

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

SHEET	DESCRIPTION	REVISION			REVISION			REVISION			REVISION		
		22-07-05			22-08-17			22-11-16			23-05-25		
		PROJECT	ACCIONA	EAI	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 DISTRIBUTION. 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

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





REFERENCE DRAWINGS	CODE	DRAWING N°
0.- P&ID SYMBOLOLOGY		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-SKO-41AG-GFO-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 SUPERHEATER		NPE7-HZI-41AC2-ZZZ-PD-XA-0005
9.- P&ID PRIMARY AIR PREHEATER		NPE7-HZI-41AC4-ZZZ-PD-XA-0002
10.- P&ID SECONDARY AIR PREHEATER		NPE7-HZI-41AC4-ZZZ-PD-XA-0006
11.- P&ID FLUE GAS PATH SCR		NPE7-HZI-41AE-ZZZ-PD-XA-0001
12.- P&ID AIR EXTRACTION SYSTEM	MAJ	PENDING
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-SKO-41AG-GFO-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
19.- P&ID STEAM TURBINE SYSTEM		NPE7-SKO-41AG-GFO-PD-XA-000002

- NOTES :**
- 0.- 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, MINIMUM 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, MINIMUM 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)

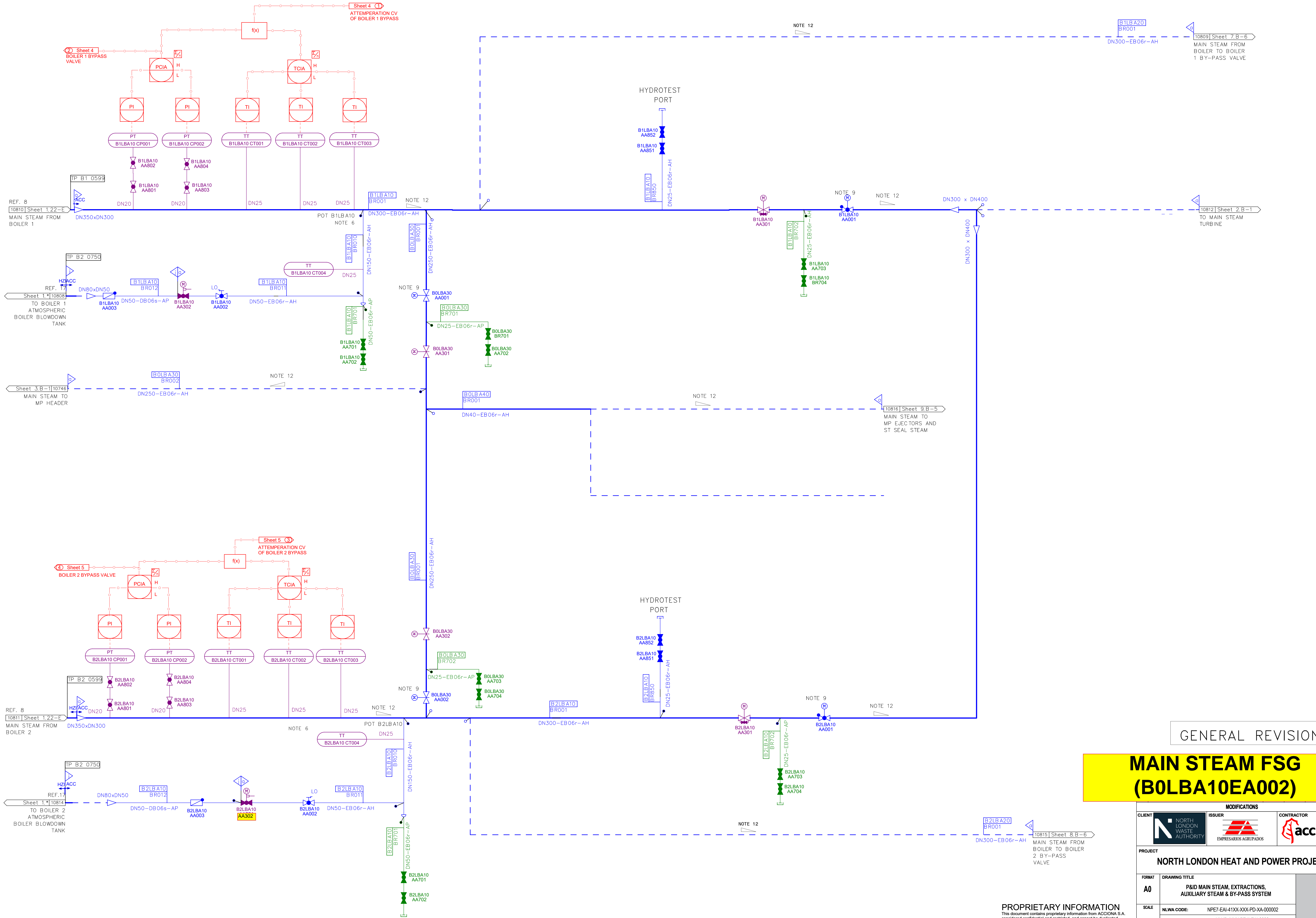
GENERAL REVISION

STEAM AND BYPASS FG
(B0LBA10EA001)

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MODIFICATIONS			
CLIENT		ISSUER	
		CONTRACTOR	
PROJECT			
NORTH LONDON HEAT AND POWER PROJECT			
FORMAT	DRAWING TITLE		[QR]
A0	P&ID MAIN STEAM, EXTRACTIONS, AUXILIARY STEAM & BY-PASS SYSTEM		
SCALE	NLWA CODE:	NPE7-EAI-41XX-XXX-PD-XA-000002	
	CONTRACTOR CODE:	NLHP-41XX-PE-II-EAI-0002	
	INTERNAL CODE:	225-001-DT-M-10200	
		SHEET 00 OF 12	REV. P04

