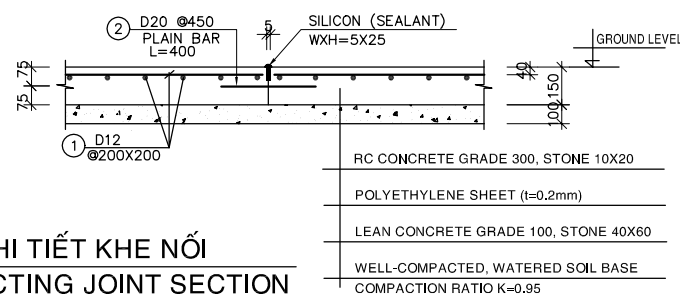
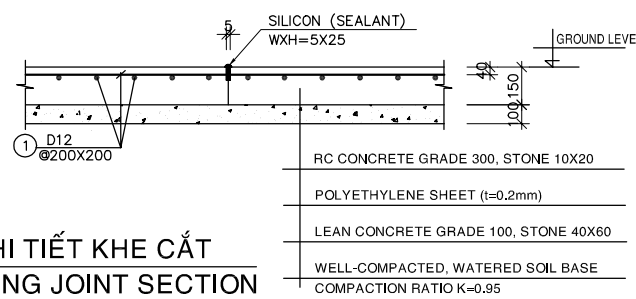


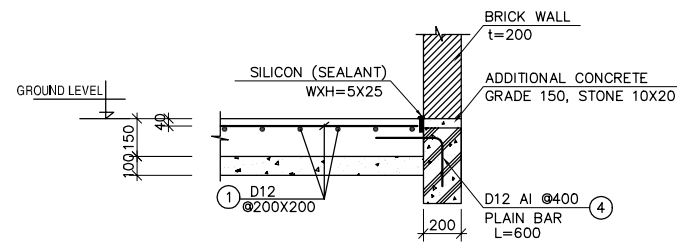
CHI TIẾT NỀN ĐIỂN HÌNH
DETAIL OF GROUND FLOOR SLAB



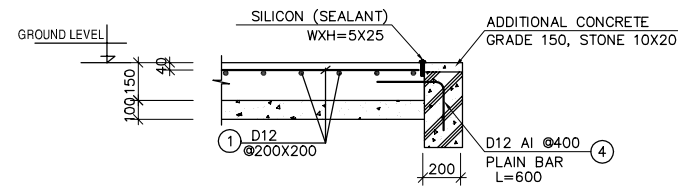
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CONNECTING JOINT SECTION



CHI TIẾT KHE CẮT
CUTTING JOINT SECTION

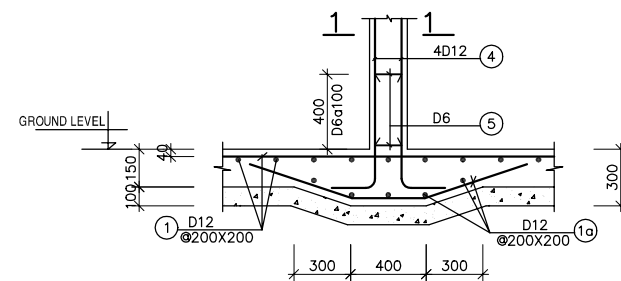


TẠI VỊ TRÍ TƯỜNG GẠCH
AT LOCATION OF BRICK-WALL

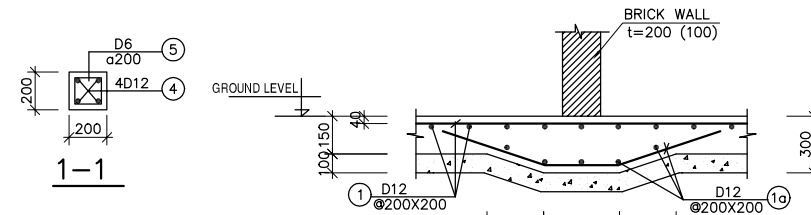


TẠI VỊ TRÍ CỬA
AT LOCATION OF DOOR

CHI TIẾT LIÊN KẾT ĐÀ KIÈNG - SÀN NỀN
CONNECTION OF GROUND BEAM - GROUND FLOOR SLAB



TẠI VỊ TRÍ TƯỜNG GẠCH
AT LOCATION OF BRICK-WALL



TẠI VỊ TRÍ CỬA
AT LOCATION OF DOOR

CHI TIẾT LIÊN KẾT BỔ TRỢ - SÀN NỀN
CONNECTION OF SUB-COLUMN - GROUND FLOOR SLAB

GHI CHÚ:
- BÊ TÔNG LỚT ĐÁ 40X60, MÁC 100
- BÊ TÔNG ĐÁ 10X20, MÁC 300
- CỐT THÉP Ra=2000 Kg/cm²

NOTE :
- LEAN CONCRETE STONE 40x60, GRADE 100
- CONCRETE STONE 10x20, GRADE 300
- REINFORCEMENT Ra=2000 Kg/cm²

NO.	DATE	DESCRIPTIONS	BY	APPRO.
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 WASTE WATER TREATMENT PLANT G-FLOOR SLAB DETAILS				
SCALE : AS SHOW				
JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		PACIFIC CONSULTANTS INTERNATIONAL		
DESIGNED KIKUTA HIROSHI	CHECKED KONDO MASAMI			
DATE : JUNE 2001	DWG. No. PE-WWTP-310-07			

LINTEL SCHEDULE

NOTES : THIS SCHEDULE IS USED FOR ALL ITEMS IN PACKAGE E, UNLESS OTHERWISE ASSERTED

MARKS	SIZE (IN / IN)		SECTION		LENGTH	QUANTITY	LEVEL								
	WIDTH	HEIGHT	WALL 200THK.	WALL 100THK.											
D01	650	2000			1050	08	2000								
D24								02							
D41								02							
D51								06							
D71								02							
D103								06							
D02	750	2200			1150	07	2200								
D23								01							
D42								02							
D52								02							
D72								02							
D102								04							
D03	800	2200			1200	06	2200								
D21								02							
D53								08							
D04								850	2200			1250	04	2200	
D22															02
D82															01
D94	01														
D82	01														
D45	03														

MARKS	SIZE (IN / IN)		SECTION		LENGTH	QUANTITY	LEVEL														
	WIDTH	HEIGHT	WALL 200THK.	WALL 100THK.																	
D05	2000	2500			2400	02	2500														
D06								07													
D07								01													
D08								01													
D09								01													
D10								09													
D11								06													
D43								01													
D44								04													
D54								07													
D39	02																				
D74	01																				
D55	900	2200			1300	05	2200														
D75								01													
D100								05													
D56								3000	4000			3600	02	4000							
D57															1800	2500			2200	01	2500
D91																					
D93	02																				
D37	1500	4000			1900	02	4000														
D37																					

MARKS	SIZE (IN / IN)		SECTION		LENGTH	QUANTITY	LEVEL																												
	WIDTH	HEIGHT	WALL 200THK.	WALL 100THK.																															
W01	2400	1850			2800	15	3150																												
W53								01																											
W02	3200	1200			3800	01	2200																												
W03								6400	1200			7000	01	2200																					
W04															02																				
W05								600	600			1000	03	2600																					
W23															03																				
W71															02																				
W06								1800	600			2200	01	2600																					
W21															2400	1300			2800	03	3150														
W22																						01													
W41															2500	3000			2900	18	4200														
W42	3600	600			4200	10	2350																												
W43																						2400	600			2800	02	2350							
W44																													2500	1000			2900	03	2350
W45																																			

MARKS	SIZE (IN / IN)		SECTION		LENGTH	QUANTITY	LEVEL														
	WIDTH	HEIGHT	WALL 200THK.	WALL 100THK.																	
W46	1800	1000			2200	01	2350														
W55								2000	1000			2400	69	2350							
W72															1000	1200			1400	01	3150
W73								4000	1200			4600	01	3150							
W74																					
W101								1200	600			1600	06	2600							
W102															2400	1800			2800	10	3150
D73								1250	3000			1650	01	3000							
D70															2500	3000			2900	01	3000
D101																					
D104	3000	4000			3600	04	4000														

NO.	DATE	DESCRIPTIONS	BY	APPRO.

