## P&ID MAIN STEAM, EXTRACTIONS, AUXILIARY STEAM & BY-PASS SYSTEM

	DESCRIPTION	REVISION 22-07-05		F	REVISION 22-08-17		F	REVISION 22-11-16			REVISION		
SHEET				22			22				23-05-25		
		PROJECT	ACCIONA	ΕΑΙ	PROJECT	ACCIONA	EAI	PROJECT	ACCIONA	EAI	PROJECT	ACCIONA	EAI
00	P&ID MAIN STEAM, EXTRACTIONS, AUXILIARY STEAM & BY-PASS SYSTEM. INDEX	IFR.P01	IFR.P01	01	IFR.P02	IFR.P02	02	IFD.P03	IFD.P03	03	IFD.P04	IFD.P04	04
01	P&ID MAIN STEAM, EXTRACTIONS, AUXILIARY STEAM & BY-PASS SYSTEM. MAIN STEAM	IFR.P01	IFR.P01	01	IFR.P02	IFR.P02	02	IFD.P03	IFD.P03	03	IFD.P04	IFD.P04	04
02	P&ID MAIN STEAM, EXTRACTIONS, AUXILIARY STEAM & BY-PASS SYSTEM. MAIN STEAM & EXTRACTIONS	IFR.P01	IFR.P01	01	IFR.P02	IFR.P02	02	IFD.P03	IFD.P03	03	IFD.P04	IFD.P04	04
03	P&ID MAIN STEAM, EXTRACTIONS, AUXILIARY STEAM & BY-PASS SYSTEM. MP STEAM / AUXILIARY STEAM DISTRIBUTION	IFR.P01	IFR.P01	01	IFR.P02	IFR.P02	02	IFD.P03	IFD.P03	03	IFD.P04	IFD.P04	04
04	P&ID MAIN STEAM, EXTRACTIONS, AUXILIARY STEAM & BY-PASS SYSTEM. MP STEAM / AUXILIARY STEAM CONSUMERS	_	_	_	_	-	_	_	_	_	IFD.P04	IFD.P04	04
05	P&ID MAIN STEAM, EXTRACTIONS, AUXILIARY STEAM & BY-PASS SYSTEM. BOILERS PRIMARY AIR HEAT EXCHANGERS	_	_	_	_	_	_	IFD.P03	IFD.P03	03	IFD.P04	IFD.P04	04
06	P&ID MAIN STEAM, EXTRACTIONS, AUXILIARY STEAM & BY-PASS SYSTEM. BOILERS SECONDARY AIR HEAT EXCHANGERS	_	_	_	_	_	_	IFD.P03	IFD.P03	03	IFD.P04	IFD.P04	04
07	P&ID MAIN STEAM, EXTRACTIONS, AUXILIARY STEAM & BY-PASS SYSTEM. FGT UNITS SEALING AIR HEAT EXCHANGERS	_	_	_	_	_	_	IFD.P03	IFD.P03	03	IFD.P04	IFD.P04	04
08	P&ID MAIN STEAM, EXTRACTIONS, AUXILIARY STEAM & BY-PASS SYSTEM. BOILER 1 BYPASS	IFR.P01	IFR.P01	01	IFR.P02	IFR.P02	02	IFD.P03	IFD.P03	03	IFD.P04	IFD.P04	04
09	P&ID MAIN STEAM, EXTRACTIONS, AUXILIARY STEAM & BY-PASS SYSTEM. BOILER 2 BYPASS	IFR.P01	IFR.P01	01	IFR.P02	IFR.P02	02	IFD.P03	IFD.P03	03	IFD.P04	IFD.P04	04
10	P&ID MAIN STEAM, EXTRACTIONS, AUXILIARY STEAM & BY-PASS SYSTEM. EJECTORS STEAM CONDITIONING	IFR.P01	IFR.P01	01	IFR.P02	IFR.P02	02	IFD.P03	IFD.P03	03	IFD.P04	IFD.P04	04
11	P&ID MAIN STEAM, EXTRACTIONS, AUXILIARY STEAM & BY-PASS SYSTEM. FGT UNITS STEAM / FLUE GAS HEAT EXCHANGERS	IFR.P01	IFR.P01	01	IFR.P02	IFR.P02	02	IFD.P03	IFD.P03	03	IFD.P04	IFD.P04	04
12	P&ID MAIN STEAM, EXTRACTIONS, AUXILIARY STEAM & BY-PASS SYSTEM. BOILERS STEAM DRAIN HEADERS	_	_	_	_	_	_	_	_	_	IFD.P04	IFD.P04	04

	DESIGN			
BRANCH	P barg	T °C		
а	57	446		
b	24	35C		
С	7	215		
d	3/-1	210		
е	0.5/-1	200		
f	3.5/-1	215		
g	6/-1	396		
h	17/-1	404		
i	42	150		
j	66	283		
k	41.5	283		
ı	27.6	446		
m	17.25	350		
n	3.5	404		

<u>REFERENCE DRAWINGS</u>	CODE	<u>DRAWING Nº</u>
O P&ID SYMBOLOGY		NPE7-EAI-41XX-XXX-PD-XA-000001
1 P&ID CONDENSATE SYSTEM	LC	NPE7-EAI-41XX-XXX-PD-XA-000008
2 P&ID BOILER BLOWDOWN SYSTEM	LCQ	NPE7-EAI-41AC-XXX-PD-XA-000005
3 P&ID FEEDWATER SYSTEM	LA	NPE7-EAI-41XX-XXX-PD-XA-000010
4 P&ID STEAM TURBINE DRAINS SYSTEM	MAL	NPE7-EAI-41XX-XXX-PD-XA-000015
5 P&ID BLEEDS		NPE7-SK0-41AG-GF0-PD-XA-000009
6 P&ID DISTRICT HEATING	LCC	NPE7-EAI-41XX-XXX-PD-XA-000009
7 P&ID SAMPLING SYSTEM	QU	NPE7-EAI-41XX-XXX-PD-XA-000014
8 P&ID BOILER WATER SIDE SUPERHEATE	R	NPE7-HZI-41AC2-ZZZ-PD-XA-000005
9 P&ID PRIMARY AIR PREHEATER		NPE7-HZI-41AC4-ZZZ-PD-XA-000002
10 P&ID SECONDARY AIR PREHEATER		NPE7-HZI-41AC4-ZZZ-PD-XA-000006
11 P&ID FLUE GAS PATH SCR		NPE7-HZI-41AE-ZZZ-PD-XA-000001
12 P&ID VACUUM SYSTEM	MAJ	NPE7-SPI-41BX-GF0-PD-XA-000001
13 P&ID BOILER WATER SIDE DRUM AND ECONOMISER		NPE7-HZI-41AC2-ZZZ-PD-XA-000003
14 P&ID PRIMARY AIR SYSTEM FEED		NPE7-HZI-41AC4-ZZZ-PD-XA-000001
15 P&ID SECONDARY AIR SYSTEM		NPE7-HZI-41AC4-ZZZ-PD-XA-000005
16 P&ID GLAND STEAM SYSTEM		NPE7-SK0-41AG-GF0-PD-XA-000003
17 P&ID BOILER BLOWDOWN		NPE7-HZI-41AC2-ZZZ-PD-XA-000007
18 P&ID BOILER DRAIN SYSTEM		NPE7-HZI-41AC2-ZZZ-PD-XA-000006

