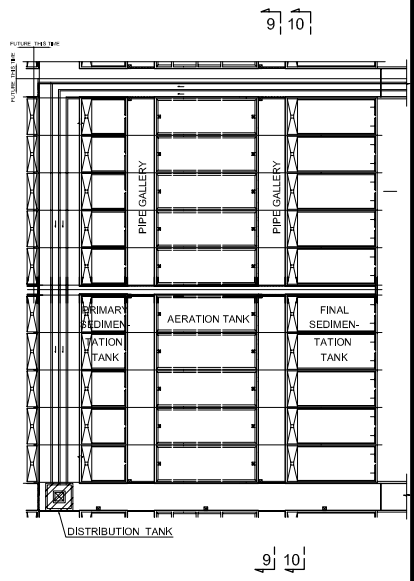
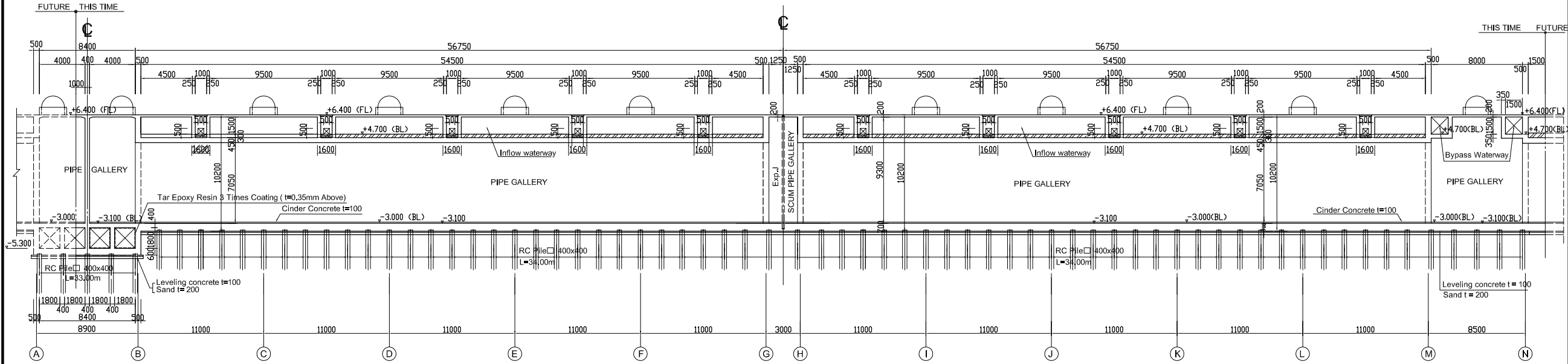


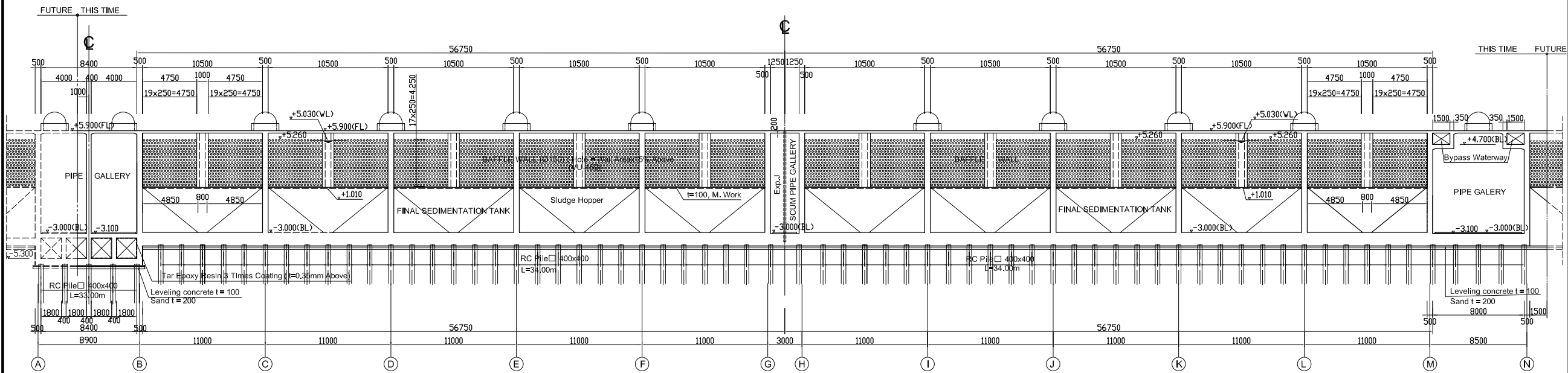
KEY PLAN



SECTION 9-9. Scale: 1/200



SECTION 10-10. Scale: 1/200

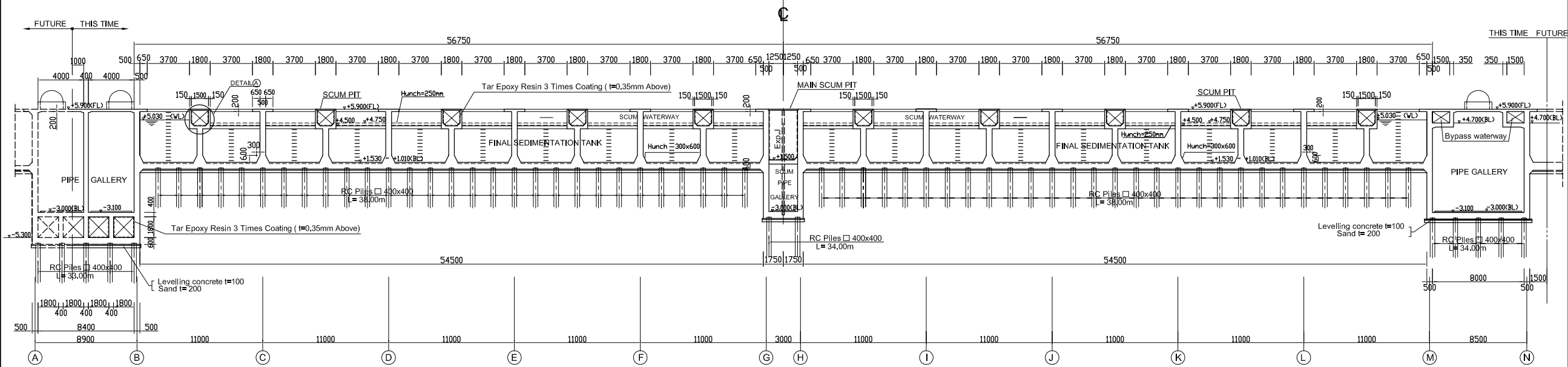


NOTES :

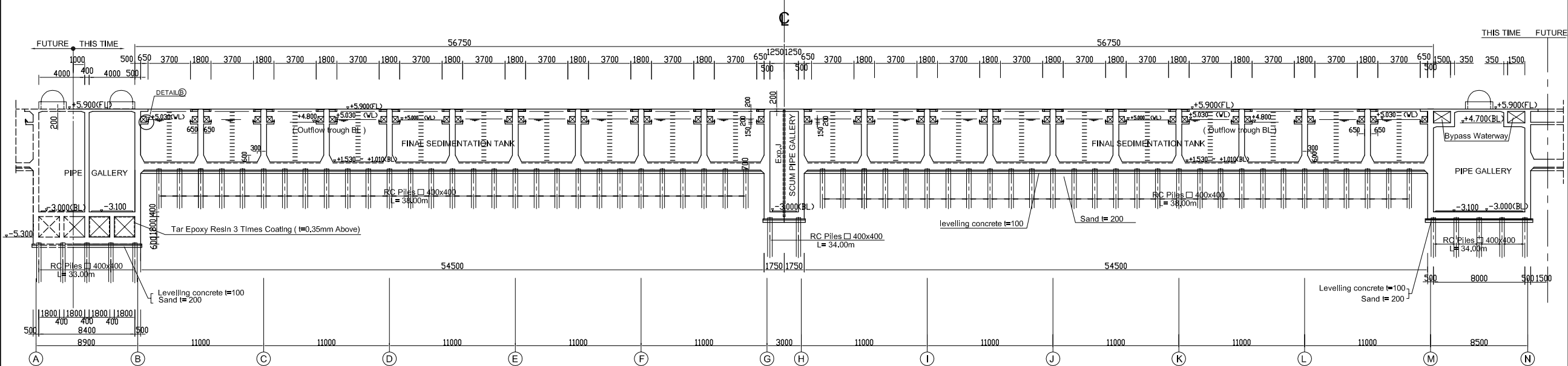
- ALL DIMENSIONS ARE MM UNLESS STATED OTHERWISE
- CONCRETE E21
- LEVELLING CONCRETE G10
- ALL REINFORCEMENT BARS ARE DEFORMED TYPE (CT5 OR EQUIVALENT AS INDICATED IN SPECIFICATION OF PACKAGE E)
- THE SPECIFICATION TO BE REFERRED FOR MORE INFORMATION OF MATERIAL GRADES
- PILE LOCATION SHOWN ON PILE ARRANGEMENT DWG. No. PE - WWTP - 252-01-02
- DETAILS OF R.C PILE SHOWN ON DWG. No. PE - WWTP - 265 - 01

