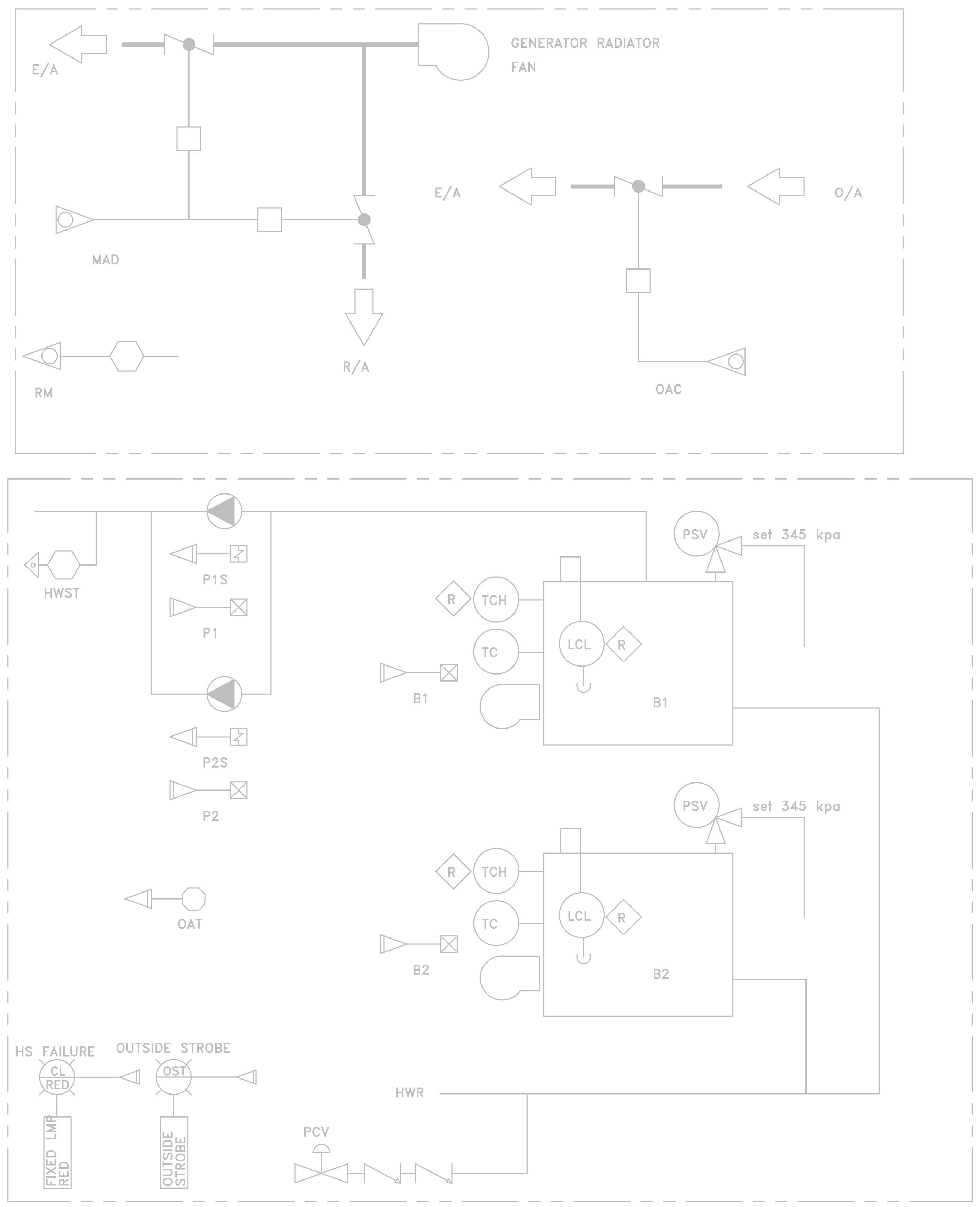


System Tag : Generator Rm Cooling

System sequences of Generator Room Cooling

1.1 ON generator start, OAD to minimum position for combustion air.
Modulate MAD and OAD to maintain space temperature. Set point selected on PLC 1 (mechanical system P.L.C).

1.2 After generator shut off, continue operation of dampers for a minimum of 10 minutes.
Operations to be similar to 1.1 except dampers to never close more than 50%.

1.3 When the generator is off and RMxxxSPT (generator room) is greater than 30 ° C,
enable operation of dampers until space temperature lowers below 30 °Celsius.

System Tag : HW system

System sequences of Hot Water system

1.1 Hot water system temperature lower than 50 °Celsius for more than 60 min when circulators enabled,
CP1 alarm lamp on (heating system fail), auto dialer "call" and outside strobe on.

1.2 Circulators to operate lead / standby. Pumps to alternate on total run time duty cycles. Pumps to switch roles after 168-hrs operation.

1.3 Circulators continue operations for 30 minutes after heating system switch turned to off position. Time to cool down the system.

1.4 When circulators operation proven, pump status P21s or P22S, enable boiler temperature controllers to cycle burners.
Burners to cycle to maintain set point (controller built-in furnace)

1.5 Hot water pump P1/2 status by P1S/P2S In event of pump failure auto change to standby pump and Signal alarm, CP1 alarm lamp on.

1.6 TCH to provide boiler high limit protection. In event of high limit set point, burner disabled, manual reset (built in boiler)

1.7 LWCO to provide boiler low water protection. In event of low water level, burner disabled, manual reset (built-in boiler)

1.8 In event of panel failure Hot Water pumps on and boilers enabled. In event of power failure heating
System auto reset

1.9 Boilers to low fire when OAT (outside air temperature) above 0 degree Celsius for more then 15 minutes. To high fire when colder.