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
WASTE WATER TREATMENT PLANT

GENERAL
LINTEL SCHEDULE

SCALE : AS SHOW

JICA JAPAN INTERNATIONAL COOPERATION
AGENCY (JICA)

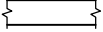

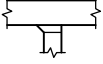
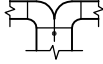
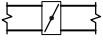
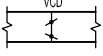





PACIFIC CONSULTANTS INTERNATIONAL

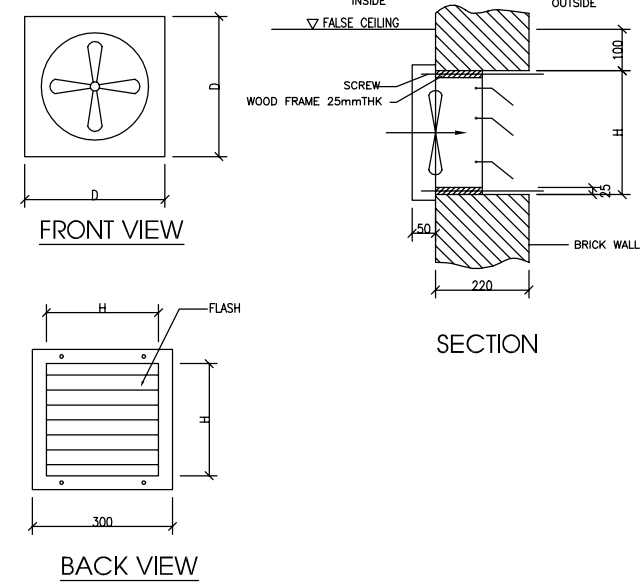
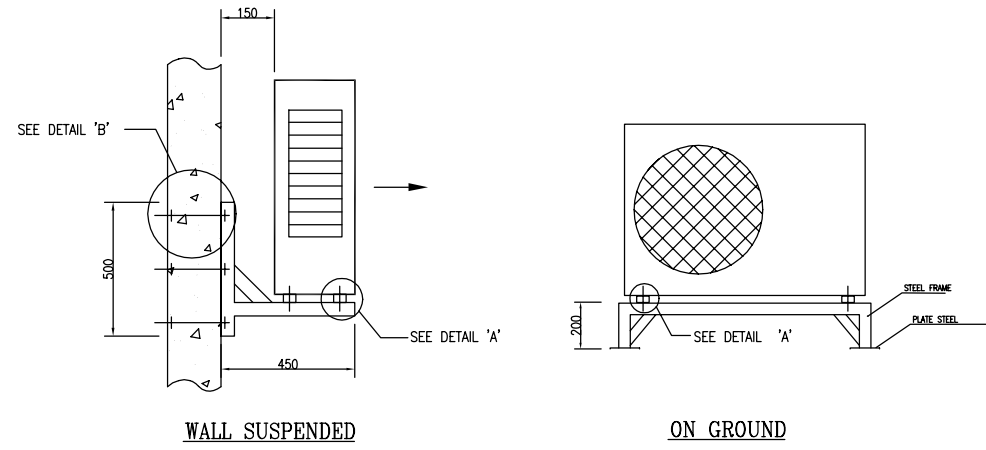
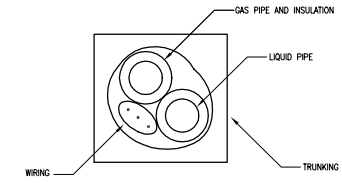
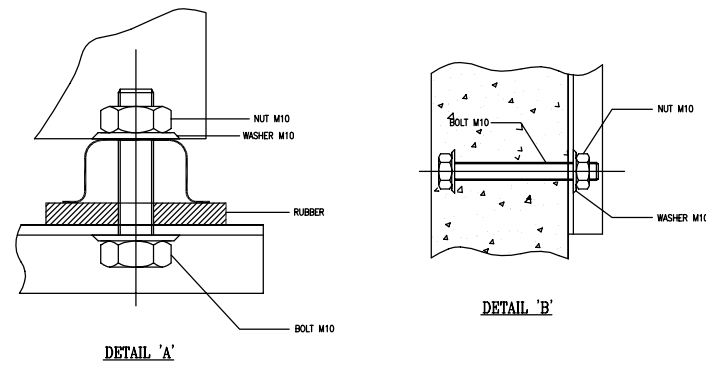
DESIGNED
KIKUTA HIROSHI

CHECKED
KONDO MASAMI

DATE : JUNE 2001 DWG. No. PE-WWTP-310-08

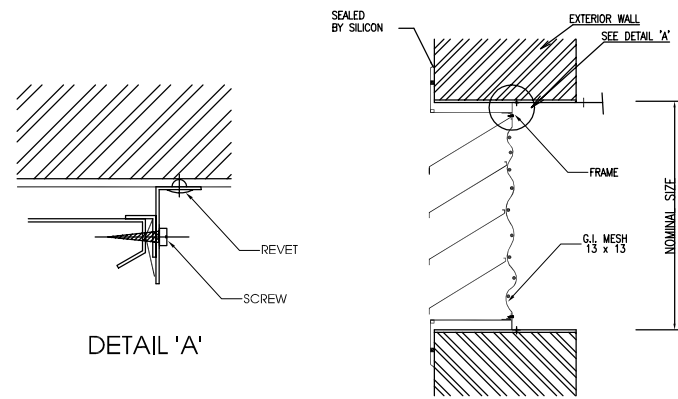
LEGEND AND ABBREVIATION

-  DUCTWORK
-  DUCTWORK WITH INTERNAL INSULATION (25mm THICK)
-  SPLITTER DAMPER
-  SPLITTER DAMPER
-  FIRE DAMPER C/W ACCESS PANEL
-  VOLUME CONTROL DAMPER OPPOSED BLADE TYPE
-  SUPPLY/RETURN AIR GRILLE C/W VCD
-  FAN C/W FLEXIBLE CONNECTION
-  FAN COIL UNIT
-  CONDENSING UNIT
-  CONDENSING UNIT

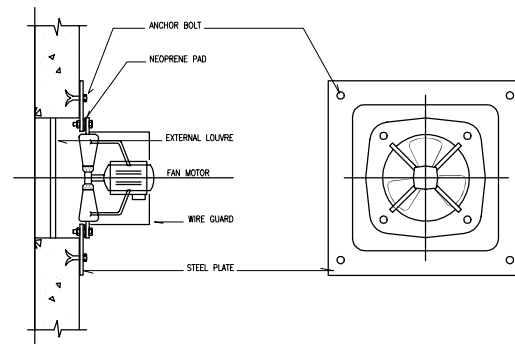


TYPICAL OF INSTALLATION FOR CONDENSING UNIT

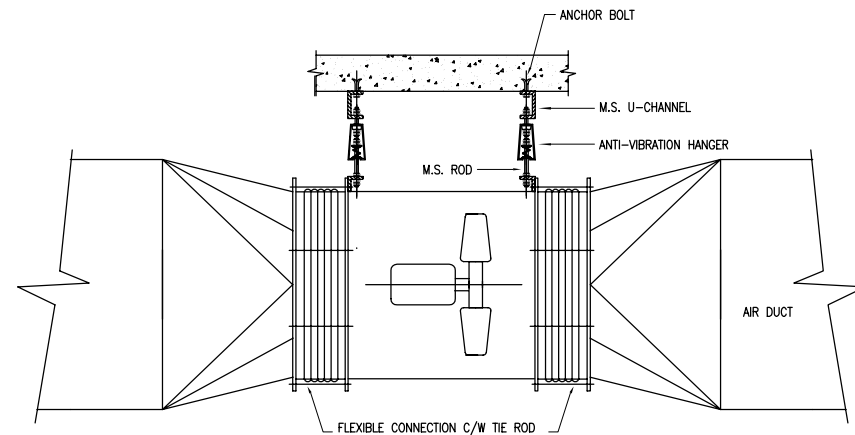
TYPICAL OF INSTALLATION FOR WALL MOUNTED FAN



TYPICAL OF INSTALLATION FOR INTAKE/OUTLET AIR



MOUNTING DETAIL FOR PROPELLER FAN



MOUNTING DETAIL FOR AXIAL FAN

NO.	DATE	DESCRIPTIONS	BY	APRO.
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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

VENTILATION AND AC SYSTEM
LEGENDS & INSTALLATION DETAILS

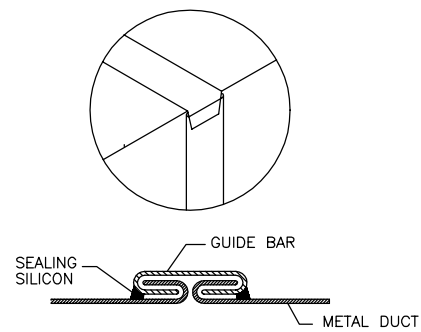
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 JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

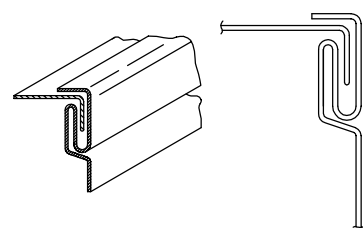
 PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED: KIKUTA HIROSHI
CHECKED: KONDO MASAMI

