1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39

PASTE IN EXPORT FROM MAP VIEWING
TOOL SHOWING BSP LOCATION
PIN POINTED BY GPS COORDINATES
AND PLACE A BOX AROUND
THE BSP INDICATING SITE LOCATION

SITE OVERVIEW

SITE INFORMATION		
DESCRIPTION	SITE DESCRIPTION AS DETAILED IN THE WSL DATABASE	
WATERMAIN	WATERMAIN NAME AS DETAILED IN THE WSL DATABASE	
LOCATION	SITE PHYSICAL ADDRESS	
GIS CO-ORDINATES	LATITUDE	SITE INFORMATION ON THE WSL GIS SYSTEM
(WGS84 DEGREES DECIMAL)	LONGITUDE	SITE INFORMATION ON THE WSL GIS SYSTEM
HISTORICAL REF	AS DETAILED IN THE WSL DATABASE	
FACILITY CODE	AS DETAILED IN THE WSL DATABASE	
AREA CODE (TAG PREFIX)	93	

NOTES:

1. INSTRUMENT TYPES ARE SITE TYPE DEPENDENT.
2. SITE SPECIFIC DRAWING SERIES NUMBERS ARE SITE DEPENDENT.
3. REFER TO DRAWING SERIES NO. XXXXXX FOR THE CIVIL DRAWING.
4. SITE POWER REQUIREMENTS ARE SITE DEPENDENT. THE AUTONOMY AND RECHARGE TIME REQUIRED FOR A SITE IS TO BE CALCULATED AND CONFIRMED WITH OPERATIONS FOR EACH INSTALLATION.

Template sheets of this drawing set are available in AutoCAD on request and will be issued on presenting a Watercare project drawing number or development reference where the intention is to vest the assets to Watercare

DRAWING SERIES NO.	SHEET	STANDARD DRAWINGS	ACAD/REFERENCE FILE NO.
2010998	001	DRAWING SCHEDULE	2010998.001
2010998	002	OVERVIEW SCHEMATIC	2010998.002
2010998	003	PIPING AND INSTRUMENTATION DIAGRAM	2010998.003
2010998	004	KINGFISHER RTU DIAGRAM	2010998.004
2010998	005	AC DISTRIBUTION SCHEMATIC	2010998.005
2010998	006	SUPERSEDED	2010998.006
2010998	007	SLOT 3 ANALOG INPUTS SCHEMATIC	2010998.007
2010998	008	SLOT 4 DIGITAL INPUTS SCHEMATIC	2010998.008
2010998	009	SLOT 5 DIGITAL OUTPUTS SCHEMATIC	2010998.009
2010998	010	AIT-XX3 & AIT-XX4 DEPOLOX 3 PLUS CL2/pH ANALYSER LOOP SCHEMATIC	2010998.010
2010998	011	AIT-XX2 CUM253 TURBIDITY ANALYSER LOOP SCHEMATIC	2010998.011
2010998	012	FIT-XXX MAGMASTER FLOWMETER 1 LOOP SCHEMATIC	2010998.012
2010998	013	FIT-XXX MAGMASTER FLOWMETER 2 LOOP SCHEMATIC	2010998.013
2010998	014	SOV-XXX & SOV-XXX PRESSURE CONTROL VALVE LOOP SCHEMATIC	2010998.014
2010998	015	PIT-XXX PRESSURE TRANSDUCER 1 LOOP SCHEMATIC	2010998.015
2010998	016	PIT-XXX PRESSURE TRANSDUCER 2 LOOP SCHEMATIC	2010998.016
2010998	017	TERMINAL BLOCK & PLUG/SOCKET CONNECTIONS	2010998.017
2010998	018	DRY GEARPLATE LAYOUT	2010998.018
2010998	019	WET GEARPLATE GENERAL LAYOUT 1 FOR DEPOLOX 3 PLUS/5 & CUM253	2010998.019
2010998	020	PU-XXX SUMP PUMP AND LSH-XXX HIGH LEVEL ALARM SCHEMATIC	2010998.020
2010998	021	PRESSURE DISPLAY UNIT	2010998.021
2010998	022	REMOVED	2010998.022
2010998	023	FIT-XXX TURBOWERK FLOWMETER LOOP SCHEMATIC	2010998.023
2010998	024	FQIT-XXX KENT FLOWMETER 1 LOOP SCHEMATIC	2010998.024
2010998	025	FQIT-XXX KENT FLOWMETER 2 LOOP SCHEMATIC	2010998.025
2010998	026	FIT-XXX WATERMASTER FLOWMETER 1 LOOP SCHEMATIC (SERIAL COMMS)	2010998.026
2010998	027	FIT-XXX WATERMASTER FLOWMETER 2 LOOP SCHEMATIC (SERIAL COMMS)	2010998.027
2010998	028	FIT-XXX WATERMASTER FLOWMETER 1 LOOP SCHEMATIC (4-20mA)	2010998.028
2010998	029	FIT-XXX WATERMASTER FLOWMETER 2 LOOP SCHEMATIC (4-20mA)	2010998.029
2010998	030	PIT-XXX PRESSURE TRANSDUCER 3 LOOP SCHEMATIC	2010998.030
2010998	031	AIT-XX3 & AIT-XX4 DEPOLOX 4 CL2/pH ANALYSER LOOP SCHEMATIC	2010998.031
2010998	032	AIT-XX3 & AIT-XX4 DEPOLOX 5 CL2/pH ANALYSER LOOP SCHEMATIC	2010998.032
2010998	033	AIT-XX3 AND AIT-XX4 E AND H CM444 CL2/PH/TURBIDITY ANALYSER LOOP SCHEMATIC	2010998.033
2010998	034	AIT-XX2 SC100 TURBIDITY ANALYSER LOOP SCHEMATIC	2010998.034
2010998	035	AIT-XX2 ACCU4 TURBIDITY ANALYSER LOOP SCHEMATIC	2010998.035
2010998	036	WET GEARPLATE GENERAL LAYOUT 2 FOR DEPOLOX 4 & ACCU4	2010998.036
2010998	037	WET GEARPLATE GENERAL LAYOUT 3 FOR DEPOLOX 3 PLUS & SC100	2010998.037
2010998	038	WET GEAR PLATE GENERAL LAYOUT 4 FOR E AND H CM444 CL/PH TURBIDITY	2010998.038
2010998	039	TYPICAL ANTENNA INSTALLATION	2010998.039
2010998	040	CABINET GENERAL LAYOUT	2010998.040
2010998	041	24V DC DISTRIBUTION SCHEMATIC	2010998.041
2010998	042	EAL-XX1 & EAL-XX2 PS-XX1 MAINS & BATT STATUS LOOP SCHEMATIC	2010998.042
2010998	043	PU-XXX SUMP PUMP 1 SCHEMATIC	2010998.043
2010998	044	PU-XXX SUMP PUMP 2 AND LSH-XXX HIGH LEVEL 2 ALARM SCHEMATIC	2010998.044
2010998	045	PU-XXX SAMPLING PUMP SCHEMATIC	2010998.045
2010998	046	SOV-XXX & SOV-XXX PRESSURE CONTROL VALVE 2 LOOP SCHEMATIC	2010998.046
2010998	047	PIT-XXX IFM PRESSURE TRANSDUCER 1 LOOP SCHEMATIC	2010998.047
2010998	048	PIT-XXX IFM PRESSURE TRANSDUCER 2 LOOP SCHEMATIC	2010998.048
2010998	049	PIT-XXX IFM PRESSURE TRANSDUCER 3 LOOP SCHEMATIC	2010998.049
2010998	050	TYPICAL ANTENNA INSTALLATION AT STRUCTURE	2010998.050
2010998	051	FIT-XXX E & H FLOWMETER LOOP SCHEMATIC (SERIAL COMMS)	2010998.051

DRAWING SERIES NO.	SHEET	CIVIL AND MECHANICAL DRAWING SCHEDULE	ACAD/REFERENCE FILE NO.
2010998	052	CHAMBER SAMPLE TAPPING POINT LAYOUT	2010998.052
2010998	053	CHAMBER SAMPLE TAPPING POINT BOM	2010998.053
2010998	054	CHAMBER SAMPLE TAPPING POINT (MANUAL)	2010998.054
2010998	055	DETAILS OF SAMPLING LINE AND DRAINS	2010998.055
2010998	056	CONCRETE PLINTH DETAIL	2010998.056

ISSUE	DATE	AMENDMENT	BY	APPD.
G	03/21	TEMPLATE UPDATED	R.X.	J.D.
F	12/18	TEMPLATE	R.X.	P.A.

DESIGNED	S Fagamalo	09/14
DES. CHECKED	D Ibrahim	09/14
DRAWN	R Matthews	09/14
DWG. CHECKED	S Fagamalo	09/14
PROJECT LEADER		
INFRAST'R APP'D		

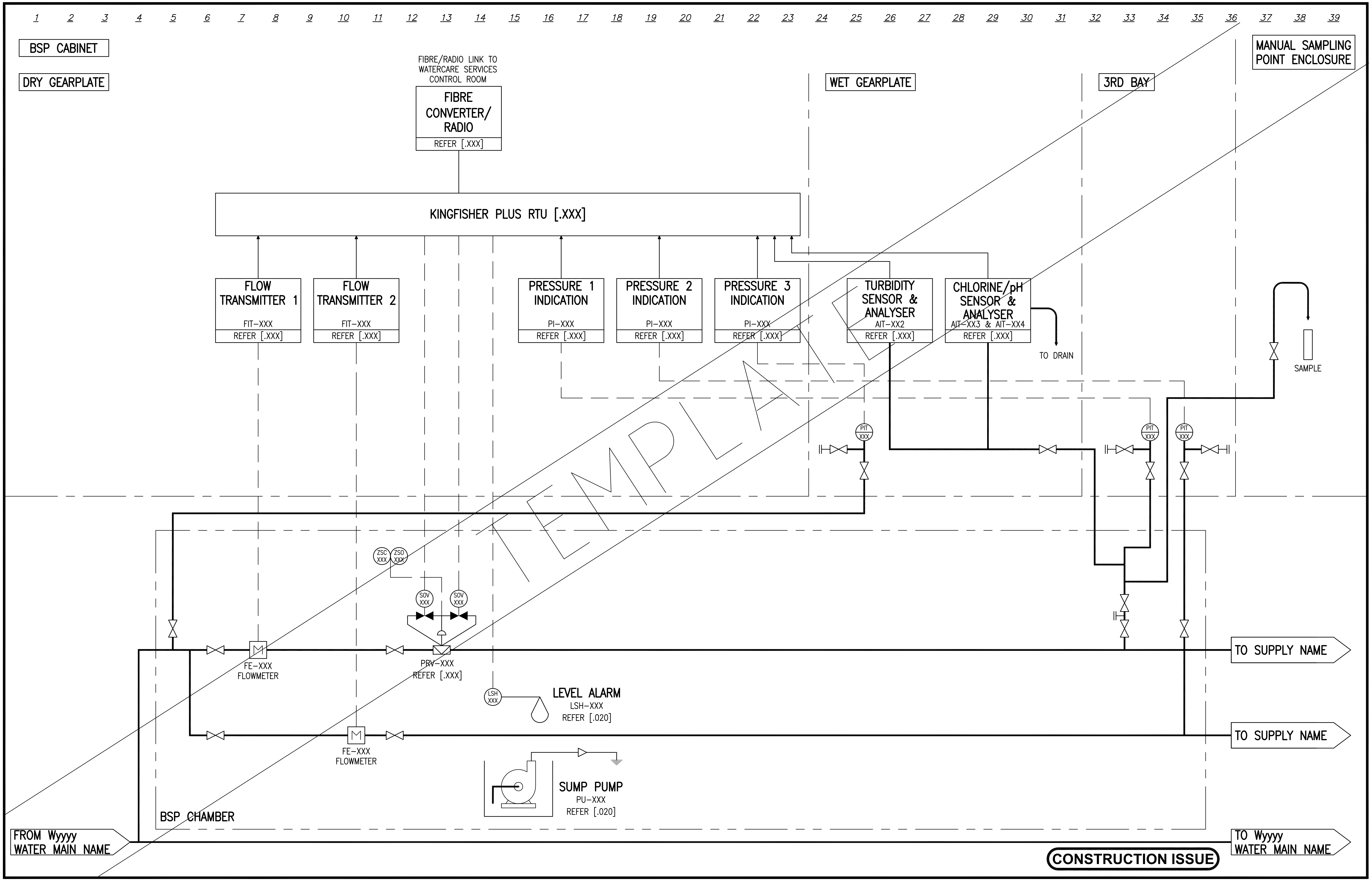
OPERATIONS

INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
LOCALITY AND DRAWING SCHEDULE

CAD FILE	2010998.001G
DATE	20:03:21
ORIGINAL SCALE A3	N.T.S.
CONTRACT No.	
REF No.	–
ISSUE	–
DWG No.	2010998 .001
ISSUE	G



CONSTRUCTION ISSUE

ISSUE	DATE	AMENDMENT	BY	APPD.
A	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
–	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

DESIGNED	S Fagamalo	09/14
DES. CHECKED	D Ibrahim	09/14
DRAWN	R Matthews	09/14
DWG. CHECKED	S Fagamalo	09/14
PROJECT LEADER		
INFRAST'R APP'D		

OPERATIONS

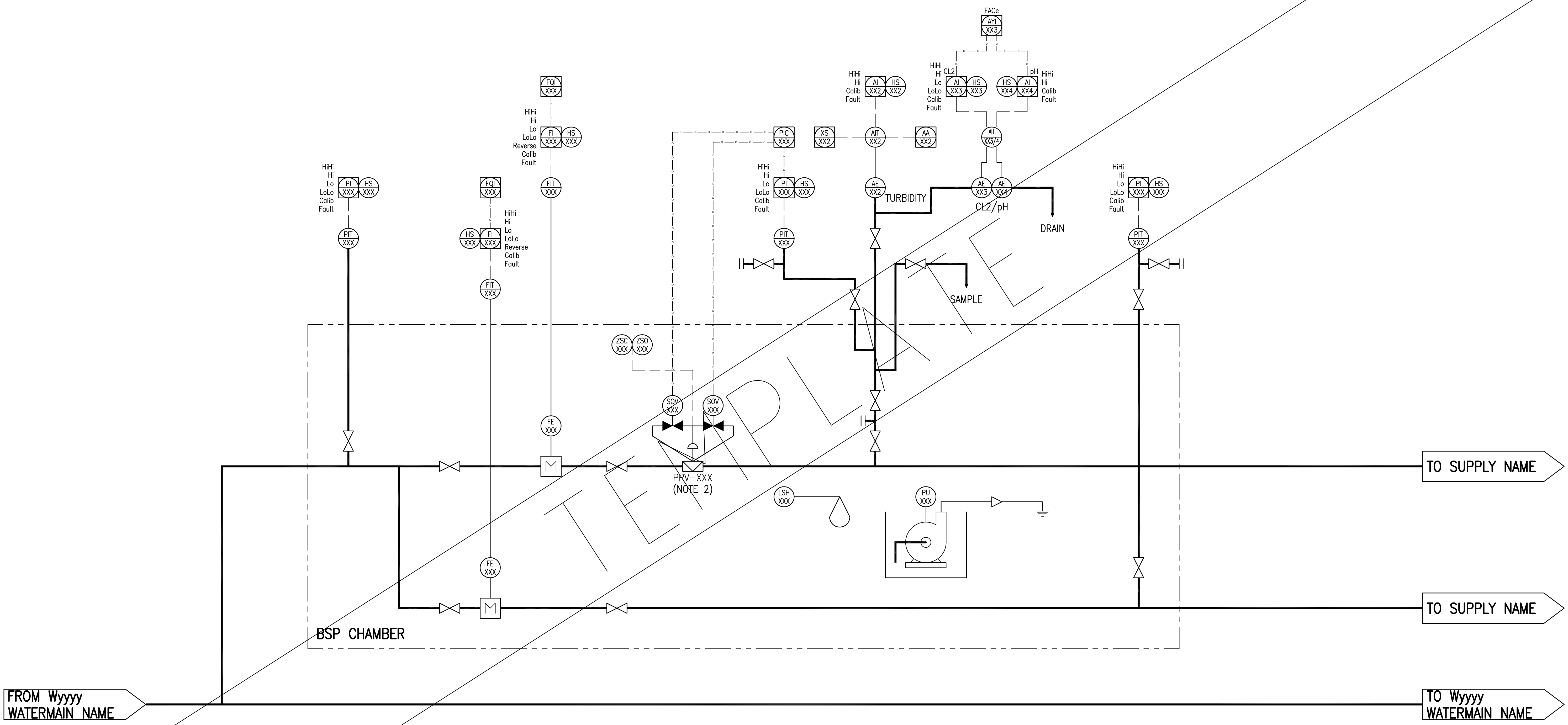
INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
OVERVIEW SCHEMATIC

CAD FILE	2010998.002A	DATE	22:05:2017
ORIGINAL SCALE A3	N.T.S.	CONTRACT No.	
REF No.	–	ISSUE	–
DWG No.	2010998 .002		A

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39



NOTES:

1. EQUIPMENT NUMBERING (XXX IN ABOVE TAGS) IS BASED ON THE FOLLOWING CONVENTION:

   XX = REPRESENTS THE BSP SUB LOCATION CODE EG. 01 FOR THE FIRST BSP ON THAT PARTICULAR WATERMAIN.

   X = SEQUENTIAL NUMBER (STARTING FROM 1 FOR EACH EQUIPMENT TYPE).
2. SOLENOID OPERATION IS TO BE CONFIRMED DURING DESIGN AND SHOWN ON DRAWING. I.E. NORMALLY CLOSED, NORMALLY OPEN.

CONSTRUCTION ISSUE

ISSUE	DATE	AMENDMENT	BY	APPD.
A	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
–	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14
D Ibrahim	09/14
R Matthews	09/14
S Fagamalo	09/14

OPERATIONS

INFRASTRUCTURE

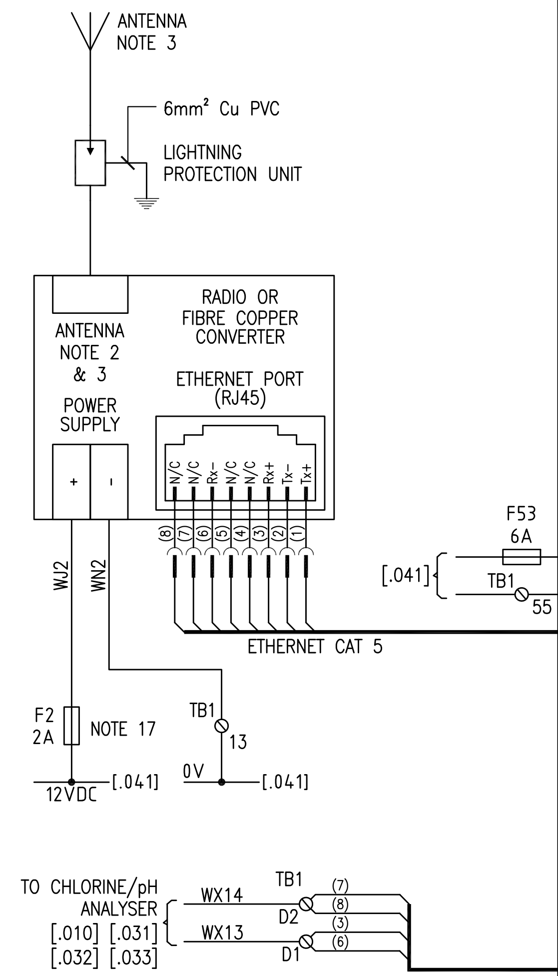
Watercare

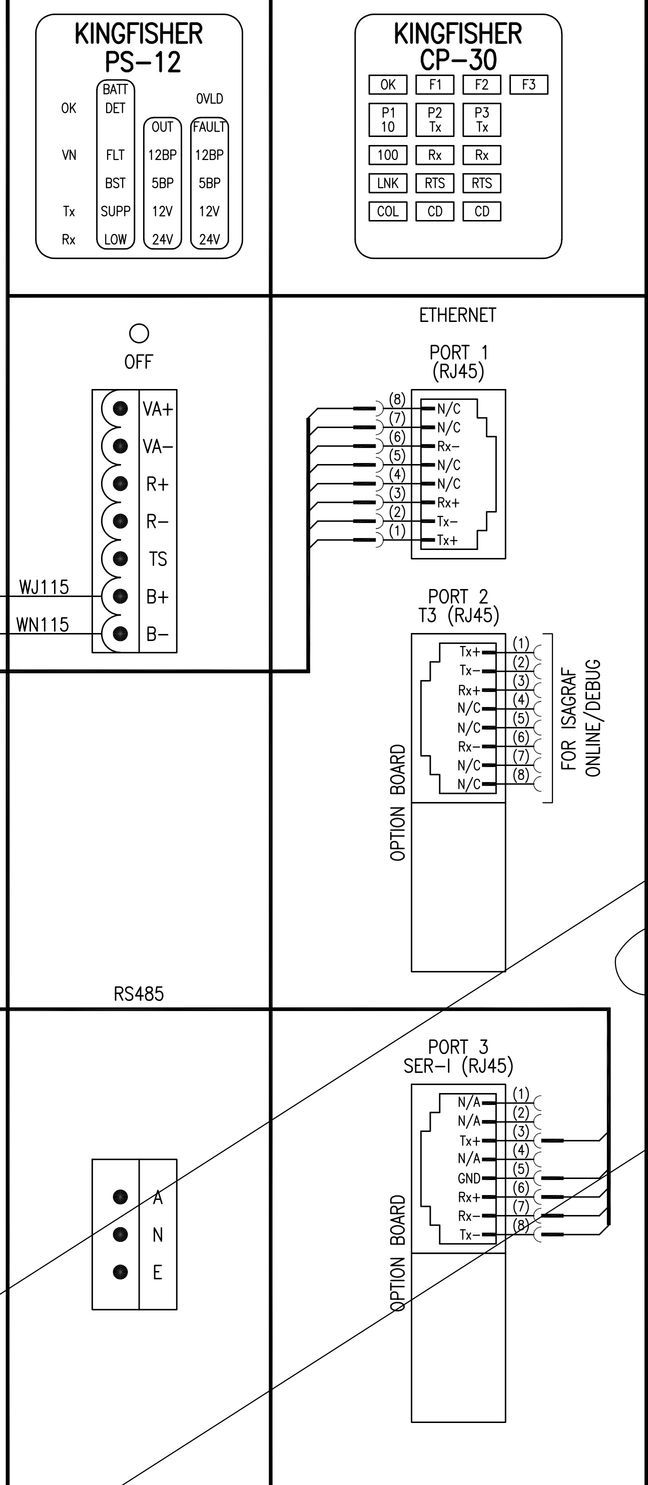
BSP STANDARD DRAWING
CONTROL SYSTEM
PIPING AND INSTRUMENTATION DIAGRAM

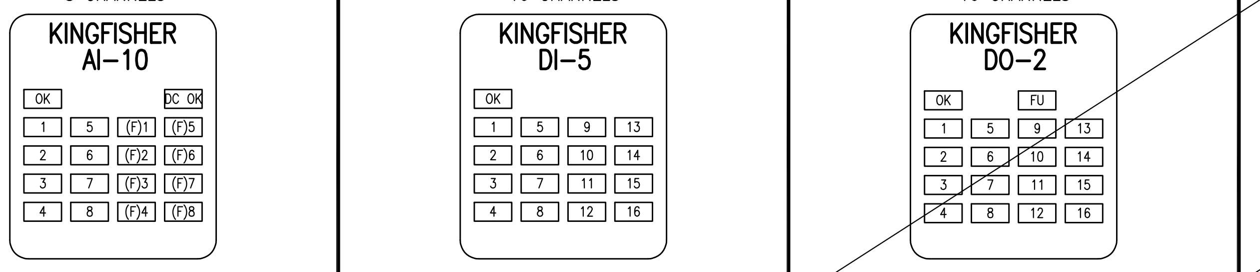
CAD FILE 2010998.003A | DATE 22:05:2017
ORIGINAL SCALE A3 N.T.S. | CONTRACT No.
REF No. – –
DWG No. 2010998 .003 A

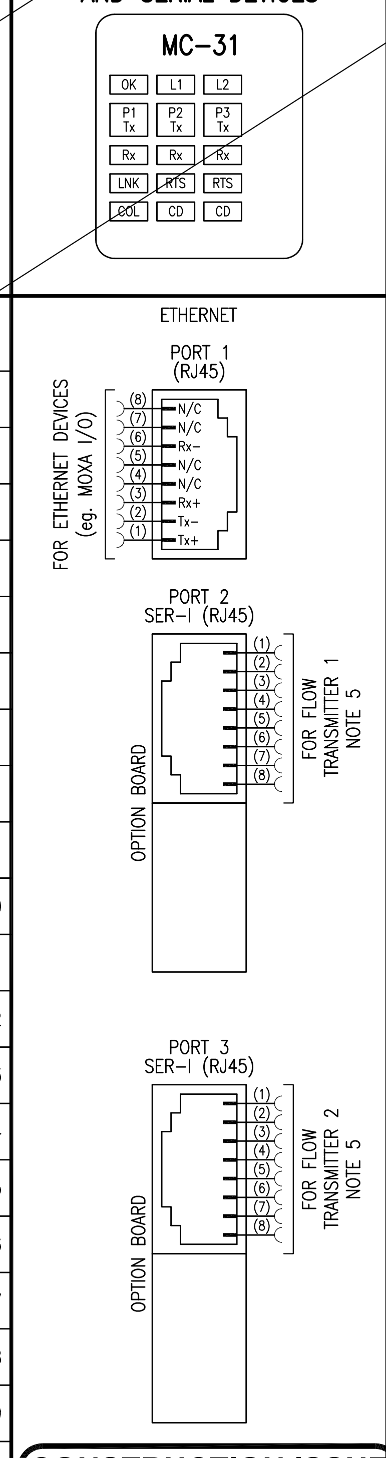
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39

SLOT 1 POWER SUPPLY | SLOT 2 PROCESSOR MODULE | SLOT 3 ANALOG INPUT 8 CHANNELS | SLOT 4 DIGITAL INPUT 16 CHANNELS | SLOT 5 DIGITAL OUTPUT 16 CHANNELS | SLOT 6 AS REQUIRED FOR MAGFLOW AND SERIAL DEVICES









SLOT 3 – ANALOG INPUT

WIRE NO.	DWG NO.	TAG DESCRIPTION	TERMINALS	
WS1	NOTE 1	AI-XX2 TURBIDITY	0301+	1
WS1A	NOTE 1	AI-XX2 TURBIDITY	0301-	2
WS2B	NOTE 15	PI-XXX PRESSURE 1	0302+	3
WN106	NOTE 15	PI-XXX PRESSURE 1	0302-	4
WS3B	NOTE 15	PI-XXX PRESSURE 2 NOTE 4	0303+	5
WN107	NOTE 15	PI-XXX PRESSURE 2 NOTE 4	0303-	6
WS4	.023	FI-XXX TURBOWERK FLOW NOTE 4	0304+	7
WS4A	.023	FI-XXX TURBOWERK FLOW NOTE 4	0304-	8
WJ100	.007	+24V DC OUT	+24V DC OUT	9
WN100	.007	0V COMMON	0V/COM	10
WS5B	NOTE 15	PI-XXX PRESSURE 3 NOTE 4	0305+	11
WN109	NOTE 15	PI-XXX PRESSURE 3 NOTE 4	0305-	12
WS6	.028	FI-XXX WATERMASTER FLOW 1 NOTE 4	0306+	13
WS6A	.028	FI-XXX WATERMASTER FLOW 1 NOTE 4	0306-	14
WS7	.029	FI-XXX WATERMASTER FLOW 2 NOTE 4	0307+	15
WS7A	.029	FI-XXX WATERMASTER FLOW 2 NOTE 4	0307-	16
	.007	SPARE	0308+	17
	.007	SPARE	0308-	18
WJ100	.007	+24V DC OUT	+24V DC OUT	19
WN100	.007	0V COMMON	0V/COM	20

SLOT 4 – DIGITAL INPUT

WIRE NO.	DWG NO.	TAG DESCRIPTION	TERMINALS	
WL1	.008	HS-XX3 CHLORINE CALIBRATION	0401	1
WL2	.008	HS-XX4 pH CALIBRATION	0402	2
WL3	.008	HS-XX2 TURBIDITY CALIBRATION	0403	3
WL4	NOTE 1	AA-XX2 TURBIDITY FAIL	0404	4
WL5	NOTE 1	XS-XX2 WATER QUALITY INSTALLED	0405	5
WL6	.008	ZSO-XX1 DOOR OPEN	0406	6
WL7	.008	HS-XX6 PRESSURE 1 CALIBRATION	0407	7
WL8	.008 NOTE 6	HS-XX7 PRESSURE 2 CALIBRATION NOTES 4&6	0408	8
	.008		+12V DC OUT	9
WN101	.008	0V COMMON	0V/COM	10
WL9	.008	HS-XX1 FLOW 1 CALIBRATION	0409	11
WL10	.024	FQI-XXX FLOW 1 PULSE NOTES 4&11	0410	12
WL11	.024	FQI-XXX-DIR FLOW 1 DIRECTION NOTES 4,6,7&12	0411	13
WL12	.008	HS-XX5 FLOW 2 CALIBRATION NOTES 4&13	0412	14
WL13	.025 NOTE 6	FQI-XXX FLOW 2 PULSE NOTES 4&6	0413	15
WL14	.025 NOTE 6	FQI-XXX-DIR FLOW 2 DIRECTION NOTES 4&6	0414	16
WL15	.008 NOTE 6	HS-XX8 PRESSURE 3 CALIBRATION NOTES 4,6,8&14	0415	17
WL16	.020	LSH-XXX SUMP LEVEL HIGH NOTES 4&9	0416	18
	.008		+12V DC OUT	19
WN101	.008	0V COMMON	0V/COM	20

SLOT 5 – DIGITAL OUTPUT

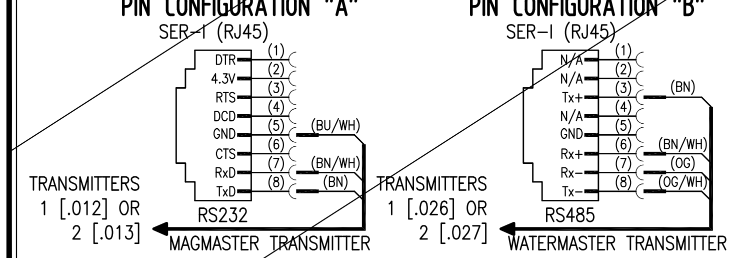
WIRE NO.	DWG NO.	TAG DESCRIPTION	TERMINALS	
WL22	.009	AI-XX3-CalibLamp CHLORINE CALIBRATION	0501	1
WL23	.009	AI-XX4-CalibLamp pH CALIBRATION	0502	2
WL24	.009	AI-XX2-CalibLamp TURBIDITY CALIBRATION	0503	3
WL25	.009	PI-XXX-CalibLamp PRESSURE 1 CALIBRATION	0504	4
WL26	.009	PI-XXX-CalibLamp PRESSURE 2 CALIBRATION NOTE 4	0505	5
WL27	.009	FI-XXX-CalibLamp FLOW 1 CALIBRATION	0506	6
WL28	.009	FI-XXX-CalibLamp FLOW 2 CALIBRATION NOTE 4	0507	7
WL29	.009	PI-XXX-CalibLamp PRESSURE 3 CALIBRATION NOTE 4	0508	8
WJ3	.009	+12V DC SUPPLY	COM 1	9
	.009	FUSE FAIL	LINK	10
WK21	.014	SOV-XXX VALVE OPEN NOTE 4	0509	11
WK22	.014	SOV-XXX VALVE CLOSE NOTE 4	0510	12
WK23	.046	SOV-XXX VALVE 2 OPEN	0511	13
WK24	.046	SOV-XXX VALVE 2 CLOSE	0512	14
	.009	SPARE	0513	15
	.009	SPARE	0514	16
	.009	SPARE	0515	17
	.009	SPARE	0516	18
WJ3	.009	+12V DC SUPPLY	COM 2	19
	.009	FUSE FAIL	LINK	20

CONSTRUCTION ISSUE

NOTES:

1. TURBIDITY ANALYSER MAKE AND MODEL ARE SITE DEPENDENT. REFER TO DRAWINGS [.011], [.034] AND [.035]
2. ANTENNA IS TO BE SHOWN IF A RADIO IS USED.
3. ANTENNA IS EITHER MOUNTED INSIDE CABINET ROOF SPACE OR EXTERNAL.
4. IF REQUIRED.
5. FOR MAGMASTER SERIAL COMMS TRANSMITTERS, USE PIN CONFIGURATION "A" AND FOR WATERMASTER SERIAL COMMS TRANSMITTERS, USE PIN CONFIGURATION "B". PIN CONFIGURATIONS AS DETAILED BELOW.
6. VARIOUS DIGITAL INPUTS CAN BE USED FOR THE INNOVATIVE ENERGIES SR100 POWER SUPPLY INDICATION SIGNALS. REFER TO DRAWING [.008] FOR THE DIGITAL INPUT NUMBERS, CONDITIONS, SIGNAL TAGS, SIGNAL DESCRIPTION, WIRE NO. AND DRAWING REFERENCE.

PIN CONFIGURATION "A" | PIN CONFIGURATION "B"



7. THIS DIGITAL INPUT IS TO BE USED WHEN THE TURBOWERK FLOWMETER IS USED. "FQI-XXX TURBOWERK REVERSE DIRECTION" IS THE SIGNAL TAG AND ASSOCIATED DESCRIPTION THAT ARE TO BE USED FOR THIS PARTICULAR INSTRUMENT.
8. THIS DIGITAL INPUT IS TO BE USED WHEN A SECOND SUMP PUMP AND LEVEL SWITCH IS USED. "LSH-XXX SUMP LEVEL 2 HIGH" IS THE SIGNAL TAG AND ASSOCIATED DESCRIPTION THAT ARE TO BE USED FOR THIS PARTICULAR INSTRUMENT.
9. THIS DIGITAL INPUT IS TO BE USED WHEN THE SUMP PUMP MCB AUXILIARY CONTACT IS INSTALLED AND USED. "CB-XXX SUMP CIRCUIT BREAKER TRIPPED" IS THE SIGNAL TAG AND ASSOCIATED DESCRIPTION THAT ARE TO BE USED FOR THIS PARTICULAR EQUIPMENT.
10. ALL THE NOTES THAT ARE DETAILED IN THIS DRAWING ARE TO PROVIDE GUIDANCE DURING DESIGN. HENCE, NOTES THAT ARE NOT REQUIRED SHOULD BE REMOVED FROM THE SITE SPECIFIC RTU DRAWING.
11. THIS DIGITAL INPUT IS TO BE USED FOR A PRESSURE CONTROL VALVE OPENED STATUS INDICATION WHEN A KENT FLOWMETER IS NOT INSTALLED ON SITE. REFER TO SITE SPECIFIC DRAWING SCHEDULE DETAILED IN [.001].
12. THIS DIGITAL INPUT IS TO BE USED FOR A PRESSURE CONTROL VALVE CLOSED STATUS INDICATION WHEN A KENT FLOWMETER AND A TURBOWERK FLOWMETER ARE NOT INSTALLED ON SITE. REFER TO SITE SPECIFIC DRAWING SCHEDULE DETAILED IN [.001].
13. THIS DIGITAL INPUT IS TO BE USED FOR A PRESSURE CONTROL VALVE 2 OPENED STATUS INDICATION WHEN A FLOWMETER 2 IS NOT INSTALLED ON SITE. REFER TO SITE SPECIFIC DRAWING SCHEDULE DETAILED IN [.001].
14. THIS DIGITAL INPUT IS TO BE USED FOR A PRESSURE CONTROL VALVE 2 CLOSED STATUS INDICATION WHEN A TURBOWERK FLOWMETER AND PRESSURE 3 TRANSDUCER ARE NOT INSTALLED ON SITE, AND THIS PARTICULAR INPUT IS NOT USED FOR THE POWER SUPPLY BATTERY VOLTAGE INDICATION. REFER TO SITE SPECIFIC DRAWING SCHEDULE DETAILED IN [.001].
15. PRESSURE TRANSMITTER MAKE AND MODEL ARE SITE DEPENDENT. REFER TO THE SITE SPECIFIC DRAWING SCHEDULE DETAILED IN [.001].
16. THE RADIO MODEL SHOULD BE DETAILED ON THE SITE SPECIFIC KINGFISHER RTU DIAGRAM.
17. THE FUSE SIZE SHOWN IS BASED ON THE USE OF A TRIO ER45E RADIO. FOR A TRIO QR450 H RADIO A 4A FUSE SHALL BE USED.

ISSUE	DATE	AMENDMENT	BY	APPD.
C	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
B	10/15	ISSUED FOR CONSTRUCTION - REVISED	A.S.	D.I.
A	06/15	ISSUED FOR CONSTRUCTION - REVISED	A.S.	D.I.
-	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

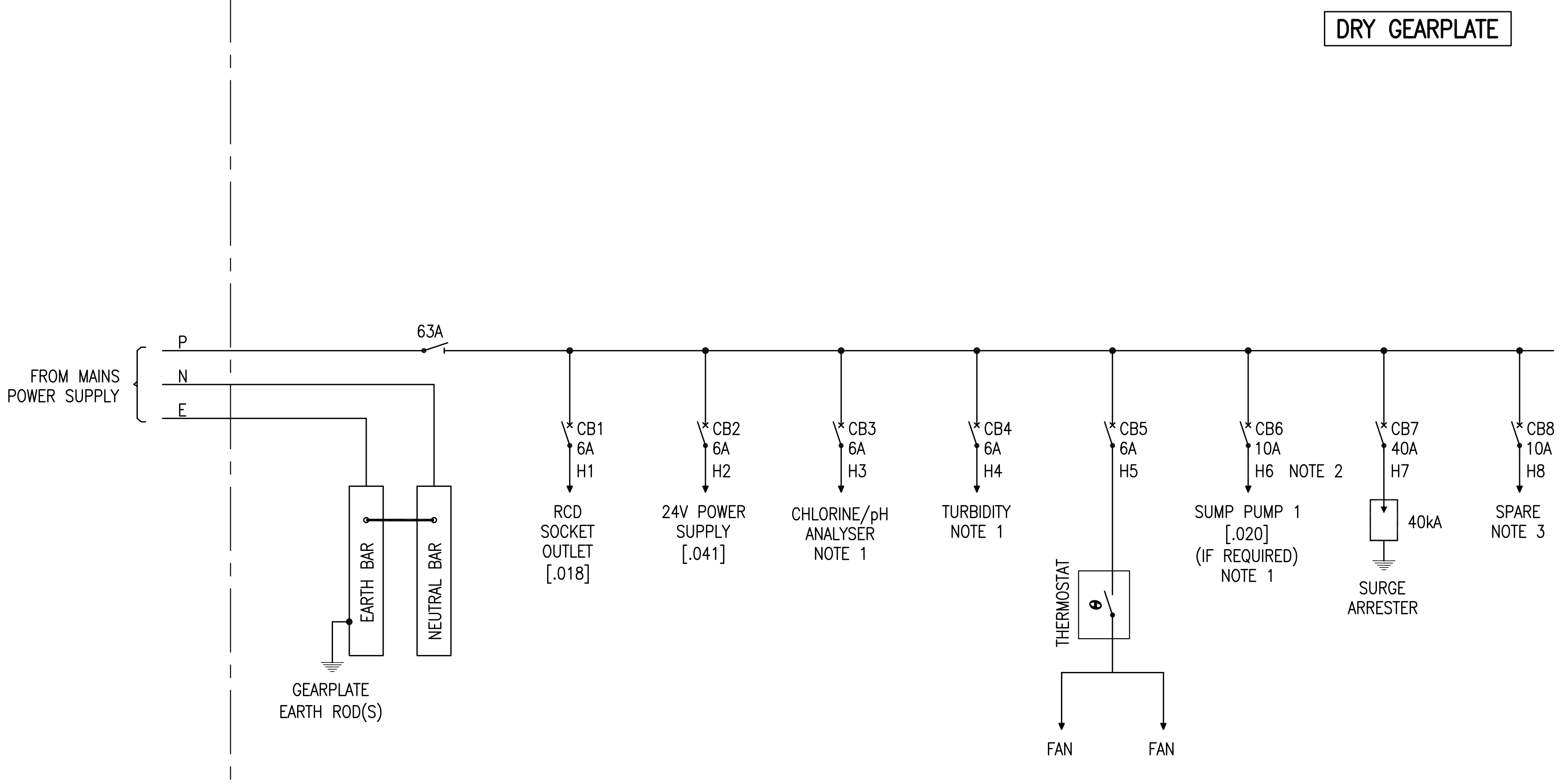
S Fagamalo	09/14	
D Ibrahim	09/14	OPERATIONS
R Matthews	09/14	
S Fagamalo	09/14	INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
KINGFISHER RTU DIAGRAM

CAD FILE 2010998.004C | DATE 22:05:2017
ORIGINAL SCALE A3 N.T.S. | CONTRACT No.
REF No. - | -
DWG No. 2010998 .004 C

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39



NOTES:

1. EQUIPMENT IS SITE DEPENDENT. REFER TO SITE SPECIFIC DRAWING SCHEDULE DETAILED IN [.001].
2. THE USE OF AN MCB THAT IS COMPLETE WITH A FAULT INDICATION AUXILIARY CONTACT FOR THE SUMP PUMP IS SITE DEPENDENT. REFER TO SITE SPECIFIC DRAWING SCHEDULE DETAILED IN [.001].
3. THE USE OF THIS MCB FOR A SECOND SUMP PUMP OR SAMPLING PUMP IS SITE DEPENDENT. REFER TO SITE SPECIFIC DRAWING SCHEDULE DETAILED IN [.001].

CONSTRUCTION ISSUE

FACILITY CODE	AREA
–	93

ISSUE	DATE	AMENDMENT	BY	APPD.
C	04/21	DC SUPPLY CHANGED FROM 12V TO 24V	R.X.	J.D.
B	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
A	04/15	ISSUED FOR CONSTRUCTION – REVISED	A.S.	D.I.
–	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14
D Ibrahim	09/14
R Matthews	09/14
S Fagamalo	09/14

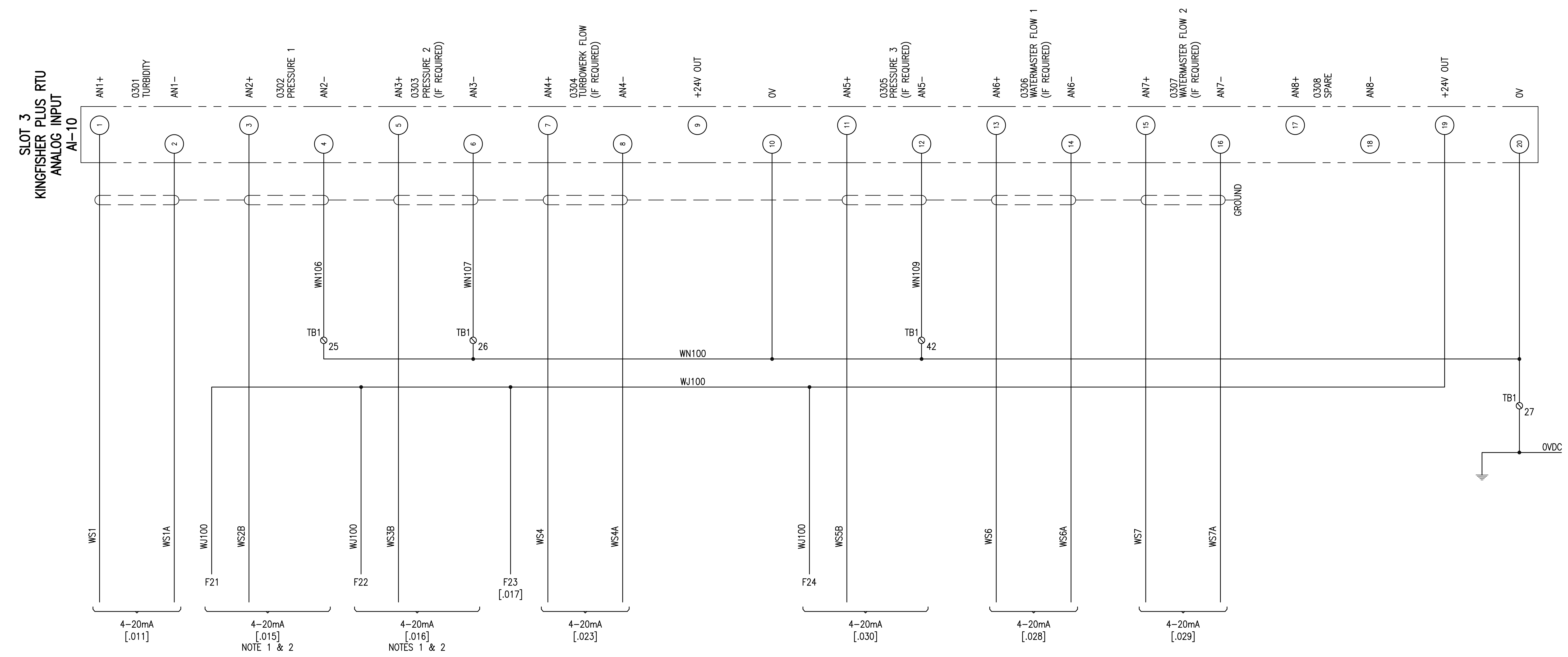
OPERATIONS

INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
AC DISTRIBUTION SCHEMATIC

CAD FILE 2010998.005C DATE 23:04:2021
ORIGINAL SCALE A3 – CONTRACT No.
REF No. – –
DWG No. 2010998 .005 C



NOTES:

1. PRESSURE TRANSMITTER MAKE AND MODEL ARE SITE DEPENDENT. REFER TO THE SITE SPECIFIC DRAWING SCHEDULE DETAILED IN [.001].
2. THE WIRING CONNECTIONS FOR THE ROSEMOUNT UNITS ARE SHOWN IN THIS DRAWING. FOR THE WIRING CONNECTIONS OF THE IFM UNITS, REFER TO DRAWING .047-.049.

