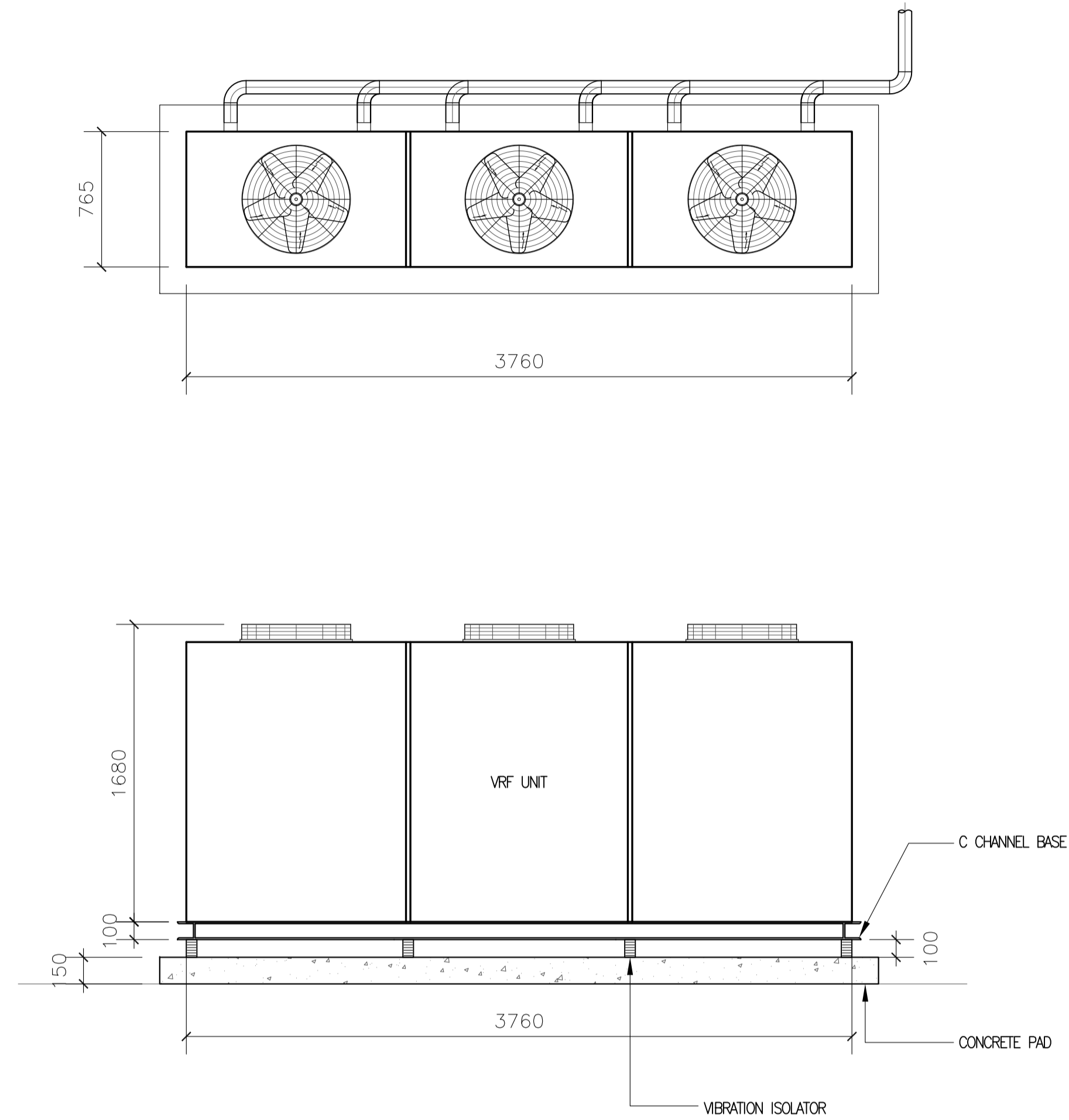
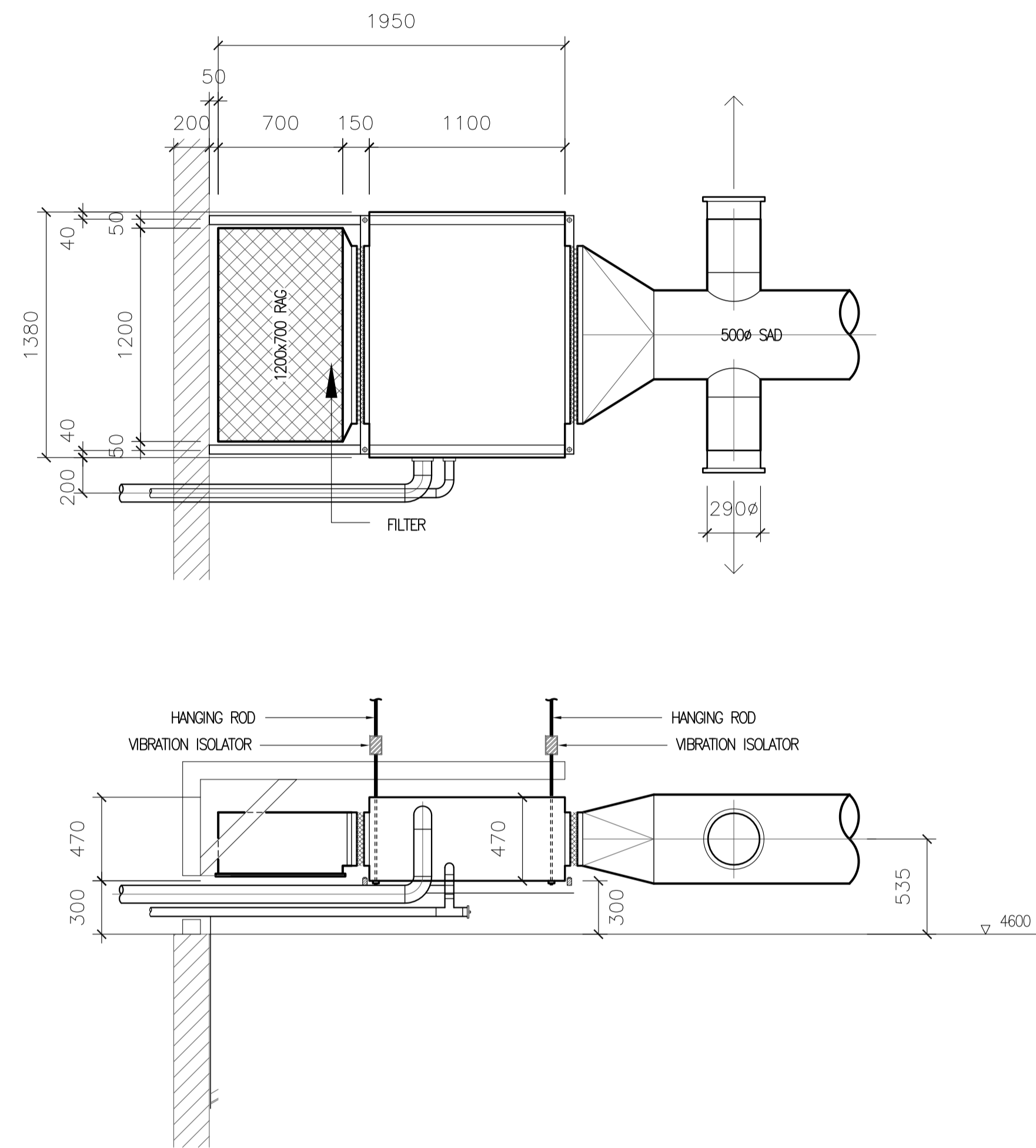


1
ROOF DECK AIR-CONDITIONING LAYOUT
 B1-5200-11 SCALE 1:250M

	Republic of the Philippines DEPARTMENT OF TRANSPORTATION AND COMMUNICATIONS		JAPAN INTERNATIONAL COOPERATION AGENCY	PREPARED BY: RENATO A. ARRIOLA <small>Philippine Registered Engineer</small> PROF. MECHANICAL ENGINEER PIR. 1725187 REC. NO. 2379 DATE: JANUARY 07, 2013 TEL. 150-563-379 PLACE: TAGBILAR 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-4: BUILDING WORKS (B) SUBCOMPONENT-4-1: (B1) PASSENGER TERMINAL BUILDING (PTB) MECHANICAL VENTILATION AND AIR-CONDITIONING ROOF DECK AIR-CONDITIONING LAYOUT OUTDOOR UNIT	SHEET NO: B1-5200-12 DRAWING SCALE: 1:250M
JICA DESIGN CONSULTANT JOINT VENTURE 								DATE: JUNE 2013 INDEX: - AMENDMENTS: - Prepared by: WIM Checked by: HIC Validated by:	



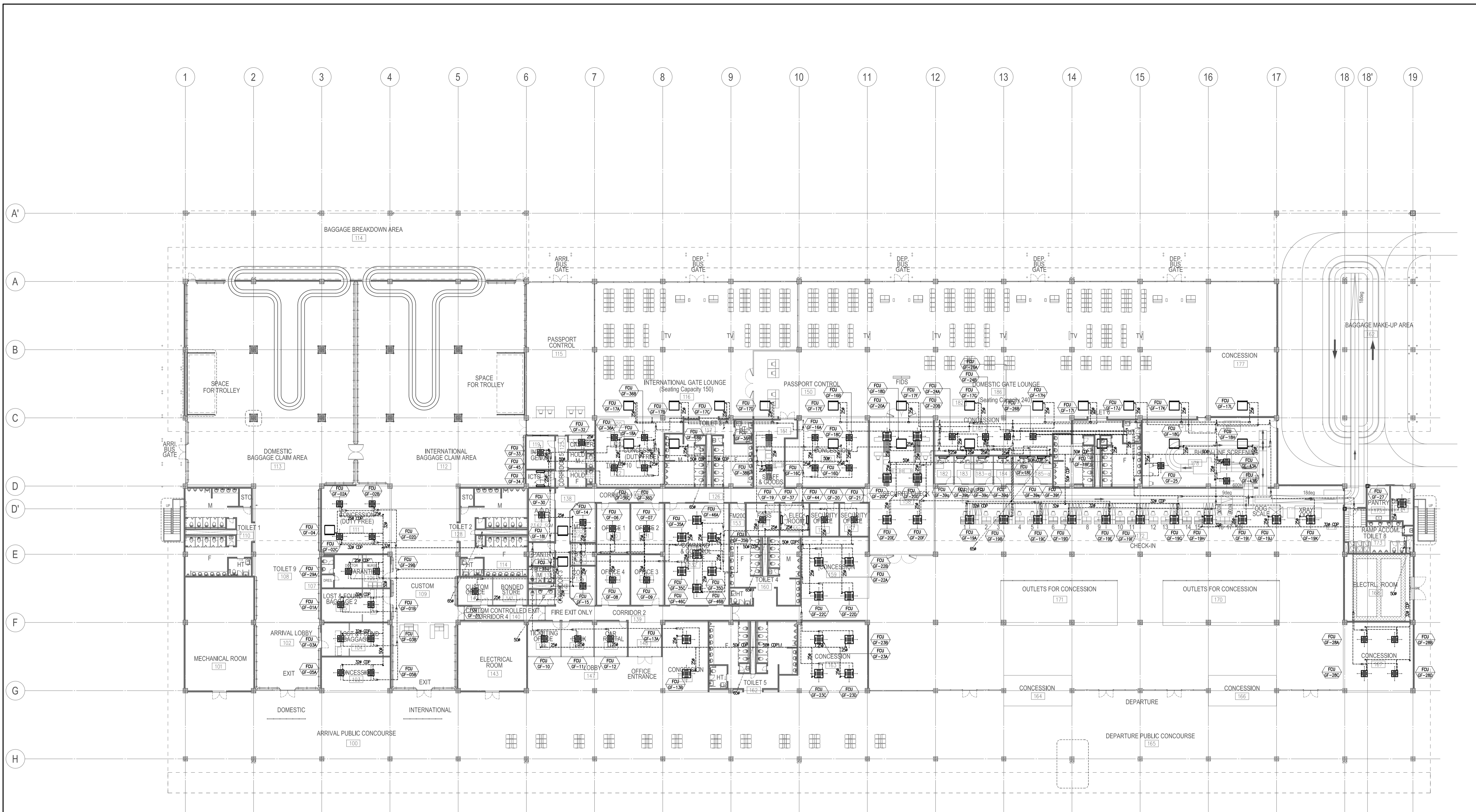
1
B1-5200-12

ROOF DECK OUTDOOR AIR-CONDITIONING UNIT DETAIL

SCALE

1:25M

	PREPARED BY: RENATO A. ARRIOLA <small>Philippine Registered Engineer</small> PROF: MECHANICAL ENGINEER PTR: 1725187 REG. NO: 2378 DATE: JANUARY 07, 2013 TEL: 150-563-379 PLACE: TAGBILAR 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-4: BUILDING WORKS (B) SUBCOMPONENT-4-1: (B1) PASSENGER TERMINAL BUILDING (PTB)	SHEET NO: B1-5200-13
	JICA DESIGN CONSULTANT JOINT VENTURE	TADASHI AOI <small>Team Leader</small>			DATE: JUNE 2013 INDEX:	AMENDMENTS:	Prepared by: WIM Checked by: HIC Validated by:

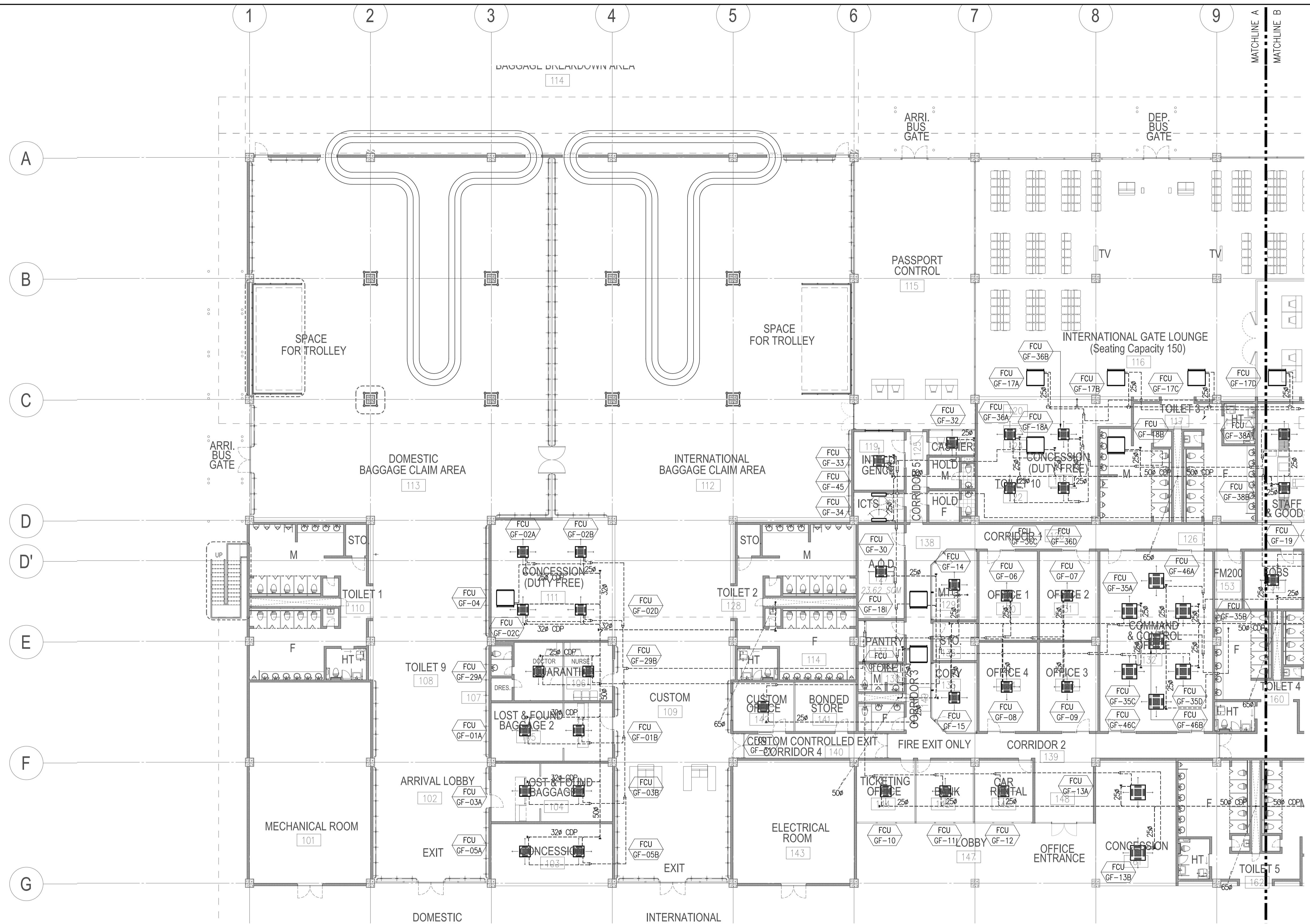


**PASSENGER TERMINAL BUILDING
AIR-CONDITIONING, REFRIGERANT PIPING AND CONDENSATE DRAIN LAYOUT**

1
B1-5200-13 SCALE

1:250M

<p>Republic of the Philippines DEPARTMENT OF TRANSPORTATION AND COMMUNICATIONS</p> <p>JICA JAPAN INTERNATIONAL COOPERATION AGENCY</p> <p>JICA DESIGN CONSULTANT JOINT VENTURE</p> <p>JAC JAPAN AIRPORT CONSULTANTS, INC.</p> <p>NIPPON KOEI CO., LTD.</p> <p>NJS CONSULTANTS CO., LTD.</p>	<p>PREPARED BY: RENATO A. ARRIOLA Filipino Registered Engineer</p> <p>PROF. MECHANICAL ENGINEER PIR. 1725187 REC. NO. 2379 DATE: JANUARY 01, 2013 TIN. 150-563-379 PLACE: TAGBILAR CITY</p>	<p>RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. Assistant Secretary for Project Implementation, DOTC</p>	<p>APPROVED: JULIANITO G. BUCAYAN, JR. Undersecretary for Project Implementation, DOTC</p>	<p>PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT</p> <p>LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES</p>	<p>JUNE 2013</p> <p>DATE INDEX AMENDMENTS</p>	<p>Prepared by: WIM Checked by: IIC Validated by:</p>	<p>SHEET CONTENTS: COMPONENT-4: BUILDING WORKS (B) SUBCOMPONENT-4-1: (B1) PASSENGER TERMINAL BUILDING (PTB)</p> <p>MECHANICAL VENTILATION AND AIR-CONDITIONING REFRIGERANT PIPING AND CONDENSATE DRAIN LAYOUT</p>	<p>SHEET NO: B1-5200-14</p> <p>DRAWING SCALE: 1:250M</p>
	<p>Republic of the Philippines DEPARTMENT OF TRANSPORTATION AND COMMUNICATIONS</p> <p>JICA JAPAN INTERNATIONAL COOPERATION AGENCY</p> <p>JICA DESIGN CONSULTANT JOINT VENTURE</p> <p>JAC JAPAN AIRPORT CONSULTANTS, INC.</p> <p>NIPPON KOEI CO., LTD.</p> <p>NJS CONSULTANTS CO., LTD.</p> <p>PREPARED BY: RENATO A. ARRIOLA (Filipino Registered Engineer)</p> <p>PROF. MECHANICAL ENGINEER PIR. 1725187</p> <p>REC. NO. 2379 DATE: JANUARY 01, 2013</p> <p>TIN. 150-563-379 PLACE: TAGBILAR CITY</p> <p>RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. (Assistant Secretary for Project Implementation, DOTC)</p> <p>APPROVED: JULIANITO G. BUCAYAN, JR. (Undersecretary for Project Implementation, DOTC)</p> <p>PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT</p> <p>LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES</p> <p>JUNE 2013</p> <p>DATE INDEX AMENDMENTS</p> <p>Prepared by: WIM</p> <p>Checked by: IIC</p> <p>Validated by:</p> <p>SHEET CONTENTS: COMPONENT-4: BUILDING WORKS (B) SUBCOMPONENT-4-1: (B1) PASSENGER TERMINAL BUILDING (PTB) MECHANICAL VENTILATION AND AIR-CONDITIONING REFRIGERANT PIPING AND CONDENSATE DRAIN LAYOUT</p> <p>SHEET NO: B1-5200-14</p> <p>DRAWING SCALE: 1:250M</p>							



