

Jan 23, 2025
Project: 7465

Christopher Z. Tworkowski Architect
34 Bridge Street
Lakefield, Ontario
K0L 2H0

Attention: Christopher Tworkowski

Mechanical Addendum No. M1

Project: Saint Albans Two Childcare Renovations – 567 Monaghan Rd, Peterborough ON

General

The following shall constitute the mechanical portion of the addendum to be issued by Christopher Z. Tworkowski Architect. Bidders are to include the following in the tender price.

1. Drawing M4

1. Schedule for Outdoor Heat Pump units, HP-1.1 & HP-1.2, has been added.
2. Diffuser Schedule updated.
3. Exhaust fan schedule identification column has been updated for clarity.

End of Mechanical Addendum M1



Calvin Muller, P.Eng.
Mechanical Engineer



ASSOCIATION OF CONSULTING
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GENERAL MECHANICAL SPECIFICATIONS

1. THE MECHANICAL DRAWINGS DO NOT SHOW ALL THE ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DETAILS. INFORMATION INVOLVING ACCURATE DIMENSIONING OF THE SITE CONDITIONS SHALL BE TAKEN FROM SITE BY CONTRACTOR. CONTRACTOR TO MAKE ANY NECESSARY MODIFICATIONS OR ADDITIONS, WITHOUT CHARGE, TO ACCOMMODATE THE SITE CONDITIONS.
2. EQUIPMENT TO BE AS SPECIFIED OR APPROVED EQUIVALENT. DESIGN BASED ON EQUIPMENT AS SPECIFIED IN EQUIPMENT SCHEDULE AND IS NOT INTENDED TO SHOW EQUIPMENT IN EXACT LOCATIONS. CONTRACTOR IS RESPONSIBLE TO VERIFY EQUIPMENT DIMENSIONS TO ENSURE THAT EQUIPMENT WILL FIT SITE CONDITIONS. ANY COST ASSOCIATED WITH USING EQUIPMENT OTHER THAN WHAT IS SPECIFIED IS THE FULL RESPONSIBILITY OF THE CONTRACTOR AND NO EXTRA WILL BE ALLOWED FOR THESE COSTS.
3. ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS, THE SPECIFICATION, AND ALL OTHER TENDER DOCUMENTS.
4. ALL PIPING AND DUCT WORK TO BE LABELED INCLUDING DIRECTION OF FLOW EVERY 8' AND EACH CHANGE IN DIRECTION.
5. CONTRACTOR IS RESPONSIBLE TO ENSURE ALL EQUIPMENT AND MATERIALS CAN FIT INTO MECHANICAL ROOM OR ITS PLACE, THROUGH FINISHED OPENINGS, OR THAT MATERIAL IS PLACED IN MECHANICAL ROOM AT APPROPRIATE PHASE OF CONSTRUCTION.
