

P-1

FEED PUMP

FLOW	:	1.26 m3/hr
MATERIAL	:	SS316
PRESSURE	:	2 bar
POWER	:	0.55 kW
MANUFACTURER	:	GRUNDFOS
MODEL	:	CRN3-6
QUANTITY	:	1 No.

MMF-1

MULTI MEDIA FILTER

SIZE	:	13"ø x 54" HEIGHT
FLOW	:	1.26 m3/hr
PRESSURE	:	3 bar
MOC	:	FRP
OPERATION	:	MANUAL
MANUFACTURER	:	AVENTURA
QUANTITY	:	1 No.

DTK-1

SMBS DOSING TANK

CAPACITY	:	40 Ltr
MOC	:	POLYETHYLENE
QUANTITY	:	1 No.
MANUFACTURER	:	SEKO

DP-1

SMBS DOSING PUMP

FLOW	:	5 LPH
PRESSURE	:	5 Bar
POWER	:	0.22 kW
QUANTITY	:	1 No.
MANUFACTURER	:	SEKO

DTK-2

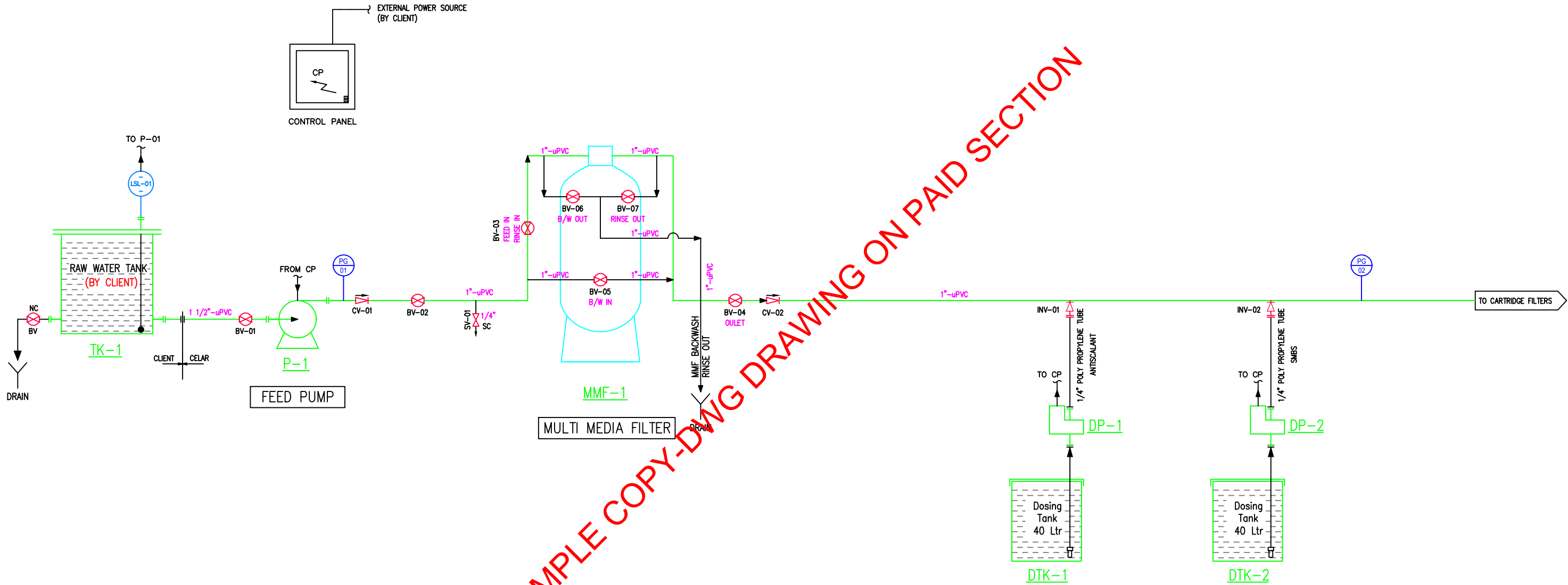
ANTISCALANT DOSING TANK

CAPACITY	:	40 Ltr
MOC	:	POLYETHYLENE
QUANTITY	:	1 No.
MANUFACTURER	:	SEKO

DP-2

ANTISCALANT DOSING PUMP

FLOW	:	5 LPH
PRESSURE	:	5 Bar
POWER	:	0.22 kW
QUANTITY	:	1 No.
MANUFACTURER	:	SEKO



MULTIMEDIA FILTER VALVE OPEN / CLOSE CONDITION					
MODE	BV-03	BV-04	BV-05	BV-06	BV-07
SERVICE MODE	OPEN	OPEN	CLOSE	CLOSE	CLOSE
BACKWASH MODE	CLOSE	CLOSE	OPEN	OPEN	CLOSE
RINSE MODE	OPEN	CLOSE	CLOSE	CLOSE	OPEN

CARTRIDGE FILTER

SIZE	:	2.5"Ø x 20"
FLOW	:	1.26 m3/hr
PRESSURE	:	4 bar
MOC	:	PP
FILTRATION	:	10 MICRON
MANUFACTURER	:	CCK
QUANTITY	:	1 No.

CARTRIDGE FILTER

SIZE	:	2.5"Ø x 20"
FLOW	:	1.26 m3/hr
PRESSURE	:	4 bar
MOC	:	PP
FILTRATION	:	5 MICRON
MANUFACTURER	:	CCK
QUANTITY	:	1 No.

HIGH PRESSURE PUMP

FLOW	:	1.46 m ³ /hr
PRESSURE	:	14.0 bar
POWER	:	2.2 kW
MATERIAL	:	SS 316
MANUFACTURER	:	GRUNDFOS
MODEL	:	CRN3-23
QUANTITY	:	1 No.

RO PERMEATORS

No.OF PRESS. VESSELS	:	3 Nos (4")
No. OF MEMBRANES / VESSELS	:	1 Nos
TOTAL No. OF MEMBRANES	:	3 Nos
PRESSURE VESSEL MOC	:	FRP
PRESSURE VESSEL MANUFACTURER	:	PENTAIR
VESSEL MODEL	:	4" 3E, 300 PSI
MEMBRANE MOC	:	COMPOSITE POLYAMIDE
MEMBRANE MANUFACTURER	:	HYDRANAUTICS
MEMBRANE MODULE	:	CPA2-4040

