
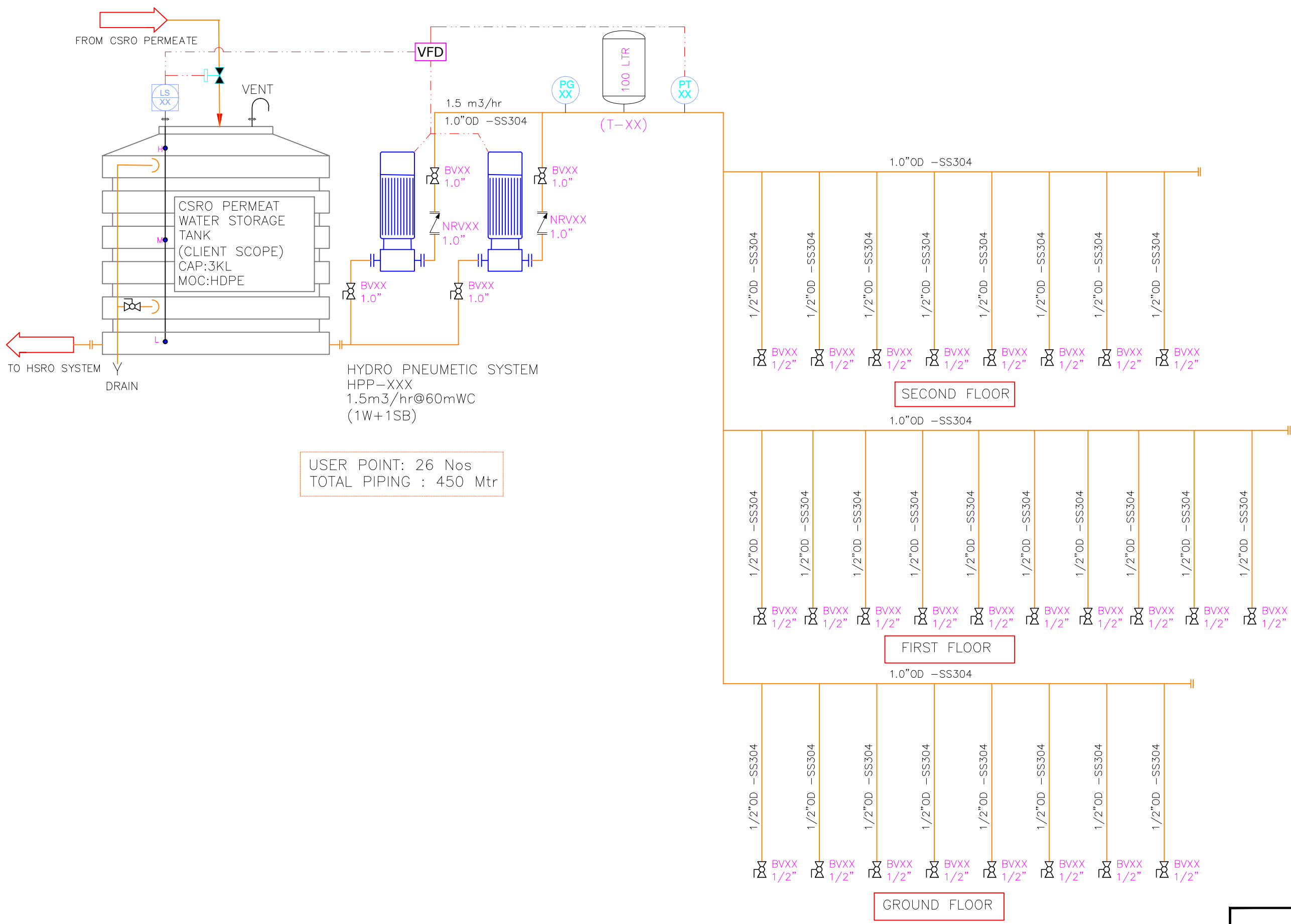
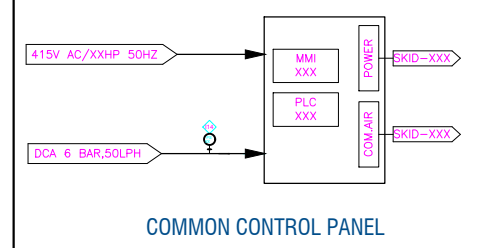


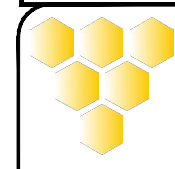
NOTES:

- SCOPE BOUNDARY LINE INDICATION
VENDOR SCOPE CLIENT SCOPE
- FOR SYMBOLS AND ABBREVIATION PLEASE REFER AS BELOW
- ALL DRAIN POINT OUTLETS SHALL TERMINATE WITH A MINIMUM VISIBLE AIR GAP OF 50 mm.
-  THESE ARE THE CONTROL, ANALOGUE SIGNAL OUTPUT OF RESPECTIVE INSTRUMENT



LEGENDS:-

TT	TEMPERATURE TRANSMITTER	NRV	NON RETURN VALVE	MAV	MANUAL ANGLE VALVE	LS	LEVEL SWITCH	FDV	FLOW DIVERTER VALVE
TS	TEMPERATURE SENSOR	PLC	PROGRAMMABLE LOGIC CONTROL	DV-XX	MANUAL 2 WAY DIAPHRAM VALVE	FIT	FLOW INDICATOR TOTALIZER	NRV	NON RETURN VALVE
CT	CONDUCTIVITY TRANSMITTER	HMI	HUMAN MACHINE INTERFACE	ADV-XX	PNEUMATIC ACTUATED 2 WAY DIAPHRAM VALVE	ABV	ACTUATED BALL VALVE		
CS	CONDUCTIVITY SENSOR			SV	SAMPLING VALVE - 1/2" DV	FI	FLOW INDICATOR		
pH	pH SENSOR			P-XXX	CENTRIFUGAL PUMP	AFR	AIR FILTER REGULATOR		
MCF	MICRON CARTRIDGE FILTER			BV	MANUAL BALL VALVE	NV	NIDDLE VALVE		
BF	BAG FILTER			FIS	FLOW ROTAMETER WITH SWITCH	PG	PRESSURE GAUGE		
CIP	CLEANING IN PLACE					PT	PRESSURE TRANSMITTER		
DP	DOSING PUMP								
DT	DOSING TANK								




HOMCO.

