

MAIN FLOOR PLAN HVAC
SCALE: 1/8"=1'-0"

TAG	MANUFACTURER	MODEL	TYPE	NOTES
S1	EH PRICE	510/F/L/A/B12	LOUVERED GRILLE	FACE SIZES ON DRAWING
E1	EH PRICE	5300/F/L/A/B12	EXHAUST GRILLE	FACE SIZES ON DRAWING

TAG	LOCATION	QUANTITY	MANUFACTURER	MODEL	AIRFLOW	HEATING	EFFICIENCY	MOTOR	CONTROL	ELECTRICAL	NOTES
HRV-1	UTILITY ROOM	1	NU-AIR	NU500	350 CFM 0.50" ESP	-	65% RECOVERY	500 W	WALL SWITCH	170 W 120/1/60	HRV C/W DUAL LOW-SPEED CONTROL W/ LOW CONTINUOUS VENTILATION CONTROL, CONTROLS TRANSFORMER, BYPASS KIT, INTAKE DISCHARGE WEATHER HOODS, CONDENSATE DRAIN & SPRING ISOLATORS ON SUSPENSION RODS SUPPORTED FROM STRUCTURE.
HC-1	UTILITY ROOM	1	THERMOLEC	-	-	1 KW	-	-	INLINE DUCT	3 KW 240/1/60	ELECTRIC HEATING COIL C/W AIR PROVING SWITCH, CONTROLS TRANSFORMER, HIGH-LIMIT CUT-OFF, CONTROL TRANSFORMER, PROTECTIVE SCREEN GUARDS, INLINE DUCT MOUNTED THERMOSTAT & SCR CONTROL SILENT MAG CONTACTORS.
HC-2	UTILITY ROOM	1	THERMOLEC	-	-	3 KW	-	-	INLINE DUCT	1 KW 120/1/60	ELECTRIC HEATING COIL C/W AIR PROVING SWITCH, CONTROLS TRANSFORMER, HIGH-LIMIT CUT-OFF, CONTROL TRANSFORMER, PROTECTIVE SCREEN GUARDS, INLINE DUCT MOUNTED THERMOSTAT & SCR CONTROL SILENT MAG CONTACTORS.

DRAWING NOTES - HVAC

- SUPPLY GRILLE TO BE LOCATED APPROXIMATELY AS SHOWN C/W BALANCING DAMPER. DUCT TO FORM CUSHION HEAD AFTER DIFFUSER TAKE-OFF. COORDINATE EXACT PLACEMENT ON SITE. REFER TO GRILLES, DIFFUSERS AND LOUVRES SCHEDULE.
- EXHAUST GRILLE TO BE LOCATED APPROXIMATELY AS SHOWN. COORDINATE EXACT PLACEMENT ON SITE. REFER TO GRILLES, DIFFUSERS AND LOUVRES SCHEDULE.
- PROPOSED HRV CONTROLLER LOCATION, MOUNT TOP OF THERMOSTAT AT 3'-11" (1200 MM) AFF. COORDINATE EXACT LOCATION ON SITE.
- APPROXIMATE ELECTRIC BASE BOARD HEATER LOCATION C/W BUILT IN THERMOSTAT. TO BE SUPPLIED, WIRED AND INSTALLED BY ELECTRICAL CONTRACTOR. HEATING VALUE INDICATES OUTPUT CAPACITY, COORDINATE WITH ELECTRICAL CONTRACTOR. UNIT TO BE INSTALLED TO ACCOMMODATE MANUFACTURER'S RECOMMENDED SERVICE AND INSTALLATION CLEARANCE REQUIREMENTS.
- EXISTING BASEBOARD HEATER TO REMAIN. RECONNECT TO RELOCATED SPACE THERMOSTAT. CONTROL WIRING BY MECHANICAL CONTRACTOR.
- EXISTING BASEBOARD HEATER TO BE RELOCATED TO LOCATION APPROXIMATELY AS SHOWN. CONNECT TO SPACE THERMOSTAT IN AREA. UNIT TO BE INSTALLED TO ACCOMMODATE MANUFACTURER'S SERVICE AND INSTALLATION CLEARANCE REQUIREMENTS.
- SUPPLY AND INSTALL HRV SUSPENDED FROM STRUCTURE C/W SPRING ISOLATORS ON SUSPENSION RODS SUPPORTED FROM STRUCTURE. CONFIRM EXACT LOCATION ON SITE. INSULATE EXHAUST AND INTAKE DUCTS OVER ENTIRE RUN. RUN CONDENSATE DRAIN TO CLOSEST STACK IN AREA. UNIT TO BE INSTALLED TO ACCOMMODATE MANUFACTURER'S RECOMMENDED SERVICE AND INSTALLATION CLEARANCE REQUIREMENTS. REFER TO MECHANICAL UNIT SCHEDULE.
- PROVIDE APPROPRIATE WALL TERMINATION FOR EXHAUST DUCT C/W BDD. INSULATE DUCT BACK 10'-0" FROM WALL PENETRATION.
- PROVIDE APPROPRIATE WALL TERMINATION FOR FRESH AIR INTAKE DUCT. INSULATE DUCT BACK 10'-0" FROM WALL PENETRATION.
- EXISTING UNIT HEATER TO REMAIN, APPROXIMATELY WHERE SHOWN. EXISTING CONTROLS TO REMAIN.
- EXISTING UNIT HEATER TO BE RELOCATED, APPROXIMATELY WHERE SHOWN. EXISTING CONTROLS TO REMAIN. UNIT TO BE INSTALLED TO ACCOMMODATE MANUFACTURER'S RECOMMENDED SERVICE AND INSTALLATION CLEARANCE REQUIREMENTS. REFER TO MECHANICAL UNIT SCHEDULE.
- EXISTING THERMOSTAT FOR ELECTRIC BASEBOARD HEATERS TO BE RELOCATED APPROXIMATELY WHERE SHOWN. PROVIDE WITH LOCKING COVER. CONTROL WIRING BY MECHANICAL CONTRACTOR.
- PROVIDE AND MOUNT SCR-TYPE ELECTRIC HEATING COILS IN DUCTWORK C/W ACCESS DOORS TO FACILITATE INSPECTION/SERVICE. TRANSITION TO COIL DUCT CONNECTIONS AS REQUIRED. SUPPLIED AND INSTALLED BY MECHANICAL CONTRACTOR, AND WIRED BY ELECTRICAL CONTRACTOR. REFER TO MECHANICAL EQUIPMENT SCHEDULE. HEATING VALUE INDICATES OUTPUT CAPACITY, COORDINATE WITH ELECTRICAL CONTRACTOR TO ENSURE OUTPUT IS ATTAINABLE WITH AVAILABLE VOLTAGE. UNIT TO BE INSTALLED TO ACCOMMODATE MANUFACTURER'S RECOMMENDED SERVICE AND INSTALLATION CLEARANCE REQUIREMENTS.