CHLORINE DOSING TANK

CAPACITY	:	40 Ltr
MOC	:	POLYETHYLENE
QUANTITY	:	1 No.
MANUFACTURER	:	SEKO

CHLORINE DOSING PUMP

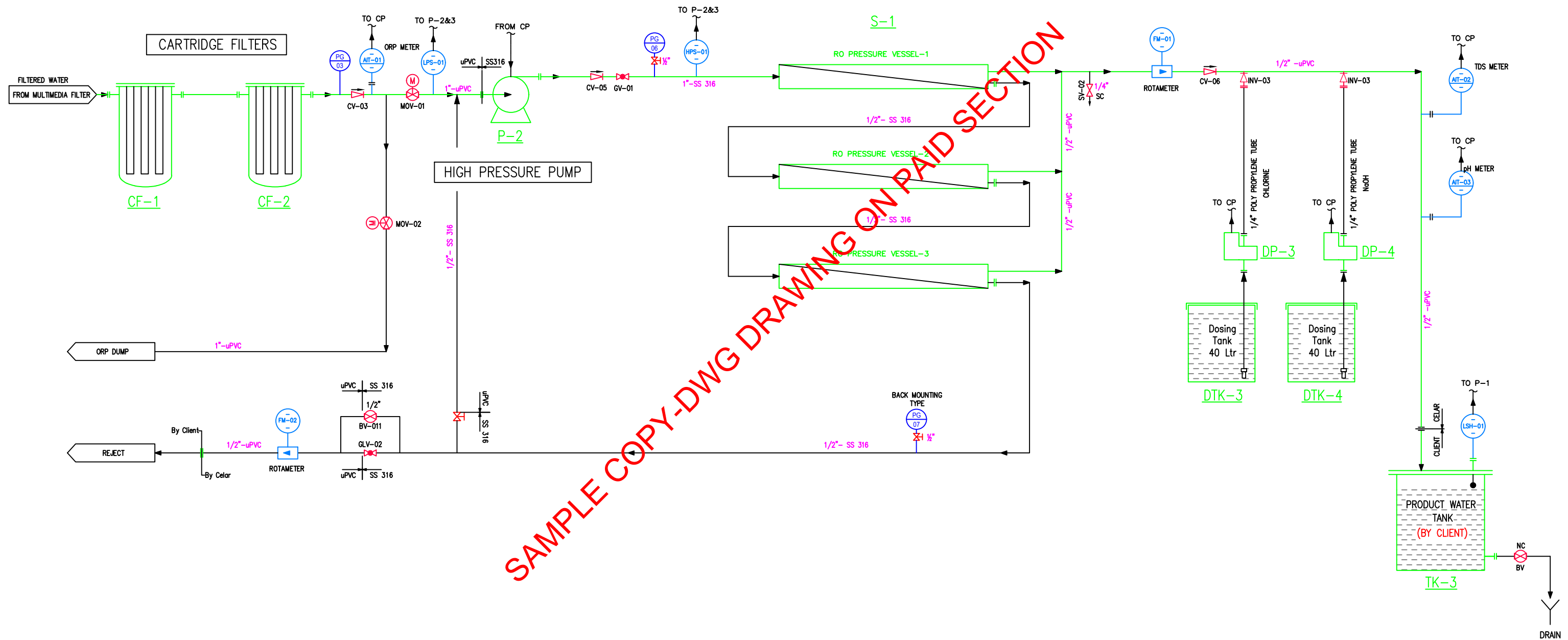
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PRESSURE	:	5 Bar
POWER	:	0.22 kW
QUANTITY	:	1 No.
MANUFACTURER	:	SEKO

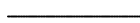
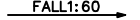
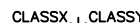
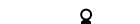
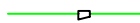
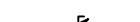
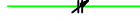
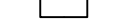
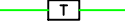
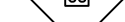
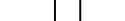
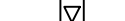
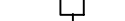
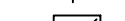
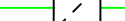
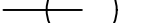
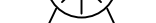
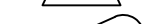
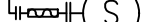
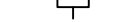
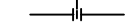
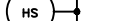
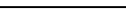
NaOH DOSING TANK

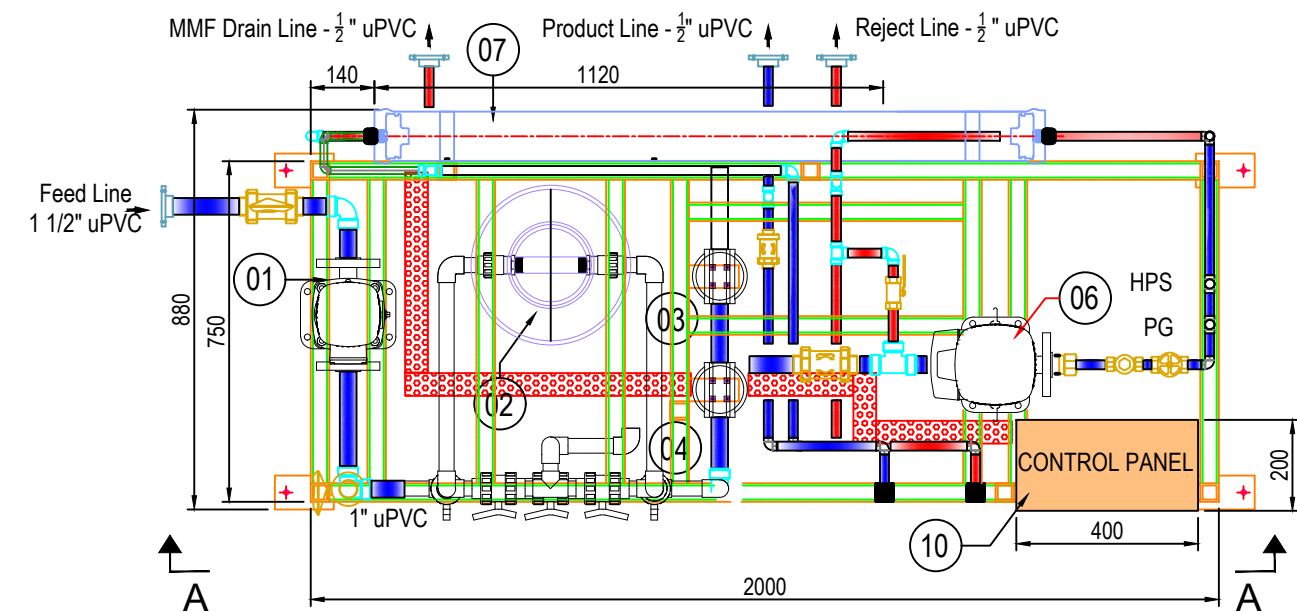
CAPACITY	:	40 Ltr
MOC	:	POLYETHYLENE
QUANTITY	:	1 No.
MANUFACTURER	:	SEKO

NaOH DOSING PUMP

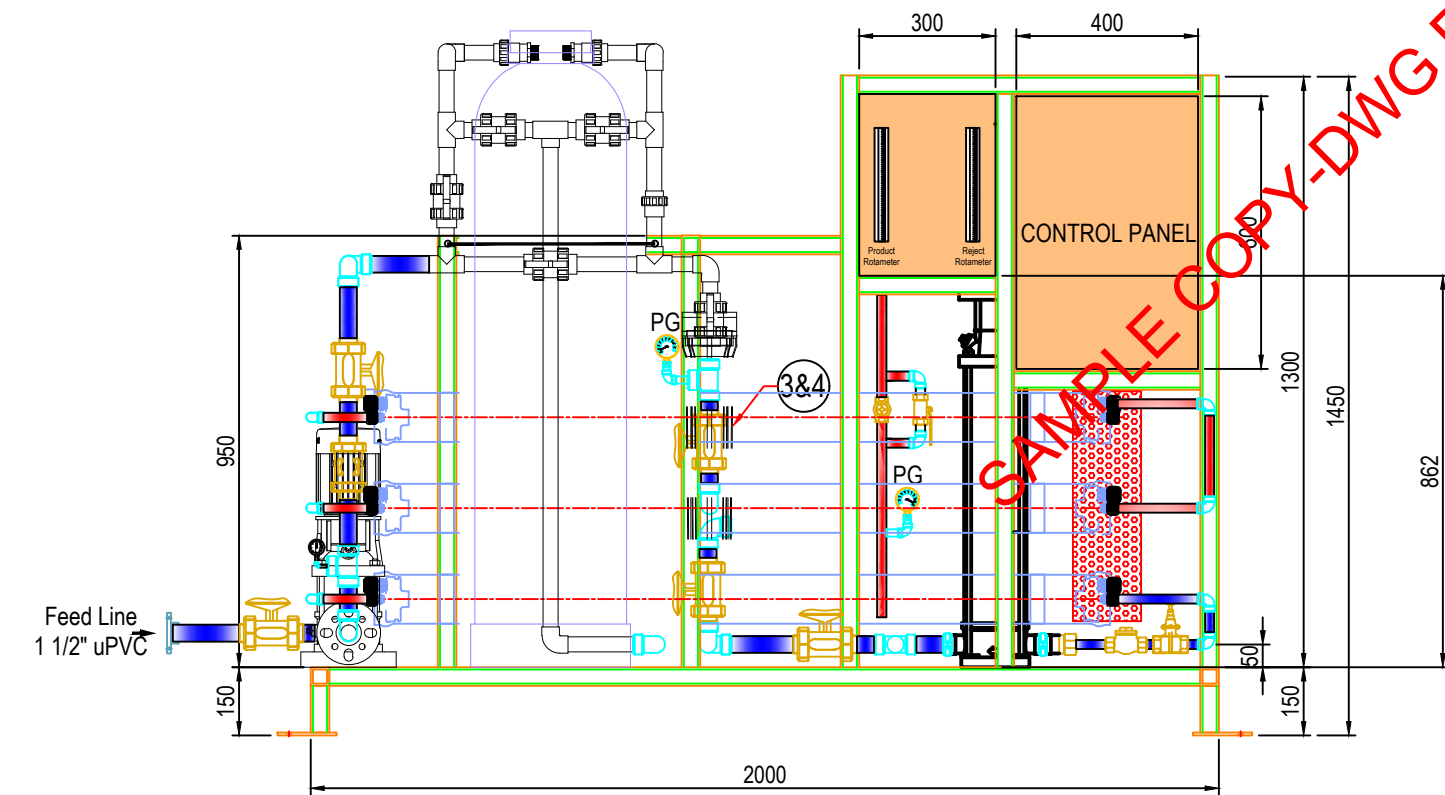
FLOW	:	5 LPH
PRESSURE	:	5 Bar
POWER	:	0.22 kW
QUANTITY	:	1 No.
MANUFACTURER	:	SEKO



