




KING HUSSEIN INTERNATIONAL AIRPORT BHS EXPANSION AQABA, JORDAN

FIRE FIGHTING SYSTEM MARCH 2021



Purpose Of Issue	Rev.	Date	Approved	Client:	Consultant:	Project:	Design Stage:	Discipline:	Title:	Design:	Drawn by:	Checked:
				Nadco.jpg		King Hussein International Airport BHS Expansion Aqaba, Jordan	Final Design Stage Airport Buildings	Mechanical	PROJECT INFORMATION COVER PAGE	Scale: NA	Date: 12/12/2019	Approved: ENGICON
										Drawing Number:		Rev.:

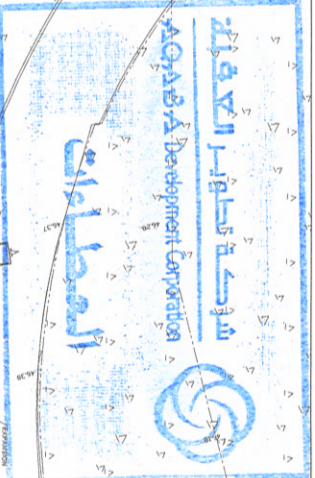
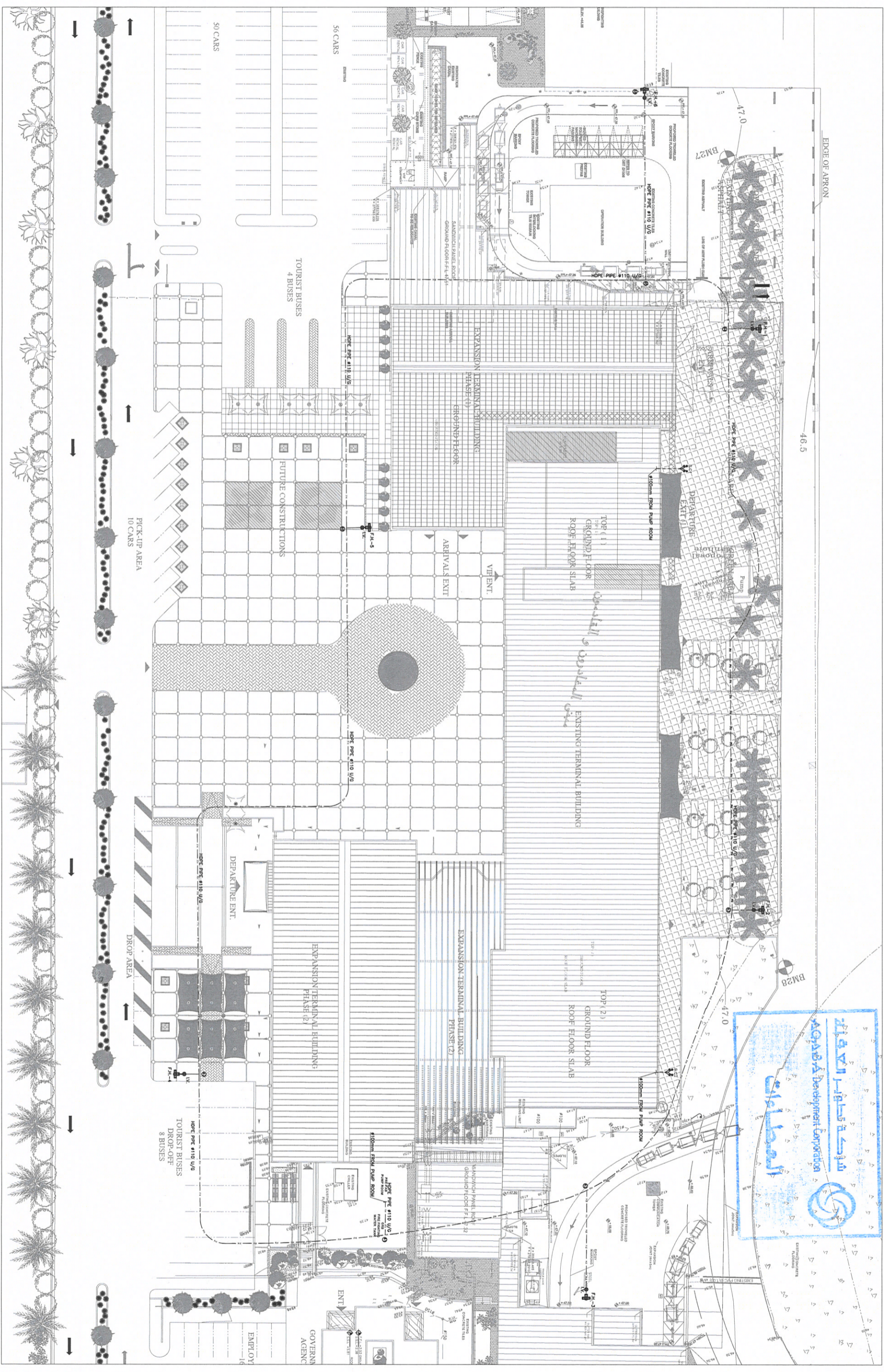
MECHANICAL

NO.	DRAWING	SCALE	REV.
FF-100	SITE PLAN_FIRE EXTINGUISHING SYSTEM PLAN	1:300	1
FF-101	SITE PLAN_FIRE EXTINGUISHING SYSTEM PLAN	1:200	1
FF-102	SITE PLAN_FIRE EXTINGUISHING SYSTEM PLAN	1:200	1
FF-200	GROUND FLOOR_FIRE EXTINGUISHING SYSTEM PLAN	1:400	1
FF-201	GROUND FLOOR_FIRE EXTINGUISHING SYSTEM PLAN	1:100	1
FF-202	GROUND FLOOR_FIRE EXTINGUISHING SYSTEM PLAN	1:100	1
FF-203	GROUND FLOOR_FIRE EXTINGUISHING SYSTEM PLAN	1:100	1
FF-204	GROUND FLOOR_FIRE EXTINGUISHING SYSTEM PLAN	1:100	1
FF-205	GROUND FLOOR_FIRE EXTINGUISHING SYSTEM PLAN	1:100	1
FF-601	FIRE FIGHTING SYSTEM RISER DIAGRAM	N.T.S.	1
FF-901	FIRE FIGHTING SYSTEM ISOMETRIC DIAGRAM	N.T.S.	1

ABBR.	DESIGNATION
ML	MAIN LINE FIRE FIGHTING PIPE
F	FIRE FIGHTING PIPE
---	DRAIN PIPE
HR	FIRE HOSE REEL PIPE
SC	FIRE DEPARTMENT CONNECTION PIPE
FH	FIRE HYDRANT PIPE
∞	DRAIN VALVE.
↓	AUTOMATIC AIR RELEASE VENT WITH ISOLATING VALVE.
∩	CHECK VALVE
∇	CIRCULATION RELIEF VALVE
⊕	PRESSURE GAGE
□ A.C.V	ALARM CHECK VALVE (WITH WATER GONG)
□ Z.C.V	ZONE CONTROL VALVE
▨	FIRE HOSE REEL
OS&Y	(OUTSIDE SCREW AND YOKE) (GATE VALVE)
b/v	BUTTERFLY VALVE
DOC	DRAIN OUTLET CONNECTION
EP1	FIRE ELECTRIC PUMP
EP2	FIRE ELECTRIC PUMP
EP3	FIRE JOCKY OUMP
FH	FIRE HYDRANT
●	FIRE DEPARTMENT CONNECTION
∇	ALARM CHECK VALVE (WITH WATER GONG)
☼	PENDENT CONCEALED SPRINKLER
⊙	UP-RIGHT SPRINKLER
⊗	DOUBLE-LAYER SPRINKLER (PENDENT+UP-RIGHT)
⊕	PUMP