MAIN STEAM



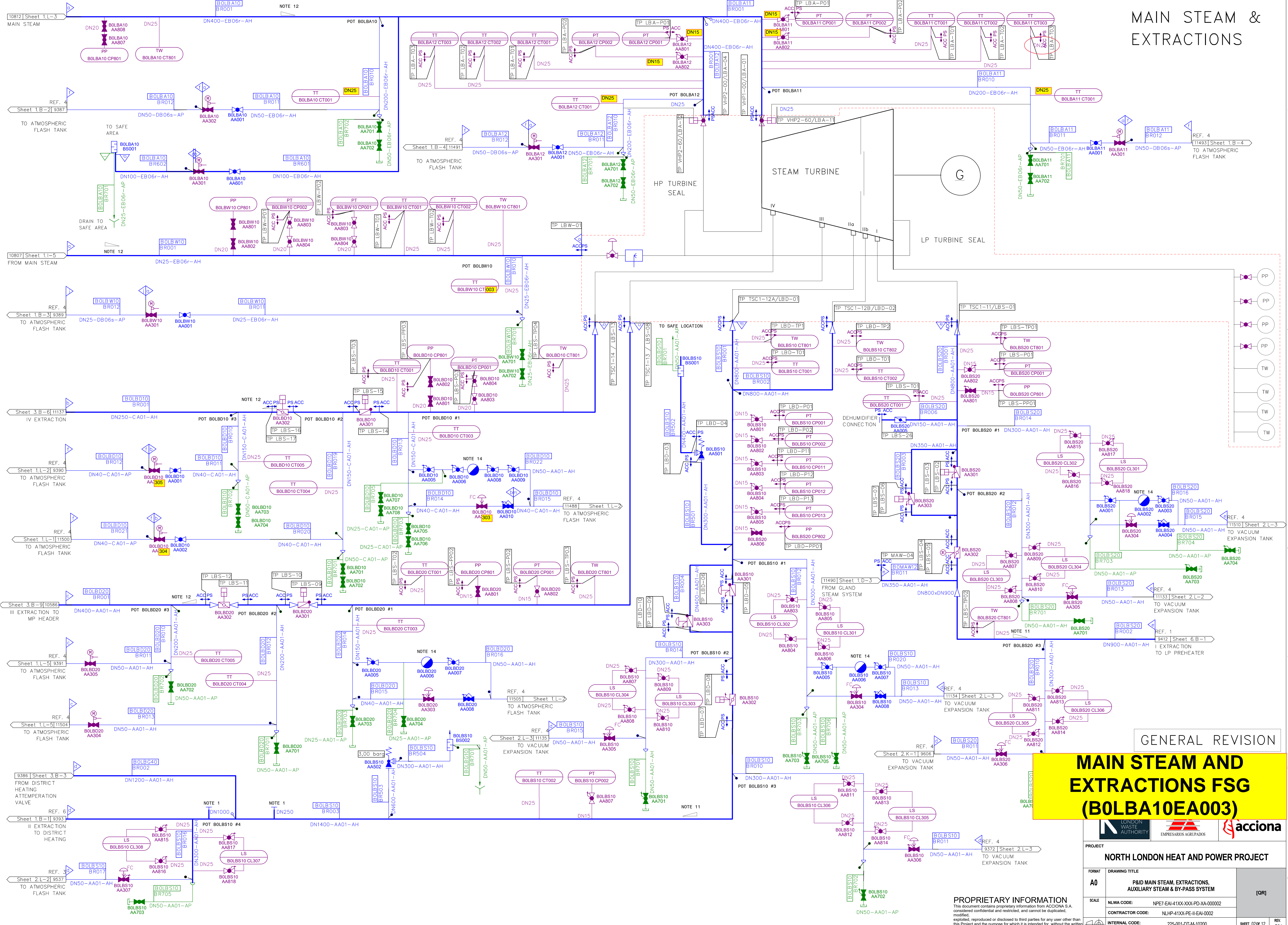
MAIN STEAM FSG (B0LBA10EA002)

GENERAL REVISION

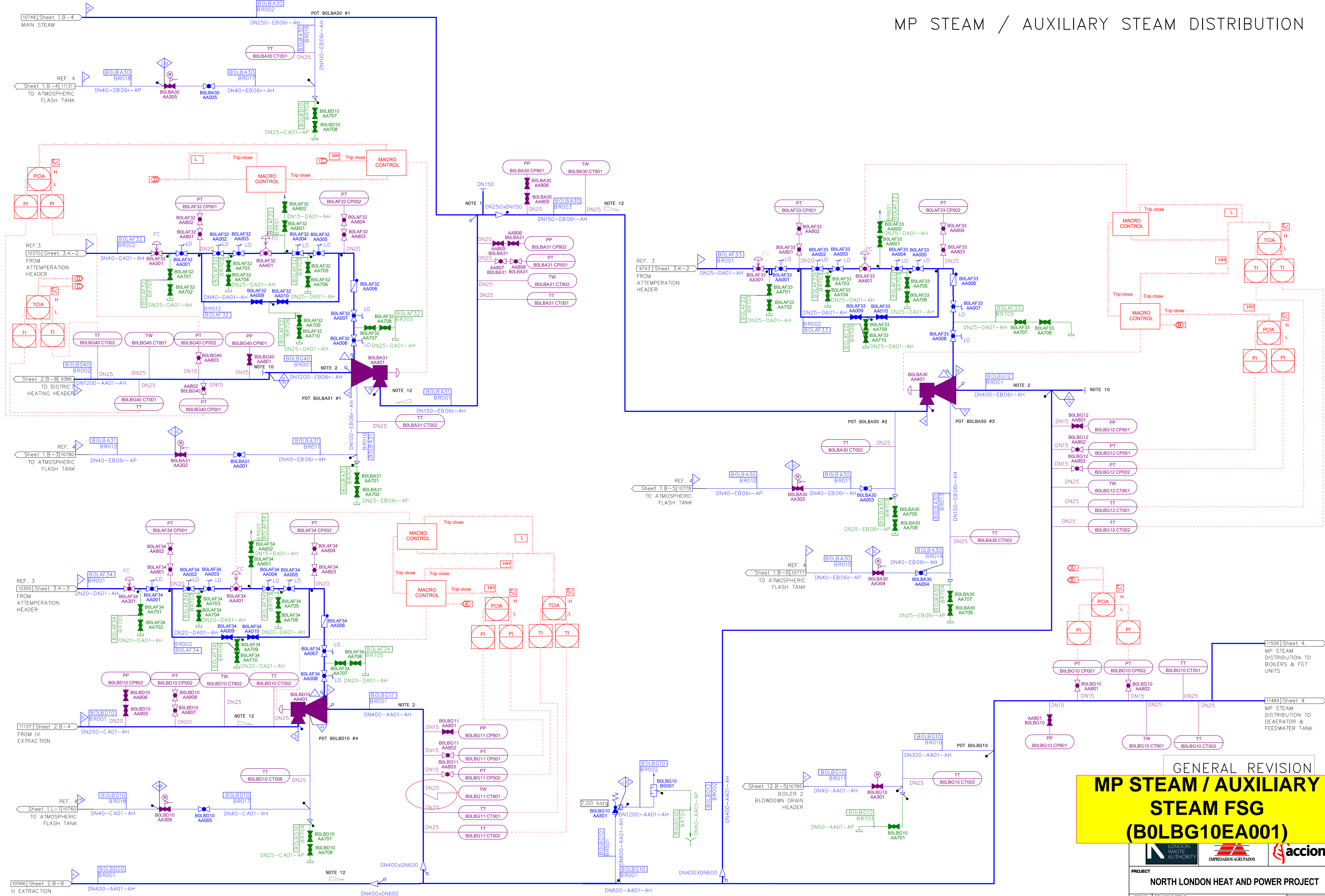
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CLIENT	ISSUER	CONTRACTOR
PROJECT		
NORTH LONDON HEAT AND POWER PROJECT		
FORMAT	DRAWING TITLE	
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SCALE	NLWA CODE:	[QR]
	NPE7-EAI-41XX-XXX-PD-XA-000002	
	CONTRACTOR CODE:	[QR]
	NLHP-41XX-PE-II-EAI-0002	
	INTERNAL CODE:	[QR]
	225-001-DT-M-10200	
SHEET 01 OF 12		REV. P04