NO.	DATE	DESCRIPTIONS	BY	APRO.
REVISIONS				
PROJECT MANAGEMENT UNIT FOR HO CHI MINH CITY WATER ENVIRONMENT IMPROVEMENT				
THE DETAILED DESIGN STUDY ON HO CHI MINH CITY WATER ENVIRONMENT IMPROVEMENT PROJECT IN THE SOCIALIST REPUBLIC OF VIET NAM				
PACKAGE E WASTEWATER TREATMENT PLANT SECTION 9-9 & 10-10				
SCALE : 1/200				
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		PACIFIC CONSULTANTS INTERNATIONAL		
DESIGNED KIMURA TORU		CHECKED KONDO MASAMI		
DATE : JUNE 2001		DWG. No. PE- WWTP - 204-05		

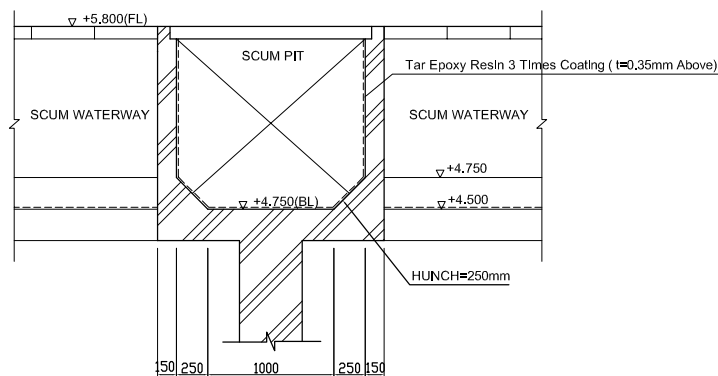
SECTION 11-11. Scale: 1/200



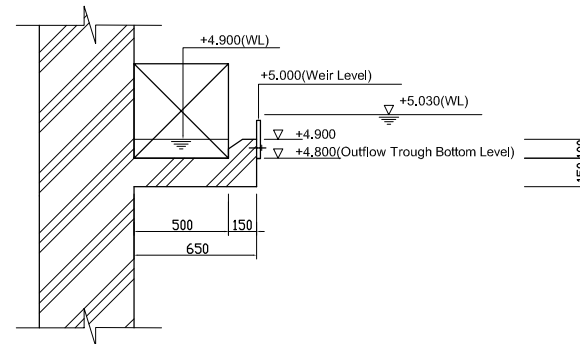
SECTION 12-12. Scale: 1/200



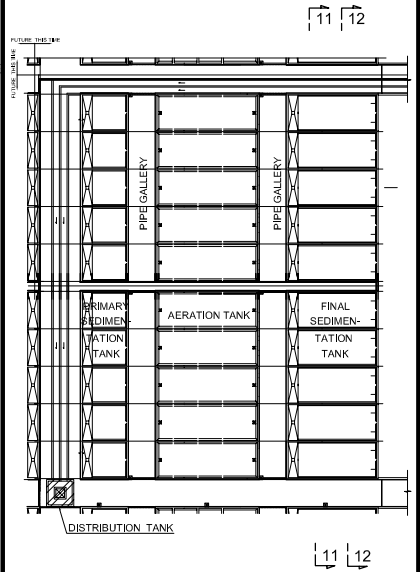
DETAIL A - SCUM PIT DETAIL (SECTION). Scale: 1/30



DETAIL B. Scale: 1/20



KEY PLAN



NOTES :

- ALL DIMENSIONS ARE MM UNLESS STATED OTHERWISE
- CONCRETE E21
- LEVELLING CONCRETE G10
- ALL REINFORCEMENT BARS ARE DEFORMED TYPE (CT5 OR EQUIVALENT AS INDICATED IN SPECIFICATION OF PACKAGE E)
- THE SPECIFICATION TO BE REFERRED FOR MORE INFORMATION OF MATERIAL GRADES
- PILE LOCATION SHOWN ON PILE ARRANGEMENT
- DWG. No. PE - WWTP - 252-01, 02
- DETAILS OF R.C PILE SHOWN ON DWG. No. PE - WWTP - 265 - 01

NO.	DATE	DESCRIPTIONS	BY	APRO.
REVISIONS				

PROJECT MANAGEMENT UNIT FOR
HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN STUDY ON HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT PROJECT
IN THE SOCIALIST REPUBLIC OF VIET NAM

PACKAGE E
WASTEWATER TREATMENT PLANT
SECTION 11 - 11 & 12 - 12

SCALE : 1/200

JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

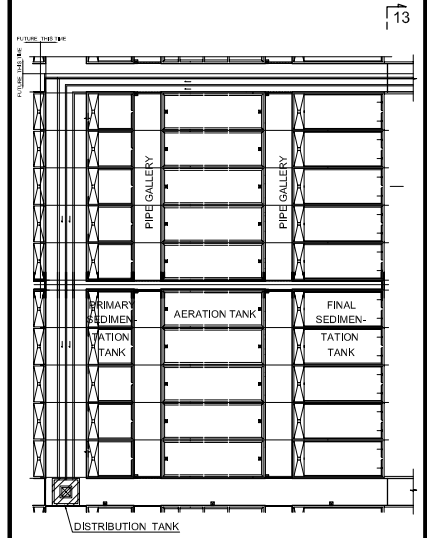
PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED
KIMURA TORU

