TTLB v2020.10.21

TITLEBLOCK 24x36 VERT ENG

PLUMBING SPECIFICATIONS:

1. ALL PLUMBING PRODUCTS SHALL BE "LEAD-FREE" CERTIFIED TO ANSI/NSF 372.
2. ALL NEW ABOVE GROUND WATER PIPING SHALL BE TYPE 'L' HARD COPPER, CERTIFIED TO ASTM B88, WITH SOLDER JOINTS.
3. DRAINAGE SYSTEM (ABOVE GROUND):
   - .1 2-1/2"(63mm) AND OVER - CAST IRON MJ PIPE WITH MJ FITTINGS AND STAINLESS STEEL CLAMPS.
   - .2 2"(50mm) AND UNDER - COPPER DWV PIPE WITH WROUGHT COPPER SOLDER FITTINGS OR IPEX XFR OR PVC DWV.
4. DRAINAGE SYSTEM (UNDERGROUND):
   - .1 PIPE UP TO AND INCLUDING 75mm(3") SHALL BE:
     - .1 ULC CERTIFIED PVC 40 DWV PIPE TO CAN/CSA B181.2 COMPLETE WITH PVC DWV FITTINGS TO CAN/CSA B181.2 WITH SOLVENT WELD JOINT.
   - .2 PIPE 75mm(3") UP TO AND INCLUDING 100mm(4") SHALL BE:
     - .1 ULC CERTIFIED PVC 40 DWV PIPE TO CAN/CSA B181.2 COMPLETE WITH PVC DWV FITTINGS TO CAN/CSA B181.2 WITH SOLVENT WELD JOINT, OR
     - .2 ULC CERTIFIED PVC SDR 28/35 BDS PIPE TO CAN/CSA B182.1 COMPLETE WITH PVC BDS FITTINGS TO CAN/CSA B182.2 WITH SOLVENT WELD JOINTS.
   - .3 PIPE 125mm(5") AND UP SHALL BE:
     - .1 ULC CERTIFIED PVC SDR 28/35 SEWER PIPE TO CAN/CSA B182.2 COMPLETE WITH PVC FITTINGS TO CAN/CSA B182.2 WITH RING GASKET JOINTS.
5. VENTS PASSING THROUGH ROOF SHALL USE HEAVY GAUGE, SEAMLESS, SPUN ALUMINUM PRE-INSULATED, VANDAL PROOF VENT FLASHING AS SUPPLIED BY NATIONAL ROOFING SUPPLY OR THALER METAL.
6. ALL NEW PIPE HANGERS SHALL BE:
   - .1 EPOXY COATED CLEVIS TYPE WITH THREADED SUSPENSION RODS WHERE HANGER DIRECTLY TOUCHES PIPING.
   - .2 ADJUSTABLE WROUGHT IRON CLEVIS TYPE AND/OR ADJUSTABLE RING WITH THREADED SUSPENSION RODS WHERE HANGERS WRAP AROUND OUTSIDE OF PIPE INSULATION. PROVIDE SADDLES TO PREVENT CRUSHING OF INSULATION.EXCEPT FOR SIZES LESS THAN/EQUAL TO 1-1/4"Ø. INSULATION CAN WRAP AROUND HANGERS.
   - .3 PIPE HANGER SPACING
     - -SIZES UP TO 1-1/4"(32mm) = 8'(2.5m) SPACING
     - -SIZES 1-1/2"(38mm) TO 2"(50mm) = 10'(3m) SPACING
     - -SIZES 2-1/2"(63mm) AND OVER = 12'(3.5m) SPACING
   - .4 PROVIDE HANGER WITHIN 12"(300mm) OF EVERY ELBOW
7. PROVIDE A SUPPLY SHUT OFF VALVE ON HOT, COLD AND/OR TEMPERED WATER SUPPLY TO EACH FIXTURE. SUPPLY SHUT OFF SHALL BE EQUAL TO MCGUIRE H165. ALL VALVES SHALL BE LINE SIZE.
8. BALL VALVES SHALL BE LEAD FREE WITH SOLDERED OR THREADED ENDS. BALL VALVES SHALL BE EQUAL TO KITZ #858 & #859. ALL VALVES SHALL BE LINE SIZE.
9. CHECK VALVES SHALL BE LEAD FREE. CHECK VALVES 2" AND SMALLER SHALL BE EQUAL TO KITZ #822 & #823 WITH SOLDER OR THREADED ENDS. 2-1/2" AND LARGER CHECK VALVES SHALL BE EQUAL TO KITZ #150UOAM WITH FLANGED ENDS. ALL VALVES SHALL BE LINE SIZE.
10. FLEXIBLE SUPPLIES ARE NOT ACCEPTABLE FOR FLUSH TANK TOILETS OR ANY EXPOSED INSTALLATION, WHERE SUPPLIES ARE INSTALLED UNDER COUNTER OR BEHIND SHROUDS FLEXIBLE SUPPLIES ARE ACCEPTABLE.
11. REFER TO PLUMBING FIXTURE SPECS INCLUDING FIXTURES, TRAP SEAL PRIMERS, WATER HAMMER ARRESTORS, ACCESS DOORS, ETC.
12. INSULATION:
    - .1 EXTERNAL PIPE INSULATION SHALL BE RIGID, SECTIONAL FIBERGLASS TYPE AND BE COMPLETE WITH FACTORY APPLIED ALL PURPOSE VAPOUR BARRIER. PRE-FORMED INSULATION SHALL BE USED AT PIPE FITTINGS, VALVES, ETC. PROVIDE NON-CRUSHING INSULATION AT ALL PIPE HANGERS AND PROVIDE SADDLES.
    - .2 INSULATE DCW, DHW AND DTW PIPING.
    - .3 INSULATE VENT LINES 1.5m BACK FROM ROOF.
    - .4 INSULATION THICKNESS: 1"(25mm)
13. ACCESS DOORS/COVERS
    - .1 FLUSH ACCESS DOOR - UNIVERSAL: ACUDOR #UF-5000 UNIVERSAL ACCESS DOORS, 14 GA. (1.7mm) STEEL, BAKED ENAMEL PRIME COAT, CONTINUOUS CONCEALED HINGE, WITH POSITIVE AND SELF-OPENING SCREWDRIVER OPERATED LOCK. DOORS IN WASHROOMS SHALL BE STAINLESS STEEL. ALL OTHER PANELS SHALL BE BAKED ENAMEL PRIME COATED FOR FIELD PAINTING. MINIMUM SIZE OF PANELS SHALL BE 12"x18" (300mmx450mm). WHEREVER POSSIBLE 24"x24" (600mmx600mm) PANELS SHALL BE USED.
    - .2 RECESSED ACCESS DOOR - DRYWALL AREA: ACUDOR #DW-5015 SERIES RECESSED ACCESS DOOR, 16 GA. (1.5mm) STEEL, BAKED ENAMEL PRIME COAT, WITH CONCEALED PIVOTING ROD TYPE HINGE AND SELF-OPENING SCREWDRIVER OPERATED LOCK. DOOR TO BE RECESSED 5/8" (14mm) TO RECEIVE DRYWALL. FLANGE OF DOOR TO BE GALVANIZED STEEL FOR FIELD PAINTING TAPING BEADING TO PROVIDE FINISH OF DRYWALL JOINTS.