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MAIN STEAM & EXTRACTIONS



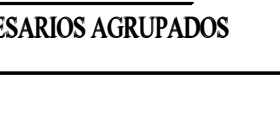




MP STEAM / AUXILIARY STEAM DISTRIBUTION



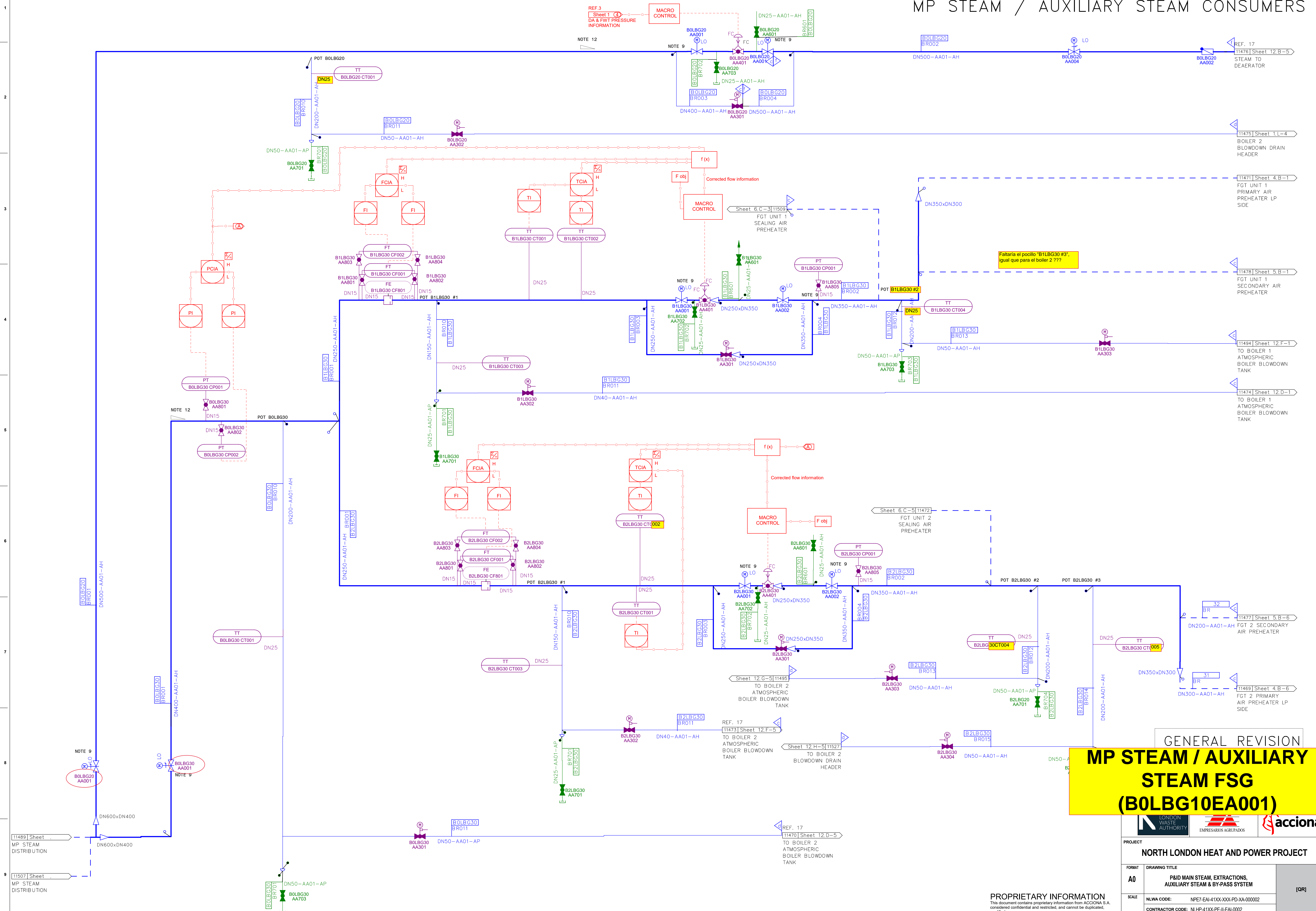
GENERAL REVISION

**MP STEAM / AUXILIARY
STEAM FSG
(B0LBG10EA001)**

		
<p>PROJECT</p> <p>NORTH LONDON HEAT AND POWER PROJECT</p>		
<p>FORMAT</p> <p>A0</p>	<p>DRAWING TITLE</p> <p>P&ID MAIN STEAM, EXTRACTIONS, AUXILIARY STEAM & BY-PASS SYSTEM</p>	<p>[QR]</p>
<p>SCALE</p>	<p>NLWIA CODE: NPE7-EAI-41XX-XXX-PD-XA-000002</p> <p>CONTRACTOR CODE: NLHP-41XX-PE-II-EAI-0002</p>	
	<p>INTERNAL CODE: 225-001-DT-M-10200</p>	
	<p>SHEET 03 OF 12</p>	<p>REV. P04</p>



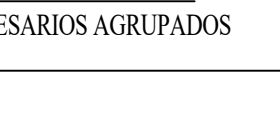
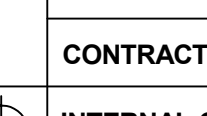
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MP STEAM / AUXILIARY STEAM CONSUMERS