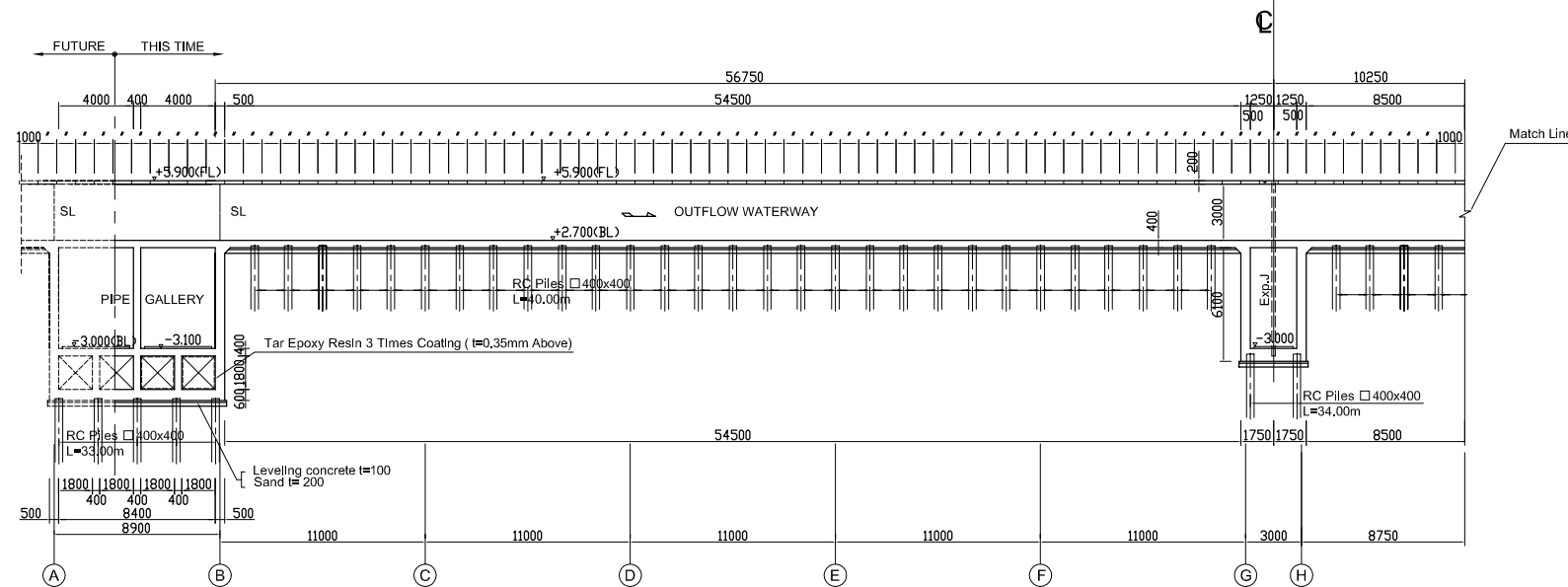
CHECKED
KONDO MASAMI

DATE : JUNE 2001 DWG. No. PE- WWTP - 204 - 06

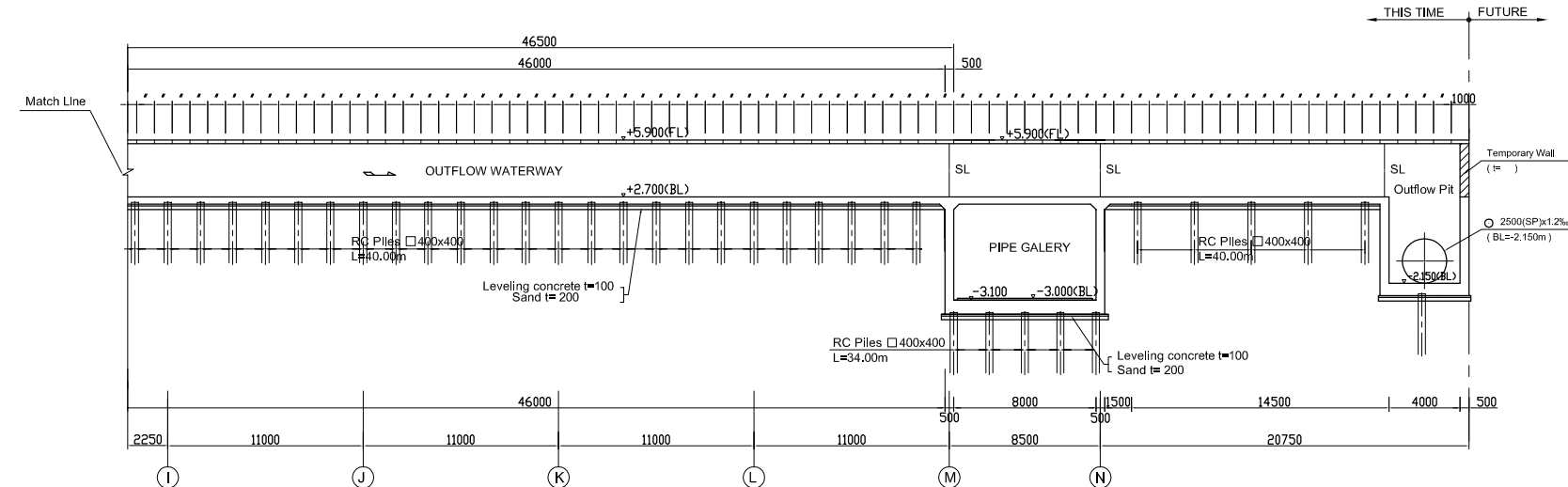
KEY PLAN



SECTION 13-13. Scale: 1/200



SECTION 13-13. Scale: 1/200



OUTLINE OF WWTP

[Outline of Wastewater Treatment Plant]: Phase I	[Outline of Hydraulic Profile Facility]
1) Primary Sedimentation Tank 5.0 m ^W x 13.0 m ^L x 3.0 m ^H x 10 tanks 20 waterway / train x 1 train 2) Aeration Tank 10.5 m ^W x 28.0 m ^L x 5.5 m ^H x 10 tanks / train x 1 train 3) Final Sedimentation Tank 5.0 m ^W x 26.0 m ^L x 3.5 m ^H x 10 tanks 20 waterway / train x 1 train 4) Disinfection Tank 5.0 m ^W x 27.0 m ^L x 5.0 m ^H x 3 bends 4 waterway x 1 train 5) Inlet Pipe □ 1.300 ^W x 1.200 ^H x 0.5% x 2 Box 6) Effluent Pipe ○ 2,500 mm x 1.2% (HP), L=100 m	1) Disinfection Tank • Overflow Weir = Suppressed Rectangular Weir, B = 5.0 m (Fixed Weir) Weir Level = +2,000 m • Inflow Gate = 2,000 ² (Bypass Gate = 2,000 mm ²) 2) Disinfection Tank & Secondary Treatment Water Tank Connection Method • Direct Connection (5.0 m ²) 3) Secondary Treatment Water Tank & Final Sedimentation Tank Outflow Pit Connection Pipe • □ 2,500 mm (SP) x 1.2 % , L = 65 m , Pressured Pipe 4) Final Sedimentation Tank • Outflow Trough: B = 0.5 m , I = 0 , BL = +4,800 m , L = 27 m / waterway • Outflow Notch = Triangular Weir , Notch Degree = 7 / m Weir Level = +5,000 m • Inflow Gate = 500 mm ² 5) Aeration Tank • Overflow Weir = Suppressed Rectangular Weir , B = 8.25 m Weir Level = +5,200 m • Inflow Movable Weir: B = 0.5 m , Weir Level = +5,500 m • Step Movable Weir: B = 0.5 m , 4 Point Step System Weir Level = +5,500 m
	6) Primary Sedimentation Tank • Outflow Trough: B = 0.5 m , i = 0 , BL = +5,800 m , L = 13 m / waterway • Outflow Notch = Triangular Weir , Notch Degree = 7 / m , Weir Level = +6,000 m • Inflow Movable Weir: B = 0.5m , Weir Level = +6,200 m 7) Distribution Tank • Movable Weir: B = 1.0m (4 Division) , Weir Level = +6,900 m • Bypass Gate = 1,000 mm ² x 4 8) Distribution Tank & Discharge Tank Connection Pipe • 1,800 mm ² x 2 trains , L = 300 m , 90° Bend x 1 , Pressured Pipe 9) Inflow Waterway (P/S Tank , A/R Tank , F/S Tank) • B = 1.0 m (Open Waterway) 10) Outflow Waterway (P/S Tank , A/R Tank) • B = 1.0 m (Open Waterway) 11) Outflow Waterway (F/S Tank) • B = 2.0 m (Open Waterway) , A = 2.0 m ² (Pressured Pipe) 12) Bypass Waterway (P/S Tank , A/R Tank , F/S Tank) • B = 1.5 m (Open Waterway) 13) Bypass Waterway (Disinfection Tank) • B = 5.0 m (Open Waterway) 14) Used Formula • Manning's Formula (n = 0,010 ~ 0,013)

NOTES :

- ALL DIMENSIONS ARE MM UNLESS STATED OTHERWISE
- CONCRETE E21
- LEVELLING CONCRETE G10
- ALL REINFORCEMENT BARS ARE DEFORMED TYPE (CT5 OR EQUIVALENT AS INDICATED IN SPECIFICATION OF PACKAGE E)
- THE SPECIFICATION TO BE REFERRED FOR MORE INFORMATION OF MATERIAL GRADES
- PILE LOCATION SHOWN ON PILE ARRANGEMENT DWG. No. PE - WWTP - 252-01,02
- DETAILS OF R.C PILE SHOWN ON DWG. No. PE - WWTP - 265 - 01

NO.	DATE	DESCRIPTIONS	BY	APRO.

