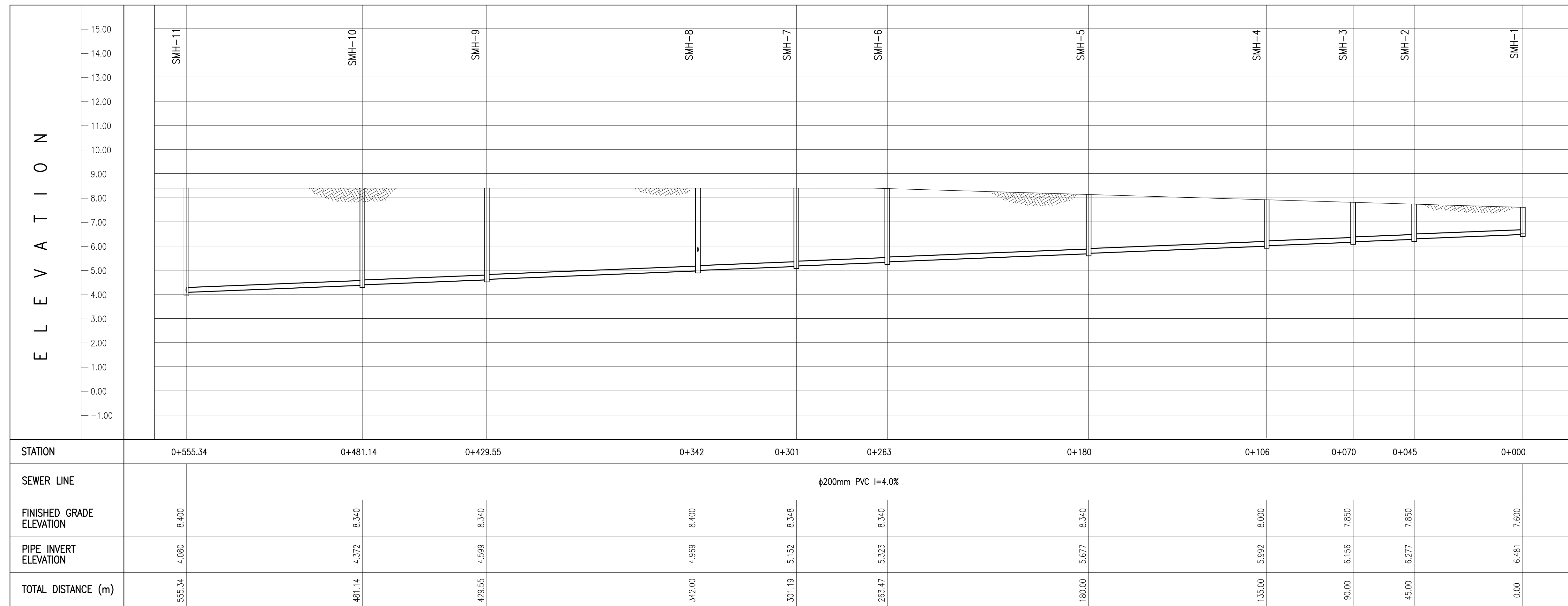


1 SEWER LINE PLAN
 U3-3310-51 SCALE 1:1000m.



2 SEWER LINE PROFILE(1)
 U3-3310-51 SCALE VERTICAL 1:100 m. HORIZONTAL 1:1000 m.

- GENERAL NOTES:**
- ALL PIPE DIAMETERS ARE IN MILLIMETERS. PIPE LENGTH ARE IN METERS AND ARE MEASURED HORIZONTALLY BETWEEN CENTERLINES OF MANHOLES.
 - TOP ELEVATION OF SEWER MANHOLES OR MANHOLE COVERS SHALL BE FLUSHED WITH THE FINISHED GRADE. TOP ELEVATIONS INDICATED IN PLANS ARE BASED ON ROAD CENTERLINE ELEVATION. CONTRACTOR SHALL ADJUST THE TOP ELEVATIONS OF SEWER MANHOLES IN ACCORDANCE WITH THE FINISHED GRADE.
 - PROPOSED SEWER MANHOLES SHALL BE LOCATED AS INDICATED ON THE PLAN. THE CONTRACTOR SHALL LOCATE THE SEWER MANHOLES TO SUIT ACTUAL SITE CONDITIONS.
 - CONTRACTOR SHALL PROCEED WITH EXTREME CAUTION AND CARE TO AVOID CLASHING WITH EXISTING UTILITIES.
 - PROPOSED SERVICE LINES SHALL BE LAID ALONG THE ALIGNMENT OF THE PROPOSED SEWER LINE.

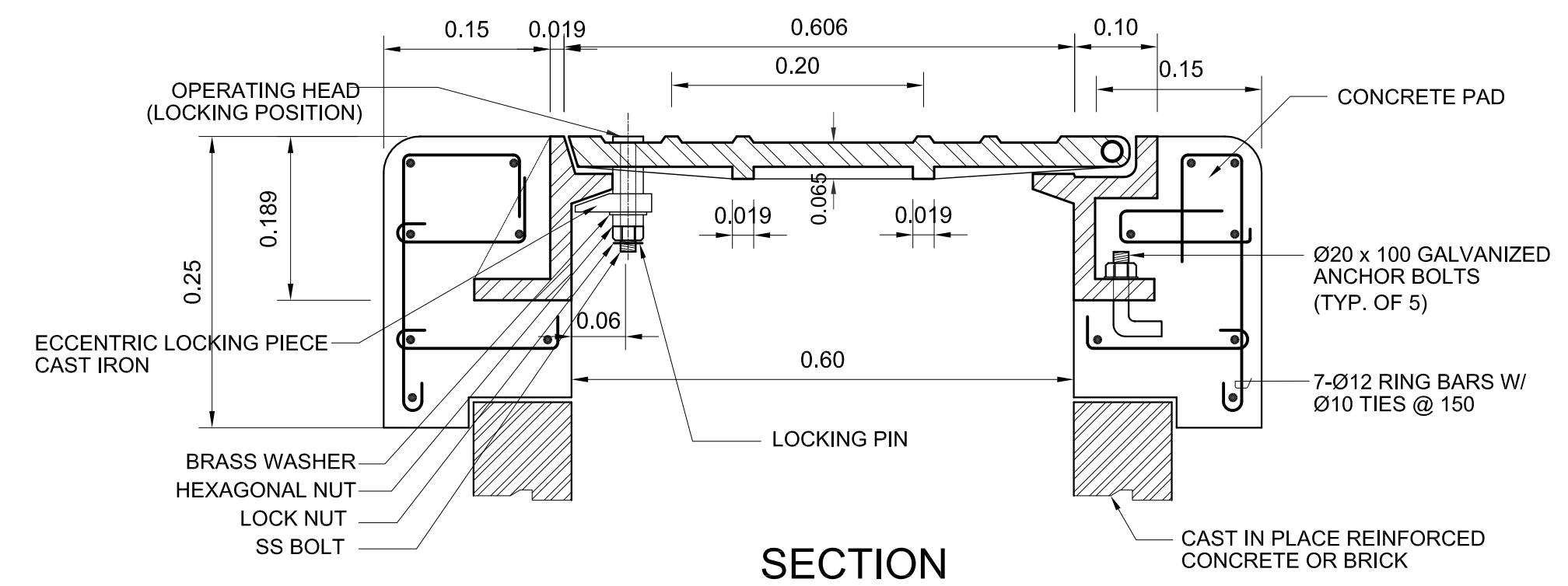
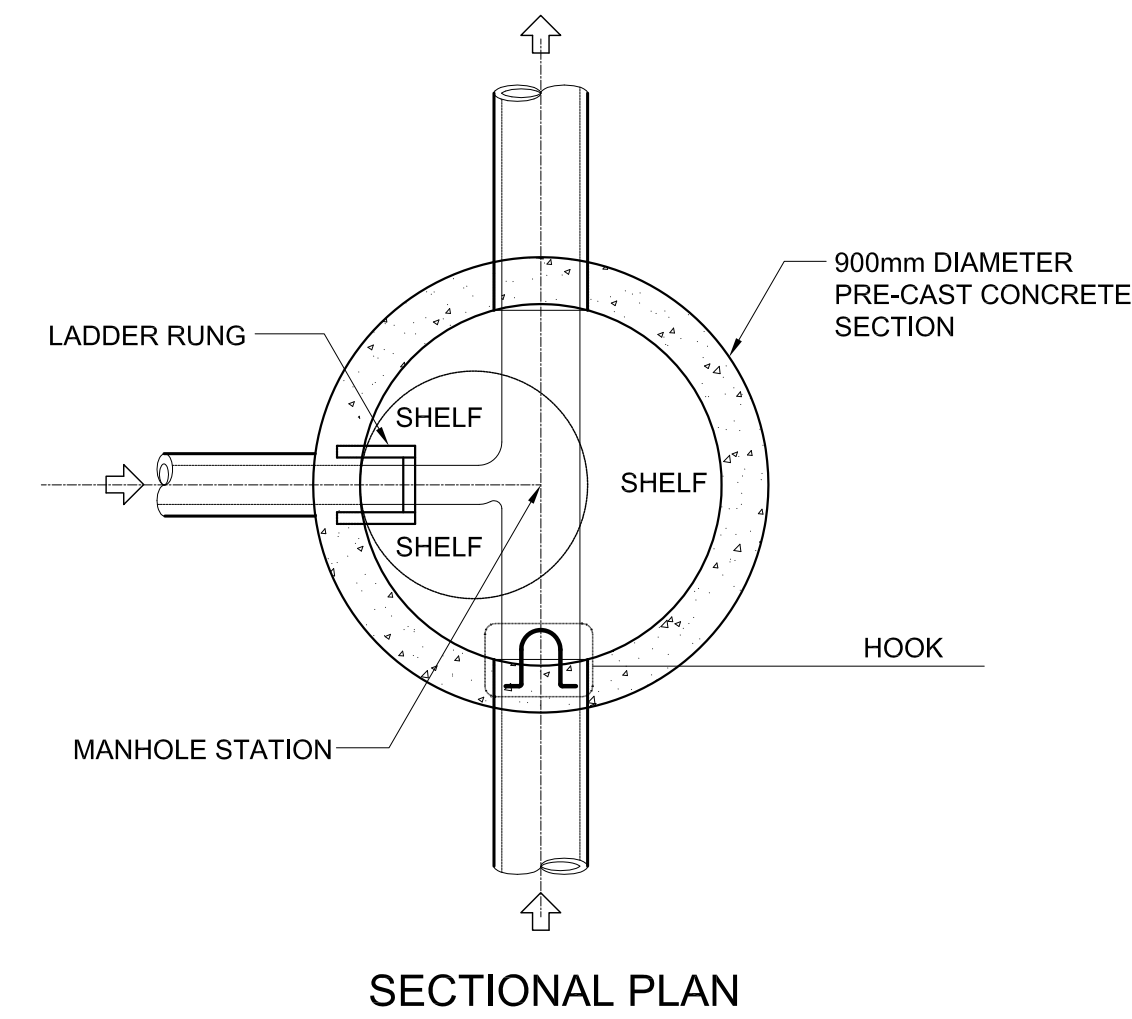
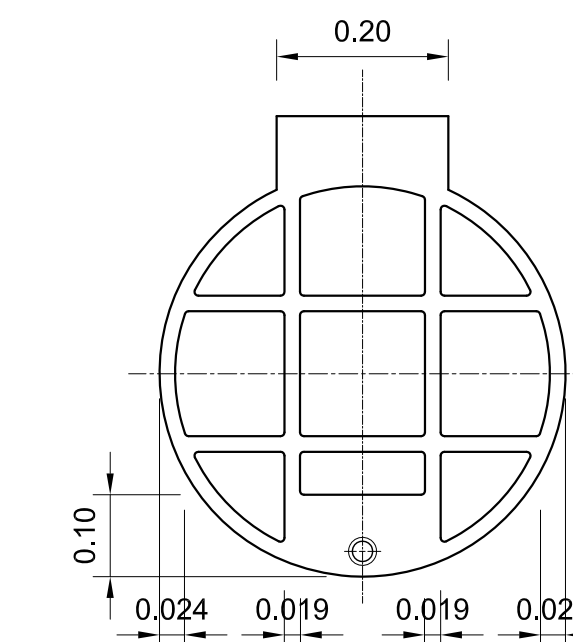
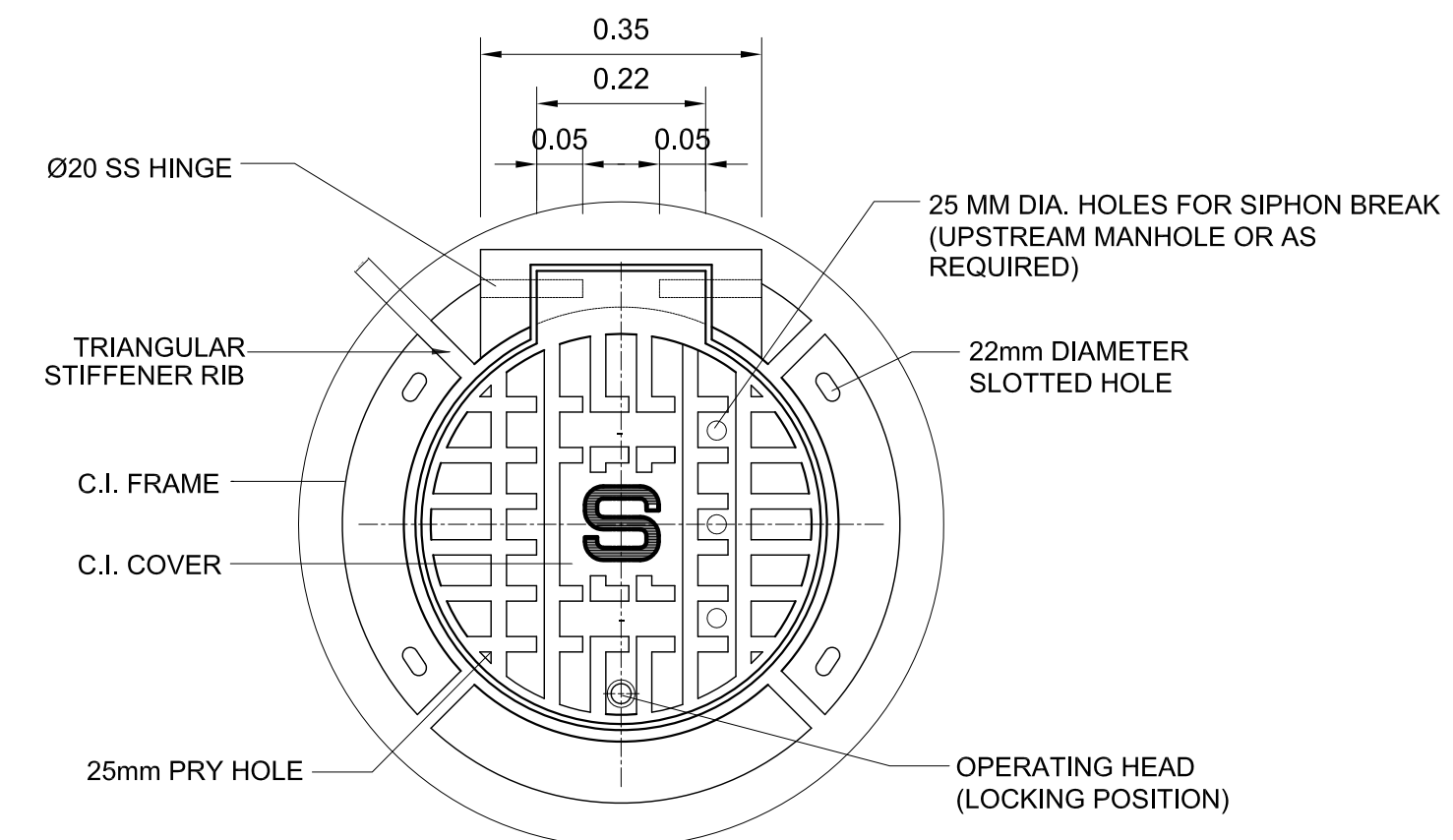
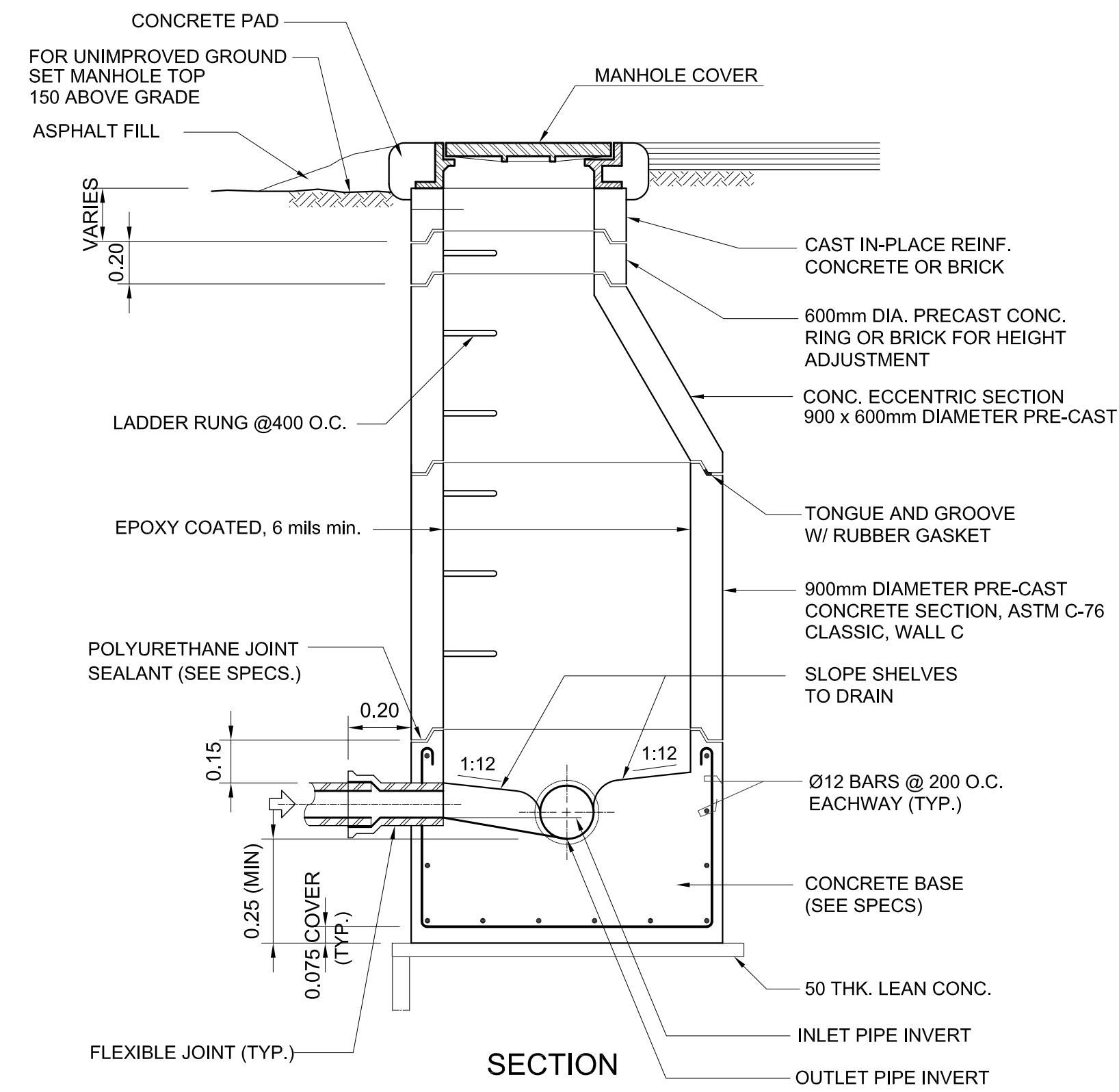
- LEGEND:**
- STP PROPOSED STP
 - SEWER MANHOLE (SMH)
 - ➔ PROPOSED SEWER LINE
 - SEWER LATERAL PIPE and CONNECTION PIT

	Republic of the Philippines DEPARTMENT OF TRANSPORTATION AND COMMUNICATIONS	JAPAN INTERNATIONAL COOPERATION AGENCY	PREPARED BY: BIENVENIDO S. SEVILLA <small>PROF: Sanitary Engineer PIR: 8091754 REG. NO.: 0000549 DATE: March 2013 TIN: 245-772-657 PLACE: Quezon City</small>	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	APPROVED: JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT	LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	SHEET CONTENTS: COMPONENT-3 UTILITY WORKS (U) SUBCOMPONENT-3-3 (U3) SEWAGE TREATMENT SYSTEM SEWER LINE (1) PLAN & PROFILE (1)	SHEET NO: U3-3310-51 DRAWING SCALE: V=1:100, H=1:1000
	JICA DESIGN CONSULTANT JOINT VENTURE 		TADASHI AOI Team Leader		JUN 2013 DATE INDEX AMENDMENTS Prepared by: FRS Jr. WIM IIC Checked by: Validated by:				



1 SEWER LINE PROFILE(2)
 U3-3310-52 SCALE VERTICAL 1:100 m.

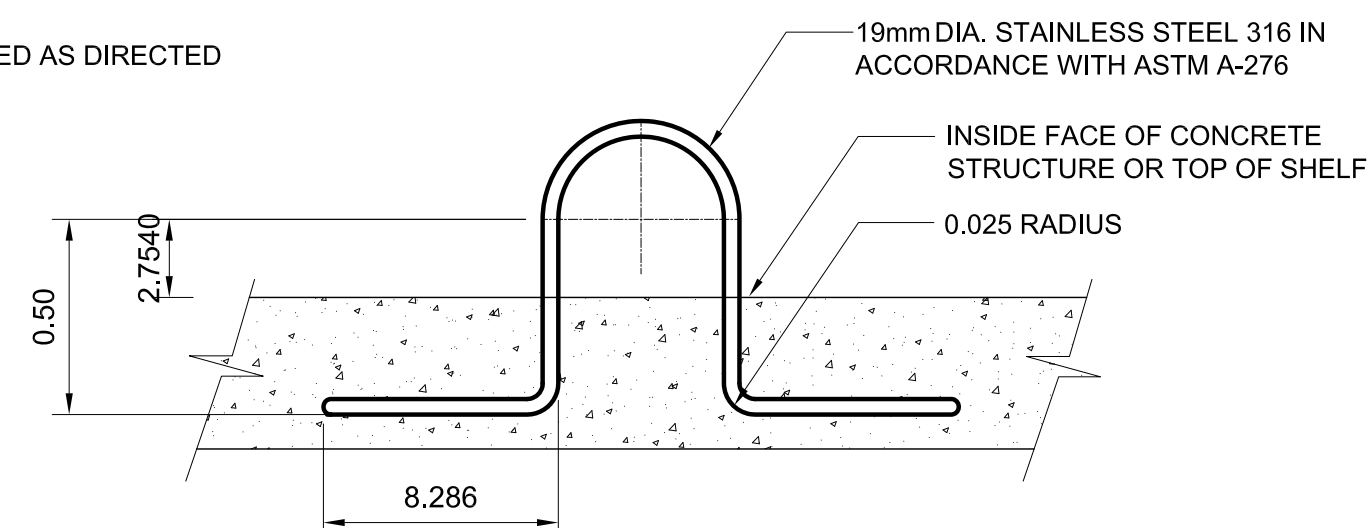
	PREPARED BY: BIENVENIDO S. SEVILLA <small>PROF: Sanitary Engineer PIR: 8091754</small> <small>REG. NO.: 0000549 DATE: March 2013</small> <small>TIN: 245-772-657 PLACE: Quezon City</small>	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	APPROVED: JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT	LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	SHEET CONTENTS: COMPONENT-3 UTILITY WORKS (U) SUBCOMPONENT-3-3 (U3) SEWAGE TREATMENT SYSTEM SEWER LINE (2) PROFILE (2)	SHEET NO: U3-3310-52
	JICA DESIGN CONSULTANT JOINT VENTURE <small>JAPAN AIRPORT CONSULTANTS, INC. NIPPON KOEI CO., LTD. NJS CONSULTANTS CO., LTD.</small>	TADASHI AOI <small>Team Leader</small>	ILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	DATE: JUNE 2013 INDEX: AMENDMENTS:	Prepared by: FRS Jr. WIM IIC Checked by: Validated by:	DRAWING SCALE: V=1:100