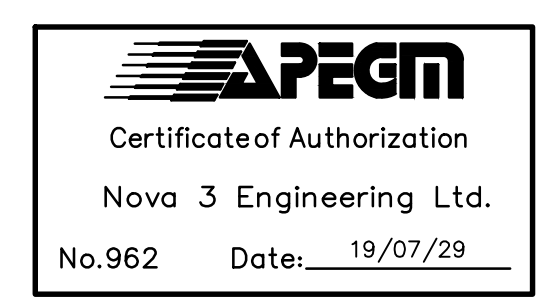
GENERAL NOTES - HVAC

- MECHANICAL CONTRACTOR SHALL VERIFY EXACT LOCATIONS, SIZES, ETC. PRIOR TO COMMENCEMENT OF WORK. VERIFY ALL CONNECTION POINTS ON SITE.
- MECHANICAL CONTRACTOR SHALL ALLOW IN HIS TENDER QUOTATION FOR ALL REQUIRED MODIFICATIONS TO EXISTING HVAC SYSTEMS AND EQUIPMENT (I.E.) RE-ROUTING AND RE-BALANCING OF EXISTING DUCTWORK AS DEEMED NECESSARY DUE TO RENOVATION WORK.
- REFER TO ARCHITECTURAL, ELECTRICAL & STRUCTURAL DRAWINGS FOR COORDINATION PURPOSES.
- MECHANICAL CONTRACTOR SHALL CAREFULLY REMOVE & RELOCATE EXISTING EQUIPMENT AS PER CITY'S REQUIREMENTS.
- ALL CUTTING & PATCHING OF FLOOR SLABS, WALLS ETC. TO BE PERFORMED BY GENERAL CONTRACTOR.
- COORDINATE THE EXACT LOCATION OF THE GRILLES AND DIFFUSERS ON SITE WITH THE ELECTRICAL CONTRACTOR, GENERAL CONTRACTOR, ARCHITECTURAL CEILING PLAN, LIGHTING LAYOUT, ETC. TO ENSURE THAT THERE ARE NOT ANY CONFLICTS DURING INSTALLATION.
- PROVIDE BALANCE DAMPER FOR EACH SUPPLY/EXHAUST AIR GRILLE OR DIFFUSER TO ALLOW FOR THE PROPER BALANCING OF THE SYSTEM. PROVIDE OPPOSED BLADE DAMPERS WITH THE DIFFUSER AND ADJUSTABLE FROM THE DIFFUSER FACE WHEN A DUCT MOUNTED BALANCE DAMPER WOULD NOT BE ACCESSIBLE.
- ALL DUCT DIMENSIONS DENOTE INTERNAL "OPEN" AREA OF THE DUCT.
- ALL DUCTWORK PENETRATING THE BUILDING THERMAL ENVELOPE SHALL BE INSULATED A MINIMUM 10'-0" BACK FROM THE BUILDING PENETRATION.
- REFER TO ARCHITECTURAL DRAWINGS AND PROVIDE FIRE DAMPERS IN ALL WALLS DENOTED AS FIRE SEPARATIONS. FIRE DAMPER RATING TO BE EQUAL TO OR EXCEED WALL ASSEMBLY RATING. PROVIDE ACCESS DOORS AT ALL FIRE DAMPERS TO ALLOW FOR INSPECTION/TESTING.
- COORDINATE THE EXACT LOCATIONS OF EQUIPMENT, DUCT OPENINGS, AND DUCT LOCATIONS WITH THE EXISTING STRUCTURE AND THE STRUCTURAL CONTRACT ADMINISTRATOR.
- ALL WORK SHALL COMPLY IN EVERY RESPECT WITH ALL NATIONAL, PROVINCIAL AND LOCAL CODES AND BY-LAWS, WHICH SHALL BE CONSIDERED PART OF THE SPECIFICATION. IN THE CASE OF CONFLICTING REQUIREMENTS, BE GOVERNED BY THE MOST STRINGENT REGULATIONS.