NPE7-SK0-41AG-GF0-PD-XA-000002

19.- P&ID STEAM TURBINE SYSTEM

## 0.- THIS D REVISI

- O.- THIS DRAWING IS PRELIMINARY AND IS SUBJECTED TO REVISION DEPENDING ON THE FINAL EQUIPMENT SUPPLIERS. CONNECTIONS WITH MAIN EQUIPMENT TO BE CHECKED DURING FURTHER REVISIONS TAKING INTO ACCOUNT FINAL EQUIPMENT DOCUMENTATION.
- 1.- CONNECTION FOR DISTRICT HEATING FUTURE EXPANSION
- 2.- STRAIGHT RUN LENGTH WITHOUT INSTRUMENTATION TO BE DEFINED BY BYPASS/ATTEMPERATION VALVE MANUFACTURER
- 3.- ADEQUATE STRAIGHTS DIAMETERS SHALL BE CONSIDERED FOR FLOWMETER TIPOLOGY
- 4.- DRAIN POT VALVES SHALL BE PLACED NEAR THE CORRESPONDING DRAIN TANK
- 5.- FLOW METERS WILL BE INSTALLED ON A STRAIGHT RUN OF PIPE. FREE DISTANCE TO BE CONFIRMED BY SUPPLIERS.
- 6.- THE THERMOCOUPLE + THERMOWELL SHOULD HAVE A FAST RESPONSE AND MUST BE LOCATED IN THE MAIN SUPPLY STEAM LINE AS CLOSE AS POSSIBLE TO THE BOILERS THUS AS FAR AWAY AS POSSIBLE TO THE TURBINE
- 7.- STEAM TRAP ARRANGEMENT SHALL BE IN HORIZONTAL CONFIGURATION.
- 8.- SPARE CONNECTION.
- 9.- VALVES OF DN200 SIZE OR HIGHER SHALL INCLUDE LOCALLY ACTUATED ELECTRICAL PINION
- 10.- FIRST ELBOW DOWNSTREAM THE ATTEMPERATION VALVE WILL BE SUBSTITUTED BY A TEE WITH A BLIND FLANGE
- 11.- FOR SATURATED STEAM, MINIMUN PIPE SLOPE IN FLOW DIRECTION SHALL BE AT LEAST 1% IN COLD POSITION AND 0.5% IN HOT POSITION. THE RECOMMENDED SLOPE IS 1.5%
- 12.- FOR SUPERHEATER STEAM, MINIMUN PIPING SLOPE IN FLOW DIRECTION SHALL BE AT LEAST 0.5% IN COLD POSITION AND 0.25% IN HOT POSITION. THE RECOMMENDED SLOPE IS 1.5%
- 13.- THE DESIGN CONCEPT OF THE STEAM SUPPLY SUBSYSTEM TO BOILER SHALL TO BE REVIEWED, CONFIRMED AND APPROVED BY BOILER MANUFACTURER (HZI)
- 14.- STEAM TRAP ARRANGEMENT SHALL BE IN HORIZONTAL CONFIGURATION.
  15.- LOCATE AS CLOSE AS POSSIBLE TO THE DISCHARGE.
- 16.- INTERNAL BYPASS VALVE SHALL BE ALSO PROVIDED WITH AN INDEPENDENT MOTORIZED ACTUATOR. THE KKS EQUIPMENT CODE TO THIS BYPASS VALVE WILL BE THE IMMEDIATE FOLLOWING NUMBER CODE TO THE MAIN VALVE.

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GENERAL REVISION

P04 IFD - ISSUED FOR DESIGN 23-07-07 CPJ FHS EGH
P03 IFD - ISSUED FOR DESIGN 22-11-16 CPJ FHS EGH
P02 IFR - ISSUED FOR REVIEW 22-08-17 FPC FHS PFX
REV. DESCRIPTION DATE DRAWN CHECKED APPROVED

