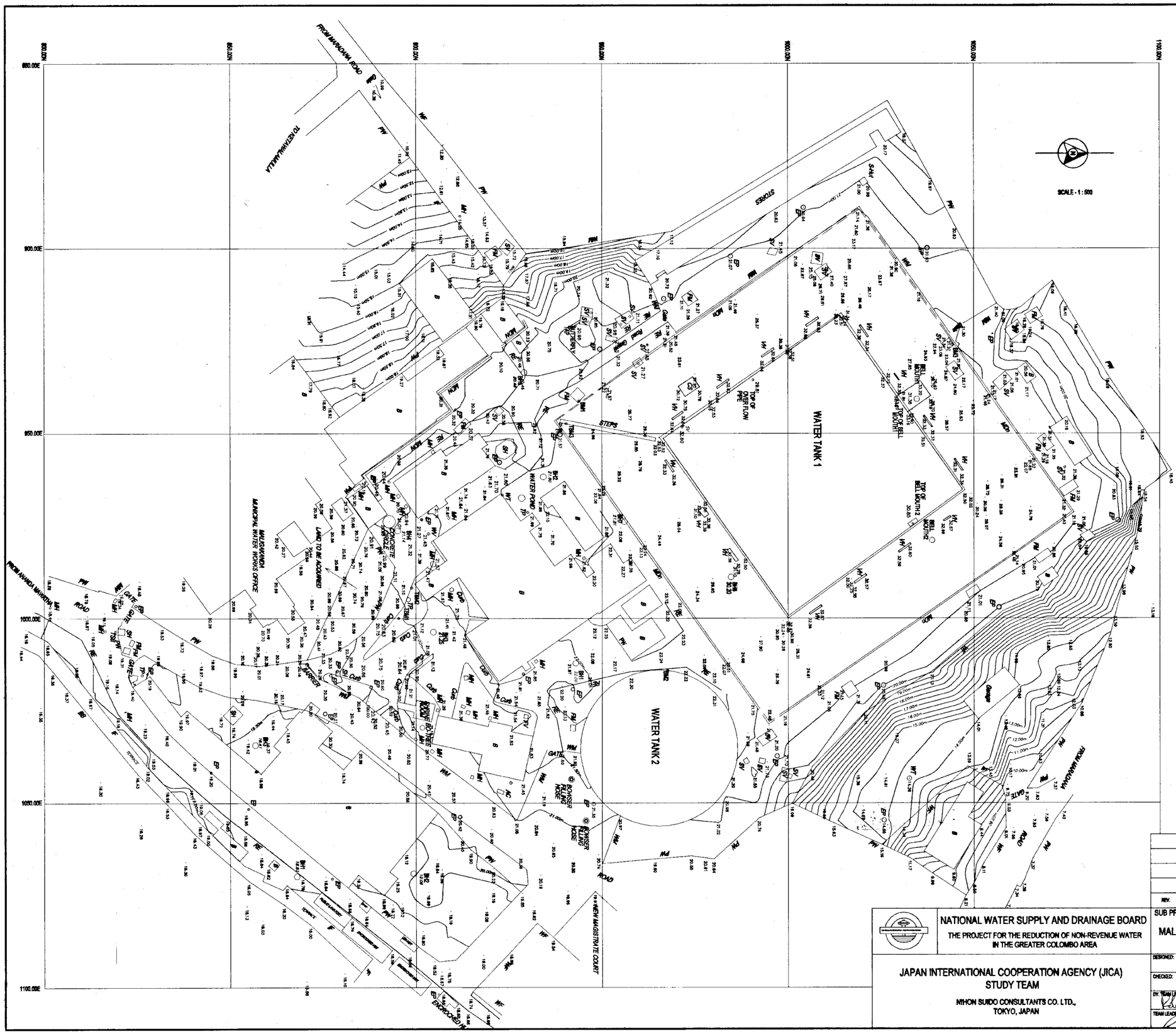


REFERENCE :

B	—	PERMANENT BUILDING
BB	—	BOTTOM OF BANK
EP	—	ELECTRIC POST
FM	—	FLOOR METER
MDr	—	MASONRY DRAIN
MH	—	MANHOLE
IF	—	IRON FENCE
PW	—	PARAPET WALL
RE	—	ROAD EDGE
S-HUT	—	SECURITY HUT
SV	—	SLUICE VALVE
TP	—	TELEPHONE POST
WT	—	WATER TANK
WP	—	WATER PIPE
WV	—	WATER VALVE
WM	—	WIRE MESH
WF	—	WIRE FENCE

NOTE :

1. ELEVATIONS ARE BASED ON MSL DATUM.
2. ELEVATIONS ARE IN METERS.
3. TBM 1= 21.032m MSL
4. TBM 2= 21.257m MSL
5. TBM 3=22.427m MSL
6. BM 1= 21.492m MSL
7. BM 2= 23.357m MSL
8. BM 3=21.384m MSL

DO NOT SCALE

REV.	DESCRIPTION

NATIONAL WATER SUPPLY AND DRAINAGE BOARD

THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

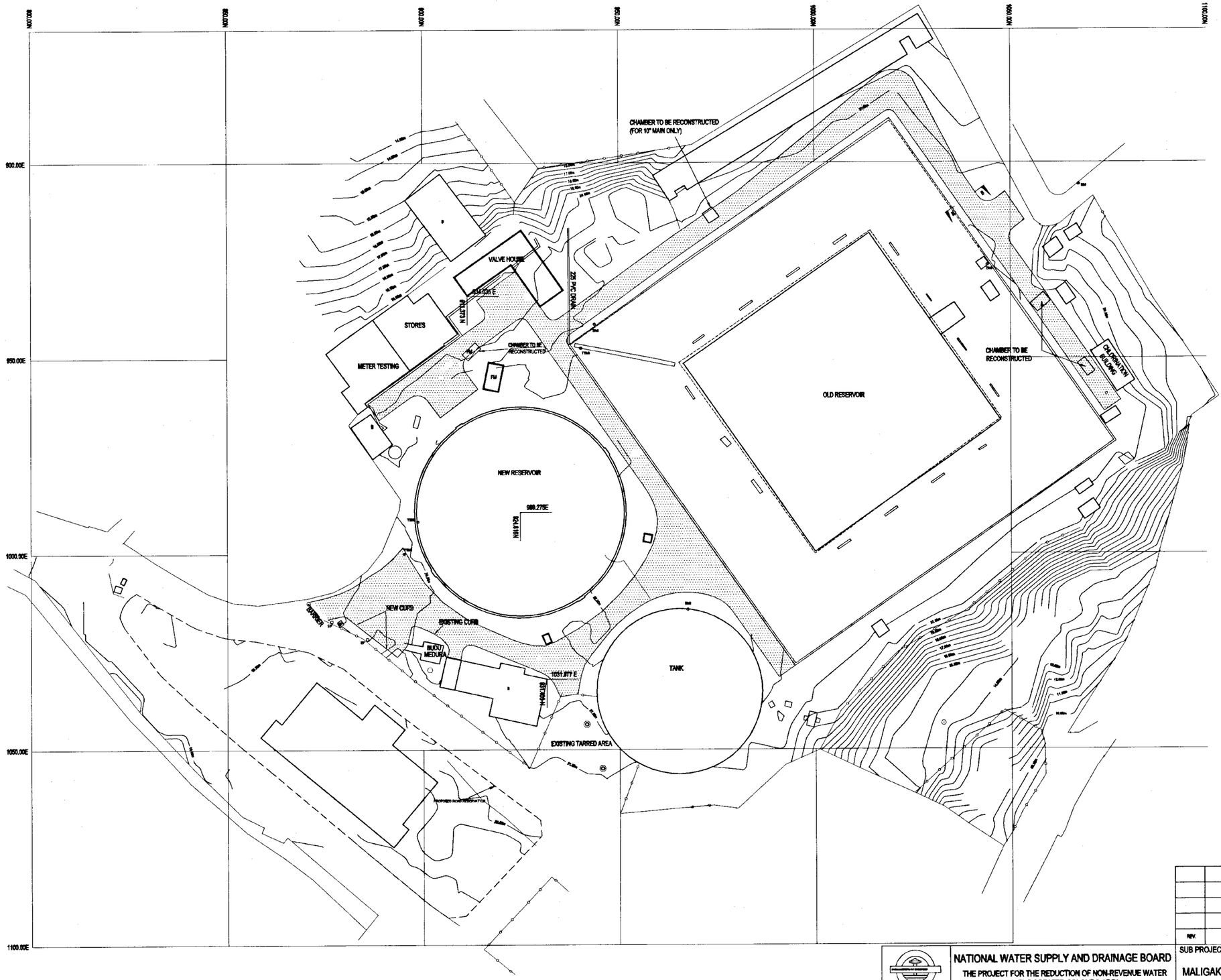
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STUDY TEAM

NIHON SUIDO CONSULTANTS CO. LTD.,
TOKYO, JAPAN

SUB PROJECT: MALIGAKANDA

TITLE: SURVEY PLAN

DESIGNED:	DRAWN:	DATE: JAN 2001
CHECKED:	PM (NWS&DB) NWSDB:	CONTRACT No: NRW / CW
DY. TEAM LEADER:	A.G.M (P&D) NWSDB:	DRG. No: MK / GR / C - 01
TEAM LEADER:	D.G.M (P&D) NWSDB:	



NOTES:

1. Elevations are based on MSL Datum.
2. Elevations are in metres.
3. TBM 1 = 21.032m MSL
4. TBM 2 = 21.267m MSL
5. TBM 3 = 22.427m MSL
6. BM 1 = 21.462m MSL
7. BM 2 = 23.357m MSL
8. BM 3 = 21.364m MSL

COORDINATES SHOWN AT THE CENTRE OF NEW RESERVOIR, EXISTING BUILDING CORNER & THE CORNER OF VALVE HOUSE ARE BASED ON THE SURVEY GRIDS ONLY.

DO NOT SCALE

REV.	DESCRIPTION

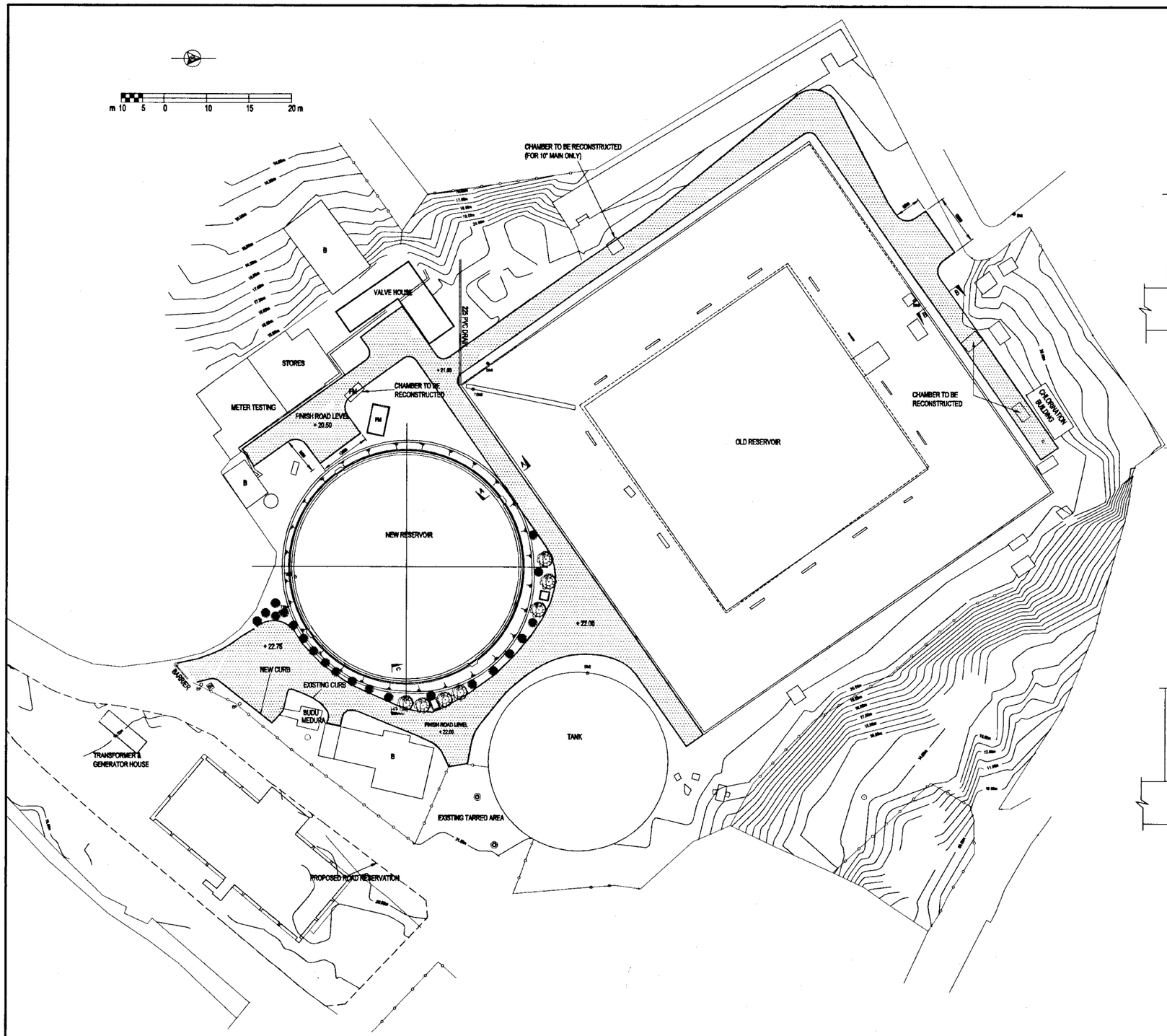
NATIONAL WATER SUPPLY AND DRAINAGE BOARD
THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

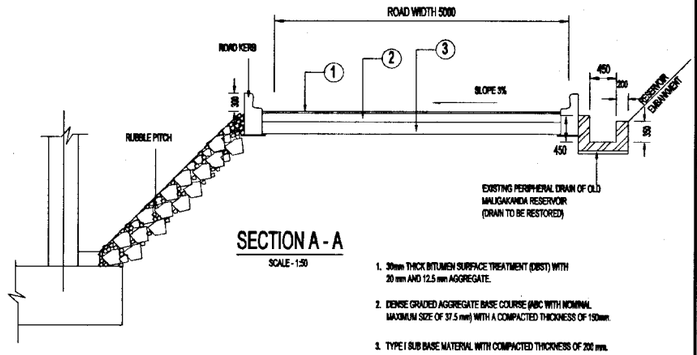
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STUDY TEAM
NIHON SUIDO CONSULTANTS CO. LTD.,
TOKYO, JAPAN

SUB PROJECT: MALIGAKANDA

TITLE: MALIGAKANDA NEW RESERVOIR SETTINGOUT PLAN

DESIGNED:	DRAWN:	DATE: JAN 2001
CHECKED:	PM (NRW&MPS) NWSDB:	CONTRACT No: NRW / CW
DY. TEAM LEADER:	A.G.M (PMD) NWSDB:	DRG. No: MK / GR / C-02
TEAM LEADER:	D.G.M (PMD) NWSDB:	

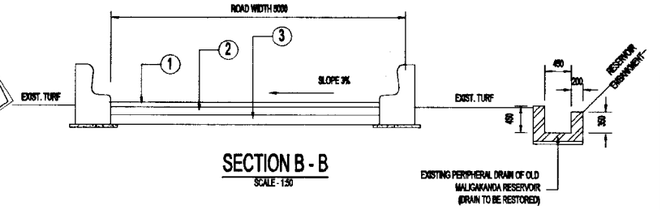




SECTION A - A

SCALE - 1:50

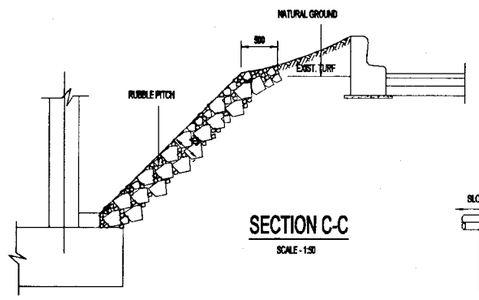
1. 30mm THICK BITUMEN SURFACE TREATMENT (DBST) WITH 20 mm AND 12.5 mm AGGREGATE.
2. DENSE GRADED AGGREGATE BASE COURSE (ABC WITH NOMINAL MAXIMUM SIZE OF 37.5 mm) WITH A COMPACTED THICKNESS OF 150mm.
3. TYPE I SUB BASE MATERIAL WITH COMPACTED THICKNESS OF 200 mm.



SECTION B - B

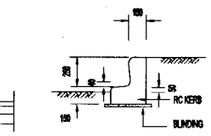
SCALE - 1:50

INTERNAL ROAD



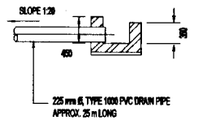
SECTION C-C

SCALE - 1:50



DETAIL OF ROAD KERB

SCALE - 1:25



DO NOT SCALE

REV.	DESCRIPTION

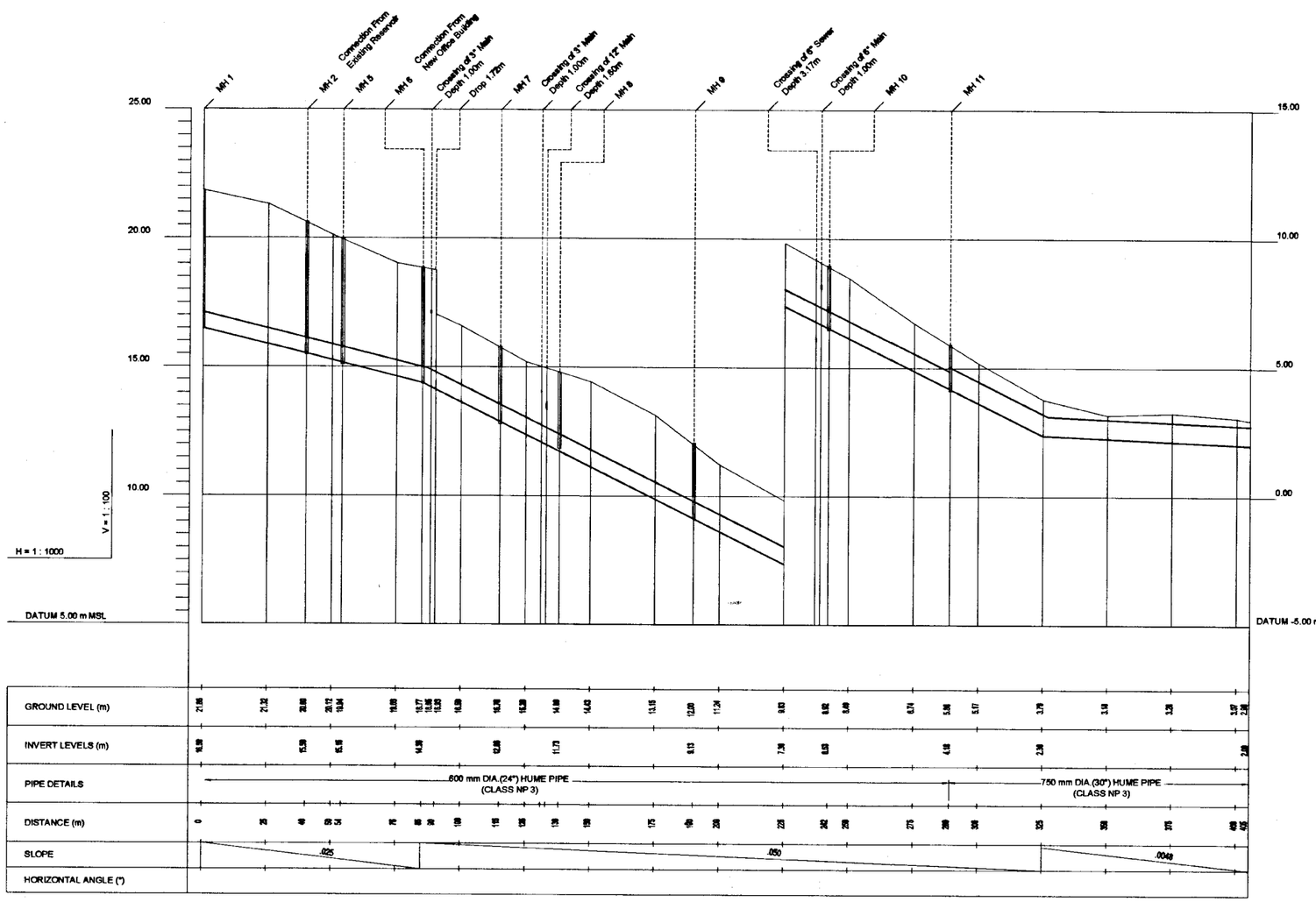
NATIONAL WATER SUPPLY AND DRAINAGE BOARD
THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

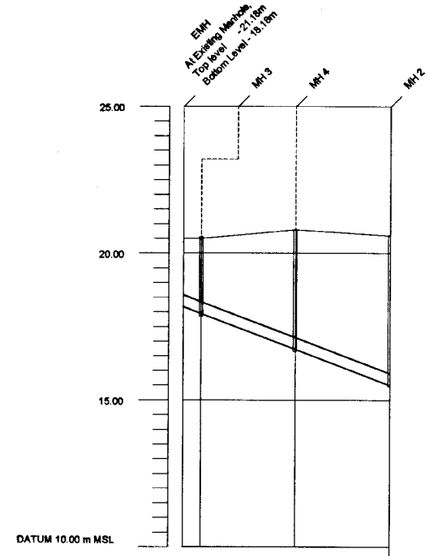
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STUDY TEAM
NIHON SUIDO CONSULTANTS CO. LTD., TOKYO, JAPAN

SUB PROJECT: MALIGAKANDA

TITLE: MALIGAKANDA NEW RESERVOIR LANDSCAPING & ROAD LAYOUT

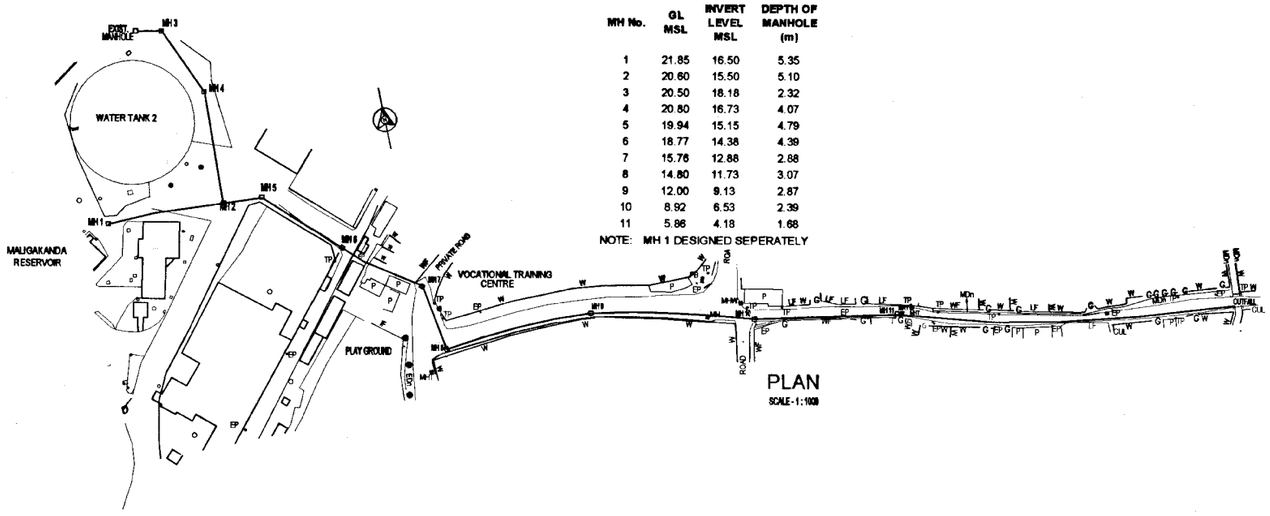
DESIGNED:	DRAWN:	DATE: JAN 2001
CHECKED:	PM (NRW/SWPS) NWSDB:	CONTRACT No: NRW / CW
DY. TEAM LEADER:	A.G.M (P&D) NWSDB:	DRG. No: MK / GR / C-03
TEAM LEADER:	D.G.M (P&D) NWSDB:	





GROUND LEVEL (m)	20.50 20.50	21.32	20.80	20.60
INVERT LEVELS (m)	18.18 17.95		16.73	15.50
PIPE DETAILS	375 mm DIA.(15") HUME PIPE (CLASS NP3)			
DISTANCE (m)	0 0	25	38	50 70
SLOPE	.036			
HORIZONTAL ANGLE (°)				

L.S. FOR WASHOUT FROM MALIGAKANDA RESERVOIR

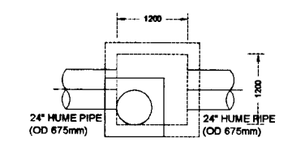


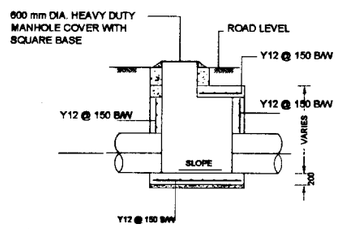
SCHEDULE OF MANHOLES

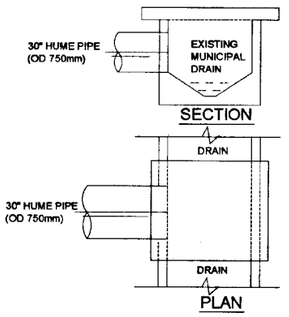
MH No.	GL MSL	INVERT LEVEL MSL	DEPTH OF MANHOLE (m)
1	21.85	16.50	5.35
2	20.60	15.50	5.10
3	20.50	18.18	2.32
4	20.80	16.73	4.07
5	19.94	15.15	4.79
6	18.77	14.38	4.39
7	15.76	12.88	2.88
8	14.80	11.73	3.07
9	12.00	9.13	2.87
10	8.92	6.53	2.39
11	5.86	4.18	1.68

NOTE: MH 1 DESIGNED SEPERATELY

DETAILS OF MANHOLE CHAMBER







DETAIL AT OUTFALL

DO NOT SCALE

REV.	DESCRIPTION

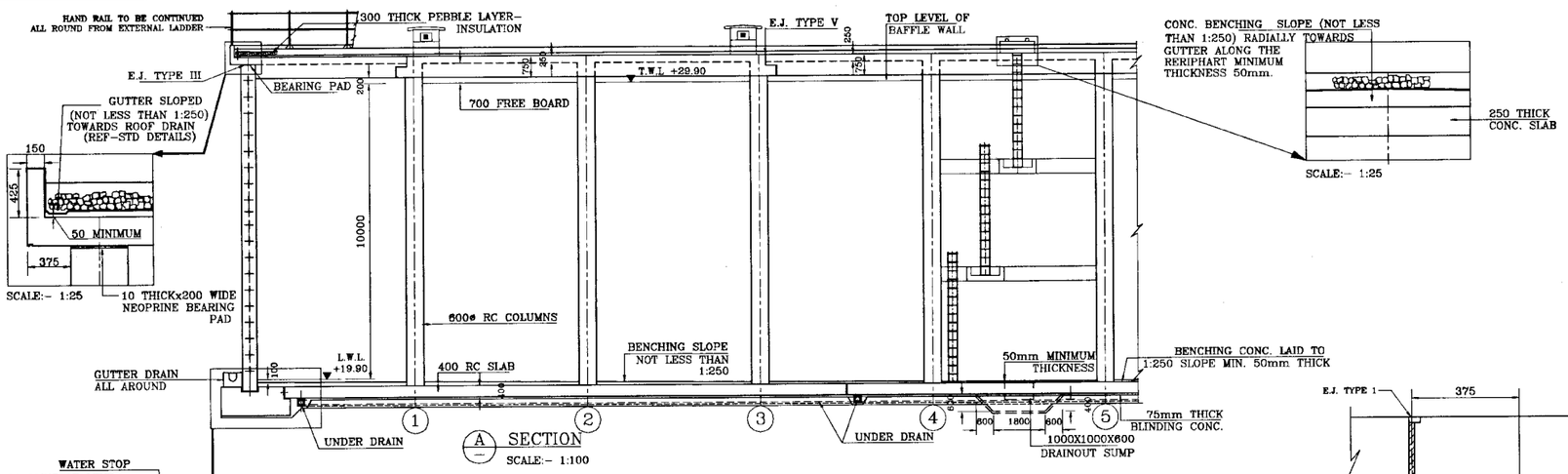
NATIONAL WATER SUPPLY AND DRAINAGE BOARD
THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STUDY TEAM
NIHON SUIDO CONSULTANTS CO. LTD., TOKYO, JAPAN

SUB PROJECT: MALIGAKANDA

TITLE: MALIGAKANDA NEW RESERVOIR WASHOUT DRAIN PLAN AND PROFILE

DESIGNED:	DRAWN:	DATE: JAN 2001
CHECKED:	PM (NRW&WPS) NWSDB:	CONTRACT No: NRW / CW
DY. TEAM LEADER:	A.G.M (P&D) NWSDB:	DRG. No: MK / GR / C-04
TEAM LEADER:	D.G.M (P&D) NWSDB:	



Notes:-

1. The drawings to be read in conjunction with Standard Drawings, Structural and other relevant drawings.
2. All exposed concrete corners shall be chamfered 20 mm unless otherwise stated on the drawings.
3. The blinding concrete shall be grade 15 having Characteristic strength of 15 N/mm^2.
4. The structural concrete of the perimeter post-tensioned circular wall shall be grade 40 having a Characteristic strength of 40. N/mm^2 and for all other structural members the concrete shall be grade 35A having a Characteristic strength of 35. N/mm^2 unless otherwise noted on the drawings.
5. All laps in reinforcing steel (48 x bar diameter) shall be staggered.
6. All reinforcing steel in the perimeter wall shall be arranged so that there is a minimum of 40 mm between any bar and the nearest cable duct and clear cover to reinforcing steel shall be 50. mm.
7. The proprietary post-tensioning wires, ducts and anchorages shall be approved by the Engineer prior to start with construction.
8. The contractor shall provide adequate steel supports for the cable ducts and reinforcing steel in addition to the designed reinforcement shown on drawings and the details shall be approved by the Engineer.
9. Wires shall be placed in the ducts before concreting commences.
10. All cable ducts shall be grouted and grout vents shall be provided at all points necessary at not more than 10.m centres. The grout mix shall be approved by the Engineer and shall contain approved expanding agent.
11. The cables shall be stressed in the order shown. The wires in the cables shall not be cropped until all wires have been stressed.
12. The wires shall not be cropped closer than 25. mm from the grips and cropping of wires shall not commence until the stressing records have been approved by the Engineer.
13. Each pre-stressing wire shall be 7.0 mm dia high tensile low relaxation steel conforming to BS 5896-1980 with ultimate guaranteed tensile strength not less than 1860 N/mm^2 and shall be stressed as shown in Table 1.
14. The pre-stressing wires shall be stressed only after the complete wall is cast and the entire wall concrete attains 28 day strength and after a minimum period of 28 days.
15. Anchorage recesses shall be dimensioned by the contractor to suit type of anchor used and the details shall be approved by the Engineer. All anchor recesses shall be covered with non-shrink cement sand mortar after stressing all wires and grouting the ducts are completed and approved by the Engineer.
16. All exposed concrete surfaces shall be in accordance with the specifications.
17. The wires in the cable ducts shall be stressed in two operations, first with 50% of the force on all cables and second to complete the balance 50% of the forces and in the following order of ducts.

