

Public Works and  
Government Services  
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PRINCE EDWARD ISLAND

revisions

project

date

ARDGOWAN NATIONAL  
HISTORIC SITE  
HVAC UPGRADE  
QUEENS CO., PE

drawing

design

ELECTRICAL  
SERVICE SCHEMATIC

designed RLS

date MARCH 29 2017

drawn JH

date MARCH 29 2017

approved RLS

date MARCH 29 2017

tender

submission

FWSSC Project Manager

Administrateur de projets TFSQC

project number

R.080258.002

drawing no.

E3 OF 3

1.) SUPPLY AND INSTALL THE FOLLOWING  
BRANCH BREAKERS IN EXISTING PANEL  
MDPA FOR NEW MECHANICAL LOADS.

- 1 @ 15A-2P (EVAP-1)
- 1 @ 15A-2P (EVAP-2)
- 1 @ 15A-2P (EVAP-3)
- 1 @ 15A-2P (EVAP-4)
- 1 @ 15A-2P (EVAP-5)
- 1 @ 15A-1P (ERV-1)
- 1 @ 15A-1P (ERV-2)
- 1 @ 15A-1P (ERV-3)
- 1 @ 15A-1P (EF-1)

The diagram illustrates the existing electrical system for the HVAC upgrade at the Ardgowan National Historic Site. It shows a 600V, 3PH, 4W main distribution panel (MDP) connected to a 50KVA, 600/120/240V stepdown transformer. The transformer's secondary feeds a 250A, 120/240V, 1PH, 3W main panel (MDPA). This MDPA is connected to three sub-panels: Panel A (225A, 120/240V, 1PH, 3W), Panel B (200A, 120/240V, 1PH, 3W), and a Square D load center. Panel A supplies a new exterior condensing unit (COND-1) and five new evaporator units (EVAP-1 to EVAP-5). Panel B supplies three new heat recovery ventilators (ERV-1 to ERV-3). Panel B also supplies an existing 3kW electric hot water heater and an existing 60kW electric boiler. The diagram includes detailed wiring specifications such as 3 #10 + BOND IN 21mm PVC CONDUIT UNDERGROUND, 2 #12 + BOND IN 21mm EMT, and 30 #14 WP. A note indicates to connect wiring from the new condensing unit to the existing 30A-3P circuit breaker.

1 EXISTING ELECTRICAL SINGLE LINE DIAGRAM  
E3 E3  
SCALE : NOT TO SCALE

FWSSC A1 (2004)

E-DN/020-E - 548599