

**SITE PLAN**  
SCALE: 1" = 300'-0"

**LEGEND:**

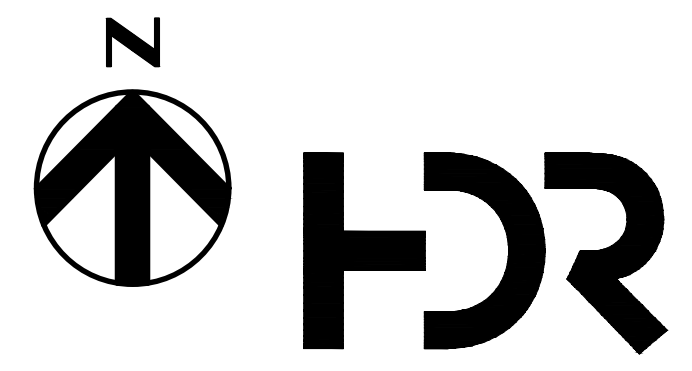
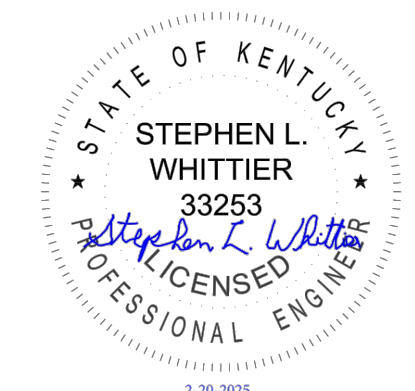
	PROPERTY LINE
	ASPHALT PAVING

TERMINAL POINTS			
TERMINAL POINT NUMBER (TP)	NAME	NORTHING	EASTING
TP-1	RAW WATER SUPPLY	N2170524.81	E1940829.82
TP-2	FUEL GAS SUPPLY	N2173119.69	E1938702.58
TP-3	POTABLE WATER SUPPLY	N2172298.54	E1940438.45
TP-4	PROCESS WASTEWATER DISCHARGE	N2171652.45	E1939561.86
TP-5	SANITARY WASTE DISCHARGE	N2171652.45	E1939561.86
TP-6	STORM WATER DISCHARGE	N2169964.64	E1938492.86
TP-7	UNIT 5-11 DEMINERALIZED WATER SUPPLY	N2172131.05	E1940151.85
TP-8	UNIT 6-7 FUEL GAS SUPPLY	N2173107.89	E1938629.14
TP-9	COAL PILE RUN-OFF POND DISCHARGE	N2171527.49	E1940049.71
TP-10	TRANSMISSION INTERCONNECTION	N2172104.29	E1940330.75
TP-11	SWITCHYARD DUCTBANK	N2173465.55	E1938885.77
TP-12	LEAD LINE PROTECTION	N2172104.29	E1940330.75
TP-13	TRANSMISSION SCADA/AGC	N2171842	E1940695
TP-14	INTERNET/VOIP/DATA	N2170906.92	E1941775.82
TP-15	EXISTING EW BROWN DCS	N2173081.70	E1939469.73
TP-16	RESERVE AUXILIARY POWER	N2171601.95	E1941290.36
TP-17	CEMS DAS	N2173081.70	E1939469.73
TP-C1	CONSTRUCTION POWER	N2172674.10	E1940814.95
TP-C2	CONSTRUCTION WATER	N2172298.54	E1940438.45
TP-C3	EXCESS MATERIAL STOCKPILE	N2171560.02	E1941482.37
TP-C4	ACCESS GATE	N2172423.59	E1936542.94