    1, 4, 7, 10, 13, 16, 19, 22, 25, 28, 31, 34, 37, 40, 43, 46, 49, 52, 55, 58, 61

    2, 5, 8, 11, 14, 17, 20, 23, 26, 29, 32, 35, 38, 41, 44, 47, 50, 53, 56, 59,

    3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, and 57.
18. The notation used in labeling the cable ducts (and wires) is as shown in example table 1 of dwg. No MK/GR/ST-06
19. The cement used to produce concrete for the foundation structure such as the perimeter rc ring foundation and the base slab of the reservoir shall be Portland Cement complying to BS 12 mixed with 25 % pulverized fuel ash (pfa). The cement content of the concrete shall be not less than 380 kg/m^3 and the maximum free water cement ratio shall be 0.45.

Table 1

Height of wall measured from bottom of wall (m)	Force that should be applied by prestressing –after all losses (kN/m height)	No of 7.0 mm Wires in a single cable (nos.)	Cable spacing used (mm c/c)	Jacking force per Cable allowance for slip at anchors is not considered (kN)	Actual stress that should get transferred on to the wall due to pre-stressing (after all losses) (N/mm^2)
10.0-11.4	892.0	12	400	443.0	1.78
8.0-10.0	1177.0	12	300	443.0	2.35
6.0-8.0	1547.0	12	225	443.0	3.09
4.0-6.0	2254.0	12	150	443.0	4.51
2.0-4.0	2756.0	12	120	443.0	5.51
0.0-2.0	3233.0	12	100	443.0	6.47

loads (unfactored)

super imposed load on roof	2.5kN/m^2
250 mm pebble layer on roof	5.0 kN/m^2
benching concrete (250 mm average)g on roof	5.5 kN/m^2
Density of water	10.0 Kn/M^3

Parameters assumed -post tensioning

Coeiff. of friction	0.3
Profile Coeiff.	0.0025 /m

Allowable bearing capacity of founding material = 200 kN/m^2

DO NOT SCALE

REV.	DESCRIPTION

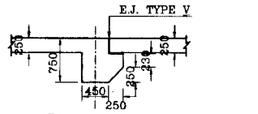
NATIONAL WATER SUPPLY AND DRAINAGE BOARD
THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

SUB PROJECT: MALIGAKANDA

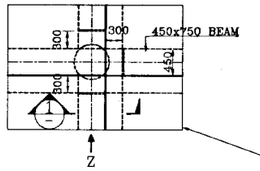
TITLE: NEW RESERVOIR
GENERAL ARRANGEMENT
SHEET 1 OF 3

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) STUDY TEAM
NIHON SUIDO CONSULTANTS CO. LTD., TOKYO, JAPAN

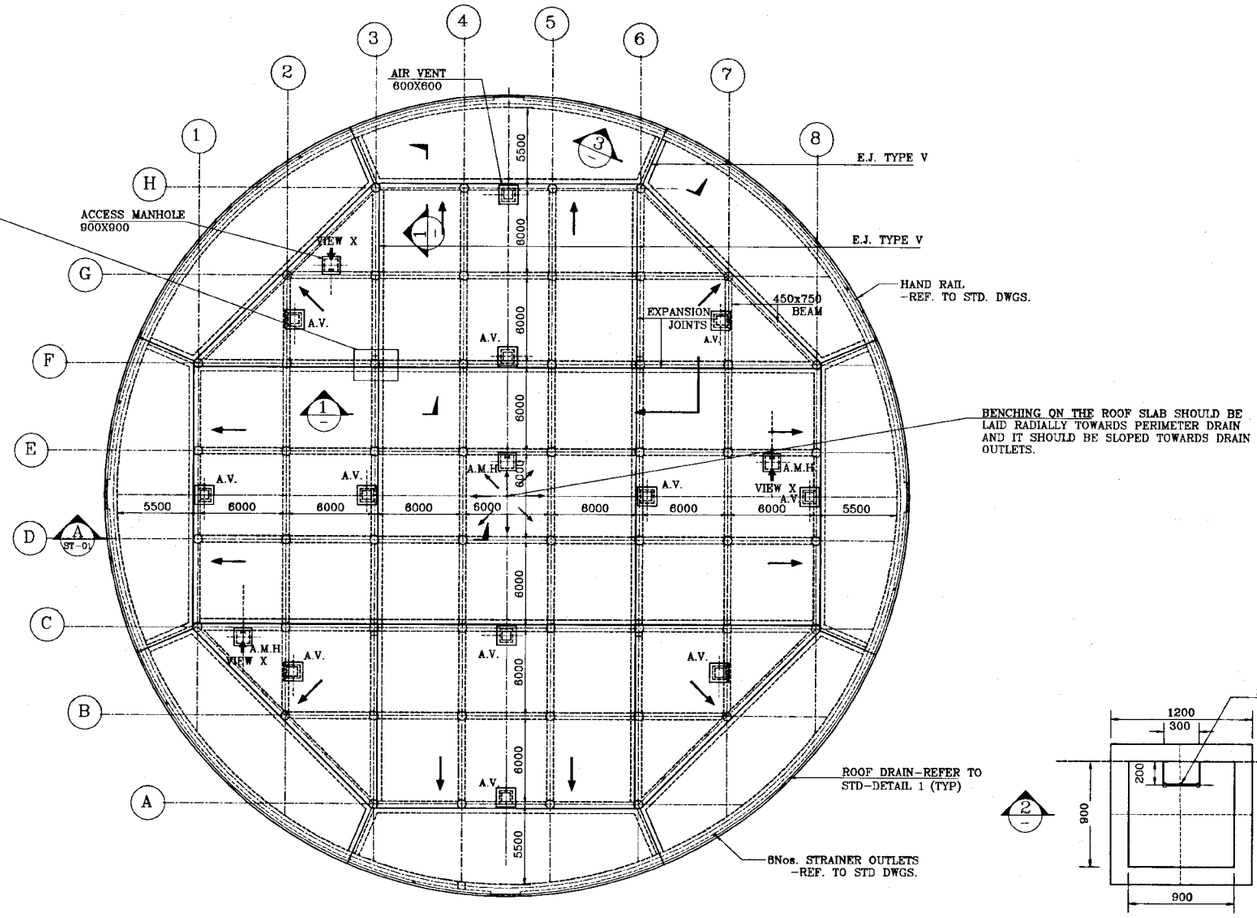
DESIGNED	DRAWN: RUKMANI	DATE	JAN 2001
CHECKED	PM (NRW&WPS) NWSDB	CONTRACT No.	NRW/CW
DY. TEAM LEADER	ADM(PMD) NWSDB	DRG No.	MK/GR/ST–01
TEAM LEADER	DGM(PMD) NWSDB		



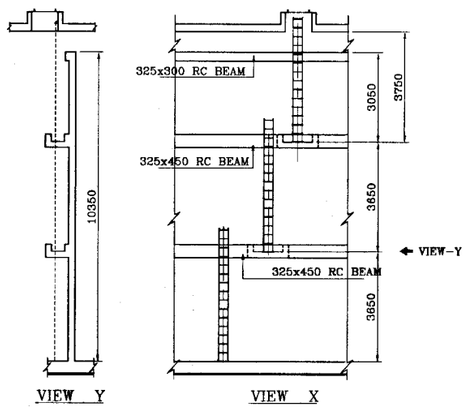
1 SECTION



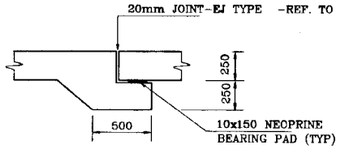
VIEW – Z
SCALE:– 1:50



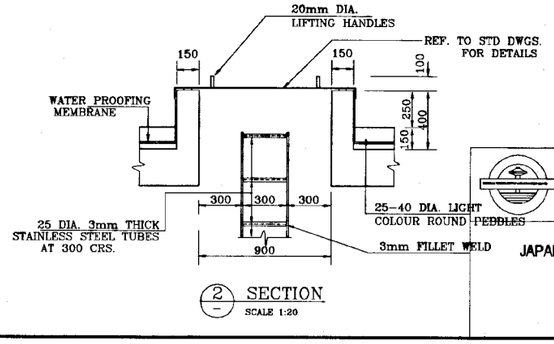
ROOF PLAN
SCALE:– 1:200



VIEW Y VIEW X
(TYPICAL AT ALL ACCESS MANHOLE –
REF. TO MK/GR/ST-03 DWG. FOR LADDER DETAILS)
SCALE:– 1:100

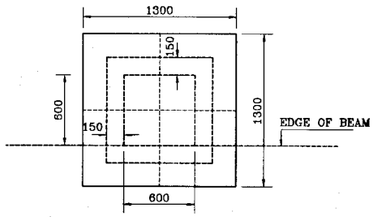


3 SECTION
SCALE 1:25



2 SECTION
SCALE 1:20

ACCESS MANHOLE
& LADDER [AMH] – REF. TO STD. DWGS FOR DETAILS
SCALE 1:25



AIR VENT (AV) – REF. TO STD. DWGS FOR DETAILS
SCALE 1:25

The main activities in construction work in their order are as listed below in brief.

1. Excavation, Construction of under drainage and laying of intake pipes, washouts and outflow pipes etc.
2. Construction of perimeter ring foundation and the centre base slab.
3. Construction of perimeter post-tensioned wall, post-tensioning, construction of columns and baffle walls.
4. Carry out temporary pipe connections, fill the reservoir to it's full capacity, leave it for 7-14 days for the sub-soil to settle, empty the reservoir and carry out permanent pipe connections.
5. Carryout all other construction works involved.

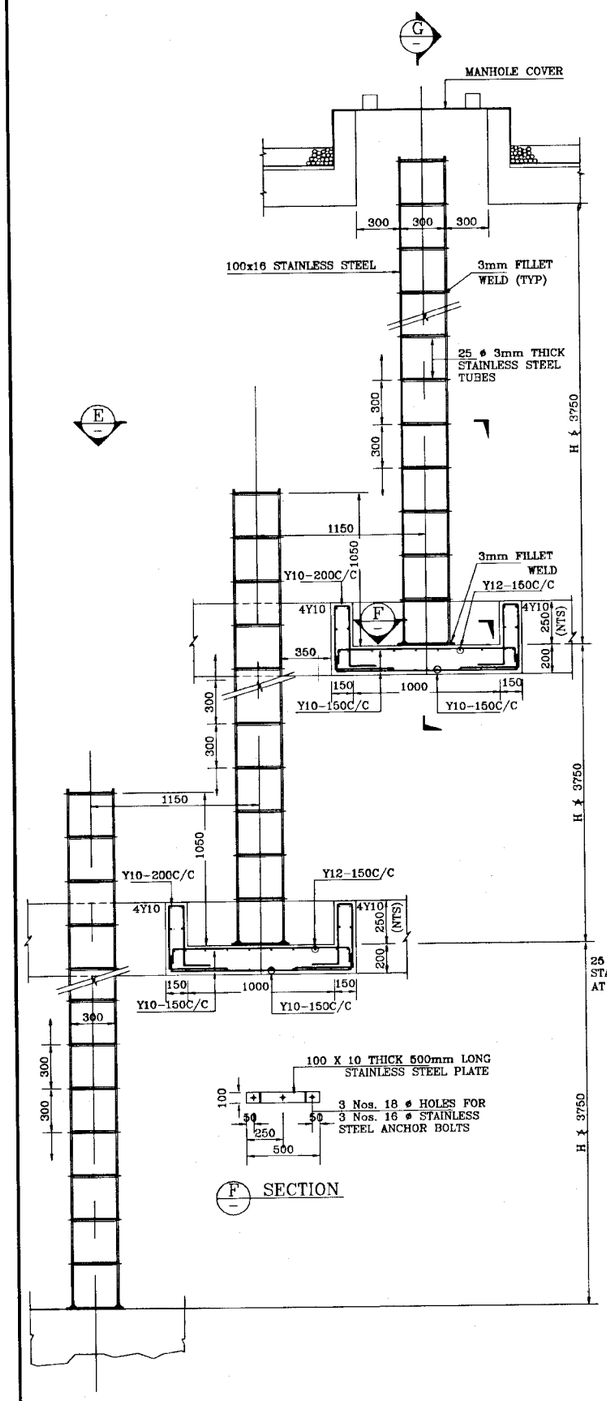
DO NOT SCALE

REV	DESCRIPTION

NATIONAL WATER SUPPLY AND DRAINAGE BOARD
THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STUDY TEAM
NIHON SUIDO CONSULTANTS CO. LTD., TOKYO, JAPAN

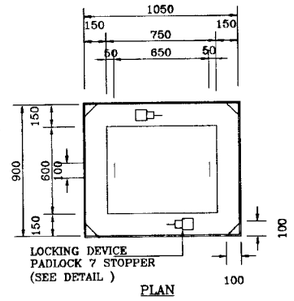
SUB PROJECT: MALIGAKANDA	TITLE: NEW RESERVOIR GENERAL ARRANGEMENT		SHEET 2 OF 3
DESIGNED	DRAWN: ANOMA	DATE: JAN 2001	
CHECKED	PM (NRW&MPS) NWSDB	CONTRACT No: NRW/CW	
DY. TEAM LEADER	AGM(P&D) NWSDB	DRG. No: MK/GR/ST-02	
TEAM LEADER	DGM(P&D) NWSDB		



ELEVATION

DETAILS OF MANHOLE LANDING PLATFORMS &LADDERS

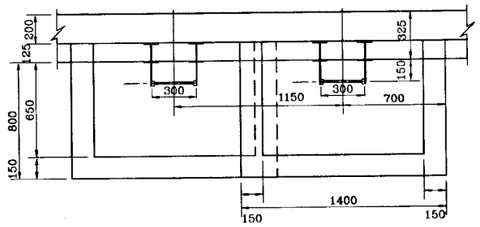
SCALE - 1:20



PLAN

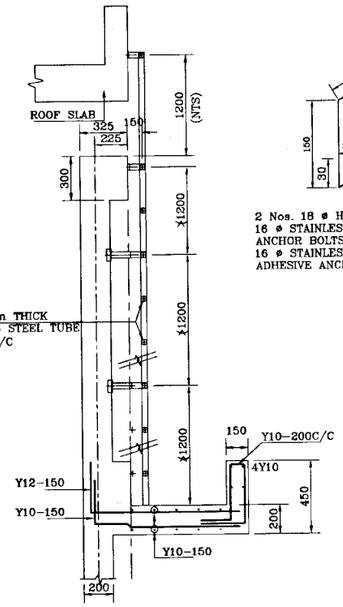
DETAIL OF MANHOLE COVER

SCALE - 1:20



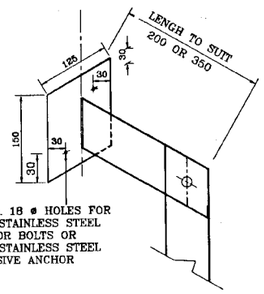
E SECTIONAL PLAN

SCALE - 1:20



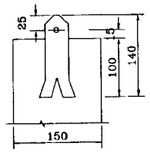
G SECTION

SCALE 1:20



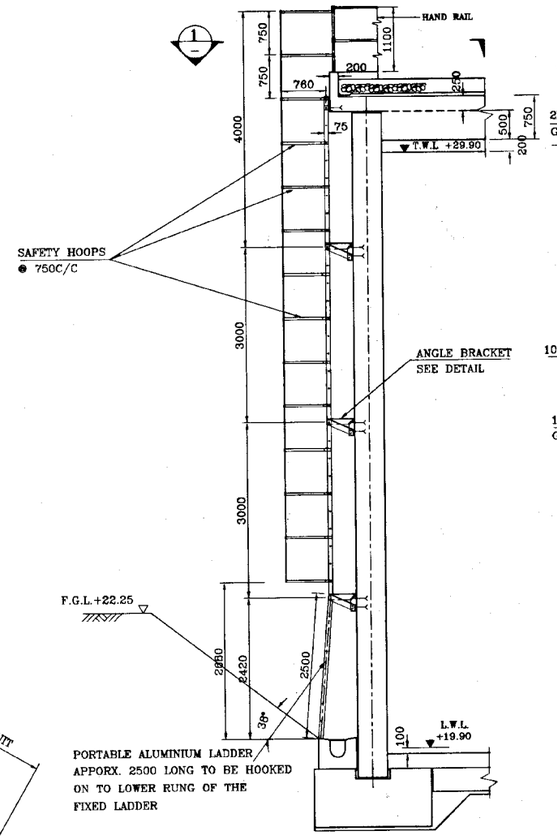
DETAIL AT 'A'

SCALE - 1:5



MH. COVER LOCKING DEVICE

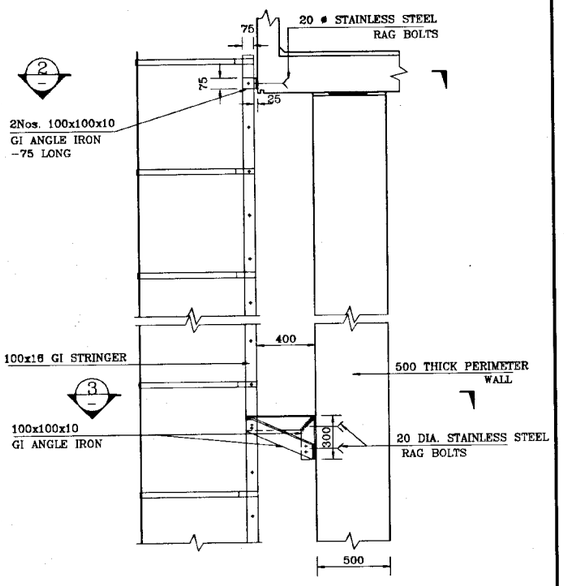
SCALE - 1:5



ELEVATION

DETAILS OF EXTERNAL LADDERS

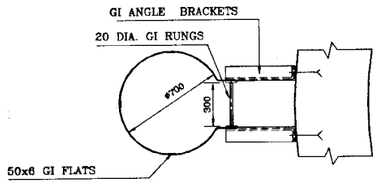
SCALE 1:50



PART ELEVATION

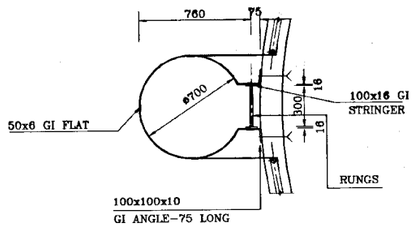
DETAILS OF BRACKETS FOR EXTERNAL LADDER

SCALE 1:20



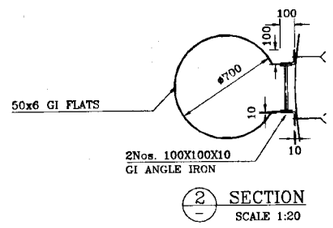
3 SECTION

SCALE 1:20



1 SECTION

SCALE 1:20



2 SECTION

SCALE 1:20

NOTES :-

1. EXACT LOCATION OF EXTERNAL LADDER TO BE DECIDED AT SITE.
2. ALL EXTERNAL LADDERS SHALL BE FABRICATED WITH HOT DIP GALVANIZED MILD STEEL SECTIONS CONFORMING TO BS. 4 PART 1 & BS. 4848 PARTS 2 & 4.
3. ALL INTERNAL LADDERS (WITHIN THE RESERVOIR) SHALL BE FABRICATED WITH STAINLESS STEEL CONFORMING TO BS.
4. REF. TO STD-DWGS. FOR DETAILS OF ANCHOR BOLTS.

DO NOT SCALE

REV.	DESCRIPTION

NATIONAL WATER SUPPLY AND DRAINAGE BOARD

THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) STUDY TEAM

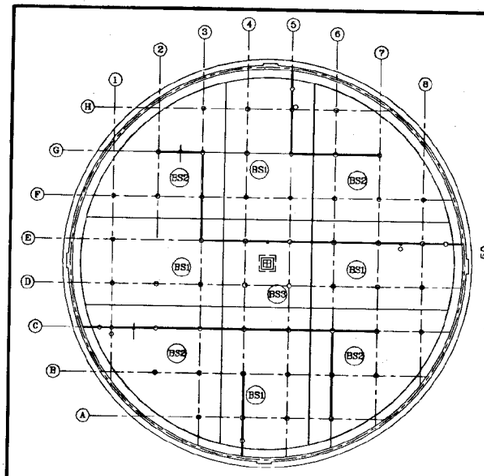
NIHON SUIDO CONSULTANTS CO. LTD., TOKYO, JAPAN

SUB PROJECT: MALIGAKANDA

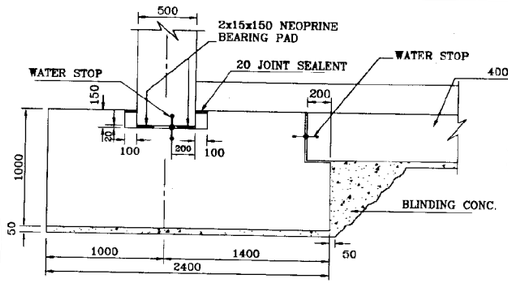
TITLE: NEW RESERVOIR GENERAL ARRANGEMENT

SHEET 3 OF 3

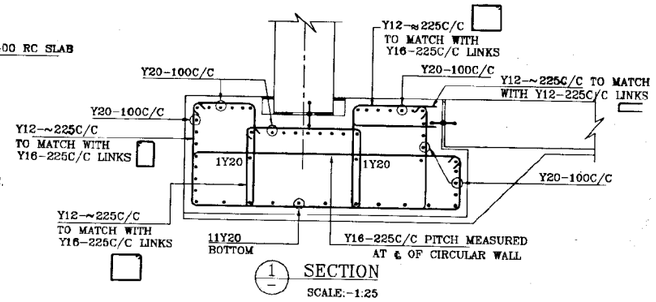
DESIGNED	DRAWN: R.U.K.M.A.N.J	DATE: JAN 2001
CHECKED	PM (NRWSA/P/S NWSDB	CONTRACT No. NRW/CW
DY. TEAM LEADER	AGM(P/D) NWSDB	ORG No. MK/GR/ST-03
TEAM LEADER	DGM(P/D) NWSDB	



