AIR HANDLING UNIT/MAKE-UP AIR UNIT SCHEDULE

NO.	LOCATION	MAKE	MODEL	AIRFLOW CFM (l/s)	* EXTERNAL STATIC PRESS. IN. H_2O (Pa)	PACKAGED UNIT		HEATING COIL				HEATING COIL MEDIUM					HEATING DATA									COOLING COIL		COOLING MEDIUM			UNIT WEIGHT LBS (KG)	CONTROLS					
																															INTERLOCK					
																															SUPPLIED BY		INSTALLED BY		WITH	F.A. SHUT DOWN
						YES	NO	YES	NO	QTY	SIZE IN. x IN. (mm x mm)	NAT. GAS	ELEC	H_2O	PROP. & GLYCOL	% GLYCOL	TOTAL MBH (kW) (IN/OUTPUT)	GLYCOL FLOW GPM (l/s)	ENTERING AIR °F (°C) DB	ENTERING AIR °F (°C) WB	LEAVING AIR °F (°C) DB	LEAVING AIR °F (°C) WB	MAXIMUM AIR PRESSURE DROP IN. H_2O (Pa)	ENTERING H_2O TEMPERATURE °F (°C)	LEAVING H_2O TEMPERATURE °F (°C)	WATER PRESSURE DROP FT. H_2O (KPa)	YES	NO	CHILLED H_2O	DX/ ELEC	REFRIGERANT TYPE		MECH	ELEC	MECH	ELEC		
AHU-1	OUTSIDE GYMNASIUM	ENGINEERED AIR	DJ100/C/HRP/0	11,400 (5,380.20)	1.0" (249)	●			●	--	-- (--)	●				--	900/720	-- (--)	41.4°F (5.22°C)	-- (--)	99.6°F (37.55°C)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	●			●	R407C	10,000 LBS (4,536)	●			●	CU-1	●
AHU-2	MECHANICAL ROOM (BASEMENT)	ENGINEERED AIR	LM13/C	11,800 (5,569)	2" (498)	●		●		1	45" X 83" (1143 X 2108)				●	30%	376.4	26.9	41.9°F (5.50°C)	-- (--)	71.4°F (21.88°C)	-- (--)	0.2 (49.8)	110°F (43.33°C)	80.5°F (26.94°C)	5.3FT (15.84)	●			●	R407C	3,800 LBS (1723.60)	●			●	CU-2 & EF-2	●
MUA-1	ROOF	ENGINEERED AIR	HE27/0	2,300 (1,085.50)	0.5" (124.5)	●			●	--	--	●				--	274.114	--	-31°F (-35°C)	-- (--)	70°F (21.11°C)	-- (--)	--	--	--	--		●			--	900 LBS (408.20)		●		●	EF-4	

* EXCLUDES FILTER PRESSURE DROP

CONTINUATION OF AIR HANDLING UNIT/MAKE-UP AIR UNIT SCHEDULE

HEAT PIPE PERFORMANCE								STARTER										POWER SUPPLY												REMARKS	NOTES
COOLING MODE (4,831 CFM)				HEATING MODE (4,831 CFM)																											
OUTDOOR AIR ENTERING TEMP DB/WB °F (°C)	OUTDOOR AIR LEAVING TEMP DB/WB °F (°C)	EXHAUST AIR ENTERING TEMP DB/WB °F (°C)	EXHAUST AIR LEAVING TEMP DB/WB °F (°C)	OUTDOOR AIR ENTERING TEMP DB/WB °F (°C)	OUTDOOR AIR LEAVING TEMP DB/WB °F (°C)	EXHAUST AIR ENTERING TEMP DB/WB °F (°C)	EXHAUST AIR LEAVING TEMP DB/WB °F (°C)	SUPPLIED BY MECH	SUPPLIED BY ELEC	INSTALLED BY MECH	INSTALLED BY ELEC	PACK	TYPE	VSD	MAN	FUNC.	PL.	PB.	HOA	SUPPLY FAN HP (kw)	RETURN FAN HP (kw)	V/ø	FLA	MCA	MOCP	EM	FEEDER	CNDT	BRKR	CCT		
87.0/73.0°F (30.55/22.77°C)	79.6/70.8°F (26.44/21.55°C)	75/66°F (23.88/18.88°C)	82.4/68.3°F (28/20.16°C)	-31.0/-31.0°F (-35/-35°C)	2.0/-0.7°F (-16.66/18.16°C)	70.0/53.0°F (21.11/11.66°C)	37.2/37.2°F (2.88/2.88°C)	●		●		YES								20 (15)	15 (11.2)	208/3	107	121	175		3ø1	1 1/2"	175A/3P	MD-1	OUTDOOR TYPE INDIRECT GAS FIRED C/W DX-COOLING ECONOMIZER, CONTROLLER, TILTING HEAT PIPE RECOVERY SYSTEM, REMOTE CONTROL PANEL, CO_2 MONITOR & MOTOR STARTERS. WILL BE MOUNTED AT GRADE.	
--	--	--	--	--	--	--	--	●		●		YES								15 (11.2)	-- (--)	208/3	45	54.9	96.9		3ø6	1"	100A/3P	MD-1	INDOOR TYPE GLYCOL HEATING, DX-COOLING C/W ECONOMIZER, REMOTE CONTROL PANEL, CONTROLLER, CO_2 MONITOR & MOTOR STARTERS. (EF-2) OPERATIVE IN ECONOMIZER MODE.	3
--	--	--	--	--	--	--	--	●		●		YES								1.5 (1.12)	-- (--)	208/3	6.1	7.3	12.2		3ø12	3/4"	15A/3P	C-1,2,3	OUTDOOR TYPE, DIRECT GAS FIRED C/W REMOTE CONTROL PANEL 2' HIGH ROOF CURB.	