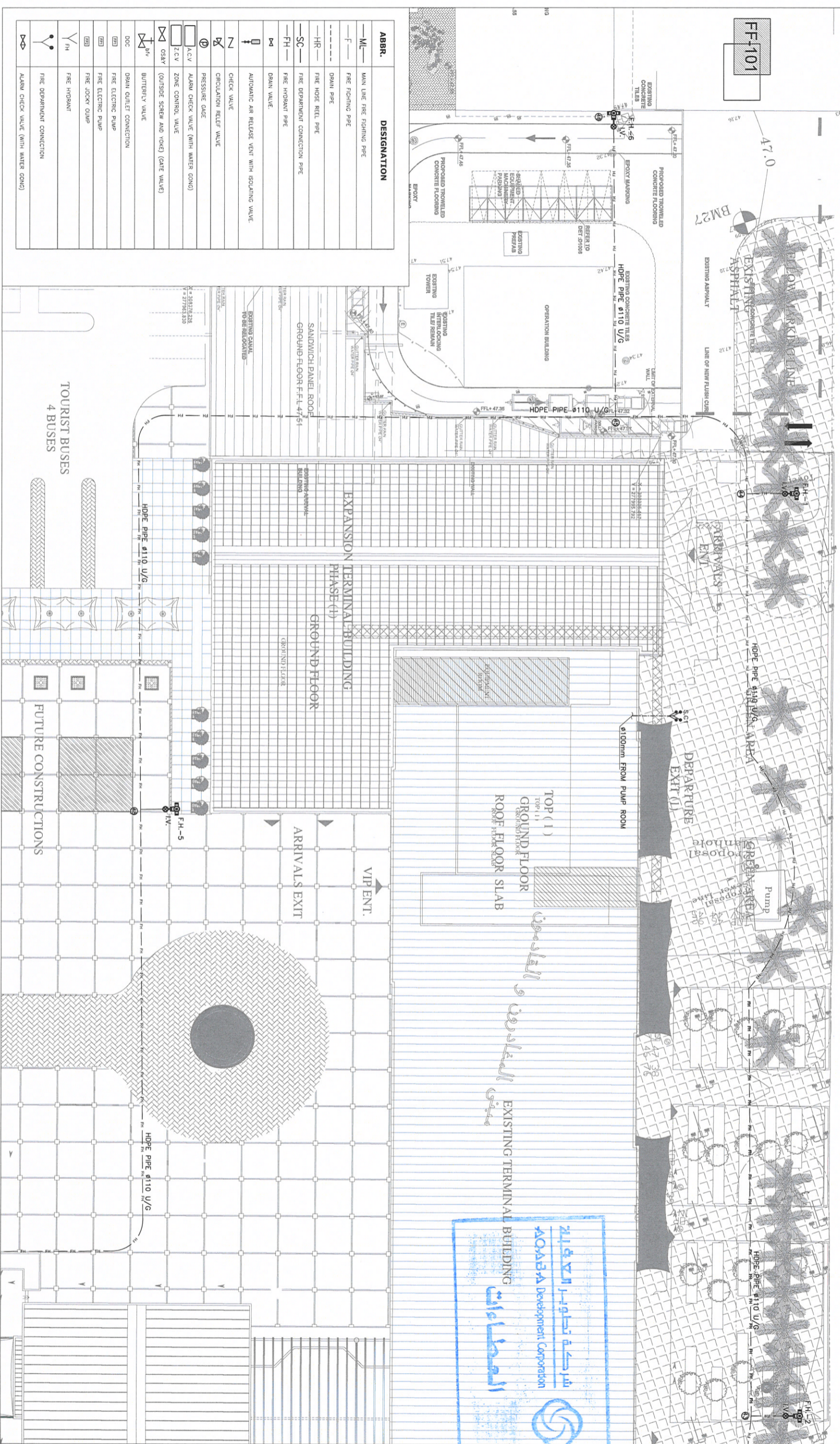
Purpose Of Issue	Rev.	Date	Approved	Client:	Consultant:	Project:	Design Stage:	Title:	Design:	Drawn by:	Checked:
Fire Fighting System	A	August 2020	Engicon	شركة تطوير العقبة AQABA Development Corporation	engicon	King Hussein International Airport FIRE FIGHTING SYSTEM Aqaba, Jordan	Final Design Stage Airport Buildings	LIST OF DRAWINGS	E.J	Engicon	Z.SH.
							Discipline: Mechanical	Scale:	N.T.S.	August 2020	W.Z
									Drawing Number:		Rev.: 0
									AG-001		



Purpose of Issue		Rev.	Date	Approved	Client:	Project:		Design Stage:		Title:		Design:		Drawn by:		Checked:	
Fire Fighting System		A	August 2020	Engicon	شركة تطوير العقبة AQABA Development Corporation	King Hussein International Airport FIRE FIGHTING SYSTEM Aqaba, Jordan		Final Design Stage Airport Buildings		SITE PLAN FIRE EXTINGUISHING SYSTEM PLAN		E.J		Engicon		Z.SH	
					مشروع استشاري	Agaba, Jordan		Mechanical		Scale: 0 6 12 18 24 30 METERS		1/300		August 2020		W.Z	
					مشروع استشاري	Agaba, Jordan										Rev: 0	

