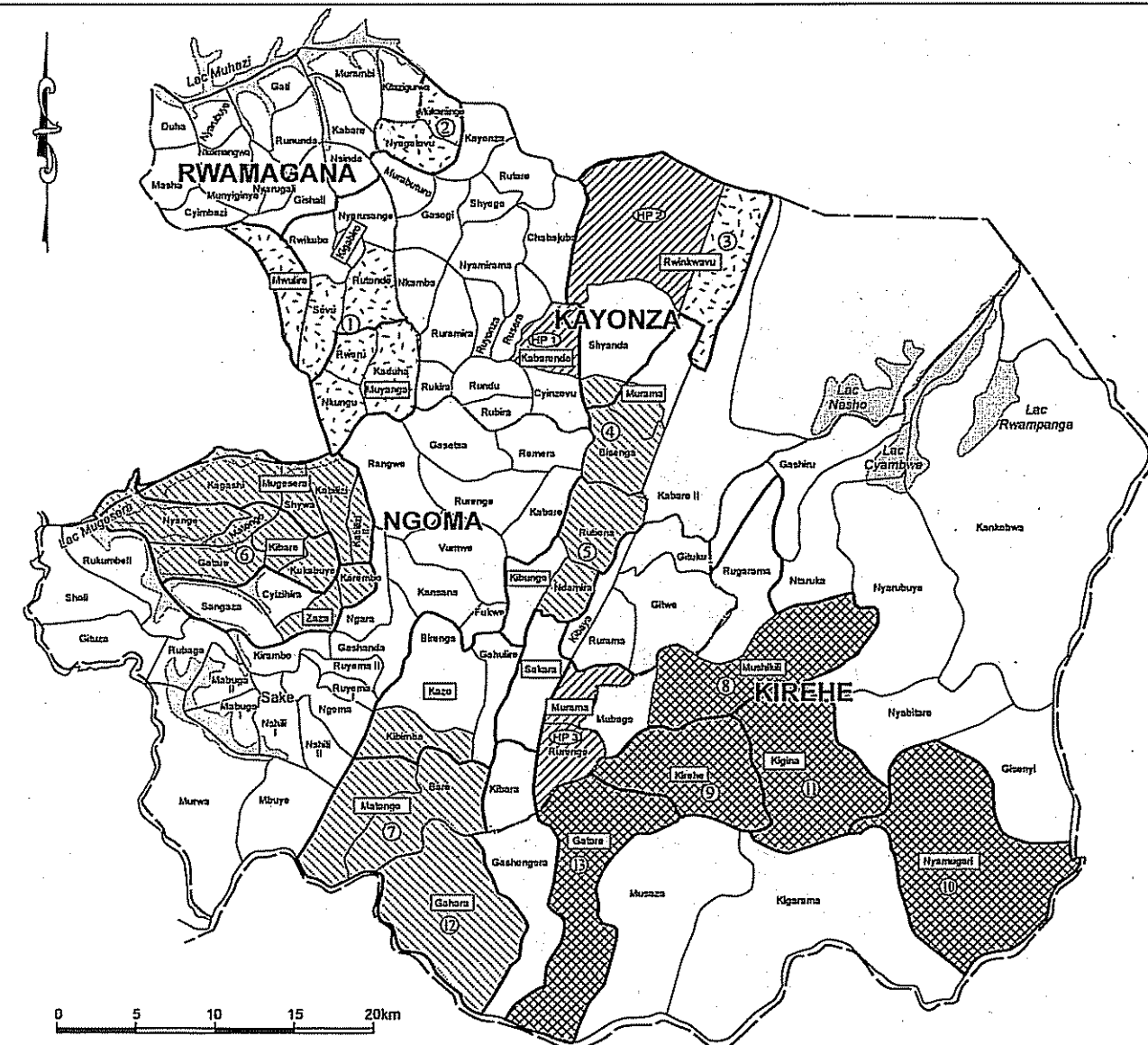


7.12 基本設計図面



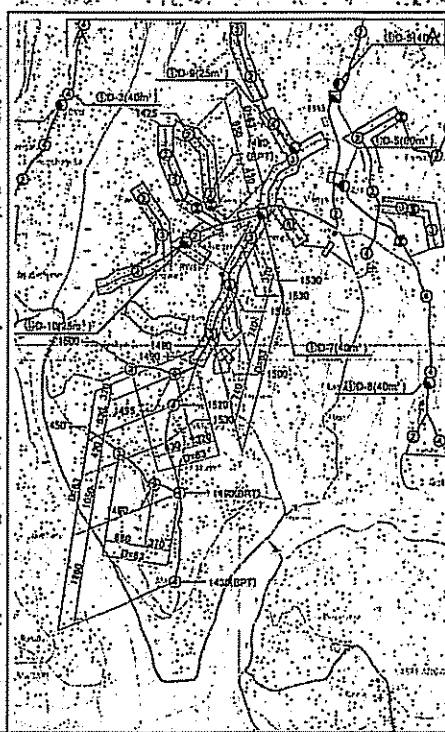
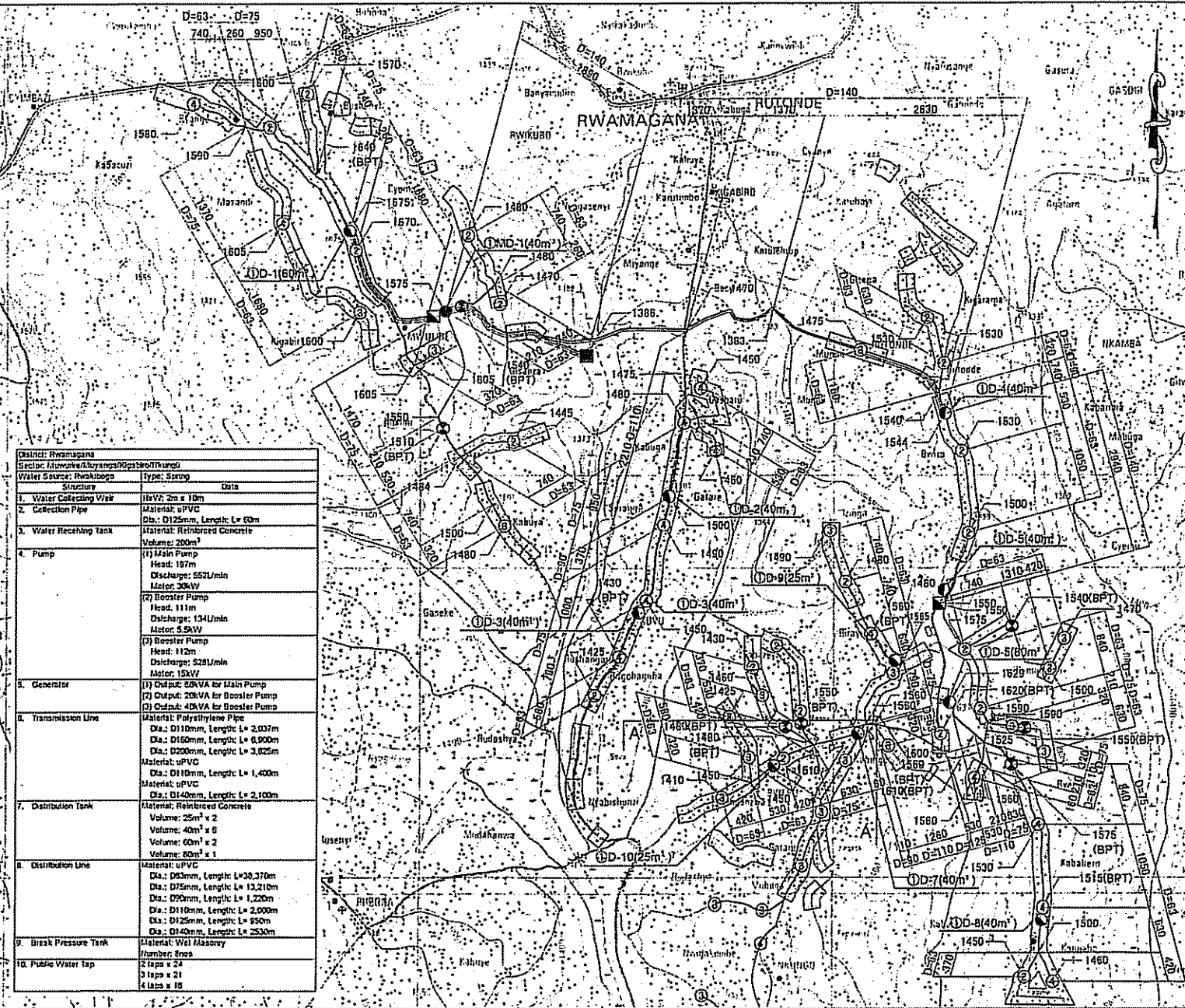
List of the Project Sites

District Name	Sector Name	Water Source Name	Water Supply System No.	Construction Stage			Former District Name	Former Sector Name
				1st	2nd	3rd		
Rwamagana	Kyabiro	Rwibanga spring	01	*			Rwamagana	Sovu (partially) Kibanga Mugera Kibana Kibana
	Muyanga			Kabarwiro	Mungu			
Kayanza	Mukaranga	Kashabana groundwater	02	*			Muhazi	Muhazi Muhazi Muhazi
	Kabomondo	Kabomondo groundwater	03	*				Kabomondo Kabomondo
	Rwibanga	Rwibanga groundwater	04	*			Cyambwira	Cyambwira Cyambwira
	Murama	Gicaza spring	05	*		*		Murama Murama
Ngoma	Kibanga	Gesetse Nyakagali spring	06	*		*	Kibanga	Rubana Ruhanga Ruhanga
	Kibira	Rwidera spring Kababaha spring	07	*		*	Kibanga	Kibira Kibira Kibira
	Mugera	Mugera-Murama groundwater	HP08	*			Ruhira	Ruhira Ruhira
	Murama	Kigoma spring	09	*		*	Kigoma	Kigoma Kigoma
	Muhazi	Muhazi spring	10	*		*	Ruhira	Muhazi Muhazi
Kirehe	Kirehe	Gashira spring Mugera spring	01	*	*	*		Kirehe Kirehe
	Mugera	Mugera spring	02	*	*	*	Ruhira	Mugera Mugera
	Kigoma	Kigoma spring	03	*	*	*		Kigoma Kigoma
	Gashira	Gashira spring	04	*	*	*		Gashira Gashira

LEGEND

- PROPOSED PIPED SUPPLY SCHEME STAGE 1
- PROPOSED PIPED SUPPLY SCHEME STAGE 2
- PROPOSED PIPED SUPPLY SCHEME STAGE 3
- PROPOSED HAND PUMP SCHEME STAGE 1

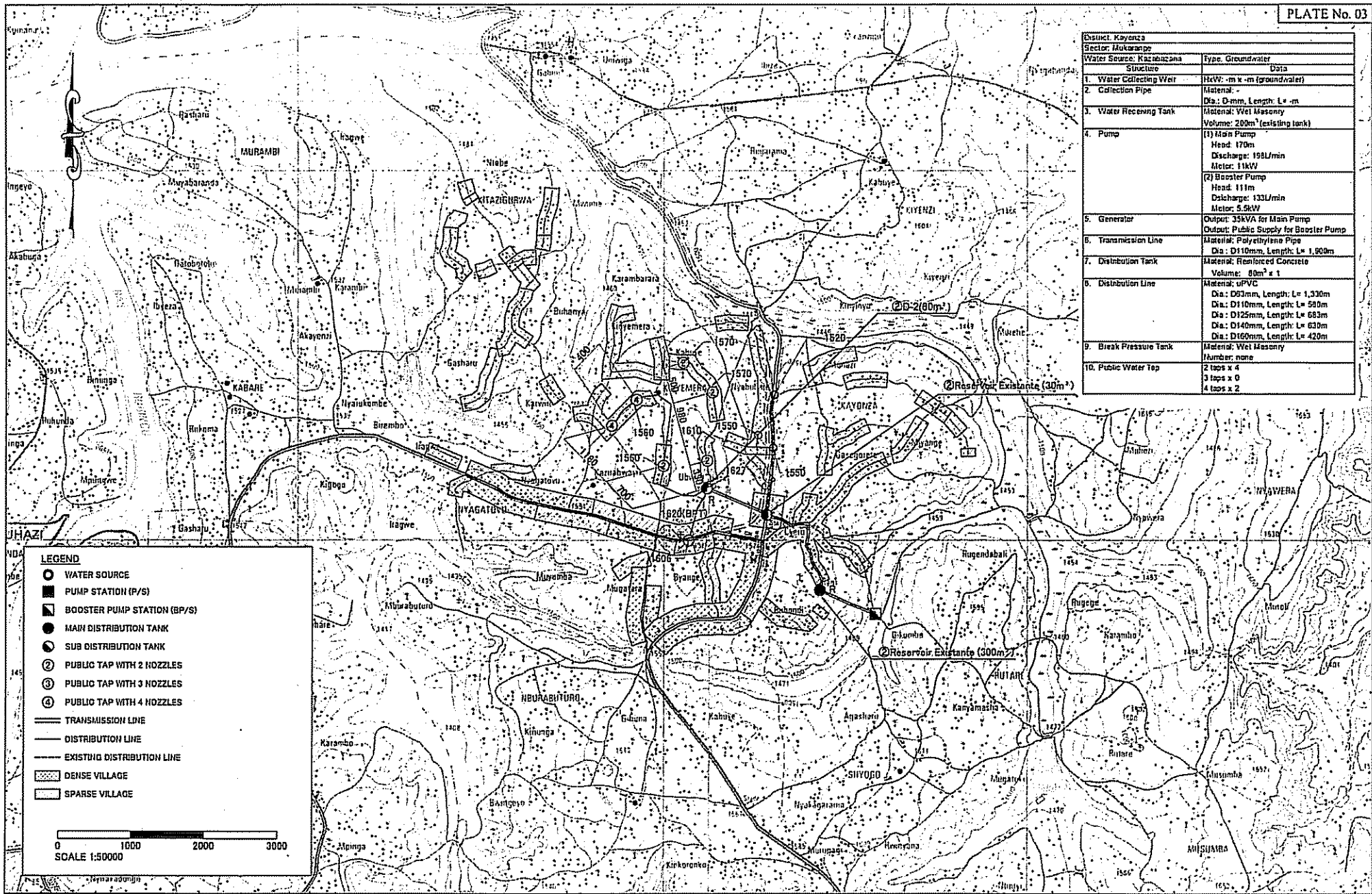
<p>PROJECT NAME</p> <p style="text-align: center;">THE PROJECT FOR RURAL WATER SUPPLY</p>	<p style="text-align: center;">JAPAN INTERNATIONAL COOPERATION AGENCY</p> <p style="text-align: center;">MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES THE REPUBLIC OF RWANDA</p>	<p>CONSULTANT</p> <p style="text-align: center;"> NIPPON KOEI CO., LTD.</p>	<p>DRAWING TITLE</p> <p style="text-align: center;">LOCATION MAP OF THE PROJECT FOR RURAL WATER SUPPLY</p>						
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">SCALE</td> <td style="width: 33%;">DATE</td> <td style="width: 33%;">DRAWING NO.</td> </tr> <tr> <td style="text-align: center;">NONE</td> <td style="text-align: center;">FEBRUARY 2006</td> <td style="text-align: center;">GE-001</td> </tr> </table>	SCALE	DATE	DRAWING NO.	NONE	FEBRUARY 2006	GE-001	
SCALE	DATE	DRAWING NO.							
NONE	FEBRUARY 2006	GE-001							



DATA: Rwamagana	
Section: Muzika/Muyanga/Gashoro/Thungu	
Water Source: Rwakiboga Type: Spring	
Structure	Data
1. Water Collecting Weir	HeiV: 2m x 10m
2. Collection Pipe	Material: uPVC Dia.: Ø125mm, Length: L= 60m
3. Water Receiving Tank	Material: Reinforced Concrete Volume: 200m ³
4. Pump	(1) Main Pump Head: 197m Discharge: 552l/min Motor: 30kW
	(2) Booster Pump Head: 111m Discharge: 134l/min Motor: 4.5kW
	(3) Booster Pump Head: 112m Discharge: 528l/min Motor: 15kW
5. Generator	(1) Output: 60kVA for Main Pump (2) Output: 20kVA for Booster Pump (3) Output: 40kVA for Booster Pump
6. Transmission Line	Material: Polyethylene Pipe Dia.: Ø110mm, Length: L= 2,037m Dia.: Ø160mm, Length: L= 6,900m Dia.: Ø200mm, Length: L= 3,625m Material: uPVC Dia.: Ø110mm, Length: L= 1,400m Material: uPVC Dia.: Ø140mm, Length: L= 2,100m
	Material: Reinforced Concrete Volume: 25m ³ x 2 Volume: 40m ³ x 6 Volume: 60m ³ x 2 Volume: 80m ³ x 1
8. Distribution Line	Material: uPVC Dia.: Ø93mm, Length: L= 30,370m Dia.: Ø75mm, Length: L= 13,210m Dia.: Ø50mm, Length: L= 1,220m Dia.: Ø110mm, Length: L= 2,000m Dia.: Ø125mm, Length: L= 950m Dia.: Ø140mm, Length: L= 2530m
	Material: Wet Masonry
	Number: 6m ²
	3 laps x 21
	4 laps x 18
10. Public Water tap	

PROJECT NAME THE PROJECT FOR RURAL WATER SUPPLY	JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANT NIPPON KOEI CO., LTD.	DRAWING TITLE WATER SUPPLY SYSTEM (I)		
	MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES THE REPUBLIC OF RWANDA		SCALE 1:50000	DATE FEBRUARY 2006	DRAWING NO. PW-001

District: Kayanza	
Sector: Mukawango	
Water Source: Kazibazana	Type: Groundwater
Structure	Data
1. Water Collecting Weir	HW: -m x -m (groundwater)
2. Collection Pipe	Material: - Dia: 0-mm, Length: L= -m
3. Water Receiving Tank	Material: Wet Masonry Volume: 200m ³ (existing tank)
4. Pump	(1) Main Pump Head: 170m Discharge: 198l/min Motor: 11kW (2) Booster Pump Head: 111m Discharge: 133l/min Motor: 5.5kW
5. Generator	Output: 35kVA for Main Pump Output: Public Supply for Booster Pump
6. Transmission Line	Material: Polyethylene Pipe Dia: D110mm, Length: L= 1,900m
7. Distribution Tank	Material: Reinforced Concrete Volume: 80m ³ x 1
8. Distribution Line	Material: uPVC Dia: D63mm, Length: L= 1,330m Dia: D110mm, Length: L= 590m Dia: D125mm, Length: L= 683m Dia: D140mm, Length: L= 630m Dia: D160mm, Length: L= 420m
9. Break Pressure Tank	Material: Wet Masonry Number: none
10. Public Water Tap	2 taps x 4 3 taps x 0 4 taps x 2

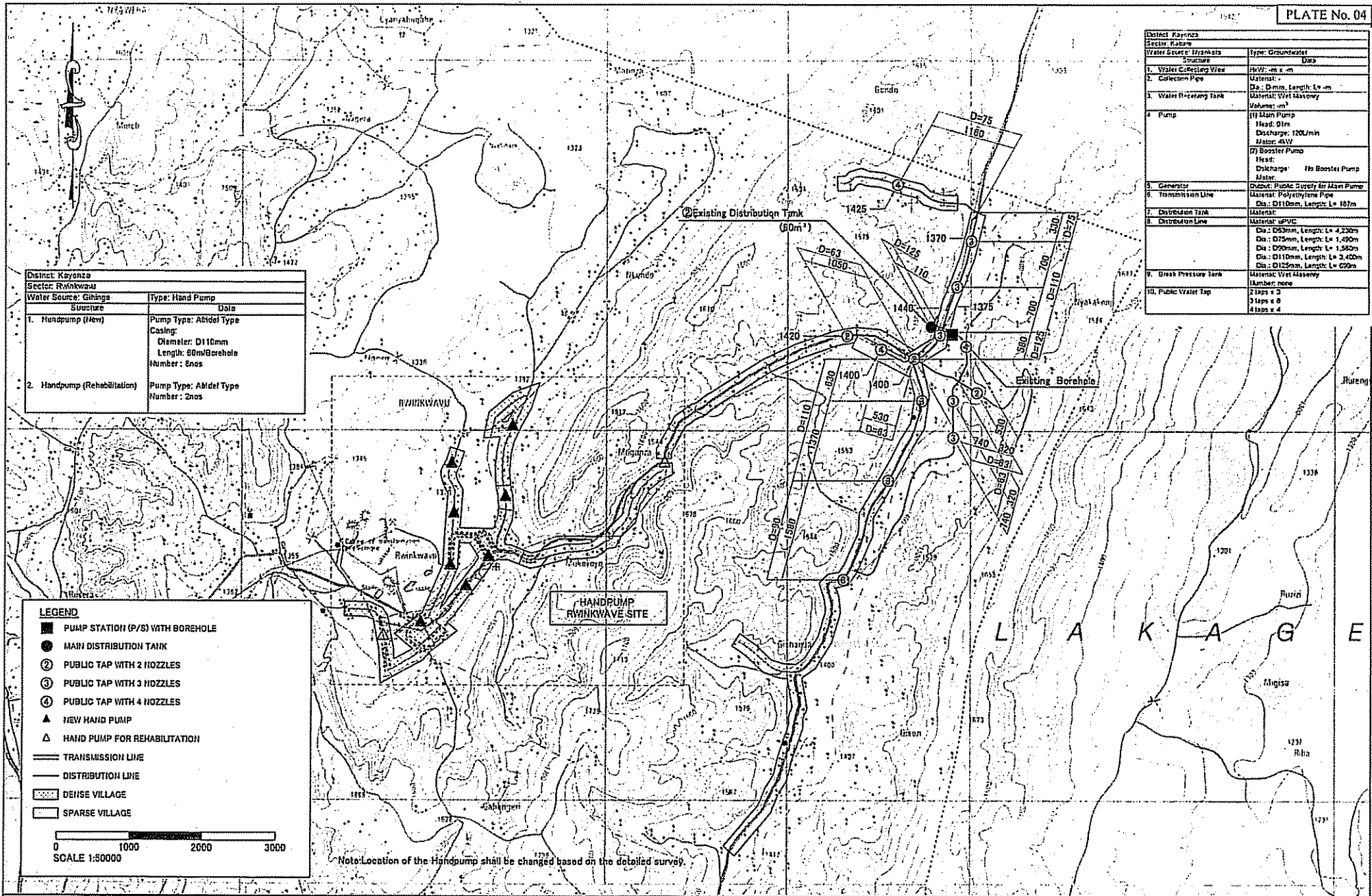


LEGEND

- WATER SOURCE
- PUMP STATION (P/S)
- ▣ BOOSTER PUMP STATION (BP/S)
- MAIN DISTRIBUTION TANK
- SUB DISTRIBUTION TANK
- ② PUBLIC TAP WITH 2 NOZZLES
- ③ PUBLIC TAP WITH 3 NOZZLES
- ④ PUBLIC TAP WITH 4 NOZZLES
- TRANSMISSION LINE
- DISTRIBUTION LINE
- EXISTING DISTRIBUTION LINE
- ▨ DENSE VILLAGE
- ▩ SPARSE VILLAGE

0 1000 2000 3000
SCALE 1:50000

PROJECT NAME THE PROJECT FOR RURAL WATER SUPPLY	JAPAN INTERNATIONAL COOPERATION AGENCY		CONSULTANT		DRAWING TITLE	
	MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES THE REPUBLIC OF RWANDA		NIPPON KOEI CO., LTD.		WATER SUPPLY SYSTEM (2)	
SCALE 1:50000			DATE FEBRUARY 2006		DRAWING NO. PW-002	



District: Kayanza	
Sector: Rukwau	
Water Source: Ifirakaza	Type: Groundwater
Structure	Disp
1. Volute Collecting Vase	HW: m x m
2. Collection Pipe	Material: - Dia.: Dmm, Length: Lm
3. Water Retaining Tank	Material: Vri Alloy Volume: m³
4. Pump	(I) Main Pump Head: 01m Discharge: 1200/min Motor: 4KW (II) Booster Pump Head: - Discharge: - Booster Pump Motor: -
5. Generator	Output: Public Supply for Main Pump
6. Transmission Line	Material: Polyethylene Pipe Dia.: D110mm, Length: L= 187m
7. Distribution Tank	Material: -
8. Distribution Line	Material: uPVC Dia.: D63mm, Length: L= 4,230m Dia.: D75mm, Length: L= 1,490m Dia.: D90mm, Length: L= 1,342m Dia.: D110mm, Length: L= 3,400m Dia.: D125mm, Length: L= 620m
9. Break Pressure Tank	Material: Vri Assembly Number: none
10. Public Water Tap	2 Taps x 0 3 Taps x 0 4 Taps x 4

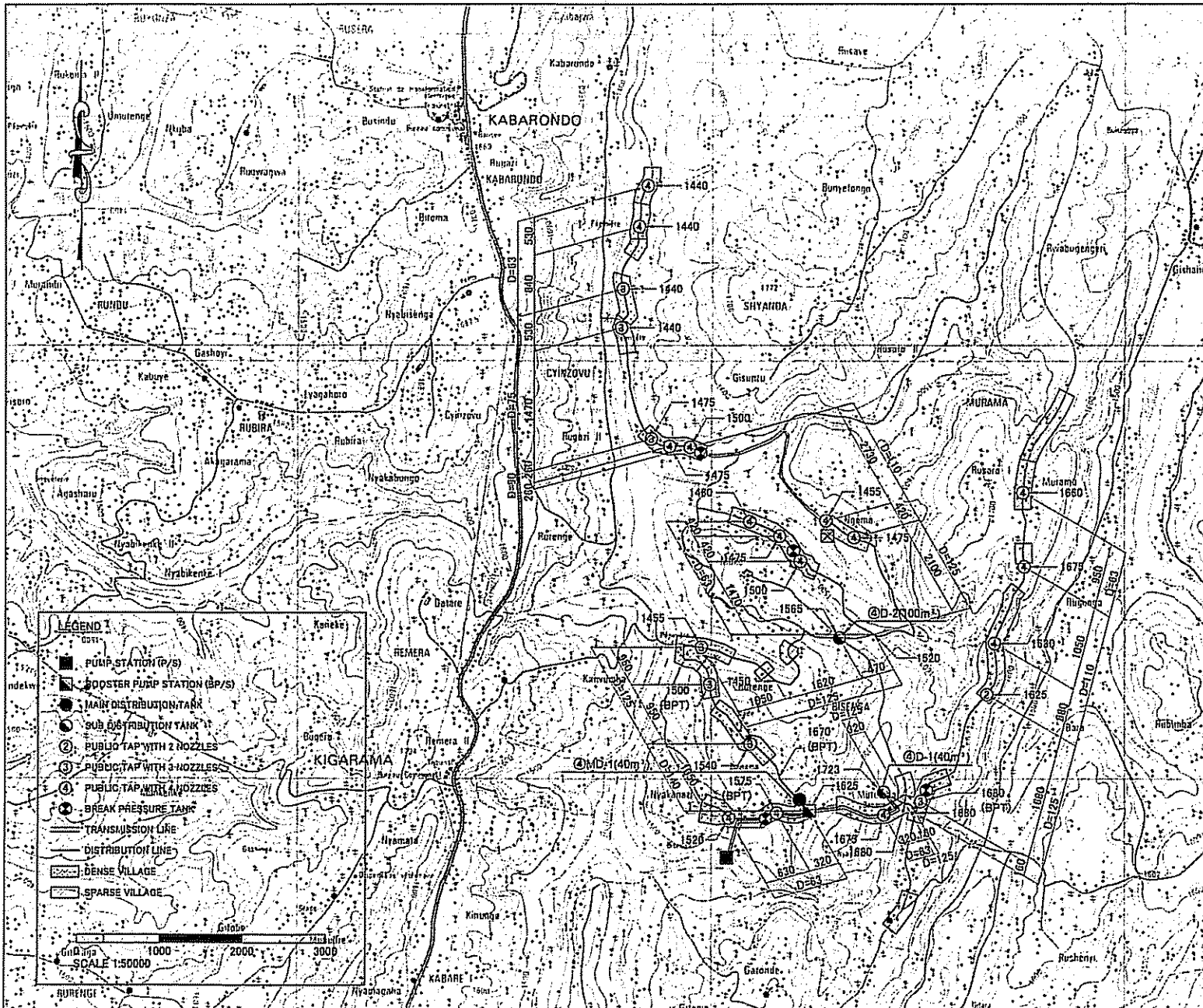
District: Kayanza	
Sector: Rukwau	
Water Source: Gihanga	
Structure	Type: Hand Pump
Date	
1. Handpump (New)	Pump Type: Abidel Type Casing: Diameter: D110mm Length: 60m/Borehole Number: 6nos
2. Handpump (Rehabilitation)	Pump Type: Abidel Type Number: 2nos

LEGEND

- PUMP STATION (P/S) WITH BOREHOLE
- MAIN DISTRIBUTION TANK
- ② PUBLIC TAP WITH 2 NOZZLES
- ③ PUBLIC TAP WITH 3 NOZZLES
- ④ PUBLIC TAP WITH 4 NOZZLES
- ▲ NEW HAND PUMP
- △ HAND PUMP FOR REHABILITATION
- TRANSMISSION LINE
- DISTRIBUTION LINE
- ▨ DENSE VILLAGE
- ▩ SPARSE VILLAGE

0 1000 2000 3000
SCALE 1:50000

Note: Location of the Handpump shall be changed based on the detailed survey.