MECHANICAL SYMBOLS		INSTRUMENT SYMBOLS		SERVICE INDICATION
PIPE LINE/PIPING	GENERAL	EQUIPMENT	CONTROL VALVES	ABBREVIATION (GENERAL)
 MAIN PROCESS LINE (ARROW INDICATES DIRECTION OF FLUID FLOW)  SECONDARY PROCESS LINE AND UTILITY LINE  FUTURE LINE  LINE CROSSING, UNCONNECTED  LINE CROSSING, CONNECTED  LINE JUNCTION (CONNECTED)  FENCE  INDICATION OF FALL (OR RISE)  PIPING HEADER  CLASSX CLASSY  CLASS X CLASS Y  TRACED LINE  INSULATION  HOSE CONNECTION  PIPELINE TEE CONNECTION (BARRED)  SPECTACLE BLIND (CLOSED)  SPECTACLE BLIND (OPEN)  SPADE BLIND  SPOOL PIECE  CONCENTRIC REDUCER  ECCENTRIC REDUCER, FLUSH TOP  ECCENTRIC REDUCER, FLUSH BOTTOM  INSULATING COUPLING  INSULATING GASKET SET.  INSULATING SPOOL END CLOSURES  END FLANGED AND BOLTED  END CAP, BUTT WELDED  END CAP, SCREWED  END CLOSURE QUICK RELEASE VALVES  BUTTERFLY VALVE  BALL VALVE  CHECK VALVE  GLOBE VALVE  SAMPLE VALVE  INJECTION VALVE  NEEDLE VALVE  THREE-WAY VALVE, BASIC SYMBOL  ANGLE VALVE, BASIC SYMBOL  GATE VALVE, WEDGE TYPE  GATE VALVE, PARALLEL SLIDE  DIAPHRAGM VALVE FLOW CONTROL VALVE PLUG VALVE, STRAIGHT PORT VALVE CONTROLLED BY SPRING LOAD (QUICK CLOSING)	 BELLOW (FLANGED)  FLEXIBLE HOSE (FLANGED)  STEAM TRAP ASSEMBLY  DRAIN TRAP (BASIC SYMBOL)  CONTINUOUS DRAINER  STEAM TRAP WITHOUT STRAINER THERMOSTATIC OR THERMODYNAMIC TYPE  OPEN VENT  CORROSION COUPON / COSASCO FITTING.  FUNNEL  VORTEX BREAKER  FLARE  PULSATION DAMPENER  ROTAMETER  STRAINER, FILTER  Y-TYPE STRAINER  VORTEX BREAKER  FLAME ARRESTER  SILENCER  SIGHT GLASS  ELECTROMAGNETIC FLOW METER  ROTA METER  UNIT CODE SERIAL  TIE-IN  SCOPE DEFINITION  RELIEF VALVE  BUTTERFLY VALVE (MOTORIZED)  BALL VALVE (MOTORIZED)  BUTTERFLY VALVE (PNEUMATIC)  BALL VALVE (PNEUMATIC)	 CENTRIFUGAL PUMP  ROTARY POSITIVE DISPLACEMENT PUMP  RC = RECIPROCATING COMPRESSOR, (SINGLE-STAGE)  RP = RECIPROCATING PUMP  METERING PUMP  AIR BLOWER  ROTARY COMPRESSOR C = CENTRIFUGAL P = POSITIVE DISPLACEMENT  RECIPROCATING ENGINE  ELECTRIC MOTOR  AIR FAN  HEATER  BASKET FILTER  GAS TURBINE  SETTLING TANK CLARIFIER  TANK (SCALE 1:2)  VESSELS (SCALE 1:2)  VESSEL WITH SUMP (SCALE 1:2)  MANHOLE COVER  EQUIPMENT NOZZLES:	 DANIEL SENSOR ORIFICE  FLOW METER  FLOW METER (VENTURI TYPE)  HAND OPERATED SWITCH (STATUS INDICATION IN CONTROL ROOM UNLESS OTHERWISE STATED)  SOLENOID VALVE NORMALLY ENERGIZED WITH LOCAL RESET CONTROL (ARROW SHOWS DIRECTION OF FLOW WHEN DE-ENERGIZED) WHEN ENERGIZED FLOW IS STRAIGHT THROUGH  INSTRUMENT SIGNAL LINE (PNEUMATIC,ELECTRIC,HYDRAULIC)  ARROW (IF INCLUDED) INDICATES DIRECTION OF SIGNAL FLOW  INSTRUMENT SIGNAL LINES (JUNCTIONS)  INSTRUMENT SIGNAL LINES (CROSSINGS)  LOCAL MOUNTED INSTRUMENT (BASIC SYMBOL)  XX = FIRST TWO DIGITS OF UNIT NUMBER  Y = INSTRUMENT FUNCTION CODE  ZZZ= SERIAL NUMBER  CONTROL ROOM MOUNTED INSTRUMENT  LOCAL PANEL MOUNTED INSTRUMENT  SIGNAL TO/FROM TELEMETRY TROUGH CONTROL VALVES  BASIC SYMBOL  ANGLE VALVE  ACTUATING MEDIUM FAILURE OPEN  ACTUATING MEDIUM FAILURE CLOSE  WITH ADJUSTABLE MECHANICAL MINIMUM STOP  WITH ADJUSTABLE MECHANICAL MAXIMUM STOP  WITH HANDWHEEL  DIRECTLY OPERATED BY HANDWHEEL OR LEVER  WITH LOCK-UP DEVICE  SELF ACTING  WITH ADJUSTABLE MECHANICAL MIN. & MAX. STOP  FLOW CONTROL VALVE	P = PROCESS G = INERT GAS S = STEAM / CONDENSATE W = WATER A = AIR D = DRAIN F = FUEL R = REFRIGERANT B = BLOW-DOWN AND RELIEF K = KILL LINE C = CHEMICAL GENERAL CONTINUATION ARROWS : 1) LEFT SIDE OF SHEET: FROM EQUIPMENT ON PREVIOUS SHEET SHEET nr. TO EQUIPMENT ON PREVIOUS SHEET SHEET nr. 2) RIGHT SIDE OF SHEET : TO EQUIPMENT ON NEXT SHEET SHEET nr. FROM EQUIPMENT ON NEXT SHEET SHEET nr. REVISION TRIANGLE PIPING IDENTIFICATION LINE NUMBER 2"- P 15 003-600CS3 PIPING CLASS/MATERIAL LINE SUB-NUMBER FIRST TWO DIGITS OF PROCESS UNIT 200 SERVICE INDICATION NOMINAL PIPE SIZE ABBREVIATION (GENERAL) A/G - ABOVE GROUND B/G - BELOW GROUND CC - CORROSION COUPON CI - CHEMICAL INJECTION CK - CASTELLOC KEYED VALVE D - DRAIN EL - ELEVATION FB - FULL BORE FO - FLUSHING OUT GO - GEAR OPERATED HC - HOSE CONNECTION IH - INSPECTION HOLE LC - LOCKED CLOSED LO - LOCKED OPEN M - MOTOR MH - MAN HOLE MOV - MOTOR OPERATED VALVE NC - NORMALLY CLOSED NNF - NORMALLY NO FLOW NO - NORMALLY OPEN PVV - PRESSURE VACUUM VALVE RE - REFERENCE ELECTRODE RO - RESTRICTION ORIFICE RV - RELIEF VALVE SC - SAMPLE CONNECTION SCR - SCREWED CONNECTION SP - SET POINT TSO - TIGHT SHUT OFF UC - UTILITY CONNECTION V - VENT CS - CARBON STEEL PE - POLY ETHYLENE PP - POLY PROPYLENE GRE - GLASS REINFORCED EPOXY SS - STAINLESS STEEL CS3 - CARBON STEEL WITH 3MM CORROSION ALLOWANCE CS1D(PE) - CARBON STEEL WITH 1MM CORROSION ALLOWANCE & POLYETHYLENE LINED ABBREVIATIONS (INSTRUMENTS) ARW - ANTI-RESET WIND-UP DE - DE-ENERGIZED DIR - DIRECT ACTION ESD - EMERGENCY SHUTDOWN H - HIGH HH - HIGH HIGH O/C - LIMIT SWITCHES FOR OPEN/CLOSE POSITION OF VALVE TVP - TRUE VAPOUR PRESSURE L - LOW LL - LOW LOW MR - MANUAL RESET MV - MEASURED VALUE OR - OVERRIDE SR - SPLIT RANGE SV - SET VALUE