1 STANDARD SEWER MANHOLE SCALE NTS

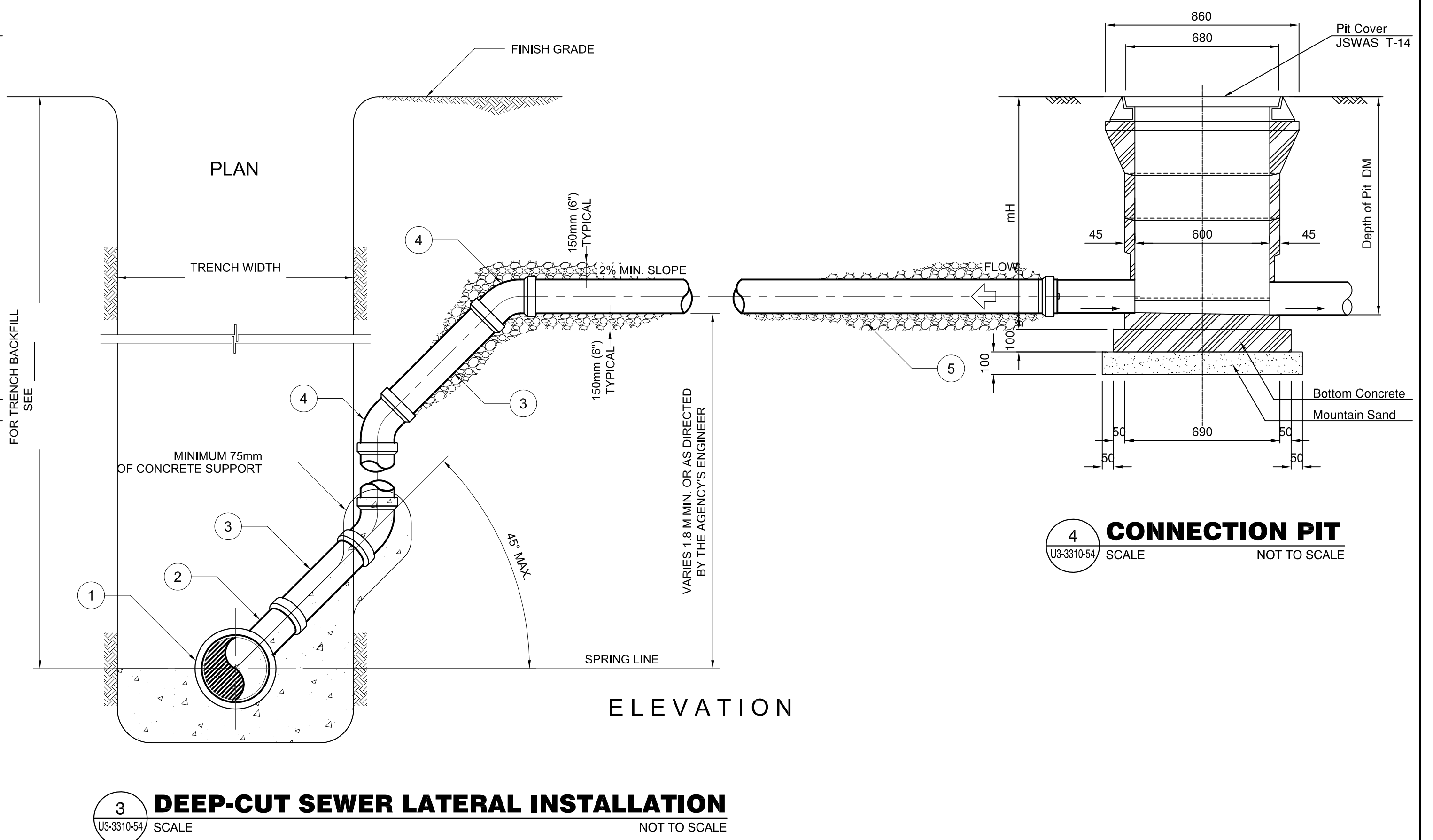
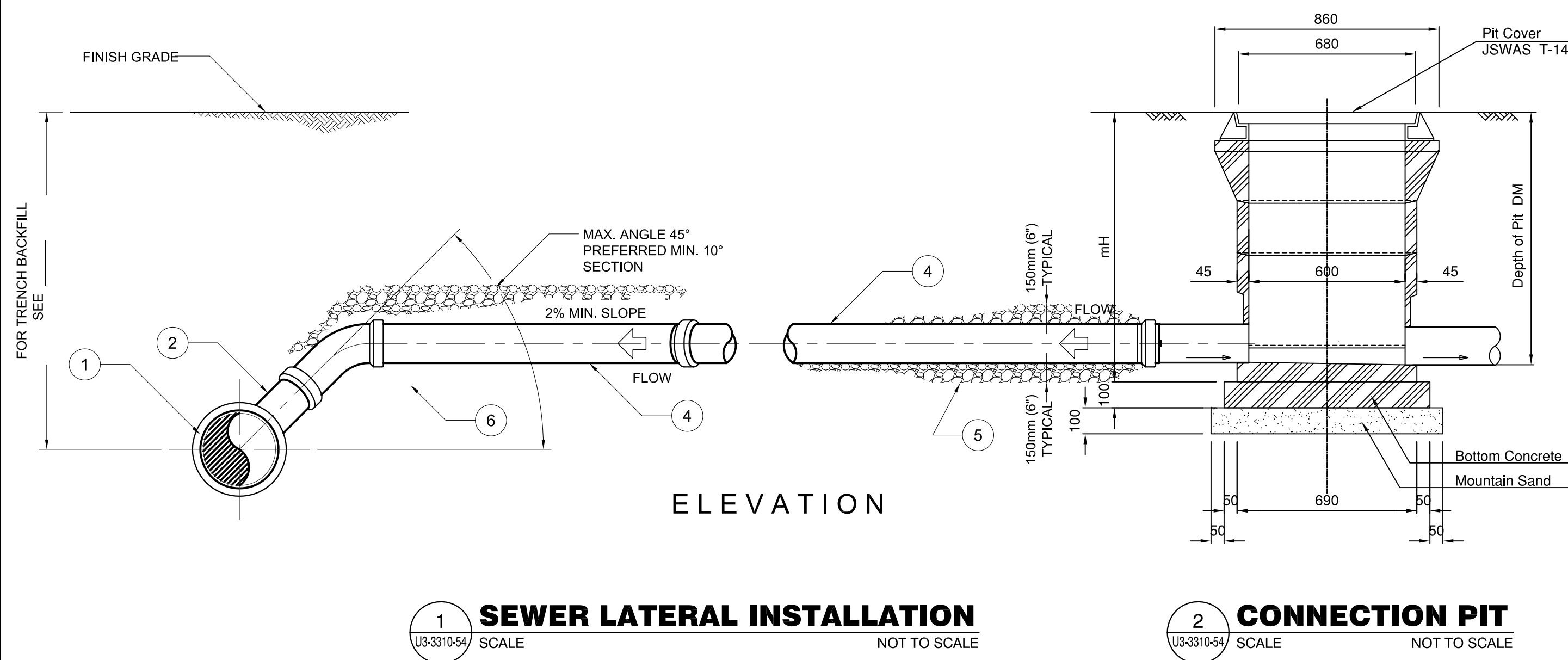
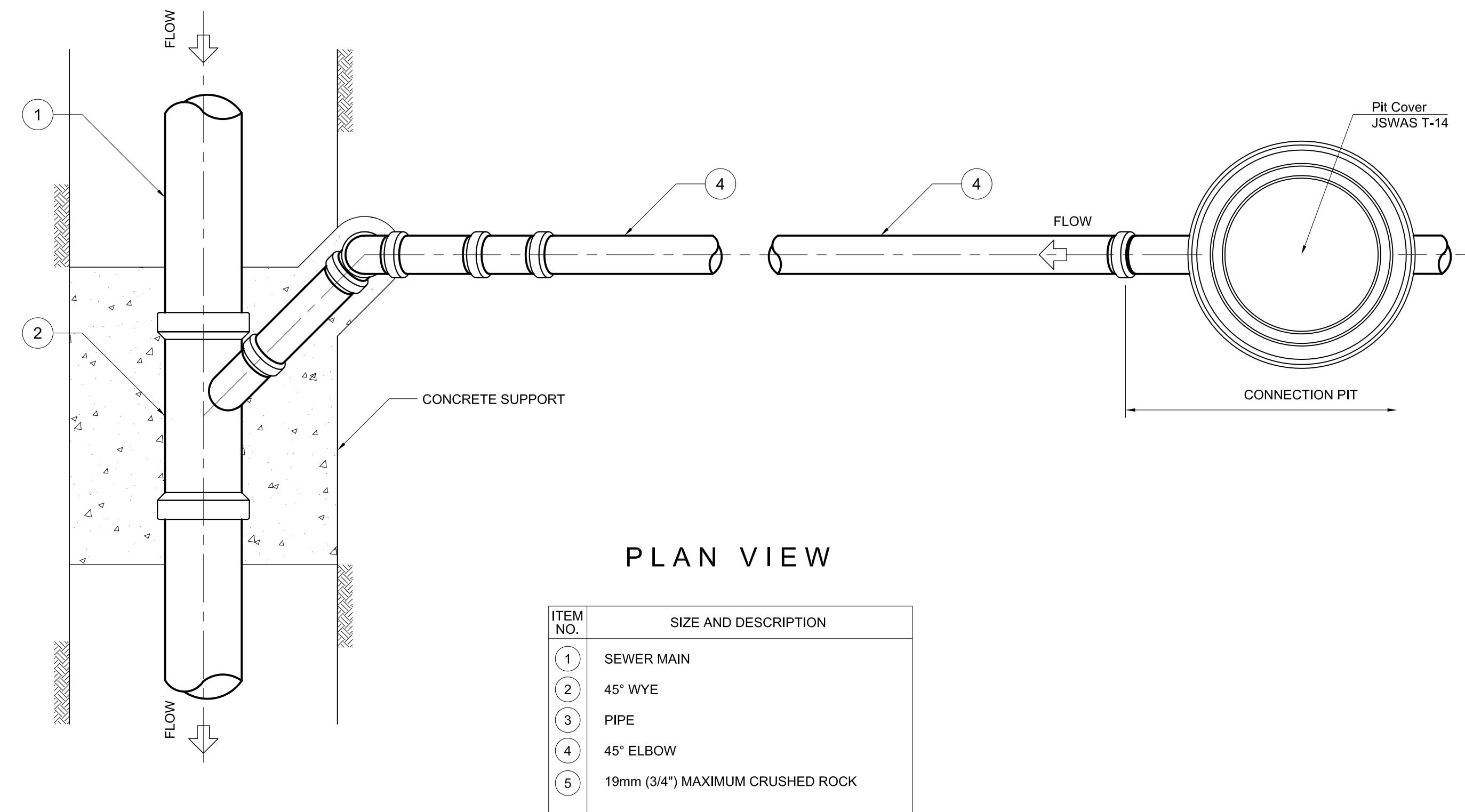
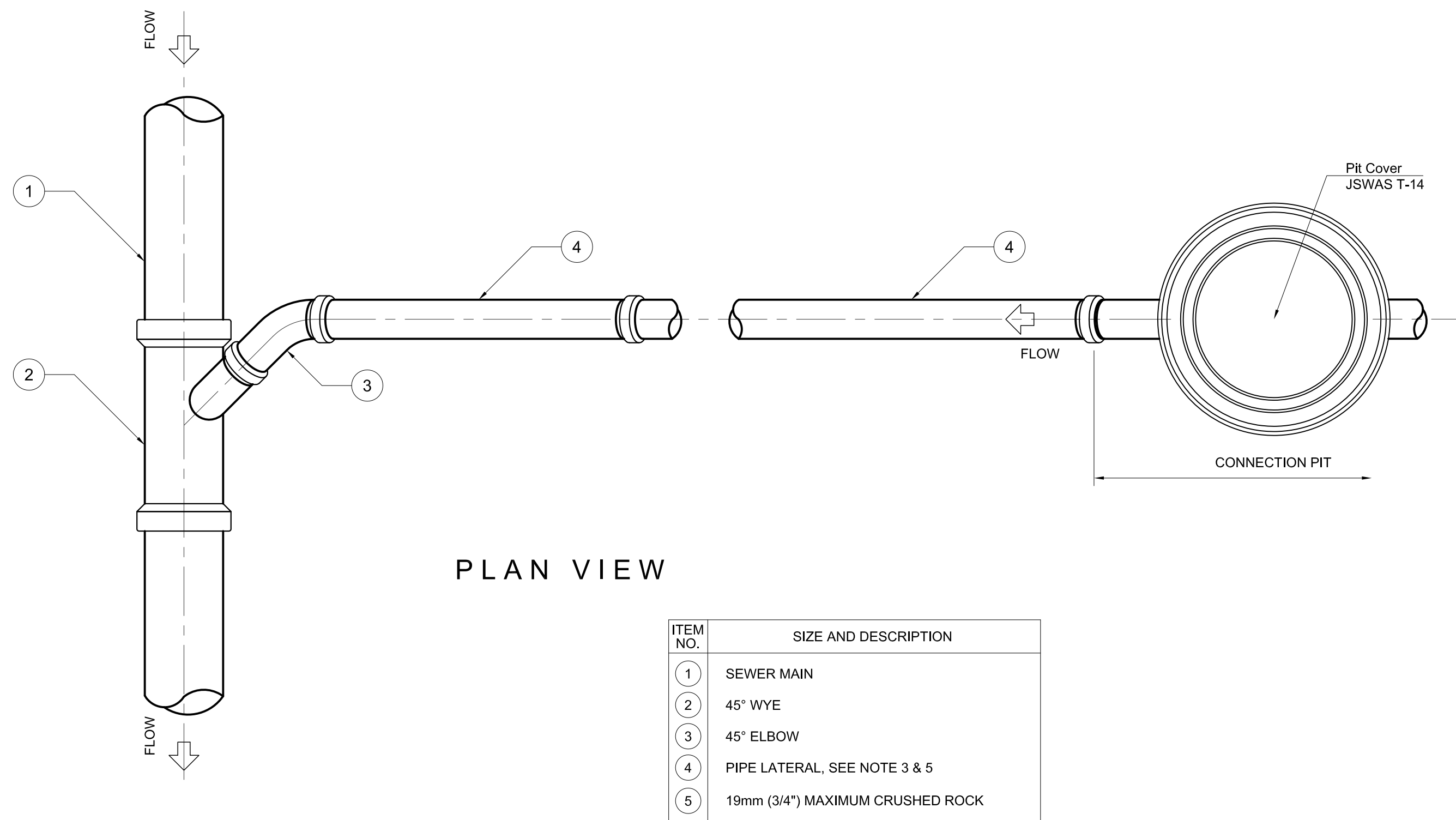
NOTES :

HOOKS SHALL BE PLACED AS DIRECTED BY SITE ENGINEER.

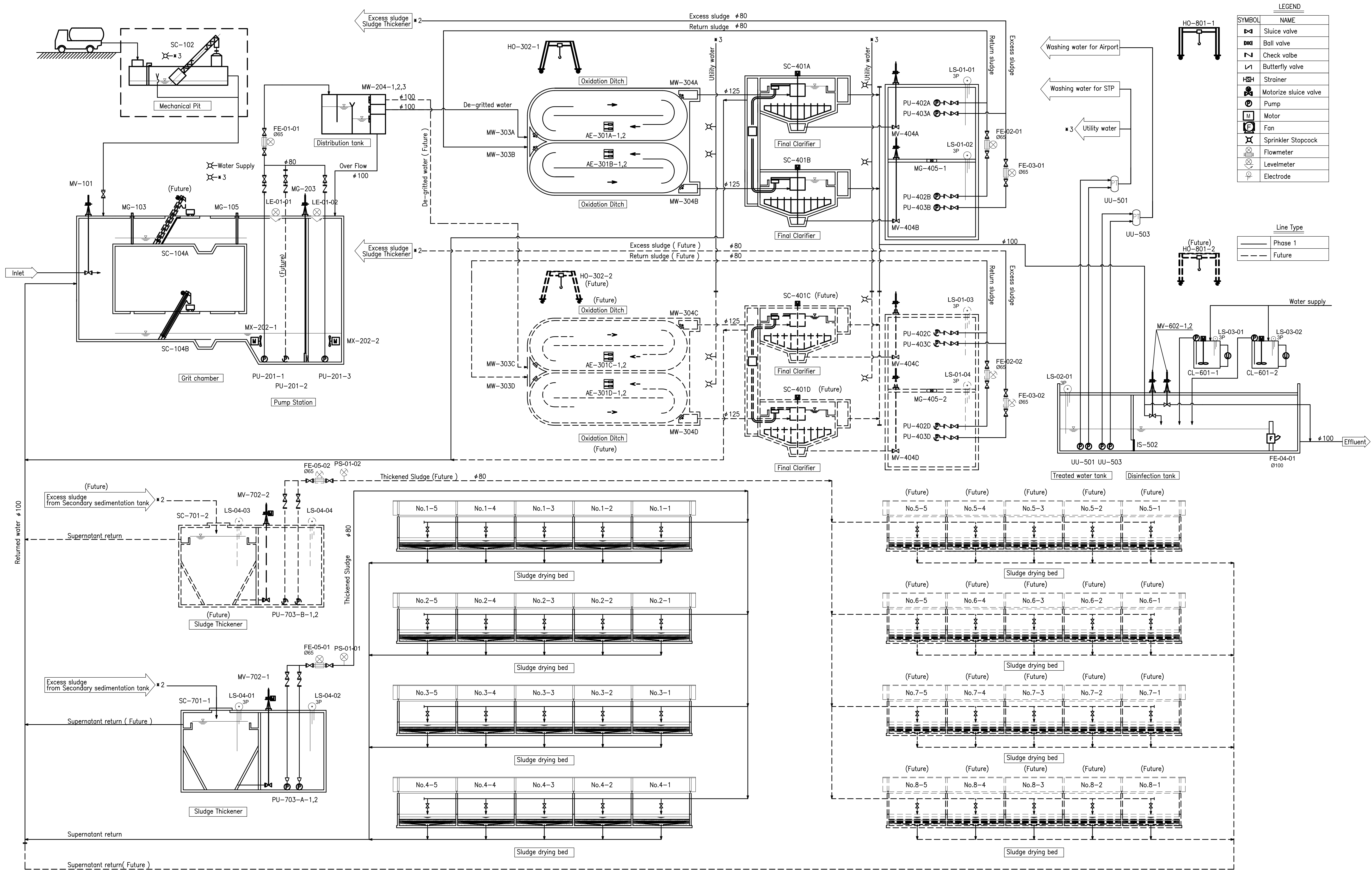


3 SEWER MANHOLE COVER DETAIL SCALE NTS

	Republic of the Philippines DEPARTMENT OF TRANSPORTATION AND COMMUNICATIONS	JAPAN INTERNATIONAL COOPERATION AGENCY	PREPARED BY: BIENVENIDO S. SEVILLA <small>PROF: Sanitary Engineer PIR: 8091754</small> <small>REG. NO.: 0000549 DATE: March 2013</small> <small>T.I.N: 245-772-657 PLACE: Quezon City</small>	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	APPROVED: JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT	LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	SHEET CONTENTS: COMPONENT-3 UTILITY WORKS (U) SUBCOMPONENT-3-3 (U3) SEWAGE TREATMENT SYSTEM SEWER LINE (3) DETAILS OF STANDARD SEWER MANHOLE	SHEET NO: U3-3310-53
	JICA DESIGN CONSULTANT JOINT VENTURE 	TADASHI AOI Team Leader	ILDEFONSO T. PATDU, JR. Assistant Secretary for Project Implementation, DOTC	JULIANITO G. BUCAYAN, JR. Undersecretary for Project Implementation, DOTC	DATE: JUNE 2013 INDEX: _____ AMENDMENTS: _____ Prepared by: FRS Jr. Checked by: WIM Validated by: HC	DRAWING SCALE: NONE			



	PREPARED BY: BIENVENIDO S. SEVILLA <small>PROF: Sanitary Engineer PIR: 8091754</small> <small>REG. NO.: 0000549 DATE: March 2013</small> <small>T.M.N. 245-772-657 PLACE: Quezon City</small>	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	APPROVED: JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT	LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	SHEET CONTENTS: COMPONENT-3 UTILITY WORKS (U) SUBCOMPONENT-3-3 (U3) SEWAGE TREATMENT SYSTEM SEWER LINE (4) DETAILS OF SEWER LATERAL INSTALLATION & CONNECTION PIT	SHEET NO: U3-3310-54
	JICA DESIGN CONSULTANT JOINT VENTURE JAC JAPAN AIRPORT CONSULTANTS, INC. NIPON KOEI CO., LTD. NJS CONSULTANTS CO., LTD.	TADASHI AOI <small>Team Leader</small>	ILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	DATE: JUNE 2013 INDEX: AMENDMENTS: Prepared by: FRS Jr. WIM HIC Checked by: Validated by:	DRAWING SCALE: NONE	

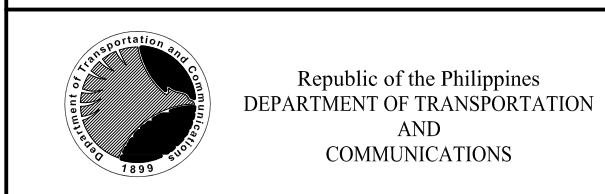


LEGEND

SYMBOL	NAME
	Sluice valve
	Ball valve
	Check valve
	Butterfly valve
	Strainer
	Motorize sluice valve
	Motor
	Fan
	Sprinkler Stopcock
	Flowmeter
	Levelmeter
	Electrode

Line Type

	Phase 1
	Future



PREPARED BY:
RENATO A. ARRIOLA
Philippine Registered Engineer
 PROF: MECHANICAL ENGINEER PIR. 1725187
 REG. NO: 2379 DATE: JANUARY 01, 2013
 TEL: 150-563-379 PLACE: TAGUIG CITY

RECOMMENDING APPROVAL:
ILDEFONSO T. PATDU, JR.
Assistant Secretary for Project Implementation, DOTC

APPROVED:
JULIANITO G. BUCAYAN, JR.
Undersecretary for Project Implementation, DOTC

NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT

LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES

SHEET CONTENTS:
 COMPONENT-3 UTILITY WORKS (U)
 SUBCOMPONENT-3-3
 (U3) SEWAGE TREATMENT SYSTEM
 MECHANICAL WORK
 MECHANICAL EQUIPMENT FLOW DIAGRAM

SHEET NO:
U3-3350-01

DRAWING SCALE:
 NONE



DATE	INDEX	AMENDMENTS	Prepared by	Checked by	Validated by
JUNE 2013			FRS Jr.	WIM	HC