FACILITY CODE	AREA
-	93

CONSTRUCTION ISSUE

ISSUE	DATE	AMENDMENT	BY	APPD.
C	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
B	10/15	ISSUED FOR CONSTRUCTION - REVISED	A.S.	D.I.
A	06/15	ISSUED FOR CONSTRUCTION - REVISED	A.S.	D.I.
-	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14
D Ibrahim	09/14
R Matthews	09/14
S Fagamalo	09/14

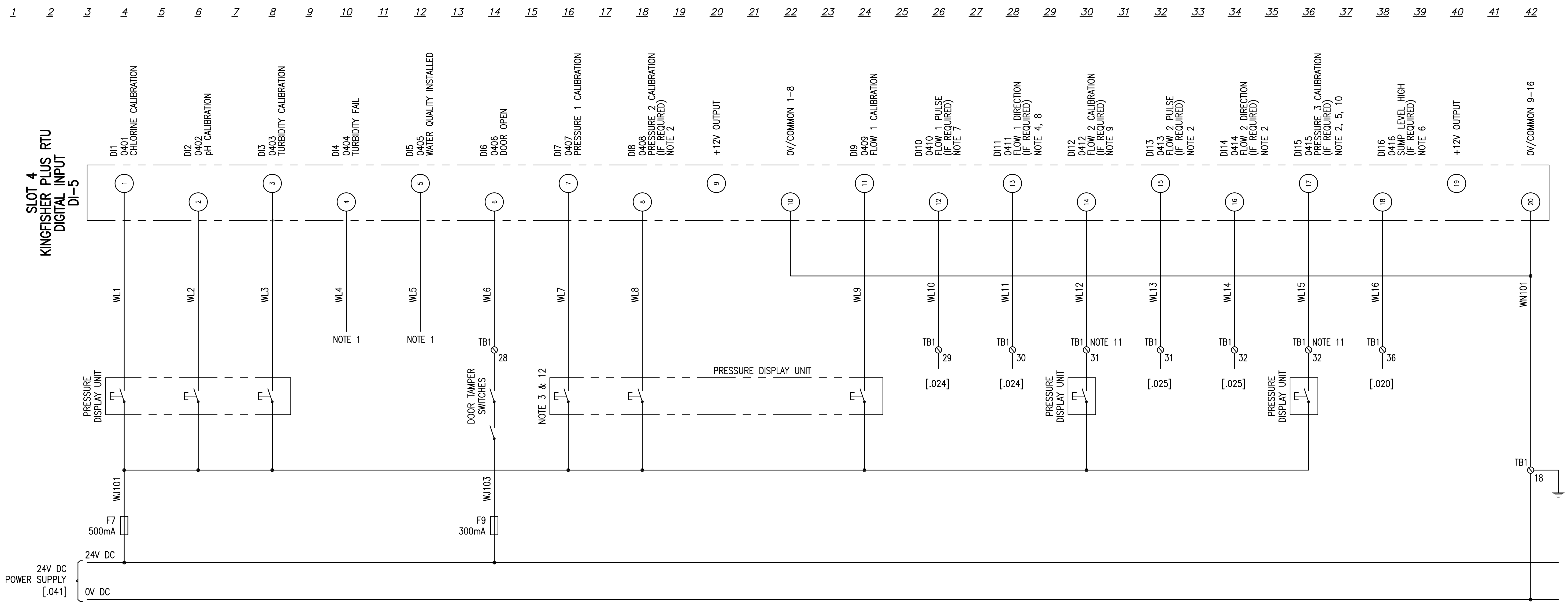
OPERATIONS

INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
SLOT 3 ANALOG INPUTS SCHEMATIC

CAD FILE 2010998.007C DATE 22:05:2017
ORIGINAL SCALE A3 -
CONTRACT No.
REF No. - -
DWG No. 2010998 .007 C



NOTES:

1. EQUIPMENT TYPE IS SITE DEPENDENT. REFER TO SITE SPECIFIC DRAWING SCHEDULE DETAILED IN [.001].
2. THE FOLLOWING DIGITAL INPUTS COULD BE USED FOR THE INNOVATIVE ENERGIES SR100 POWER SUPPLY INDICATION SIGNALS.

DI No.	SIGNAL TAG	DESCRIPTION	WIRE No.	DWG No.	CONDITION
13	EAL-XX1	PS1 MAINS FAIL	WL13	[.042]	WHEN KENT FLOWMETER 2 IS NOT INSTALLED ON SITE.
8	EAL-XX1	PS1 MAINS FAIL	WL8	[.042]	WHEN KENT FLOWMETER IS INSTALLED ON SITE, AND NO PRESSURE 2 AND 3 ARE INSTALLED ON SITE.
11	EAL-XX1	PS1 MAINS FAIL	WL11	[.042]	WHEN TURBOWERK FLOWMETER AND PRESSURE 3 ARE NOT INSTALLED ON SITE.

DI No.	SIGNAL TAG	DESCRIPTION	WIRE No.	DWG No.	CONDITION
14	EAL-XX2	PS1 BATTERY VOLTAGE LOW	WL14	[.042]	WHEN KENT FLOWMETER 2 IS NOT INSTALLED ON SITE.
15	EAL-XX2	PS1 BATTERY VOLTAGE LOW	WL15	[.042]	WHEN KENT FLOWMETER IS INSTALLED ON SITE BUT PRESSURE 2, PRESSURE 3, AND PRESSURE CONTROL VALVE 2 STATUS INDICATION ARE NOT INSTALLED ON SITE.
15	EAL-XX2	PS1 BATTERY VOLTAGE LOW	WL15	[.042]	WHEN TURBOWERK FLOWMETER, PRESSURE 3 AND PRESSURE CONTROL VALVE 2 STATUS INDICATION ARE NOT INSTALLED ON SITE.

REFER TO SITE SPECIFIC DRAWING SCHEDULE DETAILED IN [.001].

3. THIRD DOOR SWITCH IS ONLY REQUIRED FOR 3 BAY BSP CABINETS.
4. THIS DIGITAL INPUT IS TO BE USED FOR A TURBOWERK FLOWMETER WHEN A KENT FLOWMETER IS NOT INSTALLED ON SITE. REFER TO SITE SPECIFIC DRAWING SCHEDULE DETAILED IN [.001].
5. THIS DIGITAL INPUT IS TO BE USED FOR A SECOND SUMP HIGH LEVEL SWITCH WHEN A PRESSURE 3 TRANSDUCER IS NOT INSTALLED ON SITE. REFER TO SITE SPECIFIC DRAWING SCHEDULE DETAILED IN [.001].
6. THIS DIGITAL INPUT IS TO BE USED FOR A SUMP PUMP AUXILIARY CONTACT WHEN A SUMP HIGH LEVEL SWITCH IS NOT INSTALLED ON SITE. REFER TO SITE SPECIFIC DRAWING SCHEDULE DETAILED IN [.001].
7. THIS DIGITAL INPUT IS TO BE USED FOR A PRESSURE CONTROL VALVE OPENED STATUS INDICATION WHEN A KENT FLOWMETER IS NOT INSTALLED ON SITE. REFER TO SITE SPECIFIC DRAWING SCHEDULE DETAILED IN [.001].
8. THIS DIGITAL INPUT IS TO BE USED FOR A PRESSURE CONTROL VALVE CLOSED STATUS INDICATION WHEN A KENT FLOWMETER AND A TURBOWERK FLOWMETER ARE NOT INSTALLED ON SITE. REFER TO SITE SPECIFIC DRAWING SCHEDULE DETAILED IN [.001].
9. THIS DIGITAL INPUT IS TO BE USED FOR A PRESSURE CONTROL VALVE 2 OPENED STATUS INDICATION WHEN A FLOWMETER 2 IS NOT INSTALLED ON SITE. REFER TO SITE SPECIFIC DRAWING SCHEDULE DETAILED IN [.001].
10. THIS DIGITAL INPUT IS TO BE USED FOR A PRESSURE CONTROL VALVE 2 CLOSED STATUS INDICATION WHEN A TURBOWERK FLOWMETER AND PRESSURE 3 TRANSDUCER ARE NOT INSTALLED ON SITE, AND THIS PARTICULAR INPUT IS NOT USED FOR THE POWER SUPPLY BATTERY VOLTAGE INDICATION. REFER TO SITE SPECIFIC DRAWING SCHEDULE DETAILED IN [.001].
11. TERMINALS SHALL NOT BE USED WHEN THE PRESSURE DISPLAY UNIT PUSH BUTTONS ARE CONNECTED TO THESE PARTICULAR INPUTS. TERMINALS SHALL BE USED FOR THE PRESSURE CONTROL VALVE 2 STATUS INDICATION WHEN A KENT FLOWMETER AND A SECOND SUMP HIGH LEVEL SWITCH ARE NOT INSTALLED ON SITE.
12. TYPE : PUSHBUTTON SWITCH
    MAKE : EATON
    MODEL : AWHS30E-NC

FACILITY CODE	AREA
-	93

ISSUE	DATE	AMENDMENT	BY	APPD.
D	04/21	DC SUPPLY CHANGED FROM 12V TO 24V	R.X.	J.D.
C	08:16	CONSTRUCTION ISSUE MINOR CHANGES	A.C	
B	10/15	ISSUED FOR CONSTRUCTION - REVISED	A.S.	D.I.
A	06/15	ISSUED FOR CONSTRUCTION - REVISED	A.S.	D.I.
-	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14
D Ibrahim	09/14
R Matthews	09/14
S Fagamalo	09/14

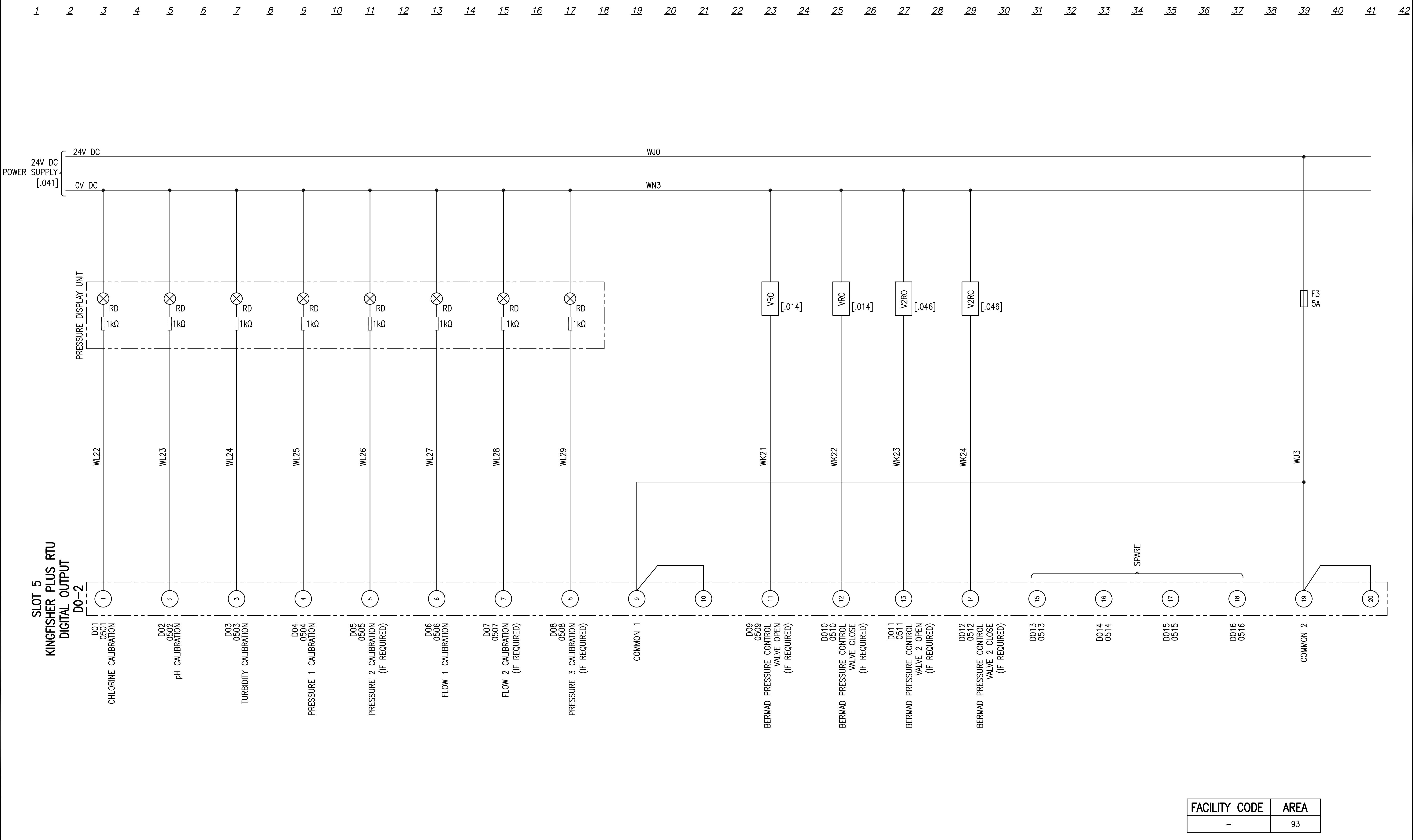
OPERATIONS

INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
SLOT 4 DIGITAL INPUTS SCHEMATIC

CAD FILE 2010998.008D
DATE 23:04:2021
ORIGINAL SCALE A3 -
CONTRACT No.
REF No. - -
DWG No. 2010998 .008 D



FACILITY CODE	AREA
–	93

CONSTRUCTION ISSUE

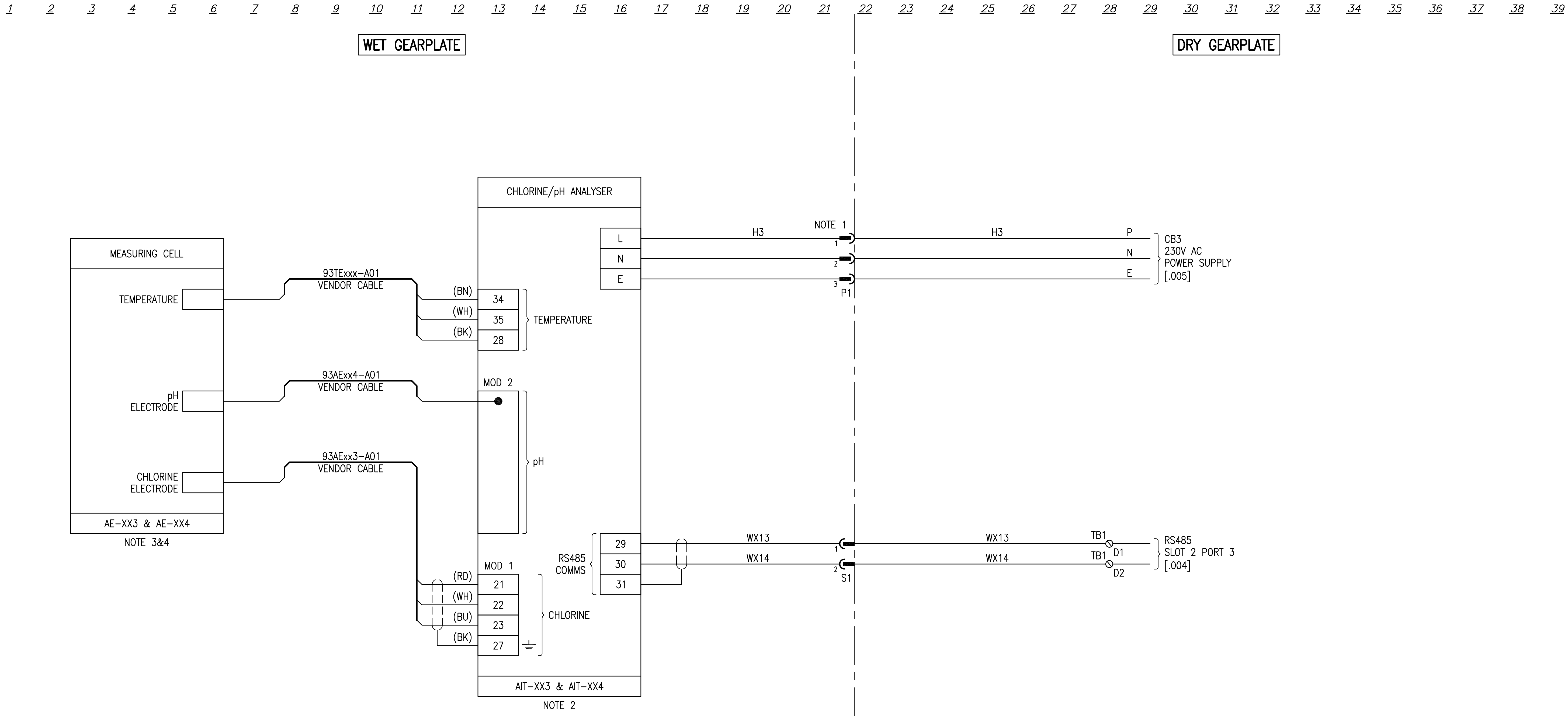
ISSUE	DATE	AMENDMENT	BY	APPD.
C	04/21	DC SUPPLY CHANGED FROM 12V TO 24V	R.X.	J.D.
B	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
A	06/15	ISSUED FOR CONSTRUCTION – REVISED	A.S.	D.I.
–	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14	
D Ibrahim	09/14	
R Matthews	09/14	OPERATIONS
S Fagamalo	09/14	
		INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
SLOT 5 DIGITAL OUTPUTS SCHEMATIC

CAD FILE	2010998.009C	DATE	23:04:2021
ORIGINAL SCALE A3	–	CONTRACT No.	
REF No.	–		–
DWG No.	2010998	.009	C



NOTES:

1. REFER TO DRAWING [.017] FOR PLUG CONNECTIONS.
2. TYPE: CHLORINE/pH ANALYSER
   MAKE: SIEMENS W&T
   MODEL DEPOLOX 3 + RESIDUAL ANALYSER
3. TYPE: MEASURING CELL
   MAKE: SIEMENS W&T
   MODEL: VARIASENS
4. THE CHLORINE AND pH PROBES SHALL NOT BE FITTED. THESE PROBES WILL BE FITTED BY WSL DURING COMMISSIONING.

CONSTRUCTION ISSUE

FACILITY CODE	AREA
–	93

ISSUE	DATE	AMENDMENT	BY	APPD.
B	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
A	11/15	ISSUED FOR CONSTRUCTION – REVISED	A.S.	D.I.
–	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14
D Ibrahim	09/14
R Matthews	09/14
S Fagamalo	09/14

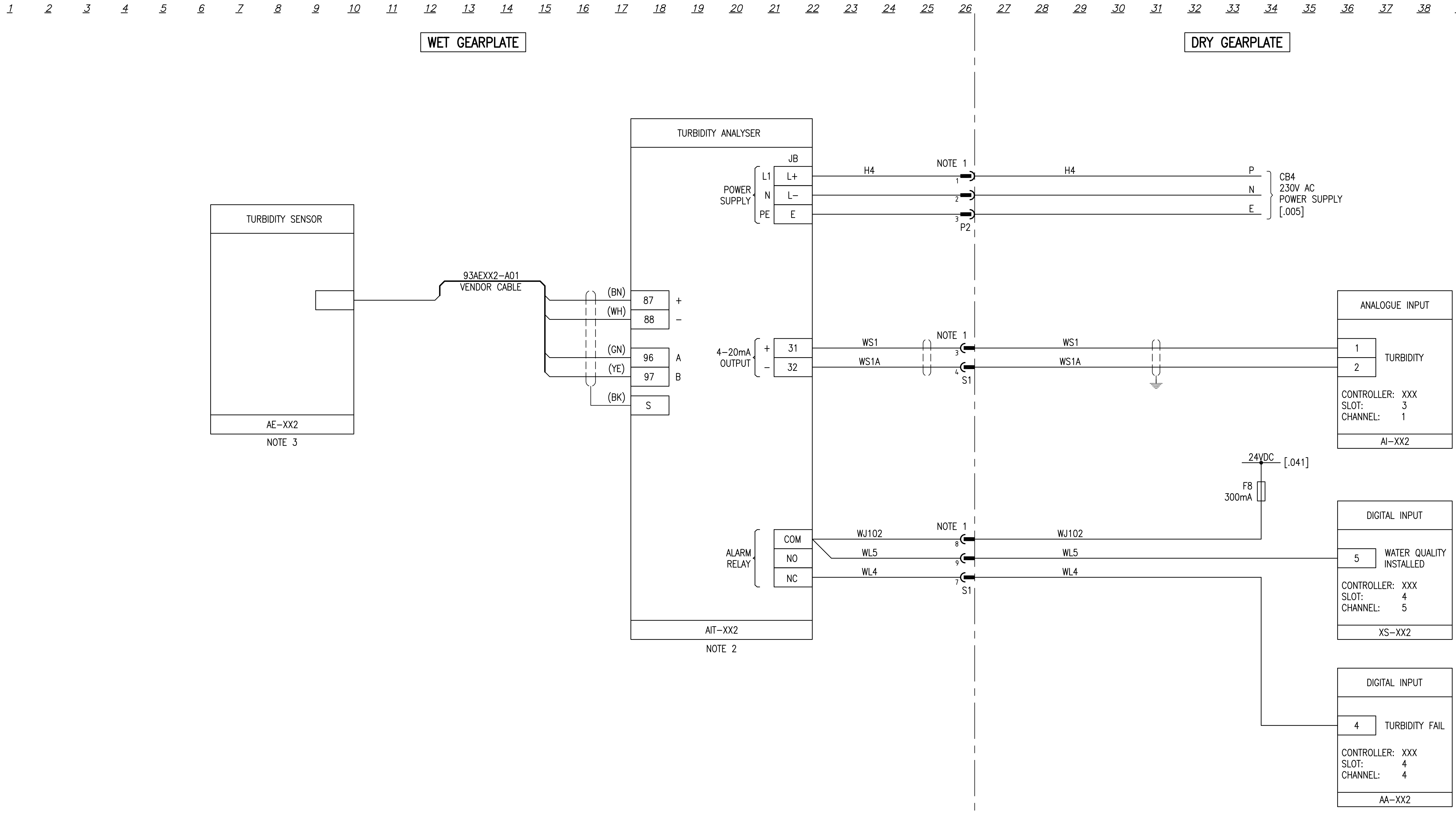
OPERATIONS

INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
AIT-XX3 & AIT-XX4 DEPOLOX 3 PLUS CL2/pH ANALYSER LOOP SCHEMATIC

CAD FILE 2010998.010B DATE 22:05:2017
ORIGINAL SCALE A3 –
CONTRACT No.
REF No. – –
DWG No. 2010998 .010 B



NOTES:

1. REFER TO DRAWING [.017] FOR PLUG CONNECTIONS.
2. TYPE: TURBIDITY ANALYSER
   MAKE: ENDRESS & HAUSER
   MODEL CUM253-TU0010
3. TYPE: TURBIDITY SENSOR
   MAKE: ENDRESS & HAUSER
   MODEL: CUS31-W2E

CONSTRUCTION ISSUE

FACILITY CODE	AREA
–	93

ISSUE	DATE	AMENDMENT	BY	APPD.
C	04/21	DC SUPPLY CHANGED FROM 12V TO 24V	R.X.	J.D.
B	05/17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
A	11/15	ISSUED FOR CONSTRUCTION – REVISED	A.S.	D.I.
–	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14
D Ibrahim	09/14
R Matthews	09/14
S Fagamalo	09/14

OPERATIONS

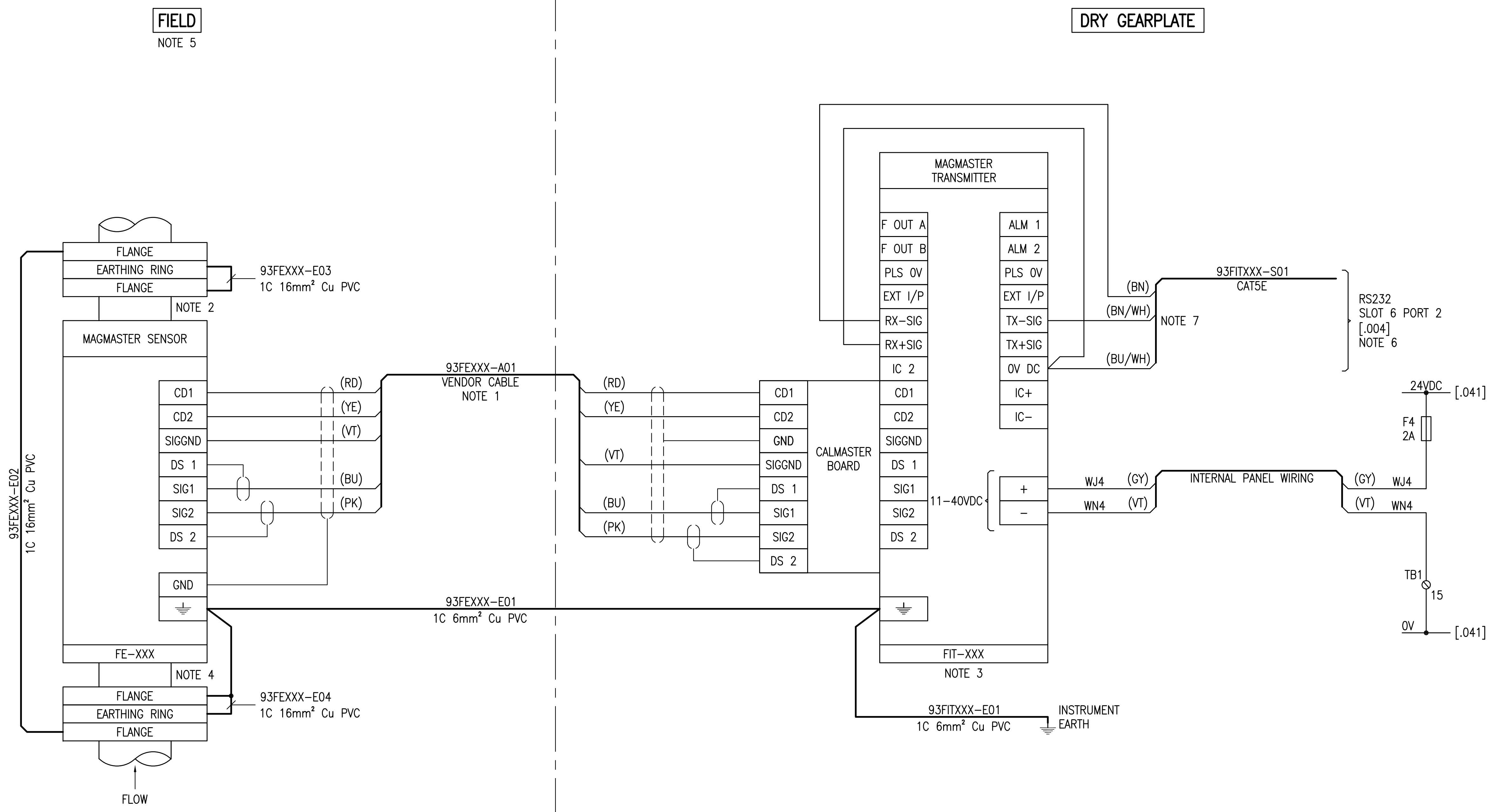
INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
AIT-XX2 CUM253 TURBIDITY ANALYSER LOOP SCHEMATIC

CAD FILE	2010998.011C
DATE	23::04:2021
ORIGINAL SCALE A3	–
CONTRACT No.	
REF No.	– / –
DWG No.	2010998 .011 C

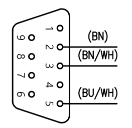
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39



NOTES:

1. CABLE SUPPLIED AND CONNECTED BY MANUFACTURER. DO NOT CUT.
2. FOR EARTHING RING AND INSTALLATION DETAIL REFER TO DRAWING 2001979.020 OR 2001979.071 – DEPENDENT ON INSTALLATION.
3. TYPE – FLOW TRANSMITTER
   MAKE – ABB
   MODEL – MAGMASTER
4. TYPE – FLOWMETER SENSOR
   MAKE – ABB
   MODEL – MAGMASTER MAGFLOW SENSOR
5. LOCATION AS DETAILED WITHIN THE SITE SPECIFIC CONTROL SYSTEM OVERVIEW [.002].
6. PIN CONFIGURATION AT THE RTU PROCESSOR/COMMUNICATION MODULE REFER TO DRAWING [.004].
7. ALTERNATIVE CONNECTIONS FOR MAGFLOW TRANSMITTER INSTALLED BEFORE 2005.

D9 CONNECTIONS ONLY



FACILITY CODE	AREA
–	93

CONSTRUCTION ISSUE

ISSUE	DATE	AMENDMENT	BY	APPD.
C	04/21	DC SUPPLY CHANGED FROM 12V TO 24V	R.X	J.D.
B	05/17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
A	11/15	ISSUED FOR CONSTRUCTION – REVISED	A.S.	D.I.
–	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S	Fagamalo	09/14
D	Ibrahim	09/14
R	Matthews	09/14
S	Fagamalo	09/14

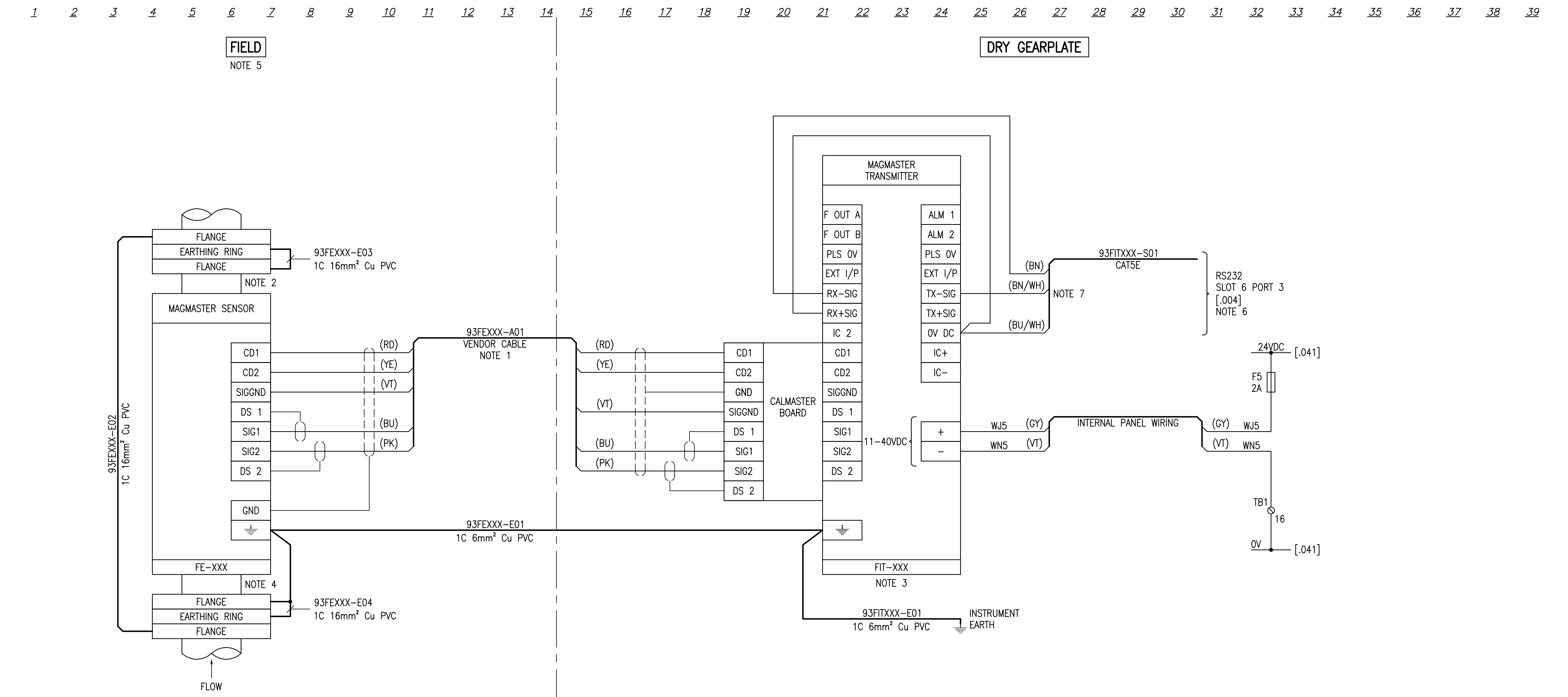
OPERATIONS

INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
FIT-XXX MAGMASTER FLOWMETER 1 LOOP SCHEMATIC

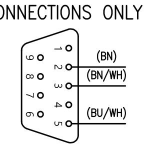
CAD FILE	2010998.012C	DATE	23:04:2021
ORIGINAL SCALE A3	–	CONTRACT No.	
REF No.	–		–
DWG No.	2010998	.012	C



NOTES:

1. CABLE SUPPLIED AND CONNECTED BY MANUFACTURER. DO NOT CUT.
2. FOR EARTHING RING AND INSTALLATION DETAIL REFER TO DRAWING 2001979.020 OR 2001979.071 – DEPENDENT ON INSTALLATION.
3. TYPE – FLOW TRANSMITTER
   MAKE – ABB
   MODEL – MAGMASTER
4. TYPE – FLOWMETER SENSOR
   MAKE – ABB
   MODEL – MAGMASTER MAGFLOW SENSOR
5. LOCATION AS DETAILED WITHIN THE SITE SPECIFIC CONTROL SYSTEM OVERVIEW [.002].
6. PIN CONFIGURATION AT THE RTU PROCESSOR/COMMUNICATION MODULE REFER TO DRAWING [.004].
7. ALTERNATIVE CONNECTIONS FOR MAGFLOW TRANSMITTER INSTALLED BEFORE 2005.

D9 CONNECTIONS ONLY



FACILITY CODE	AREA
–	93

CONSTRUCTION ISSUE

ISSUE	DATE	AMENDMENT	BY	APPD.
C	04/21	DC SUPPLY CHANGED FROM 12V TO 24V	R.X.	J.D.
B	05/17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
A	11/15	ISSUED FOR CONSTRUCTION – REVISED	A.S.	D.I.
–	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S	Fagamalo	09/14
D	Ibrahim	09/14
R	Matthews	09/14
S	Fagamalo	09/14

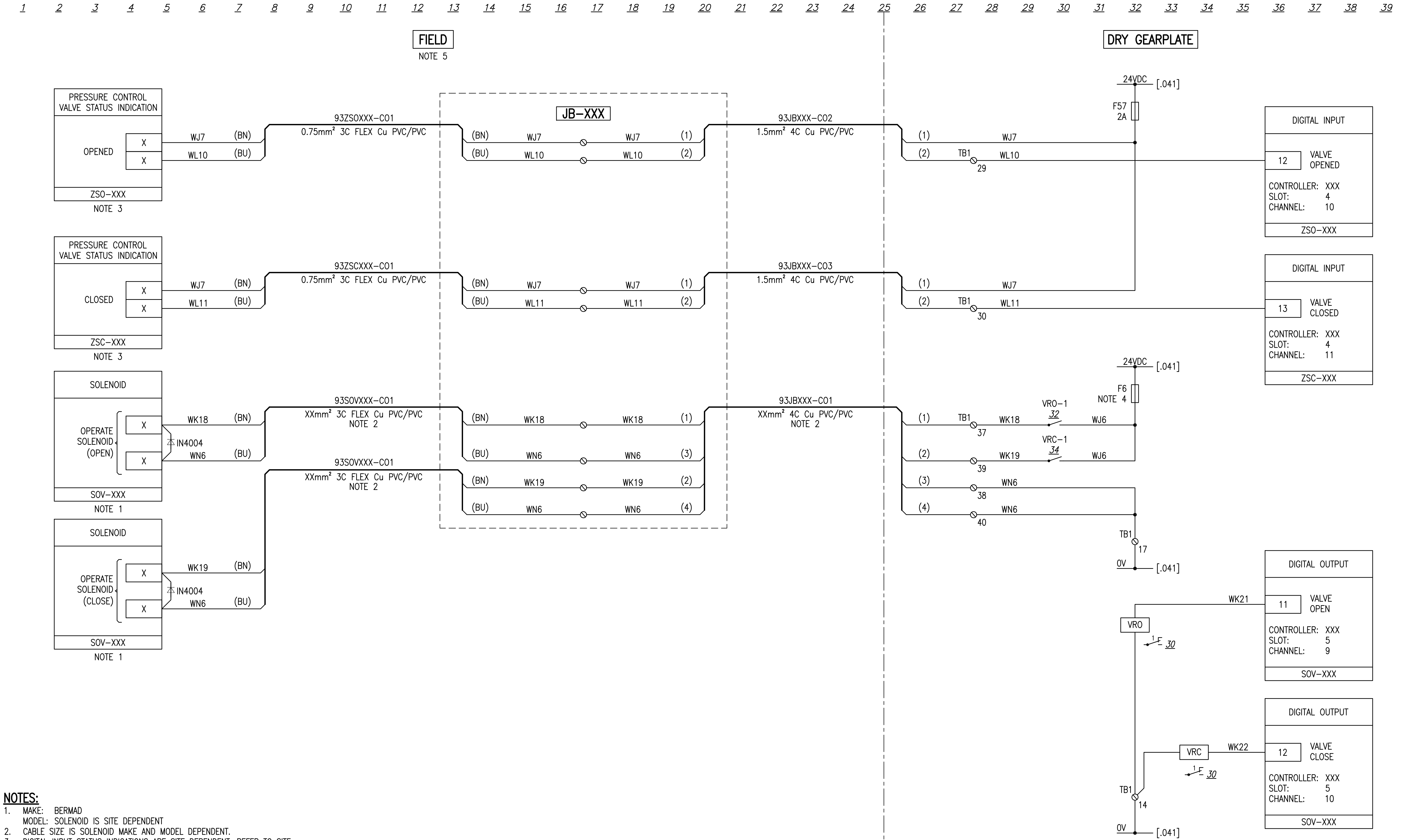
OPERATIONS

INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
FIT-XXX MAGMASTER FLOWMETER 2 LOOP SCHEMATIC

CAD FILE 2010998.013C DATE 23:04:2021
ORIGINAL SCALE A3 – CONTRACT No.
REF No. – –
DWG No. 2010998 .013 C



NOTES:

1. MAKE: BERMAD
   MODEL: SOLENOID IS SITE DEPENDENT
2. CABLE SIZE IS SOLENOID MAKE AND MODEL DEPENDENT.
3. DIGITAL INPUT STATUS INDICATIONS ARE SITE DEPENDENT. REFER TO SITE SPECIFIC RTU DRAWING [.004].
4. FUSE SIZE IS SOLENOID DEPENDENT.
5. LOCATION AS DETAILED WITHIN THE SITE SPECIFIC CONTROL SYSTEM OVERVIEW [.002].

CONSTRUCTION ISSUE

FACILITY CODE	AREA
–	93

ISSUE	DATE	AMENDMENT	BY	APPD.
C	04/21	DC SUPPLY CHANGED FROM 12V TO 24V	R.X.	J.D.
B	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
A	06/15	ISSUED FOR CONSTRUCTION – REVISED	A.S.	D.I.
–	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14
D Ibrahim	09/14
R Matthews	09/14
S Fagamalo	09/14

OPERATIONS

INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
SOV-XXX & SOV-XXX PRESSURE CONTROL VALVE LOOP SCHEMATIC

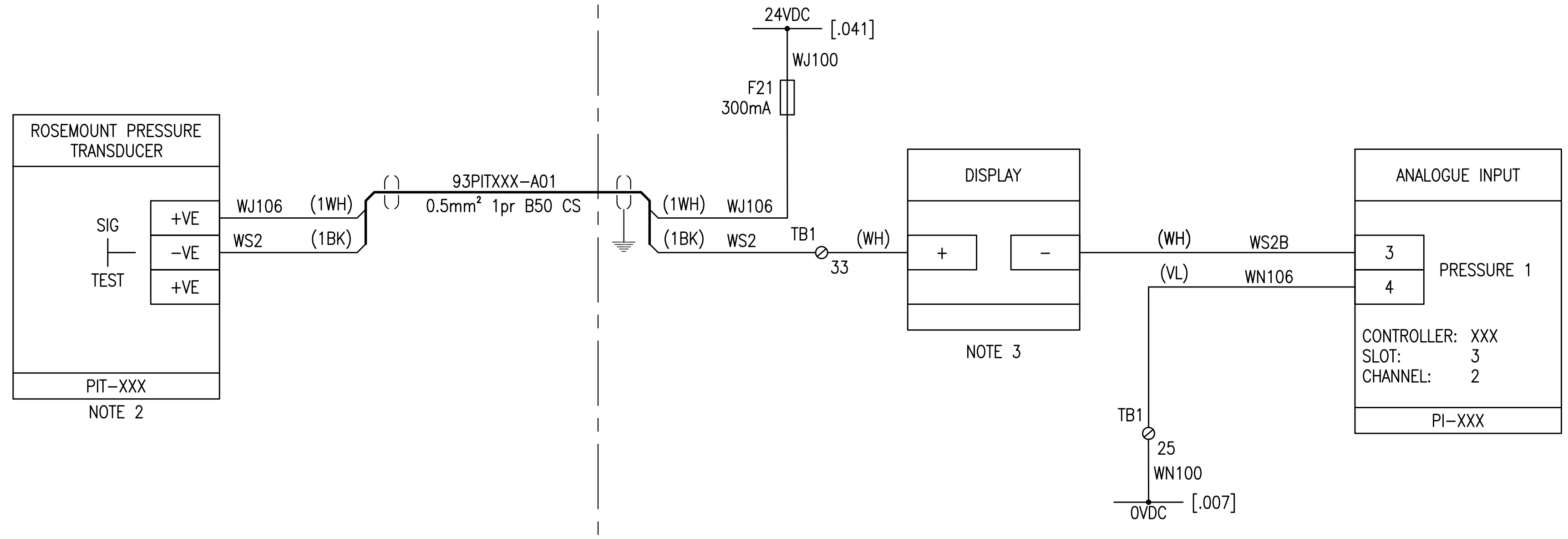
CAD FILE	2010998.014C	DATE	23:04:2021
ORIGINAL SCALE A3	–	CONTRACT No.	
REF No.	–		–
DWG No.	2010998	.014	C

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39

FLOWMETER CHAMBER

NOTE 1

DRY GEARPLATE



NOTES:

1. LOCATION AS DETAILED WITHIN THE SITE SPECIFIC CONTROL SYSTEM OVERVIEW [.002].
2. PRESSURE TRANSDUCER MODEL IS SITE DEPENDENT. MODEL IS EITHER 2088 OR 3015 SERIES.
3. DISPLAY SCALED TO 0−1500 kPA.