6. PRIOR TO SUBMITTING TENDERS, THE CONTRACTOR SHALL VISIT THE SITE TO DETERMINE ALL EXISTING CONDITIONS. ALLOW FOR ALL COSTS ASSOCIATED WITH COMPLETING THE WORK OF MECHANICAL DIVISION IN ACCORDANCE WITH EXISTING SITE AND BUILDING CONDITIONS. CONTRACTOR TO VERIFY LOCATION OF EXISTING UTILITY CONNECTIONS WHERE CONNECTIONS ARE REQUIRED. CONTRACTOR TO VERIFY LOCATION, DEPTH, ELEVATION, AND SIZE OF INVERT. NO ALLOWANCE FOR EXTRA PAYMENTS TO THE CONTRACTOR WILL BE MADE BY THE OWNER FOR FAILING TO VISIT AND EXAMINE SITE CONDITIONS.
7. SUB-CONTRACTOR SHALL MAINTAIN SUCH INSURANCE AS WILL FULLY PROTECT BOTH THE OWNER AND THE SUB-CONTRACTOR FROM ANY AND ALL CLAIMS UNDER THE WORKMEN'S COMPENSATION ACT, ALSO ALL INSURANCE AS NOTED WITHIN ARCHITECTURAL GENERAL CONDITIONS.
8. MAINTAIN A SEPARATE SET OF WHITE PRINTS ON THE SITE AND NOTE ALL CHANGES AND DEVIATIONS FROM THE ORIGINAL DESIGN. TWO SETS OF THESE DRAWINGS SHOWING ALL AS-BUILT CONDITIONS SHALL BE FORWARDED TO THE ARCHITECT AT THE COMPLETION OF THIS CONTRACT AND BEFORE APPLYING FOR FINAL PAYMENT.
9. ADDITIONAL MONEY OVER THE CONTRACT PRICE SHALL NOT BE PAID UNLESS AN APPROVED CHANGE ORDER IS ISSUED BY THE ARCHITECT. CLAIMS FOR EXTRAS SHALL BE SUBMITTED WITH A COMPLETE BREAKDOWN OF MATERIAL, LABOUR, HOURLY RATES, ETC.
10. BE RESPONSIBLE TO KEEP THE AREA CLEAN AT ALL TIMES AND TO PERIODICALLY REMOVE ALL DEBRIS. CONSTRUCTION AREA TO BE ISOLATED BY MEANS OF TARPS AND/OR TEMPORARY PARTITIONS.
11. ALL CUTTING AND PATCHING REQUIRED FOR THE WORK OF THIS DIVISION SHALL BE CARRIED OUT BY THIS DIVISION. CUTTING AND DRILLING SHALL BE PERFORMED IN A MANNER SO AS TO CAUSE LITTLE DAMAGE. BE RESPONSIBLE AND PAY FOR ANY DAMAGE TO THE BUILDING INCURRED BY WORK OF THIS DIVISION.
12. BE RESPONSIBLE TO COORDINATE THE INSTALLATION OF EQUIPMENT, DUCTING, PIPING, ETC. WITH OTHER TRADES AND THE OWNER'S REPRESENTATIVE PRIOR TO THE ACTUAL INSTALLATION.
13. BE RESPONSIBLE FOR MECHANICAL WORK UNTIL THE COMPLETION AND FINAL ACCEPTANCE, FOR REPLACING ANY ITEM THAT MAY BE DEFECTIVE, DAMAGED, LOST OR STOLEN WITHOUT ADDITIONAL COST TO THE OWNER OR DELAY TO THE COMPLETION OF THE PROJECT.