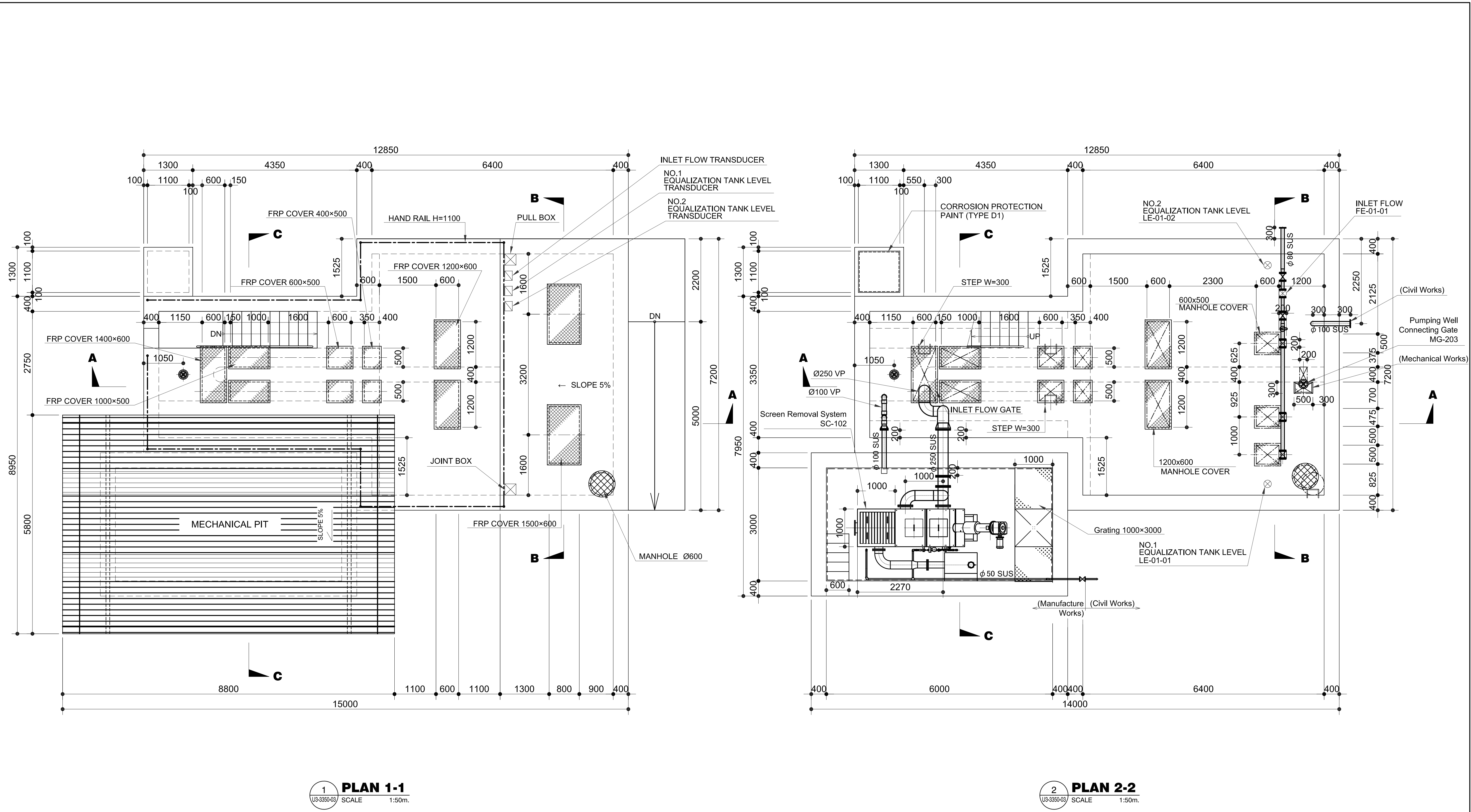
EQUIPMENT SCHEDULE

Voltage and Frequency of All Motor Output : 230V x 60Hz

Voltage and Frequency of All Motor Output : 230V x 60Hz

Section	Equipment No.	Equipment name	Specifications	Motor output (kW)	Quantity					Receiving Power(kW)	Remarks	Section	Equipment No.	Equipment name	Specifications	Motor output	Quantity					Receiving Power(kW)	Remarks
					Duty	Stand-by	Stock	Future	Total								Duty	Stand-by	Stock	Future	Total		
Section 100 Grit Chamber	MV-101	Main Inlet Valve	Manual Operated Cast Iron Valve Dia.200mm x Approx.910mmL (Spindle)	0	1				1	0		Section 400 Final Clarifier	SC-401A~D	Clarifier	Centre Driven Type Dia. 6m x 3.5mH	0.4	2			2	4	1.6	with Scum Container
	SC-102	Screen Removal System	Drum Screen 1.3m ³ /min x 2.2kW Dia. 800mm x Op.5mm ,70mm(Coarse screen)	2.2	1				1	2.2			PU-402A~D	Return Sludge Pump	Submersible Sludge Pump 0.28m ³ /min x 8 mH	1.5	1	1	2 (1)	2	6	6	():Phase1
	MG-103	Inlet Gate	Manual Operated Stainless Plate W 500mm x H 1,000mm x 4mmt	0	1				1	0	Separate type		PU-403A~D	Waste Sludge Pump	Submersible Sludge Pump 0.28m ³ /min x 7 mH	1.5	1	1	2 (1)	2	6	6	():Phase1
	SC-104A	Fine Screen A	Bar Screen W 500mm x H 1,000mm x Op.15mm	0		1			1	0	Stand-by		MV-404A~D	Sludge Outlet Valve	Manual Operated Non-Clogging Valve Dia. 150mm x Approx.3500mm(Spindle)	0	2			2	4	0	
	SC-104B	Fine Screen B	Belt Traveling Automatic Screen W 500mm x H 1,000mm x Op.15mm	0.025	1			1	2	0.05	Duty,Future		MG-405-1,2	Isolate Gate for Sludge Pumping Well	Manual Operated Cast Iron Gate W200mm x H200mm x Approx.3500mm(Spindle)	0	1			1	2	0	
	MG-105	Outlet Gate	Manual Operated Stainless Plate W 500mm x H 1,000mm x 4mmt	0	1				1	0	Separate type		Section 500 Treated Water Tank	UU-501	Utility Water Supply Unit (1)	0.28 m ³ /min x 30m x 2 Pumps (Pressure tank with unit control panel)	3.7	1			1	3.7	2 Pumps
Section 200 Pump Station	PU-201-1,2,3	Raw Water Pump	Submersible Sewage Pump 0.27m ³ /min x 11mH	1.5	1	1	1	4	4.5		IS-502	Treated Water Inlet Screen		Wedge Wire Screen W 500mm x H 500mm Op. 1.0mm	0	1		1	2	0			
	MX-202-1,2	Mixer for Equalization Tank	Submersible Mixer Propeller Dia. 300mm	1.5	2			2	3.0		UU-503	Utility Water Supply Unit (2)		0.55 m ³ /min x 40m x 2 Pumps (Pressure tank with unit control panel)	3.7	1			1	7.4	2 Pumps		
	MG-203	Pumping Well Connecting Gate	Manual Operated Cast Iron Gate W200mm x H200mm x Approx.4160mmL(Spindle)	0	1			1	0		Section 600 Disinfection tank (Powder Chlorine Dosing Device)	CL-601-1,2	Chlorine Solution Tank	Hypochlorite Tank Capacity : 0.5m ³	0	1	1		2	0			
MW-204-1,2,3	Manual Operated Adjustable Weirs and Overall Weir	Manual Operated Cast Iron Weir W 300mm x H 300mm x Approx.1000mm(Spindle)	0	2			1	3	0				Chlorine Solution Pump	Diaphragm Pump 8.0 mL ~ 60.0 mL/min	0.2	1	1		2	0.4			
Section 300 Oxidation Ditch	AE-301A-1,2 ~ AE-301D-1,2	Aerator	Mechanical Screw Type Aerator 62kg-O ₂ /day/unit	1.5	4		2 (1)	4	10	12.0		():Phase1			Chlorine Solution Tank Mixer	Vertical Mixer Dia.250mm x1,000 mmL	0.1	1	1		2	0.2	
	H0-302-1,2	Hoist For Aerator	Chain Block with Caster Type Portal Frame 0.5 ton x 2.5 m (Chain block)	0	1			1	2	0		Section 700 Sludge Thickener	MV-602-1,2	Disinfection Tank Inlet Valve and By-pass Valve	Manual Operated Cast Iron Valve Dia. 100mm x Approx.1700mm(Spindle)	0	2			2	0		
	MW-303A~D	Inlet Distribution Weir	Manual Operated Cast Iron Weir W300mm x H300mm x Approx.850mm(Spindle)	0	2			2	4	0			SC-701-1,2	Thickener	Gravity Thickner Type Center cage:Dia.300mm, Influent pipe:Dia.80mm	0	1		1	2	0		
	MW-304A~D	Outlet Distribution Weir	Manual Operated Cast Iron Weir W300mm x H300mm x Approx.950mm(Spindle)	0	2			2	4	0			MV-702-1,2	Thickened Sludge Outlet Valve	Motorized Non-clogging Valve Dia. 150mm x Approx.3250mm(Spindle)	0.4	1		1	2	0.8		
													PU-703-A-1,2 PU-703-B-1,2	Thickened Sludge Pump	Submersible Sludge Pump 0.28m ³ /min x 10 m	1.5	1	1	2 (1)	2	6	6.0	():Phase1
												Section 800 Hoist	H0-801-1,2	Hoist for Pumps and Scum container	Caster type lifting device with chain block 0.5 ton x 5.5 m (Chain block)	0	1			1	2	0	

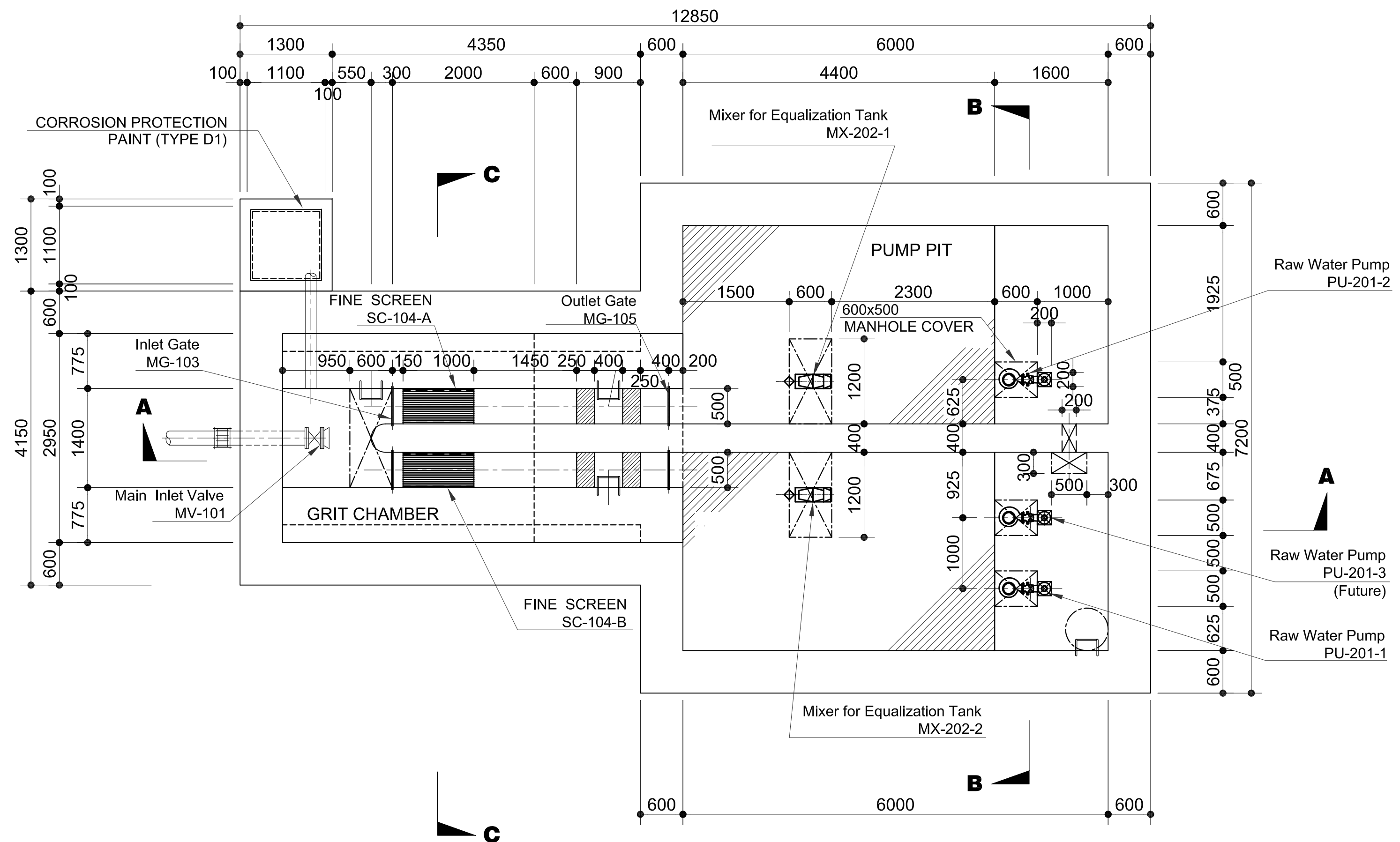
	PREPARED BY: RENATO A. ARRIOLA <small>Filipino Registered Engineer</small>	RECOMMENDING APPROVAL: JILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	APPROVED: JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT	LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	SHEET CONTENTS: COMPONENT-3 UTILITY WORKS (U) SUBCOMPONENT-3-3 (U3) SEWAGE TREATMENT SYSTEM MECHANICAL WORK MECHANICAL EQUIPMENT SCHEDULE	SHEET NO: U3-3350-02
	JICA DESIGN CONSULTANT JOINT VENTURE JAPAN AIRPORT CONSULTANTS, INC. NIPPON KOEI CO., LTD. NIS CONSULTANTS CO., LTD.	TADASHI AOI <small>Team Leader</small>	JILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	DATE: JUNE 2013 INDEX:	AMENDMENTS:	Prepared by: FRS Jr. WIM HC Checked by: Validated by:



1 PLAN 1-1
SCALE 1:50m.

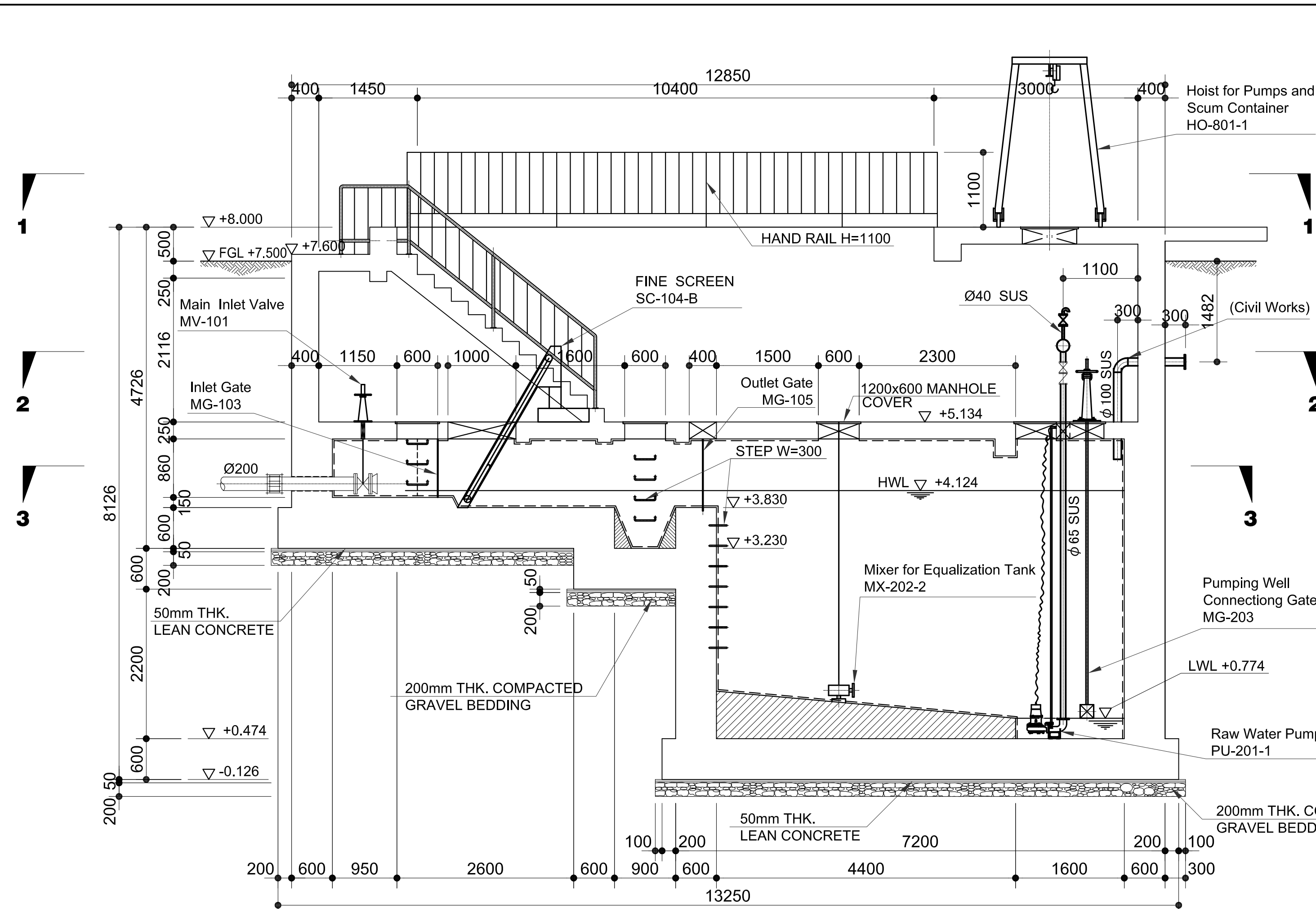
2 PLAN 2-2
SCALE 1:50m.

	PREPARED BY: RENATO A. ARRIOLA <small>Filipino Registered Engineer</small> PROF: MECHANICAL ENGINEER PIR. 1725187 REG. NO: 2378 DATE: JANUARY 01, 2013 T.I.N: 150-563-379 PLACE: TAGUIG CITY	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	APPROVED: JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT	LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	SHEET CONTENTS: COMPONENT-3 UTILITY WORKS (U) SUBCOMPONENT-3-3 (U3) SEWAGE TREATMENT SYSTEM MECHANICAL WORK GRIT CHAMBER/PUMP STATION (1) PLAN 1-1 & 2-2	SHEET NO: U3-3350-03
	JICA DESIGN CONSULTANT JOINT VENTURE JAPAN AIRPORT CONSULTANTS, INC. NIPPON KOEI CO., LTD. NJS CONSULTANTS CO., LTD.	TADASHI AOI <small>Team Leader</small>	ILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	DATE: JUNE 2013 INDEX: AMENDMENTS: Prepared by: FRS Jr. WIM IIC Checked by: Validated by:	DRAWING SCALE: 1:50	

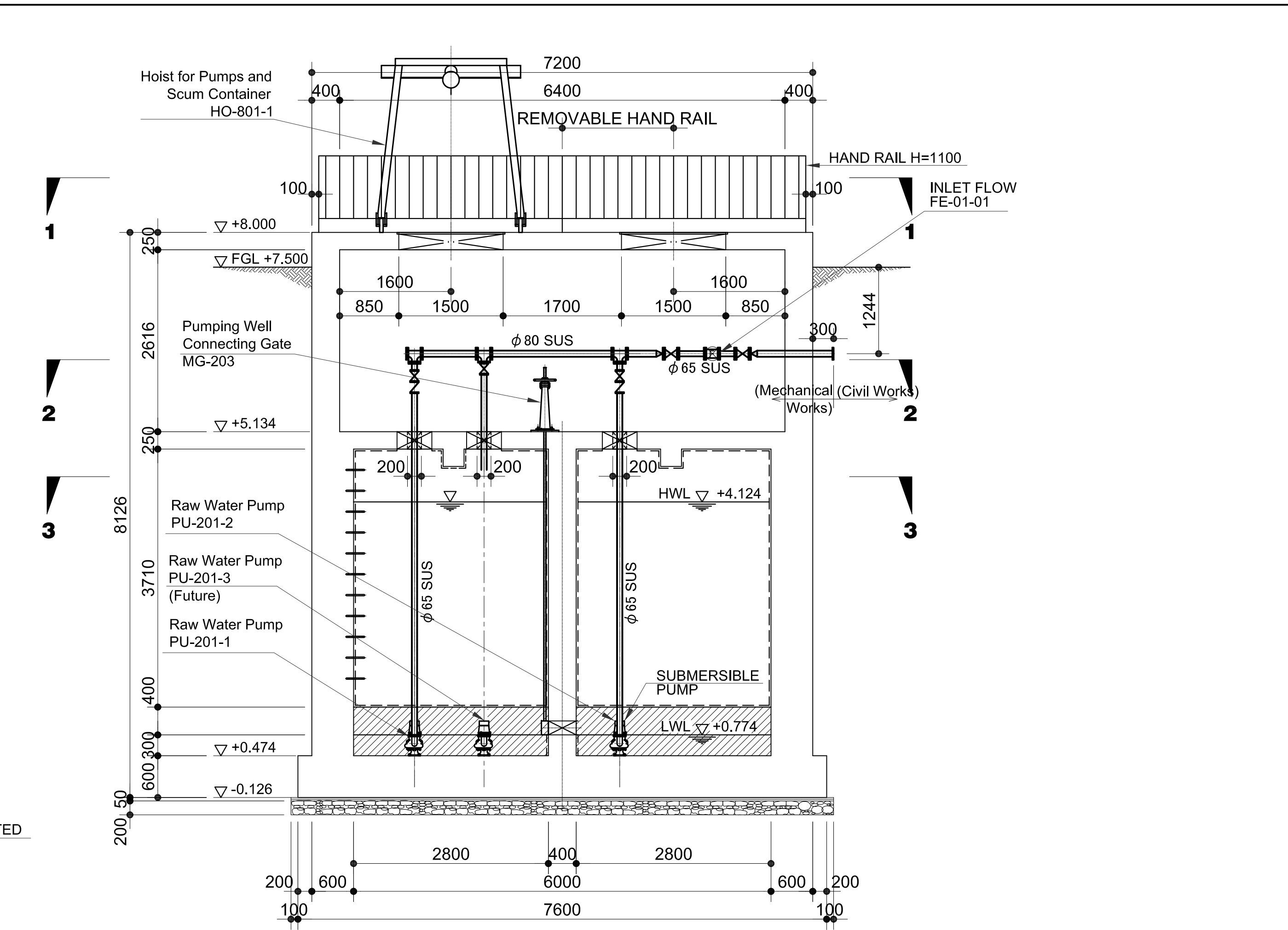


1 **PLAN 3-3**
 U3-3350-04 SCALE 1:50m.

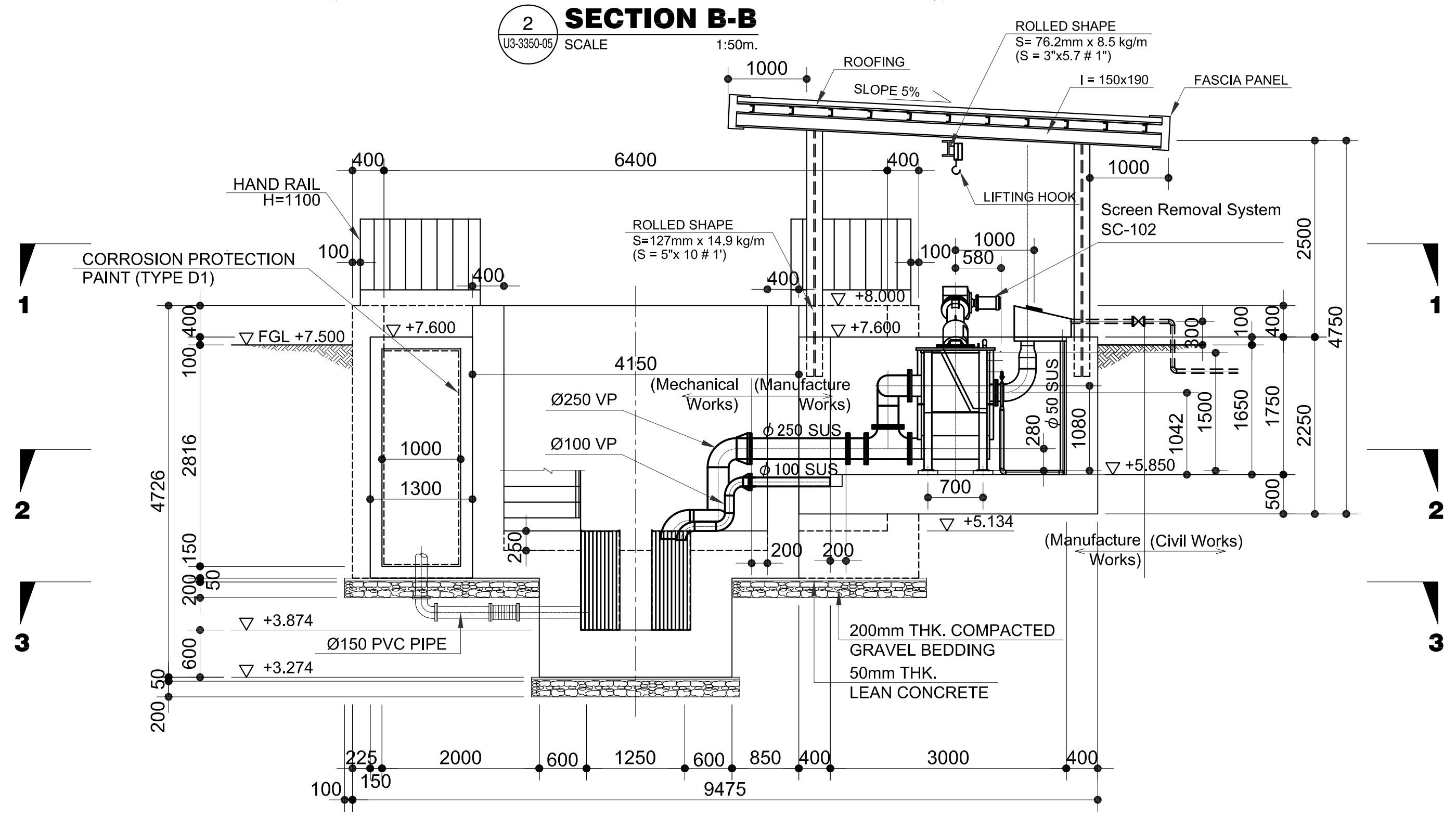
	PREPARED BY: RENATO A. ARRIOLA <small>Filipino Registered Engineer</small>	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	APPROVED: JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT	SHEET CONTENTS: COMPONENT-3 UTILITY WORKS (U) SUBCOMPONENT-3-3 (U3) SEWAGE TREATMENT SYSTEM MECHANICAL WORK GRIT CHAMBER/PUMP STATION (2) PLAN 3-3	SHEET NO: U3-3350-04
	PROF: MECHANICAL ENGINEER PIR. 1725187 REG. NO: 2379 DATE: JANUARY 01, 2013 T.I.N: 150-563-379 PLACE: TAGBILAR CITY	TADASHI AOI <small>Team Leader</small>	LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	DATE INDEX AMENDMENTS JUNE 2013	Prepared by: FRS Jr. WIM IIC Checked by: Validated by:	DRAWING SCALE: 1:50