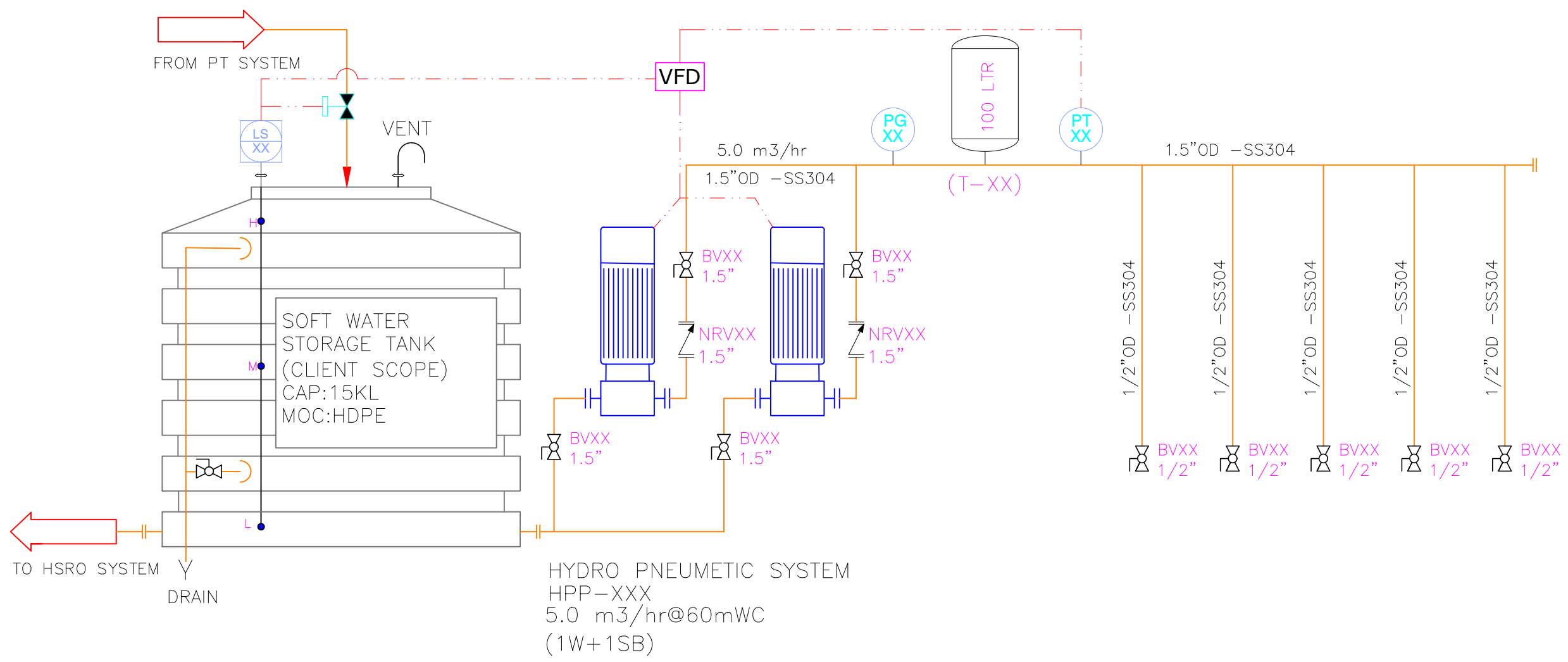
CONSULTANT: KNACK TECHNOCRATS

42 AVINASH, J.P. ROAD, ANDHERI (W), MUMBAI - 400 053
 TEL: 91 22 26314010, 26361629
 EMAIL: info@knacktechnocrats.com

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.					
DRAWN BY	CHECKED BY	DATE	SCALE	DWG NO.	REVISION
ABID H	I ANSARI	21/09/2023	N.T.S	-	-

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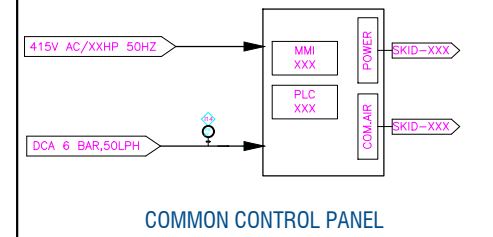
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USER POINT: 5 Nos.
 TOTAL PIPING: 200 Mtr

LEGENDS:-

TT	TEMPERATURE TRANSMITTER	NRV	NON RETURN VALVE	MAV	MANUAL ANGLE VALVE	LS	LEVEL SWITCH	FDV	FLOW DIVERTER VALVE
TS	TEMPERATURE SENSOR	PLC	PROGRAMMABLE LOGIC CONTROL	DV-XX	MANUAL 2 WAY DIAPHRAM VALVE	FIT	FLOW INDICATOR TOTALIZER	NRV	NON RETURN VALVE
CT	CONDUCTIVITY TRANSMITTER	HMI	HUMAN MACHINE INTERFACE	ADV-XX	PNEUMATIC ACTUATED 2 WAY DIAPHRAM VALVE	ABV	ACTUATED BALL VALVE		
CS	CONDUCTIVITY SENSOR			SV	SAMPLING VALVE - 1/2" DV	FI	FLOW INDICATOR		
pH	pH SENSOR			P-XXX	CENTRIFUGAL PUMP	AFR	AIR FILTER REGULATOR		
MCF	MICRON CARTRIDGE FILTER			BV	MANUAL BALL VALVE	NV	NIDDLE VALVE		
BF	BAG FILTER			FIS	FLOW ROTAMETER WITH SWITCH	PG	PRESSURE GAUGE		
CIP	CLEANING IN PLACE					PT	PRESSURE TRANSMITTER		
DP	DOSING PUMP								
DT	DOSING TANK								



HOMCO.

