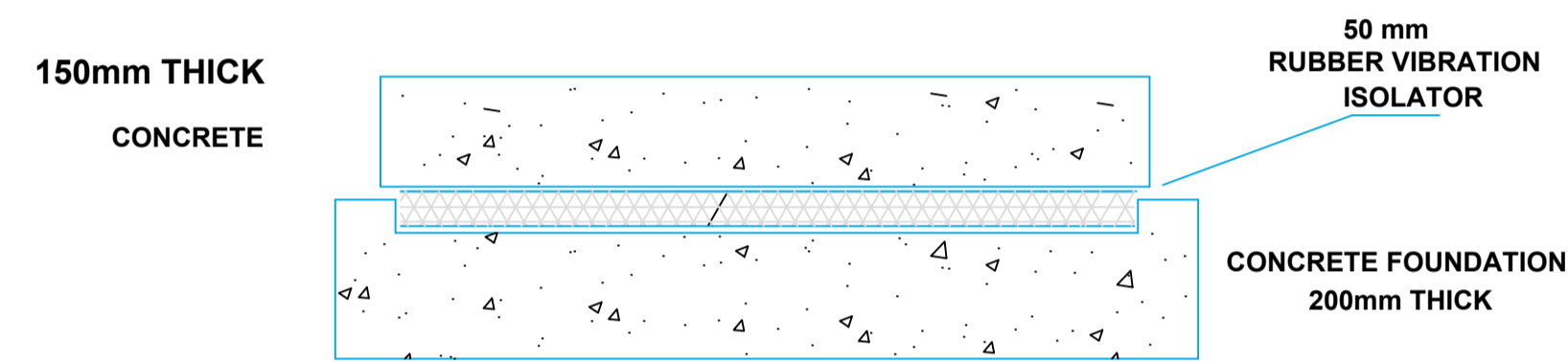
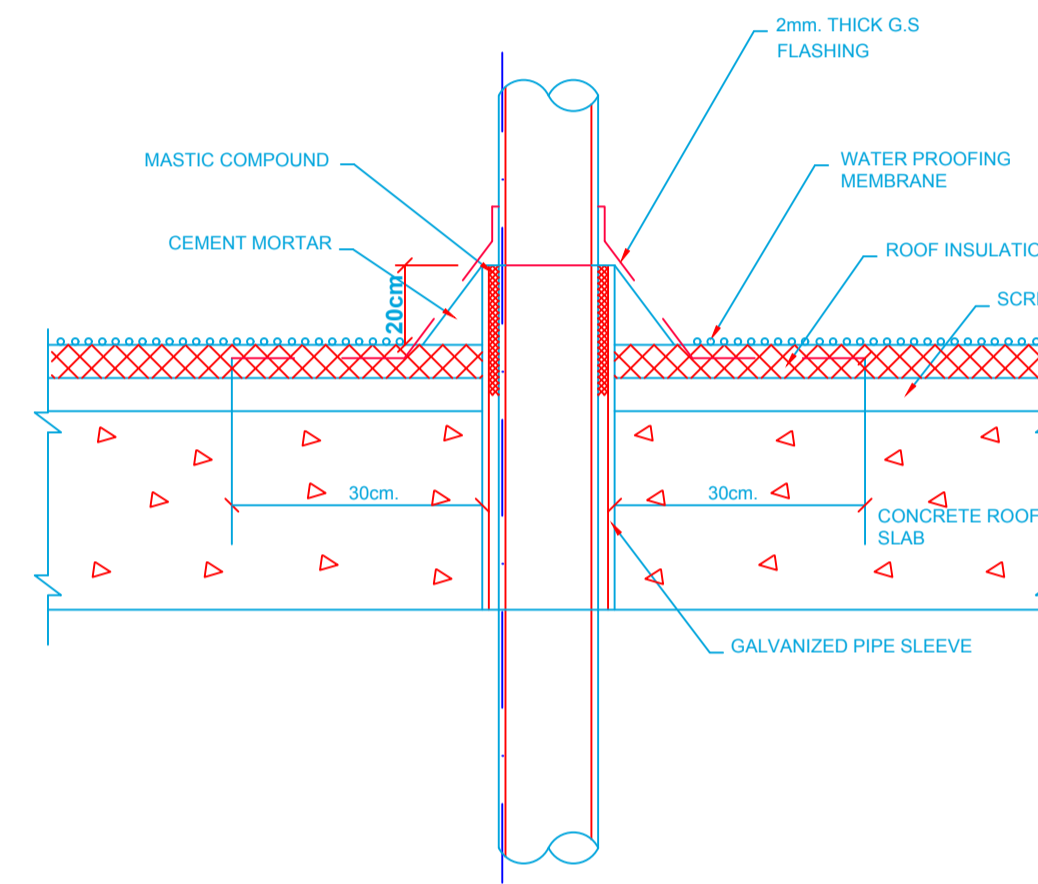


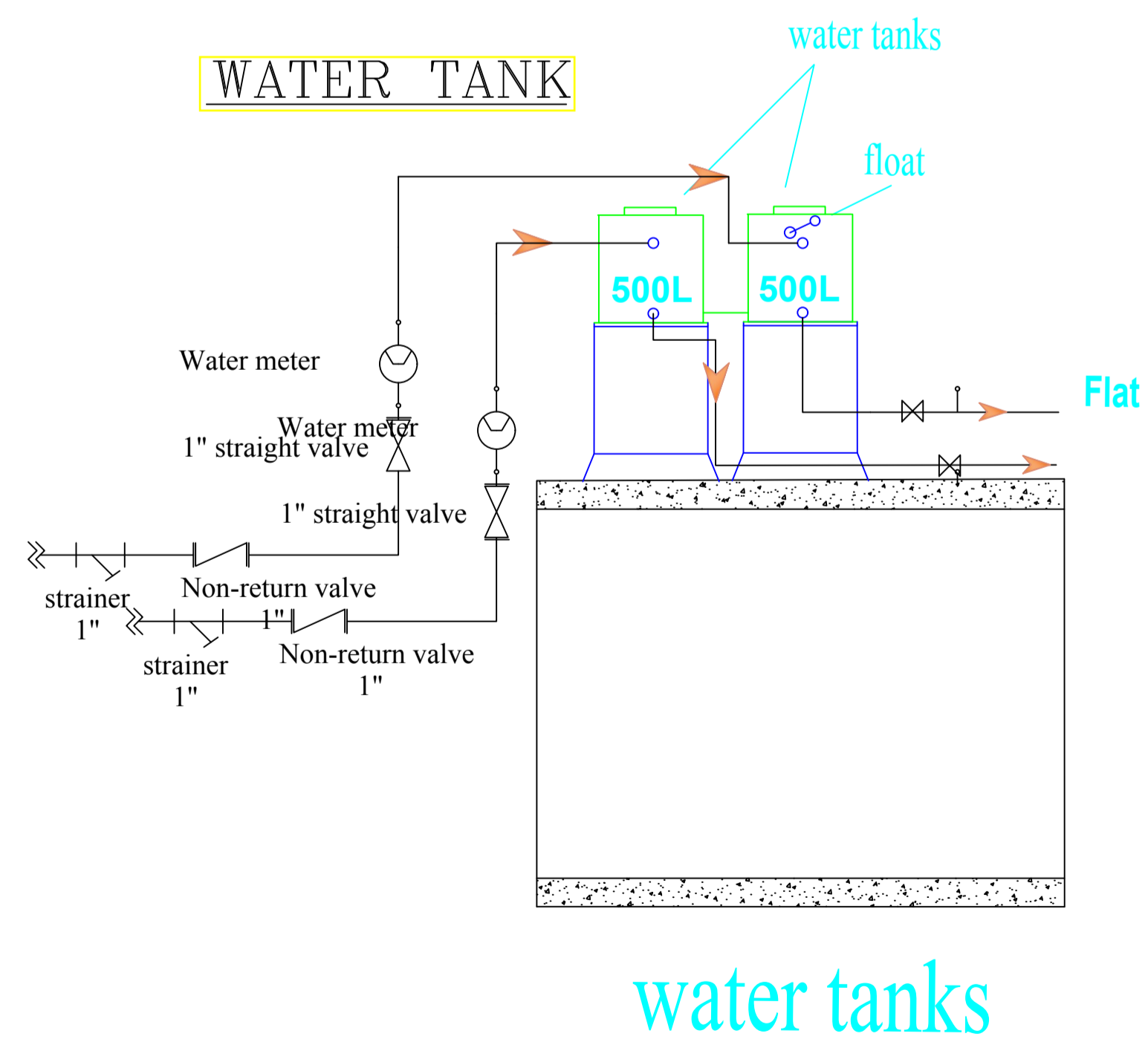
TYPICAL PUMP FOUNDATION
SIZE TO SUIT PUMP DIMENSIONS



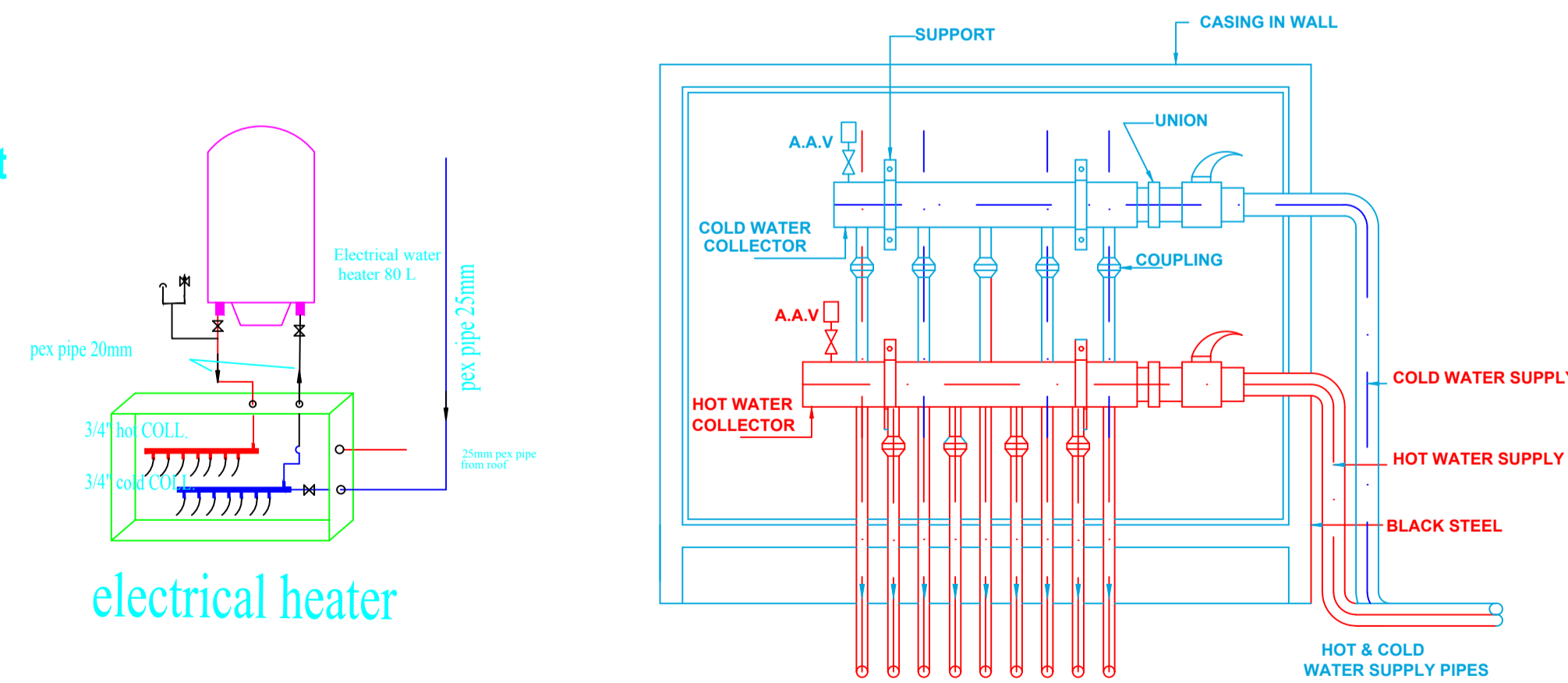
PIPE SLEEVE THROUGH ROOF



WATER TANK



WATER DISTRIBUTION BOX (W.D.B.)



Mechanical Engineering Department

H.V.A.C. Engineering

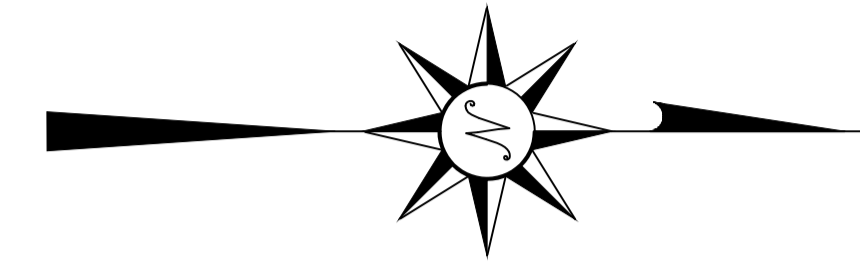
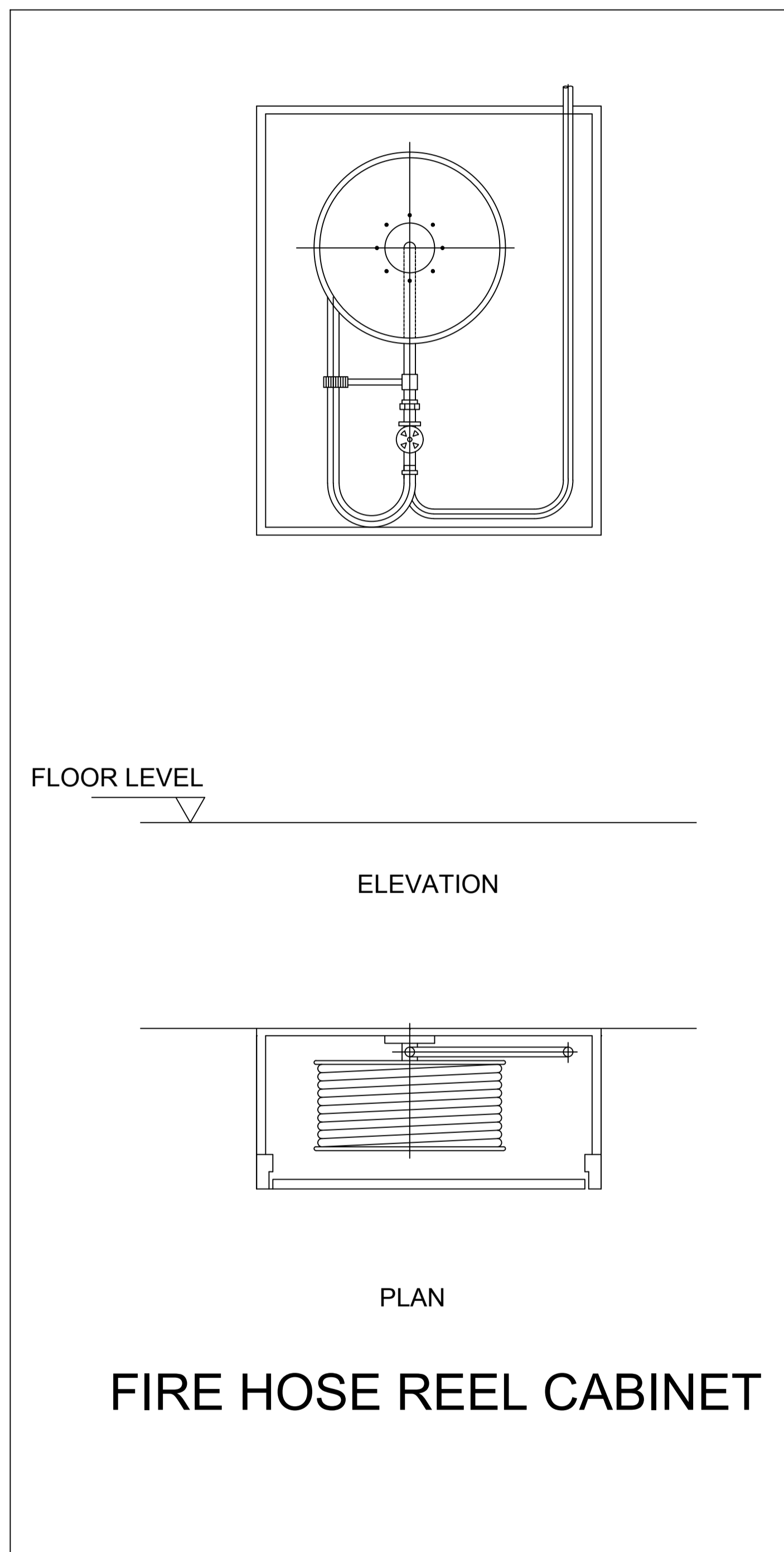
Details

Project Supervisor :
Dr.Kazem Osaily
Project Team :
Waseem Saleh
Ayman maali

Mechanical Details

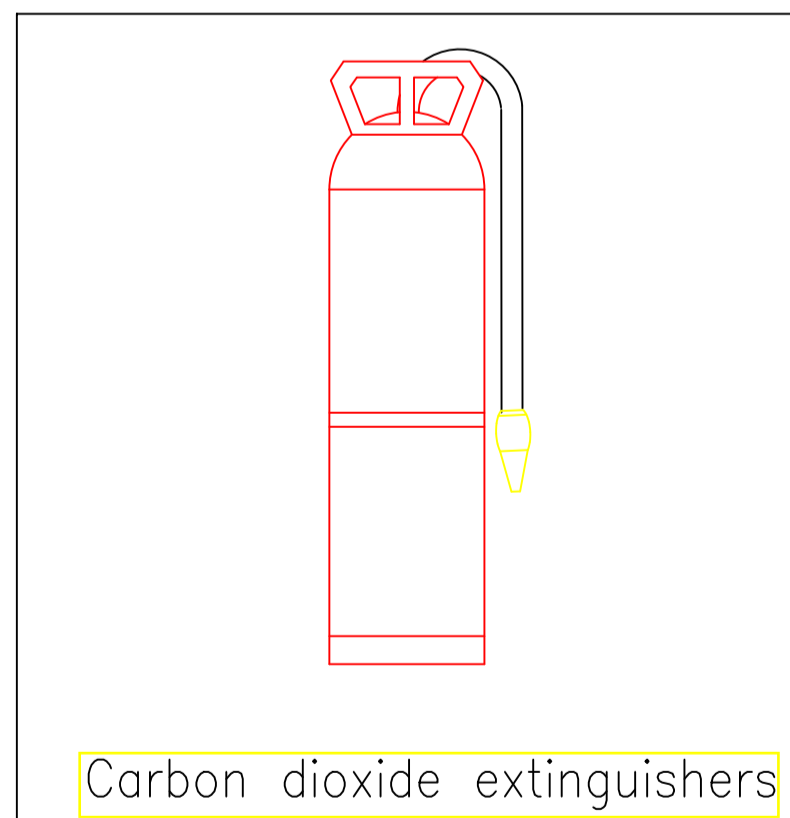
Birzet girle students
3-7-2017

M243



- FM-200 SYSTEM GENERAL NOTES (IF REQUIRED)**
1. THE DESIGN, INSTALLATION, AND TESTING OF CLEAN AGENT SYSTEMS SHALL BE IN ACCORDANCE WITH REGULATION AND NFPA 2001.
 2. ONLY CLEAN AGENT SPECIFICALLY APPROVED BY QCD TO BE USED.
 3. CLEAN AGENT STORAGE SHALL NOT BE STORED WITHIN THE PROTECTED ENCLOSURE THEY SHALL BE EASILY ACCESSIBLE FROM MAIN ENTRANCE.
 4. THE CONTROL PANEL SHALL BE LOCATED EXTERNAL TO PROTECTED ENCLOSURE.
 5. AT LEAST ONE MANUAL RELEASE PUSH BUTTON SHALL BE PROVIDED EXTERNAL TO PROTECTED ENCLOSURE AND LOCATED WITHIN 1.5m OF MAIN ENTRANCE.
 6. AN ARREST SWITCH SHALL BE PROVIDED WITHIN THE PROTECTED ENCLOSURE.
 7. THE PROPOSED FM-200 SYSTEM SHALL BE REVIEWED AND VERIFIED BY SPECIALIST FOR EACH APPLICATIONS.
 8. FM-200 GAS AND ALL RELATED EQUIPMENT SHALL BE UL LISTED.
 9. FM-200 CONCENTRATION SHALL BE (MIN. 7% & MAX. 9%), THIS CONCENTRATION SHALL BE VERIFIED BY SPECIALIST TO MEET THE REQUIREMENT.
 10. DETAILED HYDRAULIC CALCULATION SHALL BE PROVIDED FOR THE SYSTEM COMPLETE WITH WORK SHOP DRAWINGS SHOWING LOCATION OF ALL TOOLS REQUIRED TO ACTIVATE THE SYSTEM IN PROPER WAY CONSIDERING THE POINTS :-
 - FOR CEILING HEIGHT UP TO 4.4 M. NOZZLES @ ONE LEVEL TO BE PROVIDED.
 - FOR CEILING HEIGHT ABOVE 4.4 M. NOZZLE @ TWO LEVEL SHALL TO BE PROVIDED.
 - CYLINDER WITH IT'S MANUAL RELIEF TOOLS AND CONTROL STATIONS ARE RECOMMENDED TO BE INSTALLED INSIDE THE PROTECTED AREA UNLESS THIS AREA ARE CLOSED ALL TIME AND NOT ACCESSIBLE.
 - THE CYLINDER AND CONTROL PANEL SHALL BE PROTECTED IN PROPER WAY IF INSTALLED EXTERNALLY.
 11. ANY CHANGES IN THE SIZE OF EQUIPMENT AND QUANTITY REQUIRED BASED ON THE SPECIALIST CALCULATIONS SHALL BE CARRIED OUT BY CONTRACTORS WITH OUT ADDITIONAL COSTS.