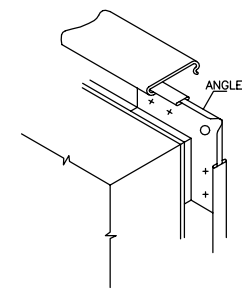
DATE : JUNE 2001
DWG. No. PE-WWTP-310-09



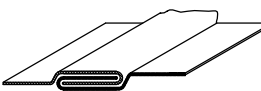
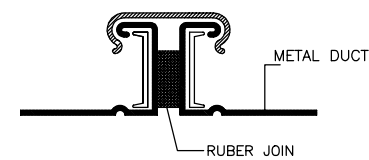
JOIN T-1



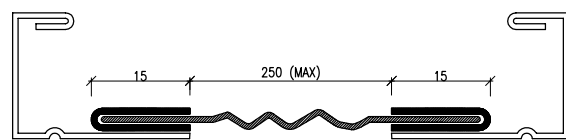
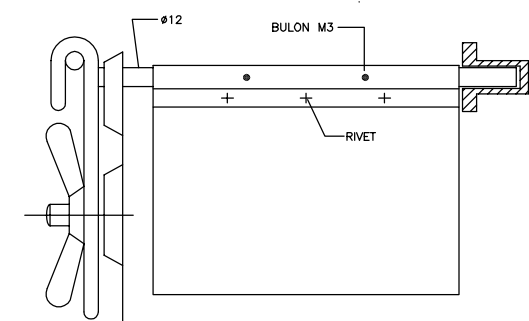
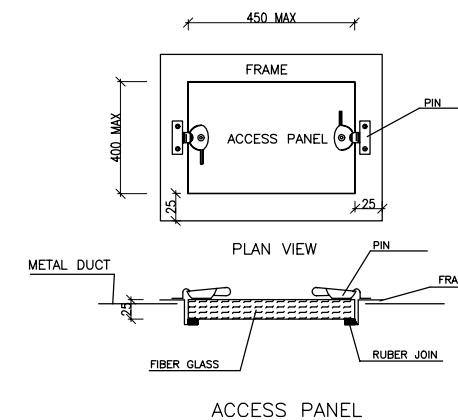
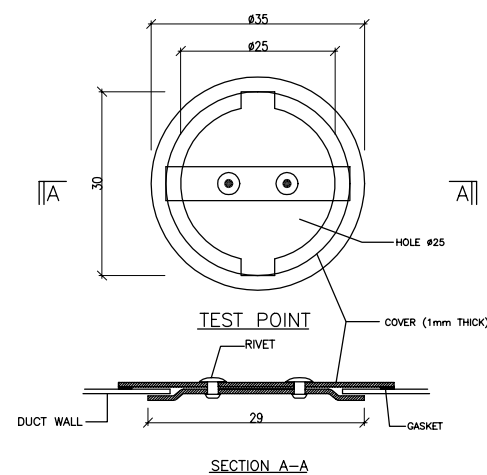
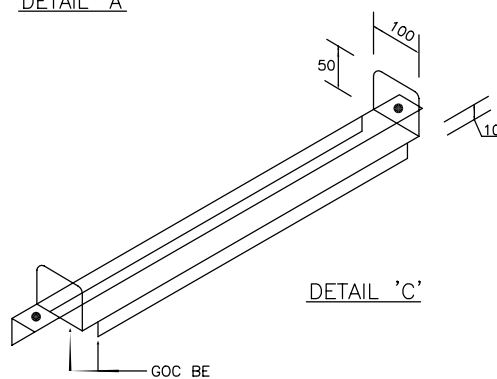
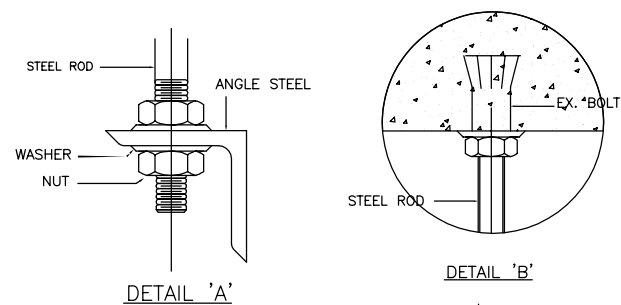
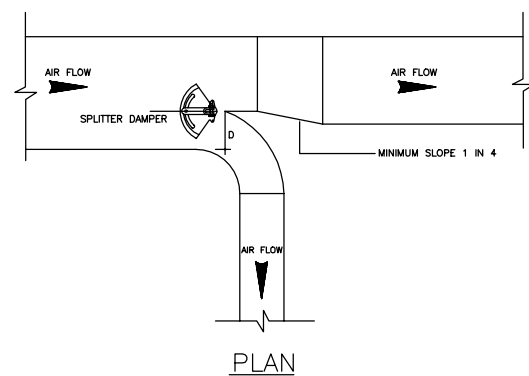
JOIN L-1



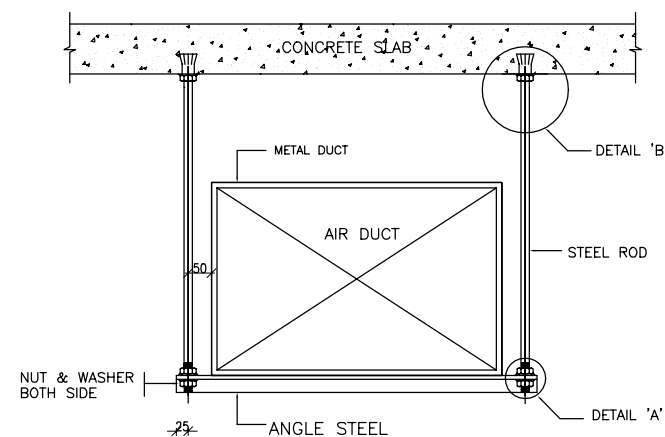
JOIN T-24



JOIN L-3



FLEXIBLE CONNECTION



HANGER & SUPPORT FOR METAL DUCT

STANDARD OF HANGER & JOIN FOR AIR DUCT

LONGEST SIDE OF DUCT (MM)	THICKNESS (MM)	JOIN TYPE		HANGER		
		SYMBOL	SPACE (MM)	STEEL ROD DIA.(MM)	SPACE (MM)	ANGLE STEEL
TO 350	0.6	T-1	3000	8	2000	30x30x3
TO 600	0.6	T-1	1500	8	2000	30x30x3
TO 750	0.8	T-24	1500	8	2000	30x30x3
TO 1000	0.8	T-24	1500	10	2000	40x40x4
TO 1500	0.8	T-24	1500	10	2000	40x40x4
TO 2000	1.0	T-24	1500	10	2000	40x40x4

NO.	DATE	DESCRIPTIONS	BY	APRO.

REVISIONS

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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
VENTILATION AND AC SYSTEM
DUCTWORK DETAILS

SCALE : AS SHOWN

JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED
KIKUTA HIROSHI
CHECKED
KONDO MASAMI