14. SHOP DRAWINGS AND PRODUCT DATA. 'SHOP DRAWINGS' MEANS DRAWINGS, DIAGRAMS, ILLUSTRATIONS, SCHEDULES, PERFORMANCE, CHARTS, BROCHURES, AND OTHER DATA WHICH ARE TO BE PROVIDED BY THE CONTRACTOR TO ILLUSTRATE DETAILS OF A PORTION OF THE WORK. INDICATE MATERIALS METHODS OF CONSTRUCTION AND ATTACHMENT OR ANCHORAGE, NECESSARY FOR COMPLETION OF WORK. ADJUSTMENTS MADE ON SHOP DRAWINGS BY OWNER OR ENGINEER ARE NOT INTENDED TO CHANGE CONTRACT PRICE. MAKE CHANGES IN SHOP DRAWINGS AS OWNER OR ENGINEER MAY REQUIRE. SUBMIT 6 HARD COPIES, OR 1 HIGH QUALITY ELECTRONIC COPY OF PRODUCT DATA SHEETS OR BROCHURES FOR ALL MECHANICAL EQUIPMENT. PROVIDE 2 MAINTENANCE MANUALS COMPLETE WITH WARRANTEE, CERTIFICATE OF INSPECTIONS, AND COPY OF ALL PRODUCT LITERATURE AND MAINTENANCE INFORMATION.
15. PRIOR TO FINAL INSPECTION DEMONSTRATE OPERATION OF EACH SYSTEM TO OWNER AND ENGINEER. INSTRUCT PERSONNEL IN OPERATION ADJUSTMENT AND MAINTENANCE OF EQUIPMENT AND SYSTEMS, USING PROVIDED OPERATION AND MAINTENANCE DATA AS BASIS FOR INSTRUCTION.
16. AFTER THE WORK IS COMPLETED, GIVE A WRITTEN GUARANTEE FOR ONE YEAR COVERING WORKMANSHIP AND MATERIALS. REPAIR OR REPLACE, WITHOUT EXPENSE TO THE OWNER, ANY DEFECTS DUE TO WORKMANSHIP OR MATERIALS WHICH IN THE OWNER'S OPINION, ARE NOT DUE TO MISUSE OR NEGLIGENCE.
17. THE MECHANICAL CONTRACTOR SHALL ENSURE THAT EVERY FIXTURE, PLUMBING APPLIANCE, INTERCEPTOR, CLEANOUT, VALVE, DEVICE OR PIECE OF EQUIPMENT SHALL BE LOCATED IN A MANNER THAT IT IS READILY ACCESSIBLE FOR USE, CLEANING, MAINTENANCE OR REPAIR. MECHANICAL CONTRACTOR SHALL PROVIDE ACCESS DOORS LARGE ENOUGH TO PERMIT EASY ACCESS TO CONCEALED FIXTURES, PLUMBING APPLIANCES, FIRE DAMPERS, INTERCEPTORS, CLEANOUTS, VALVES, DEVICES OR PIECES OF EQUIPMENT.
18. CONTRACTOR SHALL CARRY THE SERVICES OF AN APPROVED FIRE STOPPING INSTALLER AND SHALL PROVIDE ALL FIRE STOPPING FOR ALL MECHANICAL AND ELECTRICAL PENETRATIONS. PROVIDE SHOP DRAWINGS FOR FIRE STOPPING MATERIALS USED.
19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SECURITY OF THEIR PROPERTY. THE OWNER BEARS NO RESPONSIBILITY FOR PROTECTION FROM THEFT, FIRE, OR ENVIRONMENTAL CONDITIONS.
20. ALL PIPING AND DUCTING SHOWN FOR SCHEMATIC AND SCOPE OF WORK PURPOSES IN GENERAL LOCATION OF USE. COORDINATE EXACT ROUTING ON SITE AND WITH BEST PRACTICES.
21. ALL EQUIPMENT (PUMPS, HVAC UNITS, ROOFTOP FANS, ETC.) TO BE PROVIDED WITH VIBRATION ISOLATION DEVICES.