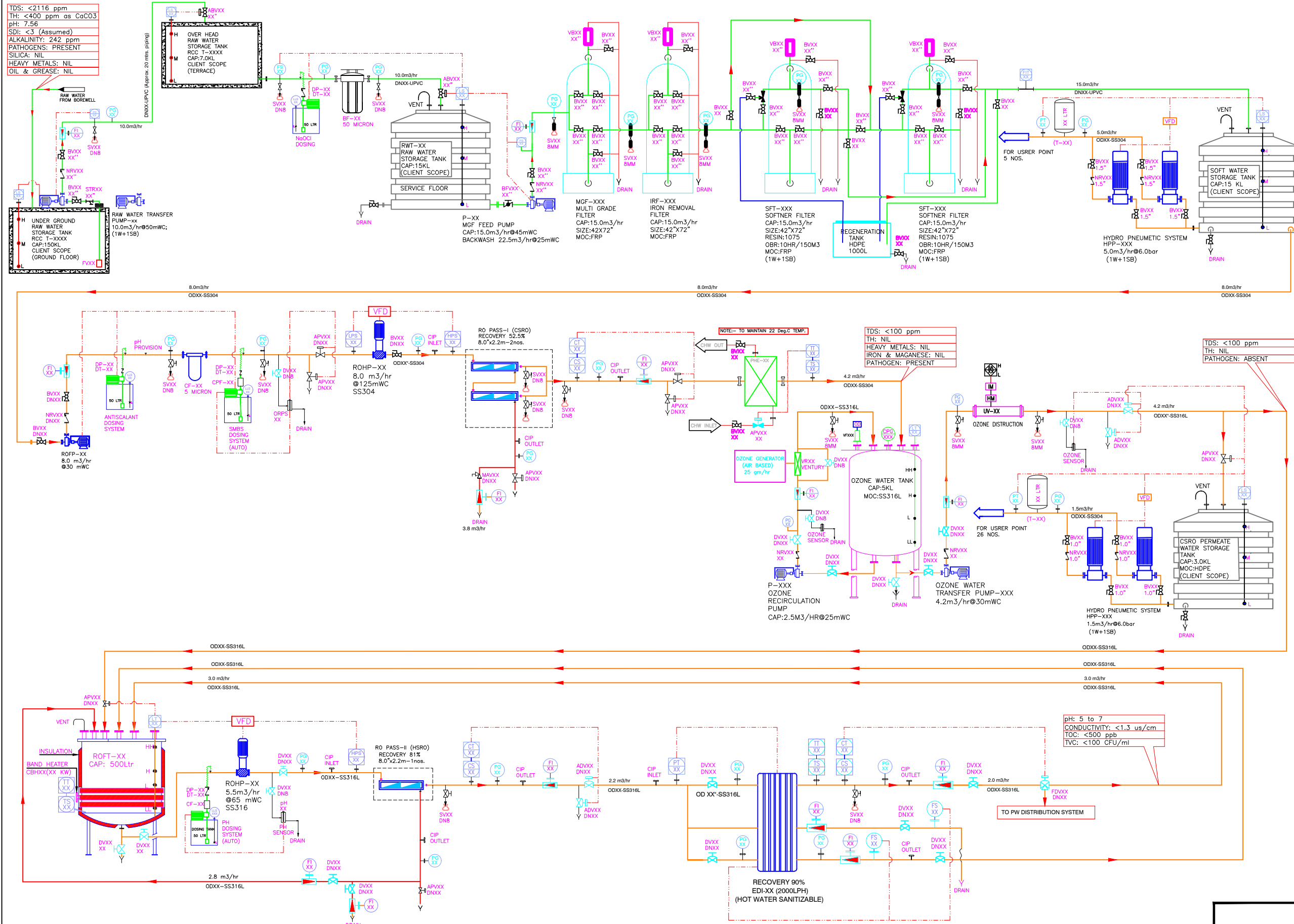
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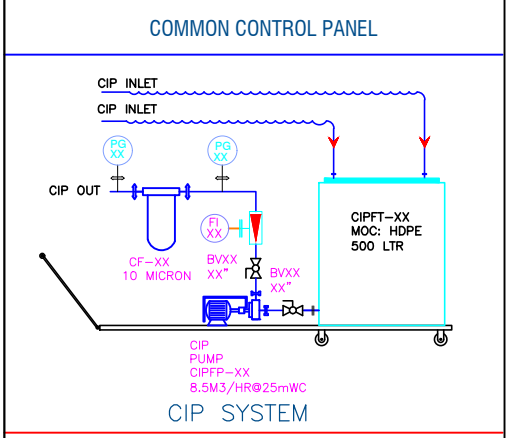
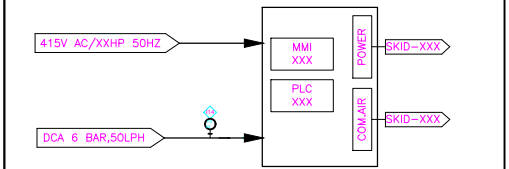
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DRAWN BY	CHECKED BY	DATE	SCALE	DWG NO.	REVISION
ABID H	I ANSARI	21/09/2023	N.T.S	-	-
TITLE		P&ID - SOFT WATER DISTRIBUTION SYSTEM			

FILE Z:\Homco\2024\UTILITY - 2024\Purified Water\P&ID - WatermassR2-WSPL-P-0063-01-01-SOFT WATER



- NOTES:**
- SCOPE BOUNDARY LINE INDICATION
 VENDOR SCOPE █ CLIENT SCOPE █
 - FOR SYMBOLS AND ABBREVIATION PLEASE REFER AS BELOW
 - ALL DRAIN POINT OUTLETS SHALL TERMINATE WITH A MINIMUM VISIBLE AIR GAP OF 50 mm.
 - THESE ARE THE CONTROL, ANALOGUE SIGNAL OUTPUT OF RESPECTIVE INSTRUMENT



LEGENDS:-

TT	TEMPERATURE TRANSMITTER	NRV	NON RETURN VALVE	MAV	MANUAL ANGLE VALVE	LS	LEVEL SWITCH	FDV	FLOW DIVERTER VALVE
TS	TEMPERATURE SENSOR	PLC	PROGRAMMABLE LOGIC CONTROL	DV-XX	MANUAL 2 WAY DIAPHRAM VALVE	FIT	FLOW INDICATOR TOTALIZER	NRV	NON RETURN VALVE
CT	CONDUCTIVITY TRANSMITTER	HMI	HUMAN MACHINE INTERFACE	ADV-XX	PNEUMATIC ACTUATED 2 WAY DIAPHRAM VALVE	ABV	ACTUATED BALL VALVE		
CS	CONDUCTIVITY SENSOR			SV	SAMPLING VALVE - 1/2" DV	FI	FLOW INDICATOR		
pH	pH SENSOR			P-XXX	CENTRIFUGAL PUMP	AFR	AIR FILTER REGULATOR		
MCF	MICRON CARTRIDGE FILTER			BV	MANUAL BALL VALVE	NV	NIDDLE VALVE		
BF	BAG FILTER			FIS	FLOW ROTAMETER WITH SWITCH	PG	PRESSURE GAUGE		
CIP	CLEANING IN PLACE					PT	PRESSURE TRANSMITTER		
DP	DOSING PUMP								
DT	DOSING TANK								

HOMCO.