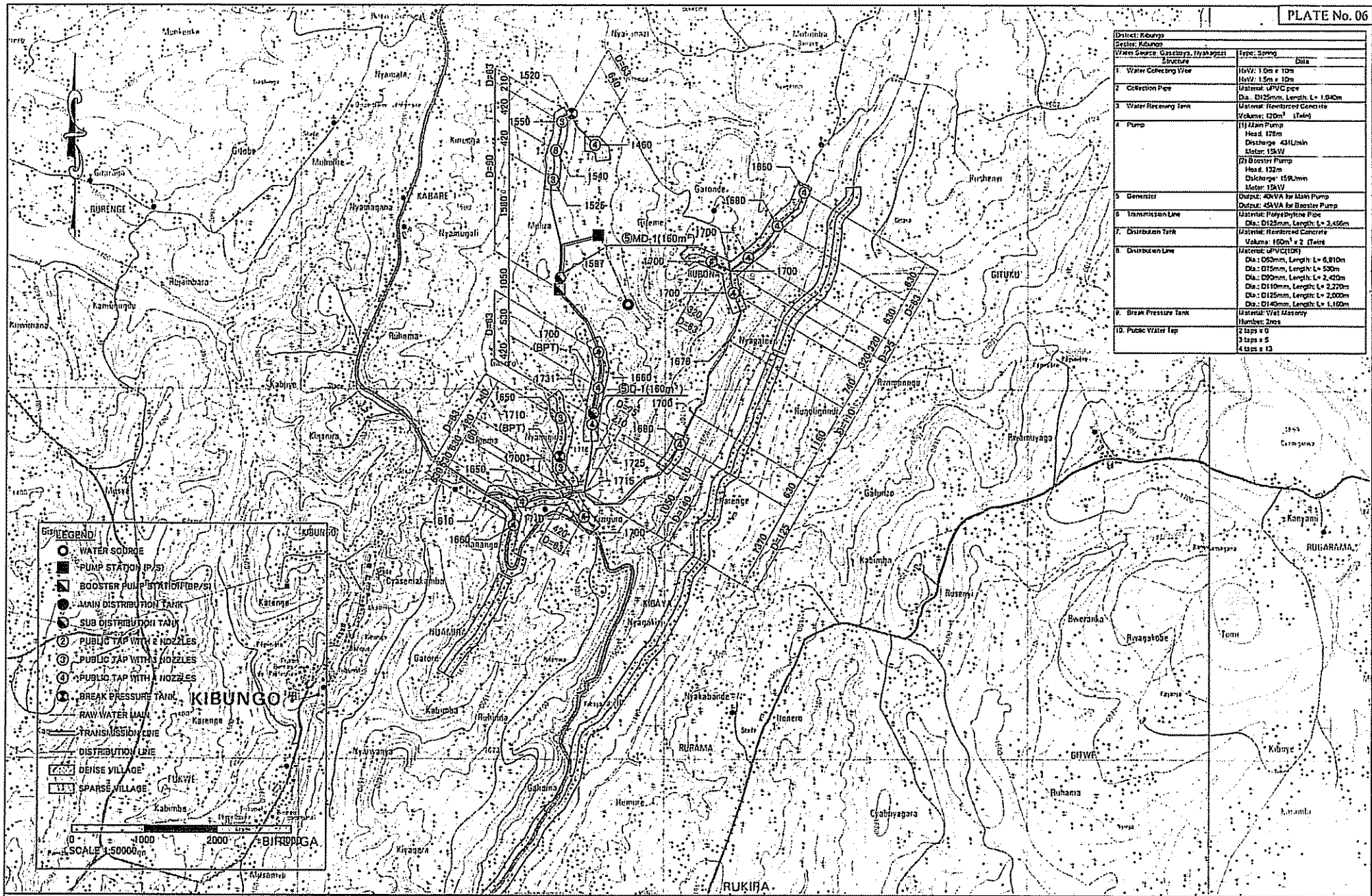
District: Kayanza		
Sector: Murama		
Water Source	Type	Spring
Structure		
1. Water Collecting Well	Head: 1.5m x 15m	
2. Collection Pipe	Material: uPVC pipe	
	Di.: D125mm, Length: L= 60m	
3. Water Receiving Tank	Material: Reinforced Concrete	
	Volume: 160m ³ (14m)	
4. Pump	(1) Main Pump Head: 141m Discharge: 53L/min Motor: 18 KW	
	(2) Booster Pump Head: 132m Discharge: 159L/min Motor: 7.5KW	
5. Generator	Output: 50KVA for Main Pump Output: 20KVA for Booster Pump	
6. Transmission Line	Material: Polyethylene Pipe	
	Di.: D160mm, Length: L= 1,505m	
	Di.: D110mm, Length: L= 1,502m	
7. Distribution Tank	Material: Reinforced Concrete	
	Volume: 40m ³ x 2	
	Volume: 100m ³ x 1	
8. Distribution Line	Material: UPVC	
	Di.: D53mm, Length: L= 5,900m	
	Di.: D75mm, Length: L= 2,100m	
	Di.: D90mm, Length: L= 520m	
	Di.: D110mm, Length: L= 4,850m	
	Di.: D125mm, Length: L= 9,840m	
	Di.: D140mm, Length: L= 1,650m	
9. Break Pressure Tank	Material: Wet Masonry	
	Number: 4nos	
10. Public Water Tap	2 taps x 2	
	3 taps x 7	
	4 taps x 15	

LEGEND I

- PUMP STATION (P/S)
- BOOSTER PUMP STATION (BP/S)
- MAIN DISTRIBUTION TANK
- SUB DISTRIBUTION TANK
- ② PUBLIC TAP WITH 2 NOZZLES
- ③ PUBLIC TAP WITH 3 NOZZLES
- ④ PUBLIC TAP WITH 4 NOZZLES
- BREAK PRESSURE TANK
- TRANSMISSION LINE
- DISTRIBUTION LINE
- ▨ DENSE VILLAGE
- ▨ SPARSE VILLAGE

SCALE 1:50000

PROJECT NAME THE PROJECT FOR RURAL WATER SUPPLY	JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANT NIPPON KOEI CO., LTD.	DRAWING TITLE WATER SUPPLY SYSTEM (4)		
	MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES THE REPUBLIC OF RWANDA		SCALE 1:50000	DATE FEBRUARY 2006	DRAWING NO. PW-004



District: Kibungo			
Sector: Kibungo			
Water Source	Structure	Type	Specs
1. Water Collecting Vitr		Typic Spring	
2. Collection Pipe			Mat: 1.5m x 10m Mat: 1.5m x 10m
3. Water Receiving Tank			Material: UPVC pipe Dia: Ø125mm, Length: L= 1.040m
4. Pump			Material: Reinforced Concrete Volume: 120m ³ (Tank)
5. Generator			(1) Main Pump Head: 126m Discharge: 431L/min Motor: 15kW (2) Booster Pump Head: 132m Discharge: 150L/min Motor: 15kW
6. Transmission Line			Output: 40kVA for Main Pump Output: 40kVA for Booster Pump
7. Distribution Tank			Material: Polyethylene Pipe Dia: Ø125mm, Length: L= 3.456m
8. Distribution Line			Material: Reinforced Concrete Volume: 160m ³ x 2 (Tanks)
9. Break Pressure Tank			Material: UPVC (PRT) Dia: Ø60mm, Length: L= 0.810m Dia: Ø75mm, Length: L= 530m Dia: Ø90mm, Length: L= 2.420m Dia: Ø110mm, Length: L= 2.270m Dia: Ø125mm, Length: L= 2.000m Dia: Ø140mm, Length: L= 1.160m
10. Public Water Tap			Material: V745 Glasswool Number: 2mcs 2 taps x 0 3 taps x 5 4 taps x 13

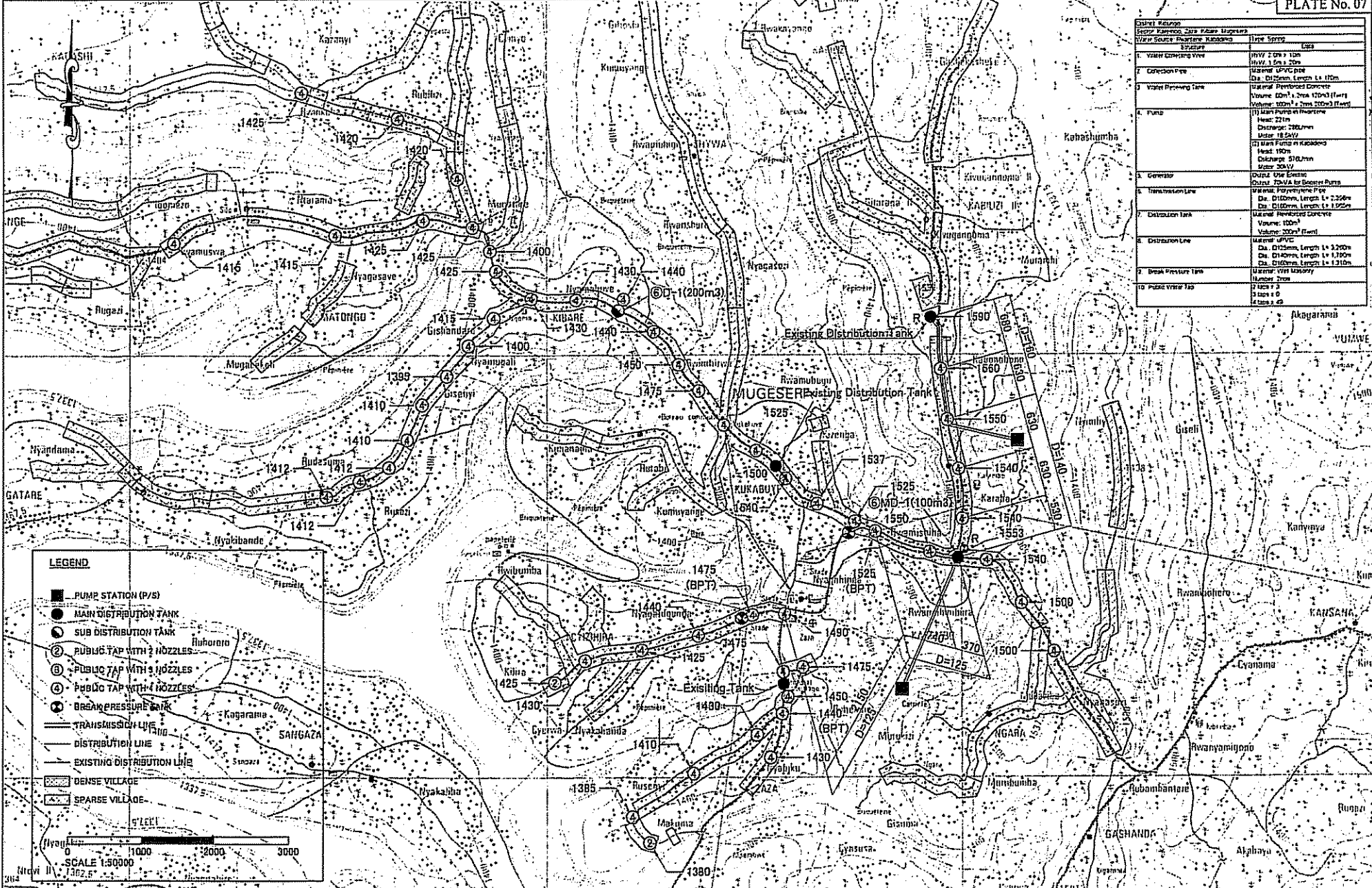
LEGEND

- WATER SOURCE
- PUMP STATION (P/S)
- BOOSTER PUMP STATION (BP/S)
- MAIN DISTRIBUTION TANK
- SUB DISTRIBUTION TANK
- ② PUBLIC TAP WITH 2 NOZZLES
- ③ PUBLIC TAP WITH 3 NOZZLES
- ④ PUBLIC TAP WITH 4 NOZZLES
- BREAK PRESSURE TANK
- RAW WATER MAIN
- TRANSMISSION LINE
- DISTRIBUTION LINE
- ▨ DENSE VILLAGE
- ▩ SPARSE VILLAGE

SCALE 1:50000

PROJECT NAME THE PROJECT FOR RURAL WATER SUPPLY	JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANT NIPPON KOEI CO., LTD.	DRAWING TITLE WATER SUPPLY SYSTEM (5)		
	MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES THE REPUBLIC OF RWANDA		SCALE 1:50000	DATE FEBRUARY 2006	DRAWING NO. PW-005

Symbol	Material	Quantity	Remarks
1	Water Conveying Pipe	1000m	100mm Dia. 100m
2	Collection Pipe	1000m	100mm Dia. 100m
3	Water Pressing Tank	1	Material: Reinforced Concrete Volume: 100m ³ (10m x 10m x 1m) Capacity: 100m ³ (10m x 10m x 1m)
4	Pump	1	(1) Main Pump in Frontage Head: 20m Capacity: 1000m ³ /hr Motor: 15kW (2) Main Pump in Backstage Head: 100m Capacity: 1000m ³ /hr Motor: 30kW
5	Generator	1	Output: 100kW Fuel: 200L/hr
6	Transmission Line	1000m	Material: Polyethylene Pipe Dia: 100mm, Length: 1000m
7	Distribution Tank	1	Material: Reinforced concrete Volume: 100m ³ Capacity: 100m ³
8	Distribution Line	1000m	Material: PVC Dia: 100mm, Length: 1000m
9	Break Pressure Tank	1	Material: VIBI Masonry Capacity: 100m ³
10	Public Water Tap	10	2 taps x 3 3 taps x 4 4 taps x 5

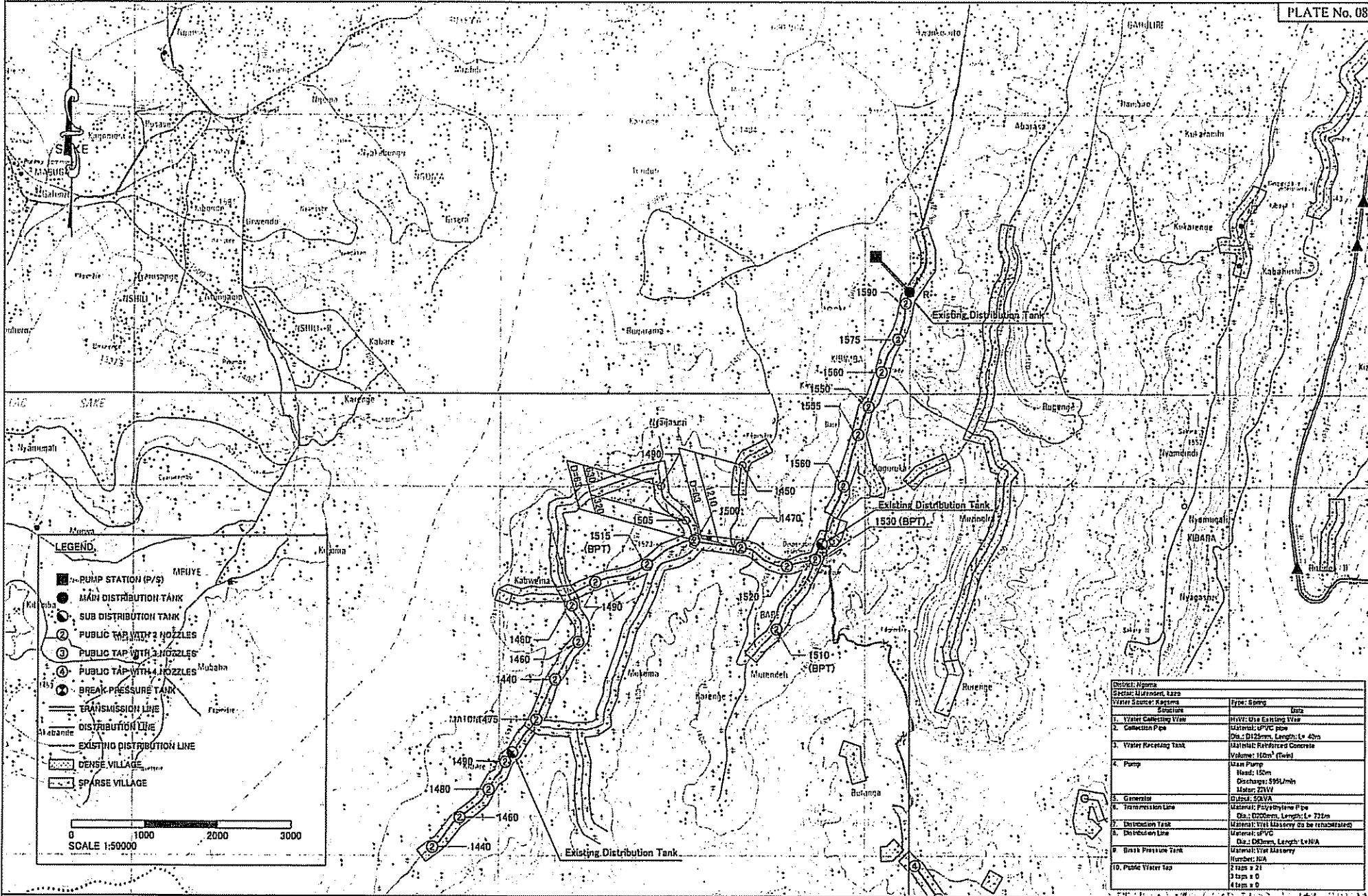


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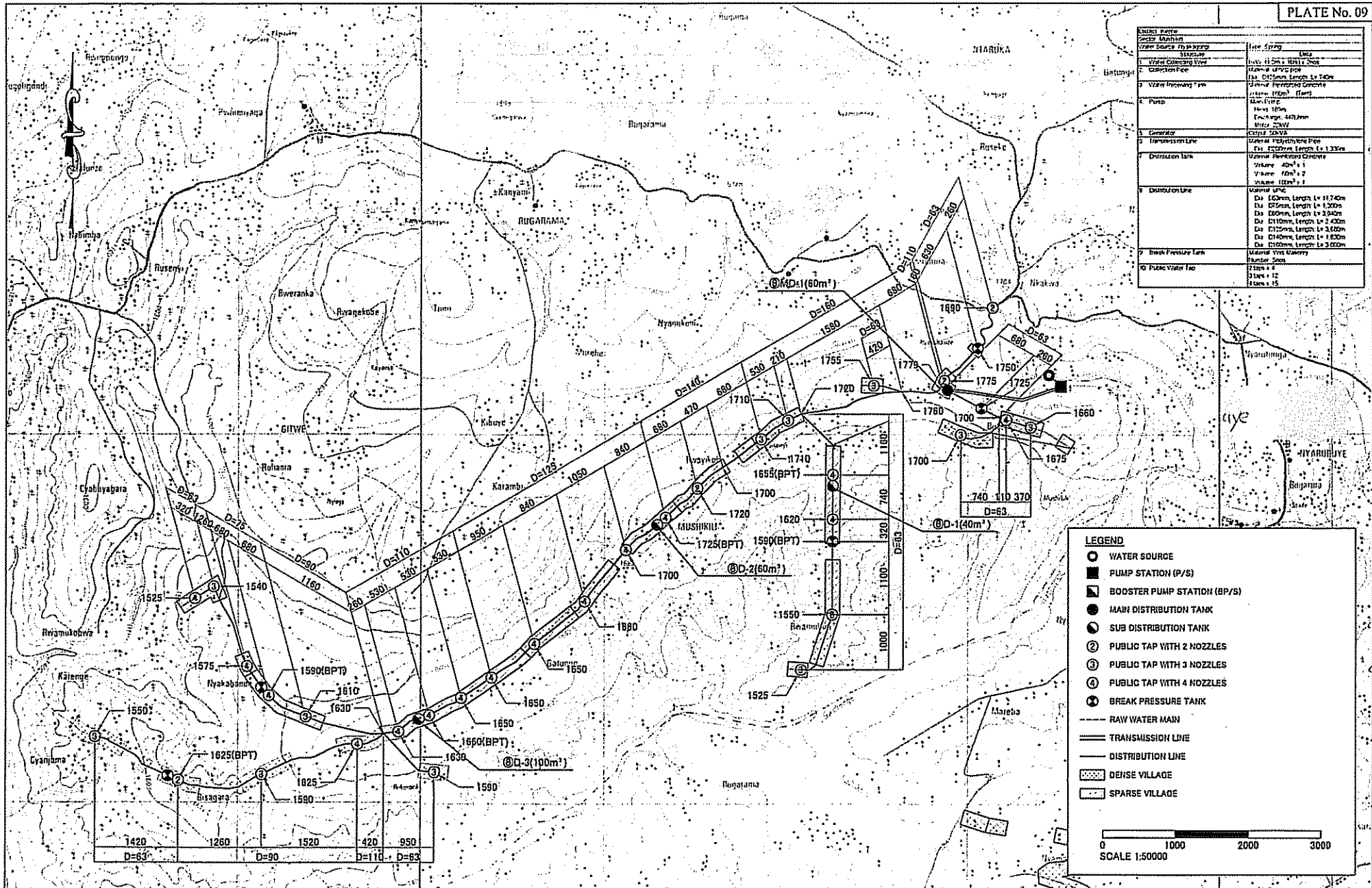
- PUMP STATION (P/S)
- MAIN DISTRIBUTION TANK
- SUB DISTRIBUTION TANK
- ② PUBLIC TAP WITH 2 HOZZLES
- ③ PUBLIC TAP WITH 3 HOZZLES
- ④ PUBLIC TAP WITH 4 HOZZLES
- ⊗ BREAK PRESSURE TANK
- TRANSMISSION LINE
- DISTRIBUTION LINE
- EXISTING DISTRIBUTION LINE
- ▨ DENSE VILLAGE
- ▩ SPARSE VILLAGE

SCALE 1:50000

0 1000 2000 3000



PROJECT NAME THE PROJECT FOR RURAL WATER SUPPLY	CONSULTANT JAPAN INTERNATIONAL COOPERATION AGENCY		DRAWING TITLE WATER SUPPLY SYSTEM (7)	
	MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES THE REPUBLIC OF RWANDA		NIPPON KOEI CO.,LTD.	
	SCALE 1:50000	DATE FEBRUARY 2006	DRAWING NO. PW-007	



Symbol	Description
○	Water Source
■	Pump Station (P/S)
▲	Booster Pump Station (BP/S)
●	Main Distribution Tank
○	Sub Distribution Tank
②	Public Tap with 2 Nozzles
③	Public Tap with 3 Nozzles
④	Public Tap with 4 Nozzles
⊗	Break Pressure Tank
—	Raw Water Main
—	Transmission Line
—	Distribution Line
⊘	Dense Village
⊘	Sparse Village

LEGEND

- WATER SOURCE
- PUMP STATION (P/S)
- ▲ BOOSTER PUMP STATION (BP/S)
- MAIN DISTRIBUTION TANK
- SUB DISTRIBUTION TANK
- ② PUBLIC TAP WITH 2 NOZZLES
- ③ PUBLIC TAP WITH 3 NOZZLES
- ④ PUBLIC TAP WITH 4 NOZZLES
- ⊗ BREAK PRESSURE TANK
- RAW WATER MAIN
- TRANSMISSION LINE
- DISTRIBUTION LINE
- ⊘ DENSE VILLAGE
- ⊘ SPARSE VILLAGE

SCALE 1:50000

0 1000 2000 3000

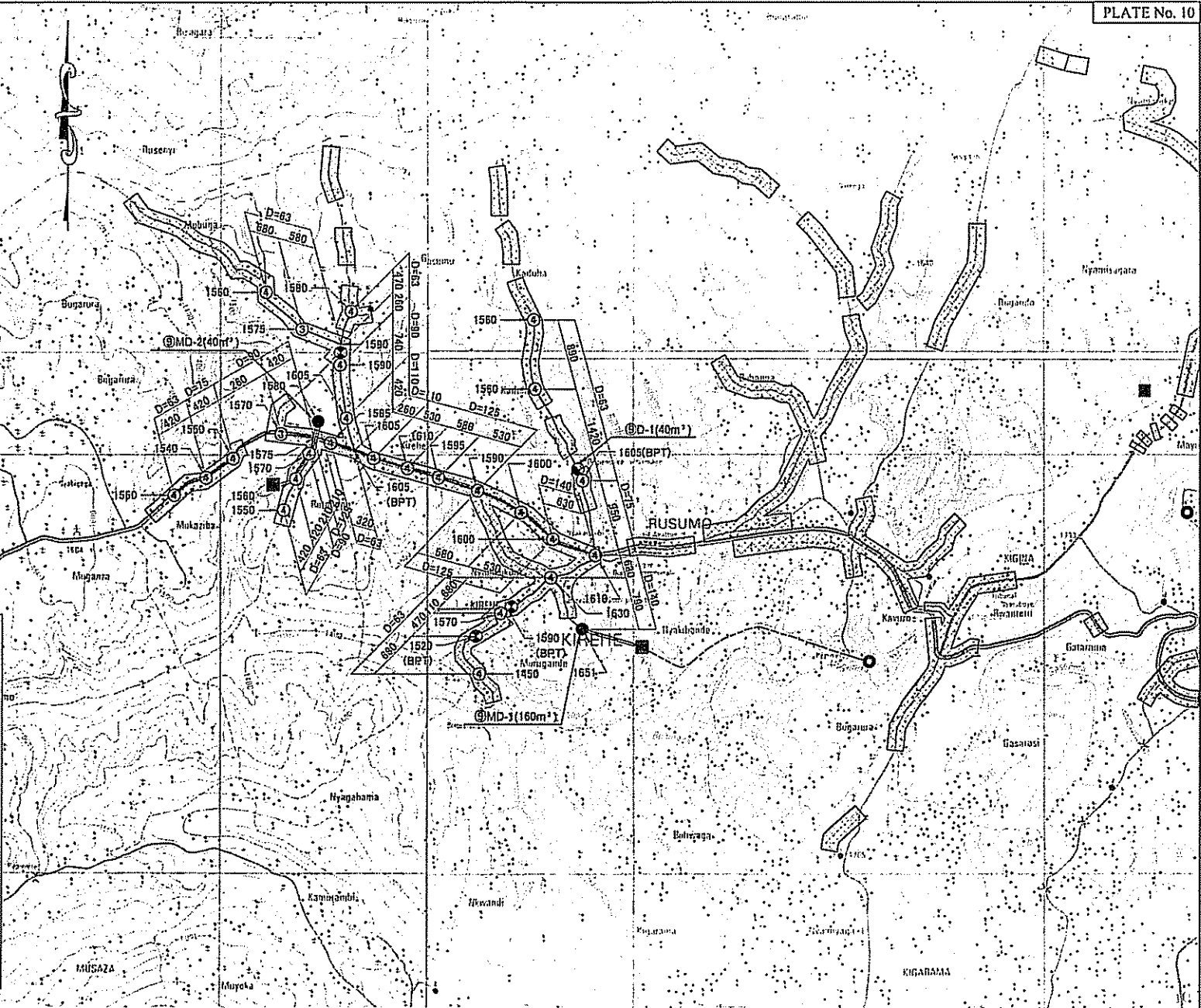
PROJECT NAME THE PROJECT FOR RURAL WATER SUPPLY	JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANT NIPPON KOEI CO., LTD.	DRAWING TITLE WATER SUPPLY SYSTEM (8)		
	MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES. THE REPUBLIC OF RWANDA		SCALE 1:50000	DATE FEBRUARY 2006	DRAWING NO. PW-008

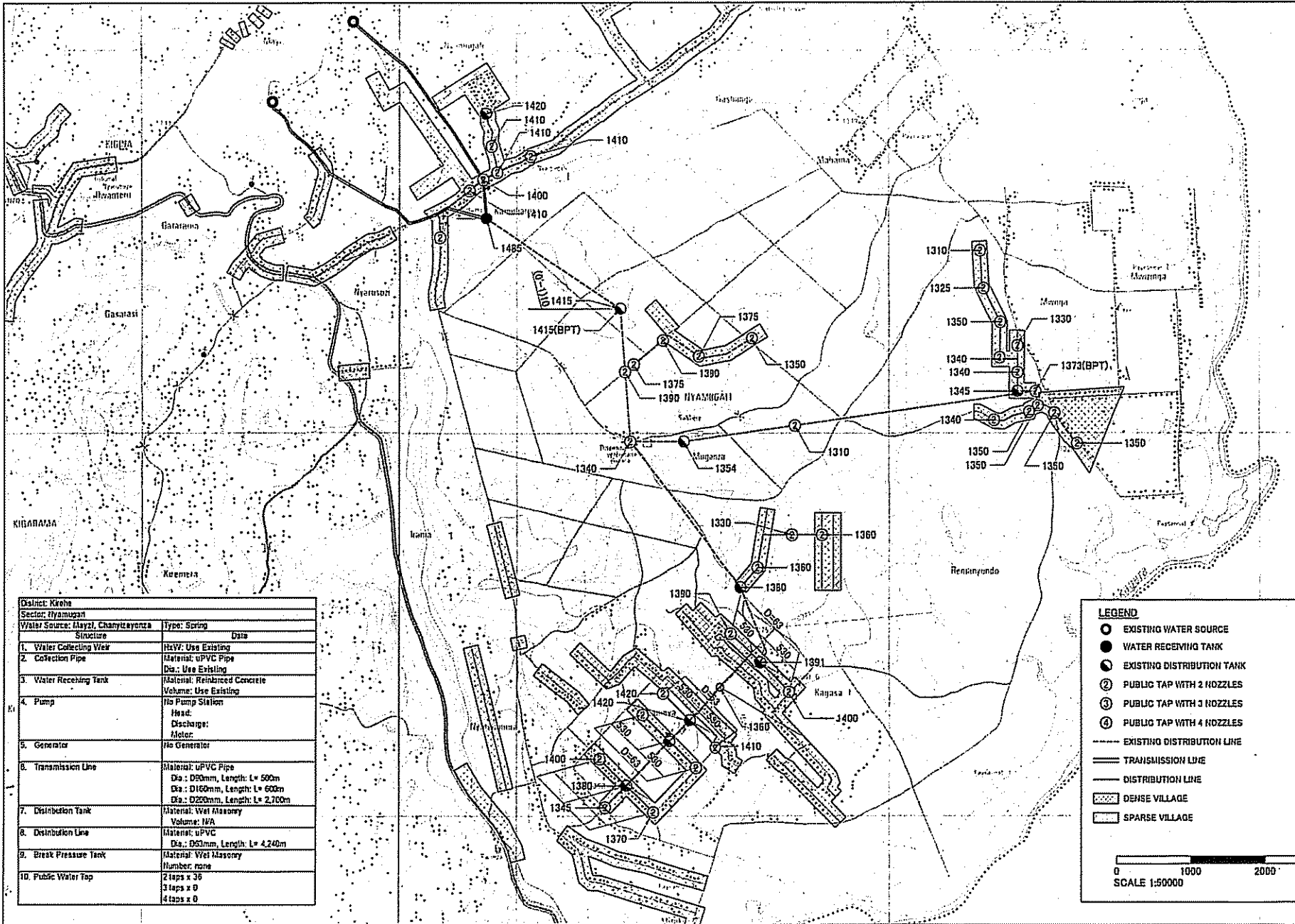
Water Source	Type	Capacity
1 Water Catching Tank	Hand	100m ³ x 20m
2 Collection Pipe	UPVC	100mm x 10m
3 Water Reception Tank	UPVC	100mm x 10m
4 Pump	Hand	100m ³ x 20m
5 Generator	Hand	100m ³ x 20m
6 Transmission Line	UPVC	100mm x 10m
7 Distribution Tank	UPVC	100mm x 10m
8 Distribution Line	UPVC	100mm x 10m
9 Break Pressure Tank	UPVC	100mm x 10m
10 Public Water Tap	UPVC	100mm x 10m

