MOTOR EQUIPMENT SCHEDULE

EQUIPMENT						PKG UNIT	STARTER						CONTROLS				EMER. POWER	FIRE ALARM SHUT DOWN	DRIVE ISOLATION TRANSFORMER	CIRCUITING				REMARKS
ITEM	DESCRIPTION	LOCATION	KW/HP	AMPS	VOLTS – ø		TYPE	FUNC.	HOA	PB	PL	SUPPLY BY	TYPE	SUPPLY BY	INSTALL BY	WIRED BY				PANEL/CIRCUIT	O.C.P.	WIRE	CONDUIT	
UNIT HEATERS																								
UH-1	UNIT HEATER	B75 FREIGHT LOBBY	1/6 HP	4.4	120V/1Ø	-	MAG	-	*	-	-	DIV 26	DDC	DIV 25	DIV 25	DIV 25	*	-	-	NM2ND-52	15A-1P	2 #12+GRD	21mm	
UH-2	UNIT HEATER	B75 STORAGE	1/12 HP	-	120V/1Ø	-	MAG	-	*	-	-	DIV 26	DDC	DIV 25	DIV 25	DIV 25	*	-	-	NM2ND-53	15A-1P	2 #12+GRD	21mm	
UH-3	UNIT HEATER	B75 STORAGE	1/12 HP	-	120V/1Ø	-	MAG	-	*	-	-	DIV 26	DDC	DIV 25	DIV 25	DIV 25	*	-	-	NM2ND-54	15A-1P	2 #12+GRD	21mm	
UH-4	UNIT HEATER	PHYTOTRON 099	0.25 HP	5.8	120V/1Ø	-	MAG	-	*	-	-	DIV 26	DDC	DIV 25	DIV 25	DIV 25	*	-	-	NB2EE-28	15A-1P	2 #12+GRD	21mm	
UH-5	UNIT HEATER	MECH. PENTHOUSE	0.25 HP	5.8	120V/1Ø	-	MAG	-	*	-	-	DIV 26	DDC	DIV 25	DIV 25	DIV 25	*	-	-	MP2EA-1	15A-1P	2 #12+GRD	21mm	
UH-6	UNIT HEATER	MECH. PENTHOUSE	0.25 HP	5.8	120V/1Ø	-	MAG	-	*	-	-	DIV 26	DDC	DIV 25	DIV 25	DIV 25	*	-	-	MP2EA-2	15A-1P	2 #12+GRD	21mm	
UH-7	UNIT HEATER	MECH. PENTHOUSE	0.25 HP	5.8	120V/1Ø	-	MAG	-	*	-	-	DIV 26	DDC	DIV 25	DIV 25	DIV 25	*	-	-	MP2EA-3	15A-1P	2 #12+GRD	21mm	
UH-8	UNIT HEATER	B75 BASEMENT MECH. ROOM	0.25 HP	5.8	120V/1Ø	-	MAG	-	*	-	-	DIV 26	DDC	DIV 25	DIV 25	DIV 25	*	-	-	REFER TO REMARK	15A-1P	2 #12+GRD	21mm	WIRE AND CONNECT TO NEAREST AVAILABLE 120V EMERGENCY POWER PANEL. CONFIRM EXISTING PANEL ON SITE.
UH-9	UNIT HEATER	B75 PENTHOUSE	0.25 HP	5.8	120V/1Ø	-	MAG	-	*	-	-	DIV 26	DDC	DIV 25	DIV 25	DIV 25	*	-	-	MP2EB-13	15A-1P	2 #12+GRD	21mm	
UH-10	UNIT HEATER	B75 PENTHOUSE	0.25 HP	5.8	120V/1Ø	-	MAG	-	*	-	-	DIV 26	DDC	DIV 25	DIV 25	DIV 25	*	-	-	MP2EB-14	15A-1P	2 #12+GRD	21mm	
UH-11	UNIT HEATER	SHELL SPACE 302	0.25 HP	5.8	120V/1Ø	-	MAG	-	*	-	-	DIV 26	DDC	DIV 25	DIV 25	DIV 25	*	-	-	MP2EB-17	15A-1P	2 #12+GRD	21mm	
UH-12	UNIT HEATER	SHELL SPACE 302	0.25 HP	5.8	120V/1Ø	-	MAG	-	*	-	-	DIV 26	DDC	DIV 25	DIV 25	DIV 25	*	-	-	MP2EB-18	15A-1P	2 #12+GRD	21mm	
UH-13	UNIT HEATER	SHELL SPACE 302	0.25 HP	5.8	120V/1Ø	-	MAG	-	*	-	-	DIV 26	DDC	DIV 25	DIV 25	DIV 25	*	-	-	MP2EB-19	15A-1P	2 #12+GRD	21mm	
CABINET UNIT HEATERS																								