REVISIONS

PROJECT MANAGEMENT UNIT FOR
HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN STUDY ON HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT PROJECT
IN THE SOCIALIST REPUBLIC OF VIET NAM

PACKAGE E
WASTEWATER TREATMENT PLANT
SECTION 13 - 13

SCALE : 1/200

JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

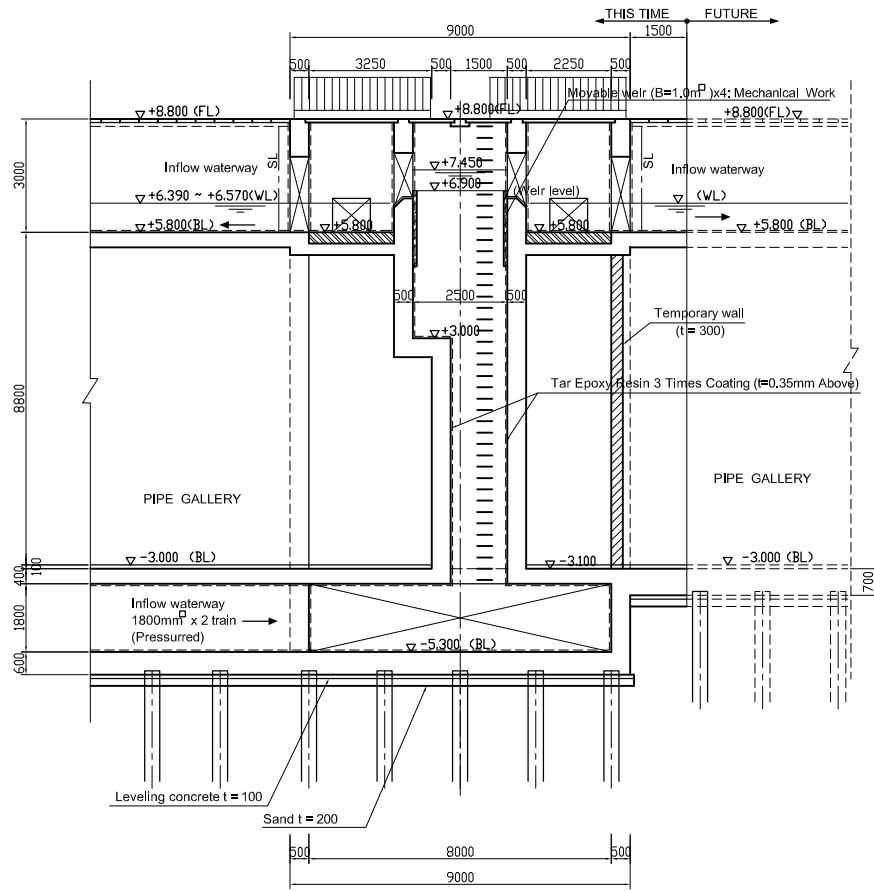
DESIGNED
KIMURA TORU

CHECKED
KONDO MASAMI

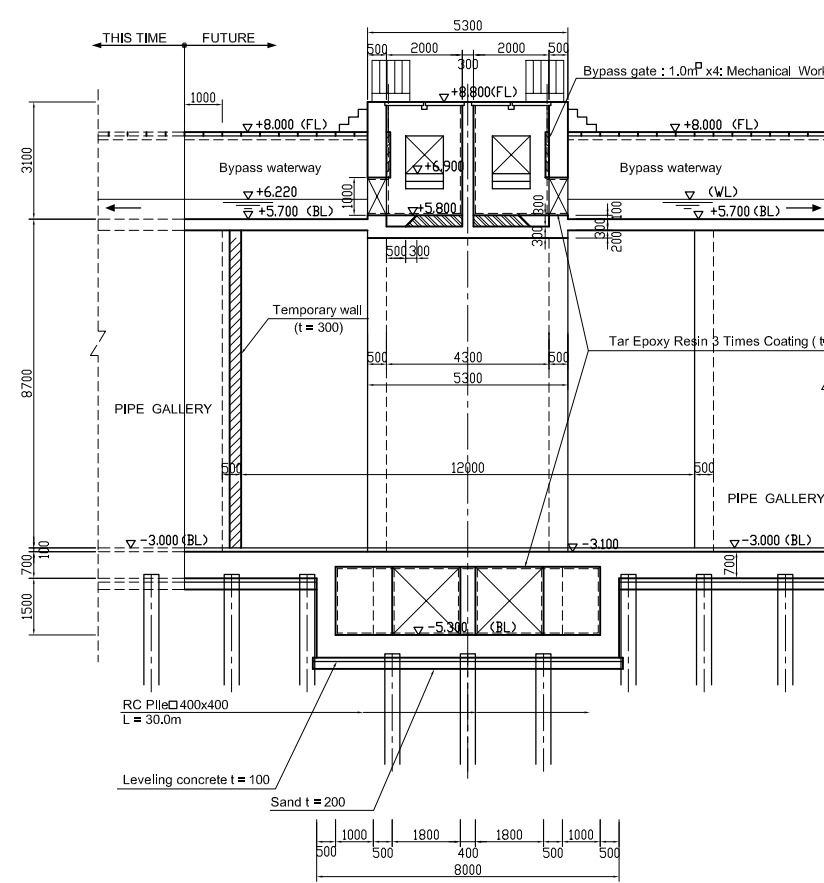
DATE : JUNE 2001 DWG. No. PE- WWTP - 204-07

DISTRIBUTION TANK PLAN and SECTION. Scale: 1/100

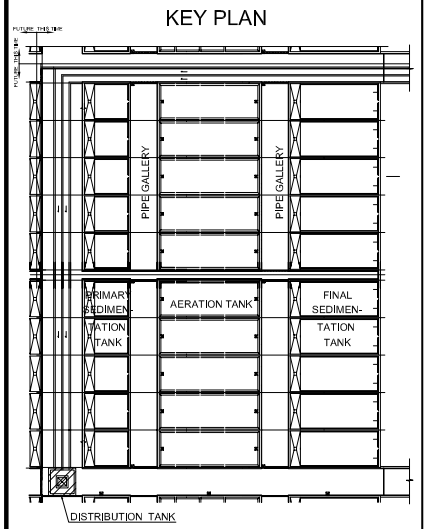
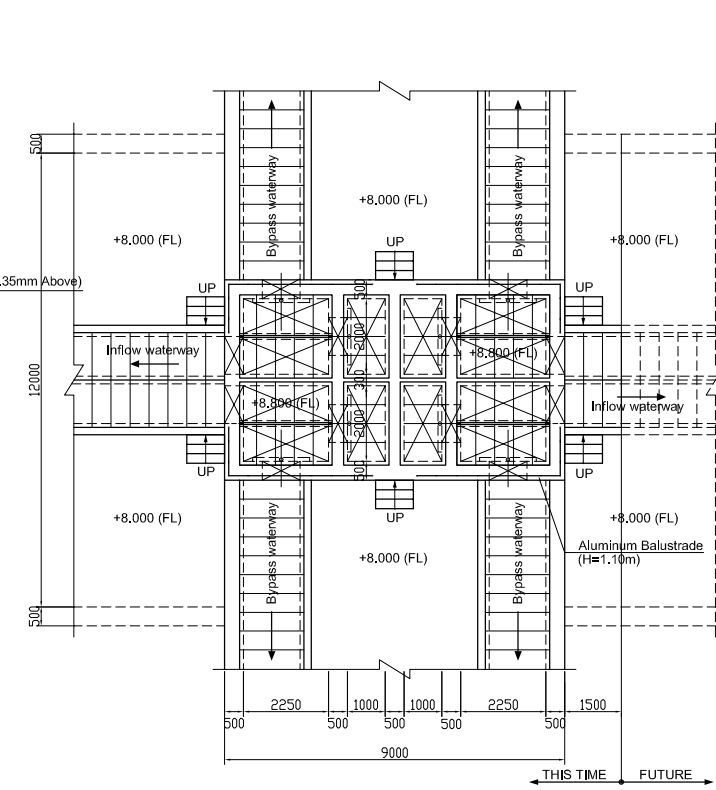
SECTION 1 - 1. Scale: 1/100