1 SECTION A-A
U3-3350-05 SCALE 1:50m.

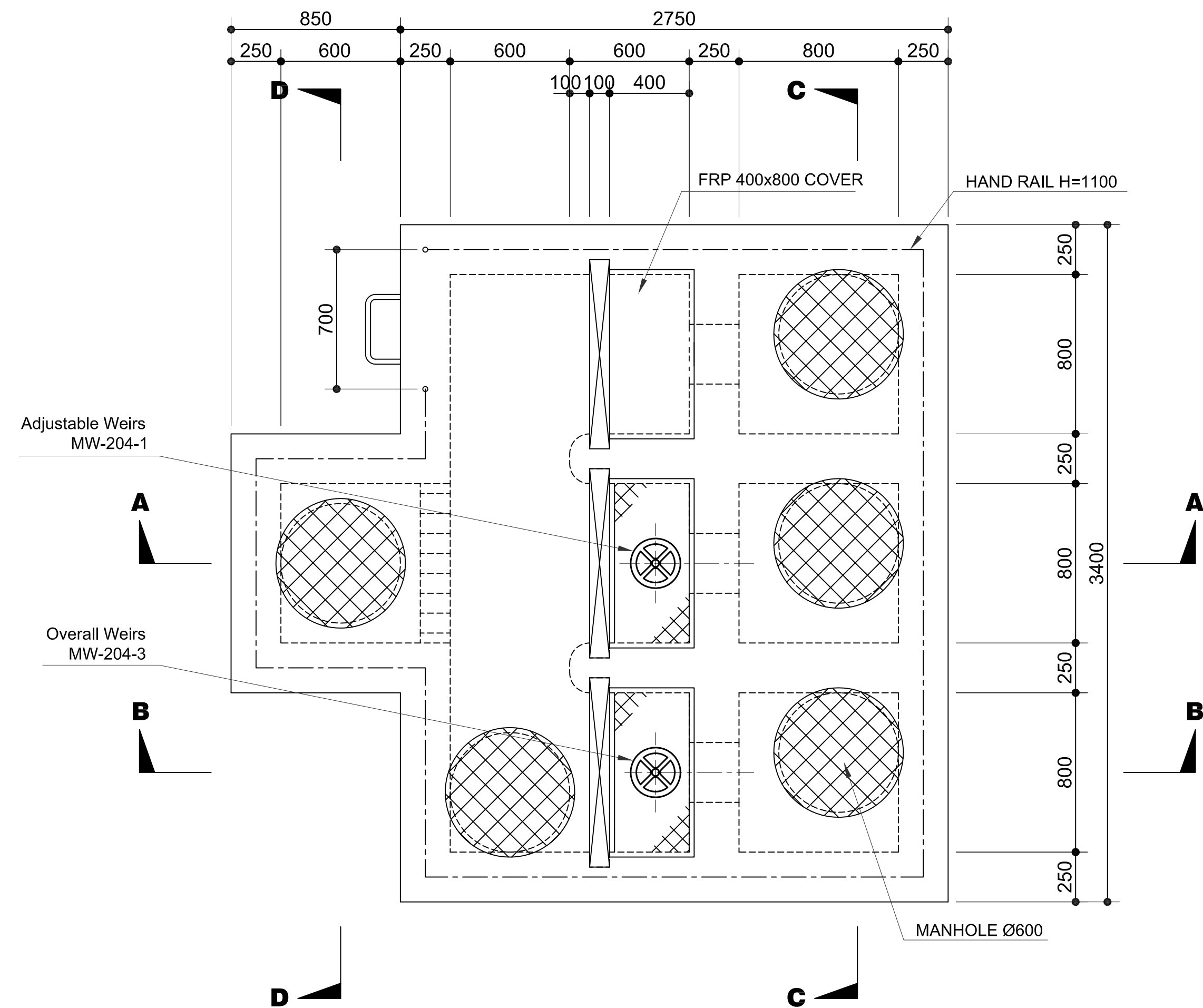


2 SECTION B-B
U3-3350-05 SCALE 1:50m.

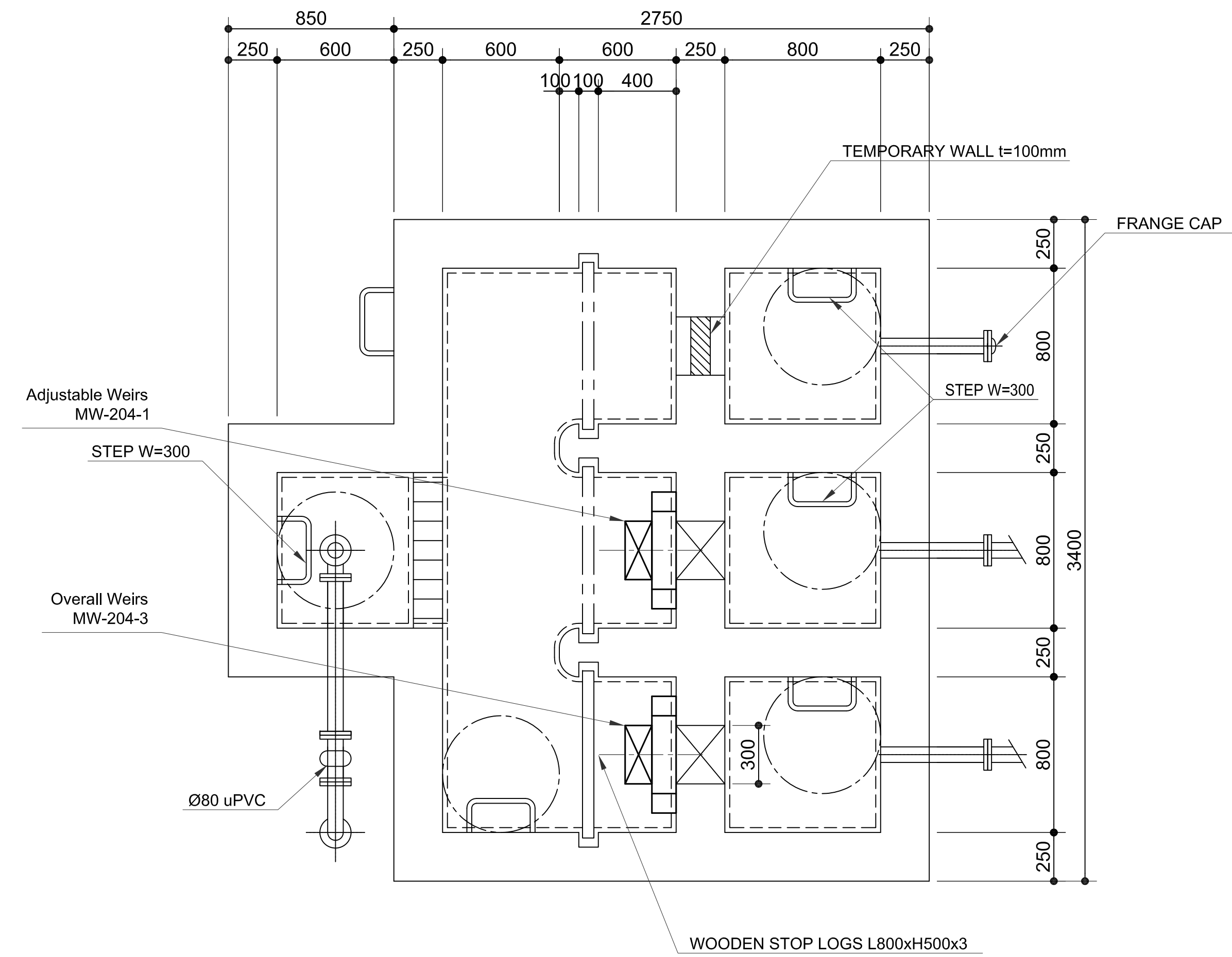


3 SECTION C-C
U3-3350-05 SCALE 1:50m.

	PREPARED BY: RENATO A. ARRIOLA <small>Filipino Registered Engineer</small>	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	APPROVED: JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT	LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	SHEET CONTENTS: COMPONENT-3 UTILITY WORKS (U) SUBCOMPONENT-3-3 (U3) SEWAGE TREATMENT SYSTEM GRIT CHAMBER/PUMP STATION (3) SECTION A-A, B-B & C-C	SHEET NO: U3-3350-05
	JICA DESIGN CONSULTANT JOINT VENTURE <small>JAPAN AIRPORT CONSULTANTS, INC. NIPPON KOEI CO., LTD. NJS CONSULTANTS CO., LTD.</small>	<small>PROF. MECHANICAL ENGINEER PIR. 1725187 REC. NO. 2379 DATE: JANUARY 01, 2013 T.I.N. 150-563-379 PLACE: TAGBILAR CITY</small>	<small>JUNE 2013</small>	<small>DATE INDEX AMENDMENTS</small>	<small>FRS Jr. WIM IIC Prepared by Checked by Validated by</small>	DRAWING SCALE: 1:50	



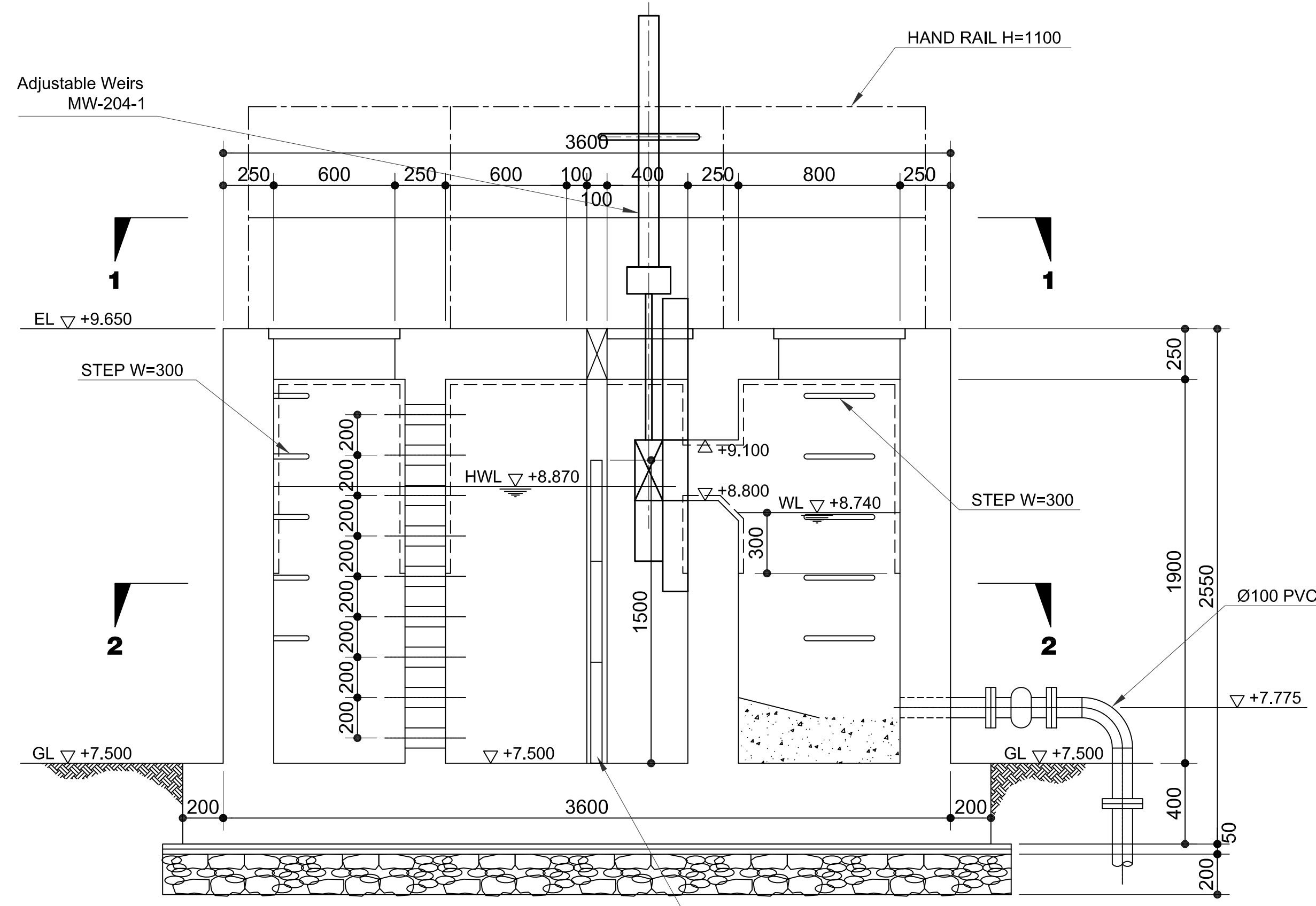
1 **PLAN 1-1**
U3-3350-06 SCALE 1:20m.



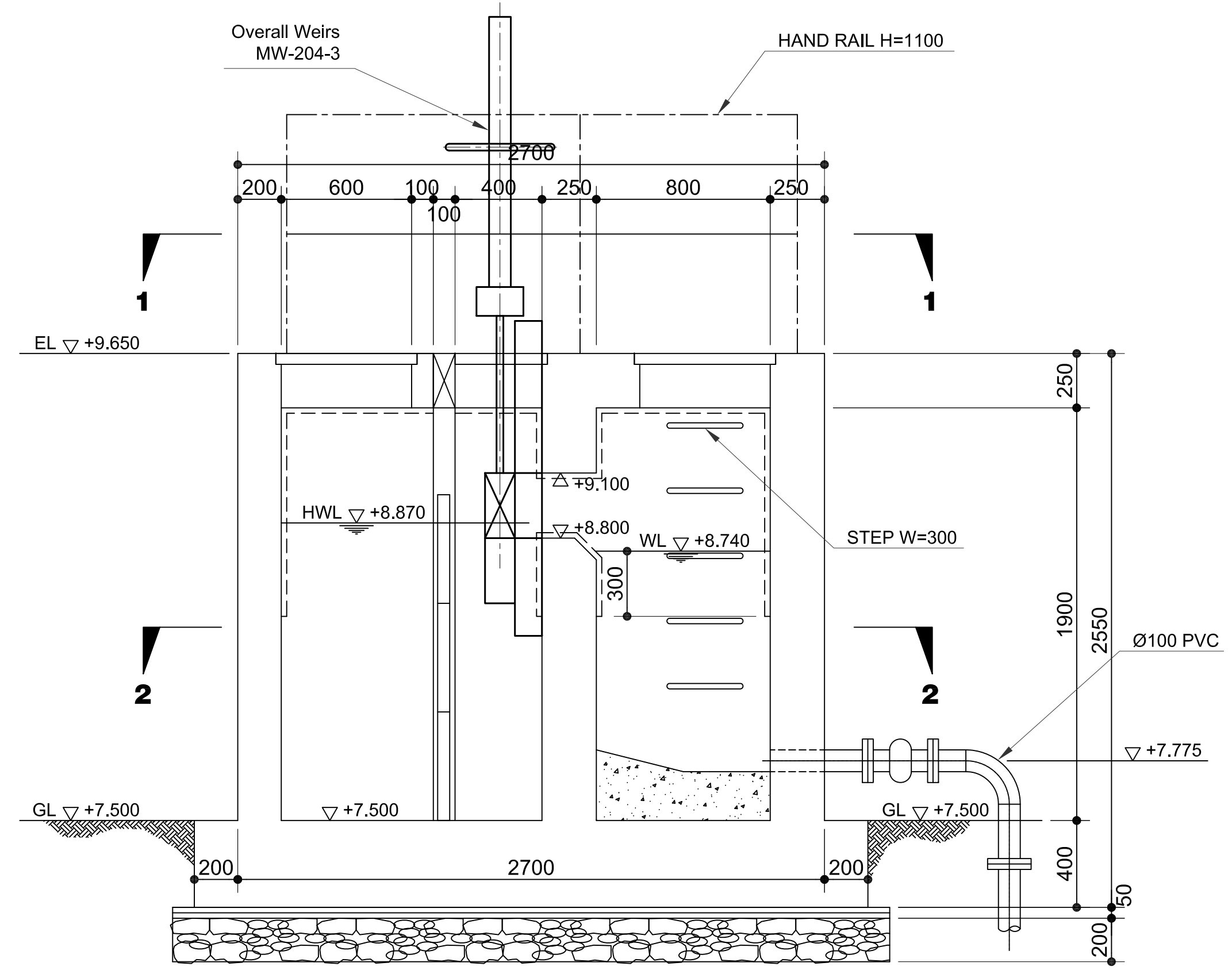
2 **PLAN 2-2**
U3-3350-06 SCALE 1:20m.

NOTE:
----- CORROSION PROTECTION PAINT (TYPE D1)

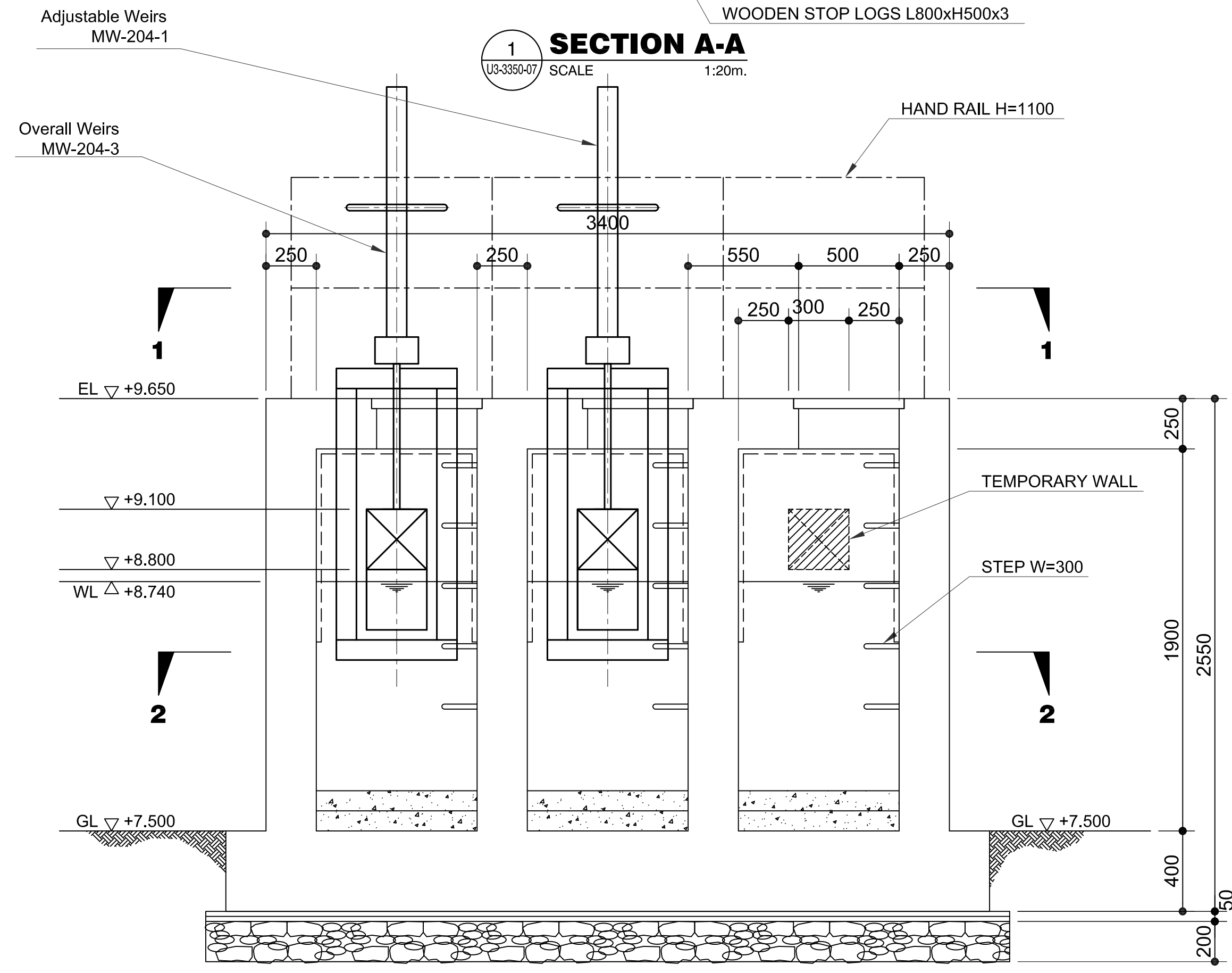
	PREPARED BY: RENATO A. ARRIOLA <small>Filipino Registered Engineer</small>	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	APPROVED: JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT	LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	SHEET CONTENTS: COMPONENT-3 UTILITY WORKS (U) SUBCOMPONENT-3-3 (U3) SEWAGE TREATMENT SYSTEM MECHANICAL WORK DISTRIBUTION CHAMBER (1) PLAN 1-1 & 2-2	SHEET NO: U3-3350-06
	JICA DESIGN CONSULTANT JOINT VENTURE <small>JAPAN AIRPORT CONSULTANTS, INC. NIPPON KOEI CO., LTD. NIS CONSULTANTS CO., LTD.</small>	<small>PROF. MECHANICAL ENGINEER PTR. 1725187 REG. NO.: 2379 DATE: JANUARY 01, 2013 T.I.N. 150-563-379 PLACE: TAGAYtay CITY</small>			DATE INDEX AMENDMENTS JUNE 2013	Prepared by: FRS Jr. WIM HC Checked by: Validated by:	DRAWING SCALE: 1:20



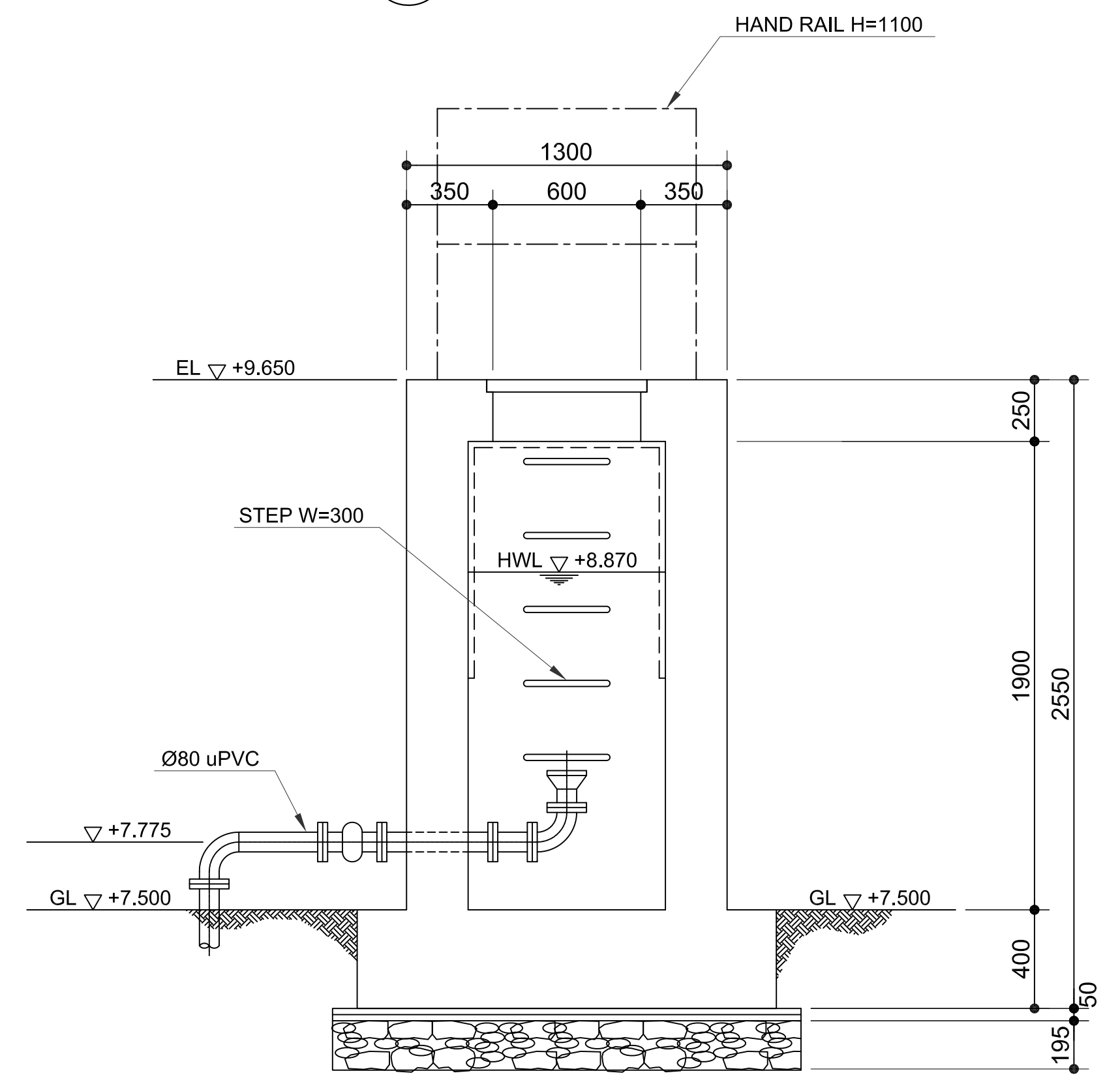
SECTION A-A
SCALE 1:20m.



SECTION B-B
SCALE 1:20m.