CONDENSING UNIT SCHEDULE (AIR COOLED)

NO.	LOCATION	MAKE	MODEL	CAPACITY MBH	REFRIGERANT TYPE	MINIMUM AMBIENT TEMPERATURE °F (°C)	MAXIMUM AMBIENT TEMPERATURE °F (°C)	UNIT WEIGHT LBS (KG)	STARTER										POWER SUPPLY										CONTROLS						REMARKS
									SUPPLIED BY		INSTALLED BY		PACK	TYPE	VSD	MAN	FUNC.	PL.	PB.	HOA	HP (kw)	V/ø	FLA	MCA	MOCP	EM	FEEDER	CNDT	BRKR	CCT	INTERLOCK					F.A. SHUT DOWN	
									MECH	ELEC	MECH	ELEC																			SUPPLIED BY MECH	SUPPLIED BY ELEC	INSTALLED BY MECH	INSTALLED BY ELEC	WITH		
CU-1	GROUND	ENGINEERED AIR	CUB313	402.3	R407C	50°F (10°C)	95°F (35°C)	2500 (1134)	●		●		YES									208/3		128.4	175		3ø1	1 1/2"	175A/3P	MD-1		●		●	AHU-1		MINIMUM OF 3 COMPRESSORS, CTRAC CONTROL.
CU-2	ROOF	ENGINEERED AIR	CUB453	527.1	R407C	50°F (10°C)	95°F (35°C)	3000 (1360.70)	●		●		YES									208/3		195.2	250		3ø3/0	2"	250A/3P	MD-1		●		●	AHU-2		MINIMUM OF 4 COMPRESSORS, CTRAC CONTROL.

DOMESTIC HOT WATER HEATER SCHEDULE (GAS FIRED)

NO.	LOCATION	MAKE	MODEL	TANK CAPACITY GAL (L)	HEATING				GAS TRAIN INLET PRESSURE IN. WG.	RECOVERY AT 100°F (55.5°C) TEMP RISE GPH (LPH)	UNIT WEIGHT LBS (KG)	STARTER										POWER SUPPLY										CONTROLS						REMARKS
					MEDIUM		INPUT MBH (kW)	OUTPUT MBH (kW)				SUPPLIED BY		INSTALLED BY		PACK	TYPE	VSD	MAN	FUNC.	PL.	PB.	HOA	HP (kw)	V/ø	FLA	MCA	MOCP	EM	FEEDER	CNDT	BRKR	CCT	INTERLOCK				F.A. SHUT DOWN	
					NAT. GAS	ELEC						MECH	ELEC	MECH	ELEC																			SUPPLIED BY MECH	SUPPLIED BY ELEC	INSTALLED BY MECH	INSTALLED BY ELEC	WITH		
DHWT-1	MECH. ROOM (BASEMENT)	A.O. SMITH	BTRC-200A	100 (379)	●		199.00 (58)	159.2 (46.4)	4.5"-13.8" WG.	193 (731)	630 (286)	●		●		YES								FRAC	120/1					2ø12	3/4"	20A/1P	C-39	●		●		--	--	GAS FIRED HEATER WITH POWER VENTER.