EDGE OF APRON

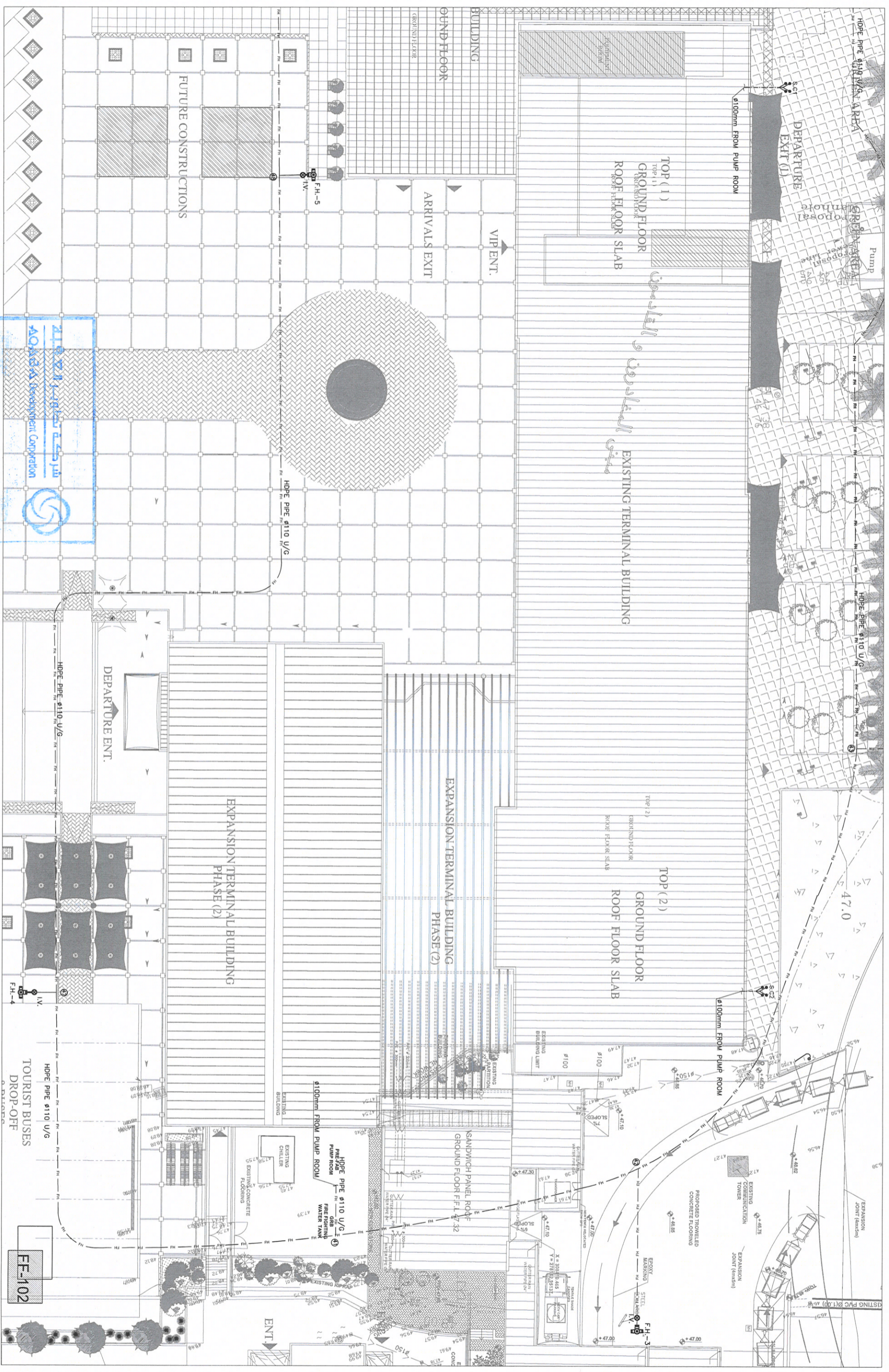
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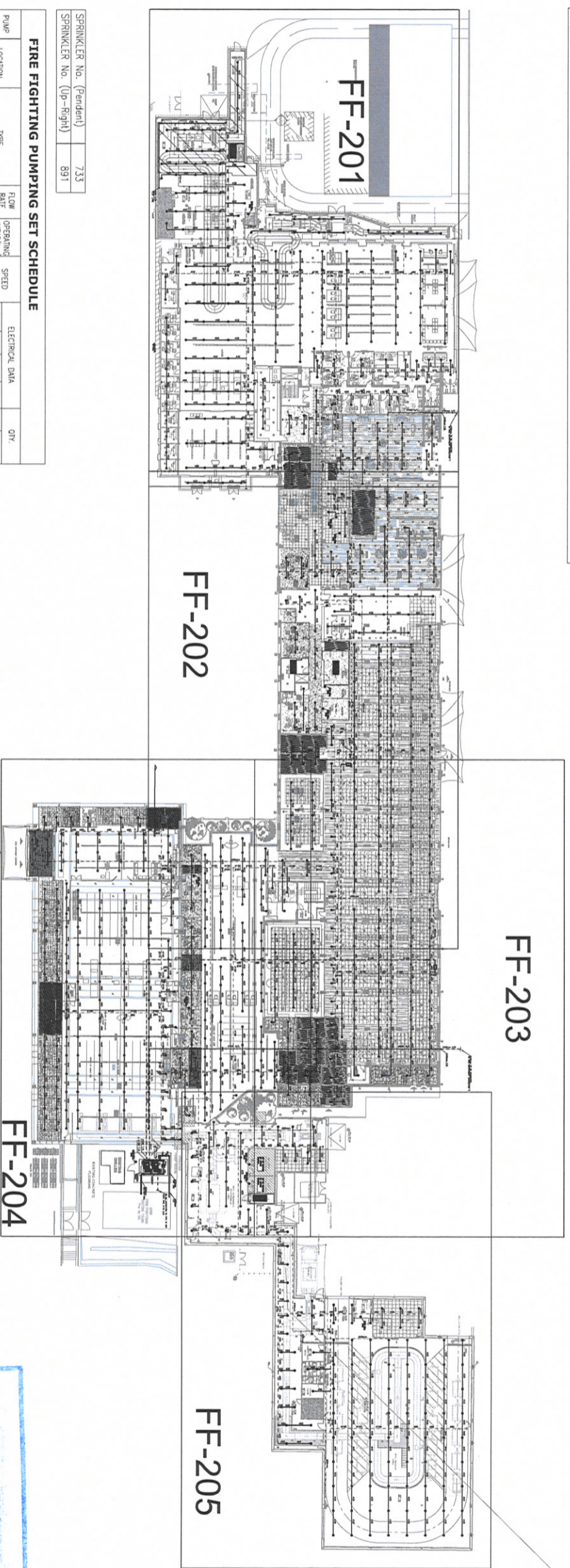
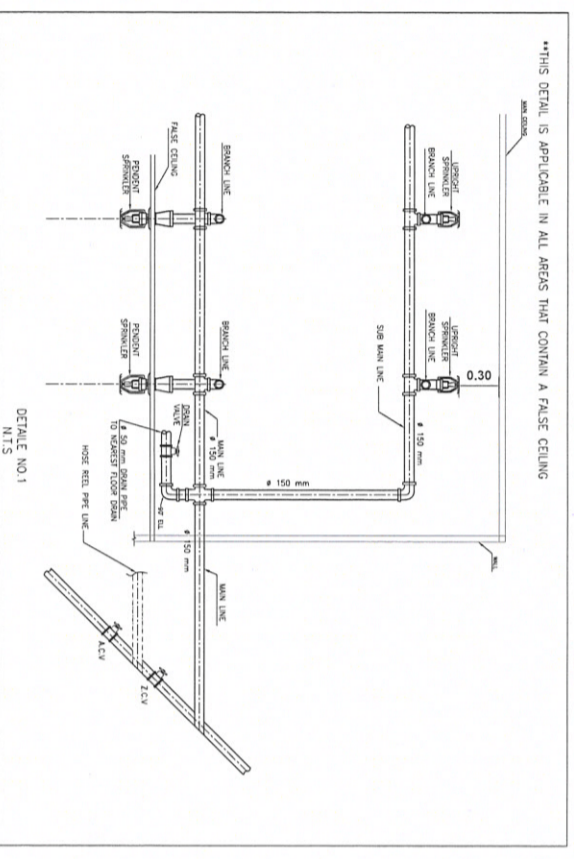
ABBR.	DESIGNATION
ML	MAIN LINE FIRE FIGHTING PIPE
F	FIRE FIGHTING PIPE
DR	DRAIN PIPE
HR	FIRE HOSE REL. PIPE
SC	FIRE DEPARTMENT CONNECTION PIPE
FH	FIRE HYDRANT PIPE
BD	DRAIN VALVE
AV	AUTOMATIC AIR RELEASE VENT WITH ISOLATING VALVE
CV	CHECK VALVE
CR	CIRCULATION RELIEF VALVE
PC	PRESSURE GAGE
ACV	ALARM CHECK VALVE (WITH WATER CONG)
ZCV	ZONE CONTROL VALVE
OSAV	(OUTSIDE SCREEN AND YOK) (GATE VALVE)
BT	BUTTERFLY VALVE
DOC	DRAIN OUTLET CONNECTION
EP	FIRE ELECTRIC PUMP
EB	FIRE ELECTRIC PUMP
ED	FIRE JOCKY QUIMP
YFH	FIRE HYDRANT
FC	FIRE DEPARTMENT CONNECTION
ACV	ALARM CHECK VALVE (WITH WATER CONG)

شركة تطوير العقاب
 AQABA Development Corporation
 المقاولات

Purpose Of Issue	Rev.	Date	Approved	Client:	Consultant:	Project:	Design Stage:	Title:	Design:	Drawn By:	Checked:
Fire Fighting System	A	August 2020	Engicon	شركة تطوير العقاب AQABA Development Corporation	engicon	King Hussein International Airport FIRE FIGHTING SYSTEM Aqaba, Jordan	Final Design Stage Airport Buildings	SITE PLAN FIRE EXTINGUISHING SYSTEM PLAN	E. J.	Engicon	Z. SH.
								Scale: 0 4 8 12 16 20 METERS	Scale: 1/200	Date: August 2020	Approved: W.Z.
									Drawing Number:	FF-101	Rev.: 0