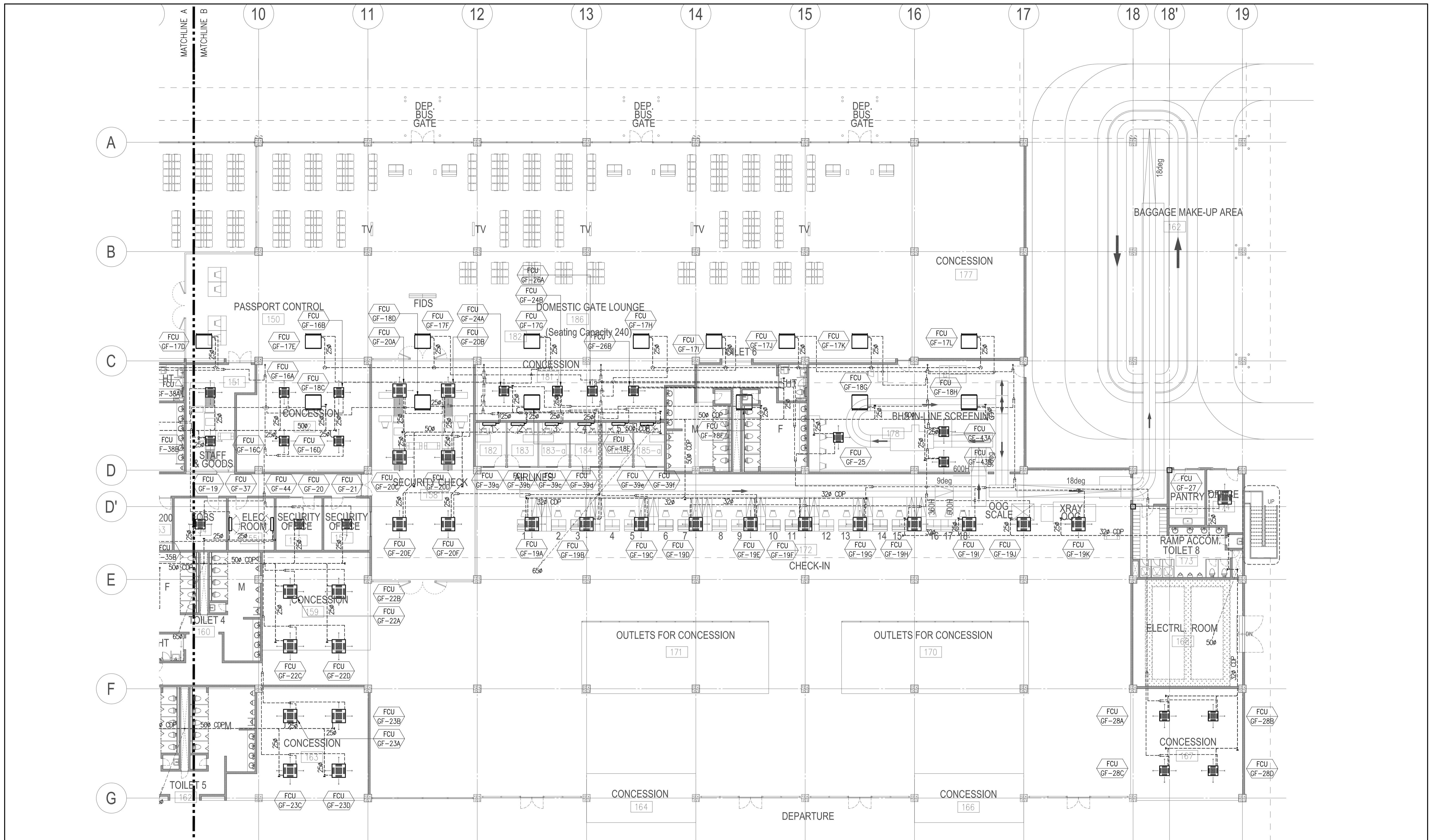
**PASSENGER TERMINAL BUILDING
AIR-CONDITIONING, REFRIGERANT PIPING AND CONDENSATE DRAIN LAYOUT (PART A)**

1
B1-5200-14

SCALE

1:150M

	PREPARED BY: RENATO A. ARRIOLA <small>Filipino Registered Engineer</small> PROF: MECHANICAL ENGINEER PIR. 1725187 REG. NO: 2379 DATE: JANUARY 01, 2013 T.M. 150-563-379 PLACE: TAGBILAR 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-4: BUILDING WORKS (B) SUBCOMPONENT-4-1: (B1) PASSENGER TERMINAL BUILDING (PTB)	SHEET NO: B1-5200-15
	JICA DESIGN CONSULTANT JOINT VENTURE JAC JAPAN AIRPORT CONSULTANTS, INC. NK NIPPON KOEI CO., LTD. NIS NIS CONSULTANTS CO., LTD.	TADASHI AOI <small>Team Leader</small>					MECHANICAL VENTILATION AND AIR-CONDITIONING REFRIGERANT PIPING AND CONDENSATE DRAIN LAYOUT (PART A)



**PASSENGER TERMINAL BUILDING
AIR-CONDITIONING, REFRIGERANT PIPING AND CONDENSATE DRAIN LAYOUT (PART B)**

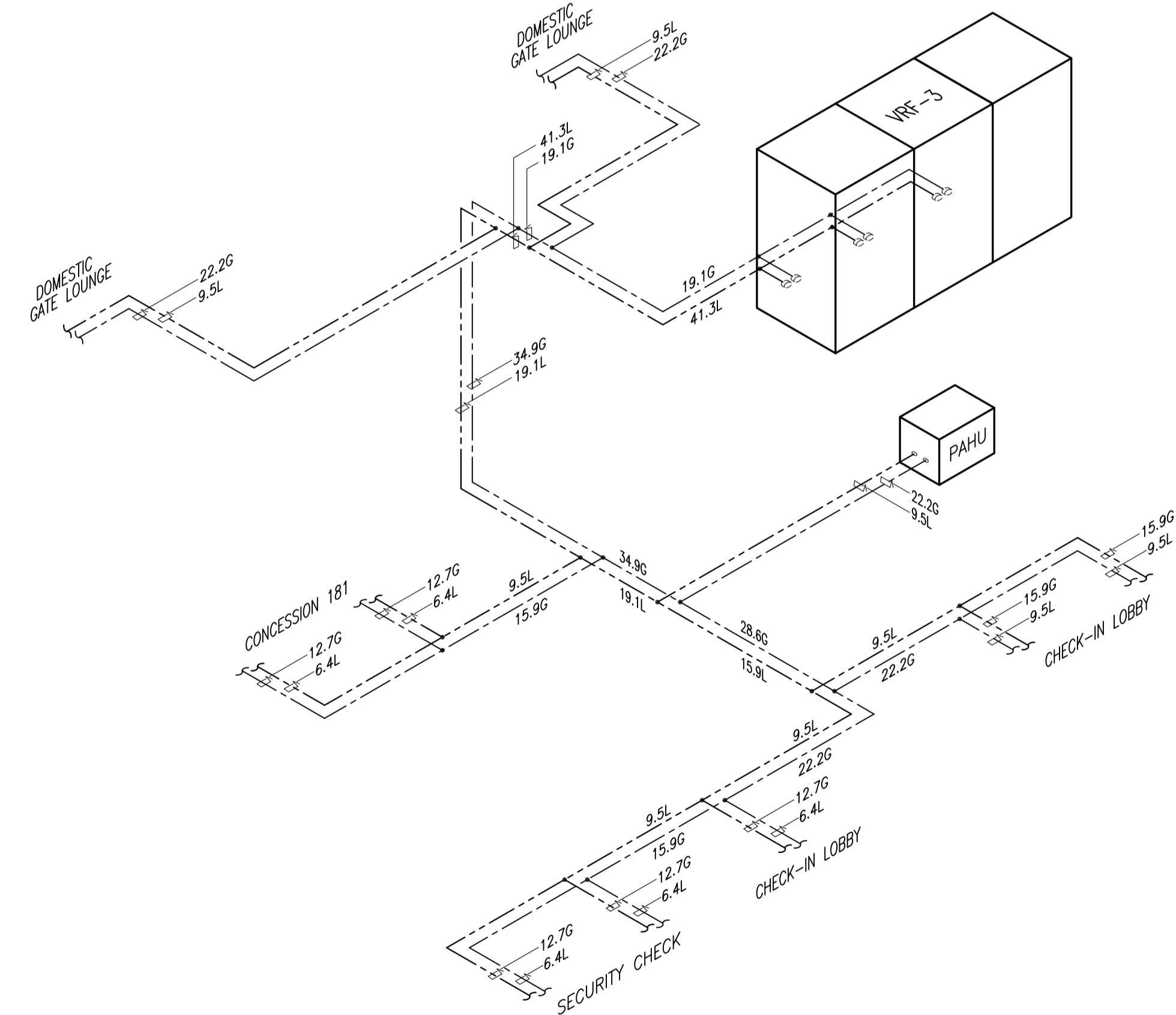
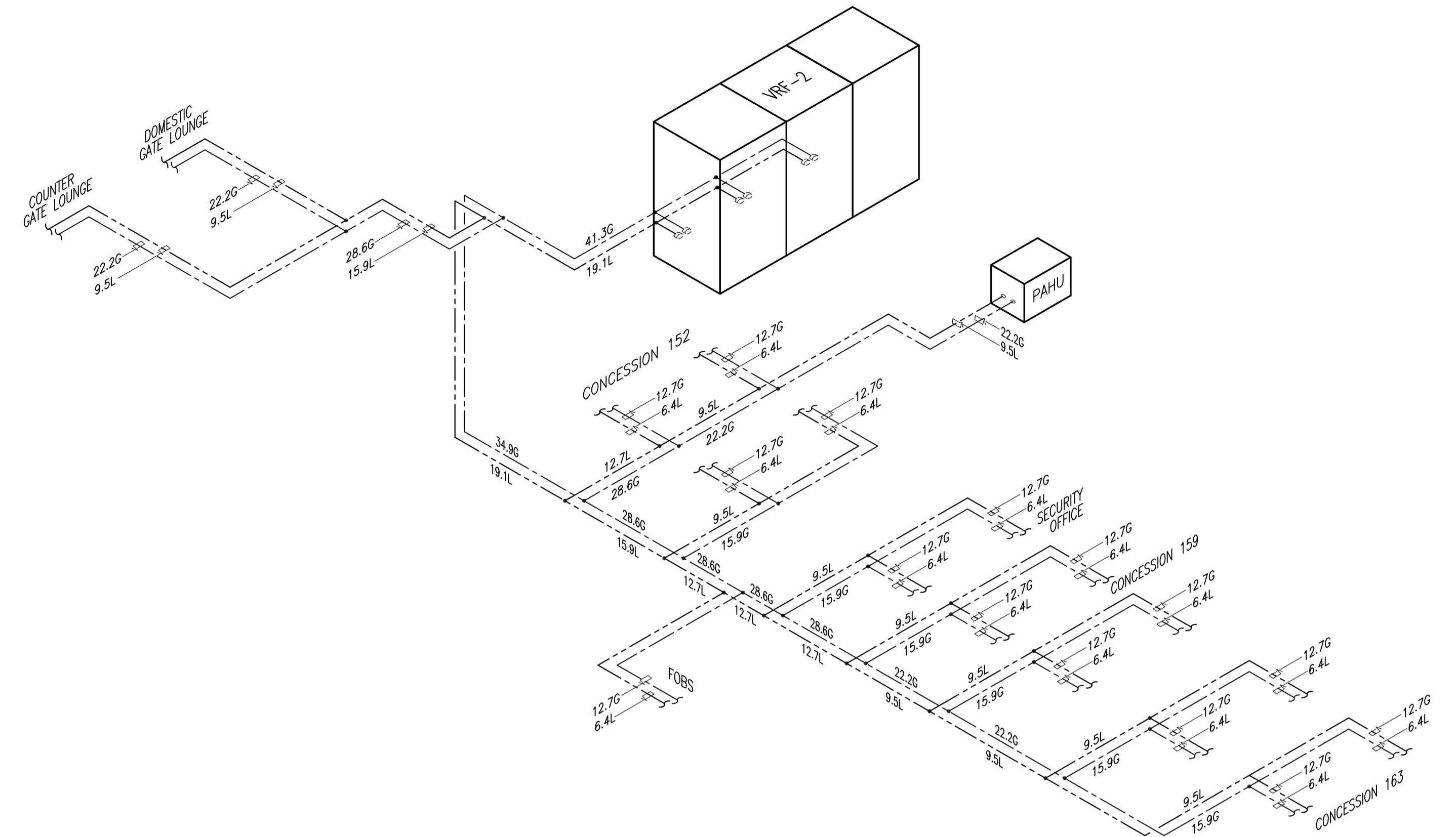
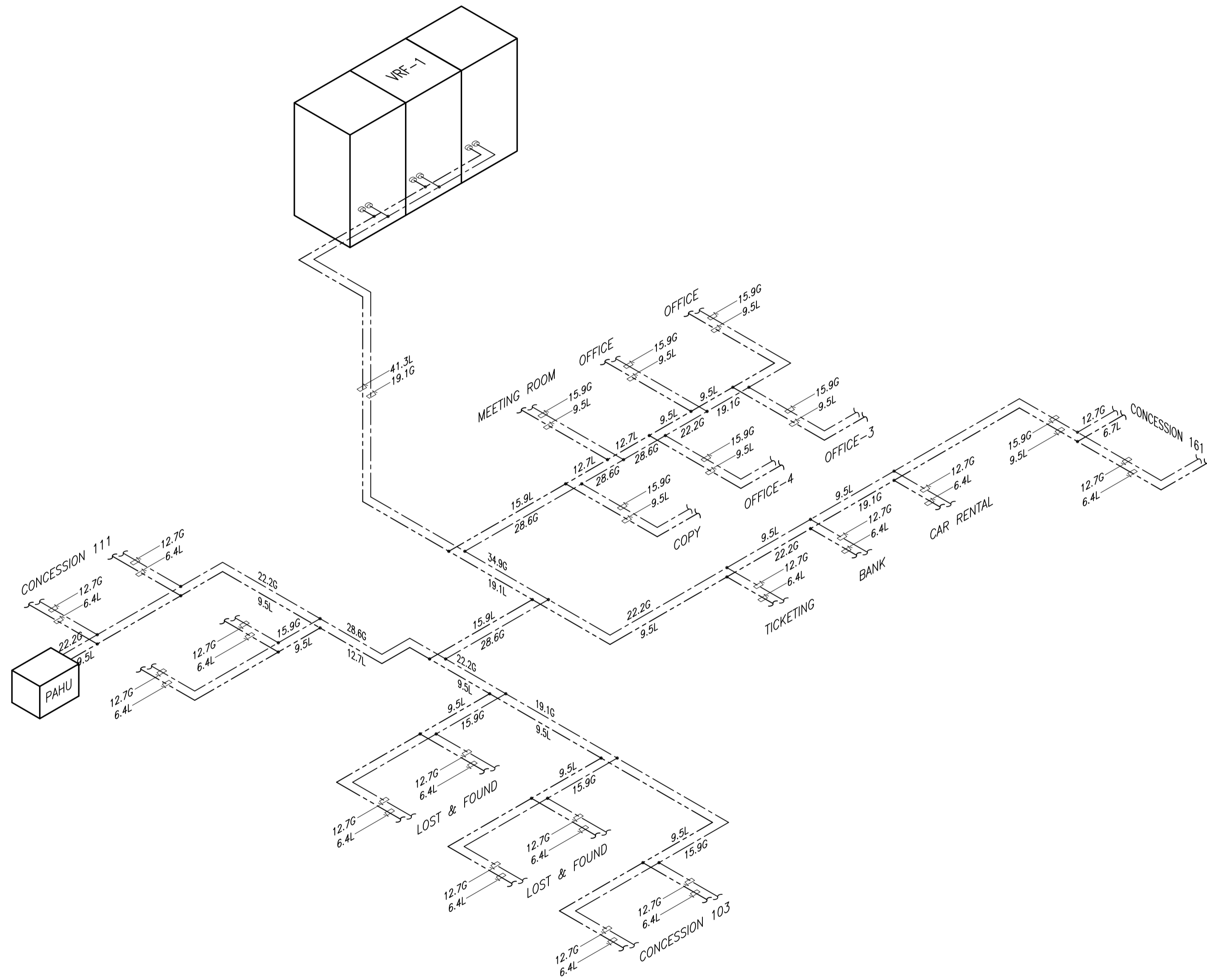
1
B1-5200-15

SCALE

1:150M

	PREPARED BY: RENATO A. ARRIOLA <small>Filipino Registered Engineer</small> <small>PROF. MECHANICAL ENGINEER PIR. 1725187</small> <small>REG. NO. 2379 DATE: JANUARY 01, 2013</small> <small>TIN. 150-563-379 PLACE: TAGBILAR CITY</small>	RECOMMENDING APPROVAL: JILDEFONSO T. PATDU, JR. <small>Assistant Secretary</small> <small>for Project Implementation, DOTC</small>	APPROVED: JULIANITO G. BUCAYAN, JR. <small>Undersecretary</small> <small>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-4: BUILDING WORKS (B) SUBCOMPONENT-4-1: (B1) PASSENGER TERMINAL BUILDING (PTB) MECHANICAL VENTILATION AND AIR-CONDITIONING REFRIGERANT PIPING AND CONDENSATE DRAIN LAYOUT (PART B)	SHEET NO: B1-5200-16 DRAWING SCALE: 1:150M
	JICA DESIGN CONSULTANT JOINT VENTURE JAC JAPAN AIRPORT CONSULTANTS, INC. NK NIPPON KOEI CO., LTD. NIS NIS CONSULTANTS CO., LTD.	TADASHI AOI <small>Team Leader</small>	JILDEFONSO T. PATDU, JR. <small>Assistant Secretary</small> <small>for Project Implementation, DOTC</small>	JULIANITO G. BUCAYAN, JR. <small>Undersecretary</small> <small>for Project Implementation, DOTC</small>	DATE: JUNE 2013 INDEX AMENDMENTS	Prepared by: WIM Checked by: IIC Validated by:	