FAN/EXHAUST HOOD SCHEDULE

NO.	LOCATION/ SERVICE	MAKE	MODEL	FAN TYPE	AIRFLOW CFM (l/s)	EXTERNAL STATIC PRESS. IN. H_2O (Pa)	OUTLET VELOCITY FPM (m/s)	SPEED RPM	UNIT WEIGHT LBS (KG)	STARTER											POWER SUPPLY										CONTROLS						REMARKS	NOTES
										SUPPLIED BY		INSTALLED BY		PACK	TYPE	VSD	MAN	FUNC.	PL.	PB.	HOA	HP (kw)	V/ø	FLA	MCA	MOCP	EM	FEEDER	CNDT	BRKR	CCT	INTERLOCK				F.A. SHUT DOWN		
										MECH	ELEC	MECH	ELEC																			SUPPLIED BY MECH	SUPPLIED BY ELEC	INSTALLED BY MECH	INSTALLED BY ELEC	WITH			
EF-1	EXHAUST AIR THROUGH HRV- WASHROOMS & CHANGE ROOMS	GREENHECK	BDF-120-20	INLINE CENT.	3,155 (1,489)	1.5 (373.6)	-- (--)	1,067	142 (64.40)		●		●		MAG			FVNR	YES		YES	2	208/3	7.5	9.4	18.75		3ø12	3/4"	15A/3P	C-4,5,6						BELT DRIVEN DUCT FAN WITH GALVANIZED STEEL HOUSING.	
EF-2	EXHAUST AIR FROM AHU-2- ECONOMIZER MODE	GREENHECK	BDF-180-50	INLINE CENT.	8,545 (4,032.80)	1 (249)	-- (--)	727	304 (137.90)		●		●		MAG			FVNR				5	208/3	16.7	20.9	41.8		3ø10	1"	40A/3P	C-7,8,9		●		●	AHU-2		BELT DRIVEN DUCT FAN WITH GALVANIZED STEEL HOUSING.	
EF-3	EXHAUST AIR- JANITOR ROOM	GREENHECK	GB-071-6	CENT. ROOF EXHAUST	100 (47.20)	0.25 (62.2)	-- (--)	857	58 (26.30)		●		●				YES		YES		YES	1/6	120/1	4.4	5.5	11.0		2ø12	3/4"	15A/1P	C-10						BELT DRIVEN, CENTRIFUGAL ROOF EXHAUST FAN WITH CURB. (2' HIGH) CONTINUOUS DUTY.	
EF-4	EXHAUST AIR- KITCHEN HOOD	GREENHECK	CUBE-180HP-15	CENT. UP BLAST ROOF EXHAUST	2,400 (1,132.60)	1.6 (398.5)	-- (--)	1,352	124 (56.20)		●		●		MAG			FVNR	YES		YES	2	208/3	7.5	9.4	18.7		3ø12	3/4"	15A/3P	C-11,12,13		●		●	MUA-1		BELT DRIVEN, UPBLAST KITCHEN CENTRIFUGAL ROOF EXHAUST C/W DISCONNECT SWITCH, ROOF CURB & HINGED BASE AS PER NFPA 96.	
EF-5	EXHAUST AIR- JAN./STORAGE ROOM	GREENHECK	GB-071-6	CENT. ROOF EXHAUST	100 (47.20)	0.50 (124.4)	-- (--)	1725	58 (26.30)		●		●				YES		YES		YES	1/6	120/1	4.4	5.5	11.0		2ø12	3/4"	15A/1P	C-53						BELT DRIVEN, CENTRIFUGAL ROOF EXHAUST FAN WITH CURB. (2' HIGH) CONTINUOUS DUTY.	
EH-1	EXHAUST HOOD- KITCHEN	GREENHECK	GHEW 74"L X 36"W X 24"H	EXHAUST HOOD	2,400 (1,132.60)	0.684 (170.30)	(--)	--	185 (83.90)					YES									120/1					2ø12	3/4"	15A/1P	E-30						430 SS CONST., UL710 RATING EXHAUST HOOD C/W BAFFLE FILTERS, INCANDESCENT, EXHAUST COLLAR & 'ANSUL R-102' WET CHEMICAL FIRE SUPPRESSION SYSTEM AS PER NFPA 96.	
RH-1	EXHAUST AIR- KITCHEN RANGE	BROAN	CM130WWN (30" WIDE)	RANGE HOOD EXHAUST	160 (75.50)	-- (--)	-- (--)	2-SPEED	--	●		●		YES								FRAC	120/1	1.6				2ø12	3/4"	15A/1P	C-14						RANGE HOOD- DUCT C/W AL FILTER, 75W LIGHT AND DAMPER.	