Purpose Of Issue		Rev.	Date	Approved	Client:	Project:		Design Stage:		Title:		Design:		Checked:	
Fire Fighting System		A	August 2020	Engicon	المشرف على التطوير والتنمية AQASAD Development Corporation	King Hussein International Airport FIRE FIGHTING SYSTEM Amman, Jordan		Final Design Stage Airport Buildings		SITE PLAN FIRE EXTINGUISHING SYSTEM PLAN		E. J.		Z. SH.	
					المشرف على التصميم engicon			Mechanical		Scale: 0 4 8 12 16 20 METERS		Scale: 1/200		Date: August 2020	
												Drawing Number: FF-102		Rev.: 0	



FIRE FIGHTING PUMPING SET SCHEDULE

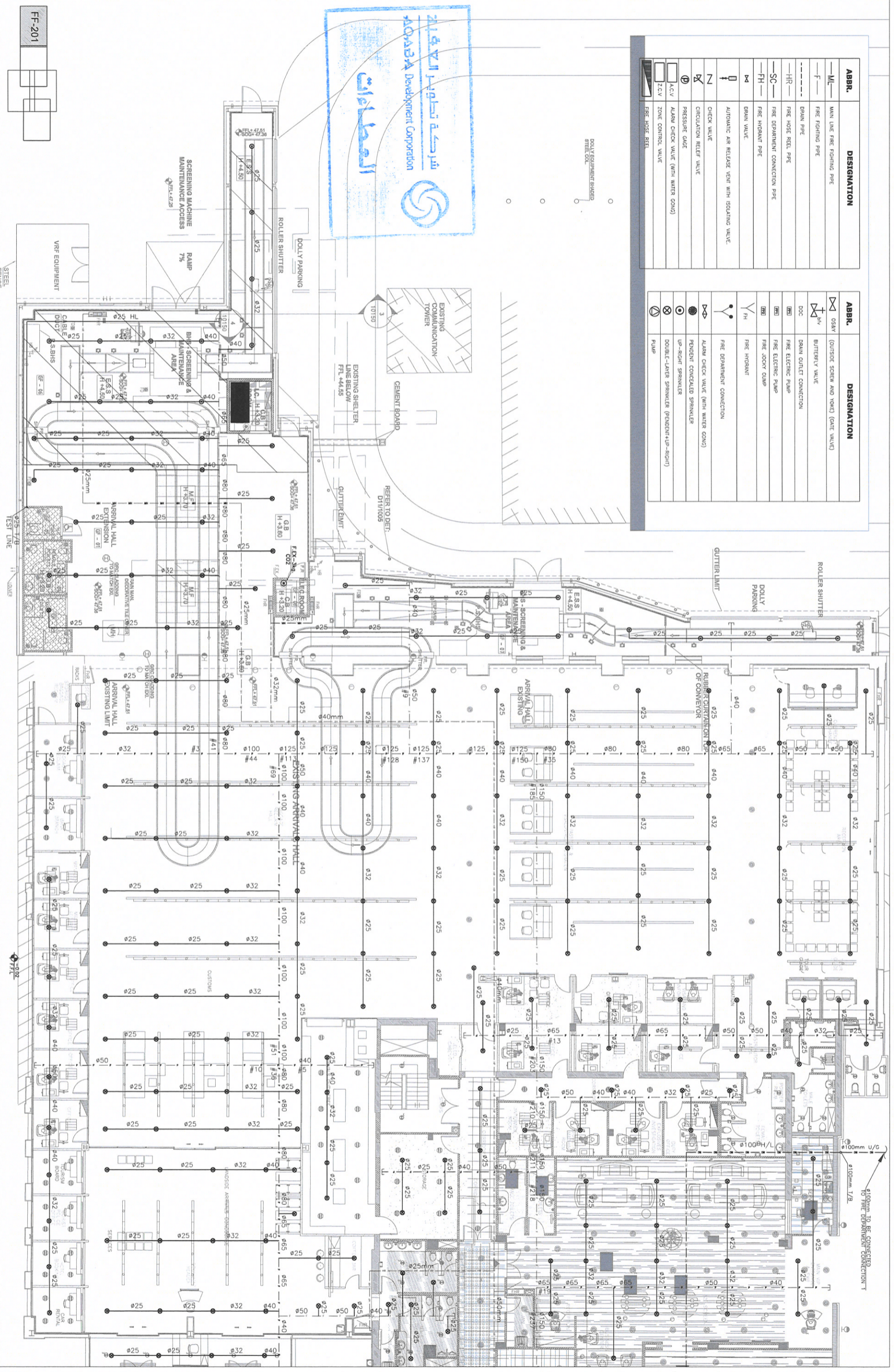
PUMP REF.	LOCATION	TYPE	FLOW RATE L/min	OPERATING HEAD/m	SPEED CONTROL	ESTIM. KW	PHASE	RPW	Duty	Stand By
F01	PUMP ROOM	PACKAGE SET OF CENTRIFUGAL HORIZONTAL SPLIT CASE PUMPS	2667.34	6.04	CONSTANT SPEED	37.3	400	3	3550	1
F02	PUMP ROOM	MULTI-STAGE CENTRIFUGAL JOCKEY PUMP	60	6.54	CONSTANT SPEED	2.3	400	3	3450	1