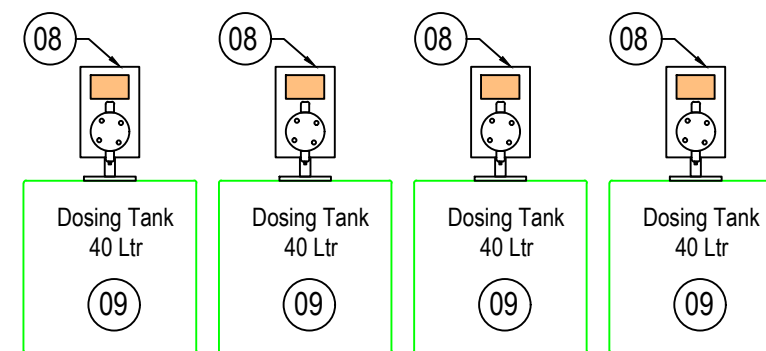
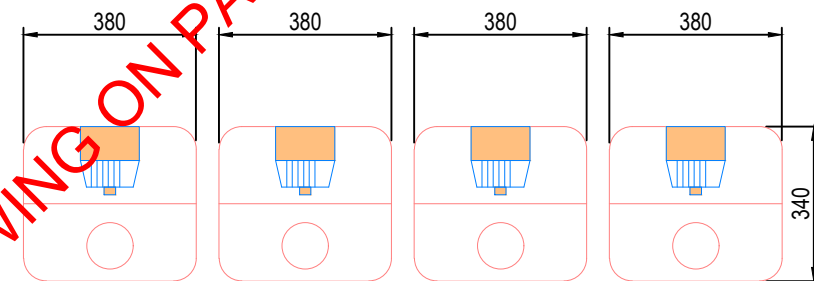