MODIFICATIONS

CLIENT

NORTH
LONDON HEAT AND POWER PROJECT

FORMAT DRAWING TITLE

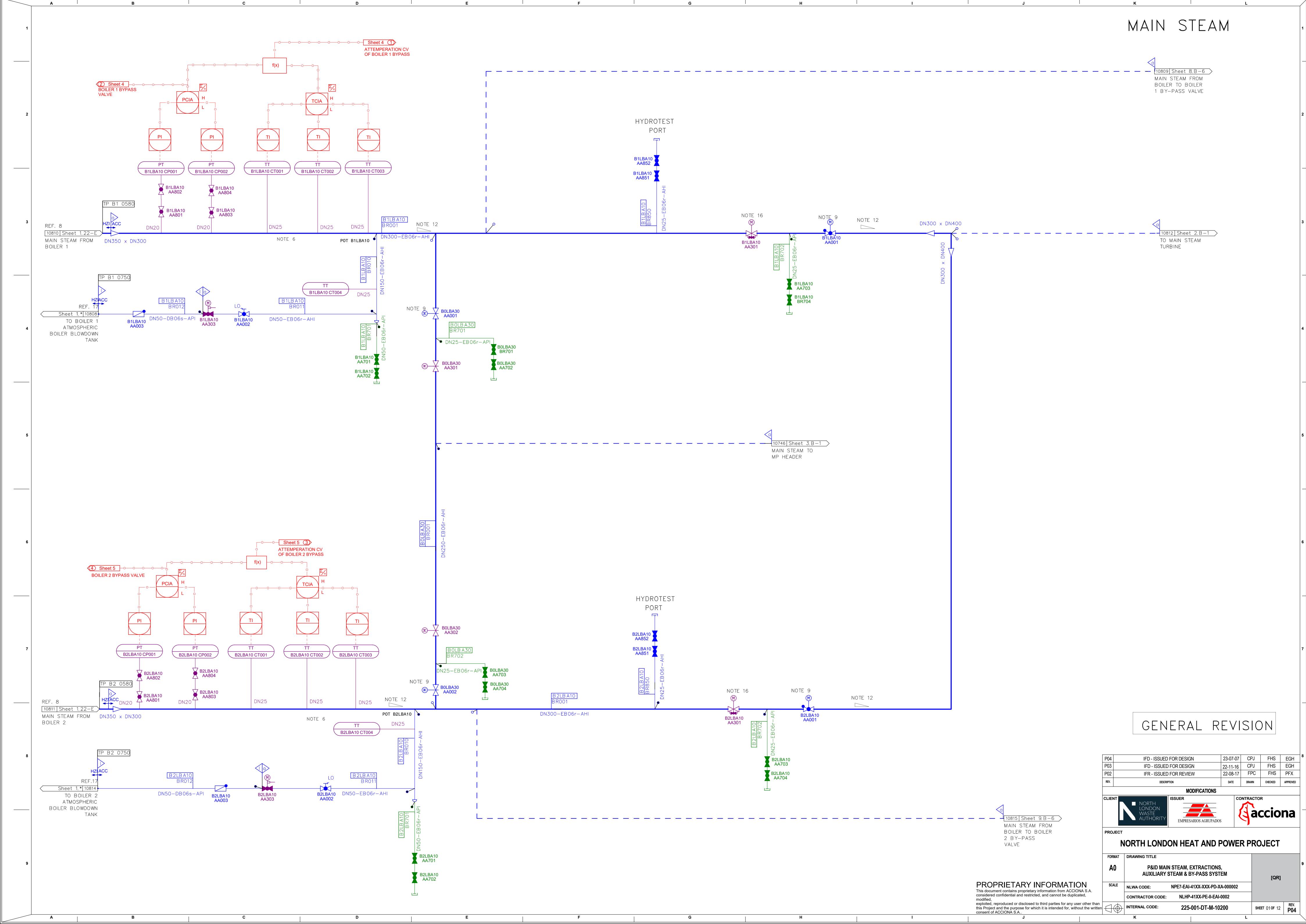
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