SPRINKLER No. (Pendent) 733
 SPRINKLER No. (Up-Right) 891

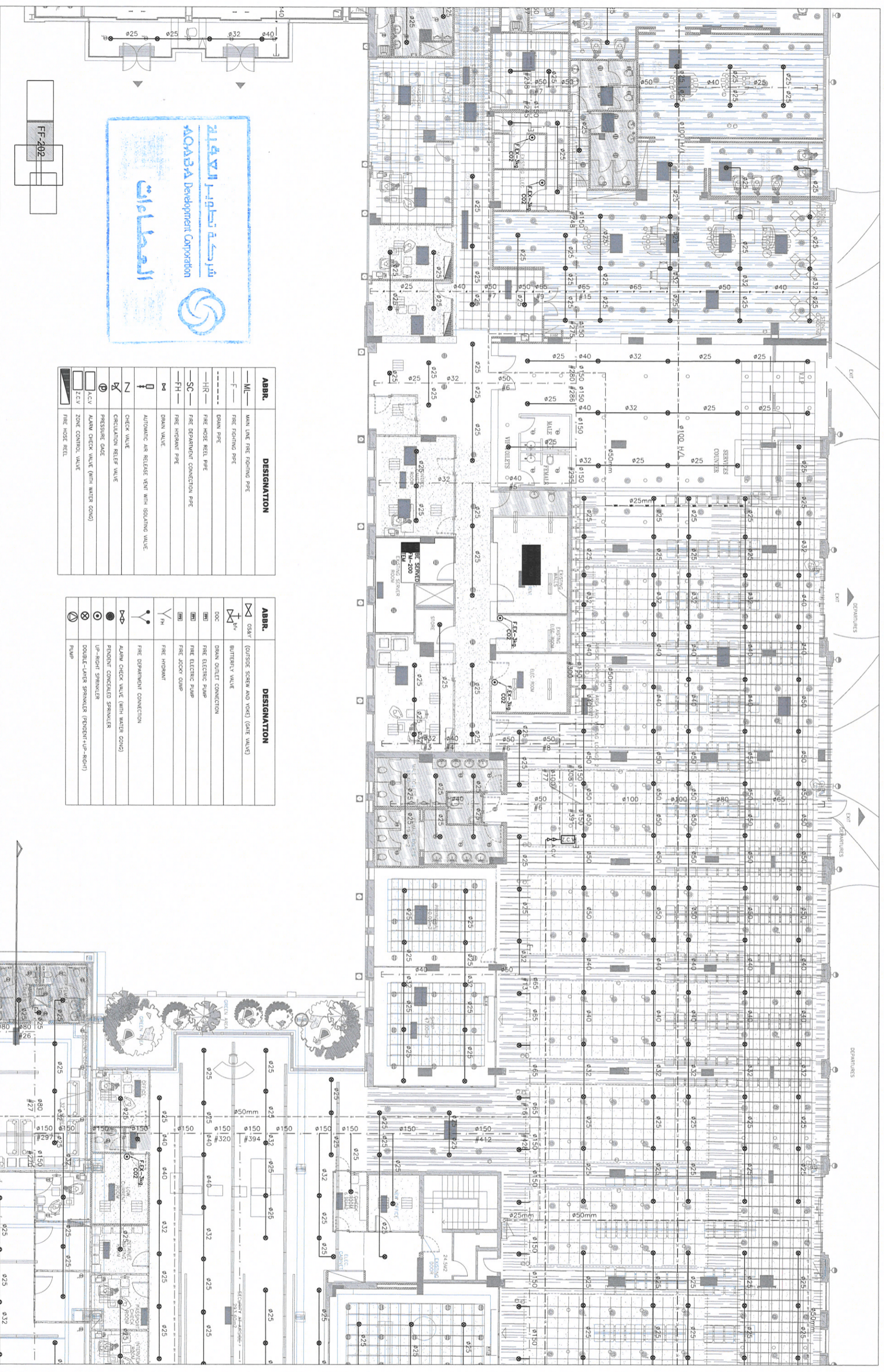


Purpose of Issue	Rev.	Date	Approved	Client:	Consultant:	Project:	Design Stage:	Title:	Design:	Drawn by:	Checked:
Fire Fighting System	A	August 2020	Engicon	شركة تطوير العقاب AQABA Development Corporation	engicon	King Hussein International Airport FIRE FIGHTING SYSTEM Aqaba, Jordan	Final Design Stage Airport Buildings	GROUND FLOOR FIRE EXTINGUISHING SYSTEM PLAN	E. J.	Engicon	Z. SH.
							Discipline: Mechanical	Scale: 0 8 16 24 32 40 METERS	Scale: 1/400	Date: August 2020	Approved:
									Drawing Number: FF-200		Rev.: 0

ABBR.	DESIGNATION	ABBR.	DESIGNATION
ML	MAIN LINE FIRE FIGHTING PIPE	OS&V	(OUTSIDE SCREEN AND VALVE) (GATE VALVE)
F	FIRE FIGHTING PIPE	BU	BUTTERFLY VALVE
DR	DRAIN PIPE	DOC	DRAIN OUTLET CONNECTION
HR	FIRE HOSE REEL PIPE	FE	FIRE ELECTRIC PUMP
SC	FIRE DEPARTMENT CONNECTION PIPE	FC	FIRE Jockey PUMP
FH	FIRE HOBRANT PIPE	FH	FIRE HOBRANT
AV	DRAIN VALVE		FIRE DEPARTMENT CONNECTION
AV	AUTOMATIC AIR RELEASE VENT WITH ISOLATING VALVE		ALARM CHECK VALVE (WITH WATER GONG)
AV	CHECK VALVE		CIRCULATION RELIEF VALVE
AV	PRESSURE GAUGE		RESISTANT CONCEALED SPRINKLER
AV	ALARM CHECK VALVE (WITH WATER GONG)		UP-RIGHT SPRINKLER
AV	ZONE CONTROL VALVE		DOUBLE-LAYER SPRINKLER (ROBBER+UP+RIGHT) PUMP
AV	FIRE HOSE REEL		

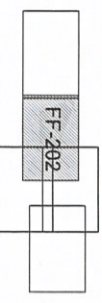
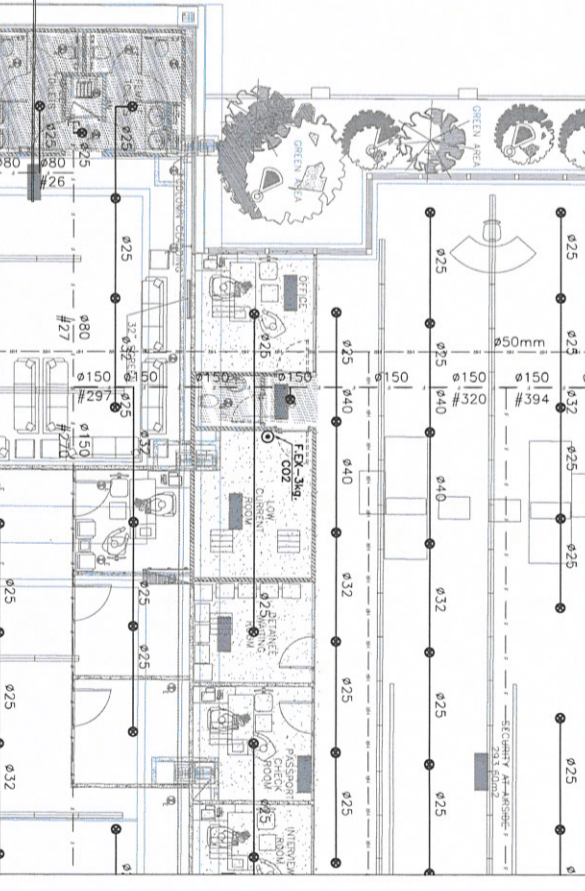


Purpose/Issue	Rev.	Date	Approved	Client:	Consultant:	Project:	Design Stage:	Title:	Design:	Drawn by:	Checked:
Fire Fighting System	A	August 2020	Engicon	شركة تطوير العقاب Aqaba Development Corporation	engicon	King Hussein International Airport FIRE FIGHTING SYSTEM Aqaba, Jordan	Final Design Stage Airport Buildings	GROUND FLOOR FIRE EXTINGUISHING SYSTEM PLAN Sheet 1 of 5	E.J.	Engicon	Z.S.H.
							Discipline:	Scale:	Drawing Number:	Date:	Rev.:
							Mechanical	0 2 4 6 8 10 METERS	FF-201	August 2020	0