PLAN VIEW

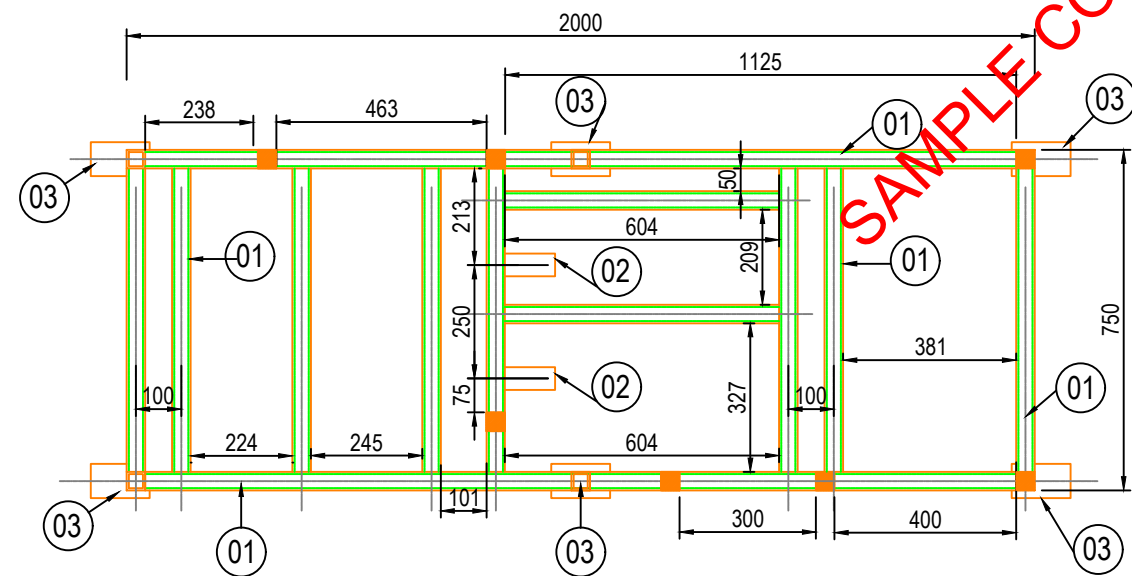


VIEW -AA

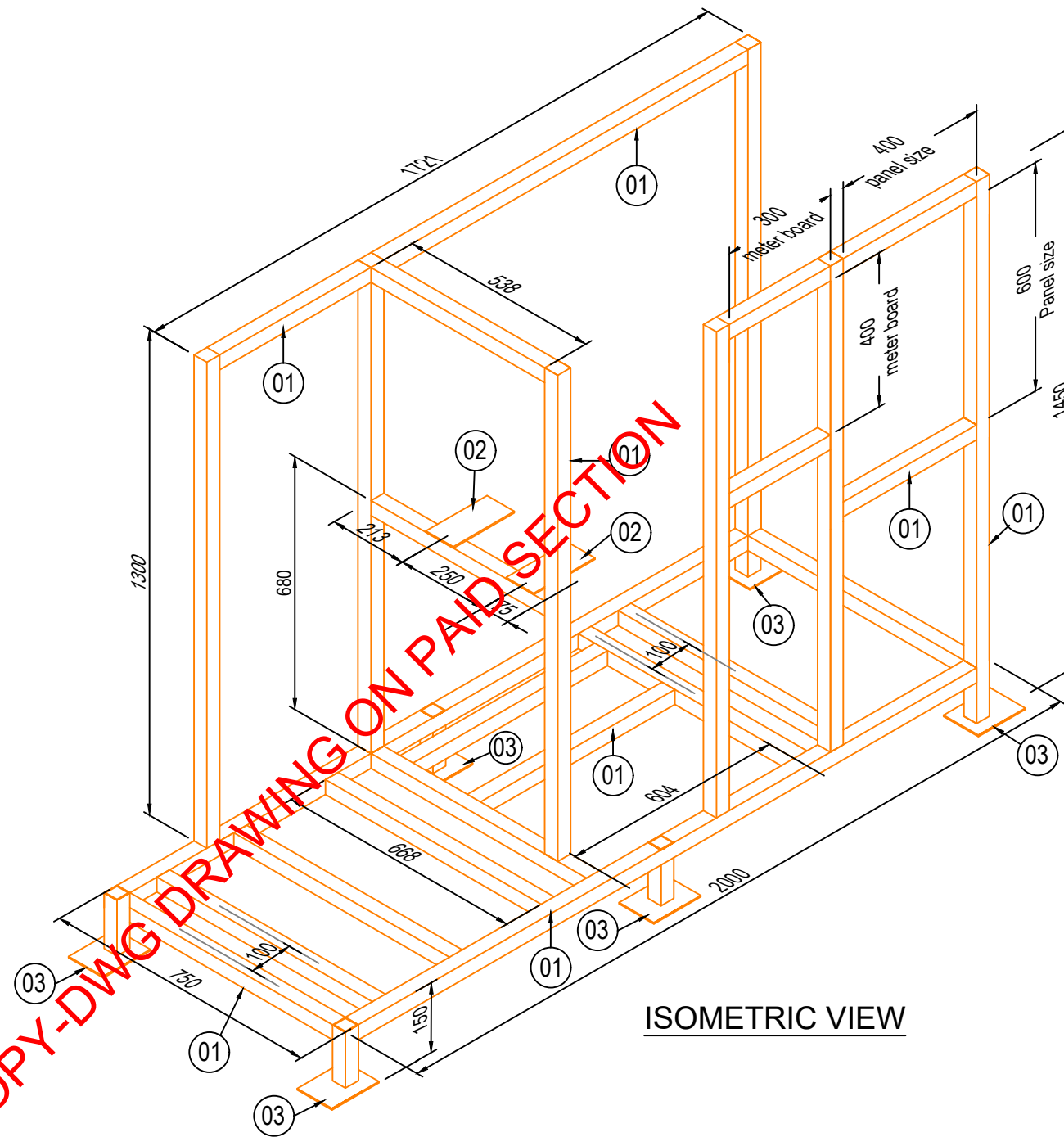
EQUIPMENT SCHEDULE					
Sr. No.	Equipment Details	Specification / Model No / Size	Make	Quantity	Unit
1	Feed Pump	CMN 3-6	Grundfos	1	No
2	Multimedia Filter	13" (Dia:) x 54" (H)	Aventura	1	No
3	Cartridge Filter	10 Micron, 2.5" x 20"	CCK	1	No
4	Cartridge Filter	5 Micron, 2.5" x 20"	CCK	1	No
5					
6	High Pressure Pump	CRN 3-23	Grundfos	1	No
7	Pressure Vessel	4", 1E 300 PSI	Pentair	3	No
8	Dosing Pump	HC 897	Aqua	4	Nos
9	Dosing Tank	40 Ltrs	JM	4	Nos
10	Control Panel	-		1	No



LEGEND:	
	PROCESS LINE
	REJECT/DRAIN LINE
	BALL VALVE (uPVC)
	CHECK VALVE (uPVC)
	CHECK VALVE (SS)
	GLOBE VALVE (SS)
	BALL VALVE (SS)
	PRESSURE GAUGE
	ROTAMETER



PLAN VIEW



ISOMETRIC VIEW

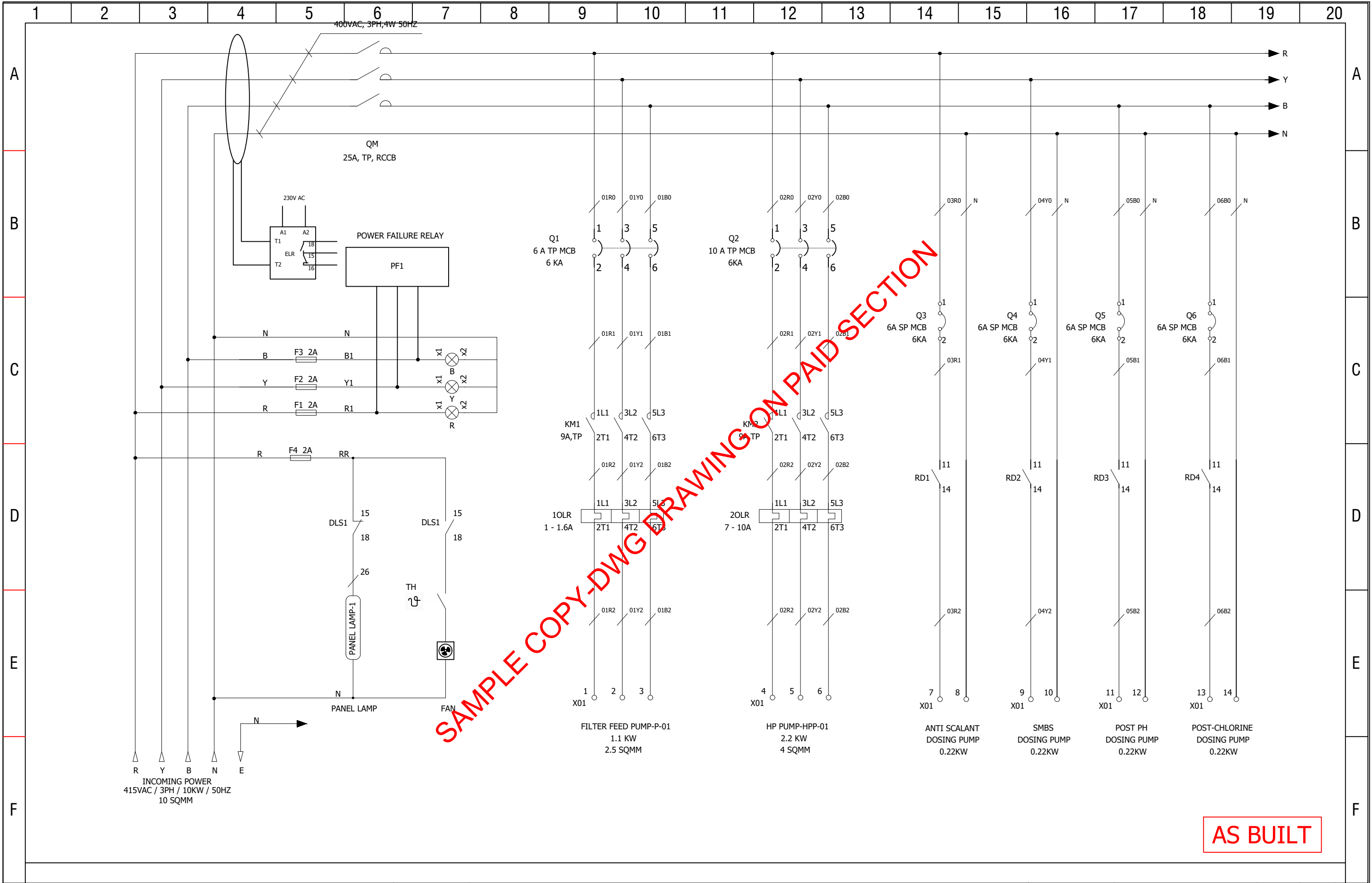
SAMPLE COPY-DWG DRAWING ON PAID SECTION

CLIENT : XXX
SUPPLIER : XXX
PROJECT : SKID 15 CMD SWRO PLANT
AREA : XXXX
DOC NAME : POWER AND CONTROL WIRING OF CONTROL PANEL

