

600 VOLT MOTOR CONTROL CENTER - MCC-1S

CONNECTED KW: 600
DEMAND KW: 260

EQUIP. NUMBER	MOTOR								STARTER		FEEDER			CIRCUIT PROTECTION		REMARKS
	DESCRIPTION	LOCATION		HP	KW	FULL LOAD AMPS	SERV. FACT.	EEMAC SIZE	TYPE	KVAR CAP.	CAP (AMPS)	SIZE	TYPE	CONT. RATING (AMPS)	FRAME SIZE	
		MCC#	RM#													
	10KVAR CAPACITOR	F1-1L									20	#12	RW-90	15A-3P	HFD/CL	
	10KVAR CAPACITOR	F1-1R									20	#12	RW-90	15A-3P	HFD/CL	
R605-EF	SCRUBBER EXHAUST FAN	F1-2L	S112	3	2.2	3.2	1.15	-	-	-	20	#12	RW-90	15A-3P	HFD/CL	
	10KVAR CAPACITOR	F1-2R									20	#12	RW-90	15A-3P	HFD/CL	PACKAGED UNIT
	3-10KVAR CAPACITORS	F1-3														BREAKERS IN SECTION F1
S109-RAP	CLARIFIER #3 RAS PUMP	F2-1	S131	60	45	60	1.15	-	-	-	85	#4	RW-90	150A-3P	HFD/CL	RELCON VFD
R601-EF	SCRUBBER EXHAUST FAN	F2-2	S112	0.5	0.38	0.8	1.15	1	CMFVNR	-	20	#12	RW-90	3A-3P	HMCP	
	SPARE STARTER	F2-3						3	CMFVNR	-				100A-3P	HMCP	
S101-RAP	CLARIFIER #1 RAS PUMP	F2-4	S101	40	30	38	1.15	3	CMFVNR	-	65	#6	RW-90	100A-3P	HMCP	RELIANCE VFD
S551-FWP	FLUSHING WATER PUMP	F3-1	S101	125	93.8	110	1.15	5	CMFVNR	20	185	#2/0	RW-90	250A-3P	HMCP	IQ 1000 PROTECTION, UNDERVOLTAGE PROTECTED VIA DCS 2 1
S529-SP	SAMPLER PUMP CLARIFIER #1	F3-2	S101	1.5	1.1	1.9	1.15	1	CMFVNR	-	20	#12	RW-90	3A-3P	HMCP	
S103-RAP	CLARIFIER #2 RAS PUMP	F3-3	S101	40	30	38	1.15	3	CMFVNR	-	65	#6	RW-90	100A-3P	HMCP	RELIANCE VFD
	SPARE STARTER	F4-1						2	CMFVNR	-				50A-3P	HMCP	
S307-SP	CLARIFIER # 1 & 2 SCUM PUMP	F4-2	S118	5	3.8	5.7	1.15	1	CMFVNR	-	20	#12	RW-90	15A-3P	HMCP	
S309-SP	CLARIFIER # 3 SCUM PUMP	F4-3	S131	7.5	5.6	7.7	1.15	1	CMFVNR	-	20	#12	RW-90	15A-3P	HMCP	
S541-AB	CHANNEL AERATION BLOWER	F4-4	S105	75	56	68	1.15	4	CMFVNR	10	105	#3	RW-90	150A-3P	HMCP	IQ 1000 PROTECTION
	SPACE	F5-1														
S671-HWP	HOT WATER CIRCULATING PUMP	F5-2	S101	1.5	1.1	1.4	1.15	1	CMFVNR	-	20	#12	RW-90	7A-3P	HMCP	
S537-FN	AIR COMPRESSORS SUPPLY FAN	F5-3	S105	3	2.2	2.9	1.15	1	CMFVNR	-	20	#12	RW-90	7A-3P	HMCP	
S563-PFP	PIPE FLUSHING PUMP	F5-4	S101	2	1.5	1.7	1.15	1	CMFVNR	-	20	#12	RW-90	7A-3P	HMCP	
S667-CWP	CHILLED WATER PUMP	F5-5	S101	1.5	1.1	1.9	1.15	1	CMFVNR	-	20	#12	RW-90	7A-3P	HMCP	
	SPACE	F5-6														
S679-CWP	COOLING TOWER PUMP	F6-1	S101	5	3.5	5.1	1.15	1	CMFVNR	-	20	#12	RW-90	15A-3P	HMCP	
S649-FN	COOLING TOWER FAN	F6-2	ROOF	7.5	5.6	8.1	1.15	1	CMFVNR	-	20	#12	RW-90	15A-3P	HMCP	
S401-STP	SLUDGE RECIRCULATION PUMP	F6-3	S102	25	18.7	23.2	1.15	2	CMFVNR	5	65	#6	RW-90	50A-3P	HMCP	UNDERVOLTAGE PROTECTED VIA DCS 2 1
	SPARE STARTER	F6-4						3	CMFVNR	-				100A-3P	HMCP	
S553-FWP	FLUSHING WATER PUMP	F6-5	S101	20	15	18	1.15	2	CMFVNR	-	30	#10	RW-90	50A-3P	HMCP	UNDERVOLTAGE PROTECTED VIA DCS 2 1