LEGEND

- WATER SOURCE
- ⊠ PUMP STATION (P/S)
- ⊙ MAIN DISTRIBUTION TANK
- ⊙ SUB DISTRIBUTION TANK
- ② PUBLIC TAP WITH 2 HOZZLES
- ③ PUBLIC TAP WITH 3 HOZZLES
- ④ PUBLIC TAP WITH 4 HOZZLES
- ⊗ BREAK PRESSURE TANK
- RAW WATER MAIN
- TRANSMISSION LINE
- - - DISTRIBUTION LINE
- ▨ DENSE VILLAGE
- ▩ SPARSE VILLAGE

0 1000 2000 3000
SCALE 1:50000



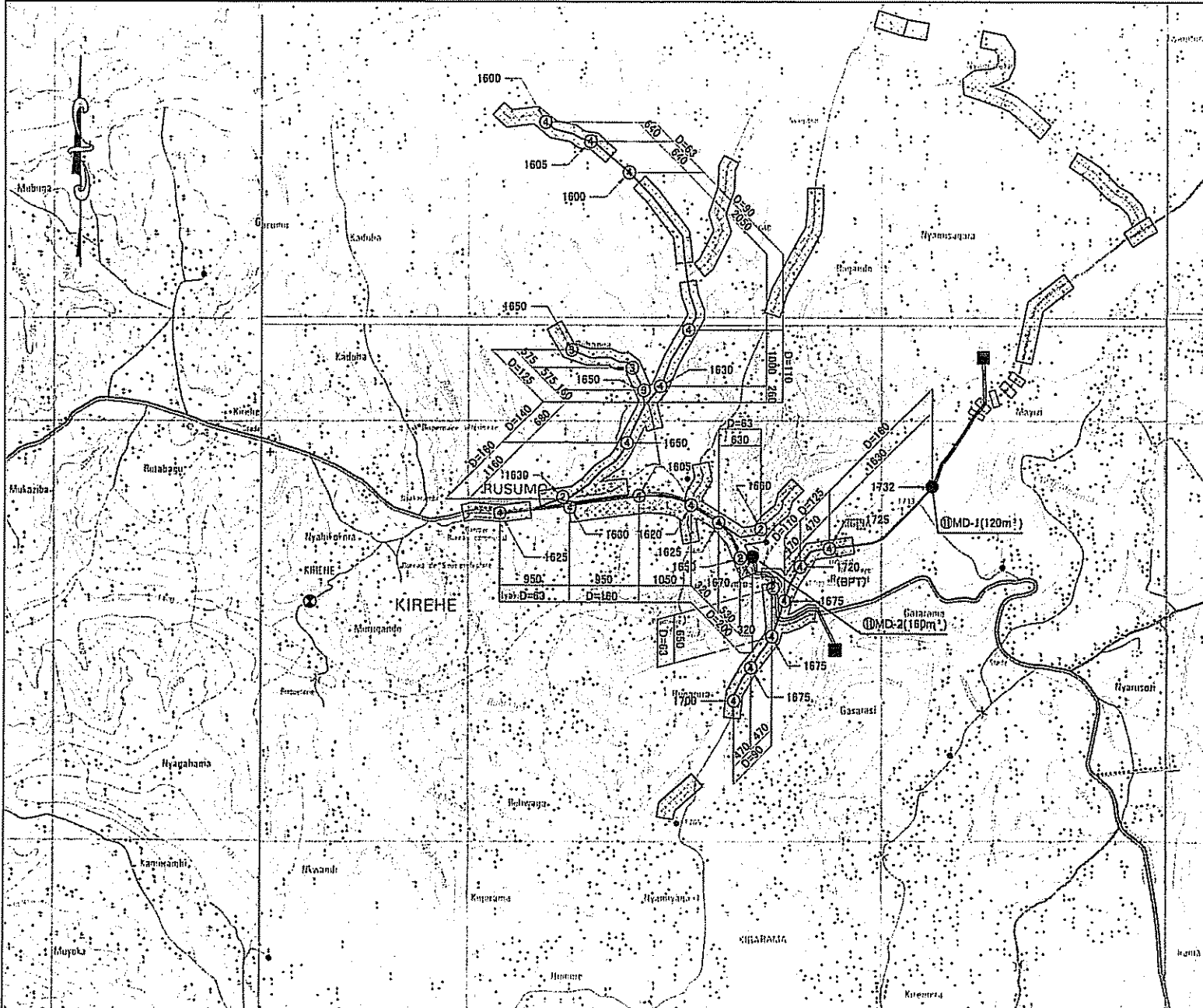


LEGEND

- EXISTING WATER SOURCE
- WATER RECEIVING TANK
- EXISTING DISTRIBUTION TANK
- ② PUBLIC TAP WITH 2 NOZZLES
- ③ PUBLIC TAP WITH 3 NOZZLES
- ④ PUBLIC TAP WITH 4 NOZZLES
- EXISTING DISTRIBUTION LINE
- TRANSMISSION LINE
- DISTRIBUTION LINE
- ▨ DENSE VILLAGE
- SPARSE VILLAGE

0 1000 2000 3000
SCALE 1:50000

PROJECT NAME THE PROJECT FOR RURAL WATER SUPPLY	CONSULTANT JAPAN INTERNATIONAL COOPERATION AGENCY MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES THE REPUBLIC OF RWANDA	DRAWING TITLE WATER SUPPLY SYSTEM (10)	SCALE 1:50000		DATE FEBRUARY 2006	DRAWING NO. PW-010
			DRAWING TITLE WATER SUPPLY SYSTEM (10)		SCALE 1:50000	DATE FEBRUARY 2006



LEGEND

- WATER SOURCE
- PUMP STATION (P/S)
- ▣ BOOSTER PUMP STATION (BP/S)
- MAIN DISTRIBUTION TANK
- ⊙ SUB DISTRIBUTION TANK
- ② PUBLIC TAP WITH 2 NOZZLES
- ③ PUBLIC TAP WITH 3 NOZZLES
- ④ PUBLIC TAP WITH 4 NOZZLES
- ⊕ BREAK PRESSURE TANK
- RAW WATER MAIN
- == TRANSMISSION LINE
- DISTRIBUTION LINE
- ▨ DENSE VILLAGE
- ▩ SPARSE VILLAGE

0 1000 2000 3000
SCALE 1:50000

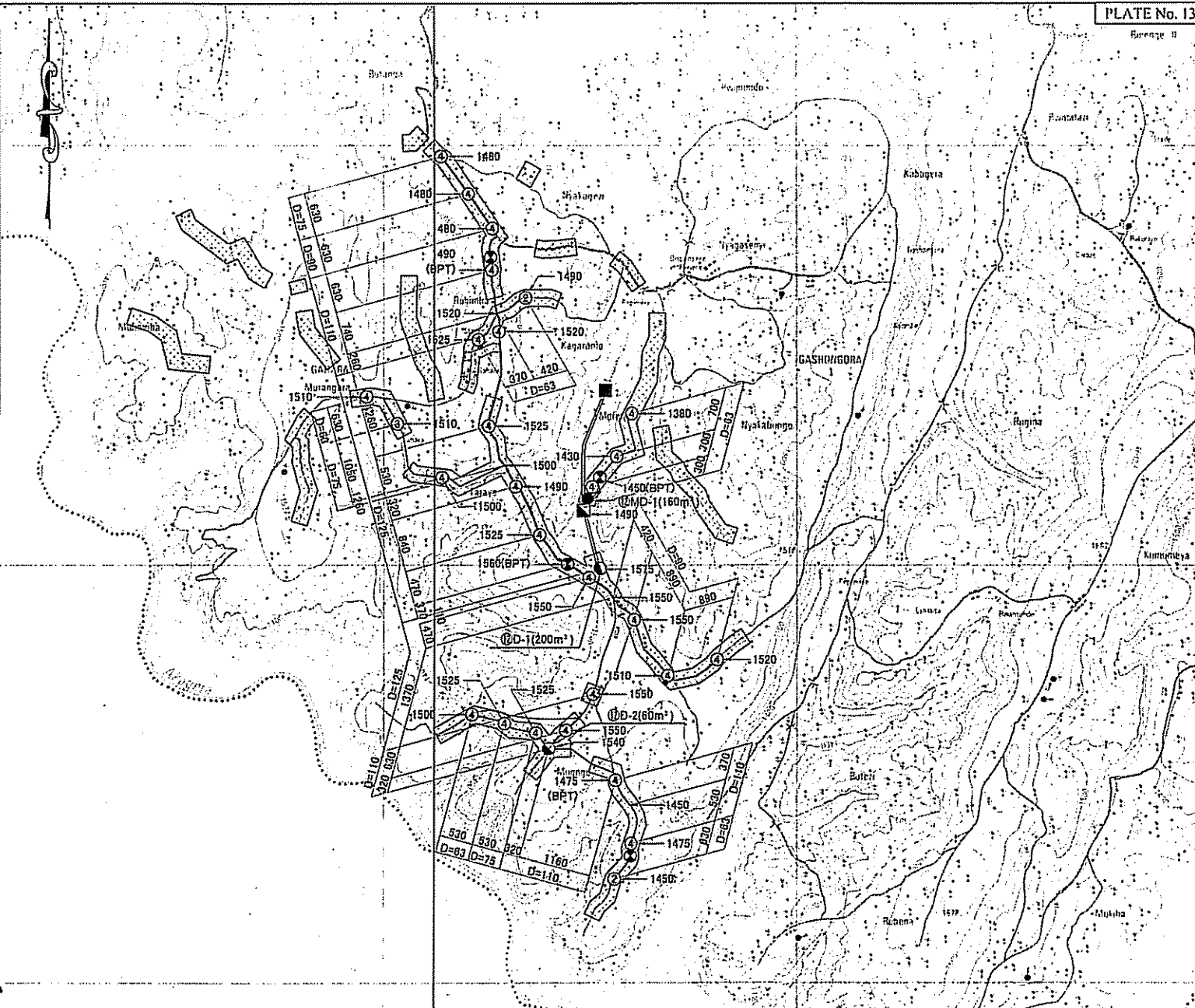
District: Kirehe	
Sector: Kirehe	
Water Source: Gasebura, Kabingo I	Type: Spring
Structure	Data
1. Water Collecting Weir	Qty: 1.0m x 20m Qty: 1.5m x 10m
2. Collection Pipe	Material: uPVC pipe Dia: D125mm, Length: L= 3,000m
3. Water Receiving Tank	Material: Reinforced Concrete Volume: 120m³ (Twin) Volume: 60m³ x 1ns
4. Pump	(1) Main Pump in Gasebura Head: 197m Discharge: 418L/min Motor: 22kW (2) Main Pump in Kabingo I Head: 176m Discharge: 374L/min Motor: 18.5kW
5. Generator	Output: 50KVA for Main Pump Output: 45KVA for Main Pump
6. Transmission Line	Material: Polyethylene Pipe Dia: D160mm, Length: L= 3,197m Dia: D200mm, Length: L= 2,163m
7. Distribution Tank	Material: Reinforced Concrete Volume: 160m³ (Twin) Volume: 120m³ (Twin)
8. Distribution Line	Material: uPVC Dia: D63mm, Length: L= 3,510m Dia: D90mm, Length: L= 2,920m Dia: D118mm, Length: L= 1,720m Dia: D145mm, Length: L= 650m Dia: D160mm, Length: L= 3,740m Dia: D200mm, Length: L= 2,220m
9. Break Pressure Tank	Material: Wet Masonry Number: 1/1A
10. Public Water Tap	2 taps x 4 3 taps x 2 4 taps x 16

<p>PROJECT NAME</p> <p style="text-align: center;">THE PROJECT FOR RURAL WATER SUPPLY</p>	<p style="text-align: center;">JAPAN INTERNATIONAL COOPERATION AGENCY</p> <hr/> <p style="text-align: center;">MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES</p> <p style="text-align: center;">THE REPUBLIC OF RWANDA</p>	<p>CONSULTANT</p> <p style="text-align: center;"> NIPPON KOEI CO., LTD.</p>	<p>DRAWING TITLE</p> <p style="text-align: center;">WATER SUPPLY SYSTEM (11)</p>						
			<table border="1" style="width: 100%;"> <tr> <td style="width: 33%;">SCALE</td> <td style="width: 33%;">DATE</td> <td style="width: 33%;">DRAWING NO.</td> </tr> <tr> <td style="text-align: center;">1:50000</td> <td style="text-align: center;">FEBRUARY 2006</td> <td style="text-align: center;">PW-011</td> </tr> </table>	SCALE	DATE	DRAWING NO.	1:50000	FEBRUARY 2006	PW-011
SCALE	DATE	DRAWING NO.							
1:50000	FEBRUARY 2006	PW-011							

LEGEND

- WATER SOURCE
- PUMP STATION (P/S)
- ▣ BOOSTER PUMP STATION (BP/S)
- MAIN DISTRIBUTION TANK
- SUB DISTRIBUTION TANK
- ② PUBLIC TAP WITH 2 NOZZLES
- ③ PUBLIC TAP WITH 3 NOZZLES
- ④ PUBLIC TAP WITH 4 NOZZLES
- BREAK PRESSURE TANK
- RAW WATER MAIN
- === TRANSMISSION LINE
- DISTRIBUTION LINE
- ▨ DENSE VILLAGE
- SPARSE VILLAGE

0 1000 2000 3000
SCALE 1:50000



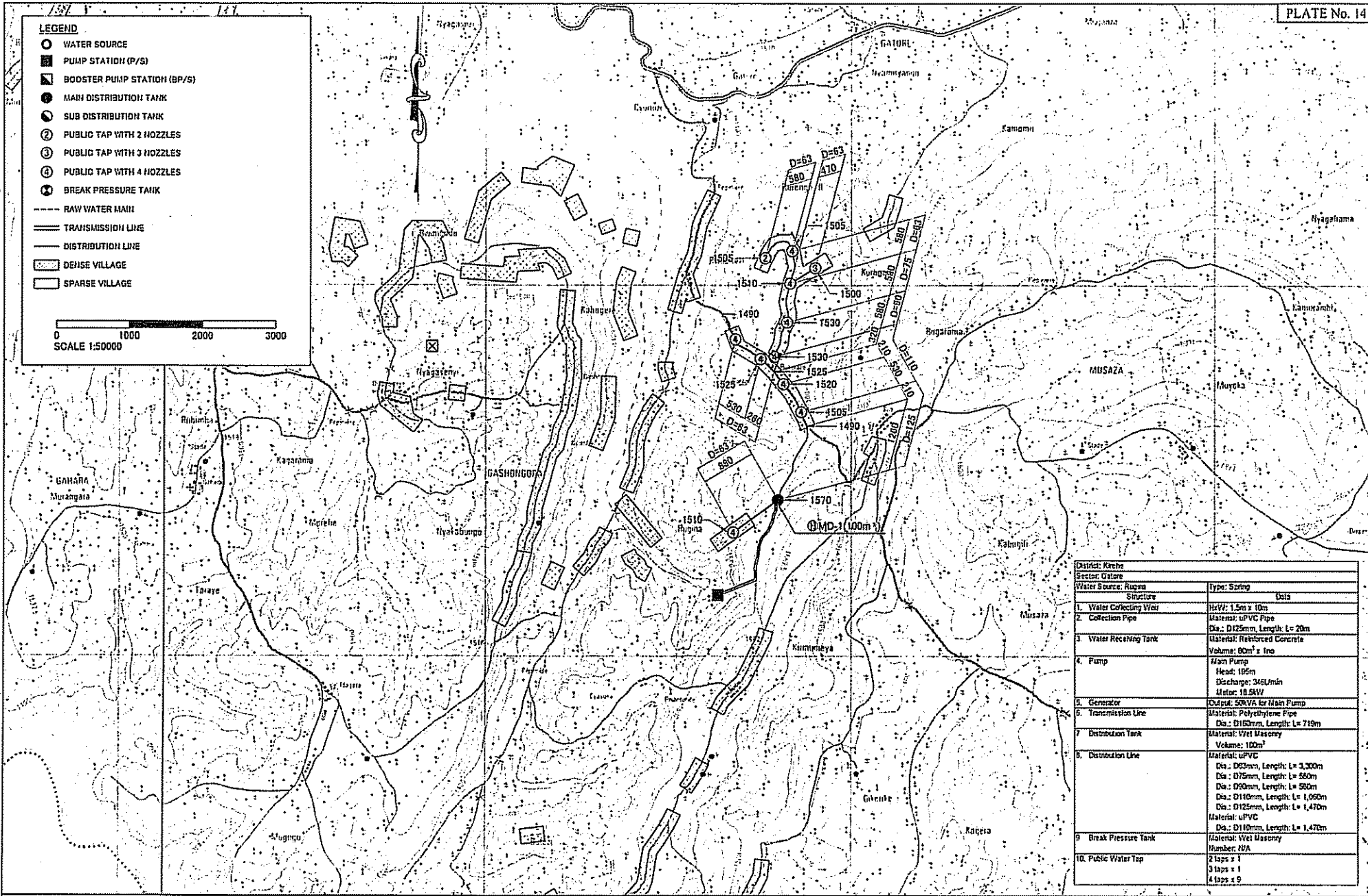
District: Kasehe	
Sector: Gahara	
Water Source: Gaharado	
Structure	Type: Spring
Data	
1. Water Collecting Vitr	HSW: 1.0m x 10m
2. Collection Pipe	Material: uPVC Pipe Dia.: D125mm, Length: L= 120m
3. Water Receiving Tank	Material: Reinforced Concrete Volume: 160m ³ (1win)
4. Pump	(1) Main Pump Head: 197m Discharge: 455L/min Motor: 18.5KW (2) Booster Pump Head: 94m Discharge: 395L/min Motor: 18KW
5. Generator	Output: 50KVA for Main Pump Output: 30KVA for Booster Pump
6. Transmission Line	Material: Polyethylene Pipe Dia.: D160mm, Length: L= 839m Dia.: D200mm, Length: L= 1,705m
7. Distribution Tank	Material: Wet Masonry Volume: 60m ³ x 1 Volume: 160m ³ x 1 (1win) Volume: 200m ³ x 1 (1win)
8. Distribution Line	Material: uPVC Dia.: D93mm, Length: L= 4,280m Dia.: D75mm, Length: L= 3,470m Dia.: D60mm, Length: L= 2,830m Dia.: D118mm, Length: L= 4,650m Dia.: D125mm, Length: L= 5,740m
9. Break Pressure Tank	Material: Wet Masonry Number: 4nos
10. Public Water Tap	2 taps x 2 3 taps x 1 4 taps x 25

THE PROJECT FOR RURAL WATER SUPPLY	JAPAN INTERNATIONAL COOPERATION AGENCY MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES THE REPUBLIC OF RWANDA	CONSULTANT NIPPON KOEI CO., LTD.	DRAWING TITLE WATER SUPPLY SYSTEM (12)
			SCALE: 1:50000 DATE: FEBRUARY 2006 DRAWING NO.: PW-012

LEGEND

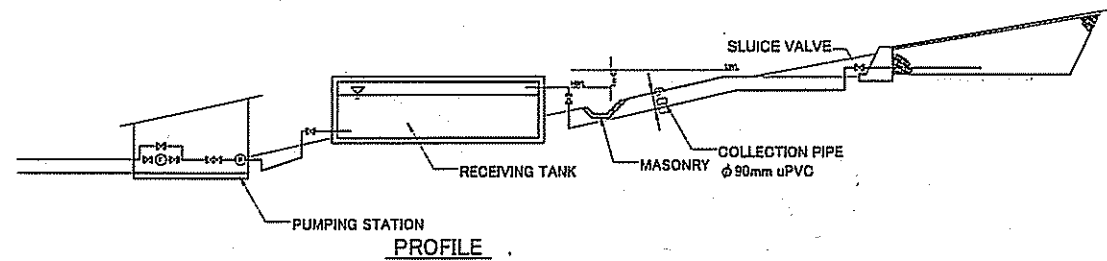
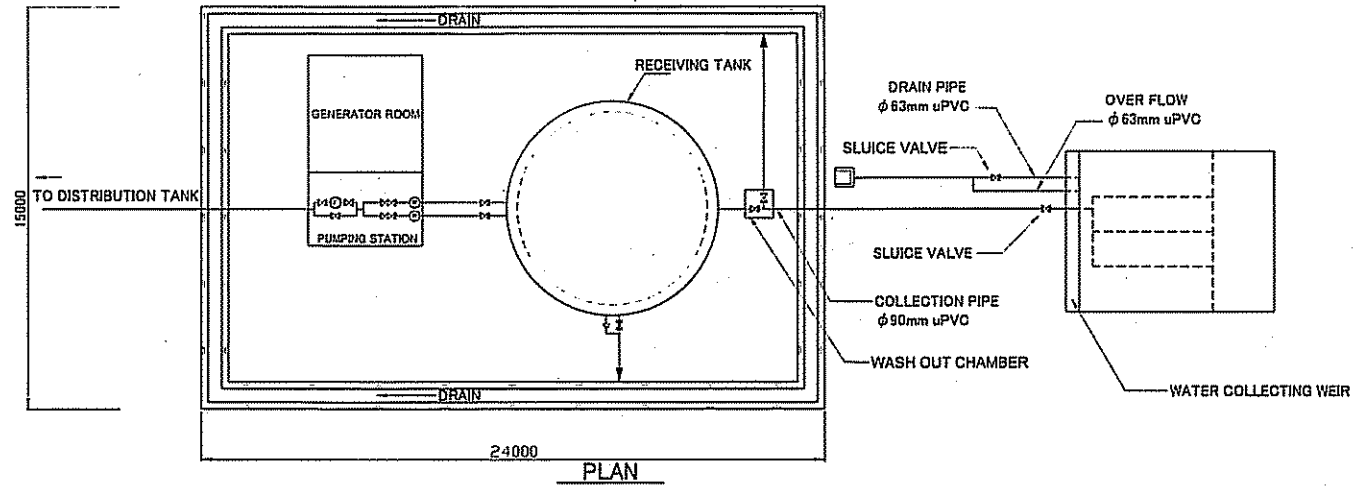
- WATER SOURCE
- PUMP STATION (P/S)
- ▣ BOOSTER PUMP STATION (BP/S)
- MAIN DISTRIBUTION TANK
- SUB DISTRIBUTION TANK
- ② PUBLIC TAP WITH 2 HOZZLES
- ③ PUBLIC TAP WITH 3 HOZZLES
- ④ PUBLIC TAP WITH 4 HOZZLES
- ⊗ BREAK PRESSURE TANK
- RAW WATER MAIN
- === TRANSMISSION LINE
- DISTRIBUTION LINE
- ▨ DENSE VILLAGE
- SPARSE VILLAGE

0 1000 2000 3000
SCALE 1:50000

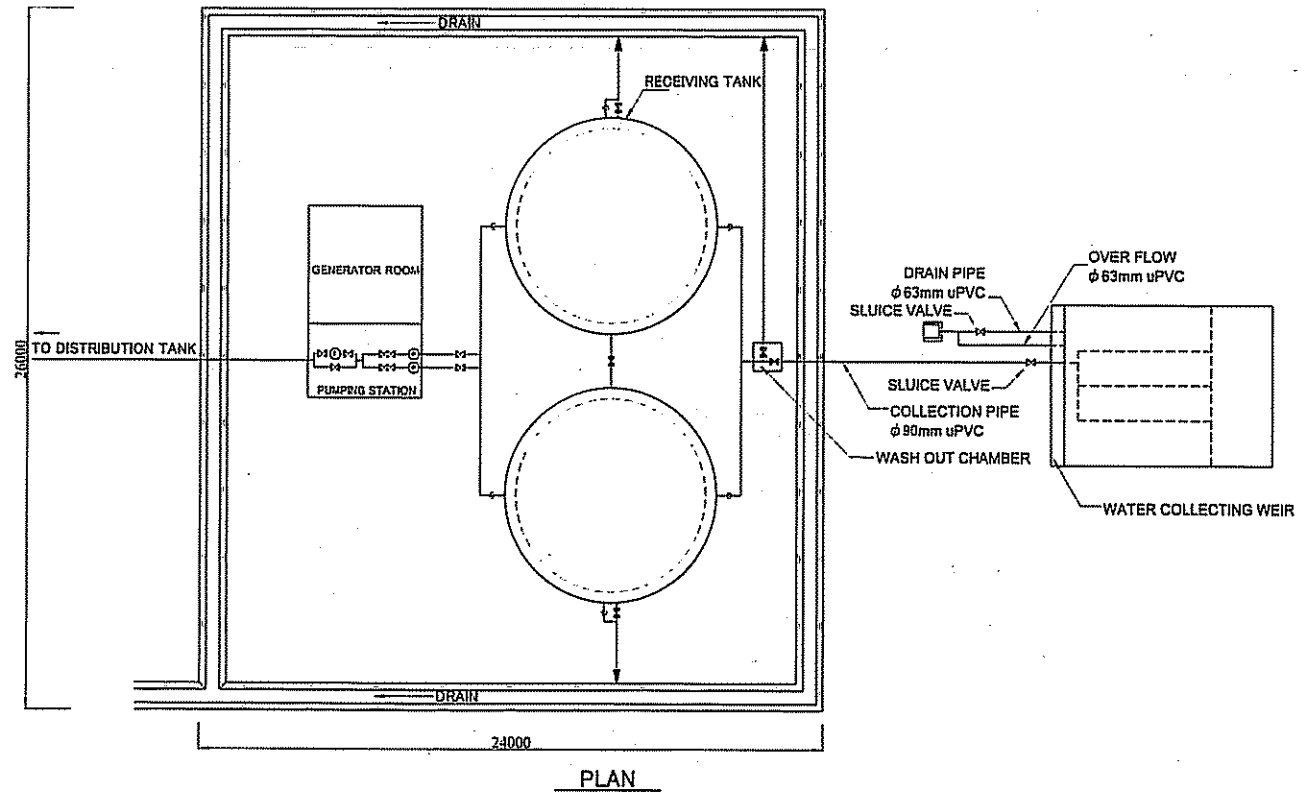


District: Kiche	
Sector: Gatare	
Water Source: Rugya	Type: Spring
Structure	Date
1. Water Collecting Vess	Size: 1.5m x 10m
2. Collection Pipe	Material: uPVC Pipe Da.: D125mm, Length: L= 20m
3. Water Receiving Tank	Material: Reinforced Concrete Volume: 60m³ ± 1m
4. Pump	Main Pump Head: 10m Discharge: 245L/min Motor: 18.5kW
5. Generator	Output: 50kVA for Main Pump
6. Transmission Line	Material: Polyethylene Pipe Da.: D150mm, Length: L= 719m
7. Distribution Tank	Material: Wet Masonry Volume: 100m³
8. Distribution Line	Material: uPVC Da.: D63mm, Length: L= 3,300m Da.: D75mm, Length: L= 560m Da.: D90mm, Length: L= 500m Da.: D110mm, Length: L= 1,050m Da.: D125mm, Length: L= 1,470m Material: uPVC Da.: D110mm, Length: L= 1,470m
9. Break Pressure Tank	Material: Wet Masonry Number: 01
10. Public Water Tap	2 taps x 1 3 taps x 1 4 taps x 9

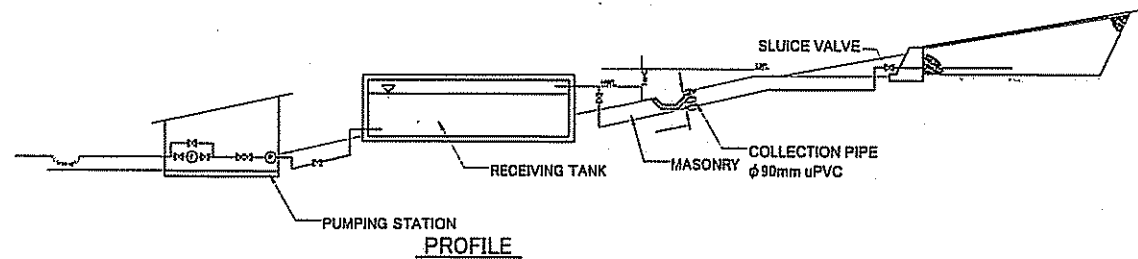
THE PROJECT FOR RURAL WATER SUPPLY	JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANT	DRAWING TITLE WATER SUPPLY SYSTEM (13)	
	MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES THE REPUBLIC OF RWANDA	NIPPON KOEI CO.,LTD.	SCALE 1:50000	DATE FEBRUARY 2006



PROJECT NAME THE PROJECT FOR RURAL WATER SUPPLY	JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANT NIPPON KOEI CO.,LTD.	DRAWING TITLE COLLECTING WEIR AND CONNECTING PIPE(1)		
	MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES THE REPUBLIC OF RWANDA		SCALE NONE	DATE FEBRUARY 2006	DRAWING NO. PW-014



PLAN



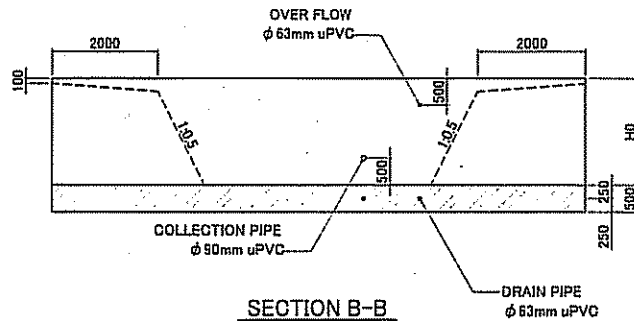
PROFILE

PROJECT NAME THE PROJECT FOR RURAL WATER SUPPLY	JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANT NIPPON KOEI CO.,LTD.	DRAWING TITLE COLLECTING WEIR AND CONNECTING PIPE(2)		
	MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES THE REPUBLIC OF RWANDA		SCALE NONE	DATE FEBRUARY 2006	DRAWING NO. PW-015