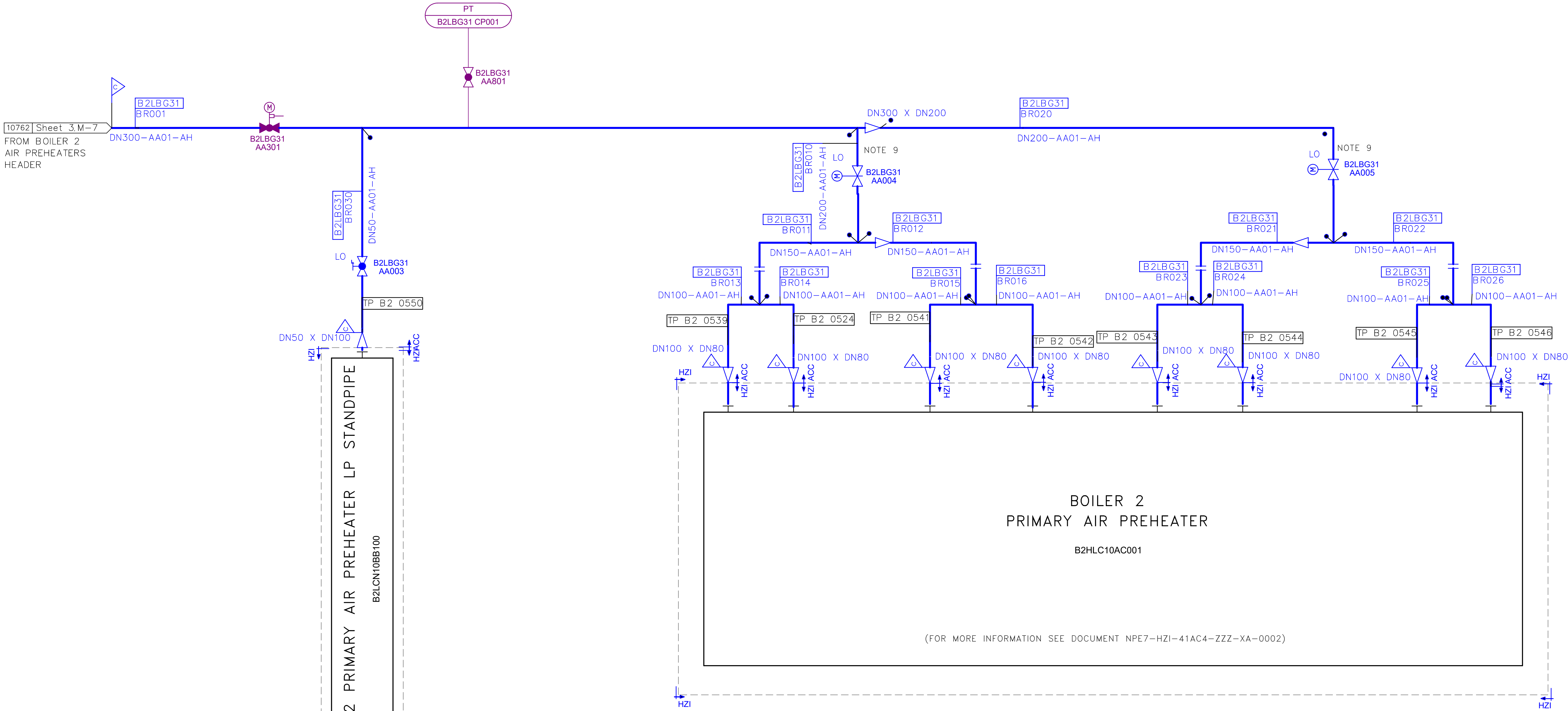
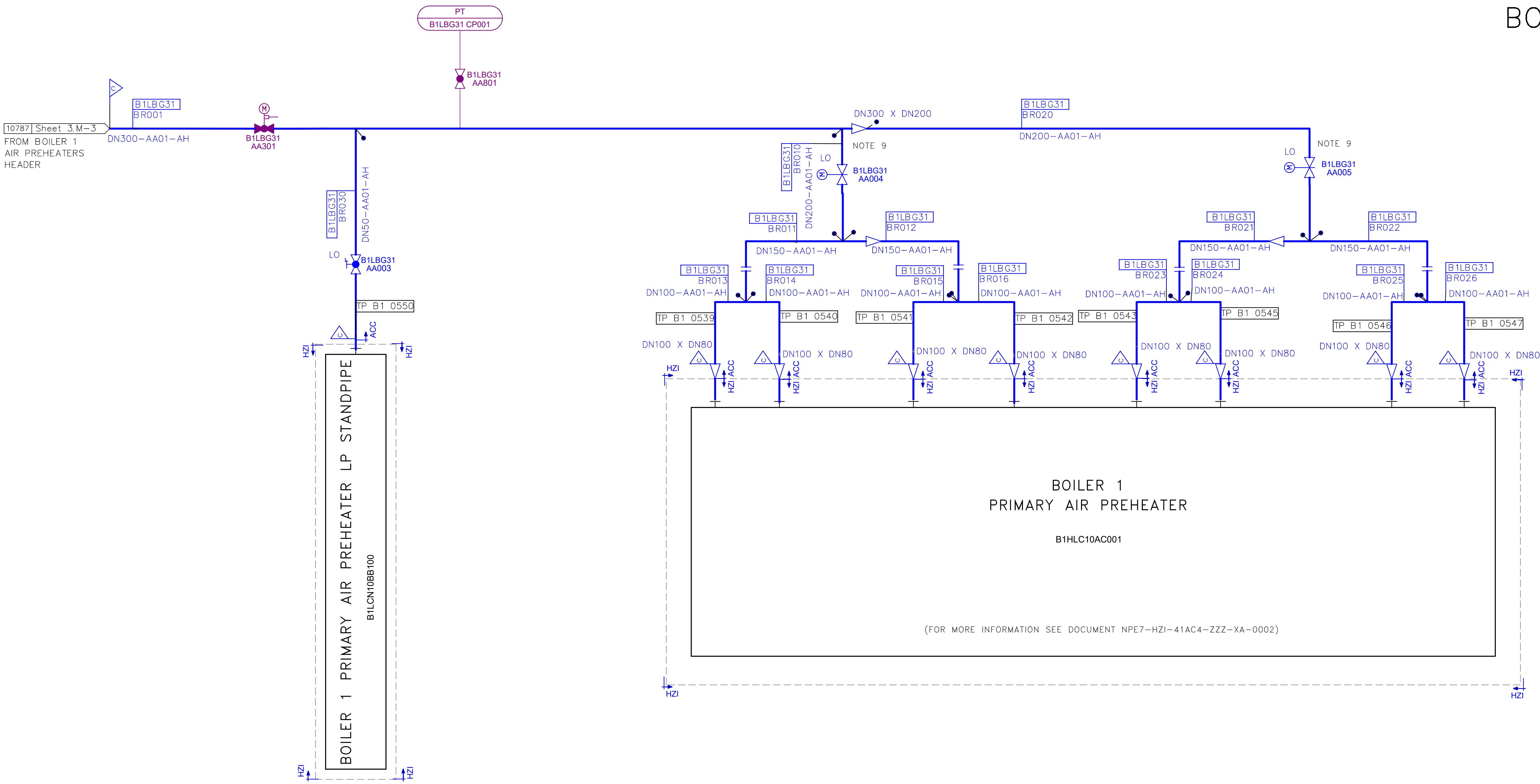
GENERAL REVISION

**MP STEAM / AUXILIARY
STEAM FSG
(B0LBG10EA001)**

		
<p>PROJECT</p> <p>NORTH LONDON HEAT AND POWER PROJECT</p>		
<p>FORMAT</p> <p>A0</p>	<p>DRAWING TITLE</p> <p>P&ID MAIN STEAM, EXTRACTIONS, AUXILIARY STEAM & BY-PASS SYSTEM</p>	<p>[QR]</p>
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	<p>INTERNAL CODE: 225-001-DT-M-10200</p>	
<p>INTERNAL CODE: 225-001-DT-M-10200</p>		<p>SHEET 04 OF 12</p>
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BOILERS PRIMARY AIR HEAT EXCHANGERS



GENERAL REVISION

P04	IFD - ISSUED FOR DESIGN	23-05-25	FPC	CPJ	EGH
P03	IFD - ISSUED FOR DESIGN	22-11-16	CPJ	FHS	EGH
P02	IFR - ISSUED FOR REVIEW	22-08-17	FPC	FHS	PFH
P01	IFR - ISSUED FOR REVIEW	22-07-05	FHS	FHS	PFH

REV.	DESCRIPTION	DATE	DRAWN	CHECKED	APPROVED
MODIFICATIONS					
CLIENT		ISSUER		CONTRACTOR	
NORTH LONDON WASTE AUTHORITY		EMPRESARIOS AGRIPOS		acciona	