- SEQUENCE OF OPERATION**
- FM-200 SYSTEM IS GAS SUPPRESSION SYSTEM EXTINGUISHED IN THE SPACE AS GAS VAPOR AT HIGH PRESSURE (4-6) BAR TO COVER THE PROTECTED AREA IN THE FOLLOWING SEQUENCE OF OPERATION :-
1. ONCE FIRST DETECTOR IN THE PAEC SENDING SMOKE DIRECTLY SEND SIGNAL TO CONTROL PANEL.
 2. CONTROL PANEL SENDING THE FOLLOWING SIGNALS :-
 - ACTUATING 1ST STAGE ALARM
 - SHUT DOWN A/C OR VENTILATION SYSTEM
 - CLOSING AUTOMATIC ROLL UP SHUTTER
 3. ON CONTROL PANEL RECEIVING SIGNAL FROM 2ND DETECTOR SENDING THE FOLLOWING SIGNALS :-
 - ACTUATING 2ND STAGE ALARM SYSTEM
 - TO FIRE ALARM SYSTEM IN THE BUILDING
 - ACTUATING FM-200 SOLENOID VALE DIRECTLY CONTROLLING THE FM-200 GAS FLOW.
 - AFTER (30-60) sec. THE SOLENOID VALE START RELAPING THE GAS FROM CYLINDER
 - AFTER (60-90) sec. THE SOLENOID VALE START RELAPING THE GAS
 4. ANY ONE IN THE BUILDING CAN RELEAS MANUALLY THE GAS IN CASE THERE IS FIRE AND THE SYSTEM NOT RESPONED AUTOMATICALLY.



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H.V.A.C. Engineering

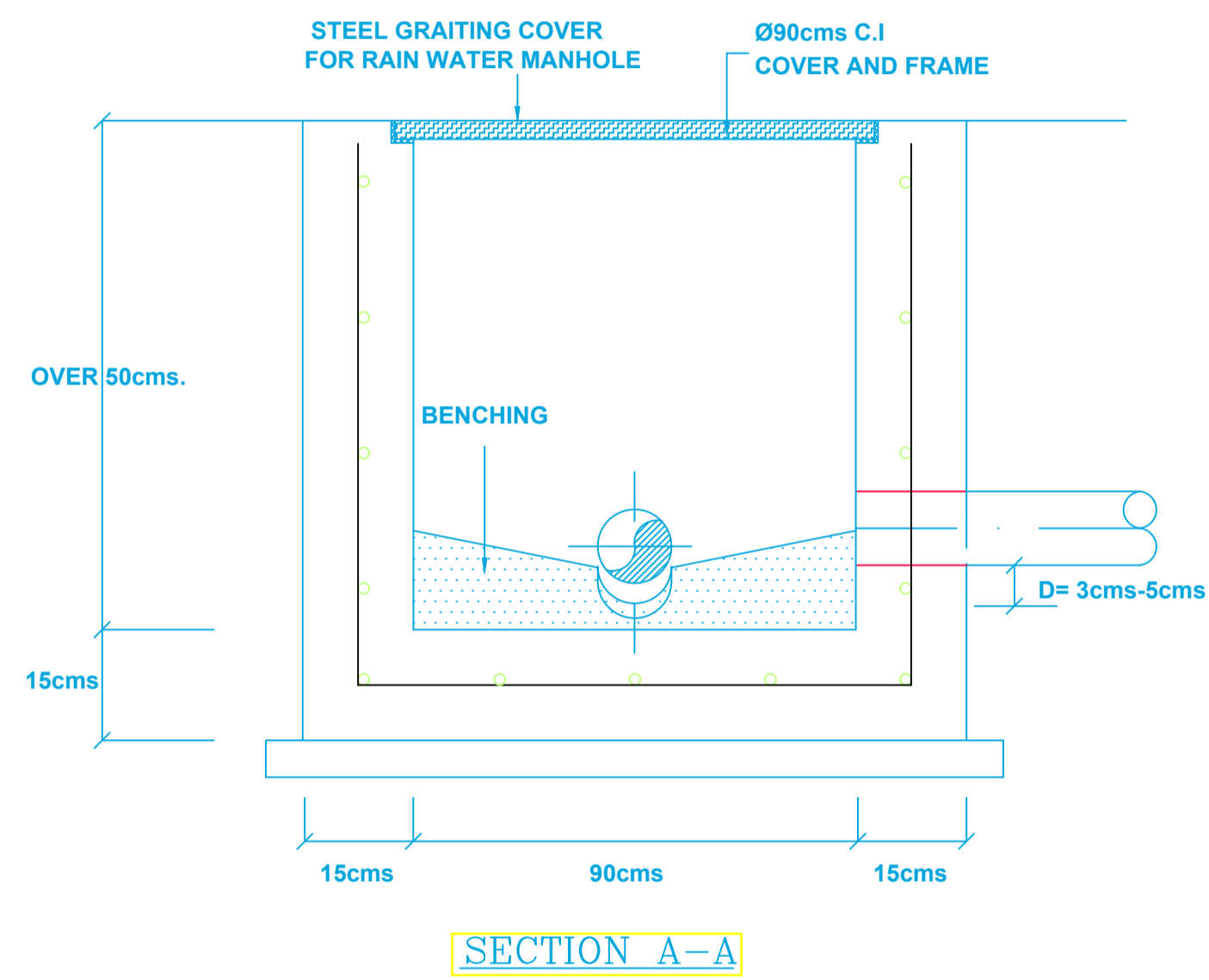
Details

Project Supervisor :
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Ayman maali

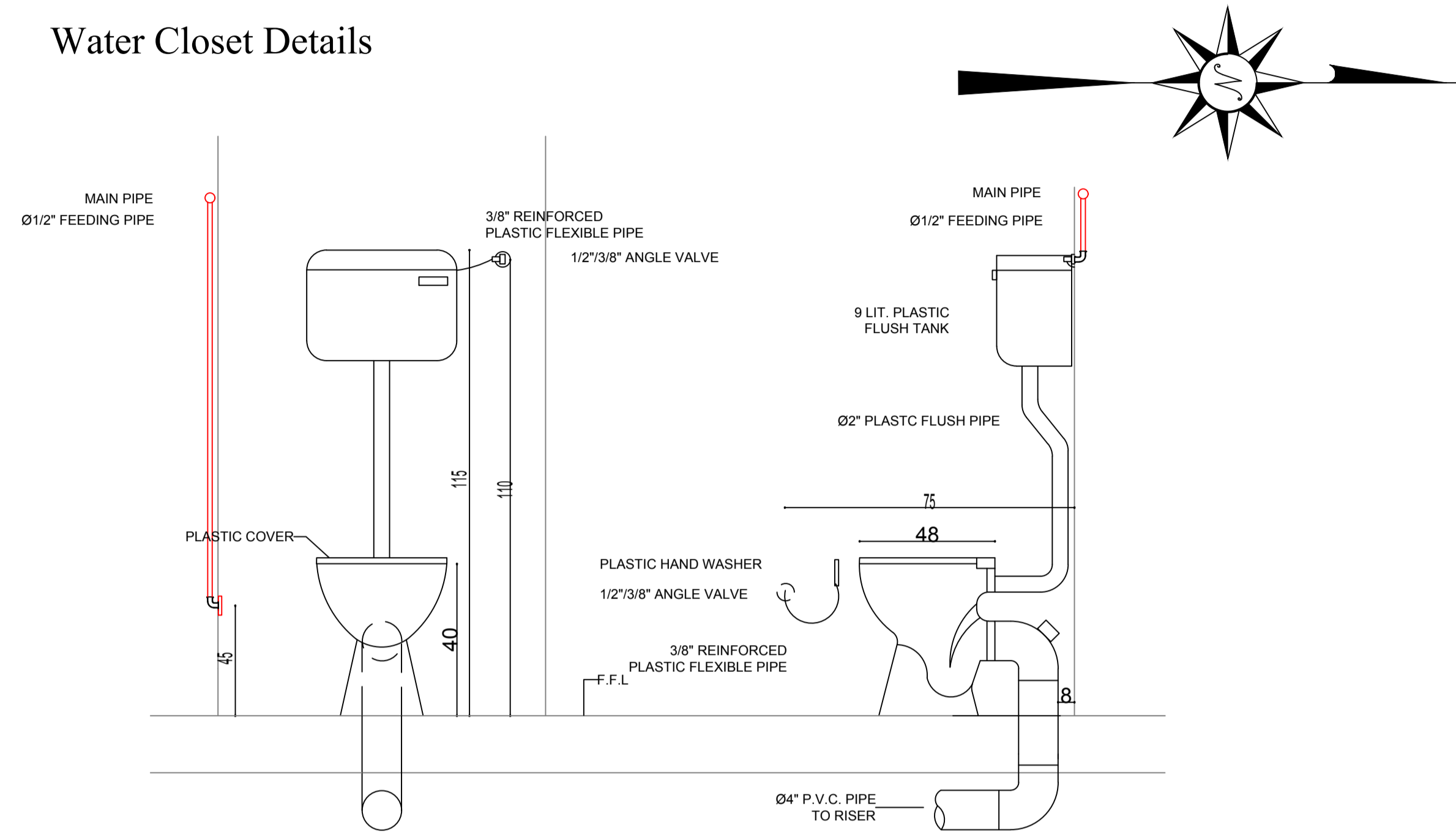
Mechanical Details

Birzet girle students	
3-7-2017	M245

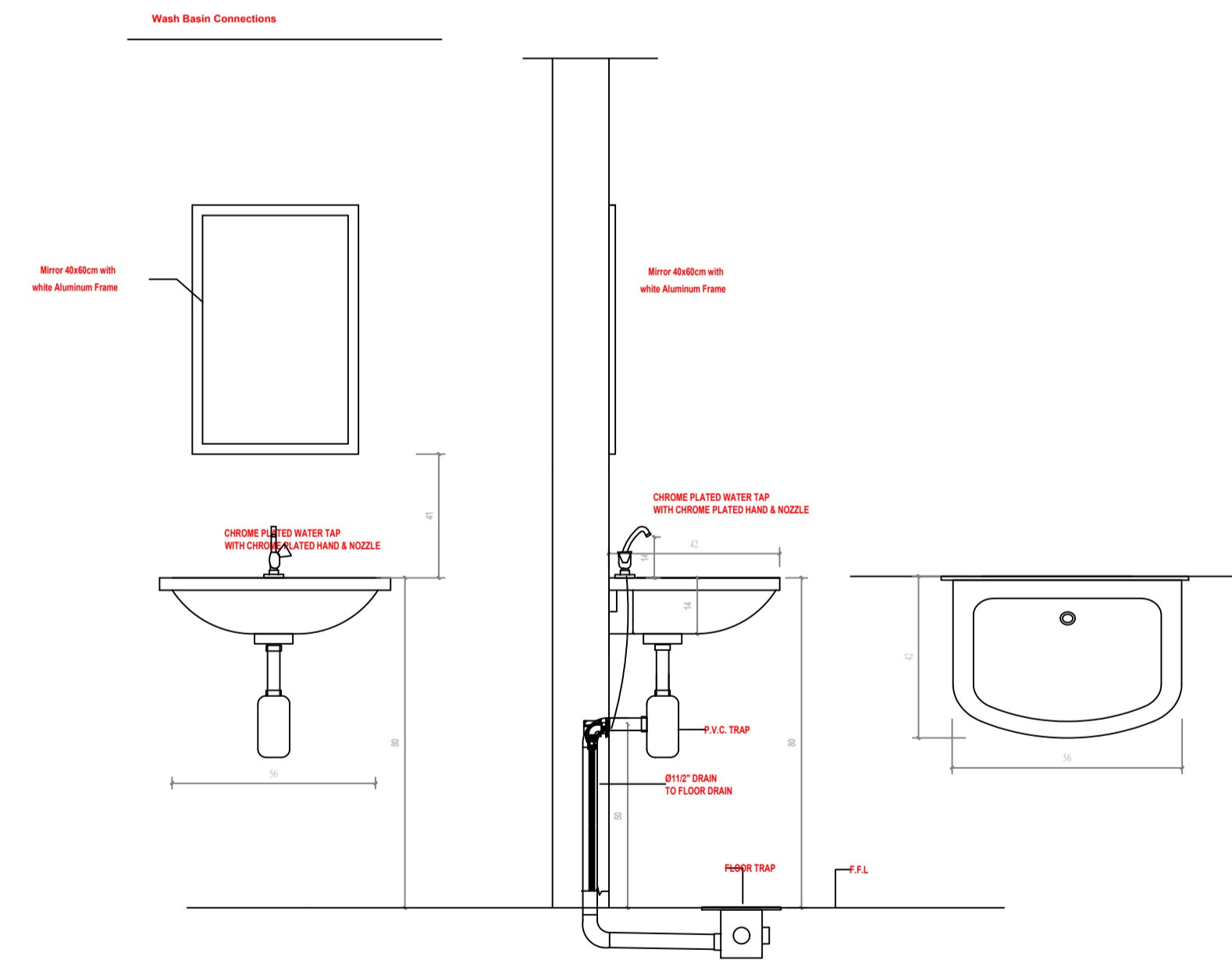
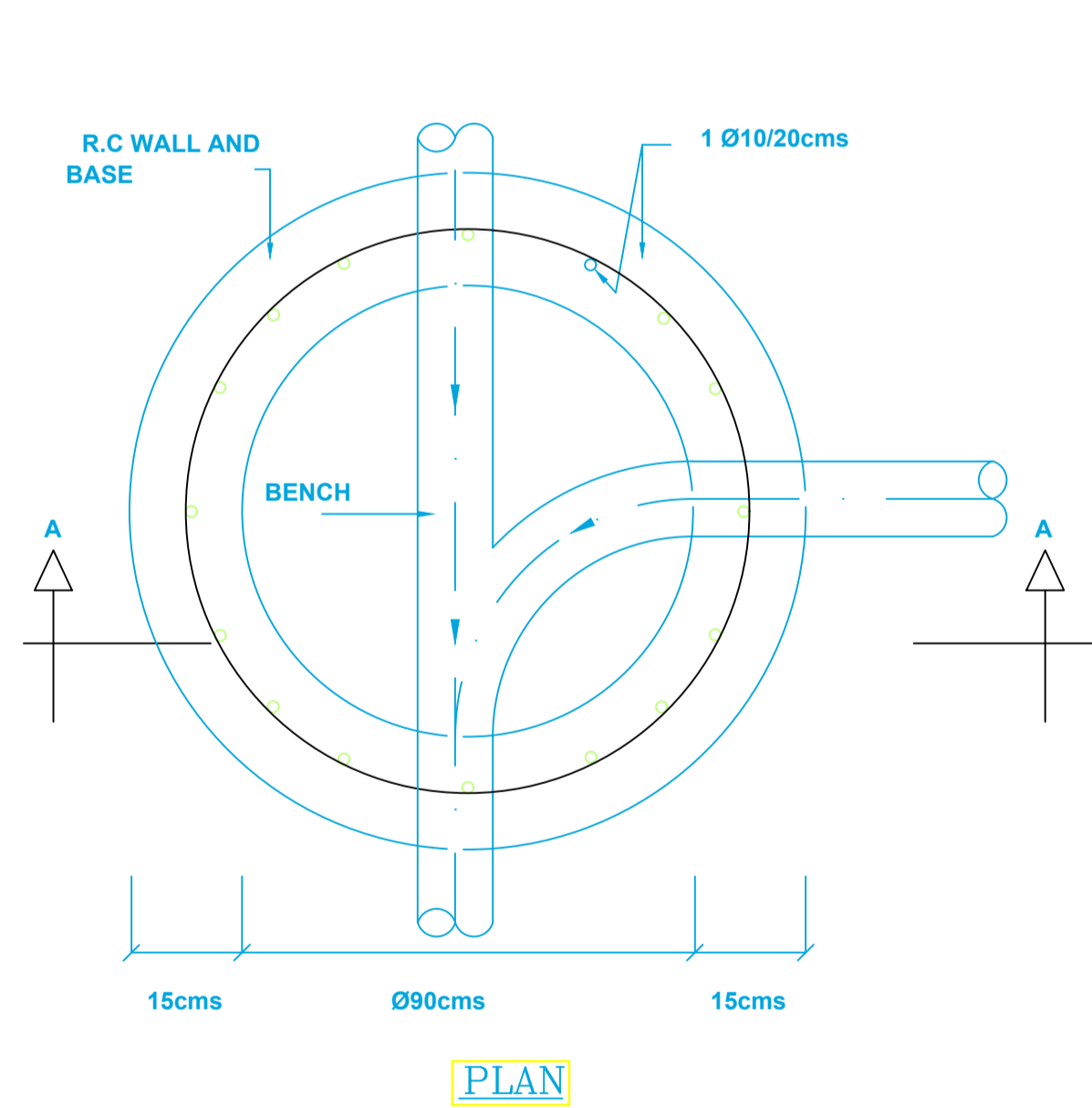
DRAINAGE MANHOLE - Ø50CM DEPTH UP TO 120CM.



