GRILLES AND DIFFUSERS SCHEDULE					
SUPPLY	RETURN/EXHAUST	MODEL	NOTES		
A		24"x24"/SPD/31/B13	1,2,3,6		
В		6"x6"/510D/F/L/A/B12	1,2,4,5		
	©	6"x6"/530/F/L/A/B12	1,2		
	(D)	8"x8"/530/F/L/A/B12	1,2		
	E	12"x12"/80/F/A/B12	1,2		
F		24"x24"/DAL358 Q-600	1,9		
	G	24"x12"/80/B12/CORE ONLY	1,2		
	H	24"x6"/80/F/A/B12/CORE ONLY	1,2		
	Ū.	6"x6"/80/F/A/B12	1,2		
K		DRS-R-355/ROUND C/A PLENUM	1,9		
	Ĺ	10"x10"/530/F/L/A/B12	1,2		
	Ø G1∕	22"x18"/STGI/BF/B15			
	6 G2	1900A - 20"x18"	1,2		
	63	12"x6"/STGI/BF/B15	1,7		
			1,2		
NOTES ·					

<u>NO1</u>	<u>ES :</u>
1-	COLOUR TO BE COOR!

- COLOUR TO BE COORDINATED WITH ARCHITECT.
- SELECTION BASED ON E.H. PRICE.
- SIZE OF COLLAR ON DRAWING. C/W TRANSITION FROM ROUND TO RECTANGLE AT GRILLE.
- C/W INTEGRATED BALANCING DAMPER.
- STEEL SURFACE MOUNTED IN DRYWALL CEILING (IF APPLICABLE).
- SELECTION BASED ON AIR LOUVER, FIRE RATED DOOR GRILLE. DOOR GRILLE TO BE INSTALLED AS LOW AS POSSIBLE ON DOOR PANEL.
- SELECTION BASED ON NAD KLIMA.

F	FAN-POWERED MIXING BOXES SCHEDULE						
BOX NO.	BOX SIZE	TOTAL CFM	PRIMARY CFM	MIN. CFM	NOTES		
FPMB-01	30	800	30%	30%	1,2		
FPMB-02	40	1210	30%	30%	1,2		

VARIA	VARIABLE AIR VOLUME BOXES SCHEDULE						
BOX NO.	BOX SIZE	MAX. CFM	MIN. CFM	NOTES			
VAV-01	4	150	30%	1,2			
VAV-02	4	70	30%	1,2			
VAV-03	6	320	30%	1,2			
VAV-04	4	75	30%	1,2			
VAV-05	6	210	30%	1,2			
VAV-06	4	55	30%	1,2			
VAV-07	4	85	30%	1,2			
				-			

SELECTION BASED ON EH PRICE, FDCA SERIES.

CONTROLS BY DIV. 25.

SELECTION BASED ON EH PRICE, SDV SERIES. CONTROLS BY DIV. 25.

NO.	IDENTIFICATION	BRAND	MODEL	COOLING CAPACITY	HEATING INPUT (MBH)	HEATING OUTPUT (MBH)	VOLTAGE	MCA (A)	ESP	DESIGN FLOW (CFM)	WEIGHT (Lbs)
RTU-01	GYMNASIUM	YORK	ZJ300N40R5B5AAA2A1	25 TONS	400	2 STAGES 320	575/3/60	46.9	1.0"	10000	3300
RTU-02	HALLWAY	YORK	ZJ061N08B5B5AAA2A1	5 TONS	80	1 STAGE 65	575/3/60	9.7	0.6"	2000	955
RTU-03	DAYCARE	YORK	ZJ090N18E5B5FAD2A1	7.5 TONS	180	2 STAGES 144	575/3/60	17.3	1.0"	3000	1305

ROOFTOP UNITS SCHEDULE

RTU UNITS COMPLETE WITH:

1- C/W ECONOMIZER MODE; 2- ANTI SHORT CYCLE TIMER;