| AIR HANDLER UNIT SCHEDULE | | | | | | | | | |
|---------------------------|----------|--------------|-------------------------|--|------------|--|---------------------|--|--|
| IDENT. | LOCATION | MANUFACTURER | TYPE | POWER | MODEL | CAPACITY (MBH) | CFM/STATIC PRESSURE | CONTROL | REMARKS |
| AHU-1.1 | MECHROOM | MITSUBISHI | AIR HANDLER INDOOR UNIT | 208/230-1-60 MCA: 5.5A MOCp: 15A POWERED BY OUTDOOR UNIT | PVA-A42AA7 | HEATING: 42,000 BTU/H COOLING 42,000 BTU/H | 1200CFM @ 0.5" | PROGRAMMABLE THERMOSTAT: HONEYWELL RTH2300 OR EQUIVALENT | ROUTE CONDENSATE TO NEAREST DRAIN AND CONNECT INDIRECTLY. c/w COOLING COIL TO SUIT CONDENSING UNIT. CONNECT TO OUTDOOR UNIT HP-1.1 |
| AHU-1.2 | MECHROOM | MITSUBISHI | AIR HANDLER INDOOR UNIT | 208/230-1-60 MCA: 5.5A MOCp: 15A POWERED BY OUTDOOR UNIT | PVA-A42AA7 | HEATING: 42,000 BTU/H COOLING 42,000 BTU/H | 1200CFM @ 0.5" | PROGRAMMABLE THERMOSTAT: HONEYWELL RTH2300 OR EQUIVALENT | ROUTE CONDENSATE TO NEAREST DRAIN AND CONNECT INDIRECTLY. c/w COOLING COIL TO SUIT CONDENSING UNIT. CONNECT TO OUTDOOR UNIT HP-1.2 |