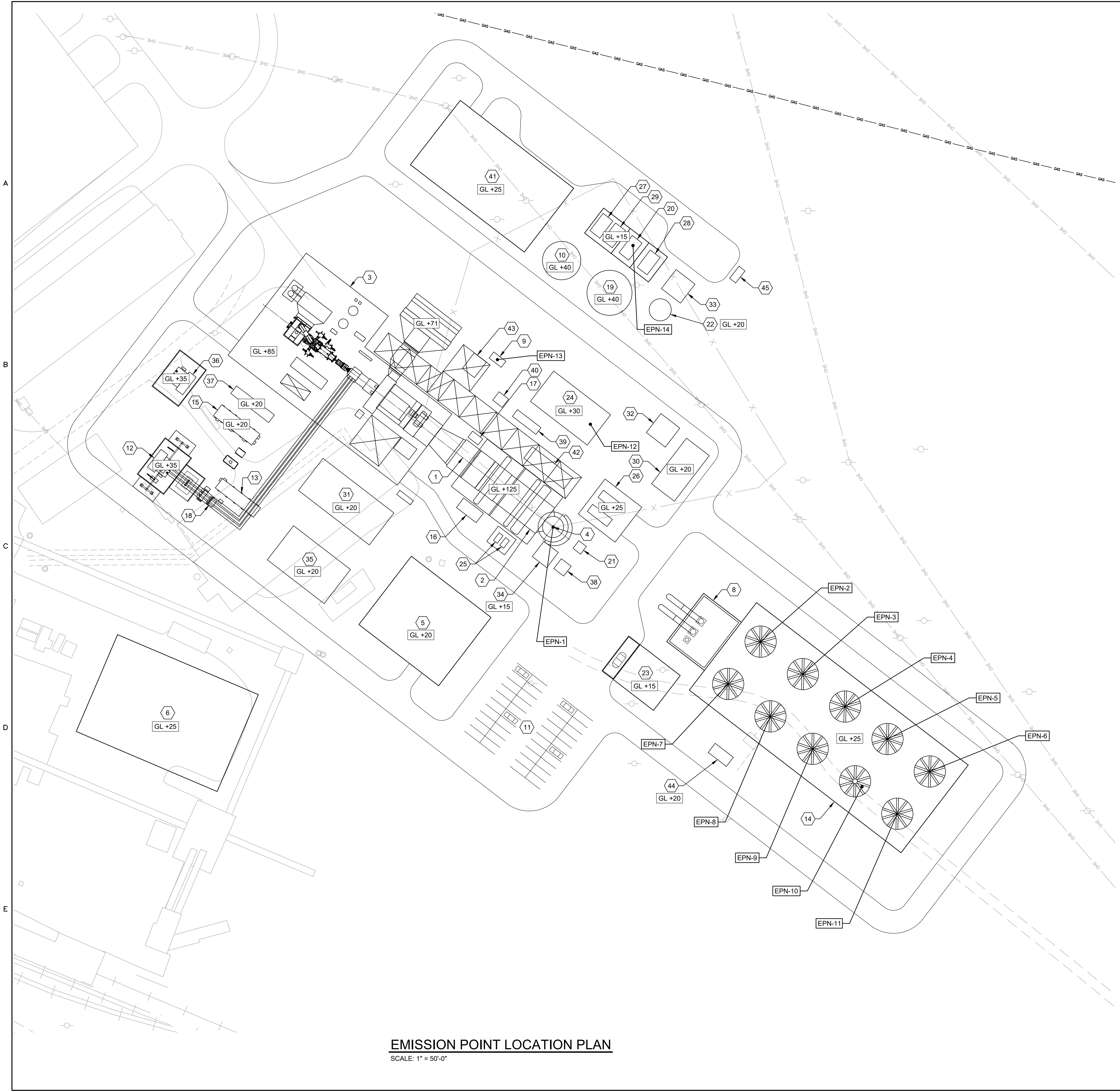
ALL COORDINATES ARE BASED ON NAD83 KENTUCKY STATE PLANE SOUTH ZONE 1602, US SURVEY FEET. ALL ELEVATIONS ARE BASED ON NAVD88 VERTICAL DATUM.

