MECHANICAL DRAWING LIST

M-000	MECHANICAL DRAWING LIST, LEGEND, NOTES AND KEY PLAN
M-001	SCHEDULES
M-100	TOWN HALL – NEW PLUMBING AND FIRE PROTECTION PLANS
M-200	TOWN HALL – NEW PIIPING PLAN
M-201	TOWN HALL – PIPING AND CONTROLS SCHEMATIC
M-300	TOWN HALL – NEW HVAC PLANS
M-400	TOWN HALL – MECHANICAL DETAILS
M-401	TOWN HALL – MECHANICAL DETAILS (CONT'D)

MECHANICAL LEGEND

SYMBOL	DESCRIPTION
	NEGATIVE PRESSURE (RETURN) DUCT UP
	EXISTING DUCTWORK TO BE REMOVED
	EXISTING DUCTWORK TO REMAIN
	NEW DUCTWORK
FR	FULL RADIUS DUCT CONNECTION
TK	TAP-IN DUCT CONNECTION
	SUPPLY AIR DIFFUSER (SQUARE)
	RETURN/EXHAUST GRILLE
	SUPPLY AIR DIFFUSER (SIDEWALL)
	SUPPLY AIR DIFFUSER (ROUND)
	SUPPLY AIR DIFFUSER (FLOOR)
T	THERMOSTAT
FD	FIRE DAMPER
BD	BALANCING DAMPER
CTE	CONNECT TO EXISTING
HWS	HOT WATER HEATING SUPPLY
HWR	HOT WATER HEATING RETURN
	3-WAY CONTROL VALVE
	2-WAY CONTROL VALVE
	ISOLATING (SHUT-OFF) VALVE
	CIRCUIT BALANCING VALVE
DC	DRAIN COCK
	BACKFLOW PREVENTOR
	AIR SEPARATOR
	MANUAL AIR VENT
	AUTOMATIC AIR VENT
	COOLING COIL
	INLINE PUMP
CO2	CO2 SENSOR
	DOMESTIC COLD WATER PIPING
	DOMESTIC HOT WATER PIPING
	SANITARY PIPING BELOW GRADE OR FLOOR
	SANITARY PIPING ABOVE FLOOR
V	VENT PIPING
P	GAS PIPING (PROPANE)
FD	FLOOR DRAIN
CO	CLEANOUT IN FLOOR
CO	CLEANOUT IN LINE OR STACK
NFWH	NON-FREEZE WALL HYDRANT c/w VACUUM BREAKER
FEX	FIRE EXTINGUISHER – SURFACE MOUNTED
HB	HOSE BIBB c/w VACUUM BREAKER
	ISOLATION VALVE
	THROTTLING VALVE
	CHECK VALVE
	PIPE DOWN
	PIPE UP
	STRAINER
VTR	VENT THROUGH ROOF
	UNION
NFHB	NON-FREEZE HOSE BIBB c/w VACUUM BREAKER

NOTE: ALL NEW DEVICES SHOWN IN BOLD

GENERAL DEMOLITION NOTES

1. CONTRACTOR IS TO ENSURE THAT ALL EXISTING SERVICES (PIPING, DUCTWORK, ETC) SERVING EXISTING AREAS REMAIN IN SERVICE UNTIL THESE AREAS ARE RECONNECTED TO NEW SERVICES. ONLY THEN OBSOLETE PIPING IS TO BE REMOVED AS SHOWN.
2. ALL DISTURBED SURFACES AFTER SERVICE REMOVAL OR REROUTING TO BE FILLED-IN WITH APPROPRIATE MATERIAL TO MAINTAIN FIRE SEPARATION AND PATCHED TO MATCH EXISTING OR NEW.
3. CONTRACTOR IS TO ENSURE THAT ALL EXISTING ITEMS TO BE REMOVED REMAIN THE PROPERTY OF THE OWNER AND SHALL BE DELIVERED TO A LOCATION ON SITE DESIGNATED BY THE OWNER. IF THE OWNER DECLARES NO INTEREST IN THE REMOVED ITEMS, ASSUME OWNERSHIP AND REMOVE FROM SITE. ALL EFFORTS SHOULD BE MADE FOR REUSE IN THE TEMPORARY RELOCATION PROJECT AND ALL REMAINING SHOULD BE REMOVED FROM THE SITE.
4. SHOULD EXISTING SERVICES BE LOCATED IN WALL BEING DEMOLISHED, CONTRACTOR IS TO RELOCATE TO NEW SUITABLE LOCATION AND RECONNECT. CONFIRM PRIOR TO COMMENCEMENT OF ANY WORK.