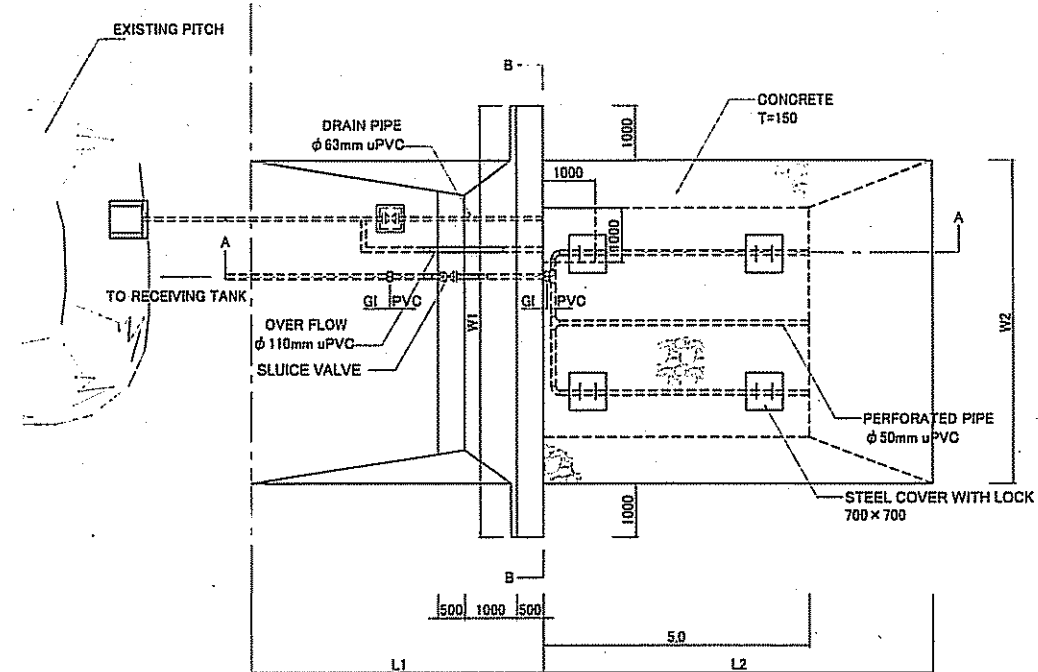
TABLE OF DIMENSION

Site	Q-1	Q-2	Q-3	Q-4	Q-5	Q-6	Q-7	Q-8
Unit	Rwakiboga	Gicaca	Gasebaya	Iyakageza	Rwanubene	Kabadeko	Kagoma	Iyakagongiri
n	10.0	15.0	30.0	10.0	5.0	18.0	10.0	11.0
W1	20.0	15.0	10.0	10.0	20.0	20.0	20.0	10.0
W2	18.0	13.0	8.0	8.0	8.0	18.0	18.0	8.0
H0	2.0	1.5	1.0	1.5	2.0	1.5	2.0	1.0
H1	2.6	1.9	1.2	2.1	3.3	1.9	2.6	1.5
L1	25.0	27.5	35.0	20.0	15.0	28.0	25.0	16.0
L2	6.3	5.9	5.6	6.1	6.7	5.9	6.3	5.8
L3	60.0	60.0	100.0	40.0	100.0	70.0	40.0	50.0
R/C	R/O.S.	-	-	-	-	-	-	-
Site	Q-2	Q-1	Q-2	Q-1	Q-2	Q-1	Q-2	Q-1
Unit	Iyakagongiri	Gahema	Iyugunika	Kabingo	Gasebura	Gaharada	Rugina	-
n	18.0	10.0	5.0	4.0	4.0	25.0	5.0	-
W1	10.0	20.0	10.0	10.0	10.0	10.0	10.0	-
W2	8.0	18.0	8.0	8.0	8.0	8.0	8.0	-
H0	1.0	1.0	1.5	1.5	1.5	1.0	1.5	-
H1	1.3	1.5	2.8	3.1	3.1	1.2	2.8	-
L1	23.0	15.0	12.5	11.0	11.0	33.0	12.5	-
L2	5.7	5.8	6.4	6.5	6.8	5.0	6.4	-
L3	690.0	40.0	200.0	30.0	30.0	120.0	20.0	-
R/C	-	2	-	-	-	-	-	-
A/V/C	-	2	-	-	-	-	-	-
B/O/C	-	2	-	-	-	-	-	-

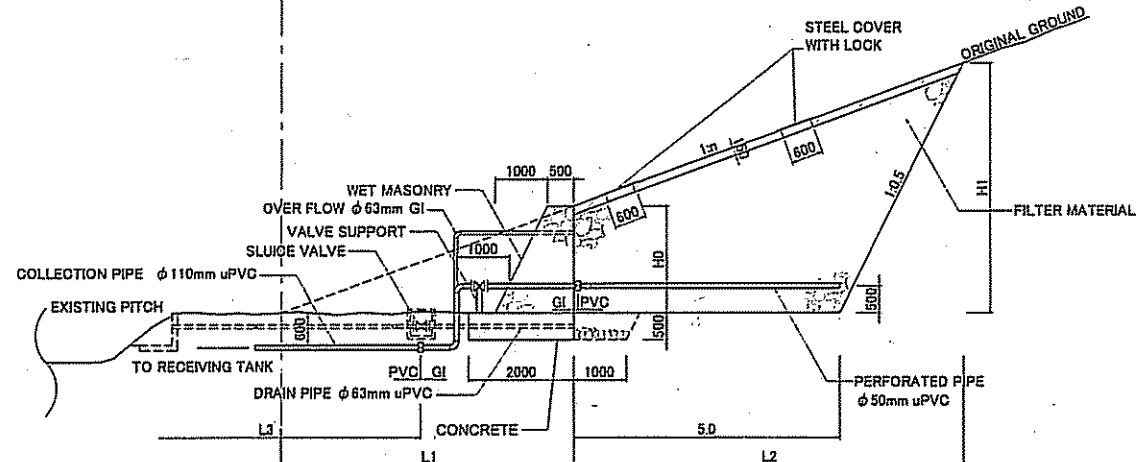
Note: R/C RIVER CROSSING
A/V/C AIR VALVE CHAMBER
B/O/C BLOW OFF CHAMBER



SECTION B-B

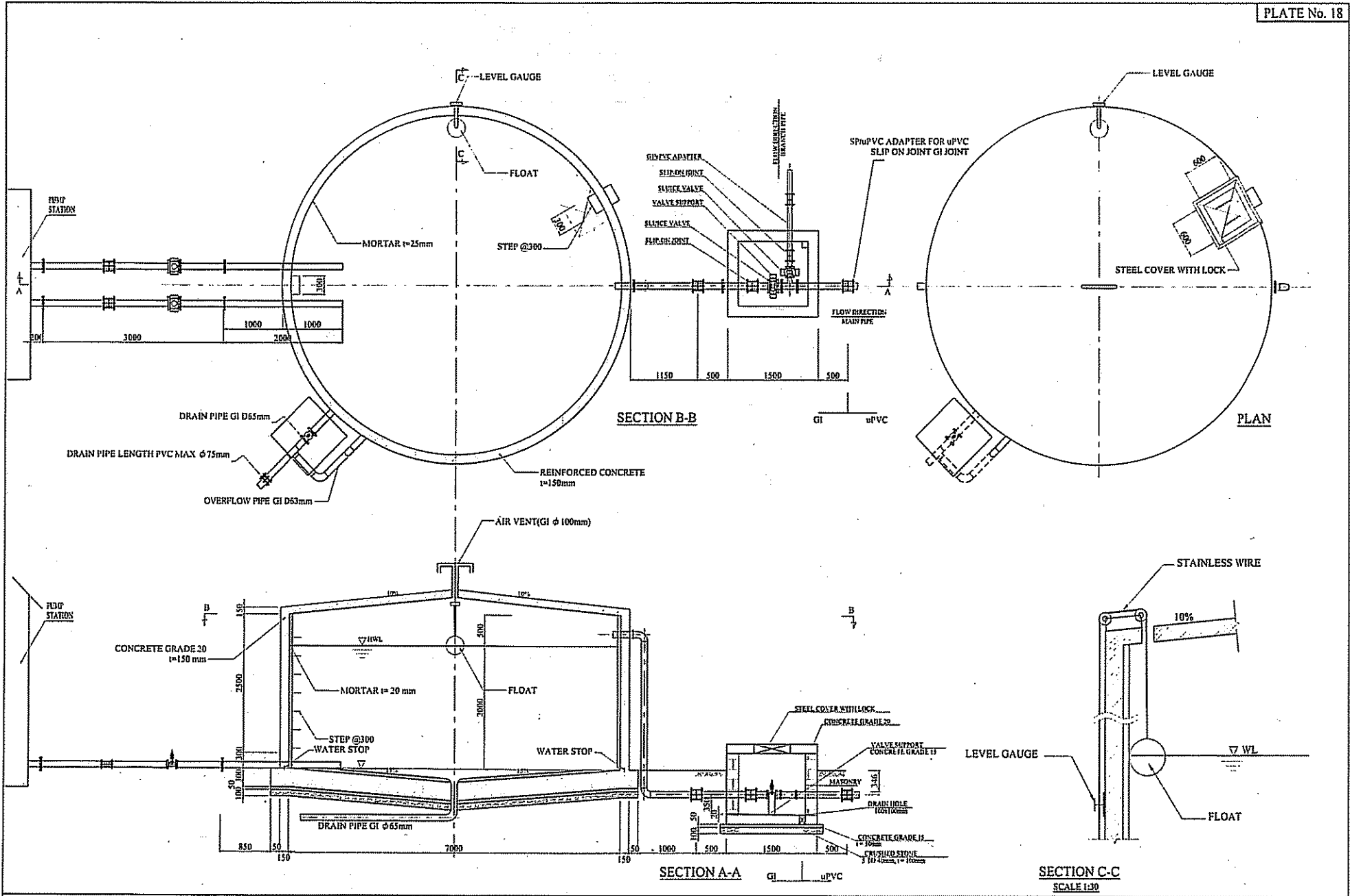


PLAN

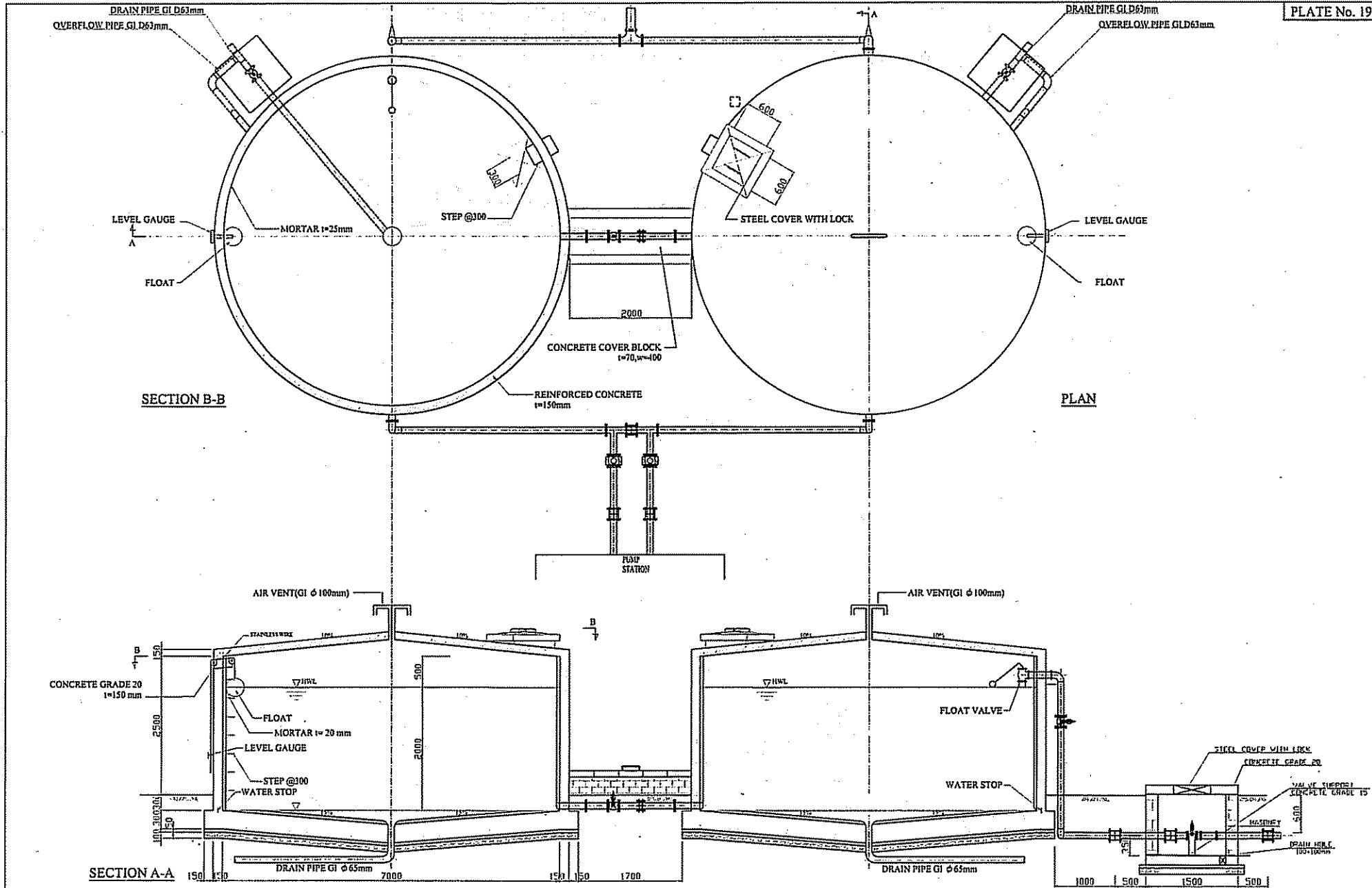


SECTION A-A

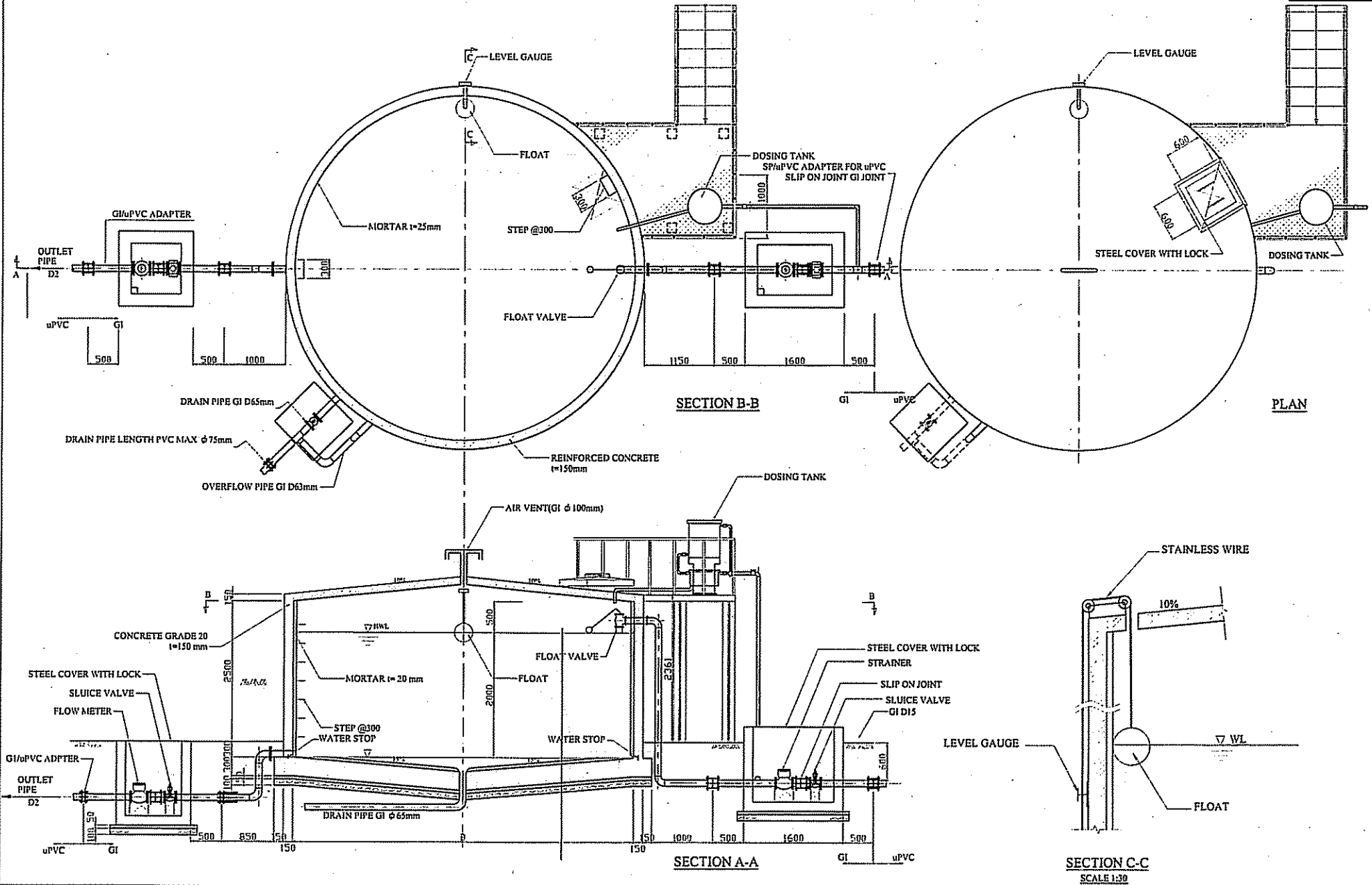
PROJECT NAME THE PROJECT FOR RURAL WATER SUPPLY	JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANT NIPPON KOEI CO.,LTD.	DRAWING TITLE COLLECTING WEIR AND CONNECTING PIPE(3)		
	MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES THE REPUBLIC OF RWANDA		SCALE 1:100	DATE FEBRUARY 2006	DRAWING NO. PW-016



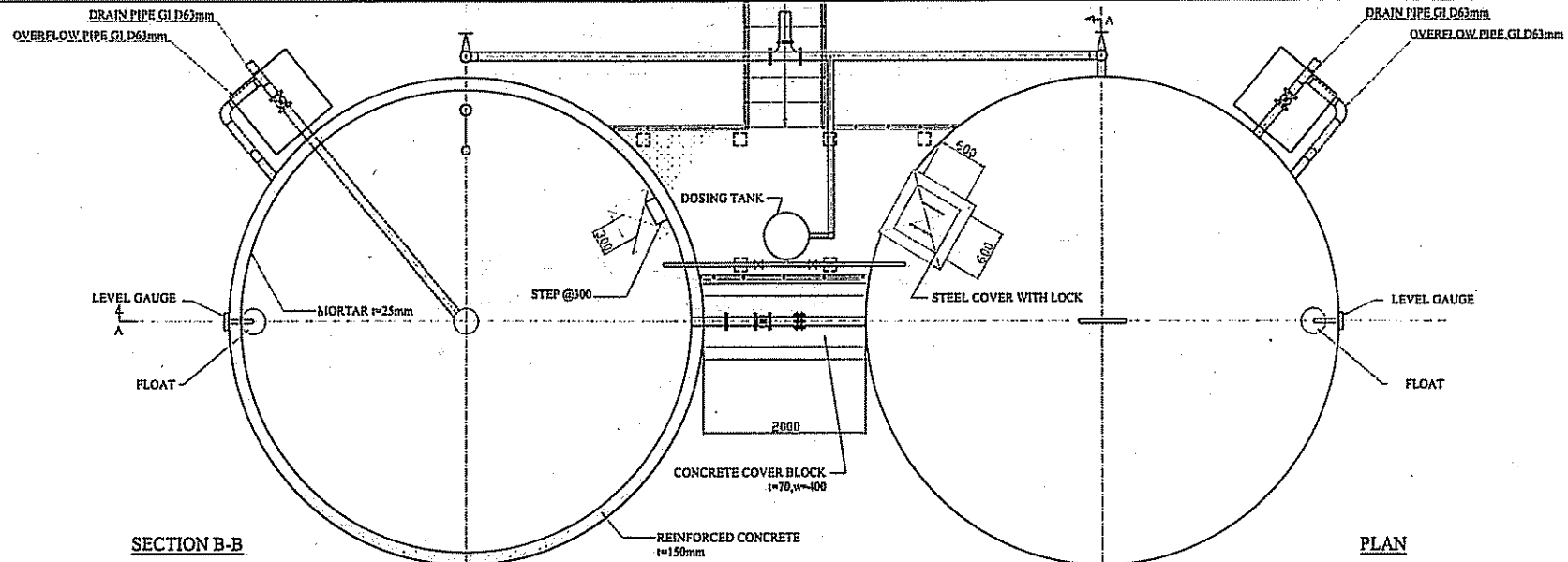
PROJECT NAME THE PROJECT FOR RURAL WATER SUPPLY	JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANT NIPPON KOEI CO., LTD.	DRAWING TITLE RECEIVING TANK (SINGLE)	
	MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES THE REPUBLIC OF RWANDA		SCALE 1:30 1:60	DATE FEBRUARY 2006



PROJECT NAME THE PROJECT FOR RURAL WATER SUPPLY	CONSULTANT NIPPON KOEI CO., LTD.		DRAWING TITLE RECEIVING TANK (TWIN)		
	JAPAN INTERNATIONAL COOPERATION AGENCY MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES THE REPUBLIC OF RWANDA		SCALE 1:60	DATE FEBRUARY 2006	DRAWING NO. PW-018

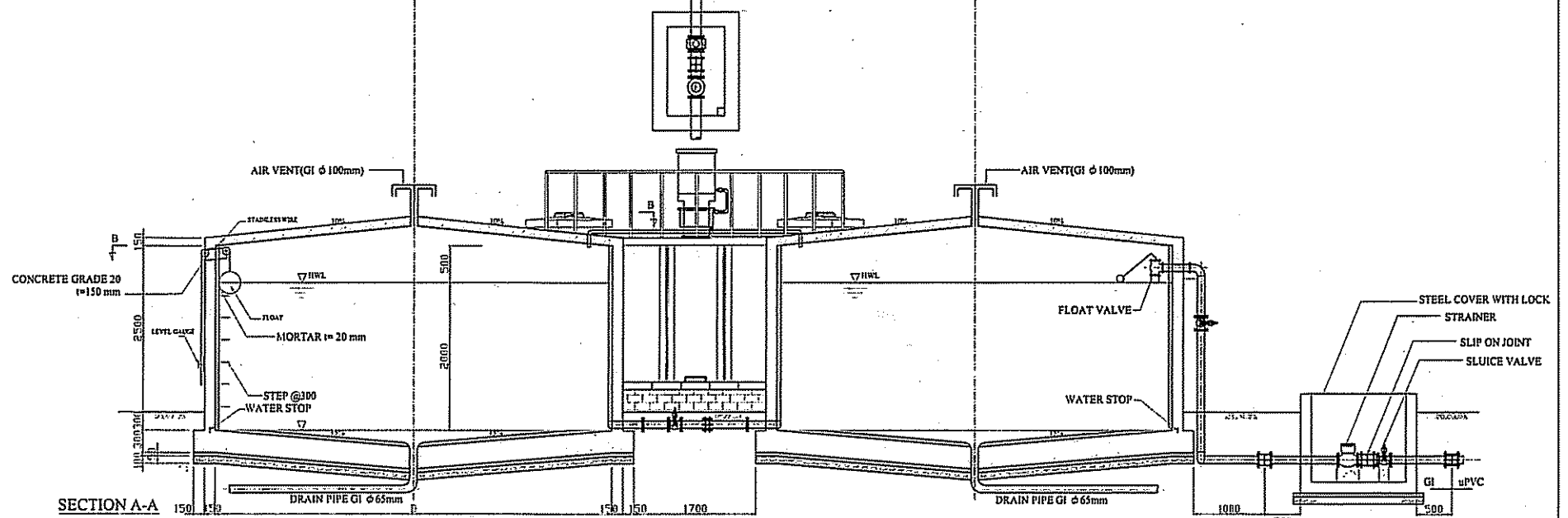


PROJECT NAME THE PROJECT FOR RURAL WATER SUPPLY	JAPAN INTERNATIONAL COOPERATION AGENCY MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES THE REPUBLIC OF RWANDA	CONSULTANT NIPPON KOEI CO.,LTD.	DRAWING TITLE MAIN DISTRIBUTION TANK (SINGLE)		
			SCALE 1:30 1:60	DATE FEBRUARY 2006	DRAWING NO. PW-019



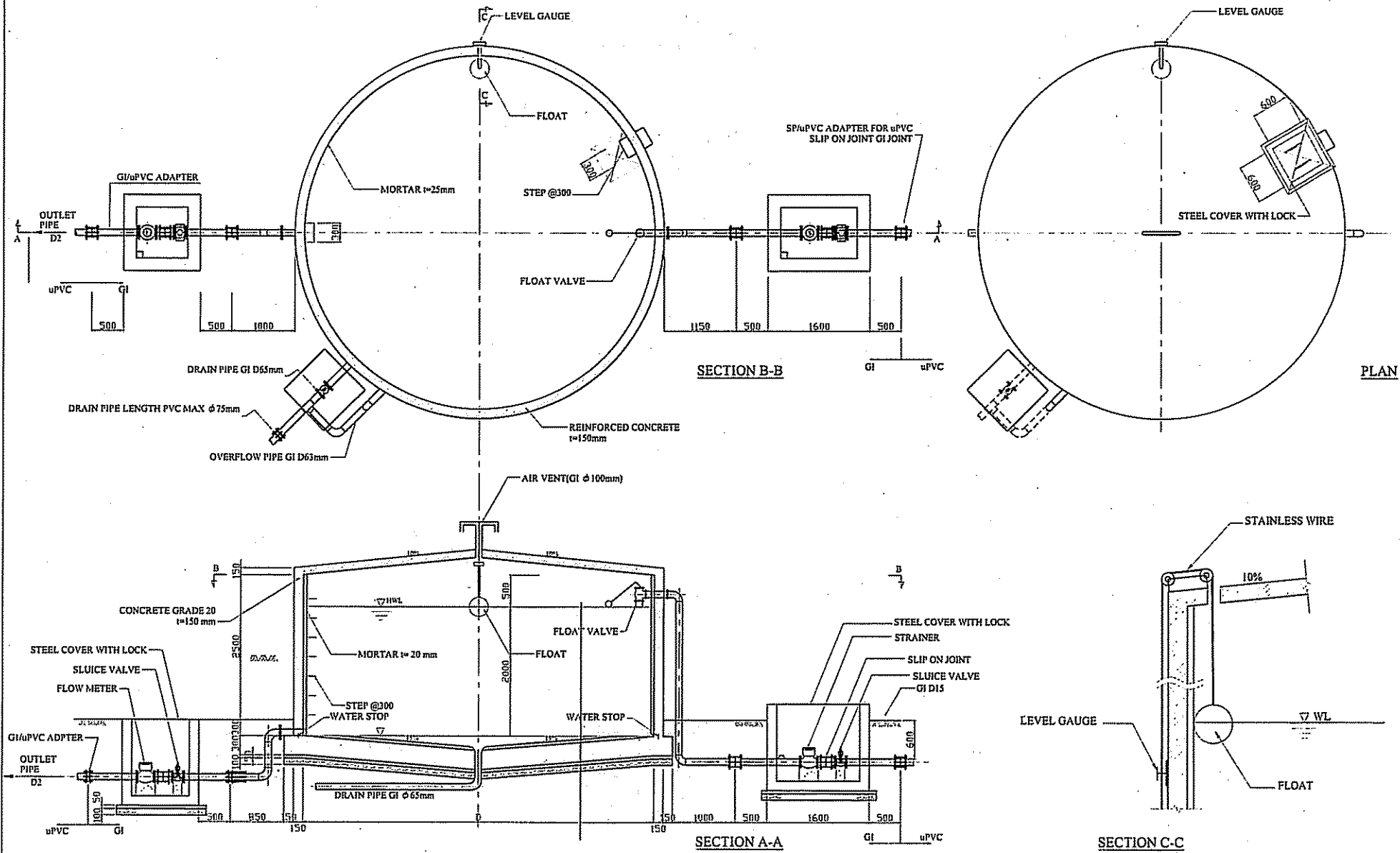
SECTION B-B

PLAN

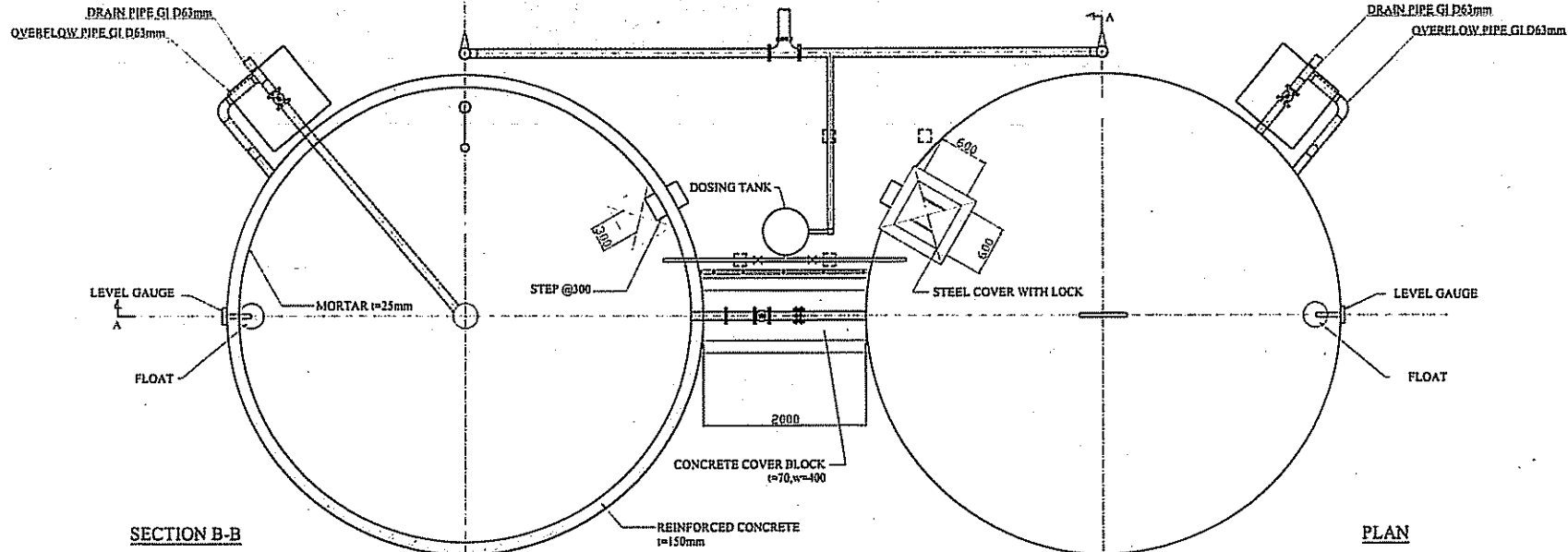


SECTION A-A

PROJECT NAME THE PROJECT FOR RURAL WATER SUPPLY	JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANT NIPPON KOEI CO., LTD.	DRAWING TITLE MAIN DISTRIBUTION TANK (TWIN)		
	MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES THE REPUBLIC OF RWANDA		SCALE 1:60	DATE FEBRUARY 2006	DRAWING NO. PW-020