5- CONTOL INTERFACE REQUIRED W/BAS;

3- 50mm PLEATED FILTER;

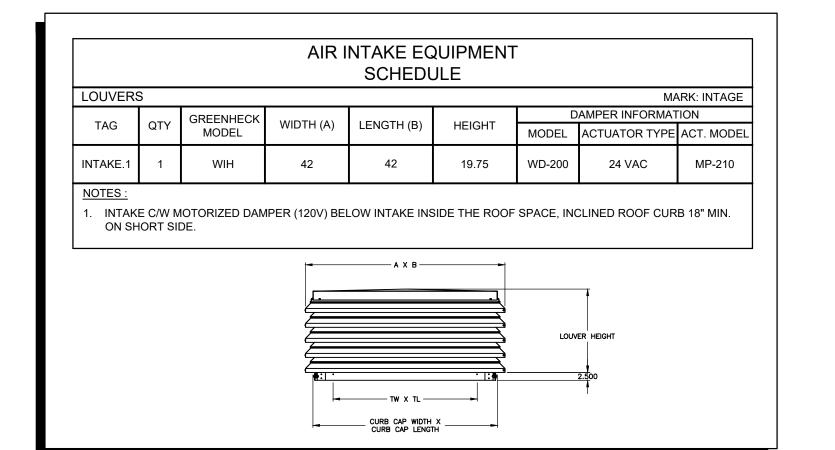
4- 455mm ROOF CURB;

6- REFRIGERANT R410a;

7- CARBON DIOXIDE CONTROL KIT;

8- HACR CIRCUIT BREAK/DISCONNECT SWITCH; 9- ERV W/SEPERATED ELECTRICAL CONNECTION.

ERV UNITS							
IDENTIFICATION	BRAND	MODEL	OUTSIDE AIR	MCA			
ERV-1	YORK	VR036	3000				
ERV-2	YORK	VP011	745	6			
ERV-3	YORK	VP011	960	6			



NO. IDENTIFICATION BRAND MODEL CAPACITY CFM PRESSURE (ESP) MOTOR HP FRPM V/Hz/PH NOTES EF-1 EXHAUST FAN DAY CARE LOREN COOK 90C15DH 400 0.5" 1/8 1550 120/1/60 1,2,3,5 EF-2 EXHAUST FAN #2 GYMNASIUM AREA LOREN COOK ACE-D 101C17D 600 0.75" 1/6 1709 120/1/60 1,2,3,5 EF-3 KITCHEN HOOD CADEXAIR FX116Q1 1500 1.0" 1/2 1650 120/1/60 1,2 EF-4 EXHAUST FAN BOILER ROOM LOREN COOK ACE-D 150D170 (VF) 2000 0.75" 3/4 1258 208/1/60 1,2,6 EF-5 EXHAUST FAN STORAGE ROOM NUTONE 695C 70 0 1.1A 1258 120/1/60		FANS SCHEDULE								
EF-1 DAY CARE LOREN COOK 90C15DH 400 0.5" 1/8 1550 120/1/60 1,2,3,5 EF-2 EXHAUST FAN #2 GYMNASIUM AREA LOREN COOK ACE-D 101C17D 600 0.75" 1/6 1709 120/1/60 1,2,3,5 EF-3 KITCHEN HOOD CADEXAIR FX116Q1 1500 1.0" 1/2 1650 120/1/60 1,2 EF-4 EXHAUST FAN BOILER ROOM LOREN COOK ACE-D 150D170 (VF) 2000 0.75" 3/4 1258 208/1/60 1,2,6 EF-5 EXHAUST FAN BOILER ROOM NULTONE 695C 70 0 11A 1258 120/1/60	NO.	IDENTIFICATION	BRAND	MODEL		_		FRPM	V/Hz/PH	NOTES
EF-2 GYMNASIUM AREA LOREN COOK 101C17D 600 0.75" 1/6 1709 120/1/60 1,2,3,5 EF-3 KITCHEN HOOD CADEXAIR FX116Q1 1500 1.0" 1/2 1650 120/1/60 1,2 EF-4 EXHAUST FAN BOILER ROOM LOREN COOK ACE-D 150D170 (VF) 2000 0.75" 3/4 1258 208/1/60 1,2,6 FF-5 EXHAUST FAN BOILER ROOM NILTONE 695C 70 0 1 1A 1258 120/1/60	EF-1	-	LOREN COOK	_	400	0.5"	1/8	1550	120/1/60	1,2,3,5
EF-4 EXHAUST FAN BOILER ROOM LOREN COOK ACE-D 150D170 (VF) 2000 0.75" 3/4 1258 208/1/60 1,2,6 EF-5 EXHAUST FAN NUTONE 695C 70 0 1 1A 1258 120/1/60	EF-2	= "	LOREN COOK	_	600	0.75"	1/6	1709	120/1/60	1,2,3,5
BOILER ROOM LOREN COOK 150D170 (VF) 2000 0.75" 3/4 1258 208/1/60 1,2,6 EXHAUST FAN NILTONE 695C 70 0 1.1A 1258 120/1/60	EF-3	KITCHEN HOOD	CADEXAIR	FX116Q1	1500	1.0"	1/2	1650	120/1/60	1,2
FE-5 I I NULONE I 695C I 70 I 0 I 1.1A I 1258 I 120/1/60 I I	EF-4		LOREN COOK	-	2000	0.75"	3/4	1258	208/1/60	1,2,6
	EF-5	-	NUTONE	695C	70	0	1.1A	1258	120/1/60	