- THE MECHANICAL CONTRACTOR SHALL INSTALL HEATING, VENTILATION, AND AIR CONDITIONING SYSTEMS IN COMPLETE ACCORDANCE WITH THE RECOMMENDATIONS OF THE NATIONAL/PROVINCIAL BUILDING CODE, ASHRAE, SMACNA LATEST EDITION DUCT STANDARDS, MANITOBA ENERGY CODE FOR BUILDINGS REQUIREMENTS AND MANITOBA OFFICE OF THE FIRE COMMISSIONER.
- ALL INSULATING MATERIALS, METHODS, SIZES AND TYPES OF INSULATION FOR ALL DUCT WORK SHALL BE INSTALLED TO THE REQUIREMENTS OF THE ASHRAE STANDARDS 90.1-2010 "ENERGY STANDARD FOR BUILDING EXCEPT LOW-RISE RESIDENTIAL BUILDING", STANDARD 90.2 "ENERGY EFFICIENT DESIGN OF LOW-RISE RESIDENTIAL BUILDINGS", THERMAL INSULATION ASSOCIATION OF CANADA (TIAC) STANDARDS AND MANITOBA ENERGY CODE FOR BUILDINGS REQUIREMENTS.
- VENTILATION CONTRACTOR SHALL ENSURE THAT ALL DUCTWORK THAT MAY CONVEY OUTSIDE AIR BE LOCATED A MINIMUM OF 6" (150 MM) AWAY FROM ANY SPRINKLER PIPING. DUCTWORK IN SUCH LOCATIONS SHALL BE PROTECTED WITH A MINIMUM OF 2" (50MM) RIGID DUCT INSULATION WITH VAPOR RETARDING FOIL FINISH. ALTER LOCATION OF DUCTWORK TO SUIT.
- FOR STRUCTURES REQUIRING NEW OR CONTAINING EXISTING FIRE PROTECTION/SPRINKLER SYSTEMS, THE CITY, PROPERTY MANAGER, TENANT AND/OR GENERAL CONTRACTOR SHALL RETAIN THE SERVICES OF A SPRINKLER CONTRACTOR/ENGINEER TO PROVIDE COMPLETE SPRINKLER SYSTEM DESIGN (HYDRAULIC LOAD CALCULATIONS, LAYOUTS, HEAD TYPES AND LOCATIONS, ETC). DESIGN TO INCLUDE PROVISIONS FOR FREEZE PROTECTION IN ALL MECHANICAL AND SERVICE ROOMS UTILIZING DRY SYSTEMS.
- ALL CONTROL / ELECTRICAL WIRING TO MEET OR EXCEED FLAME SPREAD RATING OF 25 AND DEVELOPED SMOKE RATING OF 50 AND BE SUITABLE FOR INSTALLATION IN AIR PLENUMS.
- PROVIDE MINIMUM 4" (100MM) FLEXIBLE NEOPRENE CONNECTION ON DISCHARGE AND INTAKE DUCT CONNECTIONS.
- ALL CONTROL WIRING BY MECHANICAL CONTRACTOR UNLESS OTHERWISE SPECIFIED.
- ALL DUCT INSULATION AND COVERINGS SHALL MEET THE REQUIREMENTS OF CAN/ULC-S110 "TEST FOR AIR DUCTS" AND HAVE A FLAME SPREAD RATING NOT EXCEEDING 25 AND A SMOKE DEVELOPED CLASSIFICATION NOT EXCEEDING 50. THIS SHALL INCLUDE ALL TAPES, SEALANTS, AND MISCELLANEOUS PRODUCTS ASSOCIATED WITH THE INSTALLATION.
- THERMOSTATS SHALL BE INSTALLED WITH TOP OF THERMOSTAT AT 3'-11" (1200 MM) AFF.