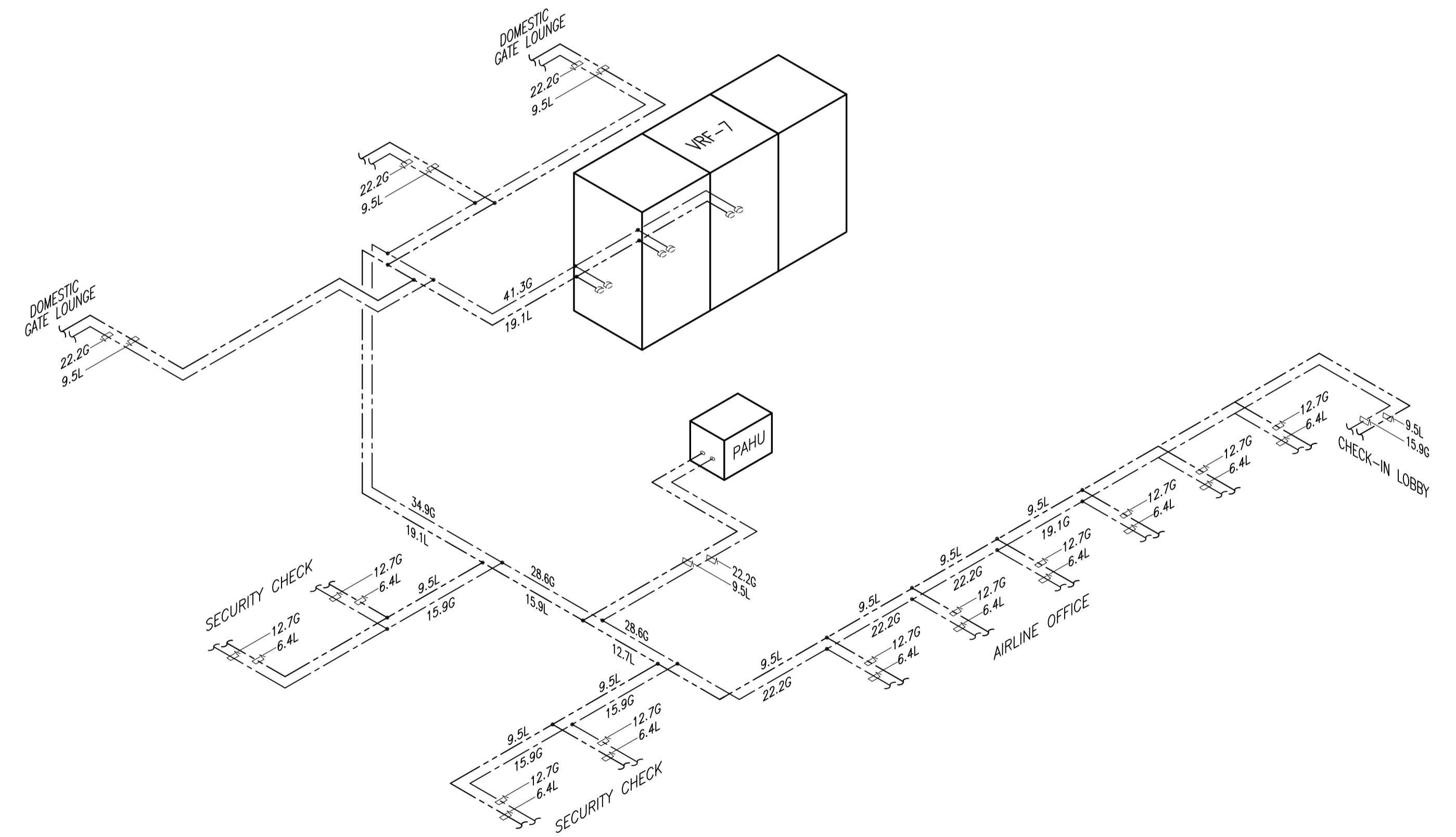
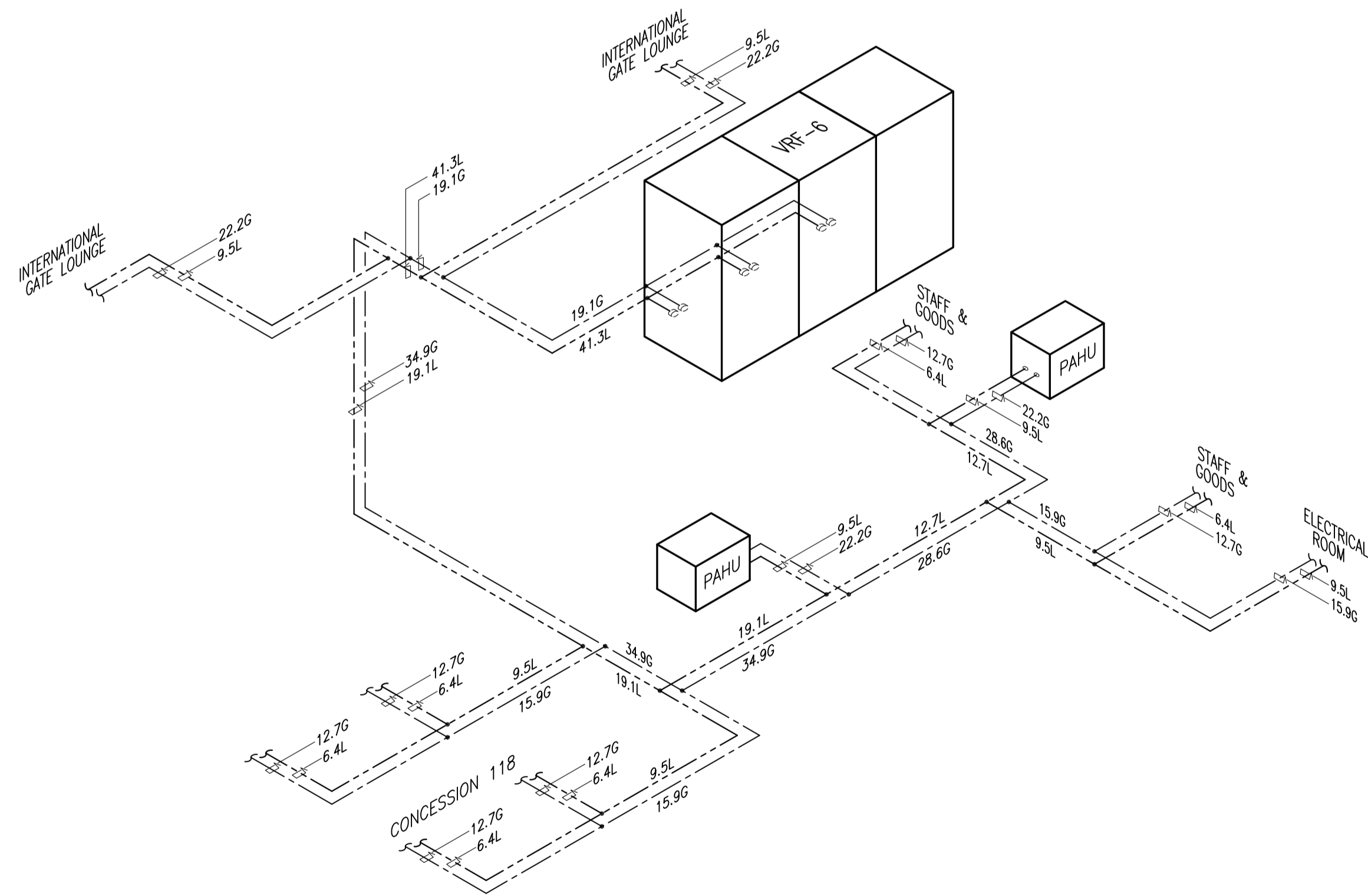
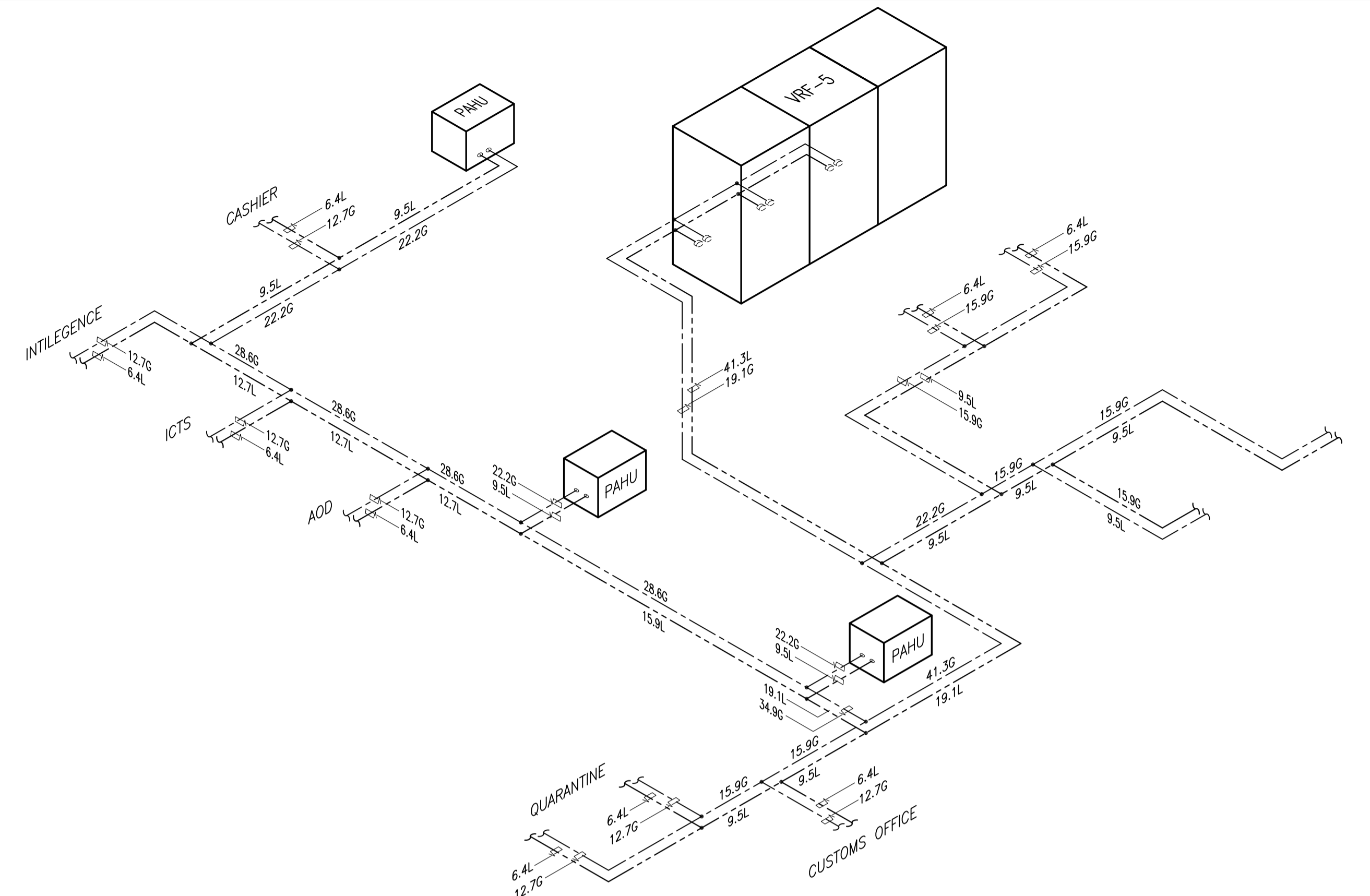
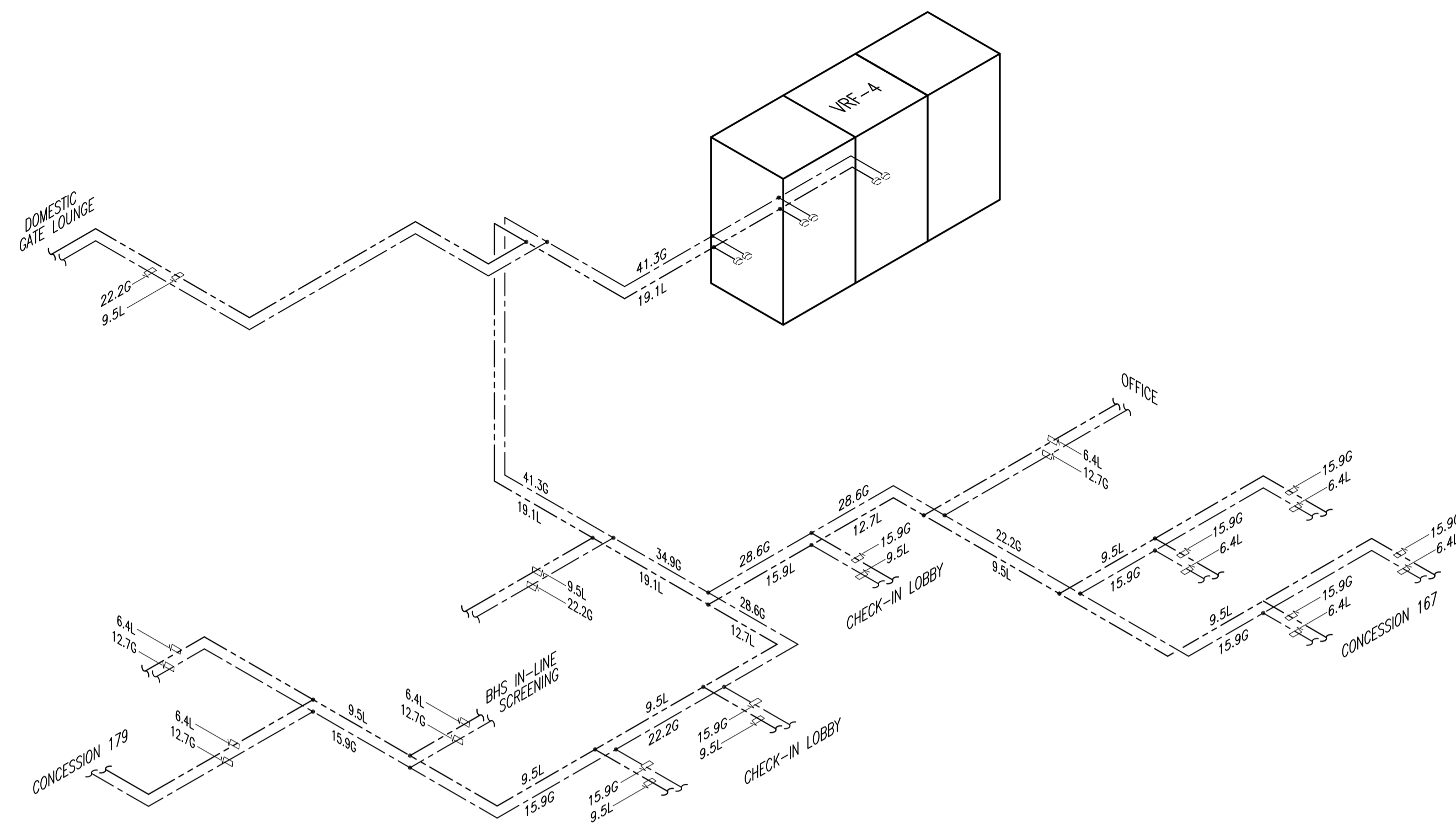
OUTDOOR UNIT			INDEX UNIT			INDOOR UNIT		
HP	GAS	LIQUID	INDEX	GAS	LIQUID	HP	GAS	LIQUID
5HP	15.9	9.5	150	15.9	9.5	20	12.7	6.4
8HP	19.1	9.5	150-200	19.1	9.5	25	12.7	6.4
10HP	22.2	9.5	200-290	22.2	9.5	32	12.7	6.4
12HP-16HP	28.6	12.7	290-420	28.6	12.7	40	12.7	6.4
18HP-22HP	28.6	12.7	420-640	28.6	12.7	50	12.7	6.4
24HP	34.9	15.9	640-920	34.9	15.9	63	15.9	9.5
26HP-34HP	34.9	19.1	920-	34.9	19.1	80	15.9	9.5
36HP-54HP	41.3	19.1	-	41.3	19.1	100	15.9	9.5
						125		



**PASSENGER TERMINAL BUILDING
ISOMETRIC LAYOUT LIQUID AND GAS (PART 1)**

1
B1-5200-16/ NTS

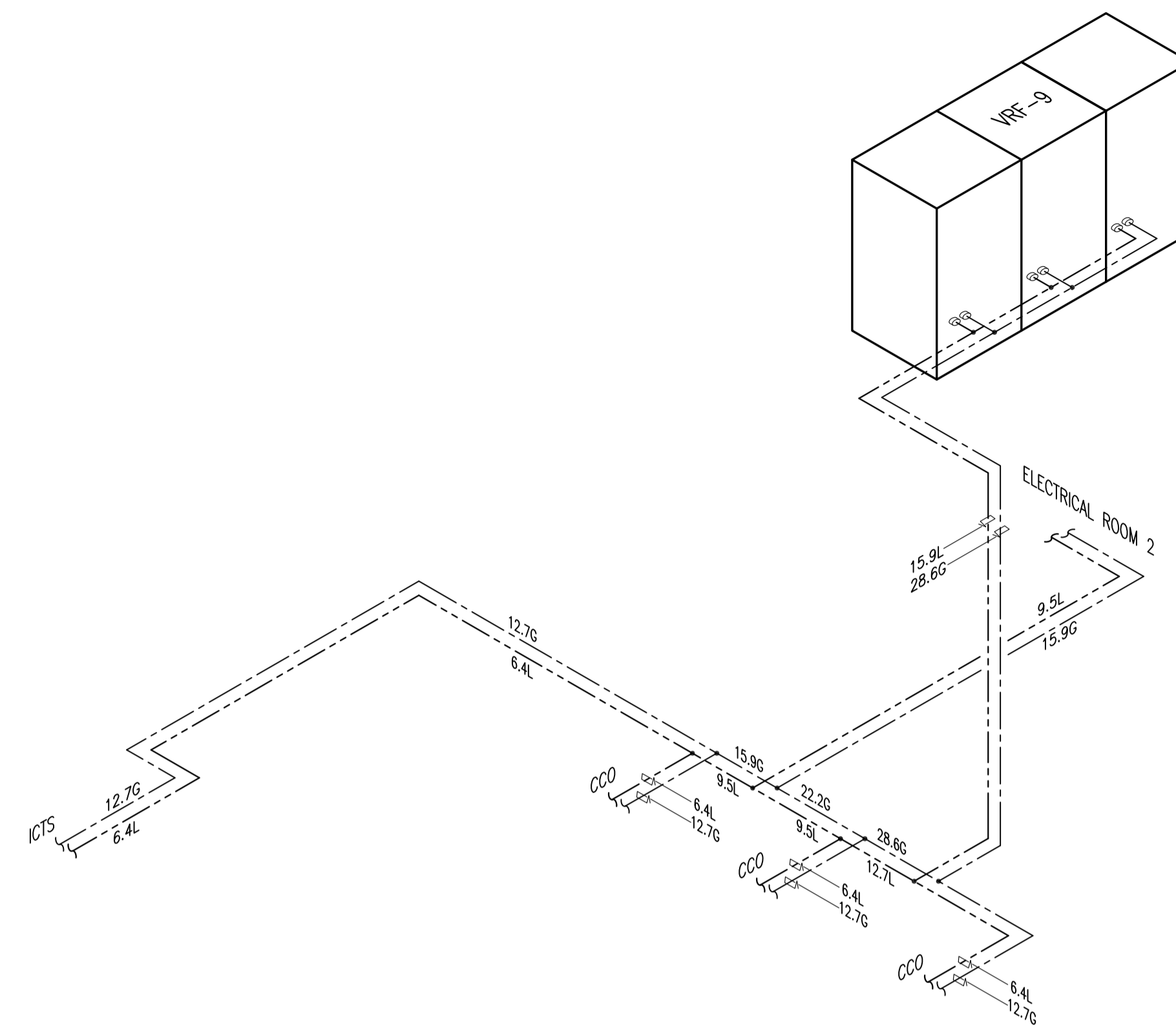
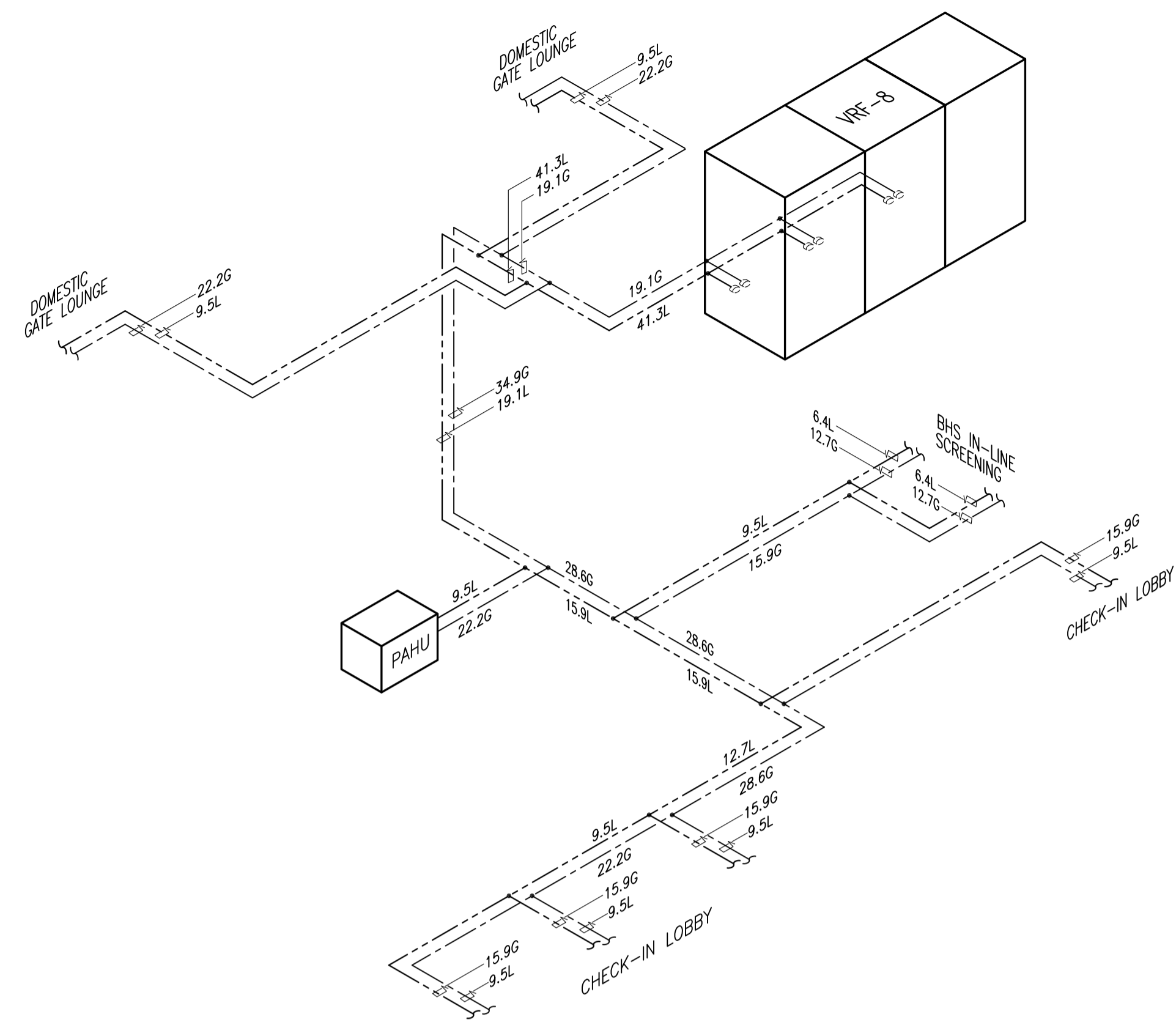
	PREPARED BY: RENATO A. ARRIOLA <small>Filipino Registered Engineer</small> PROF: MECHANICAL ENGINEER PIR: 1725187 REG. NO: 2379 DATE: JANUARY 01, 2013 TEL: 150-563-379 PLACE: TAGBILAR CITY	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	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-4: BUILDING WORKS (B) SUBCOMPONENT-4-1: (B1) PASSENGER TERMINAL BUILDING (PTB) MECHANICAL VENTILATION AND AIR-CONDITIONING ISOMETRIC LAYOUT LIQUID AND GAS (PART 1)	SHEET NO: B1-5200-17 DRAWING SCALE: NTS
	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: WIM Checked by: IIC Validated by:	