SECTION 2 - 2. Scale: 1/100



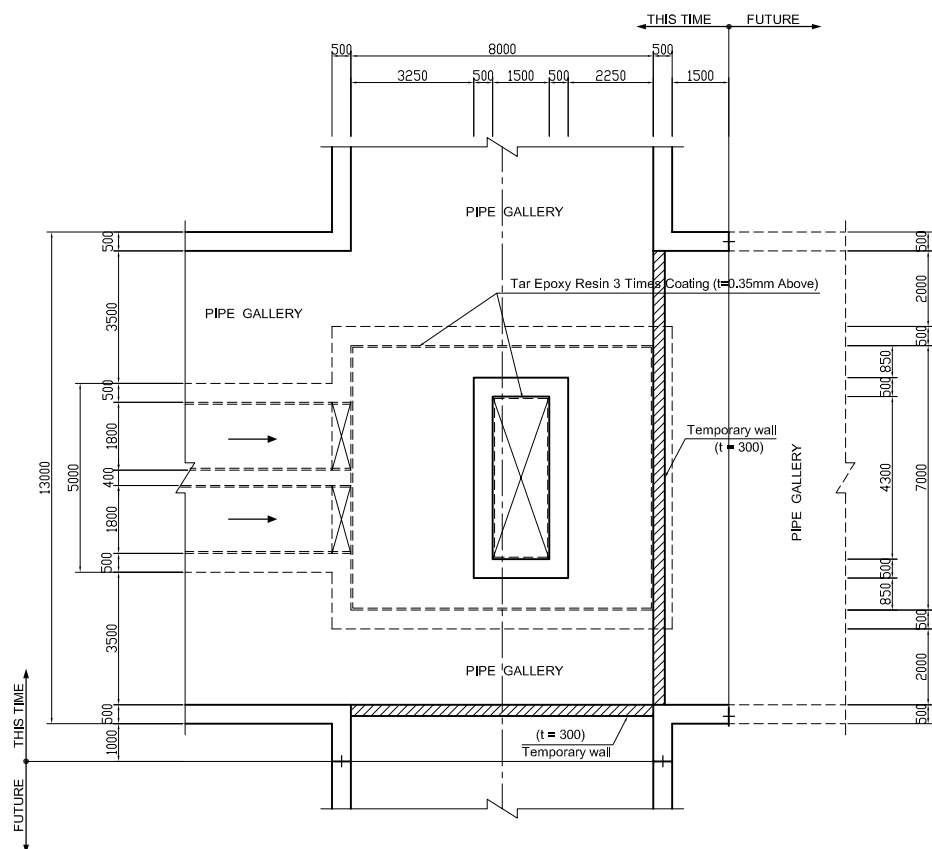
UPPER PLAN. Scale: 1/100



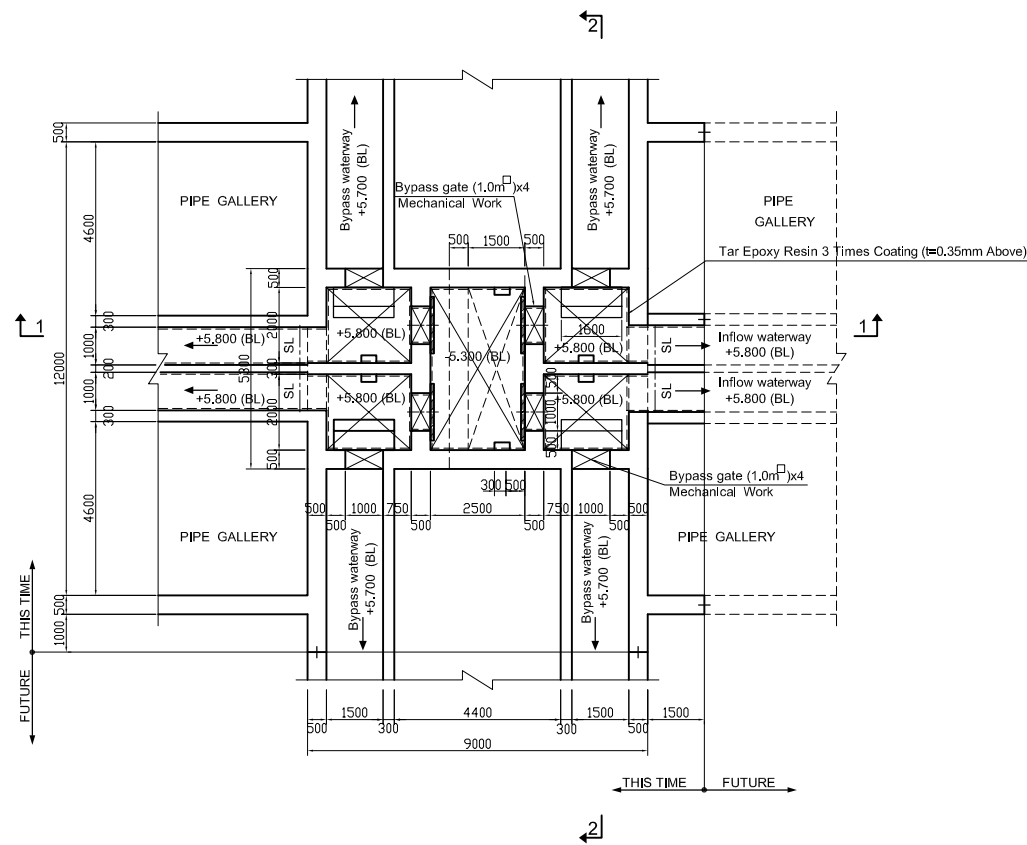
NOTES :

- ALL DIMENSIONS ARE MM UNLESS STATED OTHERWISE
- CONCRETE E21
- LEVELLING CONCRETE G10
- ALL REINFORCEMENT BARS ARE DEFORMED TYPE (CT5 OR EQUIVALENT AS INDICATED IN SPECIFICATION OF PACKAGE E)
- THE SPECIFICATION TO BE REFERRED FOR MORE INFORMATION OF MATERIAL GRADES
- PILE LOCATION SHOWN ON PILE ARRANGEMENT DWG. No. PE - WWTP - 252-01.02
- DETAILS OF R.C PILE SHOWN ON DWG. No. PE - WWTP - 265 - 01