SF-1	SUPPLY AIR- OUTDOOR AIR THROUGH HRV	GREENHECK	BDF-120-15	INLINE CENT.	3,155 (1,489)	1 (249)	-- (--)	908	142 (64.40)		●		●		MAG			FVNR	YES		YES	1.5	208/3	5.7	7.2	14.3		3ø12	3/4"	15A/3P	C-15,16,17		●		●	EF-1 & AHU-2	●	BELT DRIVEN DUCT FAN WITH GALVANIZED STEEL HOUSING.	3
CF-1	CEILING FAN FOR GYMNASIUM	BANVIL 2000	FP36R (36")	CEILING FAN	10,500 (4,955.40)	--	-- (--)	290 (MAX.)	17 (7.71)	●		●		YES								FRAC	120/1	0.85				2ø12	3/4"	15A/1P	C-18	●		●				CEILING FAN C/W 40"X12" KNOCKDOWN FAN MOUNT GUARD, SECURITY CHAIN, HEAVY DUTY FAN CAGE AND REVERSIBLE VARIABLE SPEED CONTROL.	1,2
CF-2	CEILING FAN FOR GYMNASIUM	BANVIL 2000	FP36R (36")	CEILING FAN	10,500 (4,955.40)	--	-- (--)	290 (MAX.)	17 (7.71)	●		●		YES								FRAC	120/1	0.85				2ø12	3/4"	15A/1P	C-18	●		●				CEILING FAN C/W 40"X12" KNOCKDOWN FAN MOUNT GUARD, SECURITY CHAIN, HEAVY DUTY FAN CAGE AND REVERSIBLE VARIABLE SPEED CONTROL.	1,2
CF-3	CEILING FAN FOR GYMNASIUM	BANVIL 2000	FP36R (36")	CEILING FAN	10,500 (4,955.40)	--	-- (--)	290 (MAX.)	17 (7.71)	●		●		YES								FRAC	120/1	0.85				2ø12	3/4"	15A/1P	C-19	●		●				CEILING FAN C/W 40"X12" KNOCKDOWN FAN MOUNT GUARD, SECURITY CHAIN, HEAVY DUTY FAN CAGE AND REVERSIBLE VARIABLE SPEED CONTROL.	1,2
CF-4	CEILING FAN FOR GYMNASIUM	BANVIL 2000	FP36R (36")	CEILING FAN	10,500 (4,955.40)	--	-- (--)	290 (MAX.)	17 (7.71)	●		●		YES								FRAC	120/1	0.85				2ø12	3/4"	15A/1P	C-19	●		●				CEILING FAN C/W 40"X12" KNOCKDOWN FAN MOUNT GUARD, SECURITY CHAIN, HEAVY DUTY FAN CAGE AND REVERSIBLE VARIABLE SPEED CONTROL.	1,2
CF-5	CEILING FAN FOR GYMNASIUM	BANVIL 2000	FP36R (36")	CEILING FAN	10,500 (4,955.40)	--	-- (--)	290 (MAX.)	17 (7.71)	●		●		YES								FRAC	120/1	0.85				2ø12	3/4"	15A/1P	C-20	●		●				CEILING FAN C/W 40"X12" KNOCKDOWN FAN MOUNT GUARD, SECURITY CHAIN, HEAVY DUTY FAN CAGE AND REVERSIBLE VARIABLE SPEED CONTROL.	1,2
CF-6	CEILING FAN FOR GYMNASIUM	BANVIL 2000	FP36R (36")	CEILING FAN	10,500 (4,955.40)	--	-- (--)	290 (MAX.)	17 (7.71)	●		●		YES								FRAC	120/1	0.85				2ø12	3/4"	15A/1P	C-20	●		●				CEILING FAN C/W 40"X12" KNOCKDOWN FAN MOUNT GUARD, SECURITY CHAIN, HEAVY DUTY FAN CAGE AND REVERSIBLE VARIABLE SPEED CONTROL.	1,2
CF-7	CEILING FAN FOR GYMNASIUM	BANVIL 2000	FP36R (36")	CEILING FAN	10,500 (4,955.40)	--	-- (--)	290 (MAX.)	17 (7.71)	●		●		YES								FRAC	120/1	0.85				2ø12	3/4"	15A/1P	C-54	●		●				CEILING FAN C/W 40"X12" KNOCKDOWN FAN MOUNT GUARD, SECURITY CHAIN, HEAVY DUTY FAN CAGE AND REVERSIBLE VARIABLE SPEED CONTROL.	1,2
CF-8	CEILING FAN FOR GYMNASIUM	BANVIL 2000	FP36R (36")	CEILING FAN	10,500 (4,955.40)	--	-- (--)	290 (MAX.)	17 (7.71)	●		●		YES								FRAC	120/1	0.85				2ø12	3/4"	15A/1P	C-54	●		●				CEILING FAN C/W 40"X12" KNOCKDOWN FAN MOUNT GUARD, SECURITY CHAIN, HEAVY DUTY FAN CAGE AND REVERSIBLE VARIABLE SPEED CONTROL.	1,2