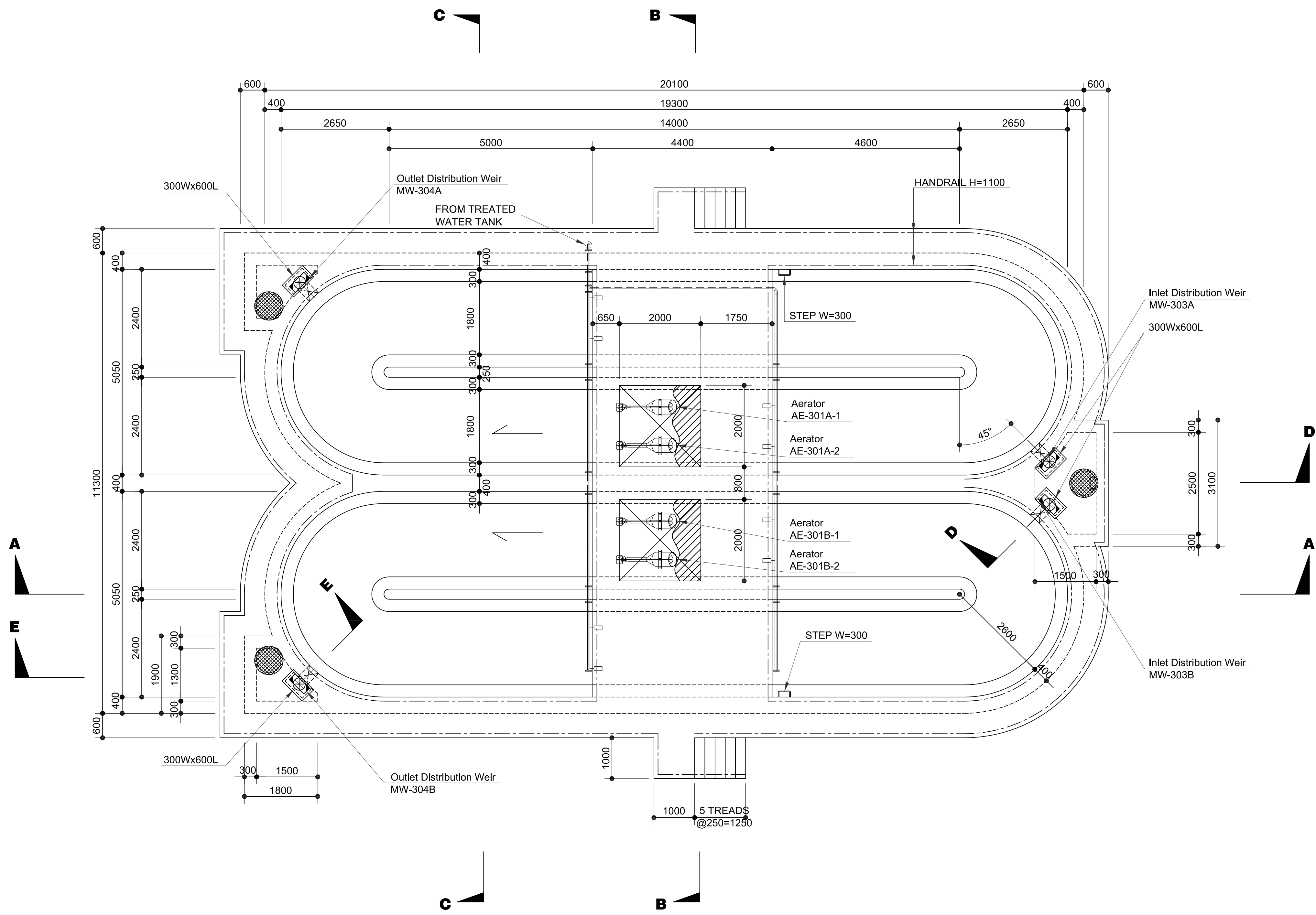
SECTION C-C
SCALE 1:20m.



SECTION D-D
SCALE 1:20m.

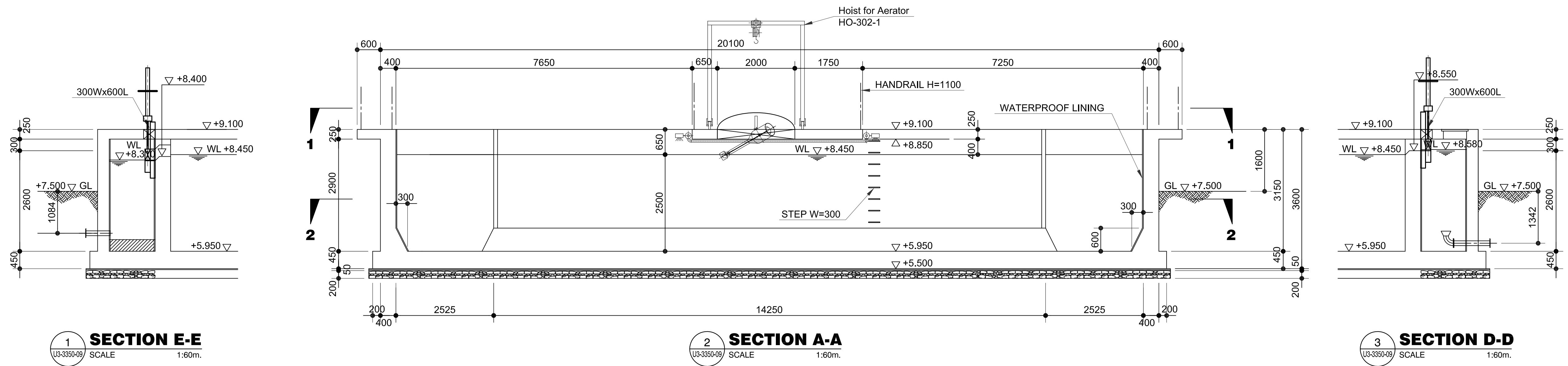
NOTE: --- CORROSION PROTECTION PAINT (TYPE D1)

	PREPARED BY: RENATO A. ARRIOLA <small>PROF. MECHANICAL ENGINEER PIR. 1725187 REG. NO. 2379 DATE: JANUARY 01, 2013 TIN. 150-563-379 PLACE: TAGUIG CITY</small>	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	APPROVED: JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT	SHEET CONTENTS: COMPONENT-3 UTILITY WORKS (U) SUBCOMPONENT-3-3 (U3) SEWAGE TREATMENT SYSTEM DISTRIBUTION CHAMBER (2) SECTION A-A, B-B, C-C & D-D	SHEET NO: U3-3350-07
	JICA DESIGN CONSULTANT JOINT VENTURE JAC JAPAN AIRPORT CONSULTANTS, INC. NIPON KOEI CO., LTD. NJS CONSULTANTS CO., LTD.	TADASHI AOI <small>Team Leader</small>	ILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	DRAWING SCALE: 1:20



1 PLAN 1-1
SCALE 1:60m.

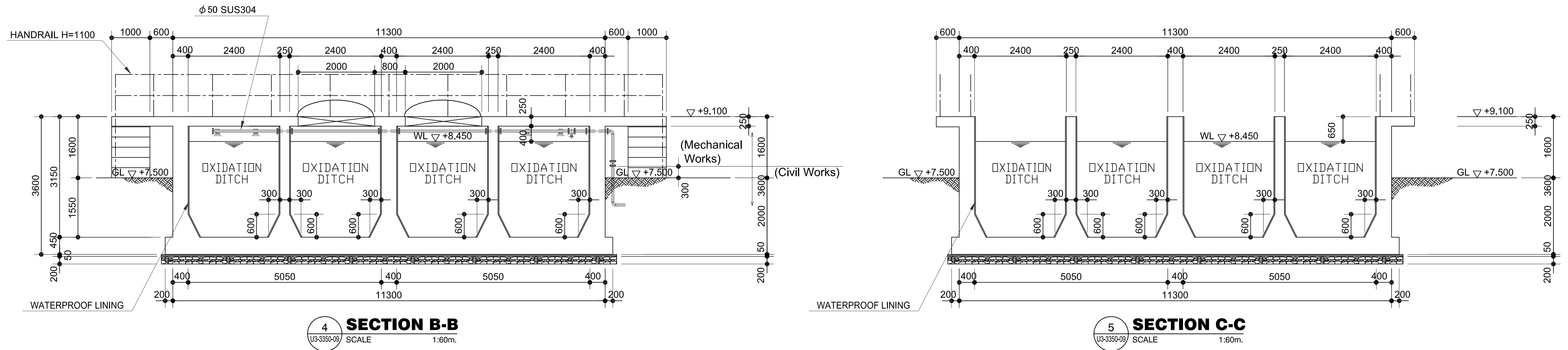
	PREPARED BY: RENATO A. ARRIOLA <small>Filipino Registered Engineer</small>	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	APPROVED: JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT	LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	SHEET CONTENTS: COMPONENT-3 UTILITY WORKS (U) SUBCOMPONENT-3-3 (U3) SEWAGE TREATMENT SYSTEM MECHANICAL WORK OXIDATION DITCH (1) PLAN 1-1	SHEET NO: U3-3350-08
	JICA DESIGN CONSULTANT JOINT VENTURE <small>REP. NO: 2379 PIR. 1725187 TAN. 150-563-379 DATE: JANUARY 01, 2013 PLACE: TAGBILAR CITY</small>	TADASHI AOI <small>Team Leader</small>	JUN 2013	DATE INDEX	AMENDMENTS	Prepared by: FRS Jr. WIM HC Checked by: Validated by:	DRAWING SCALE: 1:60



1 SECTION E-E
SCALE 1:60m.

2 SECTION A-A
SCALE 1:60m.

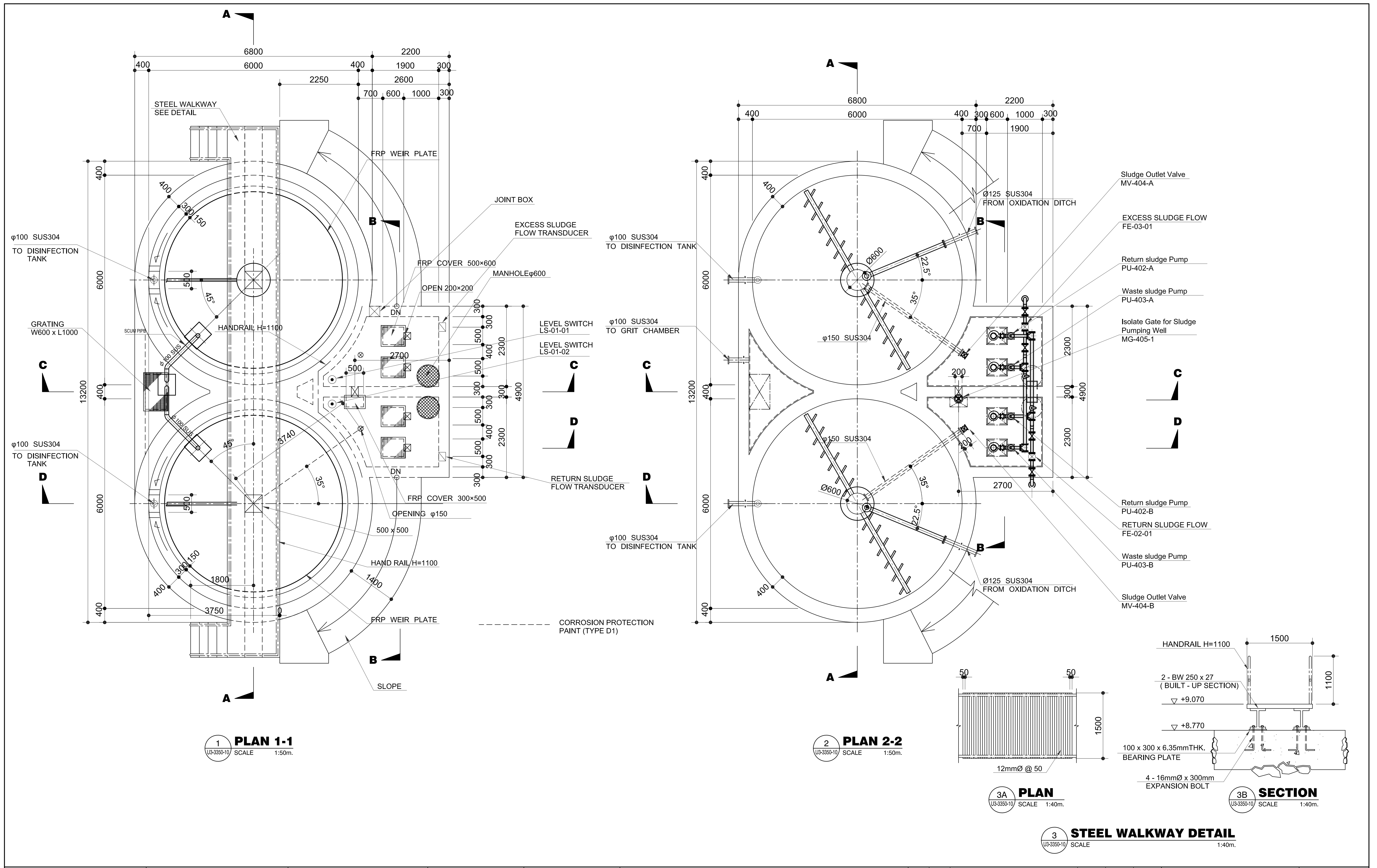
3 SECTION D-D
SCALE 1:60m.



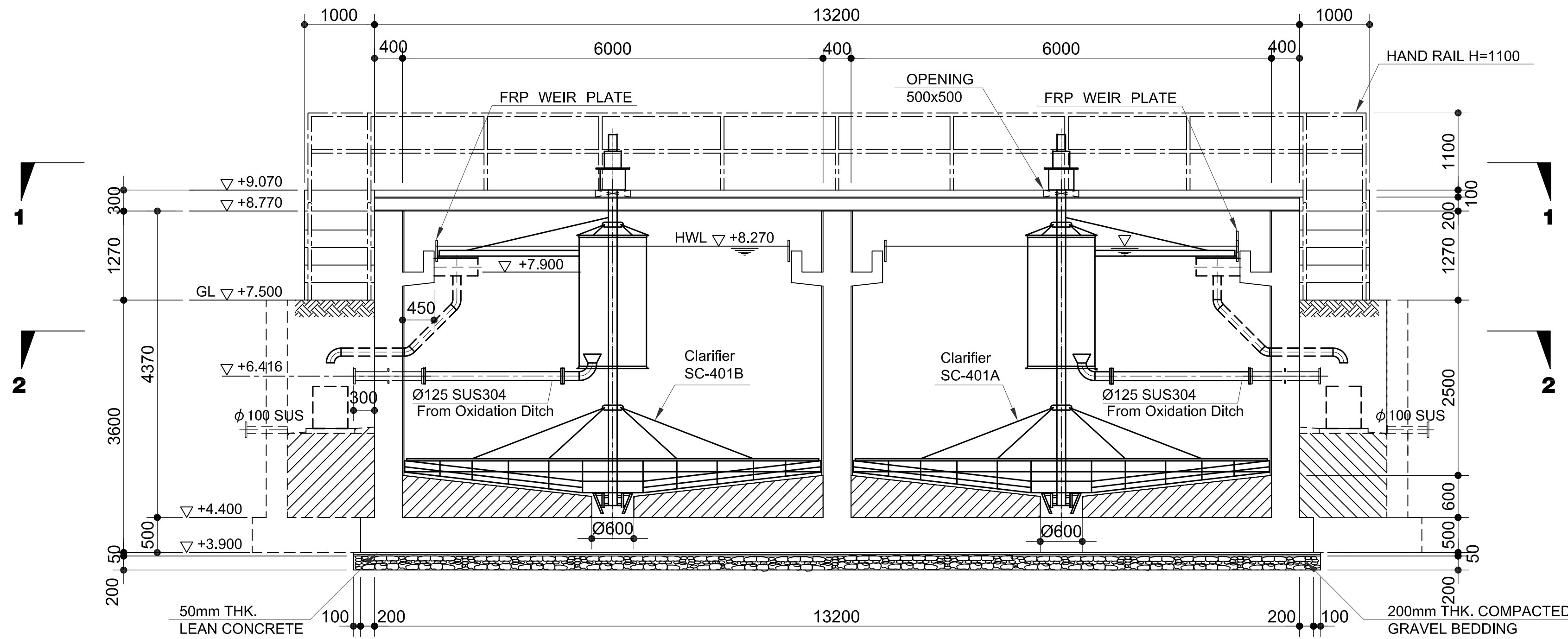
4 SECTION B-B
SCALE 1:60m.

5 SECTION C-C
SCALE 1:60m.

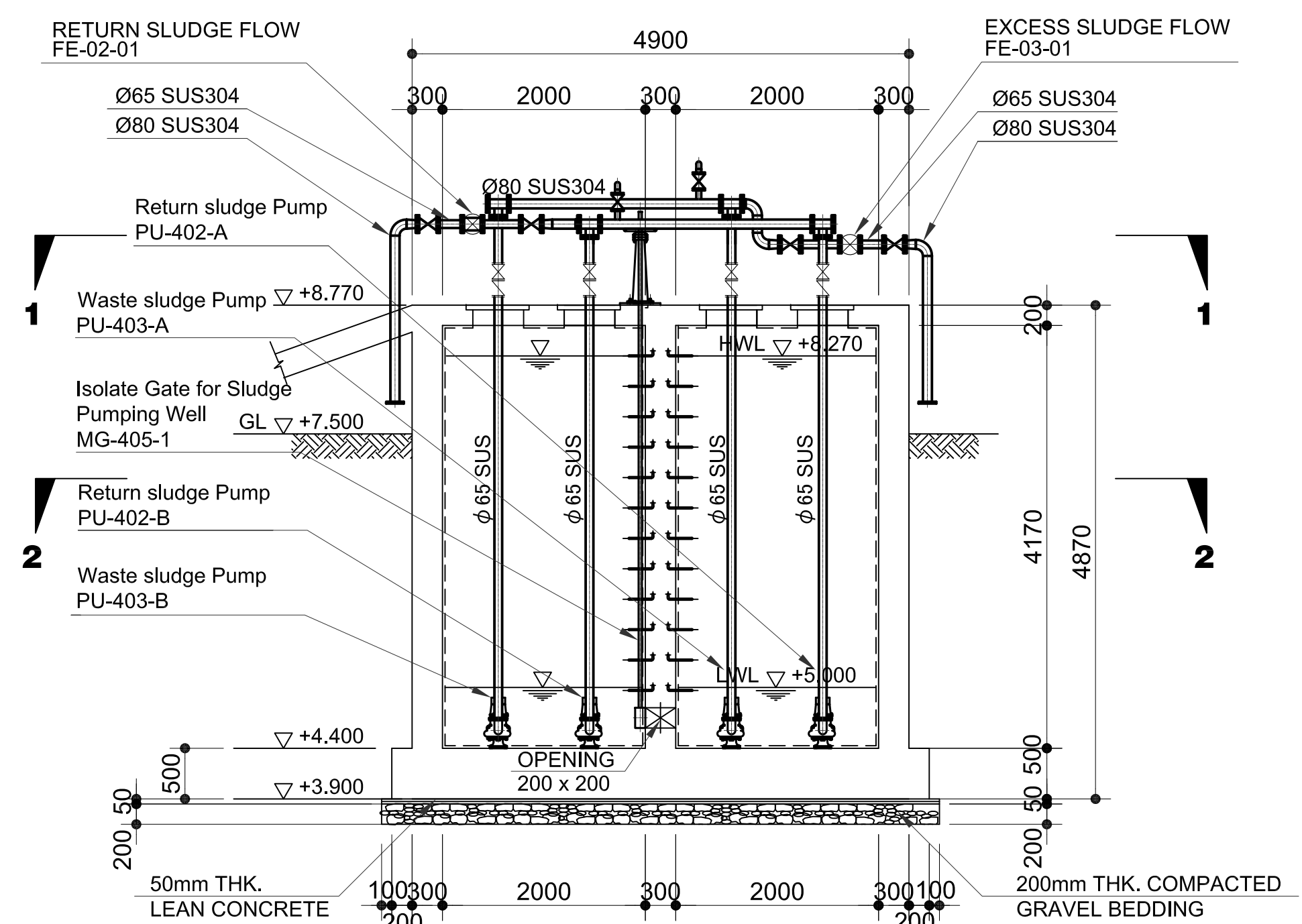
	PREPARED BY: RENATO A. ARRIOLA <small>Mechanical Engineer</small>	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	APPROVED: JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT	SHEET CONTENTS: COMPONENT-3 UTILITY WORKS (U) SUBCOMPONENT-3-3 (U3) SEWAGE TREATMENT SYSTEM MECHANICAL WORK OXIDATION DITCH (2) SECTION A-A, B-B, C-C, D-D & E-E	SHEET NO: U3-3350-09
	JICA DESIGN CONSULTANT JOINT VENTURE <small>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF TRANSPORTATION AND COMMUNICATIONS</small>	<small>PROF. MECHANICAL ENGINEER PIR. 1725187 REG. NO. 2379 DATE: JANUARY 01, 2013 T.I.N. 150-563-379 PLACE: TAGAYtay CITY</small>	<small>RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. Assistant Secretary for Project Implementation, DOTC</small>	<small>APPROVED: JULIANITO G. BUCAYAN, JR. Undersecretary for Project Implementation, DOTC</small>	LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	DRAWING SCALE: 1:60



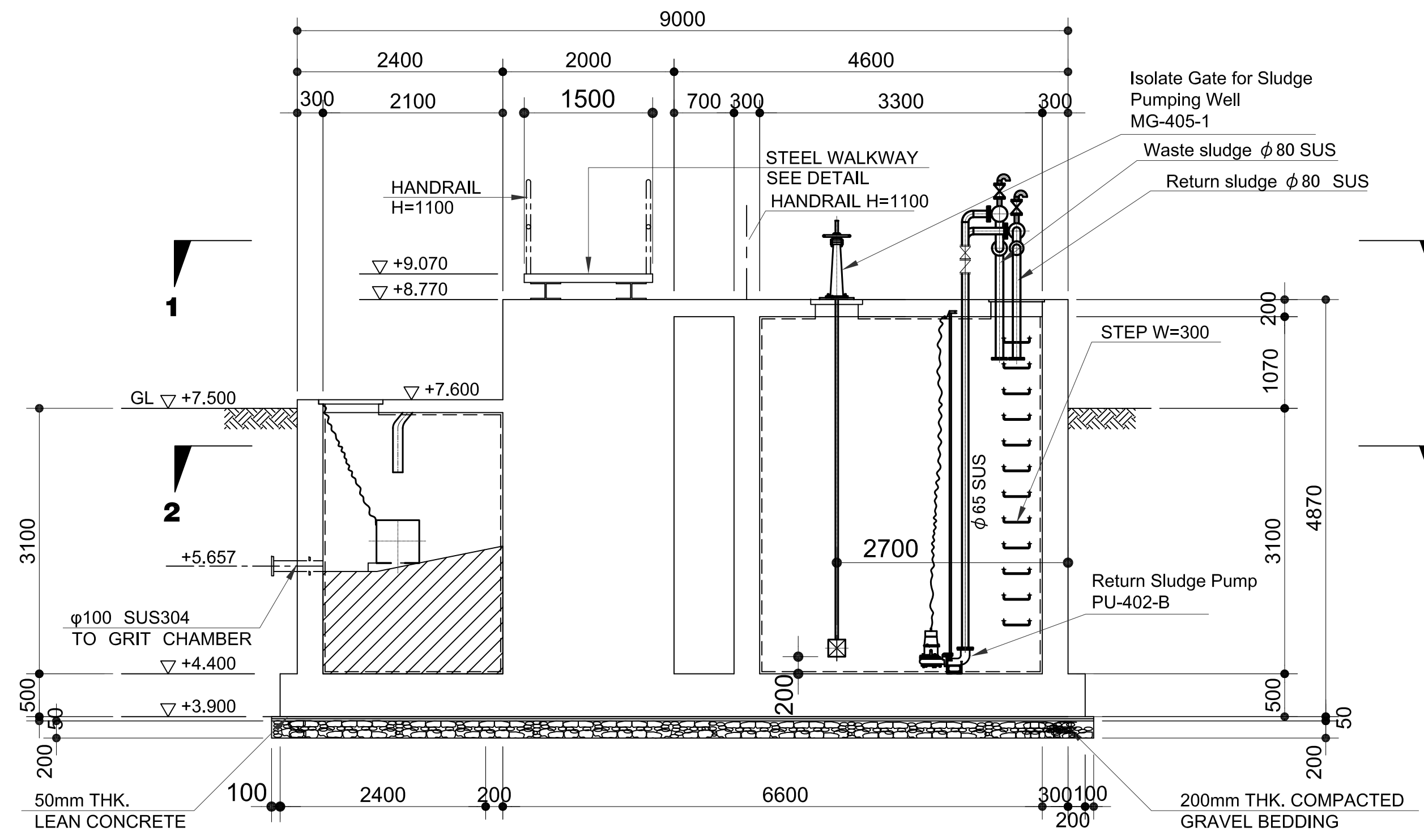
	PREPARED BY: RENATO A. ARRIOLA <small>Philippine Registered Engineer</small> PROF. MECHANICAL ENGINEER PIR. 1725187 REG. NO.: 2379 DATE: JANUARY 01, 2013 TEL. 150-563-379 PLACE: TAGUIG CITY	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. <small>Assistant Secretary</small> for Project Implementation, DOTC	APPROVED: JULIANITO G. BUCAYAN, JR. <small>Undersecretary</small> for Project Implementation, DOTC	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT	LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	SHEET CONTENTS: COMPONENT-3 UTILITY WORKS (U) SUBCOMPONENT-3-3 (U3) SEWAGE TREATMENT SYSTEM MECHANICAL WORK FINAL CLARIFIER (1) PLAN 1-1, 2-2 & DETAILS	SHEET NO: U3-3350-10		
	JICA DESIGN CONSULTANT JOINT VENTURE JAC JAPAN AIRPORT CONSULTANTS, INC.	TADASHI AOI <small>Team Leader</small>	ILDEFONSO T. PATDU, JR. <small>Assistant Secretary</small> for Project Implementation, DOTC	JULIANITO G. BUCAYAN, JR. <small>Undersecretary</small> for Project Implementation, DOTC	DATE: JUNE 2013	INDEX:	AMENDMENTS:	Prepared by: FRS Jr. WIM IIC Checked by:	Validated by:



