

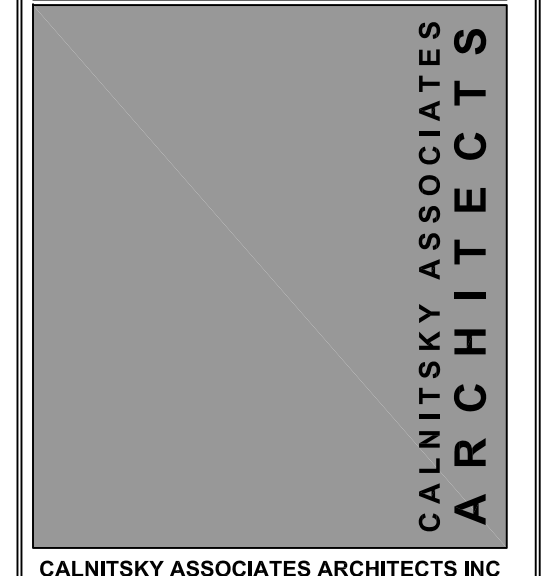
1 HVAC MAIN FLOOR  
M-2.1 SCALE: 1:100

- GENERAL NOTES:
- ARRANGE WITH THE G.C. FOR FURNACE AND ERV TO BE INSTALLED ON 102mm "HOUSE-KEEPING" PADS, DOWN FLOW UNITS TO BE ON CURBS.
  - GRILLES INSTALLED THROUGH BLOCK WALL SHALL BE INSTALLED 2400mm A.F.F. CAULK AROUND EXTERIOR FLANGE AND TOOL TO A NEAT FINISH.
  - ALL DUCTWORKS AND RELATED ACCESSORIES SHALL BE INSTALLED AS PER THE LATEST SMACNA STANDARDS.
  - DUCTWORK SHALL BE GALVANIZED SHEET METAL. DUCT GAUGES SHALL BE AS FOLLOWING:
    - EXPOSED DUCTWORK:
      - GYM AND CHANGEROOMS = 18 GA.
      - ALL OTHER EXPOSED DUCTWORK (EXCEPT FOR DUCTWORK IN MECHANICAL ROOM 202) = 20GA.
    - CONCEALED DUCTWORK:
      - DUCTS DIAMETER UP TO 203mm = 26 GA.
      - DUCTS DIAMETER FROM 229mm TO 559mm = 24GA.
      - DUCTS DIAMETER LARGER THAN 559mm = 22GA.
      - REGULAR DUCTWORK AND DUCTWORK IN MECHANICAL ROOM 202:
        - DUCTS UP TO 305mm ON THE LONGEST LENGTH = 26GA.
        - DUCTS 330mm TO 711mm ON THE LONGEST LENGTH = 24GA.
        - DUCTS 737mm TO 1219mm ON THE LONGEST LENGTH = 22GA.
        - DUCTS 1245mm TO 2438mm ON THE LONGEST LENGTH = 20GA.
    - BALANCING DAMPERS SHALL BE PROVIDED FOR EACH SUPPLY AIR OUTLET, RETURN AND EXHAUST AIR INLET. DAMPERS MOUNTED AT GRILLES SHALL BE MULTI-BLADE TYPE. BUTTERFLY DAMPERS IN DUCTWORK SHALL BE CONSTRUCTED OF SHEET METAL TWO (2) GAUGE LARGER THAN THE DUCTWORK. DUCT DAMPERS SHALL HAVE LOCKING QUADRANTS AND POSITION INDICATOR.
    - ALL DUCTWORK SHALL BE SEALED WITH NON-TOXIC DUCT SEALANT.
    - WHERE SHOWN OR NOTED ON THE DRAWINGS, PROVIDE 25mm THICK, FLEXIBLE RESIN IMPREGNATED, FIBREGLASS INTERNAL ACOUSTIC INSULATION WITH BLACK PLASTIC-COATED MATTE FINISH. ACOUSTIC LINING SHALL BE 50mm LARGER THAN THE DIMENSIONS SHOWN. ALL ACOUSTIC LINING SHALL BE SEALED, IF WELD PINS ARE USED TO SECURE THE LINING, PINS SHALL HAVE A THERMAL ADHESIVE ON HEADS.
    - FIRE DAMPERS SHALL BE PROVIDED AT ALL LOCATIONS WHERE DUCTWORK PASSES THROUGH A RATED SEPARATION, WHETHER SHOWN ON THE DRAWINGS OR NOT. REFER TO THE ARCHITECTURAL DRAWINGS FOR ALL FIRE SEPARATION LOCATIONS.
    - PROVIDE DUCT ACCESS DOORS AT ALL LOCATIONS REQUIRED FOR INSTALLATION, MAINTENANCE OR ADJUSTMENT OF EQUIPMENT OR CONTROLS. ACCESS DOORS SHALL HAVE GASKETS, PIANO HINGES AND THUMB LATCHES. DOORS SHALL BE INSTALLED TO ALLOW FOR INSTALLATION OF INTERNAL OR EXTERNAL INSTALLATION AS REQUIRED. FOR FIRE DAMPER ACCESS, MINIMUM 305mm X 305mm IN SIZE UNLESS DUCT IS SMALLER.
    - SUPPORT HORIZONTAL DUCTWORK AT MAXIMUM 2438mm ON CENTRE. SUPPORT DUCTWORK WITH 25.4mm X 25.4mm X 3mm GALVANIZED ANGLE IRON TRAPEZE, SUSPENDED BY THREADED RODS ATTACHED TO THE STRUCTURE. ROD SIZES AS FOLLOWING:
      - 10mm DIAMETER THREADED RODS FOR CIRCULAR DUCT 305mm DIAMETER AND SMALLER.
      - 12mm DIAMETER THREADED RODS FOR CIRCULAR DUCT 356mm TO 559mm DIAMETER.
      - 12mm DIAMETER THREADED RODS FOR RECTANGULAR DUCT 457mm WIDE AND SMALLER.
      - 16mm DIAMETER THREADED RODS FOR RECTANGULAR DUCT OVER 457mm WIDE.
      - IN CONCEALED SPACES FOR ROUND AND RECTANGULAR DUCTWORK 305mm WIDE OR LESS, PERFORATED GALVANIZED STEEL STRAP MAY BE USED IN LIEU OF THREADED ROD SUSPENDED.
    - PROVIDE COMPLETE CLEANING OF ALL NEW AND EXISTING DUCTWORK AND FURNACES INCLUDING ALL UNDERSLAB DUCTS. PROVIDE CERTIFICATE WHEN ALL CLEANING IS COMPLETE.