FACILITY CODE	AREA
−	93

CONSTRUCTION ISSUE

ISSUE	DATE	AMENDMENT	BY	APPD.
B	04/21	ISSUE FOR CONSTRUCTION UPDATED	R.X.	J.D.
A	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
−	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14
D Ibrahim	09/14
R Matthews	09/14
S Fagamalo	09/14

OPERATIONS

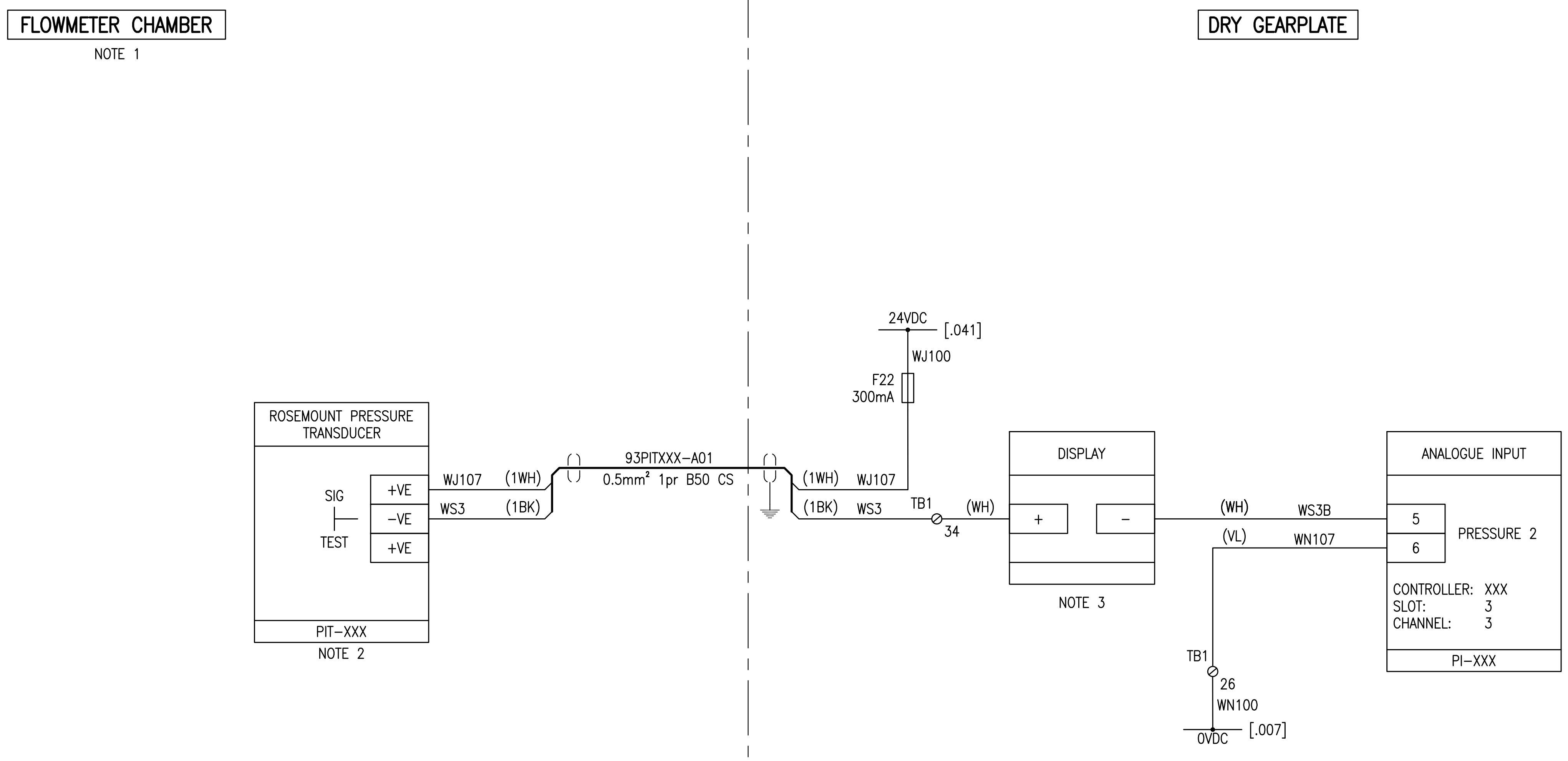
INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
PIT−XXX PRESSURE TRANSDUCER 1 LOOP SCHEMATIC

CAD FILE 2010998.015B DATE 23:04:2021
ORIGINAL SCALE A3 − CONTRACT No.
REF No. − −
DWG No. 2010998 .015 B

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39



NOTES:

1. LOCATION AS DETAILED WITHIN THE SITE SPECIFIC CONTROL SYSTEM OVERVIEW [.002].
2. PRESSURE TRANSDUCER MODEL IS SITE DEPENDENT. MODEL IS EITHER 2088 OR 3015 SERIES.
3. DISPLAY SCALED TO 0-1500 kPA.

FACILITY CODE	AREA
-	93

CONSTRUCTION ISSUE

ISSUE	DATE	AMENDMENT	BY	APPD.
B	04/21	ISSUED FOR CONSTRUCTION UPDATED	R.X.	J.D.
A	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
-	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14
D Ibrahim	09/14
R Matthews	09/14
S Fagamalo	09/14

OPERATIONS

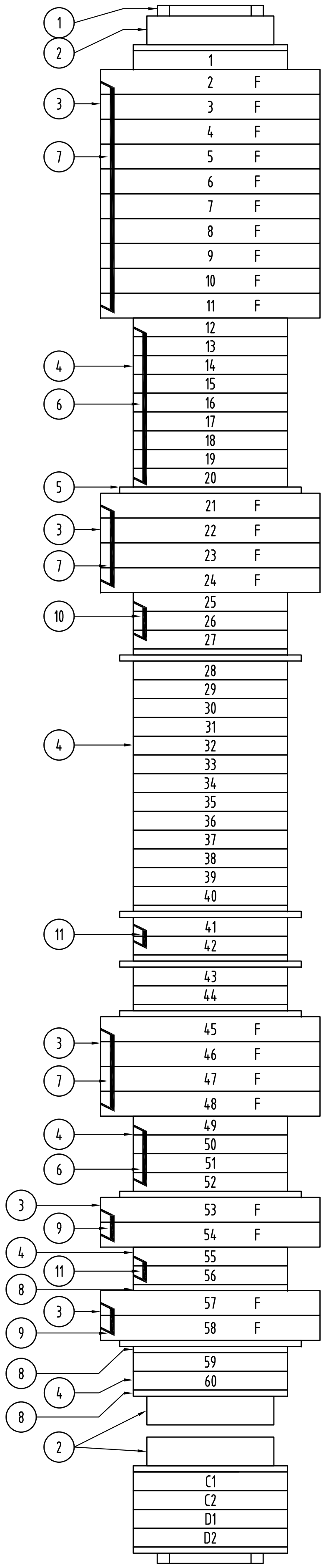
INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
PIT-XXX PRESSURE TRANSDUCER 2 LOOP SCHEMATIC

CAD FILE	2010998.016B
DATE	23:04:2021
ORIGINAL SCALE A3	-
CONTRACT No.	
REF No.	- / -
DWG No.	2010998 .016 B

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39



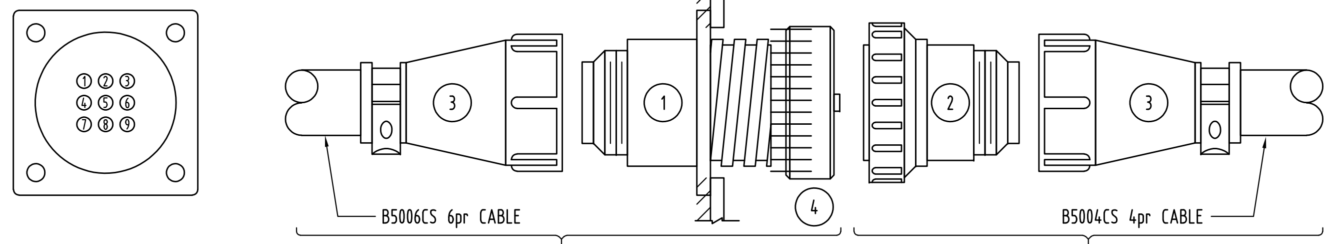
TERMINAL BLOCK SCHEDULE

FROM	WIRE No.	TERMINAL No.	WIRE No.	TO	DRAWING No.
DC POWER SUPPLY	WJ0	1	WJ0	POWER SUPPLY 24VDC+	REF. SHEET .041
		2	WJ2	RADIO (NOTE 4)	REF. SHEET .004
		3	WJ3	SLOT 5 DIGITAL OUTPUTS	REF. SHEET .009
		4	WJ4 (NOTE 14)	MAGMASTER FLOWMETER 1 (NOTE 14)(NOTE 15)	REF. SHEET .012
		5	WJ5 (NOTE 14)	MAGMASTER FLOWMETER 2 (NOTE 14)(NOTE 17)	REF. SHEET .013
		6	WJ6	BERMAD PRESSURE CONTROL VALVE (NOTE 5)	REF. SHEET .014
		7	WJ101	PRESSURE DISPLAY UNIT	REF. SHEET .008
		8	WJ102	WET GEARPLATE	REF. SHEET .041
		9	WJ103	DOOR SWITCH	REF. SHEET .008
		10	WJ104	12/24V DC CONVERTER (IF REQUIRED) (NOTE 6)	REF. SHEET .022
		11	WJ105	SUMP LEVEL HIGH	REF. SHEET .020
DC POWER SUPPLY	WN0	12	WN0	POWER SUPPLY 24VDC-	REF. SHEET .041
		13	WN2	RADIO (NOTE 4)	REF. SHEET .004
		14	WN3	SLOT 5 DIGITAL OUTPUTS	REF. SHEET .009
		15	WN4 (NOTE 14)	MAGMASTER FLOWMETER 1 (NOTE 14)(NOTE 15)	REF. SHEET .012
		16	WN5 (NOTE 14)	MAGMASTER FLOWMETER 2 (NOTE 14)(NOTE 17)	REF. SHEET .013
		17	WN6	BERMAD PRESSURE CONTROL VALVE	REF. SHEET .014
		18	WN101	DIGITAL INPUT COMMON	REF. SHEET .008
		19	WN104	12/24V DC CONVERTER (IF REQUIRED) (NOTE 6)	REF. SHEET .022
		20	WN105	SPARE	
RTU 24V+	WJ100	21	WJ106	PRESSURE 1 TRANSDUCER	NOTE 16
		22	WJ107	PRESSURE 2 TRANSDUCER	NOTE 16
		23	WJ108	SPARE	
		24	WJ109	PRESSURE 3 TRANSDUCER	NOTE 16
RTU 24V-	WN100	25	WN106	PRESSURE 1 TRANSDUCER	NOTE 16
		26	WN107	PRESSURE 2 TRANSDUCER	NOTE 16
		27	WN0	0V	
RTU DI	WL6	28	WL6	DOOR SWITCH	REF. SHEET .008
RTU DI	WL10	29 (NOTE 11)	WL10	KENT FLOWMETER 1 (NOTE 8)(NOTE 9)	REF. SHEET .024
RTU DI	WL11	30 (NOTE 11)	WL11	KENT FLOWMETER 1 (NOTE 3)(NOTE 8)(NOTE 9)	REF. SHEET .024
RTU DI	WL13	31 (NOTE 11)	WL13	KENT FLOWMETER 2 (NOTE 8)(NOTE 10)	REF. SHEET .025
RTU DI	WL14	32 (NOTE 11)	WL14	KENT FLOWMETER 2 (NOTE 8)(NOTE 10)	REF. SHEET .025
	WS2	33	WS2	PRESSURE 1 TRANSDUCER	NOTE 16
	WS3	34	WS3	PRESSURE 2 TRANSDUCER	NOTE 16
		35		SPARE (NOTE 5) (NOTE 8)	REF. SHEET .008
RTU DI	WL16	36	WL16	SUMP LEVEL HIGH (NOTE 7)	REF. SHEET .020
	WK18	37	WK18	BERMAD VALVE - OPEN	REF. SHEET .014
		38	WN6	BERMAD VALVE - OPEN	REF. SHEET .014
	WK19	39	WK19	BERMAD VALVE - CLOSE	REF. SHEET .014
		40	WN6	BERMAD VALVE - CLOSE	REF. SHEET .014
RTU 24V-	WN100	41	WN108	SPARE	
		42	WN109	PRESSURE 3 - TRANSDUCER	NOTE 16
RTU DI	WS5	43	WS5	PRESSURE 3 - TRANSDUCER	NOTE 16
		44		SPARE (NOTE 8)	REF. SHEET .046
12/24V DC CONVERTER	WJ200	45	WJ201	FLOWMETER 1 (NOTE 1)	
		46	WJ202	FLOWMETER 2 (NOTE 1)	
		47	WJ203	SPARE	
		48	WJ204	SPARE	
12/24V DC CONVERTER	WN200	49	WN201	FLOWMETER 1 (NOTE 1)	
		50	WN202	FLOWMETER 2 (NOTE 1)	
		51	WN203	SPARE	
		52	WN204	SPARE	
DC POWER SUPPLY	WJ0	53	WJ115	RTU POWER SUPPLY	REF. SHEET .004
		54	WJ116	SR100 ALARMS	REF. SHEET .042
DC POWER SUPPLY	WN0	55	WN115	RTU POWER SUPPLY	REF. SHEET .004
		56	WN116	SPARE	REF. SHEET .041
DC POWER SUPPLY	WJ0	57 (NOTE 12)	WJ7	BERMAD VALVE - STATUS INDICATION (NOTE 12)	REF. SHEET .014
		58 (NOTE 13)	WJ8	BERMAD VALVE 2 - STATUS INDICATION (NOTE 13)	REF. SHEET .046
		59 (NOTE 14)	WN104(NOTE 14)	BERMAD VALVE 2 - OPEN (NOTE 14)	REF. SHEET .046
		60 (NOTE 14)	WN104(NOTE 14)	BERMAD VALVE 2 - CLOSE (NOTE 14)	REF. SHEET .046
ETHERNET EXTENDER - FIELD (IF REQUIRED)	WS101	C1	WS101	ETHERNET EXTENDER (IF REQUIRED)	REF. SHEET .004
ETHERNET EXTENDER - FIELD (IF REQUIRED)	WS102	C2	WS102	ETHERNET EXTENDER (IF REQUIRED)	REF. SHEET .004
CL/pH ANALYSER	WX13	D1	WX13	RTU	REF. SHEET .004
	WX14	D2	WX14	RTU	REF. SHEET .004

TERMINAL BLOCK DETAILS

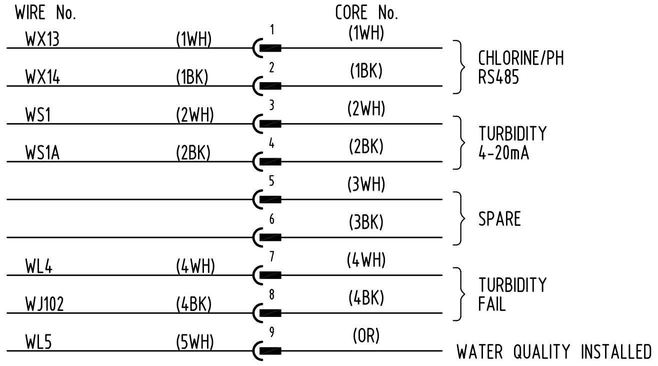
ITEM No.	DESCRIPTION	MAKE	MODEL No:
1	TERMINAL RAIL	PHOENIX	NS 35/7.5
2	END STOP	PHOENIX	E/UK1
3	FUSE TERMINAL COMPLETE WITH FUSE	PHOENIX	UK 5-HESI
4	TERMINAL BLOCK	PHOENIX	UK5N
5	PARTITION PLATE	PHOENIX	ATP-UK 5-MTK
6	BRIDGE BAR	PHOENIX	EB 10-6
7	BRIDGE BAR	PHOENIX	EBS 10-8
8	END COVER	PHOENIX	D-UK4/10
9	BRIDGE BAR	PHOENIX	EBS 2-8
10	BRIDGE BAR	PHOENIX	EB 3-6
11	BRIDGE BAR	PHOENIX	EB 2-6

CONTACT ARRANGEMENT SHOWN FOR FIXED RECEPTACLE MATING FACE.



RECEPTACLE ASSEMBLY TO BE SUPPLIED WITH DRY GEARPLATE. TO BE FULLY ASSEMBLED, CONNECTED TO CABLE AND READY TO BE FIXED IN BOX PARTITION WHEN INSTALLED.

PLUG ASSEMBLY TO BE SUPPLIED WITH WET GEARPLATE. TO BE FULLY ASSEMBLED AND CONNECTED TO CABLE.

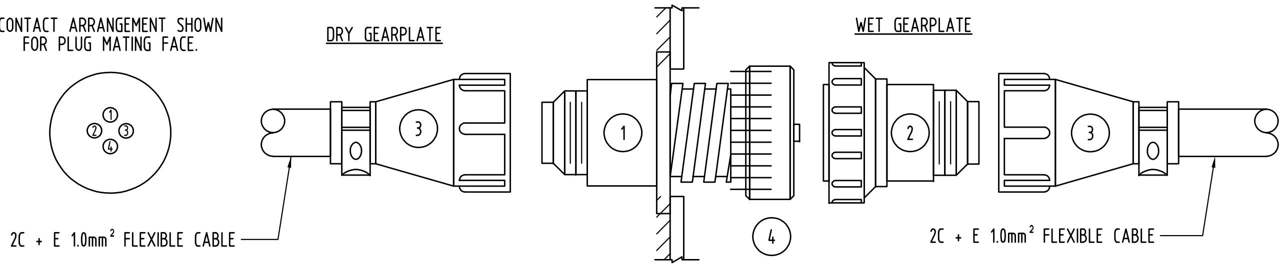


SIGNAL PLUG/SOCKET PIN CONFIGURATION

AMP CIRCULAR CPC CONNECTOR SHELL SIZE 13, 9 CONTACT.

ITEM No.	DESCRIPTION	PART No.	No. PLUG/SOCKET
1	MALE FLANGED RECEPTACLE WITH PERIPHERAL SEAL	206705-1 206403-4	1 1
2	FEMALE PLUG	206708-1	1
3	CABLE CLAMP	206966	2
4	SEALING CAP PIN CONTACTS SOCKET CONTACTS	213485-1 66103-4 66105-4	1 9 9

CONTACT ARRANGEMENT SHOWN FOR PLUG MATING FACE.

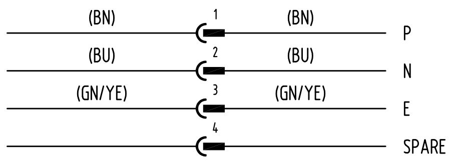


RECEPTACLE ASSEMBLY TO BE SUPPLIED WITH DRY GEARPLATE. TO BE FULLY ASSEMBLED, CONNECTED TO CABLE AND READY TO BE FIXED IN BOX PARTITION WHEN INSTALLED.

PLUG ASSEMBLY TO BE SUPPLIED WITH WET GEARPLATE. TO BE FULLY ASSEMBLED AND CONNECTED TO CABLE.

AMP CIRCULAR CPC CONNECTOR SHELL SIZE 11, 4 CONTACT.

ITEM No.	DESCRIPTION	PART No.	No. PLUG/SOCKET
1	FEMALE FLANGED RECEPTACLE WITH PERIPHERAL SEAL	206430-1 206403-1	1 1
2	MALE PLUG	206429-1	1
3	CABLE CLAMP	206062-1	2
4	SEALING CAP PIN CONTACTS SOCKET CONTACTS	208800-1 66099-4 66101-4	1 4 4



230V AC POWER PLUG/SOCKET PIN CONFIGURATION

NOTES:

1. FLOWMETER MODEL IS SITE DEPENDENT. REFER TO SITE SPECIFIC DRAWING SCHEDULE DETAILED IN (.001).
2. DIGITAL INPUTS USED FOR THE 12V INNOVATIVE ENERGIES SR100 POWER SUPPLY INDICATION SIGNALS ARE AS DETAILED IN (.008)
3. THESE DIGITAL INPUTS ARE TO BE USED WHEN TURBOWERK FLOWMETER IS USED.
4. THIS 12V SUPPLY IS TO BE USED WHEN A FIBRE TO COPPER CONVERTER OR AN ETHERNET EXTENDER IS USED AND A RADIO IS NOT INSTALLED.
5. THIS FUSE AND TERMINAL IS TO BE USED WHEN A SECOND SUMP LEVEL HIGH SWITCH IS USED.
6. THIS 12V SUPPLY IS TO BE USED WHEN A 12VDC/24VDC CONVERTER IS NOT REQUIRED, AND WHEN ONE OF THE FOLLOWING IS USED:
   - AN ETHERNET SWITCH
   - A FIBRE TO COPPER CONVERTER
   - A RS232/RS485 CONVERTER
   - A PRESSURE CONTROL VALVE 2
7. THIS DIGITAL INPUT IS TO BE USED WHEN THE SUMP PUMP MCB AUXILIARY CONTACT IS INSTALLED AND USED.
8. THESE TERMINALS ARE USED FOR A BERMAD VALVE 2 OPEN AND CLOSE WHEN THERE IS NO KENT FLOWMETER AND SECOND SUMP LEVEL HIGH SWITCH INSTALLED ON SITE. REFER TO DRAWING (.046) FOR FERRULE DETAILS.
9. DIGITAL INPUTS USED FOR A PRESSURE CONTROL VALVE 2 AS DETAILED IN (.008).
10. DIGITAL INPUTS USED FOR A PRESSURE CONTROL VALVE AS DETAILED IN (.008).
11. CONNECTION TO THESE TERMINALS AS DETAILED IN DRAWING (.008).
12. THIS FUSE IS TO BE ADDED ONLY WHEN STATUS INDICATION FROM PRESSURE CONTROL VALVE 1 IS REQUIRED.
13. THIS FUSE IS TO BE ADDED ONLY WHEN STATUS INDICATION FROM PRESSURE CONTROL VALVE 2 IS REQUIRED.
14. THIS TERMINAL IS TO BE ADDED ONLY WHEN STATUS INDICATION FROM PRESSURE CONTROL VALVE 2 IS REQUIRED. TERMINALS AND FERRULES ARE AS DETAILED IN (.046)
15. THE USE OF THIS FUSE IS FOR ONE OF THE FOLLOWING:
   - AN ETHERNET EXTENDER
   - AN ETHERNET SWITCH
   - PRESSURE CONTROL VALVE 2

   WHEN A 12/24V DC CONVERTER AND MAGMASTER FLOWMETER 2 ARE USED AND MAGMASTER FLOWMETER 1 IS NOT USED. REFER TO THE SITE SPECIFIC DRAWINGS.
16. PRESSURE TRANSMITTER MAKE AND MODEL ARE SITE DEPENDENT. REFER TO THE SITE SPECIFIC DRAWING SCHEDULE DETAILED IN (.001).
17. THE USE OF THIS FUSE AND TERMINAL IS FOR ONE OF THE FOLLOWING:
   - AN ETHERNET EXTENDER
   - AN ETHERNET SWITCH
   - PRESSURE CONTROL VALVE 2

   WHEN A 12/24V DC CONVERTER AND MAGMASTER FLOWMETER 1 ARE USED AND MAGMASTER FLOWMETER 2 IS NOT USED. REFER TO THE SITE SPECIFIC DRAWINGS.

FACILITY CODE	AREA

CONSTRUCTION ISSUE

ISSUE	DATE	AMENDMENT	BY	APPD.
D	04/21	DC POWER SUPPY NOTE ADDED	R.X.	J.D.
C	05/17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
B	06/15	ISSUED FOR CONSTRUCTION - REVISED	A.S.	D.L.
A	02/15	ISSUED FOR CONSTRUCTION - REVISED	L.B.	D.I.
-	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S	Fagamalo	09/14
D	Ibrahim	09/14
R	Matthews	09/14
S	Fagamalo	09/14

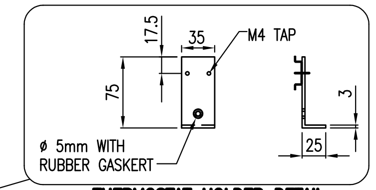
OPERATIONS

INFRASTRUCTURE

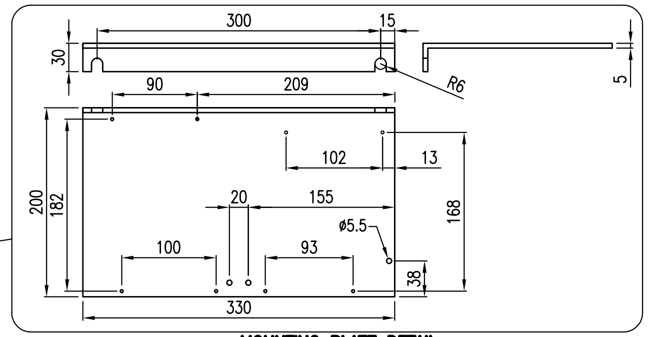
Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
TERMINAL BLOCK & PLUG/SOCKET CONNECTIONS

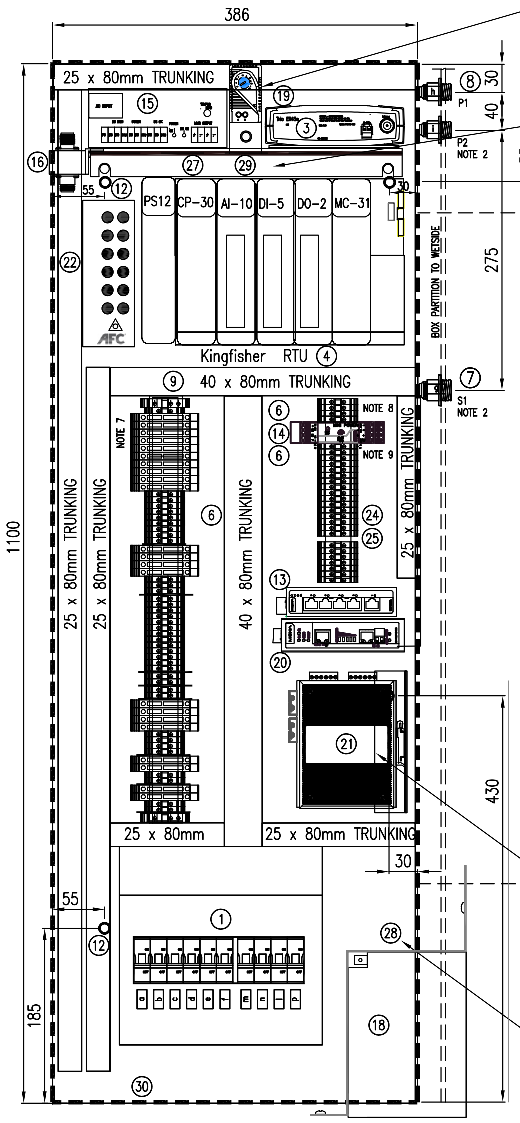
CAD FILE 2010998.017D	DATE 23:04:2021
ORIGINAL SCALE A3 -	CONTRACT No.
REF No. -	-
DWG No. 2010998 .017	D



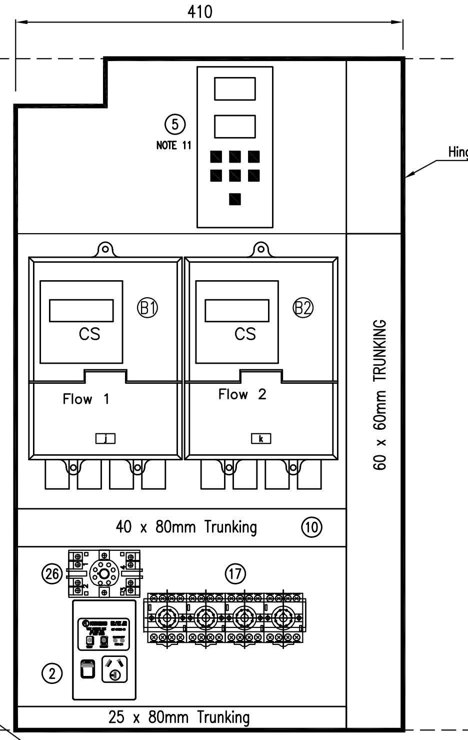
THERMOSTAT HOLDER DETAIL



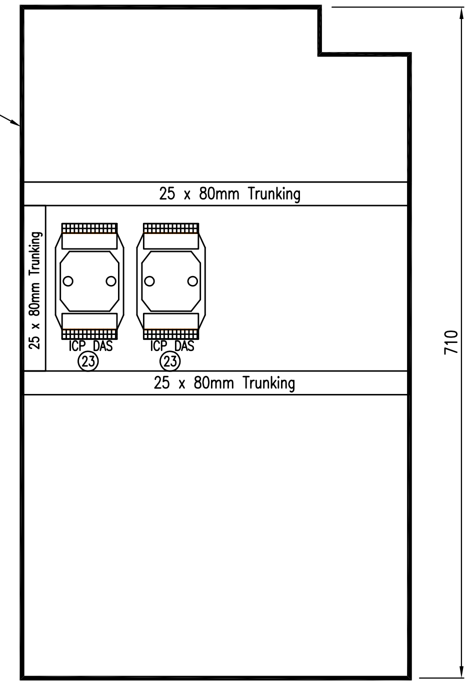
MOUNTING PLATE DETAIL



GEARPLATE
(FULL BACK GEAR PLATE)

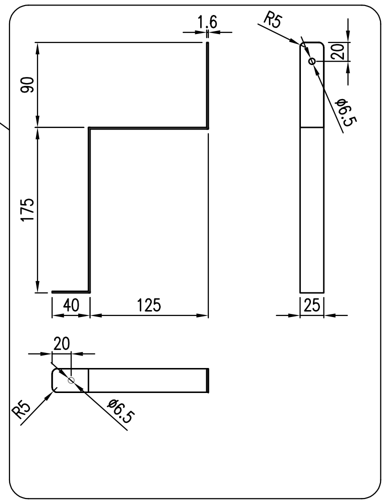


FRONT SIDE GEARPLATE
(NOTE 5)

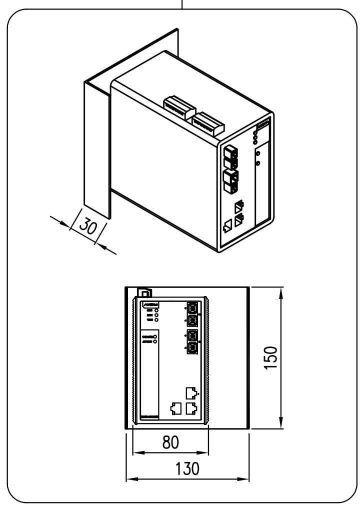


REVERSE SIDE GEARPLATE

ADDITIONAL GEARPLATE
(FRONT HINGEABLE GEAR PLATE)



BATTERY BRACKET DETAIL



ETHERNET SWITCH & MOUNTING PLATE DETAIL

NOTES:

1. PROVIDE ADHESIVE GEARPLATE LABELS ONLY IF EQUIPMENT NOT INSTALLED.
2. PLUG/SOCKET RECEPTACLES ARE TO BE FIXED IN POSITION WHEN GEARPLATE INSTALLED.
3. CIRCUIT BREAKER TO BE USED IF A SECOND SUMP PUMP OR SAMPLING PUMP IS USED. REFER TO SITE SPECIFIC DRAWING DETAILED IN [.001].
4. FAULT INDICATION AUXILIARY CONTACT FROM THE SUMP PUMP MCB.
5. AN ETHERNET CAT5E CABLE SHALL BE PROVIDED COMPLETE WITH RJ45 CONNECTORS AT BOTH ENDS. THE CABLE SHALL BE CONNECTED TO THE RTU CP-30 PORT 2 AND INSTALLED WITHIN THE CABINET. THIS IS IN ORDER TO ENABLE AN EXTERNAL LAPTOP CONNECTION FROM THE FRONT SIDE GEARPLATE WITHOUT THE NEED TO ACCESS THE FULL BACK GEARPLATE.
6. THE NUMBER AND SIZE OF CATHODIC PROTECTION AND CUSTOMER CONNECTION TERMINALS ARE INDICATIVE ONLY AND SITE DEPENDENT.
7. TERMINALS 1 TO 58 MOUNTING LOCATION.
8. TERMINALS 59 TO 60 MOUNTING LOCATION.
9. TERMINALS C1, C2, D1 AND D2 MOUNTING LOCATION.
10. BATTERY IS TO BE INSTALLED WITH BATTERY BRACKET.
11. THE PRESSURE DISPLAY UNIT CONFIGURATION IS SITE DEPENDENT. REFER TO DRAWING [.021].
12. THERMOSTAT IS TO BE MOUNTED ON AN "L" SHAPE BRACKET.
13. THE LABEL FOR THIS BREAKER IS TO BE "SPARE" IF A SUMP PUMP IS NOT INSTALLED ON SITE. REFER TO SITE SPECIFIC DRAWING DETAILED IN [.001].
14. THE RADIO MODEL IS SITE DEPENDENT. REFER TO SITE SPECIFIC DRAWING DETAILED IN [.004].

DRY GEARPLATE BILL OF MATERIALS

ITEM No.	ITEM	MAKE	MODEL	No. OFF
1	230V AC DISTRIBUTION, COMPRISING MCB SWITCHBOARD	VYNCO	GE VCP10	1
	–ISOLATOR 63A	MERLIN GERIN	A9S66163	1
	–6A MCBS	MERLIN GERIN	A9F44106	5
	–40A MCBS	MERLIN GERIN	A9F44140	1
	–10A MCBS	MERLIN GERIN	A9F44110	AS REQUIRED
	–MCB AUXILIARY CONTACT (NOTE 4)	MERLIN GERIN	A9A26927	IF REQUIRED
	–COMB BUSBAR	MERLIN GERIN	A9XPH112	1
	–DIN RAIL			TO SUIT
	–EARTH & NEUTRAL BAR			1
1a	SURGE ARRESTER	SCHNEIDER	iPRD40	1
2	230V AC SOCKET OUTLET, COMPRISING			
	–SOCKET OUTLET	PDL	691 RCD	1
	–MOUNTING BLOCK	PDL	89DP	1
3	RADIO	TRIO	ER45e/QR450 H (NOTE 14)	IF REQUIRED
4	RTU, COMPRISING	KINGFISHER PLUS		1
	–MODULE RACK	KINGFISHER PLUS	BA–6	1
	–POWER SUPPLY MODULE	KINGFISHER PLUS	PS–12	1
	–PROCESSOR MODULE	KINGFISHER PLUS	CP–30	1
	–ANALOG INPUT MODULE	KINGFISHER PLUS	AI–10	1
	–DIGITAL INPUT MODULE	KINGFISHER PLUS	DI–5	1
	–DIGITAL OUTPUT MODULE	KINGFISHER PLUS	DO–2	1
	–COMMUNICATION MODULE	KINGFISHER PLUS	MC–30/31	IF REQUIRED
5	PRESSURE DISPLAY UNIT	REFER SHEET .021		1
6	TERMINALS	REFER SHEET .017		AS DETAILED
7	SIGNAL PLUG/SOCKET RECEPTACLE ASSEMBLY	REFER SHEET .017		1
8	230V AC PLUG/SOCKET RECEPTACLE ASSEMBLY	REFER SHEET .017		2
9	TRUNKING – NARROW SLOT, OPEN	CRITCHLEY BETADUCT		AS DETAILED
10	COMMUNICATIONS CABLE (NOTE 5)	ETHERNET	CAT 5E	1
11	TERMINALS (IF REQUIRED)			IF REQUIRED
12	GEARPLATE MOUNTING HOLE	11ϕ HOLE		4
13	FIBRE TO COPPER CONVERTER	MOXA	EDS 208A	IF REQUIRED
14				IF REQUIRED
B1	FLOW TRANSMITTER NO.1	AS DETAILED IN DWGS	AS DETAILED IN DWGS	IF REQUIRED
B2	FLOW TRANSMITTER NO.2 (IF REQUIRED)	AS DETAILED IN DWGS	AS DETAILED IN DWGS	IF REQUIRED
15	24V POWER SUPPLY	INNOVATIVE ENERGIES		1
16	LIGHTNING PROTECTION UNIT	RF INDUSTRIES	POLYPHASER IS–50NX–CO	IF REQUIRED
17	RELAYS	OMRON	MK–S	IF REQUIRED
18	BATTERIES	YUASA	NP24–12B	1
19	THERMOSTAT	STEGO	KTS 01141	1
20	ETHERNET EXTENDER	MOXA	IEX–402–VDSL2	IF REQUIRED
21	ETHERNET SWITCH	MOXA	EDS 205A/208A OR EDS 505A/508A (MANAGED SWITCH)	IF REQUIRED
22	FIBRE TERMINATION ENCLOSURE	AFC	FDE–12 SC 6–S	IF REQUIRED
23	PROTOCOL CONVERTERS	ICP–DAS	7510	IF REQUIRED
24	CATHODIC PROTECTION TERMINALS (NOTE 6)			IF REQUIRED
25	CUSTOMER CONNECTION TERMINALS (NOTE 6)	PHOENIX CONTACT	UK5N	IF REQUIRED
26	CUSTOMER CONNECTION LOOP ISOLATOR	INTECH	PI–D–X	IF REQUIRED
27	MOUNTING PLATE		ALUMINIUM – DULUX ARCTIC WHITE POWDER COATED	1
28	BATTERY BRACKET		304 STAINLESS STEEL	1
29	THERMOSTAT BRACKET		ALUMINIUM	1
30	DRY GEARPLATE		ALUMINIUM – 5mm THICK DULUX ARCTIC WHITE POWDER COATED	1

DRY GEARPLATE LABEL SCHEDULE

LABEL No.	INSCRIPTION	TYPE	LOCATION
a	MAIN SWITCH	ENGRAVED	BELOW SWITCH
b	RCD S/O	ENGRAVED	BELOW MCB
c	12VDC POWER SUPPLY	ENGRAVED	BELOW MCB
d	CHLORINE/pH	ENGRAVED	BELOW MCB
e	TURBIDITY	ENGRAVED	BELOW MCB
f	FAN	ENGRAVED	BELOW MCB
g	SIGNALS	CABLE FERRULE	ON RECEPTACLE CABLE
h	CHLORINE/pH 230V AC	CABLE FERRULE	ON RECEPTACLE CABLE
i	TURBIDITY 230V AC	CABLE FERRULE	ON RECEPTACLE CABLE
j	FLOW TRANSMITTER 1	ADHESIVE TAPE	ON GEARPLATE IN TRANSMITTER POSTION. (NOTE 1)
k	FLOW TRANSMITTER 2	ADHESIVE TAPE	ON GEARPLATE IN TRANSMITTER POSTION. (NOTE 1)
l	SPARE (NOTE 3)	ENGRAVED	BELOW MCB
m	SUMP PUMP NOTE 13	ENGRAVED	BELOW MCB
n	SURGE ARRESTER	ENGRAVED	BELOW MCB
p	SURGE ARRESTER UNIT	ENGRAVED	BELOW UNIT

CONSTRUCTION ISSUE

FACILITY CODE	AREA
–	93

ISSUE	DATE	AMENDMENT	BY	APPD.
E	11/15	ISSUED FOR CONSTRUCTION – REVISED	A.S.	D.I.
D	10/15	ISSUED FOR CONSTRUCTION – REVISED	A.S.	D.I.
C	06/15	ISSUED FOR CONSTRUCTION – REVISED	A.S.	D.I.
B	05/15	ISSUED FOR CONSTRUCTION – REVISED	A.S.	D.I.
G	04/21	12V DC REPLACED BY 24V DC AND OTHER NOTES AMENDED	R.X.	J.D.
F	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	

T Tan	01/15
I Linstrom	01/15
L Bera	01/15
S Fogamalo	01/15

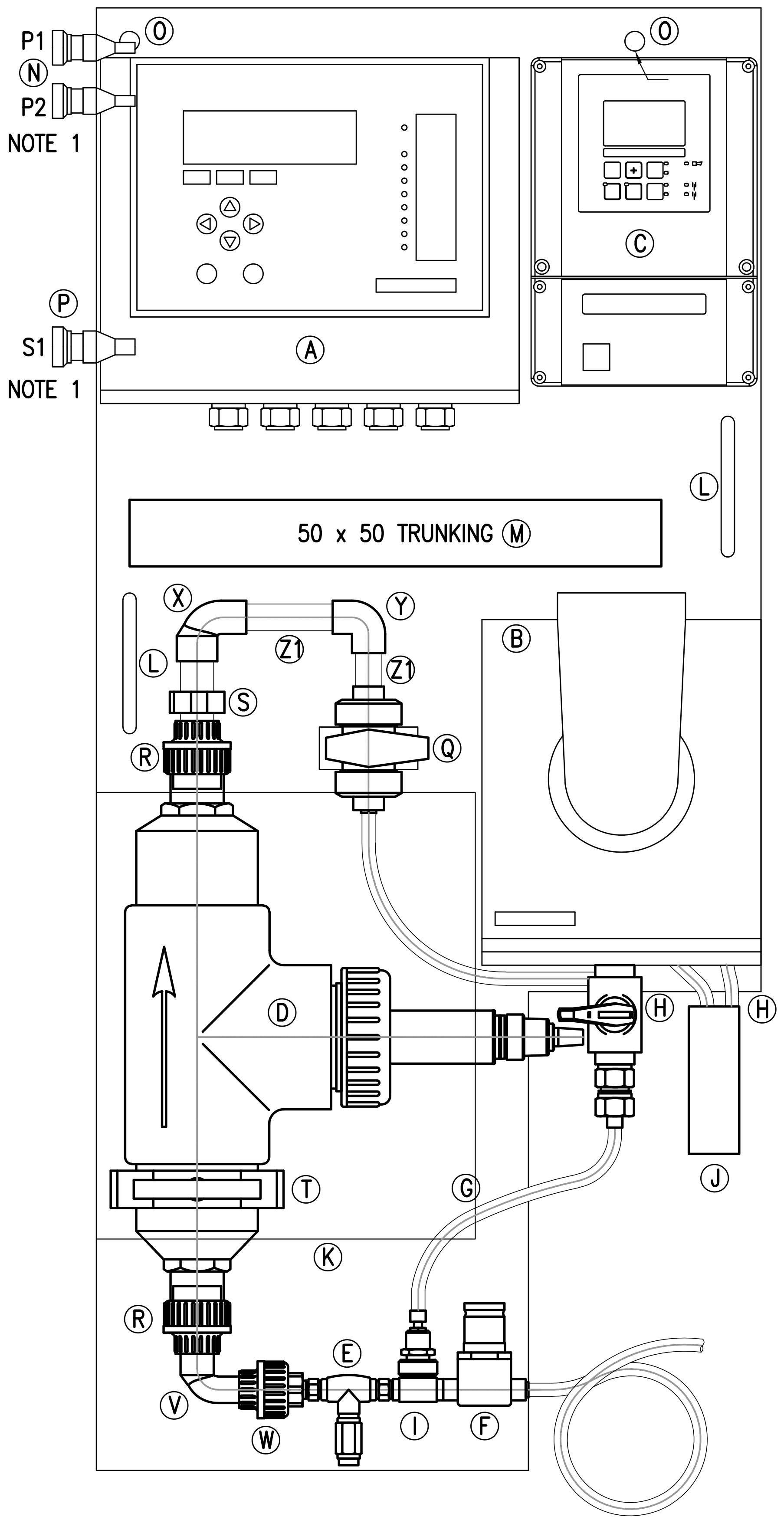
OPERATIONS

INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
DRY GEARPLATE LAYOUT

CAD FILE 2010998.018G DATE 23:04:2021
ORIGINAL SCALE A3 – CONTRACT No.
REF No. – –
DWG No. 2010998 .018 G



LIST OF MATERIALS

ITEM NO.	ITEM	MAKE	QTY
A	CHLORINE/pH TRANSMITTER	SIEMENS	1
B	CHLORINE/pH SENSOR	SIEMENS	1
C	TURBIDITY TRANSMITTER	ENDRESS+HAUSER	1
D	TURBIDITY SENSOR	ENDRESS+HAUSER	1
E	1/2" RELIEF VALVE SET TO 2 BAR G + 1/2" BRASS TEE	SWAGEOK	1
F	1/4" FLOW REGULATOR S/S SET TO 32 LITRES PER MINUTE	SMC	1
G	REINFORCED PLASTIC HOSE RATED TO MINIMUM 5 BAR GAUGE OPERATING PRESSURE	SMC	1
H	DRAIN HOSES SUPPLIED WITH SENSOR		2
I	1/4" BSP BRASS TEE	SMC	1
J	PVC DRAIN (NOTE 3)		1
K	GEAR PLATE – 6mm POWDER COATED ALUMINIUM		1
L	HANDLES – STAINLESS STEEL 96mm		2
M	TRUNKING – NARROW SLOT OPEN 50x50mm		TO SUIT
N	PLUG/SOCKET 230V AC ASSEMBLY (NOTE 2)		2
O	GEAR PLATE MOUNTING HOLES – 15mm ø		2
P	PLUG/SOCKET SIGNAL WIRING ASSEMBLY (NOTE 2)		1
Q	GF523 METERING VALVE C/W MOUNTING PLATE		1
R	25mm PVC UNION	GEORG FISCHER	2
S	25mm CLIP–IT SADDLE + 2x SPACERS	GEORG FISCHER	1
T	90mm CLIP–IT SADDLE + SAFETY CLIP	GEORG FISCHER	1
U	20mm PRO–FIT REDUCING BUSH	GEORG FISCHER	1
V	20–16mm PRO–FIT 90° ELBOW	GEORG FISCHER	1
W	20mm PVC/BRASS UNION 20–1/2" BSP	GEORG FISCHER	1
X	25–20mm PRO–FIT 90° ELBOW	GEORG FISCHER	1
Y	20mm 90° ELBOW	GEORG FISCHER	1
Z	25mm METRIC PIPE PVC	GEORG FISCHER	1
Z1	20mm METRIC PIPE PVC CLEAR	GEORG FISCHER	2

LABELS

LABEL NO.	DESCRIPTION	TYPE	LOCATION
P1	CHLORINE/pH 230V AC	CABLE FERRULE	ON PLUG CABLE
P2	TURBIDITY 230V AC	CABLE FERRULE	ON PLUG CABLE
S1	SIGNALS	CABLE FERRULE	ON PLUG CABLE

NOTES:

1. LEADS FOR PLUG/SOCKET ASSEMBLIES TO REACH RECEPTACLE POSITION.
2. REFER TO DRAWING [.017] FOR PLUG CONNECTION DETAILS.
3. REFER TO DRAWING [.055] FOR TAP AND DRAIN DETAILS.

