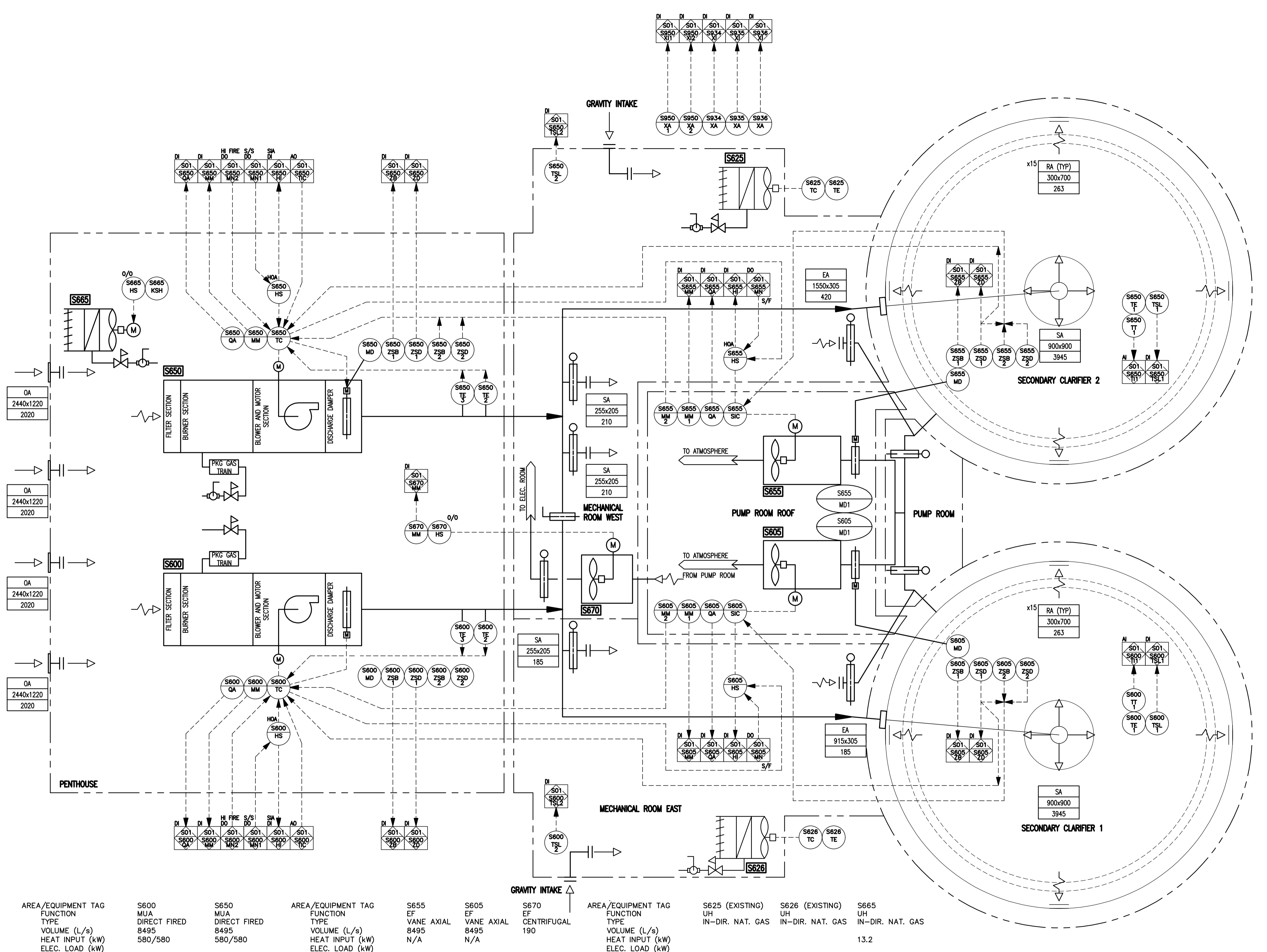


CW-10-M660-1
 P:\Projects\2009\09-0754-08_DocControl\ToBeIssued\DWG\ELECTRICAL\1-0103S-P0020-001-Rev 00.dwg - Tab: 1-0103S-P0020-001 Plotted By: G.Nelson 12/16/2010 [Thu 4:40pm]
 File Name: P:\Projects\2009\09-0754-08_DocControl\ToBeIssued\DWG\ELECTRICAL\1-0103S-P0020-001-Rev 00.dwg