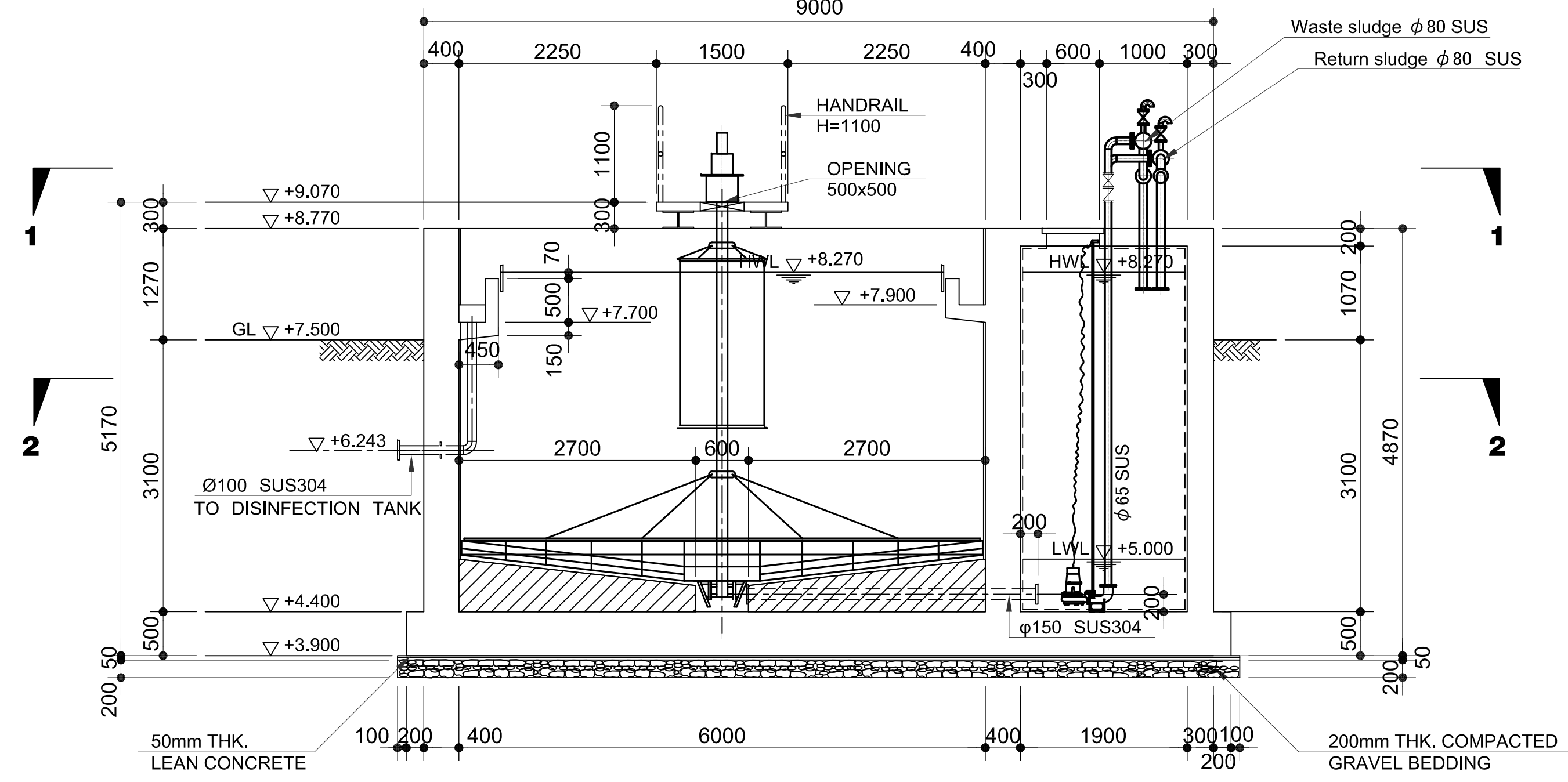
SECTION A-A
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SECTION B-B
SCALE 1:50m.



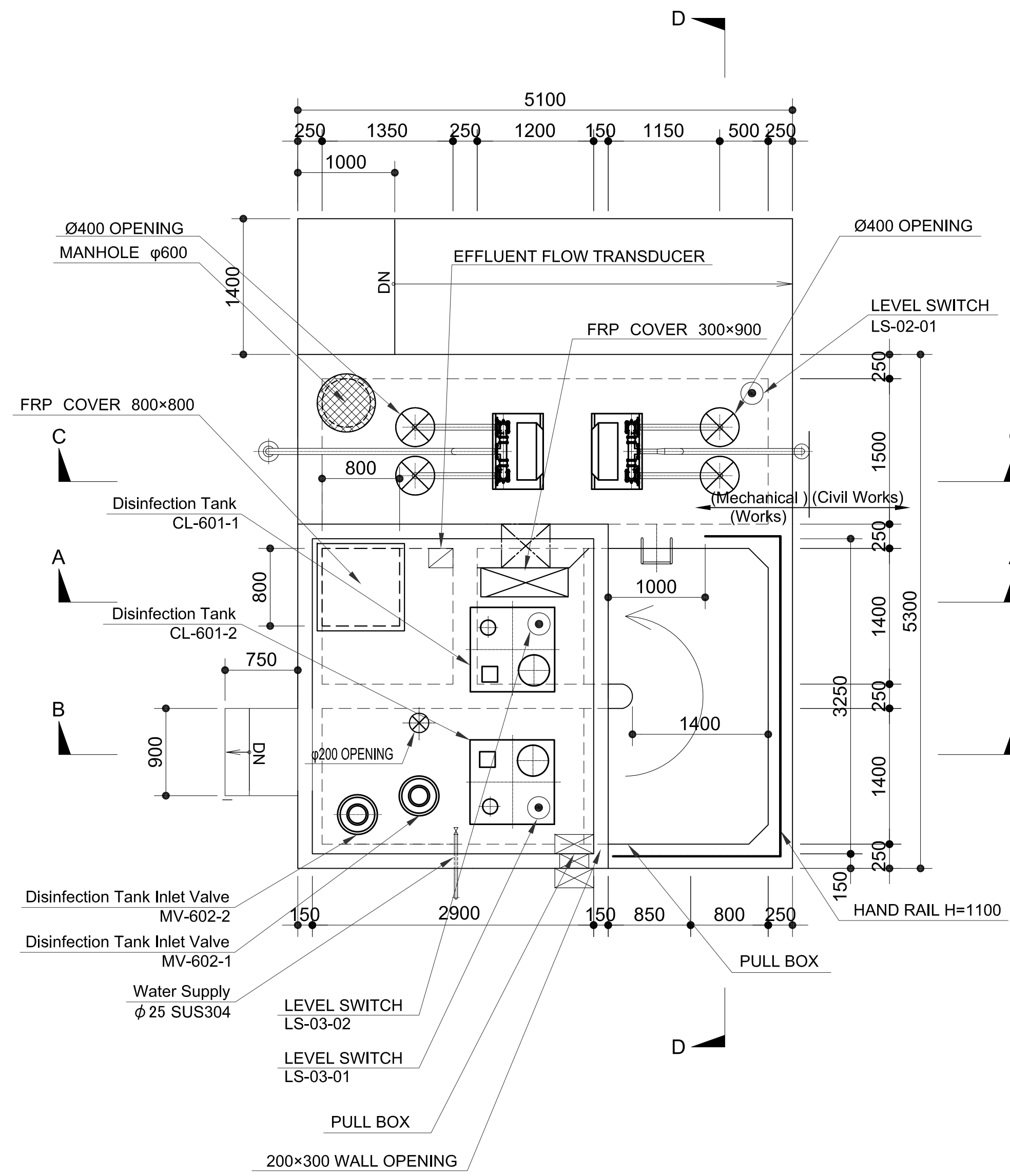
SECTION C-C
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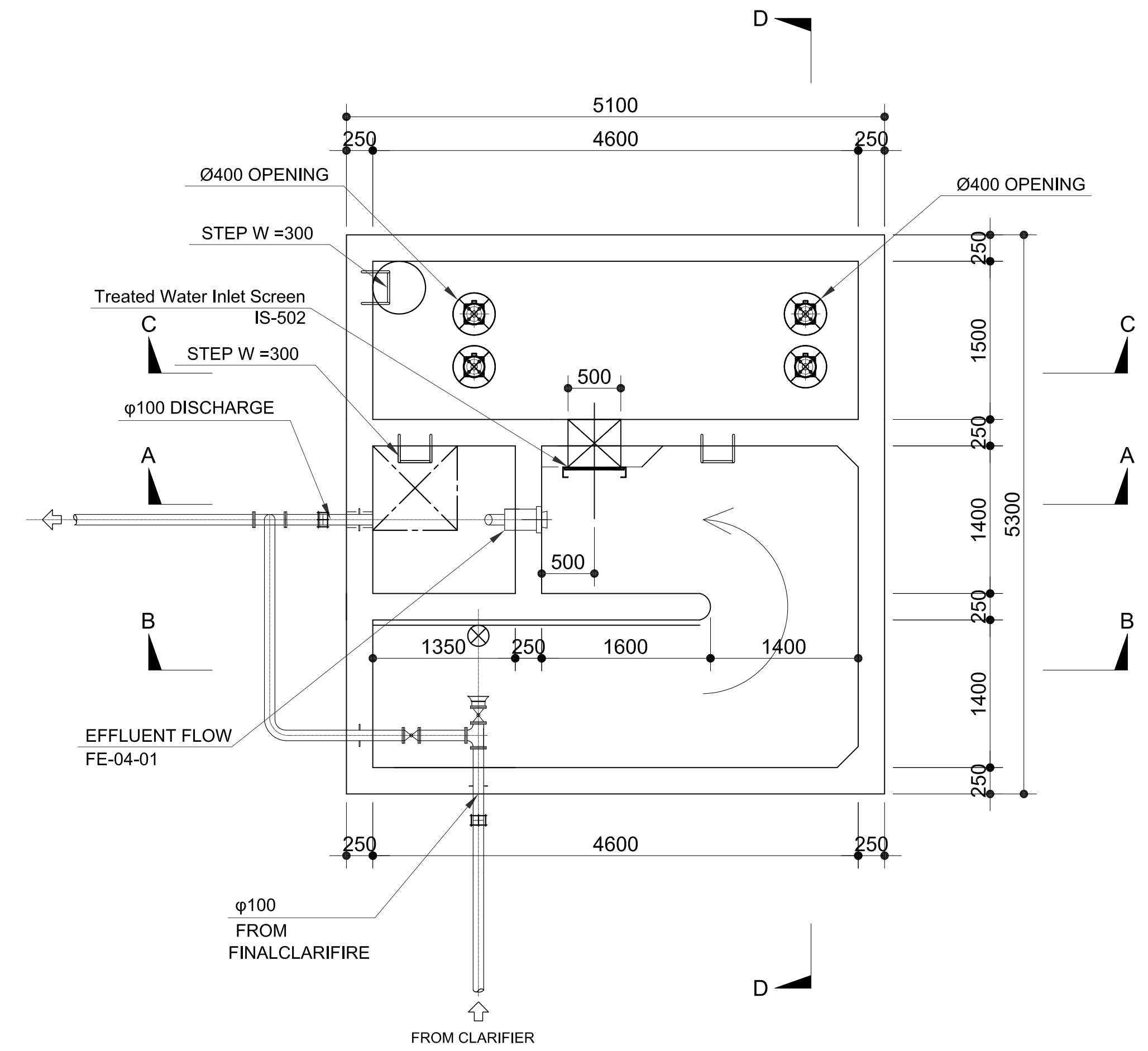
SECTION D-D
SCALE 1:50m.

--- CORROSION PROTECTION PAINT (TYPE D1)

	PREPARED BY: RENATO A. ARRIOLA <small>Philippine Registered Engineer</small> PROF: MECHANICAL ENGINEER PIR. 1725187 REG. NO: 2379 DATE: JANUARY 01, 2013 TEL: 150-963-379 PLACE: TAGUIG CITY	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	APPROVED: JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	SHEET CONTENTS: COMPONENT-3 UTILITY WORKS (U) SUBCOMPONENT-3-3 (U3) SEWAGE TREATMENT SYSTEM MECHANICAL WORK FINAL CLARIFIER (2) SECTION A-A, B-B, C-C & D-D	SHEET NO: U3-3350-11 DRAWING SCALE: 1:50
	JICA DESIGN CONSULTANT JOINT VENTURE JAPAN AIRPORT CONSULTANTS, INC. NIPPON KOEI CO., LTD. NJS CONSULTANTS CO., LTD.	TADASHI AOI <small>Team Leader</small>	ILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	DATE: JUNE 2013 INDEX: - AMENDMENTS: - Prepared by: FRS Jr. Checked by: WIM Validated by: IIC	SHEET NO: U3-3350-11 DRAWING SCALE: 1:50

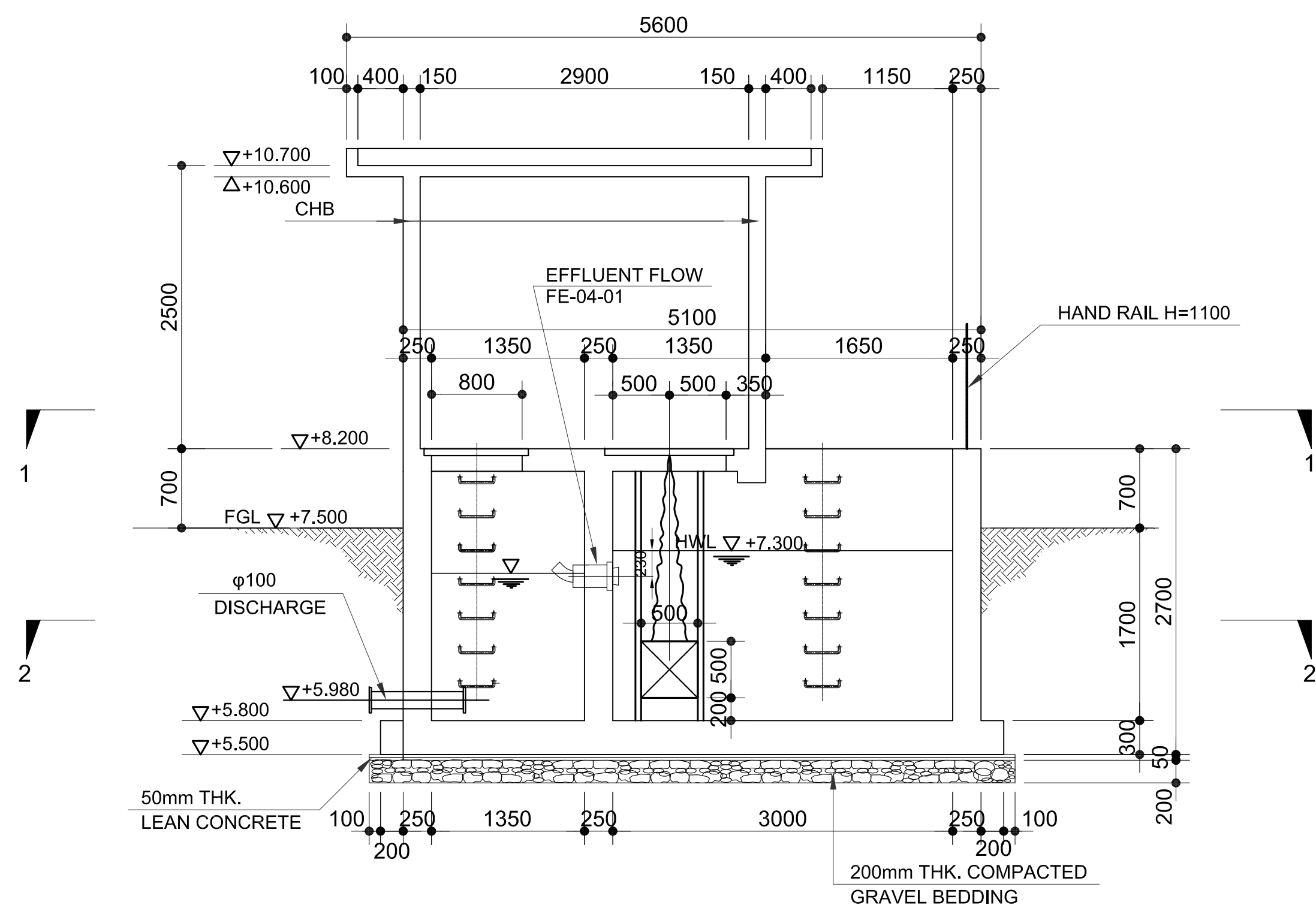


1 PLAN 1-1
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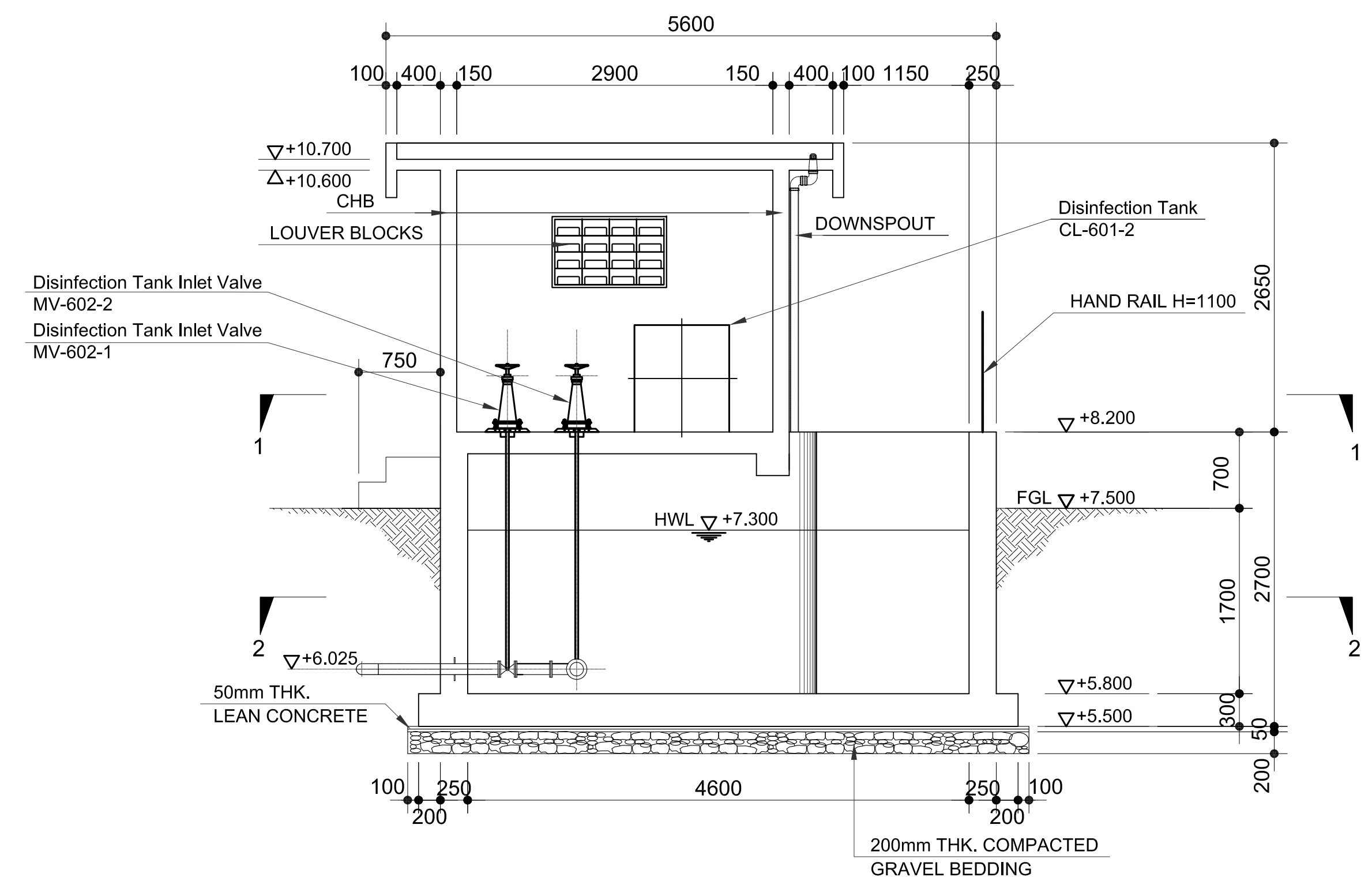


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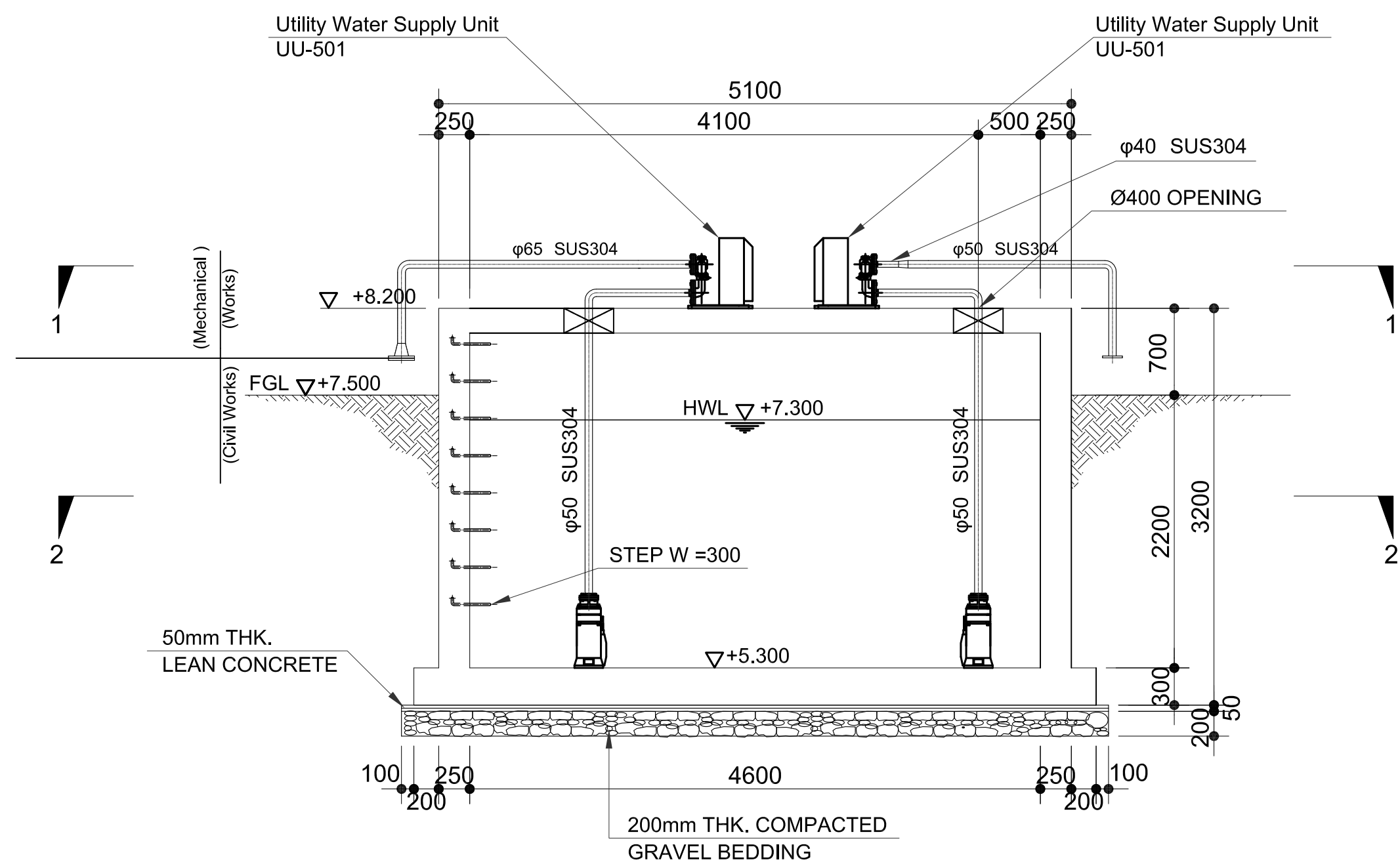
	PREPARED BY: RENATO A. ARRIOLA <small>MECHANICAL ENGINEER PIR. 1725187</small>	RECOMMENDING APPROVAL: JILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	APPROVED: JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT	SHEET CONTENTS: COMPONENT-3 UTILITY WORKS (U) SUBCOMPONENT-3-3 (U3) SEWAGE TREATMENT SYSTEM MECHANICAL WORK DISINFECTION TANK (1) PLAN 1-1 & 2-2	SHEET NO: U3-3350-12
	JICA DESIGN CONSULTANT JOINT VENTURE <small>JAPAN AIRPORT CONSULTANTS, INC. NIPPON KOEI CO., LTD. NJS CONSULTANTS CO., LTD.</small>	TADASHI AOI <small>Team Leader</small>	JILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	DRAWING SCALE: 1:40