**Revisions**

A	Project: 10403218	Drawn: J.B.	12/20/2024
	FEASIBILITY STUDY REPORT	Chkd: MAW	12/12/2024
B	Project: 10403218	Drawn: J.B.	02/20/2025
	ISSUED FOR CPCN APPLICATION	Chkd: MAW	02/20/2025



Location and Unit: EW BROWN	Scale: 1" = 300'-0"	Contract No. PPL companies	Drawn: J.B.
Engineering discipline: CIVIL	Drawing type: PLAN	Approval: [Signature]	Checked: MAW
<b>COMBINED CYCLE GENERATION PROGRAM</b> EW BROWN UNIT 12 SITE PLAN		Released for: C1000	Alternate Drawing No. C1000
Originator: HDR ENGINEERING, INC	Job or Project No. 10403218	Drawing No. 12GA-C1000	Rev: B



EMISSION POINTS				
EMISSION POINT NUMBER (EPN)	NAME	SPCS NAD83 (FEET)	UTM ZONE 16S (METERS)	HEIGHT ABOVE GRADE (FEET)
1	HRSG STACK	N2171934 E1940825	N4184831 E701606	185
2	COOLING TOWER CELL 1	N2171815 E1941042	N4184795 E701673	66
3	COOLING TOWER CELL 2	N2171781 E1941086	N4184785 E701686	66
4	COOLING TOWER CELL 3	N2171747 E1941130	N4184775 E701700	66
5	COOLING TOWER CELL 4	N2171713 E1941175	N4184765 E701714	66
6	COOLING TOWER CELL 5	N2171680 E1941219	N4184755 E701727	66
7	COOLING TOWER CELL 6	N2171771 E1941008	N4184782 E701662	66
8	COOLING TOWER CELL 7	N2171737 E1941052	N4184772 E701676	66
9	COOLING TOWER CELL 8	N2171703 E1941096	N4184761 E701689	66
10	COOLING TOWER CELL 9	N2171669 E1941141	N4184751 E701703	66
11	COOLING TOWER CELL 10	N2171633 E1941184	N4184740 E701717	66
12	AUXILIARY BOILER	N2172042 E1940866	N4184864 E701618	60
13	EMERGENCY DIESEL GENERATOR	N2172110 E1940767	N4184884 E701588	16
14	DIESEL FIRE PUMP	N2172227 E1940907	N4184920 E701630	13
15*	FUEL GAS HEATER	N2173206 E1938357	N4185208 E700848	25

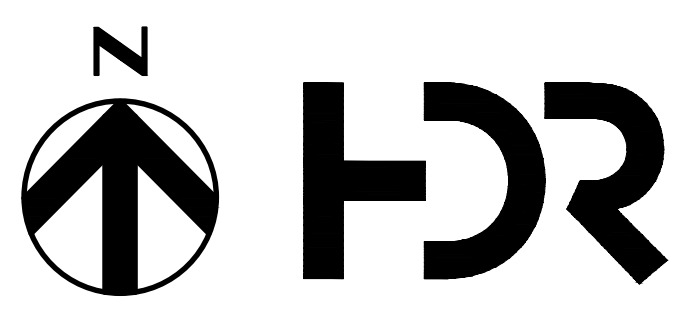
ALL COORDINATES ARE BASED ON NAD83 KENTUCKY STATE PLANE SOUTH ZONE 1602, US SURVEY FEET.  
 ALL ELEVATIONS ARE BASED ON NAVD88 VERTICAL DATUM.  
 BASE ELEVATION = 895 FEET ABOVE SEA LEVEL.  
 \* NOT SHOWN ON THIS DRAWING REFER TO SHEET 10403218-12GA-C1000 FOR LOCATION.