Water Closet Details



Lavatory Details



Mechanical Engineering Department
H.V.A.C. Engineering

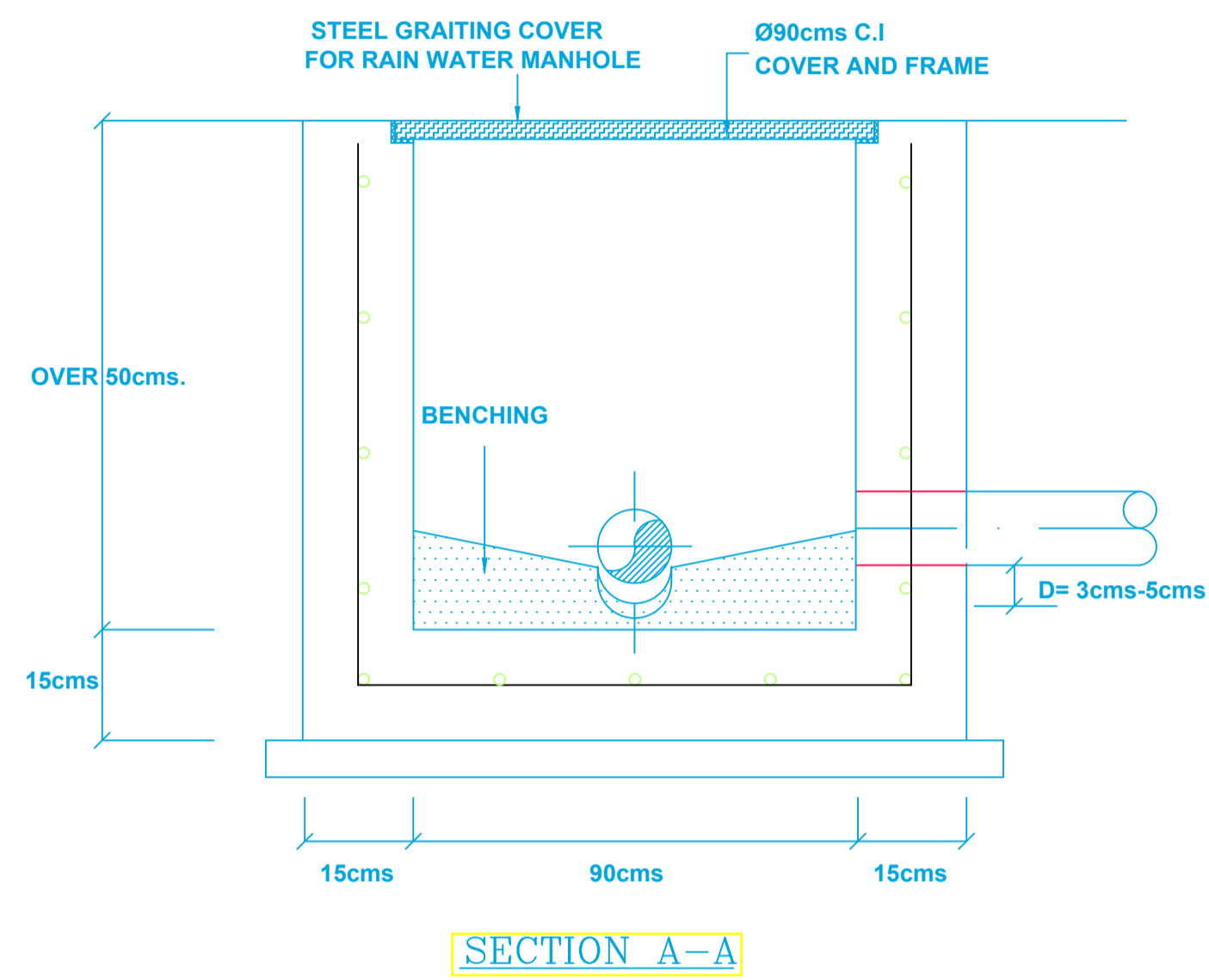
Details

Project Supervisor :
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Project Team :
Waseem Saleh
Ayman maali

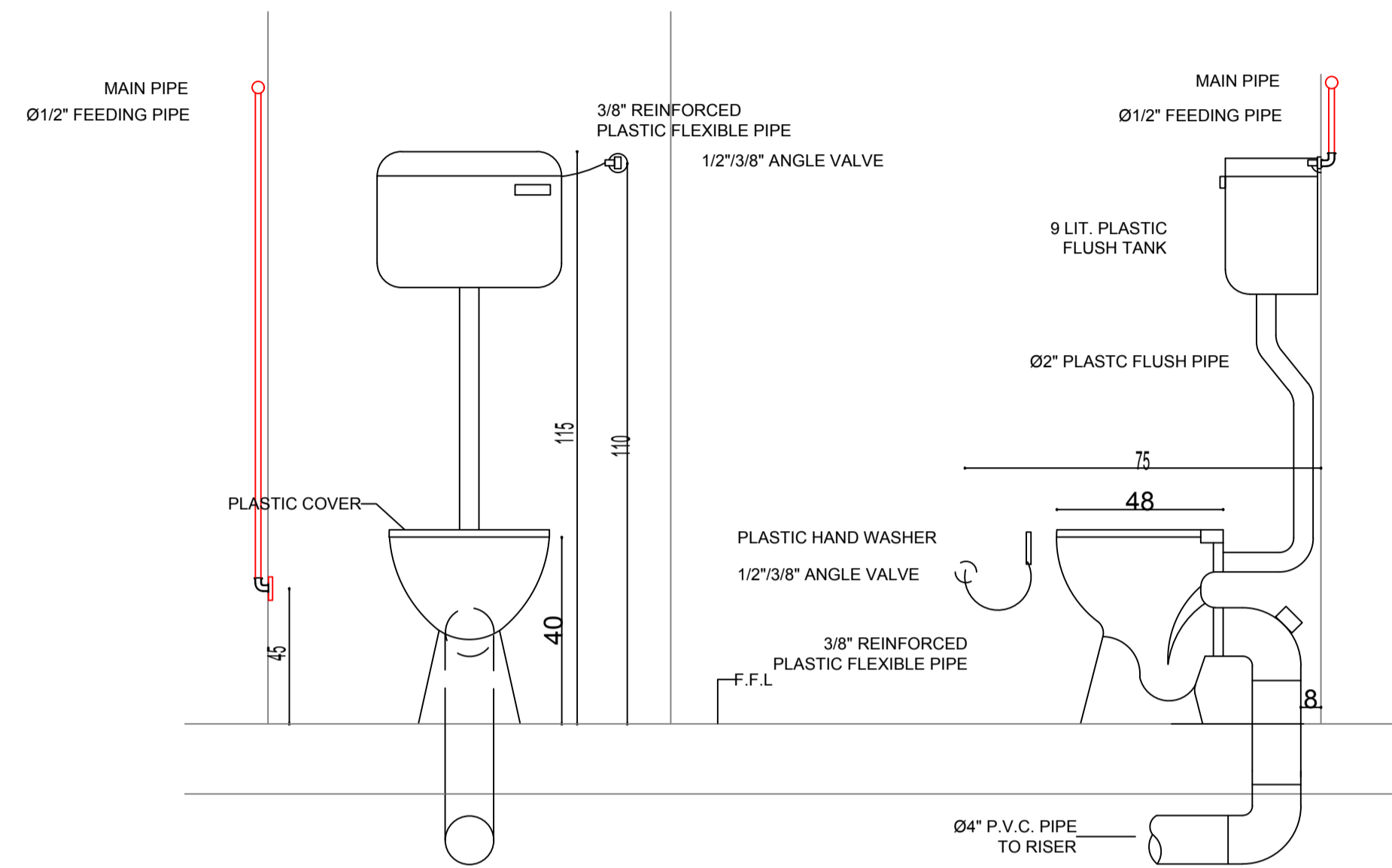
Mechanical Details

Birzeit girle students
3-7-2017
M248

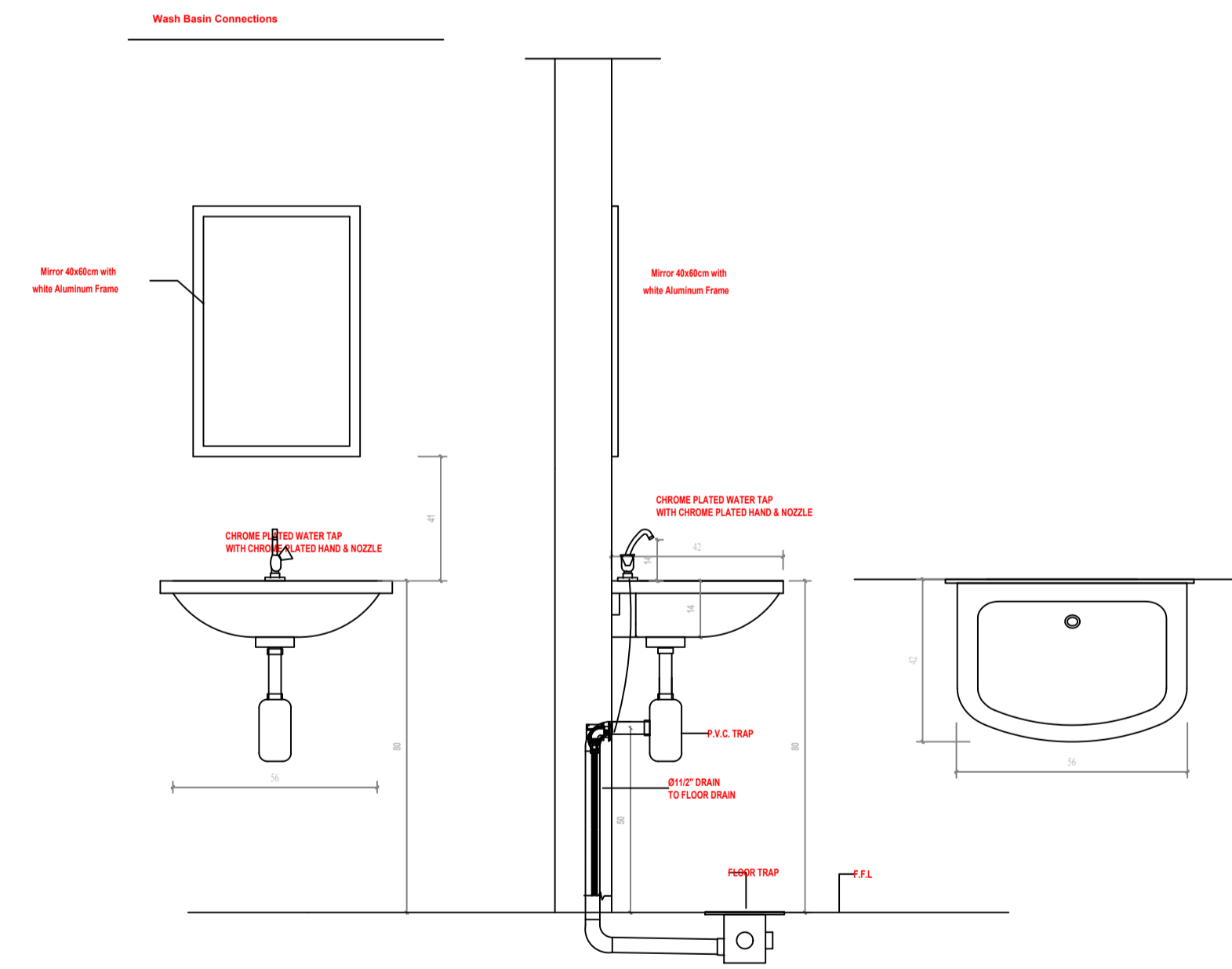
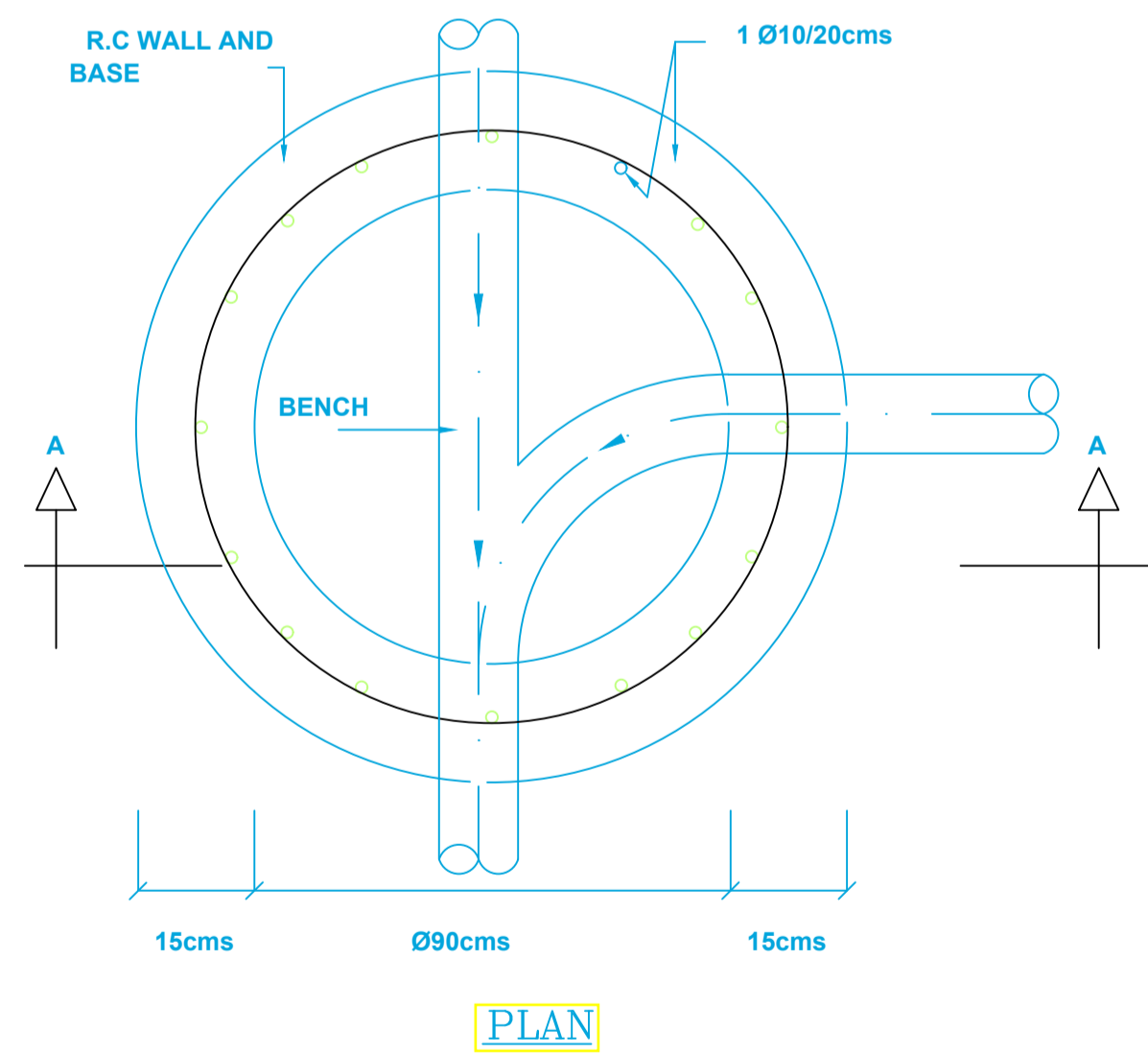
DRAINAGE MANHOLE - Ø50CM DEPTH UP TO 120CM.



Water Closet Details



Lavatory Details



Mechanical Engineering Department
H.V.A.C. Engineering

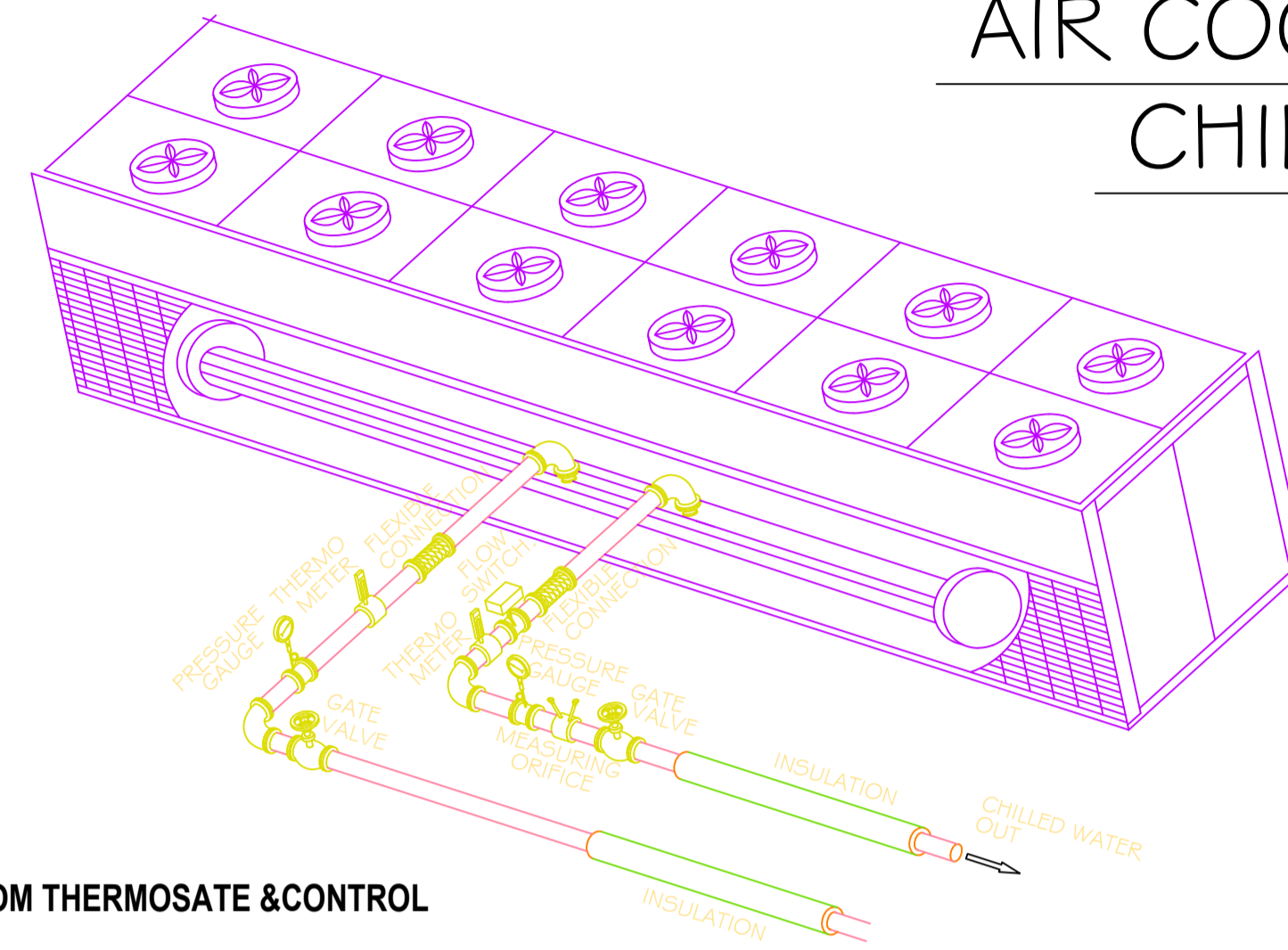
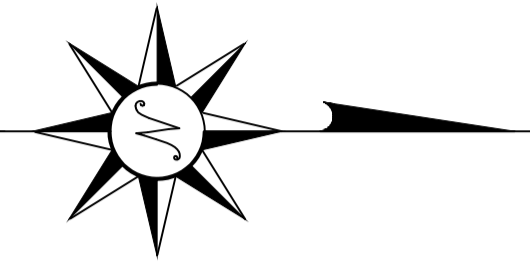
Details