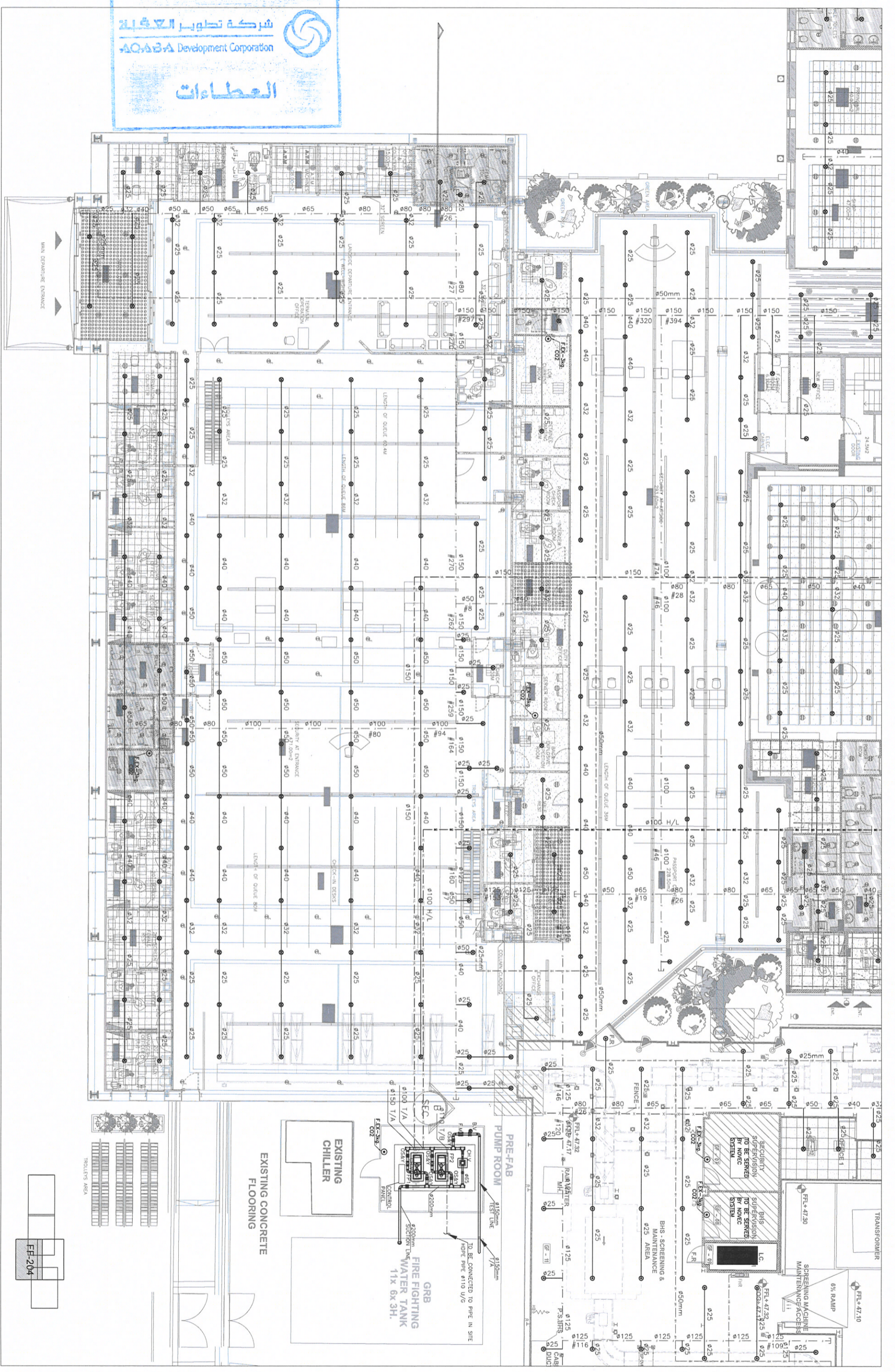


ABBR.	DESIGNATION
ML	MAIN LINE FIRE FIGHTING PIPE
F	FIRE FIGHTING PIPE
DR	DRAIN PIPE
HR	FIRE HOSE REEL PIPE
SC	FIRE DEPARTMENT CONNECTION PIPE
FH	FIRE HYDRANT PIPE
AV	AUTOMATIC AIR RELEASE VENT WITH ISOLATING VALVE
CV	CHECK VALVE
CR	CIRCULATION RELIEF VALVE
PC	PRESSURE GAUGE
ACV	ALARM CHECK VALVE (WITH WATER GONG)
ZCV	ZONE CHECK VALVE
FR	FIRE HOSE REEL

ABBR.	DESIGNATION
OSKY	(OUTSIDE SCREEN AND YOKER) (GATE VALVE)
BU	BUTTERFLY VALVE
DOC	DRAIN OUTLET CONNECTION
EP	FIRE ELECTRIC PUMP
JO	FIRE JOCKY PUMP
FH	FIRE HYDRANT
FC	FIRE DEPARTMENT CONNECTION
ACV	ALARM CHECK VALVE (WITH WATER GONG)
PC	PENDENT CONCEALED SPRINKLER
UP	UP-RIGHT SPRINKLER
DL	DOUBLE-LAYER SPRINKLER (PENDENT+UP-RIGHT)
P	PUMP



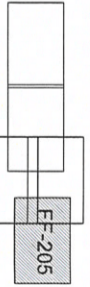
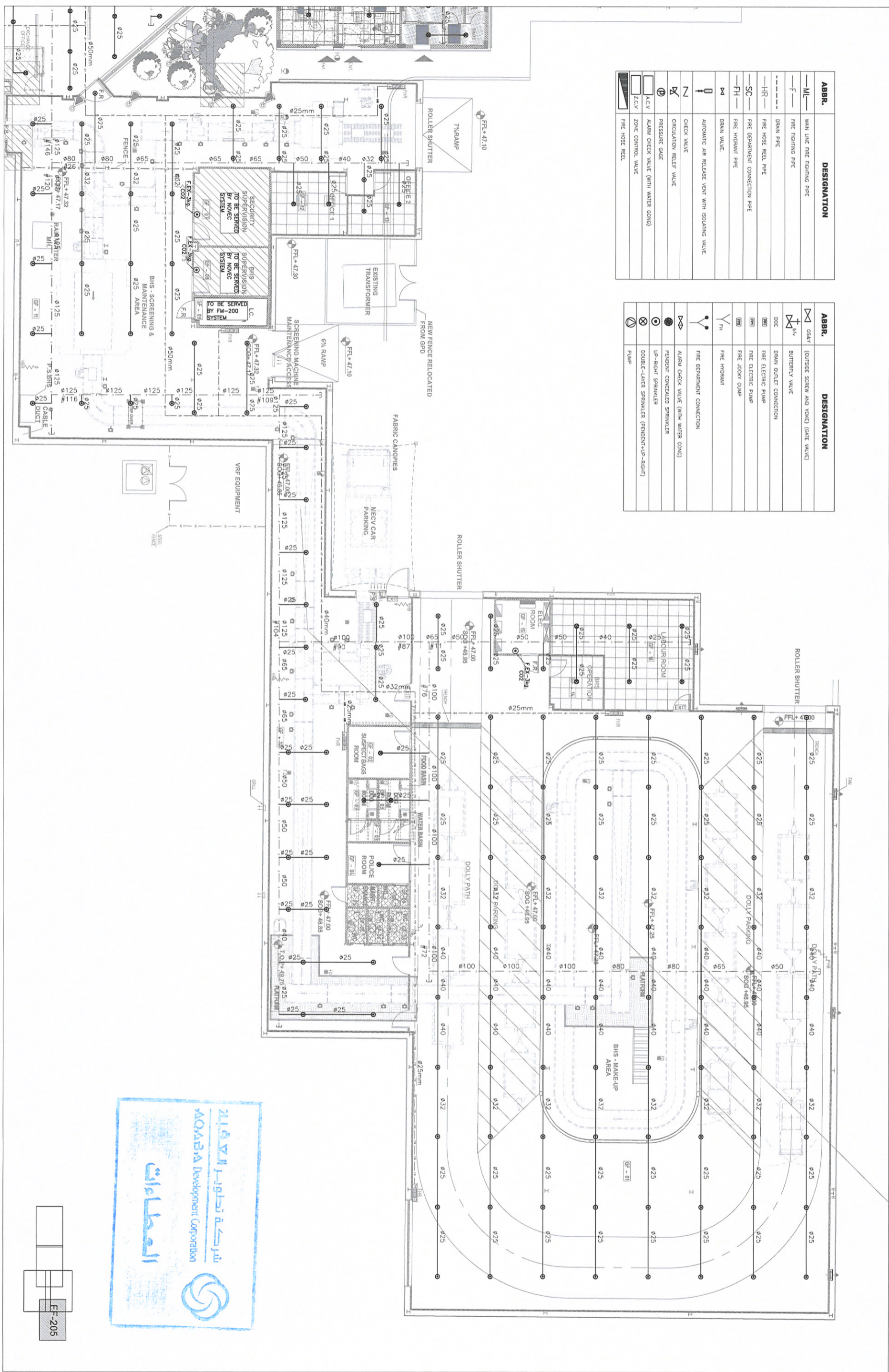
Purpose of Issue	Rev.	Date	Approved	Client:	Consultant:	Project:	Design Stage:	Title:	Designer:	Drawn by:	Checked:
Fire Fighting System	A	August 2020	Engicon	شركة تطوير العقارات AQADABA Development Corporation	engicon	King Hussein International Airport FIRE FIGHTING SYSTEM Aqaba, Jordan	Final Design Stage Airport Buildings	GROUND FLOOR FIRE EXTINGUISHING SYSTEM PLAN Sheet 2 of 5	E.I.	Engicon	Z.S.H.
							Discipline: Mechanical	Scale: 0 2 4 6 8 10 METERS	Scale: 1/100	Date: August 2020	Approved: W.Z
									Drawing Number: FF-202		Rev.: 0