**PASSENGER TERMINAL BUILDING
ISOMETRIC LAYOUT LIQUID AND GAS (PART 2)**

1
B1-5200-17 NTS

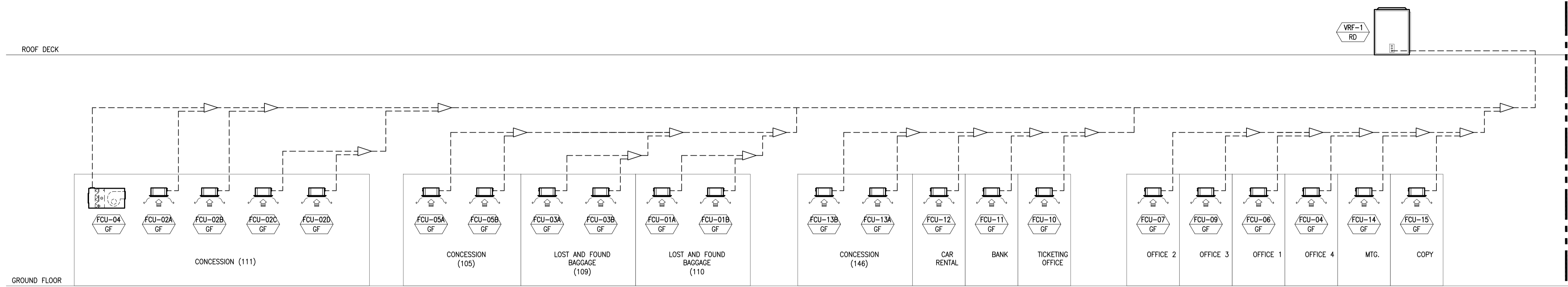
		PREPARED BY: RENATO A. ARRIOLA <small>Filipino Registered Engineer</small>	RECOMMENDING APPROVAL: JULDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	APPROVED: JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT							SHEET CONTENTS: COMPONENT-4: BUILDING WORKS (B) SUBCOMPONENT-4-1: (B1) PASSENGER TERMINAL BUILDING (PTB)	SHEET NO: B1-5200-18
				TADASHI AOI <small>Team Leader</small>		LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	DATE: JUNE 2013	INDEX	AMENDMENTS	Prepared by: WIM Checked by: HIC Validated by:	MECHANICAL VENTILATION AND AIR-CONDITIONING ISOMETRIC LAYOUT LIQUID AND GAS (PART 2)	DRAWING SCALE: NTS	



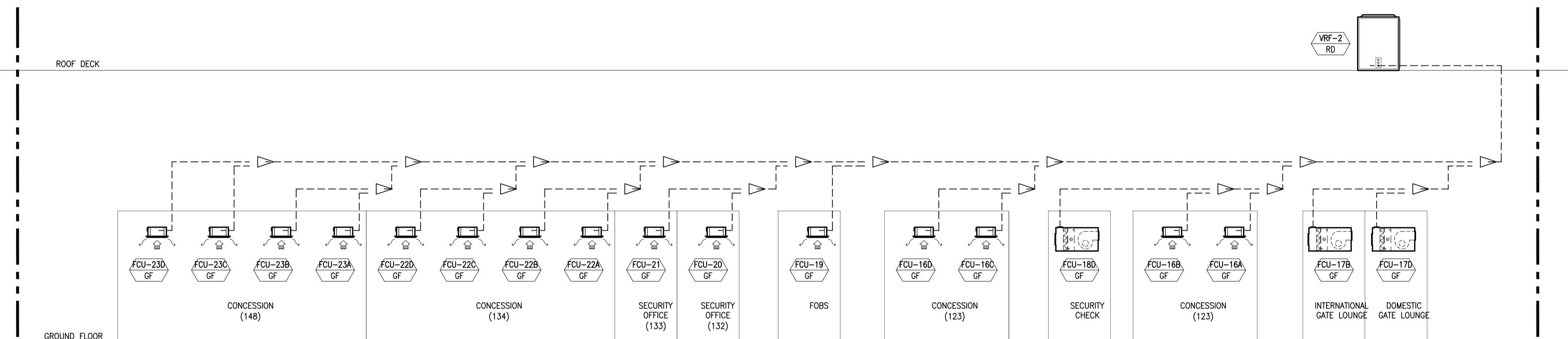
**PASSENGER TERMINAL BUILDING
ISOMETRIC LAYOUT LIQUID AND GAS (PART 3)**

1
B1-5200-18 / NTS

	PREPARED BY: RENATO A. ARRIOLA <small>Filipino Registered Engineer</small> <small>PROF. MECHANICAL ENGINEER PTR. 1725187</small> <small>REC. NO. 2379 DATE: JANUARY 01, 2013</small> <small>T.M.N. 150-563-379 PLACE: TAGBILAR CITY</small>	RECOMMENDING APPROVAL: 	APPROVED: 	PROJECT TITLE: 	SHEET CONTENTS: 	SHEET NO:
	JICA DESIGN CONSULTANT JOINT VENTURE 	JILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT 	COMPONENT-4: BUILDING WORKS (B) SUBCOMPONENT-4-1: (B1) PASSENGER TERMINAL BUILDING (PTB) 	B1-5200-19
JAC JAPAN AIRPORT CONSULTANTS, INC.	TADASHI AOI <small>Team Leader</small>			LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES 	DATE INDEX AMENDMENTS 	DRAWING SCALE:
					Prepared by: WIM Checked by: HC Validated by:	NTS



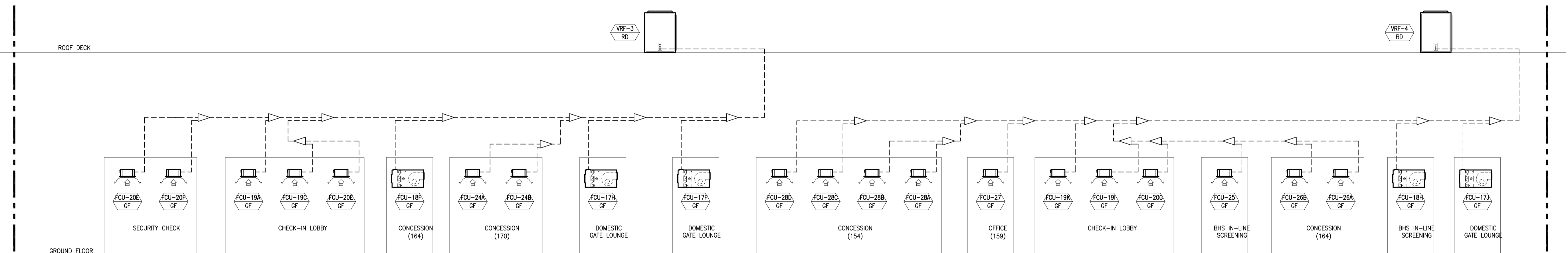
MATCHLINE A
MATCHLINE B



LEGEND:	
SYMBOLS	DESCRIPTIONS
	VRF INDOOR UNIT (CEILING CASSETTE FAN COIL UNIT)
	PRE-COOLED AIR HANDLING UNIT
	VRF INDOOR UNIT (WALL MOUNTED FAN COIL UNIT)
	VRF OUTDOOR UNIT (AIR-COOLED TYPE)
	REFRIGERANT PIPING (SUCTION AND LIQUID LINE)

MATCHLINE A
MATCHLINE B

MATCHLINE B
MATCHLINE C



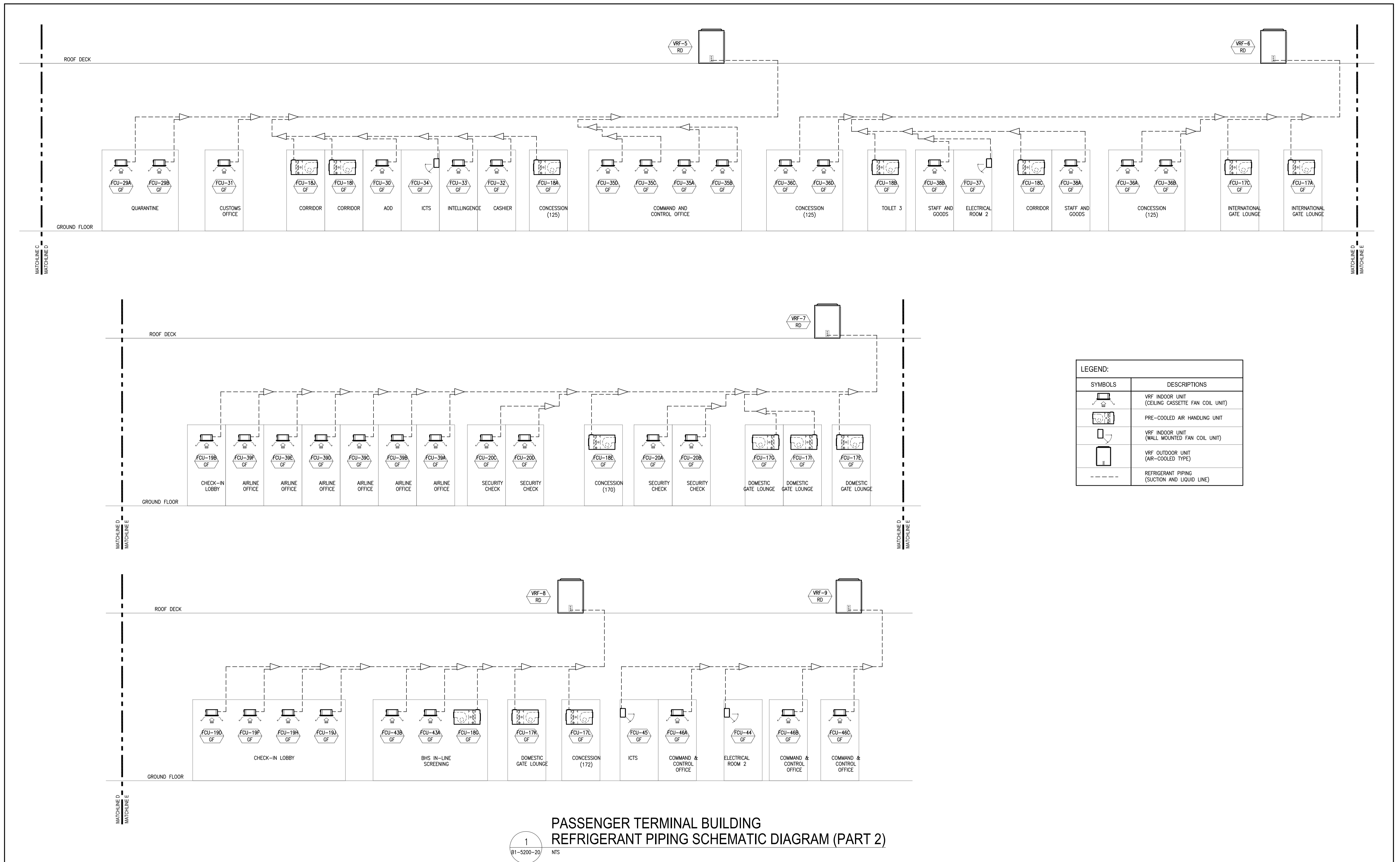
MATCHLINE B
MATCHLINE C

MATCHLINE C
MATCHLINE D

**PASSENGER TERMINAL BUILDING
REFRIGERANT PIPING SCHEMATIC DIAGRAM (PART 1)**

1
B1-5200-19
NTS

	PREPARED BY: RENATO A. ARRIOLA <small>Filipino Registered Engineer</small> <small>PROF. MECHANICAL ENGINEER PIR. 1725187</small> <small>REG. NO. 2379 DATE: JANUARY 01, 2013</small> <small>TIN. 150-563-379 PLACE: TAGUIG CITY</small>	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. <small>Assistant Secretary</small> <small>for Project Implementation, DOTC</small>	APPROVED: JULIANITO G. BUCAYAN, JR. <small>Undersecretary</small> <small>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-4: BUILDING WORKS (B) SUBCOMPONENT-4-1: (B1) PASSENGER TERMINAL BUILDING (PTB) MECHANICAL VENTILATION AND AIR-CONDITIONING REFRIGERANT PIPING SCHEMATIC DIAGRAM (PART 1)	SHEET NO: B1-5200-20 DRAWING SCALE: NTS
	JICA DESIGN CONSULTANT JOINT VENTURE JAPAN AIRPORT CONSULTANTS, INC. NIPPON KOEI CO., LTD. NIS CONSULTANTS CO., LTD.	DATE: JUNE 2013 INDEX: AMENDMENTS Prepared by: WIM Checked by: IIC Validated by:				

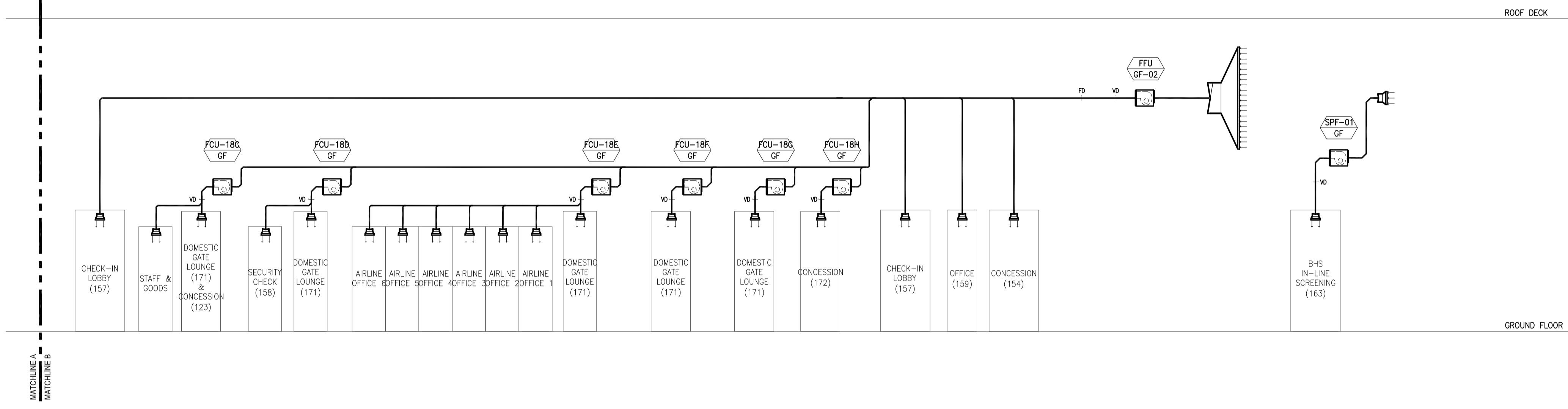
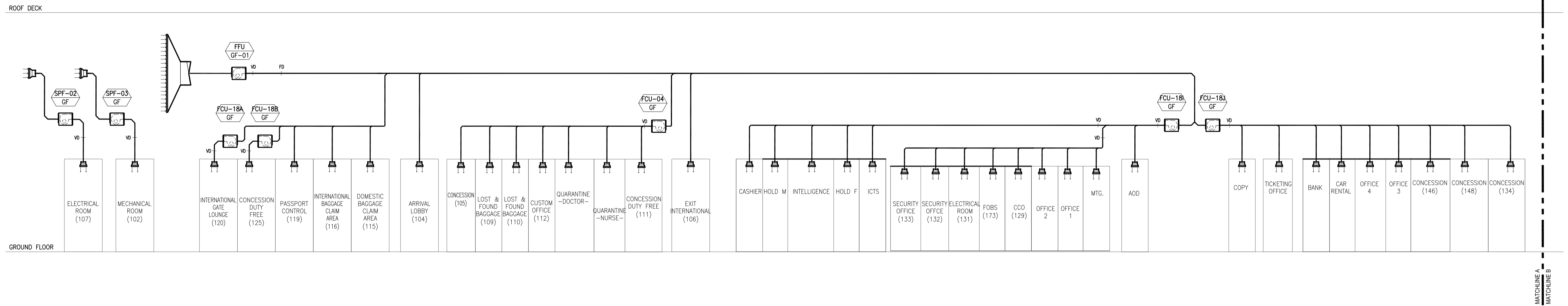


LEGEND:	
SYMBOLS	DESCRIPTIONS
	VRF INDOOR UNIT (CEILING CASSETTE FAN COIL UNIT)
	PRE-COOLED AIR HANDLING UNIT
	VRF INDOOR UNIT (WALL MOUNTED FAN COIL UNIT)
	VRF OUTDOOR UNIT (AIR-COOLED TYPE)
	REFRIGERANT PIPING (SUCTION AND LIQUID LINE)