FACILITY LEGEND:

- 1 GAS TURBINE (GT)
- 2 HEAT RECOVERY STEAM GENERATOR (HRSG)
- 3 POWERTRAIN ENCLOSURE
- 4 HRSG STACK
- 5 CONTROL BUILDING
- 6 ADMINISTRATION BUILDING
- 7 NOT USED
- 8 CIRCULATING WATER PUMPS
- 9 EMERGENCY GENERATOR
- 10 DEMIN WATER STORAGE TANK
- 11 PLANT PARKING
- 12 GSU TRANSFORMER
- 13 BATTERY ENCLOSURE
- 14 COOLING TOWER
- 15 EXCITATION / STATIC START ENCLOSURE
- 16 AMMONIA FLOW CONTROL
- 17 DUCT BURNER SKID
- 18 UNIT AUX TRANSFORMERS
- 19 SERVICE / FIRE WATER STORAGE TANK
- 20 FIRE PROTECTION PUMP HOUSE
- 21 CEMS SHELTER
- 22 WASTE WATER TANK
- 23 CIRCULATING WATER CHEMICAL FEED ENCLOSURE
- 24 AUXILIARY BOILER ENCLOSURE
- 25 HRSG RECIRCULATION PUMPS
- 26 BOILER FEED PUMP / ELECTRICAL ENCLOSURE
- 27 DEMIN FORWARDING PUMPS
- 28 WASTE WATER PUMP SKID
- 29 SERVICE WATER PUMP SKID
- 30 AMMONIA UNLOADING / STORAGE / FORWARDING
- 31 SINGLE SHAFT PEECC
- 32 CARBON DIOXIDE / NITROGEN CYLINDER STORAGE
- 33 HYDROGEN BULK STORAGE CYLINDERS
- 34 HRSG BLOWDOWN TANK / PIT
- 35 MEDIUM VOLTAGE PDC
- 36 SPARE GSU TRANSFORMER
- 37 OIL / WATER SEPARATOR
- 38 HRSG BLOWDOWN SUMP
- 39 SAMPLE PANEL
- 40 CT FUEL GAS PERFORMANCE HEATER
- 41 WATER TREATMENT ENCLOSURE
- 42 HRSG ELECTRICAL ENCLOSURE
- 43 CT FINAL FILTER
- 44 COOLING TOWER PDC

NOTES:

1. GL+ REFERS TO ELEVATION ABOVE FINISHED GRADE.



Location and Unit: EW BROWN	Scale: 1" = 50'-0"	Contract No. PPL companies	Drawn: J.B.
Engineering discipline: CIVIL	Drawing type: PLAN	Checked: MAW	12/29/2024
Title: COMBINED CYCLE GENERATION PROGRAM EW BROWN UNIT 12 EMISSION POINT LOCATION PLAN		Approved: [Signature]	Released for: Alternate Drawing No.
Originator: 10403218	Job or Project No. 12GA-C1002	Drawing No. B	Rev: B