DEVICE LISTING

TAG	DESCRIPTION
NON-PACKAGED	
S600-HS	S600/S605 SYSTEM HAND/OFF/AUTO SWITCH
S600-TE/TI-1	TEMPERATURE ELEMENT FOR SECONDARY CLARIFIER 1
S600-TSL-1	LOW TEMPERATURE SWITCH FOR SECONDARY CLARIFIER 1
S600-TSL-2	EAST MECHANICAL ROOM LOW TEMP SWITCH
S650-HS	S650/S655 SYSTEM HAND/OFF/AUTO SWITCH
S650-TE/TI-1	TEMPERATURE ELEMENT FOR SECONDARY CLARIFIER 2
S650-TSL-1	LOW TEMPERATURE SWITCH FOR SECONDARY CLARIFIER 2
S650-TSL-2	WEST MECHANICAL ROOM LOW TEMP SWITCH
S605-CSR	CURRENT SENSING RELAY FOR EXHAUST FAN S605
S605-HS	EXHAUST FAN S605 HAND/OFF/AUTO SWITCH
S605-SIC	EXHAUST FAN S605 VFD
S605-MM-1/2	EXHAUST FAN S605 VFD RUN STATUS
S605-QA	EXHAUST FAN S605 VFD FAULT ALARM
S605-MD	EXHAUST FAN S605 DISCHARGE DAMPER ACTUATOR
S605-ZSD-1/2	OPEN LIMIT SWITCH FOR EF S605 DISCHARGE DAMPER
S605-ZSB-1/2	CLOSED LIMIT SWITCH FOR EF S605 DISCHARGE DAMPER
S655-CSR	CURRENT SENSING RELAY FOR EXHAUST FAN S655
S655-HS	EXHAUST FAN S655 HAND/OFF/AUTO SWITCH
S655-SIC	EXHAUST FAN S655 VFD
S655-MM-1/2	EXHAUST FAN S655 VFD RUN STATUS
S655-QA	EXHAUST FAN S655 VFD FAULT ALARM
S655-MD	EXHAUST FAN S655 DISCHARGE DAMPER ACTUATOR
S655-ZSD-1/2	OPEN LIMIT SWITCH FOR EF S655 DISCHARGE DAMPER
S655-ZSB-1/2	CLOSED LIMIT SWITCH FOR EF S655 DISCHARGE DAMPER
S665-HS	EXHAUST FAN S665 ON/OFF SWITCH
S670-HS	EXHAUST FAN S670 ON/OFF SWITCH
S670-MM	EXHAUST FAN S670 RUN STATUS
S950-XA1	PLC PANEL 24 VDC POWER SUPPLY STATUS NO.1
S950-XA2	PLC PANEL 24 VDC POWER SUPPLY STATUS NO.2
S934-XA	PLC PANEL UTILITY POWER STATUS
S935-XA	PLC PANEL UPS STATUS
S936-XA	PLC PANEL ETHERNET SWITCH STATUS
PACKAGED	
S600-MM	CURRENT SENSING RELAY FOR MUA S600 BLOWER MOTOR
S600-QA	MUA S600 DISCHARGE DAMPER ACTUATOR FAILURE
S600-TC	MUA S600 TEMPERATURE CONTROLLER
S600-MD	MUA S600 DISCHARGE DAMPER ACTUATOR
S600-ZSD-1/2	OPEN LIMIT SWITCH FOR MUA S600 DISCHARGE DAMPER
S600-ZSB-1/2	CLOSED LIMIT SWITCH FOR MUA S600 DISCHARGE DAMPER
S600-TE2	TEMPERATURE ELEMENT FOR MUA UNIT
S600-TE3	MUA S600 FREEZE PROTECTION
S650-TC	MUA S650 TEMPERATURE CONTROLLER
S650-MM	CURRENT SENSING RELAY FOR MUA UNITS BLOWER MOTOR
S650-QA	MUA S650 DISCHARGE DAMPER ACTUATOR FAILURE
S650-MD	MUA S650 DISCHARGE DAMPER ACTUATOR
S650-ZSD-1/2	OPEN LIMIT SWITCH FOR MUA S650 DISCHARGE DAMPER
S650-ZSB-1/2	CLOSED LIMIT SWITCH FOR MUA S650 DISCHARGE DAMPER
S650-TE2	TEMPERATURE ELEMENT FOR MUA UNIT
S650-TE3	MUA S650 FREEZE PROTECTION