CUH-1	CABINET UNIT HEATER	STAFF ENTRANCE 064	0.25 HP	5.8	120V/1Ø	-	MAG	-	*	-	-	DIV 26	DDC	DIV 25	DIV 25	DIV 25	*	-	-	NB2EA-17	15A-1P	2 #12+GRD	21mm	
CUH-2	CABINET UNIT HEATER	STAIR NO. 6	0.25 HP	5.8	120V/1Ø	-	MAG	-	*	-	-	DIV 26	DDC	DIV 25	DIV 25	DIV 25	*	-	-	NB2EB-30	15A-1P	2 #12+GRD	21mm	
CUH-3	CABINET UNIT HEATER	CORRIDOR C105	0.25 HP	5.8	120V/1Ø	-	MAG	-	*	-	-	DIV 26	DDC	DIV 25	DIV 25	DIV 25	*	-	-	NM2EA-26	15A-1P	2 #12+GRD	21mm	
CUH-4	CABINET UNIT HEATER	STAIR NO. 3	0.25 HP	5.8	120V/1Ø	-	MAG	-	*	-	-	DIV 26	DDC	DIV 25	DIV 25	DIV 25	*	-	-	REFER TO REMARK	15A-1P	2 #12+GRD	21mm	WIRE AND CONNECT TO NEAREST AVAILABLE 120V EMERGENCY POWER PANEL. CONFIRM EXISTING PANEL ON SITE.
BOILER PUMPS																								
CFP-1	BOILER CHEMICAL FEED PUMP	MECH. PENTHOUSE ROOM 224	2 @0.25 HP	11.6	120V/1Ø	*	-	-		-	-	-	-	-	-	-		-	-	MP2NA-17	30A-1P	2 #12+GRD	21mm	
CFP-2	BOILER CHEMICAL FEED PUMP	MECH. PENTHOUSE ROOM 224	2 @0.25 HP	11.6	120V/1Ø	*	-	-		-	-	-	-	-	-	-		-	-	MP2NA-18	30A-1P	2 #12+GRD	21mm	
CFP-3	BOILER CHEMICAL FEED PUMP	MECH. PENTHOUSE ROOM 224	2 @0.25 HP	11.6	120V/1Ø	*	-	-		-	-	-	-	-	-	-		-	-	MP2NA-19	30A-1P	2 #12+GRD	21mm	
CFP-4	BOILER CHEMICAL FEED PUMP	MECH. PENTHOUSE ROOM 224	2 @0.25 HP	11.6	120V/1Ø	*	-	-		-	-	-	-	-	-	-		-	-	MP2NA-20	30A-1P	2 #12+GRD	21mm	
CFP-5	BOILER CHEMICAL FEED PUMP	MECH. PENTHOUSE ROOM 224	2 @0.25 HP	11.6	120V/1Ø	*	-	-		-	-	-	-	-	-	-		-	-	MP2NA-21	30A-1P	2 #12+GRD	21mm	
MISCELLANEOUS																								
EL-1	ELEVATOR	BASEMENT LAB WING	14.5 HP	-	600V/3Ø	*	-	-		-	-	BY SUPPLIER	-	-	-	BY SUPPLIER		-	-	MP6NA-16,17,18	30A-3P	3 #10+GRD	21mm	REFER TO NOTE #12
OH-1	OVERHEAD DOOR	PHYTOTRON	0.75 HP	-	208V/3Ø	*	-	-		-	-	BY SUPPLIER	-	-	-	BY SUPPLIER		-	-	NB2NO-12,13,14	15A-1P	3 #12+GRD	21mm	REFER TO DETAIL ON DRAWING E506
BFU-1	BOILER FEEDWATER UNIT	B 75 PENTHOUSE	0.5 HP	9.8	120V/1Ø	*	-	-		-	-	-	DDC	DIV 25	DIV 25	DIV 25	*	-	-	MP2EB-22	20A-1P	2 #12+GRD	21mm	
SP-1	WEEPING TILE SUMP PUMP	PHYTOTRON	3/4 HP	1.1	600V/3Ø	*	-	-		-	-	-	DDC	DIV 25	DIV 25	DIV 25	*	-	-	SD-B6EA	20A-3P	3 #12+GRD	21mm	
SP-2			3/4 HP	1.1	600V/3Ø	*							DDC	DIV 25	DIV 25	DIV 25	*	-	-					
DF-1	DRINKING FOUNTAIN X2	CORR C105/ LAB 078	FR. HP.	-	120V/1Ø	*	-	-		-	-	-	-	-	-	-		-	-	NM2NB-7/ NB2NB-31	2X 15A-1P	2 #12+GRD	21mm	
MAINTENANCE SHOP BUILDING																								