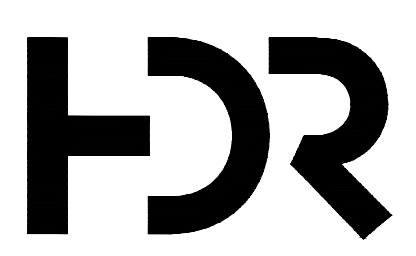
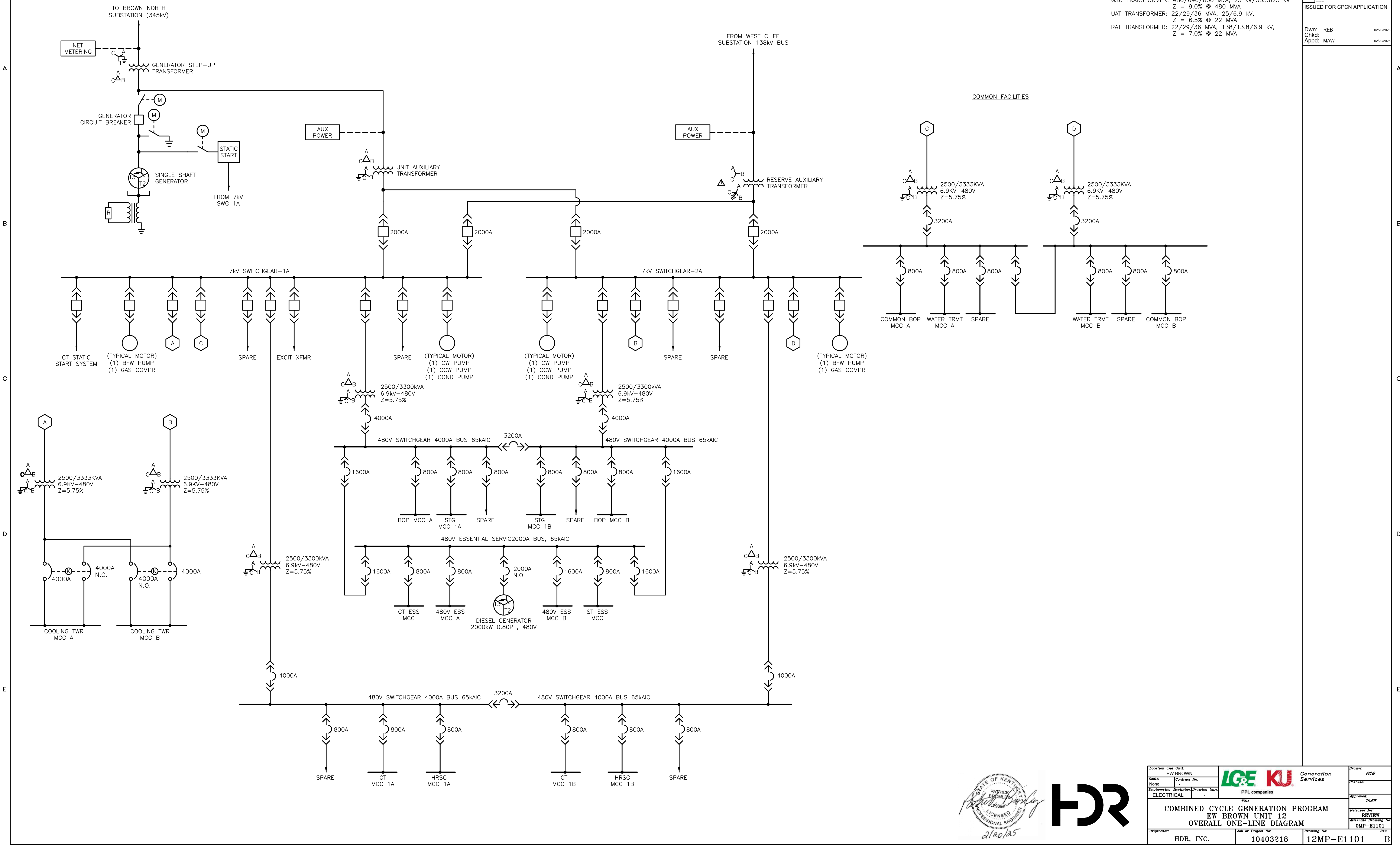
EMISSION POINT LOCATION PLAN  
 SCALE: 1" = 50'-0"

Revisions	
A	Project: 10403218 FEASIBILITY STUDY REPORT Dwn: J.B. Chkd: MAW Appd: [Signature]
B	Project: 10403218 ISSUED FOR CPCN APPLICATION Dwn: J.B. Chkd: MAW Appd: [Signature]