LOWER PLAN. Scale: 1/100



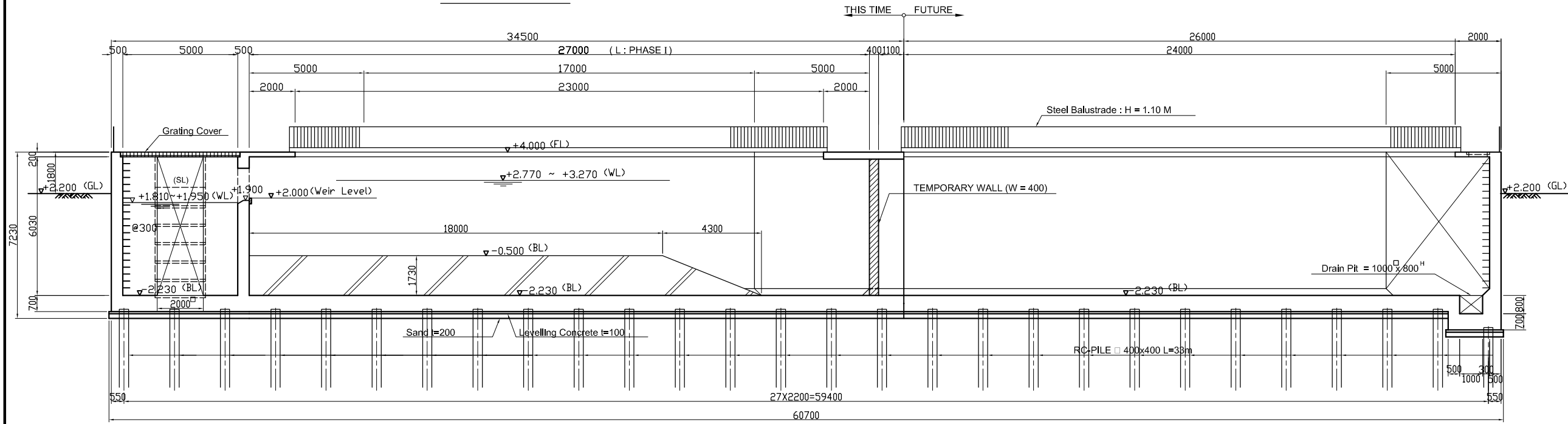
MIDDLE PLAN. Scale: 1/100



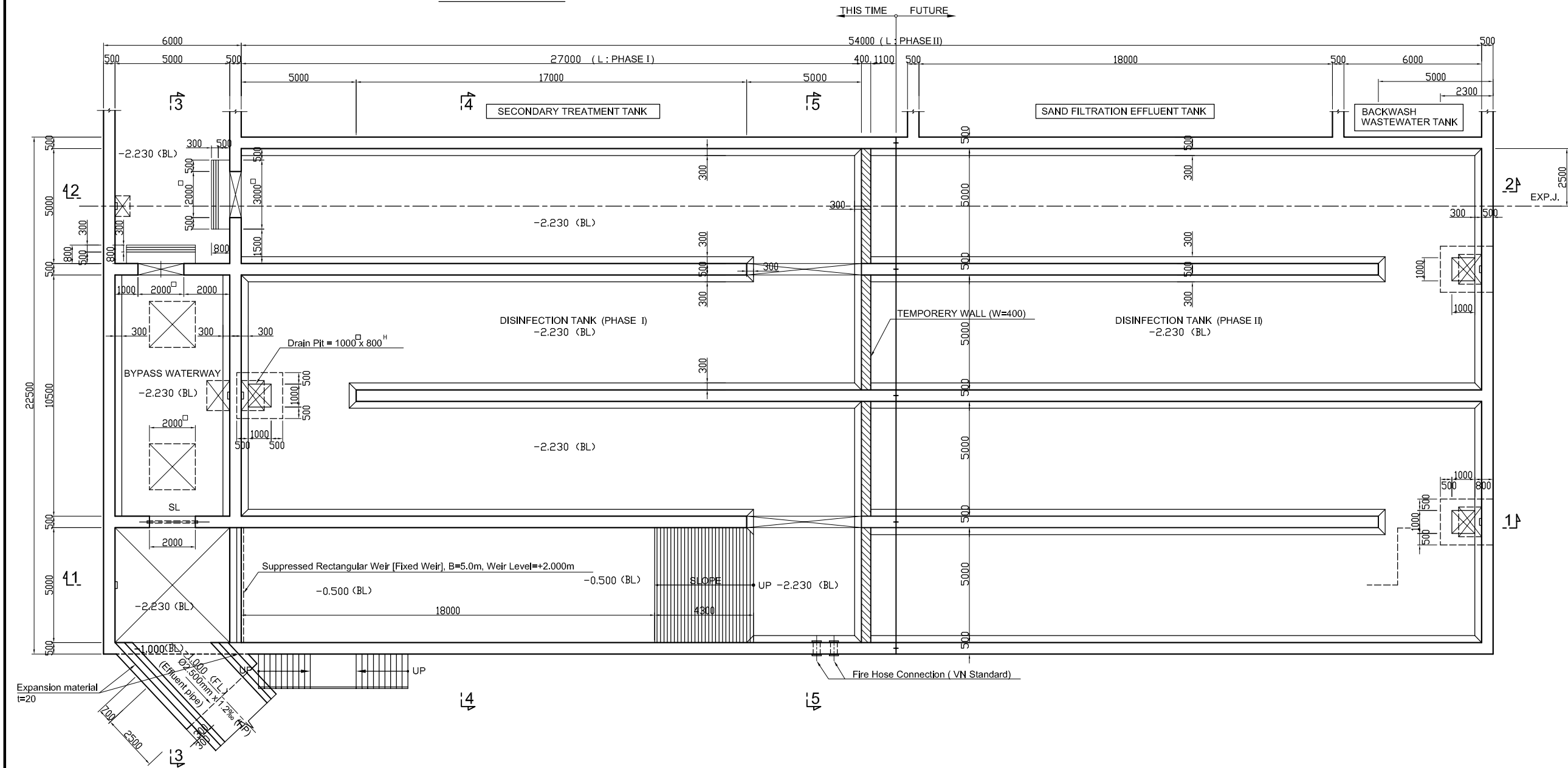
NO.	DATE	DESCRIPTIONS	BY	APRO.
REVISIONS				
PROJECT MANAGEMENT UNIT FOR HO CHI MINH CITY WATER ENVIRONMENT IMPROVEMENT				
THE DETAILED DESIGN STUDY ON HO CHI MINH CITY WATER ENVIRONMENT IMPROVEMENT PROJECT IN THE SOCIALIST REPUBLIC OF VIET NAM				
PACKAGE E WASTEWATER TREATMENT PLANT DISTRIBUTION TANK PLAN and SECTION				
SCALE 1 / 100				
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)				
PACIFIC CONSULTANTS INTERNATIONAL				
DESIGNED KIMURA TORU		CHECKED KONDO MASAMI		
DATE : JUNE 2001		DWG. No. PE - WWTP - 205 - 01		

DISINFECTION TANK PLAN and SECTION (No.1) Scale : 1/100

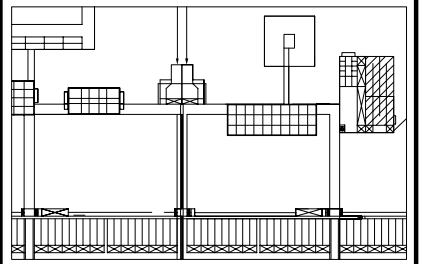
SECTION 1 - 1



LOWER PLAN



KEY PLAN



254-01

NO.	DATE	DESCRIPTIONS	BY	APRO.

REVISIONS

PROJECT MANAGEMENT UNIT FOR
HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN STUDY ON HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT PROJECT
IN THE SOCIALIST REPUBLIC OF VIET NAM

PACKAGE E
WASTEWATER TREATMENT PLANT

**DISINFECTION TANK
PLAN and SECTION (No.1)**

SCALE : 1/100

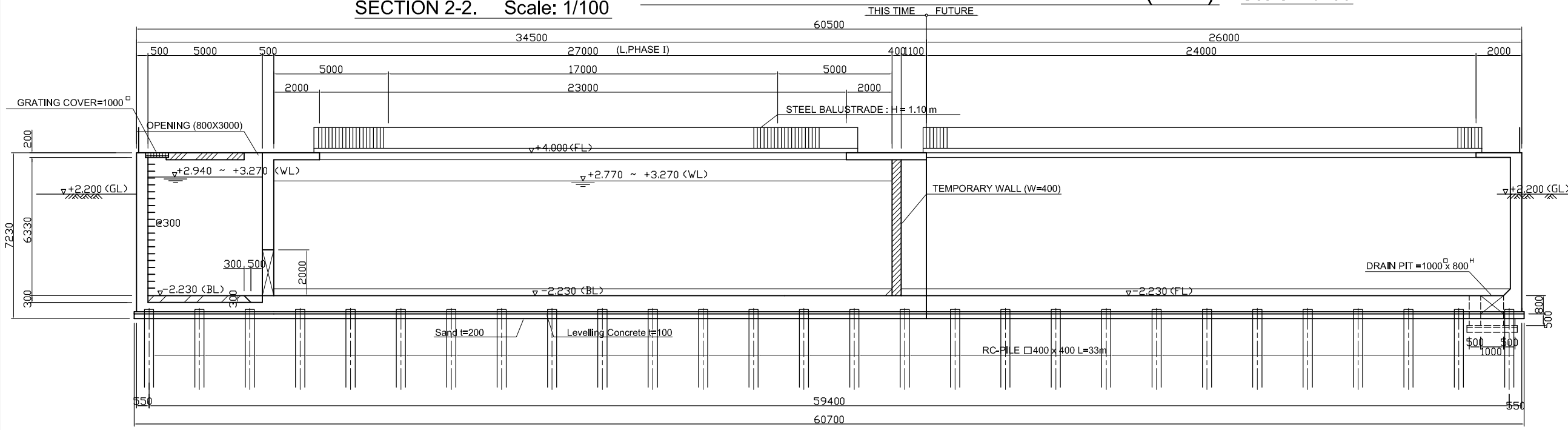
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