CONSULTANT:KNACK TECHNOCRATS

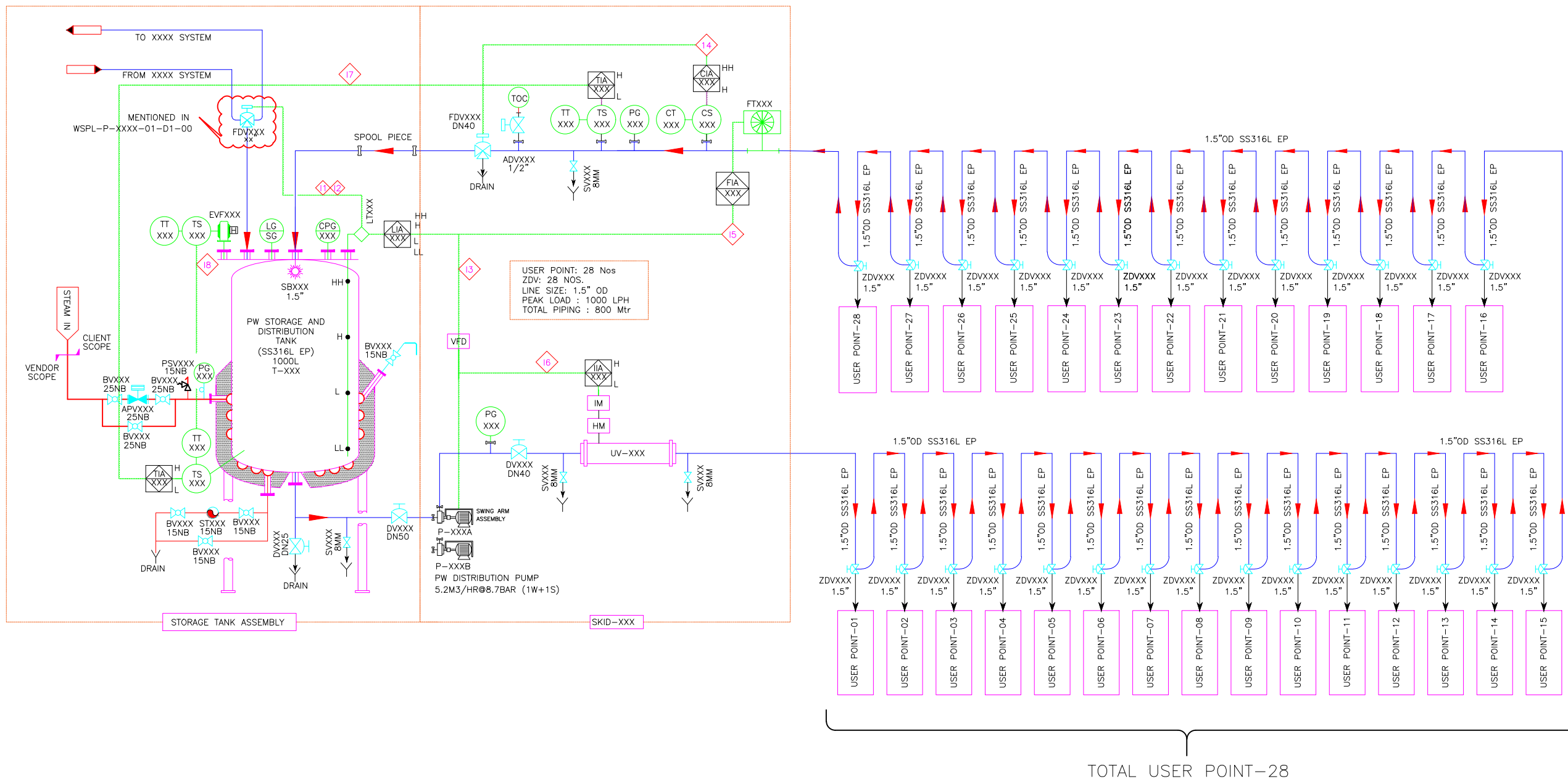
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DRAWN BY	CHECKED BY	DATE	SCALE	DWG NO.	REVISION
ABID H	I ANSARI	21/09/2023	N.T.S	-	-

TITLE P&ID - PRE-TREATMENT & PW GEN. SYSTEM

FILE Z:\Homco\2024\UTILITY - 2024\Purified Water\P&ID - Watermass\R3-WSPL-P-0063-01-D1-03 PT & PWG.YS



- NOTE**
- SCOPE BOUNDARY LINE INDICATION
CLIENT SCOPE VENDOR SCOPE
 - FOR SYMBOLS AND ABBREVIATION PLEASE REFER AS BELOW
 - ALL DRAIN POINT OUTLETS SHALL TERMINATE WITH A MINIMUM VISIBLE AIR GAP OF 50 mm.