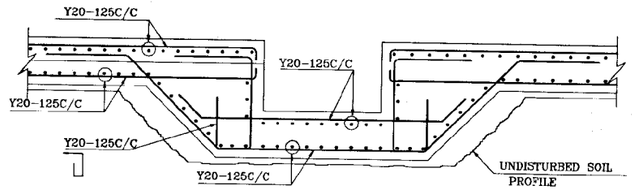
BASE KEY PLAN
SCALE:- 1:400



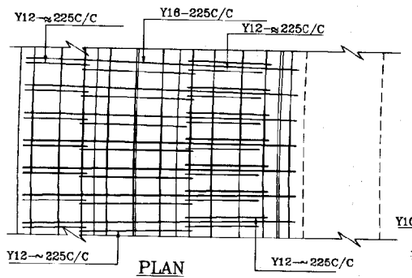
SECTION THROUGH WALL & FOUNDATION
SCALE:- 1:25



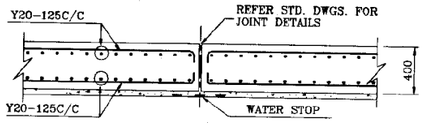
1 SECTION
SCALE:-1:25



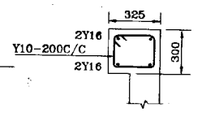
2 SECTION
SCALE:-1:25



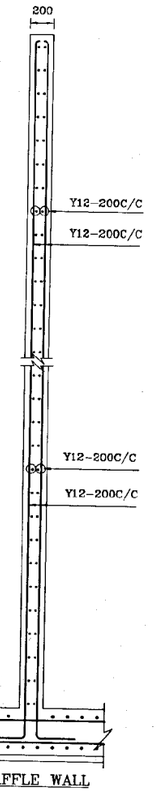
PLAN
SCALE:-1:25



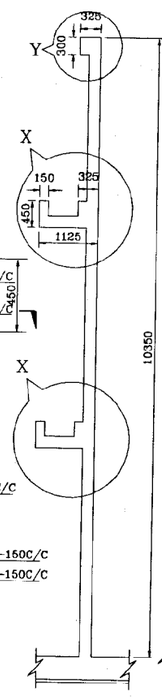
3 SECTION
SCALE:-1:25



DETAIL AT Y
SCALE:-1:20

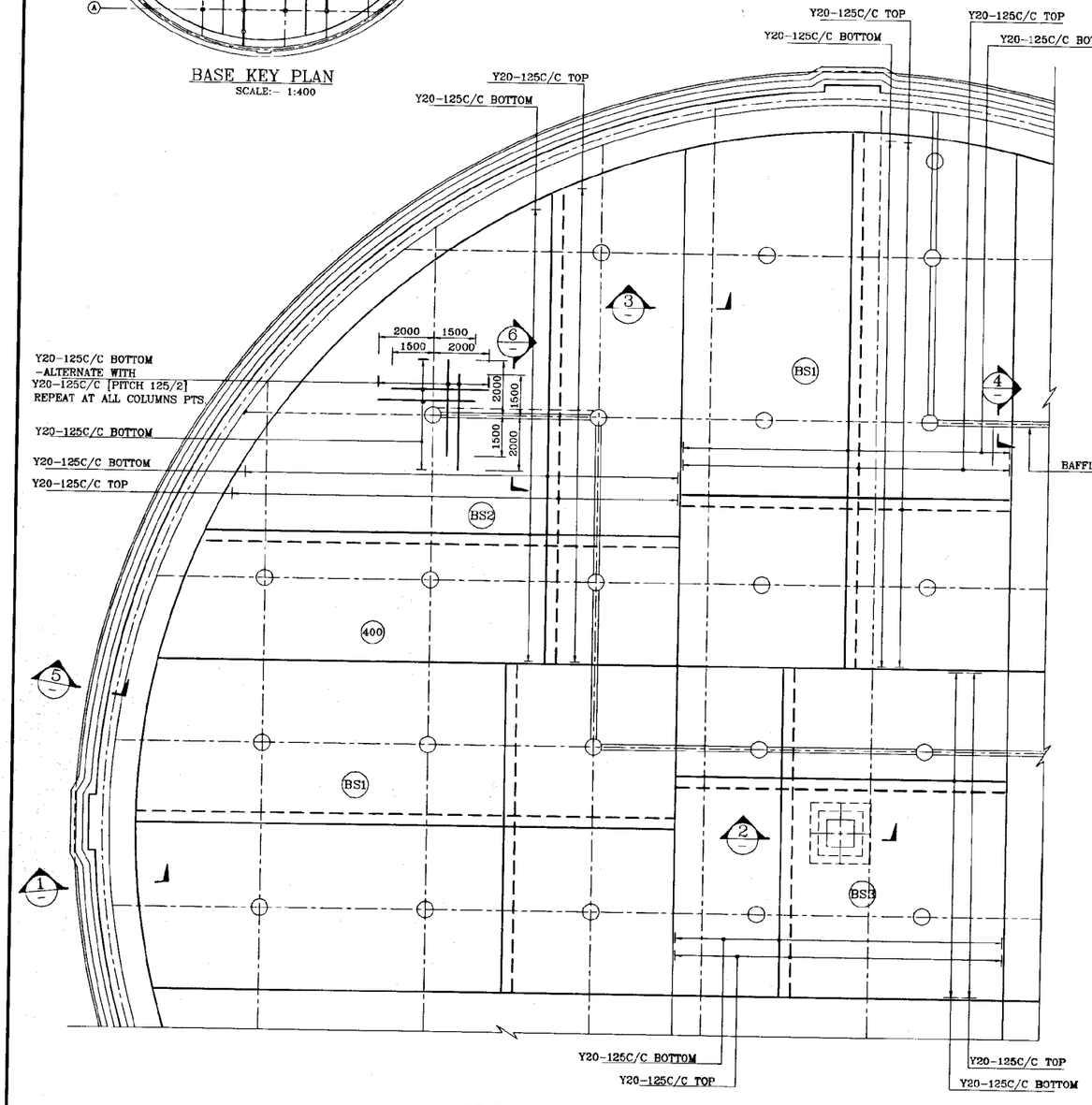


BAFFLE WALL

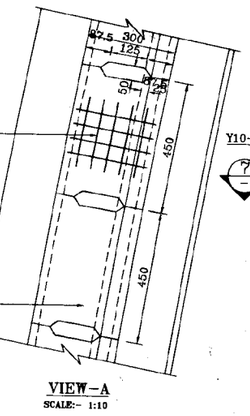


6 SECTION
SCALE:-1:50

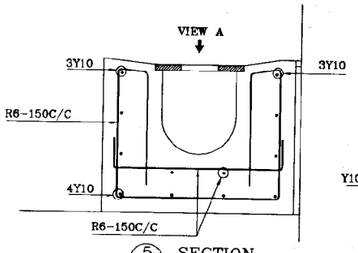
4 SECTION (TYPICAL)
SCALE:-1:25



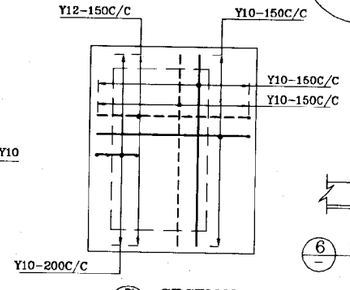
PART PLAN OF BASE SLAB
SCALE:- 1:100



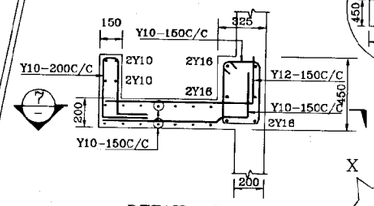
VIEW-A
SCALE:- 1:10



5 SECTION
SCALE:-1:10



7 SECTION
SCALE:-1:20



DETAIL AT X
SCALE:-1:20

DO NOT SCALE

REV	DESCRIPTION

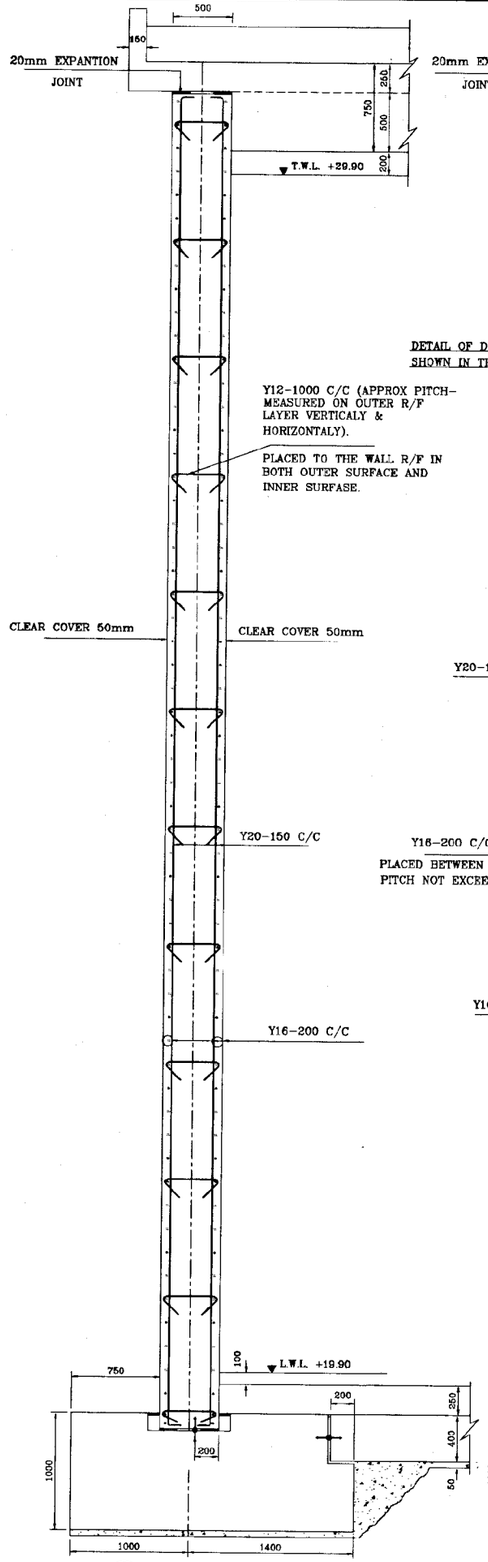
NATIONAL WATER SUPPLY AND DRAINAGE BOARD
THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STUDY TEAM
NIHON SUIDO CONSULTANTS CO. LTD., TOKYO, JAPAN

SUB PROJECT: MALIGAKANDA

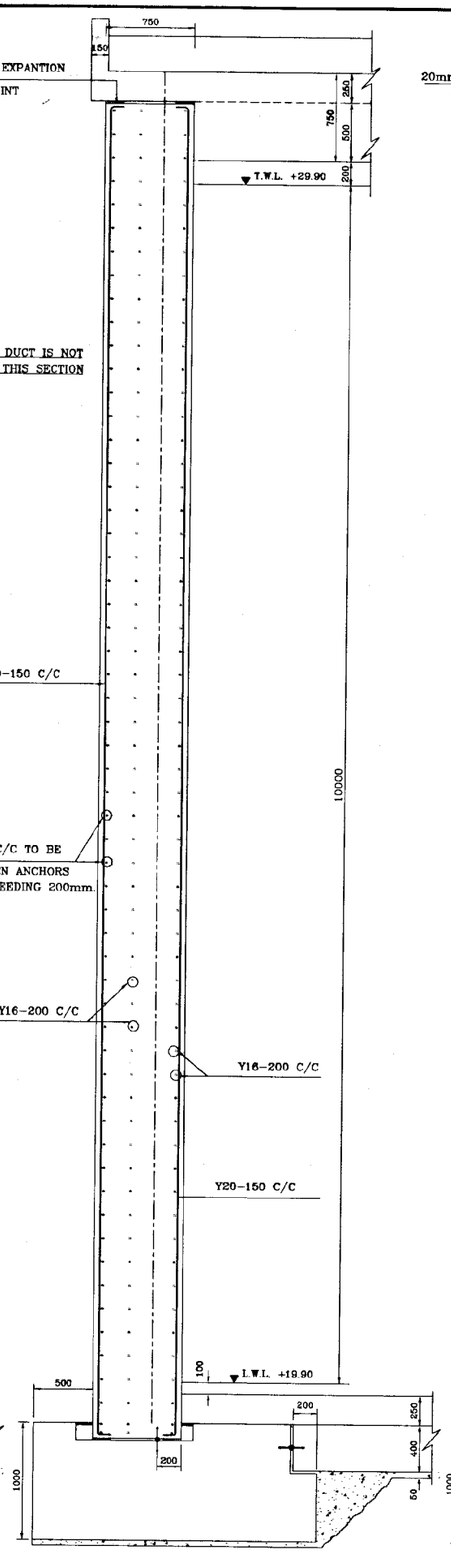
TITLE: NEW RESERVOIR
R/F DETAILS OF FOUNDATIONS
-BASE SLAB

DESIGNED	DRAWN: RUKMANI	DATE: JAN 2001
CHECKED	PM (NRW&SAPS) NWSDB	CONTRACT No: NRW/CW
DY. TEAMLEADER	ADM(PMD) NWSDB	DRG No: MK/GR/ST-04
TEAMLEADER	DGM(PMD) NWSDB	



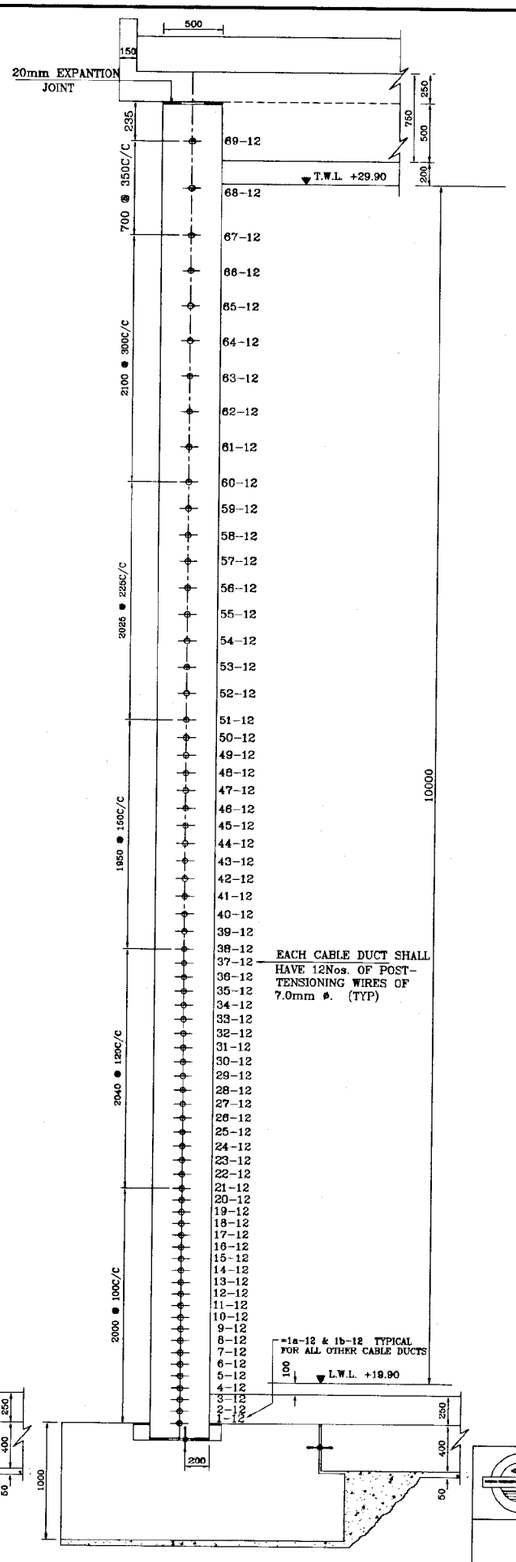
4 ST-06 SECTION
SCALE:- 1:25

REINFORCEMENT DETAIL OF WALL



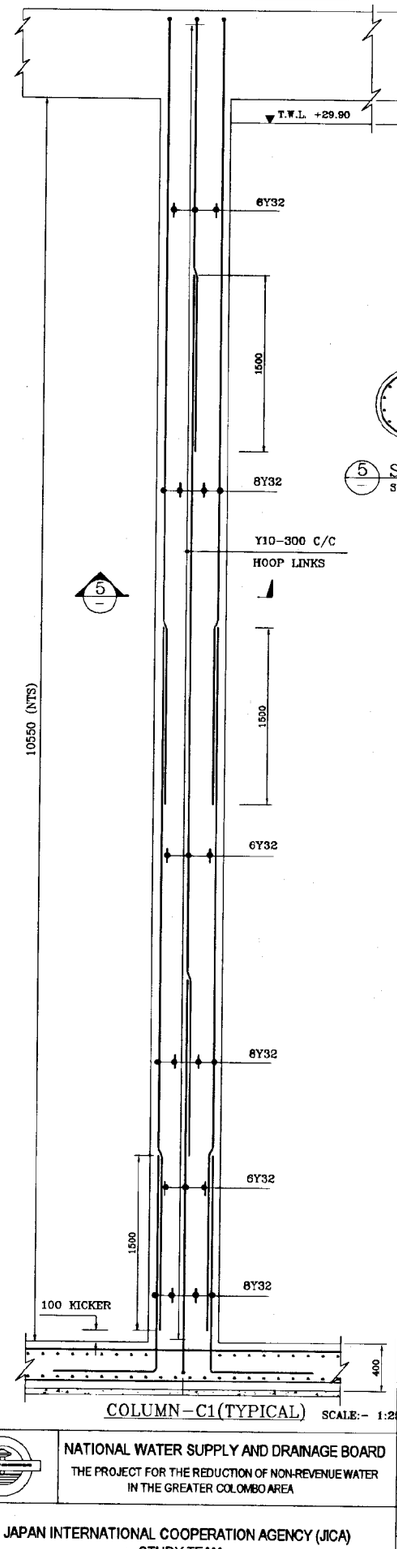
3 ST-06 SECTION
SCALE:- 1:25

REINFORCEMENT DETAIL OF THRO COUNTERFORTS

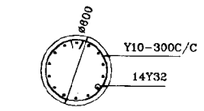


4 ST-06 SECTION
SCALE:- 1:25

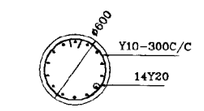
POSITION OF CABEL DUCTS



COLUMN-C1(TYPICAL) SCALE:- 1:25



5 SECTION
SCALE:- 1:25



COLUMN-C2
SCALE:- 1:25

NOTE:- ELEVATION SIMILAR TO C1

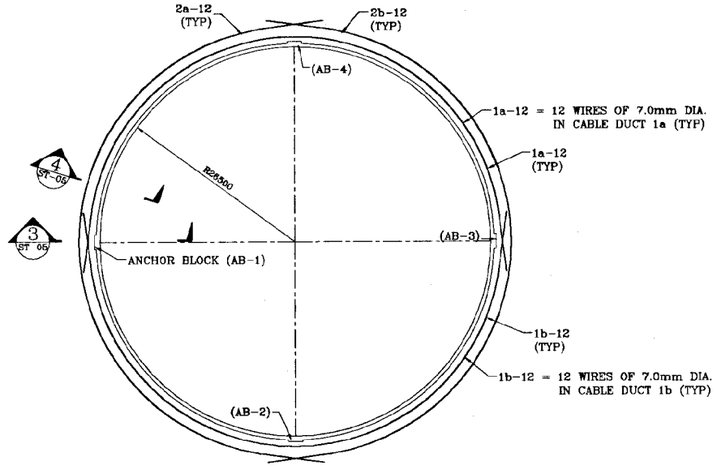
DO NOT SCALE

REV	DESCRIPTION

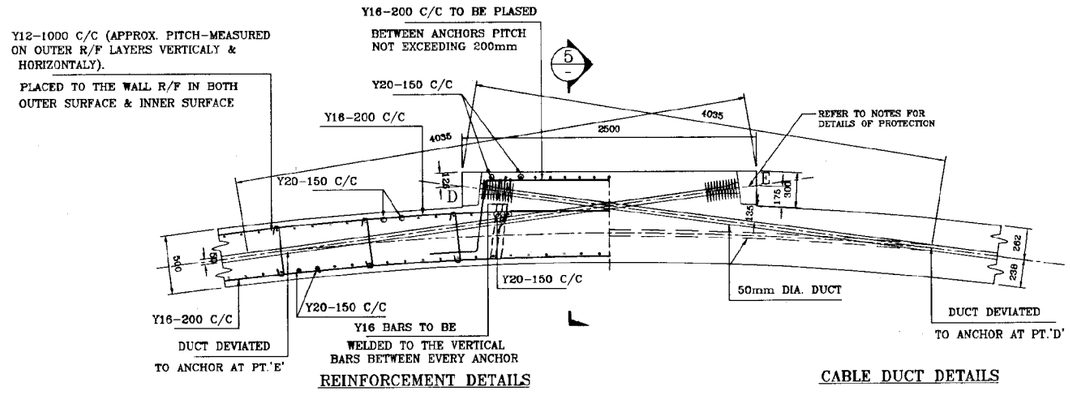
NATIONAL WATER SUPPLY AND DRAINAGE BOARD
THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STUDY TEAM
NIHON SUIDO CONSULTANTS CO. LTD., TOKYO, JAPAN

SUB PROJECT: MALIGAKANDA	TITLE: NEW RESERVOIR R/F DETAILS OF WALLS & COLUMNS	
DESIGNED	DRAWN: ANOMA	DATE: JAN 2001
CHECKED	PM (NRW&PSI, NWSDB)	CONTRACT No: NRW/CW
DY TEAM LEADER	ASM(P&D) NWSDB	DRG No: MK/GR/ST-05
TEAM LEADER	DGM(P&D) NWSDB	



PLAN SECTION
THRO WALL
TYPICAL CABLE DUCT LAYOUT
SCALE:- 1:400



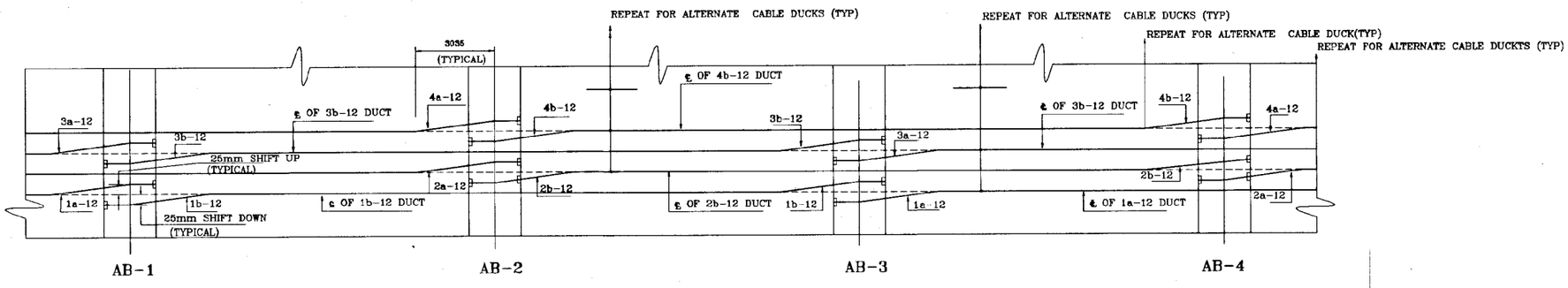
REINFORCEMENT DETAILS

CABLE DUCT DETAILS

DETAILS OF ANCHORS (TYPICAL)
SCALE:- 1:25

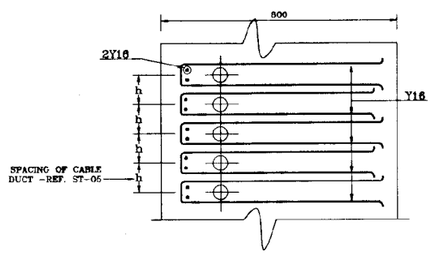
DETAILS OF ANCHORING (EXAMPLE) TABLE-1

CABLE DUCT	ANCHORED AT	PASSING THRO'	ANCHORED AT
1a-12	3	4	1
1b-12	1	2	3
2a-12	4	1	2
2b-12	2	3	4
- - -			



FOLD-OUT ELEVATION OF CABLE DUCTS

(NOT TO SCALE)



5 SECTION
SCALE:- 1:10

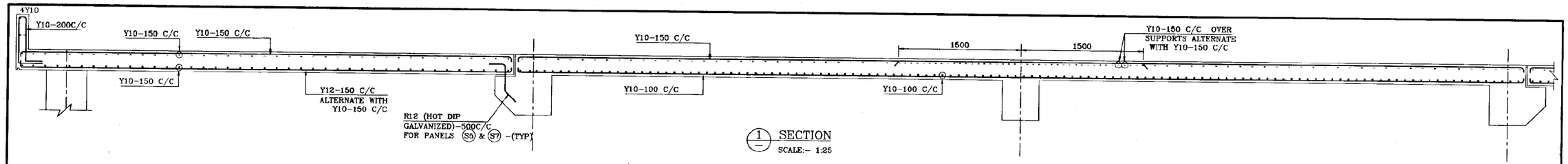
DO NOT SCALE

REV.	DESCRIPTION

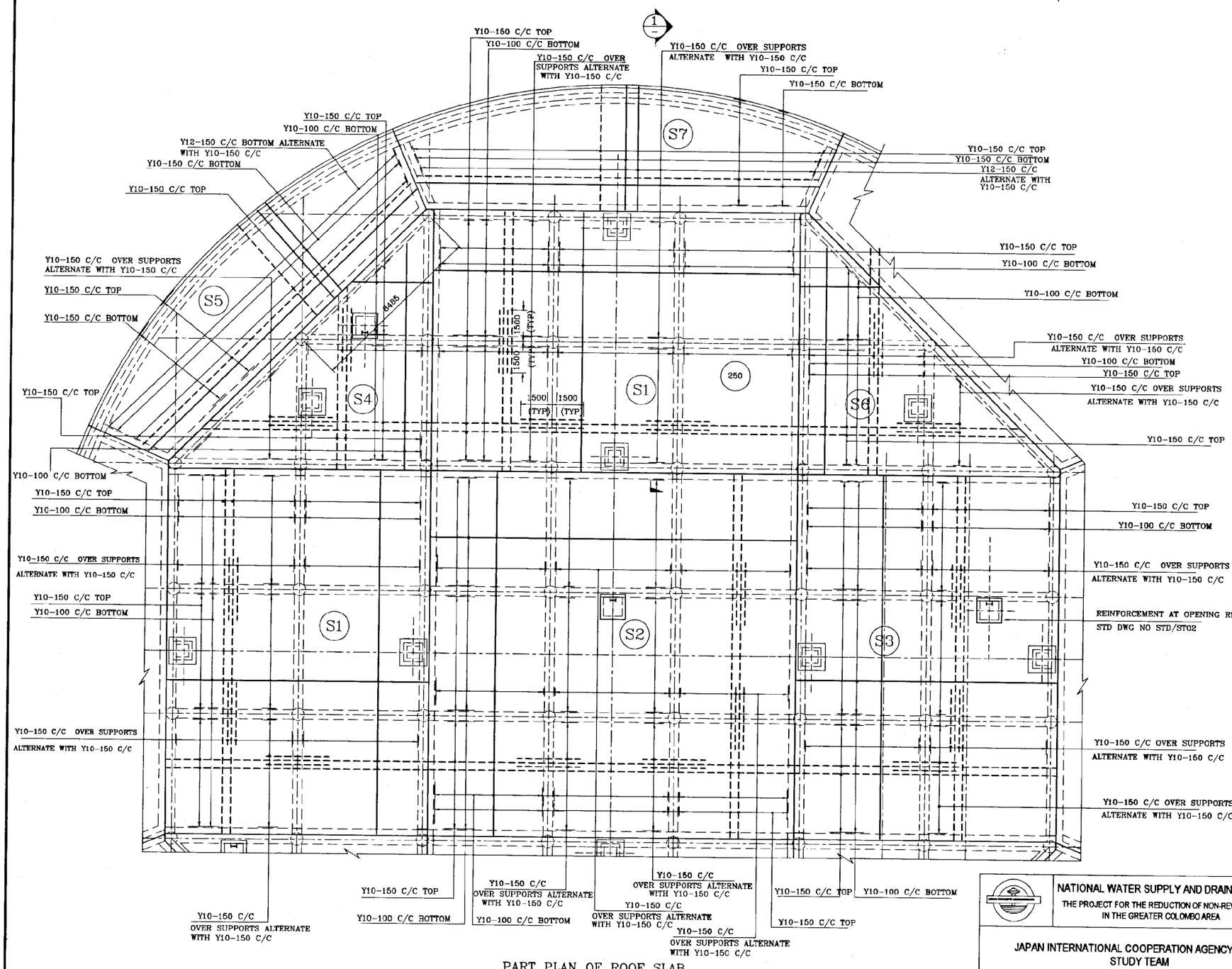
NATIONAL WATER SUPPLY AND DRAINAGE BOARD
THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STUDY TEAM
NIHON SUIDO CONSULTANTS CO. LTD., TOKYO, JAPAN

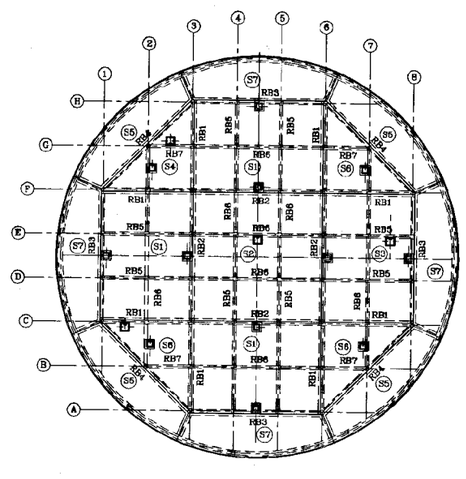
SUB PROJECT: MALIGAKANDA	TITLE: NEW RESERVOIR R/F DETAILS OF WALLS & ANCHORS.		
DESIGNED	DRAWN: ANOMA	DATE: JAN 2001	
CHECKED	PM (NRW/SIP/S) NWSDB	CONTRACT No: NRW/CW	
DY. TEAM LEADER	AGM(P&D) NWSDB	DRG. No: MK/GR/ST-06	
TEAM LEADER	DGM(P&D) NWSDB		



1 SECTION
SCALE:- 1:25



PART PLAN OF ROOF SLAB
SCALE:- 1:100



ROOF KEY PLAN
SCALE:- 1:400

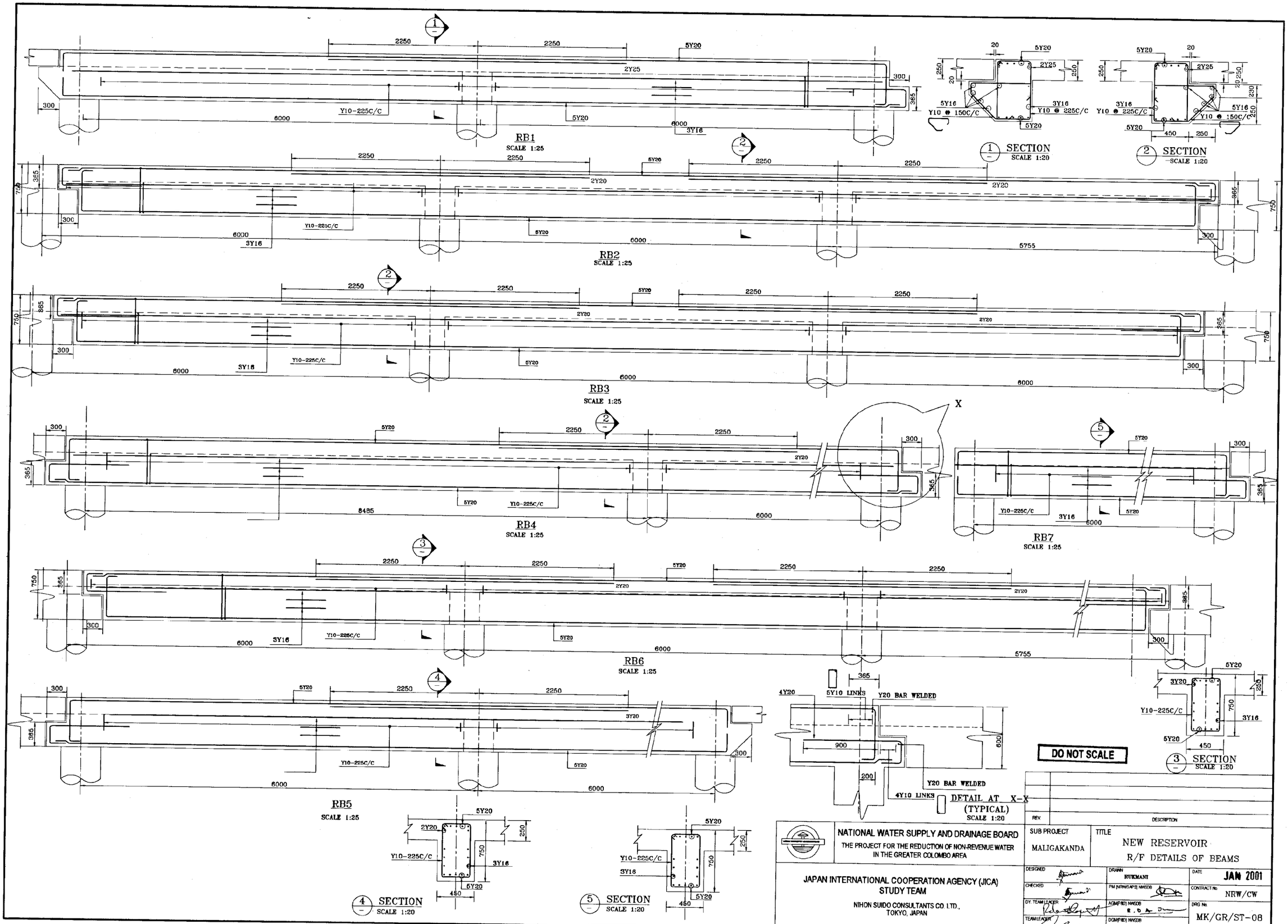
DO NOT SCALE

REV.	DESCRIPTION

NATIONAL WATER SUPPLY AND DRAINAGE BOARD
THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STUDY TEAM
NIHON SUIDO CONSULTANTS CO. LTD., TOKYO, JAPAN