- 1- C/W DISCONNECT SUPPLIED & INSTALLED BY DIV.26.
- 2- C/W ROOF CURB 455mm HIGH.
- 3- C/W MOTORIZED DAMPER (120V) SERIES 9000 FROM TAMCO, DAMPER OPERATION INTERLOCK WITH START/STOP OF FAN.
- 4- CONTROLLED BY A HIGH LIMIT THERMOSTAT SUPPLIED BY DIV.25 INSTALLED BY DIV.26.
- 5- PROVIDE A SPEED CONTROLLER AS REQUIRED TO GET DESIGN AIRFLOW. 6- FAN WITH ECM MOTOR (0-10V).

GENERAL NOTE(S):

1- SCHEDULE INDICATES THE SPECIFIC EQUIPMENT USED AS THE STANDARD OF ACCEPTANCE. PROPOSED EQUIVALENTS TO THOSE SPECIFIED MAY BE ACCEPTED BY CONSULTANT.

VENTILATION EQUIPMENT LIST (FIT-UP)

CADEXAIR, MODEL CA-S, WALL MOUNTED, 90 INCHES LONG, 42 INCHES WIDE AND 24 INCHES HIGH IN 1 SECTION. INSTALLATION: CEILING HUNG WITH MOUNTING HEIGHT OF 78 INCHES FROM THE LOWER EDGE OF THE CANOPY TO THE FLOOR, 3 INCHES FROM THE SEMI-COMBUSTIBLE CONTENTS AND 18 INCHES FROM THE COMBUSTIBLE CONTENTS. THE EXHAUST HOOD MUST HOVER-HANG THE COOKING APPLIANCE BY 12 INCHES IN THE FRONT AND 6 INCHES ON EACH SIDE. EXHAUST: 1500 CFM, 1 DUCT COLLARS, 10 INCHES X 14 INCHES, 1.0" H2O. ZONEFLOW DAMPER: 2 POSITION DAMPER ULC CERTIFIED NOT AIRTIGHT FIXED ON TOP OF THE HOOD, 120V POWERED WITH SPRING RETURN IN OPEN POSITION. LIGHTING: 2 INCANDESCENT LIGHT 100W, 120-1-60, VAPOUR PROOF AND CSA CERTIFIED (BULBS PROVIDED BY OTHERS) SKIRTING: THE SPACE BETWEEN THE TOP OF THE HOOD AND THE CEILING IS CLOSED IN WITH STAINLESS STEEL PANELS WITH THE SAME FINISH AS THE HOOD. (BY CONTRACTOR). COMPLETE WITH CONTROL PANEL IN SEPARATE BOX, CADEXAIR MODEL CC35-V-ZP1 TO AUTOMATICALLY CONTROL THE FAN, DAMPER AND LIGHTS.