FACILITY CODE	AREA
–	93

CONSTRUCTION ISSUE

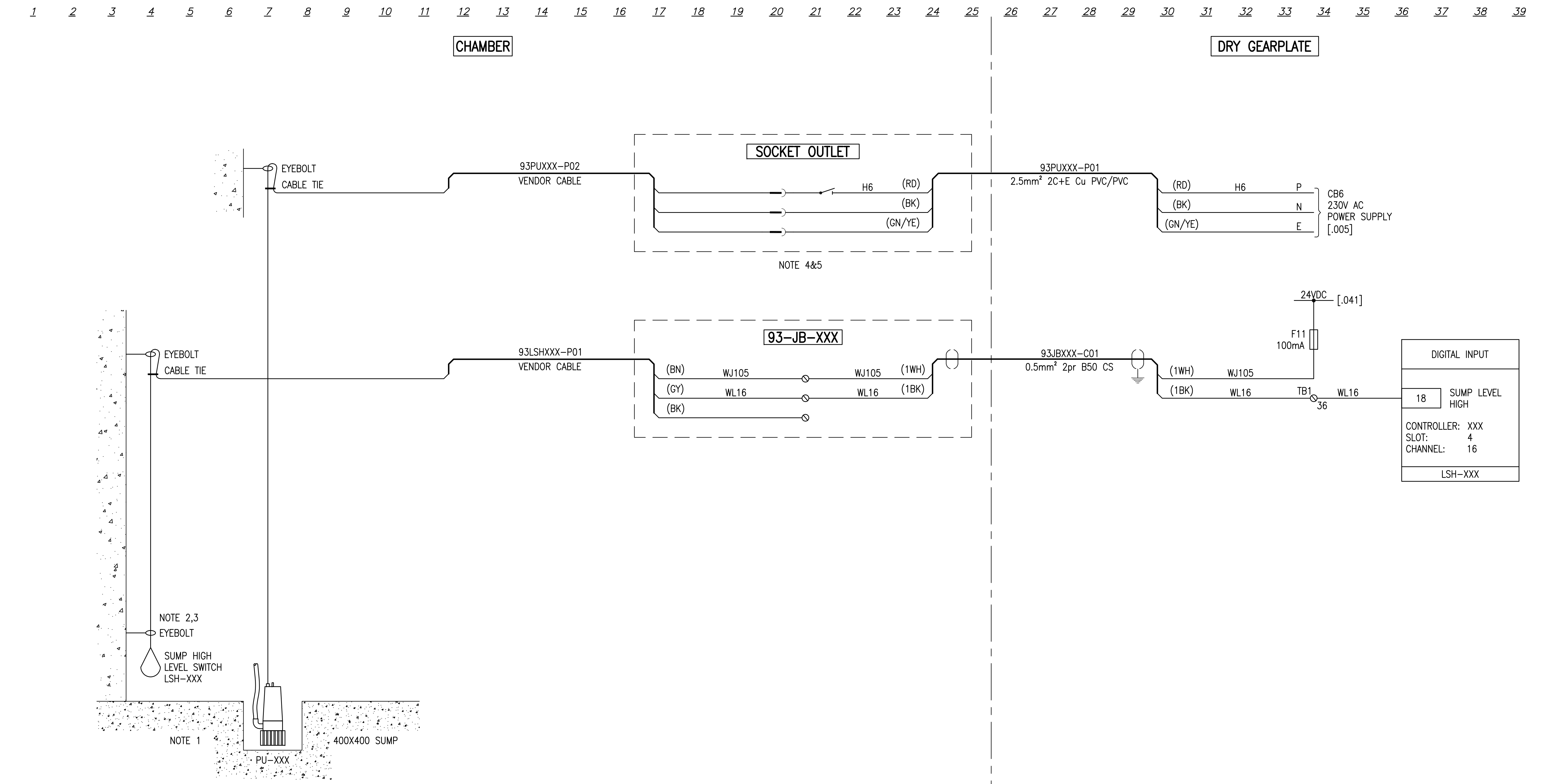
ISSUE	DATE	AMENDMENT	BY	APPD.
B	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
A	11/15	ISSUED FOR CONSTRUCTION – REVISED	A.S.	D.I.
–	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14	
D Ibrahim	09/14	OPERATIONS
R Matthews	09/14	
S Fagamalo	09/14	INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
WET GEARPLATE GENERAL LAYOUT 1 FOR DEPOLOX 3 PLUS/5 & CUM253

CAD FILE 2010998.019B — DATE 22:05:2017
ORIGINAL SCALE A3 – — CONTRACT No.
REF No. – —
DWG No. 2010998 .019 B



NOTES:

1. SUMP PUMP: C/W STAINLESS STEEL SCREEN OR SHOFOU SFA-0512.
2. TYPE: LEVEL SWITCH
   MAKE: FLYGT
   MODEL: EMN-10
3. FLOAT SWITCH SHALL BE MOUNTED 50mm ABOVE FLOOR LEVEL. EYEBOLT SHALL PROTRUDE NO MORE THAN 50mm FROM WALL. EYEBOLT SHALL BE MOUNTED 300mm ABOVE FLOOR LEVEL.
4. TYPE: SINGLE PHASE SOCKET UNIT
   MAKE: PDL
   MODEL: 56CV315
5. PLUG, SOCKET, JUNCTION BOX, AND TOP EYEBOLT (IN THE PUMP CABLE) TO BE MOUNTED 300mm FROM CHAMBER ROOF.

CONSTRUCTION ISSUE

FACILITY CODE	AREA
-	93

ISSUE	DATE	AMENDMENT	BY	APPD.
B	04/21	DC SUPPLY CHANGED FROM 12V TO 24V	R.X.	J.D.
A	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
-	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14
D Ibrahim	09/14
R Matthews	09/14
S Fagamalo	09/14

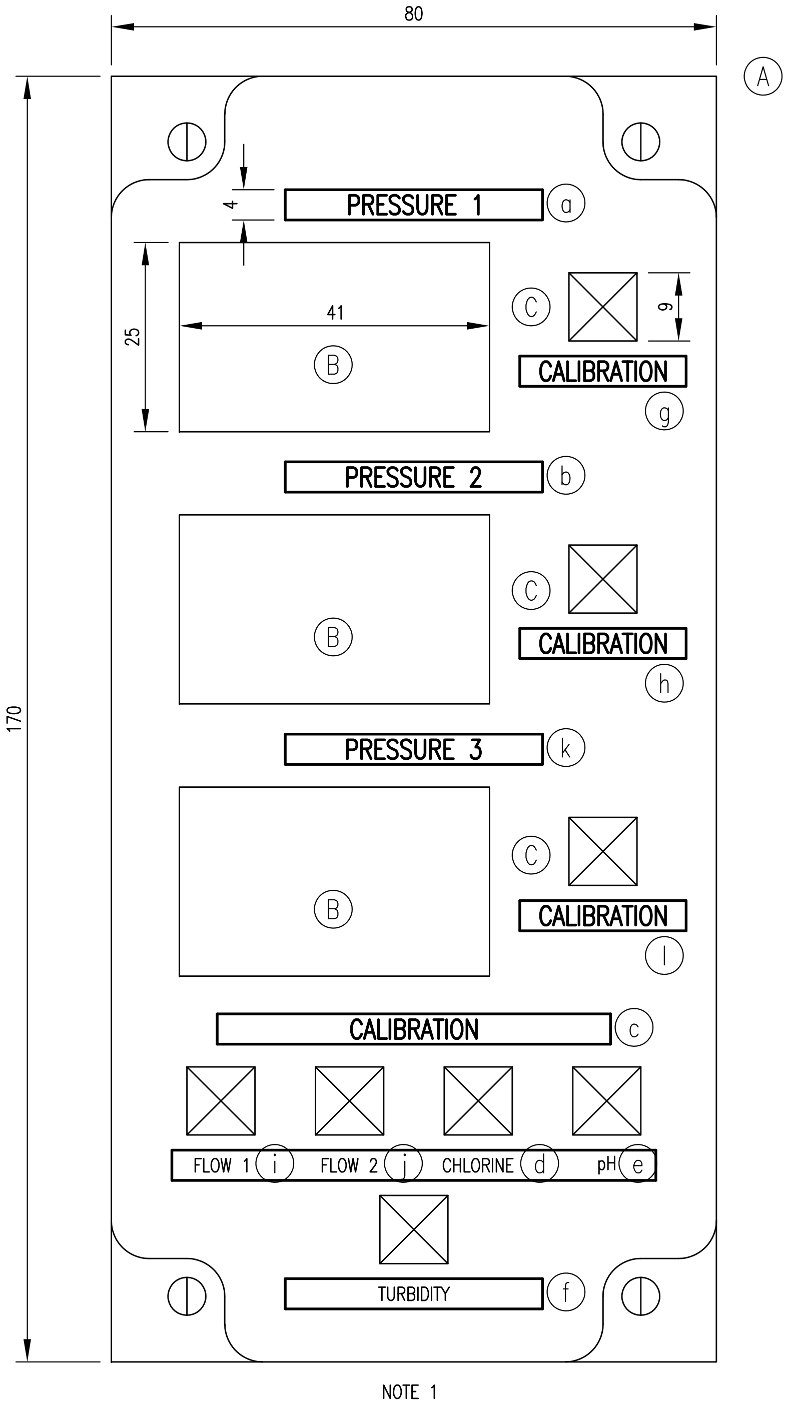
OPERATIONS

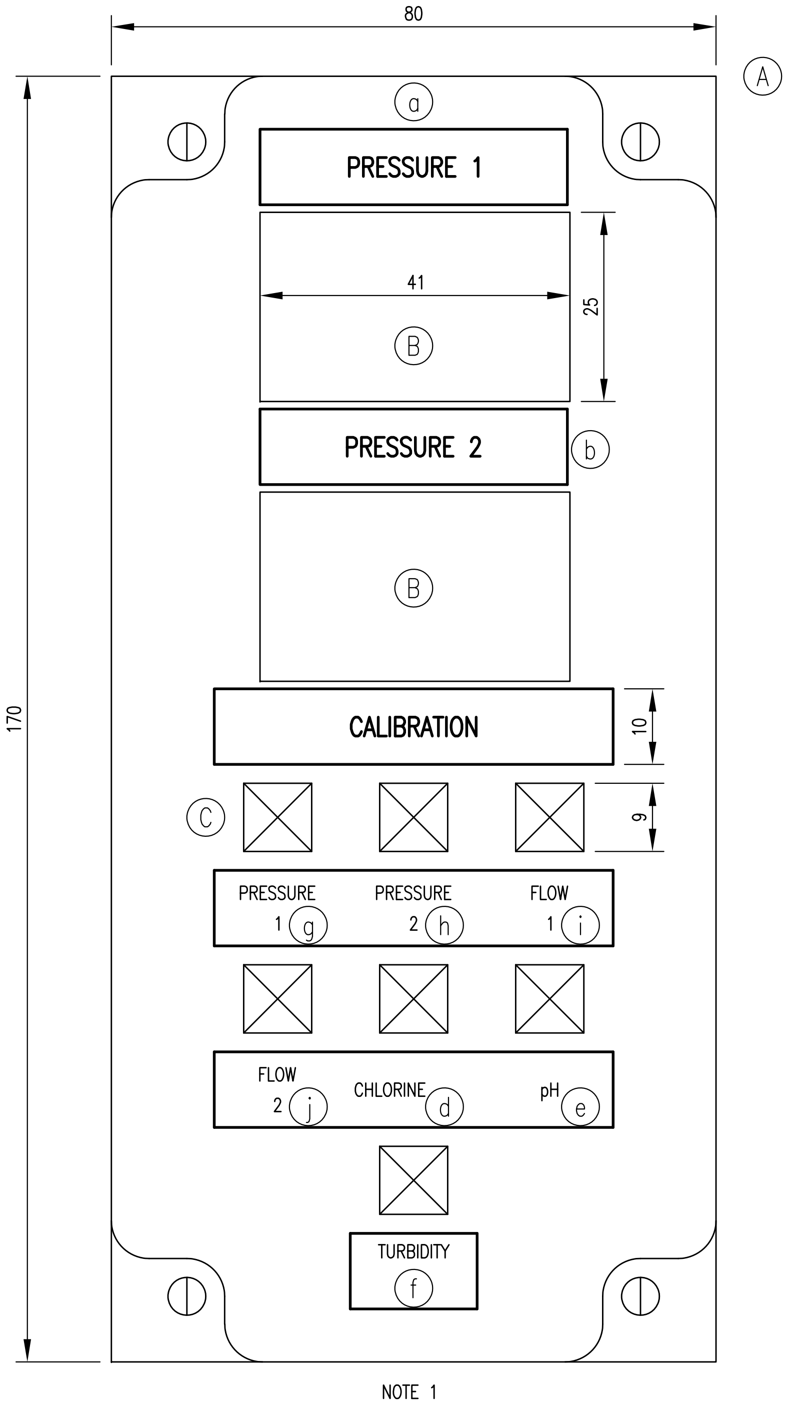
INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
PU-XXX SUMP PUMP AND LSH-XXX HIGH LEVEL ALARM SCHEMATIC

CAD FILE 2010998.020B	DATE 23:04:2021
ORIGINAL SCALE A3 -	CONTRACT No.
REF No. -	-
DWG No. 2010998 .020	B





PRESSURE DISPLAY UNIT BILL OF MATERIALS

ITEM No.	ITEM	MAKE	MODEL	No./UNIT
A	ENCLOSURE, 80w x 170h x 65d	FIBOX	PC D 65 G	1
B	LCD DISPLAY, LOOP POWERED, BEZEL MOUNT	MODUTEC	1030-0019 WITH 00-922233-001 BEZEL	2 OR 3 (NOTE 1)
C	ILLUMINATED PUSH BUTTONS (8MM, RED)	OMRON (NOTE 2)	A3DA-90AI-00ER (NOTE 2)	7 OR 8 (NOTE 1)
	INTERNAL PANEL WIRING	AFLEX	CT1B 1mm²	

LABEL No.	INSCRIPTION	TYPE	LOCATION
a	PRESSURE 1	ENGRAVED	ON ENCLOSURE
b	PRESSURE 2	ENGRAVED	ON ENCLOSURE
c	CALIBRATION	ENGRAVED	ON ENCLOSURE
d	CHLORINE	ENGRAVED	ON ENCLOSURE
e	pH	ENGRAVED	ON ENCLOSURE
f	TURBIDITY	ENGRAVED	ON ENCLOSURE
g	PRESSURE 1 CALIBRATION	ENGRAVED	ON ENCLOSURE
h	PRESSURE 2 CALIBRATION	ENGRAVED	ON ENCLOSURE
i	FLOW 1	ENGRAVED	ON ENCLOSURE
j	FLOW 2	ENGRAVED	ON ENCLOSURE
k	PRESSURE 3	ENGRAVED	ON ENCLOSURE
l	PRESSURE 3 CALIBRATION	ENGRAVED	ON ENCLOSURE

NOTES:

1. THE PRESSURE DISPLAY UNIT LAYOUT IS SITE AND EQUIPMENT NUMBER DEPENDENT. REFER TO SITE SPECIFIC DRAWING SCHEDULE DETAILED IN [.001].
2. THE CONTRACTOR SHALL SUPPLY ONE OF THE ALTERNATIVE OPTIONS THAT ARE DETAILED BELOW SHOULD THE OMRON UNITS BE UNAVAILABLE:

   OPTION 1 = MAKE: IDEC MODEL: AL8Q-M11-R
   OPTION 2 = MAKE: NKK MODEL: HB15SKW01-5C-CB

   THE CONTRACTOR SHALL ENSURE THAT THE SAME MAKE AND MODEL ARE USED FOR ALL THE PUSHBUTTONS.
   THE CONTRACTOR SHALL ALSO ENSURE THAT AS PART OF THE AS-BUILDING A NOTE IS ADDED TO THE SITE SPECIFIC DRAWING SCHEDULE [.001]. THE NOTE SHALL DETAIL THE EXACT MAKE AND MODEL OF THE PUSHBUTTONS THAT ARE USED FOR THAT PARTICULAR SITE.

CONSTRUCTION ISSUE

FACILITY CODE	AREA
–	93

ISSUE	DATE	AMENDMENT	BY	APPD.
C	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
B	10/15	ISSUED FOR CONSTRUCTION – REVISED	A.S.	D.I.
A	06/15	ISSUED FOR CONSTRUCTION – REVISED	A.S.	D.I.
–	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14
D Ibrahim	09/14
R Matthews	09/14
S Fagamalo	09/14

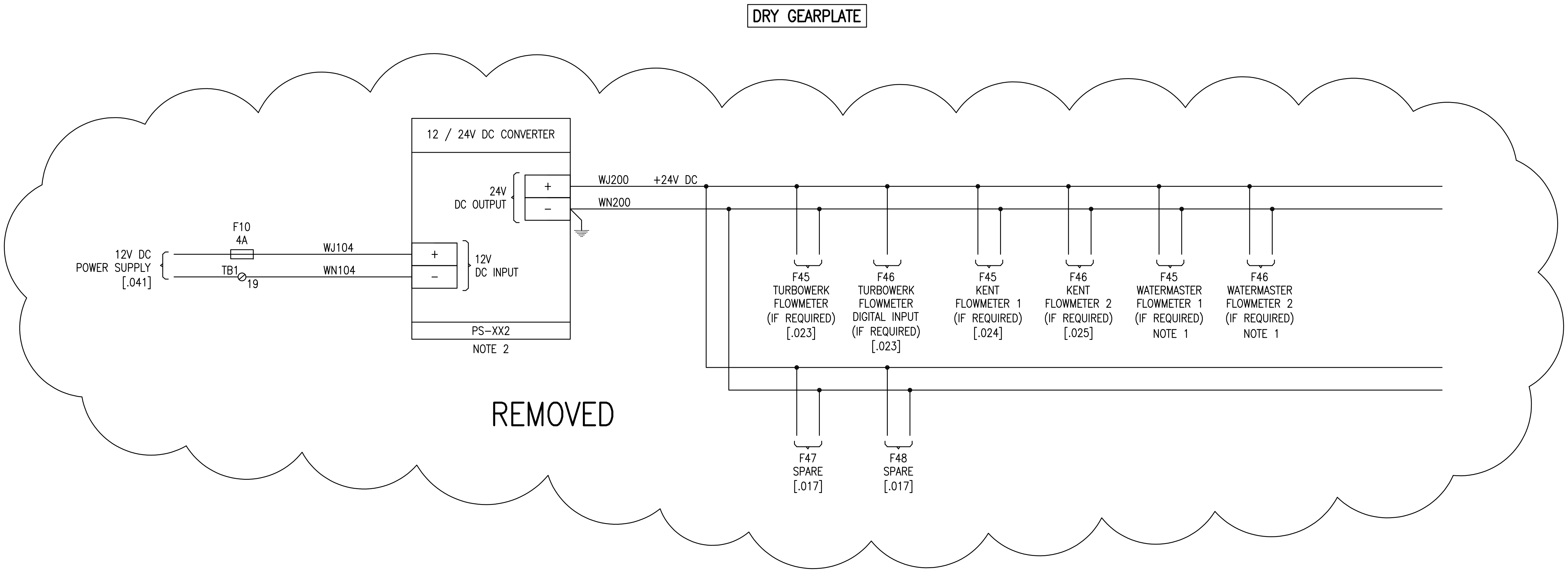
OPERATIONS
INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
PRESSURE DISPLAY UNIT

CAD FILE 2010998.021C DATE 22:05:2017
ORIGINAL SCALE A3 N.T.S.
CONTRACT No.
REF No. – –
DWG No. 2010998 .021 C

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39



NOTES:

1. WATERMASTER MODEL IS SITE DEPENDENT. REFER TO SITE SPECIFIC DRAWING SCHEDULE DETAILED IN THE [.001].
2. TYPE: 12/24V DC CONVERTER
   MAKE: PHOENIX CONTACT
   MODEL: MINI−PS−12−24VDC/24DC/1.

CONSTRUCTION ISSUE

FACILITY CODE	AREA
−	93

ISSUE	DATE	AMENDMENT	BY	APPD.
B	04:21	HISTORICAL RECORD OF 12V DC POWER SUPPLY REMOVED	R.Xu	
A	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
−	09:14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14
D Ibrahim	09/14
R Matthews	09/14
S Fagamalo	09/14

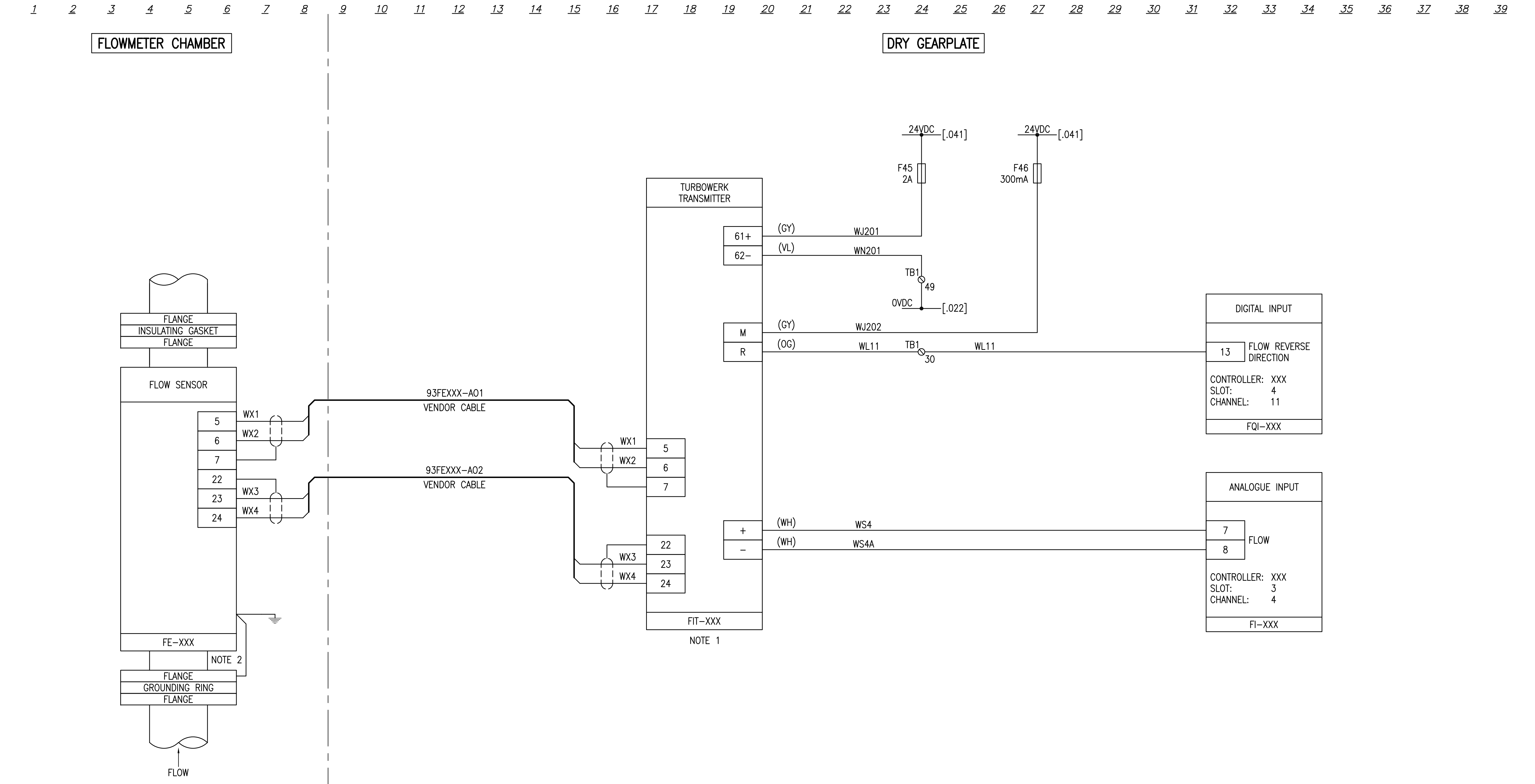
OPERATIONS

INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
24V DC DISTRIBUTION SCHEMATIC

CAD FILE 2010998.022B DATE 23:04:2021
ORIGINAL SCALE A3 − CONTRACT No.
REF No. − −
DWG No. 2010998 .022 B



NOTES:

1. TYPE – FLOWMETER TRANSMITTER
   MAKE – TURBO
   MODEL – TURBOWERK ndf/P2
2. TYPE – FLOW SENSOR
   MAKE – TURBO
   MODEL – TURBOWERK MG711/E-1

CONSTRUCTION ISSUE

FACILITY CODE	AREA
–	93

ISSUE	DATE	AMENDMENT	BY	APPD.
B	04/21	ISSUED FOR CONSTRUCTION UPDATED	R.X.	J.D.
A	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
–	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14
D Ibrahim	09/14
R Matthews	09/14
S Fagamalo	09/14

OPERATIONS

INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
FIT–XXX TURBOWERK FLOWMETER LOOP SCHEMATIC

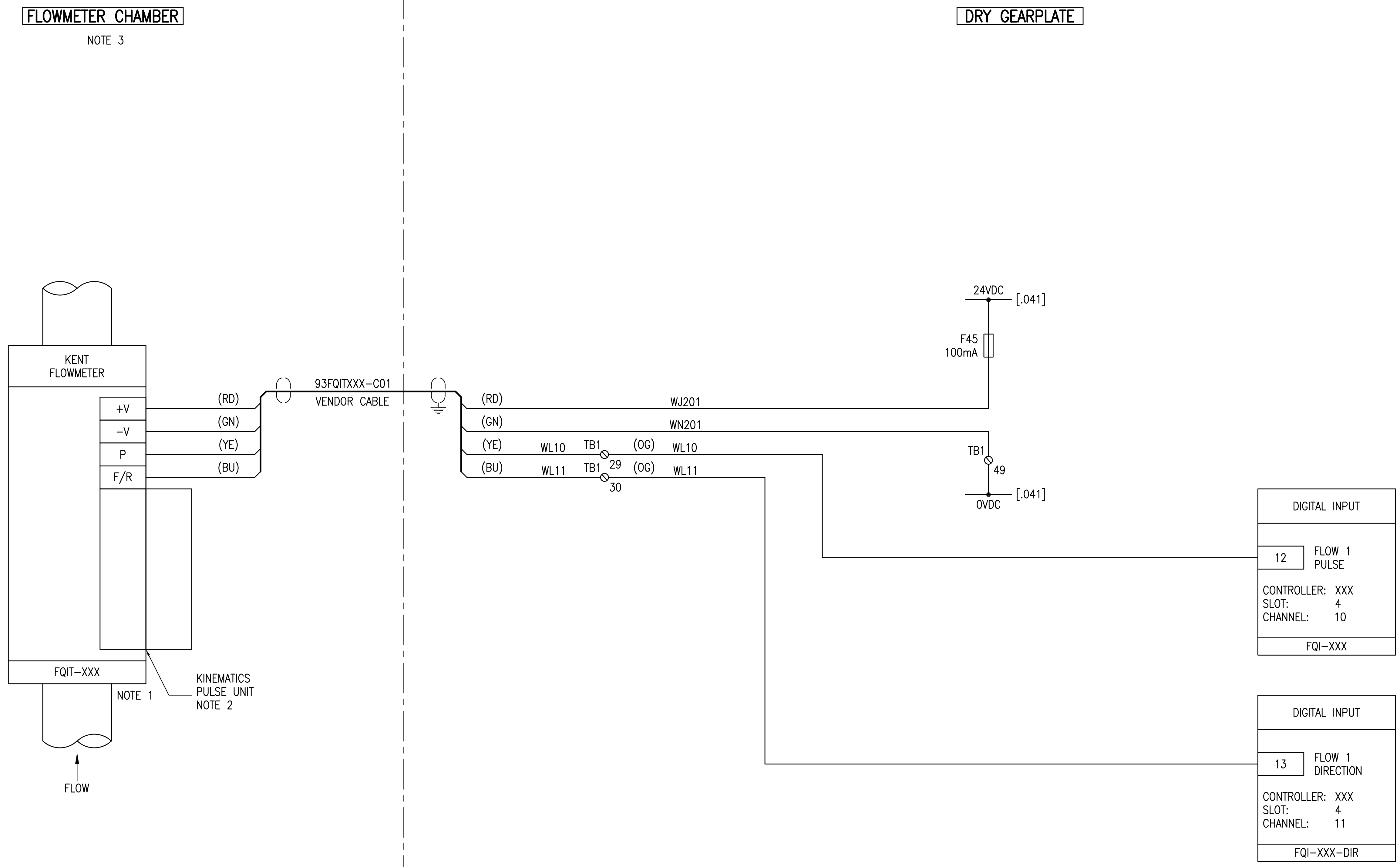
CAD FILE 2010998.023B DATE 23:04:2021

ORIGINAL SCALE A3 – CONTRACT No.

REF No. – –

DWG No. 2010998 .023 B

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39



NOTES:

1. TYPE – MECHANICAL FLOWMETER
   MAKE – KENT
2. TYPE – PULSE UNIT
   MAKE – KINEMATICS
   MODEL – METERPLATE
3. LOCATION AS DETAILED WITHIN THE SITE SPECIFIC CONTROL SYSTEM OVERVIEW [.002].

FACILITY CODE	AREA
–	93

CONSTRUCTION ISSUE

ISSUE	DATE	AMENDMENT	BY	APPD.
B	04/21	ISSUED FOR CONSTRUCTION UPDATED	R.X.	J.D.
A	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
–	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14
D Ibrahim	09/14
R Matthews	09/14
S Fagamalo	09/14

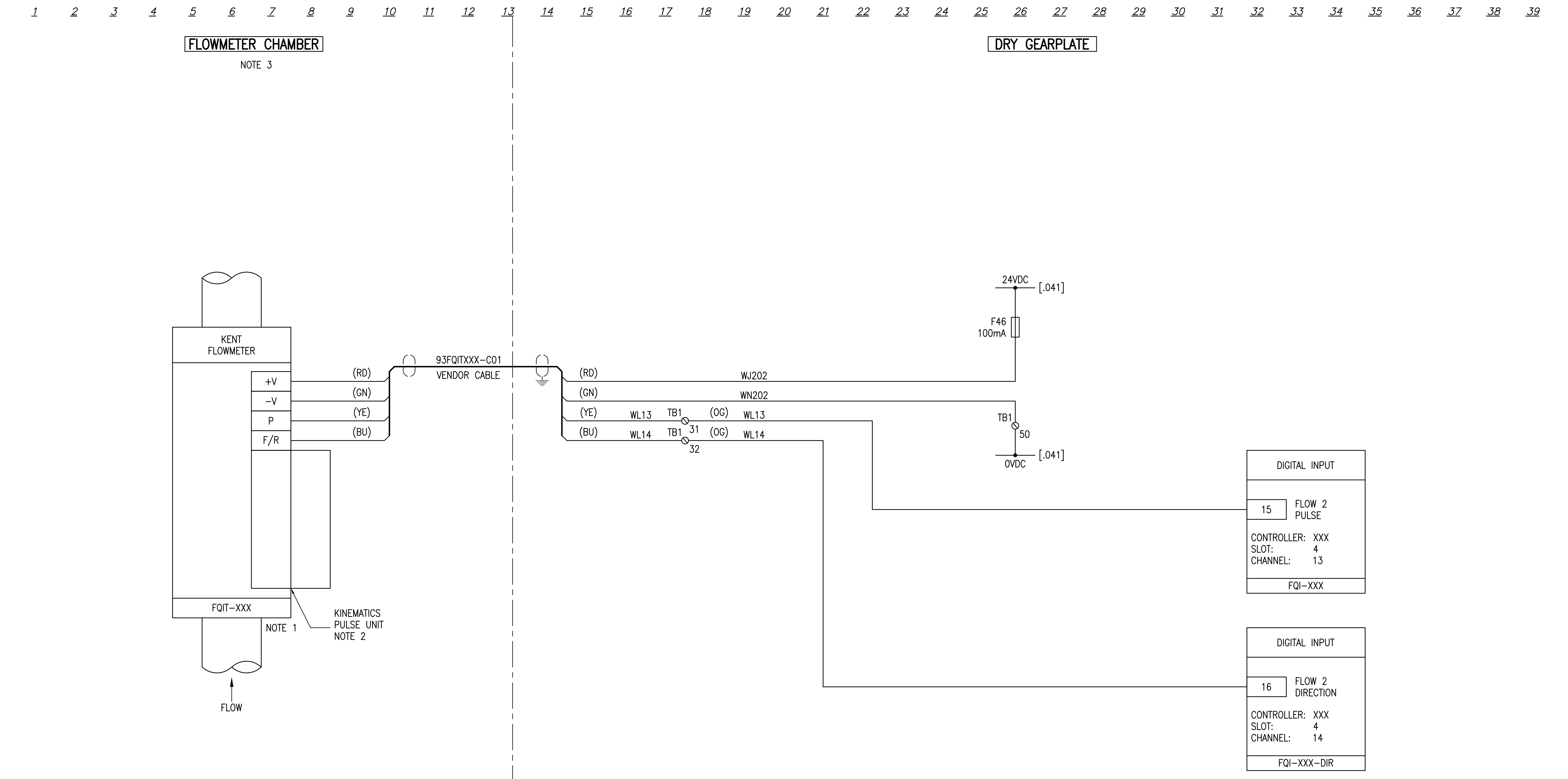
OPERATIONS

INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
FQIT-XXX KENT FLOWMETER 1 LOOP SCHEMATIC

CAD FILE 2010998.024B	DATE 23:04:2021
ORIGINAL SCALE A3 –	CONTRACT No.
REF No. –	–
DWG No. 2010998 .024	B



NOTES:

1. TYPE − MECHANICAL FLOWMETER
   MAKE − KENT
2. TYPE − PULSE UNIT
   MAKE − KINEMATICS
   MODEL − METERPLATE
3. LOCATION AS DETAILED WITHIN THE SITE SPECIFIC CONTROL SYSTEM OVERVIEW [.002].

CONSTRUCTION ISSUE

FACILITY CODE	AREA
−	93

ISSUE	DATE	AMENDMENT	BY	APPD.
B	04/21	ISSUED FOR CONSTRUCTION UPDATED	R.X.	J.D.
A	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
−	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14
D Ibrahim	09/14
R Matthews	09/14
S Fagamalo	09/14

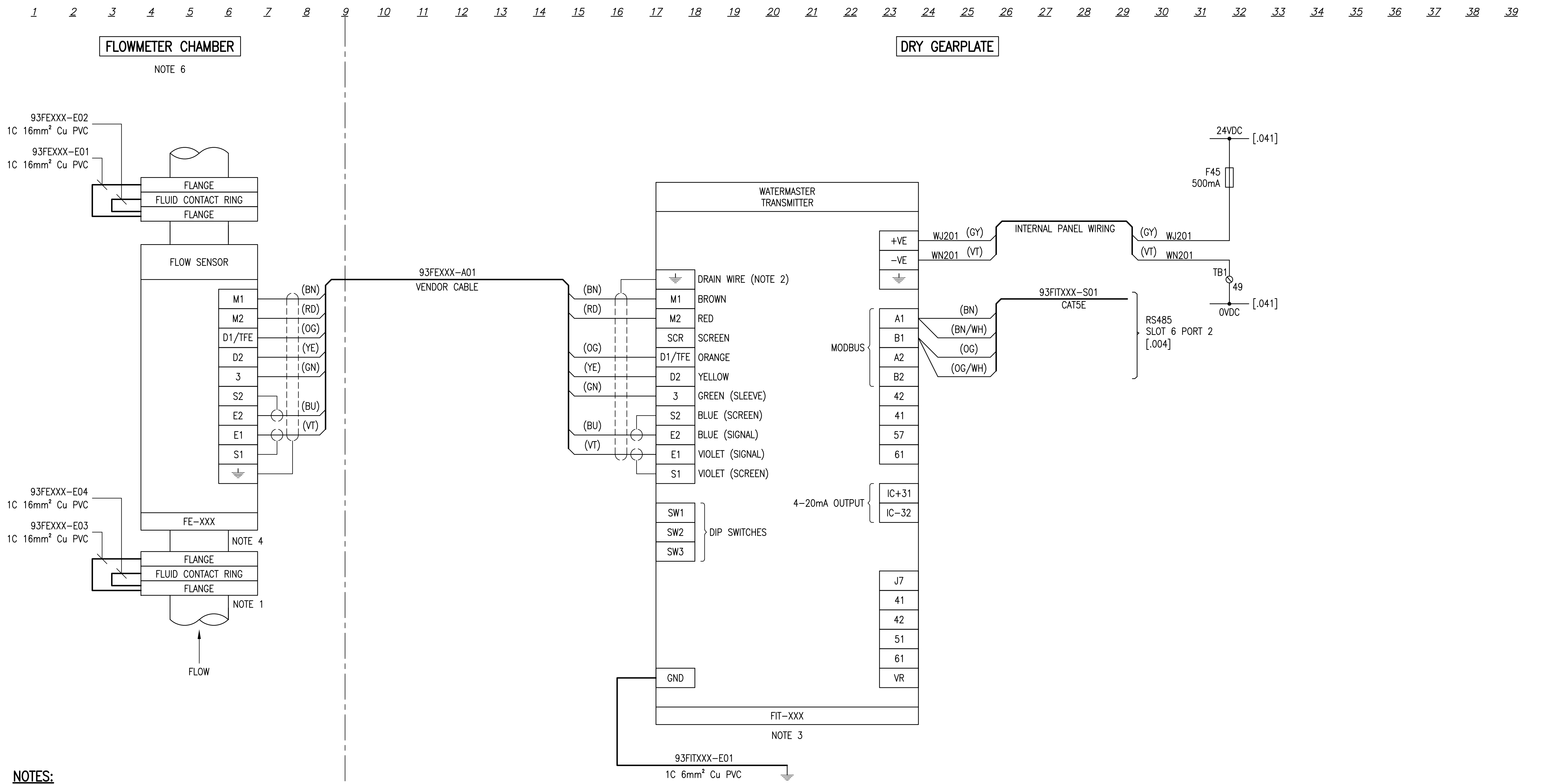
OPERATIONS

INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
FQIT−XXX KENT FLOWMETER 2 LOOP SCHEMATIC

CAD FILE	2010998.025B
DATE	23:04:2021
ORIGINAL SCALE A3	−
CONTRACT No.	
REF No.	− −
DWG No.	2010998 .025 B



NOTES:

1. FOR EARTHING RING AND INSTALLATION DETAIL REFER TO DRAWING 2001979.135 OR 2001979.136 - DEPENDENT ON INSTALLATION.
2. FOR CATHODICALLY PROTECTED SYSTEM CONNECT THE DRAIN WIRE TO TERMINAL SCR AS THERE WILL BE NO EARTH SCREW.
3. TYPE - FLOWMETER TRANSMITTER
   MAKE - ABB
   MODEL - WATERMASTER
4. TYPE - FLOW SENSOR
   MAKE - ABB
   MODEL - WATERMASTER SENSOR
5. PIN CONFIGURATION AT THE RTU PROCESSOR/COMMUNICATION MODULE REFER DRAWING [.004].
6. LOCATION AS DETAILED WITHIN THE SITE SPECIFIC CONTROL SYSTEM OVERVIEW [.002].

FACILITY CODE	AREA
-	93

CONSTRUCTION ISSUE

ISSUE	DATE	AMENDMENT	BY	APPD.
B	04/21	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	R.X.	J.D.
A	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
-	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S	Fagamalo	09/14
D	Ibrahim	09/14
R	Matthews	09/14
S	Fagamalo	09/14

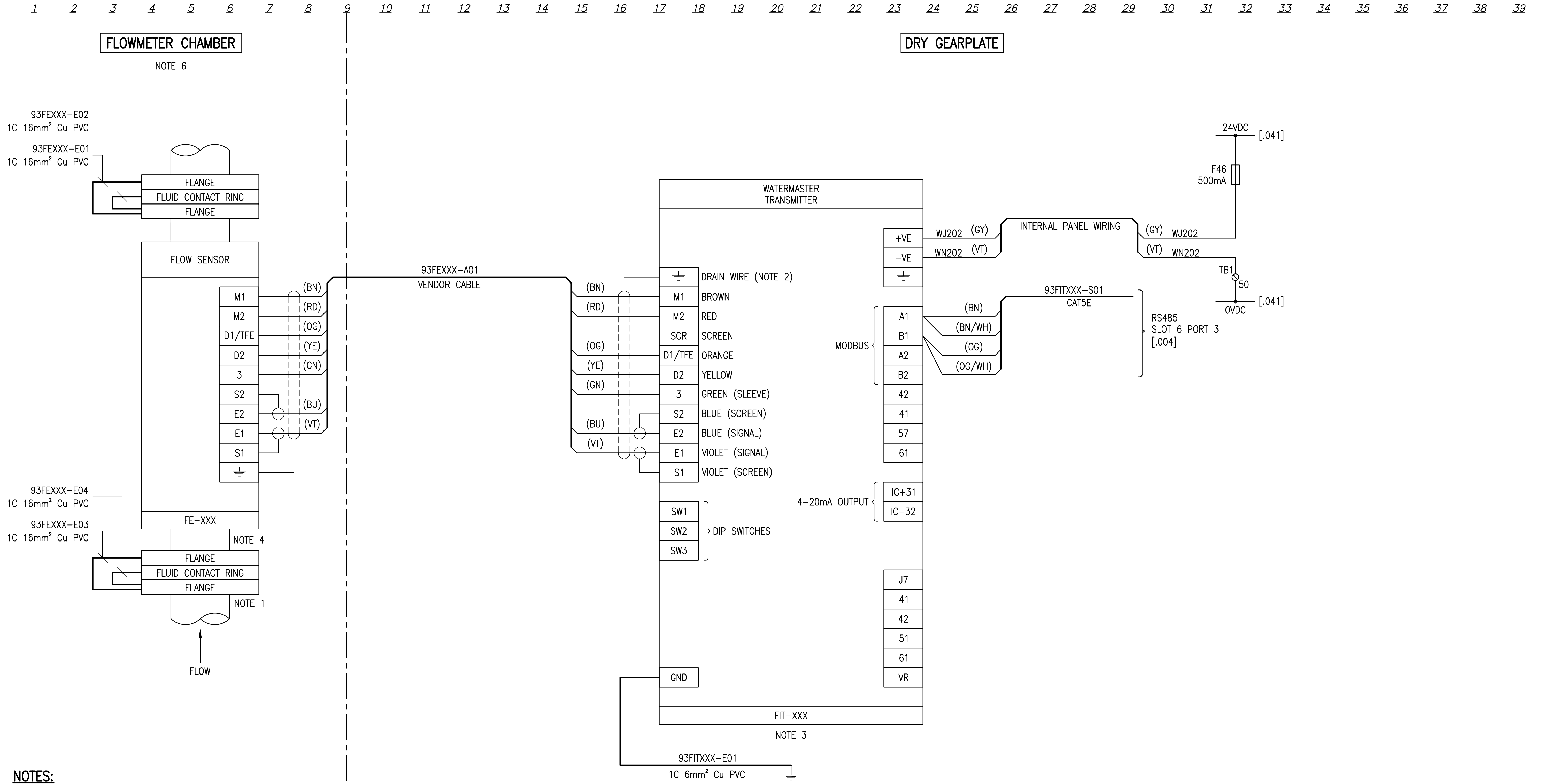
OPERATIONS

INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
FIT-XXX WATERMASTER FLOWMETER 1 LOOP SCHEMATIC (SERIAL COMMS)

CAD FILE	2010998.026B	DATE	23:04:2021
ORIGINAL SCALE A3	-	CONTRACT No.	
REF No.	-		-
DWG No.	2010998	.026	B



NOTES:

1. FOR EARTHING RING AND INSTALLATION DETAIL REFER TO DRAWING 2001979.135 OR 2001979.136 – DEPENDENT ON INSTALLATION.
2. FOR CATHODICALLY PROTECTED SYSTEM CONNECT THE DRAIN WIRE TO TERMINAL SCR AS THERE WILL BE NO EARTH SCREW.
3. TYPE – FLOWMETER TRANSMITTER
   MAKE – ABB
   MODEL – WATERMASTER
4. TYPE – FLOW SENSOR
   MAKE – ABB
   MODEL – WATERMASTER SENSOR
5. PIN CONFIGURATION AT THE RTU PROCESSOR/COMMUNICATION MODULE REFER DRAWING [.004].
6. LOCATION AS DETAILED WITHIN THE SITE SPECIFIC CONTROL SYSTEM OVERVIEW [.002].