SUB PROJECT: MALIGAKANDA	TITLE: NEW RESERVOIR R/F DETAILS OF COVER SLAB		
DESIGNED	DRAWN: ANOMA	DATE: JAN 2001	
CHECKED	PM (NRW&SAPS) NWSDB	CONTRACT No. NRW/CW	
DY. TEAMLEADER	AGM(PHD) NWSDB	DRG No. MK/GR/ST-07	
TEAMLEADER	DGM(PHD) NWSDB		



NATIONAL WATER SUPPLY AND DRAINAGE BOARD

THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STUDY TEAM

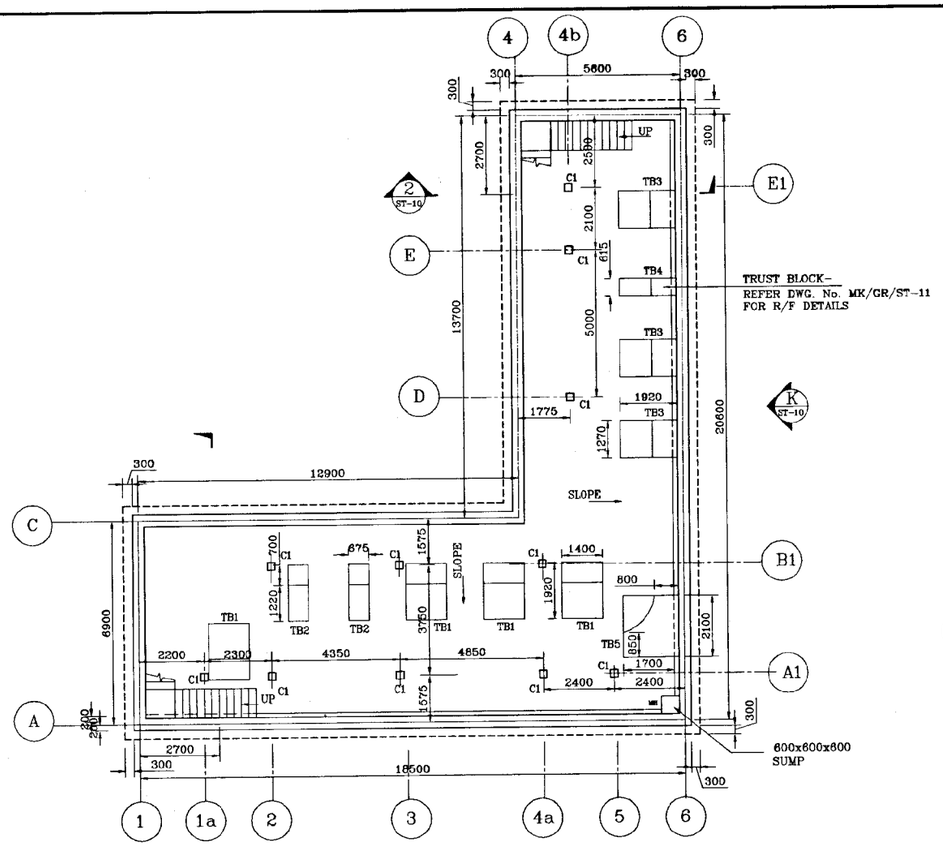
NIHON SUIDO CONSULTANTS CO. LTD., TOKYO, JAPAN

REV.	DESCRIPTION

SUB PROJECT: MALIGAKANDA

TITLE: NEW RESERVOIR
R/F DETAILS OF BEAMS

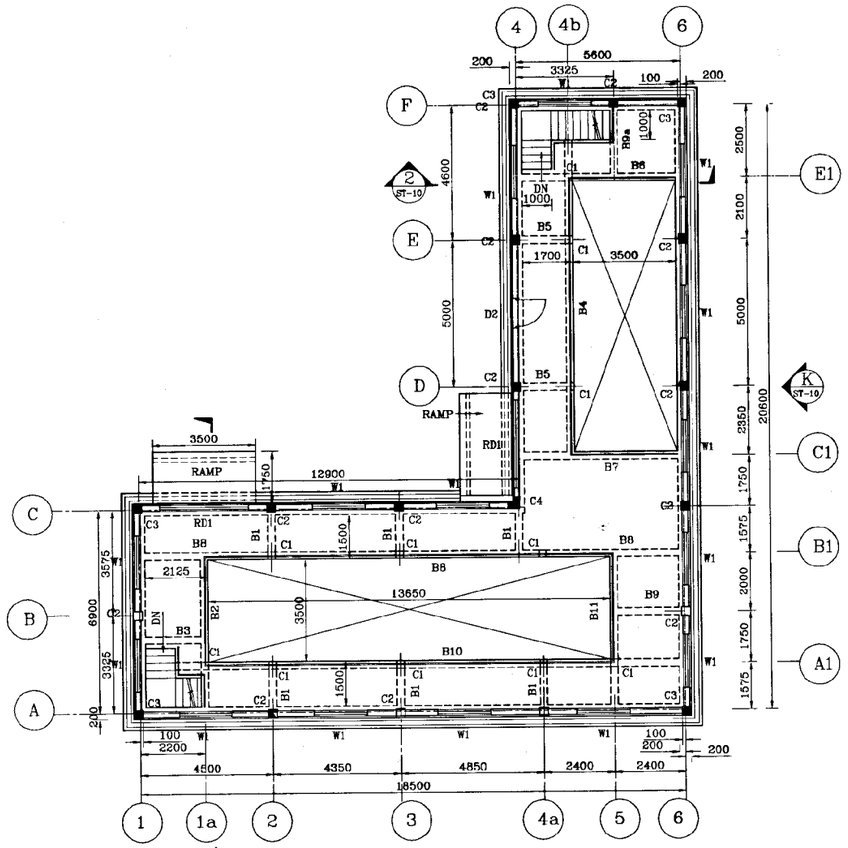
DESIGNED	DRAWN: RUKMANI	DATE: JAN 2001
CHECKED	PM (NRW&AP(S) NWSDB	CONTRACT No: NRW/CW
DY. TEAM LEADER	AGM(P&D) NWSDB	DRG No: MK/GR/ST-08
TEAM LEADER	DGM(P&D) NWSDB	



BASE PLAN +17.50

(REF. DWG. NO. GR-YP-03 FOR PIPE ENTRY & EXIT POSITIONS-TYP)

SCALE - 1 : 100

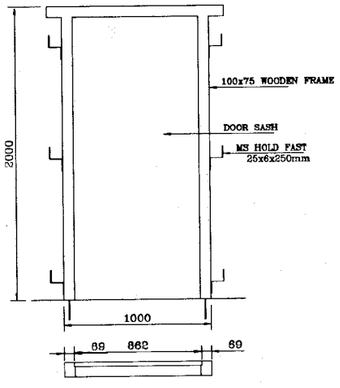


PLAN AT +20.70

SCALE - 1 : 100

C1	250x250
C2	300x300
C3	300x300
C4	200 / 200 / 300 / 300

B1	250x250
B2	250x450
B3	250x250
B4	250x450
B5	250x250
B6	250x450
B7	250x450
B8	250x450
B9	250x250
B9a	250x250
B10	250x450
B11	250x450

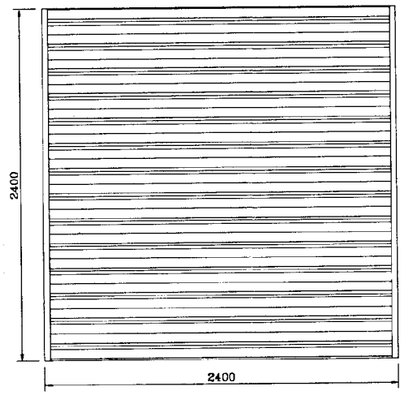


D2–1NO.

(D2) [PUMP HOUSES]

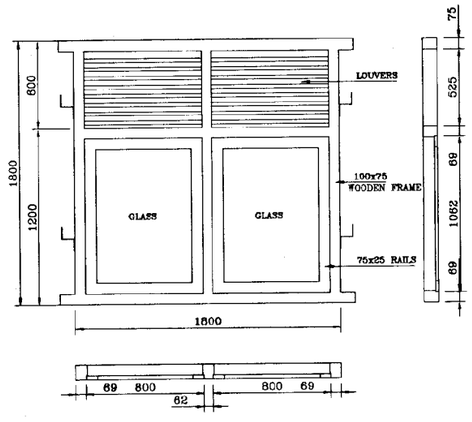
1000x2000 WOODEN DOOR

3 Nos. BUTT HINGES
1 No. MORTICE LOCK
1 No. TOWER BOLT



RD1–2NOs.

RD1– ROLLER SHUTTER DOOR
W x H
RD1– 3000x3000 [CLEAR OPENING]



W1–15NOs.

(W1) [PUMP HOUSES]

1800x1800

2 PAIRS OF BUTT HINGES
2 Nos. CASEMENT STAYS
2 Nos. CASEMENT FASTENERS
2 Nos. SASH RINGS

DO NOT SCALE

REV.	DESCRIPTION

NATIONAL WATER SUPPLY AND DRAINAGE BOARD

THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

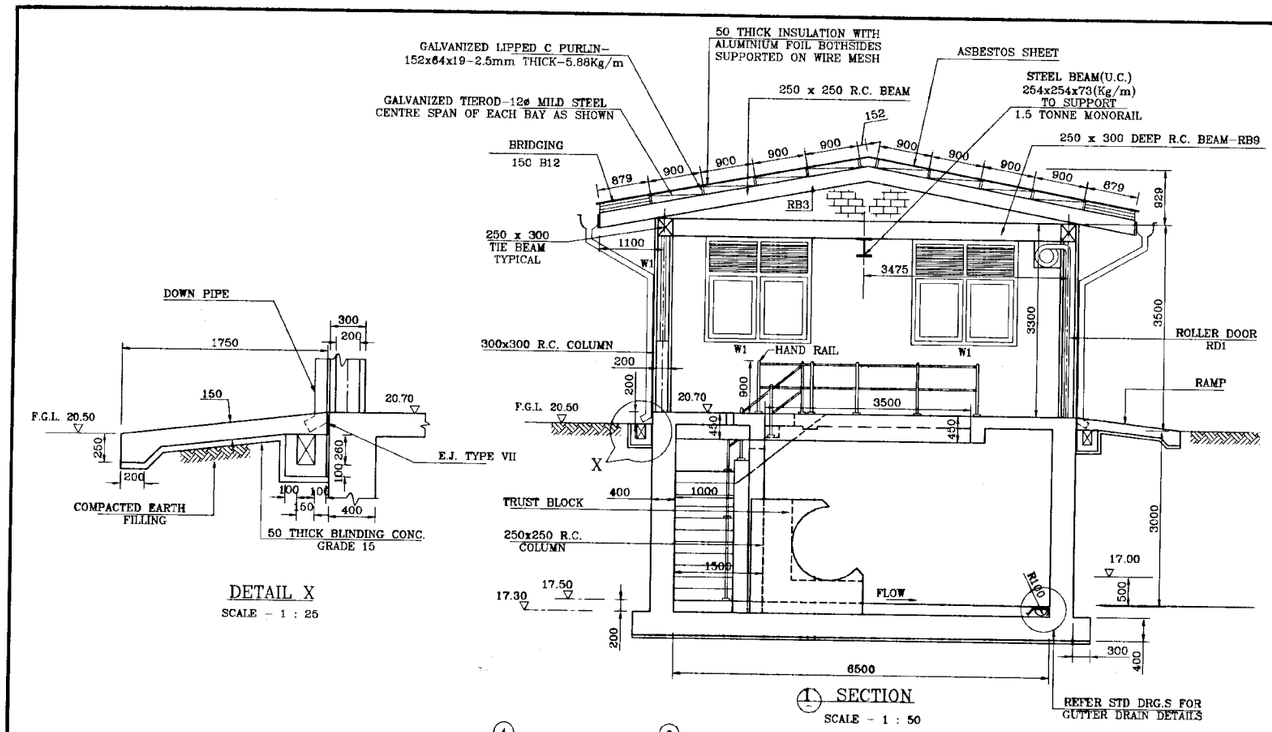
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STUDY TEAM

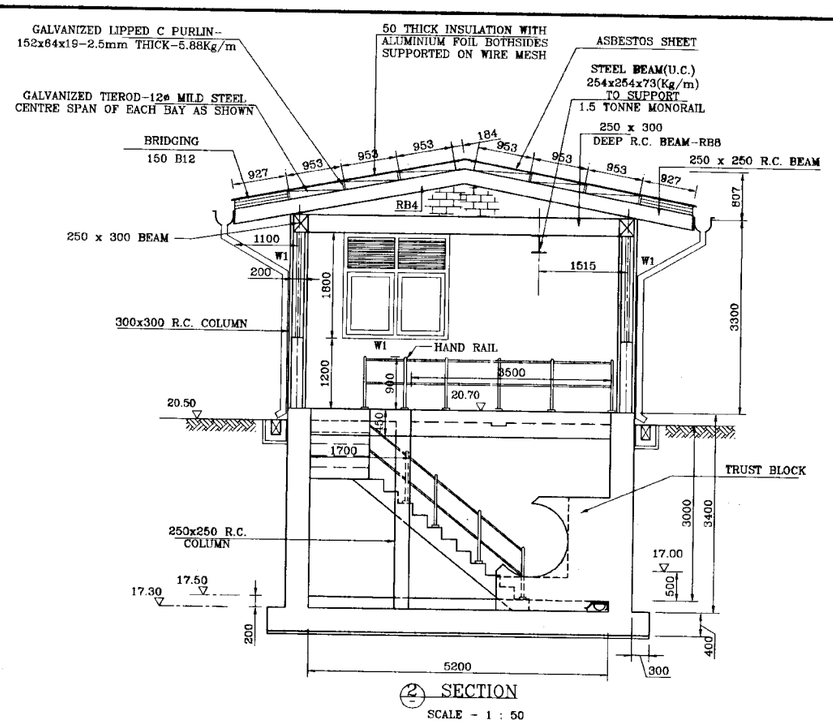
NIHON SUIDO CONSULTANTS CO. LTD.,
TOKYO, JAPAN

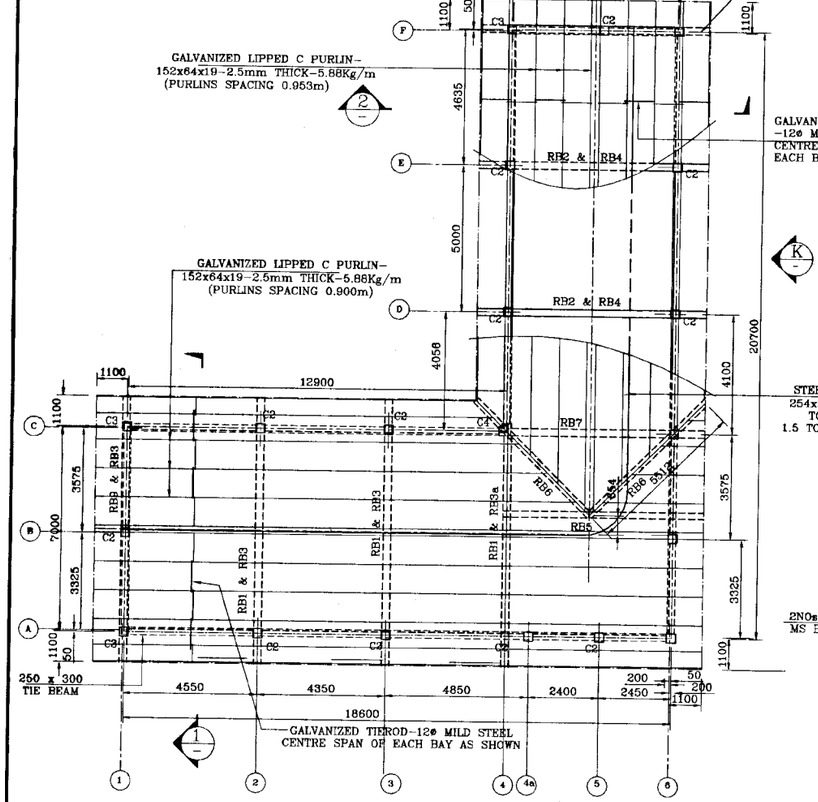
SUB PROJECT: MALIGAKANDA

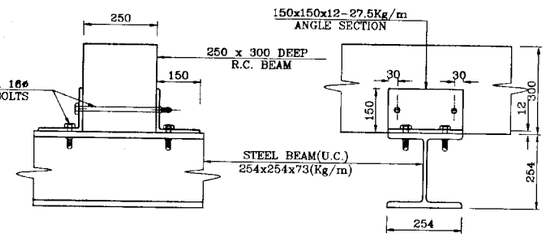
TITLE: NEW RESERVOIR VALVE HOUSE BASE PLAN, FLOOR PLAN & DOORS & WINDOW DETAILS

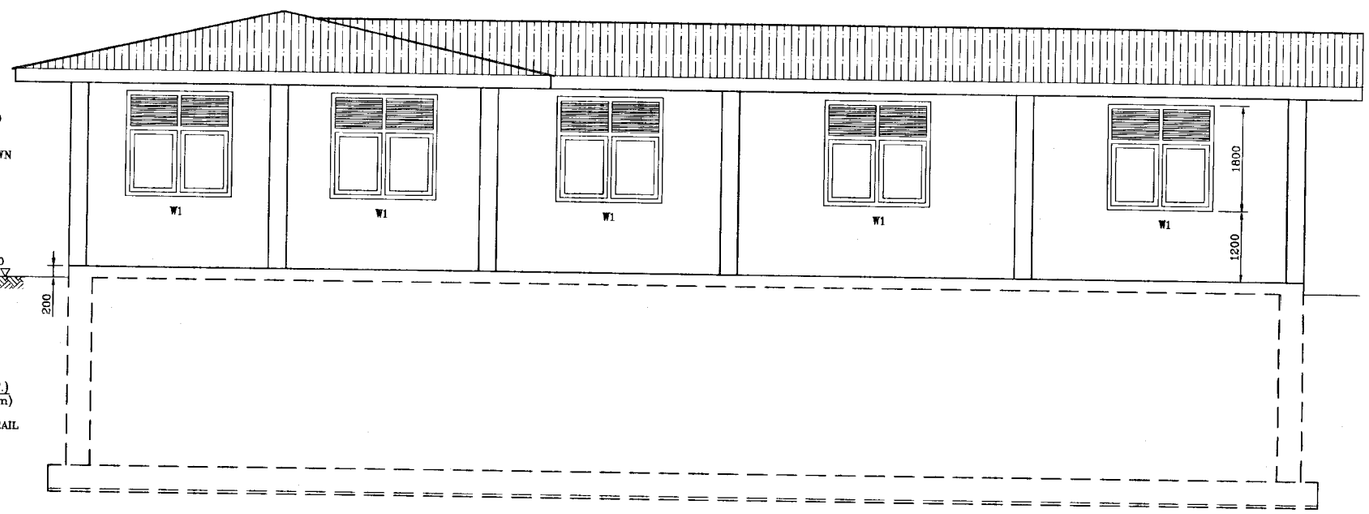
DESIGNED	DRAWN: ANOMA	DATE: JAN 2001
CHECKED	PM (NRW&AFS) NWSDB	CONTRACT No: NRW/CW
DY. TEAM LEADER	AGM(P&D) NWSDB	DRG No: MK/GR/ST-09
TEAM LEADER	DGM(P&D) NWSDB	











DO NOT SCALE

REV.	DESCRIPTION

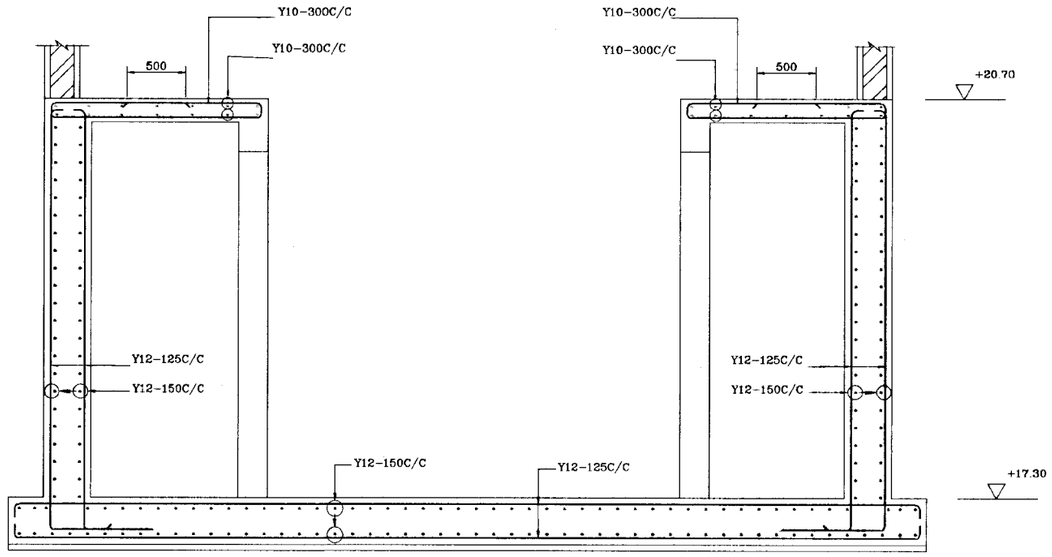
NATIONAL WATER SUPPLY AND DRAINAGE BOARD
THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STUDY TEAM
NIHON SUIDO CONSULTANTS CO. LTD.,
TOKYO, JAPAN

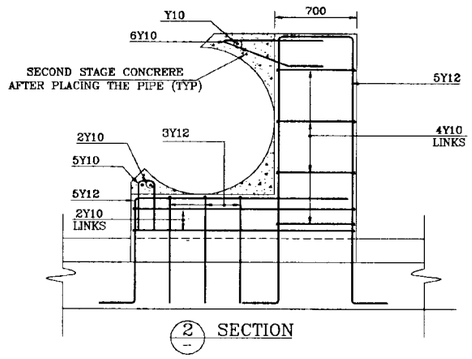
SUB PROJECT: MALIGAKANDA

TITLE: NEW RESERVOIR VALVE HOUSE ROOF PLAN, SECTIONS & ELEVATION

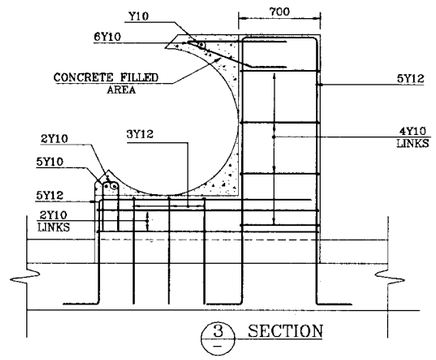
DESIGNED	DRAWN: ARYAMA	DATE: JAN 2001
CHECKED	PM (NRW&WAPS) NWSDB	CONTRACT No: NRW/CW
DY. TEAM LEADER	AGM(P&D) NWSDB	DRG. No: MK/GR/ST–10
TEAM LEADER	DGM(P&D) NWSDB	



1 SECTION
SCALE:- 1:25



2 SECTION



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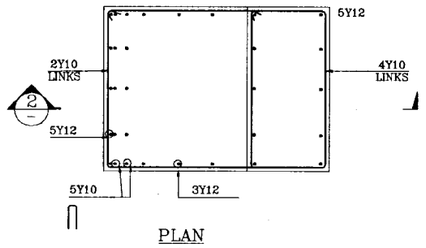
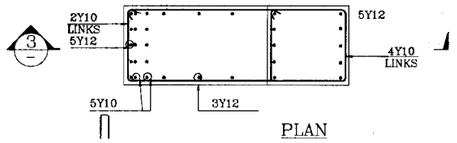
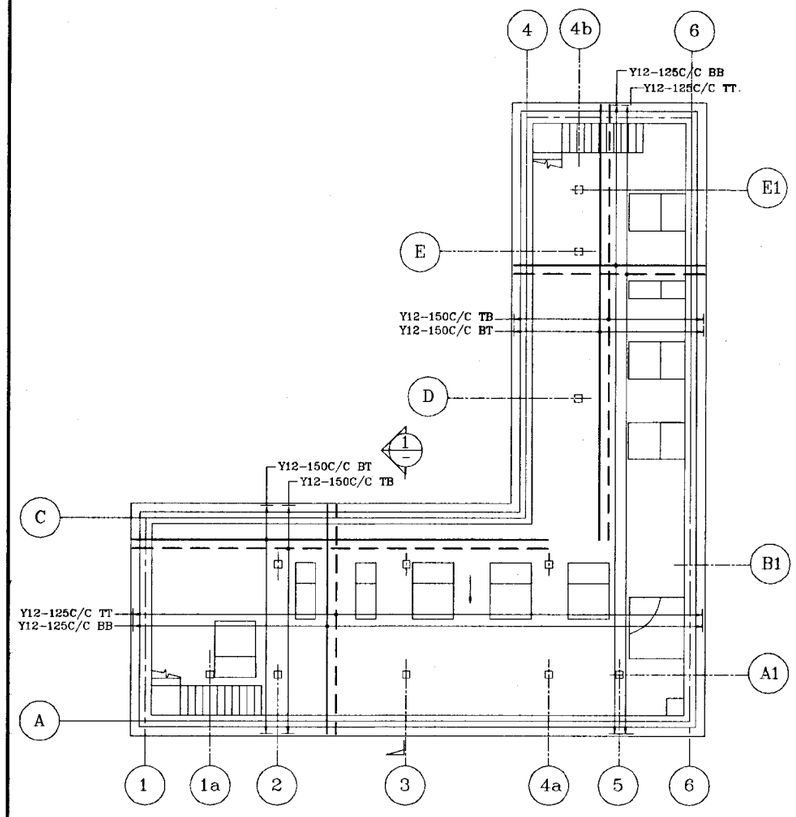