GENERAL HVAC SPECIFICATIONS

1. PROVIDE DUCTWORK IN ACCORDANCE WITH A.S.H.R.A.E. AND INTERNATIONAL MECHANICAL CODES CHAPTER 5 SECTION 506., LATEST EDITION. ALL DUCTS SHALL BE FABRICATED FROM PRIME QUALITY GALVANIZED STEEL AS PER A.S.H.R.A.E. STANDARDS. DUCTS SHALL BE INSTALLED AS HIGH AS POSSIBLE. PROPER ANGLE IRON SUPPORTS, HANGERS, ETC., SHALL BE PROVIDED FOR ALL DUCTS. SEAL ALL JOINTS OF DUCTS WITH HIGH PRESSURE SEALER. APPLY SEALANT TO OUTSIDE OF JOINTS AS PER MANUFACTURERS RECOMMENDATIONS. CONSTRUCT DUCTS IN ACCORDANCE WITH THE FOLLOWING:
- MAX DUCT DIMENSION U.S. GAUGE
UP TO 12" 26
13" TO 30" 24
31" TO 54" 22
- CONSTRUCT ROUND DUCTS IN ACCORDANCE WITH THE FOLLOWING:
- 4" TO 8" DIAMETER – 26 GAUGE
9" TO 24" DIAMETER – 24 GAUGE
2. EQUIVALENT DUCT SIZES MAY BE SUBSTITUTED IN LIEU OF THOSE SHOWN, IN ORDER TO AVOID INTERFERENCE WITH STRUCTURE AND OTHER MECHANICAL SERVICES. CONTRACTOR TO PROVIDE DRAWINGS OF ANY PROPOSED CHANGES TO ENGINEER FOR APPROVAL. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN DESIGN AIR FLOW WITH DUCT INSTALLATION. ALL SUPPLY & RETURN BRANCHES SHALL BE AT 45° TAKE OFFS.
3. THE CONTRACTOR SHALL VERIFY EXACT LOCATION OF EQUIPMENT PRIOR TO FABRICATION AND INSTALLATION OF DUCTWORK. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED ELBOWS, DUCT ACCESSORIES, ETC. TO COMPLETE THE INTENT OF THE MECHANICAL DRAWINGS.
4. HVAC EQUIPMENT MUST NOT BE USED DURING CONSTRUCTION. DUCT OPENINGS SHALL BE COVERED TO KEEP OUT DUST AND DEBRIS. COMMISSIONING MUST NOT BE PERFORMED UNTIL ALL INTERIOR FINISHES ARE COMPLETE.
5. INSULATE ALL DUCTS IN ACCORDANCE WITH ASHRAE 90.1, LATEST EDITION.
6. MECHANICAL EQUIPMENT TO BE ISOLATED FROM DUCT WORK USING 6" FLEXIBLE DUCT CONNECTORS ON BOTH THE SUPPLY AND RETURN DUCTS.
7. ALL MITERED ELBOWS TO BE COMPLETE WITH DOUBLE THICKNESS AIR VANES. ALL RADIUSSED ELBOWS TO BE COMPLETE WITH SPLITTER VANES PER SMACNA DUCT CONSTRUCTION STANDARDS.
8. PROVIDE VOLUME DAMPERS AT ALL DUCT BRANCHES AND TAKE-OFFS.
9. PROVIDE AN INDEPENDENT FIRM CERTIFIED BY NEBB TO CONDUCT TESTING, ADJUSTING AND BALANCING OF ALL MECHANICAL SYSTEMS AND COMPONENTS, INCLUDING ALL DUCTS AND HYDRONIC PIPING. SUBMIT WRITTEN REPORT IN TRIPPLICATE TO MECHANICAL ENGINEER UPON COMPLETION.
10. MAXIMUM LENGTH OF FLEX DUCT PERMITTED IS 10' PER DIFFUSER. NO FLEX DUCT IS PERMITTED ON EXPOSED DUCT WORK.
11. PROVIDE FIRE DAMPERS IN DUCTS AT FLOOR, WALL, CEILING, AND ROOF PENETRATIONS WHERE FIRE SEPARATIONS ARE CROSSED, AND WHERE REQUIRED BY LOCAL AUTHORITIES AND CODES. FIRE DAMPERS SHALL MAINTAIN 100% FREE AREA OF DUCTWORK (TYPE 'B' FIRE DAMPERS). RATE FIRE DAMPERS TO MATCH THE FIRE RATING OF SEPARATION CROSSED. PROVIDE ONLY ULC LABELED DAMPERS AND INSTALL AS SPECIFIED IN NFPA/CUA 90A.
12. SUPPLY AND RETURN DUCTS SHALL BE CONNECTED TO THE HVAC UNIT THROUGH A FLEXIBLE NON METALLIC DUCT.
13. 10' OF ACOUSTIC SOUND INSULATION SHALL BE PROVIDED TO THE DUCTS AT THE BEGINNING NEAR THE HVAC UNIT.
14. SMOKE DETECTORS AT SUPPLY DUCTS SHALL BE PROVIDED TO AUTOMATICALLY SHUT DOWN UNITS UPON DETECTION OF SMOKE.