S767-SC	CLARIFIER #3 BRIDGE DRIVE	F7-1	S130	1.0	0.8	1.0	1.15	1	CMFVNR	-	20	#12	RW-90	7A-3P	HMCP	
S683-AHU	AIR HANDLING UNIT-ELECTRICAL ROOM	F7-2	S114	1.5	1.1	1.4	1.15	1	CMFVNR	-	20	#12	RW-90	7A-3P	HMCP	
R681-EF	EXHAUST FAN - JUNCTION CHAMBER	F7-3	S103	0.5	0.4	0.8	1.25	1	CMFVNR	-	20	#12	RW-90	3A-3P	HMCP	
S535-AC	INSTRUMENT AIR COMPRESSOR	F7-4	S106	60	45	55	1.15	-	-	-	120	#2	RW-90	150A-3P	HFD/CL	PACKAGED UNIT
S765-SC	CLARIFIER #1 BRIDGE DRIVE	F7-5	S116	1	0.75	1.0	1.15	1	CMFVNR	-	20	#12	RW-90	3A-3P	HMCP	
S605-EF	SECONDARY CLARIFIER 1 & 2 EXHAUST FAN	F8-1	S128	7.5	5.6	7.6	1.15	1	CMFVNR	-	20	#12	RW-90	15A-3P	HMCP	
S689-AHU	AIR HANDLING UNIT - GALLERY	F8-2	S114	10	7.5	9.9	1.15	1	CMFVNR	-	30	#10	RW-90	30A-3P	HMCP	
S687-EF	EXHAUST FAN - TRUCK BAY	F8-3	S113	0.75	0.5	0.84	1.15	1	CMFVNR	-	20	#12	RW-90	3A-3P	HMCP	
S685-AHU	AIR HANDLING UNIT-BLOWER & PUMP ROOM	F8-4	S114	7.5	5.6	7.8	1.15	1	CMFVNR	-	20	#12	RW-90	15A-3P	HMCP	
	SPARE STARTER	F8-5						2	CMFVNR	-				50A-3P	HMCP	
	SPACE	F8-6														
	WELDING OUTLET - MAIN FLOOR	F9-1L									85	#4	RW-90	70A-3P	HFD/CL	
	WELDING OUTLET - SCRUBBER ROOM	F9-1R									85	#4	RW-90	70A-3P	HFD/CL	
	600 VOLT CDP PANEL	F9-2L									105	#3	RW-90	100A-3P	HFD/CL	
	WELDING OUTLET - BASEMENT	F9-2R									85	#4	RW-90	70A-3P	HFD/CL	
S515-MR	MONORAIL	F9-3L	S112	8	6	7.5	1.15	-	-	-	20	#12	RW-90	15A-3P	HFD/CL	
S203-WAP	WAS PUMP	F9-3R	S118	15	11	15	1.15	-	-	-	30	#10	RW-90	30A-3P	HFD/CL	RELCON VFD
S691-EF	EXHAUST FAN - SCRUBBER ROOM	F9-4	S112	0.75	0.56	1.31	1.25	1	CMFVNR	-	20	#12	RW-90	3A-3P	HMCP	
	SPACE	F9-5														
S601-AHU	AIR HANDLING UNIT - SECONDARY CLARIFIER 1 & 2	F10-1L	S126	25	18.6	23.5	1.15	-	-	-	65	#6	RW-90	90A-3P	HFD/CL	PACKAGED UNIT
	LIGHTING TRANSFORMER - 5S	F10-1R	S108								120	#2	RW-90	100A-3P	HFD	
S609-GP	GLYCOL HEAR RECOVERY PUMP	F10-2	S118	15	11.8	15.2	1.15	2	CMFVNR	-	45	#8	RW-90	50A-3P	HMCP	
S607-EF	EXHAUST FAN - SECONDARY CLARIFIER 1 & 2	F10-3	S128	40/18	30/13	40/25.5	1.15	3	CMFVNR	5	65/30	#6/#10	RW-90	100A-3P	HMCP	2 SPEED STARTER, 2 WINDING, PFC ON HIGH SPEED, UNDERVOLTAGE PROTECTED VIA DCS 2 1
	SPACE	F10-4														
S621-EF	EXHAUST FAN - SECONDARY CLARIFIER #3	F11-1	S136	60/27	45/20	53.7/26.5	1.15	4	CMFVNR	10	85/45	#4/#8	RW-90	150A-3P	HMCP	2 SPEED STARTER, 2 WINDING, PFC ON HIGH SPEED, UNDERVOLTAGE PROTECTED VIA DCS 2 1
S619-EF	EXHAUST FAN - SECONDARY CLARIFIER #3	F11-2	S136	60/27	45/20	53.7/26.5	1.15	4	CMFVNR	10	85/45	#4/#8	RW-90	150A-3P	HMCP	2 SPEED STARTER, 2 WINDING, PFC ON HIGH SPEED, UNDERVOLTAGE PROTECTED VIA DCS 2 1
S617-EF	EXHAUST FAN - GALLERY	F11-3	S137	1.5	1.2	1.5	1.15	1	CMFVNR	-	20	#12	RW-90	7A-3P	HMCP	