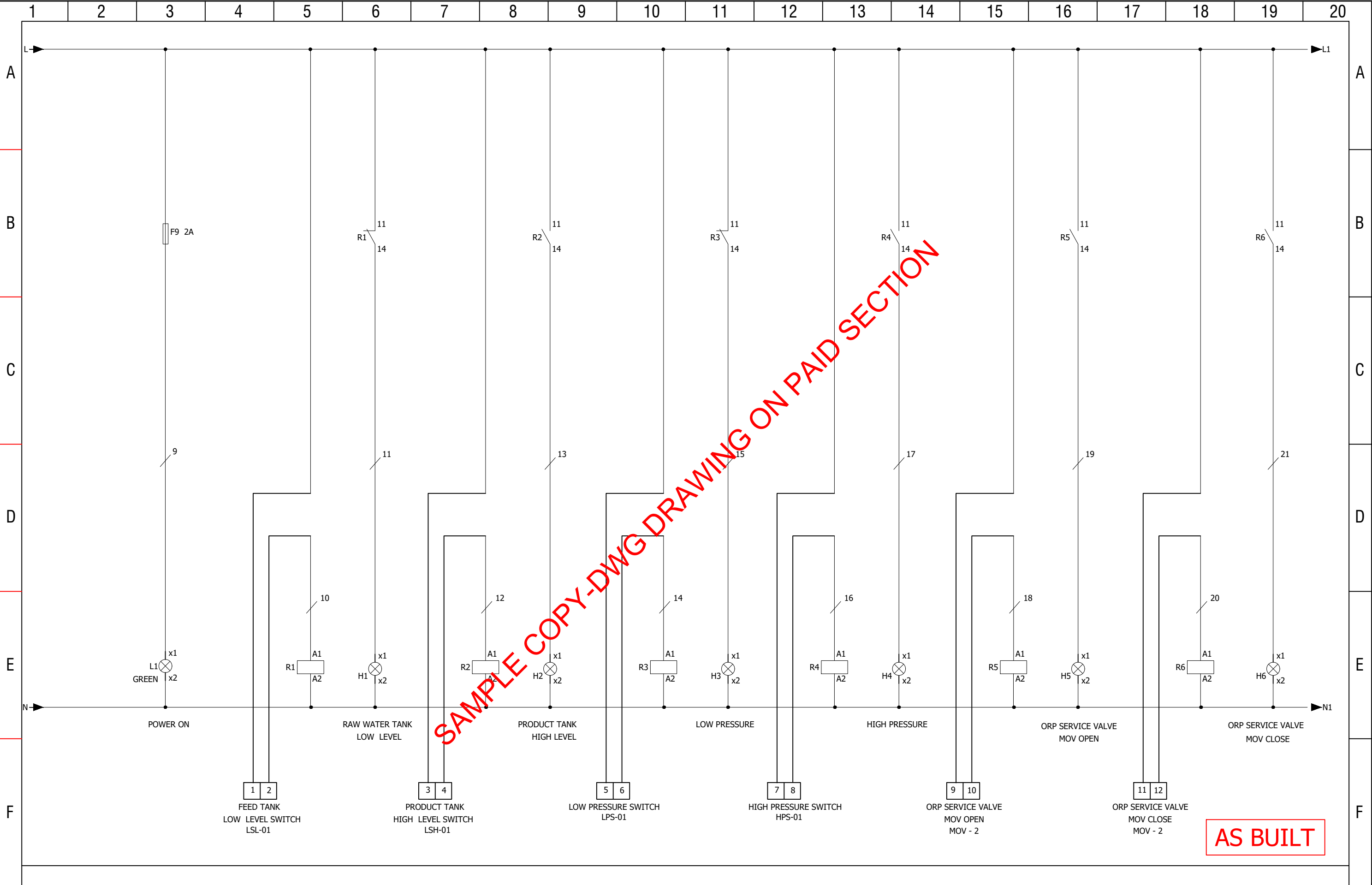
AS BUILT



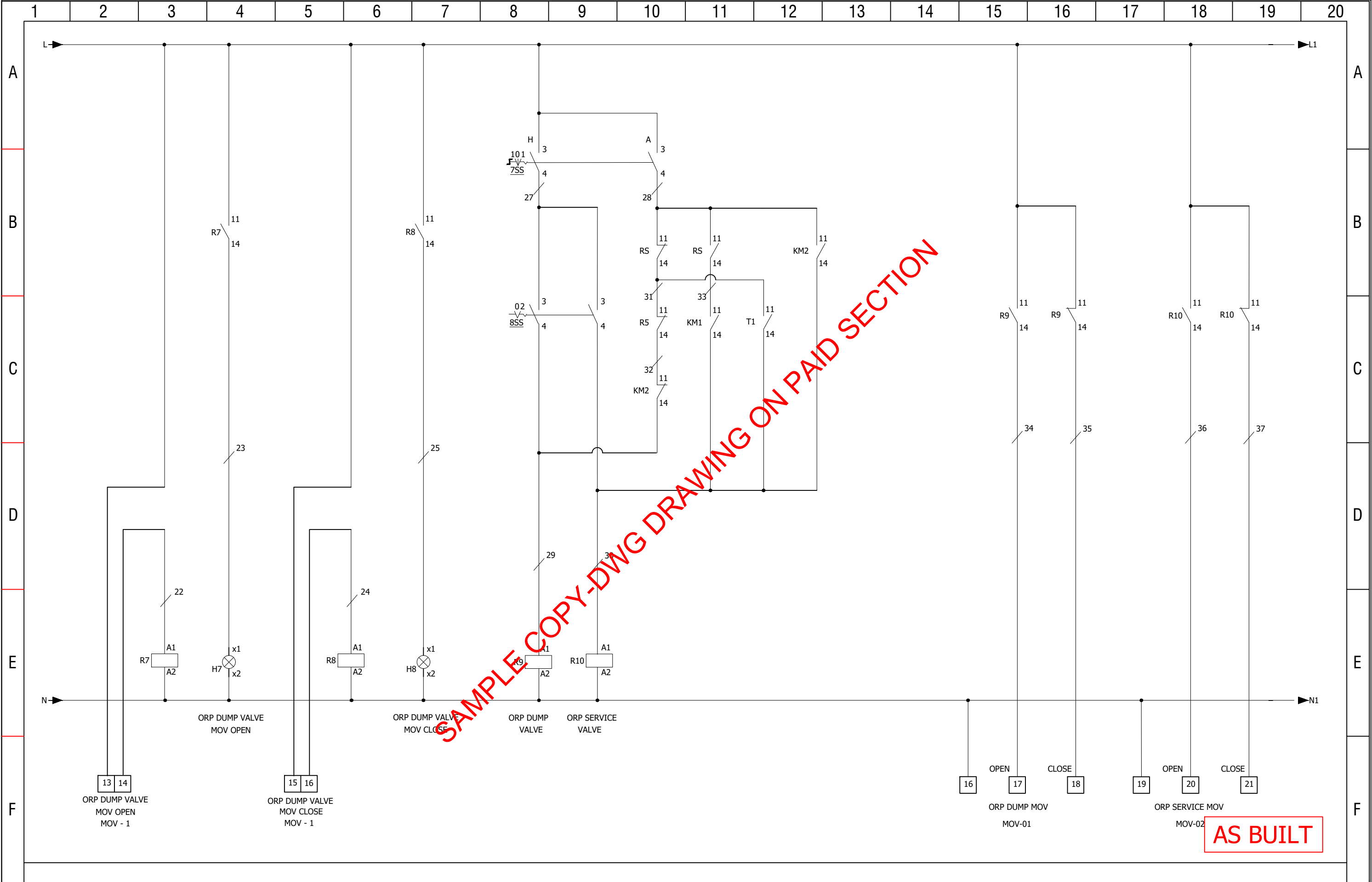
CLIENT						
PROJECT	SKID 15 CMD BWRO PLANT	1	----	AS BUILT	----	----
SUPPLIER	XXXXXX	0	----	ISSUED FOR APPROVAL	---	---
SHEET TITLE	POWER AND CONTROL WIRING DIAGRAM OF CONTROL PANEL	REV	DATE	DESCRIPTION	DRAWN	CHKD.
		SCALE - NTS	JOB NO. - XXXX	SHEET NO	XX	APPD.
				REV		0