PROJECT					
NORTH LONDON HEAT AND POWER PROJECT					

FORMAT	DRAWING TITLE	[QR]
A0	P&ID MAIN STEAM, EXTRACTIONS, AUXILIARY STEAM & BY-PASS SYSTEM	
SCALE	NLWA CODE: NPE7-EAI-41XX-XXX-PD-XA-000002	
INTERNAL CODE:	NLHP-41XX-PE-II-EAI-0002	
CONTRACTOR CODE:	225-001-DT-M-10200	
SHEET	05 OF 12	REV. P04

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**BOILER AND FGT UNIT 1 HEAT
EXCHANGERS FSG
(B1LBG30EA001)**

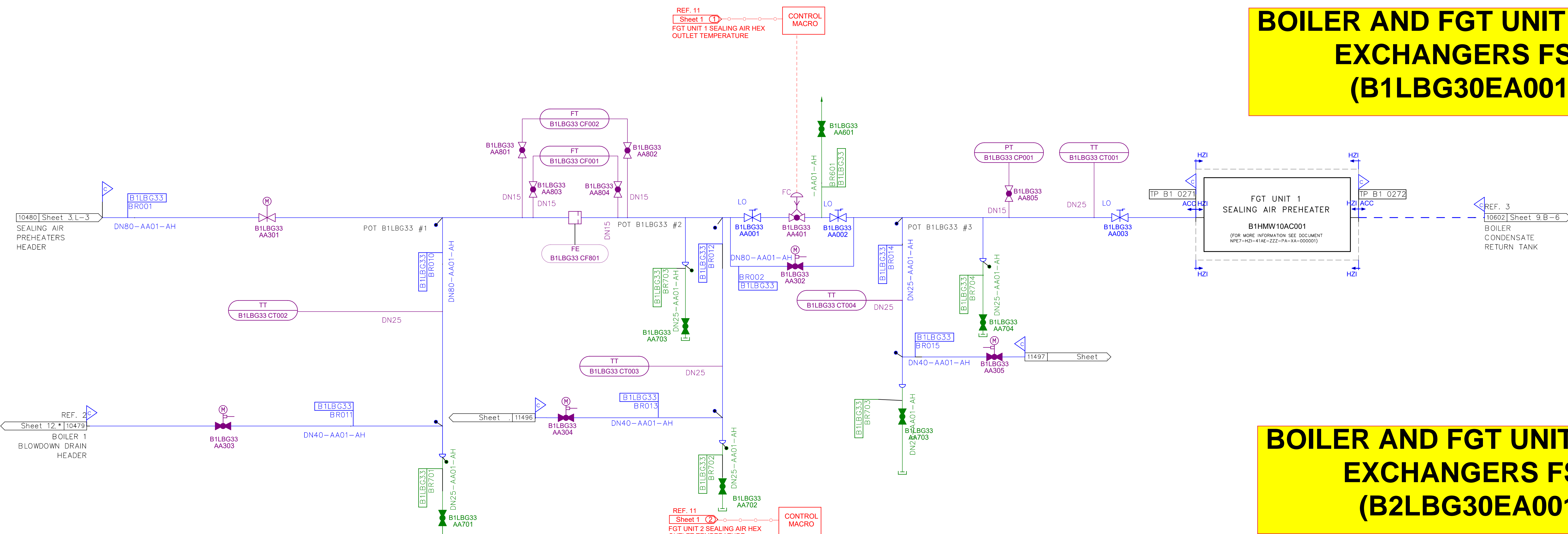


MODIFICACIONES		
CLIENT	 <p>NORTH LONDON WASTE AUTHORITY</p>	ISSUER  <p>EMPRESARIOS AGRUPOADOS</p>
		CONTRACTOR  <p>acciona</p>

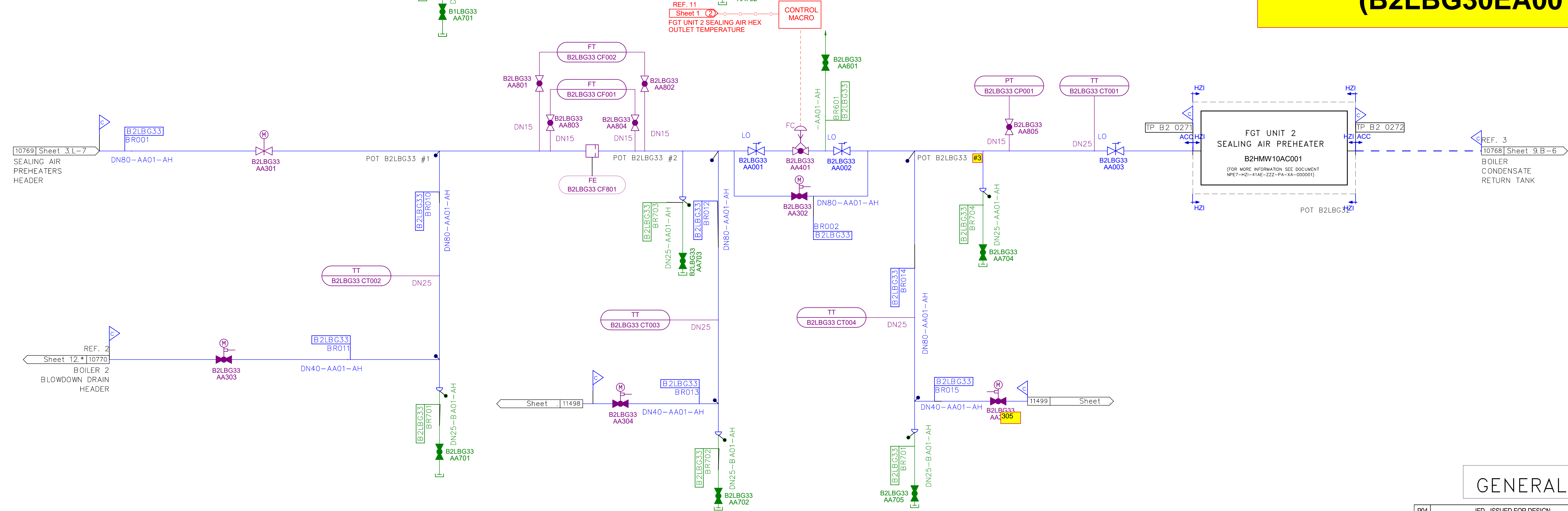
FORMAT	DRAWING TITLE	
A0	P&ID MAIN STEAM, EXTRACTIONS, AUXILIARY STEAM & BY-PASS SYSTEM	

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BOILER AND FGT UNIT 1 HEAT EXCHANGERS FSG (B1LBG30EA001)



BOILER AND FGT UNIT 2 HEAT EXCHANGERS FSG (B2LBG30EA001)



GENERAL REVISION

P04	IFD - ISSUED FOR DESIGN	23-05-25	FPC	CPJ	EGH
P03	IFD - ISSUED FOR DESIGN	22-11-16	CPS	FHS	EGH
P02	IFR - ISSUED FOR REVIEW	22-08-17	FPC	FHS	PFX
P01	IFR - ISSUED FOR REVIEW	22-07-05	FHS	FHS	PFX
REV	DESCRIPTION	DATE	DRAWN	CHECKED	APPROVED