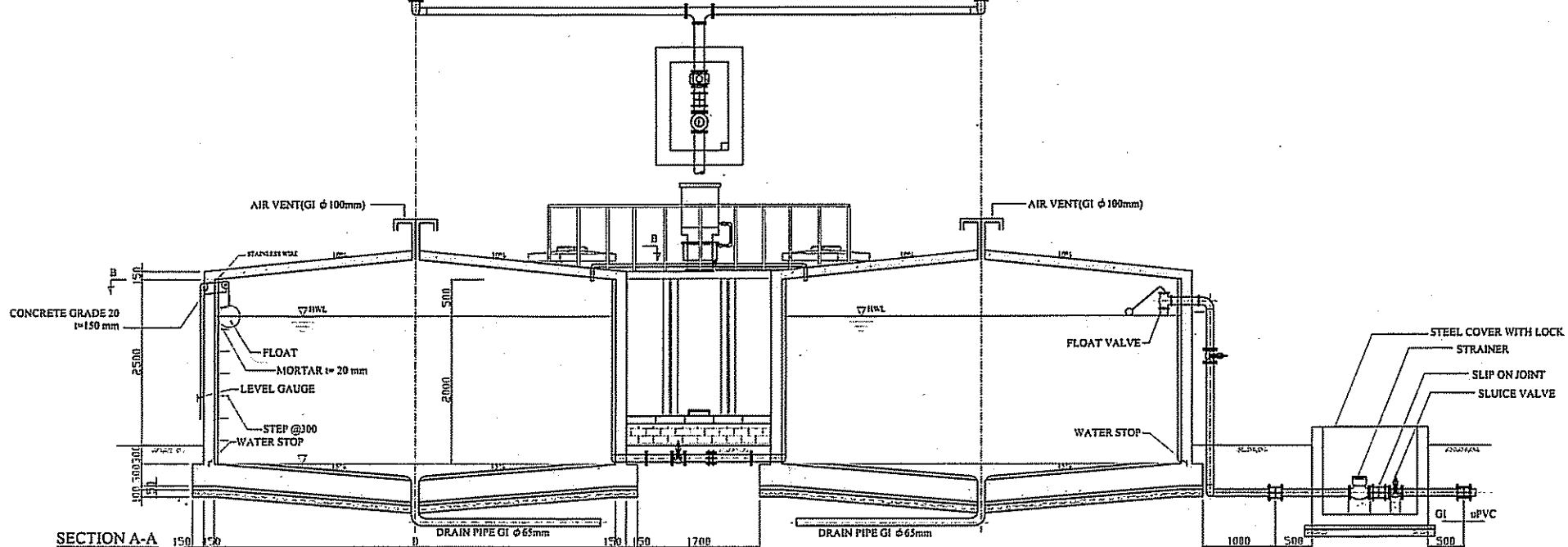


PROJECT NAME THE PROJECT FOR RURAL WATER SUPPLY	JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANT NIPPON KOEI CO.,LTD.	DRAWING TITLE DISTRIBUTION TANK (SINGLE)		
	MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES THE REPUBLIC OF RWANDA		SCALE 1:30 1:60	DATE FEBRUARY 2006	DRAWING NO. PW-021



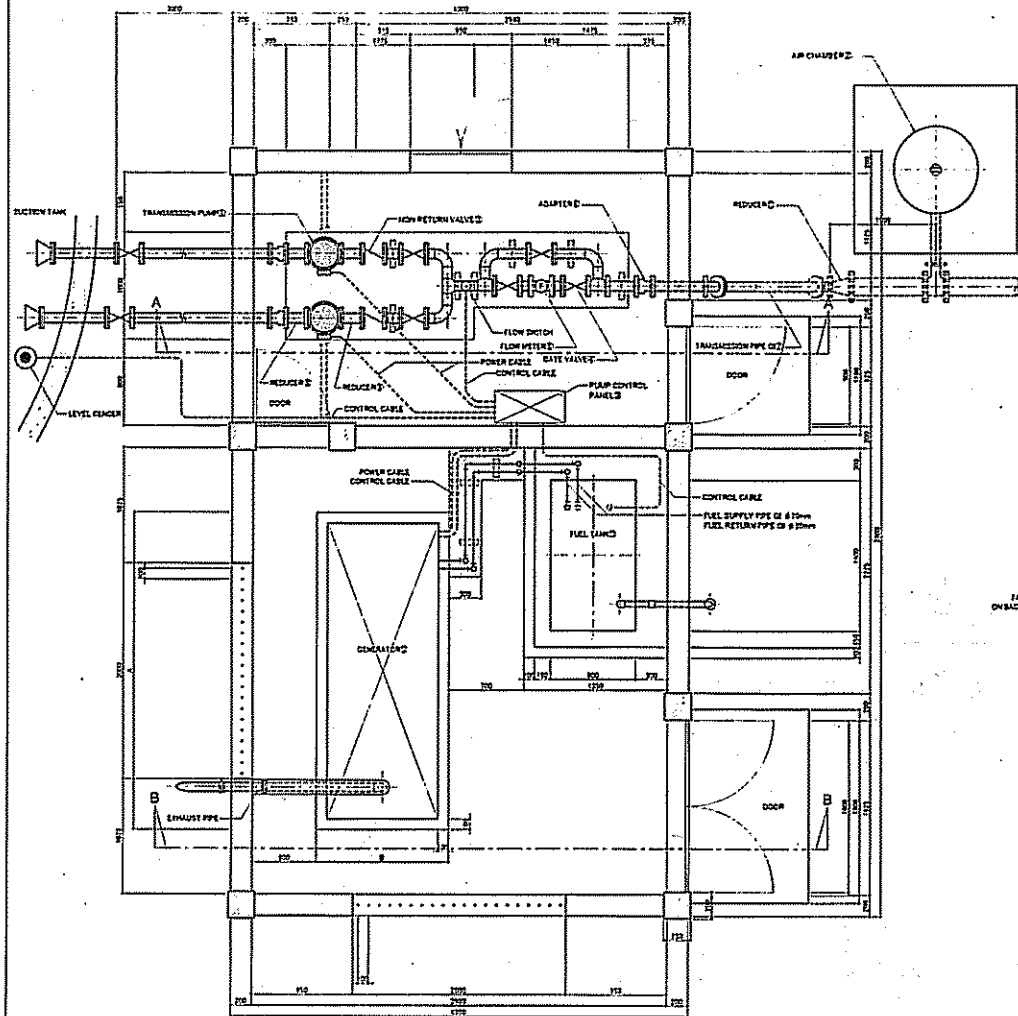
SECTION B-B

PLAN

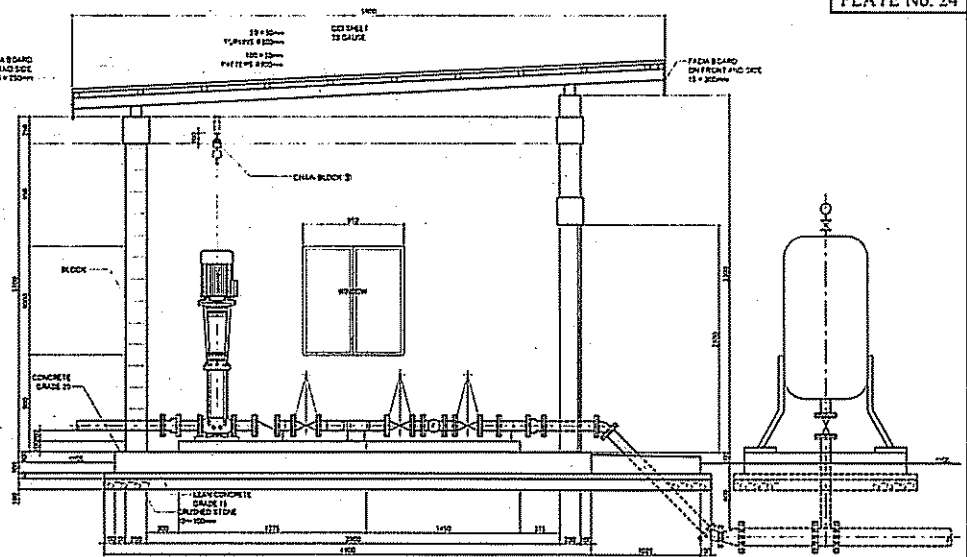


SECTION A-A

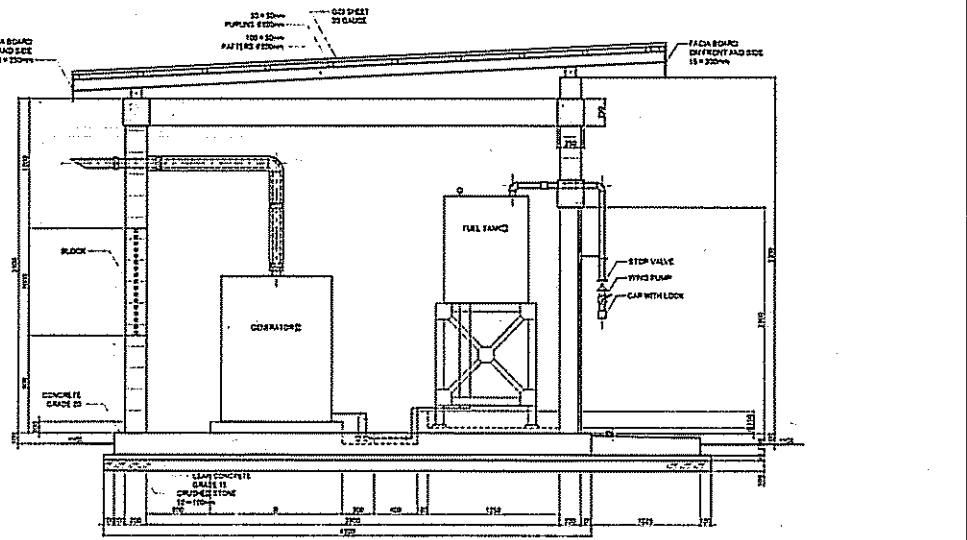
PROJECT NAME THE PROJECT FOR RURAL WATER SUPPLY	CONSULTANT NIPPON KOEI CO.,LTD.		DRAWING TITLE DISTRIBUTION TANK (TWIN)		
	JAPAN INTERNATIONAL COOPERATION AGENCY MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES THE REPUBLIC OF RWANDA		SCALE 1:60	DATE FEBRUARY 2006	DRAWING NO. PW-022



PLAN



SECTION A-A



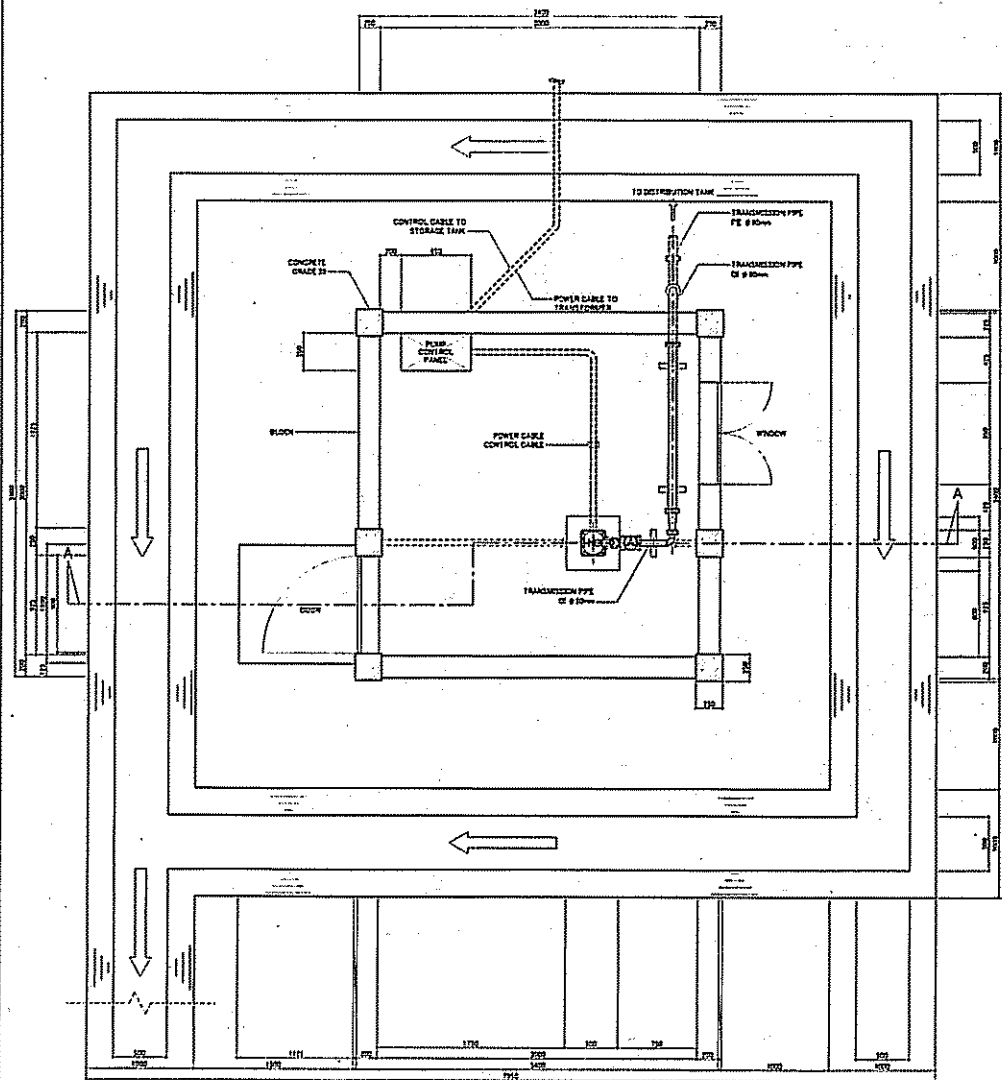
SECTION B-B

PROJECT NAME THE PROJECT FOR RURAL WATER SUPPLY	JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANT NIPPON KOEI CO., LTD.	DRAWING TITLE PUMPING STATION DETAIL(1)		
	MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES THE REPUBLIC OF RWANDA		SCALE 1:50	DATE FEBRUARY 2006	DRAWING NO. PW-023

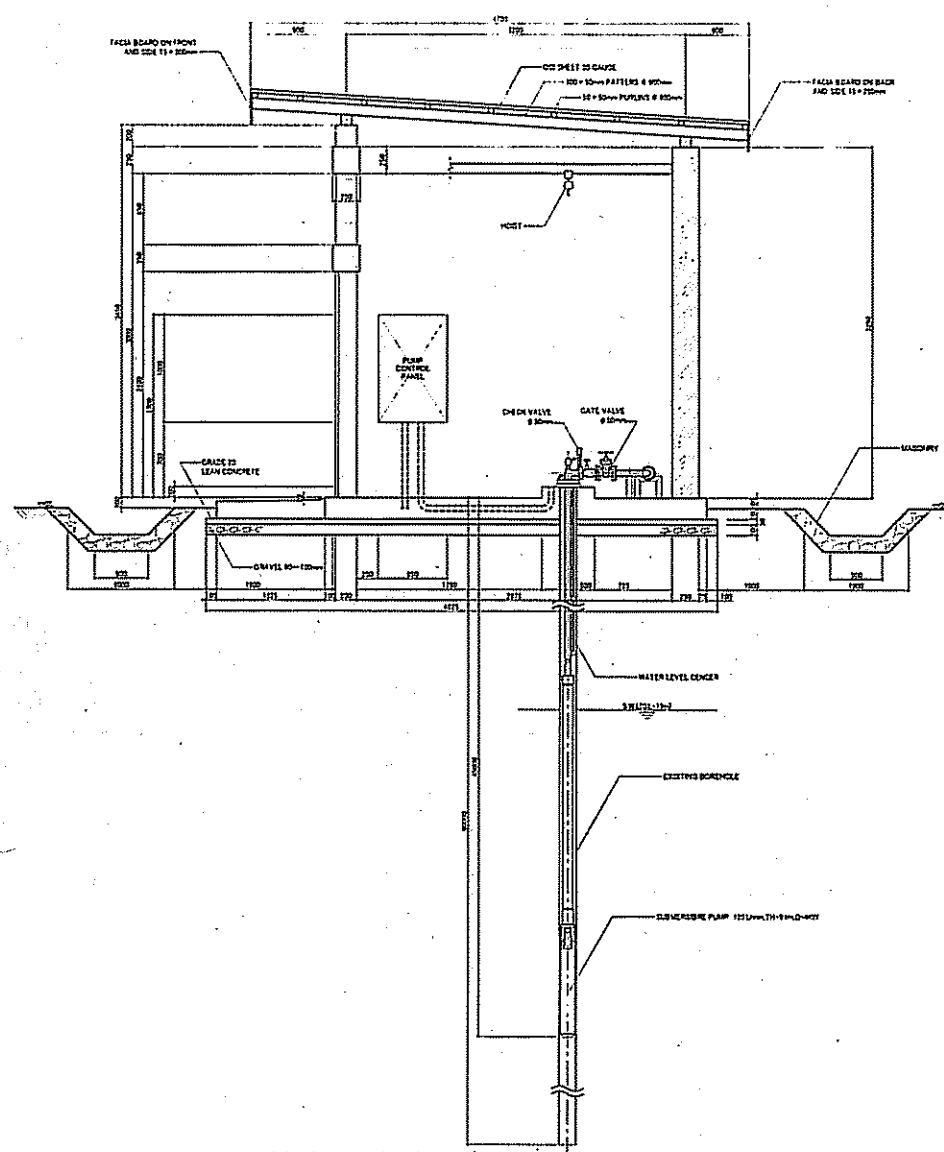
No.	Facility	Rwakibogo-Main			Rwakibogo-Booster			Knduha-Booster			Gicaca-Main			Gicaca-Booster			Gasebaya-Main			Gasebaya-Booster			Kazabazana-Booster			Rwanlone		
		Specification	Unit	Q	Specification	Unit	Q	Specification	Unit	Q	Specification	Unit	Q	Specification	Unit	Q	Specification	Unit	Q	Specification	Unit	Q	Specification	Unit	Q	Specification	Unit	Q
①	Transmission Pump	552L/minx197 mx30kW	assy	2	134L/minx111 mx5.5kW	assy	2	528L/minx112 mx15kW	assy	2	534L/minx141 mx18.5W	assy	2	159L/minx132 mx7.5W	assy	2	431L/minx128 mx15kW	assy	2	159L/minx132 mx15kW	assy	2	133L/minx111 mx5.5kW	assy	2	288L/minx221 mx18.5kW	assy	2
②	Air Chamber	300 L	assy	1	300 L	assy	1	300 L	assy	1	300 L	assy	1	300 L	assy	1	300 L	assy	1	300 L	assy	1	300 L	assy	1	300 L	assy	1
③	Non Return Valve	D80	nos	2	D85	nos	2	D80	nos	2	D80	nos	2	D65	nos	2	D80	nos	2	D85	nos	2	D85	nos	2	D85	nos	2
④-1	Gate Valve	D80	nos	8	D80	nos	2	D80	nos	8	D80	nos	8	D65	nos	6	D80	nos	8	D65	nos	6	D65	nos	6	D65	nos	6
④-2	Gate Valve				D65	nos	6				D65	nos	2	D80	nos	2				D80	nos	2	D80	nos	2	D80	nos	2
⑤	Flow Meter	D80	nos	1	D65	nos	1	D80	nos	1	D80	nos	1	D65	nos	1	D80	nos	1	D65	nos	1	D65	nos	1	D65	nos	1
⑥-1	Adapter	D80	nos	3	D80	nos	2	D80	nos	3	D80	nos	3	D65	nos	1	D80	nos	3	D65	nos	1	D65	nos	3	D65	nos	1
⑥-2	Adapter				D65	nos	1				D80	nos	2				D80	nos	2				D80	nos	2			
⑦-1	Transmission Pipe GI	D80	m	11.8	D65	m	4.6	D80	m	11.8	D80	m	11.8	D65	m	4.6	D80	m	11.8	D65	m	4.6	D65	m	12	D65	m	5
⑦-2	Transmission Pipe GI	D150	m	0.7	D80	m	7.1	D150	m	0.7	D125	m	0.7	D80	m	7.1	D125	m	0.7	D80	m	7.1				D80	m	6.4
⑦-3	Transmission Pipe GI																									D125	m	0.7
⑧	Reducer				40x65	nos	2				40x65	nos	2				50x65	nos	2				80x65	nos	2			
⑨	Reducer				80x40	nos	2				80x40	nos	2				80x50	nos	2				80x50	nos	2			
⑩	Chain Block	0.5L 2.5m	nos	1	0.5L 2.5m	nos	1	0.5L 2.5m	nos	1	0.5L 2.5m	nos	1	0.5L 2.5m	nos	1	0.5L 2.5m	nos	1	0.5L 2.5m	nos	1	0.5L 2.5m	nos	1	0.5L 2.5m	nos	1
⑪	Reducer	80x150	nos	1	65x80	nos	1	80x150	nos	1	80x125	nos	1	65x80	nos	1	80x125	nos	1	65x125	nos	1				65x125	nos	1
⑫	Generator	80kVA	assy	1	20kVA	assy	1	40kVA	assy	1	50kVA	assy	1	40kVA	assy	1	40kVA	assy	1	45kVA	assy	1				45kVA	assy	1
⑬	Fuel Tank	1000 L	assy	1	300 L	assy	1	500 L	assy	1	750 L	assy	1	300 L	assy	1	750 L	assy	1	750 L	assy	1				750 L	assy	1
⑭	Pump Control Panel	30 kw	assy	1	5.5 kw	assy	1	15 kw	assy	1	18.5 kw	assy	1	17.5 kw	assy	1	15 kw	assy	1	15 kw	assy	1				15.5 kw	assy	1
⑮	Power Cable	6.0mm2-4C	m	5.8	1.5mm2-4C	m	5.8	4.0mm2-4C	m	5.8	4.0mm2-4C	m	5.8	2.5mm2-4C	m	5.8	2.5mm2-4C	m	5.8	2.5mm2-4C	m	5.8	1.5mm2-4C	m	8.4	8.0mm2-4C	m	4.1
⑯	Control Cable	2.5mm2-4C	m	15.6	2.5mm2-4C	m	15.6	2.5mm2-4C	m	15.6	2.5mm2-4C	m	15.6	2.5mm2-4C	m	15.6	2.5mm2-4C	m	15.6	2.5mm2-4C	m	15.6	2.5mm2-4C	m	10	2.5mm2-4C	m	10.3

No.	Facility	Kabadebo			Nyakagongi			Gahama			Mugutuka			Kabingo			Gasebura			Gaharado-Main			Gaharado-Booster			Rugina		
		Specification	Unit	Q	Specification	Unit	Q	Specification	Unit	Q	Specification	Unit	Q	Specification	Unit	Q	Specification	Unit	Q	Specification	Unit	Q	Specification	Unit	Q	Specification	Unit	Q
①	Transmission Pump	576L/minx190 mx30kW	assy	2	447L/minx189 mx22kW	assy	2	182L/minx120 mx7.5kW	assy	2	352L/minx209 mx30kW	assy	2	374L/minx176 mx18.5kW	assy	2	418L/minx197 mx22kW	assy	2	455L/minx157 mx18.5kW	assy	2	395L/minx94 mx11kW	assy	2	346L/minx195 mx18.5kW	assy	2
②	Air Chamber	300 L	assy	1	300 L	assy	1	300 L	assy	1	300 L	assy	1	300 L	assy	1	300 L	assy	1	300 L	assy	1	300 L	assy	1	300 L	assy	1
③	Non Return Valve	D80	nos	2	D80	nos	2	D65	nos	2	D65	nos	2	D80	nos	2	D80	nos	2	D80	nos	2	D80	nos	2	D80	nos	2
④-1	Gate Valve	D80	nos	8	D80	nos	8	D65	nos	6	D65	nos	6	D80	nos	6	D80	nos	8	D80	nos	8	D80	nos	8	D80	nos	8
④-2	Gate Valve				D80	nos	2	D80	nos	2	D80	nos	2													D80	nos	2
⑤	Flow Meter	D80	nos	1	D80	nos	1	D65	nos	1	D65	nos	1	D80	nos	1	D80	nos	1	D80	nos	1	D80	nos	1	D80	nos	1
⑥-1	Adapter	D80	nos	3	D80	nos	3	D65	nos	1	D65	nos	1	D80	nos	3	D80	nos	3	D80	nos	3	D80	nos	3	D80	nos	3
⑥-2	Adapter				D80	nos	2	D80	nos	2	D80	nos	2													D80	nos	2
⑦-1	Transmission Pipe GI	D80	m	11.8	D80	m	11.8	D65	m	4.6	D65	m	5	D80	m	11.8	D80	m	11.8	D80	m	11.8	D80	m	11.8	D80	m	11.8
⑦-2	Transmission Pipe GI	D150	m	0.7	D150	m	0.7	D80	m	7.1	D80	m	5.4	D125	m	0.7	D150	m	0.7	D150	m	0.7	D150	m	0.7	D125	m	0.7
⑦-3	Transmission Pipe GI												D125	m	0.7											D125	m	0.7
⑧	Reducer				40x65	nos	2	80x65	nos	2																80x65	nos	2
⑨	Reducer				80x40	nos	2																					
⑩	Chain Block	0.5L 2.5m	nos	1	0.5L 2.5m	nos	1	0.5L 2.5m	nos	1	0.5L 2.5m	nos	1	0.5L 2.5m	nos	1	0.5L 2.5m	nos	1	0.5L 2.5m	nos	1	0.5L 2.5m	nos	1	0.5L 2.5m	nos	1
⑪	Reducer	80x150	nos	1	80x150	nos	1	65x80	nos	1	65x125	nos	1	80x125	nos	1	80x150	nos	1	80x150	nos	1	80x125	nos	1	65x125	nos	1
⑫	Generator	70kVA	assy	1	50kVA	assy	1	20kVA	assy	1	70kVA	assy	1	45kVA	assy	1	50kVA	assy	1	50kVA	assy	1	30kVA	assy	1	50kVA	assy	1
⑬	Fuel Tank	1000 L	assy	1	1000 L	assy	1	300 L	assy	1	750 L	assy	1	750 L	assy	1	750 L	assy	1	1000 L	assy	1	750 L	assy	1	750 L	assy	1
⑭	Pump Control Panel	30 kw	assy	1	22 kw	assy	1	17.5 kw	assy	1	30 kw	assy	1	18.5 kw	assy	1	30 kw	assy	1	18.5 kw	assy	1	11 kw	assy	1	18.5 kw	assy	1
⑮	Power Cable	6.0mm2-4C	m	5.8	4.0mm2-4C	m	5.8	1.5mm2-4C	m	5.8	4.0mm2-4C	m	5.8	4.0mm2-4C	m	5.8	4.0mm2-4C	m	5.8	4.0mm2-4C	m	5.8	2.5mm2-4C	m	5.8	4.0mm2-4C	m	5.8
⑯	Control Cable	2.5mm2-4C	m	15.6	2.5mm2-4C	m	15.6	2.5mm2-4C	m	15.6	2.5mm2-4C	m	15.6	2.5mm2-4C	m	15.6	2.5mm2-4C	m	15.6	2.5mm2-4C	m	15.6	2.5mm2-4C	m	15.6	2.5mm2-4C	m	15.6

PROJECT NAME THE PROJECT FOR RURAL WATER SUPPLY	JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANT NIPPON KOEI CO.,LTD.	DRAWING TITLE PUMPING STATION DETAIL (2)		
	MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES THE REPUBLIC OF RWANDA		SCALE NONE	DATE FEBRUARY 2006	DRAWING NO. PW-024