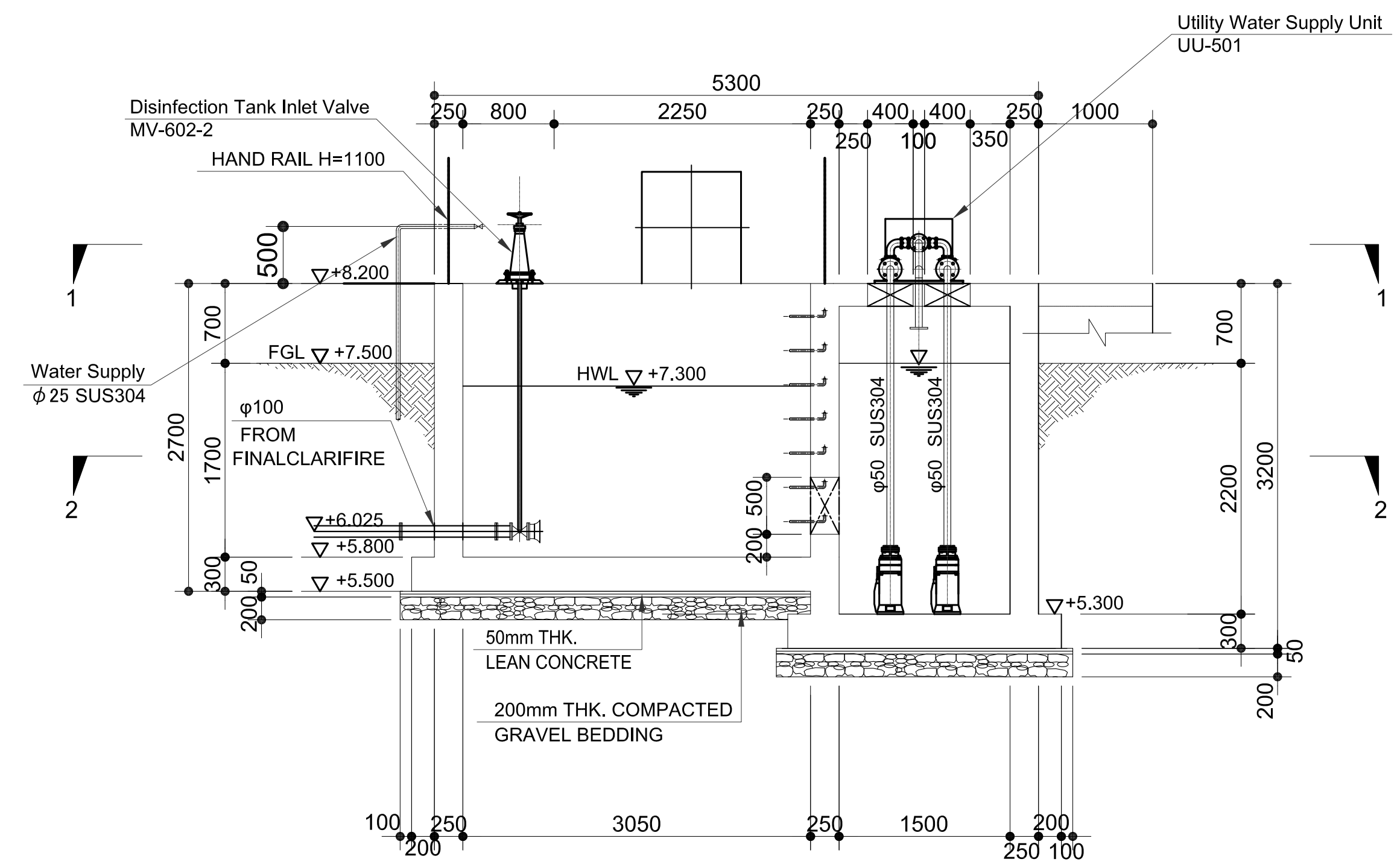
1 SECTION A-A
U3-3350-13 SCALE 1:40m.



2 SECTION B-B
U3-3350-13 SCALE 1:40m.

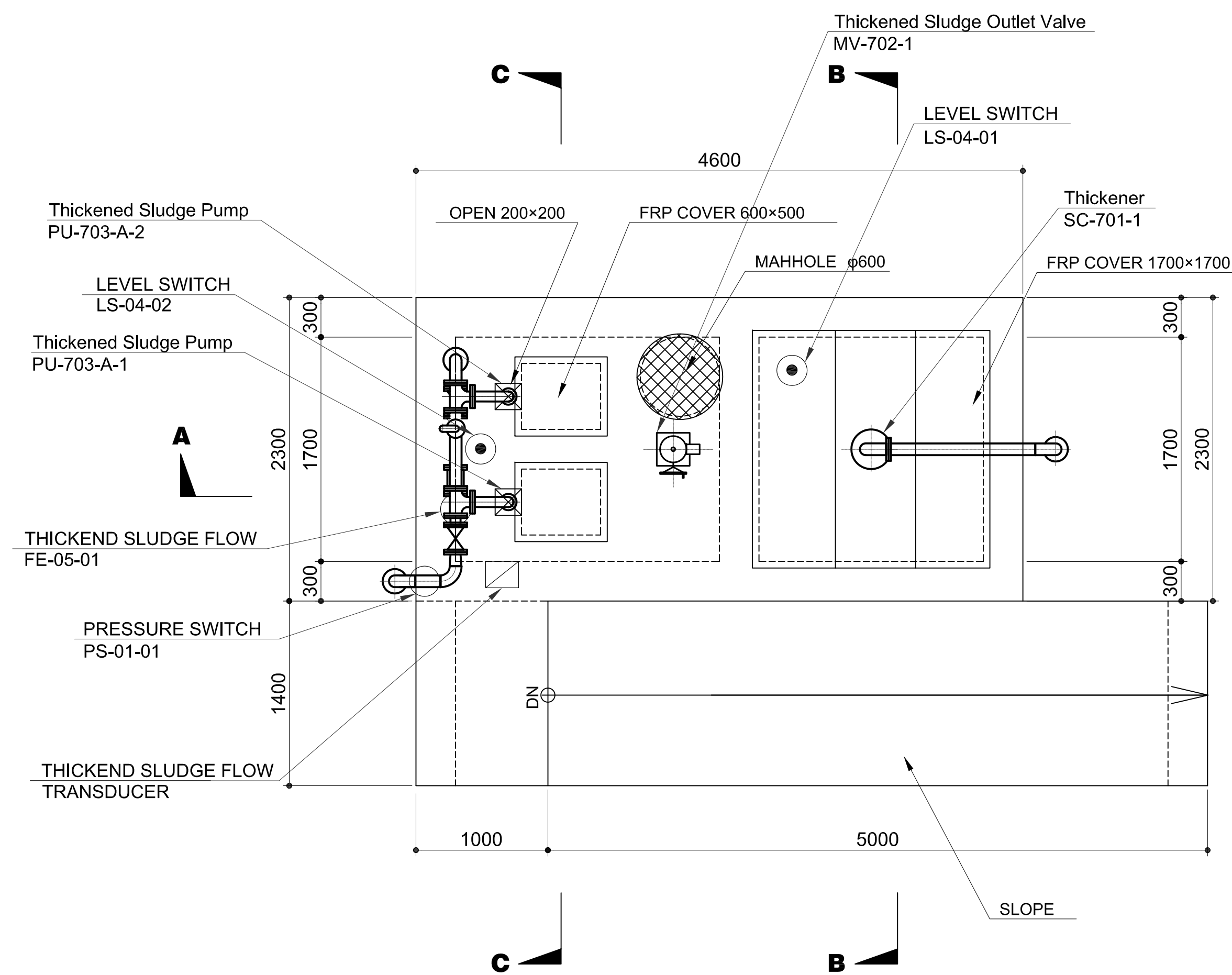


3 SECTION C-C
U3-3350-13 SCALE 1:40m.

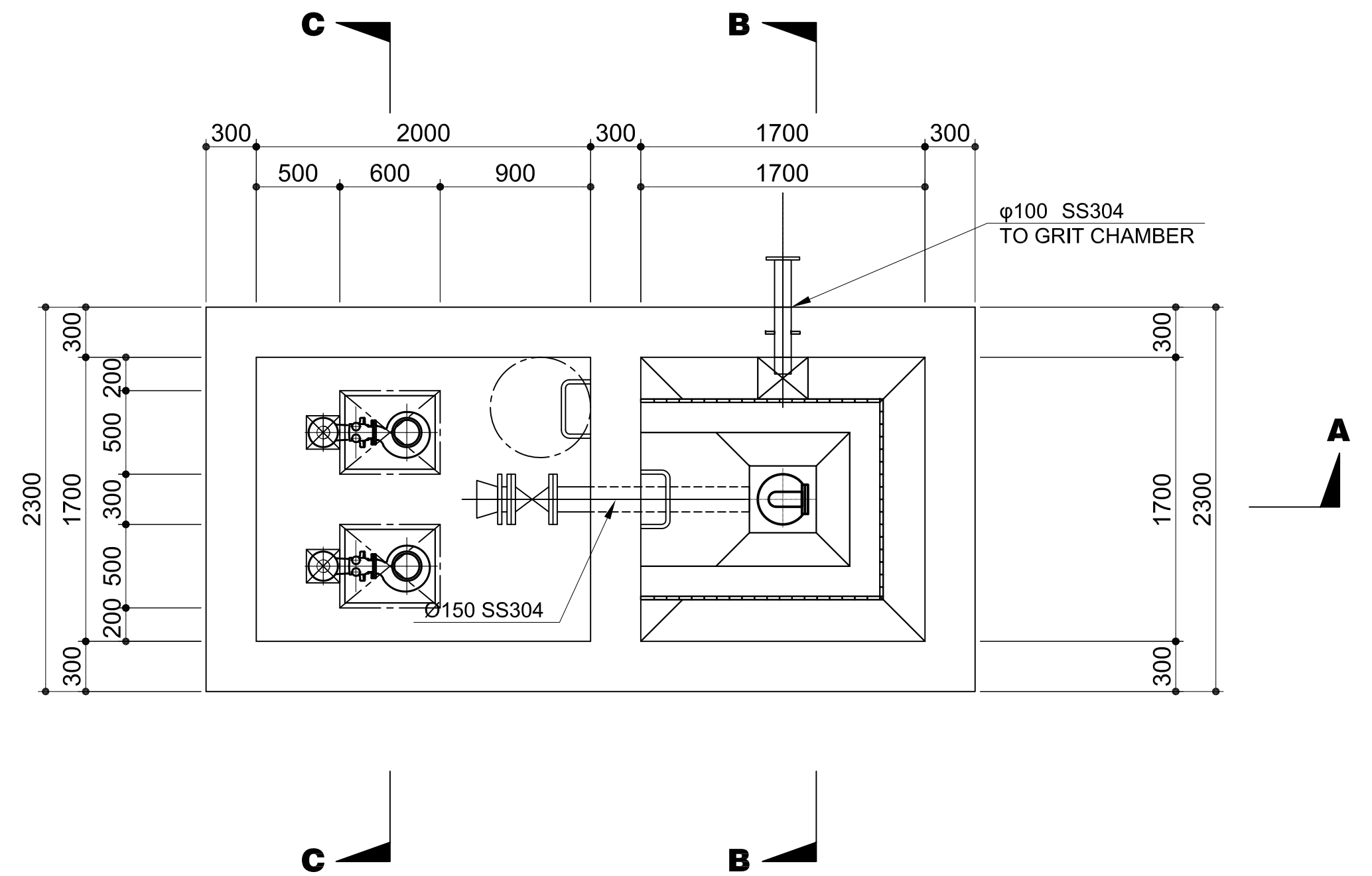


4 SECTION D-D
U3-3350-13 SCALE 1:40m.

	PREPARED BY: RENATO A. ARRIOLA <small>PIR. 1725187</small> <small>REG. NO.: 2379</small> DATE: JANUARY 01, 2013 <small>TALK. 150-563-379</small> PLACE: TAGUIG CITY	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. <small>Assistant Secretary</small> for Project Implementation, DOTC	APPROVED: JULIANITO G. BUCAYAN, JR. <small>Undersecretary</small> for Project Implementation, DOTC	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT	LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	SHEET CONTENTS: COMPONENT-3 UTILITY WORKS (U) SUBCOMPONENT-3-3 (U3) SEWAGE TREATMENT SYSTEM MECHANICAL WORK DISINFECTION TANK (2) SECTION A-A, B-B, C-C & D-D	SHEET NO: U3-3350-13
	JICA DESIGN CONSULTANT JOINT VENTURE JAC JAPAN AIRPORT CONSULTANTS, INC.	TADASHI AOI <small>Team Leader</small>	ILDEFONSO T. PATDU, JR. <small>Assistant Secretary</small> for Project Implementation, DOTC	JULIANITO G. BUCAYAN, JR. <small>Undersecretary</small> for Project Implementation, DOTC	DATE: JUNE 2013 INDEX: - AMENDMENTS: -	Prepared by: FRS Jr. Checked by: WIM Validated by: IIC	DRAWING SCALE: 1:40



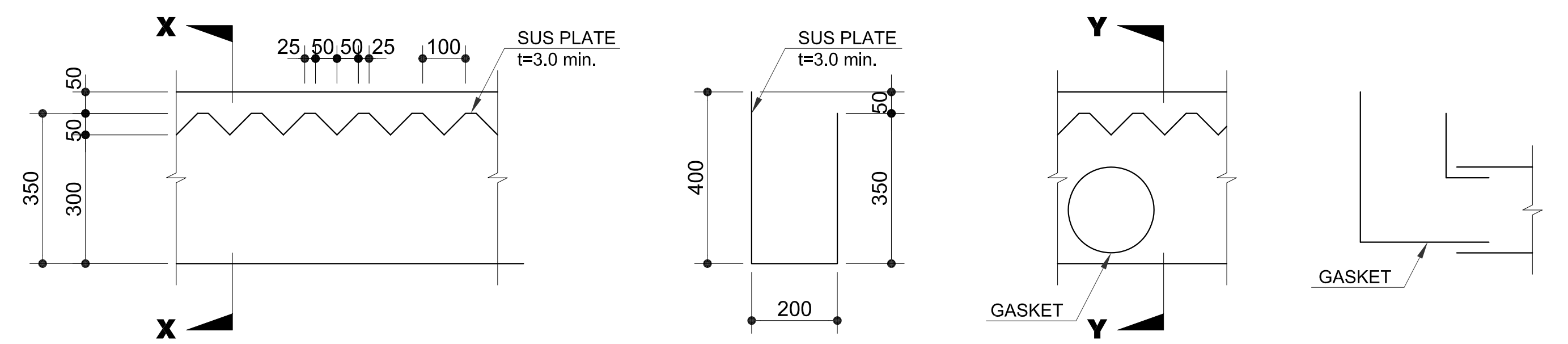
1 **PLAN 1-1**
SCALE 1:30m.



2 **PLAN 2-2**
SCALE 1:30m.

NOTE: - - - - - CORROSION PROTECTION PAINT (TYPE D1)

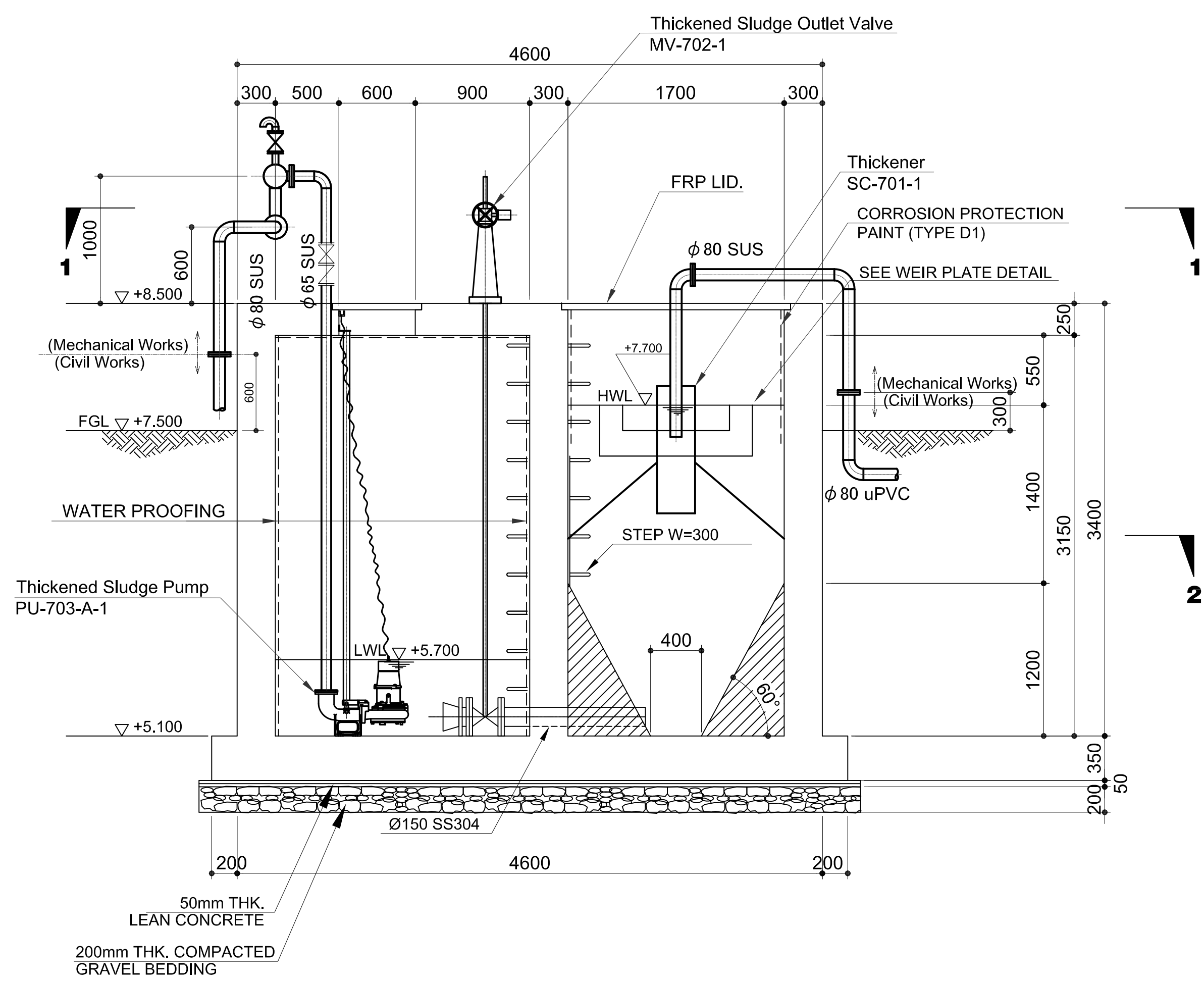
	PREPARED BY: RENATO A. ARRIOLA Filipino Registered Engineer PROF. MECHANICAL ENGINEER PIR. 1725187 REG. NO. 2379 DATE: JANUARY 01, 2013 TEL. 150-563-379 PLACE: TAGBILAG CITY	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. Assistant Secretary for Project Implementation, DOTC	APPROVED: JULIANITO G. BUCAYAN, JR. Undersecretary for Project Implementation, DOTC	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT	SHEET CONTENTS: COMPONENT-3 UTILITY WORKS (U) SUBCOMPONENT-3-3 (U3) SEWAGE TREATMENT SYSTEM MECHANICAL WORK SLUDGE THICKENER (1) PLAN 1-1 & 2-2	SHEET NO: U3-3350-14
	JICA DESIGN CONSULTANT JOINT VENTURE JAC JAPAN AIRPORT CONSULTANTS, INC. NIPON KOEI CO., LTD. NJS CONSULTANTS CO., LTD.	TADASHI AOI Team Leader	LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	DATE INDEX AMENDMENTS JUNE 2013	Prepared by: FRS Jr. WIM HC Checked by: Validated by:	DRAWING SCALE: 1:30



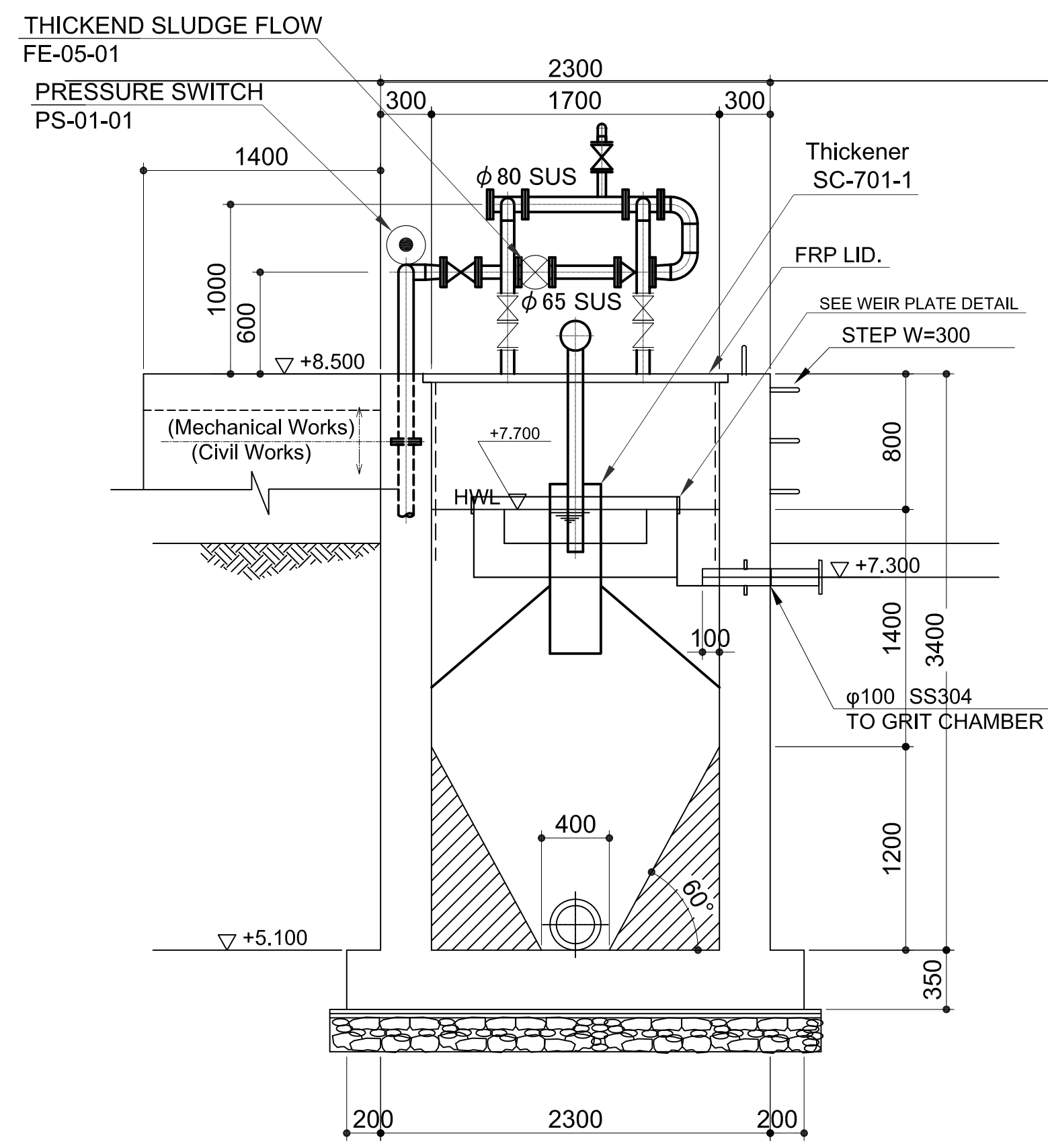
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4B SECTION Y
U3-3350-15 SCALE 1:10m.