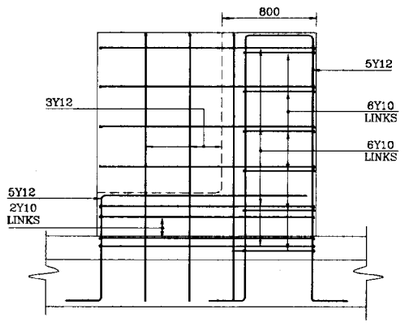
PLAN
TB1
SCALE – 1 : 25



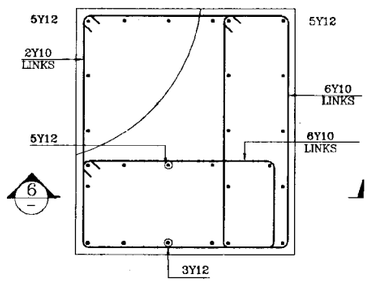
PLAN
TB2
SCALE – 1 : 25



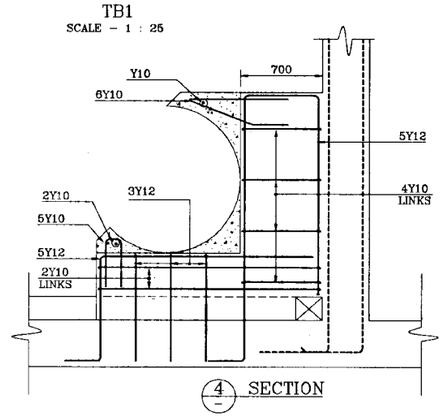
R/F DETAILS OF BASE SLAB AT +17.30
SCALE – 1 :100



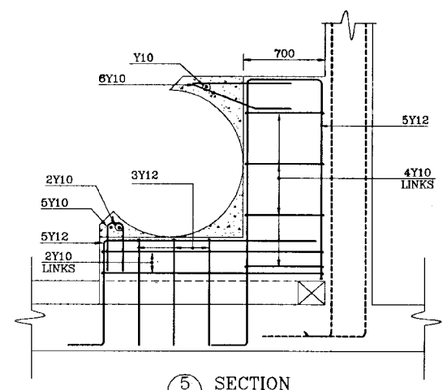
6 SECTION



PLAN
TB5
SCALE – 1 : 25



4 SECTION



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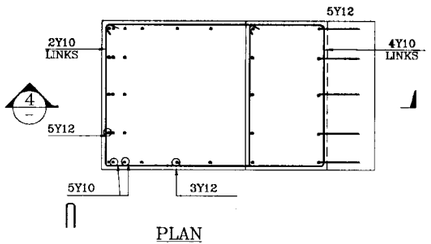
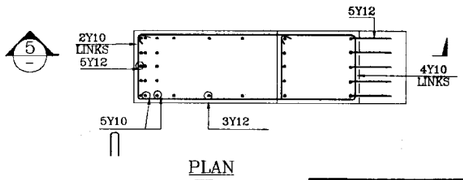


PLAN
TB3
SCALE – 1 : 25



PLAN
TB4
SCALE – 1 : 25

DO NOT SCALE

REV.	DESCRIPTION

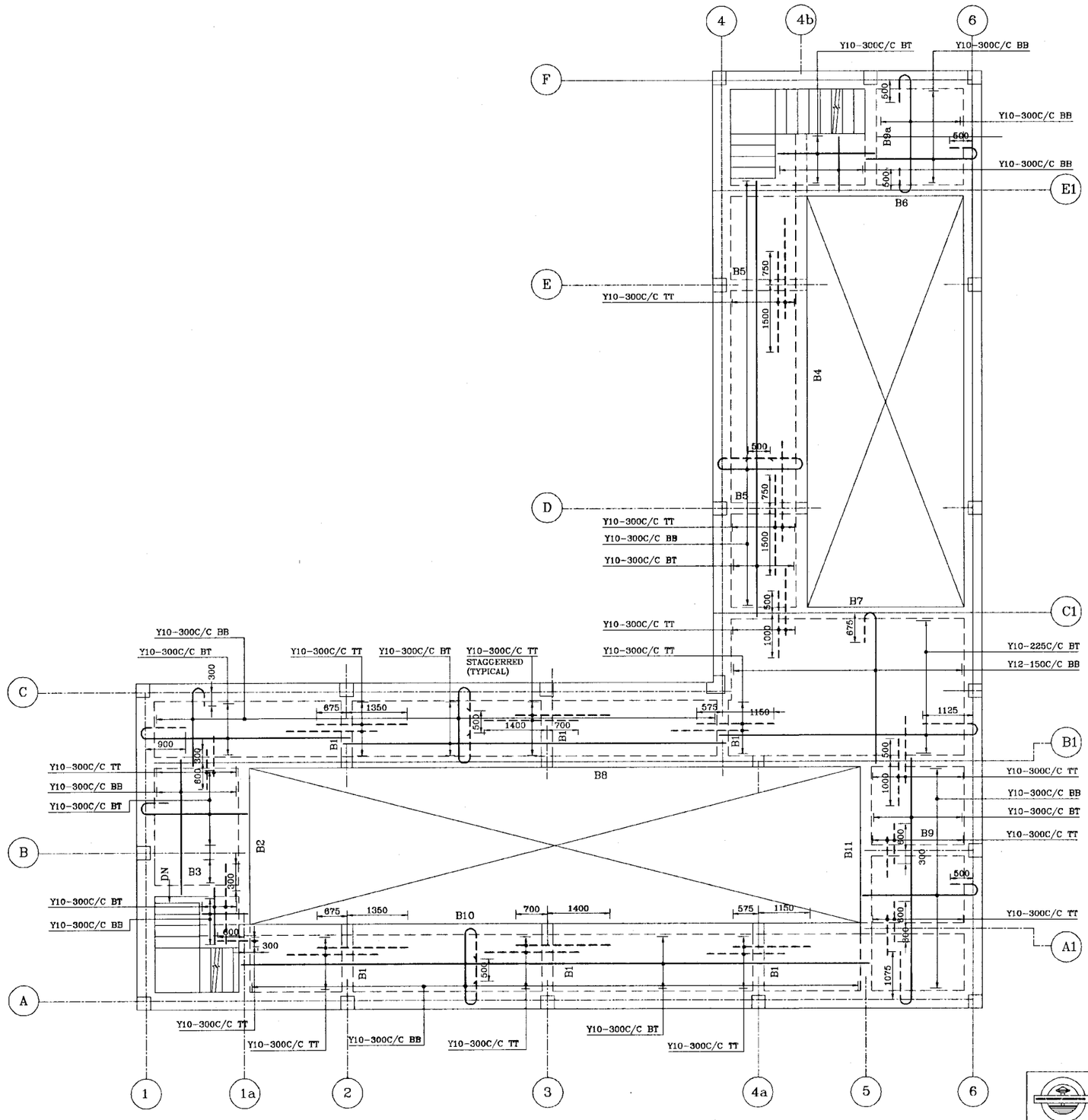
NATIONAL WATER SUPPLY AND DRAINAGE BOARD
THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

SUB PROJECT: MALIGAKANDA

TITLE: NEW RESERVOIR VALVE HOUSE R/F DETAILS FOR BASE SLAB & SECTIONS

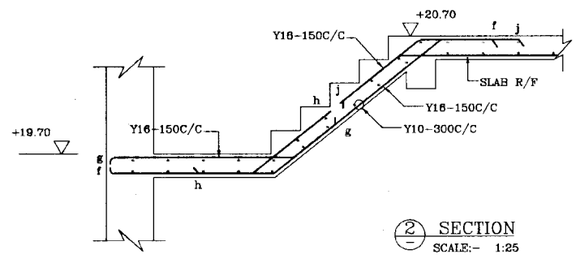
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STUDY TEAM
NIHON SUIDO CONSULTANTS CO. LTD., TOKYO, JAPAN

DESIGNED	DRAWN	DATE	JAN 2001
CHECKED	PM (NRW&SAPS) NWSDB	CONTRACT No.	NRW/CW
DY. TEAMLEADER	AGM(P&D) NWSDB	DRG No.	MK/GR/ST-11
TEAM LEADER	DGM(P&D) NWSDB		



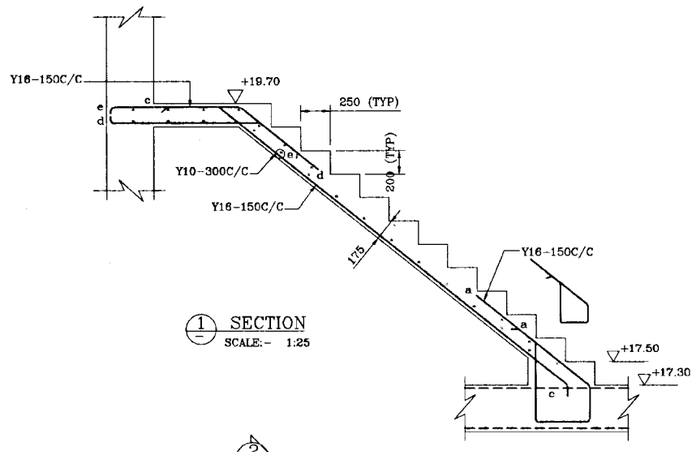
R/F DETAILS AT +20.70 LEVEL

SCALE - 1 : 50



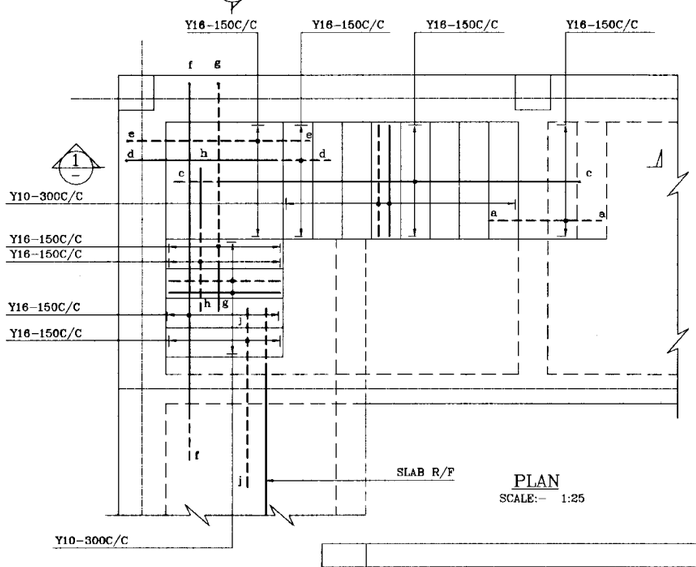
2 SECTION

SCALE:- 1:25



1 SECTION

SCALE:- 1:25



PLAN

SCALE:- 1:25

DO NOT SCALE

REV.	DESCRIPTION

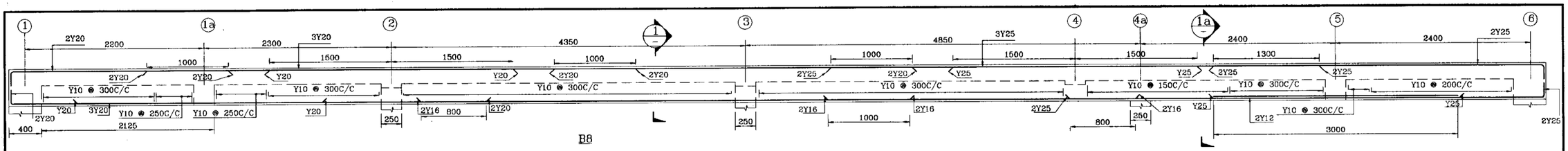
NATIONAL WATER SUPPLY AND DRAINAGE BOARD

THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STUDY TEAM

NIHON SUIDO CONSULTANTS CO. LTD.,
TOKYO, JAPAN

SUB PROJECT: MALIGAKANDA	TITLE: NEW RESERVOIR VALVE HOUSE R/F DETAILS AT FLOOR SLAB (+20.70 LEVEL) & STAIR CASE	
DESIGNED	DRAWN: RUSHANI	DATE: JAN 2001
CHECKED	PM (NRW&SAPS) NWSDB	CONTRACT No.: NRW/CW
DY. TEAM LEADER	ASM(P&D) NWSDB	DRG. No.: MK/GR/ST-12
TEAM LEADER	DGM(P&D) NWSDB	



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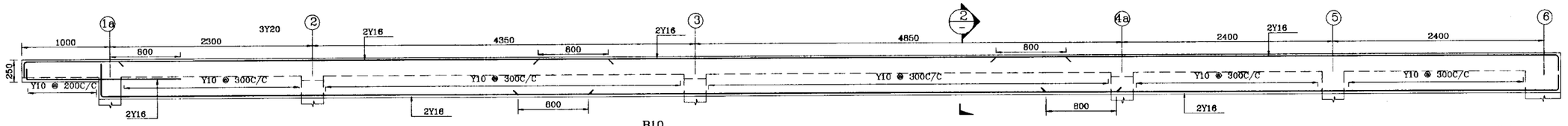
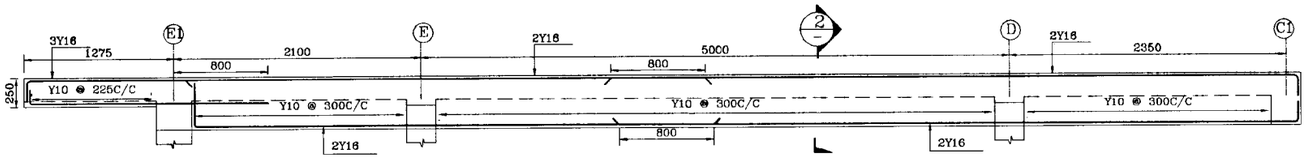
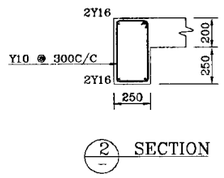


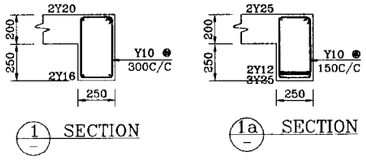
B10



B4

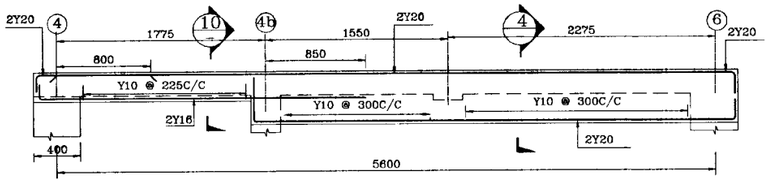


2 SECTION

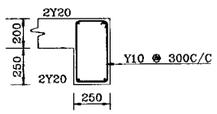


1 SECTION

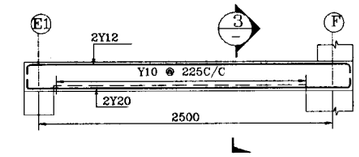
1a SECTION



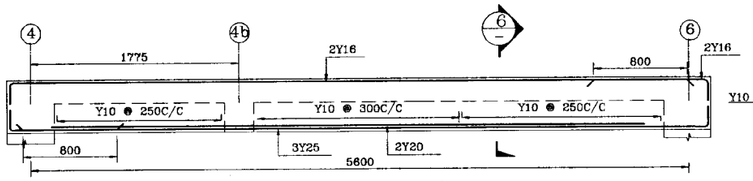
B6



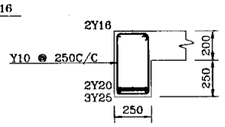
4 SECTION



B9a



B7



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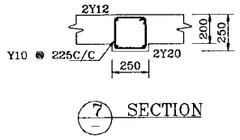
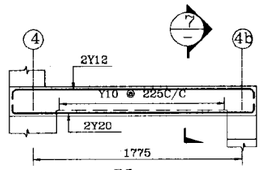
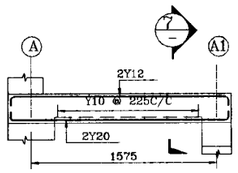


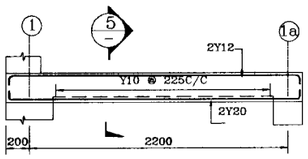
7 SECTION



B5



B1



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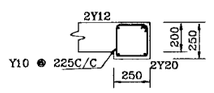

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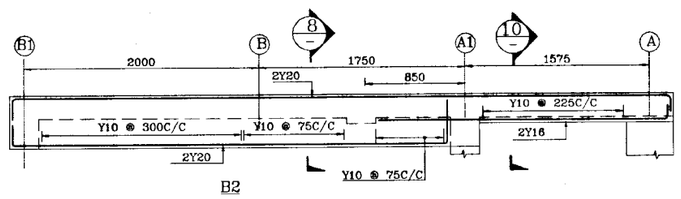

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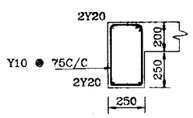
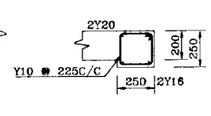


8 SECTION



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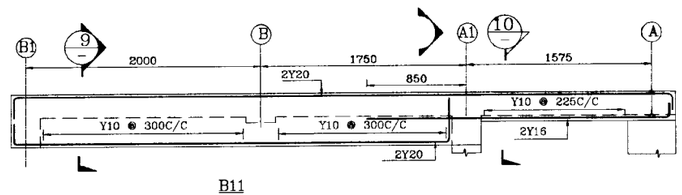

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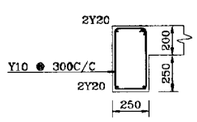


9 SECTION

DO NOT SCALE

REV.	DESCRIPTION

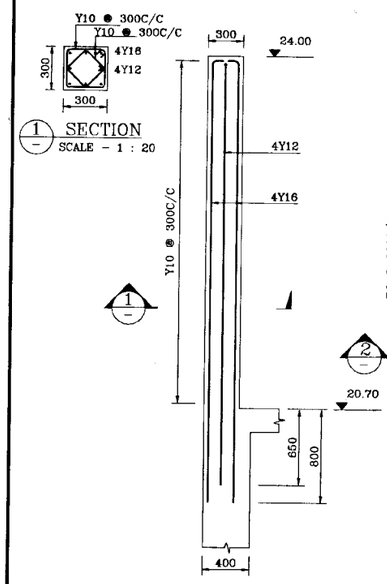
NATIONAL WATER SUPPLY AND DRAINAGE BOARD
THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STUDY TEAM
NIHON SUIDO CONSULTANTS CO. LTD.,
TOKYO, JAPAN

SUB PROJECT: MALIGAKANDA

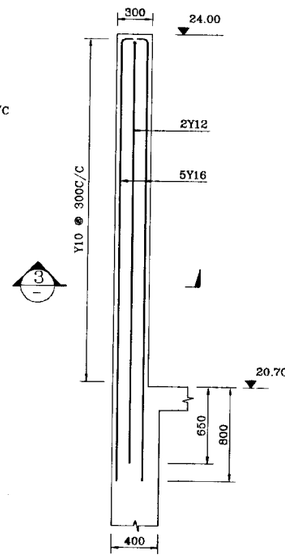
TITLE: NEW RESERVOIR VALVE HOUSE R/F DETAILS OF BEAMS

DESIGNED	DRAWN: ANOMA	DATE: JAN 2001	
CHECKED	PM (NRW&APS) NWSDB	CONTRACT No: NRW/CW	
DY. TEAM LEADER	ASSIP(ED) NWSDB	DRG. No: MK/GR/ST-13	
TEAM LEADER	DGM(P&D) NWSDB		

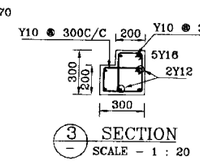


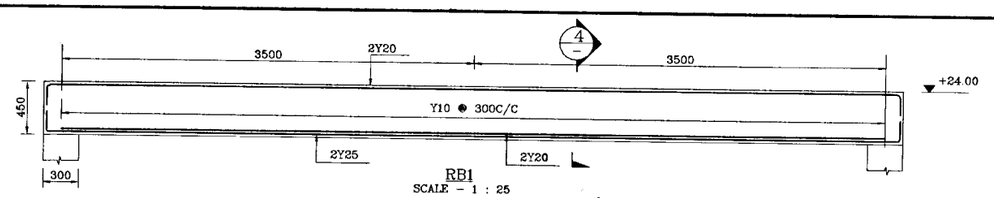
COLUMN C1
SCALE – 1 : 25

COLUMN C2 & C3
SCALE – 1 : 25

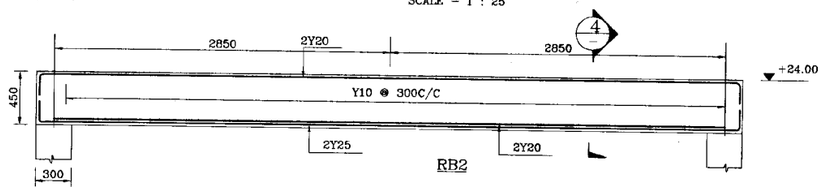


COLUMN C4
SCALE – 1 : 25

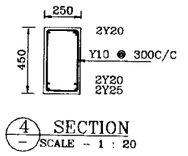




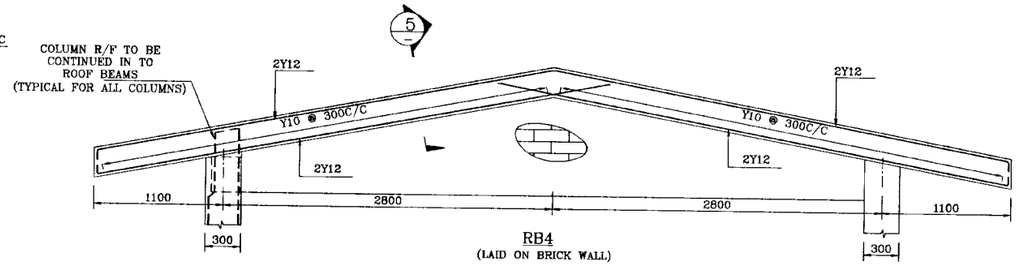
RB1
SCALE – 1 : 25



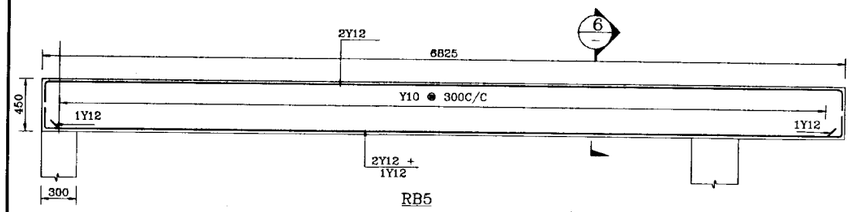
RB2



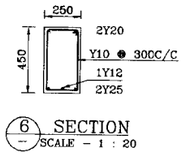
4 SECTION
SCALE – 1 : 20



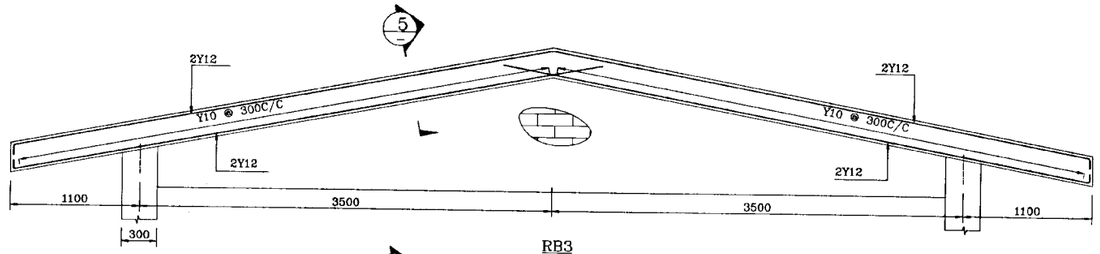
RB4
(LAID ON BRICK WALL)



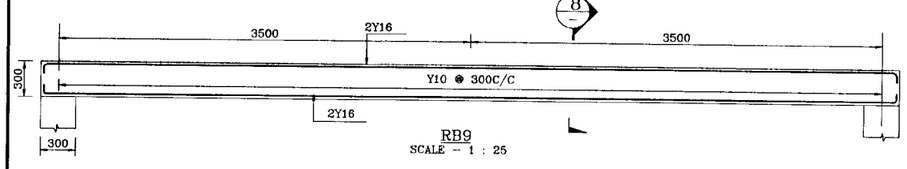
RB5



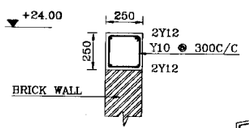
6 SECTION
SCALE – 1 : 20

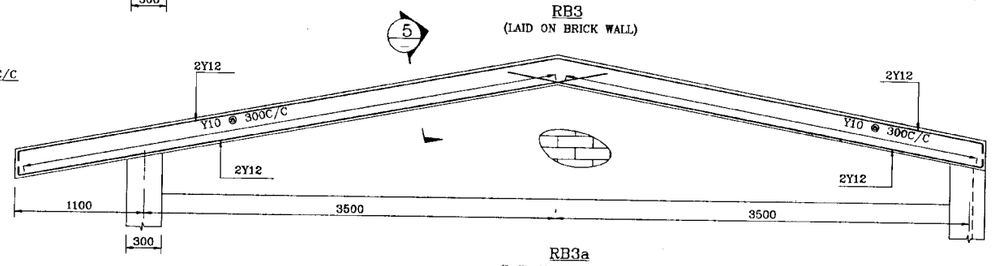


RB3
(LAID ON BRICK WALL)

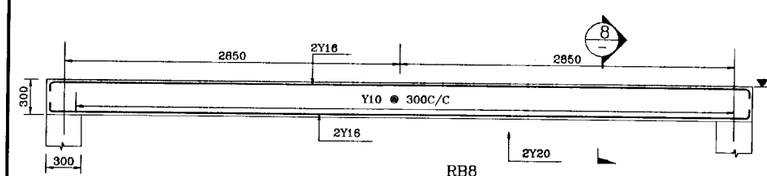


RB9
SCALE – 1 : 25





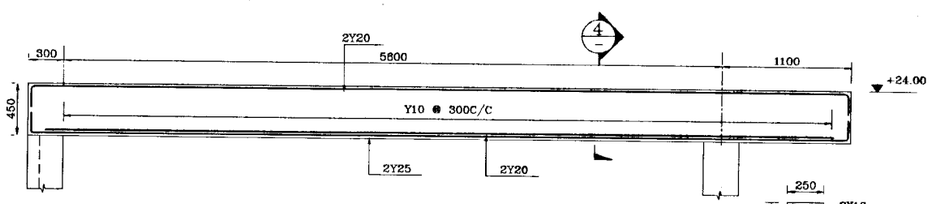
RB3a
(LAID ON BRICK WALL)



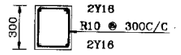
RB8

8 SECTION
SCALE – 1 : 20

5 SECTION
SCALE – 1 : 20

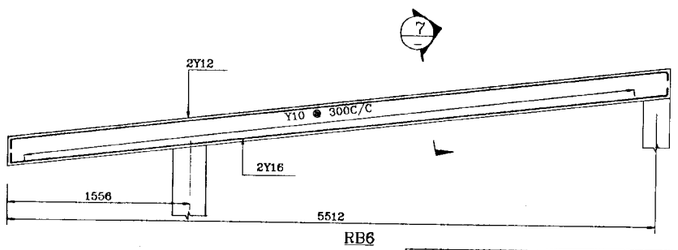


RB7

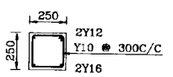


9 SECTION
SCALE – 1 : 20

ROOF TIE BEAM



RB6



7 SECTION
SCALE – 1 : 20

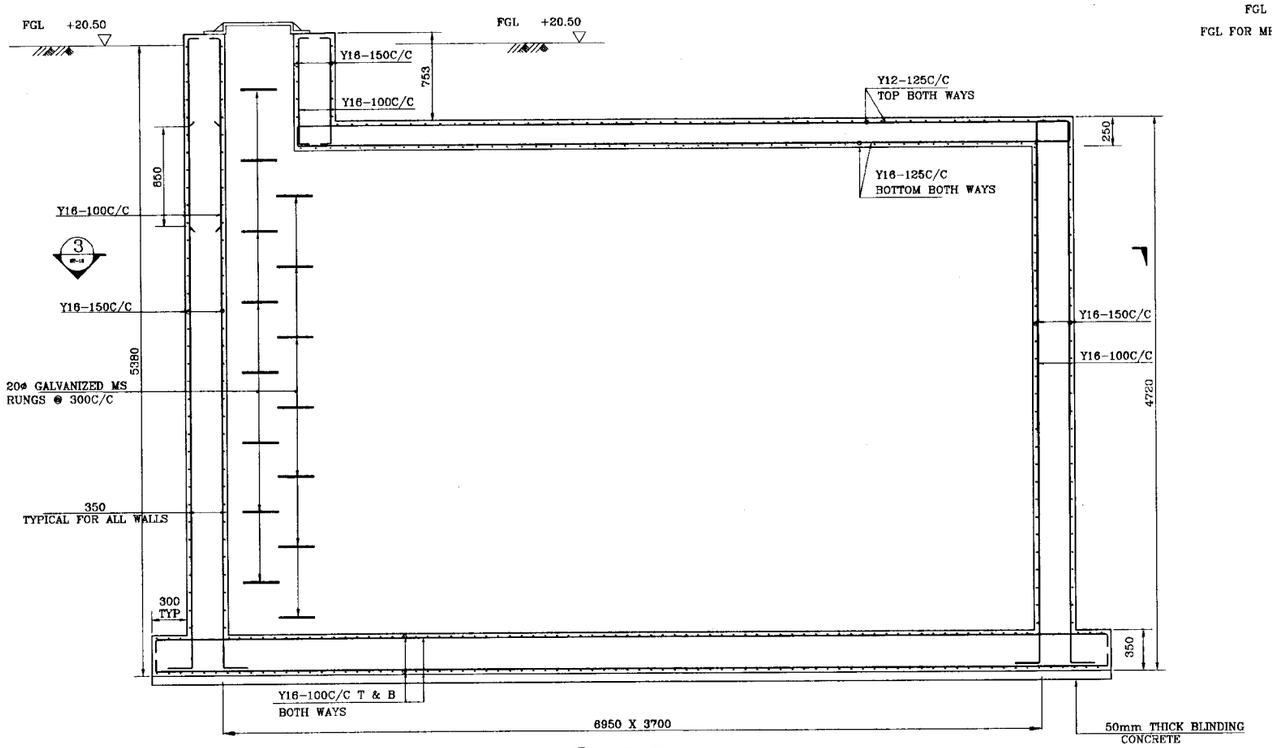
DO NOT SCALE

REV.	DESCRIPTION

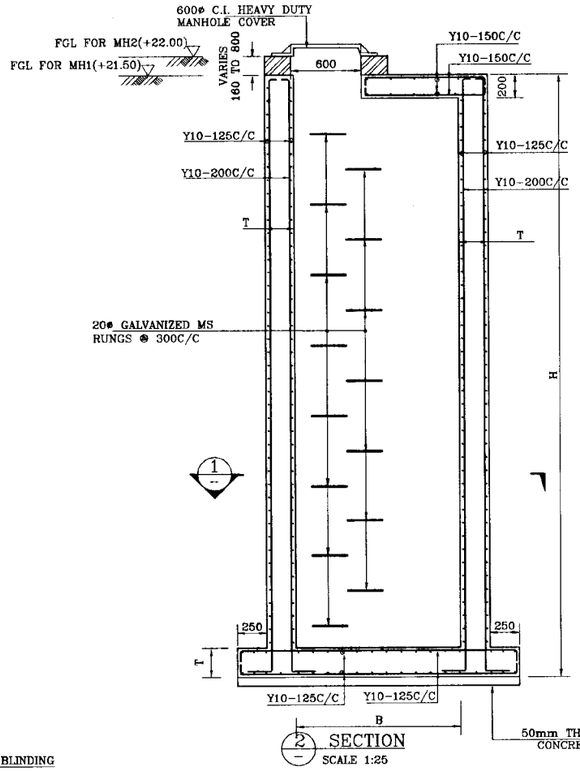
NATIONAL WATER SUPPLY AND DRAINAGE BOARD
THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STUDY TEAM
NIHON SUIDO CONSULTANTS CO. LTD.,
TOKYO, JAPAN