GUH-1	GAS FIRED UNIT HEATER	MACHINE SHOP	FR. HP.	-	120V/1Ø	*	-	-		-	-	-	DDC	DIV 25	DIV 25	DIV 25		-	-	E-1	20A-1P	2 #10+GRD	21mm	
GUH-2	GAS FIRED UNIT HEATER	ELECTRICAL SHOP	FR. HP.	-	120V/1Ø	*	-	-		-	-	-	DDC	DIV 25	DIV 25	DIV 25		-	-	E-2	20A-1P	2 #10+GRD	21mm	
GUH-3	GAS FIRED UNIT HEATER	CARPENTRY SHOP	FR. HP.	-	120V/1Ø	*	-	-		-	-	-	DDC	DIV 25	DIV 25	DIV 25		-	-	E-3	20A-1P	2 #10+GRD	21mm	
GUH-4	GAS FIRED UNIT HEATER	CARPENTRY SHOP	FR. HP.	-	120V/1Ø	*	-	-		-	-	-	DDC	DIV 25	DIV 25	DIV 25		-	-	E-4	20A-1P	2 #10+GRD	21mm	
GUH-5	GAS FIRED UNIT HEATER	METAL SHOP	FR. HP.	-	120V/1Ø	*	-	-		-	-	-	DDC	DIV 25	DIV 25	DIV 25		-	-	E-5	20A-1P	2 #10+GRD	21mm	
GUH-6	GAS FIRED UNIT HEATER	MACHINE SHOP	FR. HP.	-	120V/1Ø	*	-	-		-	-	-	DDC	DIV 25	DIV 25	DIV 25		-	-	E-6	20A-1P	2 #10+GRD	21mm	
GUH-7	GAS FIRED UNIT HEATER	WELDING SHOP	FR. HP.	-	120V/1Ø	*	-	-		-	-	-	DDC	DIV 25	DIV 25	DIV 25		-	-	E-7	20A-1P	2 #10+GRD	21mm	
GUH-8	GAS FIRED UNIT HEATER	STORES	FR. HP.	-	120V/1Ø	*	-	-		-	-	-	DDC	DIV 25	DIV 25	DIV 25		-	-	E-8	20A-1P	2 #10+GRD	21mm	
GUH-9	GAS FIRED UNIT HEATER	METAL SHOP	FR. HP.	-	120V/1Ø	*	-	-		-	-	-	DDC	DIV 25	DIV 25	DIV 25		-	-	E-9	20A-1P	2 #10+GRD	21mm	
GUH-10	GAS FIRED UNIT HEATER	STORES	FR. HP.	-	120V/1Ø	*	-	-		-	-	-	DDC	DIV 25	DIV 25	DIV 25		-	-	E-10	20A-1P	2 #10+GRD	21mm	
GUH-11	GAS FIRED UNIT HEATER	WASHBAY	FR. HP.	-	120V/1Ø	*	-	-		-	-	-	DDC	DIV 25	DIV 25	DIV 25		-	-	E-11	20A-1P	2 #10+GRD	21mm	
RTH-1	RADIANT TUBE HEATER	NORTH BAY	FR. HP.	-	120V/1Ø	*	-	-		-	-	-	DDC	DIV 25	DIV 25	DIV 25		-	-	E-12	20A-1P	2 #10+GRD	21mm	
RTH-2	RADIANT TUBE HEATER	NORTH BAY	FR. HP.	-	120V/1Ø	*	-	-		-	-	-	DDC	DIV 25	DIV 25	DIV 25		-	-	E-13	20A-1P	2 #10+GRD	21mm	
RTH-3	RADIANT TUBE HEATER	SOUTH BAY	FR. HP.	-	120V/1Ø	*	-	-		-	-	-	DDC	DIV 25	DIV 25	DIV 25		-	-	E-14	20A-1P	2 #10+GRD	21mm	
RTH-4	RADIANT TUBE HEATER	SOUTH BAY	FR. HP.	-	120V/1Ø	*	-	-		-	-	-	DDC	DIV 25	DIV 25	DIV 25		-	-	E-15	20A-1P	2 #10+GRD	21mm	
BB-1	B/B HEATER	STORES OFFICE	2.5 KW	12.0	208V/1Ø	*	-	-		-	-	-	TSTAT.	DIV 25	DIV 25	DIV 25		-	-	E-16,17	20A-2P	2 #10+GRD	21mm	
BB-2	B/B HEATER	WASHROOM	2.5 KW	12.0	208V/1Ø	*	-	-		-	-	-	TSTAT.	DIV 25	DIV 25	DIV 25		-	-	E-18,19	20A-2P	2 #10+GRD	21mm	
BB-3	B/B HEATER	GRINDING ROOM	2.5 KW	12.0	208V/1Ø	*	-	-		-	-	-	TSTAT.	DIV 25	DIV 25	DIV 25		-	-	E20.21	20A-2P	2 #10+GRD	21mm	