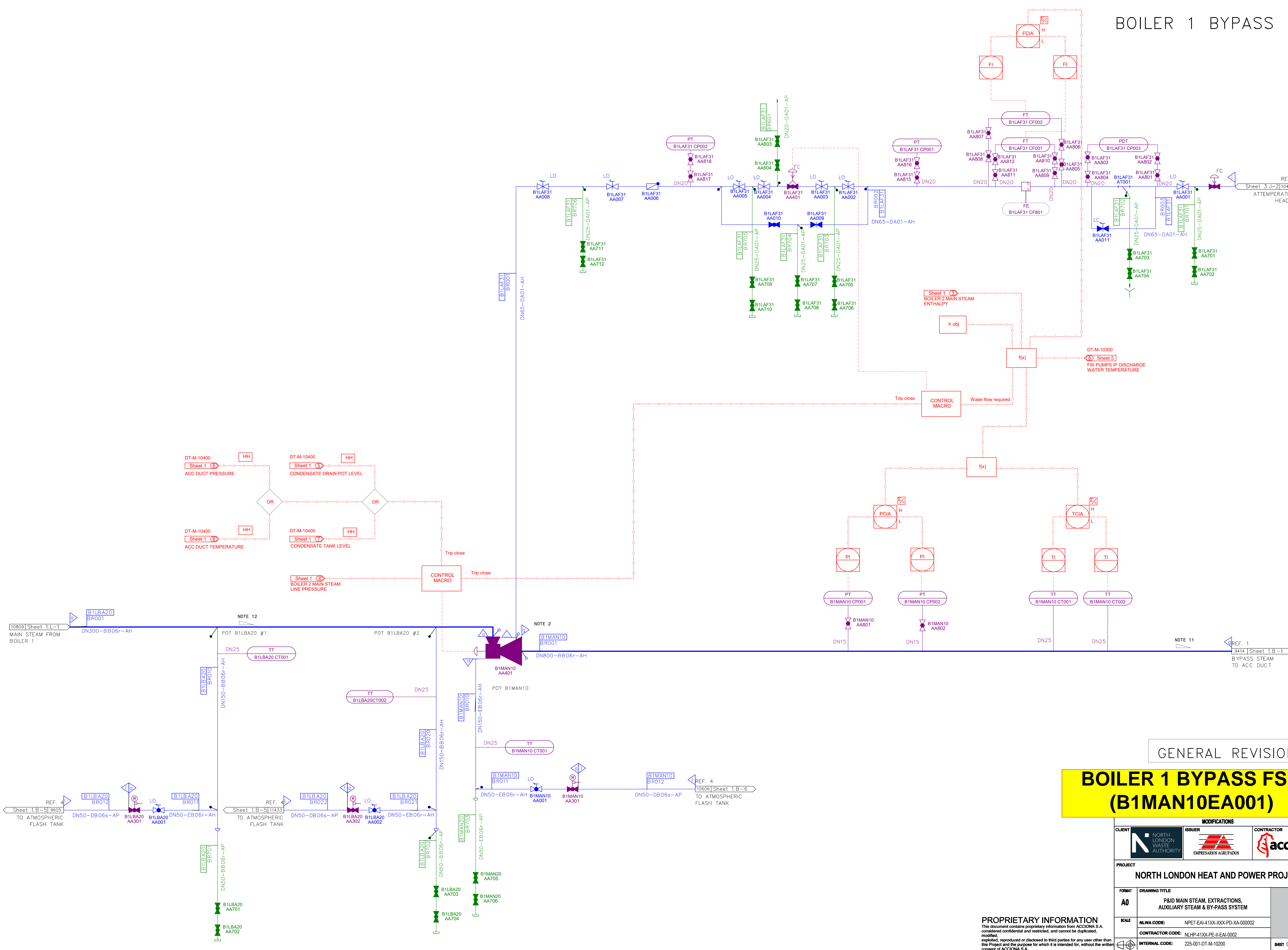
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NORTH LONDON WASTE AUTHORITY	EMPRESARIOS AGRIADOS	acciona

NORTH LONDON HEAT AND POWER PROJECT

FORMAT	DRAWING TITLE	[QR]
A0	P&ID MAIN STEAM, EXTRACTIONS, AUXILIARY STEAM & BY-PASS SYSTEM	
SCALE	NLWA CODE: NPET-EAI-41XX-XXX-PD-XA-000002	
CONTRACTOR CODE:	NLHP-41XX-PE-II-EAI-0002	
INTERNAL CODE:	225-001-DT-M-10200	
SHEET	07 OF 12	REV. P04