**PASSENGER TERMINAL BUILDING
REFRIGERANT PIPING SCHEMATIC DIAGRAM (PART 2)**

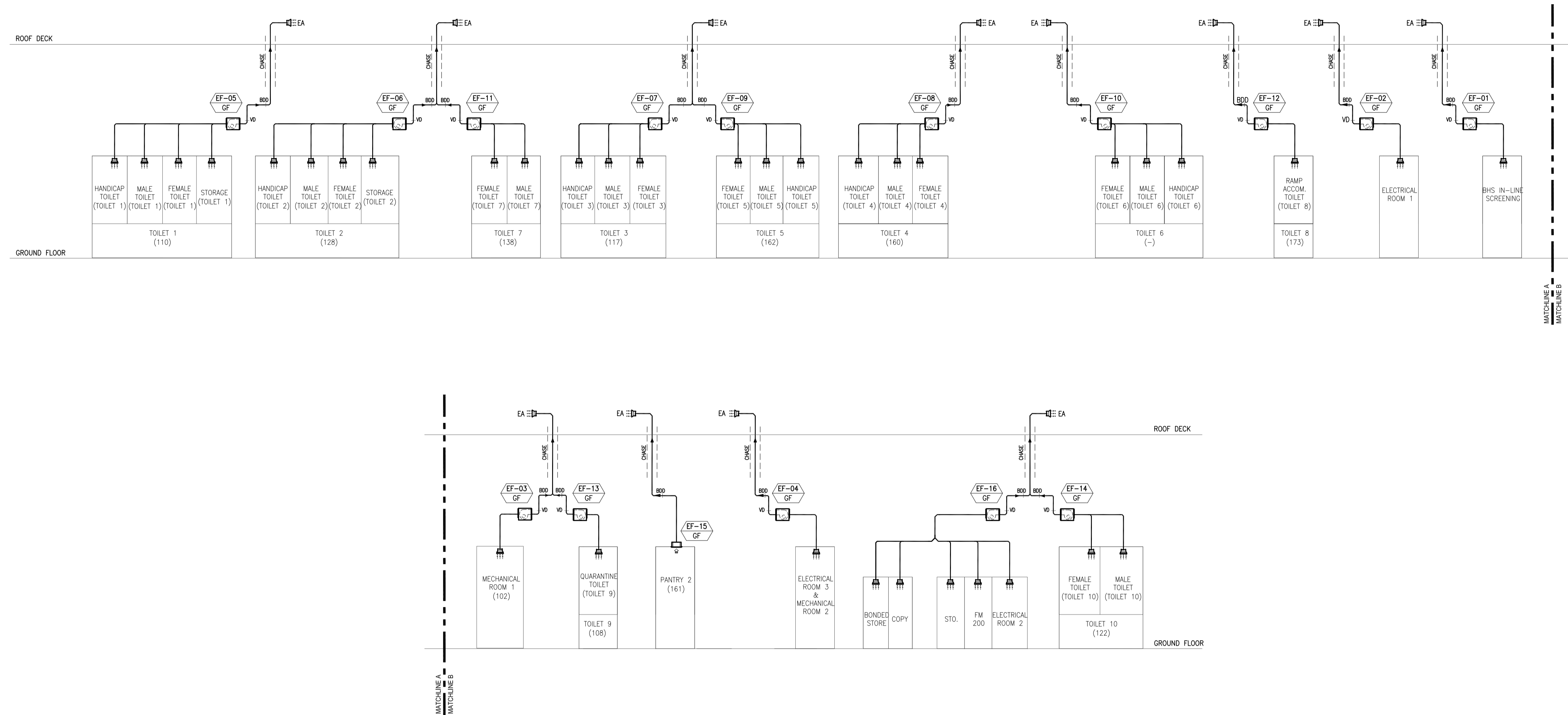
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B1-5200-20 NTS

	PREPARED BY: RENATO A. ARRIOLA <small>Filipino Registered Engineer</small> PROF: MECHANICAL ENGINEER PIR. 1725187 REG. NO: 2379 DATE: JANUARY 01, 2013 T.I.N: 150-563-379 PLACE: TAGBILAR 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-4: BUILDING WORKS (B) SUBCOMPONENT-4-1: (B1) PASSENGER TERMINAL BUILDING (PTB) MECHANICAL VENTILATION AND AIR-CONDITIONING REFRIGERANT PIPING SCHEMATIC DIAGRAM (PART 2)	SHEET NO: B1-5200-21 DRAWING SCALE: NTS
	JICA DESIGN CONSULTANT JOINT VENTURE JAPAN AIRPORT CONSULTANTS, INC. NIPPON KOEI CO., LTD. NJS CONSULTANTS CO., LTD.	JUNE 2013 DATE INDEX AMENDMENTS Prepared by WIM Checked by IIC Validated by				



1
 PASSENGER TERMINAL BUILDING
 FRESH AIR DUCT SCHEMATIC DIAGRAM
 B1-5200-21 NTS

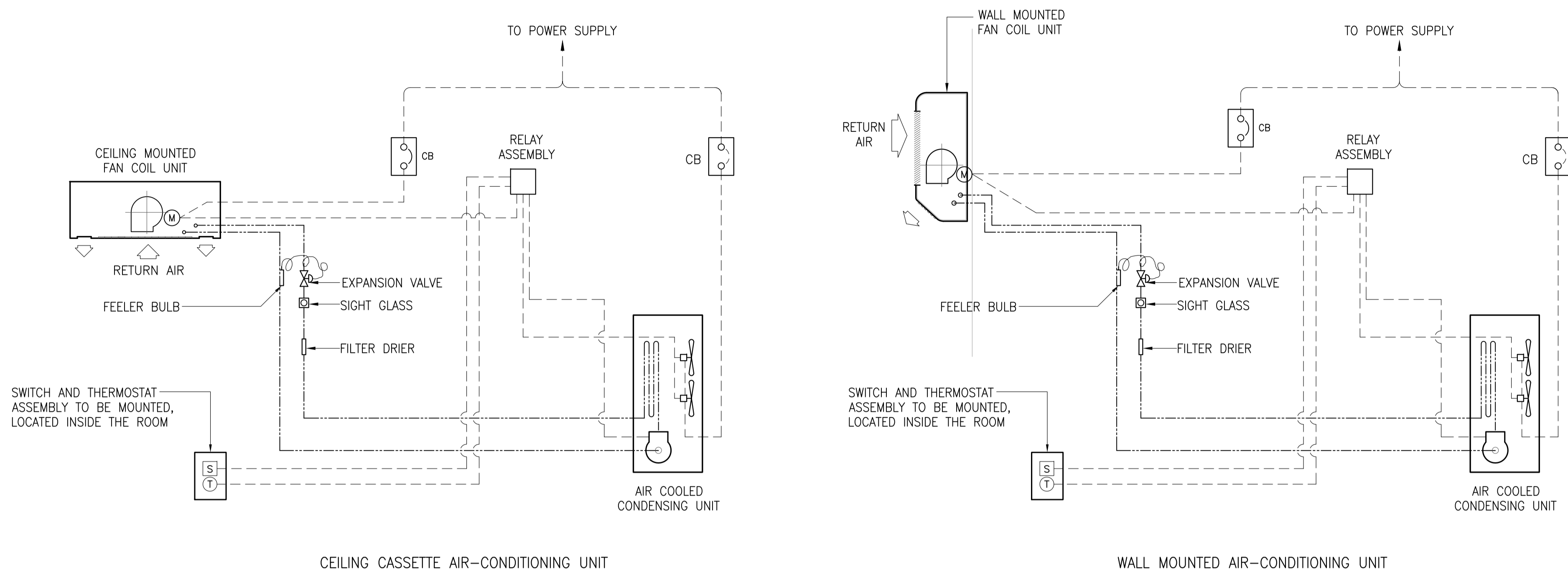
 Republic of the Philippines DEPARTMENT OF TRANSPORTATION AND COMMUNICATIONS	 JAPAN INTERNATIONAL COOPERATION AGENCY	PREPARED BY: RENATO A. ARRIOLA <small>Filipino Registered Engineer</small> <small>PROF. MECHANICAL ENGINEER PIR. 1725187</small> <small>REG. NO. 2379 DATE: JANUARY 01, 2013</small> <small>TIN. 150-563-379 PLACE: TAGBILAR CITY</small>	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. <small>Assistant Secretary</small> <small>for Project Implementation, DOTC</small>	APPROVED: JULIANITO G. BUCAYAN, JR. <small>Undersecretary</small> <small>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-4: BUILDING WORKS (B) SUBCOMPONENT-4-1: (B1) PASSENGER TERMINAL BUILDING (PTB) MECHANICAL VENTILATION AND AIR-CONDITIONING FRESH AIR DUCT SCHEMATIC DIAGRAM	SHEET NO: B1-5200-22 DRAWING SCALE: NTS
JICA DESIGN CONSULTANT JOINT VENTURE   		TADASHI AOI <small>Team Leader</small>	JULIANITO G. BUCAYAN, JR. <small>Undersecretary</small> <small>for Project Implementation, DOTC</small>	JULIANITO G. BUCAYAN, JR. <small>Undersecretary</small> <small>for Project Implementation, DOTC</small>	DATE: JUNE 2013 INDEX AMENDMENTS Prepared by: WIM Checked by: IIC Validated by:		



1
B1-5200-22 NTS

PASSENGER TERMINAL BUILDING EXHAUST AIR DUCT SCHEMATIC DIAGRAM

	PREPARED BY: RENATO A. ARRIOLA <small>Filipino Registered Engineer</small> PROF: MECHANICAL ENGINEER PTR: 1725187 REG. NO: 2378 DATE: JANUARY 01, 2013 TEL: 150-563-379 PLACE: TAGBILAR 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-4: BUILDING WORKS (B) SUBCOMPONENT-4-1: (B1) PASSENGER TERMINAL BUILDING (PTB) MECHANICAL VENTILATION AND AIR-CONDITIONING EXHAUST AIR DUCT SCHEMATIC DIAGRAM	SHEET NO: B1-5200-23 DRAWING SCALE: NTS
	JICA DESIGN CONSULTANT JOINT VENTURE JAC JAPAN AIRPORT CONSULTANTS, INC. NK NIPPON KOEI CO., LTD. NIS NIS CONSULTANTS CO., LTD.	TADASHI AOI <small>Team Leader</small>	JULIANITO G. BUCAYAN, JR. <small>Undersecretary</small> for Project Implementation, DOTC	DATE: JUNE 2013 INDEX: AMENDMENTS: Prepared by: WIM, Checked by: IIC, Validated by:	SHEET NO: B1-5200-23 DRAWING SCALE: NTS	



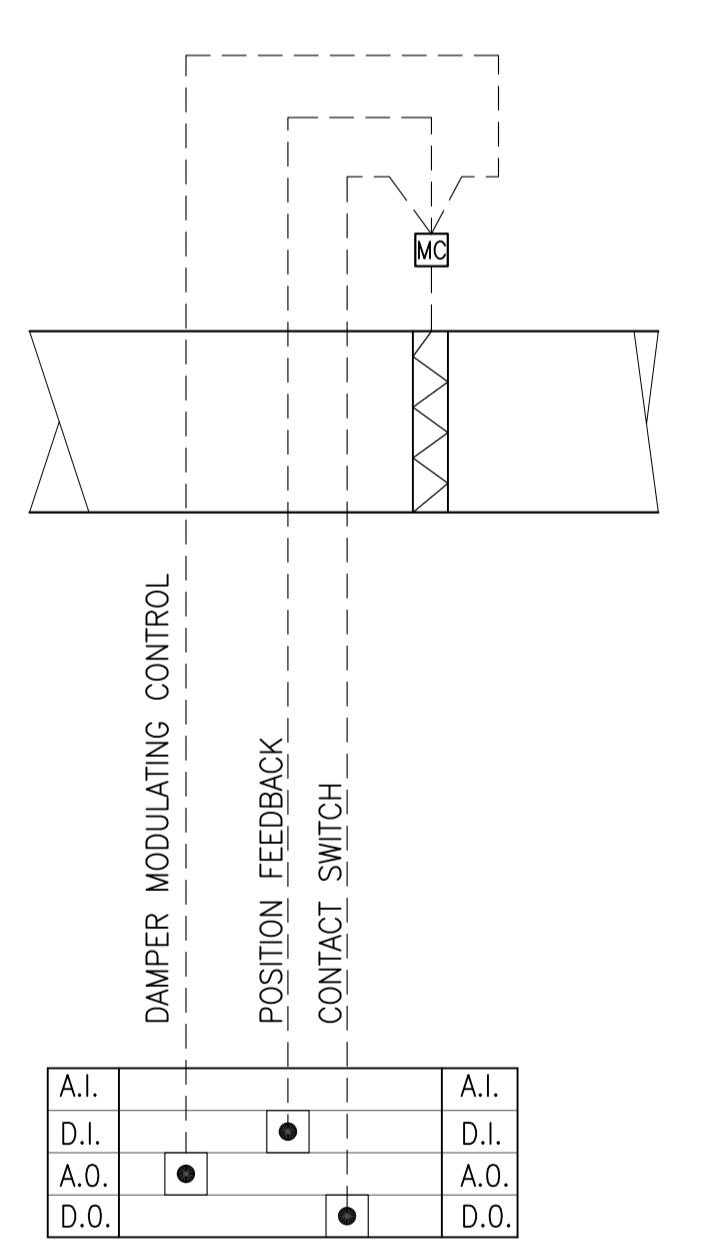
SEQUENCE OF OPERATION:

1. WHEN SWITCH [S] IS IN "OFF" POSITION, RELAY ASSEMBLY AND ALL OTHER CONTROLS ARE IN OFF POSITION.
2. WHEN SWITCH IS PUT IN ON POSITION, CONTROL RELAY ASSEMBLY WILL BE DE-ENERGIZED STARTING THE OPERATION OF THE FOLLOWING MOTOR IN SEQUENCE.
 - A. FAN COIL UNIT EVAPORATOR FAN
 - B. AIR COOLED CONDENSING UNIT AFTER 3 TO 5 MINUTES DELAY
3. THERMOSTAT (T) SHALL SENSE THE AVERAGE RETURN AIR TEMPERATURE AND SHALL OPERATE THE COMPRESSOR. THERMOSTAT SHALL BE SET AT 24°C.

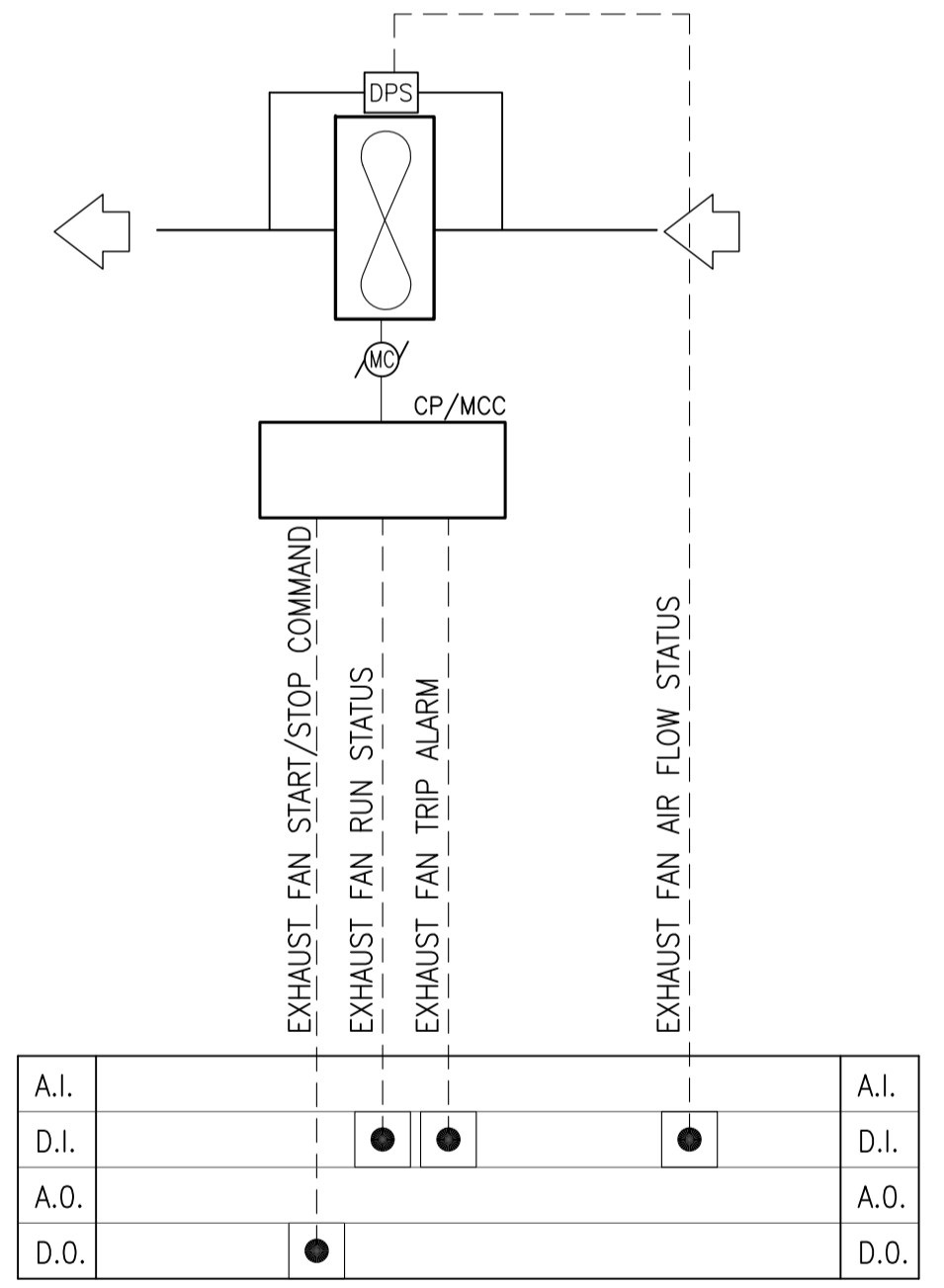
NOTE :

CIRCUIT BREAKER SIZE SHALL BE IN ACCORDANCE WITH THE RECOMMENDATION OF THE ACCU MANUFACTURER.