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GENERAL NOTES:

1. REFER TO MECHANICAL DRAWINGS FOR EXACT MOTOR LOCATIONS. CONFIRM ACTUAL EQUIPMENT RATINGS, SIZES AND LOCATIONS PRIOR TO ROUGHING–IN OF WIRING AND CIRCUIT BREAKERS. SIZE OVERLOADS ACCORDINGLY. REPORT ANY DISCREPANCIES OR SUBSTITUTIONS TO CONSULTANT PRIOR TO WIRING INSTALLATION AND CONNECTIONS. (REFER TO ACTUAL EQUIPMENT NAMEPLATES.)
2. ALL CONTROL WIRING FOR MECHANICAL ITEMS SHALL BE PROVIDED BY DIVISION 25 CONTROLS CONTRACTOR UNLESS OTHERWISE. REFER TO MECHANICAL SPECIFICATIONS.
3. ALL STARTERS TO BE SUPPLIED AND INSTALLED BY DIVISION 26, UNLESS OTHERWISE NOTED.
4. PROVIDE DISCONNECT SWITCHES FOR EQUIPMENT AS REQUIRED BY CODE TO BE SUPPLIED BY DIVISION 26.
5. PROVIDE 120V, 15A CIRCUIT FOR EACH DDC PANEL. REFER TO MECHANICAL DRAWINGS FOR QUANTITY AND LOCATION.
6. ALL MOTORS USING VFD'S TO BE WIRED WITH VFD (VARIABLE FREQUENCY DRIVE) CABLE. INSTALL DRIVE CABLE FROM VFD TO MOTOR ONLY.
7. ALL MOTOR DISCONNECT SWITCHES SERVING MOTORS WITH VFD'S TO BE INTERLOCKED TO PROVIDE CONTROLLED SHUTDOWN OF VFD WHEN DISCONNECT SWITCH IS SHUT OFF.
8. PROVIDE SEPARATE DRIVE ISOLATION TRANSFORMER FOR EACH VFD. VFD'S ARE SUPPLIED AND INSTALLED BY DIVISION 23. LINE VOLTAGE WIRED AND CONNECTED BY DIVISION 26. INSTALL DRIVE ISOLATION TRANSFORMER ADJACENT TO VFD, CONFIRM LOCATION WITH DIVISION 23 PRIOR TO ROUGHING–IN. PROVIDE ALL NECESSARY MOUNTING HARDWARE AS REQUIRED. REFER TO DRAWING E506 FOR TYPICAL VFD/DRIVE ISOLATION TRANSFORMER INSTALLATION DETAIL.
9. PROVIDE 120V, 15A CIRCUIT FOR 24V CONTROL TRANSFORMER FOR ALL VAV BOXES. REFER TO MECHANICAL DRAWINGS FOR QUANTITY AND LOCATION.
10. PROVIDE 120V, 15A CIRCUIT FOR MOTORIZED DAMPERS. REFER TO MECHANICAL DRAWINGS FOR QUANTITY AND LOCATION.
11. PROVIDE SEPARATE 15A, 120V/1ø POWER CIRCUIT FOR EACH AIR HANDLING UNIT AS INDICATED FOR LIGHTS AND POWER. LIGHTS AND RECEPTACLE SUPPLIED AND INSTALLED BY DIVISION 23.
12. ELECTRICAL CONTRACTOR TO SUPPLY, INSTALL, WIRE AND CONNECT THE FOLLOWING ELEVATOR DEVICES AND REQUIRED INTERLOCKS AS FOLLOWS:
    1. PROVIDE 30A, 120V/1ø FUSIBLE SWITCH C/W 1x 15A HRC FUSE FOR C AB LIGHTS.
    2. PROVIDE 30A, 600V/3ø FUSIBLE SWITCH C/W 3x 20A HRC FUSES FOR ELEVATOR MOTOR AS REQUIRED.
    3. INTERLOCK ELEVATOR MOTOR DISCONNECT WITH ELEVATOR CONTROLS FOR NOTIFYING AUTOMATIC LOWERING DEVICE IN ELEVATOR CONTROL NOT TO LOWER DUE TO MANUAL DISCONNECT OPERATION AS IT NORMALLY LOWERS DURING POWER FAILURE. DISCONNECT SWITCH TO BE COMPLETE WITH AUXILLARY CONTACT NO/NC.
    4. TERMINATE FROM MAIN FIRE ALARM CONTROL PANEL A GENERAL ALARM SIGNAL CONTACT IN 27MM CONDUIT TO A RED JB IN ELEVATOR MACHINE ROOM.
    5. PROVIDE THE FOLLOWING INTERCONNECTIONS FOR ELEVATOR RECALL:
        1. ELEVATOR TO BE RECALLED UPON ELEVATOR MACHINE ROOM SMOKE DETECTOR ACTIVATION.
        2. ELEVATOR TO BE RECALLED TO ALTERNATE FLOOR LEVEL UPON ACTIVATION FROM ELEVATOR LOBBY/CORRIDOR SMOKE DETECTORS.
        3. PROVIDE ALL NECESSARY RELAYS AND MODULES IN FIRE ALARM PANEL REQUIRED FOR CONNECTION POINTS.
    6. COORDINATE ALL WORK WITH ELEVATOR SUPPLIER/INSTALLER PRIOR TO ROUGHING–IN OF CONDUITS. FINAL CONNECTION TO ELEVATOR CONTROLS BY ELEVATOR INSTALLER.
    7. ELEVATOR TO BE C/W BATTERY LOWERING SYSTEM.