GENERAL NOTES

1. CONTRACTOR IS TO VERIFY ALL CONNECTION POINTS TO EXISTING MECHANICAL SERVICES ON SITE.
2. CONTRACTOR IS TO ENSURE THAT ALL EXISTING PIPING SERVING EXISTING AREAS REMAIN IN SERVICE UNTIL THESE AREAS ARE RECONNECTED TO NEW SERVICES. ONLY THEN OBSOLETE PIPING IS TO BE REMOVED AS SHOWN.
3. ALL DISTURBED SURFACES AFTER PIPE REMOVAL OR REROUTING TO BE FILLED-IN WITH APPROPRIATE MATERIAL TO MAINTAIN FIRE SEPARATION AND PATCHED TO MATCH EXISTING OR NEW.
4. CONTRACTOR IS TO ENSURE THAT ALL EXISTING REMOVED FIXTURES AND EQUIPMENT REMAIN THE PROPERTY OF THE OWNER.
5. ALL INSTALLATIONS SHALL BE IN ACCORDANCE WITH CODES, BULLETINS ETC. AND REQUIREMENTS OF ALL INSPECTION AUTHORITIES FOR THE CITY OF OTTAWA.
6. ALL DRAWINGS ARE INTEGRATED WITH THE SPECIFICATIONS WHICH ACCOMPANY THEM. NEITHER IS TO BE USED ALONE. ANY ITEM OR SUBJECT OMITTED FROM ONE BUT IMPLIED IN THE OTHER IS FULLY AND PROPERLY REQUIRED. WHEREVER DIFFERENCE OCCURS, THE MOST ONEROUS CONDITION GOVERNS.
7. PENETRATIONS OF EITHER FIRE OR SMOKE BARRIER RESISTANT WALLS SHALL BE SLEEVED & SEALED AGAINST THE PASSAGE OF FLAME OR SMOKE W/SUITABLE NON-COMBUSTIBLE MATERIALS EQUAL TO THE CONSTRUCTION TO BE PENETRATED.
8. DO NOT SCALE DRAWINGS FOR INSTALLATION PURPOSES. OBTAIN ALL DIMENSIONS FROM ARCHITECTURAL PLANS, MANUFACTURER'S SHOP DRAWINGS, AND ON SITE INSPECTIONS.
9. MECHANICAL, DIV. 2-14 AND ELECTRICAL TRADES SHALL WORK IN CONJUNCTION WITH ONE ANOTHER SO AS TO AVOID INTERFERENCE'S BETWEEN PIPING, DUCTWORK, CONDUIT, LIGHTING FIXTURES, ETC.
10. WORK SHALL BE CO-ORDINATED THROUGH THE GENERAL CONTRACTOR PRIOR TO INSTALLATION OF ANY EQUIPMENT, DUCTWORK AND CONTROLS. CO-ORDINATE WITH ARCHITECTURAL ELEVATIONS FOR ARCHITECTURAL, MECHANICAL, AND ELECTRICAL SPACE ALLOCATIONS.
11. REFER TO ARCHITECTURAL FOR OWNER SUPPLIED EQUIPMENT. CONFIRM ALL MECHANICAL REQUIREMENTS AND PROVIDE TO SUIT.