Revisions

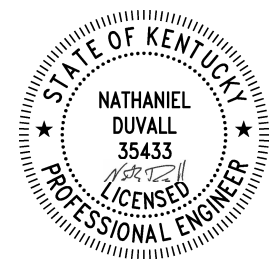
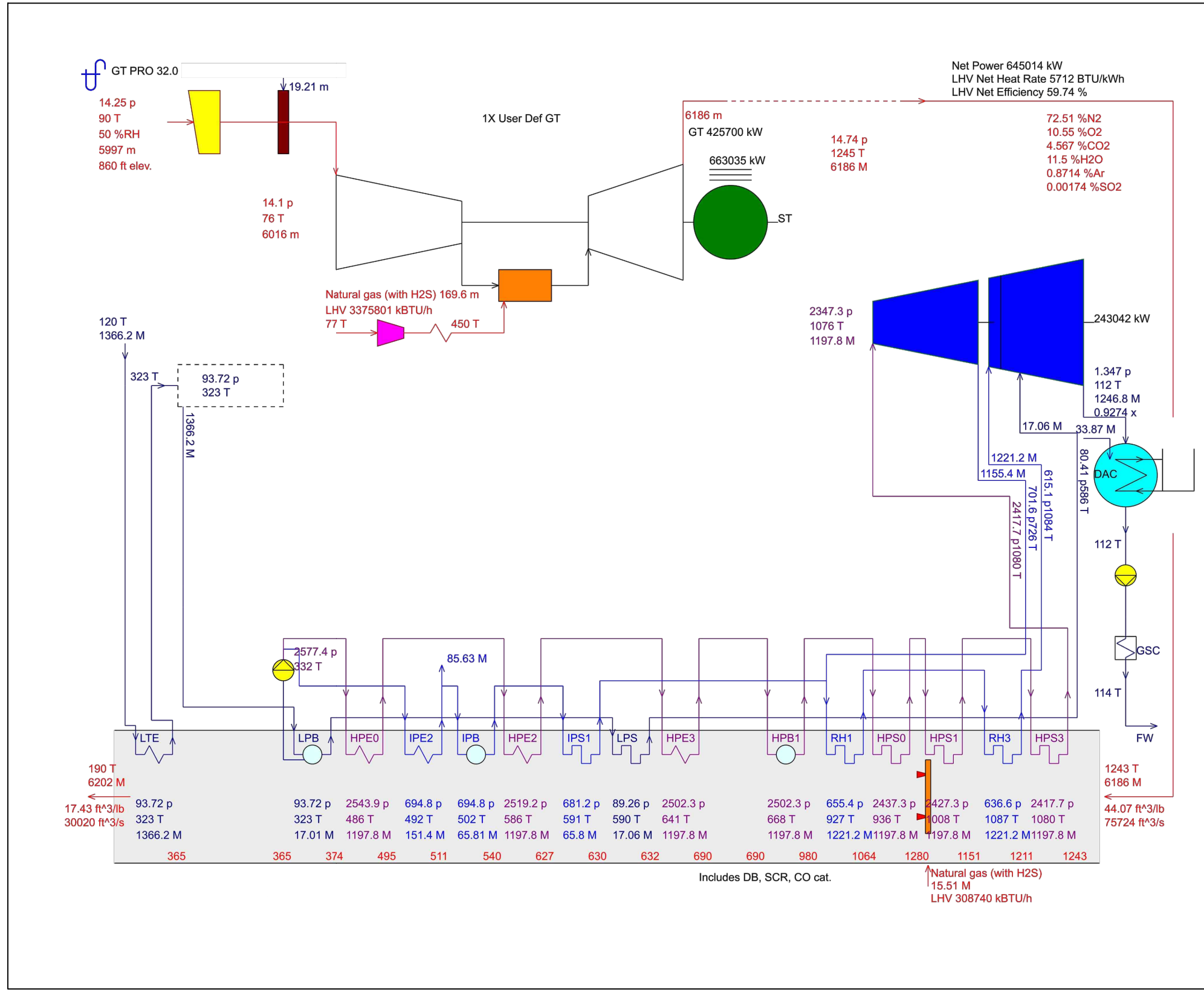
A	Project: 10403218	Drawn: REB	12/18/2024
	INITIAL ISSUE	Chkd: MAW	12/18/2024
B	Project: 10403218	Drawn: REB	02/20/2025
	ISSUED FOR CPCN APPLICATION	Chkd: MAW	02/20/2025