SEQUENCE OF OPERATION

TAG	ASSOCIATED EQUIPMENT	NORMAL COND.
S600	S600	ON*
EF	S605	ON*
S625	S625	EXISTING
S626	S626	EXISTING
S665	S665	ON/OFF CONTROL FROM MAINTENANCE SWITCH
S650	S650	OFF*
EF	S655	OFF*

NOTES

* DURING NORMAL OPERATION THE TWO MAKE-UP AIR UNITS (S600 & S650) AND THEIR RELATED EXHAUST FANS (S605 & S655) OPERATE IN LEAD (ON) - LAG (OFF) MODE.

AREA/EQUIPMENT TAG	FUNCTION	TYPE	VOLUME (L/s)	HEAT INPUT (kW)	ELEC. LOAD (kW)
S600	MUA	DIRECT FIRED	8495	580/580	
S650	MUA	DIRECT FIRED	8495	580/580	
S655	EF	VANE AXIAL	8495	N/A	
S605	EF	VANE AXIAL	8495	N/A	
S670	EF	CENTRIFUGAL	190		
S625 (EXISTING)	UH	IN-DIR. NAT. GAS			13.2
S626 (EXISTING)	UH	IN-DIR. NAT. GAS			13.2
S665	UH	IN-DIR. NAT. GAS			13.2

GENERAL NOTES

Area/Equipment Tag Function Type Volume (L/s) Heat Input (kW) Elec. Load (kW)

S600 MUA Direct Fired 8495 580/580

S650 MUA Direct Fired 8495 580/580

S655 EF Vane Axial 8495 N/A

S605 EF Vane Axial 8495 N/A

S670 EF Centrifugal 190

S625 (Existing) UH In-Dir. Nat. Gas 13.2

S626 (Existing) UH In-Dir. Nat. Gas 13.2

S665 UH In-Dir. Nat. Gas 13.2

APEGN
 Certificate of Authorization
 KGS Group
 No. 245 Date: 2010/12/21

KGS GROUP
 CONSULTING ENGINEERS

B.M. ELEV. N/A FIELD BOOK #:

POSTED TO LBIS

ALLIANCE Engineering Services Inc.

DESIGNED BY: DDW CHECKED BY: REW
 DRAWN BY: GCN APPROVED BY: REW
 HOR. SCALE: N.T.S. RELEASED FOR CONSTRUCTION
 VERTICAL: N.T.S.
 00 ISSUED FOR TENDER 2010-12-21 REW
 NO. REVISIONS DATE BY

2010 02 23

ENGINEER'S SEAL

R.E. WILLMS
 Member 3833
 REGISTERED PROFESSIONAL ENGINEER

THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT

2010 HVAC REPLACEMENT AND ASSOCIATED WORKS
WEWCC

AREA S - SECONDARY CLARIFIERS 1 & 2
 PROCESS & INSTRUMENTATION DIAGRAM

SHEET 1 OF 1
 CITY DRAWING NUMBER
 1-0103S-P0020-001

TENDER No. SP2.1
 FILENAME: 1-0103S-P0020-001-Rev 00.dwg
 PLOT DATE: 2010/12/16