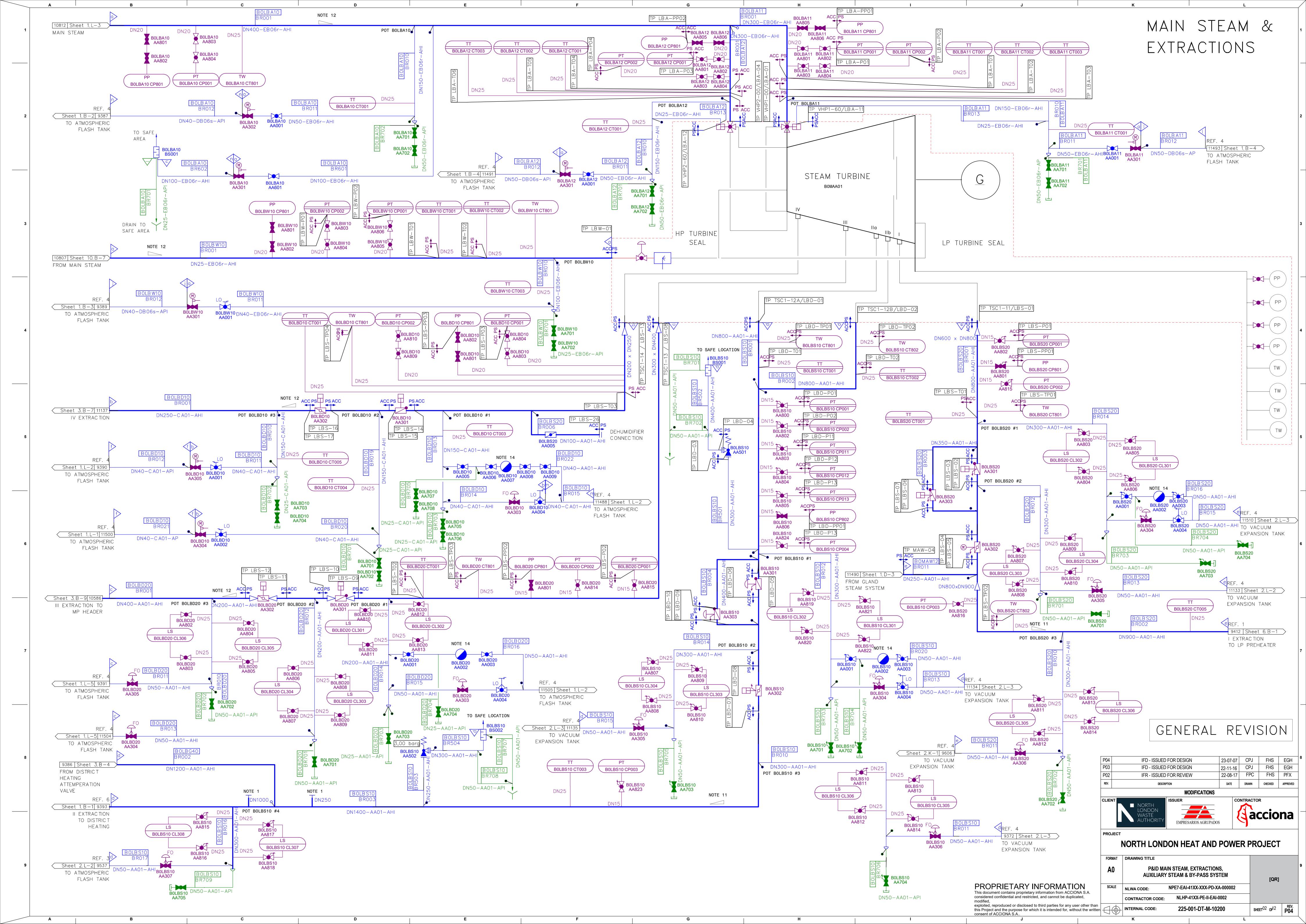
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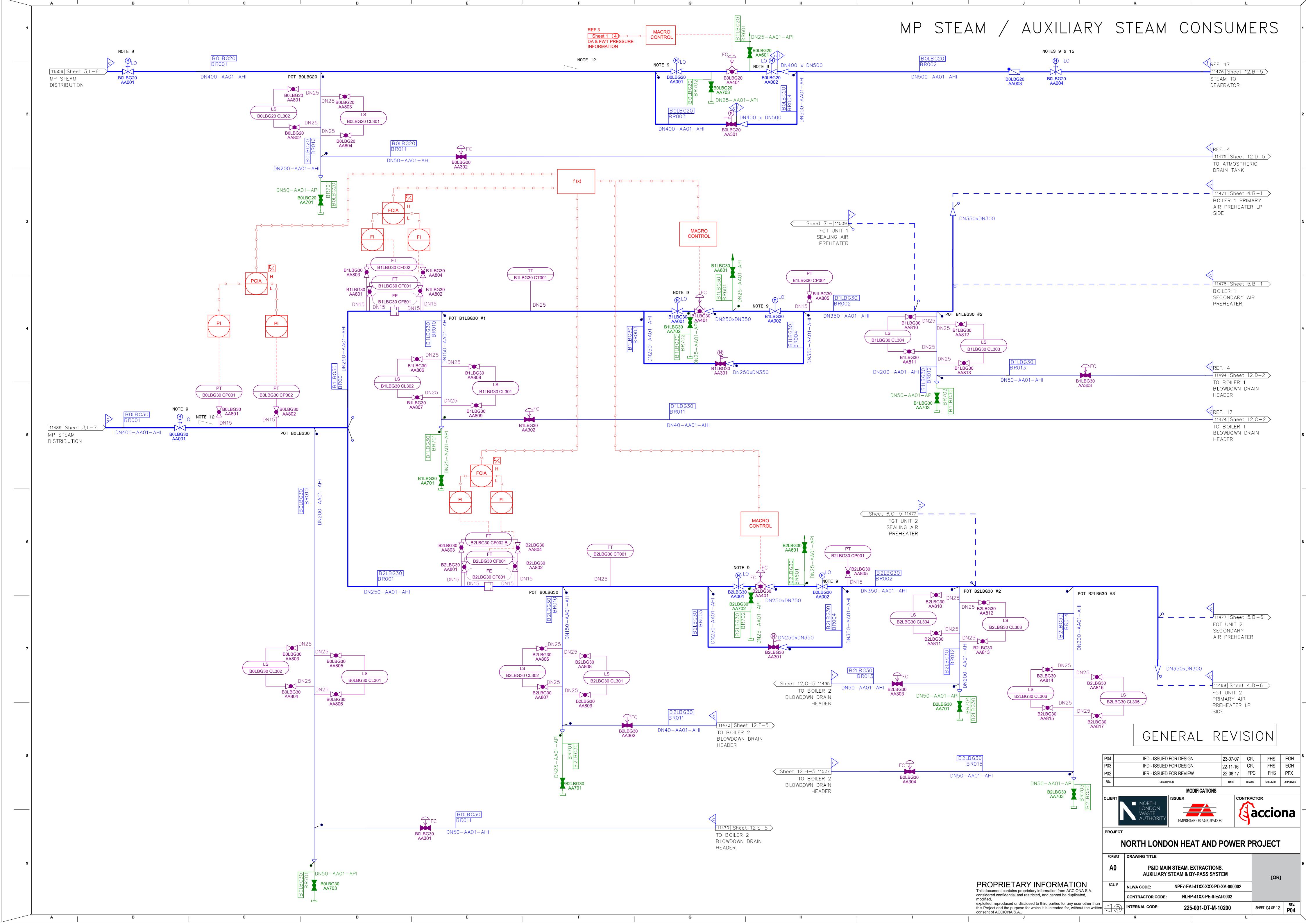
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