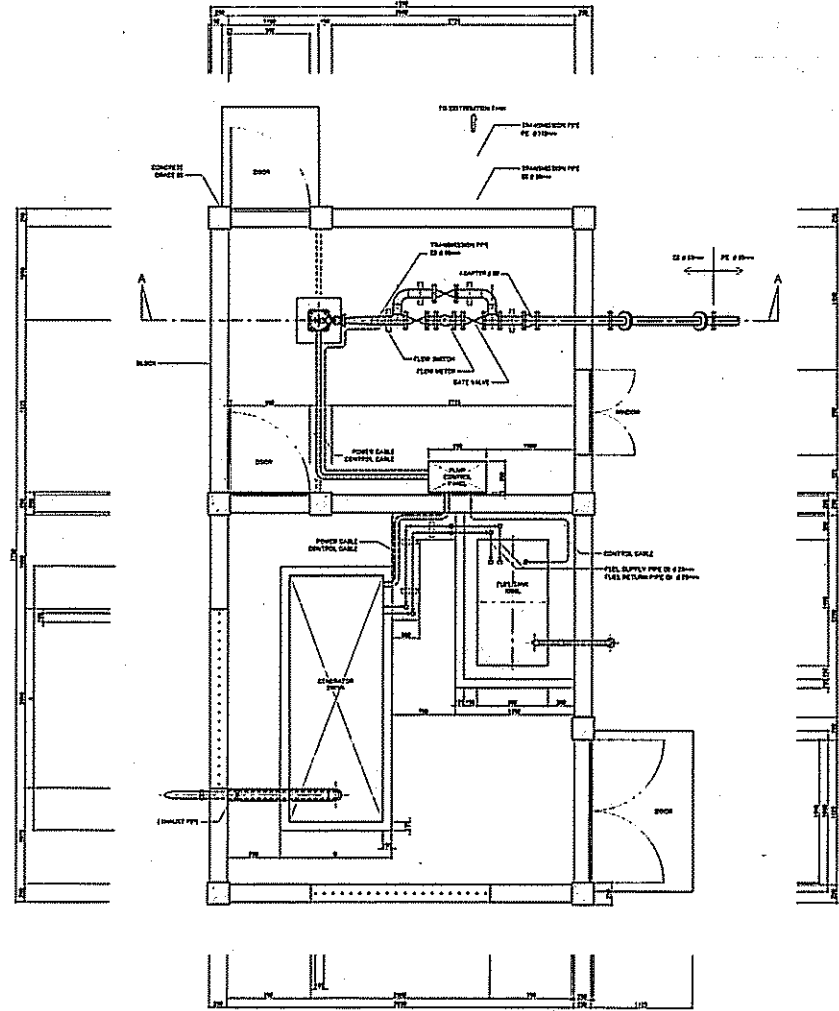


PLAN

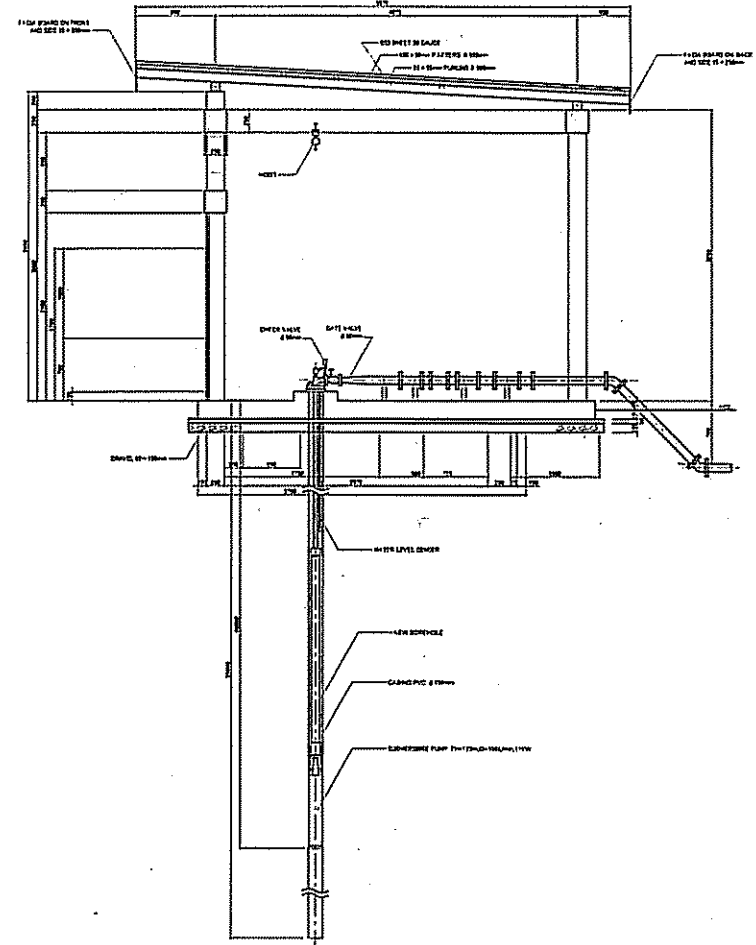


SECTION A-A

PROJECT NAME THE PROJECT FOR RURAL WATER SUPPLY	JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANT NIPPON KOEI CO.,LTD.	DRAWING TITLE PUMPING STATION DETAIL FOR NYANKORA SITE		
	MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES THE REPUBLIC OF RWANDA		SCALE 1:50	DATE FEBRUARY 2006	DRAWING NO. PW-025

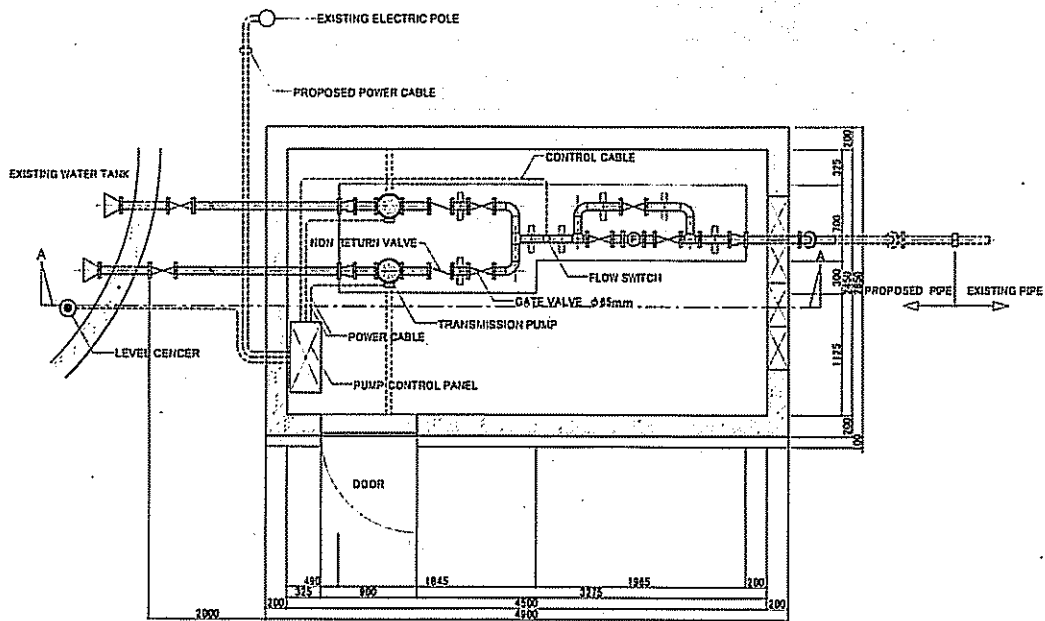


PLAN



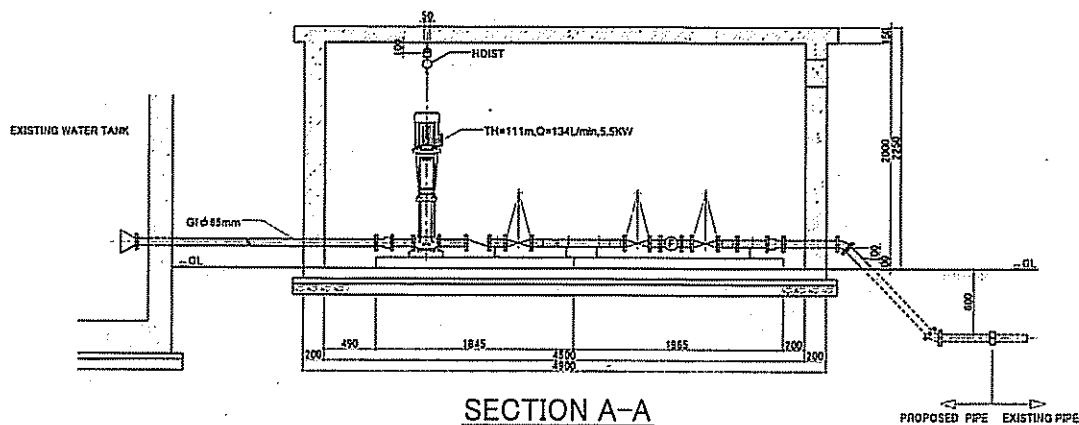
SECTION A-A

PROJECT NAME THE PROJECT FOR RURAL WATER SUPPLY	JAPAN INTERNATIONAL COOPERATION AGENCY MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES THE REPUBLIC OF RWANDA	CONSULTANT NIPPON KOEI CO.,LTD.	DRAWING TITLE PUMPING STATION DETAIL FOR KAZABAZANA SITE(1)		
			SCALE 1:60	DATE FEBRUARY 2006	DRAWING NO. PW-026

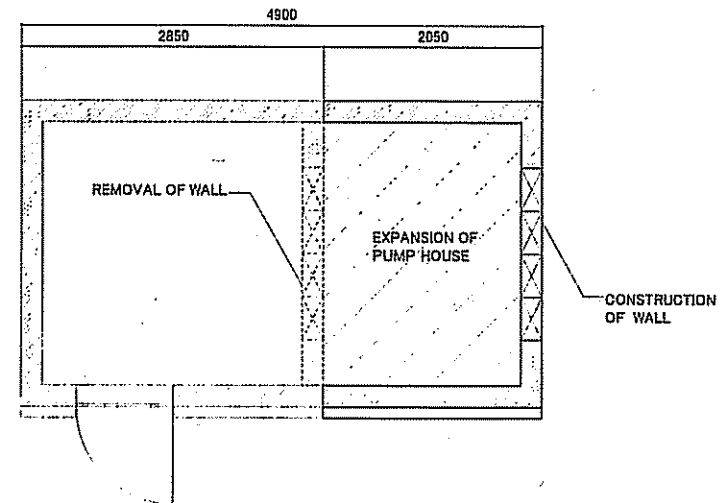


PLAN

NOTE : EXISTING WALL SHALL BE PLASTERED WITH 10mm SICKNESS



SECTION A-A

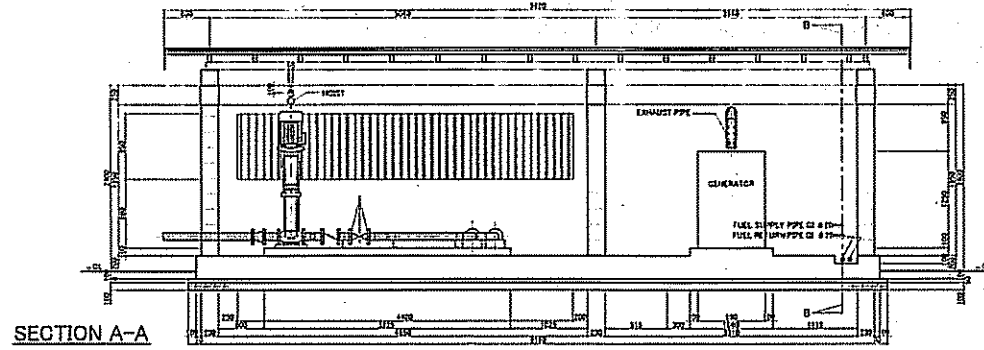


PROJECT NAME
THE PROJECT FOR RURAL WATER SUPPLY

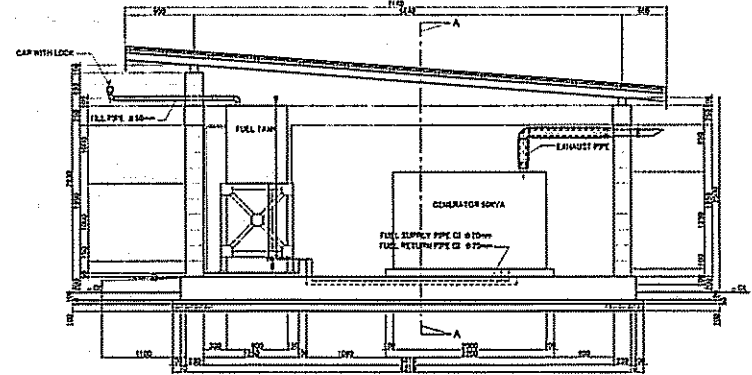
JAPAN INTERNATIONAL COOPERATION AGENCY
MINISTRY OF LAND, ENVIRONMENT, FORESTRY,
WATER AND MINES
THE REPUBLIC OF RWANDA

CONSULTANT
NIPPON KOEI CO.,LTD.

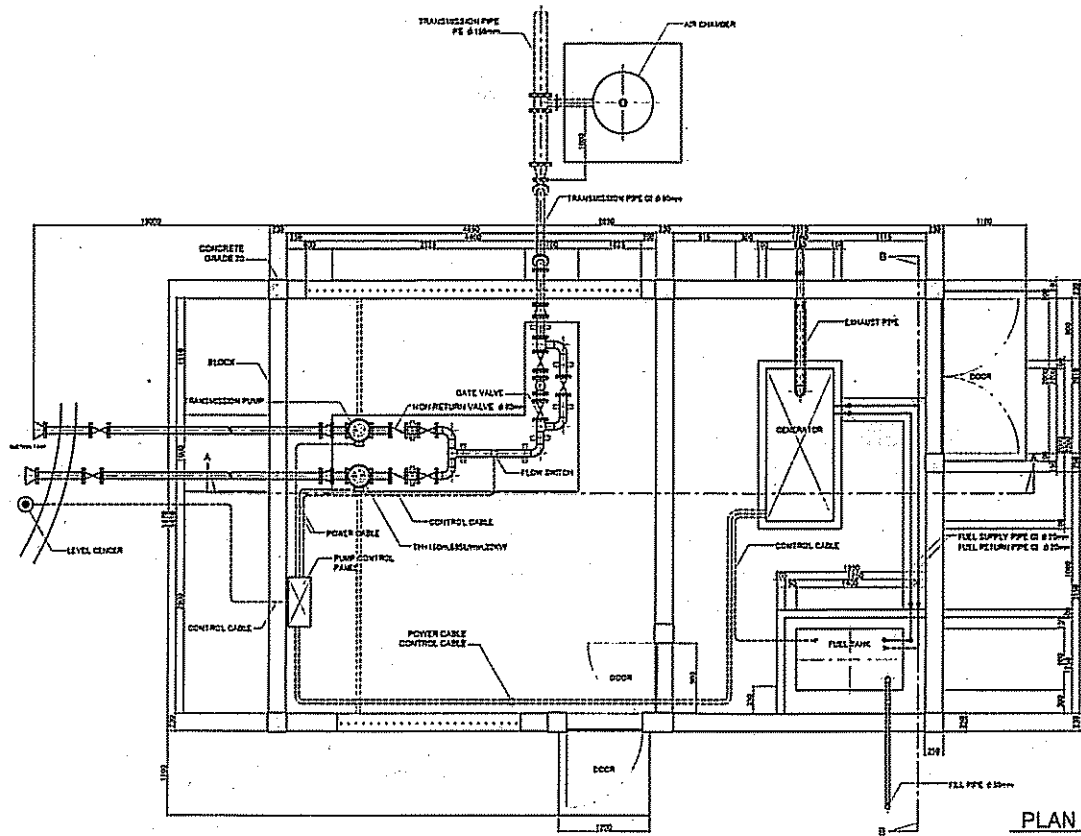
DRAWING TITLE
PUMPING STATION FOR KAZABAZANA SITE(2)
SCALE 1:50
DATE FEBRUARY 2006
DRAWING NO. PW-027



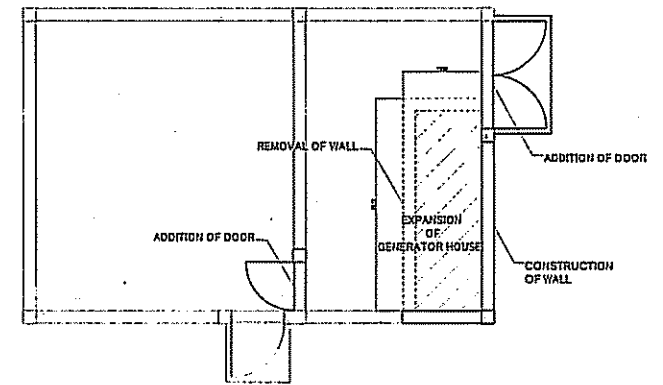
SECTION A-A



SECTION B-B




PLAN

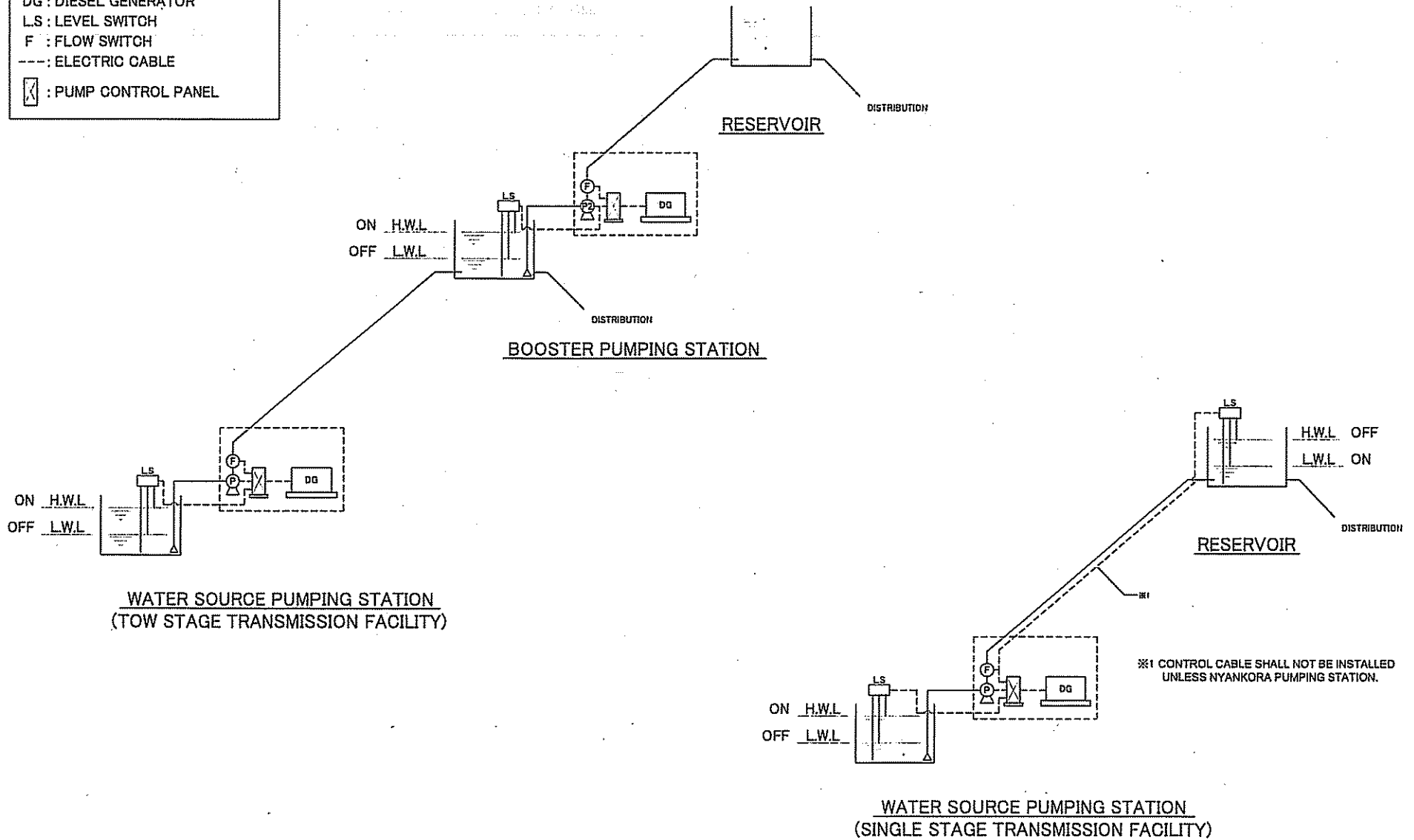



NOTE : EXISTING WALL SHALL BE PLASTERED WITH 10mm SICKNES

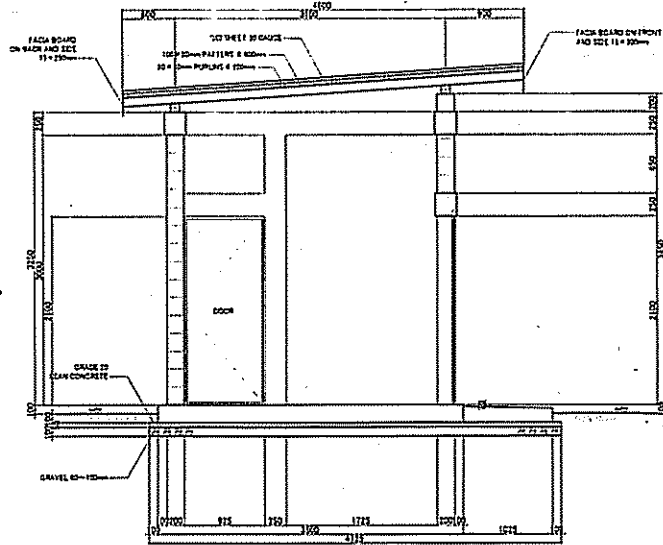
PROJECT NAME THE PROJECT FOR RURAL WATER SUPPLY	JAPAN INTERNATIONAL COOPERATION AGENCY MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES THE REPUBLIC OF RWANDA	CONSULTANT NIPPON KOEI CO.,LTD.	DRAWING TITLE PUMPING STATION DETAIL FOR KAGOMA SITE		
			SCALE 1:70	DATE FEBRUARY 2006	DRAWING NO. PW-028

LEGEND

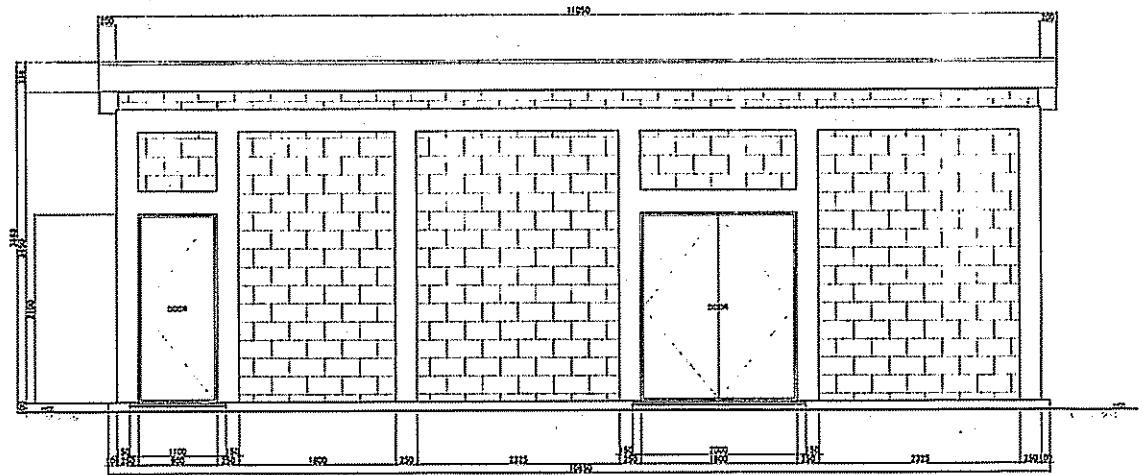
- DG : DIESEL GENERATOR
- LS : LEVEL SWITCH
- F : FLOW SWITCH
- : ELECTRIC CABLE
-  : PUMP CONTROL PANEL



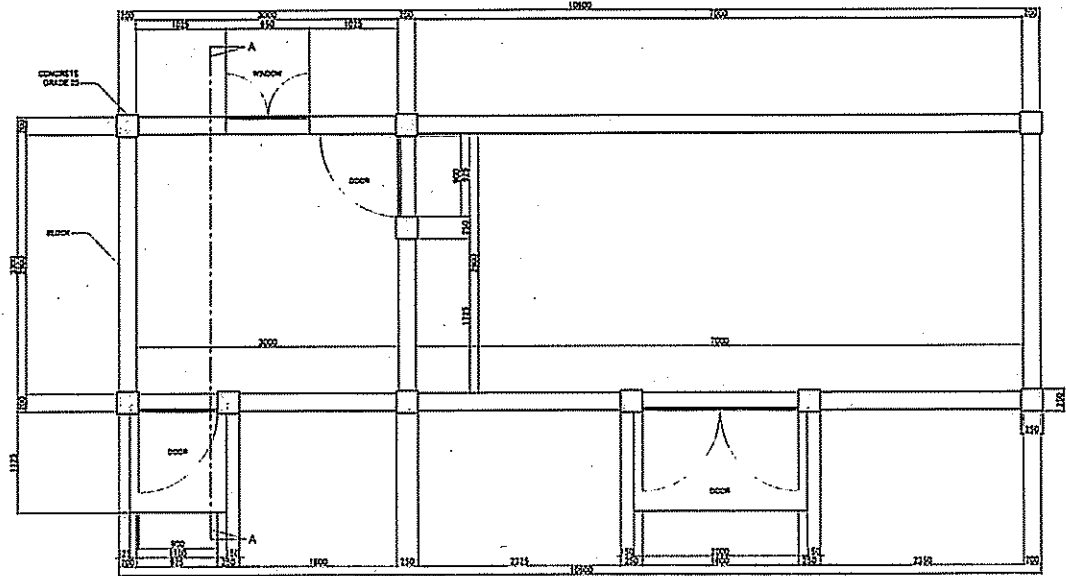
PROJECT NAME THE PROJECT FOR RURAL WATER SUPPLY	JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANT  NIPPON KOEI CO.,LTD.	DRAWING TITLE CONTROL DIAGRAM OF PUMPING WORKS		
	MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES THE REPUBLIC OF RWANDA		SCALE NONE	DATE FEBRUARY 2006	DRAWING NO. PW-029




SECTION A-A

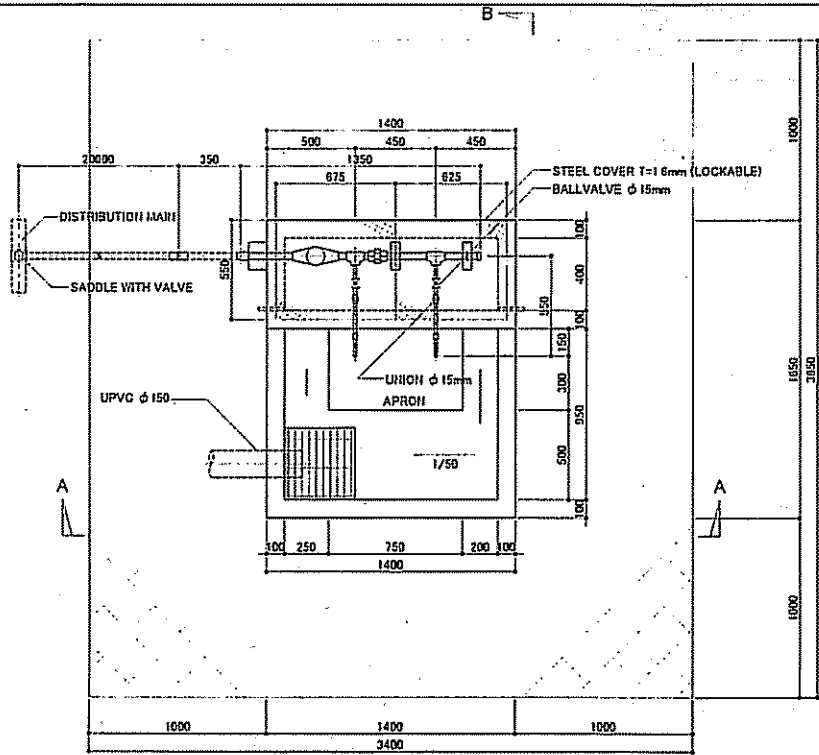


FRONT ELEVATION

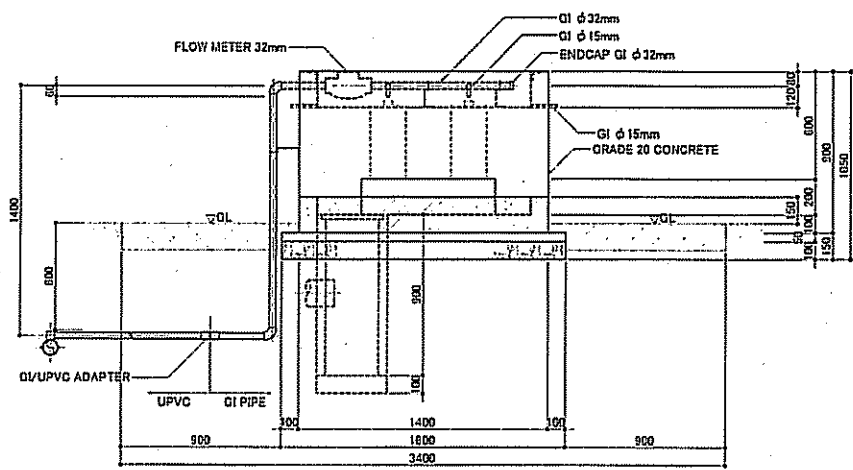


PLAN

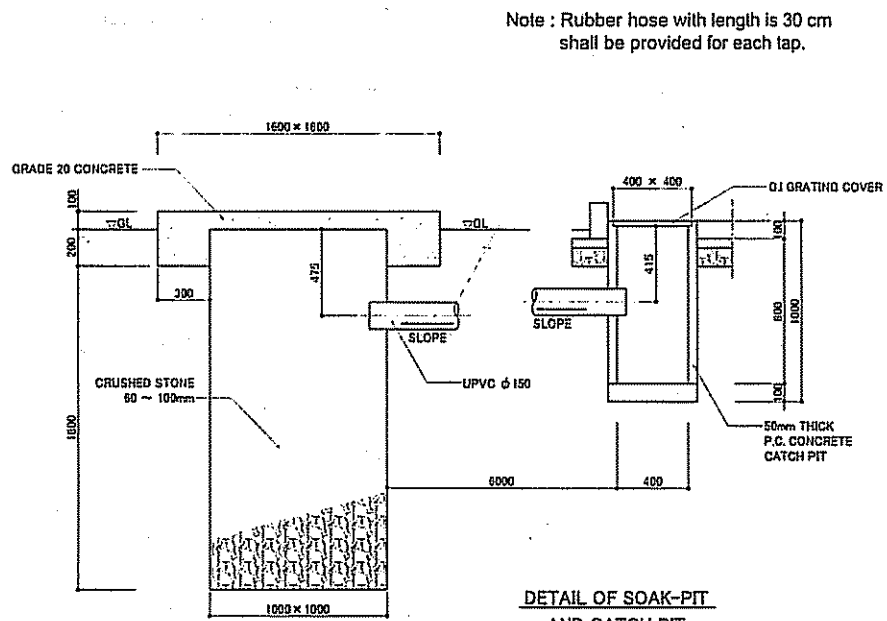
PROJECT NAME THE PROJECT FOR RURAL WATER SUPPLY	JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANT  NIPPON KOEI CO., LTD.	DRAWING TITLE MAINTENANCE OFFICE		
	MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES THE REPUBLIC OF RWANDA		SCALE 1:60	DATE FEBRUARY 2006	DRAWING NO. TD-001