CONSTRUCTION NOTES
1 PROGRAM IQ DATA PLUS II UNIT ON MCC-1S AND CONNECT ITS DISCRETE ALARM CONTACT TO DCS.



SNC-LAVALIN INC. 148 Nature Park Way Winnipeg, Manitoba Canada R3P 0X7	
DESIGNED BY: N. BRADDOO	APPROVED BY: C. REIMER
CHECKED BY: C. REIMER	DATE: 2009/12/07
PROJECT No.: 112577	SUBJ: 0105
SERIAL: 47 DD	REV: 0508 2

B.M. ELEV.					
MacLAREN ENGINEERS INC. WARDROP ENGINEERING INC. ENGINEERING CONSULTANTS					
DESIGNED BY: D.B.T.	CHECKED BY:				
DRAWN BY: C.N./V.R.	APPROVED BY:				
HOR. SCALE: N.T.S.		RELEASED FOR CONSTRUCTION:			
VERTICAL:		DATE			
2 UNDERVOLTAGE PROTECTION ADDED TO MCC-1S	12/09	NB			
1 AS CONSTRUCTED	06/93	B.T.			
0 ISSUED FOR TENDER	07/90	RDJ			
NO. REVISIONS	DATE	BY	DATE		

ENGINEER'S SEAL
ORIGINAL DRAWING
SEALED BY:
N. BRADDOO
SNC-LAVALIN
MEMBER 32727
2009/12/07
REV. 02

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
WATERWORKS, WASTE & DISPOSAL DEPARTMENT

SOUTH END WATER POLLUTION CONTROL CENTRE
SECONDARY CLARIFIER EXPANSION - ELECT.

MOTOR CONTROL CENTER 1S

CITY DRAWING NUMBER
SHEET OF
SEP-465

CONSULTANT DRAWING NO. 43525-24-S-E115