CONSTRUCTION ISSUE

FACILITY CODE	AREA
–	93

ISSUE	DATE	AMENDMENT	BY	APPD.
B	04/21	CONSTRUCTION ISSUE UPDATED	R.X.	J.D.
A	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
–	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S	Fagamalo	09/14
D	Ibrahim	09/14
R	Matthews	09/14
S	Fagamalo	09/14

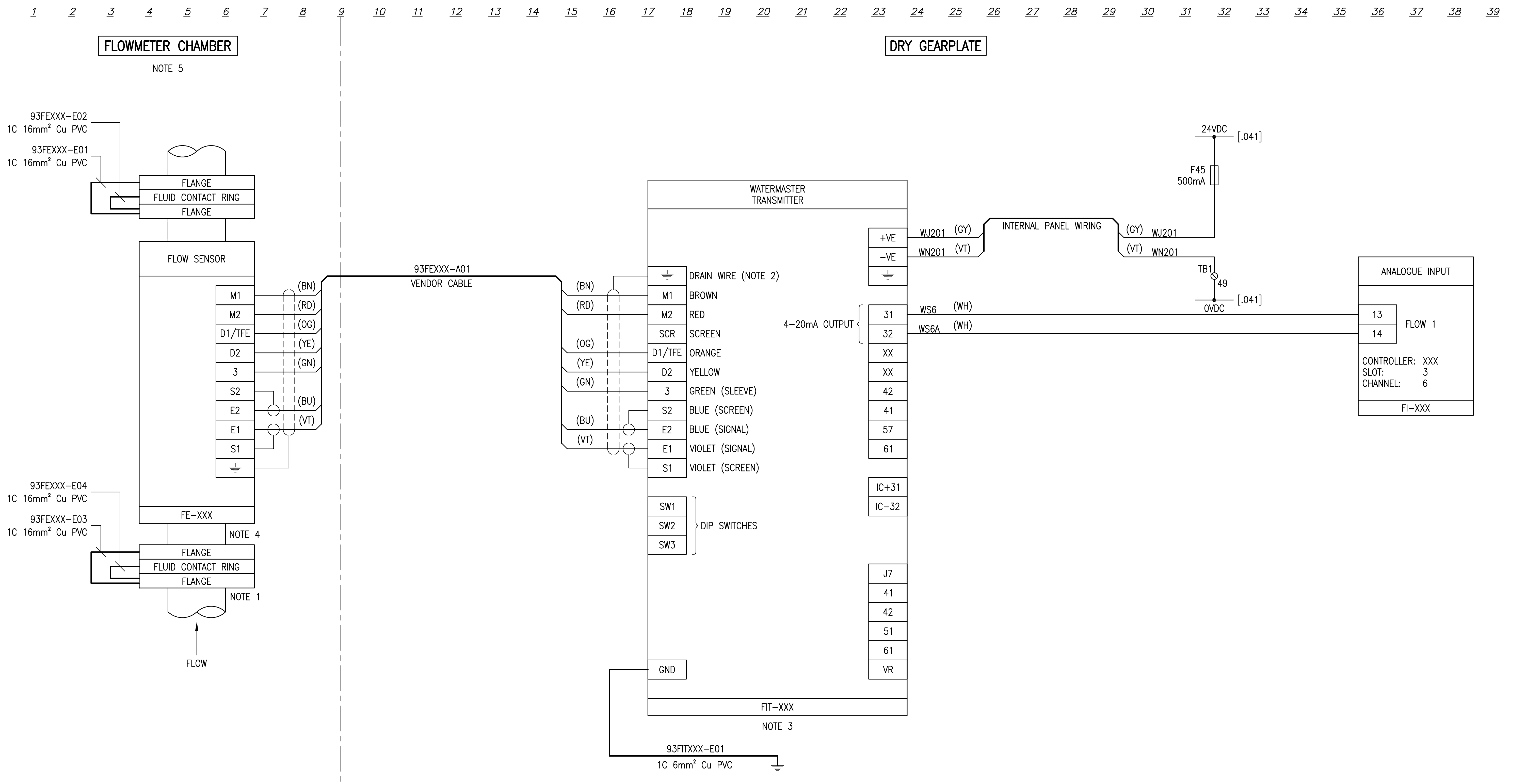
OPERATIONS

INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
FIT-XXX WATERMASTER FLOWMETER 2 LOOP SCHEMATIC (SERIAL COMMS)

CAD FILE 2010998.027B DATE 23:04:2021
ORIGINAL SCALE A3 –
CONTRACT No.
REF No. – –
DWG No. 2010998 .027 B



NOTES:

1. FOR EARTHING RING AND INSTALLATION DETAIL REFER TO DRAWING 2001979.135 OR 2001979.136 – DEPENDENT ON INSTALLATION.
2. FOR CATHODICALLY PROTECTED SYSTEM CONNECT THE DRAIN WIRE TO TERMINAL SCR AS THERE WILL BE NO EARTH SCREW.
3. TYPE – FLOWMETER TRANSMITTER
   MAKE – ABB
   MODEL – WATERMASTER
4. TYPE – FLOW SENSOR
   MAKE – ABB
   MODEL – WATERMASTER SENSOR
5. LOCATION AS DETAILED WITHIN THE SITE SPECIFIC CONTROL SYSTEM OVERVIEW.

CONSTRUCTION ISSUE

FACILITY CODE	AREA
–	93

ISSUE	DATE	AMENDMENT	BY	APPD.
B	04/21	CONSTRUCTION ISSUE UPDATED	R.X.	J.D.
A	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
–	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14
D Ibrahim	09/14
R Matthews	09/14
S Fagamalo	09/14

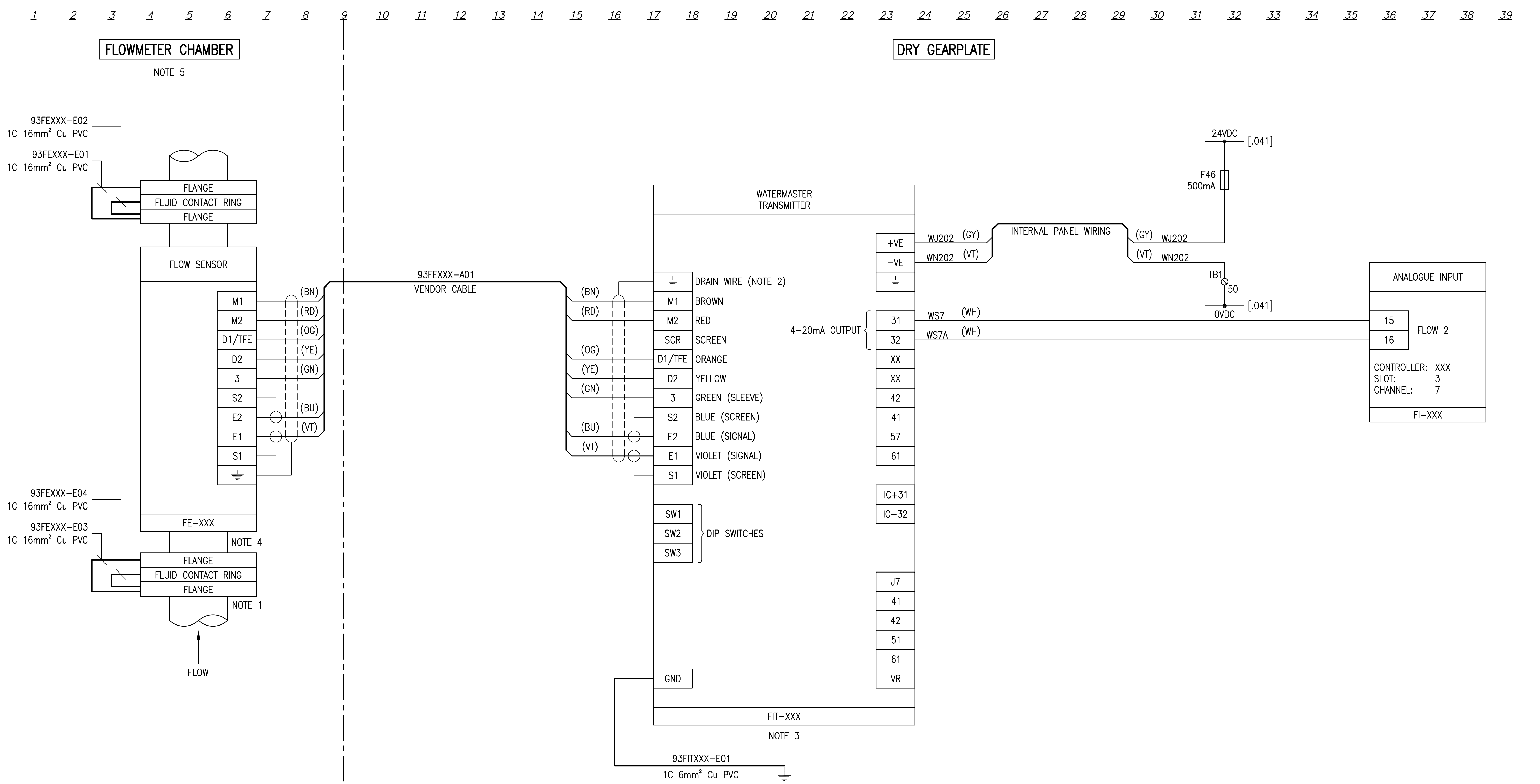
OPERATIONS

INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
FIT-XXX WATERMASTER FLOWMETER 1 LOOP SCHEMATIC (4-20mA)

CAD FILE	2010998.028B	DATE	23:04:2021
ORIGINAL SCALE A3	–	CONTRACT No.	
REF No.	–		–
DWG No.	2010998	.028	B



NOTES:

1. FOR EARTHING RING AND INSTALLATION DETAIL REFER TO DRAWING 2001979.135 OR 2001979.136 – DEPENDENT ON INSTALLATION.
2. FOR CATHODICALLY PROTECTED SYSTEM CONNECT THE DRAIN WIRE TO TERMINAL SCR AS THERE WILL BE NO EARTH SCREW.
3. TYPE – FLOWMETER TRANSMITTER
   MAKE – ABB
   MODEL – WATERMASTER
4. TYPE – FLOW SENSOR
   MAKE – ABB
   MODEL – WATERMASTER SENSOR
5. LOCATION AS DETAILED WITHIN THE SITE SPECIFIC CONTROL SYSTEM OVERVIEW [.002].

CONSTRUCTION ISSUE

FACILITY CODE	AREA
–	93

ISSUE	DATE	AMENDMENT	BY	APPD.
B	04/21	CONSTRUCTION ISSUE REVISED	R.X.	J.D.
A	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
–	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14	
D Ibrahim	09/14	
R Matthews	09/14	OPERATIONS
S Fagamalo	09/14	
		INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
FIT-XXX WATERMASTER FLOWMETER 2 LOOP SCHEMATIC (4-20mA)

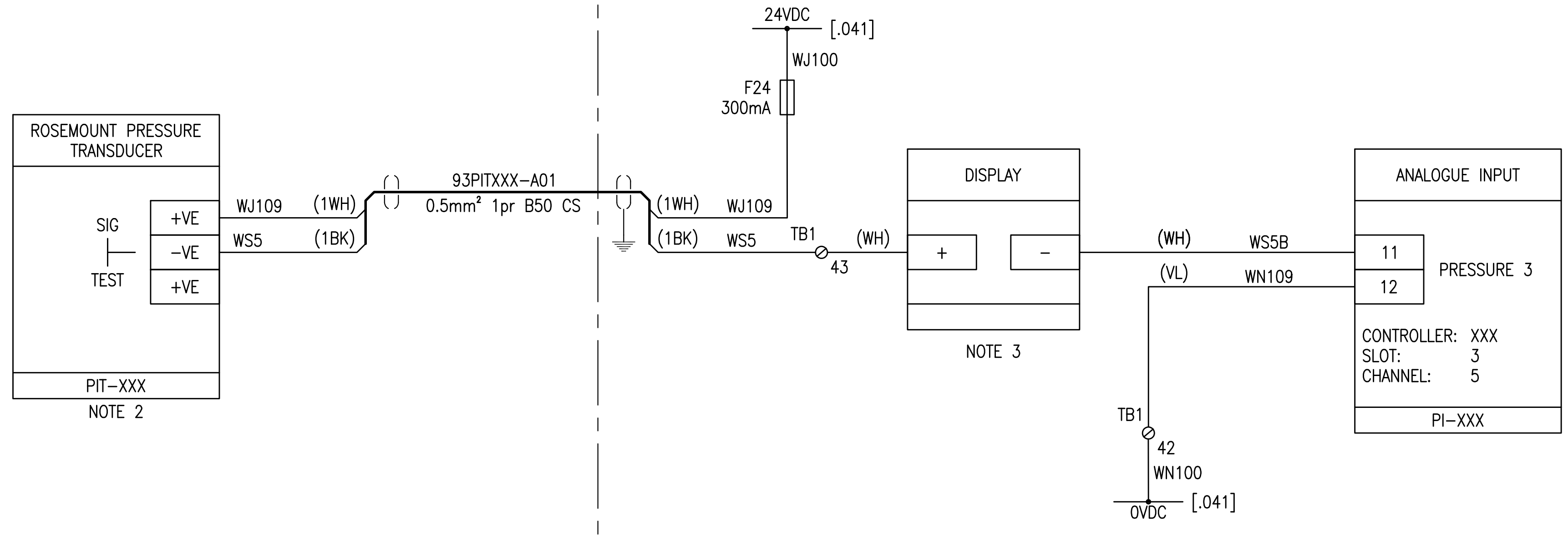
CAD FILE	2010998.029B
DATE	23:04:2021
ORIGINAL SCALE A3	–
CONTRACT No.	
REF No.	– –
DWG No.	2010998 .029 B

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39

FLOWMETER CHAMBER

NOTE 1

DRY GEARPLATE



NOTES:

1. LOCATION AS DETAILED WITHIN THE SITE SPECIFIC CONTROL SYSTEM OVERVIEW [.002].
2. PRESSURE TRANSDUCER MODEL IS SITE DEPENDENT. MODEL IS EITHER 2088 OR 3015 SERIES.
3. DISPLAY SCALED TO 0-1500 kPA.

FACILITY CODE	AREA
-	93

CONSTRUCTION ISSUE

ISSUE	DATE	AMENDMENT	BY	APPD.
B	04/21	CONSTRUCTION ISSUE REVISED	R.X.	J.D.
A	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
-	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14
D Ibrahim	09/14
R Matthews	09/14
S Fagamalo	09/14

OPERATIONS

INFRASTRUCTURE

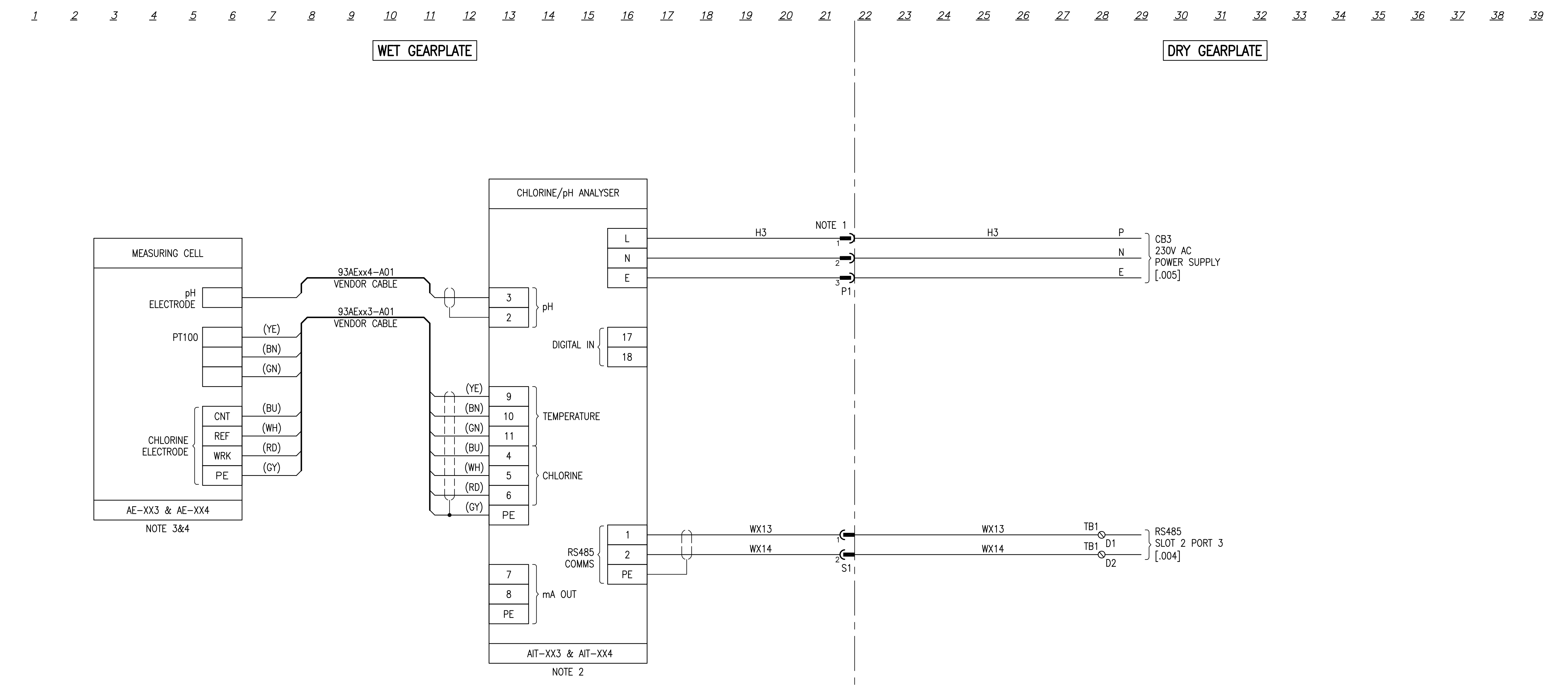
Watercare

BSP STANDARD DRAWING

CONTROL SYSTEM

PIT-XXX PRESSURE TRANSDUCER 3 LOOP SCHEMATIC

CAD FILE 2010998.030B	DATE 23:04:21
ORIGINAL SCALE A3 -	CONTRACT No.
REF No. -	-
DWG No. 2010998 .030	B



NOTES:

1. REFER TO DRAWING [.017] FOR PLUG CONNECTIONS.
2. TYPE: CHLORINE/pH ANALYSER
   MAKE: SIEMENS W&T
   MODEL MFA-Cl_2++ ANALYSER
3. TYPE: MEASURING CELL
   MAKE: SIEMENS W&T
   MODEL: DEPOLOX 4
4. THE CHLORINE AND pH PROBES SHALL NOT BE FITTED. THESE PROBES WILL BE FITTED BY WSL DURING COMMISSIONING.

FACILITY CODE	AREA
–	93

CONSTRUCTION ISSUE

ISSUE	DATE	AMENDMENT	BY	APPD.
B	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
A	11/15	ISSUED FOR CONSTRUCTION – REVISED	A.S.	D.I.
–	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14
D Ibrahim	09/14
R Matthews	09/14
S Fagamalo	09/14

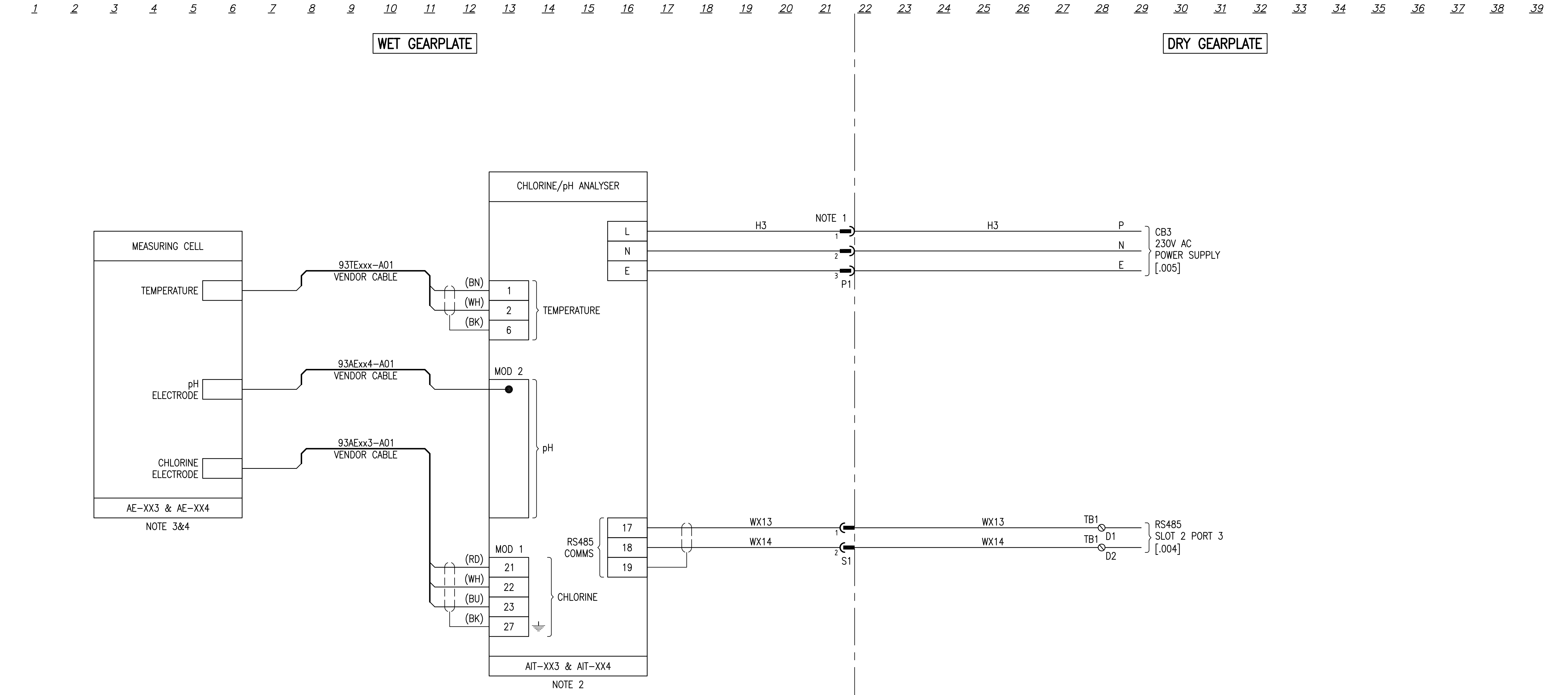
OPERATIONS

INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
AIT-XX3 & AIT-XX4 DEPOLOX 4 CL2/pH ANALYSER LOOP SCHEMATIC

CAD FILE 2010998.031B DATE 22:05:2017
ORIGINAL SCALE A3 – CONTRACT No.
REF No. – –
DWG No. 2010998 .031 B



NOTES:

1. REFER TO DRAWING [.017] FOR PLUG CONNECTIONS.
2. TYPE: CHLORINE/pH ANALYSER
   MAKE: SIEMENS W&T
   MODEL MFC ANALYSER
3. TYPE: MEASURING CELL
   MAKE: SIEMENS W&T
   MODEL: DEPOLOX 5
4. THE CHLORINE AND pH PROBES SHALL NOT BE FITTED. THESE PROBES WILL BE FITTED BY WSL DURING COMMISSIONING.

FACILITY CODE	AREA
–	93

CONSTRUCTION ISSUE

ISSUE	DATE	AMENDMENT	BY	APPD.
B	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
A	11/15	ISSUED FOR CONSTRUCTION – REVISED	A.S.	D.I.
–	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14
D Ibrahim	09/14
R Matthews	09/14
S Fagamalo	09/14

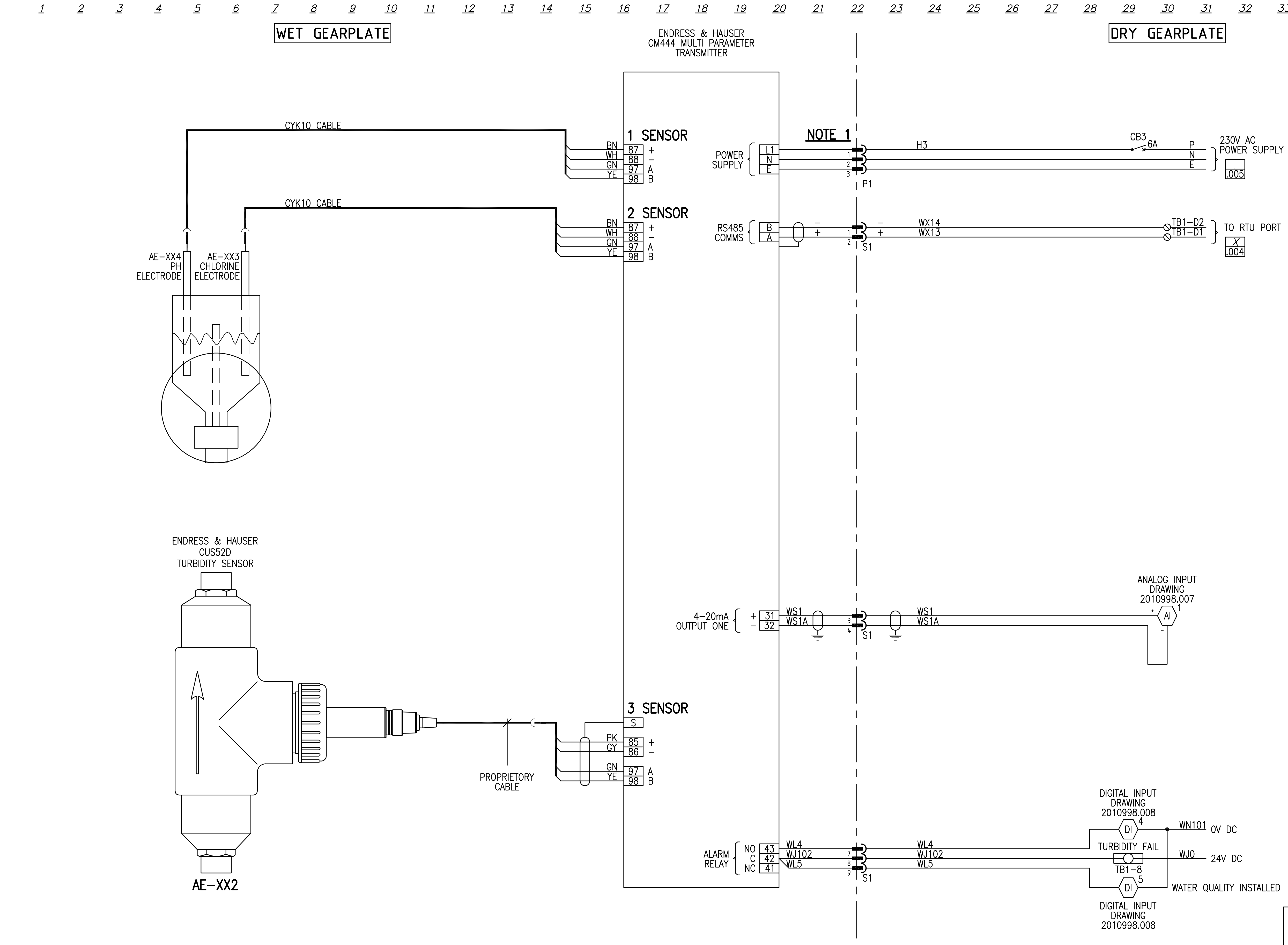
OPERATIONS

INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
AIT–XX3 & AIT–XX4 DEPOLOX 5 CL2/pH ANALYSER LOOP SCHEMATIC

CAD FILE 2010998.032B	DATE 22:05:2017
ORIGINAL SCALE A3 –	CONTRACT No.
REF No. –	–
DWG No. 2010998 .032	B



FACILITY CODE	AREA
−	93

NOTES:

1. REFER DRAWING 2010998.017 FOR PLUG CONNECTIONS.

CONSTRUCTION ISSUE

ISSUE	DATE	AMENDMENT	BY	APPD.
B	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
A	03:16	FOR CONSTRUCTION	F.T	M.W

DESIGNED	F.T	07:15
DES. CHECKED	S.W (EMC LTD)	07:15
DRAWN	J.B	07:15
DWG. CHECKED		
PROJECT LEADER		
INFRAST'R APP'D		

OPERATIONS

INFRASTRUCTURE

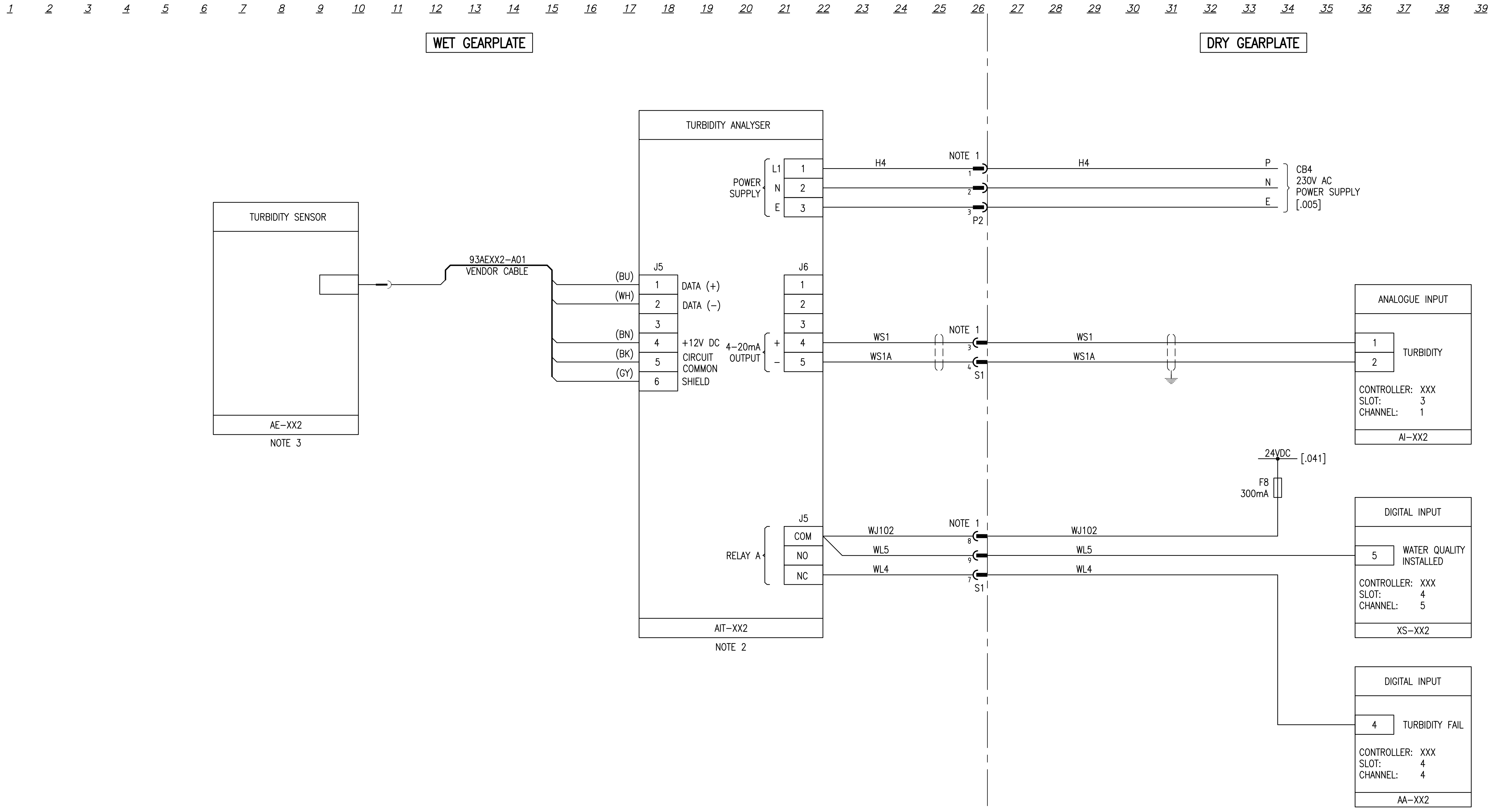
Watercare

BSP STANDARD DRAWING

CONTROL SYSTEM

AIT−XX3 AND AIT−XX4 E & H CM444 CL2/PH/TURBIDITY ANALYSER LOOP SCHEMATIC

CAD FILE	2010998.033B
DATE	22:05:2017
ORIGINAL SCALE A3	N.T.S
CONTRACT No.	-
REF No.	−
ISSUE	-
DWG No.	2010998 .033
ISSUE	B



NOTES:

1. REFER TO DRAWING [.017] FOR PLUG CONNECTIONS.
2. TYPE: TURBIDITY ANALYSER
   MAKE: ENDRESS & HAUSER
   MODEL CUM253-TU0010
3. TYPE: TURBIDITY SENSOR
   MAKE: ENDRESS & HAUSER
   MODEL: CUS31-W2E

FACILITY CODE	AREA
-	93

CONSTRUCTION ISSUE

ISSUE	DATE	AMENDMENT	BY	APPD.
C	04/21	DC SUPPLY CHANGED FROM 12V TO 24V	R.X.	J.D.
B	05/17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
A	11/15	ISSUED FOR CONSTRUCTION - REVISED	A.S.	D.I.
-	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14
D Ibrahim	09/14
R Matthews	09/14
S Fagamalo	09/14

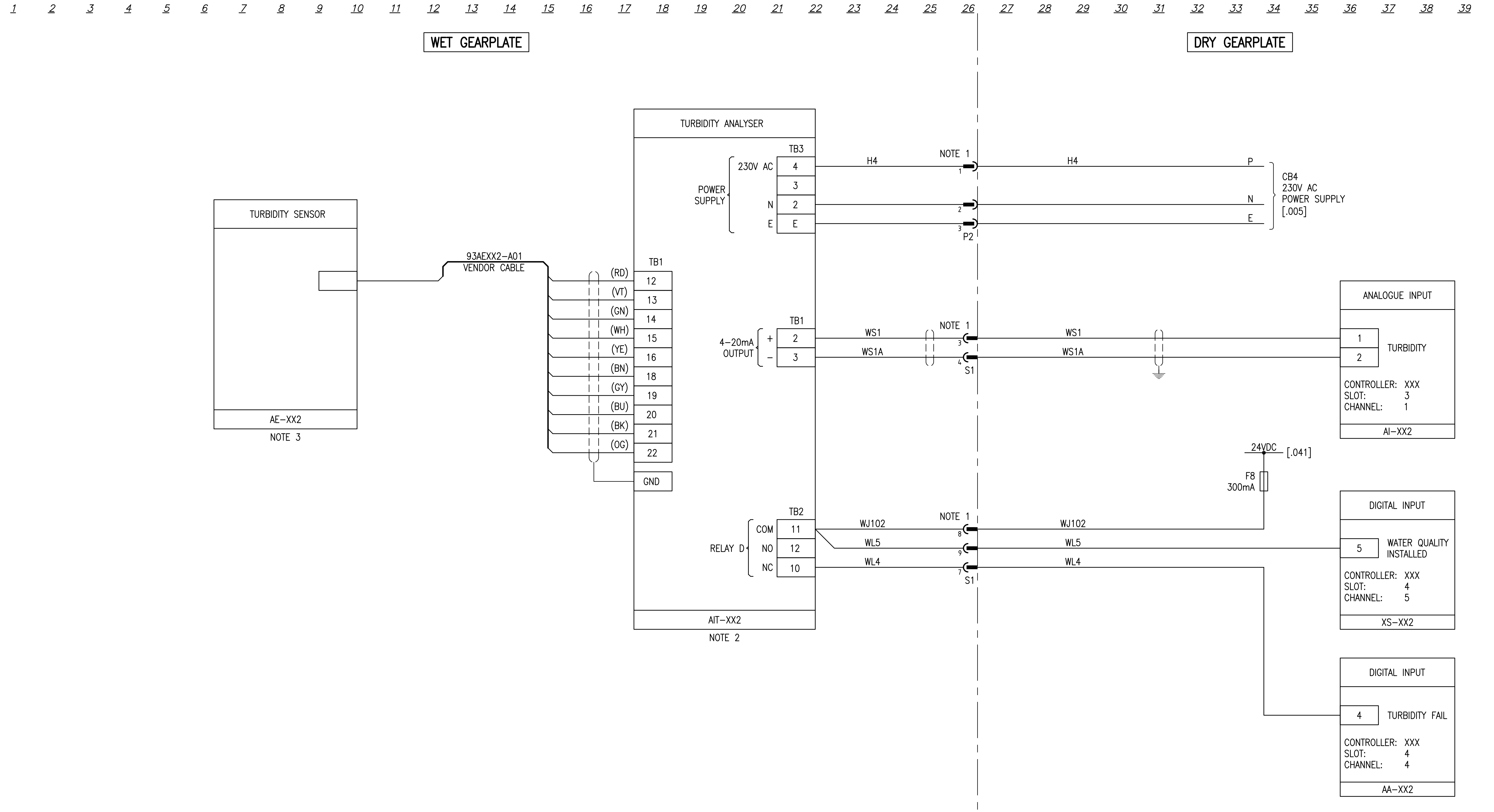
OPERATIONS

INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
AIT-XX2 SC100 TURBIDITY ANALYSER LOOP SCHEMATIC

CAD FILE	2010998.034C
DATE	23:04:21
ORIGINAL SCALE A3	-
CONTRACT No.	
REF No.	- -
DWG No.	2010998 .034 C



NOTES:

1. REFER TO DRAWING [.017] FOR PLUG CONNECTIONS.
2. TYPE: TURBIDITY ANALYSER
   MAKE: GREAT LAKES
   MODEL ACCU4 T53 ANALYSER
3. TYPE: TURBIDITY SENSOR
   MAKE: GREAT LAKES
   MODEL: ACCU4 8320 SENSOR

CONSTRUCTION ISSUE

FACILITY CODE	AREA
–	93

ISSUE	DATE	AMENDMENT	BY	APPD.
C	04:21	DC SUPPLY CHANGED FROM 12V TO 24V	R.Xu	
B	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
A	11/15	ISSUED FOR CONSTRUCTION – REVISED	A.S.	D.I.
–	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14
D Ibrahim	09/14
R Matthews	09/14
S Fagamalo	09/14

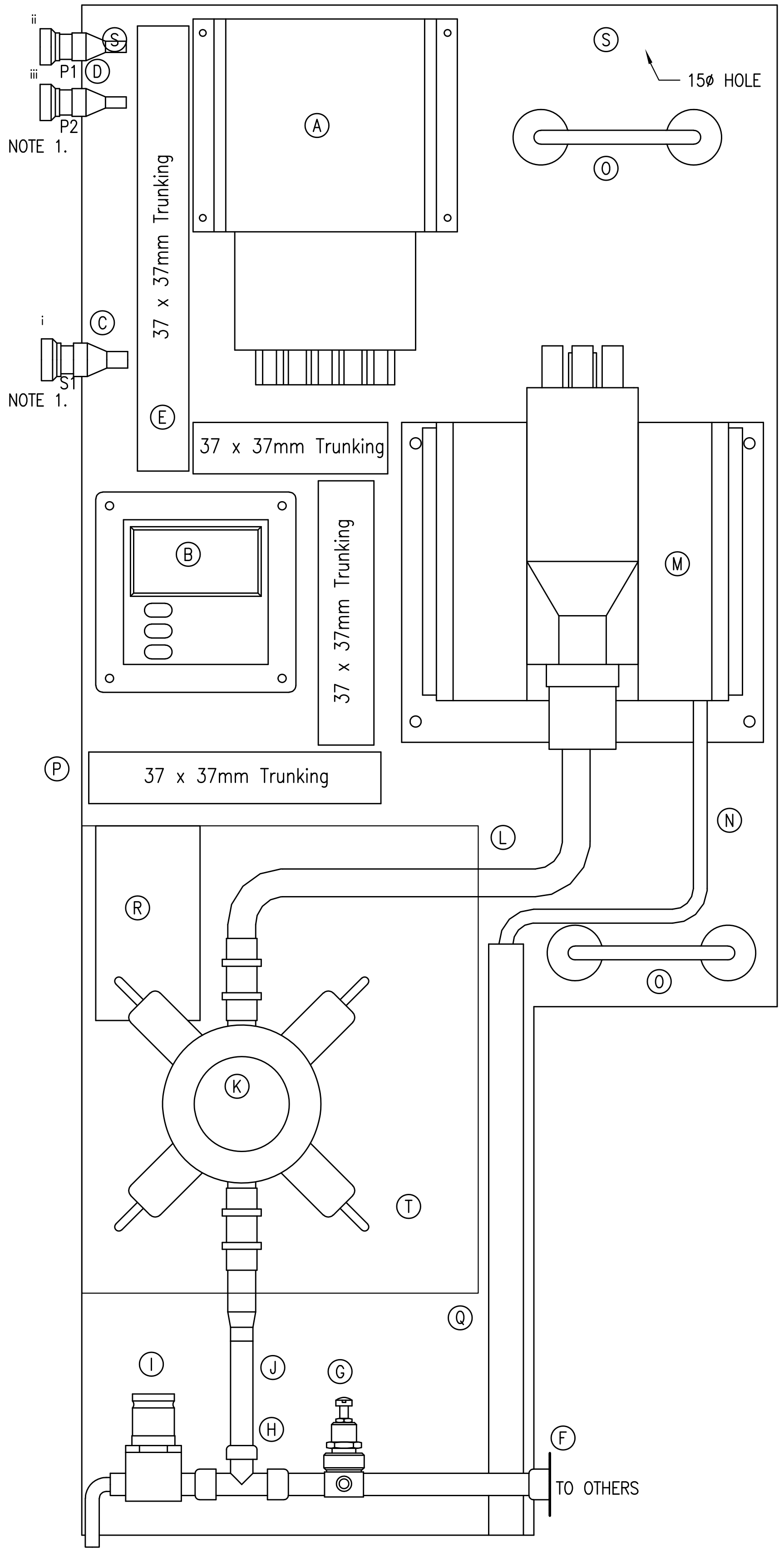
OPERATIONS

INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
AIT–XX2 ACCU4 TURBIDITY ANALYSER LOOP SCHEMATIC

CAD FILE	2010998.035C	DATE	23:04:2021
ORIGINAL SCALE A3	–	CONTRACT No.	
REF No.	–		–
DWG No.	2010998	.035	C



WET GEARPLATE LAYOUT

WET GEARPLATE BILL OF MATERIALS

ITEM No.	ITEM	MAKE	MODEL	No. OFF PER GEARPLATE
A	CHLORINE/pH MEASURING ANALYSER	WALLACE & TIERNAN	MFA-Cl_2 ++	
B	TURBIDITY ANALYSER	GREAT LAKES		
C	SIGNAL PLUG/SOCKET RECEPTACLE ASSEMBLY	REFER DRAWING 2002997 .015		1
D	230V AC PLUG/SOCKET RECEPTACLE ASSEMBLY	REFER DRAWING 2002997 .015		2
E	TRUNKING – NARROW SLOT, OPEN 37x37mm	CRITCHLEY BETADUCT	10470032	TO SUIT
F	1/2" MALE CONNECTOR FITTING TO ALLOW FOR THE REMOVAL OF THE GEARPLATE	SWAGELOK		1
NOTE 2 G	1/4" FLOW REGULATOR	FISHER CONTROLS REGULATOR	TYPE 67ss-1 SPRING 0-35 PSI	1
H	1/2" TEE	SWAGELOK		1
I	1/2" RELIEF VALVE PRESET TO RELIEVE AT 2 BarG	NUPRO	B-BCPA2-3	1
J	1/2" PVC PIPE			1
K	TURBIDITY SENSOR	GREAT LAKES		1
L	6mm REINFORCED PLASTIC HOSE RATED TO MINIMUM 5 BarG OPERATING PRESSURE			1
M	CHLORINE/PH SENSOR	DEPOLOX 4		1
N	6mm REINFORCED PLASTIC HOSE RATED TO MINIMUM 5 BarG OPERATING PRESSURE			1
O	HANDLES			2
P	GEARPLATE			1
Q	25mm NB PVC PIPE			1
R	TURBIDITY ANALYSER JUNCTION BOX			1
S	GEARPLATE MOUNTING SLOTS	150 HOLES		2
T	TURBIDITY SENSOR ENCLOSURE			1

WET GEARPLATE LABEL SCHEDULE

LABEL No.	INSCRIPTION	TYPE	LOCATION
i	SIGNALS	CABLE FERRULE	ON PLUG CABLE
ii	CHLORINE/PH 230V AC	CABLE FERRULE	ON PLUG CABLE
iii	TURBIDITY 230V AC	CABLE FERRULE	ON PLUG CABLE

NOTES:

1. LEADS FOR PLUG/SOCKET PLUG ASSEMBLIES TO REACH RECEPTACLE POSITION.
2. NORGREN R06-222-NNED REPLACED WITH FISHER FLOW REGULATOR, MOUNTED ON NEW PLATES AS THEY FAIL.