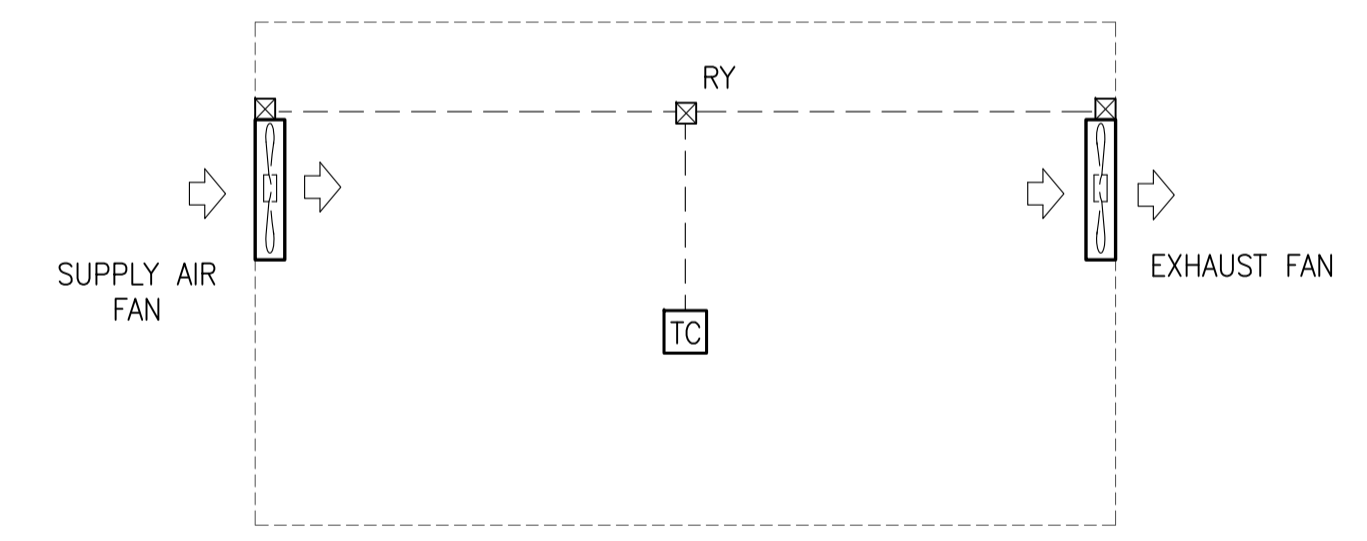
1 SPLIT TYPE FCU CONTROL DIAGRAM
B1-5200-24 NTS



2 MOTORIZED DAMPER CONTROL DIAGRAM
B1-5200-24 NTS



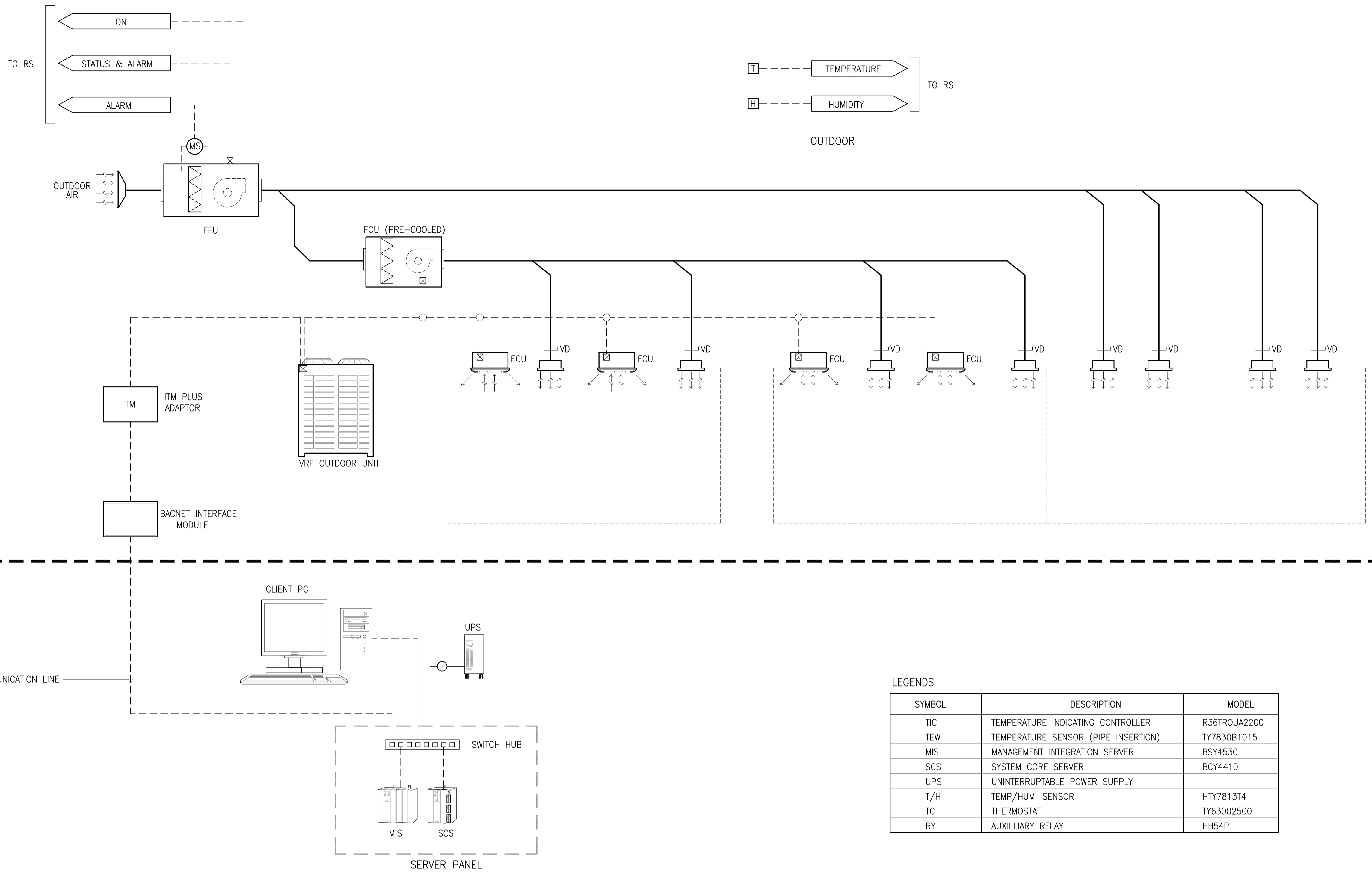
3 FAN MOTOR CONTROL DIAGRAM
B1-5200-24 NTS



LEGENDS

SYMBOL	DESCRIPTION	MODEL
TC	THERMOSTAT	TY63002500
RY	AUXILLIARY RELAY	HH54P

4 SUPPLY AIR FAN AND EXHAUST FAN CONTROL DIAGRAM
B1-5200-24 NTS

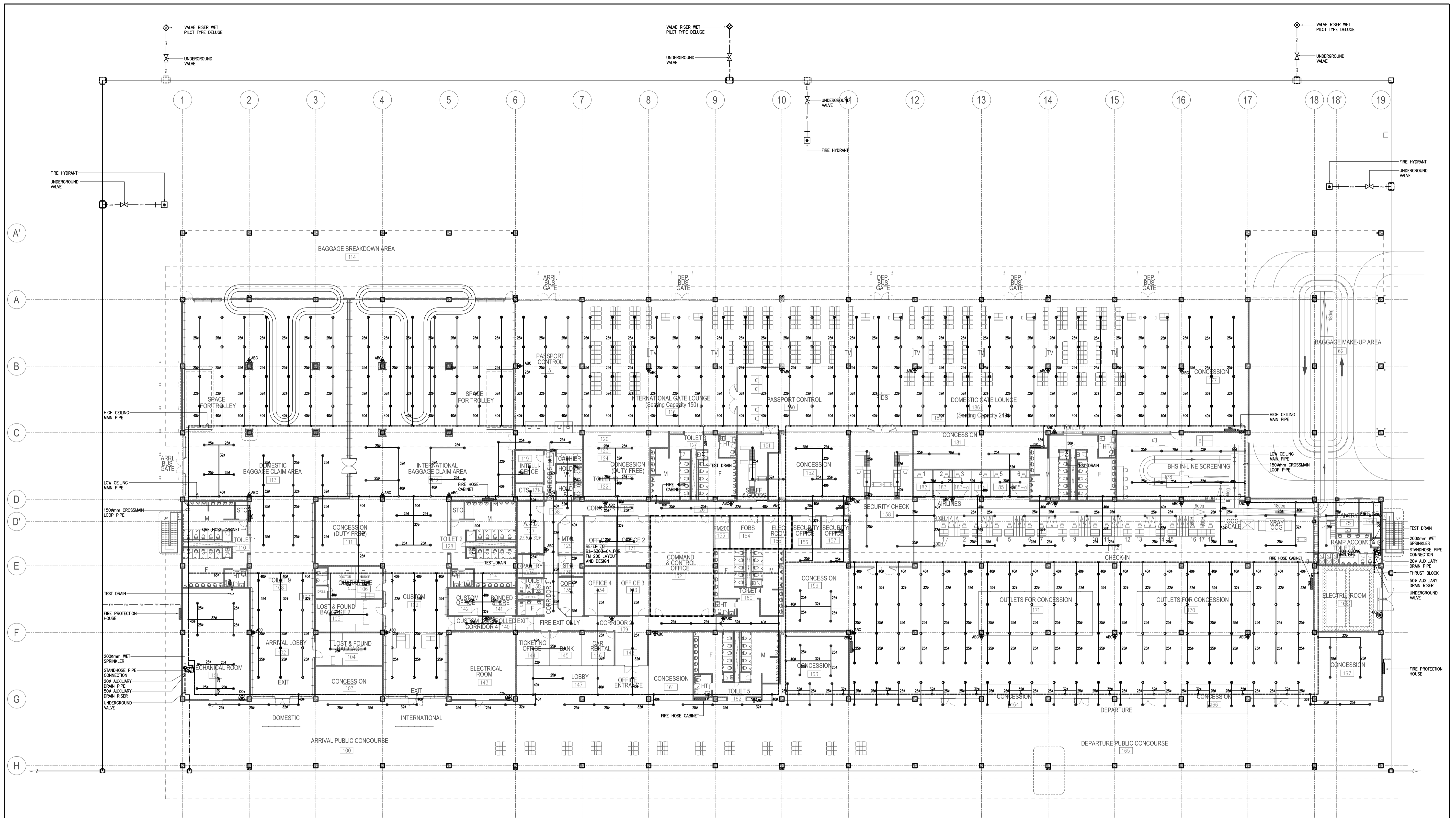


LEGENDS

SYMBOL	DESCRIPTION	MODEL
TIC	TEMPERATURE INDICATING CONTROLLER	R36TROUA2200
TEW	TEMPERATURE SENSOR (PIPE INSERTION)	TY7830B1015
MIS	MANAGEMENT INTEGRATION SERVER	BSY4530
SCS	SYSTEM CORE SERVER	BCY4410
UPS	UNINTERRUPTABLE POWER SUPPLY	
T/H	TEMP/HUMI SENSOR	HTY7813T4
TC	THERMOSTAT	TY63002500
RY	AUXILLIARY RELAY	HH54P

1 VRF AND FFU EQUIPMENT CONTROL DIAGRAM
B1-5200-25 NTS

	PREPARED BY: RENATO A. ARRIOLA <small>Filipino Registered Engineer</small> <small>PROF. MECHANICAL ENGINEER PIR. 1725187</small> <small>REG. NO.: 2379 DATE: JANUARY 01, 2013</small> <small>T.M.N. 150-953-379 PLACE: TAGBILAR 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-4: BUILDING WORKS (B) SUBCOMPONENT-4-1: (B1) PASSENGER TERMINAL BUILDING (PTB) MECHANICAL VENTILATION AND AIR-CONDITIONING AUTOMATIC CONTROL SYSTEM (PART B)	SHEET NO: B1-5200-25 DRAWING SCALE: NTS
	JICA DESIGN CONSULTANT JOINT VENTURE <small>JAPAN AIRPORT CONSULTANTS, INC. NIPPON KOEI CO., LTD. NJS CONSULTANTS CO., LTD.</small>	DATE: JUNE 2013 INDEX: AMENDMENTS Prepared by: WIM Checked by: IIC Validated by:				

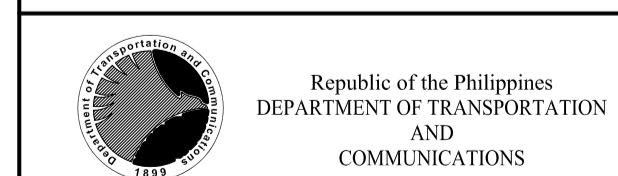


**PASSENGER TERMINAL BUILDING
GROUND FLOOR FIRE PROTECTION LAYOUT**

1
B1-5300-01

1:250M

SYMBOL	EQUIPMENT DESCRIPTION
●	PENDENT SPRINKLERS COMBINATION WITH REVERSE UPPER DEFLECTOR AND EXTRA OFFICE
○	PENDENT UPRIGHT COMBINATION
○	PENDENT SPRINKLER
■	FIRE HOSE CABINET
▲	4.5 KG FIRE EXTINGUISHER (DRY CHEMICAL)
▲	5.0 KG FIRE EXTINGUISHER CARBON DIOXIDE
▲	23 KG FIRE EXTINGUISHER CARBON DIOXIDE (WHEEL TYPE)



JICA DESIGN CONSULTANT JOINT VENTURE



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

TADASHI AOI
Team Leader

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

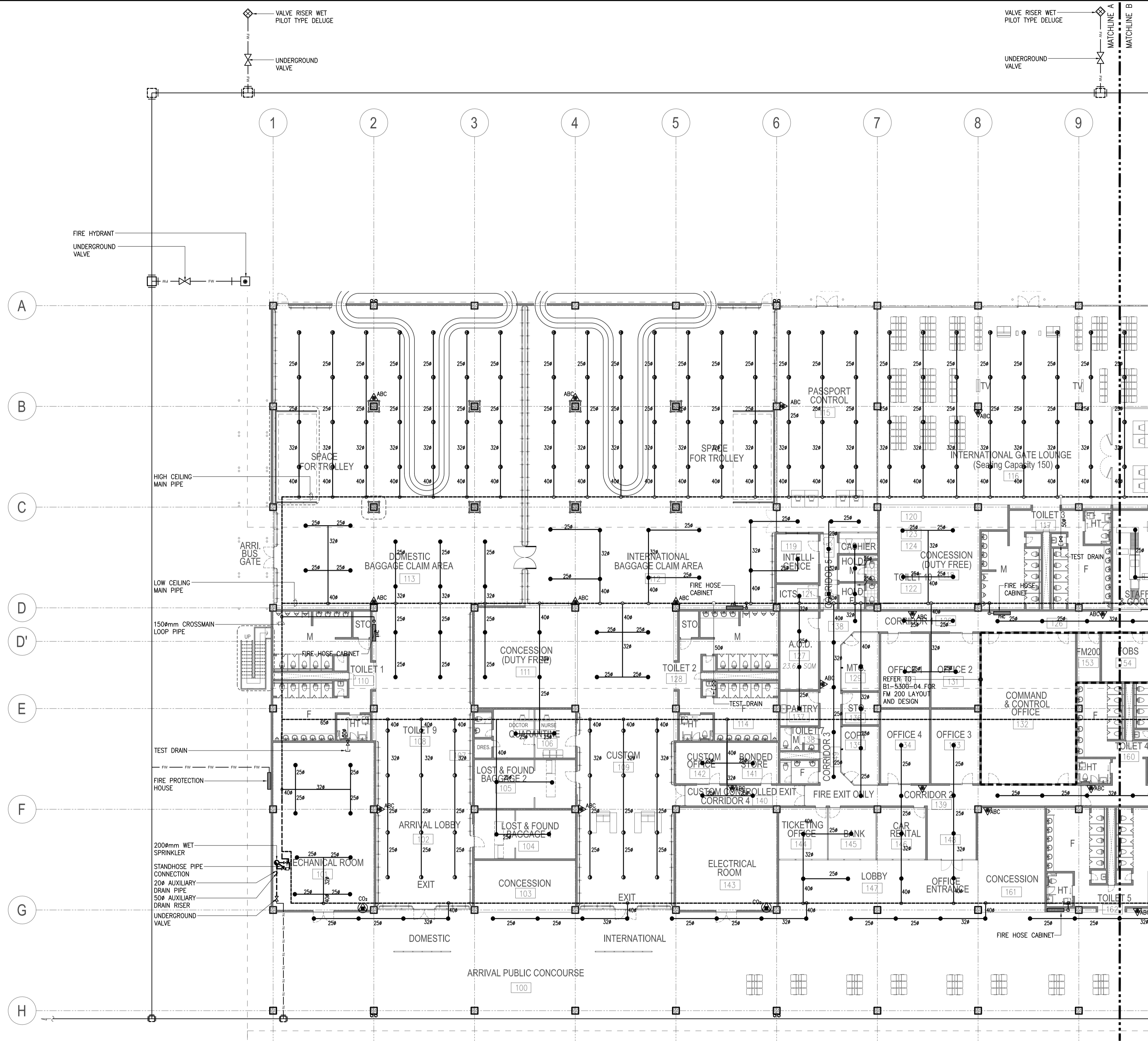
LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES

DATE	INDEX	AMENDMENTS	Prepared by	Checked by	Validated by
JUNE 2013			WIM	HC	

SHEET CONTENTS:
COMPONENT-4: BUILDING WORKS (B)
SUBCOMPONENT-4-1:
(B1) PASSENGER TERMINAL BUILDING (PTB)
MECHANICAL FIRE PROTECTION
GROUND FLOOR FIRE PROTECTION LAYOUT

SHEET NO:
B1-5300-01

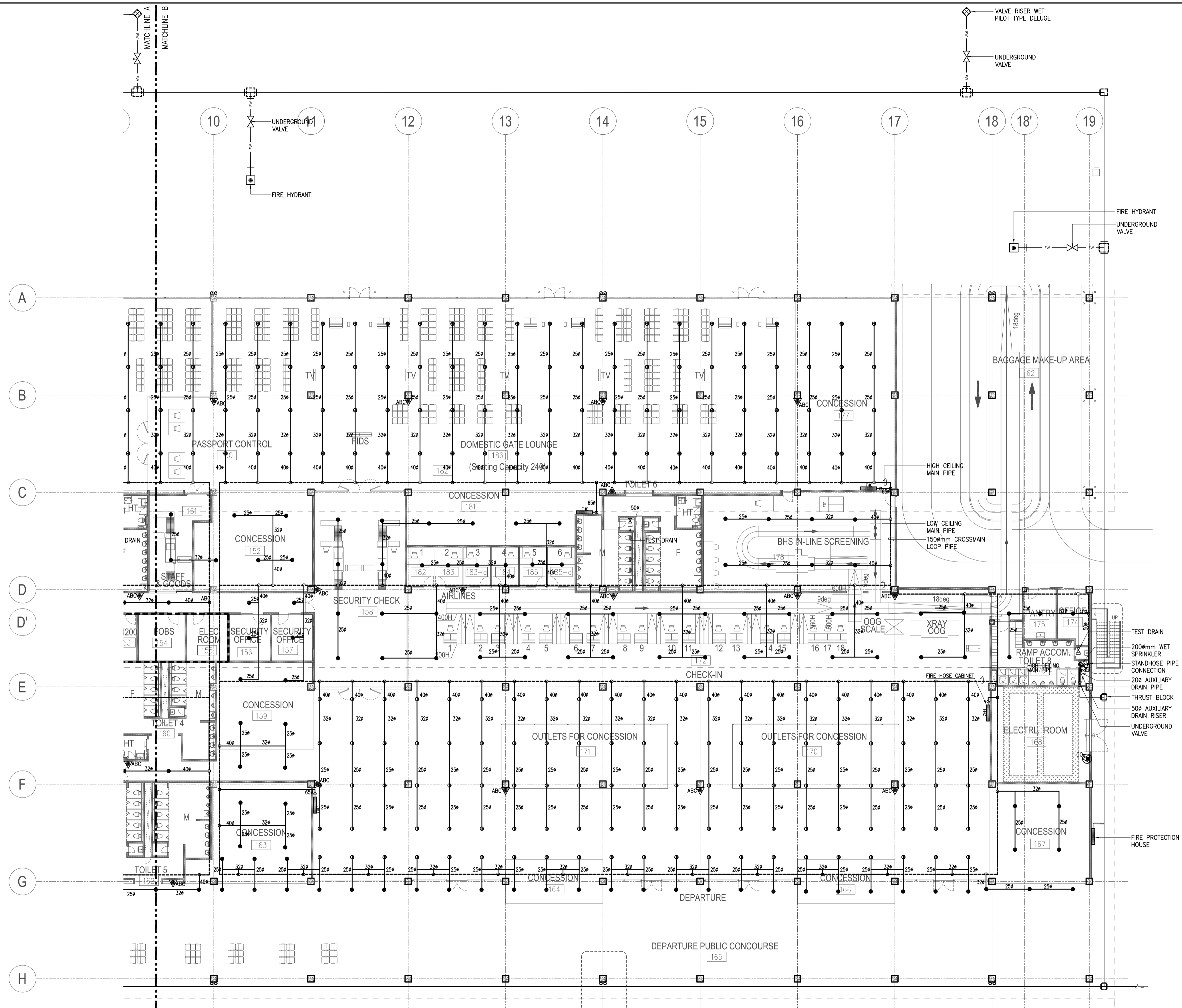
DRAWING SCALE:
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**PASSENGER TERMINAL BUILDING
GROUND FLOOR FIRE PROTECTION LAYOUT (PART A)**