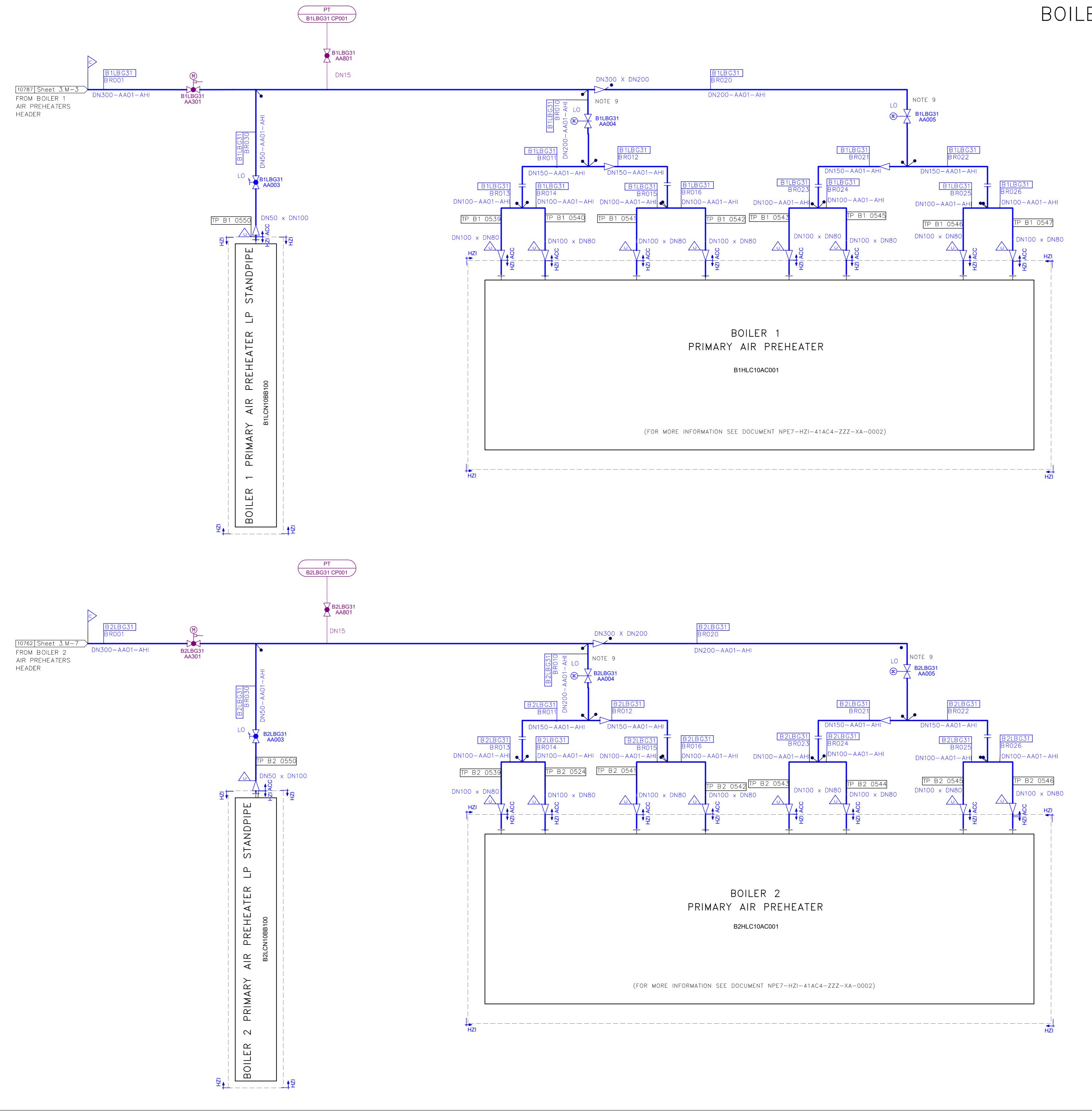
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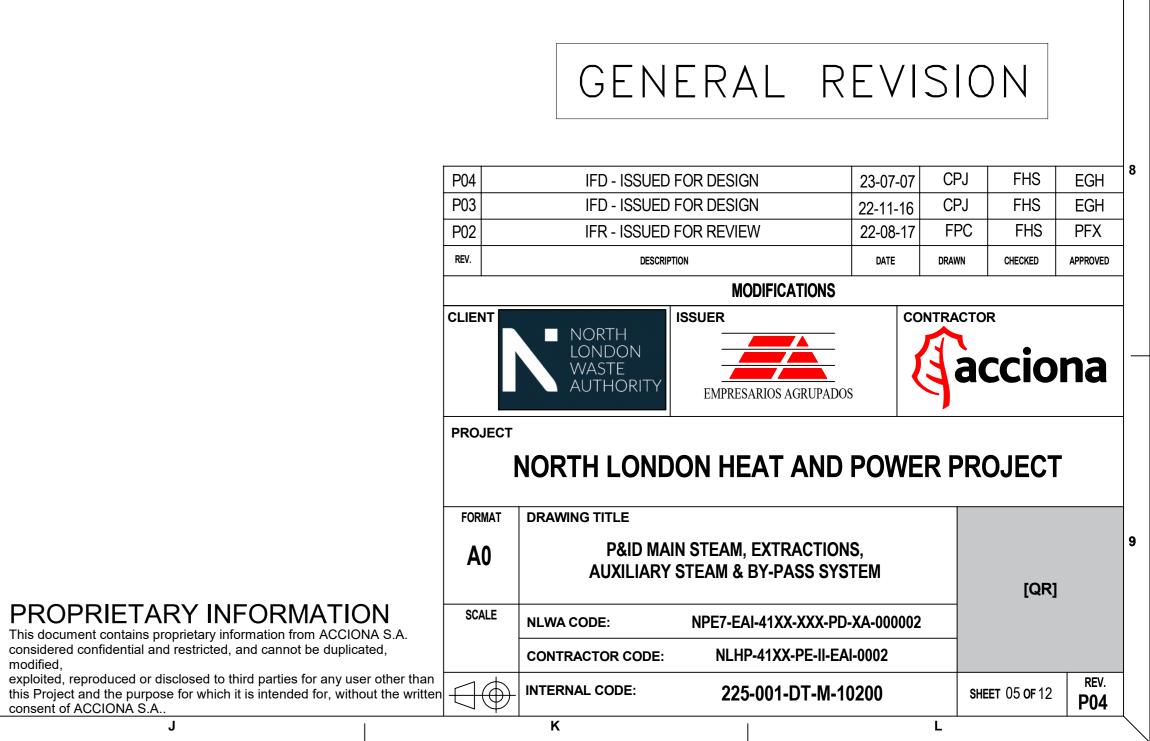
| SHEET 00 OF 12 | P04