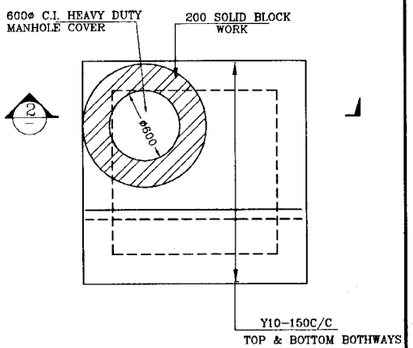
SUB PROJECT: MALIGAKANDA	TITLE: NEW RESERVOIR VALVE HOUSE R/F DETAILS OF COLUMNS & ROOF BEAMS	
DESIGNED	DRAWN: ARYOMA	DATE: JAN 2001
CHECKED	PM (NRW/SAPS) NWSDB	CONTRACT No. NRW/CW
DY. TEAM LEADER	AGM(P&D) NWSDB: R. D A	DRG No. MK/GR/ST-14
TEAM LEADER	DGM(P&D) NWSDB	



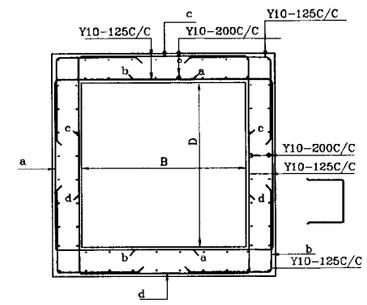
4 SECTION



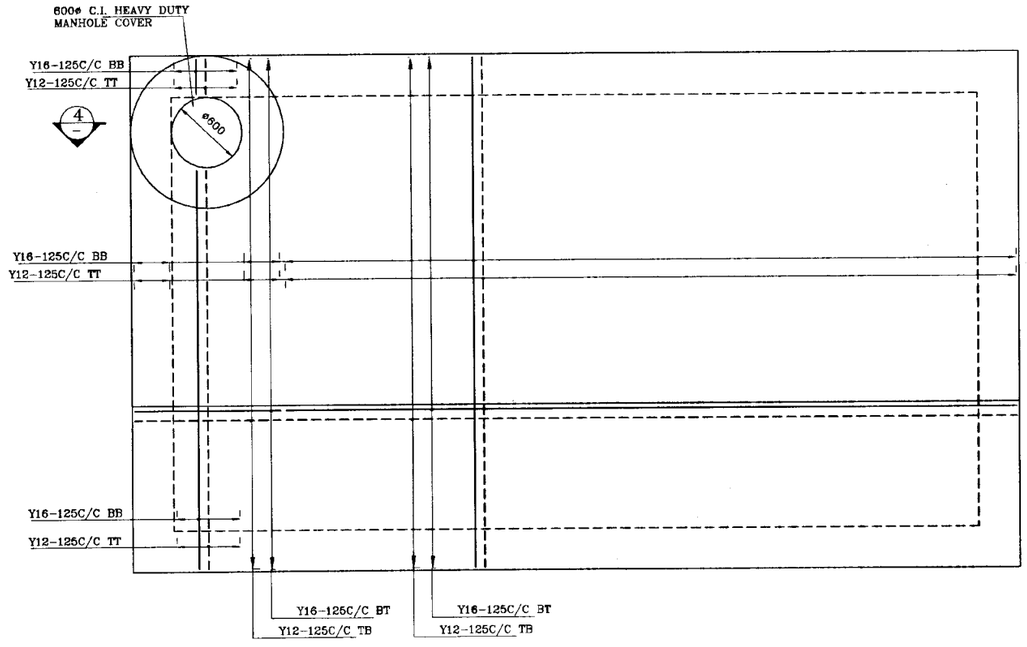
2 SECTION
SCALE 1:25



TOP SLAB



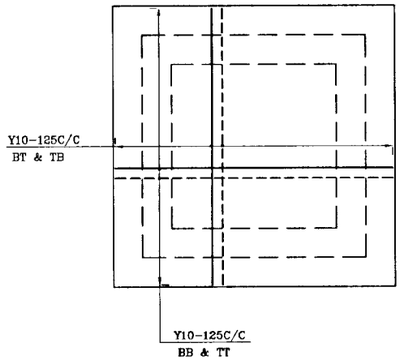
1 SECTION



TOP SLAB

R/F DETAILS OF FLOW METER CHAMBER AT NEW RESERVOIR OUTLET

SCALE 1:25



BASE SLAB

TYPICAL R/F DETAILS FOR INLET VALVE CHAMBER AND DRAINAGE MANHOLE CHAMBER MH1

SCALE 1:25

DESCRIPTION	B	D	H	T
INLET VALVE CHAMBER TO NEW RESERVOIR	1800	1800	5130	250
MH1 (DRAINAGE MH)	1400	2200	4625	275

NOTE

1. REFER TO STANDARD DRAWINGS FOR TYPICAL DETAILS.
2. THIS DRG. IS TO BE READ IN CONJUNCTION WITH DRG. NO. MK/GR/ST-16

DO NOT SCALE

REV.	DESCRIPTION

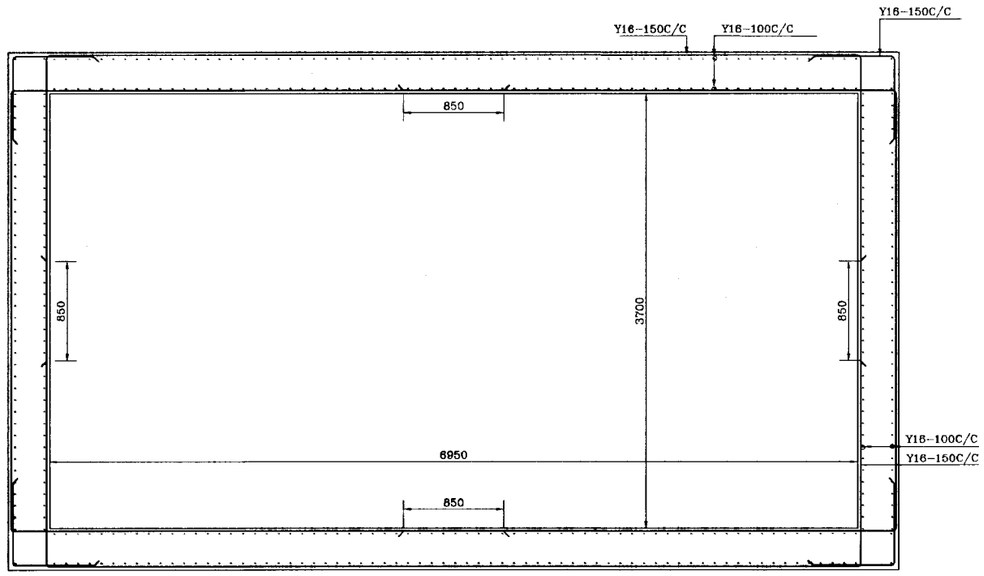
NATIONAL WATER SUPPLY AND DRAINAGE BOARD
THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

SUB PROJECT: MALIGAKANDA

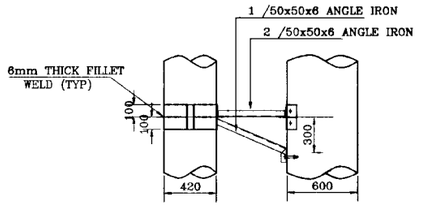
TITLE: NEW RESERVOIR R/F DETAILS OF CHAMBERS

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STUDY TEAM
NIHON SUIDO CONSULTANTS CO. LTD.,
TOKYO, JAPAN

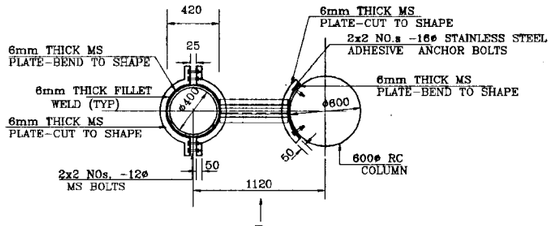
DESIGNED	DRAWN: ANOMA	DATE: JAN 2001
CHECKED	PM (NRW&SAP'S) NWSDB	CONTRACT No: NRW/CW
DY. TEAM LEADER	AGM(P&D) NWSDB	DRG No: MK/GR/ST-15
TEAM LEADER	DGM(P&D) NWSDB	



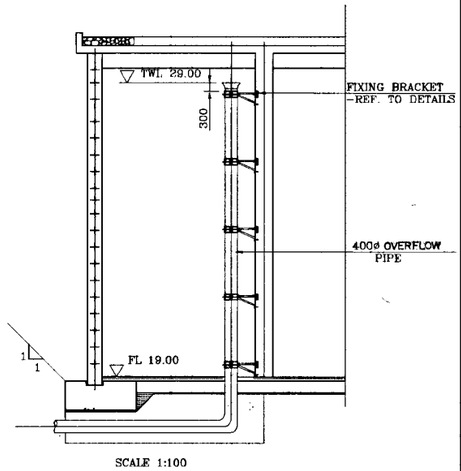
3 SECTION



ELEVATION–B

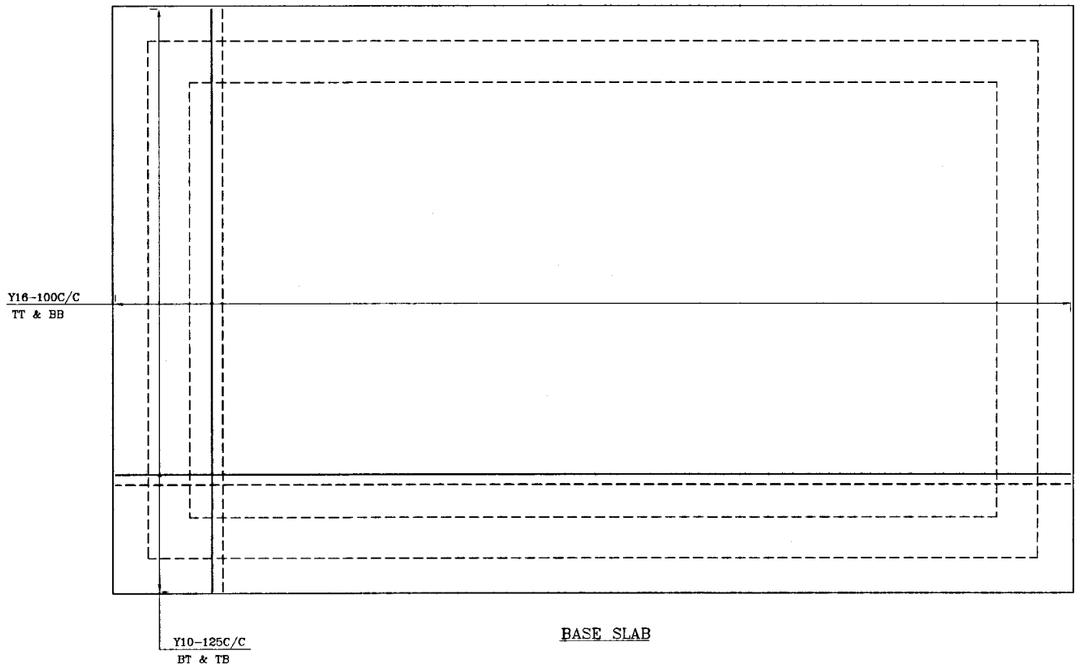


PLAN



SCALE 1:100

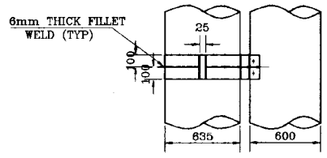
DETAILS OF FIXING BRACKETS
400ø OVER FLOW PIPE
(5 NOs.)
SCALE 1:25



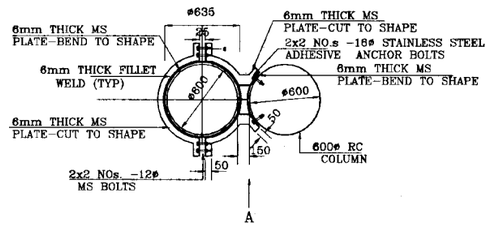
BASE SLAB

R/F DETAILS OF FLOW METER CHAMBER AT NEW RESERVOIR OUTLET

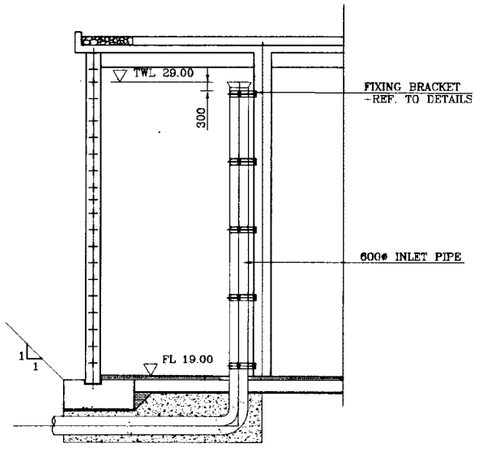
SCALE 1:25



ELEVATION–A



PLAN



SCALE 1:100

NOTE

1. ALL STRUCTURAL STEEL WORKS SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH KM/GR/ST–15

DETAILS OF FIXING BRACKET
600ø INLET PIPE
(5 NOs.)
SCALE 1:25

DO NOT SCALE

REV.	DESCRIPTION

NATIONAL WATER SUPPLY AND DRAINAGE BOARD
THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

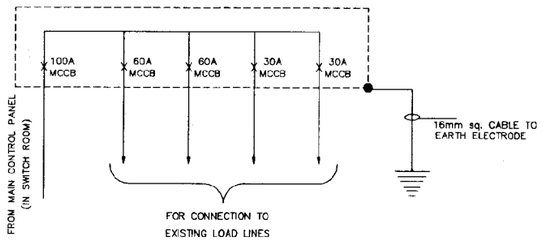
SUB PROJECT: MALIGAKANDA

TITLE: NEW RESERVOIR R/F DETAILS OF CHAMBERS & FIXING DETAILS

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) STUDY TEAM
NIHON SUIDO CONSULTANTS CO. LTD., TOKYO, JAPAN

DESIGNED	DRAWN: RUKMANI	DATE: JAN 2001
CHECKED	PM (NRW&APS) NWSDB	CONTRACT No: NRW/CW
DY. TEAM LEADER	AGM(P&D) NWSDB	DRG No: MK/GR/ST–16
TEAM LEADER	DGM(P&D) NWSDB	

DETAIL OF FEEDER PILLERS



ONE 30A FEEDER CAN BE USED TO CONNECT THE CHLORINATION BUILDING.

NOTES:-

1. FEEDER PILLER SHALL HAVE ITS SWITCHES IN FULLY WEATHER PROOF G. S. ENCLOSER.
2. ALL CABLE ENTRIES TO BE WELL SEALED AFTER INSTALLATION OF CABLES.
3. SIZE AND ARRANGEMENT OF CABLING GIVEN IN MK00SE-02

DO NOT SCALE

REV.	DESCRIPTION

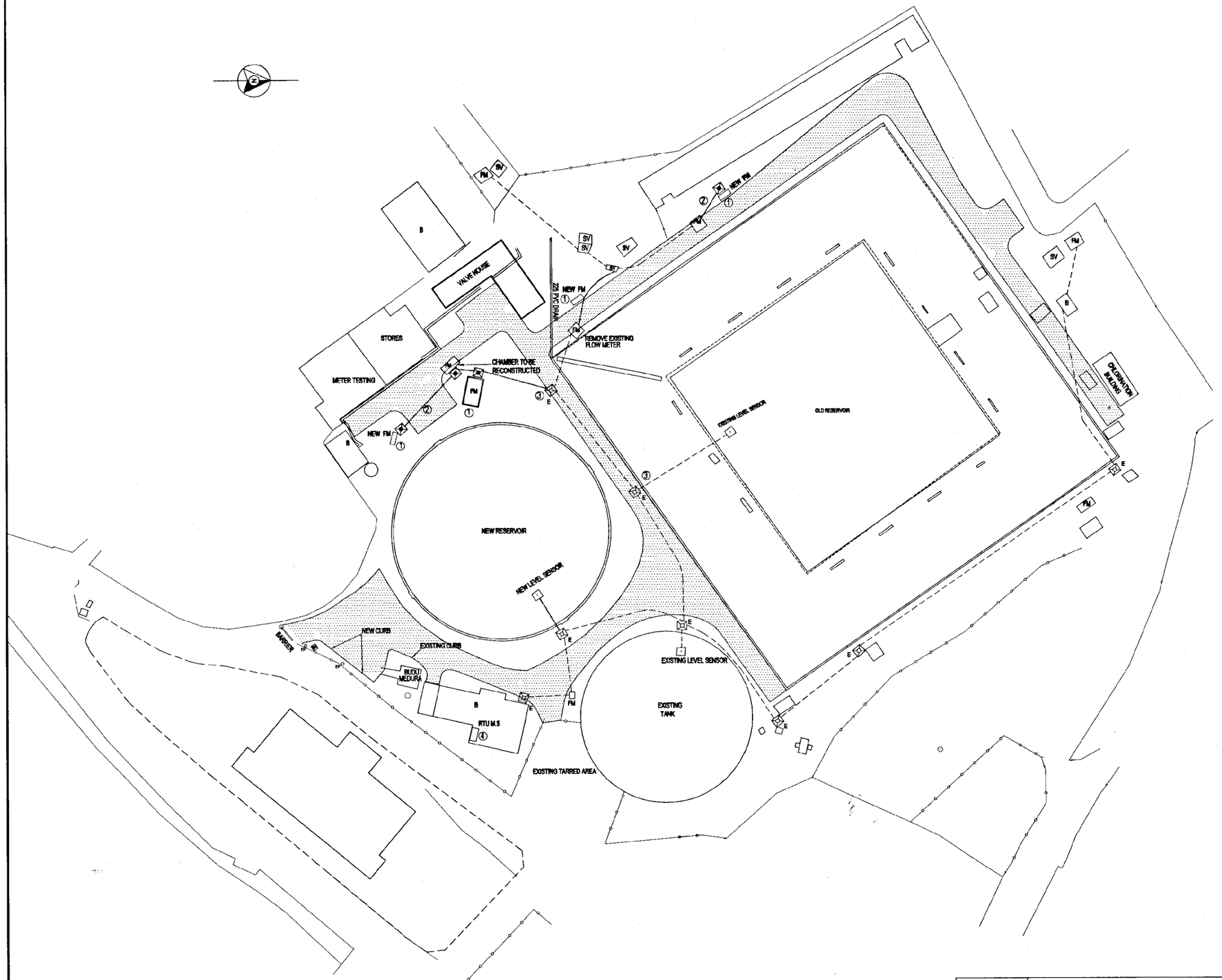
NATIONAL WATER SUPPLY AND DRAINAGE BOARD
THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

SUB PROJECT: MALIGAKANDA

TITLE: SITE LAYOUT POWER DISTRIBUTION

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STUDY TEAM
NIHON SUIDO CONSULTANTS CO. LTD., TOKYO, JAPAN

DESIGNED: H.M. Gunathasa	DRAWN:	DATE:	JAN 2001
CHECKED: H.M. Gunathasa	PM (NRW&SAPS) NAME/DR:	CONTRACT No:	NRW / CW
DY. TEAM LEADER:	A.G.M (P&D) NAME/DR: R D A J	DRG. No:	MK / GR / E-01
TEAM LEADER:	C.G.M (P&D) NAME/DR:		



DESCRIPTION

- FM — FLOW METER CHAMBER
- NEW HANDHOLE 600X600X600 FOR INSTRUMENTATION
- E — INSTRUMENT CABLE IN TRENCH EXISTING
- E — EXISTING CONNECTION BOX
- NEW INSTRUMENT CABLE IN PVC CONDUIT 5C x 1.5 mm ϕPVC/PVC SCREEN CABLE

1 INSTALL EXTERNALLY CLAMPED ULTRASONIC FLOW METER PROBE TO MATCH OTHER PROBES USED IN THE EXISTING SYSTEM MODEL DN 500 DATUM FLUTTER. REFER DRG. No. STD/E-03, DETAIL E 17.

2 CONNECT TO NEW FLOW METER TO EXISTING SYSTEM USING CABLE SPECIFIED IN MANUFACTURES RECOMMENDATIONS.

3 RELOCATE EXISTING CONCRETE HANDHOLD AWAY FROM ROAD SURFACE OR INSTALL NEW MANHOLE, FRAME & COVER TYPE B AS PER DETAIL STD/ C - 03.

4 MODIFY EXISTING INSTRUMENTATION SYSTEM INSTALLED TO INCLUDE NEW FLOW MONITORING & LEVEL SENSING POINTS. OBTAIN ASSISTANCE FROM SYSTEM SUPPLIER TO MODIFY SOFTWARE.

DO NOT SCALE

REV.	DESCRIPTION

NATIONAL WATER SUPPLY AND DRAINAGE BOARD

THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

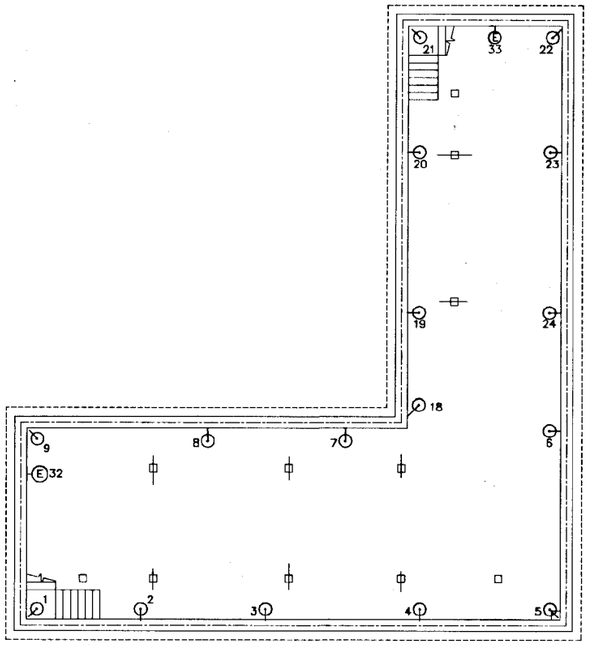
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STUDY TEAM

NIHON SUIDO CONSULTANTS CO. LTD.,
TOKYO, JAPAN

SUB PROJECT: MALIGAKANDA

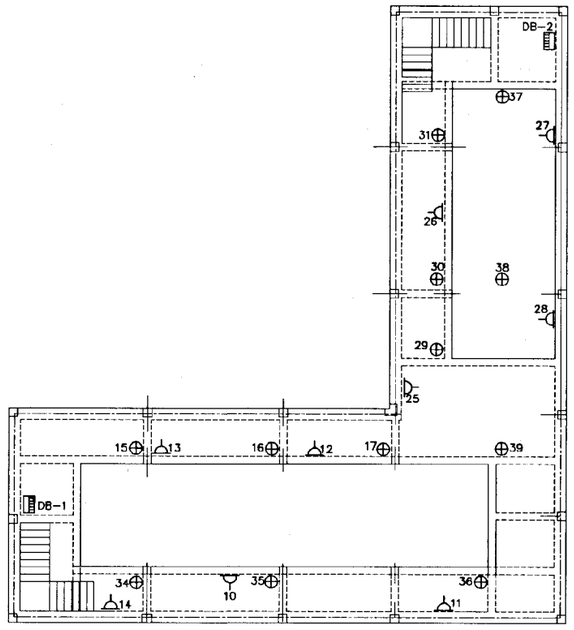
TITLE: SITE INSTRUMENTATION CABLE LAYOUT

DESIGNED: H.D. Jayathilaka	DRAWN:	DATE: JAN 2001
CHECKED: H.D. Jayathilaka	PM (NPW/SAPS) NWSDB:	CONTRACT No: NRW / CW
DY. TEAM LEADER:	A.G.M (PMD) NWSDB: A. D. D. Jayasinghe	DRG. No: MK / GR / E-02
TEAM LEADER:	D.G.M (P&D) NWSDB:	



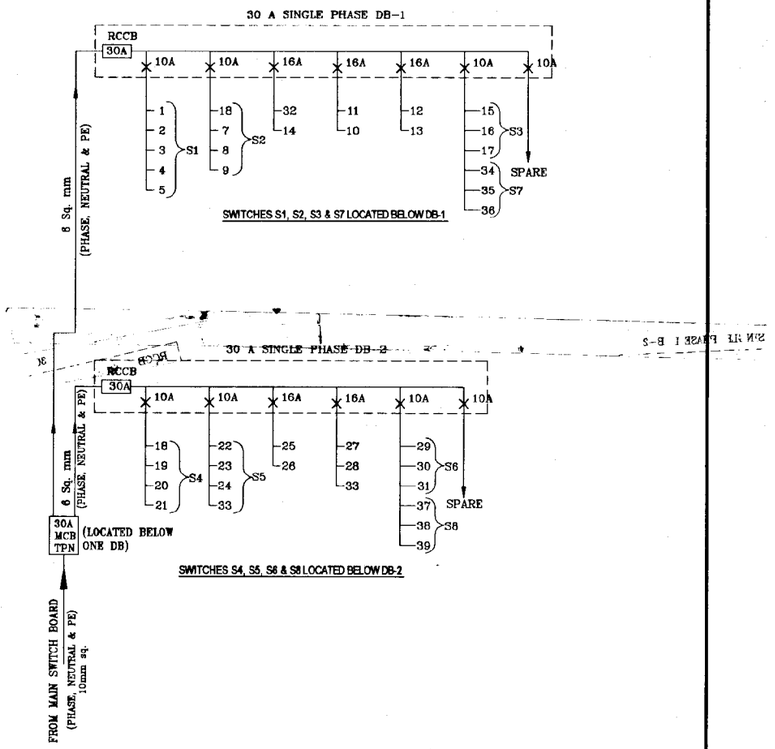
BASE PLAN +17.70

SCALE – 1 : 100



PLAN AT +20.70

SCALE – 1 : 100



FIXTURE NUMBER	ITEM	SYMBOL
1, 2, 3, 4, 5, 6, 7, 8, 9 18, 19, 20, 21, 22, 23 & 24	WALL MOUNTED FLUORESCENT LUMINAIRE TYPE (TYPE 19)	⊢⊖
10, 11, 12, 13, 14, 25, 26, 27 & 28	SOCKET OUTLETS ON WALLS (13A,SWITCHED)	⊳
15, 16, 17, 29, 30 31 34, 35, 36, 37, 38, & 39	HIGH BAY LAMP FITTING FIXED TO ROOF BEAM (TYPE 28)	⊕
32,33	EMERGENCE LAMPS (TYPE 25)	⊢Ⓔ

FOR DESCRIPTION OF LUMINAIRE TYPES, SEE CLAUSE 9.1.8.1.9.

NOTE :

ALL SOCKETS ARE LOCATED ON UPPER FLOOR 300 mm ABOVE FLOOR LEVEL.

DB 1 & DB 2 ARE LOCATED ON UPPER FLOOR AT 2M ABOVE FLOOR LEVEL.