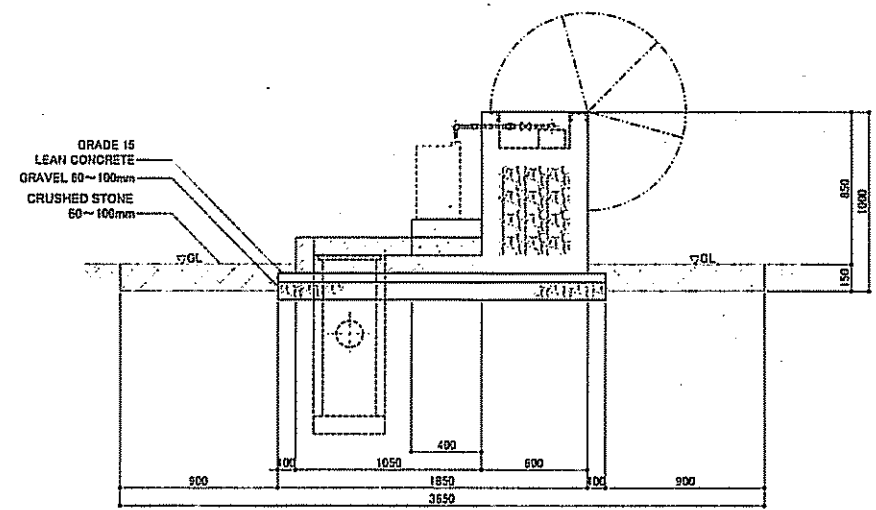
PLAN



SECTION A-A



DETAIL OF SOAK-PIT AND CATCH PIT

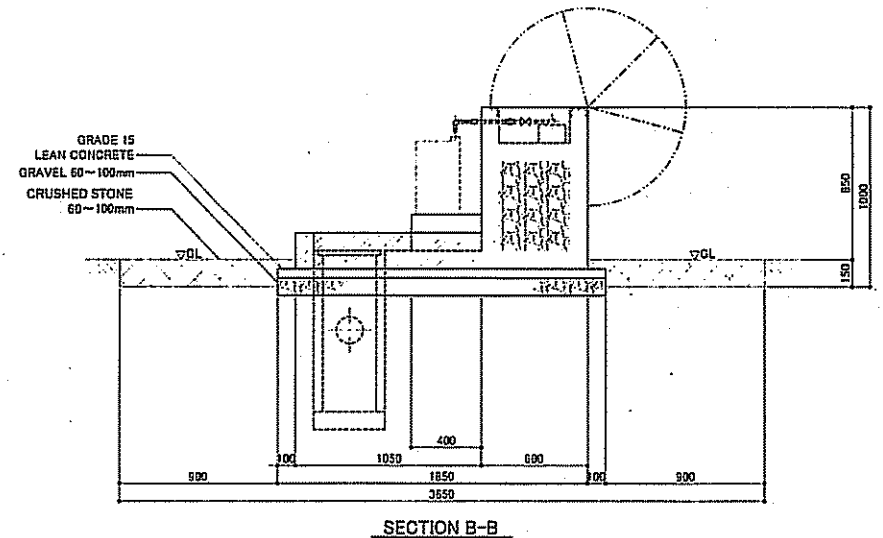
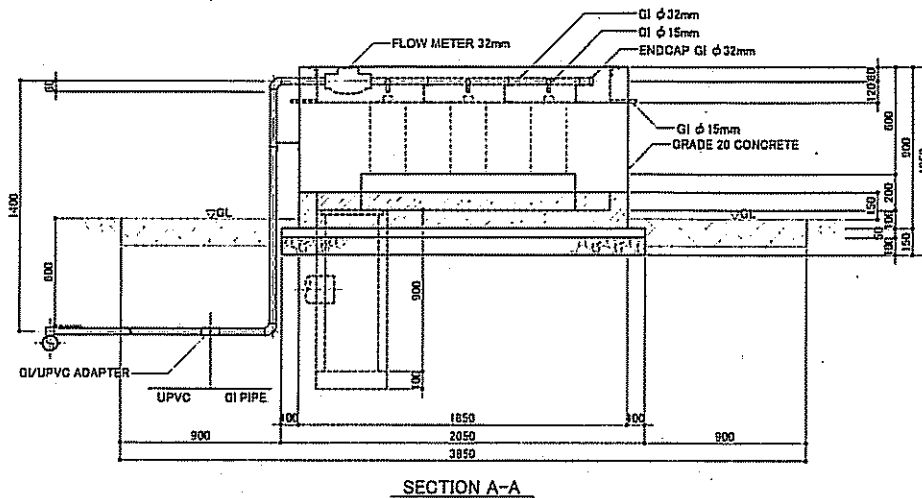
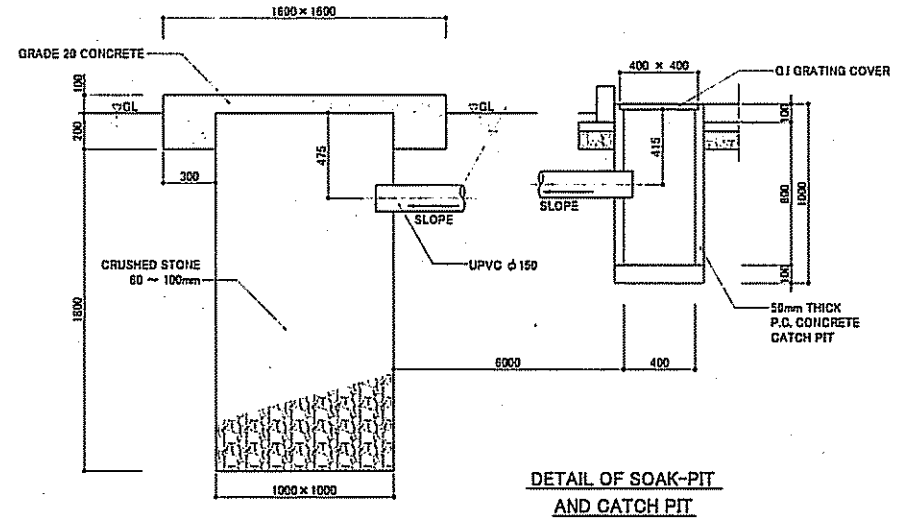
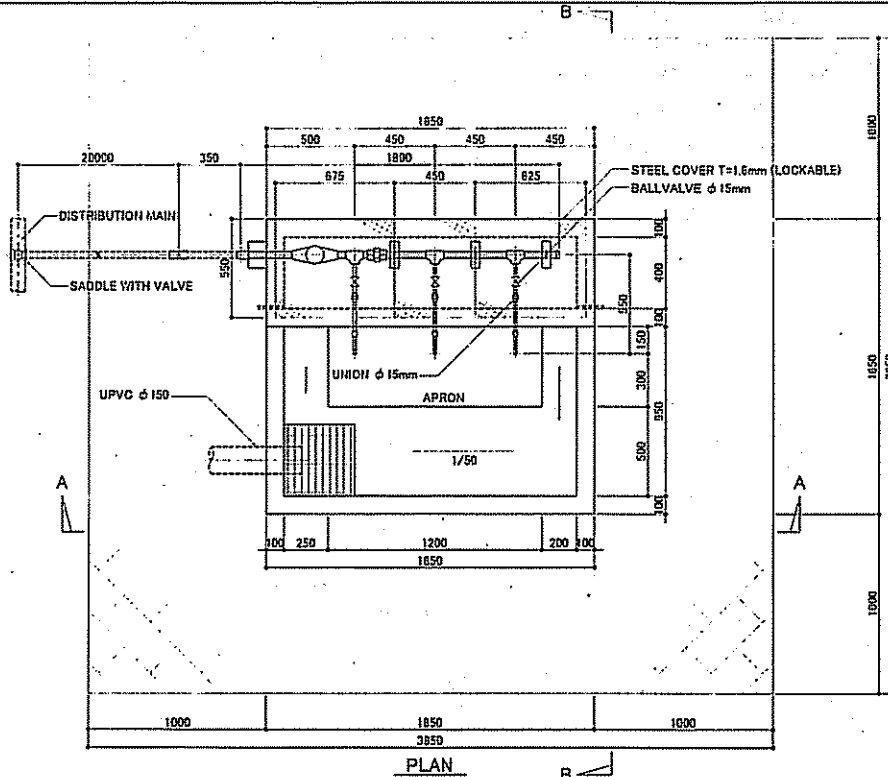


SECTION B-B

Note : Rubber hose with length is 30 cm shall be provided for each tap.

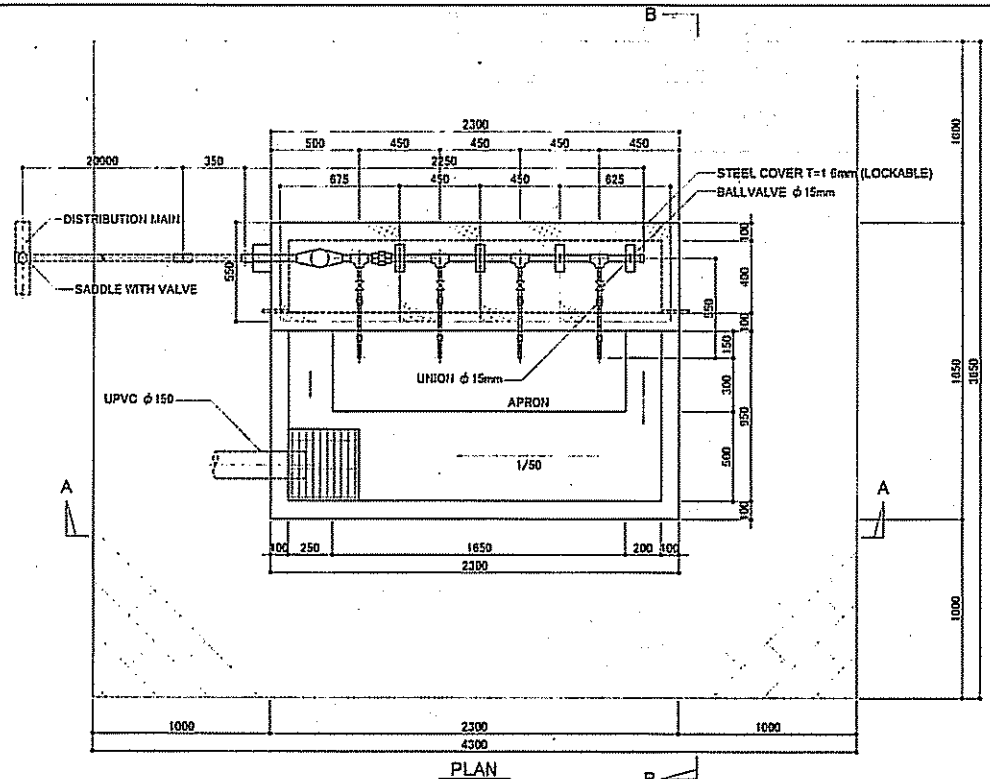
PROJECT NAME THE PROJECT FOR RURAL WATER SUPPLY	CONSULTANT NIPPON KOEI CO.,LTD.		DRAWING TITLE PUBLIC STAND FOR TWO TAPS	
	JAPAN INTERNATIONAL COOPERATION AGENCY MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES THE REPUBLIC OF RWANDA		SCALE 1:30	DATE FEBRUARY 2006
			DRAWING NO. TD-002	

Note : Rubber hose with length is 30 cm shall be provided for each tap.

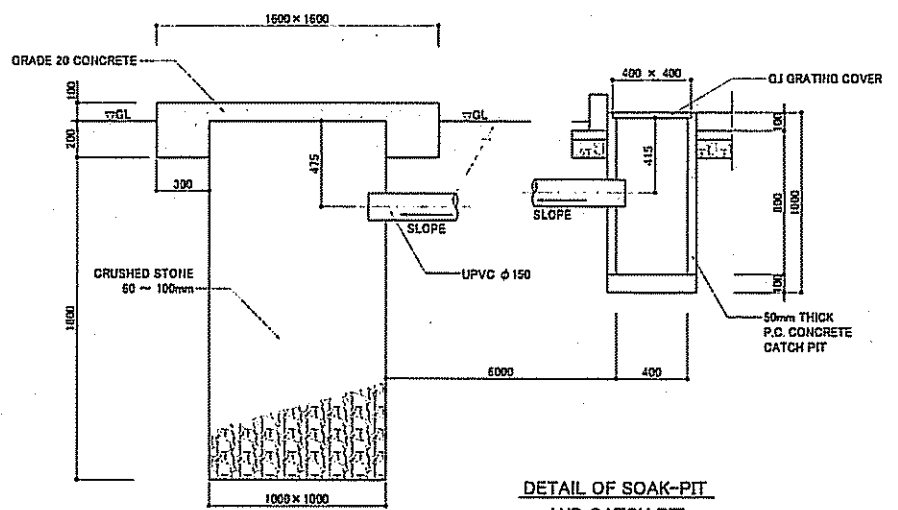


PROJECT NAME THE PROJECT FOR RURAL WATER SUPPLY	JAPAN INTERNATIONAL COOPERATION AGENCY MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES THE REPUBLIC OF RWANDA	CONSULTANT NIPPON KOEI CO.,LTD.	DRAWING TITLE PUBLIC STAND FOR THREE TAPS		
			SCALE 1:30	DATE FEBRUARY 2006	DRAWING NO. TD-003

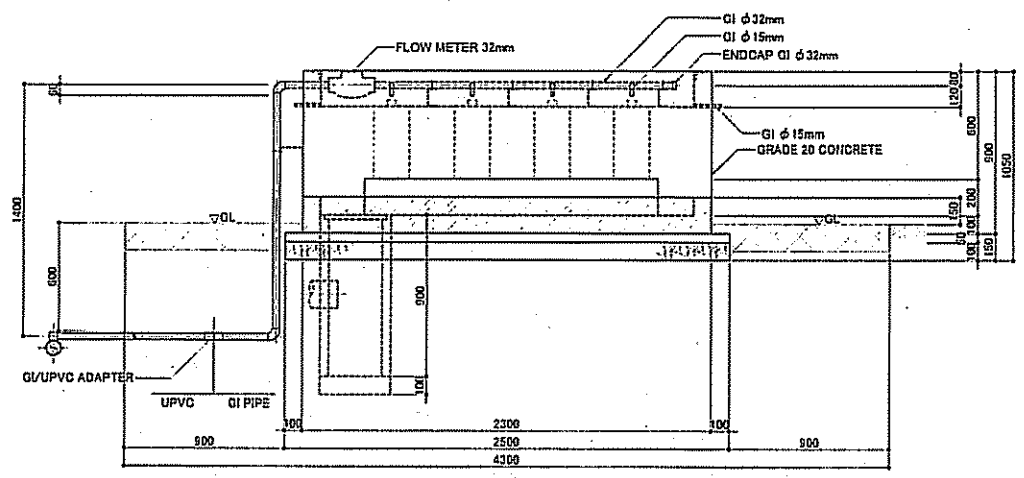
Note : Rubber hose with length is 30 cm shall be provided for each tap.



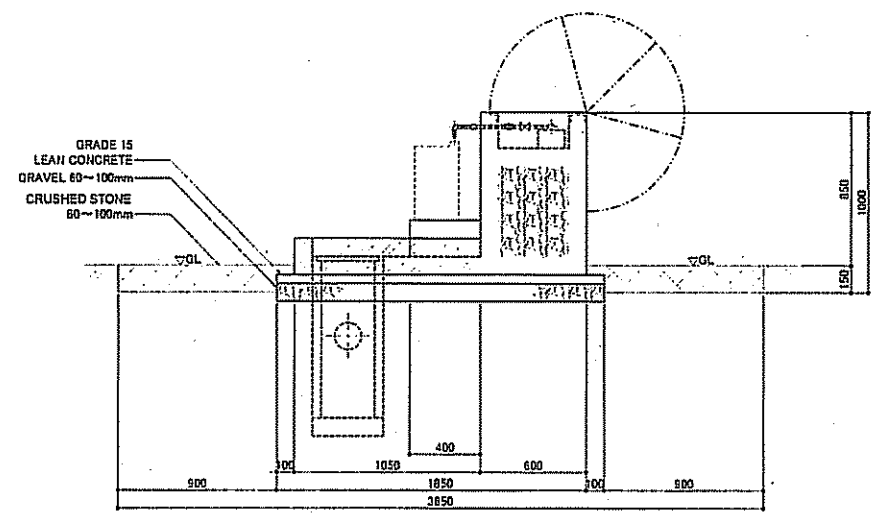
PLAN



DETAIL OF SOAK-PIT AND CATCH PIT

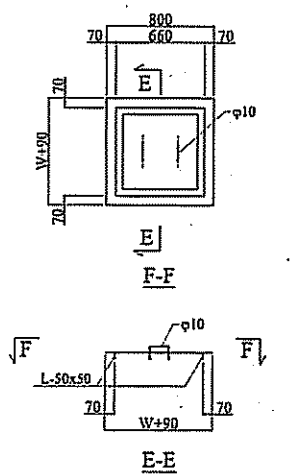
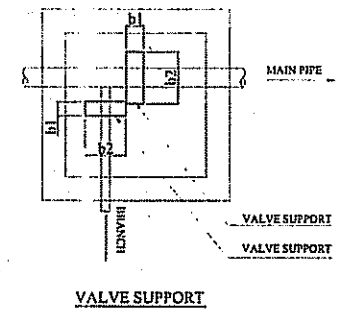
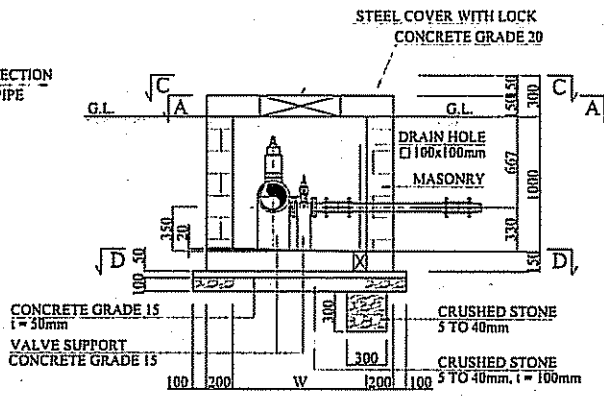
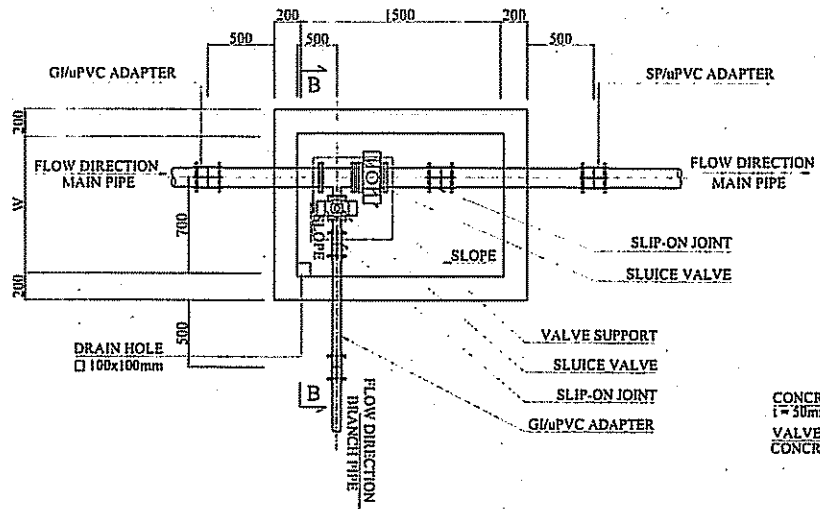


SECTION A-A



SECTION B-B

PROJECT NAME THE PROJECT FOR RURAL WATER SUPPLY	CONSULTANT NIPPON KOEI CO., LTD.		DRAWING TITLE PUBLIC STAND FOR FOUR TAPS	
	JAPAN INTERNATIONAL COOPERATION AGENCY MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES THE REPUBLIC OF RWANDA		SCALE 1:30	DATE FEBRUARY 2006
			DRAWING NO. TD-004	

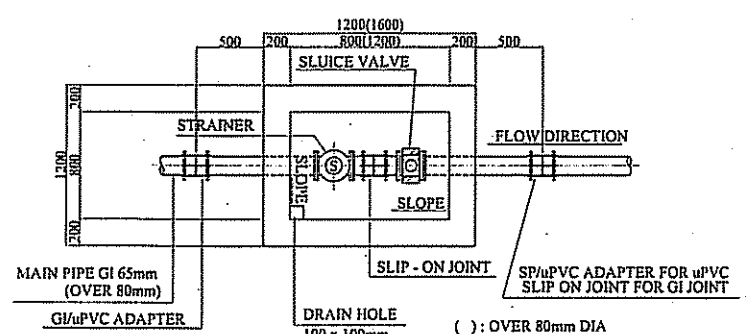
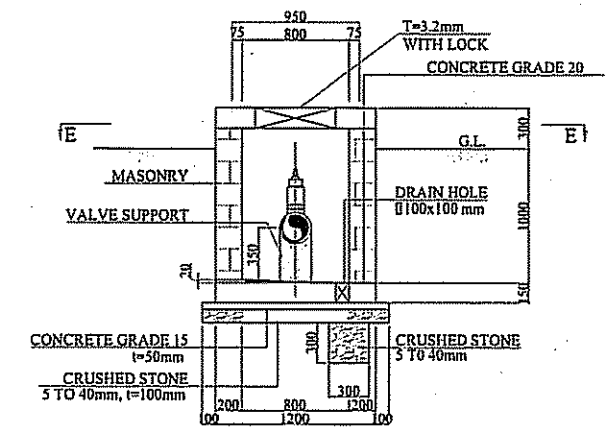
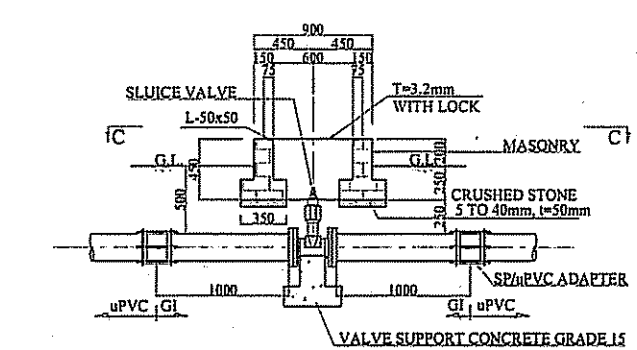
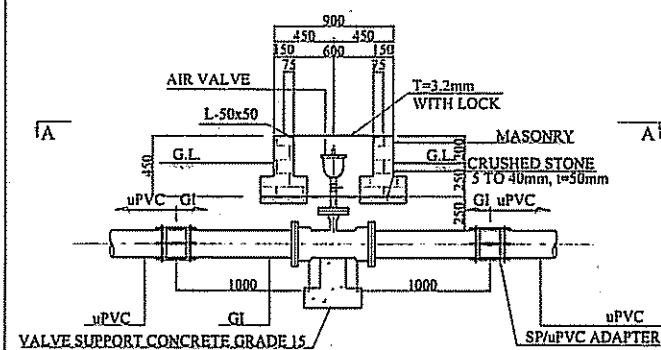
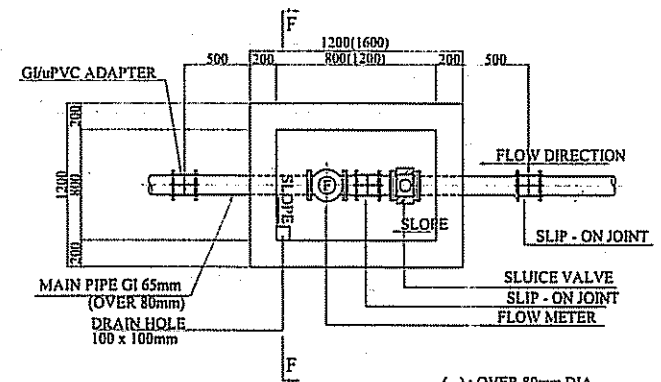
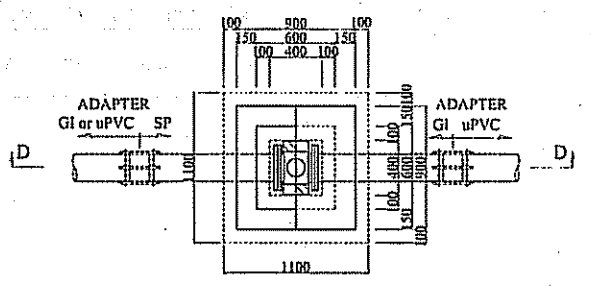
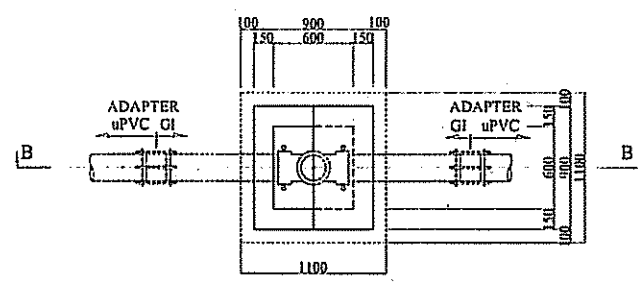


STEEL COVER WITH LOCK

	PIPE DIAMETER (mm)				W (mm)	COVER WITH LOCK
	MAIN PIPE	MAIN PIPE IN CHAMBER	BRANCH PIPE	BRANCH PIPE IN CHAMBER		
TYPE A	uPVC 63	GI 50	uPVC 63	GI 50	800	2
	uPVC 75	GI 65	uPVC 75	GI 65		
TYPE B	uPVC 90	GI 80	uPVC 63	GI 50	1000	2
	uPVC 90	GI 80	uPVC 75	GI 65		
	uPVC 90	GI 80	uPVC 90	GI 80		
TYPE C	uPVC 110	GI 100	uPVC 90	GI 80	1400	2
	uPVC 110	GI 100	uPVC 110	GI 100		
	uPVC 125	GI 100	uPVC 125	GI 100		
	uPVC 140	GI 125	uPVC 140	GI 125		
	uPVC 160	GI 150	uPVC 160	GI 150		
	uPVC 200	GI 150	uPVC 200	GI 150		

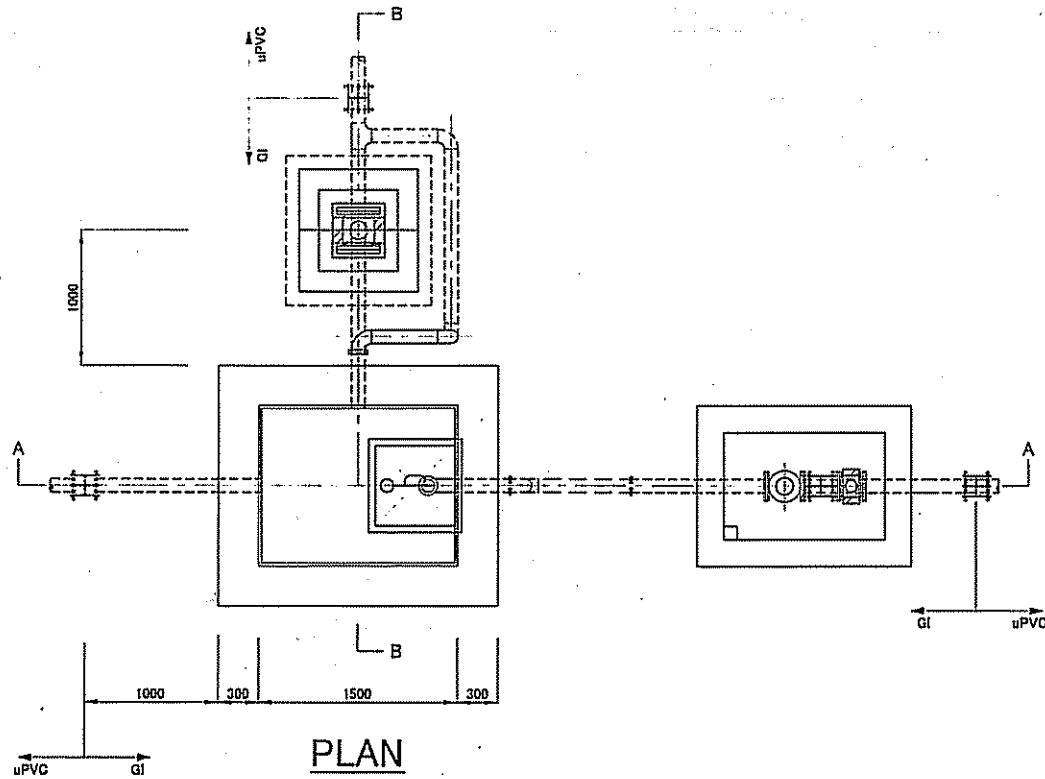
Note : Surface of stone block shall be plastered with 25mm thickness.
: Dimension at valve support shall change based on the valve length

PROJECT NAME THE PROJECT FOR RURAL WATER SUPPLY	JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANT	DRAWING TITLE VALVE CHAMBER		
	MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES THE REPUBLIC OF RWANDA	NIPPON KOEI CO.,LTD.	SCALE 1:40	DATE FEBRUARY 2006	DRAWING NO. TD-005

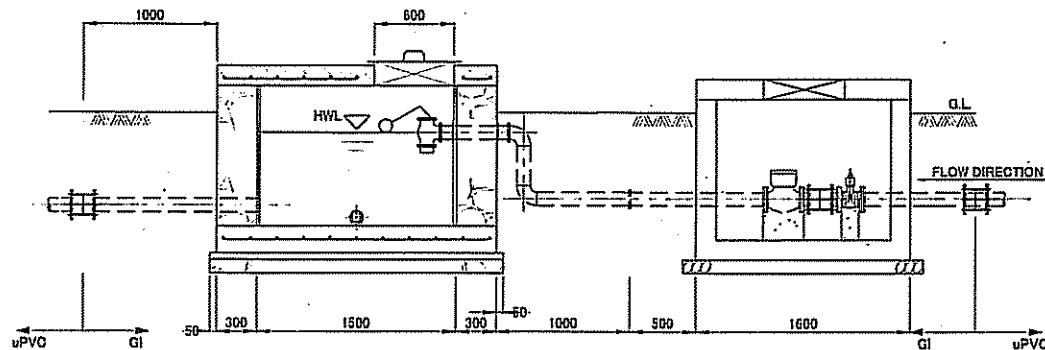


Note : Surface of stone block shall be plastered with 25mm thickness.
: Dimension of valve support shall be varied based on the valve length.