1
B1-5300-02 SCALE 1:200M

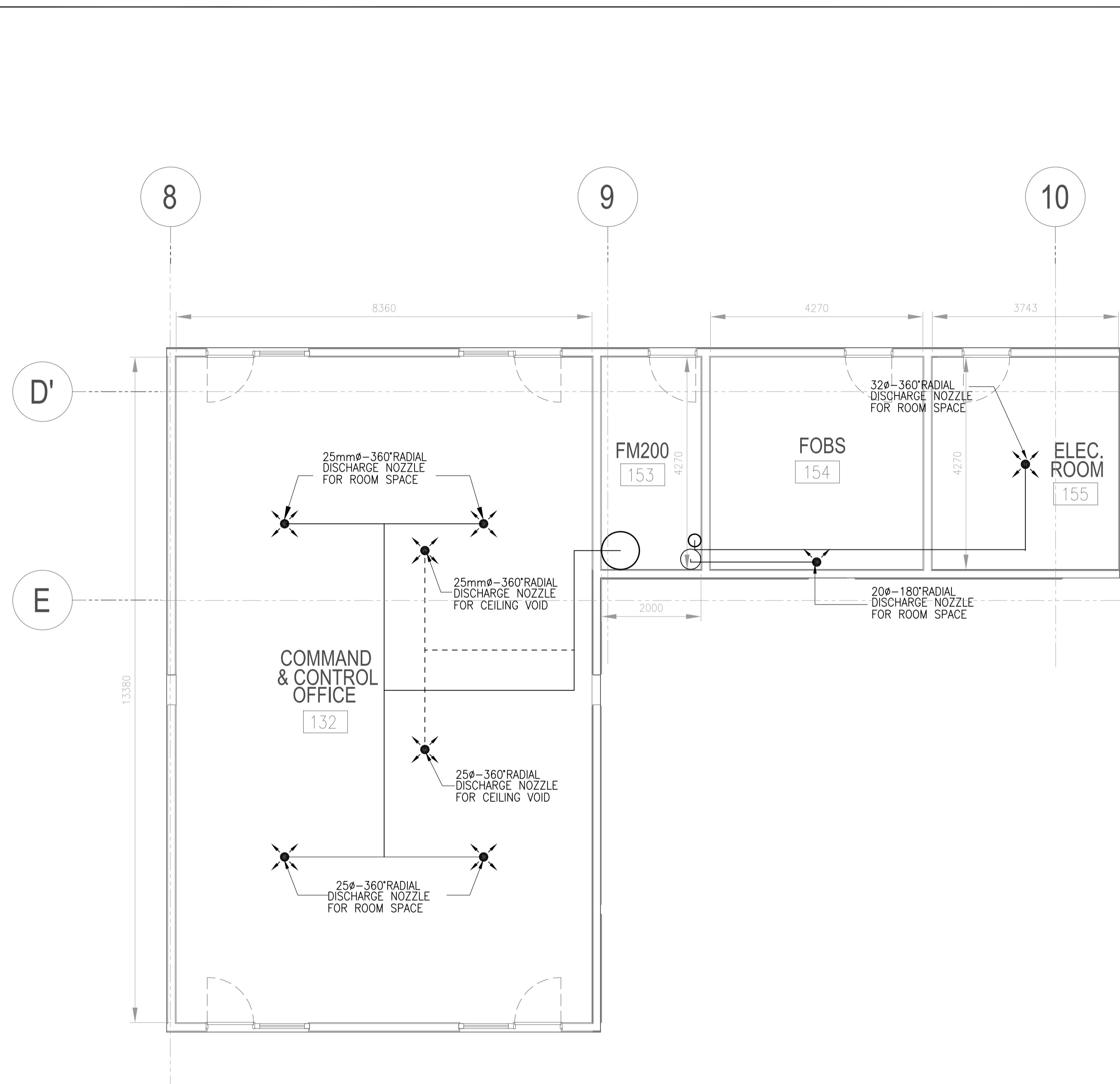
	PREPARED BY: RENATO A. ARRIOLA <small>Filipino Registered Engineer</small> PROF. MECHANICAL ENGINEER PIR. 1725187 REC. NO. 2379 DATE: JANUARY 01, 2013 TEL. 150-563-379 PLACE: TAGBILAR CITY	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	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-4: BUILDING WORKS (B) SUBCOMPONENT-4-1: (B1) PASSENGER TERMINAL BUILDING (PTB) MECHANICAL FIRE PROTECTION GROUND FLOOR FIRE PROTECTION LAYOUT (PART A)	SHEET NO: B1-5300-02 DRAWING SCALE: 1:200M
	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>	JUNE 2013 DATE INDEX AMENDMENTS Prepared by WIM Checked by IIC Validated by	SHEET NO: B1-5300-02 DRAWING SCALE: 1:200M



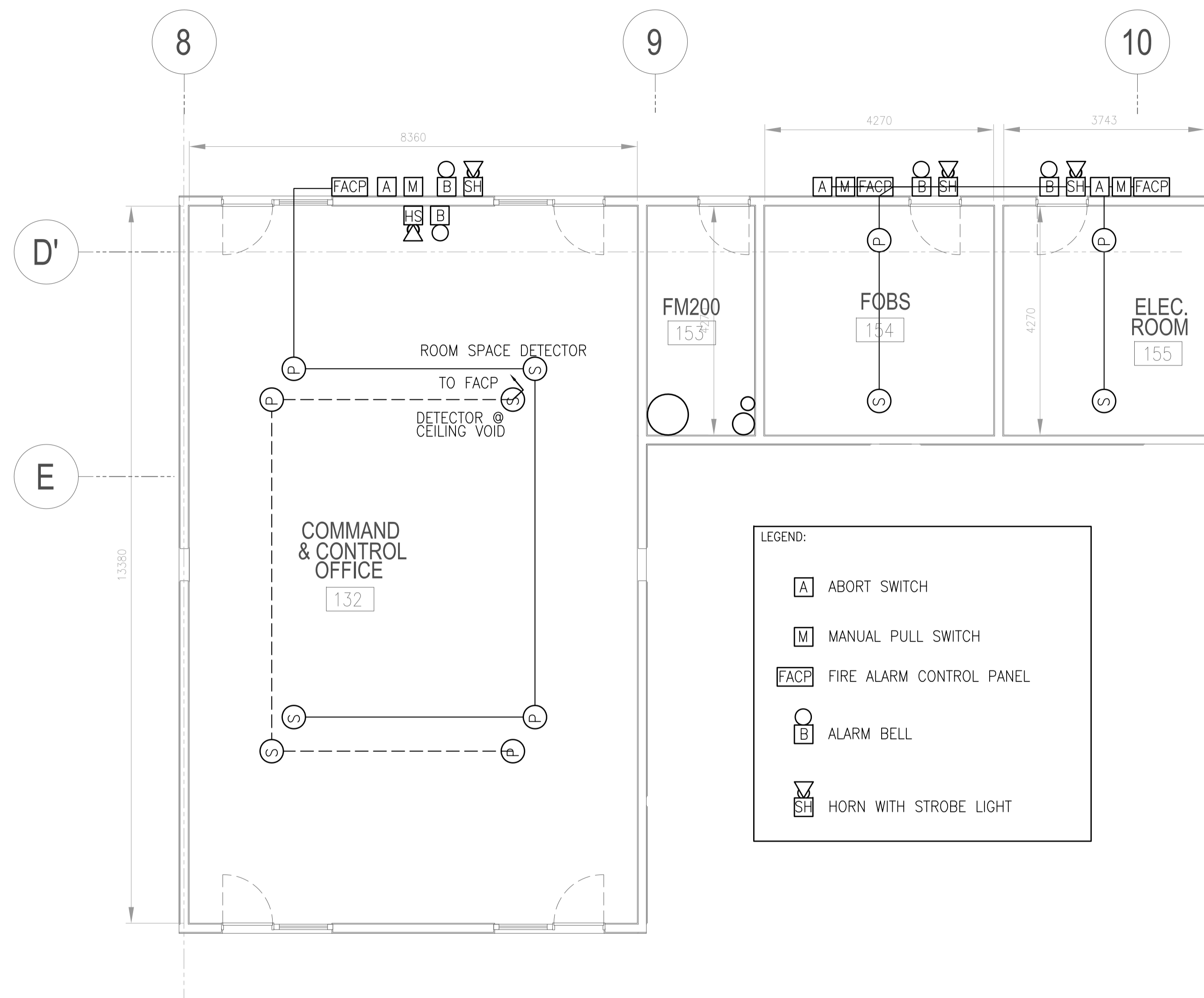
**PASSENGER TERMINAL BUILDING
GROUND FLOOR FIRE PROTECTION LAYOUT (PART B)**

1
B1-5300-03 SCALE 1:200M

		PREPARED BY: RENATO A. ARRIOLA <small>Philippine Registered Engineer</small> PROF: MECHANICAL ENGINEER PIR: 1725187 REG. NO: 2379 DATE: JANUARY 01, 2013 TIN: 150-563-379 PLACE: TAGBILAR CITY	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-4: BUILDING WORKS (B) SUBCOMPONENT-4-1: (B1) PASSENGER TERMINAL BUILDING (PTB) MECHANICAL FIRE PROTECTION GROUND FLOOR FIRE PROTECTION LAYOUT (PART B)	SHEET NO: B1-5300-03 DRAWING SCALE: 1:200M
JICA DESIGN CONSULTANT JOINT VENTURE 						DATE: JUNE 2013 INDEX: - AMENDMENTS: - Prepared by: WIM Checked by: HC Validated by:	



1 FM200 NOZZLE AND TANK LAYOUT BLOW UP
B1-5300-04 SCALE 1:60M

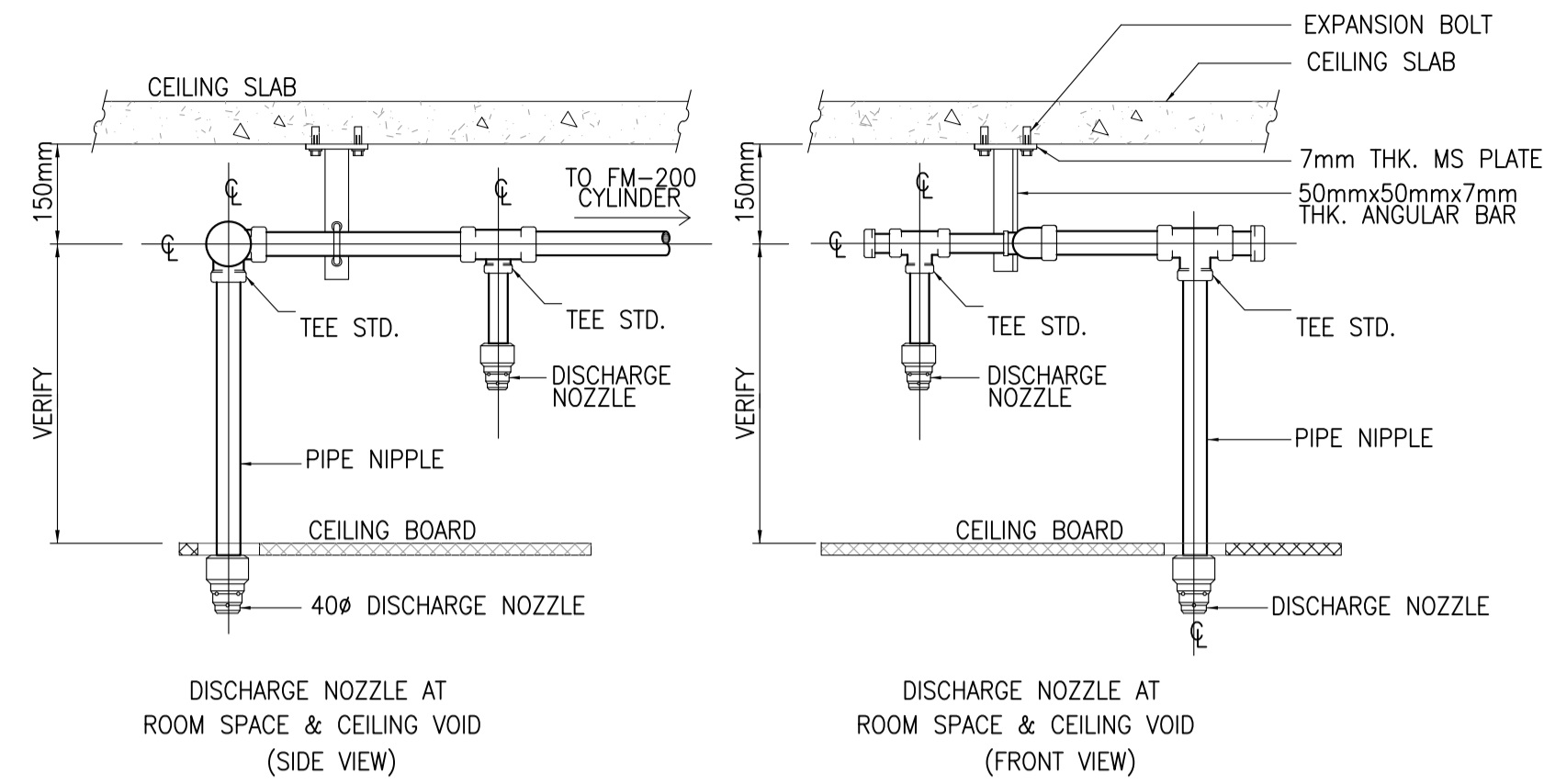


1 FM200 ELECTRONIC LAYOUT BLOW UP
B1-5300-04 SCALE 1:60M

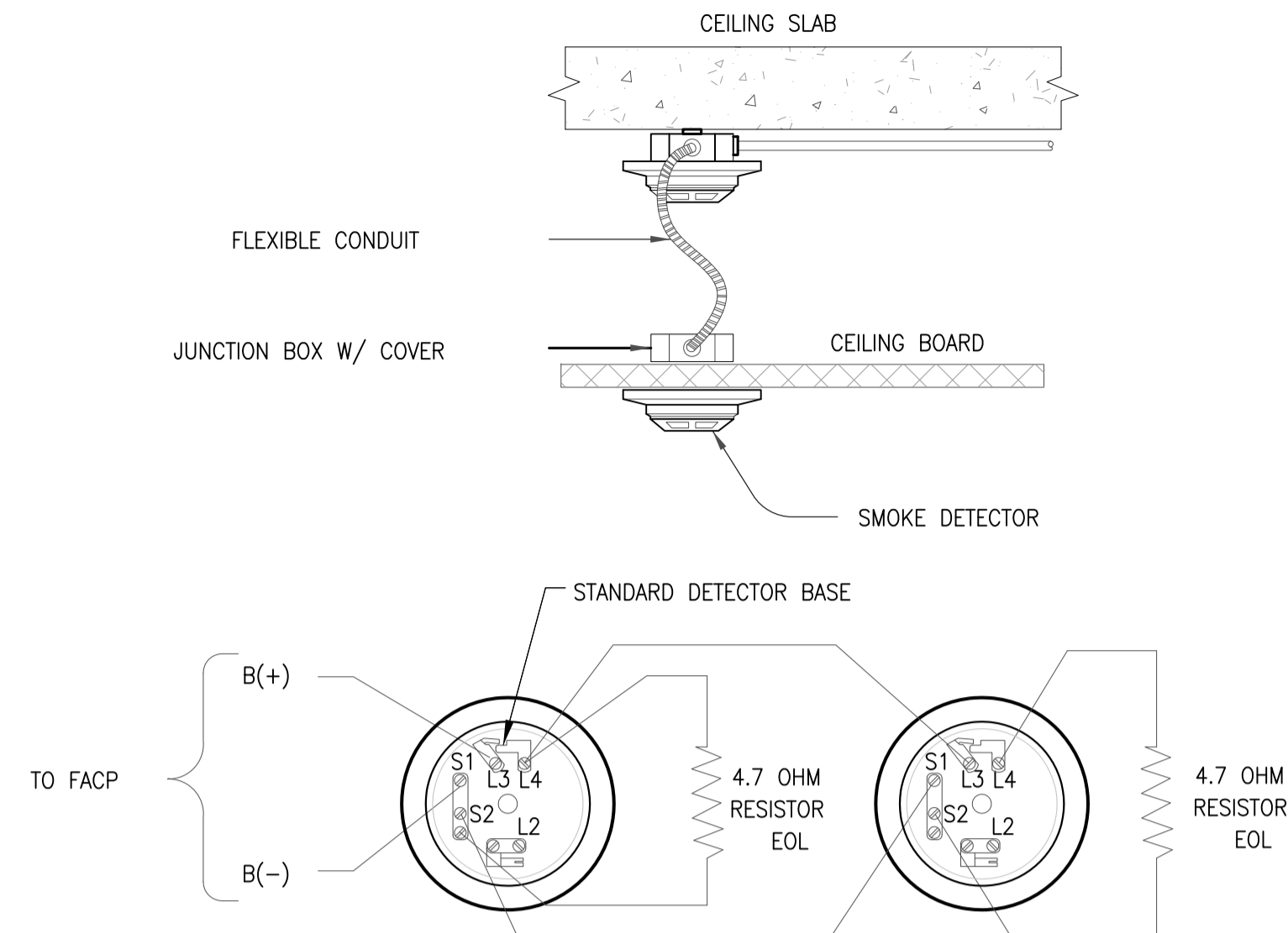
LEGEND:

[A]	ABORT SWITCH
[M]	MANUAL PULL SWITCH
[FACP]	FIRE ALARM CONTROL PANEL
[B]	ALARM BELL
[SH]	HORN WITH STROBE LIGHT

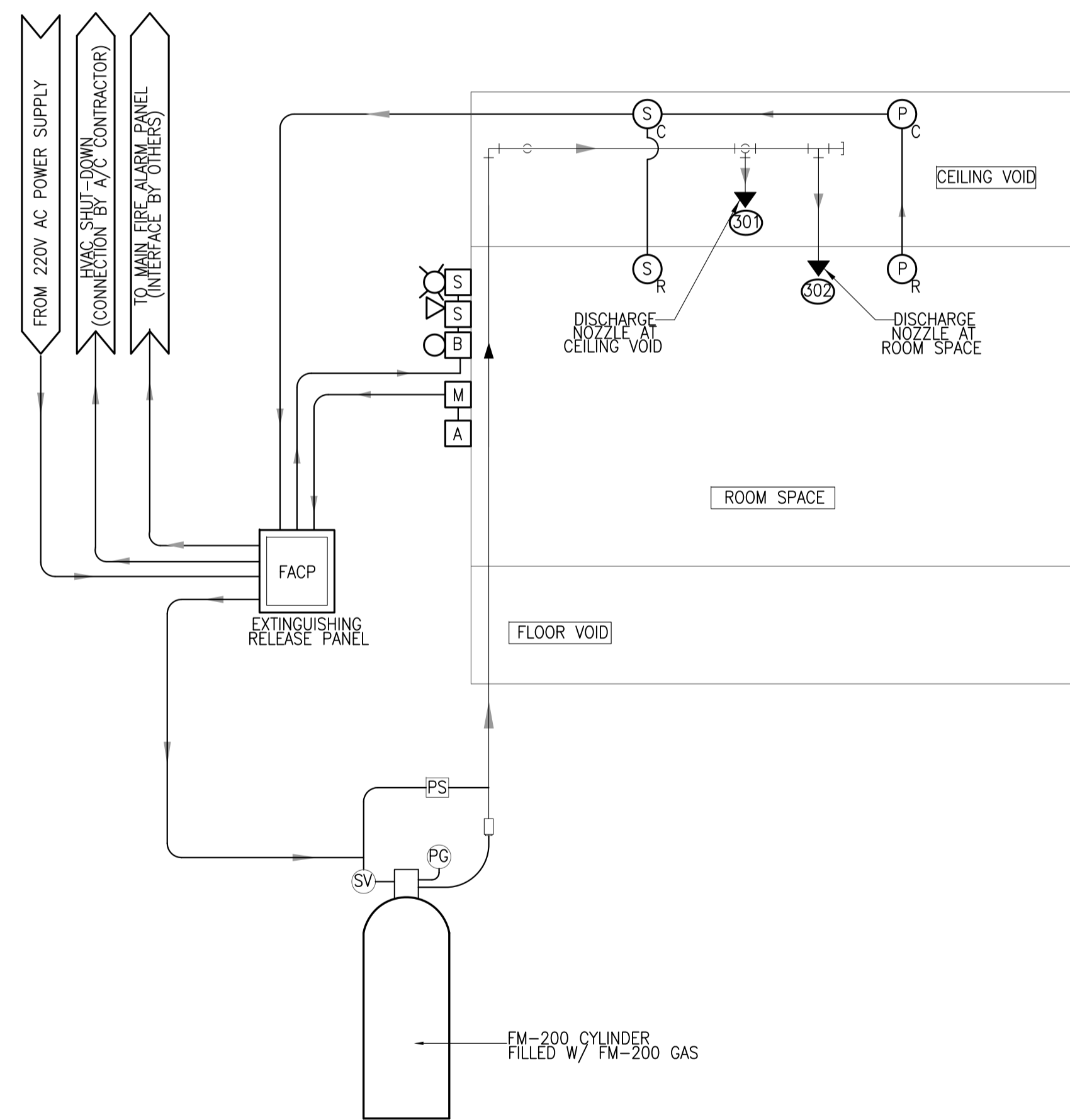
	PREPARED BY: RENATO A. ARRIOLA Filipino Registered Engineer PROF. MECHANICAL ENGINEER PTR. 1725187 REG. NO. 2379 DATE: JANUARY 01, 2013 T.I.N. 150-563-379 PLACE: TAGBILAR CITY	RECOMMENDING APPROVAL: JILDEFONSO T. PATDU, JR. Assistant Secretary for Project Implementation, DOTC	APPROVED: JULIANITO G. BUCAYAN, JR. Undersecretary for Project Implementation, DOTC	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	SHEET CONTENTS: COMPONENT-4: BUILDING WORKS (B) SUBCOMPONENT-4-1: (B1) PASSENGER TERMINAL BUILDING (PTB) MECHANICAL FIRE PROTECTION FM200 SPRINKLER AND ELECTRONIC LAYOUT AND BLOW UP	SHEET NO: B1-5300-04 DRAWING SCALE: AS SHOWN
	JICA DESIGN CONSULTANT JOINT VENTURE JAPAN AIRPORT CONSULTANTS, INC. NIPPON KOEI CO., LTD. NIS CONSULTANTS CO., LTD.	DATE: JUNE 2013 INDEX: AMENDMENTS Prepared by: WIM Checked by: IIC Validated by:				