Project Supervisor :
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Project Team :
Waseem Saleh
Ayman maali

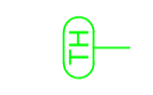

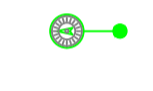

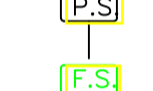
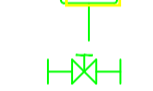
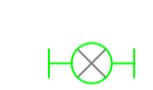
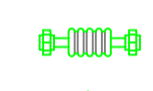
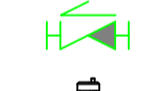
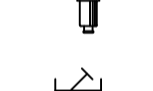
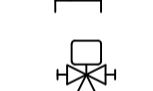
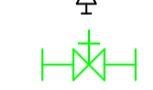



Mechanical Details

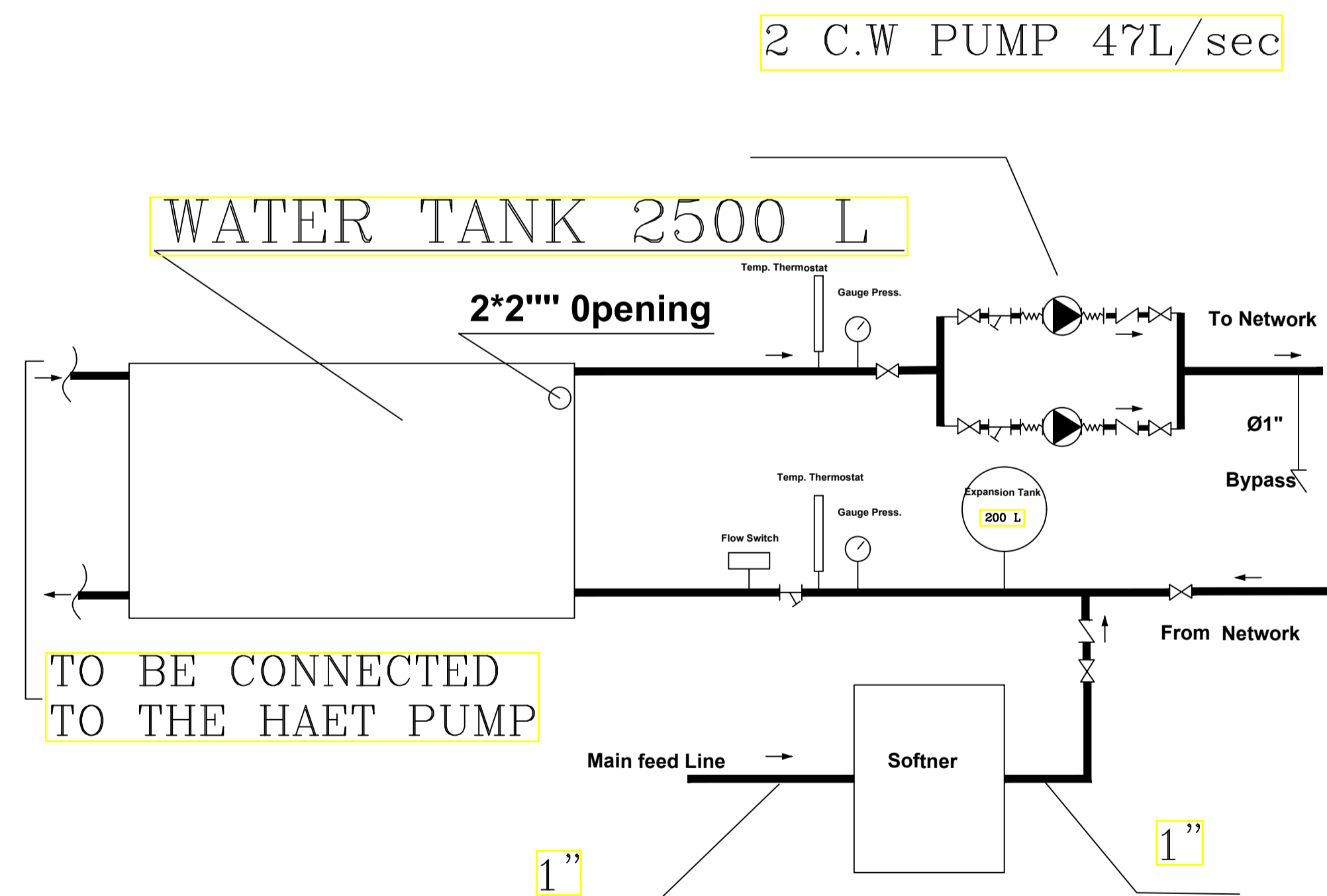
Birzeit girle students
3-7-2017
M248

AIR COOLED PACKAGED WATER CHILLER CONNECTIONS(TYPICAL)



model number (APSa270-35,
Lwt=50) Chiller
capacity 348.7 T.R

	TH.	DIGITAL ROOM THERMOSATE & CONTROL
	F.V.	Pump
	P.G.	Pressure Gage
	T.G.	Temperature Gage
	P.S.	Pressure Switch
	F.S.	Flow Switch
	I.V.	Isolating Valve
	G.V.	Globe Valve
	F.C.	Flexible Connection
	N.V.	Non Return Valve
	A.V.	Automatic Air Vent
	ST.	Strainer
	Th.W.V.	Motorized Three Way Valve.
	OS.&Y.	OS.&Y. Valve SECOND FLOOR
	D.R.V.	Double Regulating Valve



Mechanical Engineering Department

H.V.A.C. Engineering

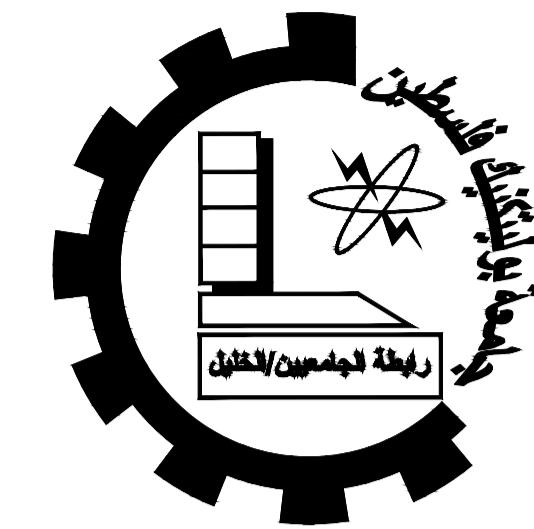
Details

Project Supervisor :
Dr.Kazem Osaily
Project Team :
Waseem Saleh
Ayman maali

Mechanical Details

Birzet girle students
3-7-2017

M249

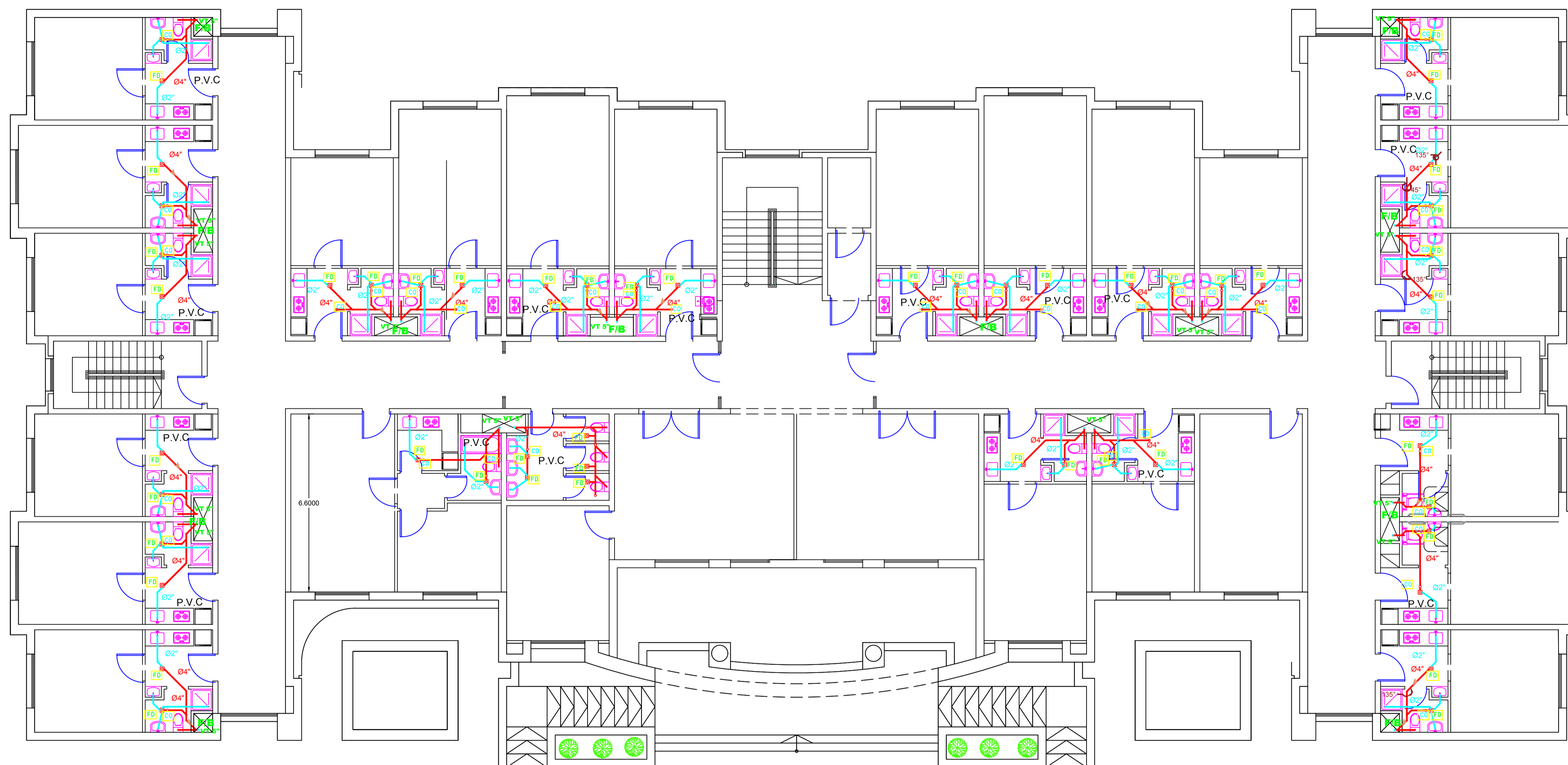
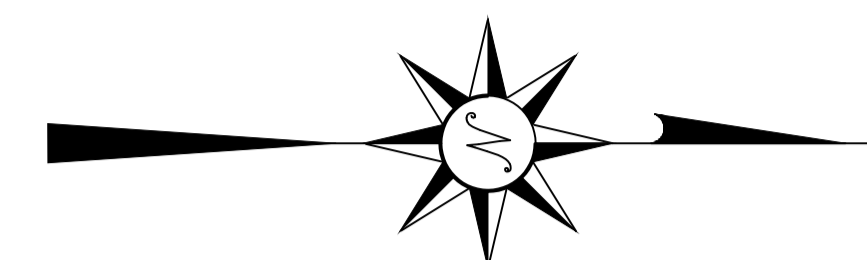


Palestine Polytechnic University

Mechanical Engineering Department

H.V.A.C. Engineering

Capacity of tank = 228 m³
 pressure head of the pump = 8 bar
 pressure head of the pump = 8 bar



Symbols	Description
	Black Water Manhole
	2" Gray Water Stack
	2" Drainage Pipe
	4" Drainage Pipe
	5" Drainage Pipe
	6" Drainage Pipe
	8" Drainage
	10" Drainage
	4" F.T
	4" C.O
	4" Rain water drainage pipe

Project Supervisor :
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 Project Team :
Waseem Saleh
Ayman maali

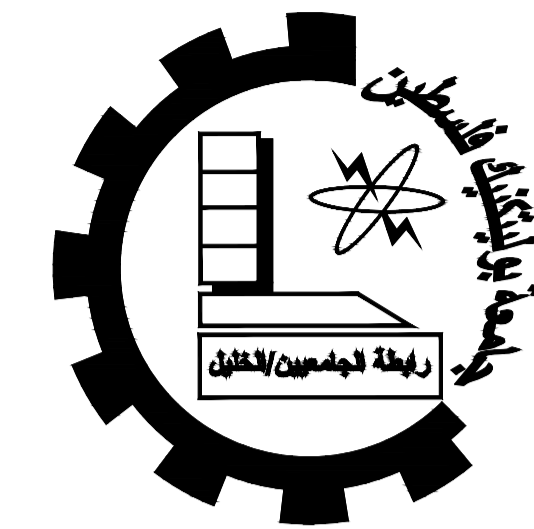
first FLOOR - DRAINAGE LAYOUT
 second FLOOR - DRAINAGE LAYOUT
 Third FLOOR - DRAINAGE LAYOUT

Birzet girle students

Date
 3-7-2017

Scale
 1/100

M203



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Mechanical Engineering Department

H.V.A.C. Engineering

Symbols	Description
	Black Water Manhole
	2" Gray Water Stack
	2" Drainage Pipe
	4" Drainage Pipe
	5" Drainage Pipe
	6" Drainage Pipe
	8" Drainage Pipe
	10" Drainage Pipe
	4" F.T
	4" C.O
	4" Rain water drainage pipe