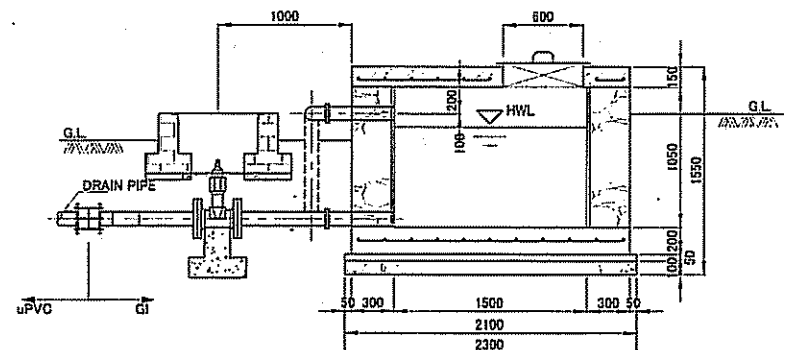
PROJECT NAME THE PROJECT FOR RURAL WATER SUPPLY	JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANT NIPPON KOEI CO.,LTD.	DRAWING TITLE AIR VALVE, SLUICE VALVE AND FLOW METER CHAMBERS	
	MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES THE REPUBLIC OF RWANDA		SCALE 1:40 1:30	DATE FEBRUARY 2006




PLAN

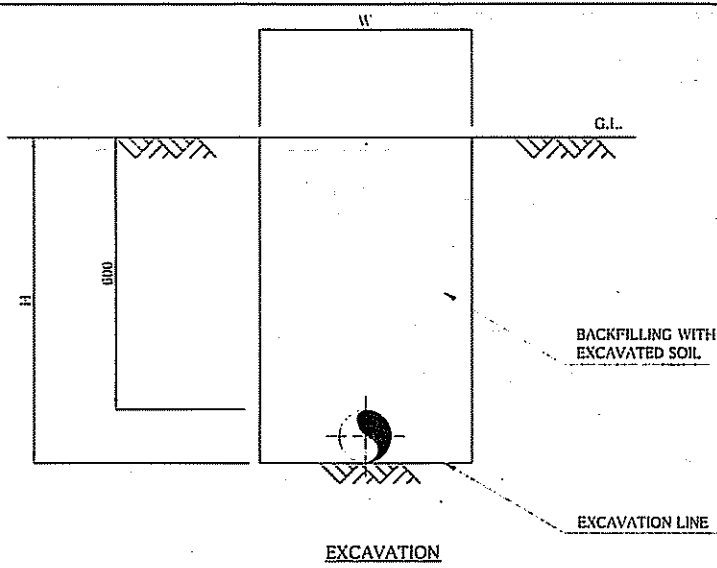


SECTION A-A



SECTION B-B

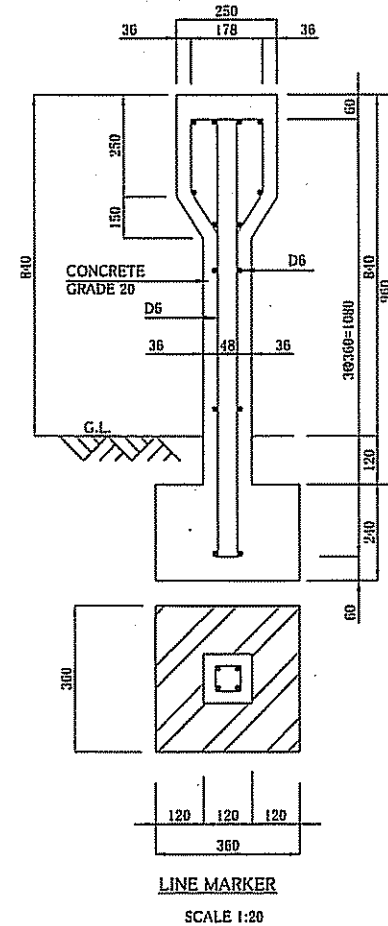
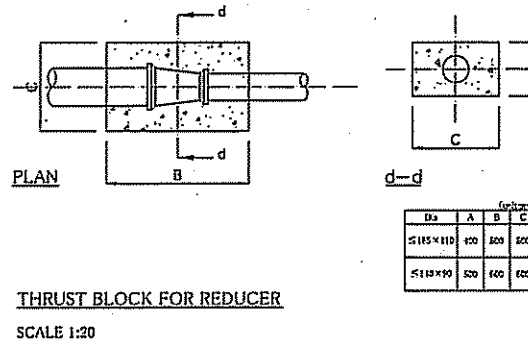
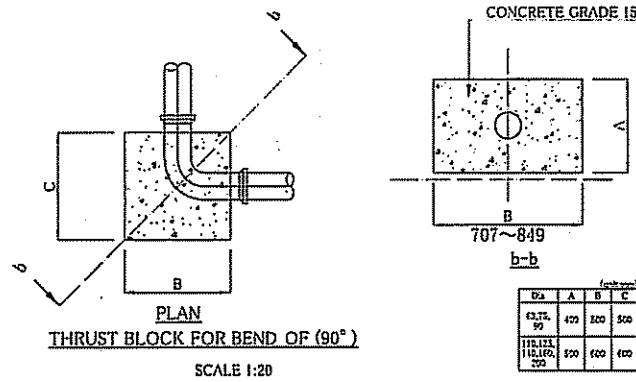
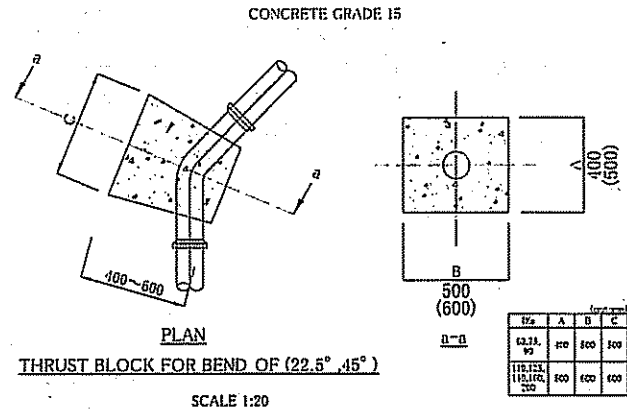
<p>PROJECT NAME</p> <p>THE PROJECT FOR RURAL WATER SUPPLY</p>	<p>JAPAN INTERNATIONAL COOPERATION AGENCY</p> <p>MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES</p> <p>THE REPUBLIC OF RWANDA</p>	<p>CONSULTANT</p> <p> NIPPON KOEI CO.,LTD.</p>	<p>DRAWING TITLE</p> <p>BREAK PRESSURE TANK TYPE B</p>		
			<p>SCALE</p> <p>1:40</p>	<p>DATE</p> <p>FEBRUARY 2006</p>	<p>DRAWING NO.</p> <p>TD-007</p>



Dimension of Manual Excavation

Pipe Diameter (mm)	Width: W (m)	Excavation Depth: H (m)
63,75,90	0.60	0.70
110,125,140	0.60	0.75
160,200	0.70	0.80

Note: Excavated soil shall be used for backfilling
 : Surplus soil shall be spoiled.
 : Sand with 100mm in thickness shall be bedded below the pipe in case of hard ground formation such as rock, stone and etc.
 : Line marker shall be installed at valve chambers and at all changes of horizontal alignment and of transmission and distribution pipeline at 250m intervals
 : Thrust block shall be installed at all changes of horizontal alignment of transmission and distribution pipeline



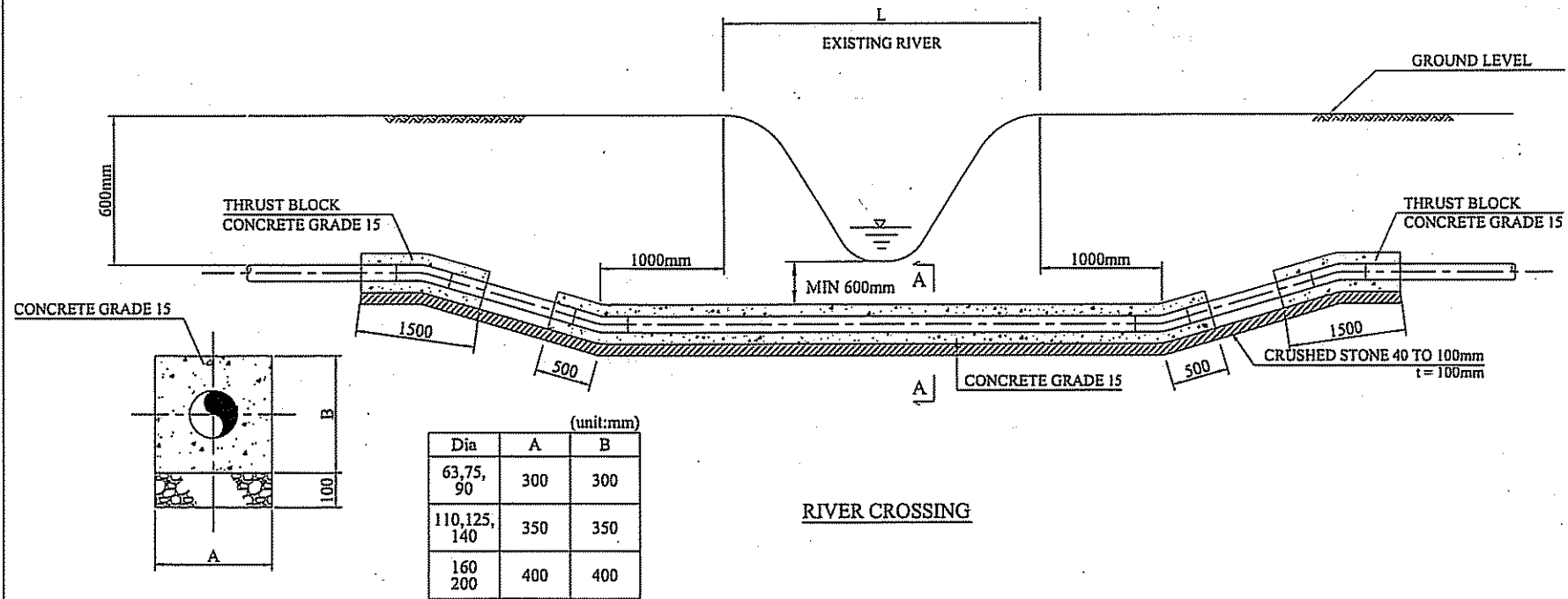
PROJECT NAME
THE PROJECT FOR RURAL WATER SUPPLY

JAPAN INTERNATIONAL COOPERATION AGENCY
 MINISTRY OF LAND, ENVIRONMENT, FORESTRY,
 WATER AND MINES
 THE REPUBLIC OF RWANDA

CONSULTANT
 NIPPON KOEI CO., LTD.

DRAWING TITLE
PIPE INSTALLATION, LINE MARKER AND THRUST BLOCK

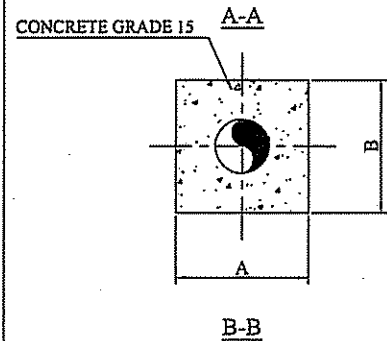
SCALE 1:15 1:20 NONE	DATE FEBRUARY 2006	DRAWING NO. TD-008
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RIVER CROSSING

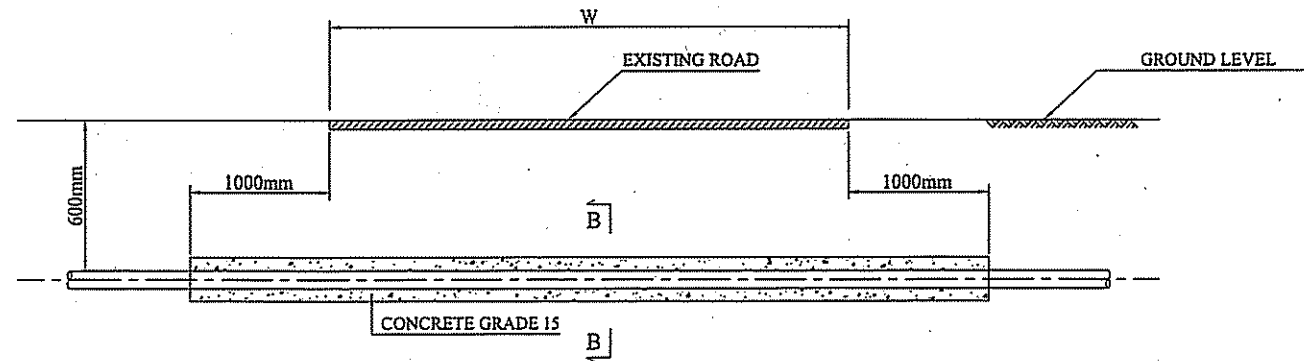
(unit:mm)

Dia	A	B
63,75, 90	300	300
110,125, 140	350	350
160 200	400	400



(unit:mm)

Dia	A	B
63,75, 90	300	300
110,125, 140	350	350
160 200	400	400



ROAD CROSSING

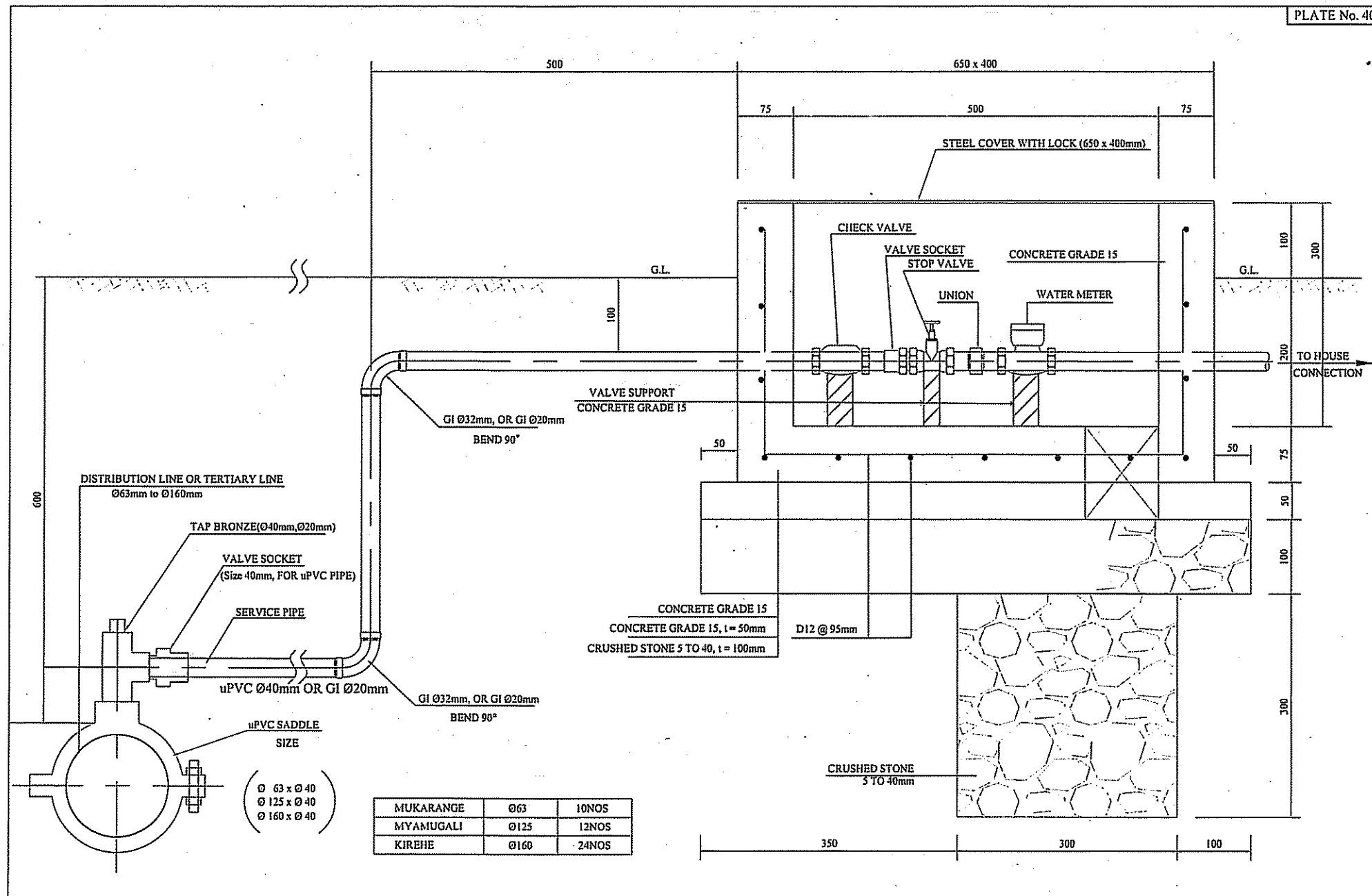
PROJECT NAME
THE PROJECT FOR RURAL WATER SUPPLY

JAPAN INTERNATIONAL COOPERATION AGENCY
MINISTRY OF LAND, ENVIRONMENT, FORESTRY,
WATER AND MINES
THE REPUBLIC OF RWANDA

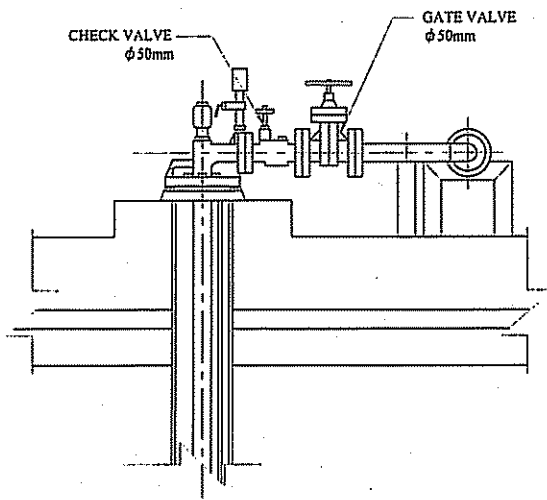
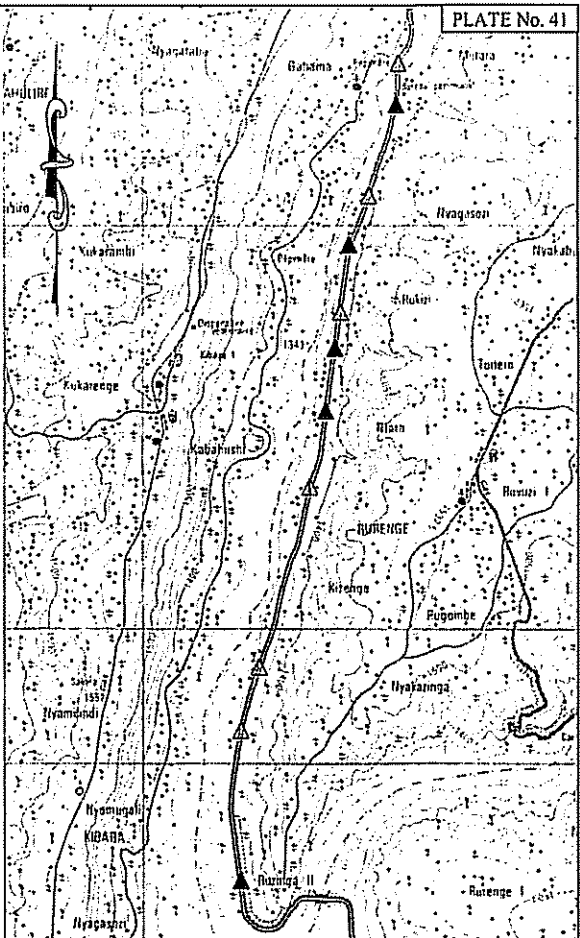
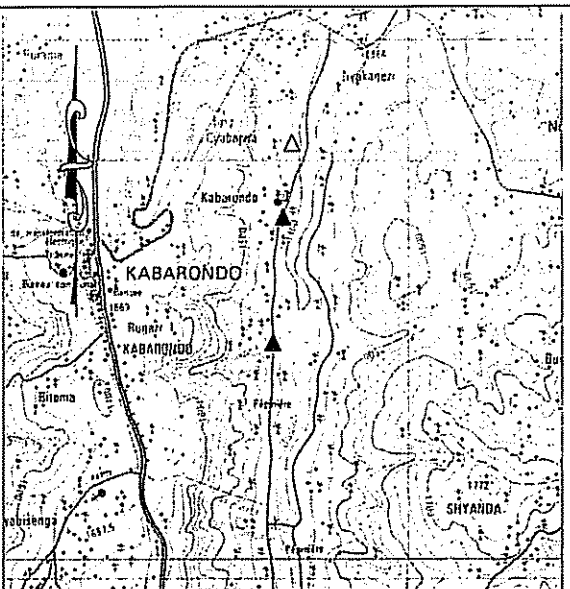
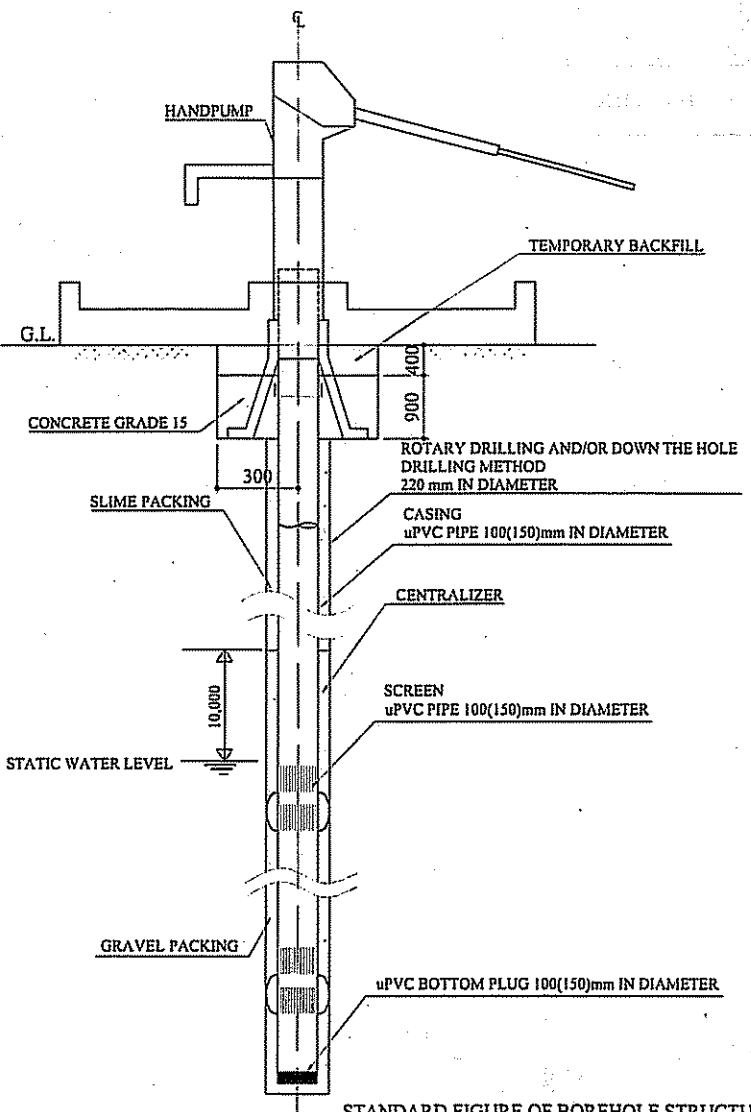
CONSULTANT
NIPPON KOEI CO.,LTD.

DRAWING TITLE
RIVER AND ROAD CROSSING OF PIPE

SCALE NONE	DATE FEBRUARY 2006	DRAWING NO. TD-009
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PROJECT NAME THE PROJECT FOR RURAL WATER SUPPLY	JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANT NIPPON KOEI CO., LTD.	DRAWING TITLE CONSUMER CONNECTION	
	MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES THE REPUBLIC OF RWANDA		SCALE 1:5	DATE FEBRUARY 2006
			DRAWING NO. TD-010	



LEGEND

- ▲ NEW HAND PUMP
- △ HAND PUMP FOR REHABILITATION
- △ HAND PUMP IN USE

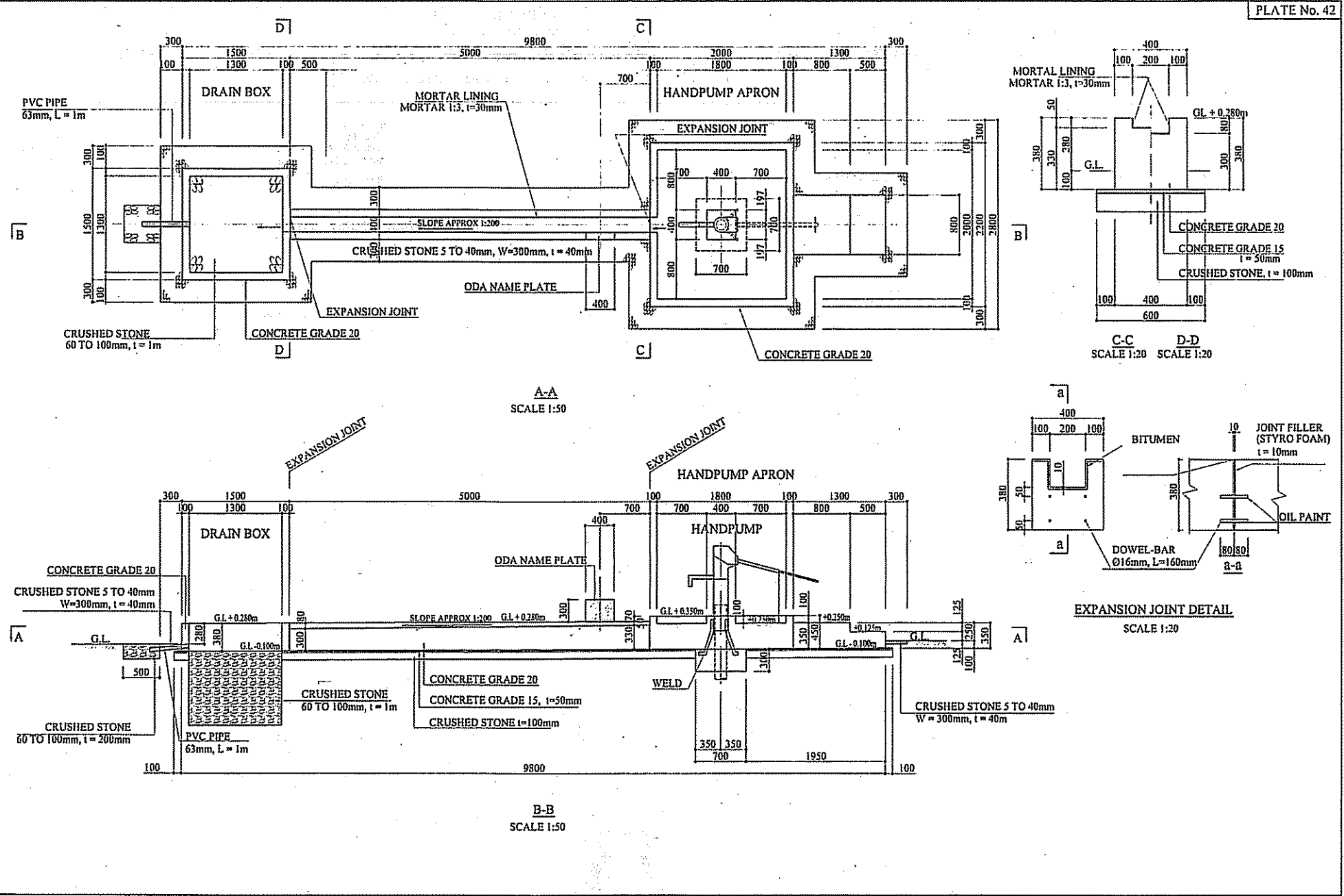
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BOREHOLE DRILLING

NEW SECTOR NAME	NO. OF BOREHOLE	CASING PIPE DIAMETER(mm)	AVERAGE DEPTH(m)	PUMP TYPE
RWINKWAVU	8	100	50	HAND PUMP
KABARONDO	2	100	51	HAND PUMP
MURAMA	5	100	50	HAND PUMP
KAZABAZANA	1	150	55	MOTOR PUMP

NOTE : SEE PW004 FOR RWINKWAVU SITE

PROJECT NAME THE PROJECT FOR RURAL WATER SUPPLY	JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANT NIPPON KOEI CO., LTD.	DRAWING TITLE BOREHOLE STRUCTURE	
	MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES THE REPUBLIC OF RWANDA		SCALE None 1/5000	DATE FEBRUARY 2006



PROJECT NAME THE PROJECT FOR RURAL WATER SUPPLY	JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANT NIPPON KOEI CO., LTD.	DRAWING TITLE STRUCTURE OF HAND PUMP FACILITY	
	MINISTRY OF LAND, ENVIRONMENT, FORESTRY, WATER AND MINES THE REPUBLIC OF RWANDA		SCALE 1:50 1:20	DATE FEBRUARY 2006