LEGEND - HVAC

	SUPPLY AIR DIFFUSER
	RETURN AIR GRILLE
	EXHAUST AIR GRILLE
	DOOR GRILLE
	THERMOSTAT
	HUMIDISTAT
	CARBON DIOXIDE DETECTOR
	ON / OFF SWITCH (BY ELECTRICAL)
	DUCTWORK LOCATED IN FLOOR
	BALANCING DAMPER
	FIRE DAMPER
	BACK DRAFT DAMPER
	MOTORIZED DAMPER
	FLEXIBLE DUCT CONNECTION
	THERMAL INSULATION
	ACOUSTIC INSULATION
	TYPE SIZE CFM / NECK Ø
	EQ NO
	TYPE SIZE OUTPUT
	1

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ISSUED FOR CONSTRUCTION

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PROFESSIONAL ENGINEERS
201-120 FORT STREET TEL: (204) 943-6142
WINNIPEG, MANITOBA R3C 1C7 FAX: (204) 942-1276
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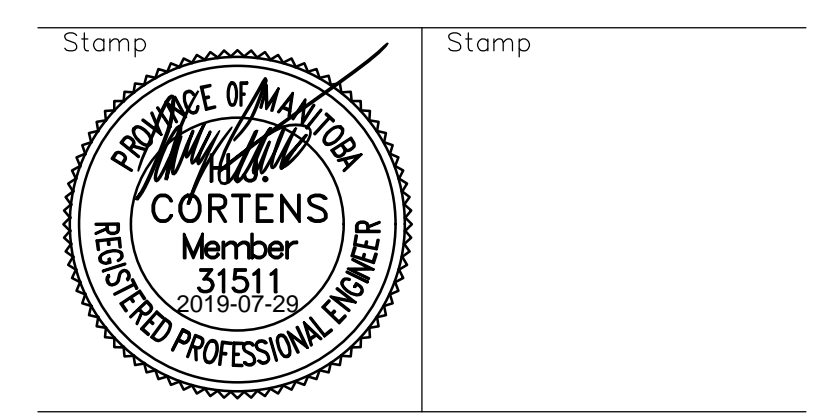
Revisions	Date	Revision
19/07/29	Issued for Tender, Permit, and Construction	

Northern Sky Architecture Inc.

100-128 James Avenue
Winnipeg, Manitoba, Canada
R3B 0Y8
contact@nsa.ca
Tel: 204.956.7979
Fax: 204.956.7979
204.943.6767

VENTILATION SUMMARY						
(BASED ON ASHRAE STANDARD 62-2010 TABLES 6.1 & 6.4)						
A.) OUTSIDE AIR						
	AREA [FT ²]	RATE [CFM/FT ²]	OCC	OCC RATE [CFM/P]	E _s	OUTSIDE AIR [CFM]
HRV						
101 MULTIPURPOSE	410	0.06	25	5.0	0.8	187.0
102 CORRIDOR	105	0.06	0	0.0	0.8	7.9
					TOTAL	194.9
C.) EXHAUST AIR						
	AREA [FT ²]	HEIGHT [FT]	FIX [#]	EXHAUST RATE		EXHAUST AIR [CFM]
103 WASHROOM	-	-	1	50	[CFM/FIX]	50
105 WASHROOM	-	-	1	50	[CFM/FIX]	50
107 WASHROOM	-	-	1	50	[CFM/FIX]	50
108 UTILITY ROOM	190	-	-	0.50	[CFM/FT ²]	95.0
					TOTAL	295.0

REFER TO CONTROLS SECTION OF SPECIFICATIONS.



Project	City of Winnipeg Little Mountain Park Washroom/Change Building 64093 Klimpke Road Winnipeg, Manitoba
drawing title	MECHANICAL MAIN FLOOR PLAN HVAC
scale	As Noted designed by HC
date	JULY, 2019 drawn by HC
project no.	19.166 reviewed by JHG
reference no.	sheet M3.0 REV.