HIGH BAY LAMP FITTINGS ARE ON ROOF BEAMS.

DO NOT SCALE

REV	DESCRIPTION

NATIONAL WATER SUPPLY AND DRAINAGE BOARD
THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

SUB PROJECT: MALIGAKANDA

TITLE: VALVE HOUSE SMALL POWER AND LIGHTING

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STUDY TEAM
NIHON SUIDO CONSULTANTS CO. LTD.,
TOKYO, JAPAN

DESIGNED: Md Jamaldeen	DRAWN:	DATE:	JAN 2001
CHECKED: Md Jamaldeen	PM (NRWSAPS) NWSDB:	CONTRACT No:	NRW / CW
DY. TEAM LEADER:	A-GM (P&D) NWSDB: R. D A	DRG. No:	MK / GR / E - 03
TEAM LEADER:	D.G.M (P&D) NWSDB:		

EXISTING RESERVOIR

PROPOSED RESERVOIR

TANK
TBL = 28.0m
FL = 19.0m
Cap. = 3.0mg

REFER DRG. No. GRYP-10 FOR DETAILS

REFER DRG. No. GRYP-05 FOR DETAILS

REFER DRG. No. GRYP-07 FOR DETAILS

REFER DRG. No. GRYP-06 FOR DETAILS

REFER DRG. No. GRYP-04 FOR DETAILS

REFER DRG. No. GRYP-08 FOR DETAILS

REFER DRG. No. GRYP-09 FOR DETAILS

REFER DRG. No. GRYP-03 FOR DETAILS

REFER DRG. No. GRYP-01 FOR DETAILS

27" STEEL / 700 DI STEPPED COUPLING

FM-MK-3

FM-MK-1

FM-MK-2 FM (NEW)

MH 1

MH 2

MH 3

MH 4

STORES

SLUDU MEDURA

PROPOSED ROAD RESERVATION

GATE

LEGEND

- EXISTING PIPE LINES
- PROPOSED PIPE LINES
- PIPE LINES TO BE ABANDONED

SCALE - 1: 250

NOTES;

1. The proposed pipeline connections are as shown on the drawing. Most of the existing pipes are in inches & all the new pipes are in millimetres.
2. This drawing is to be read in conjunction with Drg. Nos. MK/GR/YP-02 to MK/GR/YP-10.
3. The piping details and existing invert levels shown on the drawing are only indicative. Contractor shall expose existing pipes and make connections at appropriate locations according to the actual levels obtained at site.
4. Koltupitiya 20", Hultsdorf 27" and Fort 20" are located on a slope and are very close to each other. As the distance between the valve house and these pipes are very short. The contractor is advised to expose these pipes over a considerable length and set out the connections accurately.
5. Contractor shall agree with the engineer on the sequence of installation of yard piping.
6. Before construction of reservoir being isolate existing 10" Mount Mary distribution main by closing valves on both ends. Disconnect existing pipe lines to bowser points.
7. Provide Thrust blocks at all bends and tees.

DO NOT SCALE

REV.	DESCRIPTION

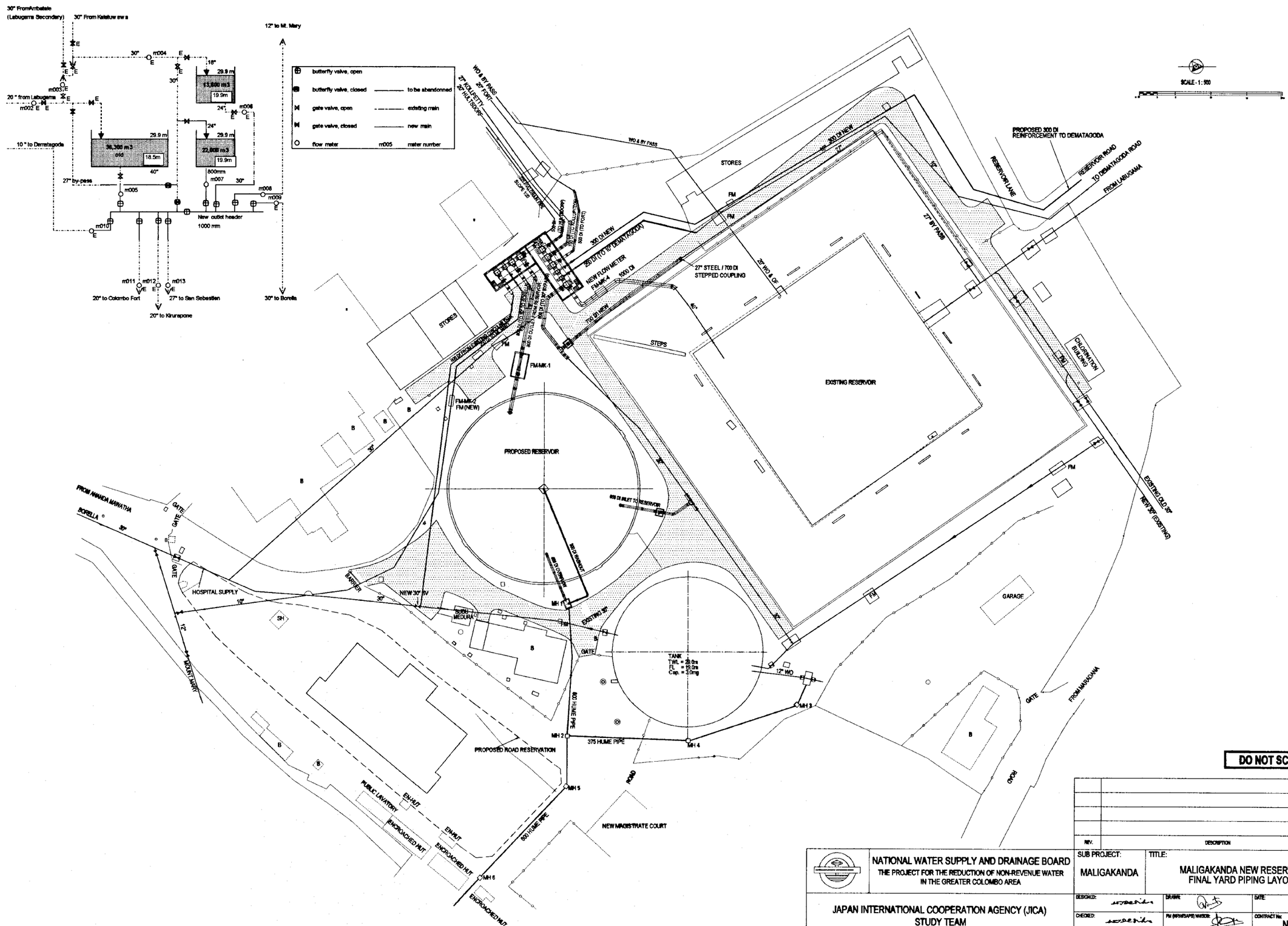
NATIONAL WATER SUPPLY AND DRAINAGE BOARD
THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

SUB PROJECT: MALIGAKANDA

TITLE: MALIGAKANDA NEW RESERVOIR MODIFICATIONS TO YARD PIPING LAYOUT

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STUDY TEAM
NIHON SUIDO CONSULTANTS CO. LTD., TOKYO, JAPAN

DESIGNED:	DRAWN:	DATE: JAN 2001
CHECKED:	PM (NRW/SAPS) NWSDB:	CONTRACT No: NRW / CW
DY. TEAM LEADER:	A.G.M (P&D) NWSDB:	DRG. No: MK/GR/YP-01
TEAM LEADER:	D.G.M (P&D) NWSDB:	



DO NOT SCALE

REV.	DESCRIPTION

NATIONAL WATER SUPPLY AND DRAINAGE BOARD
THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STUDY TEAM
NIHON SUIDO CONSULTANTS CO. LTD.,
TOKYO, JAPAN

SUB PROJECT: MALIGAKANDA

TITLE: MALIGAKANDA NEW RESERVOIR
FINAL YARD PIPING LAYOUT

DESIGNED:	DRAWN:	DATE: JAN 2001
CHECKED:	PM (NRW/SAPS) NWSDB:	CONTRACT No: NRW / CW
DY. TEAM LEADER:	A.G.M (P&D) NWSDB:	DRG. No: MK/GR/YP-02
TEAM LEADER:	D.G.M (P&D) NWSDB:	

PIPING SCHEDULE - From Existing Reservoir

Pipe No.	ND mm	Description	Length mm	Qty.
A1	1000	Coupling		1
A2	1000	P/E Pipe Piece with Puddle Flange	2840	1
A3	1000	Flange Adapter		11
A4	1000-1000	Flanged Tee		7
A5	1000	F/PE Pipe piece	800	2
A5a	1000	F/PE Pipe piece	810	2
A5b	1000	F/PE Pipe piece	715	1
A5c	1000	F/PE Pipe piece	740	2
A6	1000-300	Flanged Tee		3
A7	1000	90° Flanged Bend		1
A8	1000-300	Flanged Tee		1
A9	300-150	Flanged Taper		1
A10	1000	P/E Pipe Piece	2430	1
A11	1000	F/PE Pipe Piece	1065	1
A12	1000	D/F Pipe Piece	3600	1
A13	1000	Blank Flange		1

PIPING SCHEDULE - From 27" / 30" By Pass

B1	1000-800	Flanged Taper		1
B2	800	Flange Adapter		1
B3	800	P/E Pipe Piece with Puddle Flange	2760	1
B4	800	Coupling		1

PIPING SCHEDULE - To 16" Old Dematagoda

C1	300-250	Flanged Taper		1
C2	250	D / F Pipe Piece	1125	1
C3	250	Flange Adapter		1
C4	250	P/E Pipe Piece with Puddle Flange	2270	1
C5	250	Coupling		1

PIPING SCHEDULE - To New Dematagoda

D1	300	D / F Pipe Piece	1550	1
D2	300	Flange Adapter		1
D3	300	P/E Pipe Piece with Puddle Flange	1950	1
D4	300	Coupling		1

PIPING SCHEDULE - To 20" Existing Colombo Fort

E1	1000-500	Flanged Taper		1
E2	500	Flange Adapter		1
E3	500	P/E Pipe Piece with Puddle Flange	2080	1
E4	500	Coupling		1

PIPING SCHEDULE - To 27" Existing St. Sabastian

F1	700	D / F Pipe Piece	500	1
F2	1000-700	Flanged Taper		1
F3	700	Flange Adapter		1
F4	700	P/E Pipe Piece with Puddle Flange	2030	1
F5	700	Coupling		1

PIPING SCHEDULE - To 20" Existing Kirilapone

G1	1000-500	Flanged Taper		1
G2	500	Flange Adapter		1
G3	500	P/E Pipe Piece with Puddle Flange	2240	1
G4	500	Coupling		1

PIPING SCHEDULE - From New Circular Tank

H1	1000-800	Flanged Taper		1
H2	800	D / F Pipe Piece	1200	1
H3	800	Flange Adapter		1
H4	800	P/E Pipe Piece with Puddle Flange	2237	1
H5	800	Coupling		1

PIPING SCHEDULE - From New Circular Tank

I1	1000-800	Flanged Taper		1
I2	800	D / F Pipe Piece	1200	1
I3	800	Flange Adapter		1
I4	800	P/E Pipe Piece with Puddle Flange	2200	1
I5	800	Coupling		1

PIPING SCHEDULE - To Mount Mary

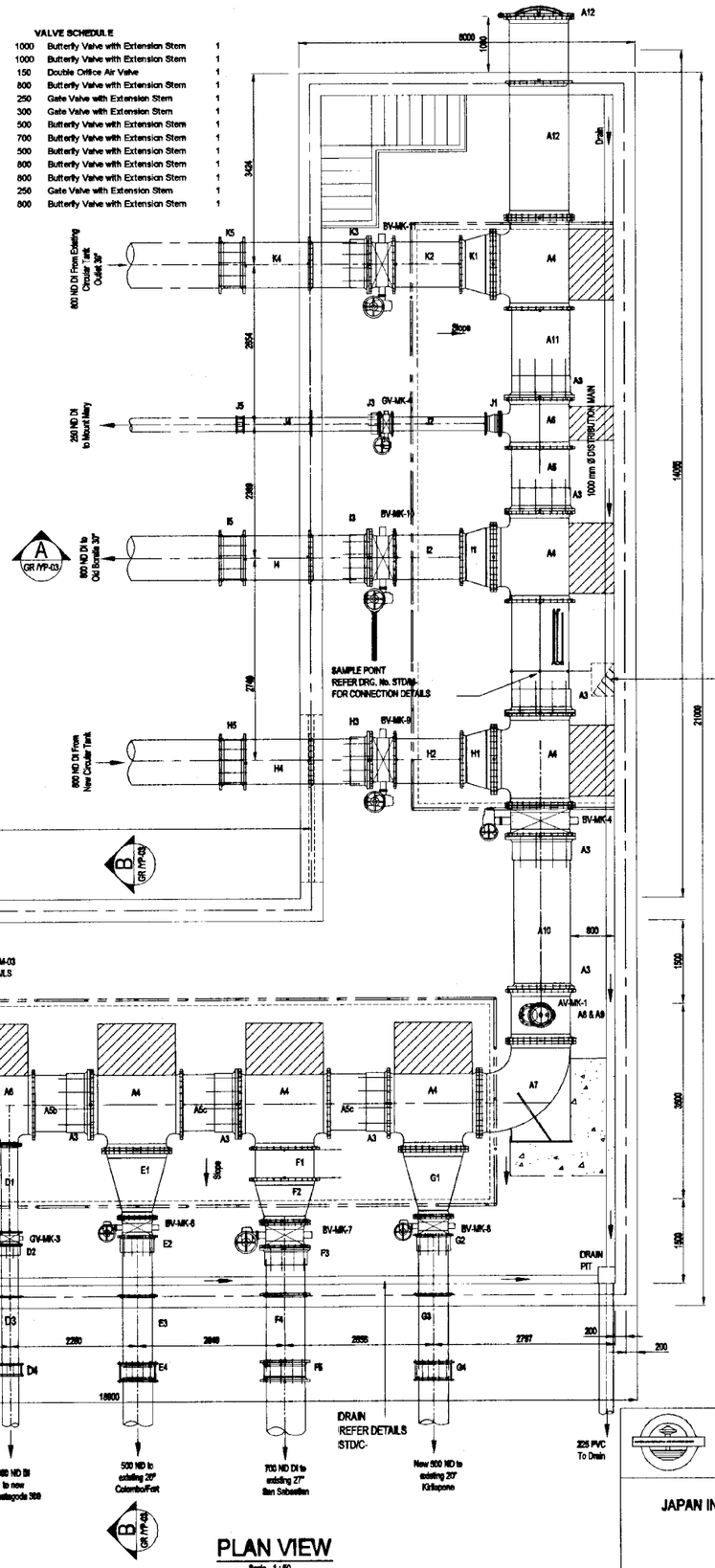
J1	300-250	Flanged Taper		1
J2	250	D / F Pipe Piece	1650	1
J3	250	Flange Adapter		1
J4	250	P/E Pipe Piece with Puddle Flange	2400	1
J5	250	Coupling		1

PIPING SCHEDULE - From Existing Circular Tank

K1	1000-800	Flanged Taper		1
K2	800	D / F Pipe Piece	1200	1
K3	800	Flange Adapter		1
K4	800	P/E Pipe Piece with Puddle Flange	2165	1
K5	800	Coupling		1

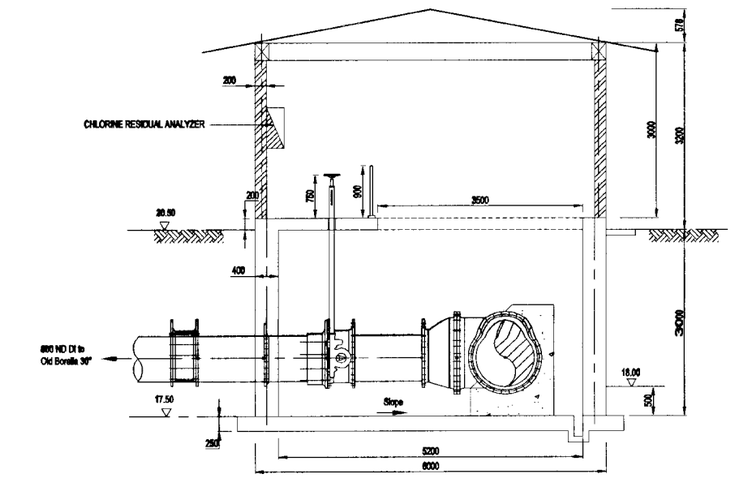
VALVE SCHEDULE

BV-MK-3	1000	Butterfly Valve with Extension Stem	1
BV-MK-4	1000	Butterfly Valve with Extension Stem	1
AV-MK-1	150	Double Orifice Air Valve	1
BV-MK-5	800	Butterfly Valve with Extension Stem	1
GV-MK-2	250	Gate Valve with Extension Stem	1
GV-MK-3	300	Gate Valve with Extension Stem	1
BV-MK-6	500	Butterfly Valve with Extension Stem	1
BV-MK-7	700	Butterfly Valve with Extension Stem	1
BV-MK-8	500	Butterfly Valve with Extension Stem	1
BV-MK-9	800	Butterfly Valve with Extension Stem	1
BV-MK-10	800	Butterfly Valve with Extension Stem	1
GV-MK-4	250	Gate Valve with Extension Stem	1
BV-MK-11	800	Butterfly Valve with Extension Stem	1



PLAN VIEW

Scale - 1 : 50



SECTION A - A

SCALE - 1 : 50

SECTION B - B

SCALE - 1 : 50

DO NOT SCALE

REV.	DESCRIPTION

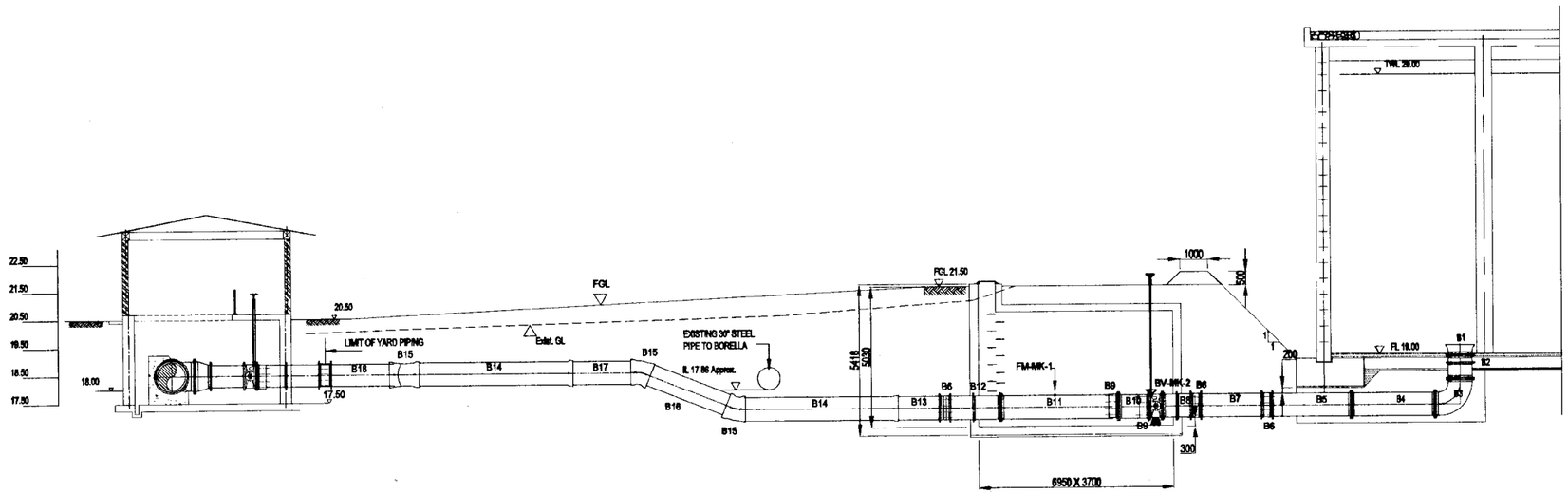
NATIONAL WATER SUPPLY AND DRAINAGE BOARD
THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

SUB PROJECT: MALIGAKANDA

TITLE: MALIGAKANDA NEW RESRVOIR ARRANGEMENT OF VALVE HOUSE

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STUDY TEAM
NIHON SUIDO CONSULTANTS CO. LTD.,
TOKYO, JAPAN

DESIGNED:	DRAWN:	DATE:	JAN 2001
CHECKED:	PM (NRW/SAPI): / NWSDB:	CONTRACT No:	NRW / CW
DY. TEAM LEADER:	A.G.M (PMD) NWSDB:	DRG. No:	MK / GR / YP-03
TEAM LEADER:	D.G.M (PMD) NWSDB:		



800 DIA. DI OUTLET PIPE

SCALE - 1 : 100

PIPING SCHEDULE - Inlet to New Reservoir

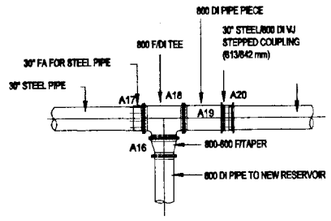
Pipe No.	ND mm	Description	Length mm	Qty.
A1	600	Flanged Bell Mouth		1
A2	600	D/F Pipe	3000	3
A2a	600	F/PE Pipe Piece	2790	1
A3	600	D/F Pipe Piece with Puddle Flange	2000	1
A4	600	Flanged Bend		1
A5	600	F/PE Pipe Piece	2650	1
A6	600	Coupling		3
A7	600	P/E Pipe Piece	3085	1
A8	600	Flange Adapter		2
A9	600	F/PE Pipe Piece with Puddle Flange	1000	1
A10	600	P/E Pipe Piece with Puddle Flange	1220	1
A11	600	P/E Pipe Piece	2000	1
A12	600	45° Socketed Bend		2
A13	600	P/E Pipe Piece	3210	1
A14	600	S/S Pipe	5500	1
A15	600	S/S Pipe Piece	3430	
A16	600	800-600 Flanged Taper		1
A17	600	30"Flange Adapter for Steel Pipe		1
A18	800-800	Flanged Tee		1
A19	800	F/PE Pipe Piece	1000	1
A20	600	30" Steel / 800 DI Stepped Coupling		1

PIPING SCHEDULE - Outlet from New Reservoir

Pipe No.	ND mm	Description	Length mm	Qty.
B1	800	Flanged Bell Mouth		1
B2	800	D/F Pipe Piece with Puddle Flange	900	1
B3	800	Flanged Bend		1
B4	800	D/F Pipe Piece	3000	1
B5	800	F/PE Pipe Piece	3000	1
B6	800	Coupling		3
B7	800	F/PE Pipe Piece	2540	1
B8	800	F/PE Pipe Piece with Puddle Flange	1230	1
B9	800	Flange Adapter		1
B10	800	Flanged Taper		2
B11	800	F/PE Pipe Piece withClamp on External Flow Meter	1800	1
B12	800	F/PE Pipe Piece	1930	2
B13	800	P/E Pipe Piece	1800	1
B14	800	S/S Pipe	5500	2
B15	800	45° Socketed Bend		2
B16	800	P/E Pipe Piece	2235	1
B17	800	P/E Pipe Piece	2400	1
B18	800	P/E Pipe Piece	2420	1
				1

VALVE SCHEDULE

VA1	600	Butterfly Valve	1
VB1	800	Butterfly Valve	1
VB2	600	Clamp on External Flow Meter	1



CONNECTION DETAIL OLD 30" STEEL

600 DIA. DI INLET PIPE

SCALE - 1 : 100

NOTE:
1. SECTIONS TAKEN ALONG PIPE CENTER LINE.

DO NOT SCALE

REV.	DESCRIPTION

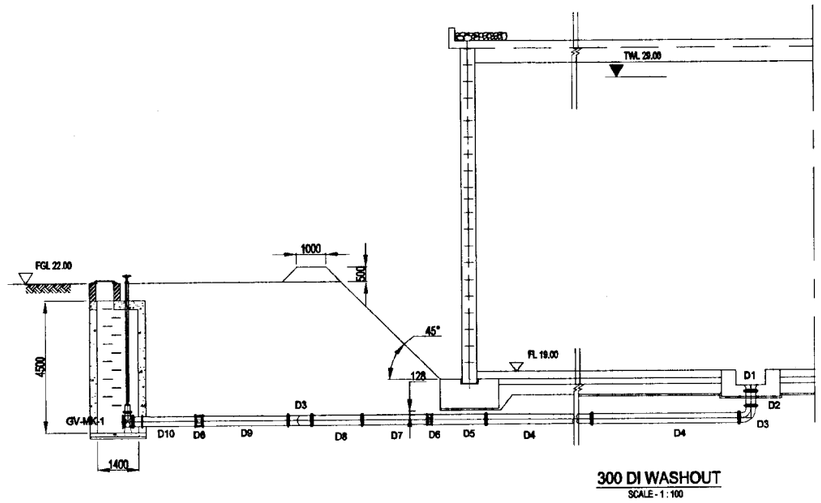
NATIONAL WATER SUPPLY AND DRAINAGE BOARD
THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STUDY TEAM
NIHON SUIDO CONSULTANTS CO. LTD.,
TOKYO, JAPAN

SUB PROJECT: MALIGAKANDA

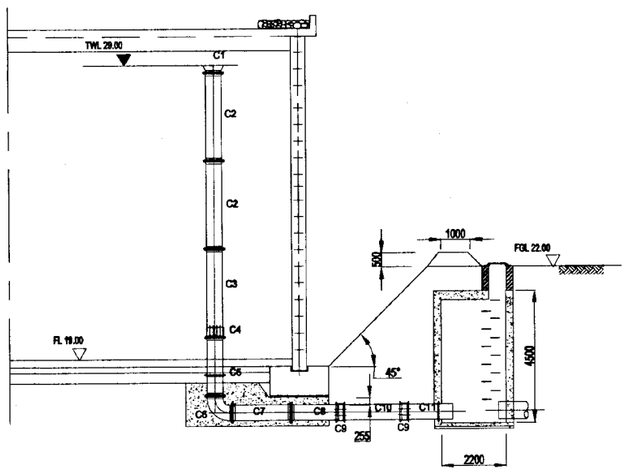
TITLE: MALIGAKANDA NEW RESERVOIR
SECTIONS - NEW RESERVOIR INLET AND OUTLET

DESIGNED:	DRAWN:	DATE: JAN 2001
CHECKED:	PM (NRW/SAPS) NWSDB:	CONTRACT No: NRW / CW
DY. TEAM LEADER:	A.G.M (P&D) NWSDB:	DWG. No: MK / GR / YP-04
TEAM LEADER:	D.G.M (P&D) NWSDB:	



300 DI WASHOUT

SCALE - 1 : 100



400 DI OVERFLOW

SCALE - 1 : 100

PIPING SCHEDULE - Overflow

Pipe No.	ND mm	Description	Length mm	Qty.
C1	400	Flanged Bell Mouth		1
C2	400	D/F Pipe	3000	2
C3	400	F/PE Pipe Piece	2800	1
C4	400	Flange Adaptor		1
C5	400	D/F Pipe Piece with Puddle Flange	2000	1
C6	400	90° Flanged Bend		1
C7	400	D/F Pipe	2000	1
C8	400	F/PE Pipe Piece	1620	1
C9	400	Coupling		3
C10	400	P/E Pipe Piece	2000	1
C11	400	P/E Pipe Piece with Puddle Flange	1550	1

PIPING SCHEDULE - Washout

D1	300	Flanged Bell Mouth		1
D2	300	D/F Pipe with Puddle Flange	500	1
D3	300	90° Flanged Bend		2
D4	300	D/F Pipe	5000	5
D5	300	F/PE Pipe Piece	1925	1
D6	300	Coupling		2
D7	300	F/PE Pipe Piece	2225	1
D8	300	D/F Pipe Piece	1700	1
D9	300	F/PE Pipe Piece	3000	1
D10	300	F/PE Pipe with Puddle Flange	2200	1

VALVE SCHEDULE

GV-MK-1	300	Gate Valve with Extension Stem	1

NOTE:

1. SECTIONS TAKEN ALONG PIPE CENTER LINE.

DO NOT SCALE

REV.	DESCRIPTION

NATIONAL WATER SUPPLY AND DRAINAGE BOARD

THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

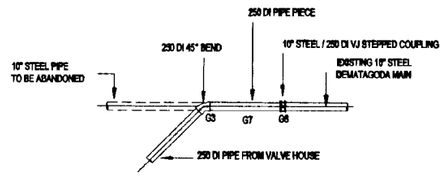
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STUDY TEAM