12. REVIEW ARCHITECTURAL AND ELECTRICAL DRAWINGS AND PROVIDE ON SITE INSPECTIONS TO DETERMINE FULL EXTENT OF PROJECT PRIOR TO SUBMITTING BID.
13. PENETRATIONS OF CONCRETE SHALL BE SAW-CUT OR CORE BORED – IMPACT HAMMERS ARE NOT ALLOWED, SEAL ALL DUCTWORK & SLEEVES TO PREVENT LEAKAGE THRU FLOOR.
14. PROPERLY SUPPORT CEILING MOUNTED EQUIPMENT AND ANY OTHER EQUIPMENT INDEPENDENT OF CEILING SUPPORT SYSTEM.
15. AVOID ANY DIRECT CONTACT BETWEEN ANY PIPING, DUCTING AND ELECTRICAL CONDUIT SYSTEMS TO PREVENT SOUND TRANSMISSION.
16. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL MECHANICAL SERVICES TO THE OCCUPIED AREA THROUGHOUT CONSTRUCTION. PROVIDE CONSTRUCTION VALVES, TEMPORARY DUCTWORK AND PIPING AS REQUIRED TO LIMIT THE SHUT DOWN OF SERVICES.
17. IF ANY AREAS ARE AFFECTED BY THE NEW SCOPE OF WORK, CONTRACTOR TO CARRY COSTS FOR THE REMOVAL AND INSTALLATION OF THE EXISTING CEILING TILES. REFER TO ARCHITECTURAL NEW REFLECTED CEILING PLAN FOR SCOPE OF NEW CEILING.
18. INSTALLATION SHALL BE COMPLETE AND FULLY FUNCTIONAL. PROVIDE ALL LABOR, MATERIALS, TOOLS, SERVICES, EQUIPMENT, ETC. AS REQUIRED.
19. PROVIDE ACCESS FOR SERVICING EQUIPMENT AS INDICATED, AS REQUIRED BY CODE AND AS RECOMMENDED BY THE MANUFACTURER.
20. PROVIDE ACCESS DOORS AS NECESSARY FOR ACCESS TO VALVES, DAMPERS, AND OTHER COMPONENTS REQUIRING MONITORING, INSPECTION, AND MAINTENANCE.
21. INSTALL EQUIPMENT, DUCTS, AND PIPES PARALLEL TO OR PERPENDICULAR TO BUILDING LINES. PROVIDE SPACE, UNIONS AND FLANGES FOR DISASSEMBLY, SERVICING AND REMOVAL OF EQUIPMENT.
22. WHEN A CONFLICT OCCURS BETWEEN INSTALLATION DETAILS, DIAGRAMS, ETC. INDICATED IN THE CONTRACT DOCUMENTS AND MANUFACTURER'S INSTALLATION INSTRUCTIONS, THE MANUFACTURER'S INSTRUCTIONS SHALL GOVERN AND SHALL BE FOLLOWED.