DATE : JUNE 2001
DWG. No. PE-WWTP-310-10

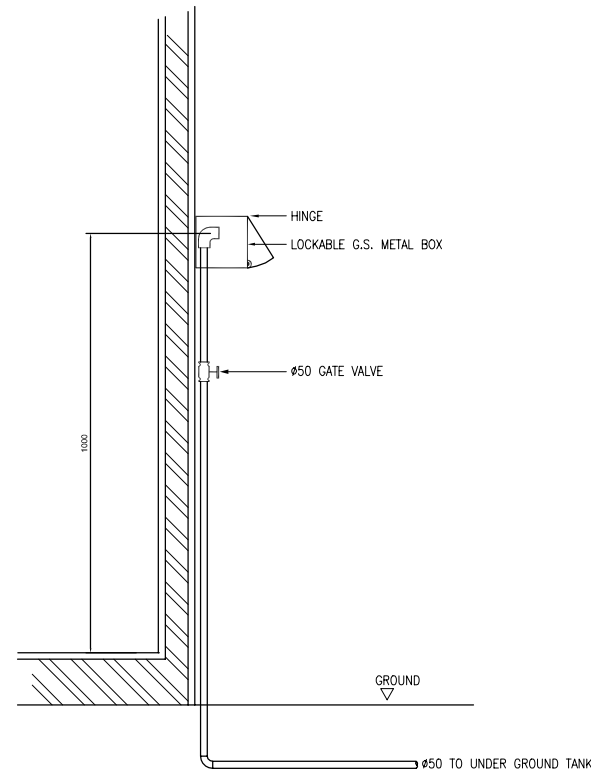
LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	WC - WATER CLOSET		ANGLE VALVE
	UR - URINAL		FLEXIBLE PIPE CONNECTOR/ EXPANSION PIPE CONNECTOR
	WB - WASH BASIN		STRAINER (Y-TYPE OR BUCKET TYPE)
	BT - BATHTUB		DUPLEX TYPE STRAINER
	SK - SINK		WATER HAMMER ARRESTOR
	SH - SHOWER		FLOATLESS TYPE LEVEL REGULATOR
	FT - FLOOR TRAP		WATER PUMP
	I.C. - INSPECTION CHAMBER		PRESSURE GAUGE
	GT - GREASE TRAP		AIR VENT
	COLD WATER PIPE		OVERFLOW PIPE WITH WARNING PIPE
	CLEANING WATER PIPE		STILLING PIPE
	FLUSHING WATER PIPE		WATER METTER
	HOT WATER PIPE		PUMP CONTROL PANEL
	HOT WATER RETURN PIPE		
	GATE VALVE		
	LOOSE JUMPER TYPE STOP		
	SILENT CHECK VALVE		
	SWING CHECK VALVE		
	PRESSURE REDUCING VALVE (SET)		
	PRESSURE REDUCING VALVE		
	SUBMERSIBLE TYPE FLOAT BALL VALVE		
	BALL FLOAT VALVE		
	COMBINED MIXER		
	TAP POINT/FACUET/BIB TAP		
	TAP POINT WITH LOCK		

GENERAL NOTES

- SOIL TRAP FOR WATER CLOSET SHOULD BE OF 100mm INTERNAL DIAMETER WITH A WATER SEAL NOT LESS THAN 50mm AND BE VENTED.
- EVERY ANTI-SYPHONAGE PIPE SHALL BE CONNECTED WITH BRANCH SOIL PIPE OR BRANCH WASTE PIPE AT A POINT NOT MORE THAN 300mm FROM TRAP OUTLET.
- THE BEND OF SOIL WASTE AND RAINWATER PIPE SHALL HAVE AN OBTUSE ANGLE AND HAVE LARGER RADIUS OF CURVATURE AND NOT CHANGE IN ANY WAY CROSS SECTION OF THE PIPE TO PROVIDE WITH A CLEANING EYE AT SIDE BEND.
- WHERE THE WASTE PIPE FROM A WASTE FITMENT IS CONNECTED TO A SOIL PIPE THE TRAP PROVIDED FOR EACH FITMENT SHALL HAVE A WATER SEAL NOT LESS THAN 60mm DEEP AND BE VENTED BY MEANS OF ANTISYPHONAGE PIPE OR ANTISYPHONAGE TRAP.
- HORIZONTAL VENT PIPE SHALL BE INSTALLED IN A MANNER THAT THERE IS A CONTINUOUS FALL BACK AT A GRADIENT OF NOT LESS THAN 1 IN 300 INTO THE DISCHARGE PIPE SYSTEM.
- UNLESS OTHERWISE STATED GRADIENT OF DRAIN PIPES SHALL BE AS FOLLOWS.

DIAMETER OF PIPE	MINIMUM FALL
32 TO 100	1 : 40
150	1 : 70
225	1 : 100
300	1 : 150
- ALL MAINHOLE COVERS INSIDE OR UNDER BUILDING SHALL BE CAST IRON DOUBLE SEAL AIR TIGHTED OR FLOOR TILE ON TOP COVER FOR TOILET AND SHOP.
- ALL SIZES SHOWN ARE IN mm.
- TRAPS FOR THE FOLLOWING WASTE FITMENTS SHALL BE OF 80mm DEEP WATER SEAL ANTISYPHONAGE TYPE AND OF APPROVED MODEL
 A). WASH BASIN (Ø32)
 B). FLOOR DRAIN (Ø50)
 C). SINK (Ø40)
 D). SHOWER TRAY (Ø50)
- SOIL PIPE FOR WATER CLOSET SHALL BE 100mm DIAMETER AND CONNECTED WITH 50mm ANTISYPHONAGE PIPE AT PAN OUTLET NOT MORE THAN 300mm.
- ALL UNDERGROUND PIPES SHALL BE PROVIDED WITH PIPE HAUNCHING OR SURROUNDED BY CONCRETE AS SHOWN ON DRAWINGS.
- DURING THE PROGRESS OF THE WORK ALL OPEN ENDS OF PIPES SHALL BE SUITABLY CAPPED TO PREVENT THE INGRESS OF FOREIGN MATER.
- DRAINAGE ARE ENDORSED TO EFFECT THAT PRIOR TO TEST.
 A). NO PIPE SHALL BE PAINTED
 B). NO UNDERGROUN PIPE SHALL BE COVERED WITH CONCRETE OR EARTH.
- INSPECTION PANELS OF ADEQUATE SIZE SHALL BE PROVIDED AT ALL PIPE DUCTS AND SHAPES FOR INSPECTION AND MAINTENANCE OF PIPES.
- ALL PIPES SHALL BE CONCEALED IN WALL OR PIPE DUCT INSIDE THE TOILETS EXCEPT THE PIPEWORK AT CEILING LEVEL.
- FIRE STOPPED SHALL BE USED FOR UPVC PIPES PASS THROUGH FIRE COMPARTMENT. THE FIRE STOPPED SHALL BE COMPLIED TO BS 476.



TYPICAL DETAIL OF CONNECTION TO WAGON
NTS

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
WASTERWATER TREATMENT PLANT

PLUMBING & DRAINAGE SYSTEM
LEGEND, GENERAL NOTES & DETAILS

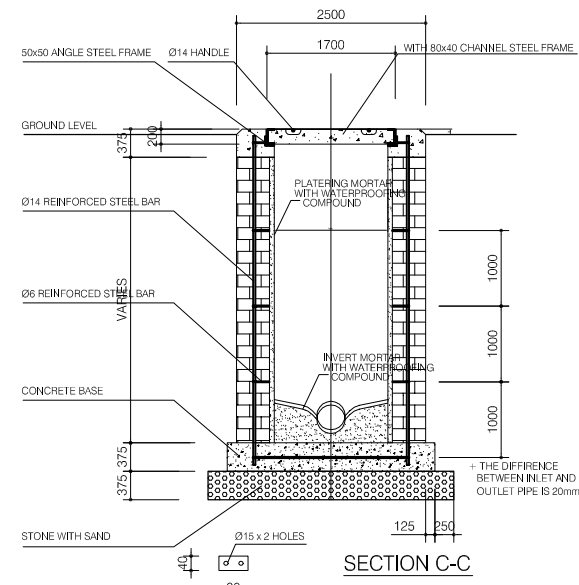
SCALE : AS SHOW

JICA JAPAN INTERNATIONAL COOPERATION
AGENCY (JICA)

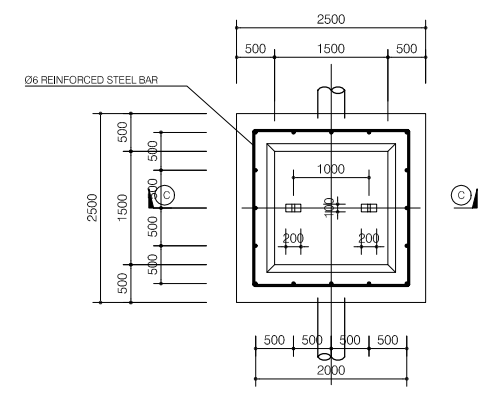
PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED KIKUTA HIROSHI	CHECKED KONDO MASAMI
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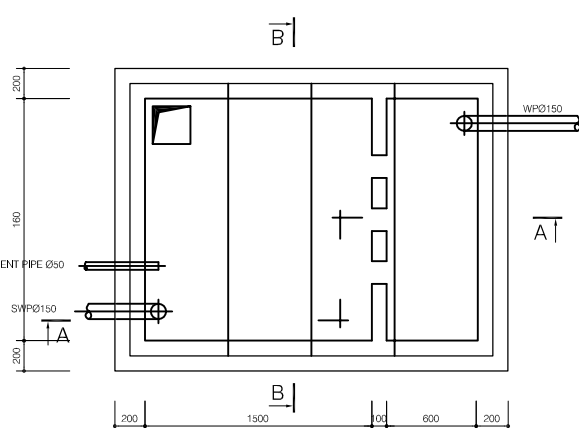
DATE : JUNE 2001 DWG. No. PE-WWTP-310-11