	CLIENT					
	PROJECT	SKID 15 CMD BWRO PLANT				
	SUPPLIER	XXXXXX				
	SHEET TITLE	POWER AND CONTROL WIRING DIAGRAM OF CONTROL PANEL				
	1	----	AS BUILT		----	----
	0	----	ISSUED FOR APPROVAL		---	---
	REV	DATE	DESCRIPTION		DRAWN	CHKD.
	SCALE - NTS	JOB NO. - XXXX	SHEET NO		XX	REV
						0



	CLIENT					
	PROJECT	SKID 15 CMD BWRO PLANT				
	SUPPLIER	XXXXXX				
	SHEET TITLE	POWER AND CONTROL WIRING DIAGRAM OF CONTROL PANEL				
	REV	DATE	DESCRIPTION		DRAWN	CHKD.
	SCALE - NTS	JOB NO. - XXXX	SHEET NO		XX	REV
						0

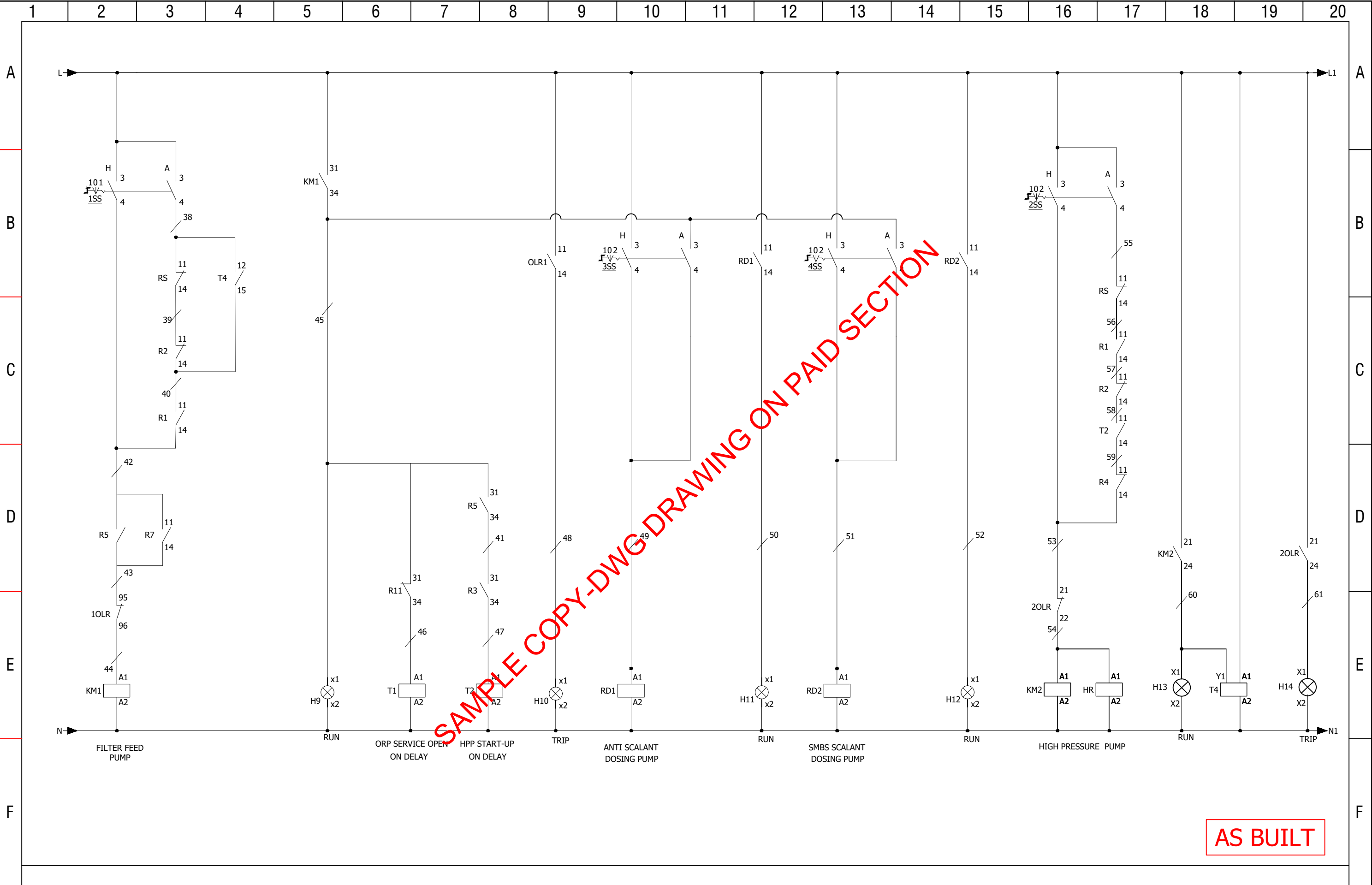


SAMPLE COPY-DWG DRAWING ON PAID SECTION

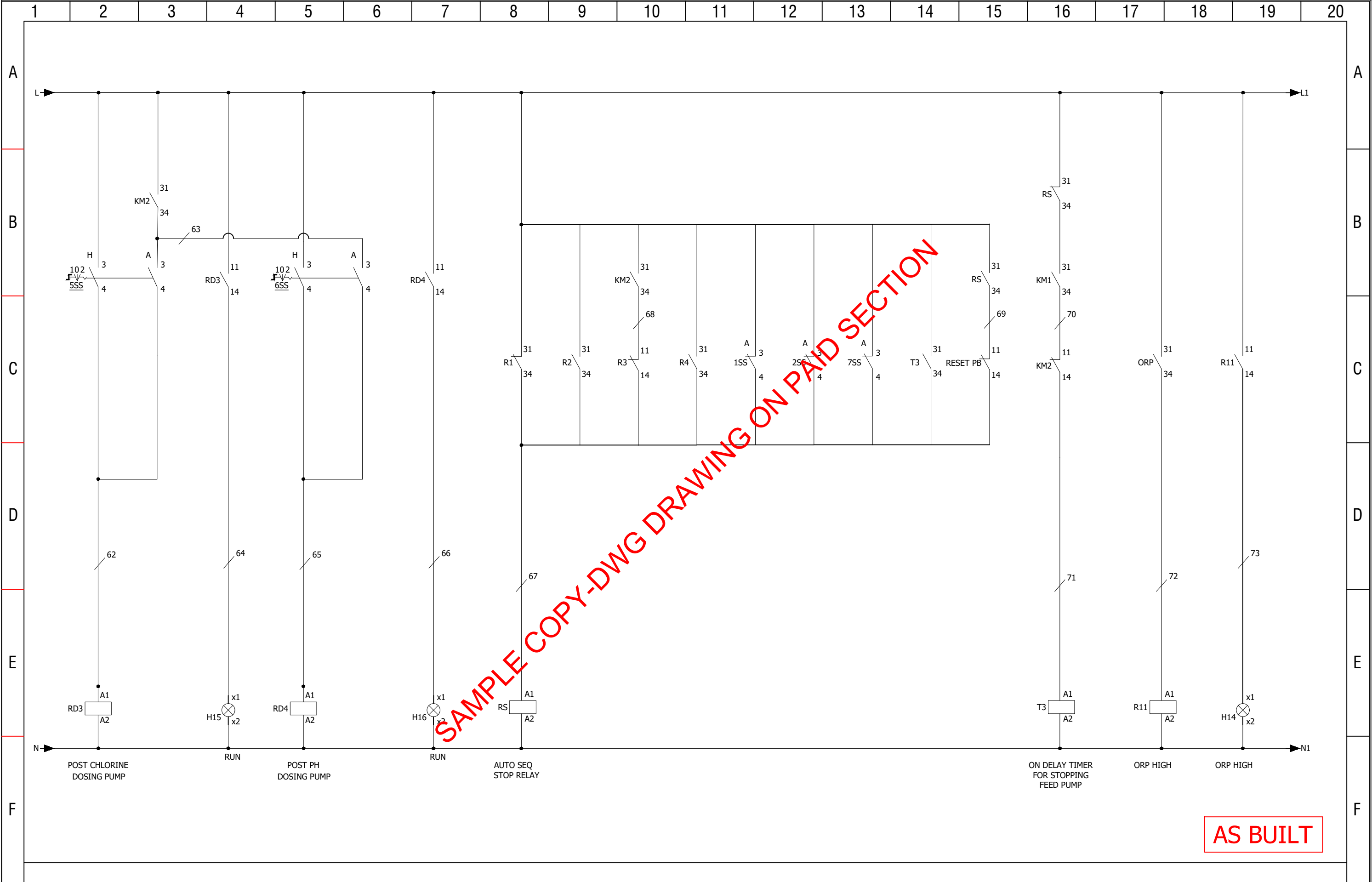
AS BUILT



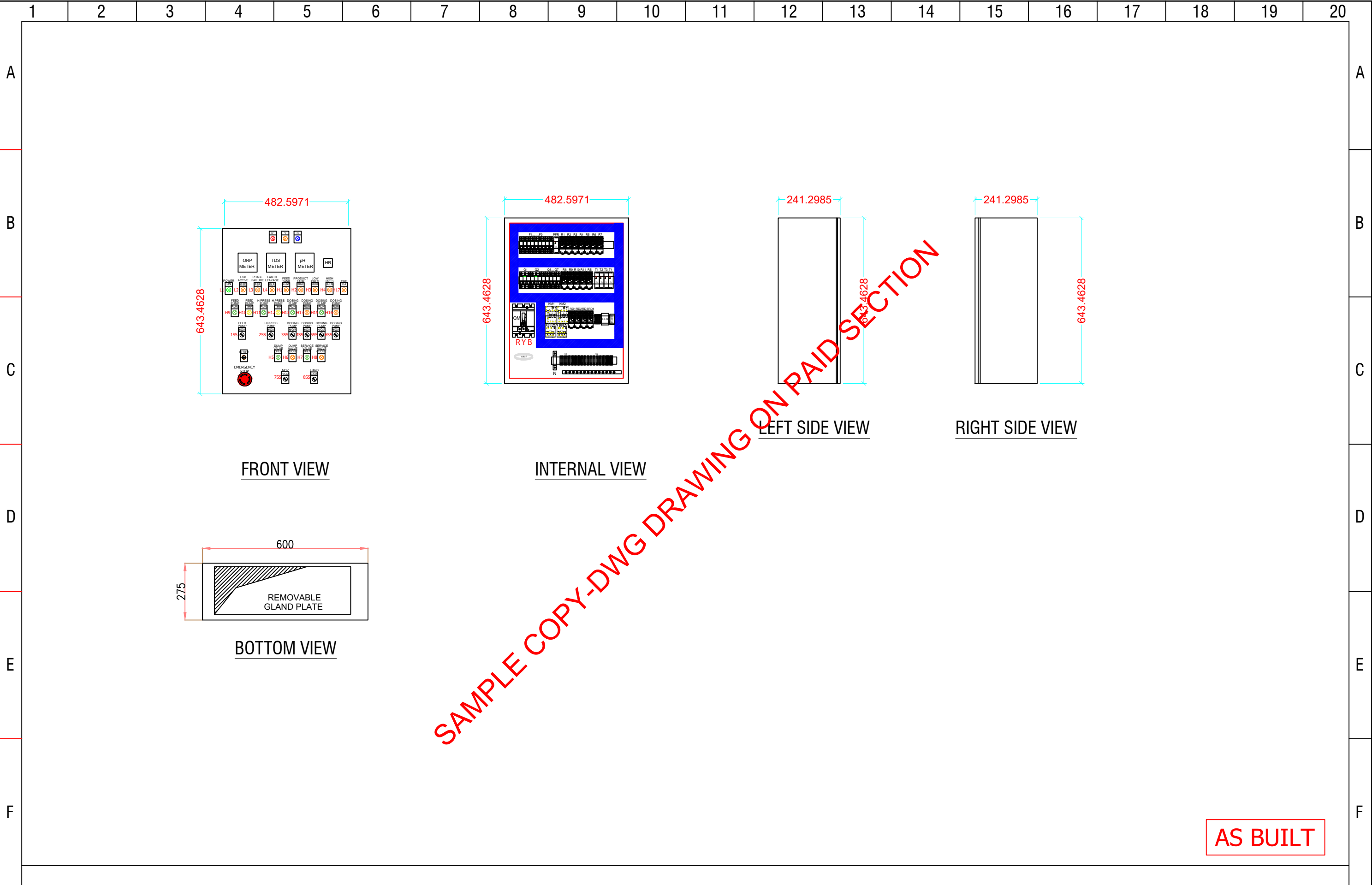
CLIENT						
PROJECT	SKID 15 CMD BWRO PLANT					
SUPPLIER	XXXXXX					
SHEET TITLE	POWER AND CONTROL WIRING DIAGRAM OF CONTROL PANEL					
	1	----	AS BUILT	----	----	----
	0	----	ISSUED FOR APPROVAL	---	---	---