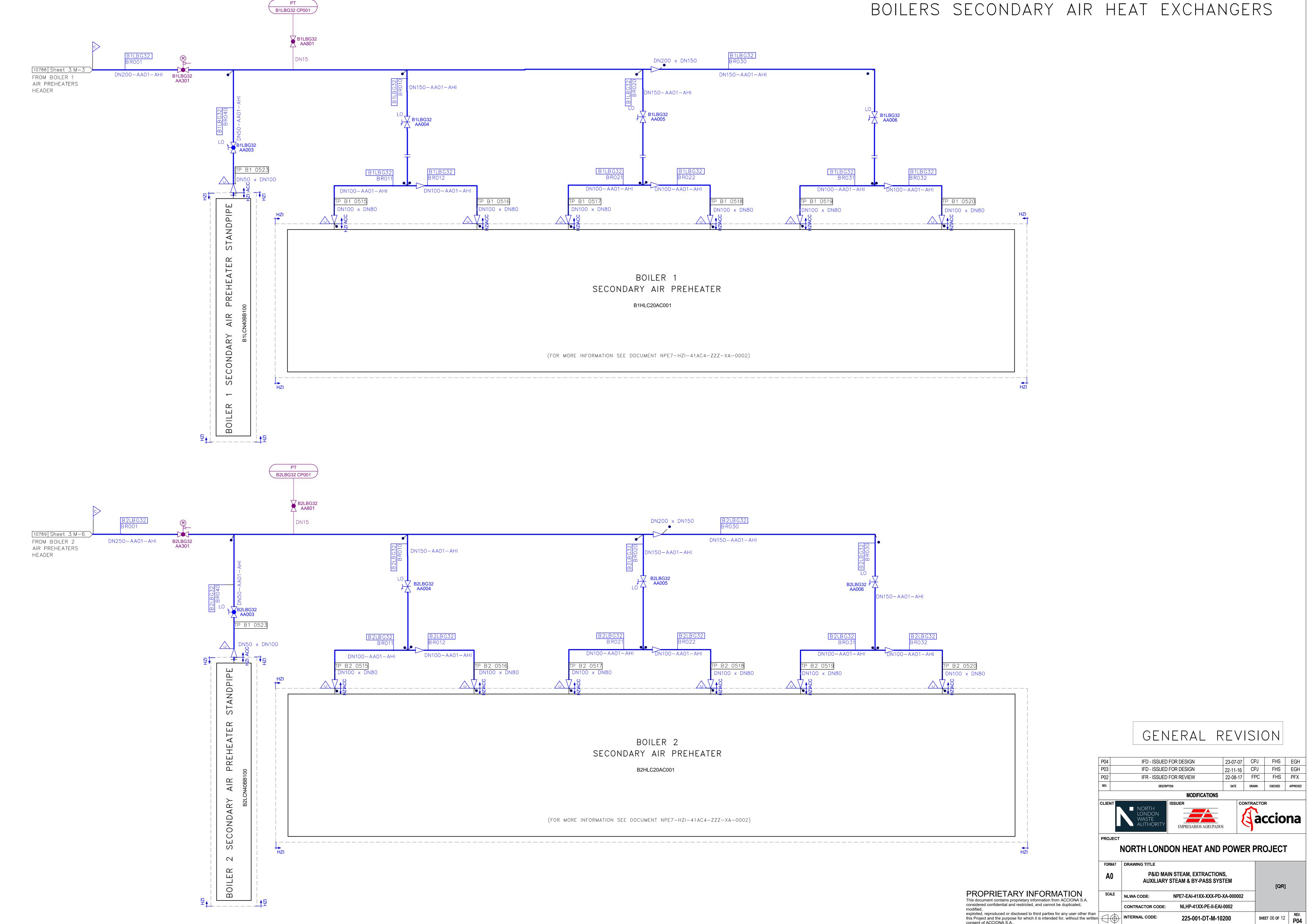


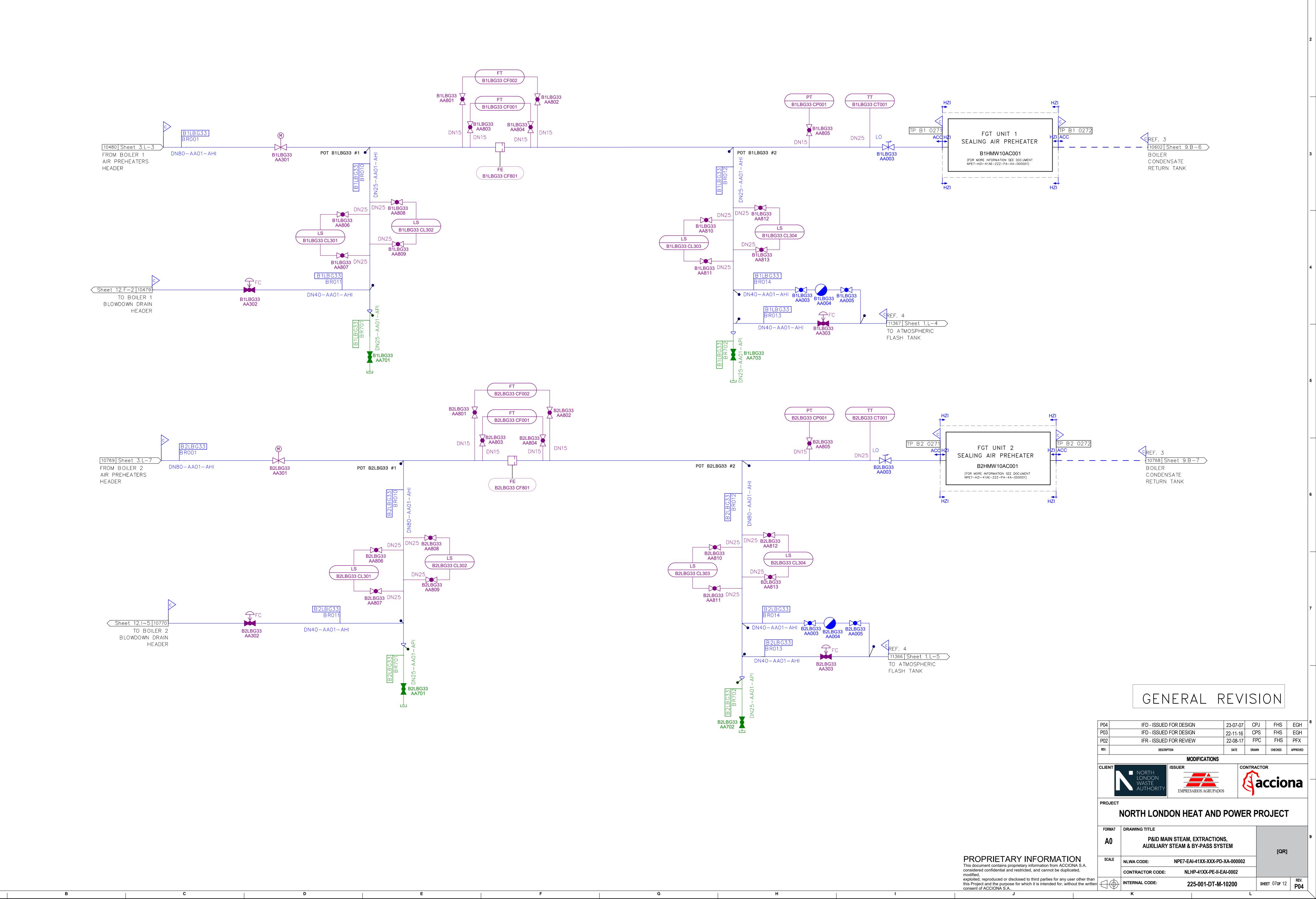


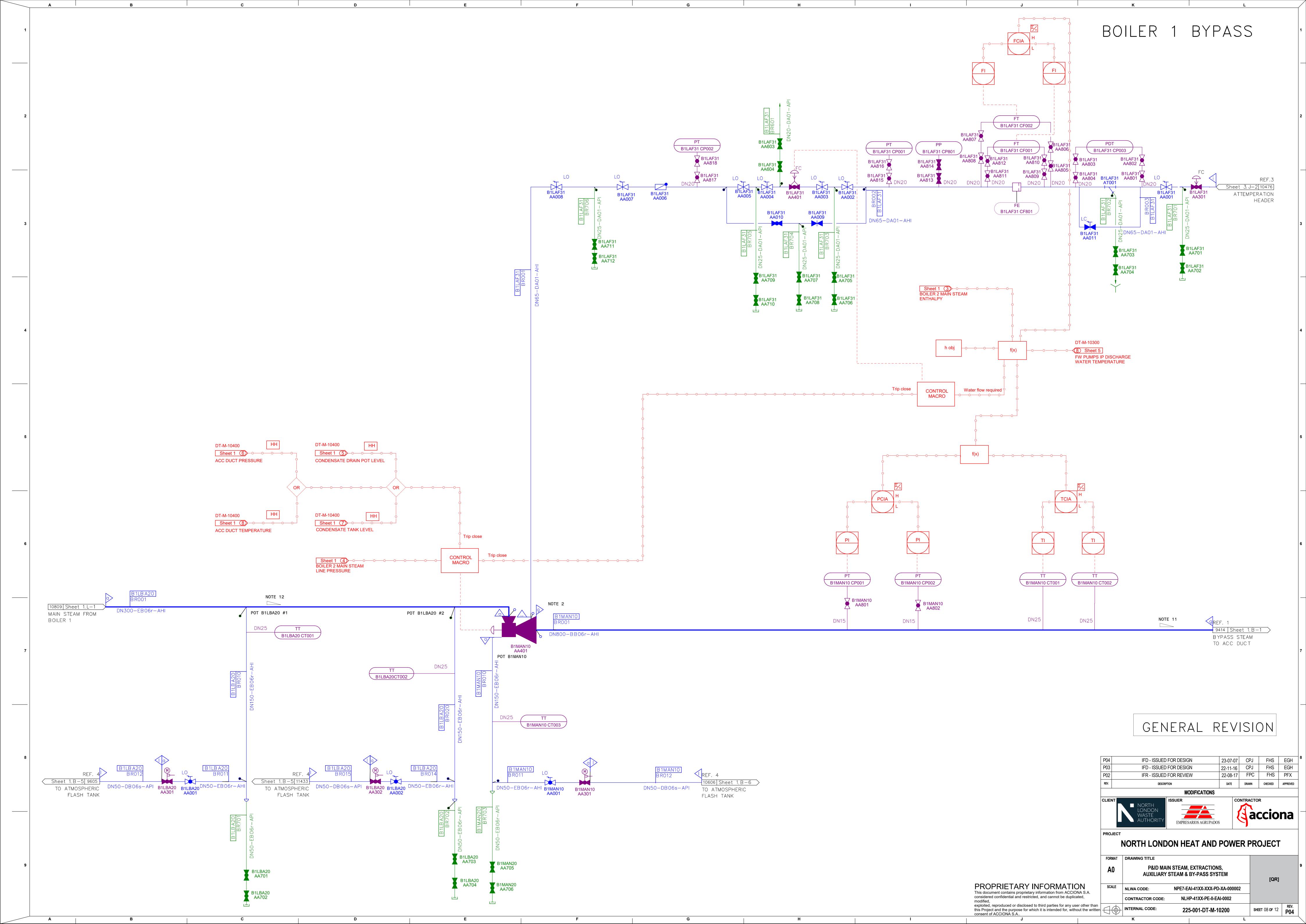
this Project and the purpose for which it is intended for, without the written consent of ACCIONA S.A..