Project Supervisor :
Dr.Kazem Osaily
Project Team :
Waseem Saleh
Ayman maali

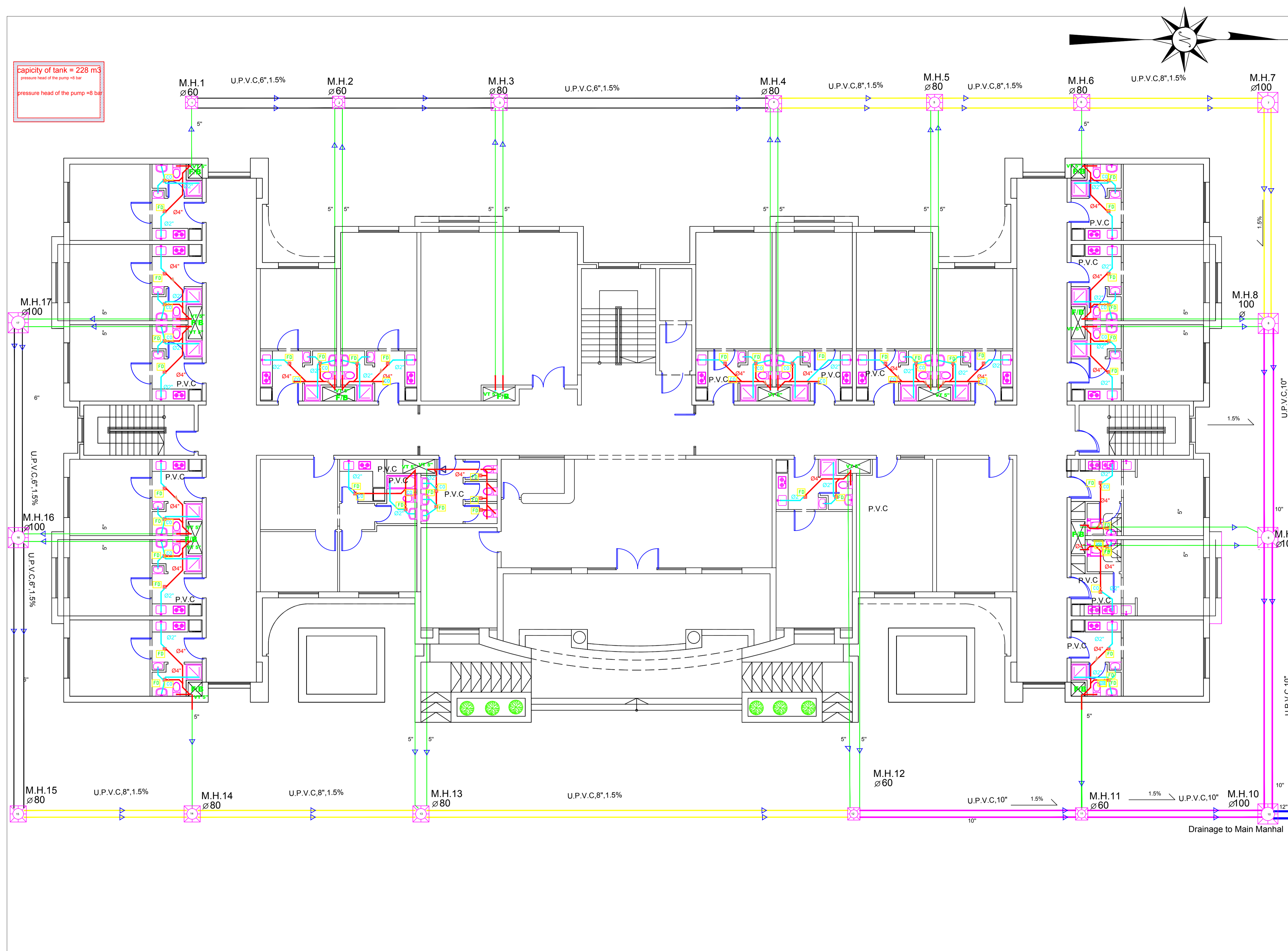
GROUND FLOOR - DRAINAGE LAYOUT

Birzet girle students

Date:
3-7-2017

Scale:
1/100

M202



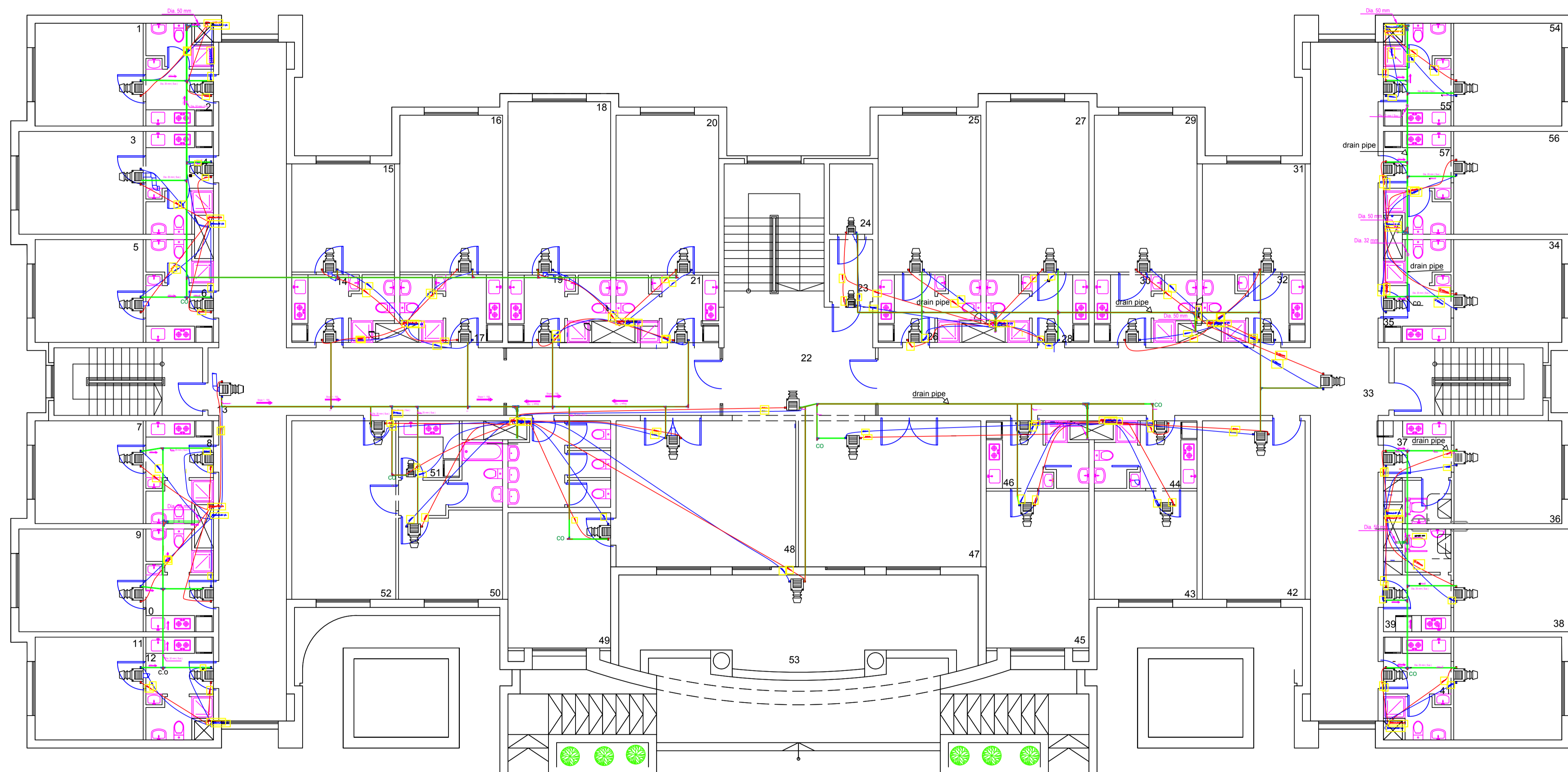
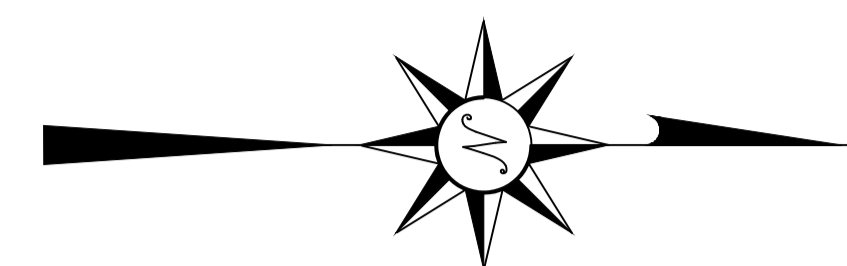


Palestine Polytechnic University

Mechanical Engineering Department

H.V.A.C. Engineering

capacity of tank = 228 m³
 pressure head of the pump = 8 bar
 pressure head of the pump = 8 bar



Symbols	Description
	duct for supply fresh air
	duct for supply for f.c.u
	duct for exhaust air form room
	duct for exhaust form bathroom
	chiler to supply cold water
	diffuser size 40*40 cm
	diffuser size 60*60cm
	grill to suction air form space to supply f.c.u
	grill to suction exhaust air form space to out side
	grill to suction exhaust air form bathroom to out side
	fan coil unit
	CHILLED WATER PUMP
	returen PIPE
	supply PIPE
	slot diffuser

Project Supervisor :
Dr.Kazem Osaily
 Project Team :
Waseem Saleh
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FIRST FLOOR
second FLOOR
Third FLOOR
- HVAC SYSTEM

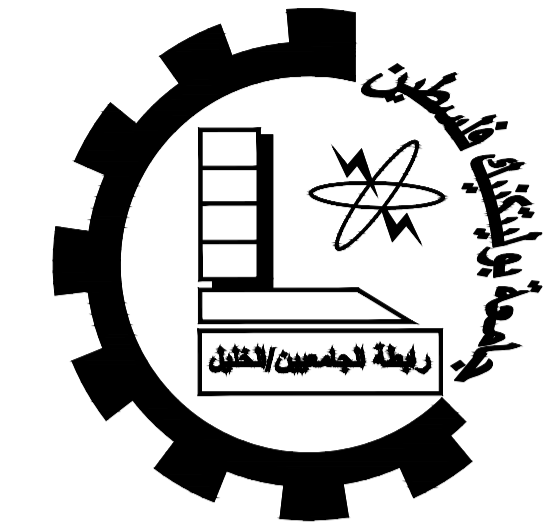
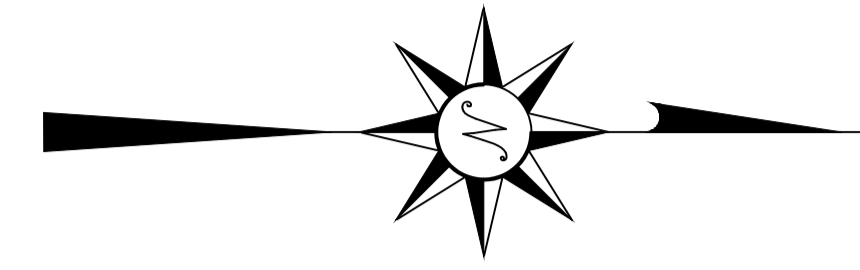
Birzet girle students

3-7-2017

11100

M235

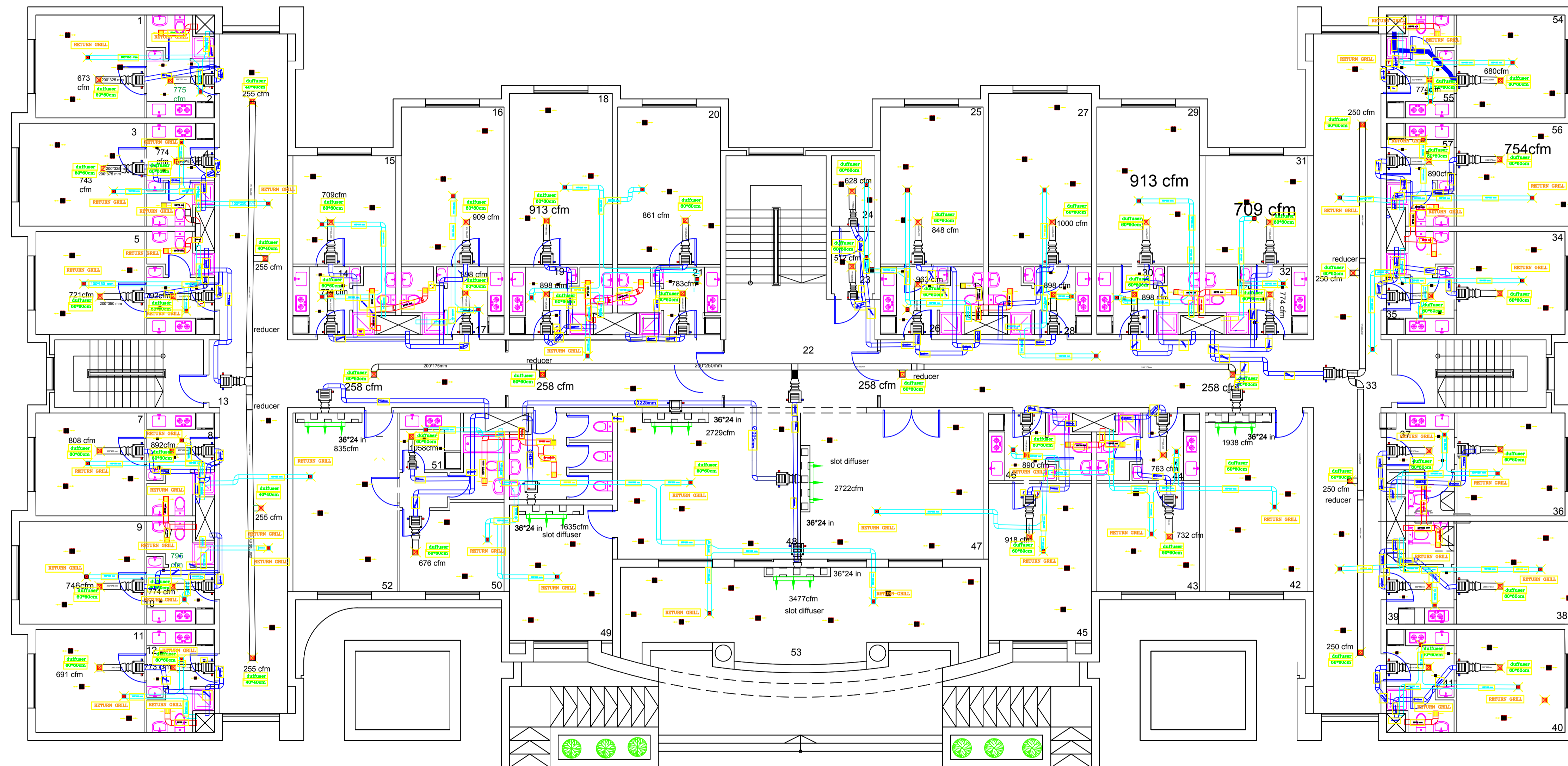
capacity of tank = 228 m³
 pressure head of the pump = 8 bar



Palestine Polytechnic University

Mechanical Engineering Department

H.V.A.C. Engineering



Symbols	Description
	duct for supply fresh air
	duct for supply for f.c.u
	duct for exhaust air form room
	duct for exhaust form bathroom
	chiler to supply cold water
	diffuser size 40*40 cm
	diffuser size 60*60cm
	grill to suction air form space to supply f.c.u
	grill to suction exhaust air form space to out side
	grill to suction exhaust air form bathroom to out side
	fan coil unit
	CHILLED WATER PUMP
	returen PIPE
	supply PIPE
	slot diffuser

Project Supervisor :
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 Project Team :
Waseem Saleh
Ayman maali

FIRST FLOOR
second FLOOR
Third FLOOR
- HVAC SYSTEM

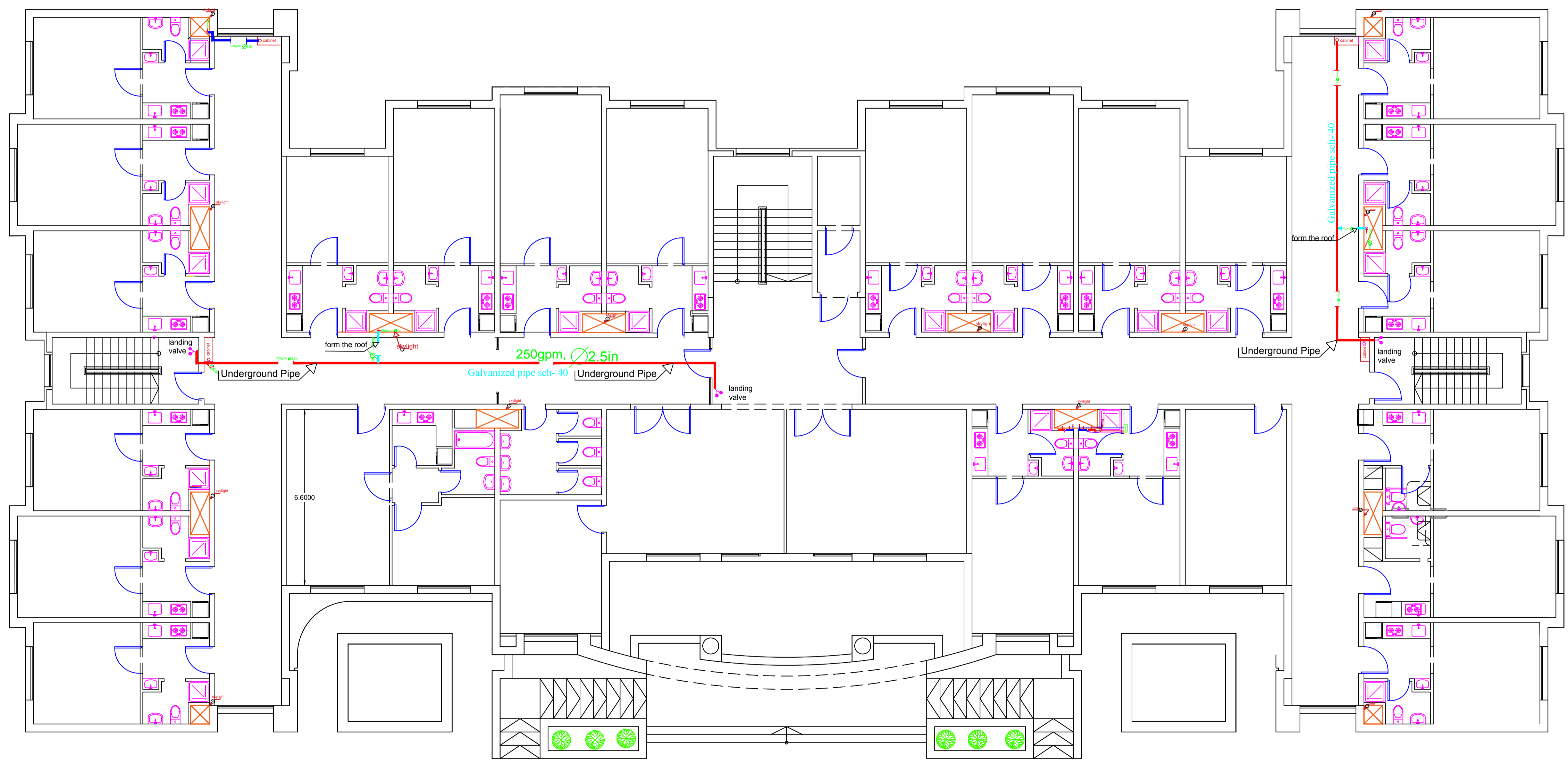
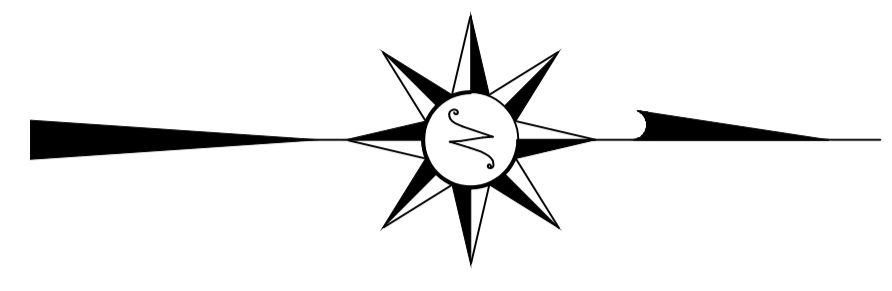
Birzet girle students

Date
 3-7-2017

Scale
 1:100

M223

capacity of tank = 228 m³
 pressure head of the pump = 8 bar
 pressure head of the pump = 8 bar



Palestine Polytechnic University

Mechanical Engineering Department

H.V.A.C. Engineering

Symbols	Description
	firefighting control panel
	FIREFIGHTING schedule-40 pipe
	FM200 GAS NOZZLE
	FM200 GAS CYLINDER
	Fire hose
	Carbon dioxide extinguishers
	4" steel pipe
	1.5" steel pipe
	2.5" steel pipe
	landing valve
	JOCKY PUMP
	ELECTRICAL FIRE PUMP

Project Supervisor :

Dr.Kazem Osaily

Project Team :

Waseem Saleh

Ayman maali

FIRST, second,Third
 FLOOR FIREFIGHTING
 MECHANICAL WORK

Author Birzet girle students	Drawn 3-7-2017	M230
Date 3-7-2017	Scale 1:100	



Palestine Polytechnic University

Mechanical Engineering Department

H.V.A.C. Engineering

Symbols	Description
	firefighting control panel
	FIREFIGHTING schedule-40 pipe
	FM200 GAS NOZZLE
	FM200 GAS CYLINDER
	Fire hose
	Carbon dioxide extinguishers
	4" steel pipe
	1.5" steel pipe
	2.5" steel pipe
	landing valve
	JOCKY PUMP
	ELECTRICAL FIRE PUMP

Project Supervisor :
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Project Team :
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Ayman maali