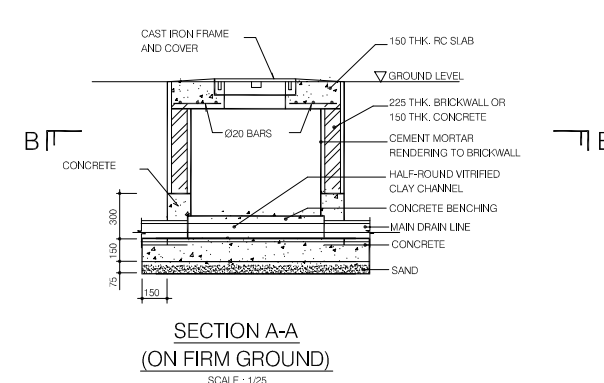
SECTION C-C
SECTION OF BRICK FOR MH WALL



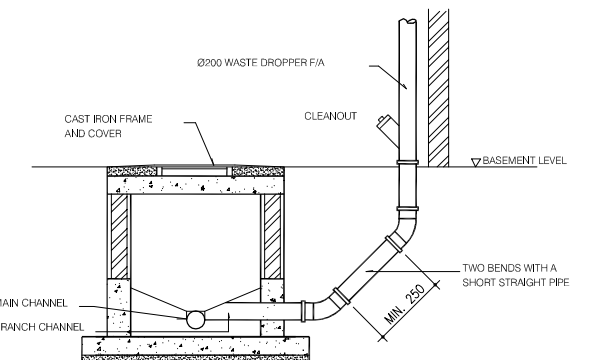
SEWER MANHOLE DETAIL PLAN



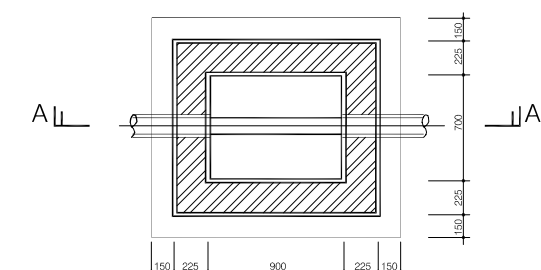
SECTION A-A
(ON SOFT GROUND)



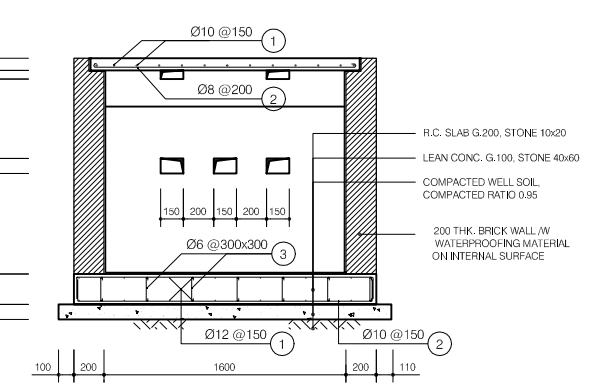
SECTION A-A
(ON FIRM GROUND)



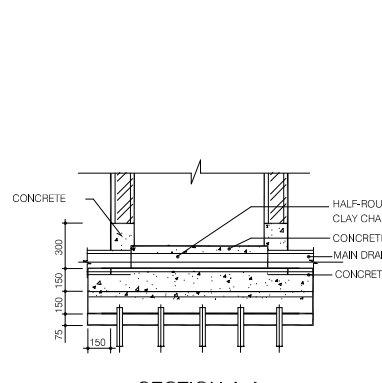
TYPICAL WASTE STACK CONNECTION
TO INSPECTION CHAMBER



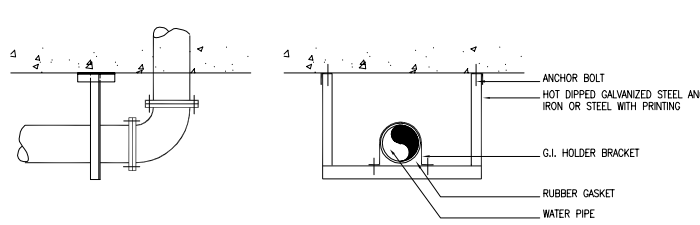
TYPICAL INSPECTION CHAMBER
SCALE : 1/25



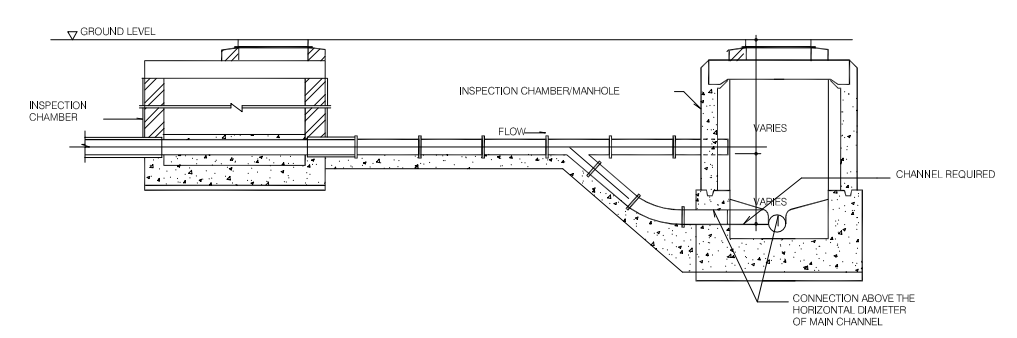
SECTION B-B



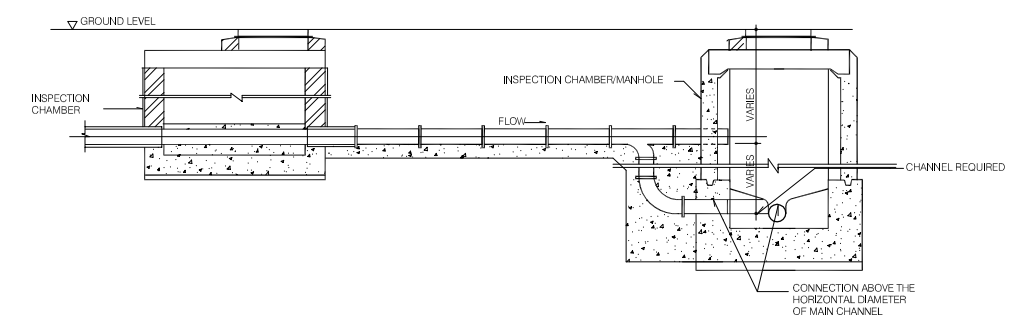
SECTION A-A
(ON SOFT GROUND)



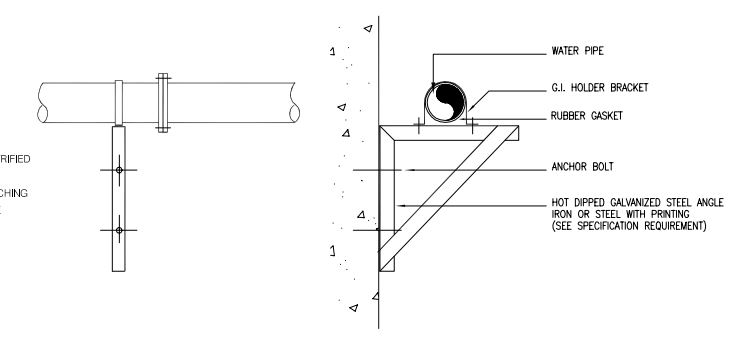
TYPICAL CEILING MOUNTED PIPE HANGER DETAIL
N.T.S.



CONNECTION TO INSPECTION CHAMBER / MANHOLE WITH TUMBLING BAY
N.T.S.



CONNECTION TO INSPECTION CHAMBER / MANHOLE WITH BACKDROP



TYPICAL WALL MOUNTED PIPE HANGER DETAIL
N.T.S.

NO.	DATE	DESCRIPTIONS	BY	APRO.