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BOILER 1 BYPASS



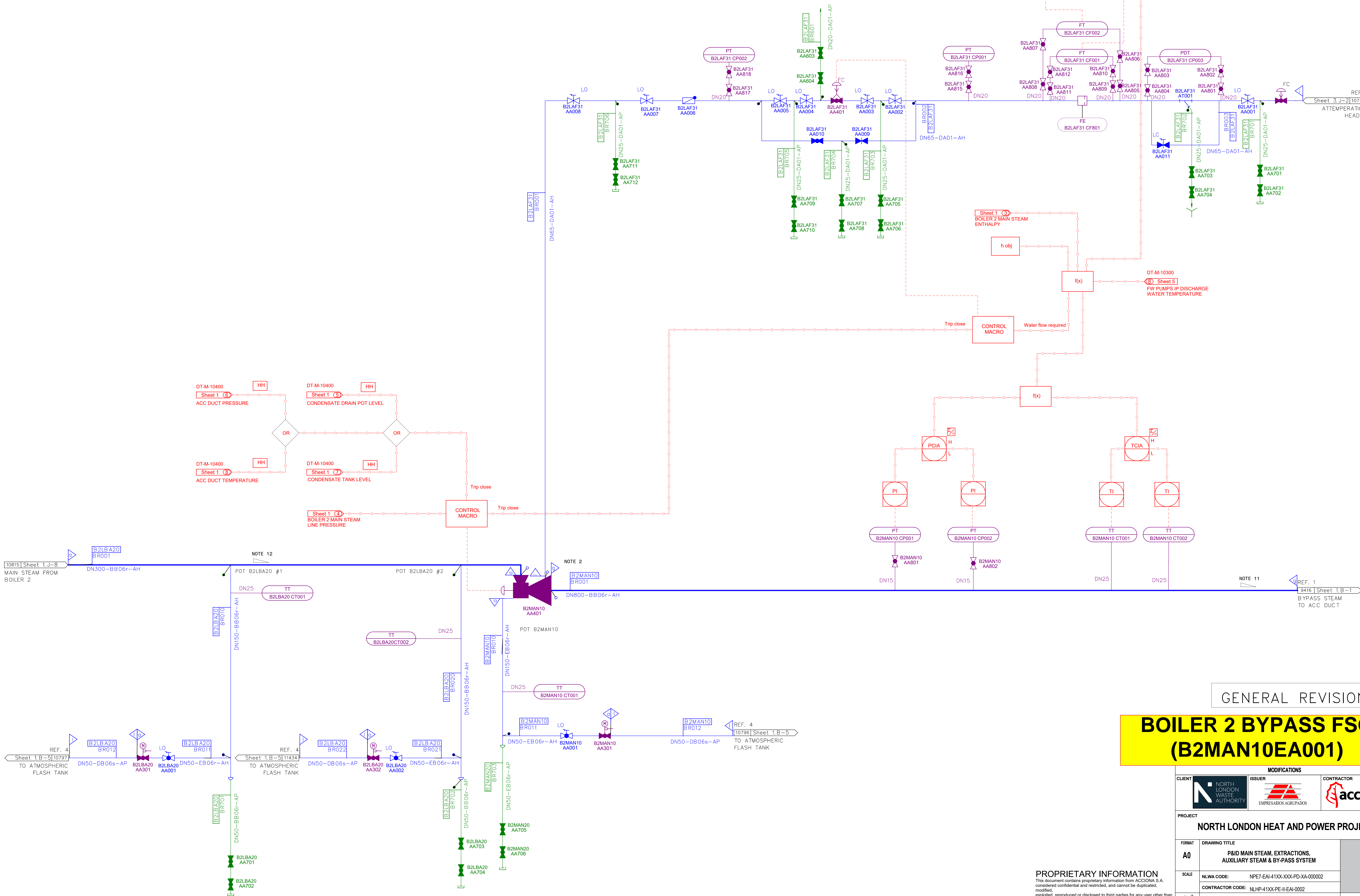
GENERAL REVISION

BOILER 1 BYPASS FSG
(B1MAN10EA001)

MODIFICATIONS			
CLIENT	ISSUER	CONTRACTOR	
 <div>NORTH LONDON WASTE AUTHORITY</div>	 <div>EMPRESARIOS AGRUPADOS</div>	 <div>acciona</div>	
PROJECT			
NORTH LONDON HEAT AND POWER PROJECT			
FORMAT	DRAWING TITLE		
A0	P&ID MAIN STEAM, EXTRACTIONS, AUXILIARY STEAM & BY-PASS SYSTEM		
SCALE	NLWA CODE:	[QR]	
	NPET-EAI-41XX-XXX-PD-XA-000002		
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	225-001-DT-M-10200	SHEET 08 of 12	
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BOILER 2 BYPASS



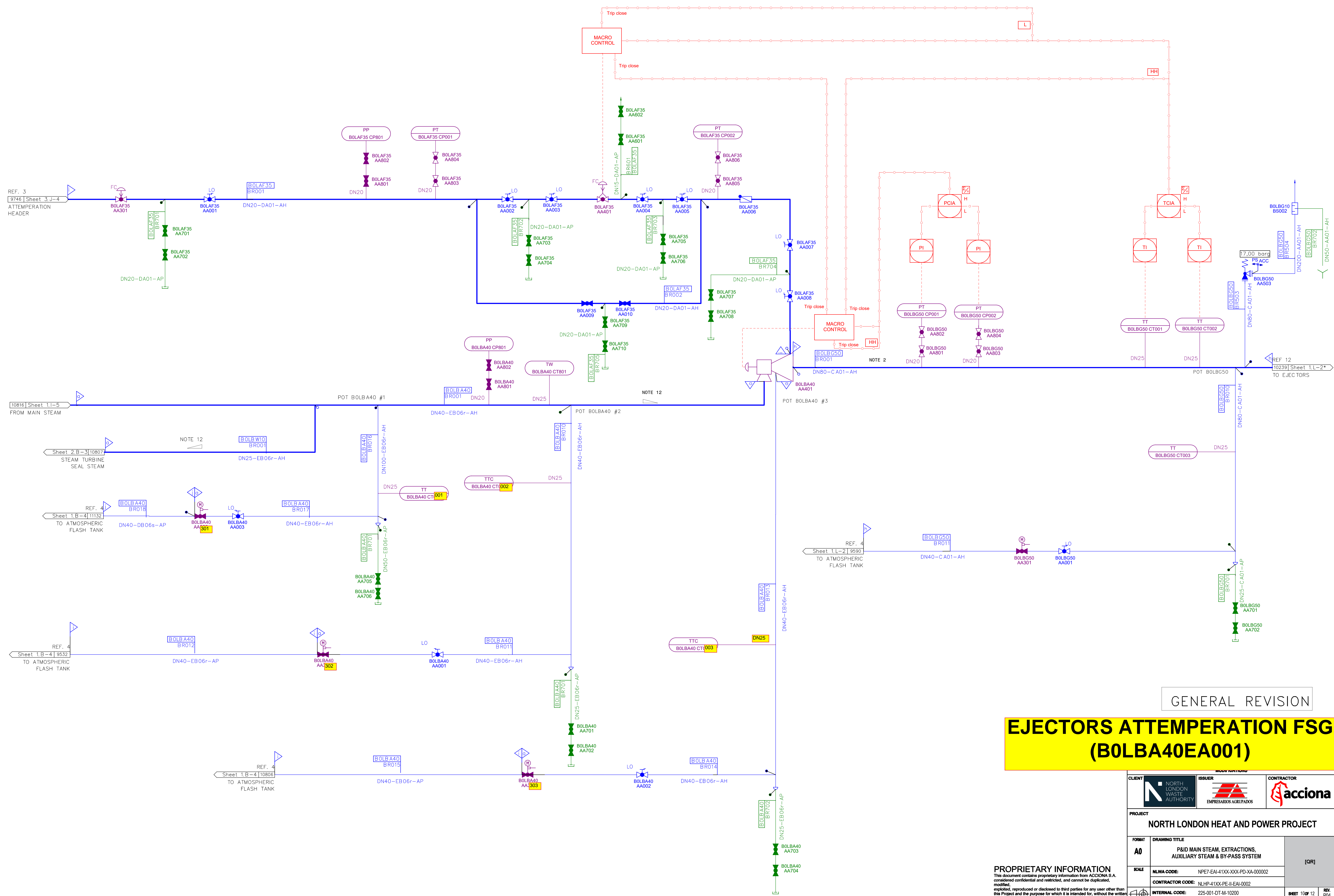
GENERAL REVISION

BOILER 2 BYPASS FSG
(B2MAN10EA001)

MODIFICATIONS		
CLIENT	ISSUER	CONTRACTOR
PROJECT		
NORTH LONDON HEAT AND POWER PROJECT		
FORMAT	DRAWING TITLE	[QR]
A0	P&ID MAIN STEAM, EXTRACTIONS, AUXILIARY STEAM & BY-PASS SYSTEM	
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INTERNAL CODE:	225-001-DT-M-10200	
SHEET 09 of 12		REV. P04




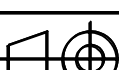
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EJECTORS STEAM CONDITIONING