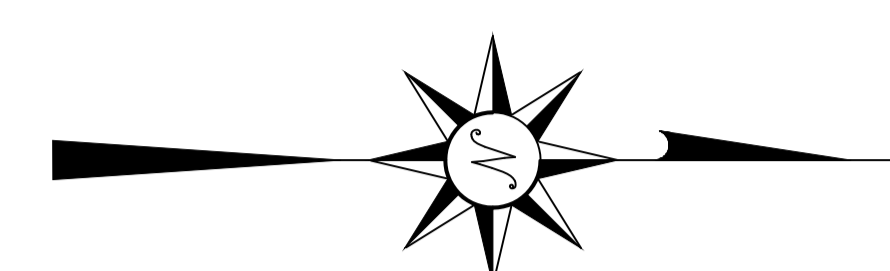
GROUND
FLOOR
FIREFIGHTING
MECHANICAL
WORK

Birzet girle students

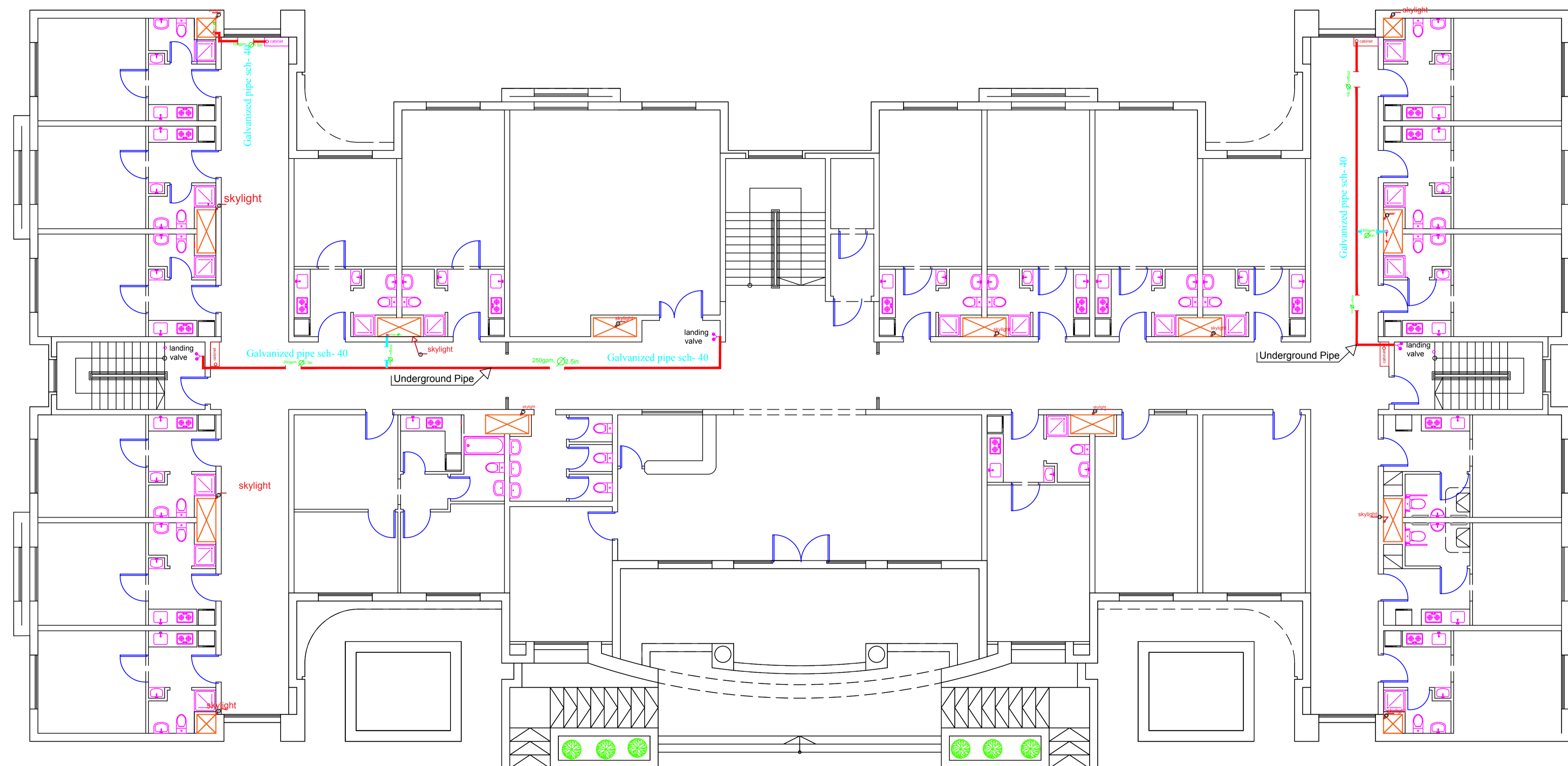
Date
3-7-2017

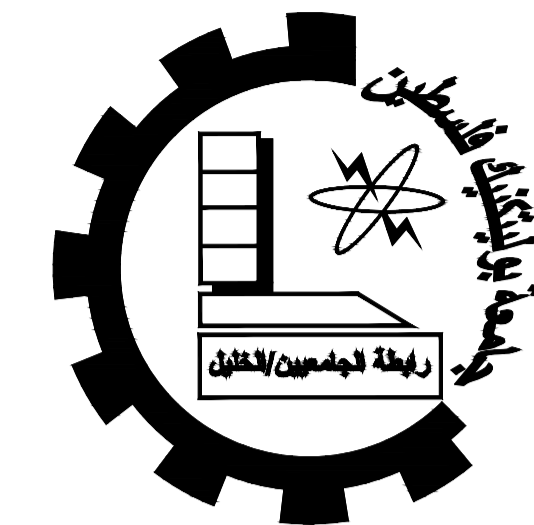
Scale
1/100

M229



capacity of tank = 228 m³
pressure head of the pump =8 bar
pressure head of the pump =8 bar





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Mechanical Engineering Department

H.V.A.C. Engineering

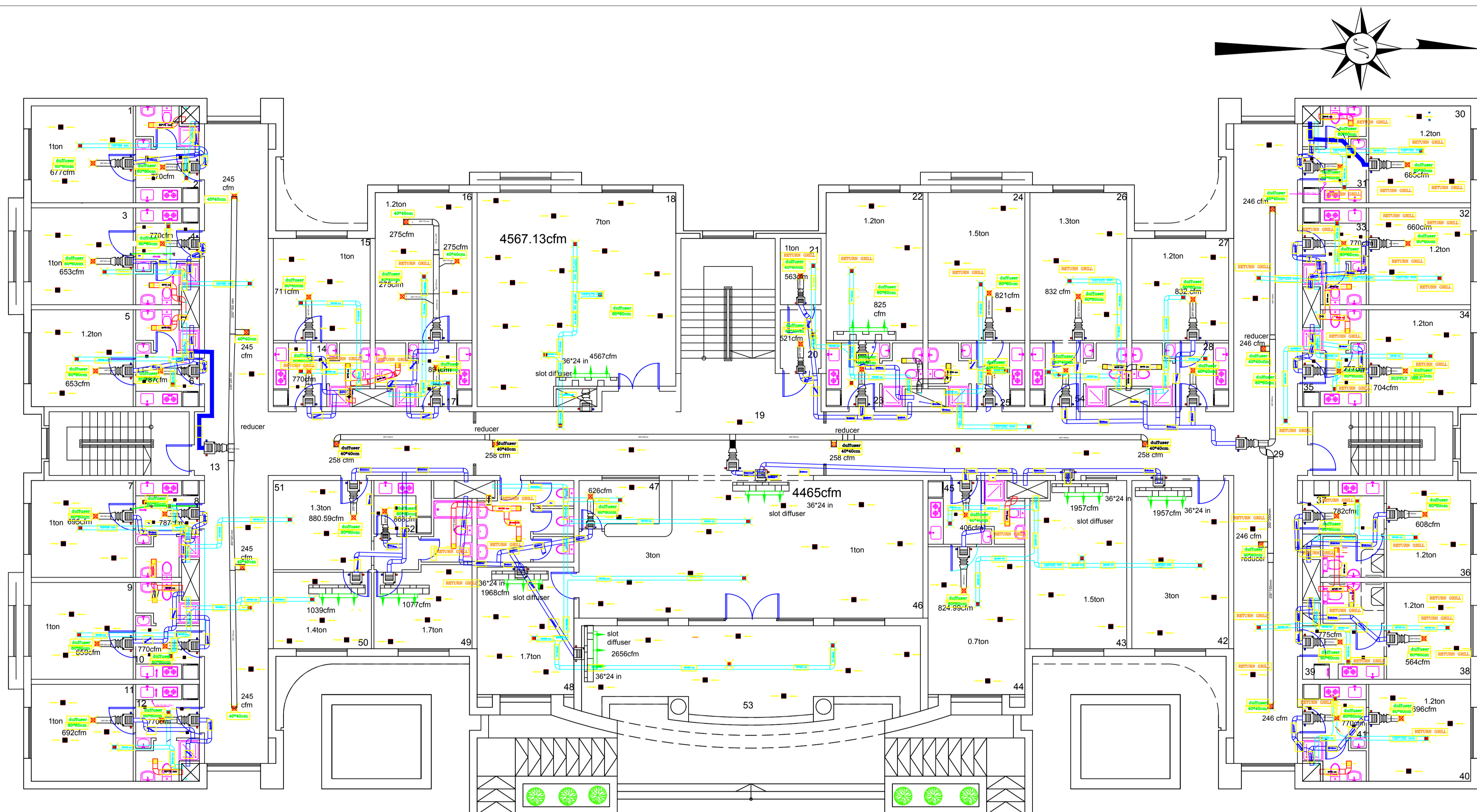
Symbols	Description
	duct for supply fresh air
	duct for supply for f.c.u
	duct for exhaust air form room
	duct for exhaust form bathroom
	chiler to supply cold water
	diffuser size 40*40 cm
	diffuser size 60*60cm
	grill to suction air form space to supply f.c.u
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	fan coil unit
	CHILLED WATER PUMP
	returen PIPE
	supply PIPE
	slot diffuser

Project Supervisor :
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Project Team :
Waseem Saleh
Ayman maali

GROUND FLOOR
- HVAC SYSTEM

By: Birzet girle students
Date: 3-7-2017
Scale: 1/100
M222

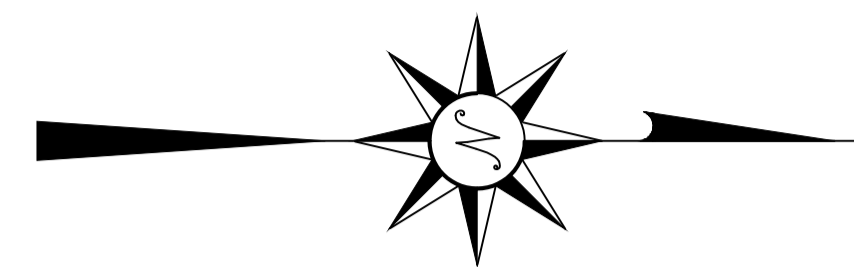
capacity of tank = 228 m³
pressure head of the pump =8 bar



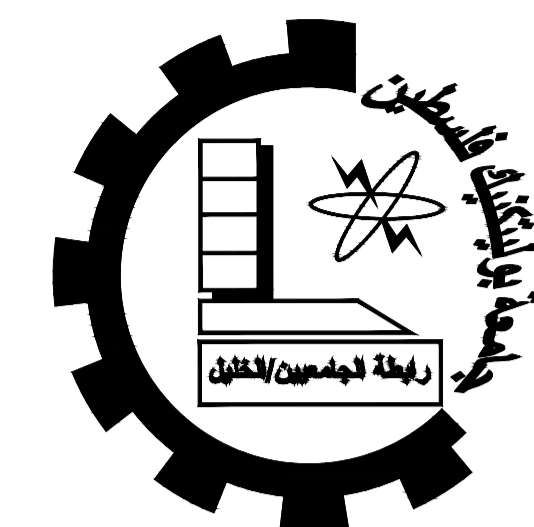
Fcu selection	Total Capacity (BTU/H)	Room	Fcu selection	Total Capacity (BTU/H)	Room	Fcu selection	Total Capacity (BTU/H)
DFPCSL-85-65-27	1069	C2	PCCPPFCM-76-03-26	1157	C3	PCCPPCSL-85-65-27	1069
DFPCSM-76-03-26	1157	C2	PCCPPFCM-85-65-27	1069	G6	PCCPPGSM-76-03-26	1156
DFPCSM-76-03-26	1157	C2	PCCPPFCM-76-03-26	1156	G9	PCCPPCSL-85-65-27	1252
DFPCSM-76-03-26	1157	C1	PCCPPFCM-76-03-27	1308	G2	PCCPPFCM-76-03-26	1157
DFPCSM-85-65-27	1030	C4	PCCPPFCM-76-03-26	1157	C3	PCCPPCSL-76-03-27	1308
DFPCSM-85-03-26	1549	C7	PCCPPFCM-80-03-26	1670	G8	PCCPPFCM-76-03-27	1308
DFPCSM-76-03-26	1157	G0	PCCPPFCM-76-03-27	970	G1	PCCPPCSL-80-03-27	1194
DFPCSM-85-03-26	1549	C2	PCCPPFCM-85-03-26	1746	C4	PCCPPFCM-85-03-26	1549
DFPCSM-85-03-26	1546	C6	PCCPPFCM-85-03-26	1549	C7	PCCPPGSM-76-03-27	1346
DFPCSM-76-03-26	1157	C9	PCCPPFCM-85-03-27	1156	G0	PCCPPFCM-76-03-27	1308
DFPCSM-76-03-26	1157	G2	PCCPPFCM-85-03-27	1069	G3	PCCPPFCM-76-03-26	1157
DFPCSM-76-03-27	1356	C5	PCCPPFCM-76-03-26	1160	G4	PCCPPFCM-76-03-27	1407
DFPCSM-76-03-26	1160	G8	PCCPPFCM-80-03-27	1094	G9	PCCPPFCM-76-03-26	1157
DFPCSM-76-03-27	1350	G1	PCCPPFCM-76-03-26	1157	G2	PCCPPFCM-85-03-26	1038
DFPCSM-85-03-26	1538	G4	PCCPPFCM-85-03-26	1549	G5	PCCPPFCM-80-03-27	1611
DFPCSM-85-03-26	1538	G7	PCCPPFCM-76-03-26	1157	G8	PCCPPFCM-85-03-26	1538
DFPCSM-85-03-27	1695	G0	PCCPPFCM-76-03-26	1293	G1	PCCPPFCM-85-03-27	1069
DFPCSM-85-03-27	1695	G3	PCCPPFCM-76-03-26	1153	G4	PCCPPFCM-85-03-27	1695

CS: Ground floor F.C.U selection & quantity of air in rooms.

pipe for F.C.U



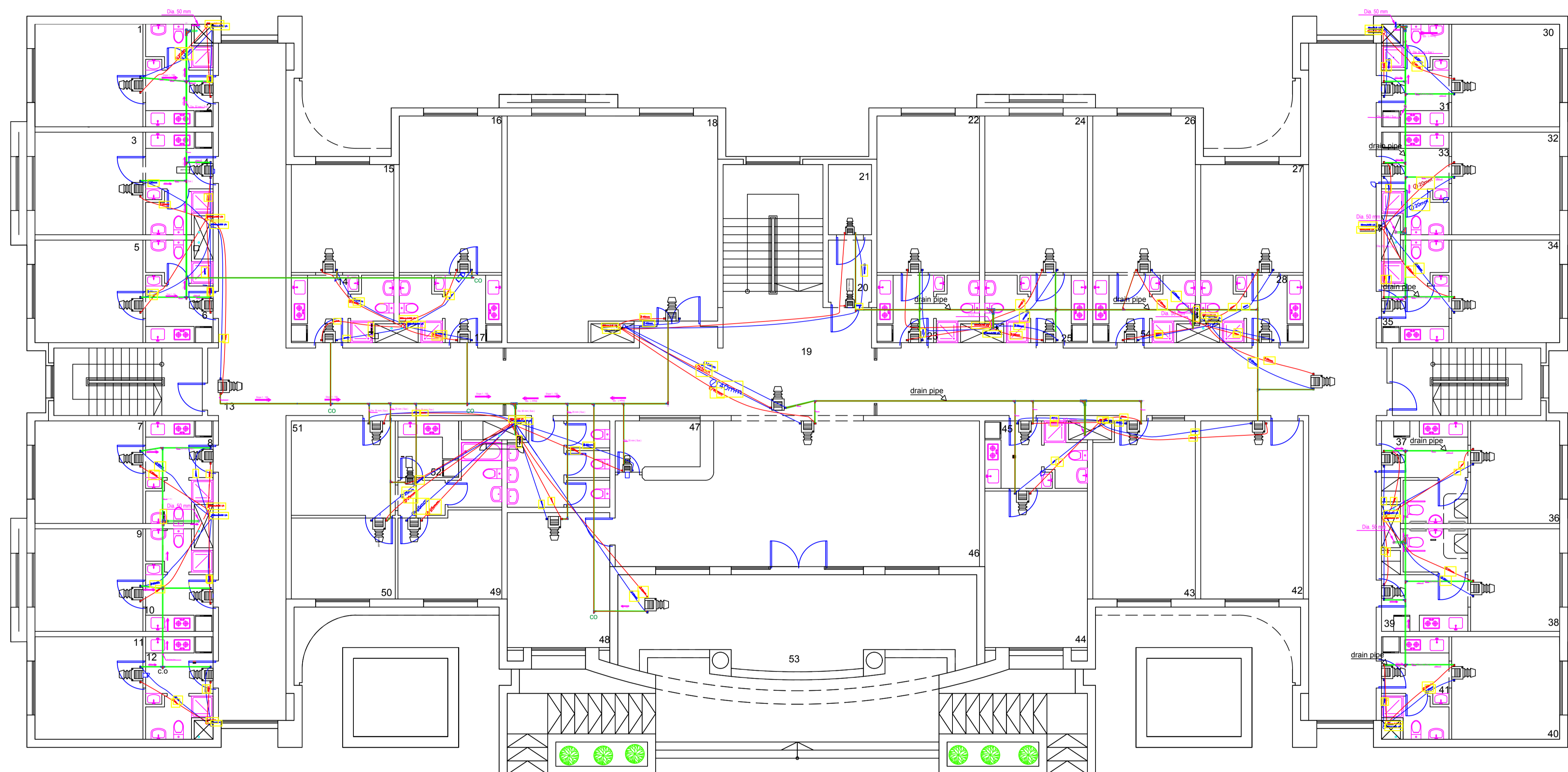
capacity of tank = 228 m³
 pressure head of the pump = 8 bar
 pressure head of the pump = 8 bar



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Mechanical Engineering Department

H.V.A.C. Engineering



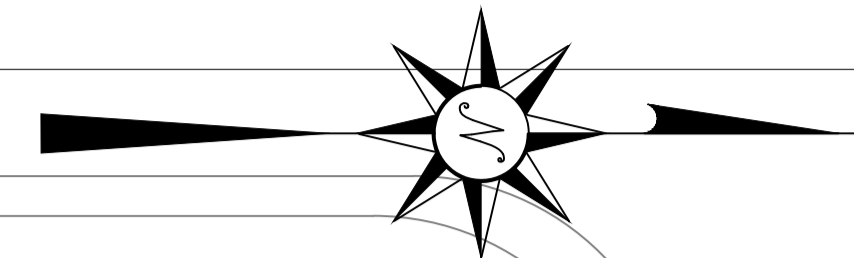
Symbols	Description
	duct for supply fresh air
	duct for supply for f.c.u
	duct for exhaust air form room
	duct for exhaust form bathroom
	chiler to supply cold water
	diffuser size 40*40 cm
	diffuser size 60*60cm
	grill to suction air form space to supply f.c.u
	grill to suction exhaust air form space to out side
	grill to suction exhaust air form bathroom to out side
	fan coil unit
	CHILLED WATER PUMP
	returen PIPE
	supply PIPE
	slot diffuser

Project Supervisor :
Dr.Kazem Osaily
 Project Team :
Waseem Saleh
Ayman maali

GROUND FLOOR
 - HVAC SYSTEM

Birzet girle students
 Date:
 3-7-2017
 Scale:
 1/100

M234



MECHANICAL LEGEND OF SYMBOLS

WATER & FIRE SYSTEM SYMBOLS		HVAC SYSTEMS		PLUMBING SYSTEM SYMBOLS	
	Cold water 16mm PEX Pipe		duct for supply fresh air		MANHOLE
	Hot water 16mm PEX Pipe		duct for supply for f.c.u		2" Gray WATER Stack
	Water Collector		duct for exhaust air from room		2" Drainage Pipe
	electric boiler		duct for exhaust air from bathroom		4" Drainage Pipe
	COLD WATER PUMP		chiller to supply cold water		5" Drainage Pipe
	JOCKEY FIRE PUMP		diffuser size 40*40cm to supply 300cfm		6" Drainage Pipe
	ELECTRICAL FIRE PUMP		diffuser size 60*60cm to supply 400cfm		8" Drainage Pipe
	water tank		grill to suction air form space to supply f.c.u		10" Drainage Pipe
	air relief valve		grill to suction exhaust air form space to out side		4" F.T
	COLLECTOR cold water		fan coil unit		4" C.O
	COLLECTOR hot water		grill to suction exhaust air form bathroom to out side		4" Rainwater Drainage
	water meter		CHILLED WATER supply PIPE		1.5% 1.5% Drainage Pipe slope
	FIREFIGHTING Schedule-40 pipes		CHILLED WATER return PIPE		
	FROM BELOW		CHILLED WATER PUMP		
	Diesel pump				

NOTES

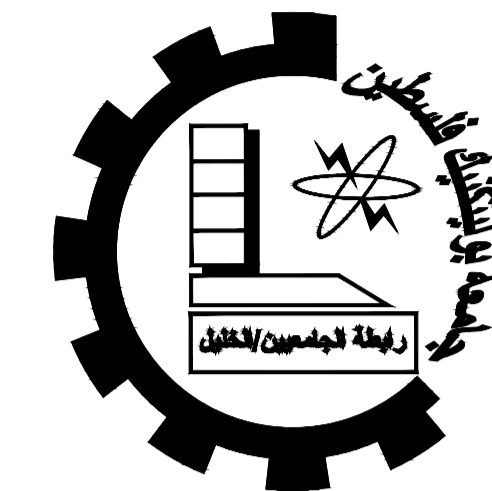
- (1) All Dimensions Are In mm.
- (2) All Levels Are In Meter
- (3) Any Missing or Unclear Detail And All Fastening Systems For All Elements Shall be Approved by The Supervisor.
- (4) Levels On Elevations & Sections Relevant to Zero Level \pm 0.00.