REVISIONS

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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
GENERAL DETAILS
PLUMBING AND DRAINAGE SYSTEM

SCALE : AS SHOWN

JICA JAPAN INTERNATIONAL COOPERATION
AGENCY (JICA)

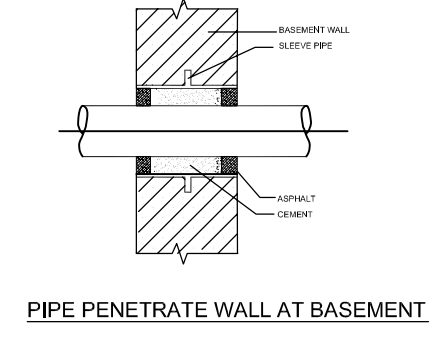
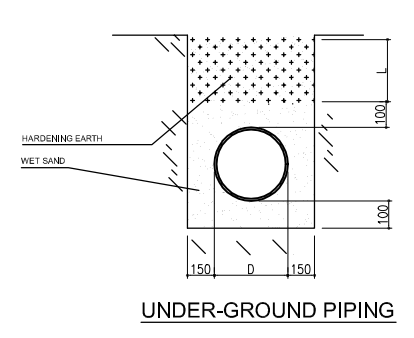
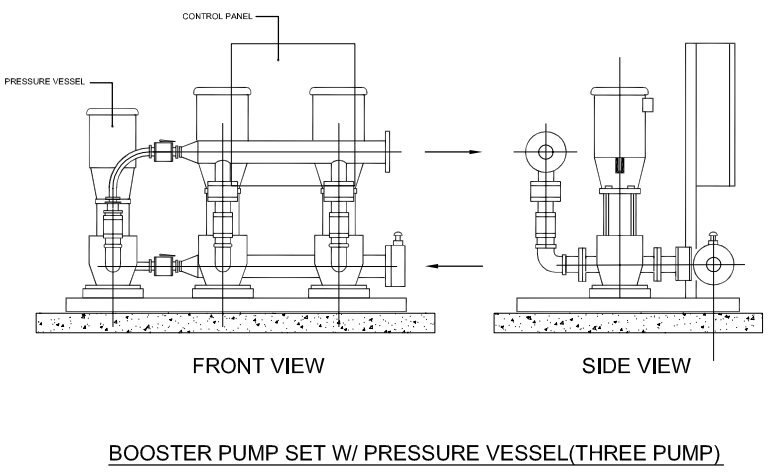
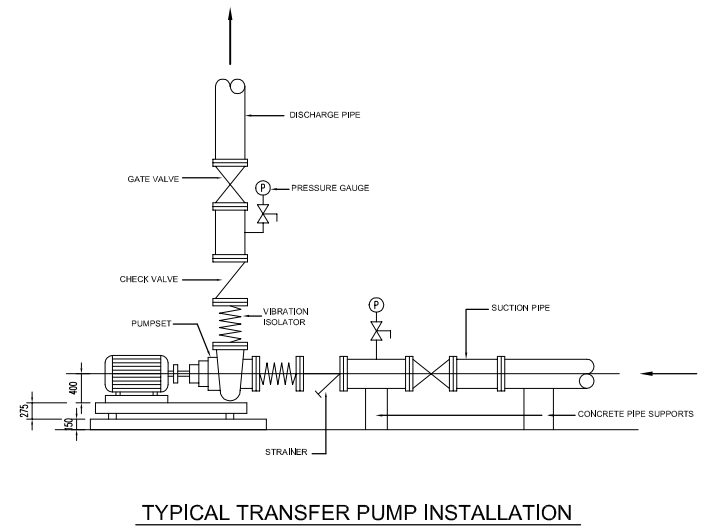
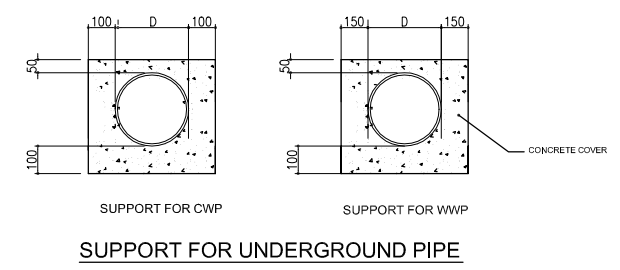
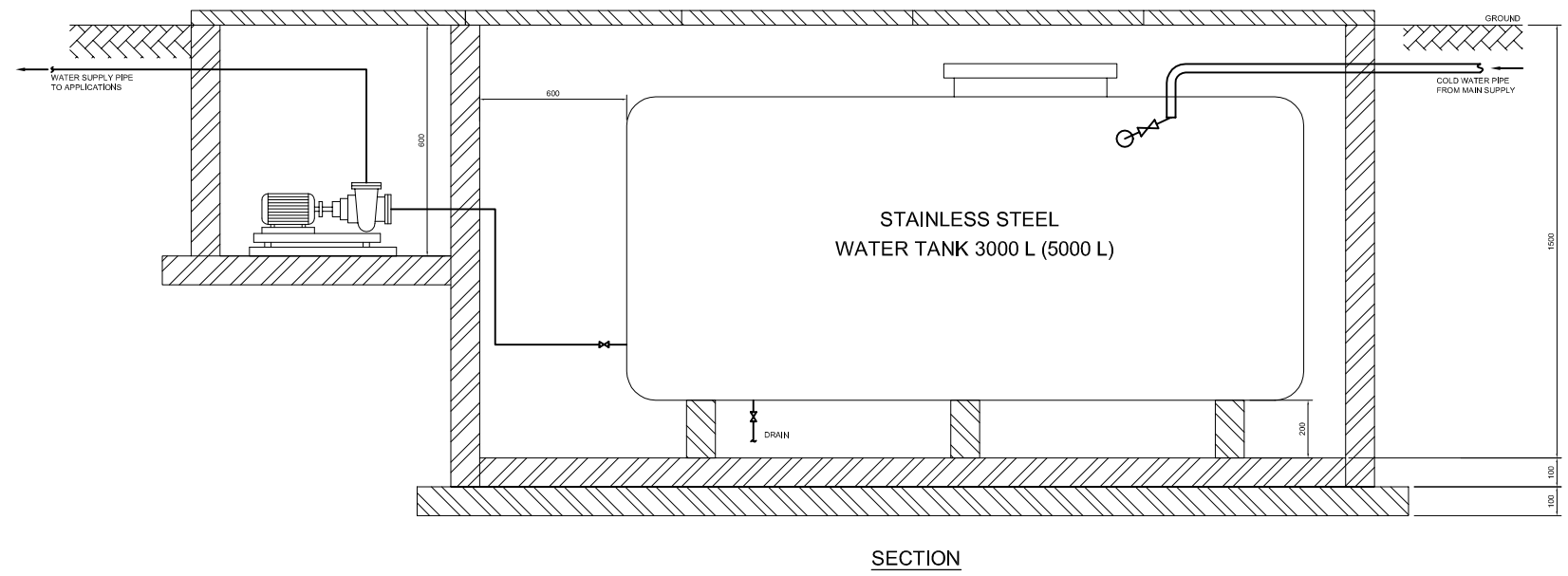
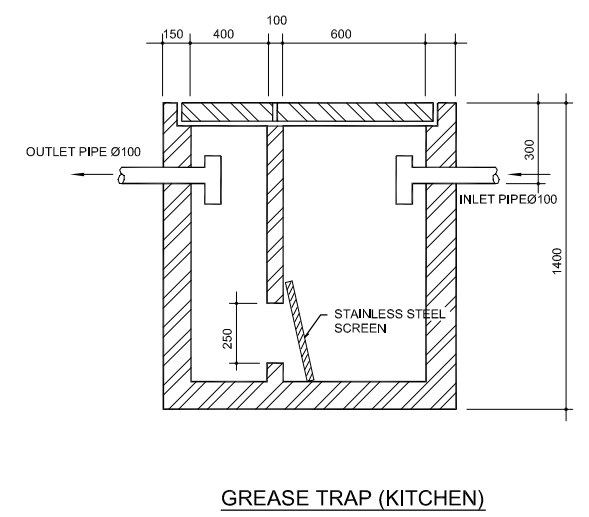
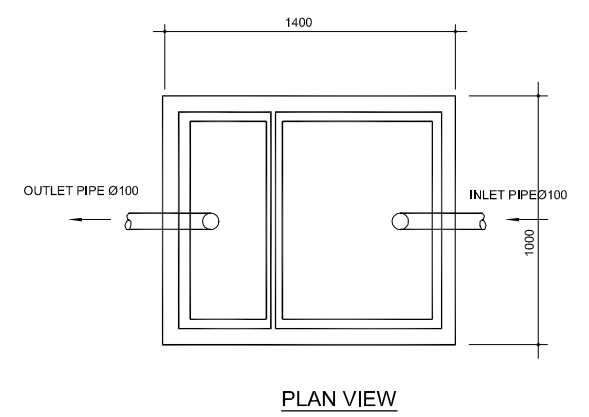
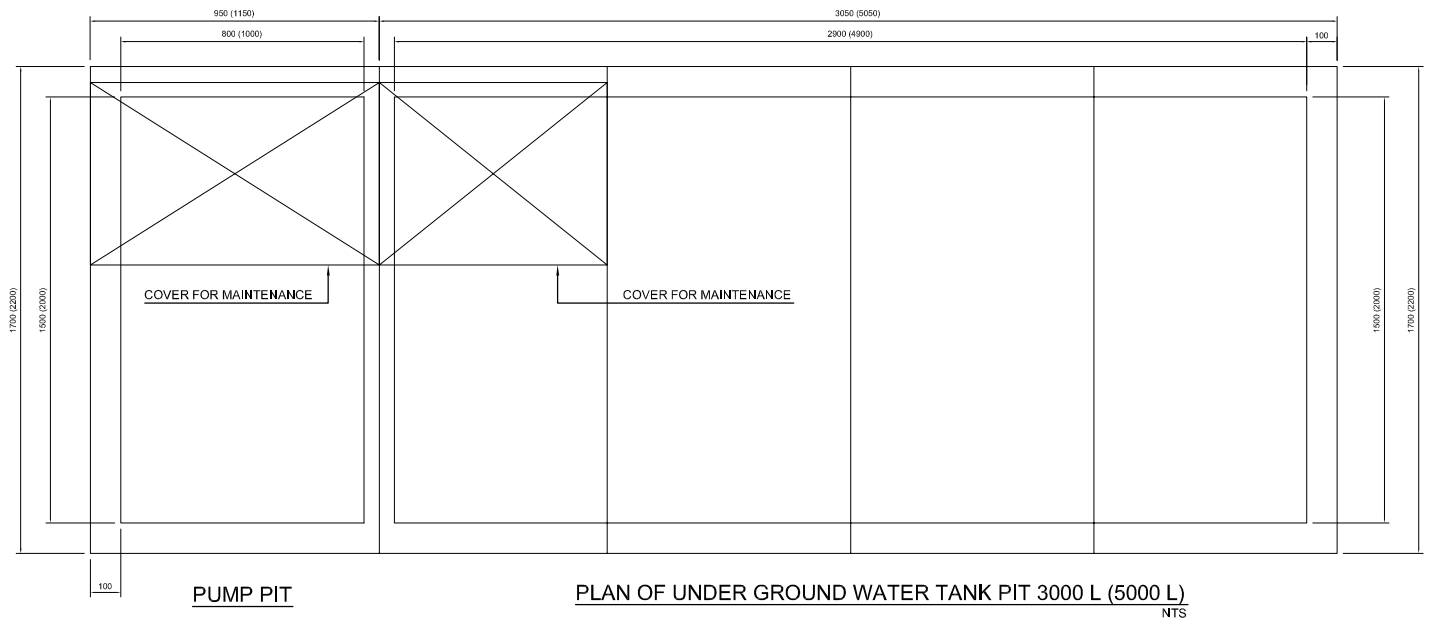
PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED
KIKUTA HIROSHI