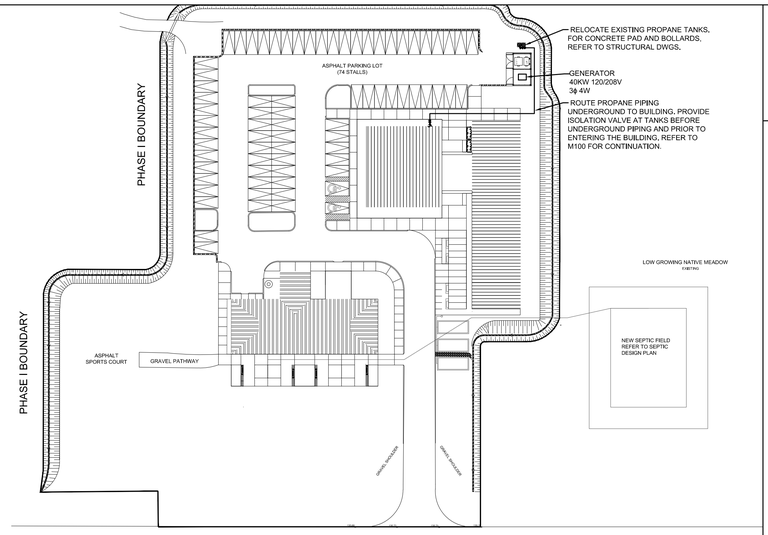
AIR DISTRIBUTION NOTES

1. CONTRACTOR TO TAKE ALL MEASUREMENTS NECESSARY TO DETERMINE CURRENT SYSTEMS PERFORMANCE IN AREAS THAT WILL CONTINUE TO BE SERVED BY EXISTING AIR HANDLING EQUIPMENT AND SHALL REPORT TO CONSULTANT ALL MEASUREMENTS MADE PRIOR TO START OF DEMOLITION.
2. ON COMPLETION OF DUCT AND/OR HEAT PIPING ALTERATIONS, CONTRACTOR SHALL RE-BALANCE ALL EXISTING SYSTEMS TO DELIVER PRE-CONSTRUCTION FLOWS.
3. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR CO-ORDINATION OF GRILLES, DIFFUSERS AND OTHER ELEMENTS.
4. CONTRACTORS SHALL COORDINATE ALL CEILING FINISHES WITH OWNER AND MATCH EXISTING ARCHITECTURAL DRAWINGS. CONTRACTOR SHALL REVIEW MECHANICAL DRAWINGS, ARCHITECTURAL REFLECTED CEILING PLANS AND ARCHITECTURAL ROOM FINISH SCHEDULES AS SOON AS CONTRACT DOCUMENTS ARE SIGNED. ADVISE CONSULTANT OF ANY CONFLICTS BETWEEN CEILING TYPE AND DIFFUSER/GRILLE TYPE.
5. CONTRACTOR AND DIFFUSER/GRILLE SUPPLIER ARE RESPONSIBLE TO PROVIDE ALL PLASTER AND FINISHING FRAMES, MOUNTING HARDWARE, AND ACCESSORIES TO SUIT ARCHITECTURAL CEILING TYPES. MECHANICAL CONTRACTOR SHALL CO-ORDINATE AND PROVIDE DETAILS OF MOUNTING REQUIREMENTS OF DIFFUSERS AND GRILLES IN DRYWALL CEILINGS TO DRYWALL TRADE AND ENSURE EDGES OF OPENINGS ARE FRAMED BY DRYWALL TRADE TO SUPPORT DIFFUSERS AND GRILLES PROPERLY. DIFFUSERS AND GRILLES MUST NOT BE SUPPORTED SOLELY BY HANGER WIRES.
6. PROPERLY SUPPORT CEILING MOUNTED EQUIPMENT AND ANY OTHER EQUIPMENT INDEPENDENT OF CEILING SUPPORT SYSTEM. REFER TO ARCHITECTURAL DETAILS AND CO-ORDINATE WITH STRUCTURAL TRADE.
7. ALL DUCTWORK FITTINGS SHALL BE RIGID GALVANIZED IRON AND AS PER VRM SPECIFICATIONS.
8. CONTRACTOR TO CARRY FOR ADDITIONAL DUCTS AND DUCT FITTING REQUIRED TO CLEAR THE INTERFERENCES IN THE CEILING SPACE.
9. CONTRACTOR IS TO RECONNECT ALL TAKE-OFFS / BRANCH LINES FROM MAINS BEING REMOVED TO NEW MAINS INSTALLED UNDER THIS CONTRACT. EXACT SIZE, LOCATION AND NUMBER OF TAKE-OFFS TO BE VERIFIED ON SITE.
10. WHERE EQUIPMENT IS SHOWN TO BE DEMOLISHED, ALL SERVICES TO EQUIPMENT SHALL CAPPED BACK AT MAIN DUCTS.
11. LOCATION OF THERMOSTATS TO BE COORDINATED WITH FINAL LOCATION OF FURNITURE AND EQUIPMENT. TYPICAL FOR ALL INDICATED.