ZERO LEVEL:
780 = 0.00 \pm From Sea Level.

5) ALL MAIN PIPES FROM ROOF TO COLLECTORS
ARE G.S. PIPES UNLESS REFERS OTHERWISE

6) FROM COLLECTORS TO FIXTURES ARE XLPE CROSS-LINKED POLYETHYLENE PIPE (16 MM DIA) UNLESS REFERS OTHERWISE .

7) EACH THERMOPIPE IS COVERED BY 25 MM PVC



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H.V.A.C. Engineering

NOTES :

Project Supervisor :
Dr.Kazem Osaily
Project Team :
Waseem Saleh
Ayman maali

LEGEND OF SYMBOLS

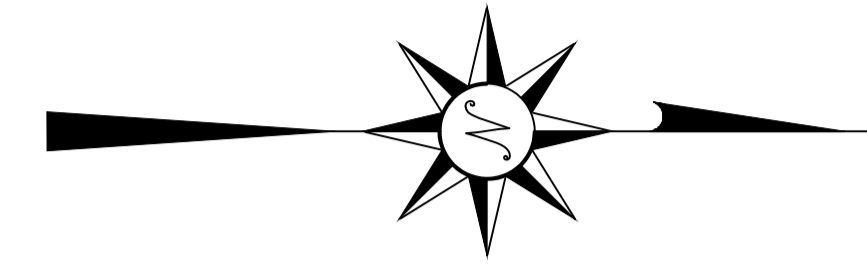
Birzeit girls students

3-7-2017

M00

LIST OF DRAWINGS:-

DWG. NO.	Drawing Title	SCALE
M00	LEGEND OF SYMBOLS	NTS
M01	LIST OF DRAWINGS	NTS
M201	SITE PLAN	1/200
M202	GROUND FLOOR - DRAINAGE LAYOUT	1/100
M203	FIRST-second- third FLOOR - DRAINAGE LAYOUT	1/100
M206	water tank net work on the roof of the building	1/100
M207	MANHOLE TABLE	1/100
M208	ROOF DRAIN LAYOUT	1/100
M209	GROUND FLOOR - WATER SUPPLY	1/100
M210	FIRST- second- third FLOOR - WATER SUPPLY	1/100
M222	GROUND FLOOR - HVAC SYSTEM	1/100
M223	FIRS- second- third T FLOOR - HVAC SYSTEM	1/100
M226	MECHANICAL WORK for the roof- HVAC SYSTEM	1/100
M229	GROUND FLOOR - FIREFIGHTING MECHANICAL WORK	1/100
M230	FIRST-second-third FLOOR - FIREFIGHTING MECHANICAL WORK	1/100
M233	FIREFIGHTING MECHANICAL WORK for the roof	1/100
M234	ground floor - water derange & network pipe for F.C.U	1/100
M235	first - second - third floor - water derange & network pipe for F.C.U	1/100
M240	MECHANICAL DETAILS	NTS
M243	MECHANICAL DETAILS	NTS
M245	MECHANICAL DETAILS	NTS
M248	MECHANICAL DETAILS	NTS



Mechanical Engineering Department

H.V.A.C. Engineering

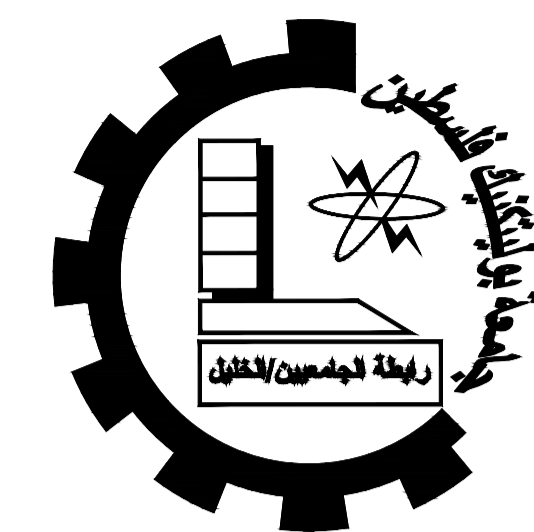
Details

Project Supervisor :
Dr.Kazem Osaily
Project Team :
Waseem Saleh
Ayman maali

List of Drawing

Birzeit girle students
3-7-2017

M01



Palestine Polytechnic University

Mechanical Engineering Department

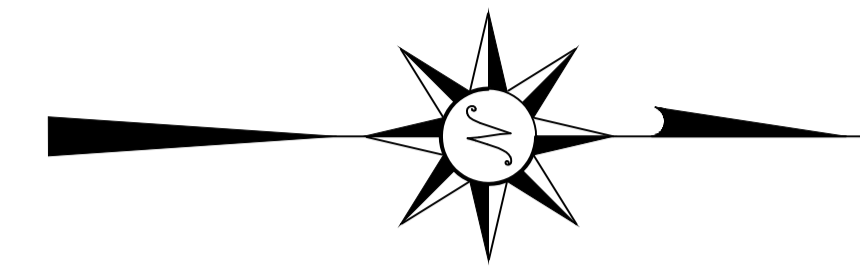
H.V.A.C. Engineering

Symbols	Description
	Water Collector
	Cold Water 16mm PEX Pipe
	Hot Water 16mm PEX Pipe
	electric boiler
	water tank
	COLD WATER PUMP
	FLOOR DRAIN

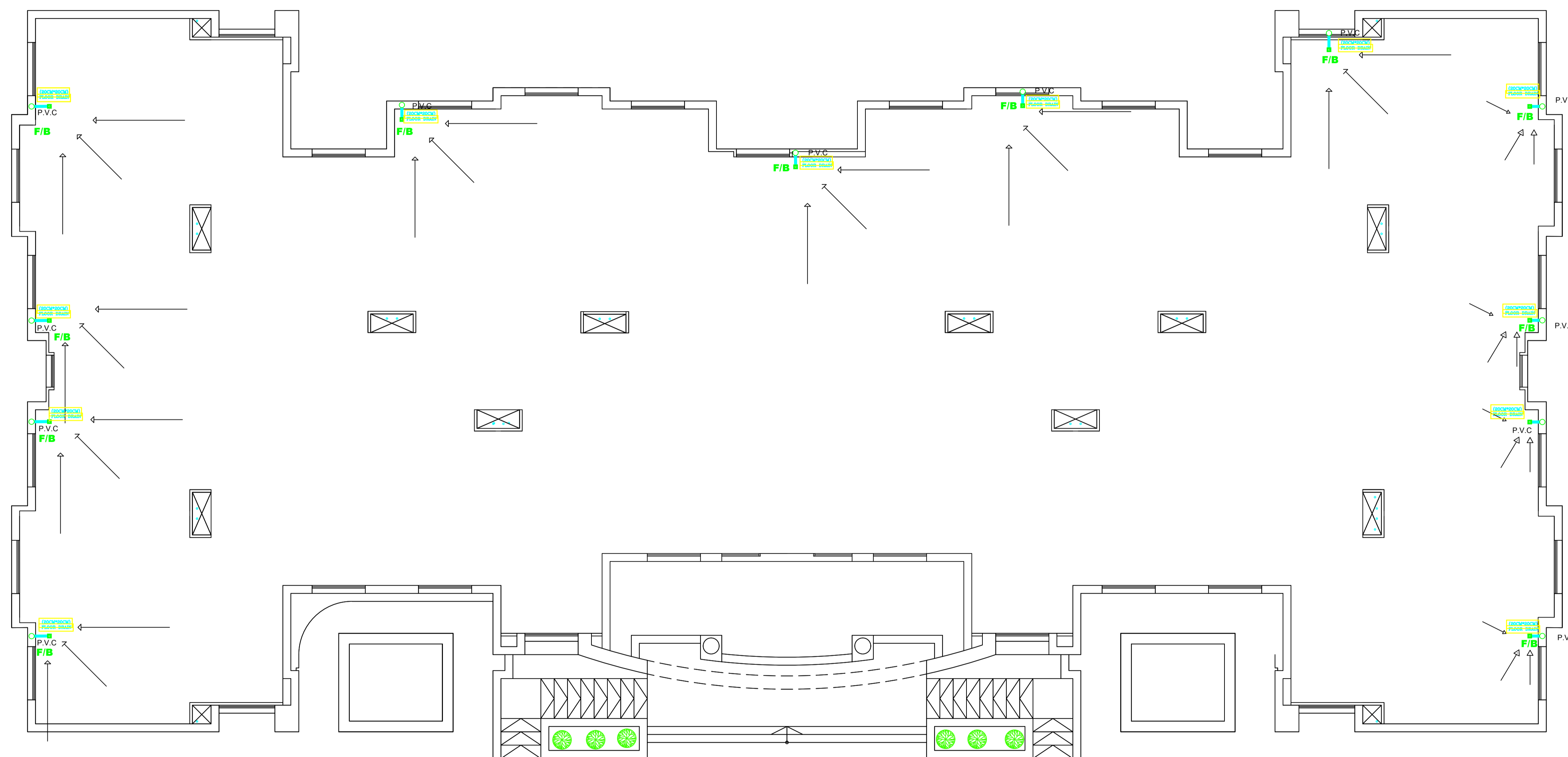
Project Supervisor :
Dr.Kazem Osaily
Project Team :
Waseem Saleh
Ayman maali

ROOF DRAIN LAYOUT

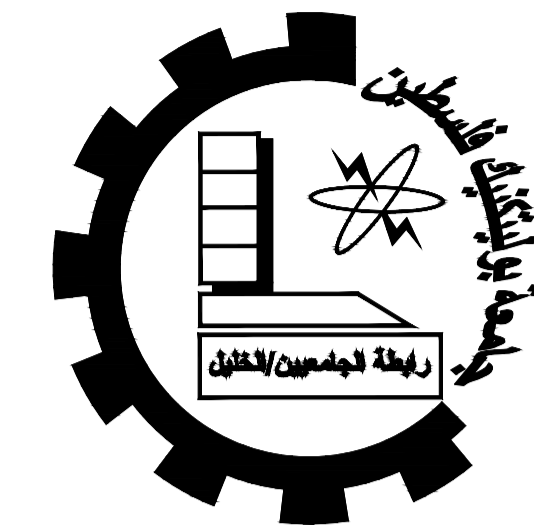
Birzet girle students	
Date	3-7-2017
Scale	1/100
M208	



capacity of tank = 228 m3
pressure head of the pump =8 bar
pressure head of the pump =8 bar



NOTE: All the rain drains are free discharge



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Mechanical Engineering Department

H.V.A.C. Engineering

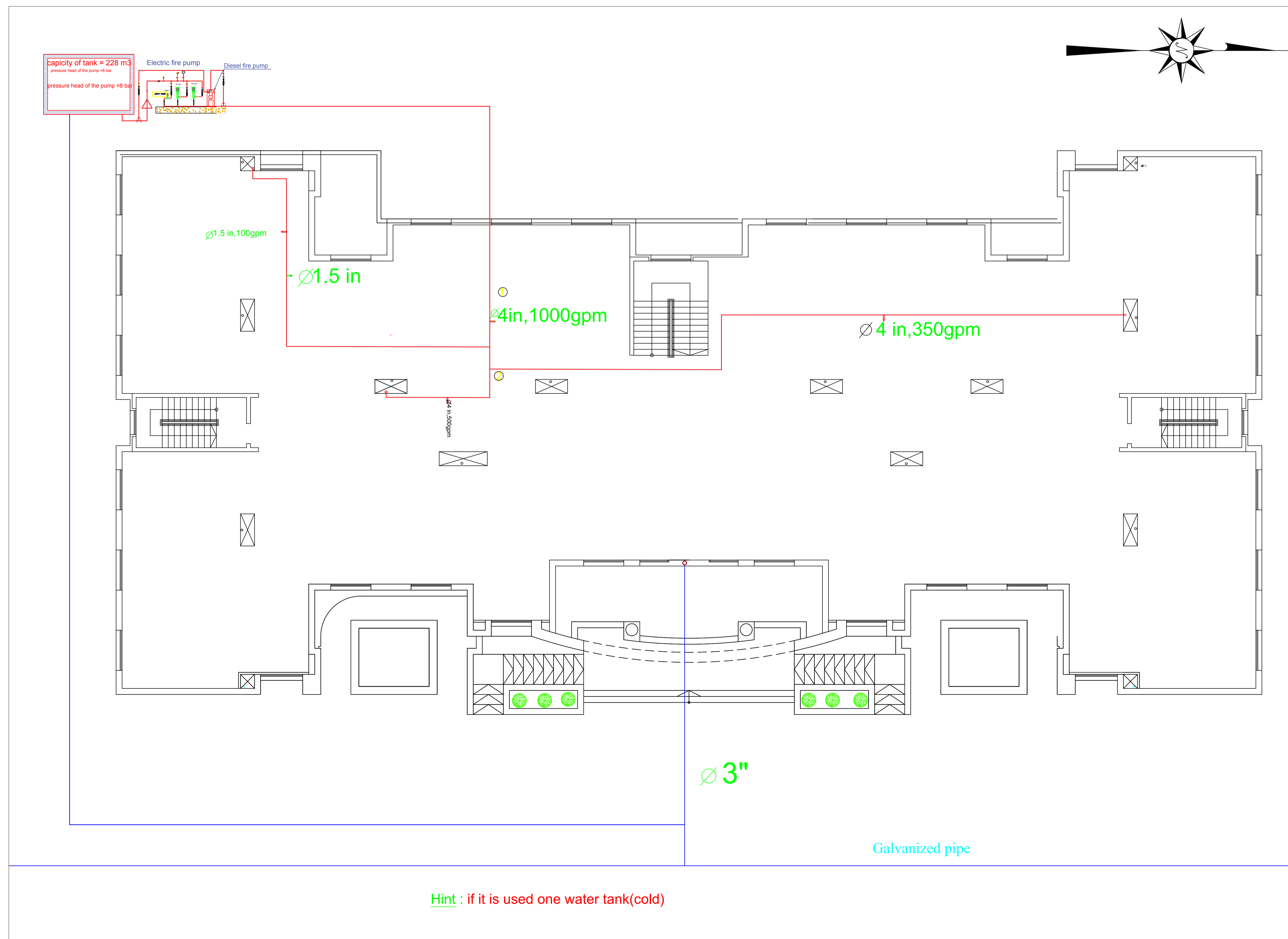
Symbols	Description
	firefighting control panel
	FIREFIGHTING schedule-40 pipe
	FM200 GAS NOZZLE
	FM200 GAS CYLINDER
	Fire hose
	Carbon dioxide extinguishers
	4" steel pipe
	1.5" steel pipe
	2.5" steel pipe
	landing valve
	JOCKY PUMP
	ELECTRICAL FIRE PUMP

Project Supervisor :
Dr.Kazem Osaily
Project Team :
Waseem Saleh
Ayman maali

FIREFIGHTING MECHANICAL WORK
for the roof

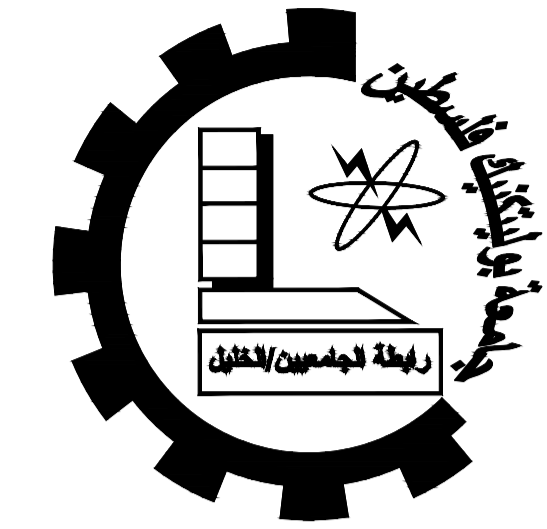
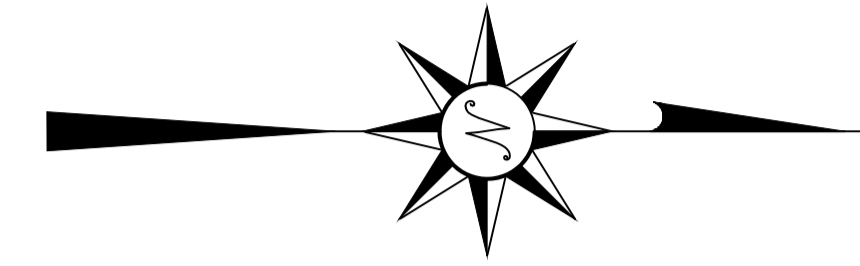
Prepared by:
Birzet girle students
Date:
3-7-2017
Scale:
1/100

M233



Hint : if it is used one water tank(cold)