LEGEND:

STARTERS
MAG = MAGNETIC STARTER
VFD = VARIABLE FREQUENCY DRIVE
MAN = MANUAL STARTER
TOG = MOTOR RATED TOGGLE SWITCH
CON = CONTACTOR

CONTROLS
T'STAT. = THERMOSTAT
H'STAT. = HUMIDISTAT
DDC = DIRECT DIGITAL CONTROL
TC = TIME CLOCK
MT = MANUAL TIMER
MS = MANUAL SWITCH
VSC = VARIABLE SPEED CONTROLLER
APS = AIR PROVING SWITCH
COD = CARBON MONOXIDE DETECTOR
FA = FIRE ALARM INTERLOCK
AUTO = INTEGRAL AUTO SWITCH ACTIVATION
FLOAT = FLOAT SWITCH

FIRE ALARM SHUTDOWN
FIRE ALARM SHUTDOWN C/W HOA AT FIRE ALARM PANEL
DUCT DETECTOR AND SHUTDOWN ON SEPARATE ZONE

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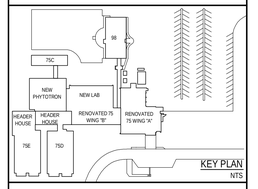

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Client/client

PWGSC
AGRICULTURE AND AGRI-FOOD CANADA

SWIFT CURRENT, SASKATCHEWAN

Project title/Titre du projet

SEMIARID PRAIRIE AGRICULTURAL RESEARCH CENTRE
(SPARC) REHABILITATION PROJECT

SWIFT CURRENT, SASKATCHEWAN

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Drawing title/Titre du dessin

SCHEDULES - MOTORS

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