- INTERLOCK SCHEDULE**
- IF TANK LEVEL HIGH OPEN TANK SUPPLY LINE INLET VALVE(FDV)
 - IF TANK LEVEL HIGH HIGH CLOSED INLET VALVE SUPPLY LINE.
 - TANK LEVEL LOW WILL START PUMP P XXX-A/B ALONG WITH UV-XXX & IF TANK LEVEL LOW LOW ,PUMP P XXX-A/B WILL STOP ALONG WITH UV-XXX
 - HIGH CONDUCTIVITY IN RETURN LINE (CT-XXX) WILL GIVE ALARM IF CT <1.2 MS WITHIN 30 SEC THEN CLOSE FDV-XXX IF CT>1.2 M AFTER 30 SEC THEN WILL GIVE ALARM.
 - LOW FLOW/VELOCITY IN RETURN LINE (FT-XXX) WILL GIVE ALARM, VFD OF PUMP P-XXXXA/B WILL CONTROL & MAINTAIN FLOW SET POINT.
 - UV-XXX INTENSITY LOW WILL GIVE AN ALARM. UV-XXX WILL GET "ON" ALONG WITH P-XXXXA/B "ON". SANITIZATION - INTERLOCK SCHEDULE
 - TEMPERATURE OF THE TANK DURING SANITIZATION IS CONTROLLED WITH THE HELP OF STEAM VALVE APV-XXX & ALSO MAINTAINS THE TEMP OF RETURN LINE.
 - HIGH TEMP AT TT/TEXXX OR TT/TEXXX ABORT SANITIZATION & STOP SYSTEM ALARM.
 - LOW TEMP AT TT/TEXXX OR TT/TEXXX FOR LONG TIME (SUITEBLE 20 MIN) ABORT SANITIZATION & STOP SYSTEM.
 - DURING SANITIZATION ELECTRIC VENT FILTER TEMP WILL BE MAINTAIN & CONTROLLED BY TT/TEXXX SET POINT & FEED BACK.

TOTAL USER POINT-28

NOTE:-
PW STORAGE & DISTRIBUTION SYSTEM
Conductivity < 1.3 µs/cm
Microbial count < 100 CFU/ml, TOC < 500 ppb

LEGENDS:-

TT	TEMPERATURE TRANSMITTER	SSV	SANITARY SAFETY VALVE		DV-XX	MANUAL 2 WAY DIAPHRAM VALVE		BV-XX	MANUAL BALL VALVE
TS	TEMPERATURE SENSOR	ST	SANITARY STEAM TRAP		ADV-XX	PNEUMATIC ACTUATED 2 WAY DIAPHRAM VALVE			
CT	CONDUCTIVITY TRANSMITTER	STV	STEAM VALVE		SV-XX	SAMPLING VALVE - 1/2" DV		FT-XX	FLOW TRANSMITTER
CS	CONDUCTIVITY SENSOR	STR	STEAM TRAP		P-XXX	CENTRIFUGAL PUMP WITH VARIABLE FREQUENCY DRIVE		SB-XX	SPRAY BALL
PG	PRESSURE GAUGE	UVD	ULTRA VIOLET DISINFECTANT UNIT		AZDV-XX	AUTOMATIC ZERO DEAD LEG VALVE		APV-XXX	ACTUATED PISTON VALVE
TOC	TOTAL ORGANIC CARBON ANALYSER	POU	POINT OF USE		ZDV-XX	ZERO DEAD LEG VALVE		HM	HOUR METER
FDV	FLOW DIVERTER VALVE	PW	PURIFIED WATER					IM	INTENSITY MONITOR
CLT	CAPACITIVE LEVEL TRANSMITTER								
CPG	COMPOUND PRESSURE GAUGE								
JVF	JACKETED VENT FILTER								
SPG	SIPHON TYPE PRESSURE GAUGE								

HOMCO.
CONSULTANT:KNACK TECHNOCRATS

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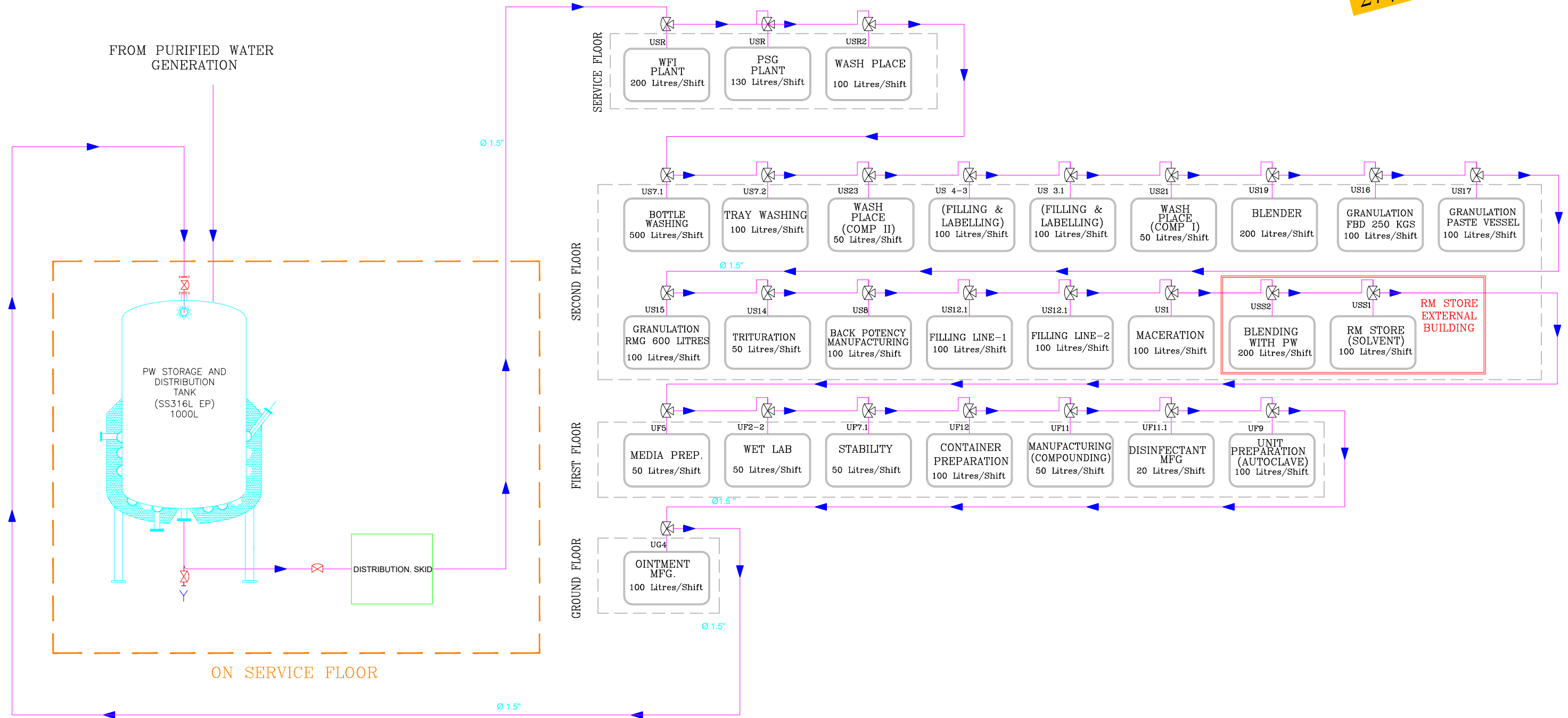
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ABID H	I ANSARI	21/09/2023	N.T.S	-	-