- NOTES:
- ALL EQUIPMENT RATINGS ARE ESTIMATED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL EQUIPMENT RATING SELECTION.
  - GENERATOR AND TRANSFORMER RATINGS  
 GENERATOR RATING: 817 MVA, 25 kV, 0.85 PF  
 GSU TRANSFORMER: 480/640/800 MVA, 25 kV/353.625 kV  
 $Z = 9.0\% @ 480 \text{ MVA}$   
 UAT TRANSFORMER: 22/29/36 MVA, 25/6.9 kV,  
 $Z = 6.5\% @ 22 \text{ MVA}$   
 RAT TRANSFORMER: 22/29/36 MVA, 138/13.8/6.9 kV,  
 $Z = 7.0\% @ 22 \text{ MVA}$



Location and Unit: EW BROWN	 Generation Services	Drawn: REB
Scale: None		Checked: MAW
Engineering discipline: ELECTRICAL	PPL companies	Approved: MAW
Title: COMBINED CYCLE GENERATION PROGRAM EW BROWN UNIT 12 OVERALL ONE-LINE DIAGRAM		Released for: REVIEW
Originator: HDR, INC.	Job or Project No.: 10403218	Alternate Drawing No.: OMP-E1101
	Drawing No.: 12MP-E1101	Rev.: B

PERFORMANCE SUMMARY	
AMBIENT TEMPERATURE	90°F
RELATIVE HUMIDITY	50%
ELEVATION	860'
FUEL	NATURAL GAS
CT LOAD	100%
EVAP COOLER STATUS	ON
NET OUTPUT NEW AND CLEAN	645,014 kW
NET HEAT RATE (HHV) NEW AND CLEAN	6335 BTU/kWh