BOILER SCHEDULE (GAS FIRED)

NO.	LOCATION	MAKE	MODEL	INPUT MBH	OUTPUT MBH	GAS TRAIN INLET PRESSURE IN. H_2O (KPa)	OPERATING PRESSURE PSI (kPa)	MINIMUM GLYCOL FLOW GPM (l/s)	DESIGN ENTERING GLYCOL TEMP. °F	DESIGN LEAVING H_2O TEMP. °F (°C)	PROPYLENE GLYCOL		UNIT WEIGHT LBS (KG)	STARTER										POWER SUPPLY										CONTROLS						REMARKS
														SUPPLIED BY		INSTALLED BY		PACK	TYPE	VSD	MAN	FUNC.	PL.	PB.	HOA	HP (kw)	V/ø	FLA	MCA	MOCP	EM	FEEDER	CNDT	BRKR	CCT	INTERLOCK				F.A. SHUT DOWN	
											Y/N	%		MECH	ELEC	MECH	ELEC																			SUPPLIED BY MECH	SUPPLIED BY ELEC	INSTALLED BY MECH	INSTALLED BY ELEC	WITH		
B-1	MECH/ ELEC ROOM IN BASEMENT	CAMUS	DYNAMAX 0261	230	220	7" (1.74)	-- (--)	15.3 (0.965)	80°F (26.67)	110°F (43.33°C)	Y	30%	221 (100.20)	●		●		YES								FRAC	120/1					2ø12	3/4"	20A/1P	C-21	●		●		--	--	CONDENSING BOILER GAS FIRED C/W NEUTRALIZER, CONTROLS & PRE-WIRED PUMP.
B-2	MECH/ ELEC ROOM IN BASEMENT	CAMUS	DYNAMAX 0261	230	220	7" (1.74)	-- (--)	15.3 (0.965)	80°F (26.67)	110°F (43.33°C)	Y	30%	221 (100.20)	●		●		YES								FRAC	120/1					2ø12	3/4"	20A/1P	C-22	●		●		--	--	CONDENSING BOILER GAS FIRED C/W NEUTRALIZER, CONTROLS & PRE-WIRED PUMP.

NOTES:
1. ELECTRICAL SHALL WIRE AND CONNECT SPEED CONTROL SWITCH AS SUPPLIED BY MECHANICAL.
2. ELECTRICAL SHALL PROVIDE CEILING MOUNTED RECEPTACLE FOR FAN LOCATION FOR FAN CORD.
3. ELECTRICAL SHALL PROVIDE DUCT MOUNTED SMOKE DETECTOR FOR FIRE ALARM SHUT DOWN.

PROVINCE OF MANITOBA
G.S. REABURN
Feb 25/10
REGISTERED PROFESSIONAL ENGINEER
(MECHANICAL ITEMS ONLY)

PROVINCE OF MANITOBA
FEB 25/10
K.E. ISAAK
REGISTERED PROFESSIONAL ENGINEER
(ELECTRICAL ITEMS ONLY)

APEGM
Certificate of Authorization
MCW/AGE Consulting Professional Engineers
No. 589 Expiry: April 30, 2010

D	ISSUED FOR TENDER	FEB 26, 2010
C	ISSUED FOR 99% REVIEW	FEB 10, 2010
B	ISSUED FOR 90% REVIEW	JAN 08, 2010
A	ISSUED FOR 60% REVIEW	DEC 02, 2009

This drawing must not be scaled.

The general Contractor must verify all dimensions, datums and levels prior to commencement of work. All errors and omissions must be reported immediately to the Architect.

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project
SINCLAIR COMMUNITY CENTRE
ADDITION & RENOVATIONS
490 Sinclair Street, Winnipeg

sheet title
SCHEDULES

project number: 5878
scale: N.T.S.
drawn by: KLG
approved by: GSR
date: 2010-02-26

drawing number:
ME1.1