FACILITY CODE	AREA
–	93

CONSTRUCTION ISSUE

ISSUE	DATE	AMENDMENT	BY	APPD.
A	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
–	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14
D Ibrahim	09/14
R Matthews	09/14
S Fagamalo	09/14

OPERATIONS

INFRASTRUCTURE

Watercare

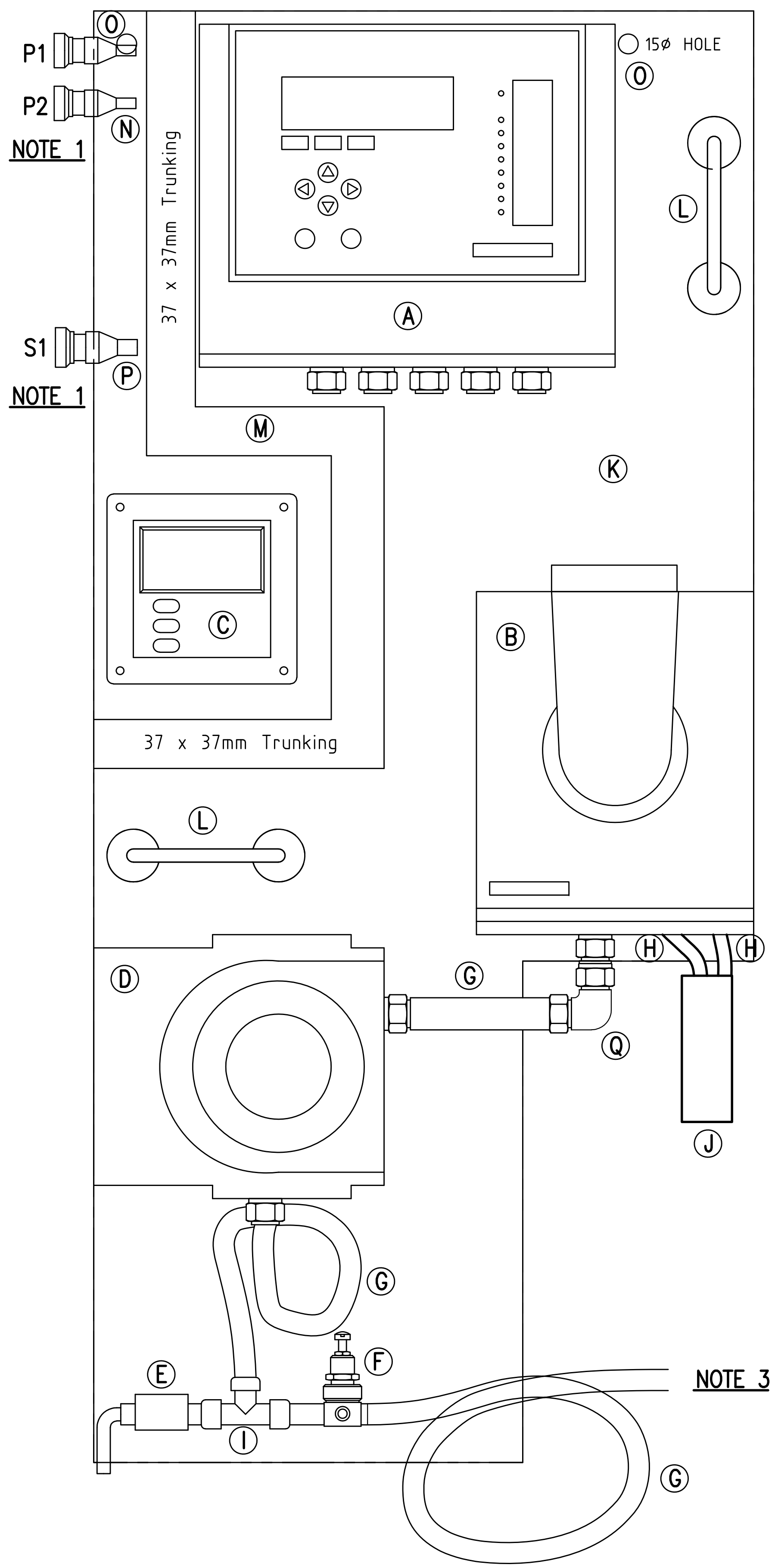
BSP STANDARD DRAWING
CONTROL SYSTEM
WET GEARPLATE GENERAL LAYOUT 2 FOR DEPOLOX 4 & ACCU4

CAD FILE 2010998.036A DATE 22:05:2017

ORIGINAL SCALE A3 – CONTRACT No.

REF No. – –

DWG No. 2010998 .036 A



LIST OF MATERIALS

ITEM NO.	ITEM	MAKE	QTY
A	CHLORINE/pH TRANSMITTER DEPOLOX 3 PLUS	SIEMENS	1
B	CHLORINE/pH SENSOR	SIEMENS	1
C	TURBIDITY TRANSMITTER	HACH	1
D	TURBIDITY SENSOR	HACH	1
E	1/2" RELIEF VALVE SET TO 2 BAR G		1
F	BRASS PRESSURE REGULATOR SMC WR110-02-X224		1
G	REINFORCED PLASTIC HOSE RATED TO MINIMUM 5 BAR GAUGE OPERATING PRESSURE		2
H	DRAIN HOSES SUPPLIED WITH SENSOR		2
I	1/2" BSP BRASS TEE	SWAGELOK	1
J	PVC DRAIN - REFER DRAWING 2002888.089		1
K	GEAR PLATE		1
L	HANDLES		2
M	TRUNKING - NARROW SLOT OPEN 37x37mm		TO SUIT
N	PLUG/SOCKET 230V AC ASSEMBLY REFER NOTE 2		2
O	GEAR PLATE MOUNTING HOLES		2
P	PLUG/SOCKET SIGNAL WIRING ASSEMBLY REFER NOTE 2		1
Q	1/2" BSP BRASS ELBOW		1

LABELS

LABEL NO.	DESCRIPTION	TYPE	LOCATION
P1	CHLORINE/pH 230V AC	CABLE FERRULE	ON PLUG CABLE
P2	TURBIDITY 230V AC	CABLE FERRULE	ON PLUG CABLE
S1	SIGNALS	CABLE FERRULE	ON PLUG CABLE

NOTES:

1. LEADS FOR PLUG/SOCKET ASSEMBLIES TO REACH RECEPTACLE POSITION.
2. REFER DRAWING [.017] FOR PLUG CONNECTION DETAILS.
3. REFER DRAWING [.055] FOR TAP AND DRAIN DETAILS.

FACILITY CODE	AREA
-	93

CONSTRUCTION ISSUE

ISSUE	DATE	AMENDMENT	BY	APPD.
B	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
A	11/15	ISSUED FOR CONSTRUCTION - REVISED	A.S.	D.I.
-	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S	Fagamalo	09/14
D	Ibrahim	09/14
R	Matthews	09/14
S	Fagamalo	09/14

OPERATIONS

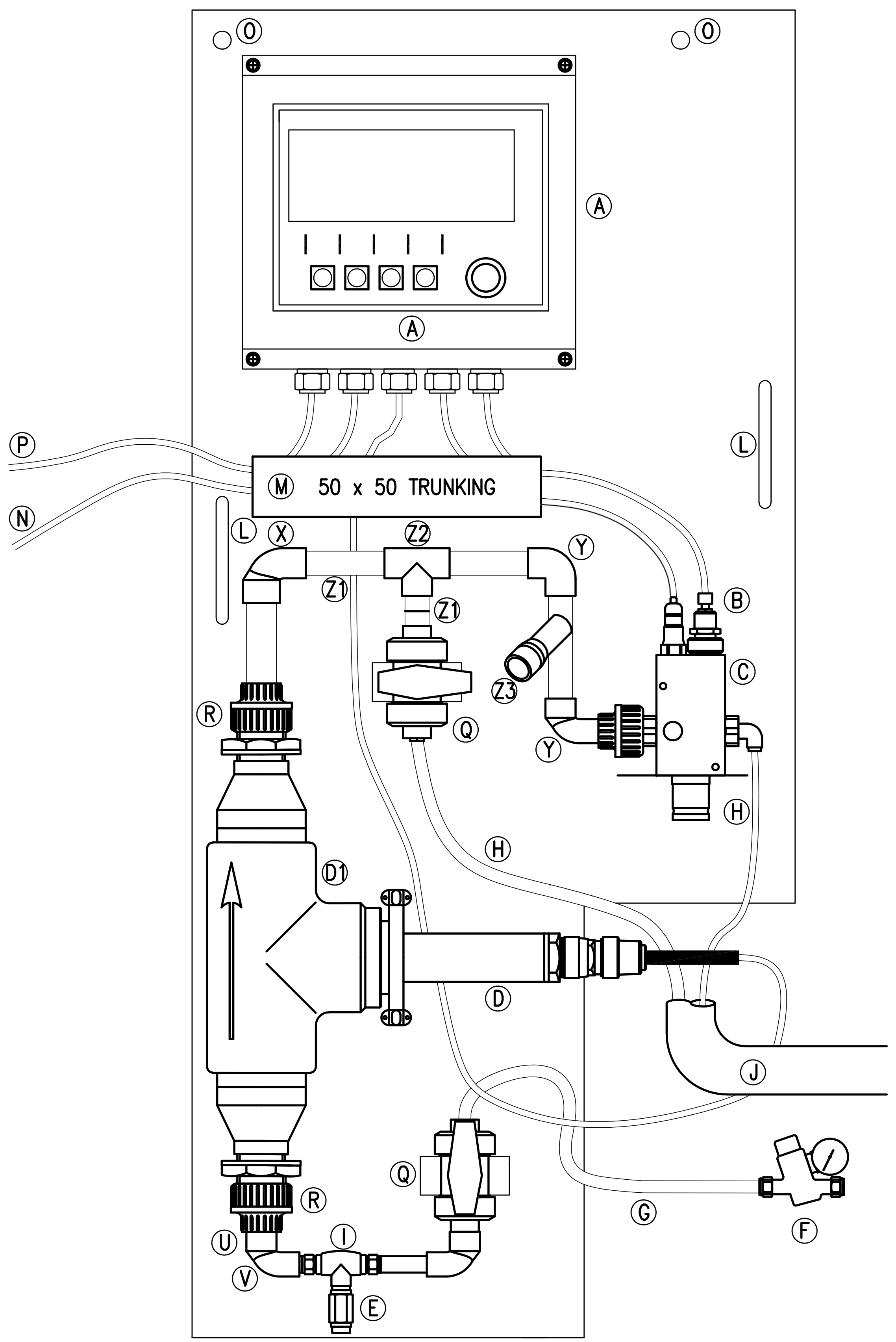
INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
WET GEARPLATE GENERAL LAYOUT 3 FOR DEPOLOX 3 PLUS & SC100

CAD FILE 2010998.037B | DATE 22:05:2017
ORIGINAL SCALE A3 - | CONTRACT No.
REF No. - | -
DWG No. 2010998 .037 | B

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39



LIST OF MATERIALS

ITEM NO.	ITEM	MAKE	QTY
A	CHLORINE/pH/TURBIDITY TRANSMITTER CM444	ENDRESS	1
B	CHLORINE/pH SENSOR CCS142/CPS11D	ENDRESS	1
C	Cl2/pH FPW ASSEMBLY CPA250	ENDRESS+HAUSER	1
D	TURBIDITY SENSOR CUS52D	ENDRESS	1
D1	TURBIDITY FLOW ASSEMBLY CUA252	ENDRESS	1
E	1/2" RELIEF VALVE SET TO 2 BAR G + 1/2" BRASS TEE	SWAGEOK	1
F	1/2" FLOW REGULATOR 533...H C/W PRESSURE GAUGE	CALEFFI	1
G	REINFORCED PLASTIC HOSE RATED TO MINIMUM 5 BAR GAUGE OPERATING PRESSURE	SMC	1
H	DRAIN HOSES SUPPLIED WITH SENSOR		2
I	1/4" BSP BRASS TEE	SMC	1
J	PVC DRAIN – REFER DRAWING 2002888.089		1
K	GEAR PLATE – 6mm POWDER COATED ALUMINIUM		1
L	HANDLES – STAINLESS STEEL 96mm		TO SUIT
M	TRUNKING – NARROW SLOT OPEN 50x50mm		
N	PLUG/SOCKET 230V AC ASSEMBLY REFER NOTE 2		2
O	GEAR PLATE MOUNTING HOLES – 15mm ø		2
P	PLUG/SOCKET SIGNAL WIRING ASSEMBLY REFER NOTE 2		1
Q	GF523 METERING VALVE C/W MOUNTING PLATE		1
R	25mm PVC UNION	GEORG FISCHER	2
S	25mm CLIP–IT SADDLE + 2x SPACERS	GEORG FISCHER	1
T	90mm CLIP–IT SADDLE + SAFETY CLIP	GEORG FISCHER	1
U	20mm PRO–FIT REDUCING BUSH	GEORG FISCHER	1
V	20–16mm PRO–FIT 90° ELBOW	GEORG FISCHER	1
W	20mm PVC/BRASS UNION 20–1/2" BSP	GEORG FISCHER	1
X	25–20mm PRO–FIT 90° ELBOW	GEORG FISCHER	1
Y	20mm 90° ELBOW	GEORG FISCHER	1
Z	25mm METRIC PIPE PVC	GEORG FISCHER	1
Z1	20mm METRIC PIPE PVC CLEAR	GEORG FISCHER	2
Z2	20mm METRIC TEE PIPE PVC	GEORG FISCHER	1
Z3	SUM STRAINER	GEORG FISCHER	1

LABELS

LABEL NO.	DESCRIPTION	TYPE	LOCATION
P1	CHLORINE/pH 230V AC	CABLE FERRULE	ON PLUG CABLE
S1	SIGNALS	CABLE FERRULE	ON PLUG CABLE

CONSTRUCTION ISSUE

NOTES:

1. LEADS FOR PLUG/SOCKET ASSEMBLIES TO REACH RECEPTACLE POSITION.
2. REFER DRAWING 2007862.012 FOR PLUG CONNECTION DETAILS.
3. REFER DRAWING 2002888.089 FOR TAP AND DRAIN DETAILS.

ISSUE	DATE	AMENDMENT	BY	APPD.
B	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
A	04:16	MINOR CHANGES FOR CONSTRUCTION	S.W	
–	03:16	TEMPLATE DRAWING	F.T	

DESIGNED	F.T	03:16
DES. CHECKED	M.W	03:16
DRAWN	J.B	03:16
DWG. CHECKED		
PROJECT LEADER		
INFRAST'R APP'D		

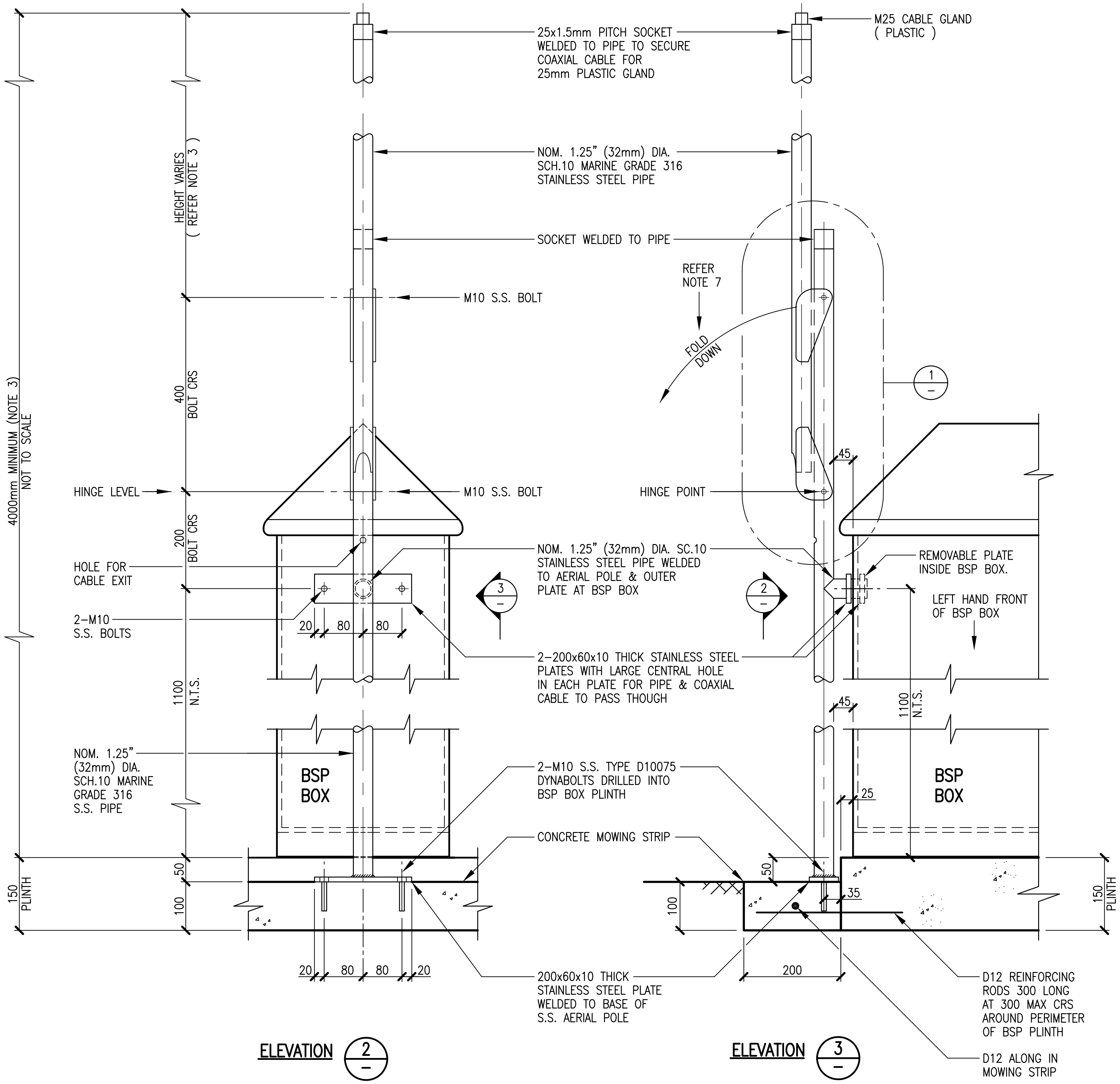
OPERATIONS

INFRASTRUCTURE

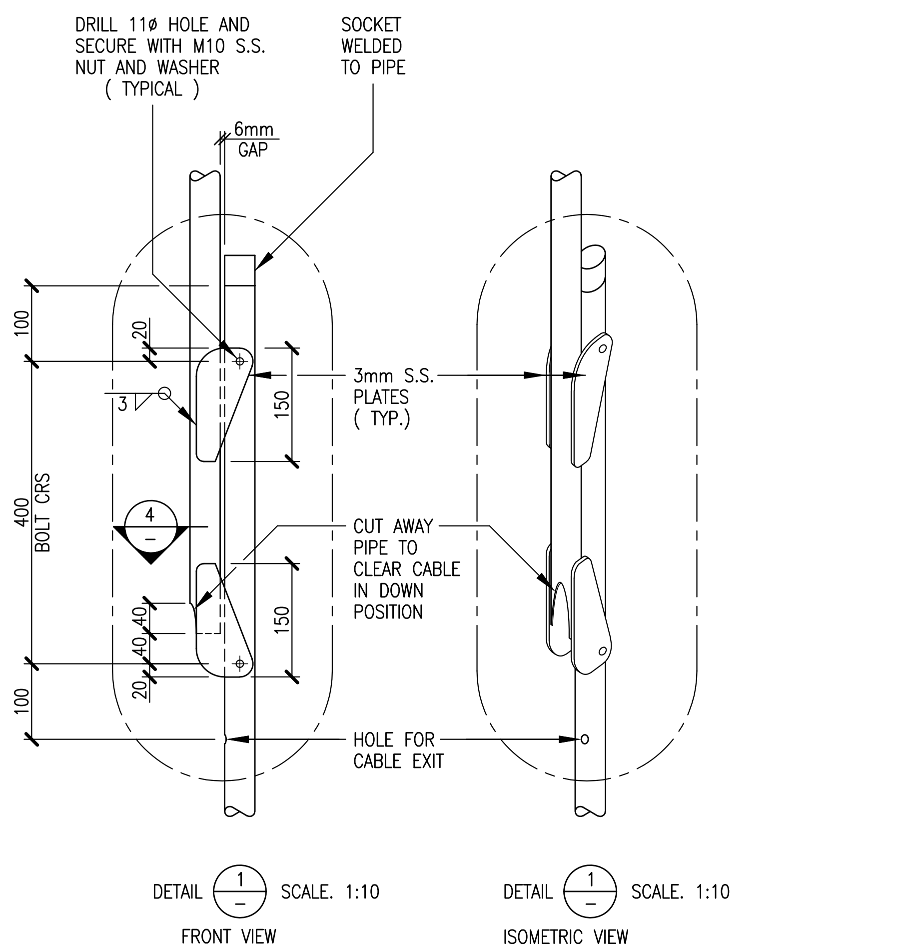
Watercare

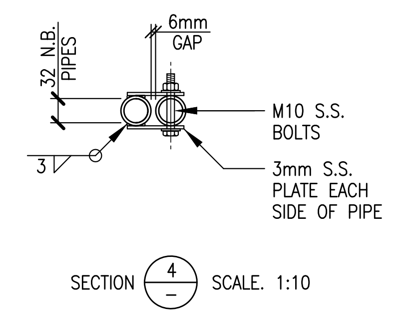
BSP STANDARD DRAWING
CONTROL SYSTEM
WET GEAR PLATE GENERAL LAYOUT 4 FOR E AND H CM444 CL/PH TURBIDITY

CAD FILE	2010998.038B	DATE	22:05:2017
ORIGINAL SCALE A3	–	CONTRACT No.	–
REF No.	–	ISSUE	–
DWG No.	2010998 .038		B



AERIAL MOUNTING & PIPE FIXING DETAILS





NOTES:

1. ALL STAINLESS STEEL (S.S.) TO BE MARINE GRADE 316
2. ANTENNA CABLE IS RG213 COAX.
3. POLE HEIGHT IS SITE DEPENDANT.
4. THE HINGE POINT SHALL BE CONSTRUCTED TO PROVIDE THE ABILITY OF HINGING THE POLE BY 135° TOWARD THE GROUND LEVEL WITH THE ANTENNA CABLE IN PLACE.
5. THE HINGE POINT SHALL BE LOCATED AT 1350mm ABOVE STANDING LEVEL.
6. TYPICAL ANTENNA FIXING TO BSP CABINET IS AS SHOWN ON THIS DRAWING. FOR ANTENNA FIXING TO A BUILDING OR STRUCTURE REFER 2010998.050
7. ANTENNA AT HINGE TO FOLD DOWN TOWARDS MAINTAINENCE STAND POINT TO ALLOW FOR CLEAR COLLAPSE.

FACILITY CODE	AREA
–	93

CONSTRUCTION ISSUE

L:\---\ EGCADFI \ 2015 \ BSP STANDARD DRAWINGS \ 2010998.039A .DWG

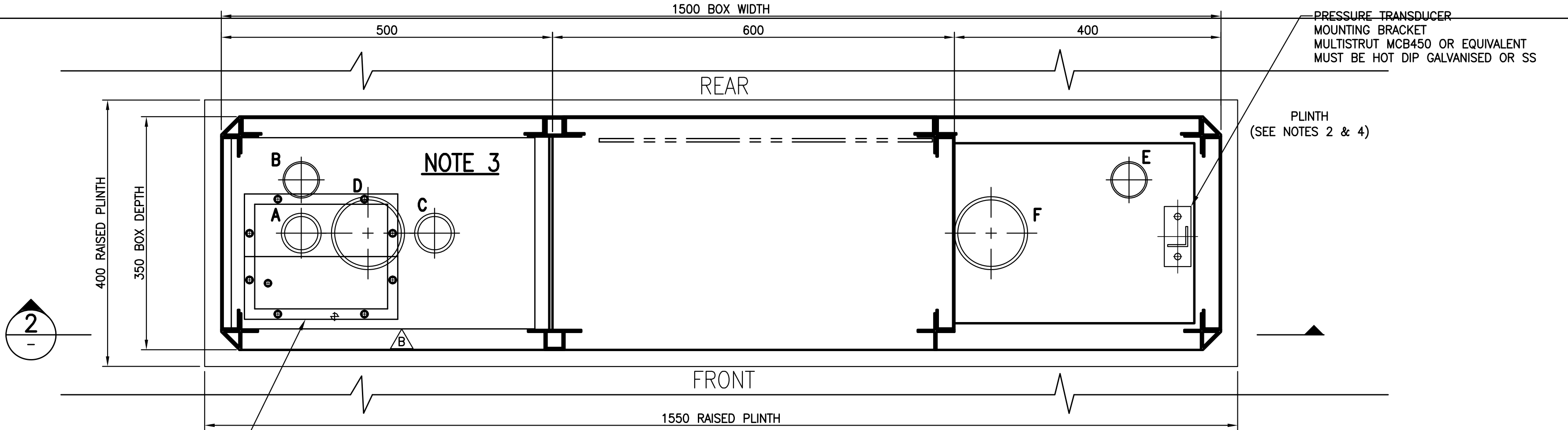
ISSUE	DATE	AMENDMENT	BY	APPD.
B	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
A	08/15	ISSUED FOR CONSTRUCTION – REVISED	L.C.	J.D.
–	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

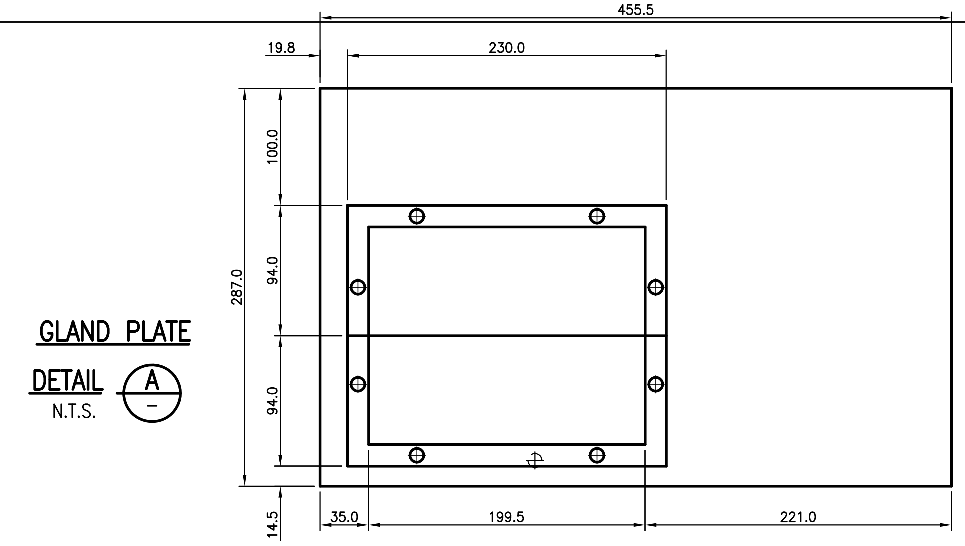
S Fagamalo	09/14	
D Ibrahim	09/14	
R Matthews	09/14	OPERATIONS
S Fagamalo	09/14	
		INFRASTRUCTURE

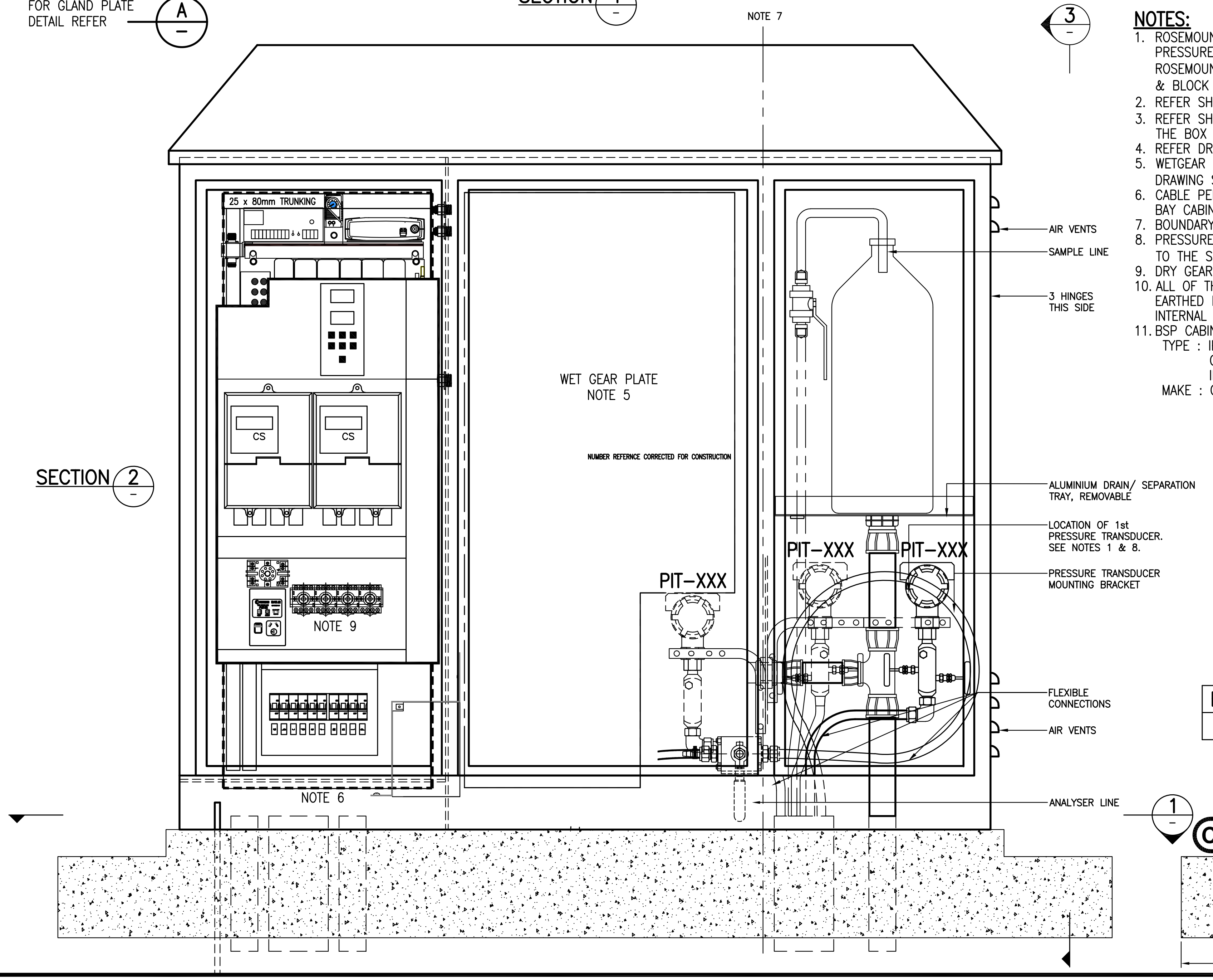
Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
TYPICAL ANTENNA INSTALLATION AT BSP CABINET

CAD FILE 2010998.039B	DATE 22:05:2017
ORIGINAL SCALE A3 –	CONTRACT No.
REF No. –	–
DWG No. 2010998 .039	B

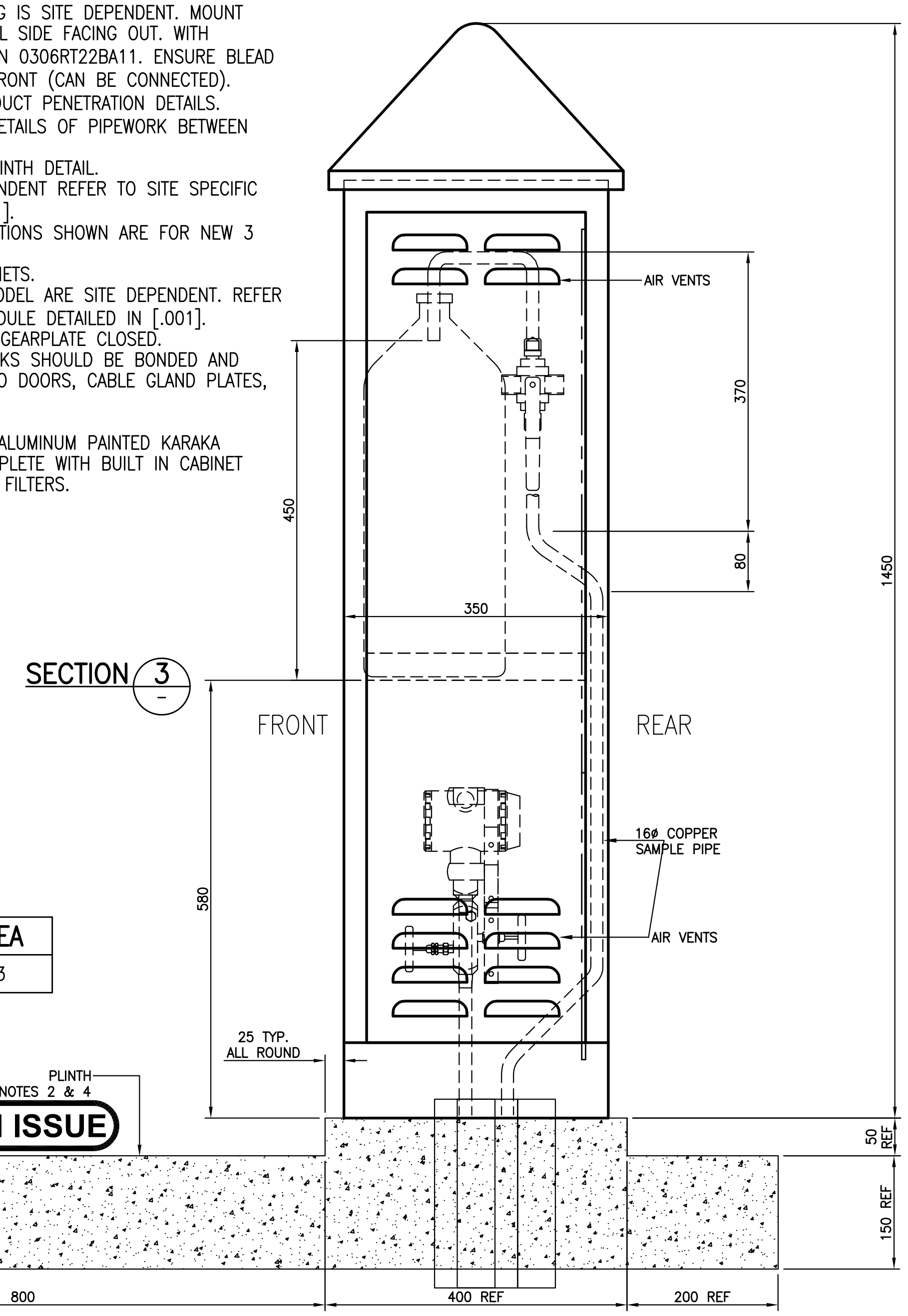






NOTES:

1. ROSEMOUNT PRESSURE UNIT MOUNTING IS SITE DEPENDENT. MOUNT PRESSURE TRANSDUCER WITH TERMINAL SIDE FACING OUT. WITH ROSEMOUNT-TWO VALVE MANIFOLD P/N 0306RT22BA11. ENSURE BLEAD & BLOCK CALIBRATION PORT FACES FRONT (CAN BE CONNECTED).
2. REFER SHEET [.056] FOR PLINTH & DUCT PENETRATION DETAILS.
3. REFER SHEET [.052] & [.053] FOR DETAILS OF PIPEWORK BETWEEN THE BOX AND CHAMBER
4. REFER DRAWING 2005696.017 FOR PLINTH DETAIL.
5. WETGEAR PLATE LAYOUT IS SITE DEPENDENT REFER TO SITE SPECIFIC DRAWING SCHEDULE DETAILED IN [.001].
6. CABLE PENETRATIONS AND DUCT LOCATIONS SHOWN ARE FOR NEW 3 BAY CABINET ONLY.
7. BOUNDARY FOR EXISTING 2 BAY CABINETS.
8. PRESSURE TRANSMITTER MAKE AND MODEL ARE SITE DEPENDENT. REFER TO THE SITE SPECIFIC DRAWING SCHEDULE DETAILED IN [.001].
9. DRY GEARPLATE SHOWN WITH HINGED GEARPLATE CLOSED.
10. ALL OF THE BSP CABINET METAL WORKS SHOULD BE BONDED AND EARTHED INCLUDED BY NOT LIMITED TO DOORS, CABLE GLAND PLATES, INTERNAL WALLS, ETC.
11. BSP CABINET :
    TYPE : IP56 MARINE GRADE 2.5mm ALUMINUM PAINTED KARAKA GREEN. THE CABINET IS COMPLETE WITH BUILT IN CABINET INSULATION, FANS AND DUST FILTERS.
    MAKE : CABLEWAYS



FACILITY CODE	AREA
–	93

CONSTRUCTION ISSUE

ISSUE	DATE	AMENDMENT	BY	APPD.
D	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
C	11/15	ISSUED FOR CONSTRUCTION - REVISED	A.S.	D.I.
B	10/15	ISSUED FOR CONSTRUCTION - REVISED	A.S.	D.I.
A	06/15	ISSUED FOR CONSTRUCTION - REVISED	A.S.	D.I.
–	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14
D Ibrahim	09/14
R Matthews	09/14
S Fagamalo	09/14

OPERATIONS

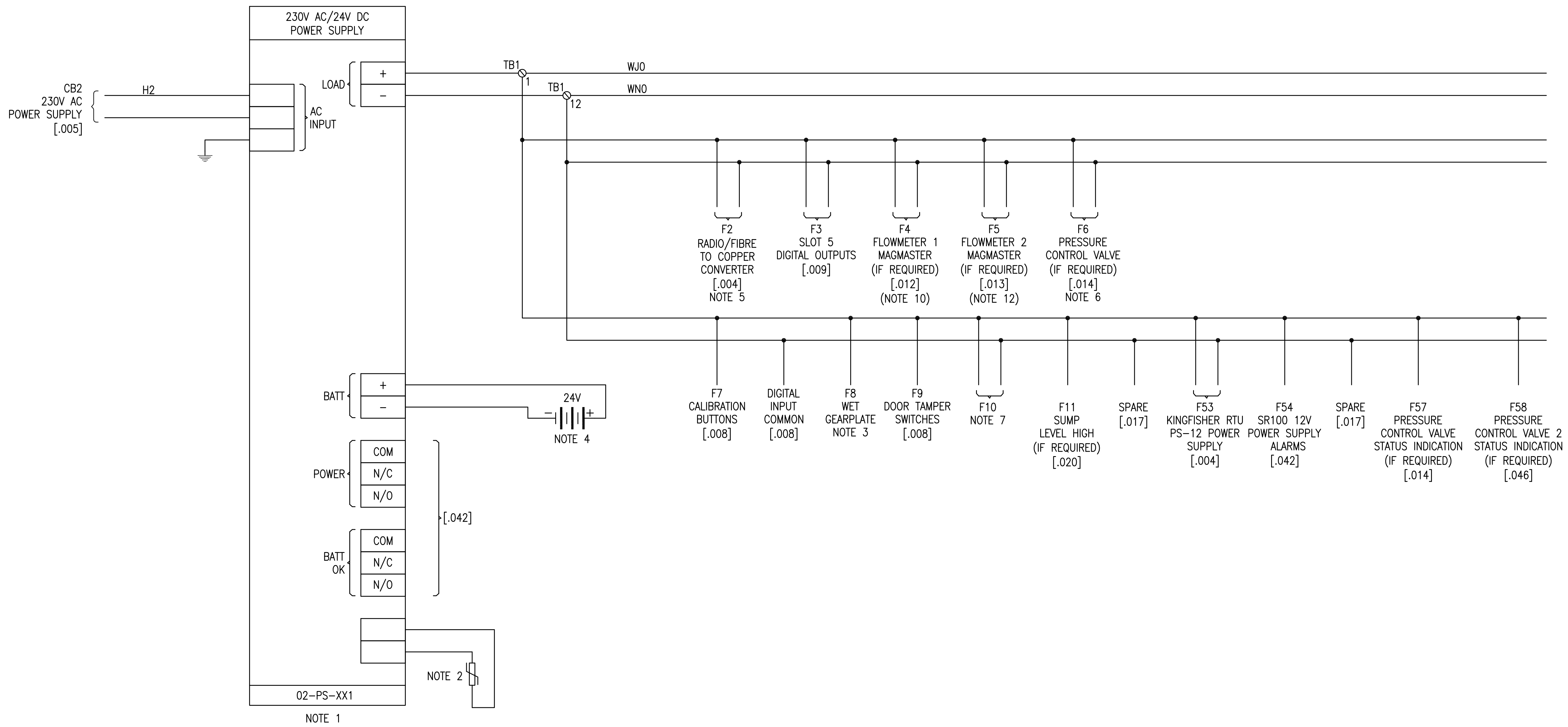
INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
CABINET GENERAL LAYOUT

CAD FILE 2010998.040D | DATE 22:05:2017
ORIGINAL SCALE A3 – | CONTRACT No.
REF No. – | –
DWG No. 2010998 .040 | D

DRY GEARPLATE



NOTES:

1. TYPE: 230V AC /24V DC POWER SUPPLY
   MAKE: INNOVATIVE ENERGIES
   MODEL: SR10012TX
2. TEMPERATURE SENSOR IS TO BE MOUNTED ON BATTERIES.
3. EQUIPMENT TYPE IS SITE DEPENDENT. REFER TO SITE SPECIFIC DRAWING SCHEDULE DETAILED IN [.001].
4. 24VDC 24Ahr BATTERY.
5. THE USE OF THIS FUSE FOR AN ETHERNET EXTENDER IS SITE DEPENDENT. REFER TO THE SITE SPECIFIC RTU SCHEMATIC DETAILED IN [.004].
6. THE USE OF THIS FUSE FOR A SECOND SUMP HIGH LEVEL SWITCH OR A PROGRAMMABLE ISOLATING DC TRANSMITTER IS SITE DEPENDENT. REFER TO THE SITE SPECIFIC DRAWINGS.
7. THE USE OF THIS FUSE IS FOR ONE OF THE FOLLOWING:
   - AN ETHERNET EXTENDER
   - AN ETHERNET SWITCH
   - PRESSURE CONTROL VALVE 2

   THIS IS SITE DEPENDENT. REFER TO THE SITE SPECIFIC DRAWINGS.
8. THE USE OF THIS FUSE FOR THE PRESSURE CONTROL VALVE STATUS INDICATION DIGITAL INPUTS IS SITE DEPENDENT. REFER TO THE SITE SPECIFIC RTU SCHEMATIC DETAILED IN [.004] AND PRESSURE CONTROL VALVE DRAWING IN [.014].
9. THE USE OF THIS FUSE AND 0V TERMINAL FOR THE PRESSURE CONTROL VALVE 2 STATUS INDICATION DIGITAL INPUTS IS SITE DEPENDENT. REFER TO THE SITE SPECIFIC RTU SCHEMATIC DETAILED IN [.004] AND PRESSURE CONTROL VALVE 2 DRAWINGS IN [.046].
10. THE USE OF THIS FUSE IS FOR ONE OF THE FOLLOWING:
    - AN ETHERNET EXTENDER
    - AN ETHERNET SWITCH
    - PRESSURE CONTROL VALVE 2

    WHEN A 12/24V DC CONVERTER AND MAGMASTER FLOWMETER 2 ARE USED AND MAGMASTER FLOWMETER 1 IS NOT USED. REFER TO THE SITE SPECIFIC DRAWINGS.
11. SITE POWER REQUIREMENTS ARE SITE DEPENDENT. THE AUTONOMY AND RECHARGE TIME REQUIRED FOR A SITE IS TO BE CALCULATED AND CONFIRMED WITH OPERATIONS FOR EACH INSTALLATION.
12. THE USE OF THIS FUSE IS FOR ONE OF THE FOLLOWING:
    - AN ETHERNET EXTENDER
    - AN ETHERNET SWITCH
    - PRESSURE CONTROL VALVE 2

CONSTRUCTION ISSUE

FACILITY CODE	AREA
−	93

ISSUE	DATE	AMENDMENT	BY	APPD.
C	04:21	DC SUPPLY CHANGED FROM 12V TO 24V	R.X.	J.D.
B	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
A	02/15	ISSUED FOR CONSTRUCTION − REVISED	L.B.	D.I.
−	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14
D Ibrahim	09/14
R Matthews	09/14
S Fagamalo	09/14

OPERATIONS

INFRASTRUCTURE

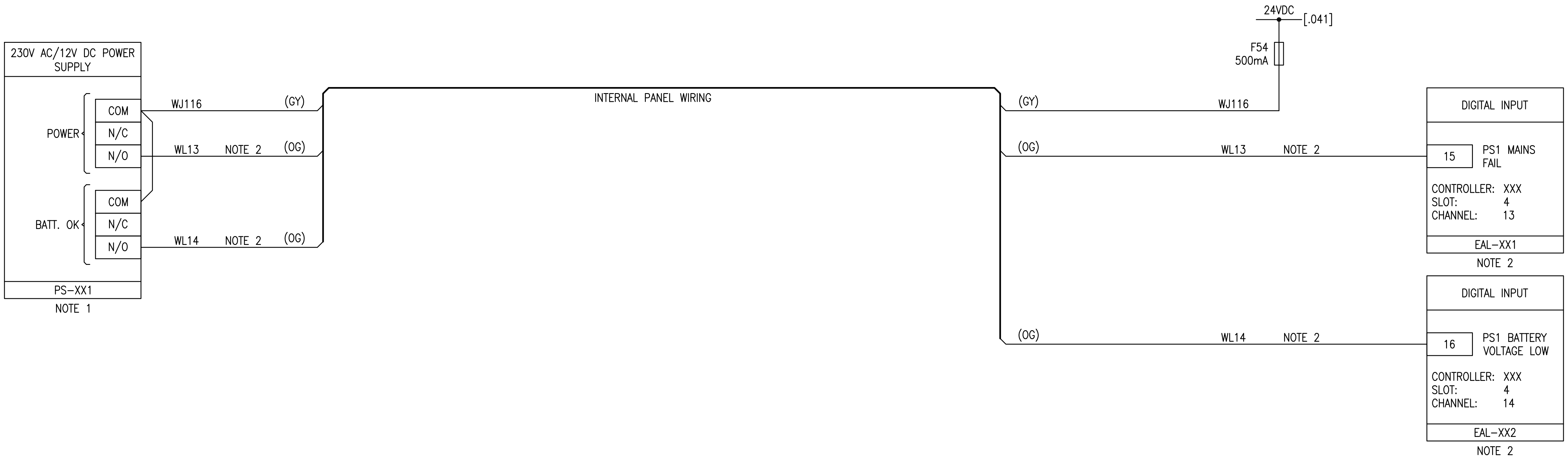
Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
24V DC DISTRIBUTION SCHEMATIC

CAD FILE 2010998.041C DATE 23:04:2021
ORIGINAL SCALE A3 −
CONTRACT No.
REF No. − −
DWG No. 2010998 .041 C

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39

DRY GEARPLATE



NOTES:

1. REFER TO DRAWING [.041] FOR THE POWER SUPPLY TYPE, MAKE AND MODEL.
2. VARIOUS DIGITAL INPUTS CAN BE USED FOR THE INNOVATIVE ENERGIES SR100 POWER SUPPLY INDICATION SIGNALS. REFER TO DRAWING [.008] FOR THE DIGITAL INPUT NUMBERS, CONDITIONS AND WIRE NO.