CADEXAIR, ALL-IN-ONE EXHAUST HOOD BUILT-IN WITH RADIAL FAN TURBINE AND AUTOMATIC FIRE SUPPRESSION SYSTEM, MODEL CRS-36, WALL MOUNTED, 36" LONG, 24" WIDE AND 30" HIGH. INSTALLATION: CEILING HUNG 68" FROM THE LOWER EDGE TO THE FLOOR; EXHAUST: INLINE, BUILT-IN FAN ON THE HOOD WITH 120-1-60 345W MOTOR, 1 DUCT COLLAR 12" ROUND, 796 CFM @ 0.375" EXTERNAL (ACCORDING TO EXTERNAL STATIC PRESSURE IN DUCT). LIGHTING: 2 HALOGEN LIGHTS, 120-1-60, VAPOUR PROOF CSA CERTIFIED; ZONEFLOW DAMPER: 2 POSITION DAMPER ULC CERTIFIED NOT AIRTIGHT FIXED ON TOP OF THE HOOD, 120V POWERED WITH SPRING RETURN IN OPEN POSITION; FIRE SUPPRESSION DETECTION: MECHANICAL FUSIBLE INSIDE GREASE EXTRACTOR AND DUCT COLLAR; ELECTRICAL CUT OFF: BY A MAGNETIC CONTACTOR TO BE SUPPLIED AND INSTALLED BY DIVISION 26. PORTABLE FIRE EXTINGUISHER: 2 PORTABLE TYPE "K" AS PER K-GUARD.

EXTRUDED ALUMINIUM - FIX BLADES, STORM PROOF LOUVERS MODEL JE443 FROM E.H. PRICE, SEE DRAWING FOR SIZE.

BOUSQUET BC(ECW)-50-CTW-250-DX. SUPPLIED BY OWNER, SEE SPECS FOR DETAIL.

FURNISH AND INSTALL, AT LOCATIONS SHOWN ON PLANS, A STAND ALONE ENERGY RECOVERY VENTILATOR (ERV). THE ENERGY RECOVERY VENTILATOR WILL CONTAIN AN ENERGY RECOVERY COMPONENT RATED IN ACCORDANCE WITH AHRI STANDARD 1060 WITH RATINGS CERTIFIED BY AHRI. ERV SHALL BE DESIGNED AS A STAND ALONE UNIT WITH ITS OWN DUCT SYSTEM. THE CABINET SHALL BE GALVANIZED MATERIAL WITH A POWDER COATED PAINT FINISH ELECTRO-STATICALLY BONDED TO THE METAL. CABINET PANELS WHERE CONDITIONED AIR IS HANDLED SHALL BE FULLY INSULATED TO PREVENT CONDENSATION AND MINIMIZE SOUND. OPENINGS SHALL BE PROVIDED FOR DUCT CONNECTIONS. LIFTING DEVICES SHALL BE PROVIDED FOR RIGGING. TEST PORTS SHALL BE PROVIDED SO AIRFLOW CAN BE MEASURED ACROSS THE CORE. THE INTAKE AND EXHAUST AIR BLOWERS OF THE ERV SHALL CONTAIN A CENTRIFUGAL FORWARD CURVED BLOWER. THEY SHALL HAVE BALL BEARINGS. DIRECT DRIVE POLYMER MEMBRANE MOTOR MOUNT BASE SHALL PERMIT EASE OF MOTOR CHANGEOVER. THE ENERGY RECOVERY DEVICE SHALL BE AN ENERGY RECOVERY CORE. THE DEVICE WILL BE AN ENTHALPY CORE. THE CORE SHALL BE EASILY CLEANABLE WITH WATER AND/OR ALKALINE BASED COIL CLEANING SOLUTION. THE ENERGY RECOVERY CASSETTE SHALL BE AN UNDERWRITERS LABORATORIES RECOGNIZED COMPONENT FOR ELECTRICAL AND FIRE SAFETY. BAROMETRIC RELIEF DAMPERS WILL BE PROVIDED IN THE EXHAUST AIR HOOD TO PREVENT AIR INFILTRATION IF THE ERV IS DE-ENERGIZED. ALL ERV UNITS TO HAVE 2" PLEATED FILTERS ON THE RETURN AIR SIDE AND ON THE INTAKE SIDE. ALL ERV UNITS SHALL BE PROVIDED WITH A SINGLE POINT POWER CONNECTION FOR HIGH VOLTAGE.