MIHON SUIDO CONSULTANTS CO. LTD.,
TOKYO, JAPAN

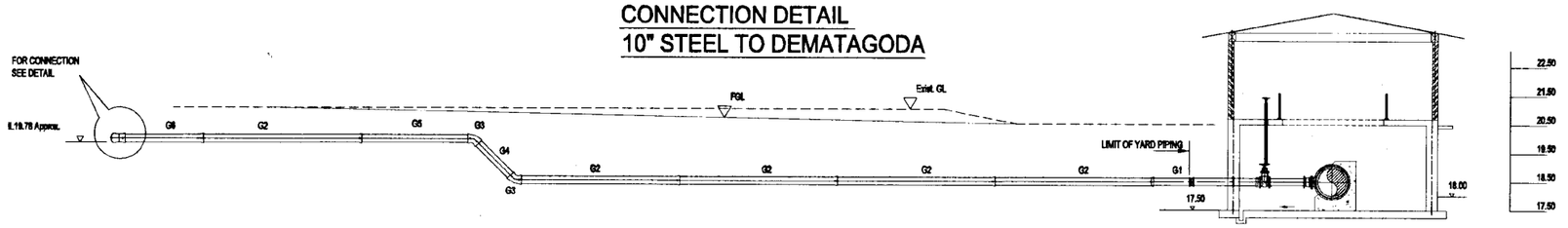
SUB PROJECT: MALIGAKANDA

TITLE: MALIGAKANDA NEW RESERVOIR
SECTIONS - NEW RESERVOIR WASHOUT AND OVERFLOW

DESIGNED:	DRAWN:	DATE:	JAN 2001
CHECKED:	PM (NRW/SAPS) NWSDB:	CONTRACT No:	NRW / CW
DY. TEAM LEADER:	A.G.M (P&D) NWSDB:	DRG. No:	MK / GR / YP-05
TEAM LEADER:	D.G.M (P&D) NWSDB:		

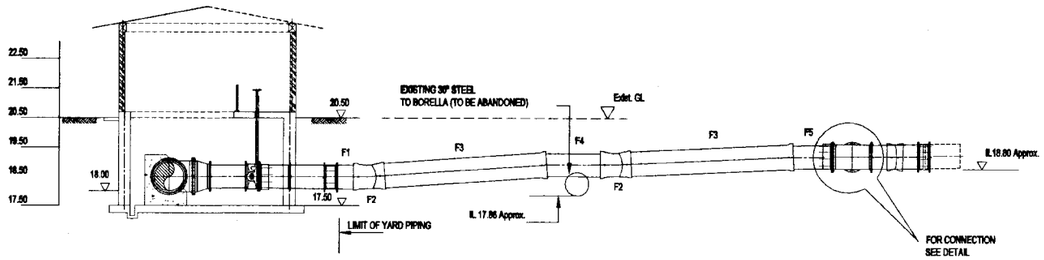


CONNECTION DETAIL 10" STEEL TO DEMATAGODA



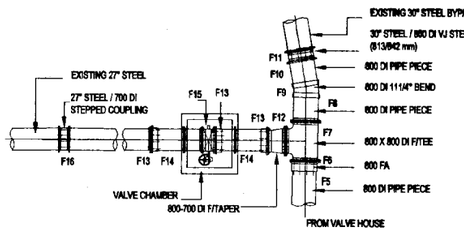
CONNECTIONS TO 10" DEMATAGODA

SCALE - 1 : 100

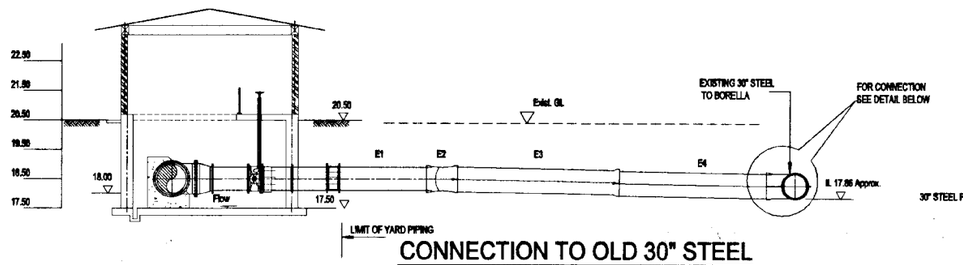


CONNECTION TO OLD 30" STEEL BY PASS

SCALE - 1 : 100

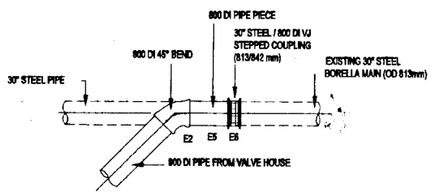


CONNECTION DETAIL 30" STEEL BYPASS



CONNECTION TO OLD 30" STEEL TO BORELLA

SCALE - 1 : 100



CONNECTION DETAIL OLD 30" STEEL TO BORELLA

PIPING SCHEDULE - 30" Steel to Borella

Pipe No.	ND mm	Description	Length mm	Qty.
E1	800	P/E Pipe Piece	3225	1
E2	800	45° Socketed Bend		2
E3	800	S/S Pipe	5500	1
E4	800	P/E Pipe Piece	5325	1
E5	800	P/E Pipe Piece	1000	1
E6	800	30" Steel/800 DI Stepped Coupling		1

PIPING SCHEDULE - 30" Steel Bypass

F1	800	P/E Pipe Piece		1
F2	800	45° Socketed Bend		2
F3	800	S/S Pipe	5500	2
F4	800	P/E Pipe Piece	2130	1
F5	800	P/E Pipe Piece	1210	1
F6	800	Flange Adapter		1
F7	800-800	Flanged Tee		1
F8	800	F/PE Pipe Piece	960	1
F9	800	111/4° Socketed Bend		1
F10	800	P/E Pipe Piece	1000	1
F11	800	30" Steel/800 DI Stepped Coupling		1
F12	800-700	Flanged Taper		1
F13	700	Flange Adapter		3
F14	700	P/E Pipe Piece with Puddle Flange	1500	2
F15	700	Butterfly Valve		1
F16	700	27" Steel / 700d DI Stepped Coupling		1

PIPING SCHEDULE - 10" Dematagoda

G1	250	P/E Pipe Piece	1380	1
G2	250	S/S Pipe	5500	5
G3	250	45° Socketed Bend		3
G4	250	P/E Pipe Piece	1760	1
G5	250	P/E Pipe Piece	3850	1
G6	250	S/S Pipe Piece	2725	1
G7	250	P/E Pipe Piece	2540	1
G8	250	10" Steel / 250 DI Stepped Coupling		1

NOTE:
1. SECTIONS TAKEN ALONG PIPE CENTER LINE.

DO NOT SCALE

REV.	DESCRIPTION

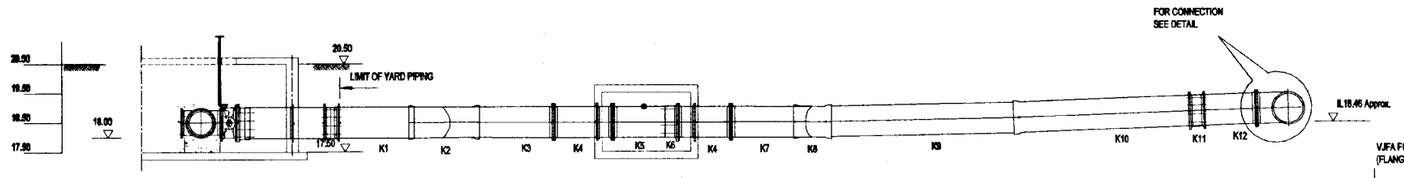
NATIONAL WATER SUPPLY AND DRAINAGE BOARD
THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

SUB PROJECT: MALIGAKANDA

TITLE: MALIGAKANDA NEW RESERVOIR SECTIONS - 10" DEMATAGODA, 30" BYPASS AND 30" BORELLA MAIN

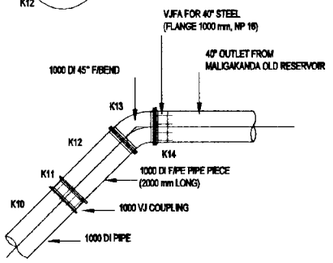
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STUDY TEAM
NIHON SUIDO CONSULTANTS CO. LTD.,
TOKYO, JAPAN

DESIGNED:	DRAWN:	DATE:	JAN 2001
CHECKED:	PM (NWS&DB) NAME:	CONTRACT No:	NRW / CW
DY. TEAM LEADER:	A.G.M (P&D) NAME:	DWG. No:	MK / GR / YP-06
TEAM LEADER:	D.G.M (P&D) NAME:		

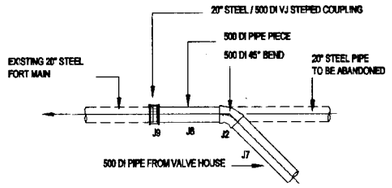


CONNECTION TO 40" STEEL

SCALE - 1 : 100



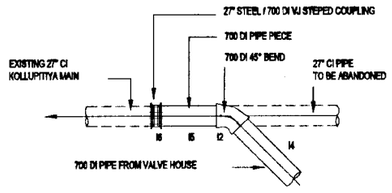
CONNECTION DETAIL 40" OUTLET FROM OLD RESERVOIR



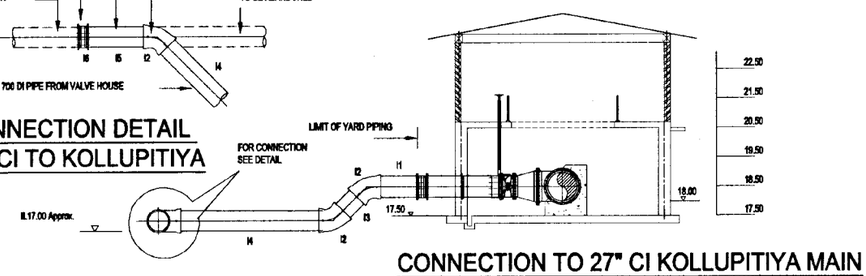
CONNECTION DETAIL 20" STEEL TO FORT

CONNECTION TO 20" STEEL FORT MAIN

SCALE - 1 : 100

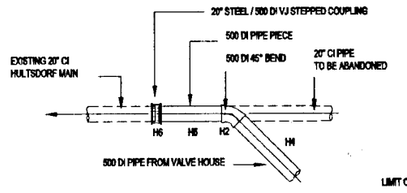


CONNECTION DETAIL 27" CI TO KOLLUPITIYA

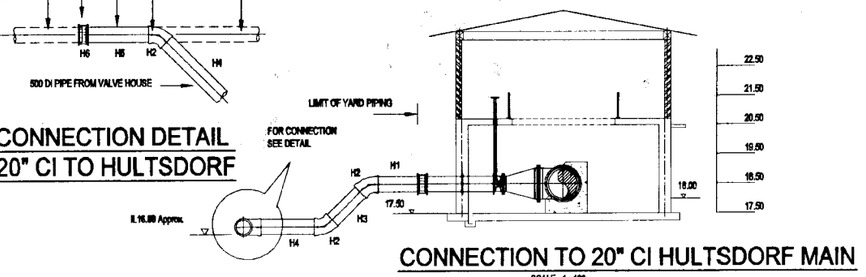


CONNECTION TO 27" CI KOLLUPITIYA MAIN

SCALE - 1 : 100



CONNECTION DETAIL 20" CI TO HULTSDORF



CONNECTION TO 20" CI HULTSDORF MAIN

SCALE - 1 : 100

NOTE:

1. SECTIONS TAKEN ALONG PIPE CENTER LINE.

PIPING SCHEDULE - 20" CI Hultsdorf Main

Pipe No.	ND mm	Description	Length mm	Qty.
H1	500	P/E Pipe Piece	1500	1
H2	500	45° Socketed Bend		3
H3	500	P/E Pipe Piece	1570	1
H4	500	P/E Pipe Piece	2050	1
H5	500	P/E Pipe Piece	2000	1
H6	500	20" Steel / 500 DI Stepped Coupling		1

PIPING SCHEDULE - 27" CI Kolluptiya Main

I1	700	P/E Pipe Piece	1515	1
I2	700	45° Socketed Bend		3
I3	700	P/E Pipe Piece	960	1
I4	700	P/E Pipe Piece	4980	1
I5	700	P/E Pipe Piece	2000	1
I6	700	27" Steel / 700 DI Stepped Coupling		1

PIPING SCHEDULE - 20" Steel Fort Main

J1	500	P/E Pipe Piece	1920	1
J2	500	45° Socketed Bend		3
J3	500	P/E Pipe Piece	3245	1
J4	500	P/E Pipe Piece	2610	1
J5	500	S/S Pipe	5500	1
J6	500	221/2° Socketed Bend		1
J7	500	P/E Pipe Piece	5050	1
J8	500	P/E Pipe Piece	2250	1
J9	500	20" Steel / 500 DI Stepped Coupling		1

PIPING SCHEDULE - 40" OUTLET FROM OLD RESERVOIR

K1	1000	P/E Pipe Piece	2700	1
K2	1000	90° Socketed Bend		1
K3	1000	F/PE Pipe Piece	2710	1
K4	1000	D/F Pipe Piece with Puddle Flange	1500	2
K5	1000	F/PE Pipe Piece with Clamp on External Flow Mete	2000	1
K6	1000	Clamp on External Flow Meter		1
K6	1000	Flange Adaptor		1
K7	1000	F/PE Pipe Piece	2300	1
K8	1000	45° Socketed Bend		1
K9	1000	P/E Pipe Piece	6560	1
K10	1000	S/S Pipe Piece	6000	1
K11	1000	Coupling		1
K12	1000	F/PE Pipe Piece	2000	1
K13	1000	45° Flanged Bend		1
K14	1000	Flange Adapter for Steel (Flange 1000 mm, NP 16)		1

DO NOT SCALE

REV.	DESCRIPTION

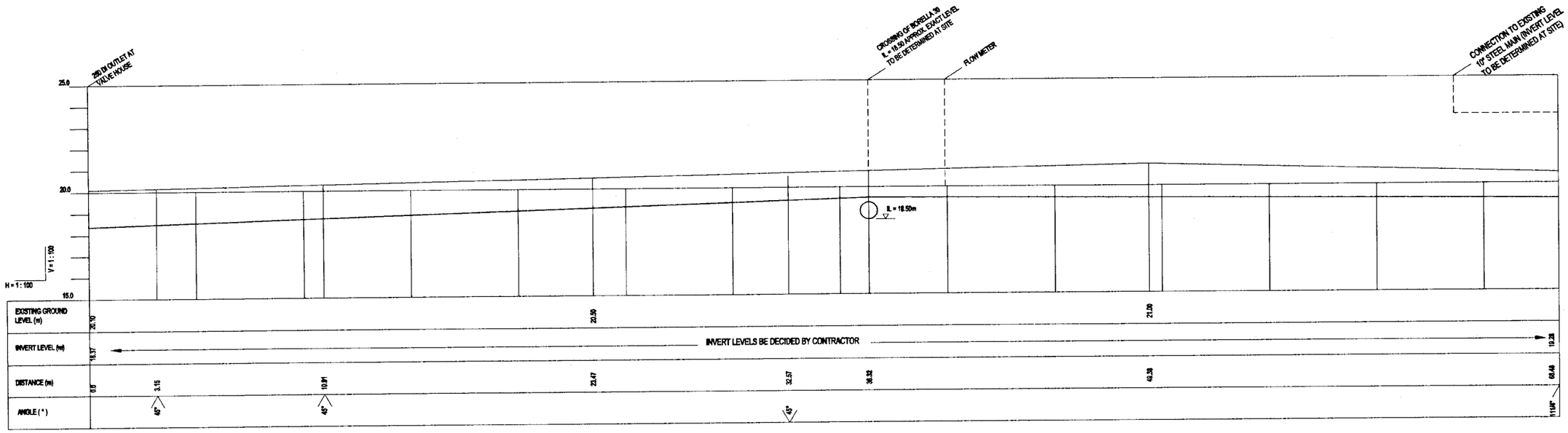
NATIONAL WATER SUPPLY AND DRAINAGE BOARD
THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STUDY TEAM
NIHON SUIDO CONSULTANTS CO. LTD., TOKYO, JAPAN

SUB PROJECT: MALIGAKANDA

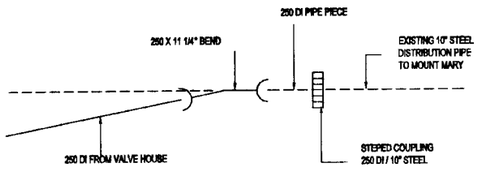
TITLE: MALIGAKANDA NEW RESERVOIR SECTIONS - 20" FORT, 27" KOLLUPITIYA, 20" HULTSDORF AND 40" OUTLET

DESIGNED:	DRAWN:	DATE: JAN 2001
CHECKED:	PM (NRW/SAPS) NWSDB:	CONTRACT No: NRW / CW
DY. TEAM LEADER:	A.G.M (P&D) NWSDB:	DRG. No: MK / GR / YP-07
TEAM LEADER:	D.G.M (P&D) NWSDB:	

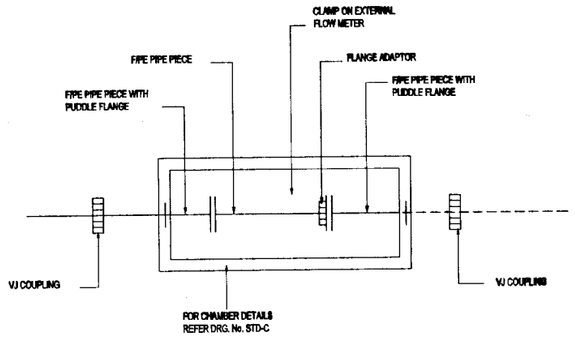


250 DI MAIN TO 10" Mt. MARY

SCALE - 1 : 100



CONNECTION DETAIL AT 10" STEEL



DETAILS OF FLOW METER CHAMBER

LIST OF MATERIALS

1. 250 DI S/S PIPES 70m.
2. 250 X 45° DI S/BEND 3 Nos.
3. 250 X 11 1/4° DI S/BEND 1 No.
4. 250 / 10" STEEL STEPPED COUPLING 1 No.
5. 250 DI FIPE PIPE PIECE WITH PUDDLE FLANGE 2m LONG 2 Nos.
6. FIPE PIPE PIECE WITH CLAMP ON EXTERNAL FLOW METER 1 No.
7. FLANGE ADAPTOR 1 No.
8. VJ COUPLING 2 Nos.

DO NOT SCALE

REV.	DESCRIPTION

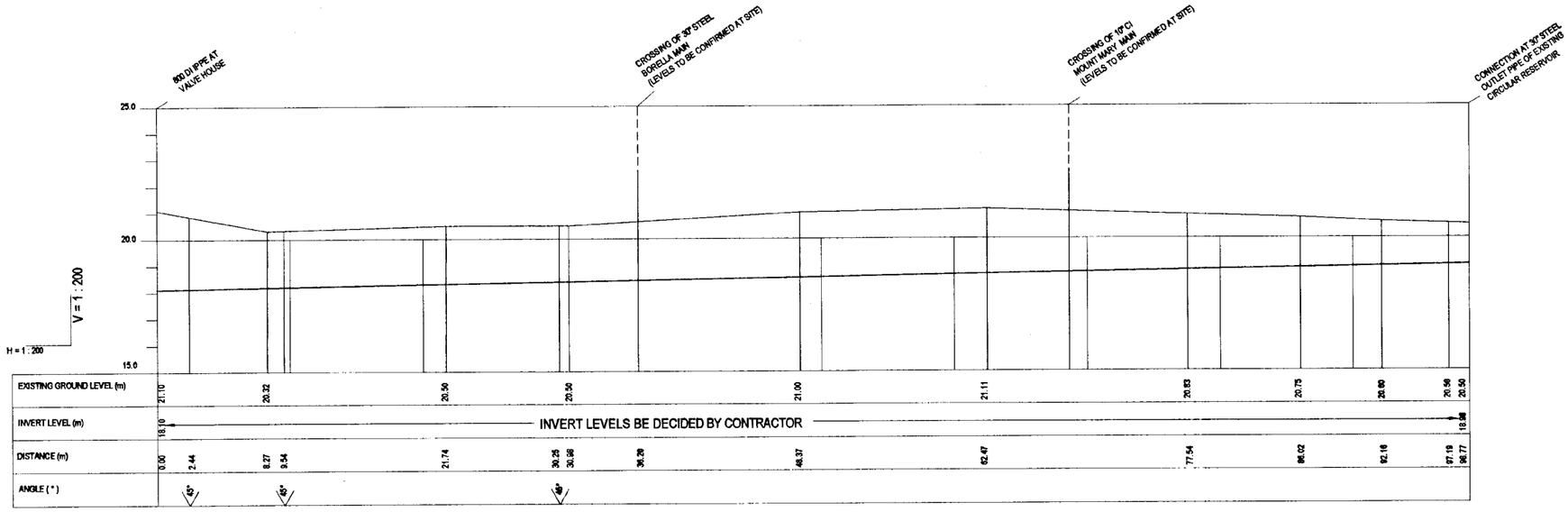
NATIONAL WATER SUPPLY AND DRAINAGE BOARD
THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

SUB PROJECT: MALIGAKANDA

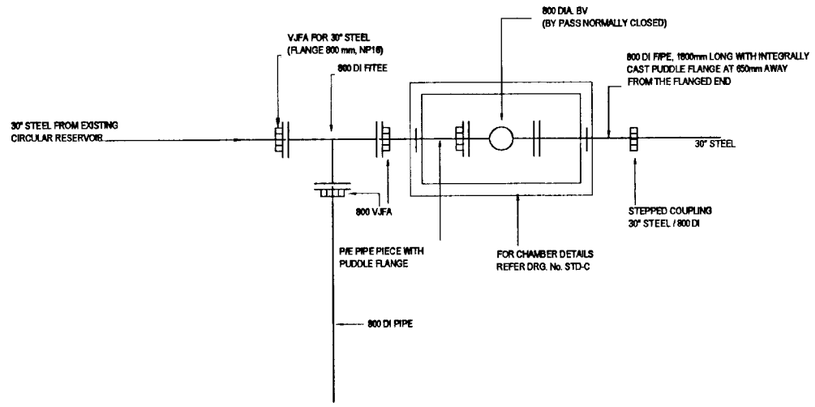
TITLE: MALIGAKANDA NEW RESERVOIR PROFILE - CONNECTION 10" MOUNT MARY

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STUDY TEAM
NIHON SUIDO CONSULTANTS CO. LTD.,
TOKYO, JAPAN

DESIGNED:	DRAWN:	DATE: JAN 2007
CHECKED:	PM (NWS&DB) NW&DB:	CONTRACT No: NRW / CW
DY. TEAM LEADER:	A.G.M (P&D) NW&DB:	DRG. No: MK/GR/YP-08
TEAM LEADER:	D.G.M (P&D) NW&DB:	



800 DI FROM 30" OUTLET OF EXIST. CIRCULAR TANK



CONNECTION TO 30" STEEL OUTLET PIPE OF EXISTING CIRCULAR RESERVOIR

LIST OF MATERIALS

1. 800 DI S/S PIPES 100m.
2. 800 X 45° DI S/BEND 3 Nos.
3. 900X800 DI FITEE 1 No.
4. 800 V.JFA 3 No.
5. V.JFA FOR 30" STEEL (FLANGE 800mm, NP 16) 1 No.
6. 800 DIA. F/ BUTTERFLY VALVE 1No.
7. 800mm P/PE, 1800mm LONG WITH INTEGRAL PUDDLE FLANGE AT 650 mm AWAY FROM THE FLANGED END 1No.
8. STEPPED COUPLING 30" STEEL / 800 DI 1No.
9. P/E PIPE PIECE WITH PUDDLE FLANGE 1 No.

DO NOT SCALE

REV.	DESCRIPTION

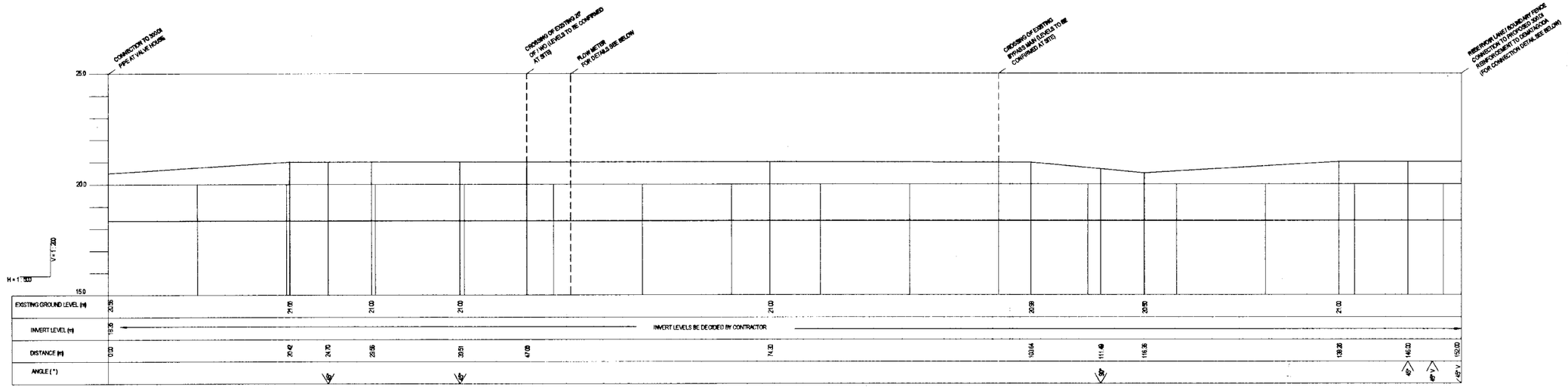
NATIONAL WATER SUPPLY AND DRAINAGE BOARD
THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STUDY TEAM
NIHON SUIDO CONSULTANTS CO. LTD., TOKYO, JAPAN

SUB PROJECT: MALIGAKANDA

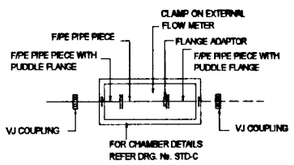
TITLE: MALIGAKANDA NEW RESERVOIR PROFILE - CONNECTION AT 30" OUTLET OF EXISTING CIRCULAR RESERVOIR

DESIGNED:	DRAWN:	DATE: JAN 2001
CHECKED:	PM (NRW&AP) NWSDB:	CONTRACT No: NRW / CW
DY. TEAM LEADER:	A.G.M (P&D) NWSDB:	DRG. No: MK / GR / YP-09
TEAM LEADER:	D.G.M (P&D) NWSDB:	

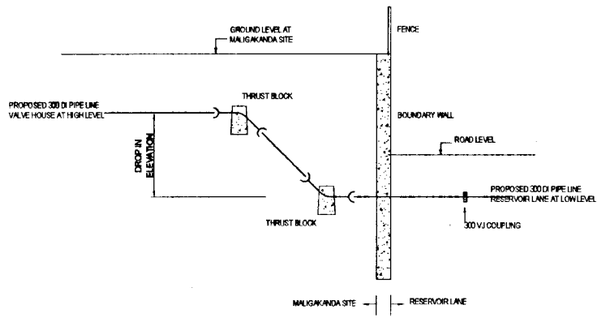


300 DI NEW

SCALE - 1 : 200



DETAILS OF FLOW METER CHAMBER



CONNECTION AT PROPOSED 300 DI REINFORCEMENT ON RESERVOIR LANE

LIST OF MATERIALS

1. 300 DI SVS PIPES 100m
2. 300 X 45° DI SVBEND 5Nos
3. 300 X 90° DI SVBEND 1 No.
4. 300 VJ COUPLING 3 Nos.
5. 200 DIA. F/PE PIPE PIECE WITH CLAMP ON EXTERNAL FLOWMETER 1 NO.
6. 200 DI F/PE PIPE PIECE WITH PUDDLE FLANGE 2m LONG 2 Nos.
7. FLANGE ADAPTOR 1 No.
8. CROSSING OF EXISTING BY PASS MAIN, FITTINGS AS REQUIRED.
9. CROSSING OF EXISTING 20" CI/WO, FITTINGS AS REQUIRED

DO NOT SCALE

REV.	DESCRIPTION

NATIONAL WATER SUPPLY AND DRAINAGE BOARD
THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STUDY TEAM

NIHON SUIDO CONSULTANTS CO. LTD.,
TOKYO, JAPAN

SUB PROJECT: MALIGAKANDA

TITLE: MALIGAKANDA NEW RESERVOIR PROFILE - CONNECTION AT NEW 300 DI TO DEMATAGODA

DESIGNED:	DRAWN:	DATE:	JAN 2001
CHECKED:	PM (NRW&WPS) NWSDB:	CONTRACT No:	NRW / CW
DY. TEAM LEADER:	A.G.M (P&D) NWSDB:	DRG. No:	MK / GR / YP-10
TEAM LEADER:	D.G.M (P&D) NWSDB:		