FILE Z:\Homco\2024\UTILITY - 2024\Purified Water\PAID - Watermass\R3-WSPL-P-0063-03-D1-01 PW DIS SYS.EM

PROPOSED SCHEMATIC DIAGRAM - PURIFIED WATER

27 / 07 / 2023



LEGENDS	ABBREVIATION :-
— Ø 1.5" PURIFIED WATER PIPE LOOP SYSTEM	IPQC - INPROCESS QUALITY CONTROL
MOC : SS 316 L	MFG. - MANUFACTURING
UG , UF , US , USRARE UTILITY USER POINTS	WFI - WATER FOR INJECTION
TOTAL NO. OF USER POINTS :- 28 NOS.	PSG - PURE STEAM GENERATOR

NOTE :- ALL CONSUMMATIONS ARE APPROXIMATE , MAY VARY AS PER THE EQUIPMENTS / PROCESS REQUIREMENT & VENDOR'S SELECTION.

HOMCO.

CONSULTANT:KNACK TECHNOCRATS

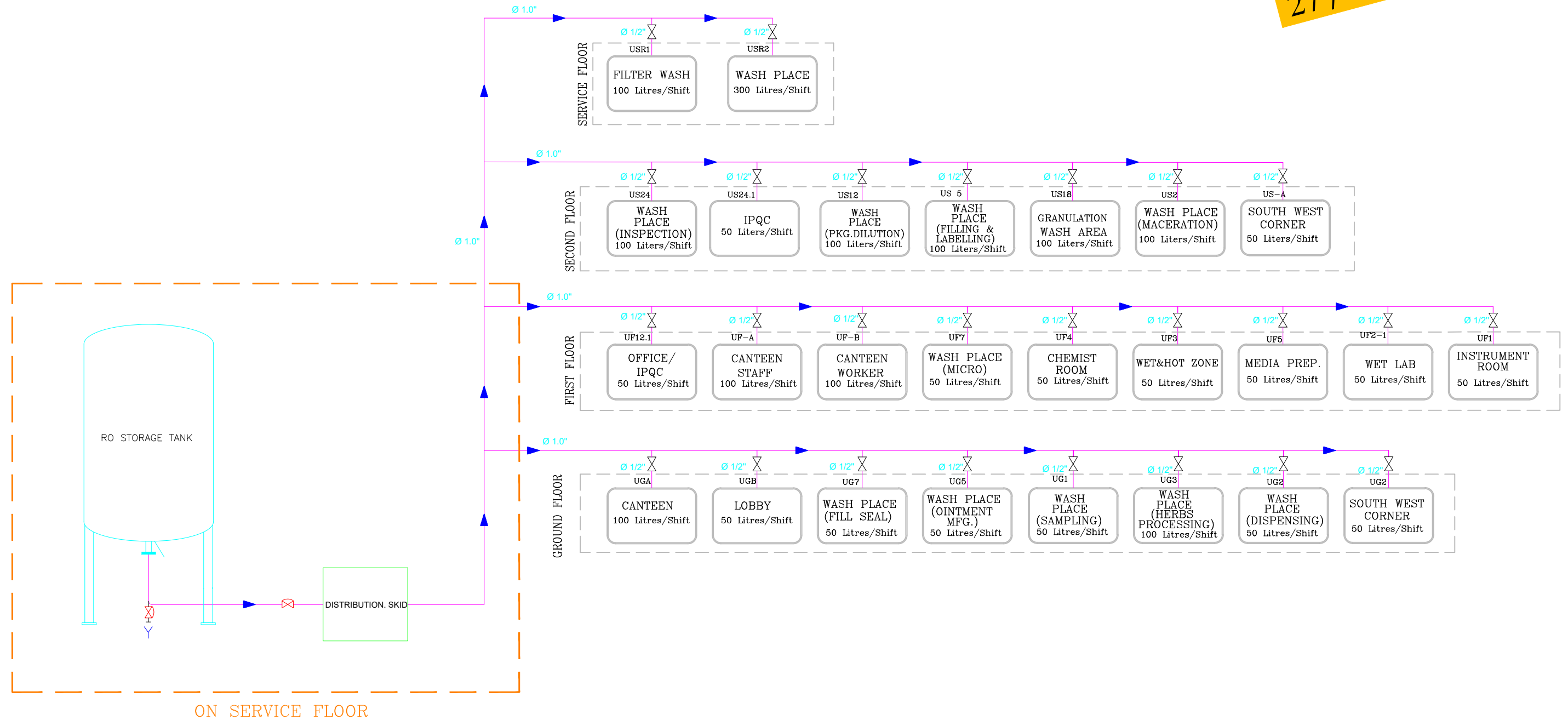
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ABID H.	I ANSARI	27-07-2023	N.T.S	KT/HO/P/GF/ST-AD/A.2	R-2022
TITLE : SCHEMATIC DIAGRAM – PURIFIED WATER					
FILE : Z:\Homco\2024\UTILITY - 2024\Purified Water\Purified water\Schematic\SCHEMATIC DIAGRAM - PURIFIED					

PROPOSED SCHEMATIC DIAGRAM - RO WATER

27 / 07 / 2023



LEGENDS
RO WATER PIPE LINE
MOC : SS 304
UG , UF , US , USRARE UTILITY USER POINTS
TOTAL NO. OF USER POINTS :- 26 NOS.