	REV	DATE	DESCRIPTION	DRAWN	CHKD.	APPD.
	SCALE - NTS	JOB NO. - XXXX	SHEET NO	XX	REV	0



	CLIENT					
	PROJECT	SKID 15 CMD BWRO PLANT				
	SUPPLIER	XXXXXX				
	SHEET TITLE	POWER AND CONTROL WIRING DIAGRAM OF CONTROL PANEL				
	REV	DATE	DESCRIPTION		DRAWN	CHKD.
	SCALE - NTS	JOB NO. - XXXX	SHEET NO		XX	REV
						APPD.
						0



	CLIENT					
	PROJECT	SKID 15 CMD BWRO PLANT				
	SUPPLIER	XXXXXX				
	SHEET TITLE	POWER AND CONTROL WIRING DIAGRAM OF CONTROL PANEL				
	1	----	AS BUILT		----	----
	0	----	ISSUED FOR APPROVAL		---	---
REV	DATE	DESCRIPTION		DRAWN	CHKD.	APPD.
SCALE - NTS		JOB NO. - XXXX		SHEET NO XX		REV 0



AS BUILT



CLIENT						
PROJECT	SKID 15 CMD BWRO PLANT	1	----	AS BUILT	----	----
SUPPLIER	XXXXXX	0	----	ISSUED FOR APPROVAL	---	---
SHEET TITLE	POWER AND CONTROL WIRING DIAGRAM OF CONTROL PANEL	REV	DATE	DESCRIPTION	DRAWN	CHKD.
		SCALE - NTS	JOB NO. - XXXX	SHEET NO	XX	APPD.
				REV		0