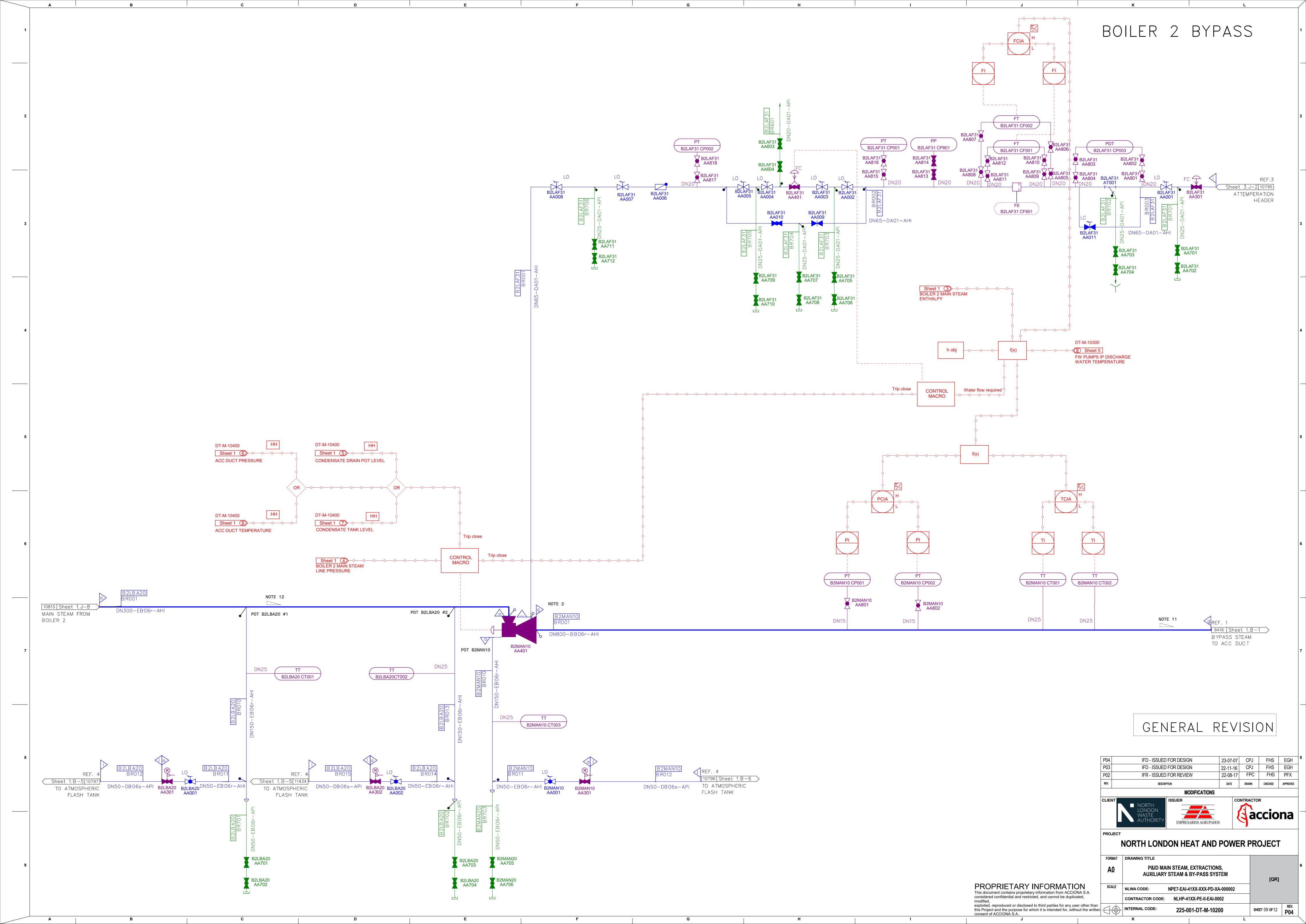
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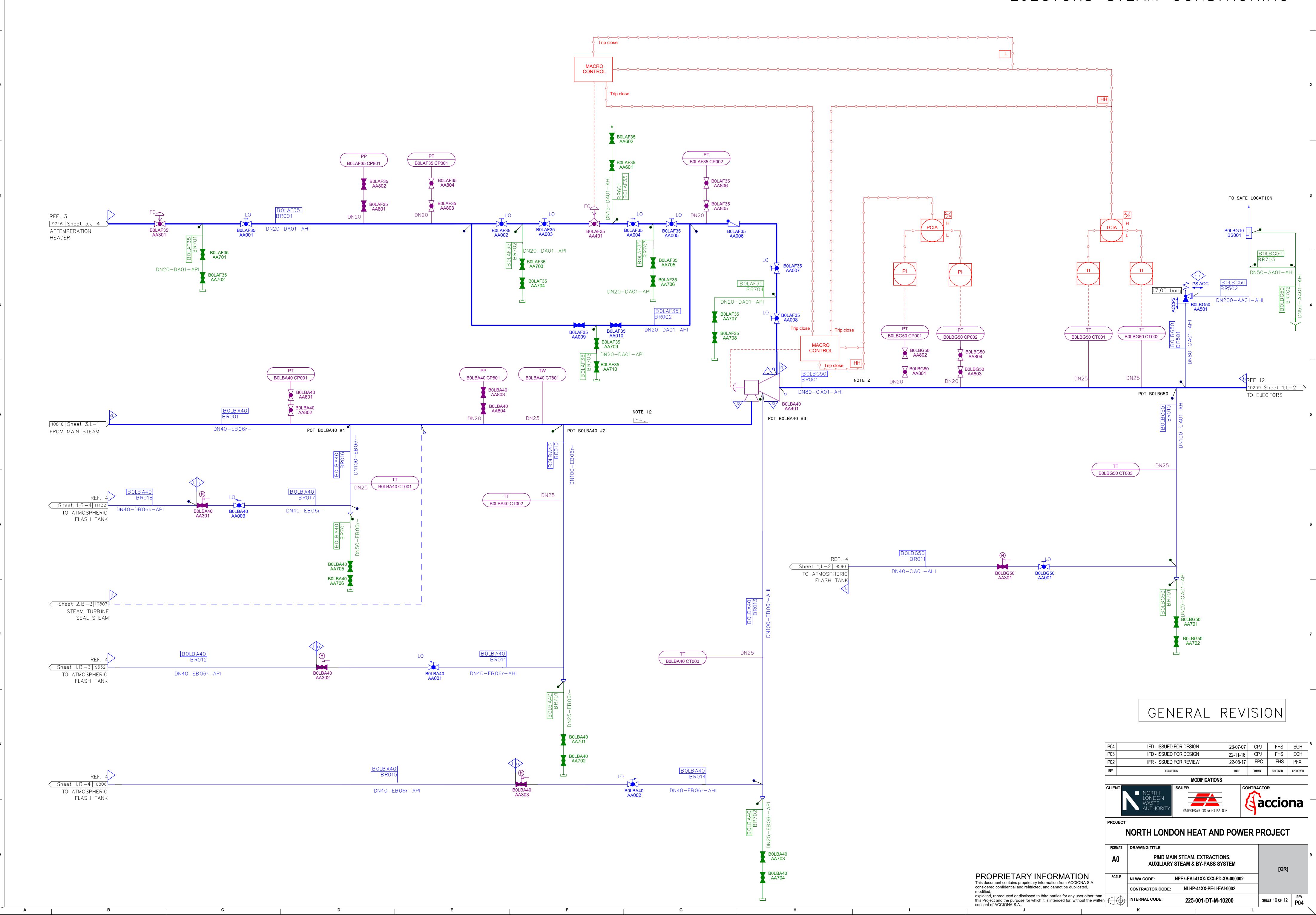
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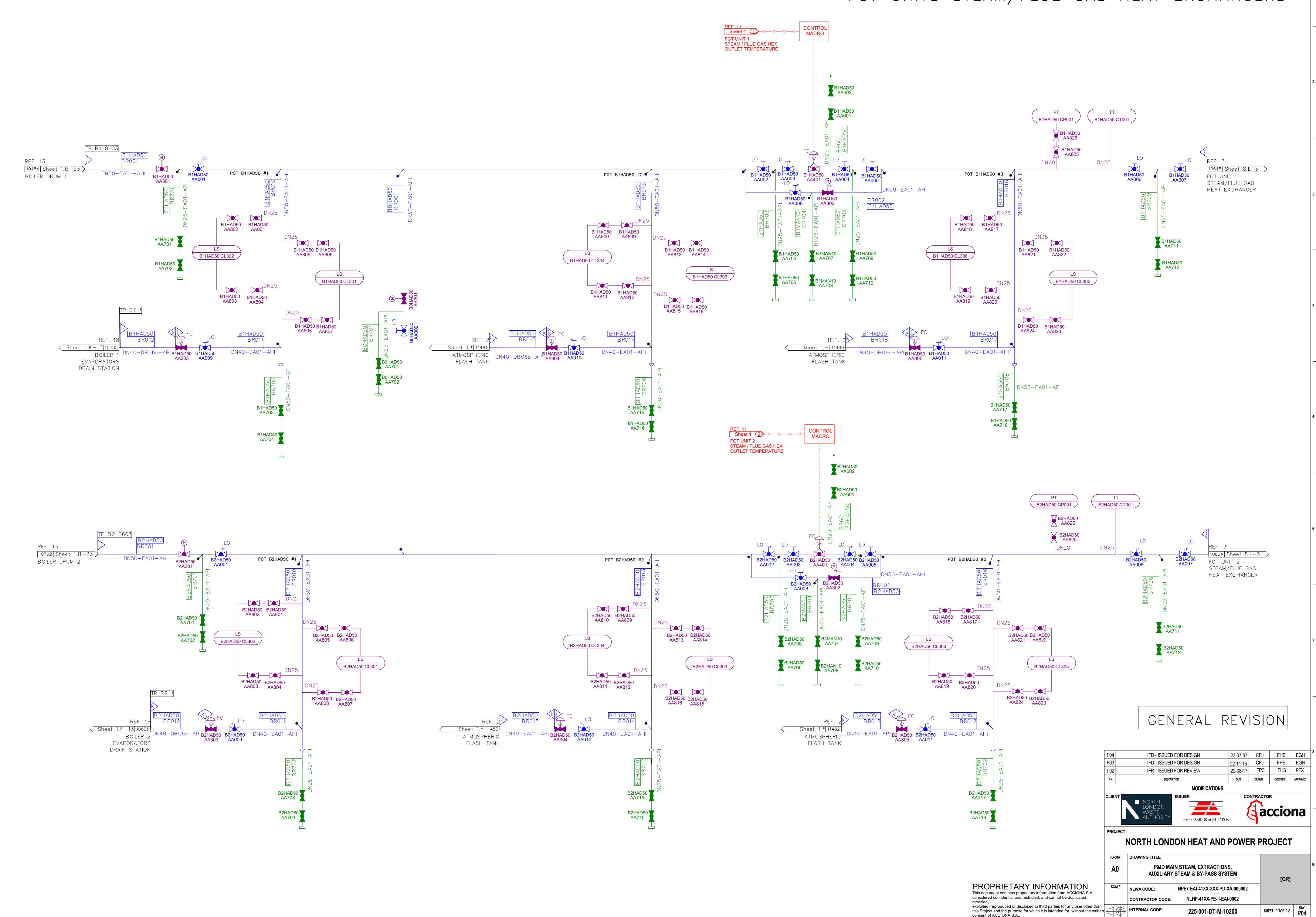












## BOILERS STEAM DRAIN HEADERS