FACILITY CODE	AREA
–	93

CONSTRUCTION ISSUE

ISSUE	DATE	AMENDMENT	BY	APPD.
C	04/21	DC SUPPLY CHANGED FROM 12V TO 24V	R.X.	J.D.
B	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
A	08:16	CONSTRUCTION ISSUE MINOR CHANGES	A.C	
–	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14
D Ibrahim	09/14
R Matthews	09/14
S Fagamalo	09/14

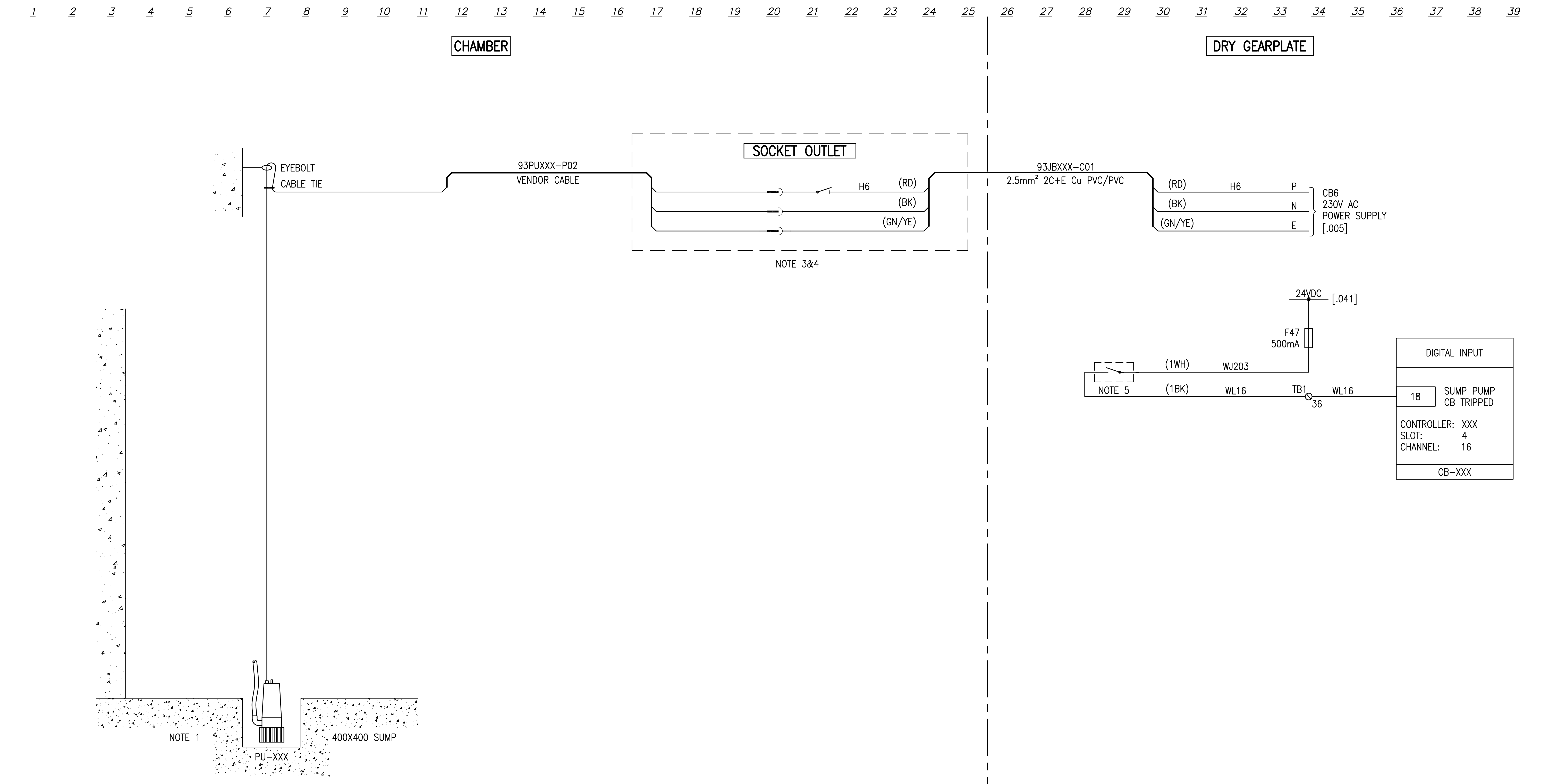
OPERATIONS

INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
EAL-XX1 & EAL-XX2 PS-XX1 MAINS & BATT STATUS LOOP SCHEMATIC

CAD FILE 2010998.042C	DATE 23:04:2021
ORIGINAL SCALE A3 –	CONTRACT No.
REF No. –	–
DWG No. 2010998 .042	C



NOTES:

1. SUMP PUMP: C/W STAINLESS STEEL SCREEN OR SHOFOU SFA–0512.
2. EYEBOLT SHALL PROTRUDE NO MORE THAN 50mm FROM WALL.
3. TYPE: SINGLE PHASE SOCKET UNIT
   MAKE: PDL
   MODEL: 56CV315
4. PLUG, SOCKET, JUNCTION BOX, AND TOP EYEBOLT (IN THE PUMP CABLE) TO BE MOUNTED 300mm FROM CHAMBER ROOF.
5. SUMP PUMP MCB FAULT INDICATION AUXILIARY CONTACT.

CONSTRUCTION ISSUE

FACILITY CODE	AREA
–	93

ISSUE	DATE	AMENDMENT	BY	APPD.
A	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
–	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14
D Ibrahim	09/14
R Matthews	09/14
S Fagamalo	09/14

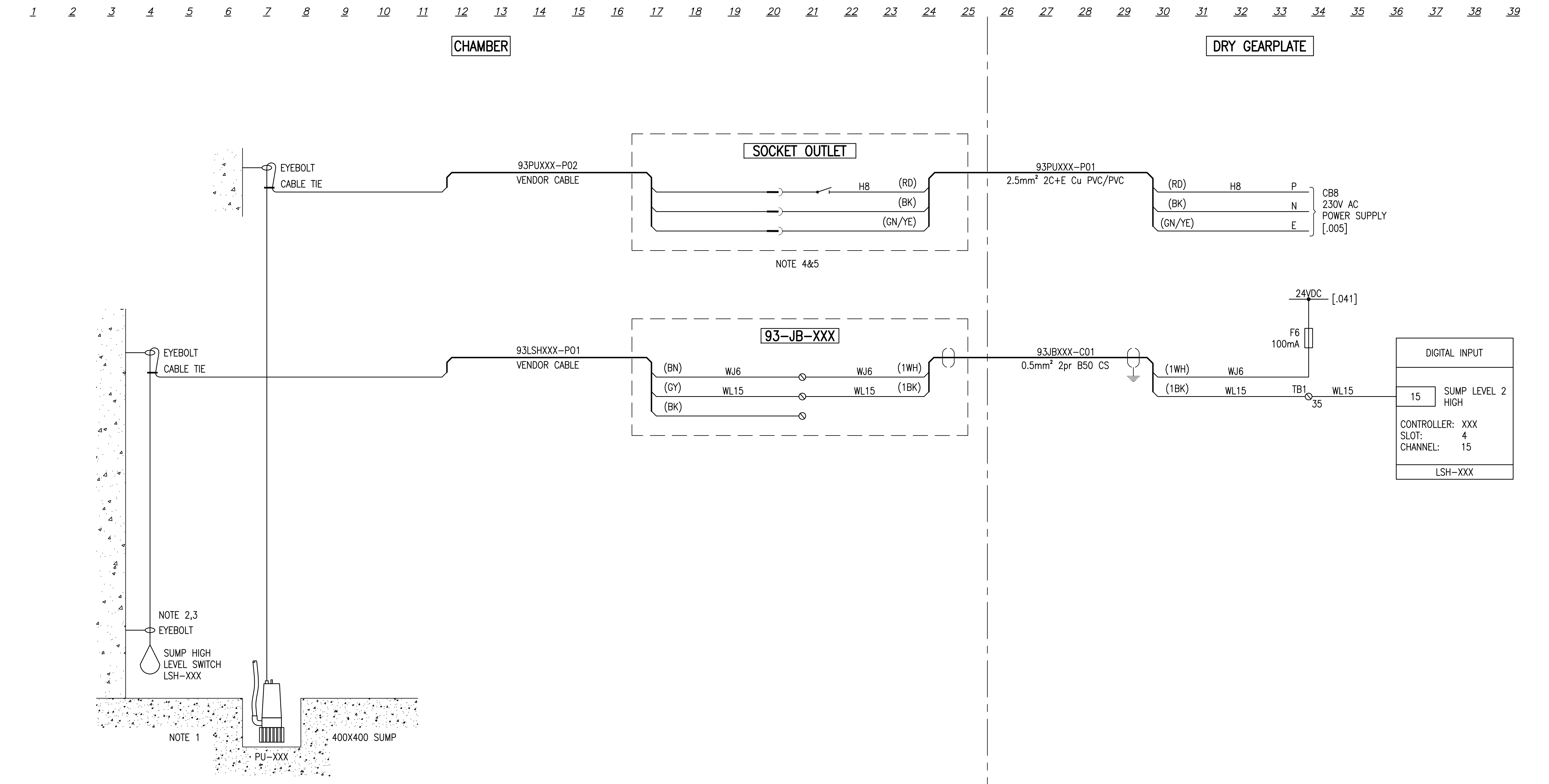
OPERATIONS

INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
PU–XXX SUMP PUMP 1 SCHEMATIC

CAD FILE 2010998.043A	DATE 22:05:2017
ORIGINAL SCALE A3 –	CONTRACT No.
REF No. –	–
DWG No. 2010998 .043	A



NOTES:

1. SUMP PUMP: C/W STAINLESS STEEL SCREEN OR SHOFOU SFA-0512.
2. TYPE: LEVEL SWITCH
   MAKE: FLYGT
   MODEL: EMN-10
3. FLOAT SWITCH SHALL BE MOUNTED 50mm ABOVE FLOOR LEVEL. EYEBOLT SHALL PROTRUDE NO MORE THAN 50mm FROM WALL. EYEBOLT SHALL BE MOUNTED 300mm ABOVE FLOOR LEVEL.
4. TYPE: SINGLE PHASE SOCKET UNIT
   MAKE: PDL
   MODEL: 56CV315
5. PLUG, SOCKET, JUNCTION BOX, AND TOP EYEBOLT (IN THE PUMP CABLE) TO BE MOUNTED 300mm FROM CHAMBER ROOF.

FACILITY CODE	AREA
-	93

CONSTRUCTION ISSUE

ISSUE	DATE	AMENDMENT	BY	APPD.
B	04/21	DC SUPPLY CHANGED FROM 12V TO 24V	R.X.	J.D.
A	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
-	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14
D Ibrahim	09/14
R Matthews	09/14
S Fagamalo	09/14

OPERATIONS

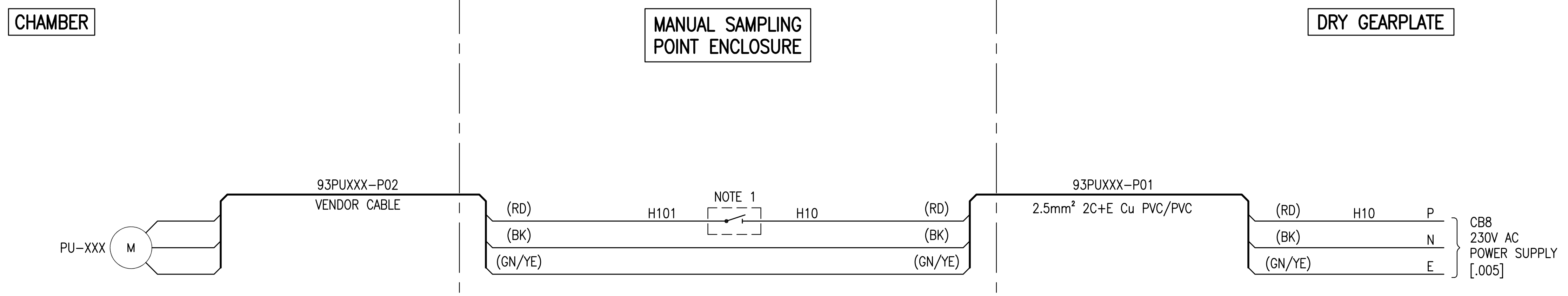
INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
PU-XXX SUMP PUMP 2 AND LSH-XXX HIGH LEVEL 2 ALARM SCHEMATIC

CAD FILE	2010998.044B	DATE	23:04:2021
ORIGINAL SCALE A3	-	CONTRACT No.	
REF No.	-		-
DWG No.	2010998	.044	B

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39



NOTES:
1. HAND SWITCH.

CONSTRUCTION ISSUE

FACILITY CODE	AREA
–	93

ISSUE	DATE	AMENDMENT	BY	APPD.
B	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
A	04/15	ISSUED FOR CONSTRUCTION – REVISED	A.S.	D.I.
–	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14
D Ibrahim	09/14
R Matthews	09/14
S Fagamalo	09/14

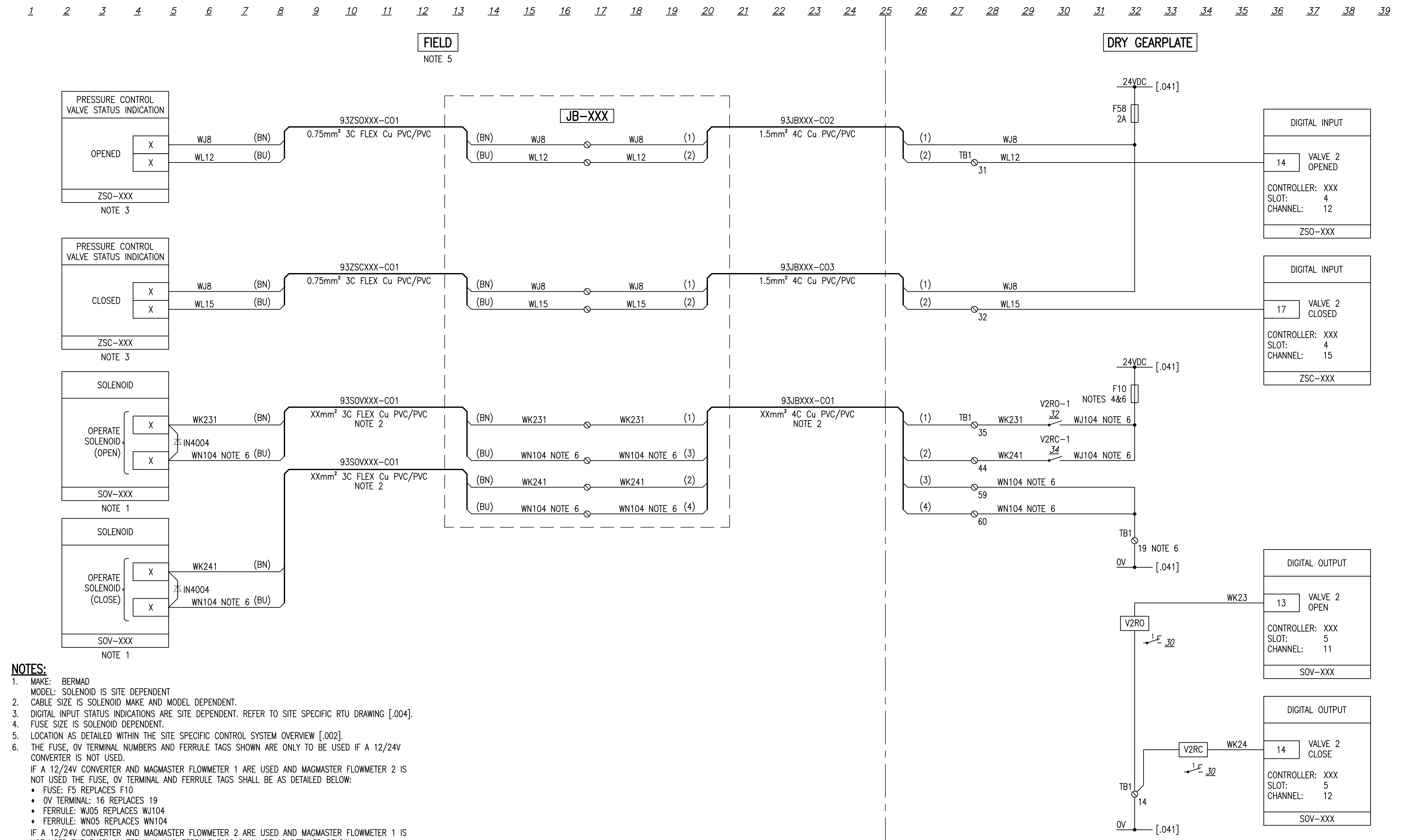
OPERATIONS

INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
PU-XXX SAMPLING PUMP SCHEMATIC

CAD FILE 2010998.045B DATE 22:05:2017
ORIGINAL SCALE A3 –
CONTRACT No.
REF No. – –
DWG No. 2010998 .045 B



NOTES:

1. MAKE: BERMAD
   MODEL: SOLENOID IS SITE DEPENDENT
2. CABLE SIZE IS SOLENOID MAKE AND MODEL DEPENDENT.
3. DIGITAL INPUT STATUS INDICATIONS ARE SITE DEPENDENT. REFER TO SITE SPECIFIC RTU DRAWING [.004].
4. FUSE SIZE IS SOLENOID DEPENDENT.
5. LOCATION AS DETAILED WITHIN THE SITE SPECIFIC CONTROL SYSTEM OVERVIEW [.002].
6. THE FUSE, 0V TERMINAL NUMBERS AND FERRULE TAGS SHOWN ARE ONLY TO BE USED IF A 12/24V CONVERTER IS NOT USED.
   IF A 12/24V CONVERTER AND MAGMASTER FLOWMETER 1 ARE USED AND MAGMASTER FLOWMETER 2 IS NOT USED THE FUSE, 0V TERMINAL AND FERRULE TAGS SHALL BE AS DETAILED BELOW:
   - FUSE: F5 REPLACES F10
   - 0V TERMINAL: 16 REPLACES 19
   - FERRULE: WJ05 REPLACES WJ104
   - FERRULE: WN05 REPLACES WN104

   IF A 12/24V CONVERTER AND MAGMASTER FLOWMETER 2 ARE USED AND MAGMASTER FLOWMETER 1 IS NOT USED THE FUSE, 0V TERMINAL AND FERRULE TAGS SHALL BE AS DETAILED BELOW:
   - FUSE: F4 REPLACES F10
   - 0V TERMINAL: 15 REPLACES 19
   - FERRULE: WJ04 REPLACES WJ104
   - FERRULE: WN04 REPLACES WN104

CONSTRUCTION ISSUE

FACILITY CODE	AREA
-	93

ISSUE	DATE	AMENDMENT	BY	APPD.
D	04/21	DC SUPPLY CHANGED FROM 12V TO 24V	R.X.	J.D.
C	05/17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
B	06/15	ISSUED FOR CONSTRUCTION - REVISED		
A	02/15	ISSUED FOR CONSTRUCTION - REVISED	L.B.	D.I.
-	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14
D Ibrahim	09/14
R Matthews	09/14
S Fagamalo	09/14

OPERATIONS

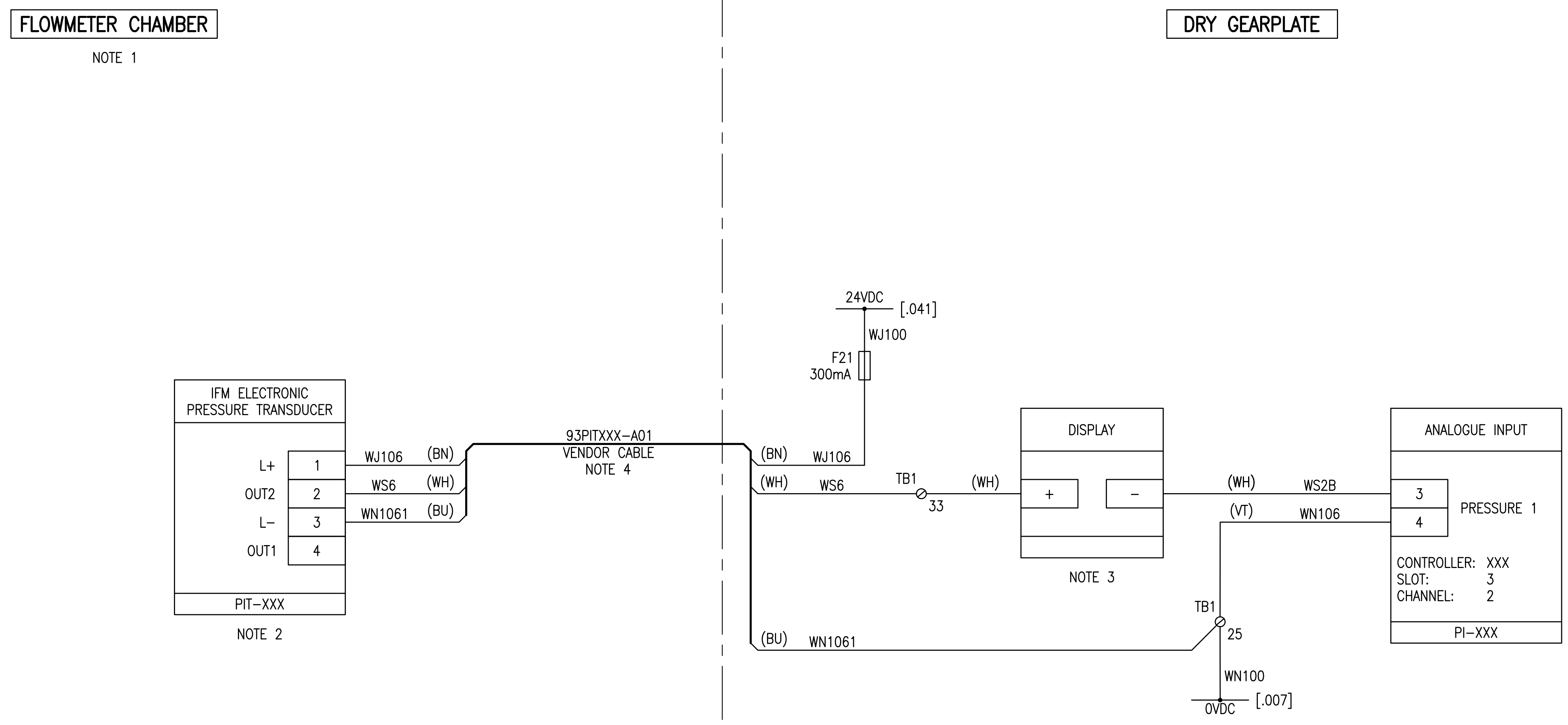
INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
SOV-XXX & SOV-XXX PRESSURE CONTROL VALVE 2 LOOP SCHEMATIC

CAD FILE 2010998.046D DATE 23:04:2021
ORIGINAL SCALE A3 -
CONTRACT No.
REF No. - -
DWG No. 2010998 .046 D

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39



NOTES:

1. LOCATION AS DETAILED WITHIN THE SITE SPECIFIC CONTROL SYSTEM OVERVIEW [.002].
2. MAKE: IFM ELECTRONIC
   MODEL: PN202 SERIES
3. DISPLAY SCALED TO 0−1500 kPA.
4. VENDOR CABLE PART NUMBER IS EVMXXX, WHERE XXX IS A 3 DIGIT NUMBER ASSOCIATED WITH THE VARIOUS CABLE LENGTHS AVAILABLE. THE CONTRACTOR IS TO ENSURE THE VENDOR CABLE IS LONG ENOUGH FOR THE PARTICULAR INSTALLATION REQUIRED.

FACILITY CODE	AREA
−	93

CONSTRUCTION ISSUE

ISSUE	DATE	AMENDMENT	BY	APPD.
B	04/21	CONSTRUCTION ISSUE REVISED	R.X.	J.D.
A	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
−	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14
D Ibrahim	09/14
R Matthews	09/14
S Fagamalo	09/14

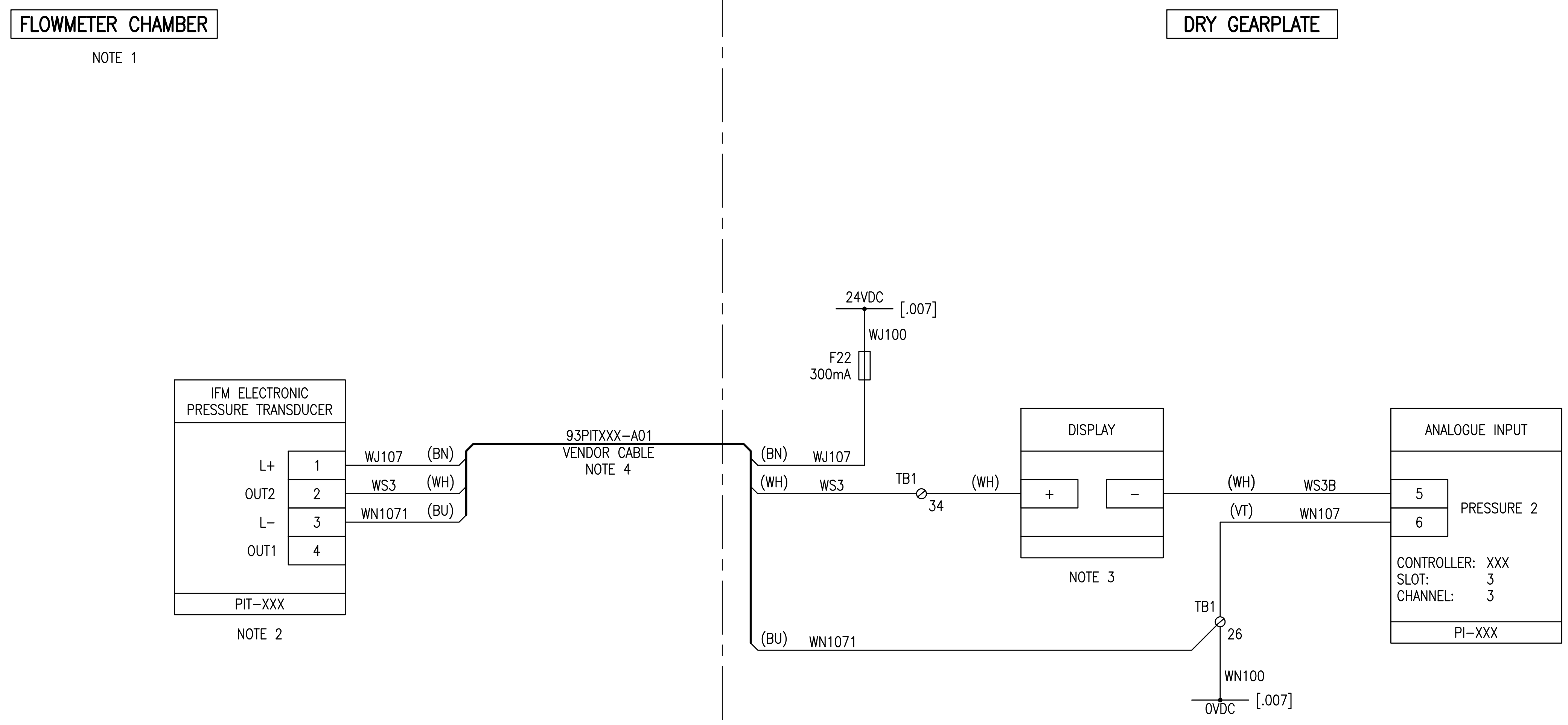
OPERATIONS

INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
PIT−XXX IFM PRESSURE TRANSDUCER 1 LOOP SCHEMATIC

CAD FILE 2010998.047B DATE 23:04:2021
ORIGINAL SCALE A3 − CONTRACT No.
REF No. − −
DWG No. 2010998 .047 B



NOTES:

1. LOCATION AS DETAILED WITHIN THE SITE SPECIFIC CONTROL SYSTEM OVERVIEW [.002].
2. MAKE: IFM ELECTRONIC
   MODEL: PN202 SERIES
3. DISPLAY SCALED TO 0–1500 kPA.
4. VENDOR CABLE PART NUMBER IS EVMXXX, WHERE XXX IS A 3 DIGIT NUMBER ASSOCIATED WITH THE VARIOUS CABLE LENGTHS AVAILABLE. THE CONTRACTOR IS TO ENSURE THE VENDOR CABLE IS LONG ENOUGH FOR THE PARTICULAR INSTALLATION REQUIRED.

CONSTRUCTION ISSUE

FACILITY CODE	AREA
–	93

ISSUE	DATE	AMENDMENT	BY	APPD.
A	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
–	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14
D Ibrahim	09/14
R Matthews	09/14
S Fagamalo	09/14

OPERATIONS

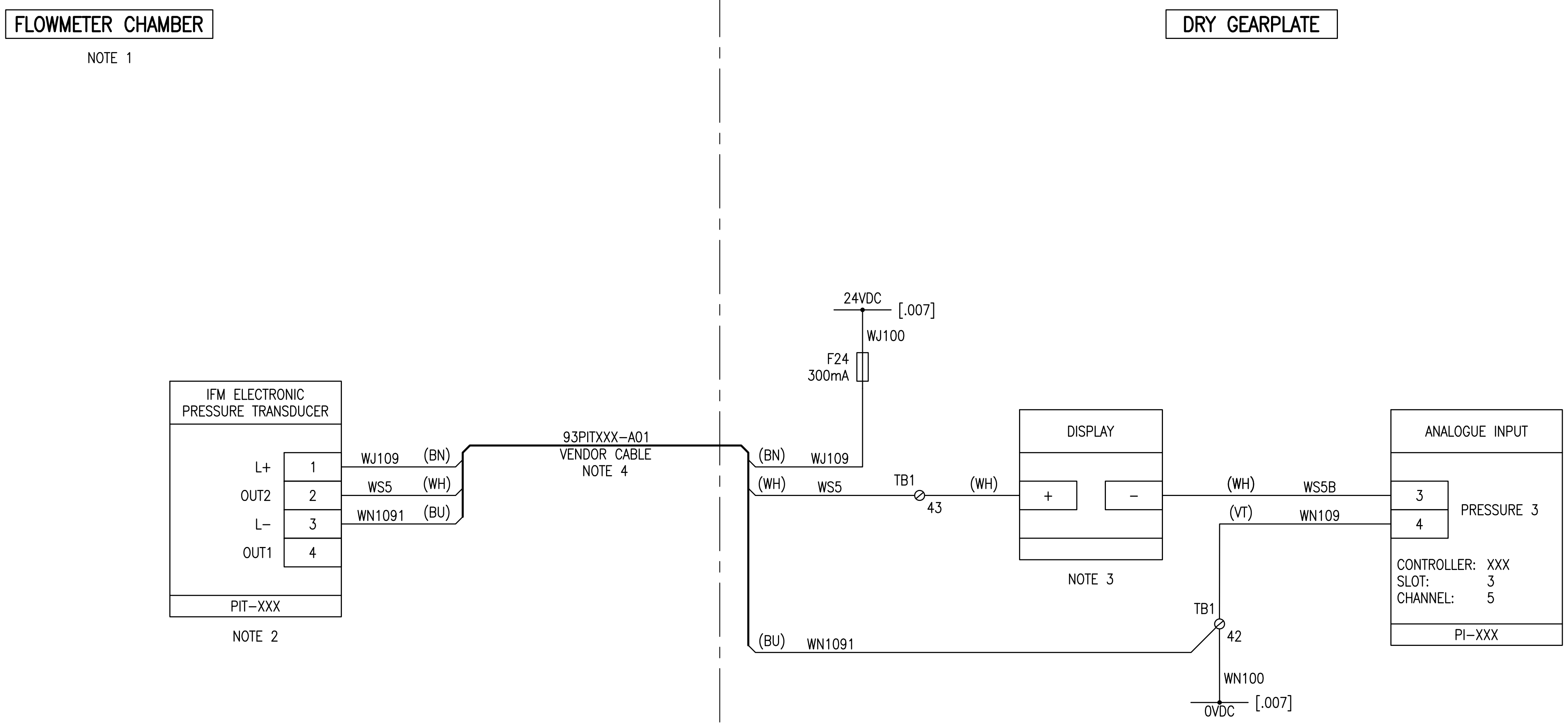
INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
PIT–XXX IFM PRESSURE TRANSDUCER 2 LOOP SCHEMATIC

CAD FILE 2010998.048A DATE 22:05:2017
ORIGINAL SCALE A3 – CONTRACT No.
REF No. – –
DWG No. 2010998 .048 A

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39



NOTES:

1. LOCATION AS DETAILED WITHIN THE SITE SPECIFIC CONTROL SYSTEM OVERVIEW [.002].
2. MAKE: IFM ELECTRONIC
   MODEL: PN202 SERIES
3. DISPLAY SCALED TO 0−1500 kPA.
4. VENDOR CABLE PART NUMBER IS EVMXXX, WHERE XXX IS A 3 DIGIT NUMBER ASSOCIATED WITH THE VARIOUS CABLE LENGTHS AVAILABLE. THE CONTRACTOR IS TO ENSURE THE VENDOR CABLE IS LONG ENOUGH FOR THE PARTICULAR INSTALLATION REQUIRED.

CONSTRUCTION ISSUE

FACILITY CODE	AREA
−	93

ISSUE	DATE	AMENDMENT	BY	APPD.
A	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B	
−	09/14	ISSUED FOR CONSTRUCTION	R.M.	D.I.

S Fagamalo	09/14
D Ibrahim	09/14
R Matthews	09/14
S Fagamalo	09/14

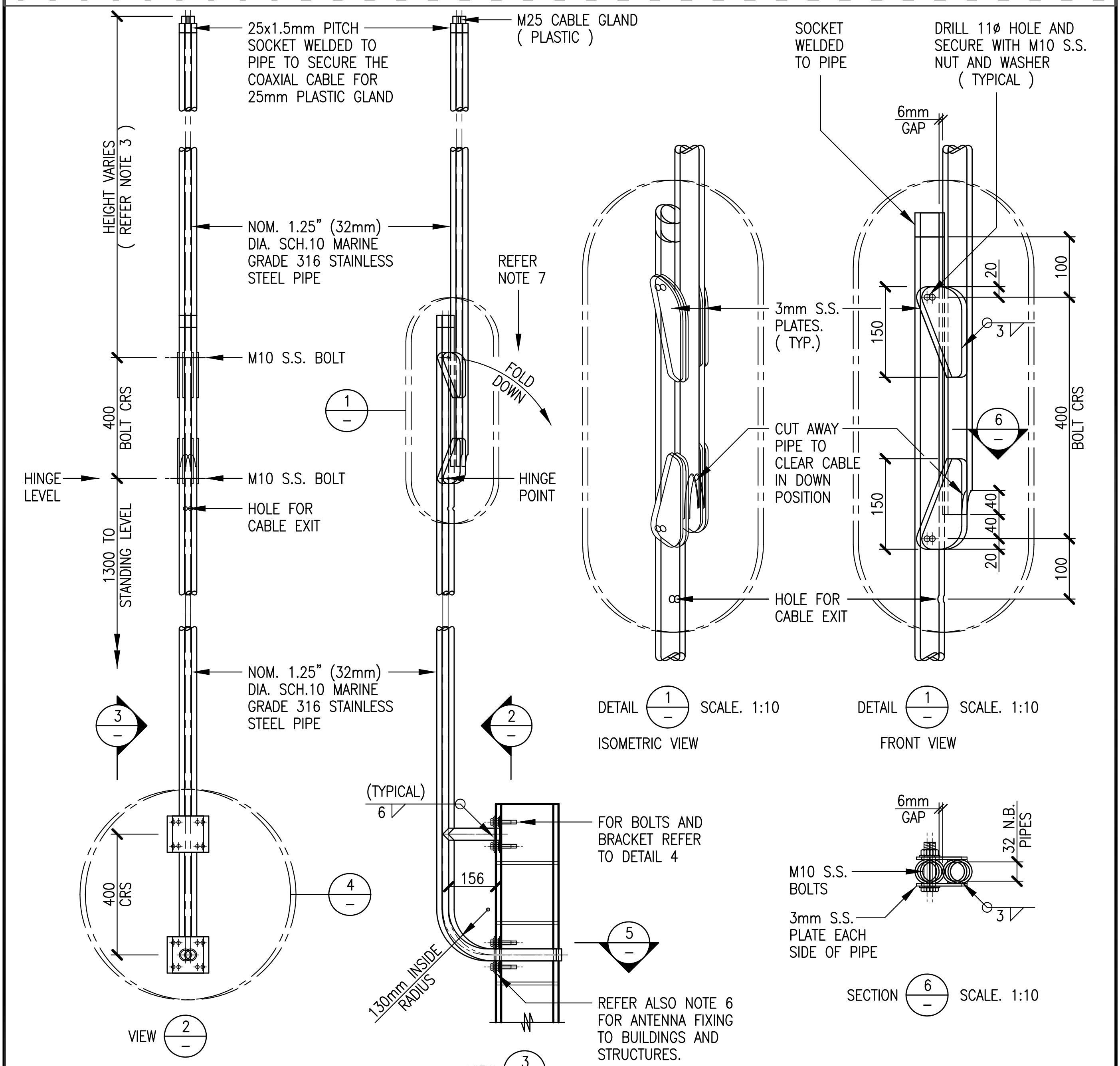
OPERATIONS

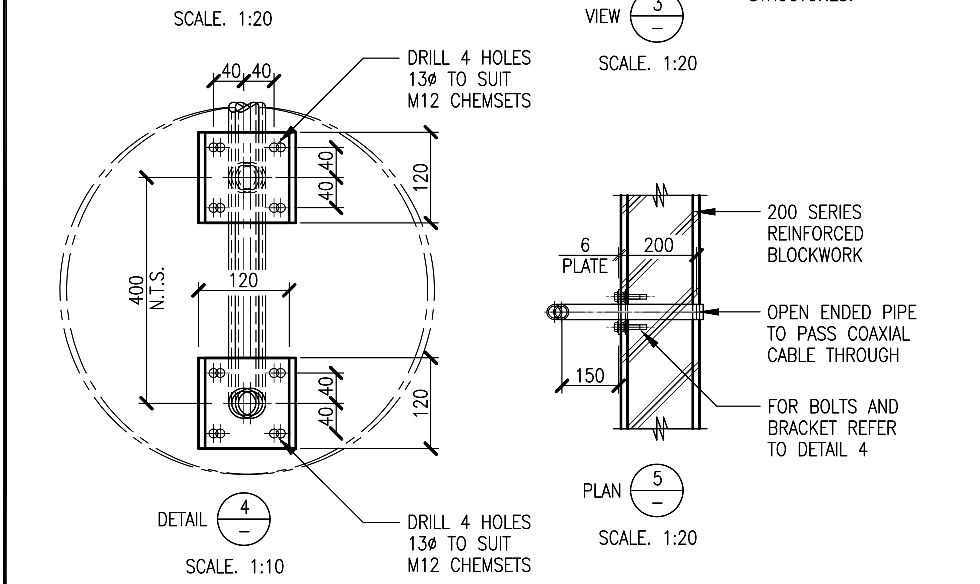
INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
PIT−XXX IFM PRESSURE TRANSDUCER 3 LOOP SCHEMATIC

CAD FILE 2010998.049A DATE 22:05:2017
ORIGINAL SCALE A3 −
CONTRACT No.
REF No. − −
DWG No. 2010998 .049 A





NOTES:

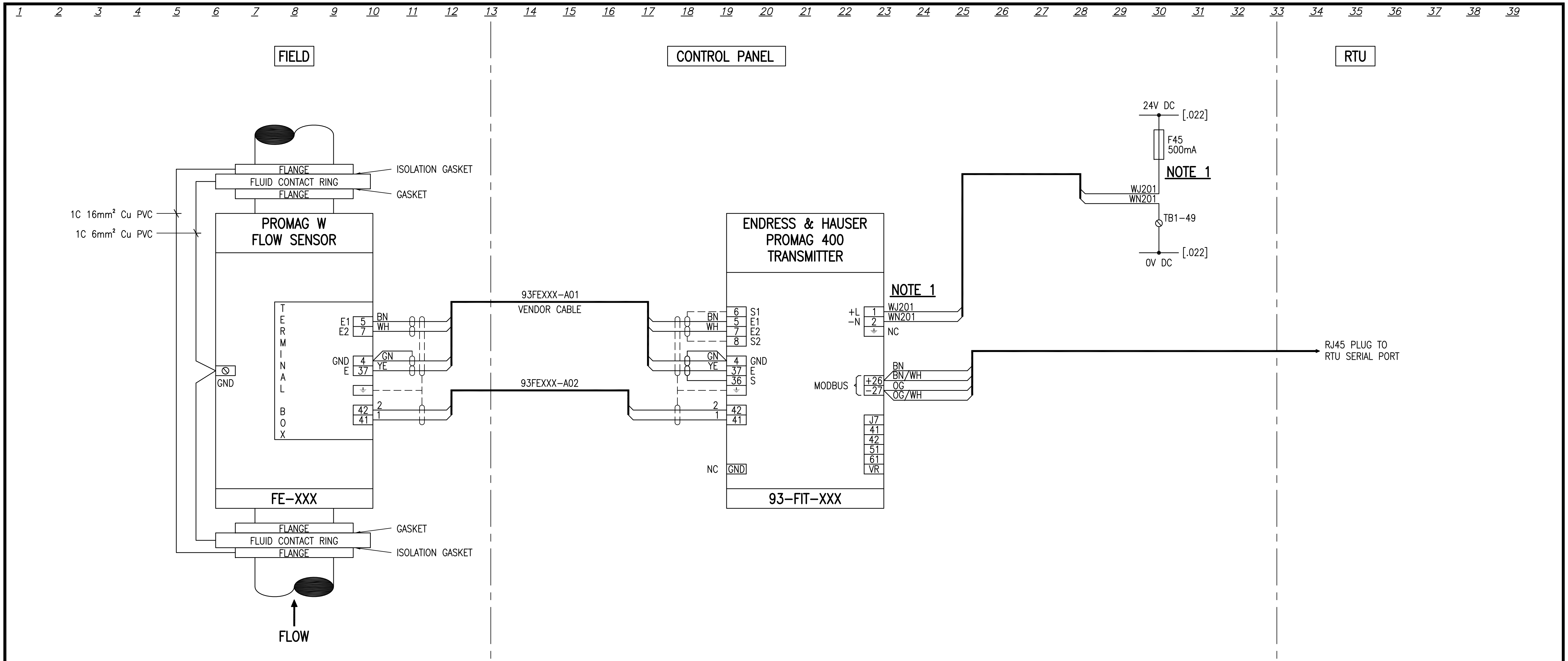
1. ALL STAINLESS STEEL (S.S.) TO BE MARINE GRADE 316
2. ANTENNA CABLE IS RG213 COAX.
3. POLE HEIGHT IS SITE DEPENDANT.
4. THE HINGE POINT SHALL BE CONSTRUCTED TO PROVIDE THE ABILITY OF HINGING THE POLE BY 135° TOWARD THE GROUND LEVEL WITH THE ANTENNA CABLE IN PLACE.
5. THE HINGE POINT SHALL BE LOCATED AT 1300mm ABOVE STANDING LEVEL.
6. TYPICAL ANTENNA FIXING TO BUILDINGS AND STRUCTURES AS SHOWN ON THIS DRAWING. FOR ANTENNA FIXING TO A BSP CABINET REFER 2010998.039
7. ANTENNA AT HINGE TO FOLD DOWN TOWARDS MAINTAINENCE STAND POINT TO ALLOW FOR CLEAR COLLAPSE.