FURNISH AND INSTALL, AT LOCATIONS SHOWN ON PLANS, A STAND ALONE ENERGY RECOVERY VENTILATOR (ERV). THE ENERGY RECOVERY VENTILATOR WILL CONTAIN AN ENERGY RECOVERY COMPONENT RATED IN ACCORDANCE WITH AHRI STANDARD 1060 WITH RATINGS CERTIFIED BY AHRI. ERV SHALL BE DESIGNED AS A STAND ALONE UNIT WITH ITS OWN DUCT SYSTEM. THE CABINET SHALL BE GALVANIZED MATERIAL WITH A POWDER COATED PAINT FINISH ELECTRO-STATICALLY BONDED TO THE METAL. CABINET PANELS WHERE CONDITIONED AIR IS HANDLED SHALL BE FULLY INSULATED TO PREVENT CONDENSATION AND MINIMIZE SOUND. OPENINGS SHALL BE PROVIDED FOR DUCT CONNECTIONS. LIFTING DEVICES SHALL BE PROVIDED FOR RIGGING. TEST PORTS SHALL BE PROVIDED SO AIRFLOW CAN BE MEASURED ACROSS THE ENERGY RECOVERY WHEEL. THE INTAKE AND EXHAUST AIR BLOWERS OF THE ERV SHALL CONTAIN A CENTRIFUGAL FORWARD CURVED BLOWER. THEY SHALL HAVE BALL BEARINGS WITH ADJUSTABLE BELT DRIVE AND MOTOR MOUNT BASE SHALL PERMIT EASE OF MOTOR CHANGEOVER AND BELT TENSION ADJUSTMENT. THE ENERGY RECOVERY DEVICE SHALL BE AN ENERGY RECOVERY CORE. THE DEVICE WILL BE A POLYMER MEMBRANE ENTHALPY CORE. THE CORE SHALL BE EASILY CLEANABLE WITH WATER AND/OR ALKALINE BASED COIL CLEANING SOLUTION. THE ENERGY RECOVERY CASSETTE SHALL BE AN UNDERWRITERS LABORATORIES RECOGNIZED COMPONENT FOR ELECTRICAL AND FIRE SAFETY. BAROMETRIC RELIEF DAMPERS WILL BE PROVIDED IN THE EXHAUST AIR HOOD TO PREVENT AIR INFILTRATION IF THE ERV IS DE-ENERGIZED. ALL ERV UNITS TO HAVE 2" PLEATED FILTERS ON THE RETURN AIR SIDE AND ON THE INTAKE SIDE. ALL ERV UNITS SHALL BE PROVIDED WITH A SINGLE POINT POWER CONNECTION FOR HIGH VOLTAGE. ENERGY RECOVERY VENTILATORS SHALL BE RUSKIN MODELN20, CAPACITY 1400CFM, E.S.P. 1.5" ON SUPPLY AND 1" ON RETURN FAN. ELECTRICAL CONNECTION 208v/1Ø/60 MCA 26.6 MOP 36.