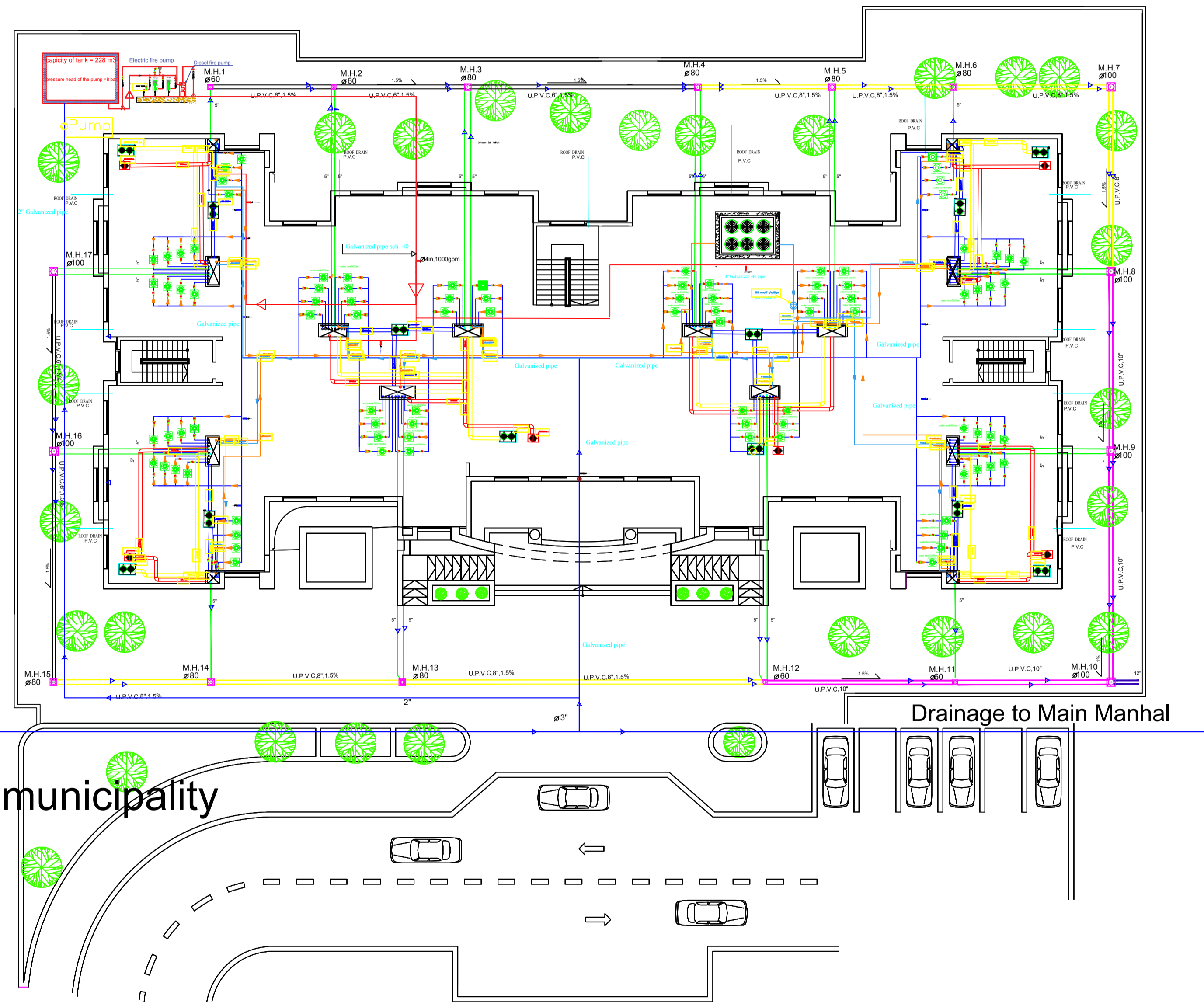
Galvanized pipe



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H.V.A.C. Engineering



Cold water line from the municipality

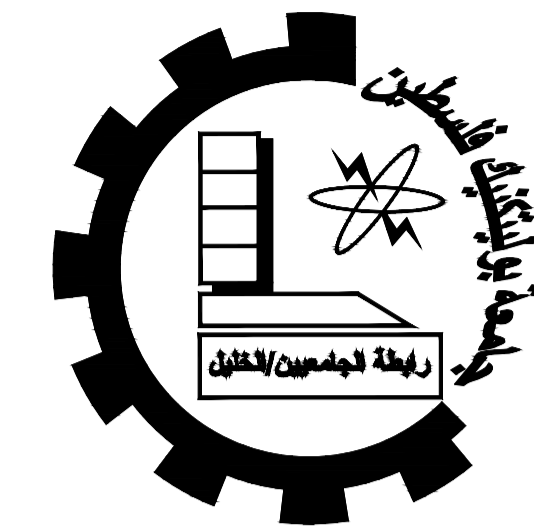
Drainage to Main Manhal

Symbols	Description
	Black Water Manhole
	2" Drainage Pipe
	4" Drainage Pipe
	5" Drainage Pipe
	6" Drainage Pipe
	8" Drainage
	10" Drainage
	water tank
	chiller to supply cold water
	JOCKY PUMP
	FIREFIGHTING schedule-40 pipe

Project Supervisor :
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Project Team :
Waseem Saleh
Ayman maali

SITE PLAN

Project: Birzet girls students	Sheet: M201
Date: 3-7-2017	
Scale: 1/200	



Palestine Polytechnic University

Mechanical Engineering Department

H.V.A.C. Engineering

Symbols	Description
	Water Collector
	Cold Water 16mm PEX Pipe
	Hot Water 16mm PEX Pipe
	electric boiler
	water tank

Project Supervisor :
Dr.Kazem Osaily
Project Team :
Waseem Saleh
Ayman maali

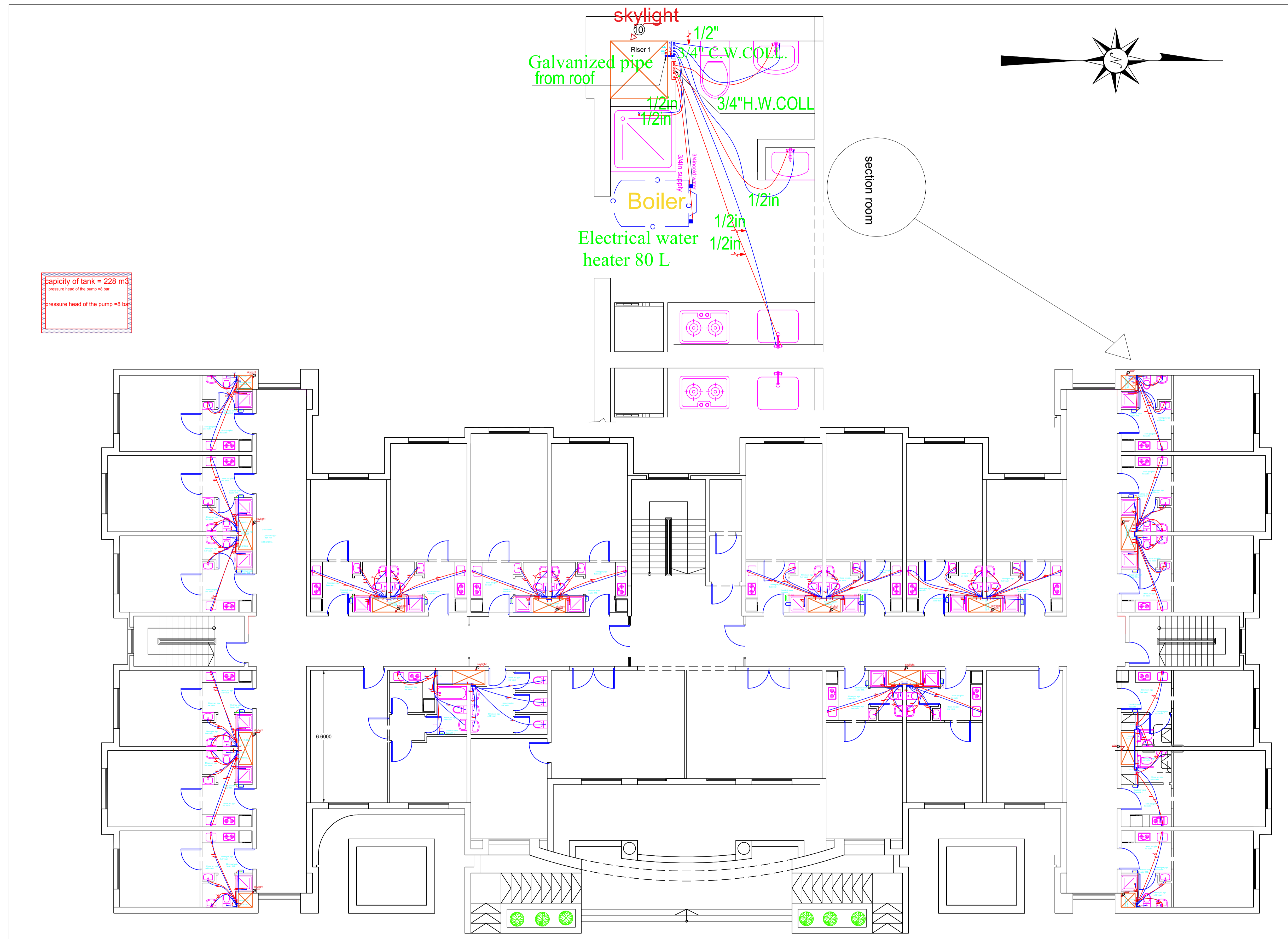
first FLOOR - water supply
second FLOOR - water supply
Third FLOOR - water supply

Birzet girle students

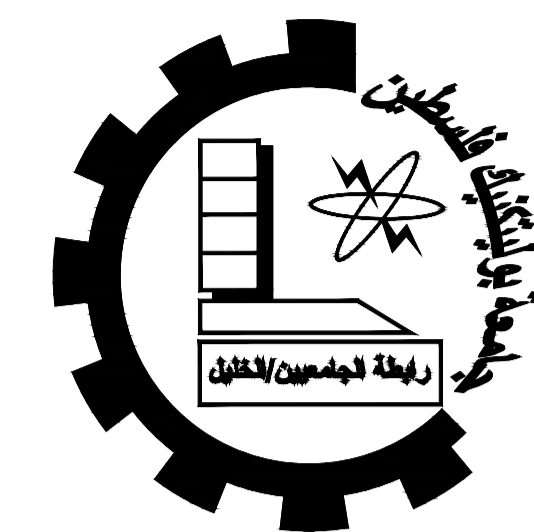
Date:
3-7-2017

Scale:
1/100

M210



capacity of tank = 228 m³
pressure head of the pump =8 bar
pressure head of the pump =8 bar



Palestine Polytechnic University

Mechanical Engineering Department

H.V.A.C. Engineering

Symbols	Description
	Water Collector
	Cold Water 16mm PEX Pipe
	Hot Water 16mm PEX Pipe
	electric boiler
	water tank

Project Supervisor :
Dr.Kazem Osaily
Project Team :
Waseem Saleh
Ayman maali

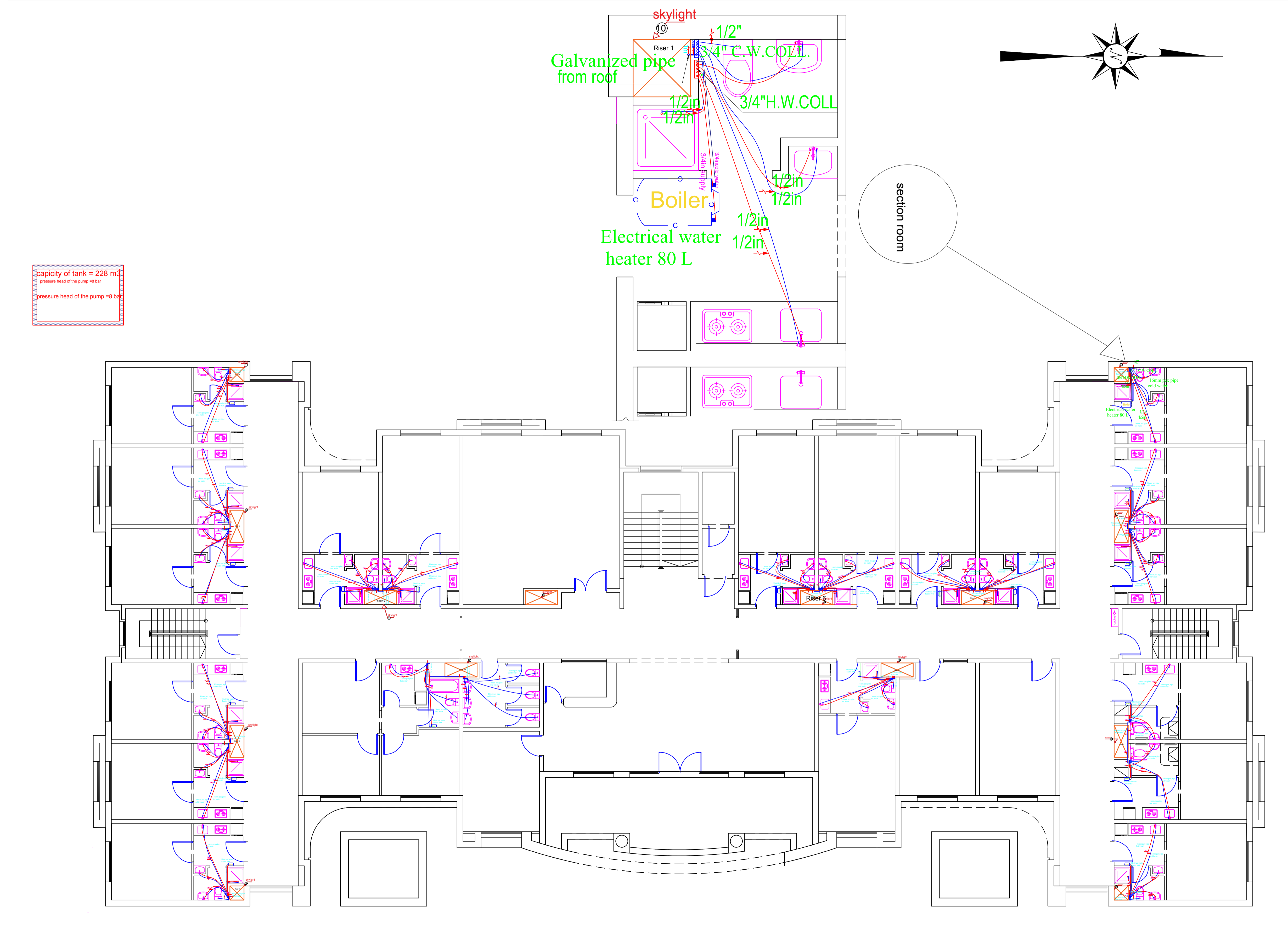
Ground floor-water supply

Birzet girle students

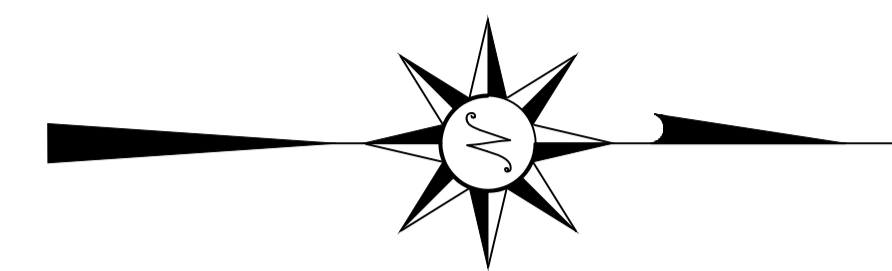
Date:
3-7-2017

Scale:
1/100

M209

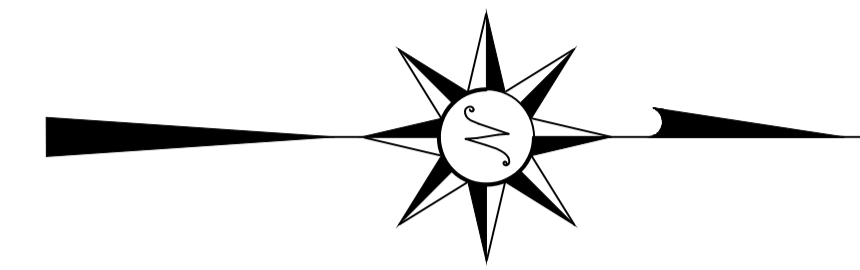


Capacity of tank = 228 m³
pressure head of the pump =8 bar
pressure head of the pump =8 bar



section room

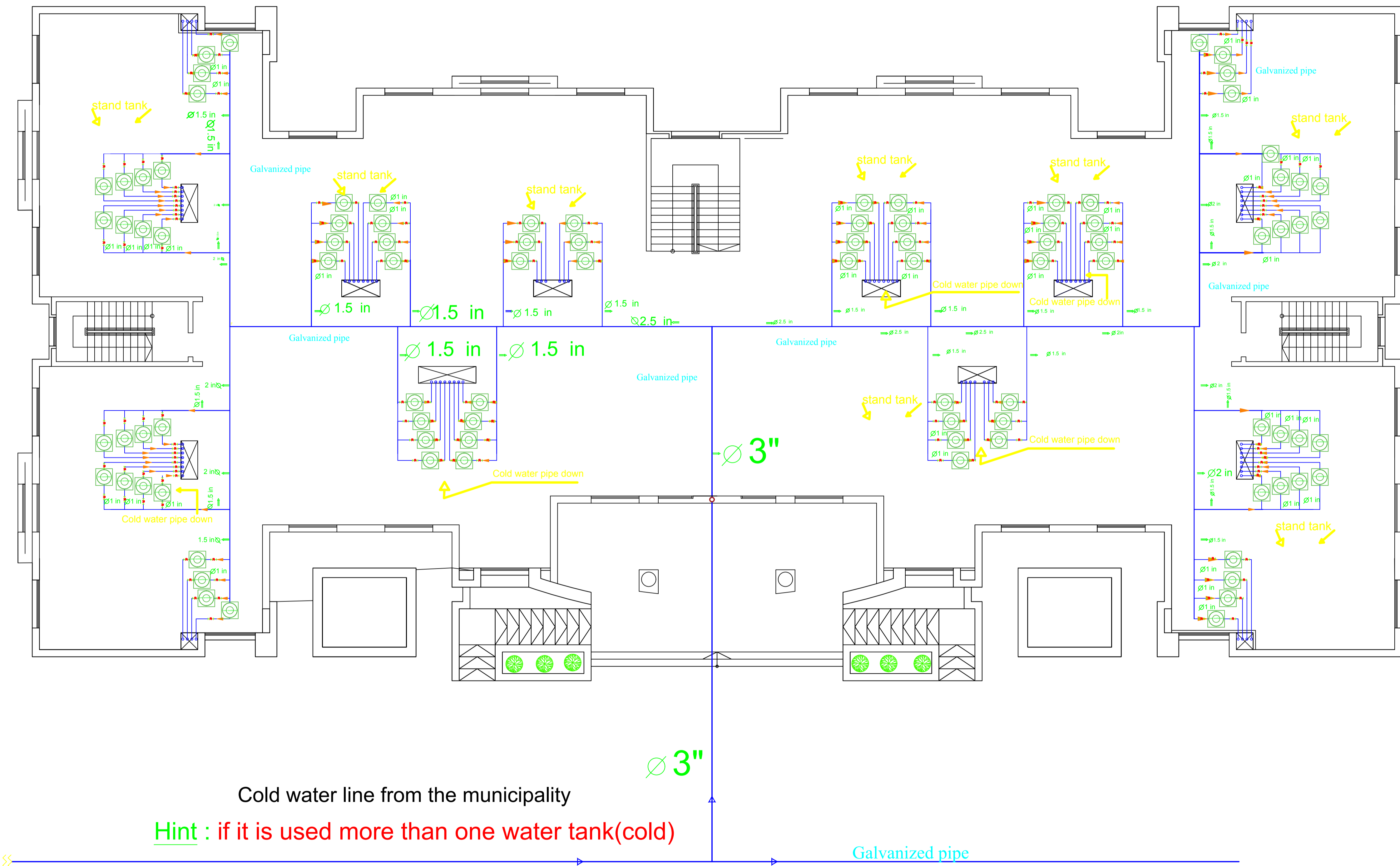
capacity of tank = 228 m³
 pressure head of the pump = 8 bar
 pressure head of the pump = 8 bar



Palestine Polytechnic University

Mechanical Engineering Department

H.V.A.C. Engineering



Symbols	Description
	Water Collector
	Cold Water 16mm PEX Pipe
	Hot Water 16mm PEX Pipe
	electric boiler
	water tank
	COLD WATER PUMP

Project Supervisor :
Dr.Kazem Osaily
 Project Team :
Waseem Saleh
Ayman maali

water tank net work on the roof
 of the building

Project: Birzet girle students	Drawn:
Date: 3-7-2017	
Scale: 1/100	M206