| OUTDOOR HEAT PUMP SCHEDULE | | | | | | |
|----------------------------|--------------|------------------------|---------------------------------------|--------------|---|--|
| IDENT. | MANUFACTURER | TYPE | POWER | MODEL | CAPACITY (MBH) | REMARKS |
| HP-1.1 HP-1.2 | MITSUBISHI | OUTDOOR HEAT PUMP UNIT | 208/230-1-60 MCA: 36A MOCp: 60A | PUZ-HA42NKA1 | HEATING: 42,000 BTU/H COOLING 42,000 BTU/H | OUTDOOR HEAT PUMP HP-1.1 AND HP-1.2 TO BE ORDERED COMPLETE WITH INDOOR AIR HANDLING UNITS AHU-1.1 AND AHU-1.2 RESPECTIVELY. INDOOR UNIT RECEIVES POWER FROM OUTDOOR UNIT THROUGH FIELD-SUPPLIED INTERCONNECTED WIRING. WIRING AND CONNECTIONS TO BE MANAGED BY MECHANICAL. UNIT HEATING OPERATIONAL RANGE FROM -30°C TO 21°C |

| ELECTRIC HEATERS SCHEDULE | | | | | | | |
|---------------------------------|--------------|---------------------|-------------------|------------|--------------|---------------------|--|
| IDENT. | MANUFACTURER | TYPE | POWER | MODEL | FINISH | CONTROL | REMARKS |
| EFF-1.1 | OUELLET | ELECTRIC FAN FORCED | 240/1/60 3000W | OCA03000 | BY ARCHITECT | BUILT-IN THERMOSTAT | BUILT-IN TAMPER PROOF THERMOSTAT, 24V RELAY, SUPPLIED AND SUPPLIED BY MECHANICAL, POWER BY ELECTRICAL. |
| EFF-2.1 TO EFF-2.3 | OUELLET | ELECTRIC FAN FORCED | 240/1/60 2000W | OAC02000-T | BY ARCHITECT | BUILT-IN THERMOSTAT | BUILT-IN TAMPER PROOF THERMOSTAT, 24V RELAY, SUPPLIED AND SUPPLIED BY MECHANICAL, POWER BY ELECTRICAL. |
| EBB-1 REMOVED FROM DESIGN | OUELLET | ELECTRIC BASEBOARD | 240/1/60 2000W | DEM2000 | BY ARCHITECT | BUILT-IN THERMOSTAT | BUILT-IN TAMPERPROOF THERMOSTAT, 24V RELAY, SUPPLIED AND SUPPLIED BY MECHANICAL, POWER BY ELECTRICAL. |
| EBB-2.1 | OUELLET | ELECTRIC BASEBOARD | 120/1/60 1000W | OFM1002 | BY ARCHITECT | BUILT-IN THERMOSTAT | BUILT-IN TAMPERPROOF THERMOSTAT, 24V RELAY, SUPPLIED AND SUPPLIED BY MECHANICAL, POWER BY ELECTRICAL. |
| EBB-3.1 TO EBB-3.5 | OUELLET | ELECTRIC BASEBOARD | 120/1/60 750W | OFM0752 | BY ARCHITECT | BUILT-IN THERMOSTAT | BUILT-IN TAMPERPROOF THERMOSTAT, 24V RELAY, SUPPLIED AND SUPPLIED BY MECHANICAL, POWER BY ELECTRICAL. |
| EBB-4.1 TO EBB-4.5 | OUELLET | ELECTRIC BASEBOARD | 120/1/60 500W | OFM0502 | BY ARCHITECT | BUILT-IN THERMOSTAT | BUILT-IN TAMPERPROOF THERMOSTAT, 24V RELAY, SUPPLIED AND SUPPLIED BY MECHANICAL, POWER BY ELECTRICAL. |