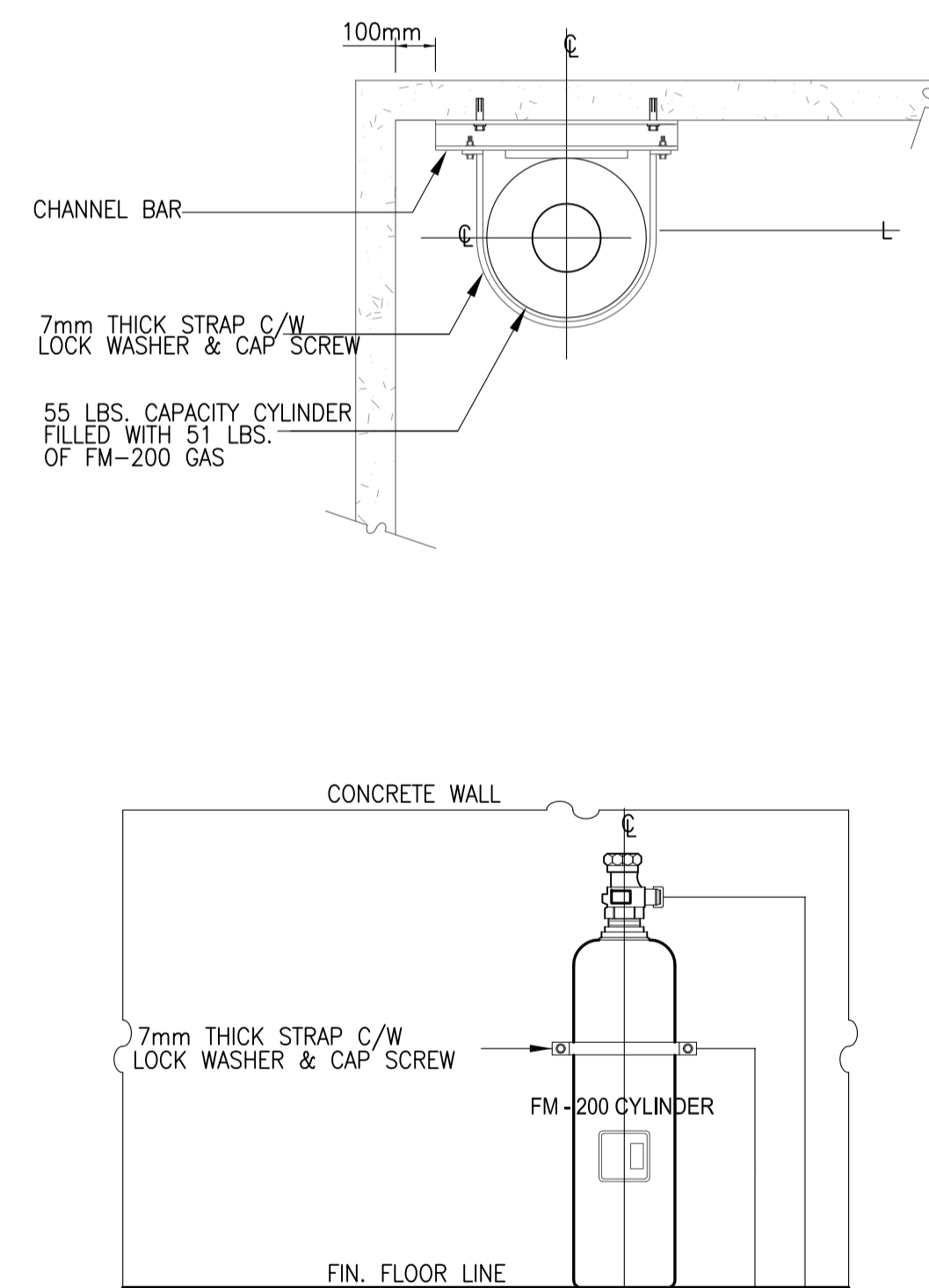
1 DISCHARGE NOZZLE DETAIL
 B1-5300-05 NOT TO SCALE



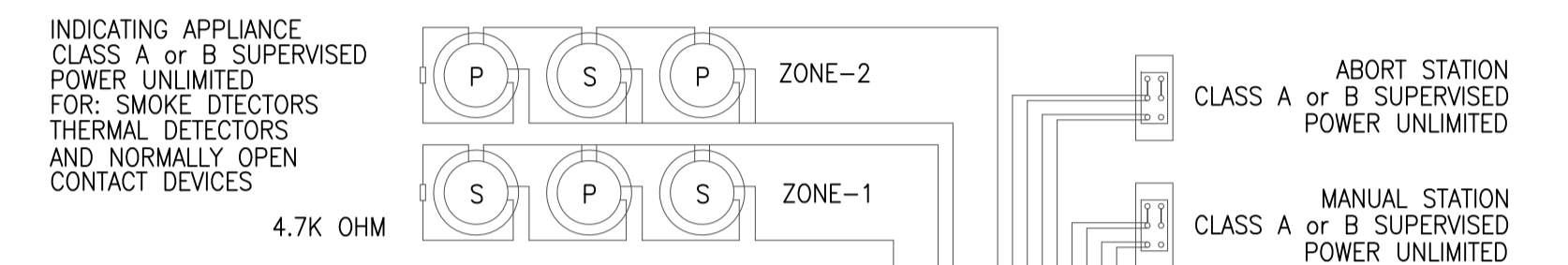
2 FM200 SMOKE DETECTOR DETAIL
 B1-5300-05 NOT TO SCALE



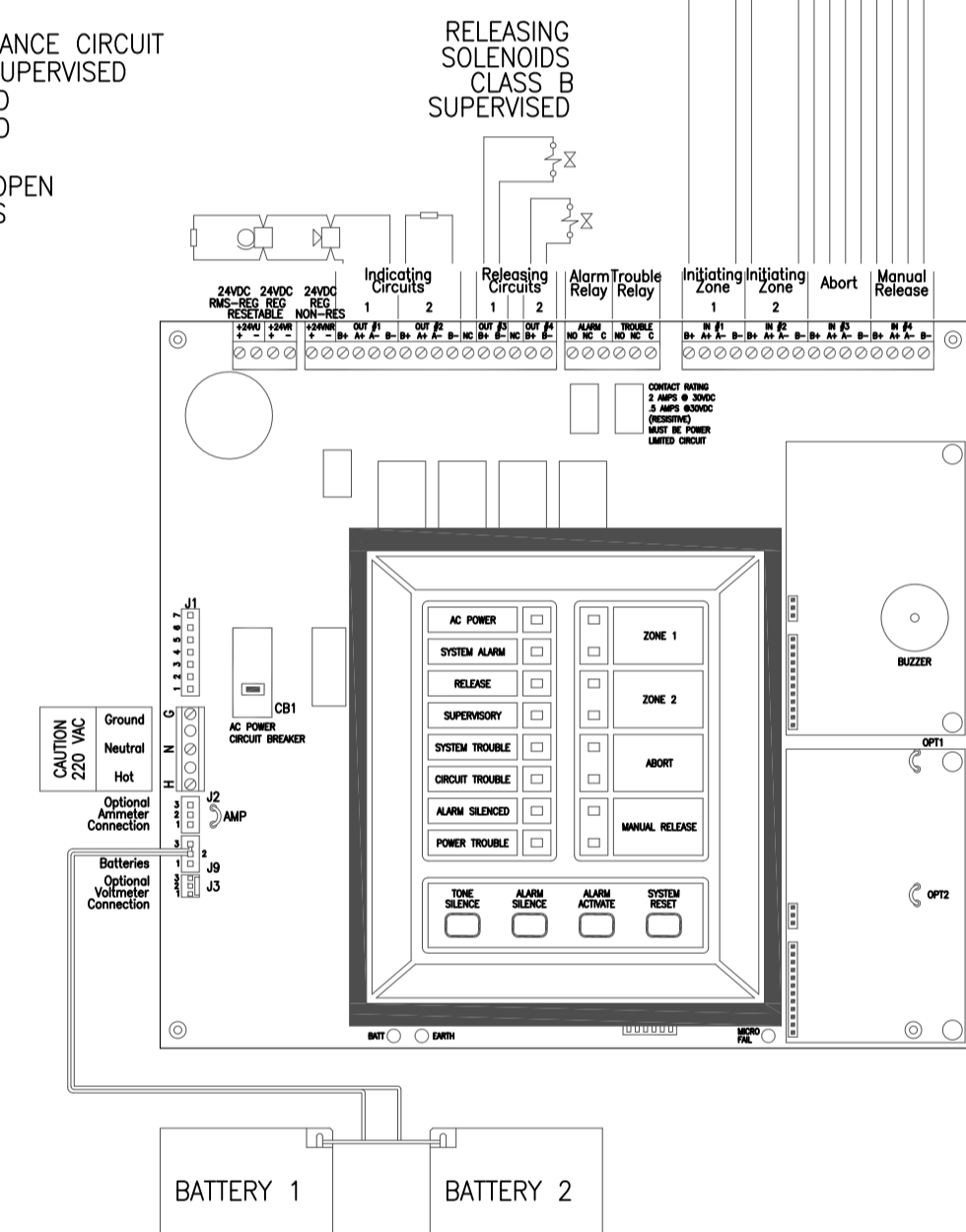
3 FM200 SYSTEM SCHEMATIC DIAGRAM
 B1-5300-05 NOT TO SCALE



4 FM200 AGENT CANISTER DETAIL
 B1-5300-05 NOT TO SCALE



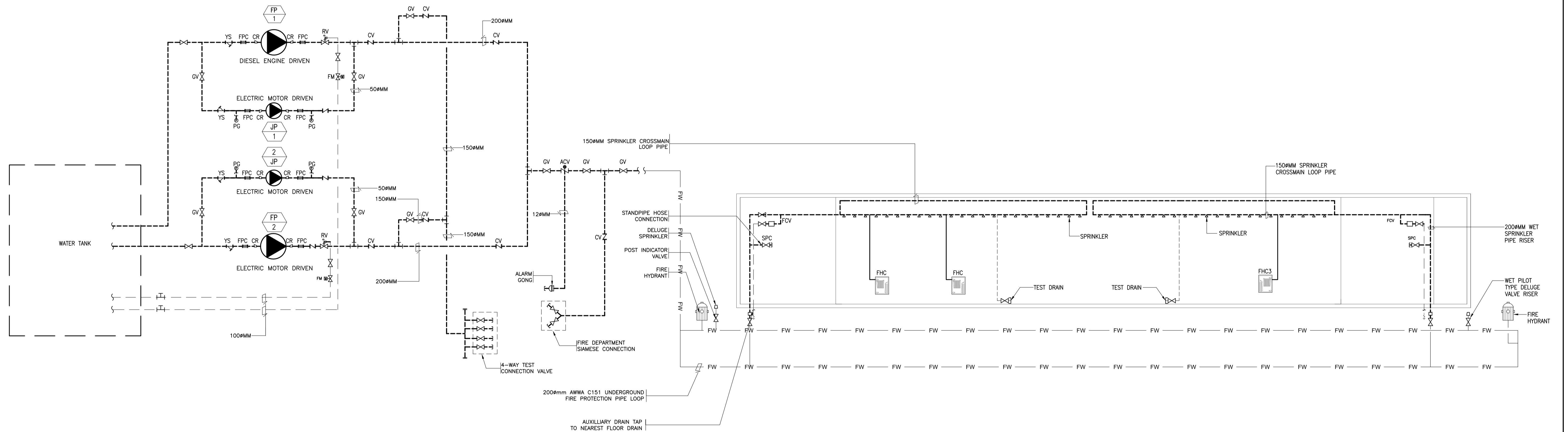
INDICATING APPLIANCE
 CLASS A or B SUPERVISED
 POWER UNLIMITED
 FOR: SMOKE DETECTORS
 THERMAL DETECTORS
 AND NORMALLY OPEN
 CONTACT DEVICES
 4.7K OHM



5 FM200 CONTROL BOX WIRING DETAIL
 B1-5300-05 NOT TO SCALE

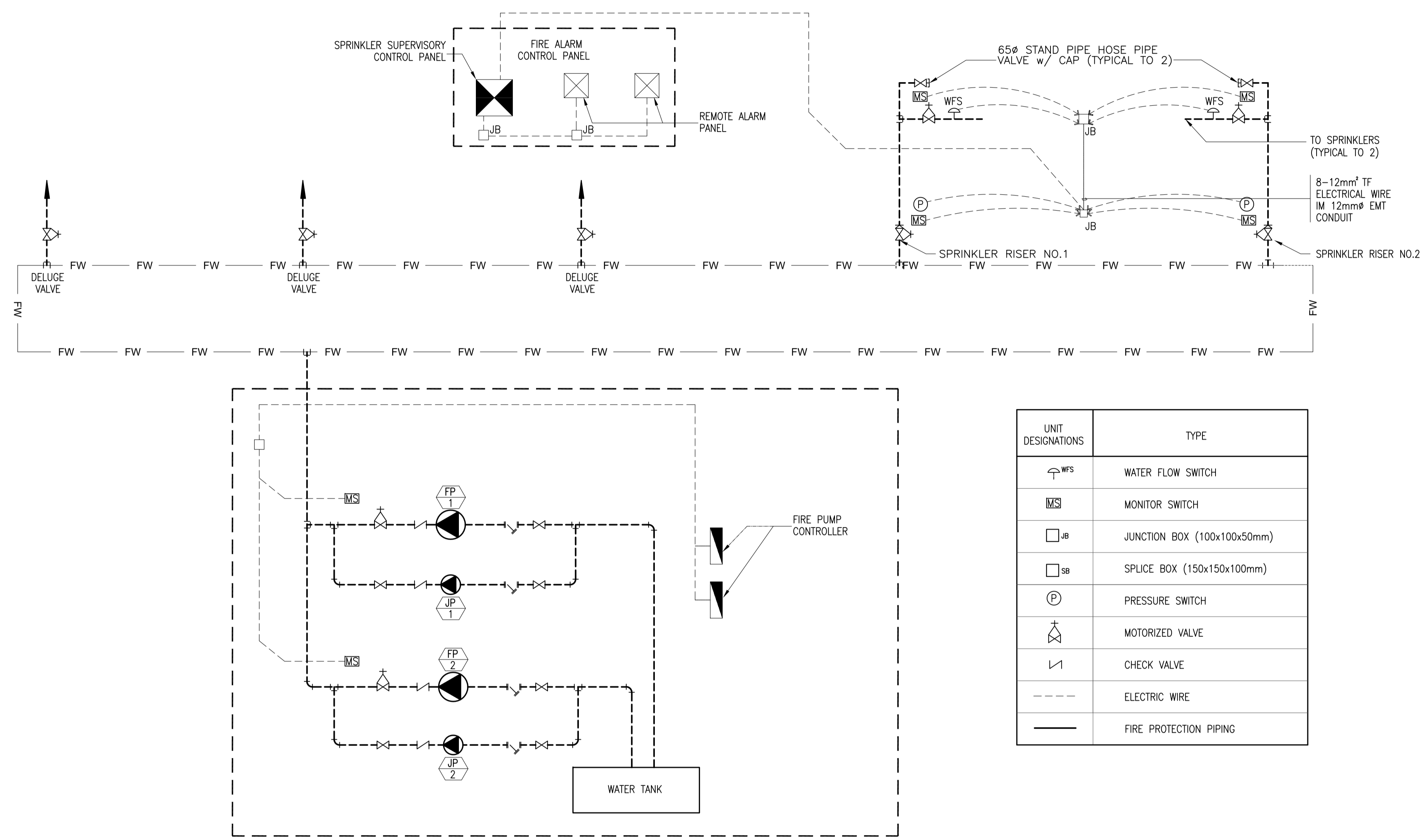
	PREPARED BY: RENATO A. ARRIOLA Filipino Registered Engineer PROF: MECHANICAL ENGINEER PTR. 1725187 REG. NO: 2379 DATE: JANUARY 01, 2013 TEL: 150-563-379 PLACE: TAGUIG CITY	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. Assistant Secretary for Project Implementation, DOTC	APPROVED: JULIANITO G. BUCAYAN, JR. Undersecretary for Project Implementation, DOTC	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT	LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	SHEET CONTENTS: COMPONENT-4: BUILDING WORKS (B) SUBCOMPONENT-4-1: (B1) PASSENGER TERMINAL BUILDING (PTB) MECHANICAL FIRE PROTECTION FM200 SYSTEM DETAILED DESIGN	SHEET NO: B1-5300-05 DRAWING SCALE: AS SHOWN
	JICA DESIGN CONSULTANT JOINT VENTURE JAPAN AIRPORT CONSULTANTS, INC. NIPPON KOEI CO., LTD. NJS CONSULTANTS CO., LTD.	JUNE 2013 DATE INDEX AMENDMENTS Prepared by Checked by Validated by	WIM IIC				

LEGENDS:			
	JOCKEY PUMP		FLEXIBLE PIPE CONNECTOR
	FIRE PUMP		RELIEF VALVE
	SPRINKLER HEAD		GATE VALVE
	PRESSURE GAUGE		Y-STRAINER
	FIRE HOSE CABINET	SPC	STANDHOSE PIPE CONNECTION
		FCV	FLOW CONTROL VALVE
	ALARM CHECK VALVE	CI	CONCENTRIC INCREASER
	FLOW METER	CR	CONCENTRIC REDUCER
	CHECK VALVE	WC	WASTE CONE



1 FIRE PROTECTION PIPING SCHEMATIC DIAGRAM
B1-5300-05 NTS

	PREPARED BY: RENATO A. ARRIOLA <small>Filipino Registered Engineer</small> <small>PROF. NO: 2379 PIR. 1725187</small> <small>REC. NO: 2379 DATE: JANUARY 01, 2013</small> <small>T.I.N. 150-563-379 PLACE: TAGBILAR CITY</small>	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. <small>Assistant Secretary</small> <small>for Project Implementation, DOTC</small>	APPROVED: JULIANITO G. BUCAYAN, JR. <small>Undersecretary</small> <small>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-4: BUILDING WORKS (B) SUBCOMPONENT-4-1: (B1) PASSENGER TERMINAL BUILDING (PTB) MECHANICAL FIRE PROTECTION FIRE PROTECTION PIPING SCHEMATIC DIAGRAM	SHEET NO: B1-5300-06
	JICA DESIGN CONSULTANT JOINT VENTURE <small>JAPAN AIRPORT CONSULTANTS, INC. NIPPON KOEI CO., LTD. NJS CONSULTANTS CO., LTD.</small>	DATE: JUNE 2013 INDEX: AMENDMENTS Prepared by: WIM Checked by: IIC Validated by:	DRAWING SCALE: NTS				



1 SCHEMATIC WIRING DIAGRAM OF SPRINKLER SUPERVISORY MONITORING PANEL