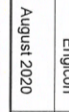
Purpose Of Issue	Rev.	Date	Approved	Client:	Consultant:	Project:	Design Stage:	Title:	Scale:	Design:	Drawn by:	Checked:
Fire Fighting System	A	August 2020	Engicon	شركة تطوير العقبات AQABA Development Corporation	engicon	King Hussein International Airport FIRE FIGHTING SYSTEM Aqaba, Jordan	Final Design Stage Airport Buildings	GROUND FLOOR FIRE EXTINGUISHING SYSTEM PLAN Sheet 4 of 5	0 2 4 6 8 10 METERS	E. J.	Engicon	Z. SH.
							Discipline:					WZ
							Mechanical					Rev: 0

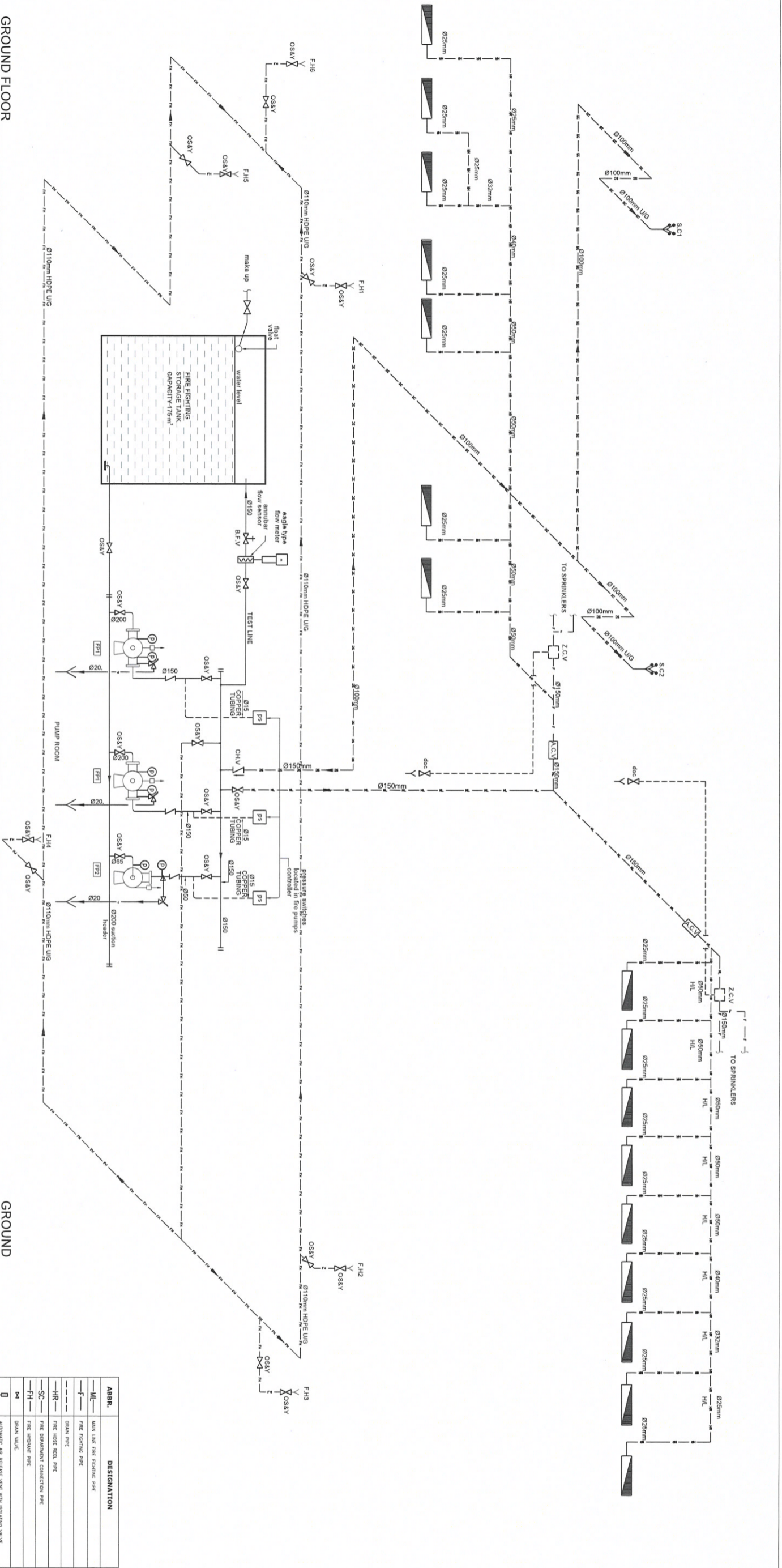
ABBR.	DESIGNATION
ML	MAIN LINE FIRE FIGHTING PIPE
F	FIRE FIGHTING PIPE
DR	DRAIN PIPE
HR	FIRE HOSE REEL PIPE
SC	FIRE DEPARTMENT CONNECTION PIPE
FH	FIRE HYDRANT PIPE
DV	DRAIN VALVE
AV	AUTOMATIC AIR RELEASE VALVE WITH ISOLATING VALVE
ZV	CHECK VALVE
RCV	CIRCULATION RELIEF VALVE
ZCV	PRESSURE GAUGE
	ALARM CHECK VALVE (WITH WATER GONG)
	ZONE CONTROL VALVE
	FIRE HOSE REEL

ABBR.	DESIGNATION
OS&Y	(OUTSIDE SCREW AND YOKED) GATE VALVE
BV	BUTTERFLY VALVE
DOC	DRAIN OUTLET CONNECTION
EP	FIRE ELECTRIC PUMP
FP	FIRE ELECTRIC PUMP
FO	FIRE Jockey PUMP
PH	FIRE HYDRANT
	FIRE DEPARTMENT CONNECTION
	ALARM CHECK VALVE (WITH WATER GONG)
	PENDENT CONCEALED SPRINKLER
	UP-RIGHT SPRINKLER
	DOUBLE-LAYER SPRINKLER (PENDENT+UP-RIGHT)
	PUMP



Purpose of Issue		Rev.	Date	Approved	Client:	Project:		Design Stage:		Title:	Design:	Drawn by:	Checked:
Fire Fighting System		A	August 2020	Engicon	شركة تطوير اقصاء AQABA Development Corporation	King Hussein International Airport FIRE FIGHTING SYSTEM Aqaba, Jordan		Final Design Stage Airport Buildings		GROUND FLOOR FIRE EXTINGUISHING SYSTEM PLAN Sheet 5 of 5	E. J.	Engicon	Z. S.H.
								Discipline: Mechanical		Scale: 1/100	Date: August 2020	Approved:	W.Z.
										Scale: 0 2 4 6 8 10 METERS	Drawing Number:	FF-205	Rev.: 0





PUMP SELECTION:
 FP1- ELECTRIC PUMP 2667,34 l/m 6,04 bar
 FP1- ELECTRIC PUMP 2667,34 l/m 6,04 bar
 FP2- JOCKEY PUMP 60 l/m 6,54 bar