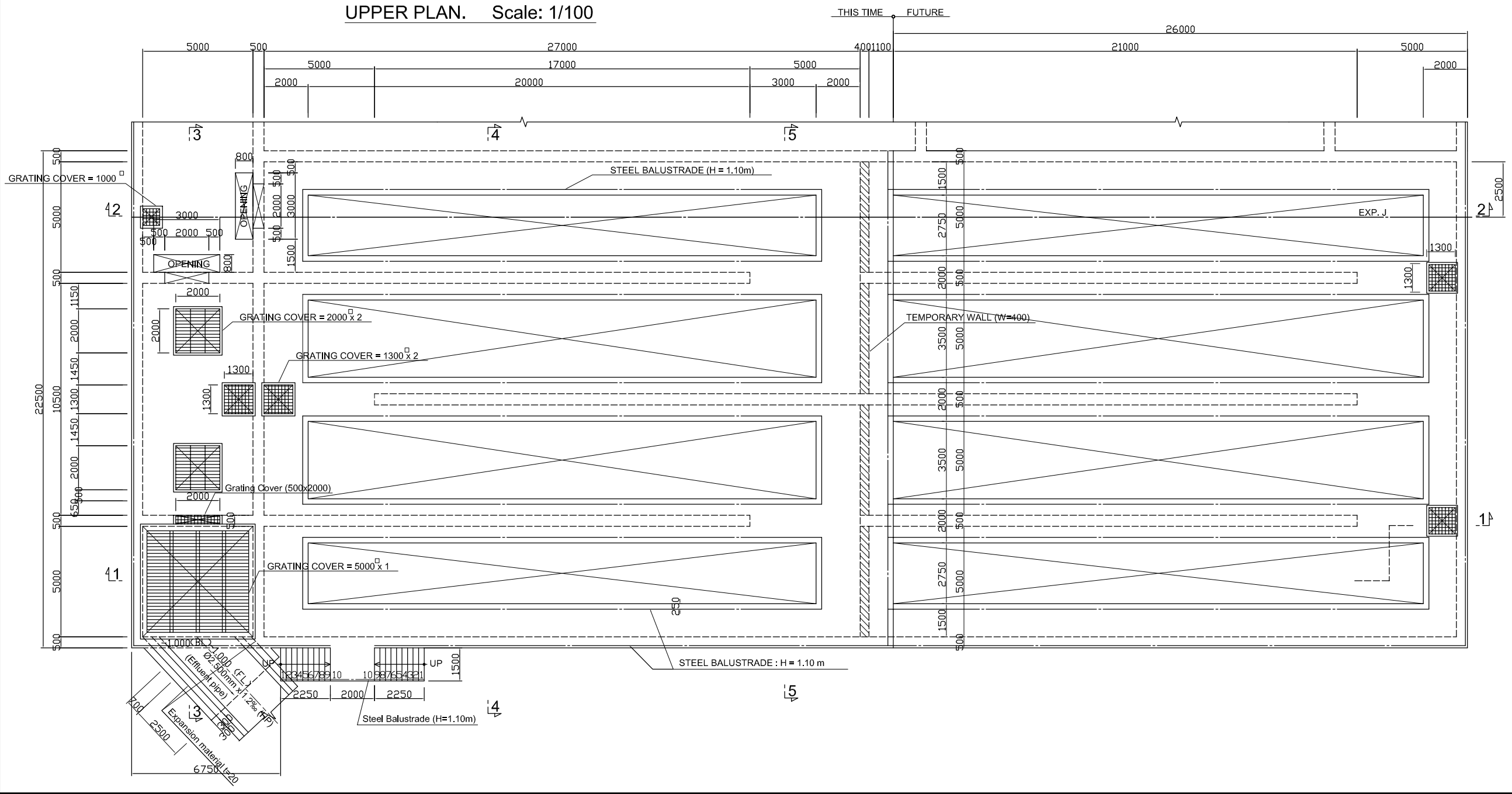
DESIGNED KIMURA TORU	CHECKED KONDO MASAMI
-------------------------	-------------------------

DATE : JUNE 2001 DWG. No. PE - WWTP - 206 - 01

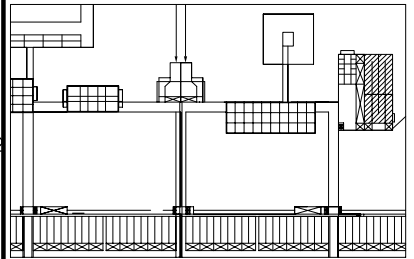
SECTION 2-2. Scale: 1/100 DISINFECTION TANK PLAN and SECTION (No.2) Scale : 1/100



UPPER PLAN. Scale: 1/100



KEY PLAN



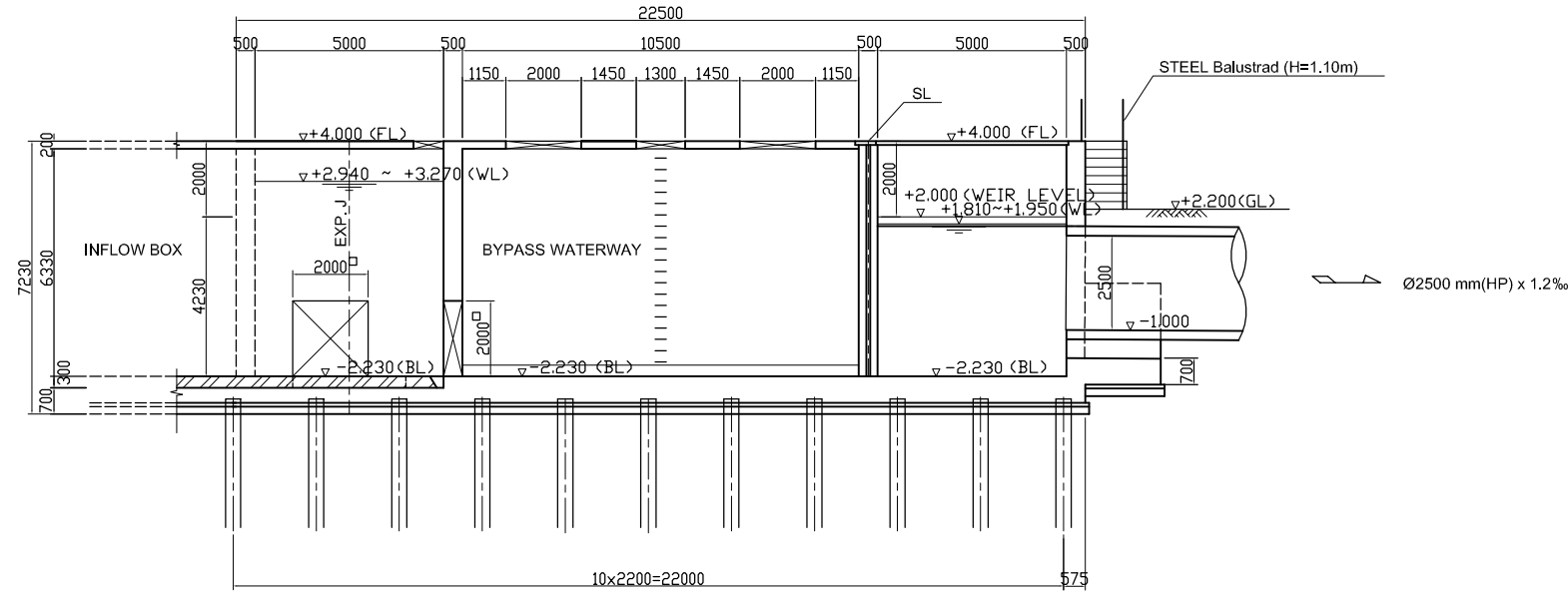
NOTES :