CHECKED
KONDO MASAMI

DATE : JUNE 2001

DWG. No. PE-WWTP-310-12



NO.	DATE	DESCRIPTIONS	BY	APRO.

REVISIONS

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PACKAGE E
WASTEWATER TREATMENT PLANT
**PLUMBING & DRAINAGE SYSTEM
TYPICAL DETAILS**

SCALE : AS SHOW

JICA JAPAN INTERNATIONAL COOPERATION
AGENCY (JICA)

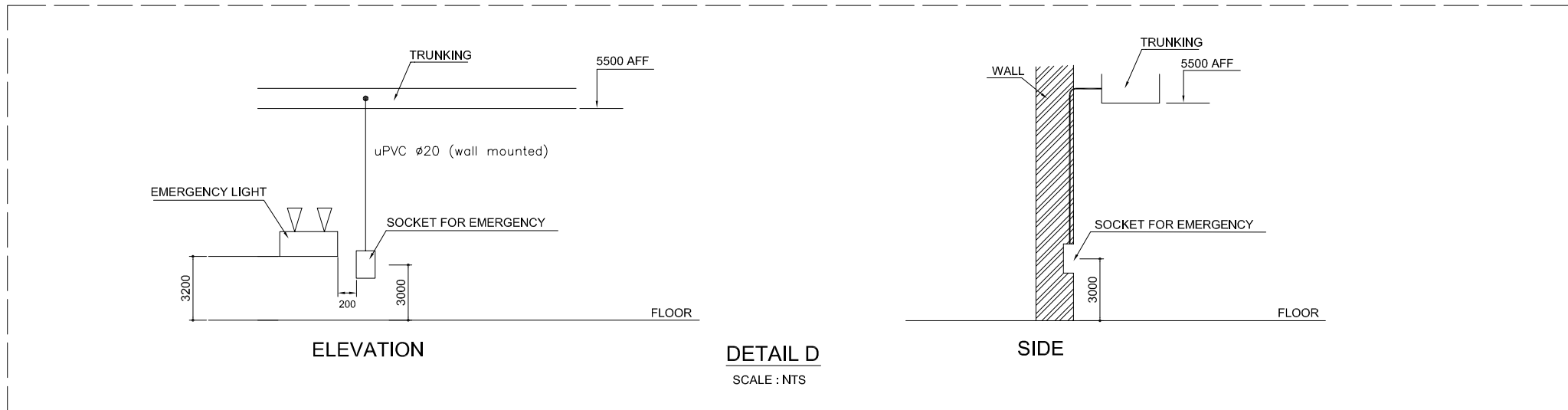
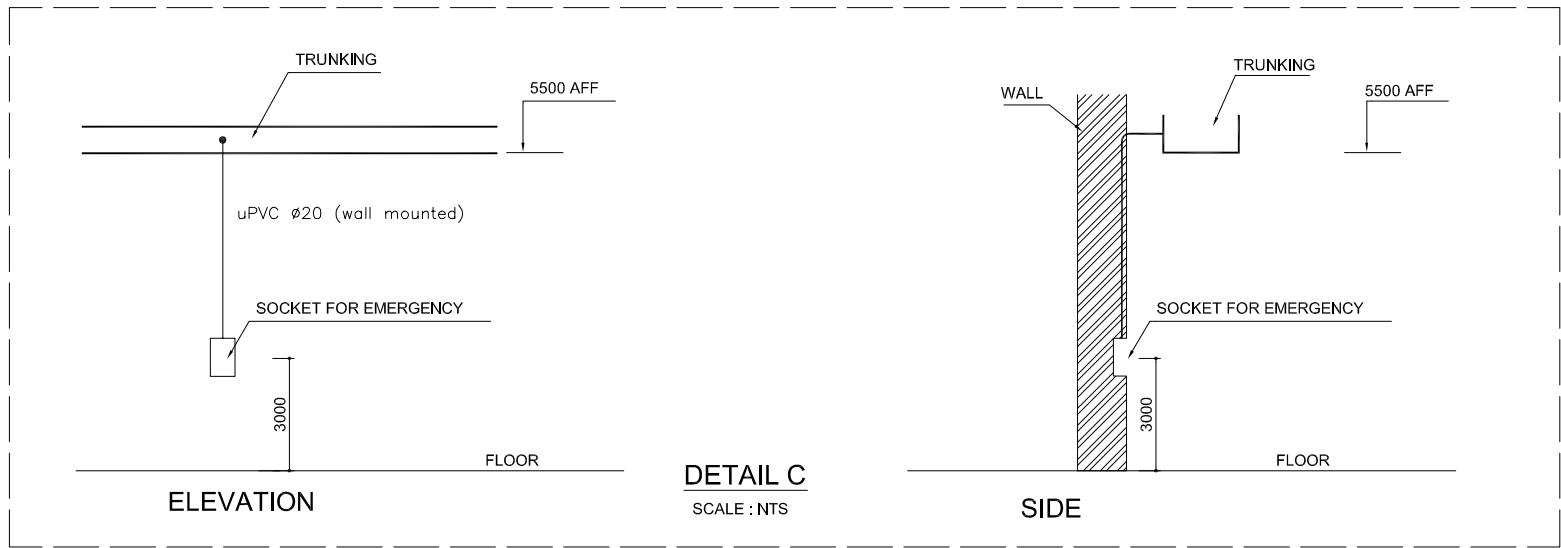
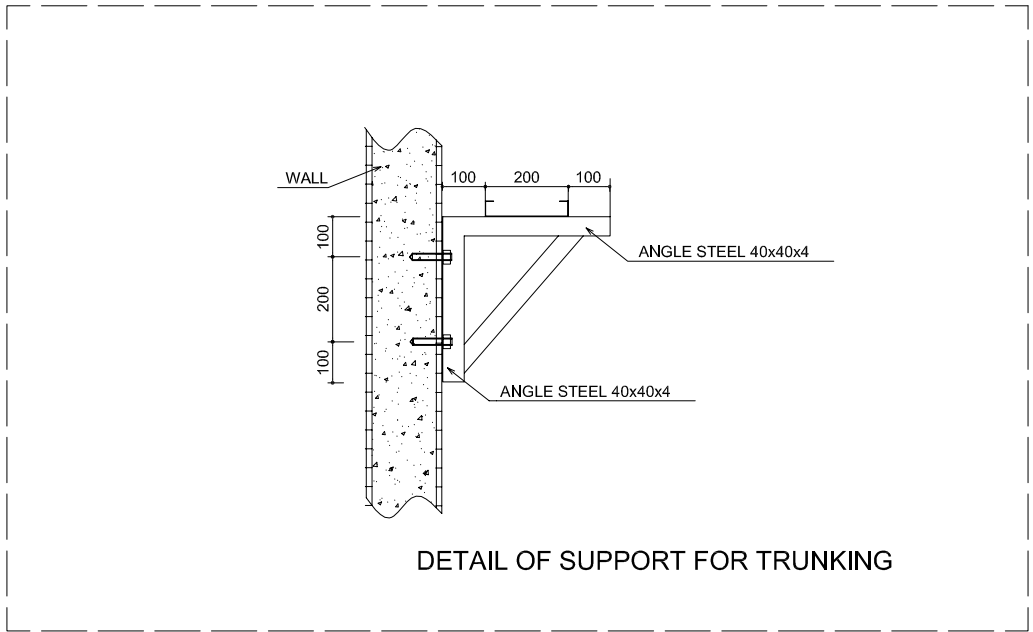
PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED
KIKUTA HIROSHI