S-# L/S	INDICATES SUPPLY AIR OUTLET
R-# L/S	INDICATES RETURN AIR INLET

PLUMBING NOTES

1. FOR MOUNTING HEIGHT OF ALL PLUMBING FIXTURES REFER TO ARCHITECTURAL ELEVATION DRAWINGS.
2. CONTRACTOR IS TO CO-ORDINATE LOCATION OF NEW PIPING WITH EXISTING OR NEW SERVICES (PIPING, DUCTWORK, ELECTRICAL CONDUITS, LIGHTS AND BUILDING STRUCTURE). IF REQUIRED REMOVE EXISTING SERVICES AND REINSTALL. TEST SERVICES AFTER WORK IS COMPLETED.
3. CONTRACTOR IS TO CLEAR EXISTING DUCTWORK WHEN INSTALLING NEW PIPING. CLEARANCES TO BE VERIFIED ON SITE.
4. ALL PLUMBING PIPING SYSTEMS AND FIXTURES SHALL BE INSTALLED AS PER ONTARIO BUILDING CODE (LATEST EDITION).
5. PROVIDE A CLEANOUT FROM EACH PLUMBING FIXTURE WHERE REQUIRED BY ONTARIO BUILDING CODE, PART 7 – PLUMBING.
6. ALL PLUMBING FIXTURES INCLUDING FLOOR DRAINS (HUB, FUNNEL FLOOR DRAINS) TO BE TRAPPED AND VENTED AS REQUIRED BY ONTARIO BUILDING CODE, PART 7 – PLUMBING.
7. ALL VENT PIPING ASSOCIATED WITH ACID WASTE IS TO BE INSTALLED AS PER O.B.C. PARAGRAPH 7.5.5.3.
8. CONTRACTOR IS TO REMOVE ALL OBSOLETE PIPING WHEREVER POSSIBLE.
9. CONTRACTOR SHALL SCAN THE CONCRETE SLAB IN THE AREA OF ANY NEW FLOOR PENETRATIONS PRIOR TO CORING ANY HOLES THROUGH THE EXISTING SLAB.
10. ALL WATER, SANITARY, SEWER AND VENT COPPER PIPING WITH SOLDER JOINTS SHALL BE LEAD FREE.
11. INSTALL SHUT-OFF VALVES AT EACH PLUMBING FIXTURE.
12. ALL EXISTING FLOOR DRAINS AND PIPING WHICH IS TO REMAIN, MUST BE CLEANED OUT AND FLUSHED BY THIS CONTRACT.
13. WHERE PIPING IS INDICATED TO BE DEMOLISHED, REMOVE AND CAP BACK AT MAIN PIPE.



1 KEY PLAN
E000 SCALE: 1:600

IT IS THE RESPONSIBILITY OF THE APPROPRIATE CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS ON SITE AND TO REPORT ALL ERRORS AND/OR OMISSIONS TO THE ARCHITECT.

ALL CONTRACTORS MUST COMPLY WITH ALL PERTINENT CODES AND BY-LAWS.

THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION UNTIL SIGNED BY THE ARCHITECT.

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VR 16-178

#	ISSUED FOR:	DD.MM.YY
6	ISSUED FOR TENDER	12.10.2017
5	ISSUED FOR PRE-TENDER REVIEW	25.08.2017
4	ISSUED FOR 95% REVIEW	18.08.2017
3	ISSUED FOR 90% REVIEW	09.08.2017
2	ISSUED FOR REVIEW	07.07.2017
1	ISSUED FOR 33% REVIEW	23.12.2016

REVISIONS:

ARCHITECT SEAL:

NORTH ARROW:

CLIENT:

ARCHITECT:

PROJECT TITLE:

MCNAB BRAESIDE

ARNPRIOR ONTARIO

SHEET TILE:

MUNICIPAL BUILDING MECHANICAL DRAWING LIST, LEGEND, NOTES AND KEY PLAN

DRAWN:	CHECKED:
AW	IF
SCALE: 1 : 50	SHEET No: M000
PROJECT No: 16-178	