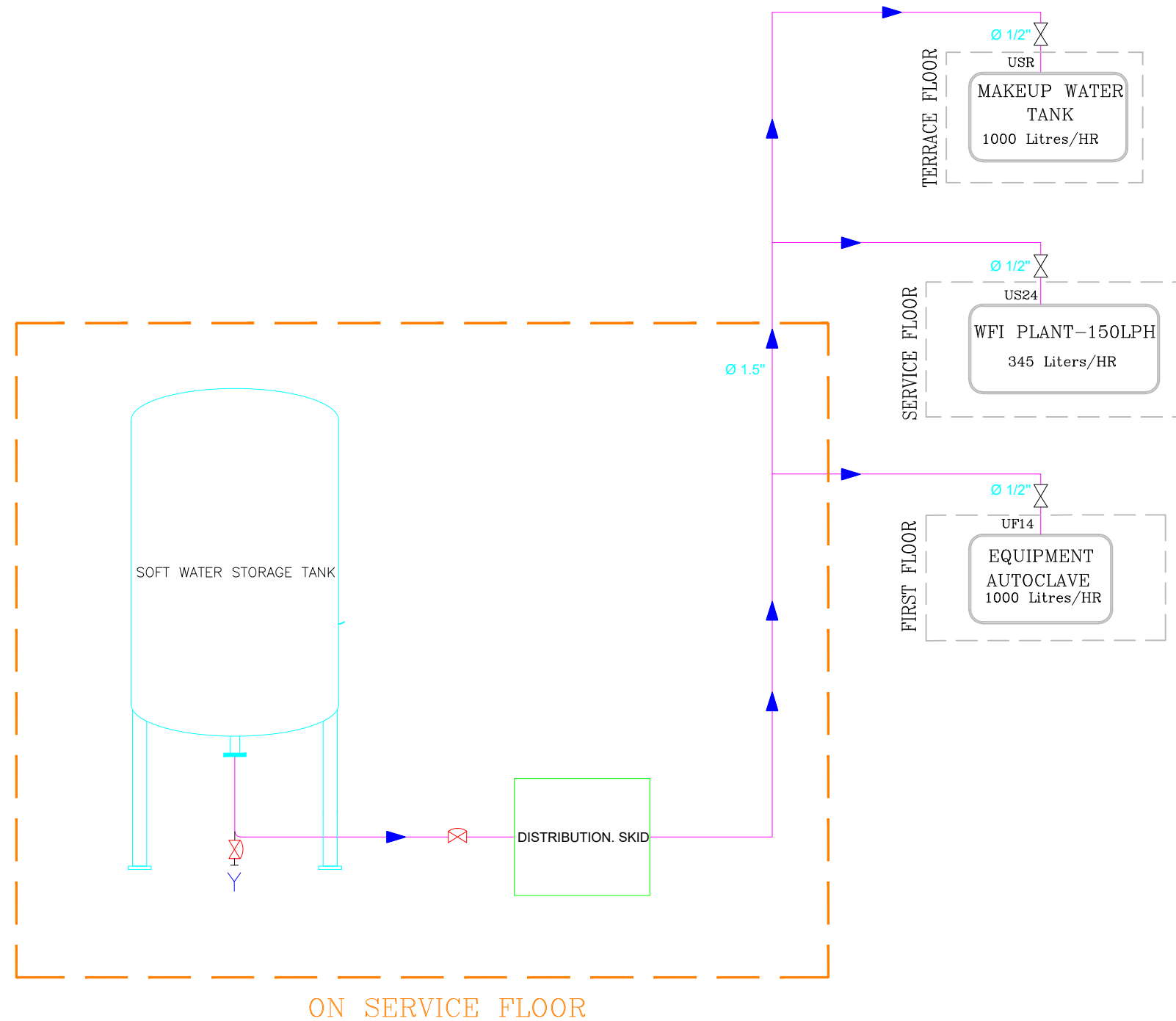
ABBREVIATION :-
IPQC - INPROCESS QUALITY CONTROL
MFG. - MANUFACTURING
BALL VALVE

NOTE :- ALL CONSUMMATIONS ARE APPROXIMATE , MAY VARY AS PER THE EQUIPMENTS / PROCESS REQUIREMENT & VENDOR'S SELECTION.

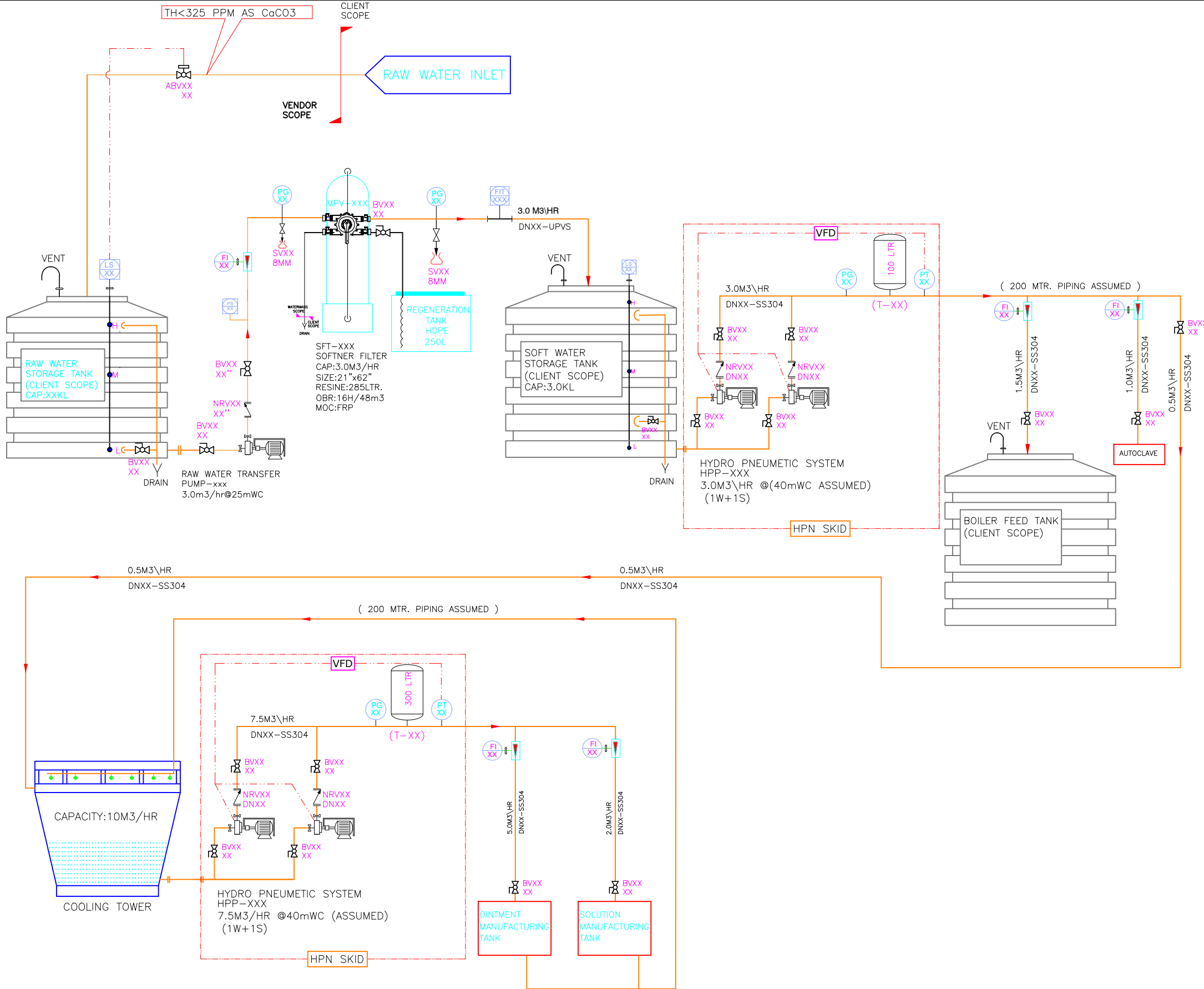
	HOMCO.				
	CONSULTANT:KNACK TECHNOCRATS				
	42 AVINASH, J.P. ROAD, ANDHERI (W), MUMBAI - 400 053 TEL: 91 22 26314010,26361629 EMAIL : info@knacktechnocrats.com				
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.					
DRAWN BY	CHECKED BY	DATE	SCALE	DWG NO.	REVISION
ABID H.	I ANSARI	27-07-2023	N.T.S	KT/HO/P/GF/ST-AD/A.2	R-2022
TITLE		SCHEMATIC DIAGRAM - RO WATER			
FILE Z:\Homco\2024\UTILITY - 2024\Purified Water\RO water\Schematic\SCHEMATIC DIAGRAM - RO WATER					