GENERAL PLUMBING SPECIFICATIONS

1. UNLESS OTHERWISE NOTED ALL HOT AND COLD WATER PIPING AFTER THE MAIN BUILDING CWS ISOLATION VALVE SHALL BE HARD COPPER TYPE L PIPING WHICH SHALL CONFORM TO ASTM B42 AND ASTM B88.
2. ALL DOMESTIC WATER PIPING TO BE INSULATED c/w VAPOUR BARRIER. PIPE INSULATION TO CONFORM O.B.C. TABLE 12.3.4.5.
3. ALL DRAINAGE, WASTE, AND VENT PIPE TO BE PVC DWV WITH FLAME SPREAD RATING < 25. PIPES TO BE XFR WHERE PENETRATING FIRE RATED WALLS.
4. WATER HAMMER ARRESTORS TO BE STAINLESS STEEL BELLOWS TYPE; WATTS SS-A OR APPROVED EQUIVALENT.
5. ROUTE ABOVE GROUND PIPING IN CEILING SPACE OF WALL INTERIORS FOR CONCEALMENT WHERE EVER POSSIBLE UNLESS SPECIFICALLY NOTED OTHERWISE ON DRAWINGS. COORDINATE PIPE INSTALLATION IN WALLS WITH MASON AND OR DRYWALLER OR APPROPRIATE TRADE INVOLVED.
6. INSTALL ISOLATION VALVES IN EACH BRANCH LINE FROM COLD AND HOT WATER MAINS, AT BASE OF EACH RISER, AND BEFORE EACH FIXTURE OR EQUIPMENT CONNECTED TO COLD/HOT WATER SYSTEM. PROVIDE A FIRE RATED ACCESS DOOR AT EACH CONCEALED VALVE.
7. INSTALL FLANGES OR UNIONS TO PERMIT REMOVAL OF EQUIPMENT WITHOUT DISTURBING PIPING SYSTEMS.
8. PROVIDE COMPLETE DRAINAGE AND VENT SYSTEMS TO SERVE FIXTURES AND ITEMS SPECIFIED AND AS SHOWN ON PLANS.
9. WHERE EXPOSED PIPES PASSES THROUGH FINISHED FLOORS, WALLS, OR CEILINGS, PROVIDE CHROME PLATED ESCUTCHEON WITH SET SCREW.
10. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL NECESSARY MATERIALS & LABOUR TO MAINTAIN ALL FIRE SEPARATIONS AFFECTED BY THE WORK PERFORMED.
11. GRADE HORIZONTAL SANITARY DRAINAGE AND VENT PIPING AT MINIMUM 1:50.
12. ALL FAUCET AND TOILET SUPPLY LINES SHALL BE STAINLESS BRAIDED HOSE.
13. ALL FLOOR DRAINS TO BE TRAPPED, PRIMED, AND VENTED WITH STRAINER INSTALLED FLUSH WITH FINISHED FLOOR. SUPPLY AND INSTALL PRIMER AND TUBING FROM CLOSEST COLD WATER BRANCH, C/W SPECIALTY BLEED VALVE (P.P.P. OR EQUAL), UNLESS OTHERWISE SPECIFIED IN DRAWINGS.
14. EXPOSED P-TRAPS SHALL BE CHROME PLATED BRASS.
15. SIZE OF DRAINAGE PIPE SERVING FIXTURES:
- | | | | |
|--------------|---------------|-------------|---------------|
| DISHWASHER | 1-1/2" (38mm) | LAVATORY | 1-1/2" (38mm) |
| SINK | 1-1/2" (38mm) | SHOWER | 1-1/2" (38mm) |
| SERVICE SINK | 1-1/2" (38mm) | URINAL | 2" (51mm) |
| WC | 3" (76mm) | FLOOR DRAIN | 2" (51mm) |
16. SIZE OF EITHER CWS & HWS ISOLATION VALVES SERVING FIXTURES:
- | | | | |
|--------------|-------------|----------|-------------|
| DISHWASHER | 1/2" (13mm) | LAVATORY | 1/2" (13mm) |
| SINK | 1/2" (13mm) | SHOWER | 1/2" (13mm) |
| SERVICE SINK | 1/2" (13mm) | URINAL | 3/4" (19mm) |
| WC | 1/2" (13mm) | WF | 1/2" (13mm) |
17. ALL PIPING FITTINGS WITH TERMINAL EQUIPMENT SHALL BE LEAD FREE.
18. THE CONTRACTOR IS RESPONSIBLE FOR THE INSULATION OF THE STORM PIPES INSIDE THE BUILDING.
19. ALL PIPING IS TO BE STRAIGHT, PARALLEL AND PERPENDICULAR TO THE BUILDING STRUCTURE. SLOPE ALL PIPING TO DRAIN POINTS.
20. WHEN PIPE LAYING NOT IN PROGRESS, CLOSE OFF OPEN ENDS OF PIPE WITH WATER TIGHT PLUG OR CAP.
21. INSTALL CLEANOUTS AS REQUIRED BY PLUMBING CODES. SIZE OF CLEANOUTS TO MATCH SIZE OF ASSOCIATED SANITARY PIPE. ENSURE CLEAN OUTS ARE MADE ACCESSIBLE.
22. CONNECT FIXTURES COMPLETE WITH SUPPLIES AND DRAINS, TRAPPED, SUPPORTED, SANITARY LEVEL AND SQUARE WITH HOT WATER FAUCETS ON THE LEFT.

| WATER HEATER | | | | | | | |
|--------------|--------------|----------|-------------|------------|----------------|---------------|---|
| IDENT. | MANUFACTURER | MODEL | CAPACITY | EFFICIENCY | GAS CONNECTION | BTU | NOTES |
| HWT-1 | AO SMITH | BTH-1520 | 100 GALLONS | 98% | 3/4" | 150,000 INPUT | GAS FIRED COMMERCIAL WATER HEATER. ORDERED COMPLETE WITH VENTING KIT BY MANUFACTURER. |