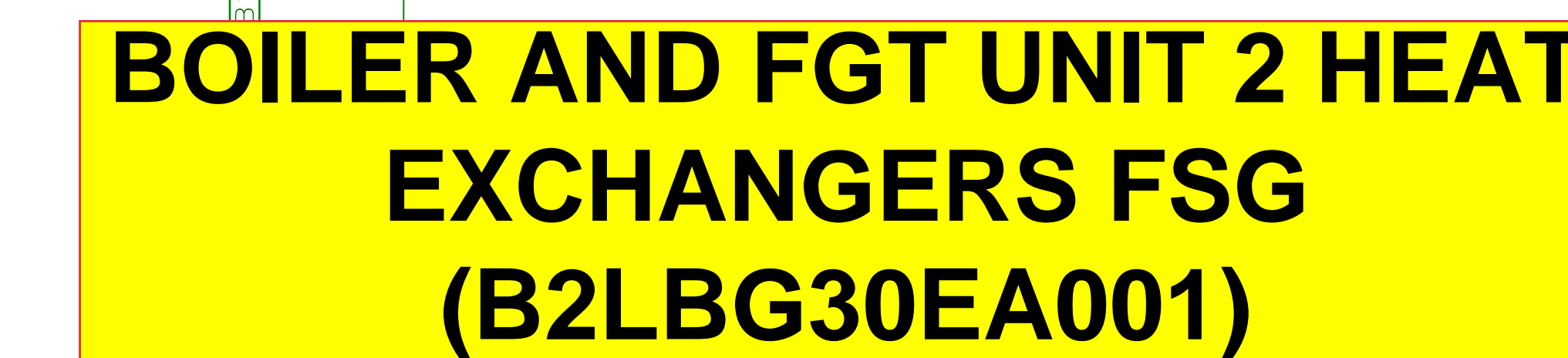


GENERAL REVISION

EJECTORS ATTEMPERATION FSG (B0LBA40EA001)

CLIENT	 NORTH LONDON WASTE AUTHORITY	ISSUER  EMPRESARIOS AGRUPADOS	CONTRACTOR  acciona
PROJECT			
NORTH LONDON HEAT AND POWER PROJECT			
FORMAT	DRAWING TITLE		[QR]
A0	P8ID MAIN STEAM, EXTRACTIONS, AUXILIARY STEAM & BY-PASS SYSTEM		
SCALE	NLHP-EAH-41XX-XXX-PD-XX-000002 NLHP-41XX-PE-JE-EAH-0002		
REVISION 	INTERNAL CODE: 225-001-DT-M-10200		SHEET 100F 12 REV. P04

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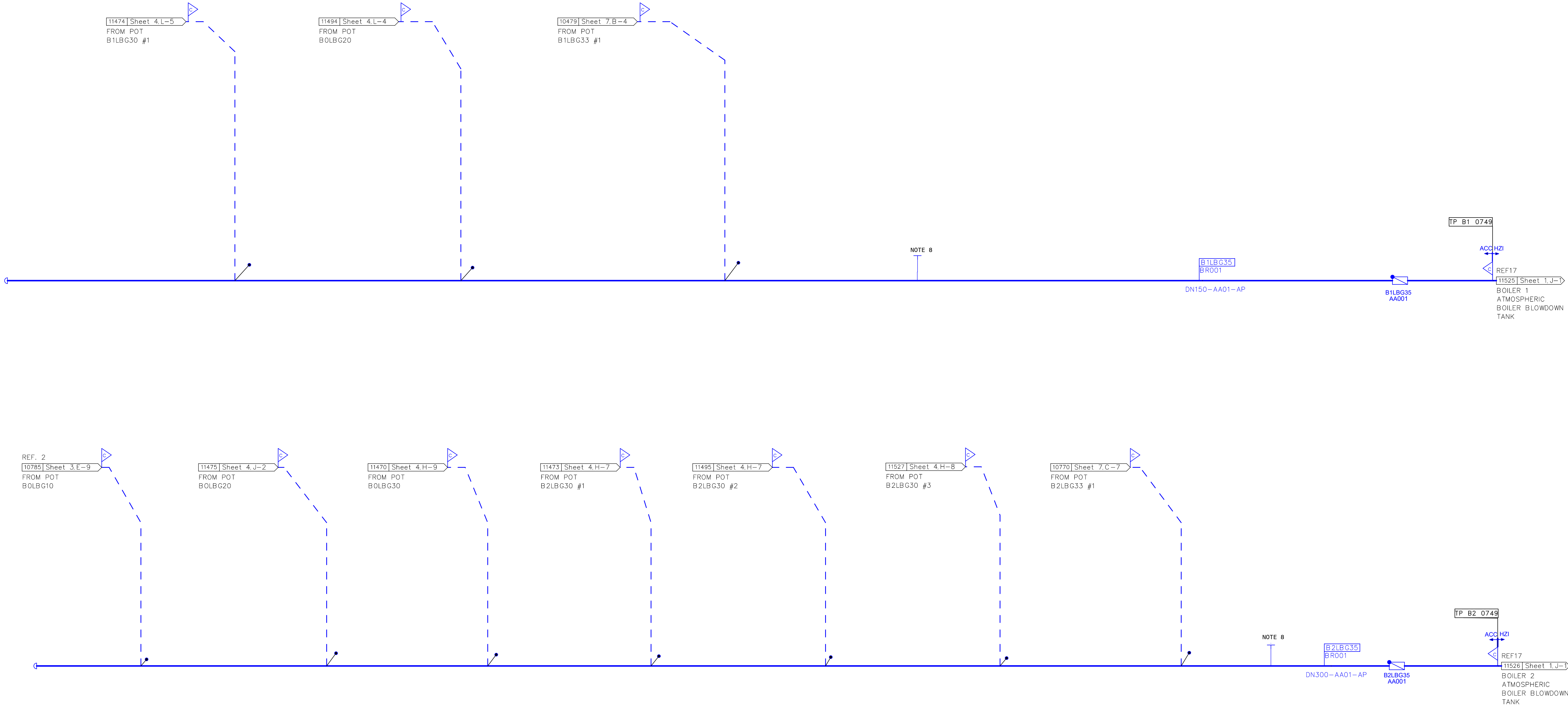


MODIFICATIONS		
CLIENT	ISSUER	CONTRACTOR
 <p>NORTH LONDON WASTE AUTHORITY</p>	 <p>EMPRESARIOS AGRUPADOS</p>	 <p>acciona</p>

FORMAT	DRAWING TITLE	
A0	P&ID MAIN STEAM, EXTRACTIONS, AUXILIARY STEAM & BY-PASS SYSTEM	

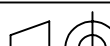
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BOILERS STEAM DRAIN HEADERS



P04	IFD - ISSUED FOR DESIGN	23-05-29	FPC	CPJ	EGH
P03	IFD - ISSUED FOR DESIGN	22-11-16	CPJ	FHS	EGH
P02	IFR - ISSUED FOR REVIEW	22-08-17	FPC	FHS	PFX
P01	IFR - ISSUED FOR REVIEW	22-07-05	FHS	FHS	PFX
REV	DESCRIPTION	DATE	DRAWN	CHECKED	APPROVED

CLIENT	ISSUER	CONTRACTOR

PROJECT					
NORTH LONDON HEAT AND POWER PROJECT					
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