- ALL DIMENSIONS ARE MM UNLESS STATED OTHERWISE
- CONCRETE E21
- LEVELLING CONCRETE G10
- ALL REINFORCEMENT BARS ARE DEFORMED TYPE (CT5 OR EQUIVALENT AS INDICATED IN SPECIFICATION OF PACKAGE E)
- THE SPECIFICATION TO BE REFERRED FOR MORE INFORMATION OF MATERIAL GRADES
- PILE LOCATION SHOWN ON PILE ARRANGEMENT DWG. No. PE - WWTP - 254 - 01
- DETAILS OF R.C PILE SHOWN ON DWG. No. PE - WWTP - 265 - 01

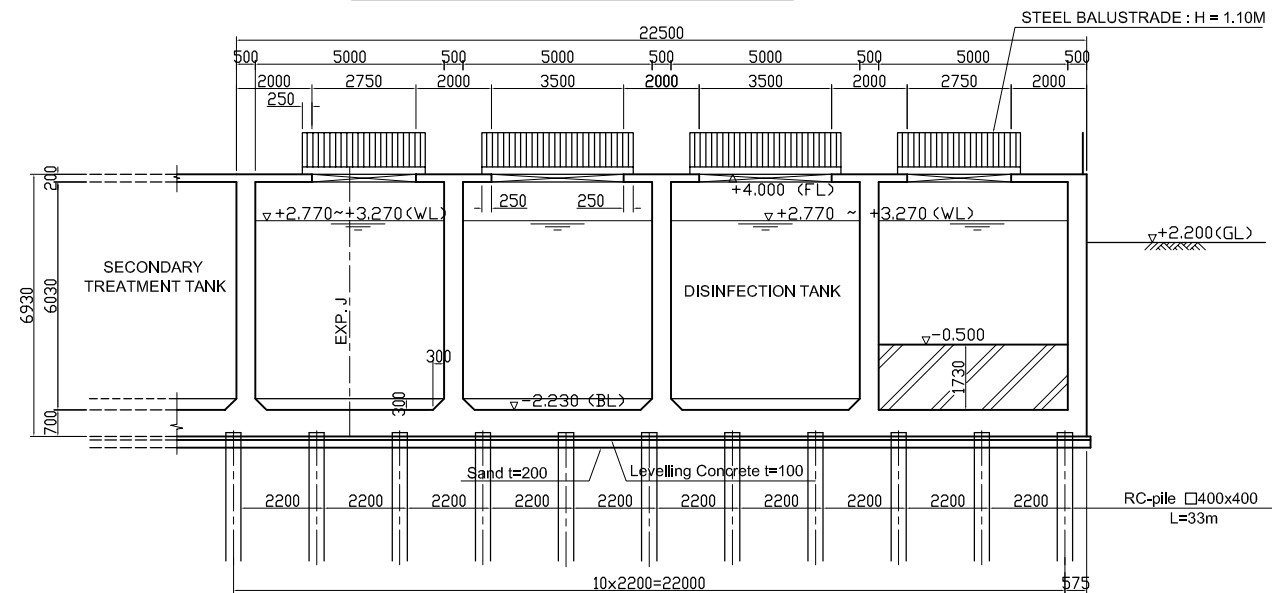
NO.	DATE	DESCRIPTIONS	BY	APRO.
REVISIONS				
PROJECT MANAGEMENT UNIT FOR HO CHI MINH CITY WATER ENVIRONMENT IMPROVEMENT				
THE DETAILED DESIGN STUDY ON HO CHI MINH CITY WATER ENVIRONMENT IMPROVEMENT PROJECT IN THE SOCIALIST REPUBLIC OF VIET NAM				
PACKAGE E WASTEWATER TREATMENT PLANT DISINFECTION TANK PLAN and SECTION (No.2)				
SCALE : 1/100				
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)				
PACIFIC CONSULTANTS INTERNATIONAL				
DESIGNED KIMURA TORU		CHECKED KONDO MASAMI		
DATE : JUNE 2001		DWG. No. PE - WWTP - 206 - 02		

DISINFECTION TANK SECTION (No.3) Scale : 1/100

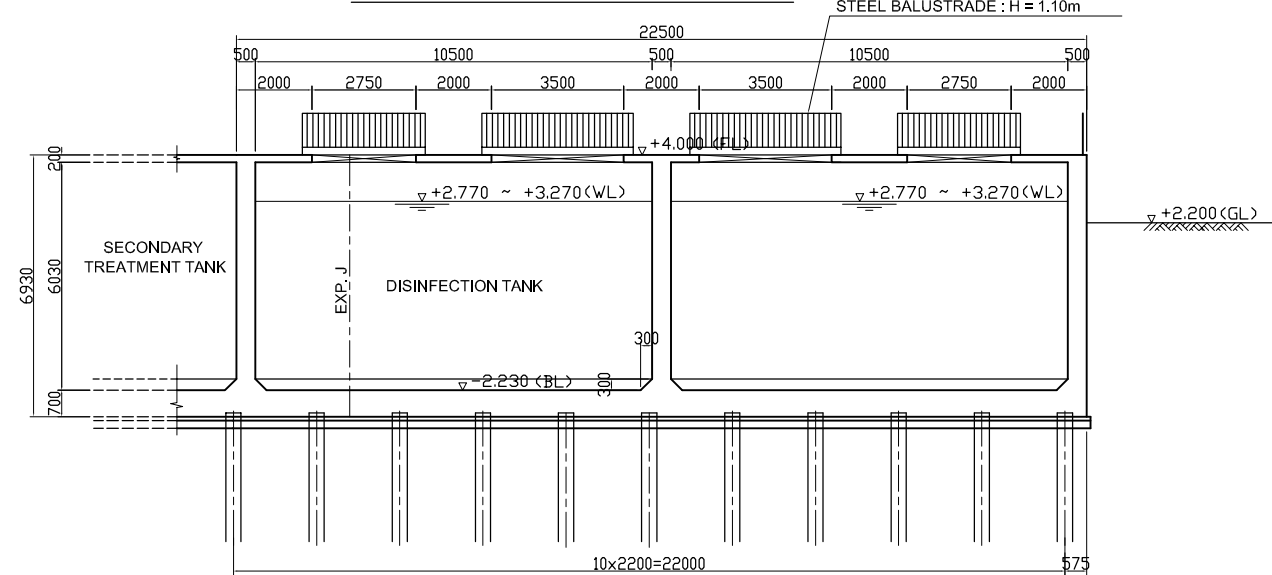
SECTION 3 - 3. Scale: 1/100



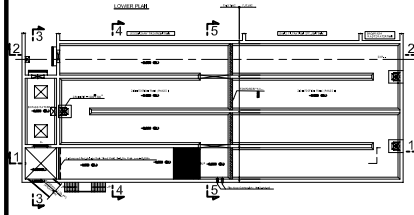
SECTION 4 - 4. Scale: 1/100



SECTION 5 - 5. Scale: 1/100



KEY PLAN



NOTES :

- ALL DIMENSIONS ARE MM UNLESS STATED OTHERWISE
- CONCRETE E21
- LEVELLING CONCRETE G10
- ALL REINFORCEMENT BARS ARE DEFORMED TYPE (CT5 OR EQUIVALENT AS INDICATED IN SPECIFICATION OF PACKAGE E)
- THE SPECIFICATION TO BE REFERRED FOR MORE INFORMATION OF MATERIAL GRADES
- PILE LOCATION SHOWN ON PILE ARRANGEMENT DWG. No. PE - WWTP - 254 - 01
- DETAILS OF R.C PILE SHOWN ON DWG. No. PE - WWTP - 265 - 01

NO.	DATE	DESCRIPTIONS	BY	APRO.

REVISIONS

PROJECT MANAGEMENT UNIT FOR
HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN STUDY ON HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT PROJECT
IN THE SOCIALIST REPUBLIC OF VIET NAM

PACKAGE E
WASTEWATER TREATMENT PLANT
DISINFECTION TANK SECTION (No.3)

SCALE 1/100

JICA JAPAN INTERNATIONAL COOPERATION
AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED KIMURA TORU CHECKED KONDO MASAMI

DATE : JUNE 2001 DWG. No. PE - WWTP - 206 - 03