CHECKED
KONDO MASAMI

DATE : JUNE 2001

DWG. No. PE-WWTP-310-13



NO.	DATE	DESCRIPTIONS	BY	APRO.

REVISIONS

PROJECT MANAGEMENT UNIT FOR
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WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN STUDY ON HO CHI MINH CITY
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PACKAGE E
WASTEWATER TREATMENT PLANT

ELECTTRICAL DETAILS (1/2)

SCALE : NTS

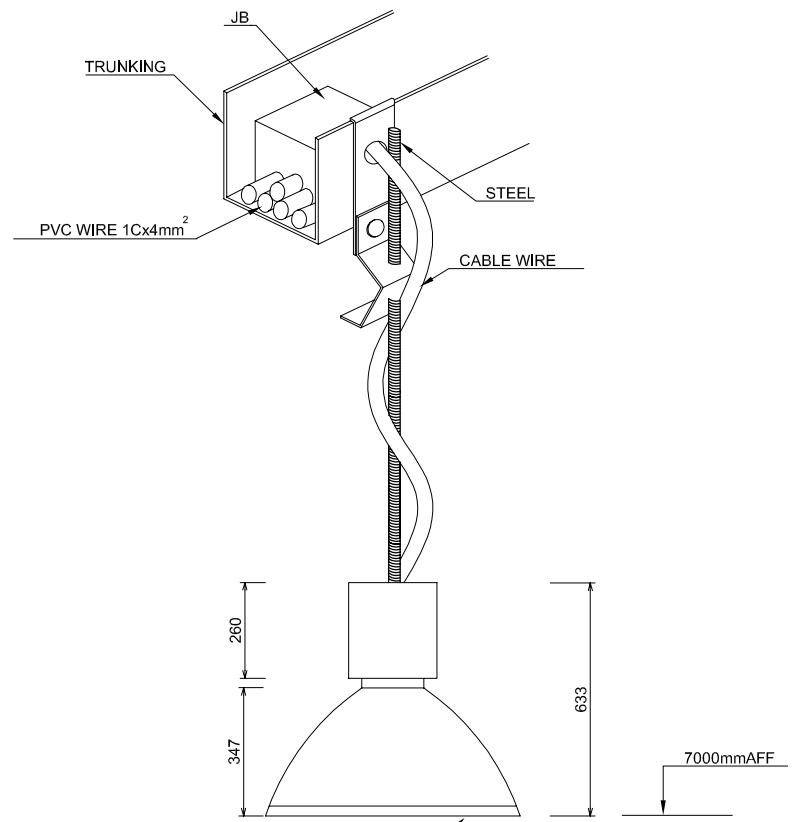
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED
KIKUTA HIROSHI

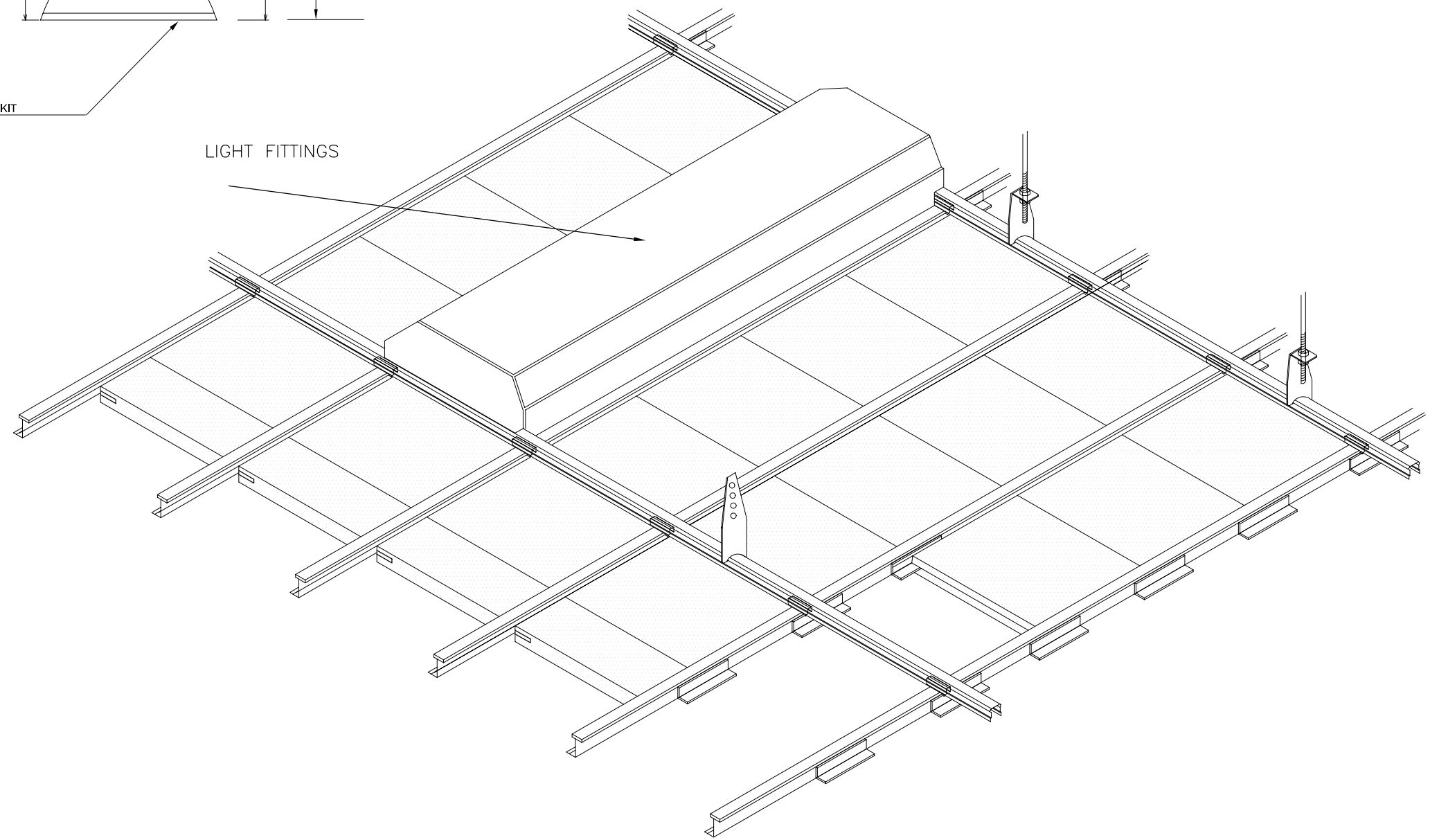
CHECKED
KONDO MASAMI

DATE : JUNE2001 DWG. No. PE-WWTP-310-14



THORN VIKING MH 400-G(250-G) alu med+IP54 KIT

LIGHT FITTINGS



NO.	DATE	DESCRIPTIONS	BY	APRO.

REVISIONS

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PACKAGE E
WASTEWATER TREATMENT PLANT
ELECTRICAL DETAILS (2/2)

SCALE : NTS

JAPAN INTERNATIONAL COOPERATION
AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED KIKUTA HIROSHI	CHECKED KONDO MASAMI
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DATE: JUNE 2001 DWG. No. PE-WWTP-310-15