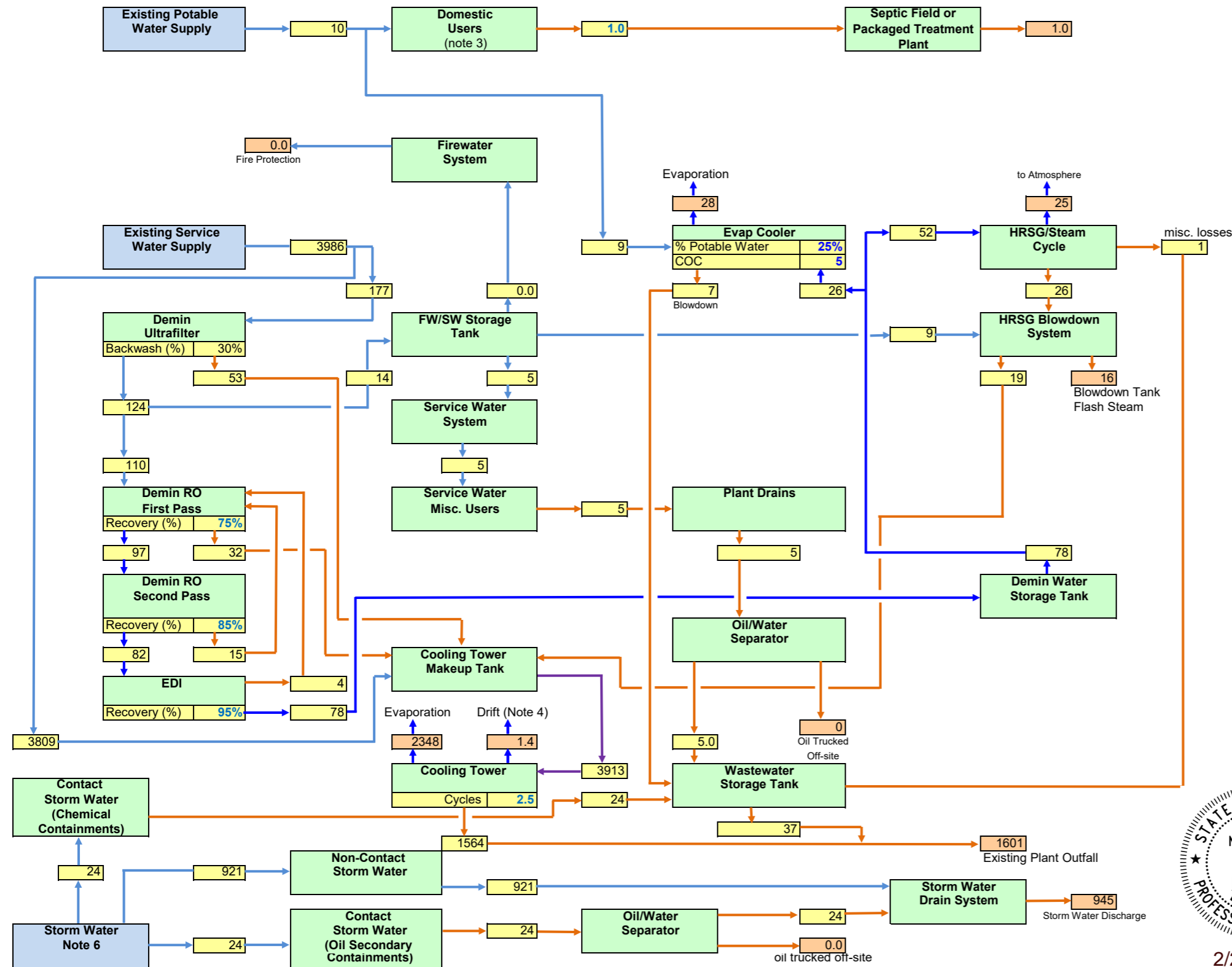
2/20/2025

A	02/20/25	ISSUED FOR CPCN
ISSUE	DATE	DESCRIPTION
	MAW	10403218
	PROJECT MANAGER	PROJECT NUMBER



**BROWN UNIT 12  
HEAT BALANCE DIAGRAM  
ADVANCED CLASS SINGLE SHAFT UNIT -  
SUMMER DAY FIRED CONDITION**

DATE	02/20/2025
FIGURE	0HB-M1001



- Notes:
- Based on assumed turbine performance, actual vendor data needed.
  - Cycle Make-Up assumed to be 2% of main steaming rate. Blowdown assumed to be 1% of main steaming rate.
  - Potable water flows assume 20 people on site at a time.
  - Drift assumed to be 0.001% of circulating water flow.
  - Cooling tower film selection needs to consider TSS loading of the make-up water.
  - Approximated based on 24-hour, 25-year rainfall event.

**Legend**

- Major Process Flow
- Minor Process Flow
- Raw/Potable Water
- Cooling Water
- Waste Stream
- Recovered/Recycled Water
- Steam
- High Purity Water

Indicates material that leaves the system

Internal flow

Water Source

All flows are in US GPM unless otherwise specified.

Case or Scenario:	Summer - Fired
Configuration	1X1 CC
Turbines in Service	1
Plant Net Power (MW)	645
Ambient temperature (deg F)	90
Ambient relative humidity, %	50
Evaporative inlet cooler effectiveness (%)	90
Cooling Tower COC	2.5

A	2/20/25	Issued for CPCN	JMH								
Rev	Date	Description	Drwn	Chckd	Eng	PEng	PMgr				

Drawn By	Date	Professional Engineer Stamp
J. Horan	02/20/25	
Checked By	Date	
Engineer	Date	
Project Engineer	12/09/22	
Project Manager	Date	
M. Wiitanen	02/20/25	



**EW Brown Unit 12  
Plant Water Balance Diagram**

Scale:	N/A	Sheet No.	Rev
Dwg No	10432108-12WB-M1000	01	A