PROPOSED SCHEMATIC DIAGRAM - SOFT WATER

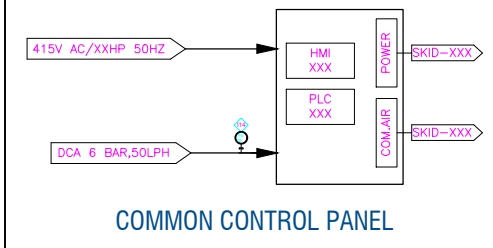
27 / 07 / 2023



LEGENDS	ABBREVIATION :-	HOMCO.												
— SOFT WATER PIPE LINE	WFI - WATER FOR INJECTION					CONSULTANT:KNACK TECHNOCRATS								
MOC : SS 304	⊗ BALL VALVE	42 AVINASH, J.P. ROAD, ANDHERI (W), MUMBAI – 400 053 TEL: 91 22 26314010,26361629 EMAIL : info@knacktechnocrats.com												
UG , UF , US , USRARE UTILITY USER POINTS						ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.								
TOTAL NO. OF USER POINTS :- 03 NOS.		<table border="1"> <tr> <th>DRAWN BY</th> <th>CHECKED BY</th> <th>DATE</th> <th>SCALE</th> <th>DWG NO.</th> <th>REVISION</th> </tr> <tr> <td>ABID H.</td> <td>I ANSARI</td> <td>27-07-2023</td> <td>N.T.S</td> <td>KT/HO/P/GF/ST-AD/A.2</td> <td>R-2022</td> </tr> </table>	DRAWN BY	CHECKED BY	DATE					SCALE	DWG NO.	REVISION	ABID H.	I ANSARI
DRAWN BY	CHECKED BY	DATE	SCALE	DWG NO.	REVISION									
ABID H.	I ANSARI	27-07-2023	N.T.S	KT/HO/P/GF/ST-AD/A.2	R-2022									
NOTE :- ALL CONSUMMATIONS ARE APPROXIMATE , MAY VARY AS PER THE EQUIPMENTS / PROCESS REQUIREMENT & VENDOR'S SELECTION.		TITLE SCHEMATIC DIAGRAM – SOFT WATER FILE Z:\Homco\2024\UTILITY - 2024\Purified Water\Soft water\Schematic\SCHEMATIC DIAGRAM - SOFT WATER												



- NOTES:**
- 1) SCOPE BOUNDARY LINE INDICATION
 VENDOR SCOPE CLIENT SCOPE
 - 2) FOR SYMBOLS AND ABBREVIATION PLEASE REFER AS BELOW
 - 3) ALL DRAIN POINT OUTLETS SHALL TERMINATE WITH A MINIMUM VISIBLE AIR GAP OF 50 mm.
 - 4) THESE ARE THE CONTROL, ANALOGUE SIGNAL OUTPUT OF RESPECTIVE INSTRUMENT



LEGENDS:-

TT	TEMPERATURE TRANSMITTER	NRV	NON RETURN VALVE	MAV	MANUAL ANGLE VALVE	LS	LEVEL SWITCH	FDV	FLOW DIVERTER VALVE
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MCF	MICRON CARTRIDGE FILTER			BV	MANUAL BALL VALVE	NV	NIDDLE VALVE		
BF	BAG FILTER			FIS	FLOW ROTAMETER WITH SWITCH	PG	PRESSURE GAUGE		
CIP	CLEANING IN PLACE					PT	PRESSURE TRANSMITTER		
DP	DOSING PUMP								
DT	DOSING TANK								

HOMCO.
CONSULTANT: KNACK TECHNOCRATS
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DRAWN BY	CHECKED BY	DATE	SCALE	DWG NO.	REVISION
ABID H	T ANSARI	21/09/2023	N.T.S	-	-

TITLE: P&ID FOR COOLING TOWER
 FILE: Z:\Homco\2024\UTILITY - 2024\Purified Water\P&ID - Watermass\WSPL-P-0063-01-D1-00 PT SYSTEM FOR