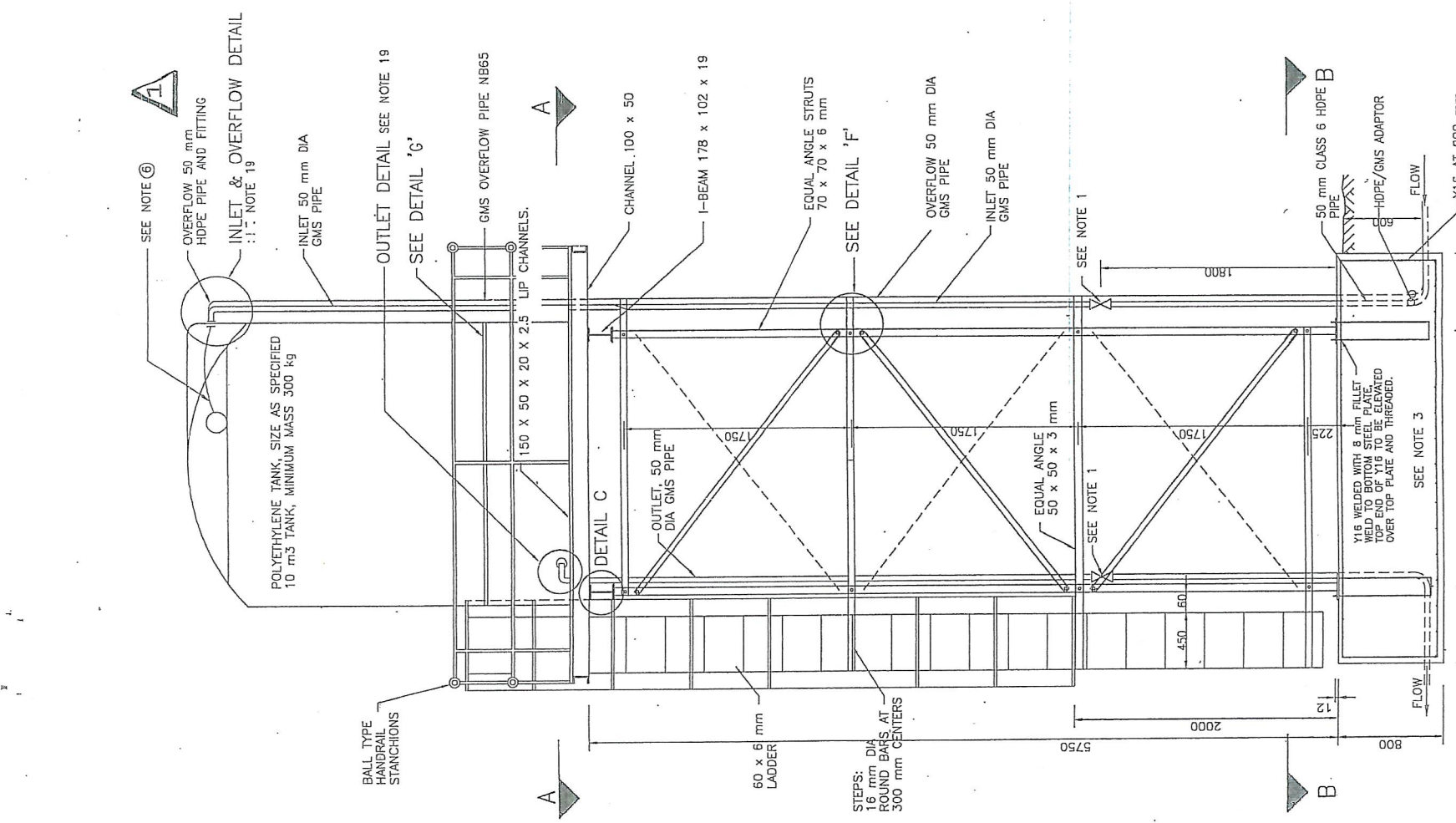
SECTION A-A
SCALE 1 : 25



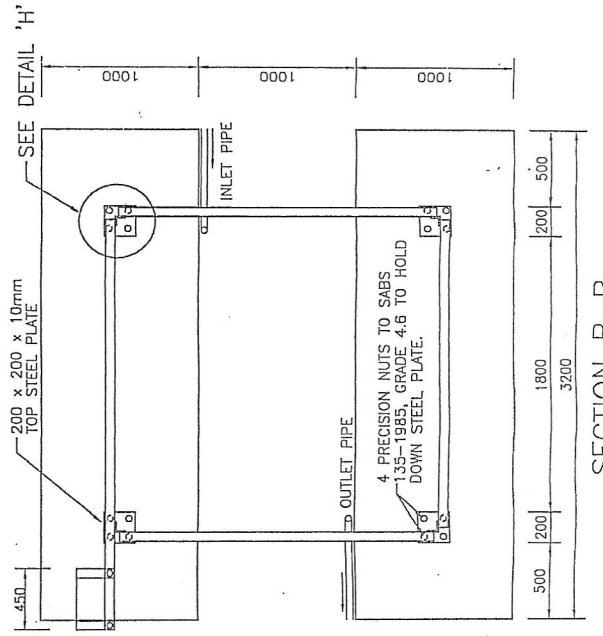
DETAIL C
SCALE 1 : 2.5



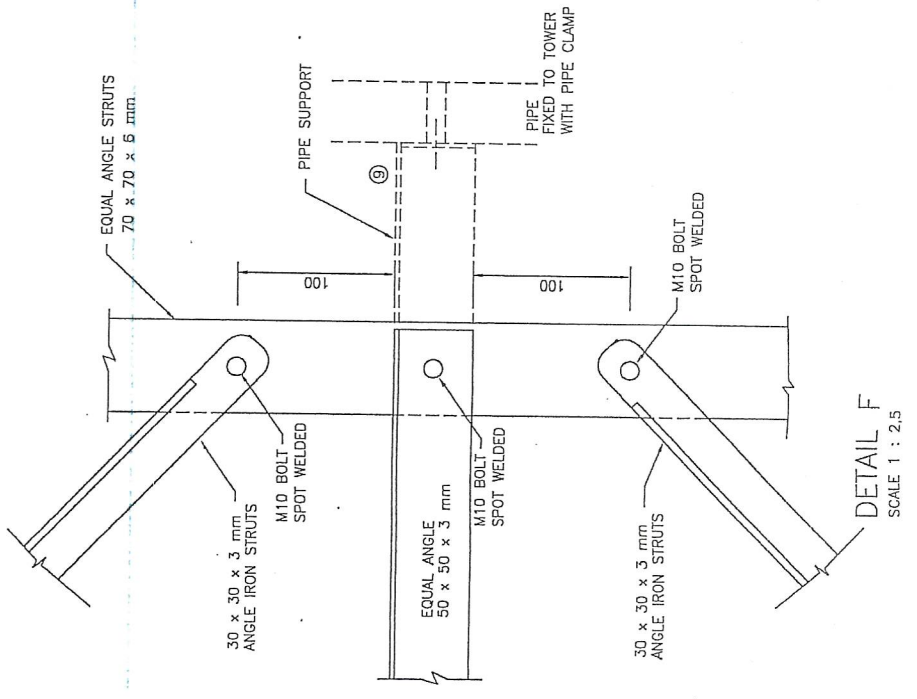
DETAIL H
10 mm THICK FOUNDATION STEEL PLATE
SCALE 1 : 2.5



ELEVATION OF WATER TOWER
SCALE 1 : 25



SECTION B-B
SCALE 1 : 25



DETAIL F
SCALE 1 : 2.5