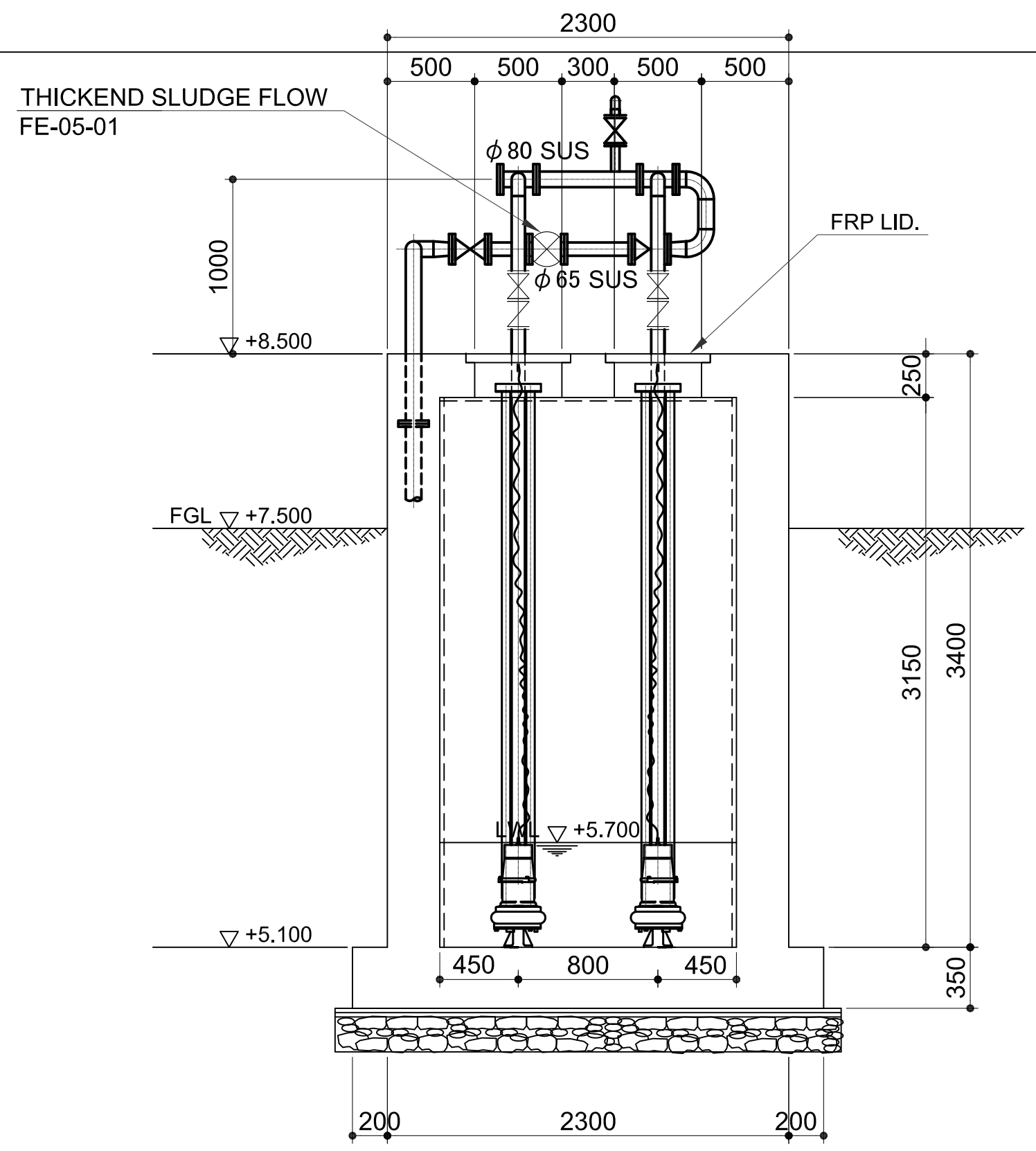
4 WEIR PLATE DETAIL
U3-3350-15 SCALE 1:10m.



1 SECTION A-A
U3-3350-15 SCALE 1:30m.



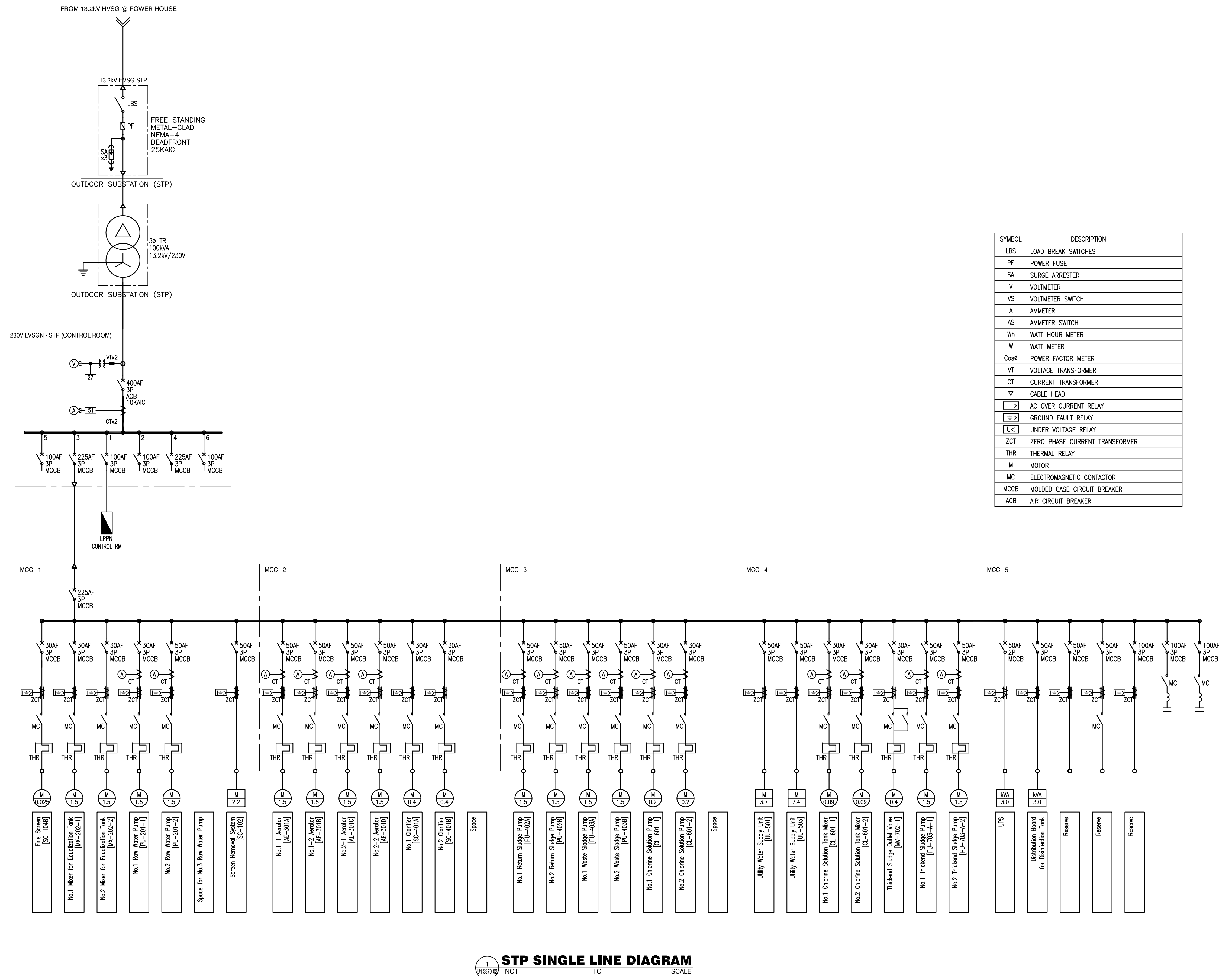
2 SECTION B-B
U3-3350-15 SCALE 1:30m.



3 SECTION C-C
U3-3350-15 SCALE 1:30m.

NOTE: --- CORROSION PROTECTION PAINT (TYPE D1)

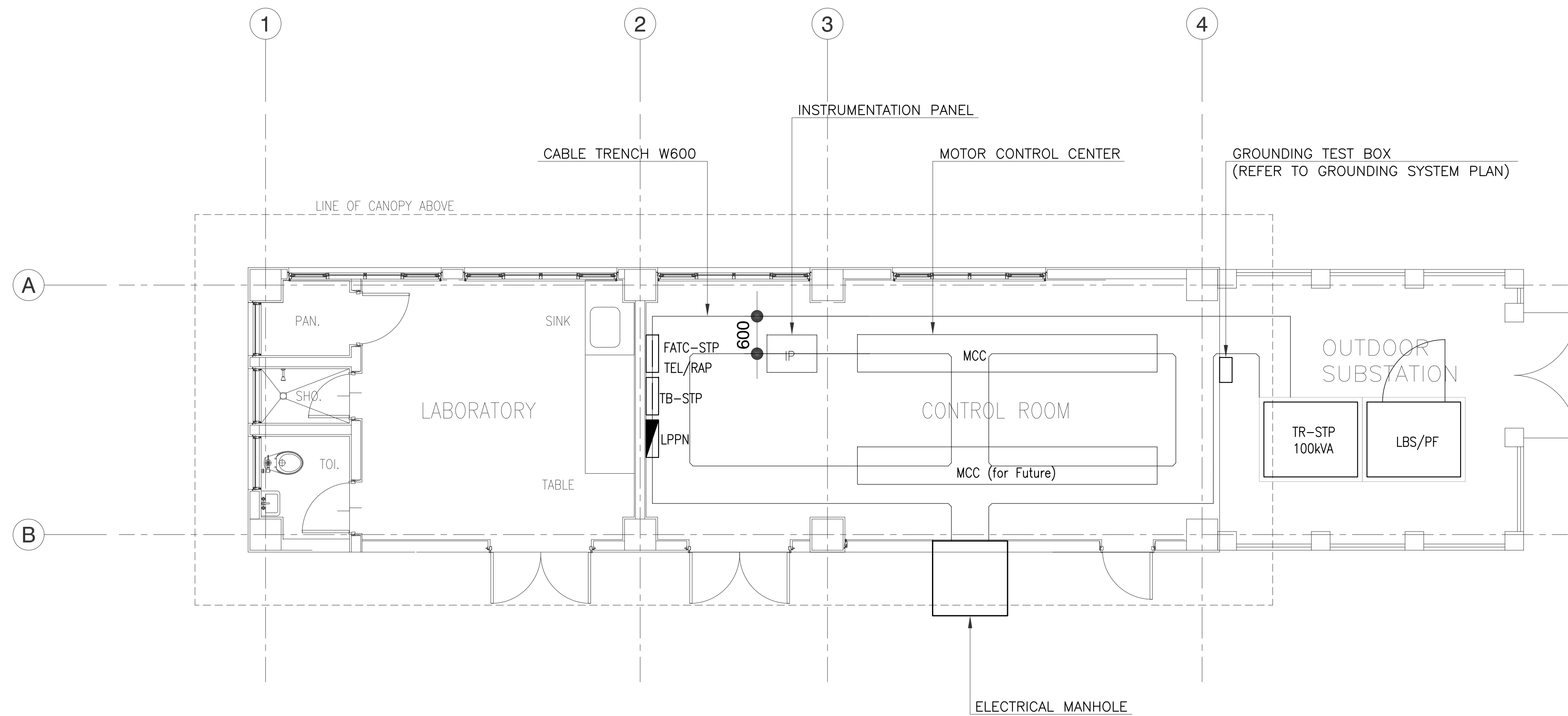
	PREPARED BY: RENATO A. ARRIOLA <small>Filipino Registered Engineer</small>	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	APPROVED: JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT	LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	SHEET CONTENTS: COMPONENT-3 UTILITY WORKS (U) SUBCOMPONENT-3-3 (U3) SEWAGE TREATMENT SYSTEM MECHANICAL WORK SLUDGE THICKENER (2) SECTION A-A, B-B, C-C & DETAILS	SHEET NO: U3-3350-15
	JICA DESIGN CONSULTANT JOINT VENTURE <small>JAPAN AIRPORT CONSULTANTS, INC. NIPPON KOEI CO., LTD. NIS CONSULTANTS CO., LTD.</small>	<small>PROF. MECHANICAL ENGINEER PIR. 1725187 REG. NO. 2379 DATE: JANUARY 01, 2013 T.M.K. 150-563-379 PLACE: TAGUIG CITY</small>	<small>TADASHI AOI Team Leader</small>	<small>JUNE 2013</small>	<small>DATE INDEX AMENDMENTS</small>	<small>Prepared by: FRS Jr. WIM IIC Checked by: Validated by:</small>	DRAWING SCALE: 1:10, 1:30



SYMBOL	DESCRIPTION
LBS	LOAD BREAK SWITCHES
PF	POWER FUSE
SA	SURGE ARRESTER
V	VOLTMETER
VS	VOLTMETER SWITCH
A	AMMETER
AS	AMMETER SWITCH
Wh	WATT HOUR METER
W	WATT METER
Cosφ	POWER FACTOR METER
VT	VOLTAGE TRANSFORMER
CT	CURRENT TRANSFORMER
▽	CABLE HEAD
[]	AC OVER CURRENT RELAY
[]	GROUND FAULT RELAY
[]	UNDER VOLTAGE RELAY
ZCT	ZERO PHASE CURRENT TRANSFORMER
THR	THERMAL RELAY
M	MOTOR
MC	ELECTROMAGNETIC CONTACTOR
MCCB	MOLDED CASE CIRCUIT BREAKER
ACB	AIR CIRCUIT BREAKER

1 **STP SINGLE LINE DIAGRAM**
 NOT TO SCALE

	PREPARED BY: TEODORO N. PAMATMAT <small>PROF. PROF. ELECTRICAL ENGINEER PIR. 1403773</small> <small>REG. NO.: 1927 DATE: 1-04-13</small> <small>TEAM 119-747-900 PLACE: MANILA</small>	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	APPROVED: JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT	LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	SHEET CONTENTS: COMPONENT-3 UTILITY WORKS (U) SUBCOMPONENT-3-3 (U3) SEWAGE TREATMENT SYSTEM ELECTRICAL WORK STP SINGLE LINE DIAGRAM	SHEET NO: U3-3370-01
	JICA DESIGN CONSULTANT JOINT VENTURE JAC JAPAN AIRPORT CONSULTANTS, INC. NIPON KOEI CO., LTD. NJS CONSULTANTS CO., LTD.	TADASHI AOI <small>Team Leader</small>	ILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	DATE: JUNE 2013 INDEX:	AMENDMENTS:	Prepared by: FRS Jr. Checked by: WIM Validated by: IIC



1
U3-3370-04

STP CONTROL ROOM (STP)
ELECTRICAL EQUIPMENT AND CABLE TRENCH LAYOUT PLAN
SCALE 1:50m.

	PREPARED BY: TEODORO N. PAMATMAT <small>PROF. PROF. ELECTRICAL ENGINEER PIR. 1403773</small> <small>REG. NO.: 1927 DATE: 1-04-13</small> <small>T.I.N. 119-747-900 PLACE: MANILA</small>	RECOMMENDING APPROVAL: 	APPROVED: 	PROJECT TITLE: 	SHEET CONTENTS: 	SHEET NO:
	JICA DESIGN CONSULTANT JOINT VENTURE 	ILDEFONSO T. PATDU, JR. Assistant Secretary for Project Implementation, DOTC	JULIANITO G. BUCAYAN, JR. Undersecretary for Project Implementation, DOTC	NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	COMPONENT-3 UTILITY WORKS (U) SUBCOMPONENT-3-3 (U3) SEWAGE TREATMENT SYSTEM ELECTRICAL WORK ELECTRICAL EQUIPMENT AND CABLE TRENCH LAYOUT PLAN	U3-3370-02 DRAWING SCALE: 1:50

GRIT CHAMBER/EQUALIZATION TANK

NO.	FROM	TO	CAPACITY [kW]	STARTER	VOLT [V]	FULL LOAD CURRENT [A]	C.B.	CABLES	COUDUIT	REMARKS
1	MCC	FINE SCREEN	0.025	DOL	230	0.1	30AF,3P,230V	3-2mm2 600V CV + 1-3.5mm2 IV	22mm DIA, CONDUIT	
2	MCC	NO.1 MIXER FOR EQUALIZATION TANK	1.5	DOL	230	5.90	50AF,3P,230V	3-2mm2 600V CV + 1-3.5mm2 IV	22mm DIA, CONDUIT	
3	MCC	NO.2 MIXER FOR EQUALIZATION TANK	1.5	DOL	230	5.90	50AF,3P,230V	3-2mm2 600V CV + 1-3.5mm2 IV	22mm DIA, CONDUIT	
4	MCC	NO.1 RAW WATER PUMP	1.5	DOL	230	5.90	50AF,3P,230V	3-2mm2 600V CV + 1-3.5mm2 IV	22mm DIA, CONDUIT	
5	MCC	NO.2 RAW WATER PUMP	1.5	DOL	230	5.90	50AF,3P,230V	3-2mm2 600V CV + 1-3.5mm2 IV	22mm DIA, CONDUIT	
6	MCC	SCREEN REMOVAL SYSTEM	2.2	DOL	230	8.70	50AF,3P,230V	3-2mm2 600V CV + 1-3.5mm2 IV	22mm DIA, CONDUIT	

ARERATION TANK/SECONDARY SEDIMENTATION TANK

NO.	FROM	TO	CAPACITY [kW]	STARTER	VOLT [V]	FULL LOAD CURRENT [A]	C.B.	CABLES	COUDUIT	REMARKS
1	MCC	NO.1-1 AERATOR	1.5	DOL	230	5.90	50AF,3P,230V	3-2mm2 600V CV + 1-3.5mm2 IV	22mm DIA, CONDUIT	
2	MCC	NO.1-2 AERATOR	1.5	DOL	230	5.90	50AF,3P,230V	3-2mm2 600V CV + 1-3.5mm2 IV	22mm DIA, CONDUIT	
3	MCC	NO.2-1 AERATOR	1.5	DOL	230	5.90	50AF,3P,230V	3-2mm2 600V CV + 1-3.5mm2 IV	22mm DIA, CONDUIT	
4	MCC	NO.2-2 AERATOR	1.5	DOL	230	5.90	50AF,3P,230V	3-2mm2 600V CV + 1-3.5mm2 IV	22mm DIA, CONDUIT	
5	MCC	NO.1 CLARIFIER	0.4	DOL	230	1.60	30AF,3P,230V	3-2mm2 600V CV + 1-3.5mm2 IV	22mm DIA, CONDUIT	
6	MCC	NO.2 CLARIFIER	0.4	DOL	230	1.60	30AF,3P,230V	3-2mm2 600V CV + 1-3.5mm2 IV	22mm DIA, CONDUIT	
7	MCC	NO.1 RETURN SLUDGE PUMP	1.5	DOL	230	5.90	50AF,3P,230V	3-2mm2 600V CV + 1-3.5mm2 IV	22mm DIA, CONDUIT	
8	MCC	NO.2 RETURN SLUDGE PUMP	1.5	DOL	230	5.90	50AF,3P,230V	3-2mm2 600V CV + 1-3.5mm2 IV	22mm DIA, CONDUIT	
9	MCC	NO.1 WASTE SLUDGE PUMP	1.5	DOL	230	5.90	50AF,3P,230V	3-2mm2 600V CV + 1-3.5mm2 IV	22mm DIA, CONDUIT	
10	MCC	NO.2 WASTE SLUDGE PUMP	1.5	DOL	230	5.90	50AF,3P,230V	3-2mm2 600V CV + 1-3.5mm2 IV	22mm DIA, CONDUIT	

DISINFECTION TANK

NO.	FROM	TO	CAPACITY [kW]	STARTER	VOLT [V]	FULL LOAD CURRENT [A]	C.B.	CABLES	COUDUIT	REMARKS
1	MCC	UTILITY WATER SUPPLY UNIT(1)	3.7	DOL	230	14.60	50AF,3P,230V	3-3.5mm2 600V CV + 1-3.5mm2 IV	22mm DIA, CONDUIT	
2	MCC	UTILITY WATER SUPPLY UNIT(2)	7.4	DOL	230	29.10	50AF,3P,230V	3-5.5mm2 600V CV + 1-3.5mm2 IV	28mm DIA, CONDUIT	
3	MCC	NO.1 CHLORINE SOLUTION PUMP	0.2	DOL	230	0.80	30AF,3P,230V	3-2mm2 600V CV + 1-3.5mm2 IV	22mm DIA, CONDUIT	
4	MCC	NO.2 CHLORINE SOLUTION PUMP	0.2	DOL	230	0.80	30AF,3P,230V	3-2mm2 600V CV + 1-3.5mm2 IV	22mm DIA, CONDUIT	
5	MCC	NO.1 CHLORINE SOLUTION TANK MIXER	0.09	DOL	230	0.40	30AF,3P,230V	3-2mm2 600V CV + 1-3.5mm2 IV	22mm DIA, CONDUIT	
6	MCC	NO.2 CHLORINE SOLUTION TANK MIXER	0.09	DOL	230	0.40	30AF,3P,230V	3-2mm2 600V CV + 1-3.5mm2 IV	22mm DIA, CONDUIT	
7	MCC	DISTRIBUTION BOARD FOR DISINFECTION TANK	3.0	DOL	230	13.10	50AF,3P,230V	3-3.5mm2 600V CV + 1-3.5mm2 IV	22mm DIA, CONDUIT	

SLUDGE THICKENER

NO.	FROM	TO	CAPACITY [kW]	STARTER	VOLT [V]	FULL LOAD CURRENT [A]	C.B.	CABLES	COUDUIT	REMARKS
1	MCC	THICKEND SLUDGE OUTLET VALVE	0.4	DOL	230	1.60	30AF,3P,230V	3-2mm2 600V CV + 1-3.5mm2 IV	22mm DIA, CONDUIT	
2	MCC	NO.1 THICKEND SLUDGE PUMP	1.5	DOL	230	5.90	50AF,3P,230V	3-2mm2 600V CV + 1-3.5mm2 IV	22mm DIA, CONDUIT	
3	MCC	NO.2 THICKEND SLUDGE PUMP	1.5	DOL	230	5.90	50AF,3P,230V	3-2mm2 600V CV + 1-3.5mm2 IV	22mm DIA, CONDUIT	

CONTROL ROOM

NO.	FROM	TO	CAPACITY [kW]	STARTER	VOLT [V]	FULL LOAD CURRENT [A]	C.B.	CABLES	COUDUIT	REMARKS
1	LVSGN	MCC			230	148.30	225AF,3P,230V	3-100mm2 600V CV + 1-22mm2 IV		
2	MCC	UPS	3.0	DOL	230	13.10	50AF,3P,230V	3-2mm2 600V CV + 1-3.5mm2 IV		
3	UPS	INSTRUMENTATION PANEL			230			3-3.5mm2 600V CV + 1-8mm2 IV		

NOTES AND SPECIFICATION

- ELECTRICAL WORKS SHALL BE DONE BY DULY LICENSED MASTER ELECTRICIANS AND / OR TO BE SUPERVISED BY DULY REGISTERED ELECTRICIAN ENGINEERS.
- ALL MATERIALS TO BE USED SHALL BE BRAND NEW AND APPROVED BY THE ENGINEERS FOR PURPOSE.
- THE MINIMUM SIZE OF WIRES / CONDUIT TO BE USE SHALL BE 2.0mm² CV 600V & 22mm DIA CONDUIT RESPECTIVELY.
- ALL MOTORS SHALL BE RATED AT 230 VOLTS, THREE PHASE, 60Hz, 4 - WIRE SYSTEM, AS SHOWN IN THE SCHEDULE.
- ALL EXPOSED CONDUIT SHALL BE AN INTERMEDIATE METALIC CONDUIT (IMC) OR APPROVED AS EQUIVALENT.

FOR MOTOR CONTROL CENTER(MCC):

THE MOTOR CONTROL CENTER SHALL BE IN THE FLOOR MOUNTED, FREE STANDING, INDOOR MODULAR TYPE MCC IN NEMA 1 ENCLOSURE.

MOTOR CONTROL CENTER SHALL INCLUDE THE FOLLOWINGS:

- THERMINAL MAGNETIC TRIP MOLDED CASE CIRCUIT BREKER PROTECTION IN EXTERNAL OPERATING HANDLE.
- OVERLOAD PROTECTION.
- GROUND FAULT PROTECTION.
- UNDER VOLTAGE PROTECTION.
- SINGLE PHASING PROTECTION.

	PREPARED BY: TEODORO N. PAMATMAT <small>PROF. ELECTRICAL ENGINEER PIR. 1403773</small> <small>REG. NO.: 1927 DATE: 1-04-13</small> <small>TIN: 119-747-900 PLACE: MANILA</small>	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	APPROVED: JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	SHEET CONTENTS: COMPONENT-3 UTILITY WORKS (U) SUBCOMPONENT-3-3 (U3) SEWAGE TREATMENT SYSTEM ELECTRICAL WORK ELECTRICAL LOAD SCHEDULE	SHEET NO: U3-3370-03 DRAWING SCALE: NONE
	JICA DESIGN CONSULTANT JOINT VENTURE JAPAN AIRPORT CONSULTANTS, INC. NIPPON KOEI CO., LTD. NJS CONSULTANTS CO., LTD.	DATE: JUNE 2013 INDEX: _____ AMENDMENTS: _____ Prepared by: _____ Checked by: _____ Validated by: _____				