				RETURN				
UNIT	MODEL	CAPACITY (CFM)	ESP	CAPACITY (CFM)	ESP	VOLTAGE	MCA	MDP
MUA-002	RUSKIN NU1316	800	1.5"	800	1"	208/1/60	20.8	30
MUA-003	RUSKIN NU1316	1290	1.5"	1290	1"	208/1/60	26.6	36
MUA-004	RUSKIN NU1316	980	1.5"	980	1"	208/1/60	20.8	30

REMOTE CONDENSER MODEL 38AUZD08 FROM CARRIER, REFRIGERANT 410A, ELECTRICAL CONNECTION MCA 14, MOP 20A @ 575V/3/60. PIPE CONNECTION TO BE CONFIRMED WITH MANUFACTURER. UNIT C/W FULL PERIMETER RAIL 2 STAGES, SCROLL COMPRESSOR WITH CRANKCASE HEATER, LIQUID LINE DRYER AND SIGHT GLASS(FIELD INSTALLED), SUCTION AND LIQUID LINE SERVICE VALVE, DISCONNECT SWITCH, UNIT CONTROLLER, ELECTRONIC EXPANSION VALVE.

DIRECT EXPANSION COOLING COIL, YORK MODEL MC37A2AH1, AIR FLOW 1290CFM, REFRIGERANT TYPE R-410A, WITH PRLK048, EEV KIT FROM LG. DIRECT EXPANSION COOLING COIL, YORK MODEL MC32A2AH1, AIR FLOW 980CFM, REFRIGERANT TYPE R-410A, WITH PRLK048, EEV KIT FROM LG.

HOT WATER HEATING COIL MOUNTED INLINE AND INSIDE DUCT, MULTIPLE PASSES COPPER TUBING WITH ALUMINIUM FIN. COIL TYPE BDW FROM JOHNSON CONTROLS. HOT WATER HEATING COIL MOUNTED INLINE AND INSIDE DUCT, MULTIPLE PASSES COPPER TUBING WITH ALUMINIUM.

COIL TYPE BDW FROM JOHNSON CONTROLS. HOT WATER HEATING COIL MOUNTED INLINE AND INSIDE DUCT, MULTIPLE PASSES COPPER TUBING WITH ALUMINIUM FIN. COIL TYPE BDW FROM JOHNSON CONTROLS.

TYPE		9	Size		Air side			Water side					
IIFL	Width	Height	Row	Fin per inch	Air flow	ADP (w.g.)	EAT	LAT	EWT	LWT	Flow rate (gpm)	WPD (ft)	Connection size
HWC-002	18	14	4	8	705	0,4	-20	70	180	140	3,6	3,2	1.5"
HWC-003	20	15	2	12	1290	0,21	-20	70	180	140	6,6	3,4	1.5"
HWC-004	15	14	2	13	980	0,27	-20	70	180	140	5,2	1,8	1.5"

GENERAL: FINAL COLOUR SELECTION OF ALL EXTERIOR WALL INLETS, OUTLETS AND LOUVERS TO BE COORDINATED WITH ARCHITECT.

HUMIDIFIERS SCHEDULE							
NO.	MODEL	POWER KW	CAPACITY Lbs/Hr	NOTES			
HUM-001	SK 310M	10	30	1,2,3,4			
HUM-002	SK 310M	10	30	1,2,3,4			
NOTEO :							

1- SELECTION BASED ON NEPTRONIC.

2- HUMIDIFIER TO BE MODULATING TYPE. 3- ELECTRICAL CONNECTION: 600V/3Ø/60HZ.

4- SEE INSTALLATION DETAIL ON DRAWING M-211.

Key Plan

	REVIE	V
N°	Date	Description
0	2018-07-06	FOR TENDER





Structure

MAISON DE DE LA FRANCOPHONIE D'OTTAWA

2720 RICHMOND ROAD, OTTAWA

MECHANICAL VENTILATION SCHEDULES & DETAILS

M-410

2018-07-06

1/8" = 1'-0"