| HRV SCHEDULE | | | | | | | |
|--------------|--------------|---------|-----------------------------|-------------|----------------------------|---------------------------|---|
| IDENT. | MANUFACTURER | MODEL | POWER | DUCT SIZE | CFM/STATIC PRESSURE | CONTROL | NOTES |
| HRV-1 | LIFEBREATH | 455DD | 120/1/60 MCA: 4.8A MOP: 15A | 14"x8" (X4) | 525 CFM @0.1 IN.W.G (HIGH) | WALL MOUNT CONTROLLER (H) | c/w 99-DXPLO2 DIGITAL CONTROLLER, MOUNTING BRACKETS |
| HRV-2 | LIFEBREATH | 350 DCS | 120/1/60 MCA: 6.3A MOP: 15A | 14"x8" (X4) | 450 CFM @0.1 IN.W.G (HIGH) | WALL MOUNT CONTROLLER (H) | c/w 99-DXPLO2 DIGITAL CONTROLLER, MOUNTING BRACKETS |

| DIFFUSER SCHEDULE | | | | | |
|-------------------|--------------|-------------|----------------------|---------------|---------------------------------------|
| IDENT. | MANUFACTURER | MODEL | DIFFUSER/GRILLE SIZE | COLOUR/FINISH | DESCRIPTION |
| A | NAILOR | 51SV-O | 8"x6" | BY ARCHITECT | LINEAR LOUVER DIFFUSER C/W O.B DAMPER |
| B | NAILOR | 5145H | 12"x8" | BY ARCHITECT | FIXED BLADE RETURN GRILLE |
| C | ETS NORD | RSL | 1000X150 (mm) | BY ARCHITECT | SOUND ATTENUATING TRANSFER GRILLE |
| D | NAILOR | 6100 SERIES | 26"x48" | BY ARCHITECT | SQUARE LOUVERED FACE GRILLE STEEL |

| EXHAUST FAN SCHEDULE | | | | | | | | | |
|----------------------|---|--------------|--------------|-------------------------------------|-----------|-------------|---------------------|-----------------|--|
| IDEN. | LOCATION | MANUFACTURER | TYPE | POWER | DUCT SIZE | MODEL | CFM/STATIC PRESSURE | OPER. FAN (RPM) | NOTES |
| EF-1.1 EF-1.2 | CHILDREN WASHROOMS | GREENHECK | CEILING MTD. | 120V/1/60 1,70A 128 MAX INPUT WATTS | 6" | SP-B150 | 155 CFM @ 0.125" WG | 1050 | c/w BACKDRAFT DAMPER, DISCONNECT, MOUNTING BRACKETS, CONTROLLED BY OCCUPANCY SENSOR. |
| EF-2.1 TO EF-2.5 | STAFF WASHROOMS JANITOR ROOM B.F WASHROOM | GREENHECK | CEILING MTD. | 120V/1/60 | 6" | SP-LP0511-1 | 55 CFM @ 0.125" WG | 685 | c/w BACKDRAFT DAMPER, DISCONNECT, MOUNTING BRACKETS, CONTROLLED BY OCCUPANCY SENSOR. |

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| | ISSUED FOR ADDENDUM 1 | 2025.01.23 | CSM |
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| 0 | ISSUED FOR PERMIT AND TENDER | 2025.01.14 | CSM |
| NO. | DESCRIPTION | DATE | BY |

REVISIONS

Kirkland Engineering Ltd. BCIN: 28857

REGISTERED PROFESSIONAL ENGINEER
C.S.MULLER
100572425
JUN 23 2025
PROVINCE OF ONTARIO
MECHANICAL

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PROJECT

SAINT ALBANS NURSERY
TWO CHILDCARE
RENOVATIONS
567 Monaghan Road
Peterborough, ON.

TITLE

MECHANICAL
SPECIFICATIONS

| | | |
|----------|------|--------------|
| DESIGN | CSM | SCALE N.T.S. |
| DRAWN | KCS | DWG NO. |
| CHECKED | CRM | |
| APPROVED | CRM | |
| PROJECT | 7465 | |

M4

CADD FILE NO. 7465M4