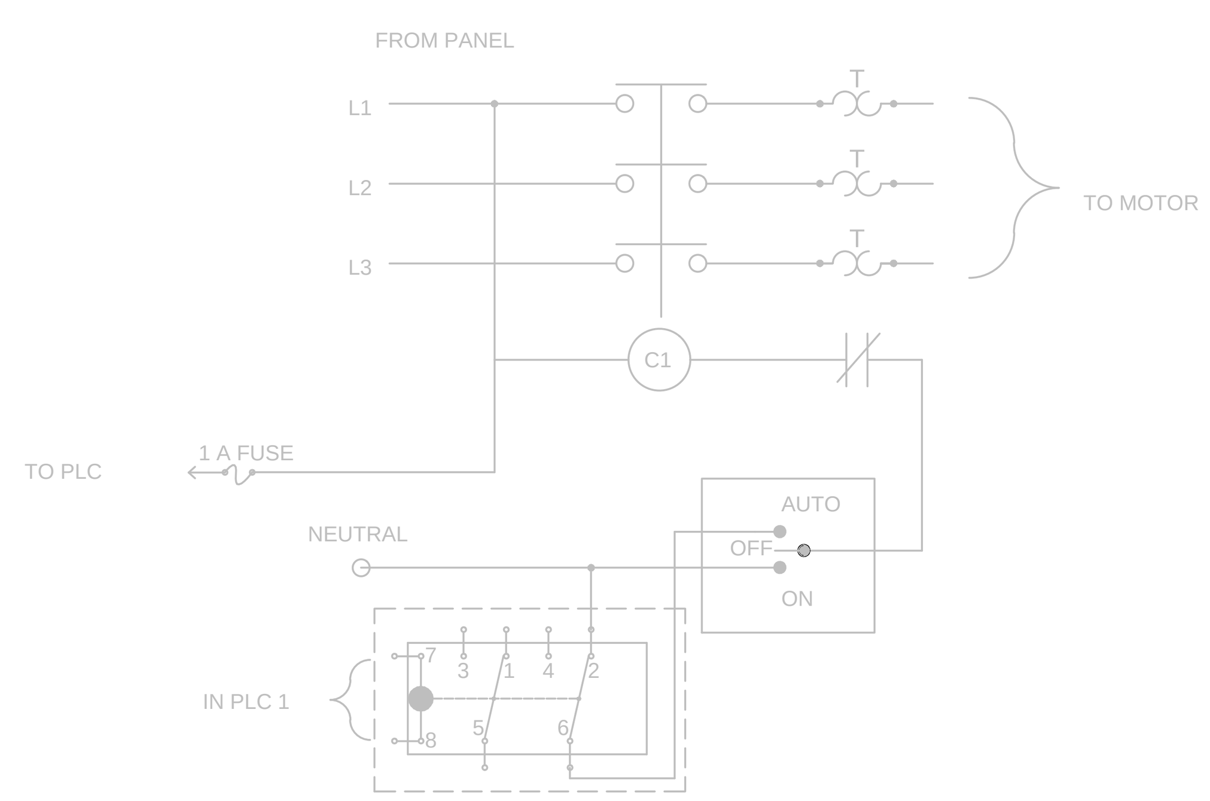
System Tag : BLBG Trouble

Ref. Description

System sequences of building Troubles

1.1 When space temp at FLRTEMP below 5 degree C signal auto dialer and exterior strobe.
1.2 When space humidity at FLRHUMID above 80%RH signal auto dialer and exterior strobe

GENERATOR ROOM COOLING, HOT WATER SYSTEM AND BUILDING TROUBLE P & ID



NOTE:

1. THESE SCHEMATICS ARE FROM THE ORIGINAL CONTRACT. REFER TO MECHANICAL SEQUENCE OF OPERATION AND DRAWING FOR ADDITIONAL EQUIPMENT AND OPERATION.

TYPICAL MAGNETIC STARTER CONTROL SCHEMATIC

No.	Issue	Date
1	60% REVIEW SUBMISSION	2013-MAR-8
2	ISSUED FIR TENDER	2013-APR-10
3	RELEASED FOR CONSTRUCTION	2013-JUN-27

No.	Revision	Ckd. By	Date

PERMIT OF PRACTICE
EXP SERVICES INC.
Signature
Date 2013/JUN/27
PERMIT NUMBER: P483
NT/NU Association of Professional Engineers and Geoscientists

RELEASED FOR CONSTRUCTION

PROFESSIONAL ENGINEER
R. A. PORTER
LICENSEE
NT/NU

Const. North

Drawn By: TAW

Dwg. Standards Ckd. By: PD

Designed By: DEB

Date Printed

Dwg. Design Ckd. By: JFP

exp Services Inc.
t: +1.613.688.1899 | f: +1.613.225.7330
2650 Queensview Drive, Unit 100
Ottawa, ON K2B 8H6
CANADA
www.exp.com

• BUILDINGS • EARTH & ENVIRONMENT • ENERGY •
• INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY •

Project Title

WASTE WATER TREATMENT PLANT UPGRADE PANGNIRTUNG, NU

Dwg. Title

GENERATOR, HOT WATER, AND BUILDING P & ID AND TYPICAL STARTER CONTROL SCHEMATIC

Project No. OTT-00204430-A0

Dwg. No. **E2635-1**

Rev. No. 0

Scale

NOT TO SCALE

This drawing is not to be scaled