L:\---\ EGCADFI \ 2015 \ BSP STANDARD DRAWINGS \ 2010998.050 .DWG

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
TYPICAL ANTENNA INSTALLATION AT STRUCTURE

SCALE:	1:20 & 1:10 (A3)
ISSUE DATE:	17–08–2015
REFERENCE No.	—
DWG No.	2010998.050A



NOTE:

1. WIRE NUMBERS, FUSES AND TERMINALS INCREMENT FOR EXTRA FLOW METERS.

CONSTRUCTION ISSUE

FACILITY CODE	AREA
XXXXX	93

ISSUE	DATE	AMENDMENT	BY	APPD.
A	05:17	NUMBER REFERENCE CORRECTED FOR CONSTRUCTION	J.B.	
–	05:17	FOR CONSTRUCTION	F.T	

DESIGNED	F.T	05:17
DES. CHECKED		
DRAWN	J.B	05:17
DWG. CHECKED		
PROJECT LEADER		
INFRAST'R APP'D		

OPERATIONS

INFRASTRUCTURE

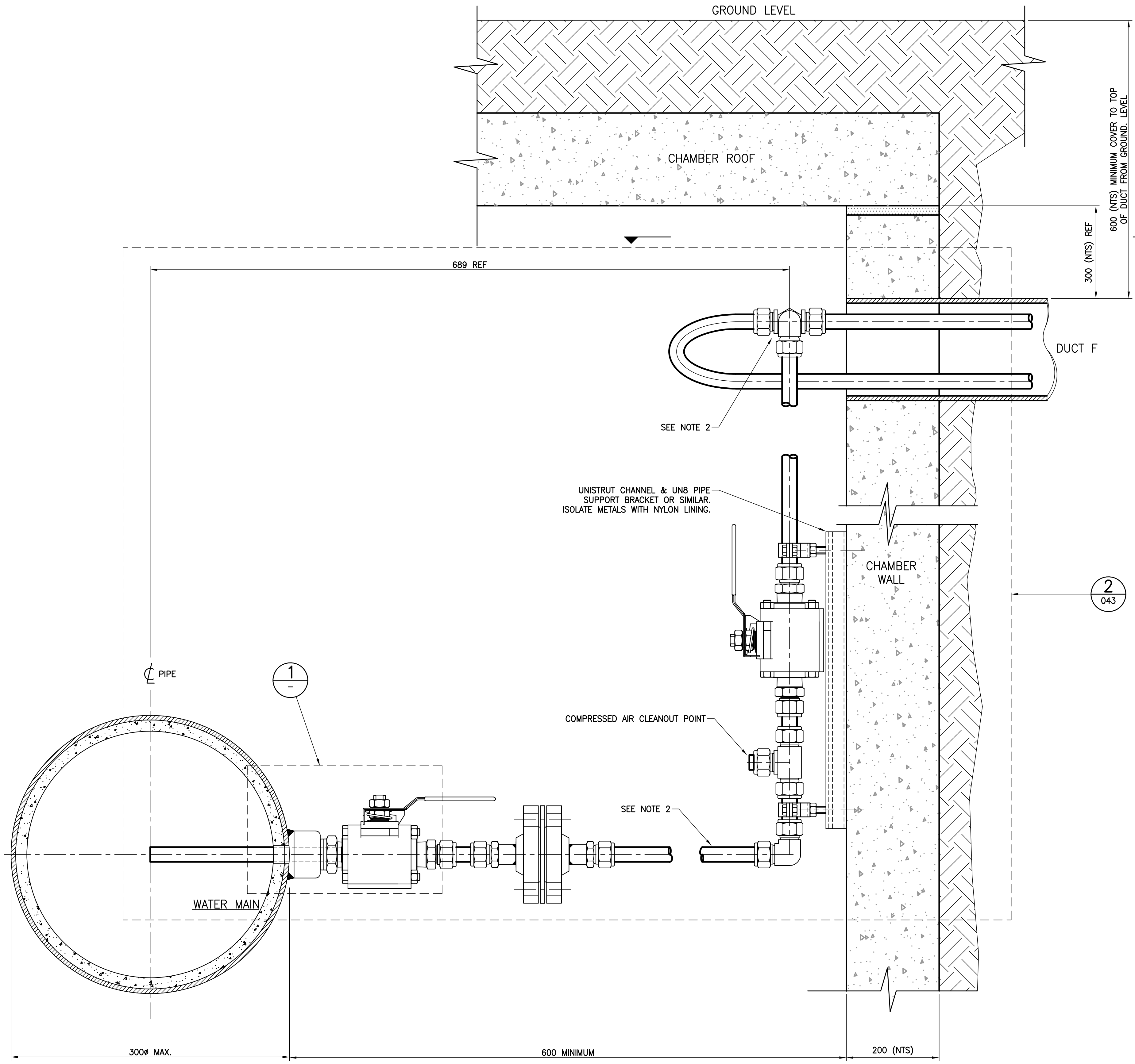
Watercare

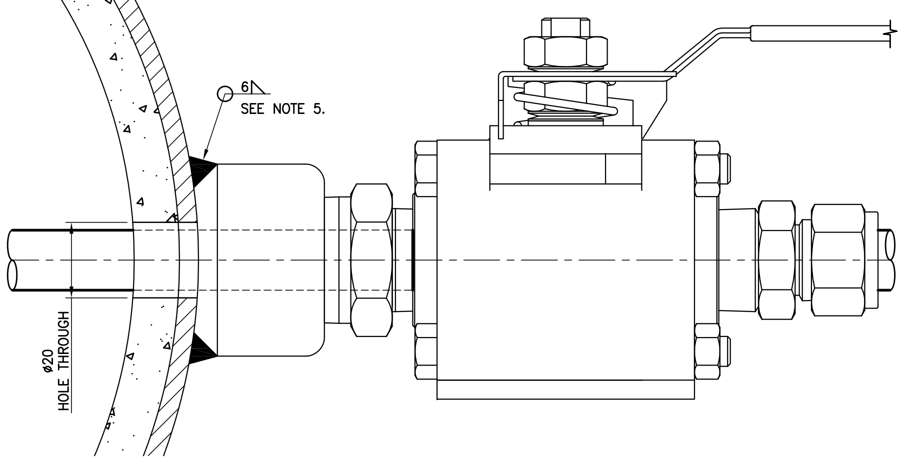
BSP STANDARD DRAWING

CONTROL SYSTEM

FIT-XXX E & H FLOWMETER LOOP SCHEMATIC (SERIAL COMMS)

CAD FILE 2010998.051A	DATE 22:05:2017
ORIGINAL SCALE A3: N.T.S	CONTRACT No.: -
REF No.: –	ISSUE: –
DWG No.: 2010998 .051	A

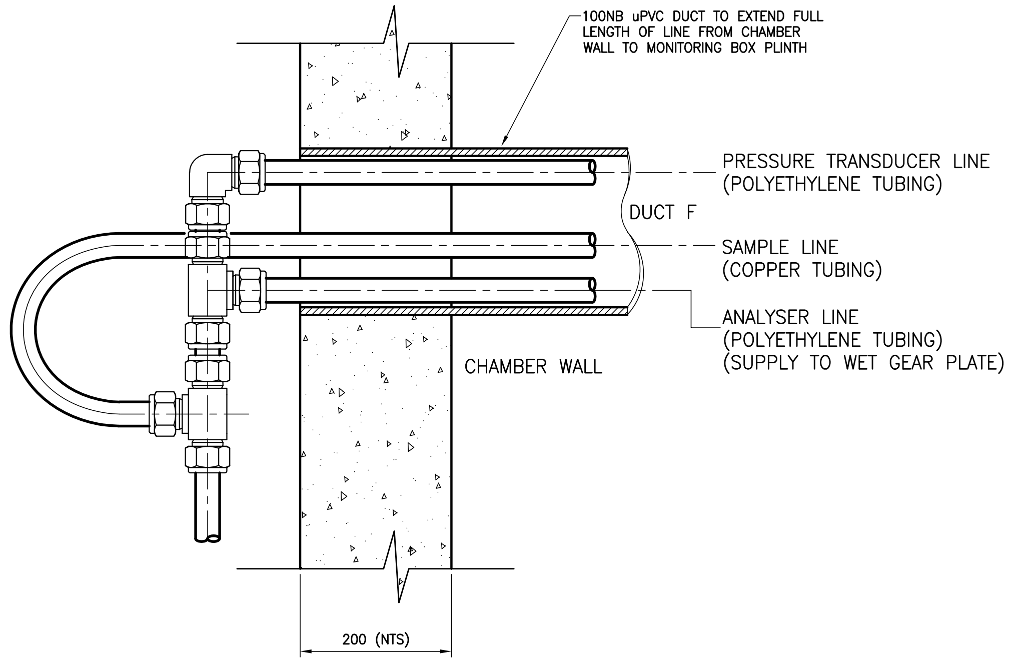




DETAIL 1
1:2 (A3)

NOTES:

1. ALL FITTINGS TO BE 20 BAR TEST PRESSURE RATED.
2. CUT TUBING TO LENGTH ON SITE.
3. CHECK ALL MEASUREMENTS ON SITE.
4. SEE DRG No. 2002888.043 FOR TAPPING POINT BOM.
5. ALL WELDS IN MILD STEEL PIPEWORK SHALL BE PERFORMED TO ASME B 31.4 UNLESS OTHERWISE STATED.



SECTION A
1:5 (A3)

CONSTRUCTION ISSUE

ISSUE	DATE	AMENDMENT	BY	APPD.
–	06:16	FOR CONSTRUCTION	J.D	

DESIGNED	J.D	06:16
DES. CHECKED		
DRAWN	J.B	06:16
DWG. CHECKED		
PROJECT LEADER		
INFRAST'R APP'D		

OPERATIONS

INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
CHAMBER SAMPLE TAPPING POINT LAYOUT

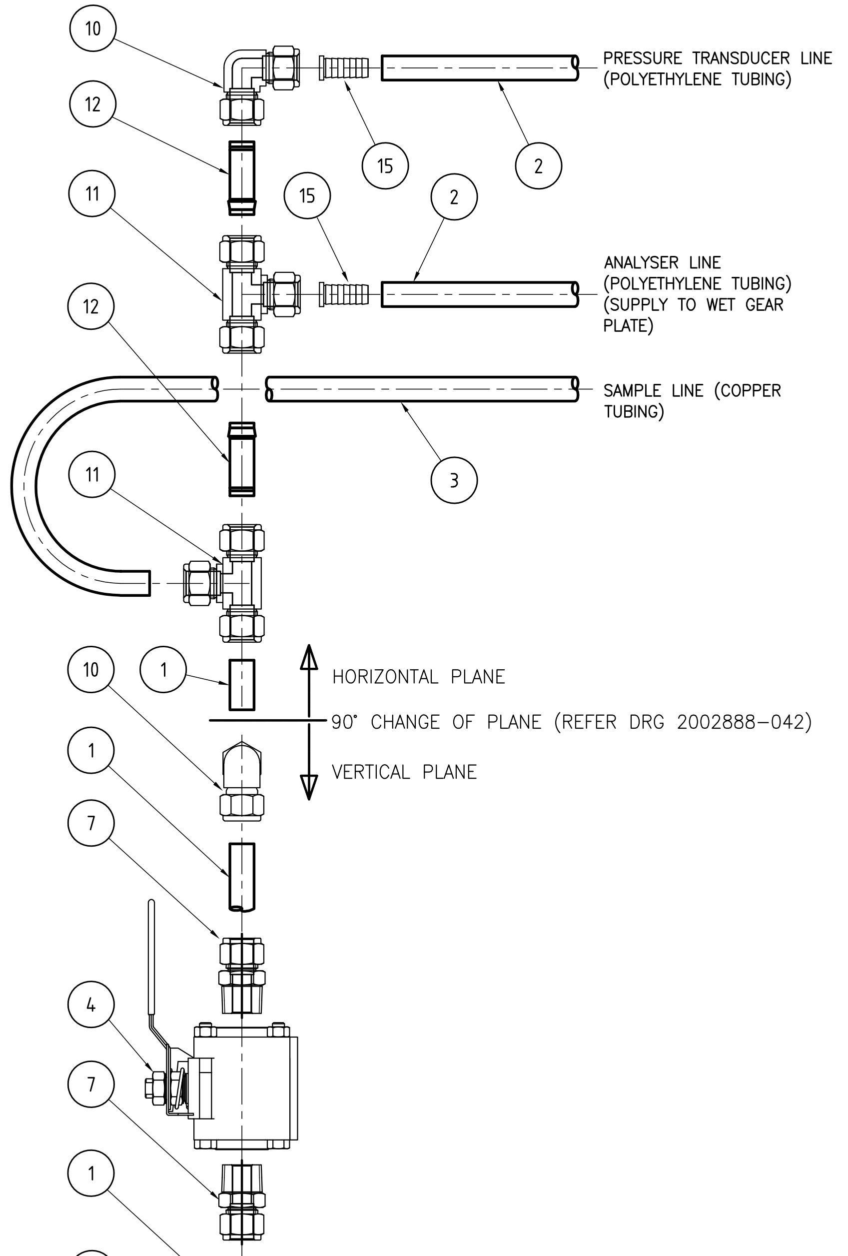
CAD FILE 2010998.052	DATE 02:06:2016
ORIGINAL SCALE A3 N.T.S	CONTRACT No. –
REF No. –	ISSUE –
DWG No. 2010998 .052	–

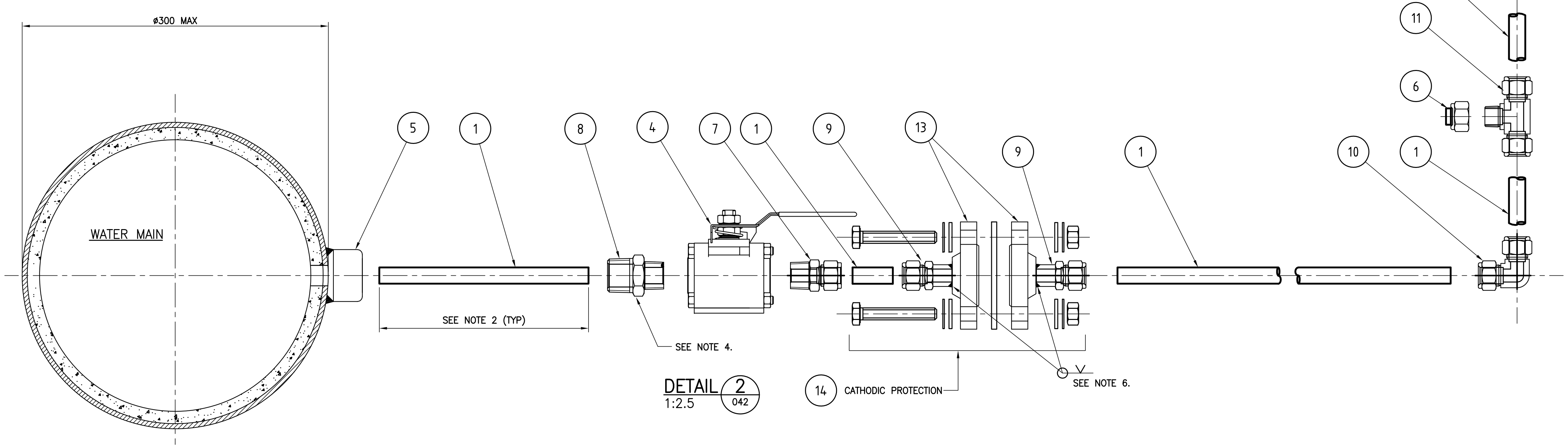
ITEM	DRG/PART No.	MAKE/SUPPLIER	MATERIAL	DESCRIPTION	QTY	
1	–	S&T STAINLESS	S/S	16mm x 1.5 WT SEAMLESS TUBE	–	
2	PA 1612	LEDATHENE	POLYETHYLENE	16mm x 11.80 ID TUBE	–	
3	–		COPPER	16mm x 1.5 WT TUBE	–	
4	VPB6020-3	S&T STAINLESS	S/S	3/4" BSP BALL V/V 1000LB. TEFLON SEATED 3-PIECE	2	
5	–	BONEY FORGE	MS	1" BSP THREADOLET CL3000	1	
6	SS-16MO-P	SWAGELOK	S/S	16mm PLUG	1	
7	SS-16MO-1-12RT	SWAGELOK	S/S	3/4" BSPx16mm MALE CONN.	3	
8	BSP6RN025020/3	S&T STAINLESS	S/S	1" x 3/4" BSP MALE ADAPTER (SEE NOTE 4)	1	
9	SS-16MO-1-8W	SWAGELOK	S/S	16mm x 1/2" MALE PIPE WELD CONNECTOR	2	
10	SS-16MO-9	SWAGELOK	S/S	16mm UNION ELBOW	3	(SEE NOTE 7)
11	SS-16MO-3	SWAGELOK	S/S	16mm UNION TEE	3	
12	SS-16M1PC	SWAGELOK	S/S	16mm PORT CONNECTOR	2	
13	FA300SP6020	S&T STAINLESS	S/S	3/4" ANSI 300LB WELDNECK FLANGE	2	
14	FLANGE ISOLATION KIT	WATERCARE		3/4" ANSI 300LB FLANGE ISOLATION KIT (SEE NOTE 5.)	1	
15	SS-16M5-12M	SWAGELOK	S/S	INSERT FOR SOFT PLASTIC TUBING	4	(SEE NOTE 8)

NOTES:

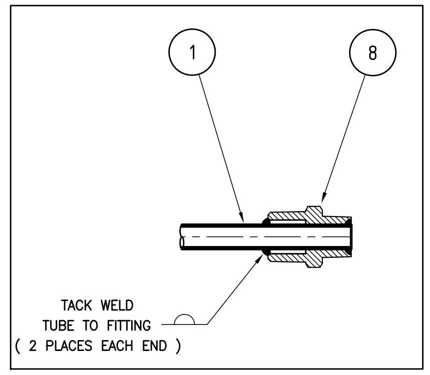
1. ALL FITTINGS TO BE 20 BAR TEST PRESSURE RATED.
2. CUT ALL TUBING TO LENGTH ON SITE.
3. CHECK ALL MEASUREMENTS ON SITE.
4. SPOT WELD TO TUBING. (SEE DETAIL A)
5. REFER TO WSL SPECIFICATION FOR SUPPLY OF BOLTS, NUTS, WASHERS AND GASKETS (SECTION 209)
6. ALL WELDS IN STAINLESS STEEL PIPEWORK SHALL BE PERFORMED TO ASME IX UNLESS OTHERWISE STATED.
7. EXTRA ELBOWS MAY BE REQUIRED DEPENDING ON CHAMBER PIPING VARIATIONS.
8. F INSERT ITEM 15 TO BE INSTALLED BOTH ENDS OF POLYETHYLENE TUBES

REFER DRAWING 2002888–042 FOR ASSEMBLED DETAIL (SECTION A)





DETAIL 2 / 042
1:2.5



DETAIL A – SECTION THROUGH FITTING
1:2.5

CONSTRUCTION ISSUE

ISSUE	DATE	AMENDMENT	BY	APPD.
–	06:16	FOR CONSTRUCTION	J.D	

DESIGNED	J.D	06:16
DES. CHECKED		
DRAWN	J.B	06:16
DWG. CHECKED		
PROJECT LEADER		
INFRAST'R APP'D		

OPERATIONS

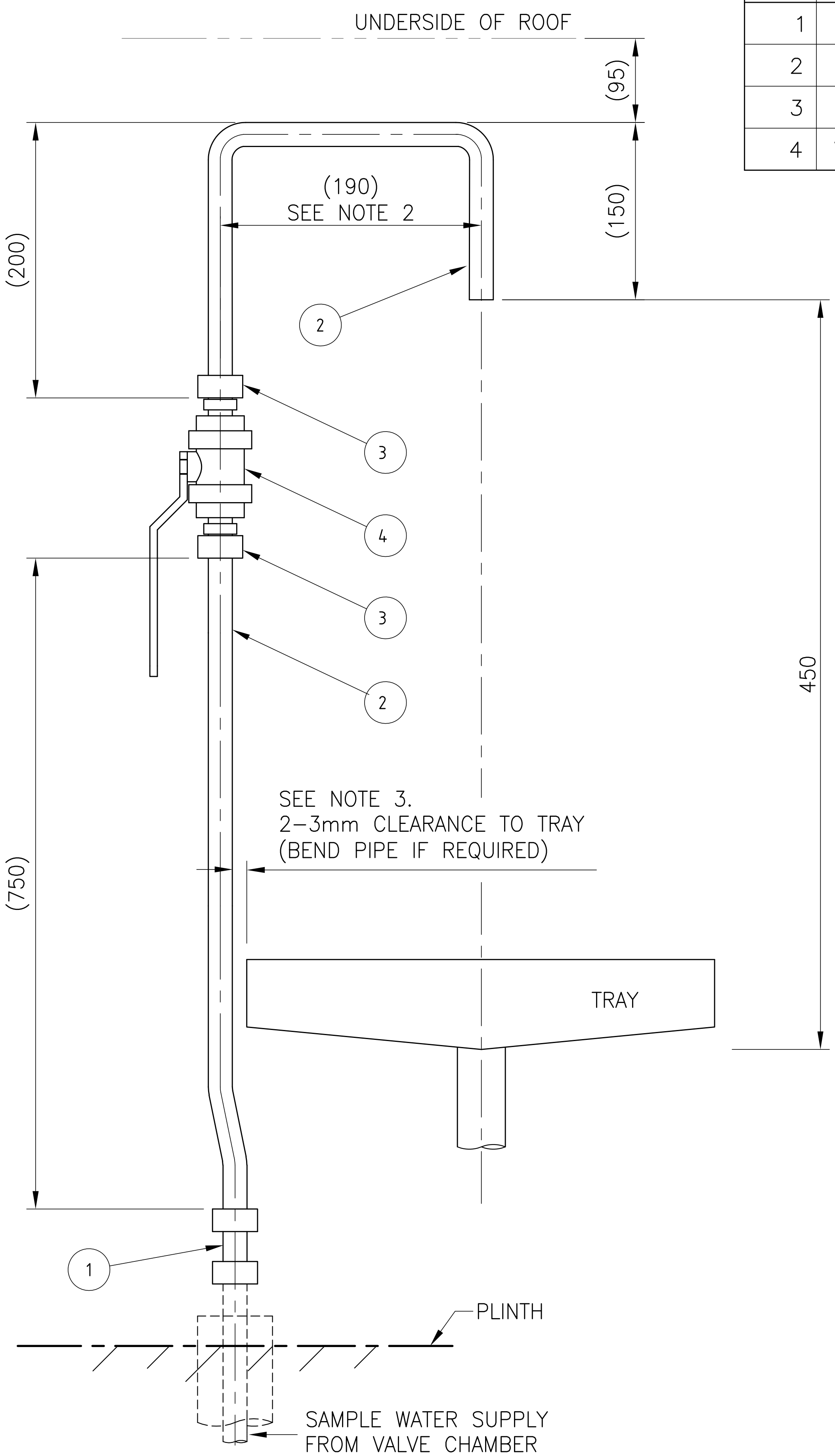
INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
CHAMBER SAMPLE TAPPING POINT BOM

CAD FILE 2010998.053 | DATE 02:06:2016
ORIGINAL SCALE A3 N.T.S | CONTRACT No. –
REF No. – | ISSUE –
DWG No. 2010998 .053 | –

ITEM	DRG/PART No.	MAKE/SUPPLIER	MATERIAL	DESCRIPTION	QTY
1	B–1010–6	SWAGELOK	BRASS	5/8" UNION	1
2	H1316	REFRIGERATION ENGINEERING	COPPER	5/8" SEAMLESS TUBE. ASTM B88 B280	2m
3	B–1010–1–8RT	SWAGELOK	BRASS	1/2" BSP x 5/8" MALE CONN.	2
4	VPB.6015–3	NZFS	S/S	3 PIECE BALL VALVE 1/2" BSP	1



NOTES:

1. ALL DIMENSIONS SHOWN ARE NOMINAL (xx), SITE CHECK TO BE MADE PRIOR TO MANUFACTURE OF EACH INSTALL.
2. ON ASSEMBLY WITH FRAME PIPE OUTLET MUST ALIGN WITH DRAIN CENTERLINE.
3. PIPE TO BE POSITIONED TO ALLOW FREE FITTING OF TRAY. 2–3mm CLEARANCE REQUIRED
4. ALL FITTINGS TO BE 16 BAR PRESSURE RATED.
5. CUT ALL TUBING TO LENGTH ON SITE.
6. CHECK ALL MEASUREMENTS ON SITE.
7. REFER SHEET .041 FOR SECTION THRO PIPING.

CONSTRUCTION ISSUE

ISSUE	DATE	AMENDMENT	BY	APPD.
–	06:16	FOR CONSTRUCTION	J.D	

DESIGNED	J.D	06:16
DES. CHECKED		
DRAWN	J.B	06:16
DWG. CHECKED		
PROJECT LEADER		
INFRAST'R APP'D		

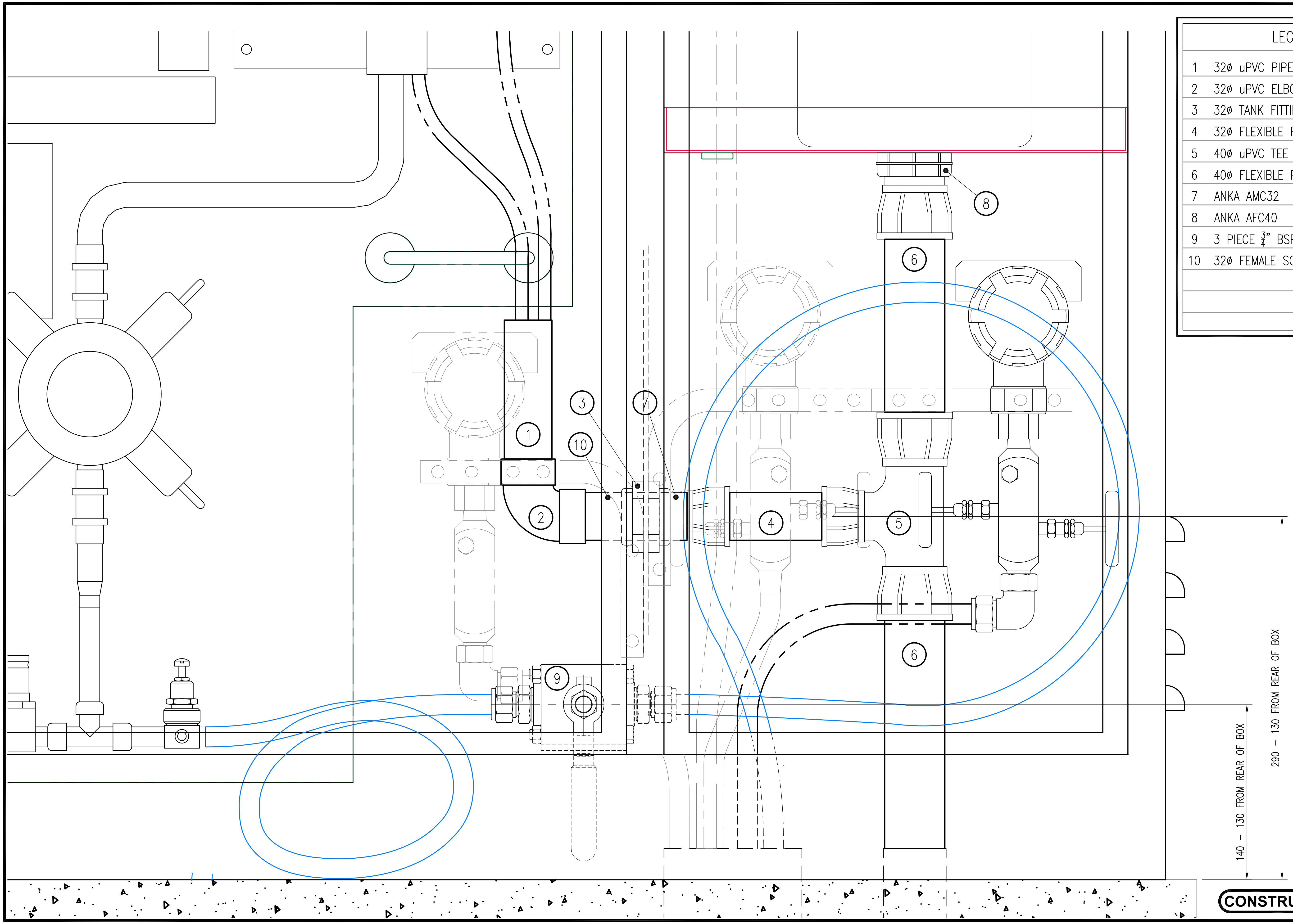
OPERATIONS

INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
CHAMBER SAMPLE TAPPING POINT LAYOUT

CAD FILE 2010998.054 DATE 02:06:2016
ORIGINAL SCALE A3 N.T.S
CONTRACT No. -
REF No. –
ISSUE –
DWG No. 2010998 .054 -



LEGEND	
1	32ø uPVC PIPE
2	32ø uPVC ELBOW
3	32ø TANK FITTING MACLON MTF32
4	32ø FLEXIBLE PIPE
5	40ø uPVC TEE ANKA ART4032
6	40ø FLEXIBLE PIPE
7	ANKA AMC32
8	ANKA AFC40
9	3 PIECE $\frac{3}{4}$" BSP SS316 BALL VALVE
10	32ø FEMALE SOCKET

CONSTRUCTION ISSUE

ISSUE	DATE	AMENDMENT	BY	APPD.
–	06:16	FOR CONSTRUCTION	J.D	

DESIGNED	J.D	06:16
DES. CHECKED		
DRAWN	J.B	06:16
DWG. CHECKED		
PROJECT LEADER		
INFRAST'R APP'D		

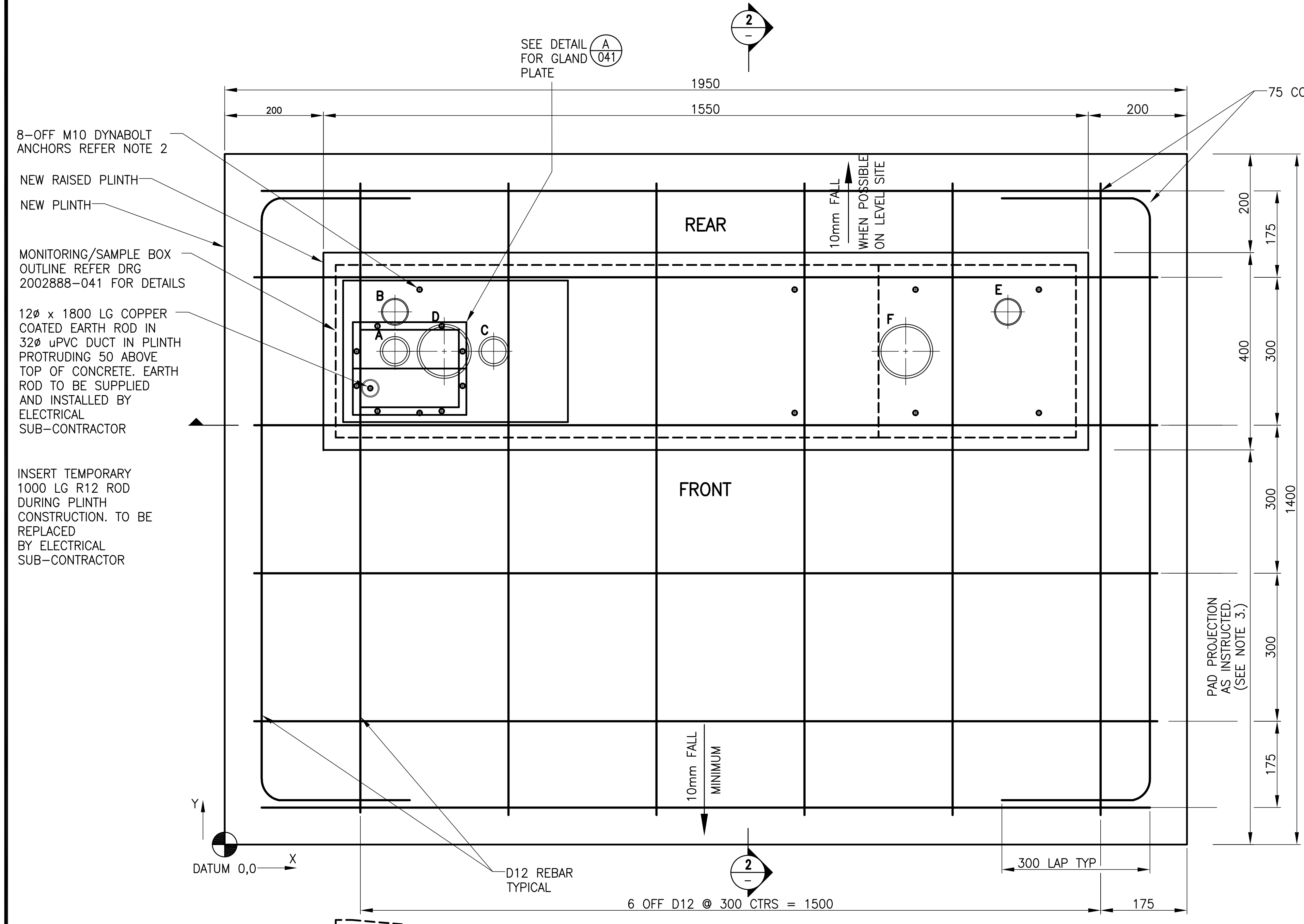
OPERATIONS

INFRASTRUCTURE

Watercare

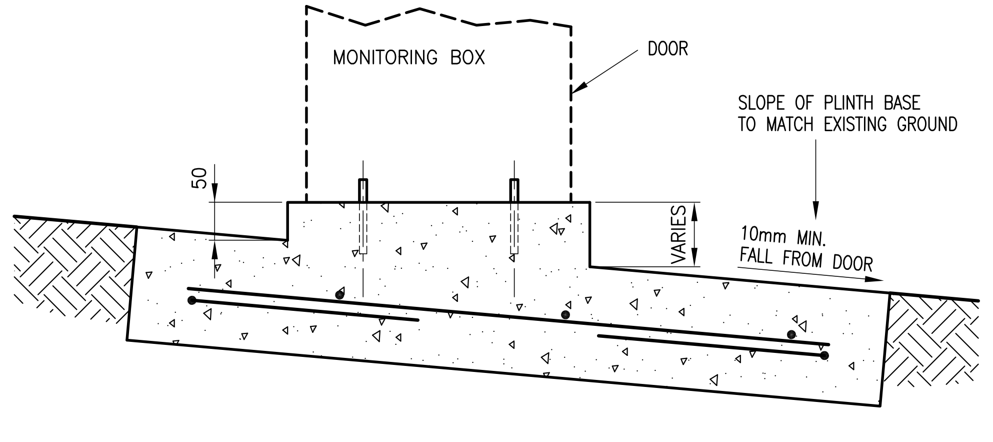
BSP STANDARD DRAWING
CONTROL SYSTEM
DETAILS OF SAMPLING LINE AND DRAINS

CAD FILE 2010998.055	DATE 02:06:2016
ORIGINAL SCALE A3 N.T.S	CONTRACT No. –
REF No. –	ISSUE –
DWG No. 2010998 .055	–

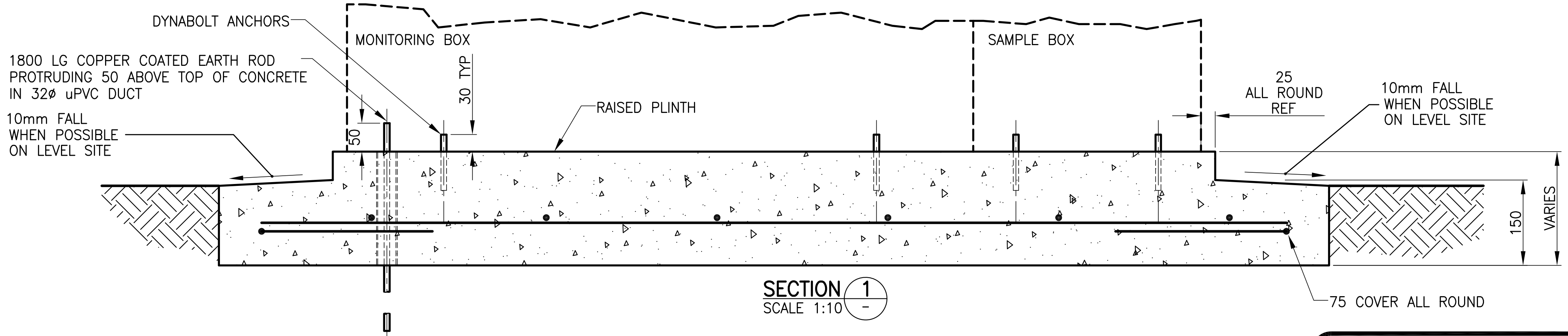


PENETRATION CHART

PENETRATION	DESCRIPTION	SIZE/MATERIAL	X-COORD	Y-COORD
A	ADDITIONAL COMMS (ONLY WHERE SPECIFIED)	50NB uPVC	345	1000
B	POWER SUPPLY (230V AC)	50NB uPVC	345	1080
C	SUMP PUMP POWER SUPPLY	50NB uPVC	545	1000
D	FLOWMETER AND PRV CABLING	100NB uPVC	445	1000
E	DRAIN FOR MANUAL SAMPLING TRAY AND WET GEAR PLATE	50NB uPVC	1587	1080
F	ANALYSER LINE (WET GEAR PLATE), SAMPLE LINE (FOR LABORATORY USE) PRESSURE TRANSDUCER (1, 2 & 3) (WHERE SPECIFIED)	100NB uPVC	1380	1000



SECTION 2
SCALE 1:10



SECTION 1
SCALE 1:10

NOTES:

1. CHECK ALL DIMENSIONS & PENETRATIONS LOCATIONS ON SITE.
2. MONITORING & SAMPLE BOX ANCHOR BOLTS TO BE M10, 98mm GALVANISED DYNABOLTS P/No DP12100GH. TO PLACE, DRILL ø12 HOLE 60 DEEP. USE MONITORING/SAMPLE BOX AS TEMPLATE. REFER DRG 2002888-041 FOR DETAILS.
3. PAD PROJECTION 800mm, UNLESS INSTRUCTED OTHERWISE
4. DUCTWORK MATERIAL TO COMPLY WITH AS/NZS 2053. WHERE A CHANGE IN DUCT DIRECTION IS REQUIRED USE LONG RADIUS BENDS.
5. ELECTRICAL DUCTWORK IS TO MAINTAIN A MINIMUM COVER OF 600mm.
6. TWO POLYPROPYLENE DRAW WIRES TO BE PROVIDED IN EACH DUCT.

CONSTRUCTION ISSUE

ISSUE	DATE	AMENDMENT	BY	APPD.
–	06:16	FOR CONSTRUCTION	J.D	

DESIGNED	J.D	06:16
DES. CHECKED		
DRAWN	J.B	06:16
DWG. CHECKED		
PROJECT LEADER		
INFRAST'R APP'D		

OPERATIONS

INFRASTRUCTURE

Watercare

BSP STANDARD DRAWING
CONTROL SYSTEM
3 BAY BOX CONCRETE PLINTH DETAIL WITH EXTENDED PAD

CAD FILE 2010998.056	DATE 02:06:2016
ORIGINAL SCALE A3 N.T.S	CONTRACT No. –
REF No. –	ISSUE –
DWG No. 2010998 .056	–