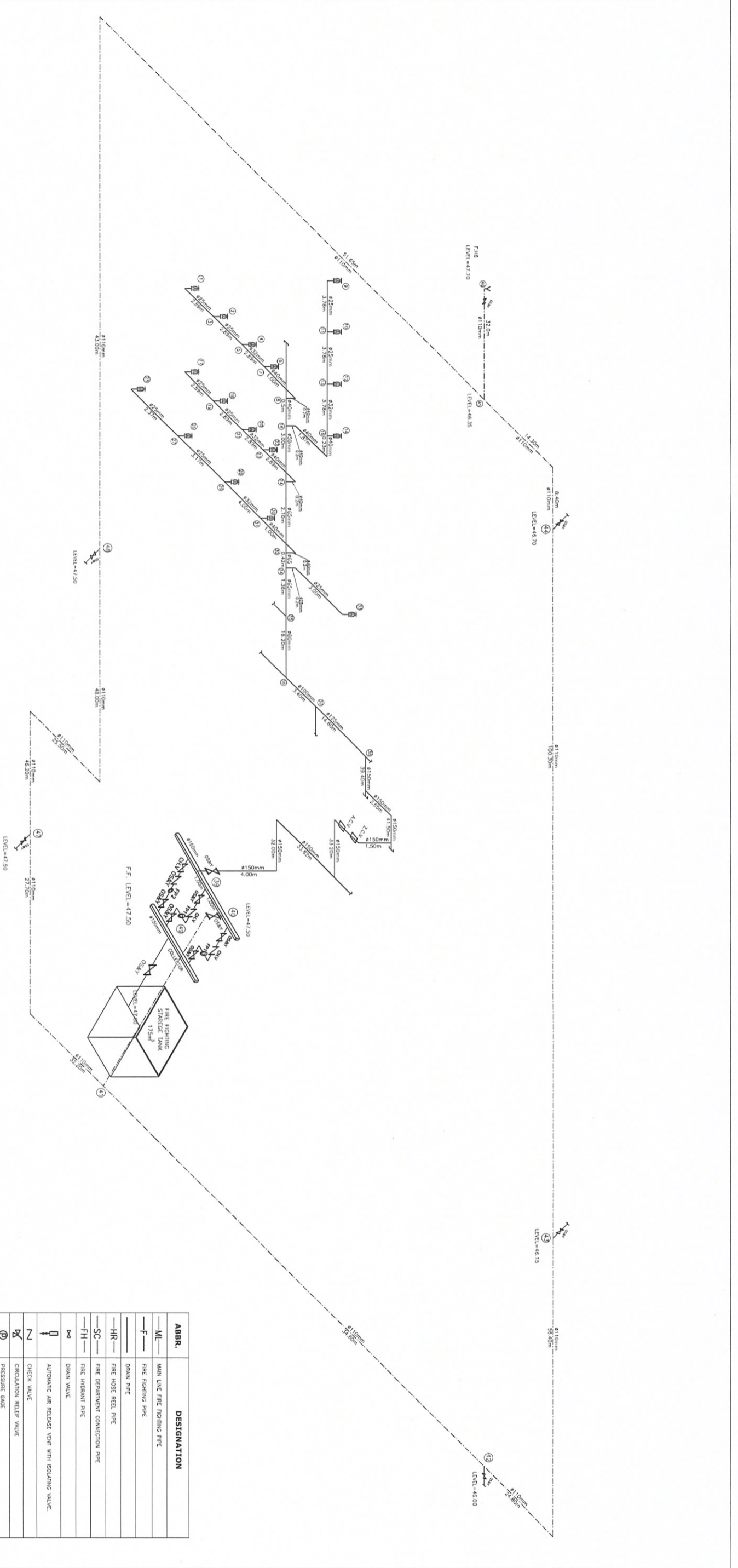
ABBV.	DESIGNATION
ML	MAIN LINE FIRE FIGHTING PIPE
F	FIRE FIGHTING PIPE
DN	DRAIN PIPE
HR	FIRE HOSE REEL PIPE
SC	FIRE SUPPLEMENT CONNECTION PIPE
FH	FIRE HOISTANT PIPE
SD	DRAIN VALVE
↑	AROUNDING AIR RELIEVE (NOT WITH SOLIDING VALVE)
N	CHECK VALVE
HC	CIRCULATION RELIEF VALVE
⊕	PRESSURE DATE
⊕	MAJAW CHECK VALVE (WITH WATER ZONE)
ZCV	ZONE CONTROL VALVE
⊕	FIRE HOSE REEL
OS&V	(OUTSIDE SCREEN AND NOVEL) (DATE VALVE)
BT	BATTERY VALVE
OC	DRAIN OUTER CONNECTION
⊕	FIRE ELECTRIC PUMP
⊕	FIRE ELECTRIC PUMP
⊕	FIRE DOOR DAMP
Y	FIRE HOISTANT
⊕	FIRE SUPPLEMENT CONNECTION
⊕	MAJAW CHECK VALVE (WITH WATER ZONE)
⊕	PRESSURE CONTROLLED SPRINKLER
⊕	UP-BEIGHT SPRINKLER
⊕	DOUBLE-LAYER SPRINKLER (PUSH-IN-UP-ROOF)
⊕	Pump



GROUND FLOOR

GROUND

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Fire Fighting System	A	August 2020	Engicon	شركة تطوير العقاب AQABA Development Corporation	King Hussein International Airport FIRE FIGHTING SYSTEM Agaba, Jordan	Final Design Stage Airport Buildings	FIRE EXTINGUISHING SYSTEM RISER DIAGRAM
				Consultant:			Scale:
				engicon			1:100 METERS
							Design:
							E.J.
							Scale:
							N.T.S.
							Date:
							August 2020
							Checked:
							Z.S.H.
							Approved:
							W.Z.
							Rev.:
							0
							Drawing Number:
							FX-601



FIRE FIGHTING PUMPING SET SCHEDULE

PUMP REF.	LOCATION	TYPE	FLOW RATE L/min	OPERATING HEAD(bar)	SPEED CONTROL	ELECTRICAL DATA			QTY.		
						Estim. kWh	V	Phase			
FP1	PUMP ROOM	PACKAGE SET OF CENTRIFUGAL HORIZONTAL SPLIT CASE PUMPS	2667.34	6.04	CONSTANT SPEED	37.3	400	3	3550	1	1
FP2	PUMP ROOM	MULTISTAGE CENTRIFUGAL JOCKEY PUMP	60	6.54	CONSTANT SPEED	2.3	400	3	3450	1	-

ABBR.	DESIGNATION
ML	MAIN LINE FIRE FIGHTING PIPE
F	FIRE FIGHTING PIPE
DR	DRAIN PIPE
HR	FIRE HOSE REL. PIPE
SC	FIRE DEPARTMENT CONNECTION PIPE
FH	FIRE HYDRANT PIPE
AV	DRAIN VALVE
AR	AUTOMATIC AIR RELEASE VALVE WITH ISOLATING VALVE
CV	CHECK VALVE
PR	CIRCULATION RELIEF VALVE
PC	PRESSURE GAUGE
ACV	ALARM CHECK VALVE (WITH WATER GONG)
ZCV	ZONE CONTROL VALVE
OSK	FIRE HOSE REL.
OSK	(OUTSIDE SCREW AND YOKER) (GATE VALVE)
BY	BUTTERFLY VALVE
DO	DRAIN OUTLET CONNECTION
PE	FIRE ELECTRIC PUMP
JO	FIRE JOCKEY PUMP
YH	FIRE HYDRANT
FC	FIRE DEPARTMENT CONNECTION
ACV	ALARM CHECK VALVE (WITH WATER GONG)
PC	PENETRANT CONE/CAPPED SPRINKLER
UR	UP-RIGHT SPRINKLER
DL	DOUBLE-LAYER SPRINKLER (PHOENIX-UP-RIGHT)
PU	PUMP



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Fire Fighting System		A	August 2020	Engicon	شركة تطوير العقبة AQABA Development Corporation	engicon	King Hussein International Airport FIRE FIGHTING SYSTEM Aqaba, Jordan	Final Design Stage Airport Buildings	FIRE EXTINGUISHING ISOMETRIC DIAGRAM	1:100	E.J.	Engicon	Z.S.H.
								Discipline:		0 METERS	N.T.S.	August 2020	Approved:
								Mechanical			FF-901	W.Z.	Rev.: 0