- LEGEND:
- RETURN AIR GRILLE
  - SUPPLY AIR DIFFUSER
  - CEILING MOUNT FAN C/W GAURD
  - FIRE DAMPER (BASED ON METAL-FAB)
  - EXHAUST
  - SUPPLY RISER
  - ENERGY RECOVERY VENTILATOR
  - THERMOSTAT (REFER TO 4.1 THERMOSTAT SCHEDULE)
  - GRILLE/DIFFUSER SCHEDULE 

TYPE	SIZE	CAPACITY L/S
-	-	-
  - DAMPER

- DRAWING NOTES:
- GRILLE ON BAR SIDE TO BE IN CEILING SPACE
  - BUILD A 203X305 RECTANGULAR TRANSITION WITH A 203X610 OUTLET. UNDERSIDE OF OUTLET SHALL NOT EXTEND OVER THE TOP OF LIGHT FIXTURE.
  - SOUND RETURN ELBOW (MINIMUM TWO ELBOWS)
  - ACOUSTICALLY LINED
  - EXISTING VENTILATION SYSTEM IN RM152 TO REMAIN (SERVED FROM RM151)
  - REMOTE SENSOR ONLY. INSTALL SENSOR 50mm FROM WALL. PROVIDE LOCKABLE VANDAL-RESISTANT ENCLOSURE. CONTROL IS TO BE LOCATED IN ROOM 119 FACILITY MANAGER.
  - AIR FLOWS AT 45° DOWNWARD. INSTALL DIFFUSER BASED FROM A DISTANCE TO AVOID AIR BLOCKAGE FROM BEAM. VERIFY DISTANCE ON SITE.
  - INSTALL GRILLES WITH BLADES POINTING 45° UPWARD
  - SENSOR ONLY. PROVIDE LOCKABLE VANDAL-RESISTANT ENCLOSURE. CONTROL IS TO BE LOCATED IN ROOM 119 FACILITY MANAGER.
  - PROVIDE LOCKABLE VANDAL-RESISTANT ENCLOSURE.
  - AIR FROM ERVs IS DIVERTED TO EACH FURNACES. REFER TO EQUIPMENT SCHEDULE - ERV AIR ALLOCATION AND ERVs LINE SCHEMATICS.
  - LOCATION OF COOLING COIL FOR CONDENSER C9. PROVIDE TRANSITION AND HOUSING.
  - PROVIDE MOTORIZED DAMPER AT RETURN
  - REMOTE CARBON DIOXIDE SENSOR INSTALLED 457mm A.F.F.
  - ALL DUCTWORK WITHIN GYM SHALL BE INSTALLED ABOVE OR WITHIN JOIST SPACE.
  - RELOCATED EXHAUST FAN TO NORTHWEST CORNER ON THE WEST WALL, PROVIDE GOOSENECK DISCHARGE DUCT. EXTEND DISCHARGE 610mm ABOVE GARAGE ROOF.
  - PROVIDE TRANSITION FOR REHEAT COIL.
  - INSTALL LOUVRES 200mm BELOW UNDERSIDE OF CEILING JOISTS.
  - INSTALL THROUGH-WALL CONCENTRIC FLUE VENTS FOR EACH FURNACE ON THE NORTH WALL OF MECHANICAL ROOM.
  - INSTALL GRILLE ON BULKHEAD.



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This drawing is not intended to be an as-built or record drawing. The contractor is responsible for verifying the accuracy of the information on-site. If there is any information that is in error, the contractor shall record the discrepancy and contact the Engineer immediately with his findings.

DATE	NO.	DESCRIPTION	DRAWN BY
2010JUN10	1	DRAWING UPDATE	JC
2010MAY13	0	ISSUE FOR TENDER	JC

REVISIONS

REGISTERED PROFESSIONAL ENGINEER  
B.A. HAUGH  
P.E. 10000  
1980-01-01 to 2010-12-31

PharmEng Technology  
A Division of P.L. Pharma Inc.

JOB TITLE:  
ADDITION & RENOVATION OF WINAKWA COMMUNITY CENTRE  
980 WINAKWA ROAD  
WINNIPEG, MB

DRAWING TITLE:  
HVAC MAIN FLOOR

SCALE:	DATE:	DRAWING NO.:
1:100	2010 MAY 13	M-2.1
DESIGN: JC	CHECKED: JC	
FILE NO: N/A	PROJECT NO: 339-2010	