HVAC MATERIAL SPECIFICATIONS:

1. DUCTWORK:
   - .1 IN CONFORMANCE WITH SMACNA, ASHRAE, OBC, NFPA 90A.
   - .2 SHEET METAL SHALL BE BEST QUALITY LOCK FORMING GALVANIZED SHEET METAL. GALVANIZING SHALL BE TO ASTM A525 (G90), HAVING A THICKNESS OF 0.054 MM AND WEIGHING NOT LESS THAN 0.31 KG/M2 ON EACH SURFACE.
   - .3 PROVIDE INSTRUMENT TEST PORTS IN DUCTS FOR PITOT TUBE INSERTION WITH CAM-ACTION HANDLE, MOULDED NEOPRENE GASKET AND EXPANSION PLUG, ZINC COATED STEEL CONSTRUCTION.
   - .4 ALL ROUND DUCTWORK SHALL BE SPIRAL.
2. DUCT ACCESS DOORS
   - .1 DUCT ACCESS DOORS SHALL BE EQUAL TO NAILOR 085CL(SQUARE) 0R 0800(OVAL). REFER TO DETAIL.
3. REFRIGERATION PIPING:
   - .1 TYPE ACR COPPER, CERTIFIED TO ASTM B280, WITH BRAZED JOINTS.
   - .2 PROVIDE P-TRAP AT UNIT, SHUT OFF VALVE, FILTER DRYER, REPLACEMENT CARTRIDGE AND TYPE, AND SIGHT GLASS AT THE CONDENSER. MAKE OIL ADJUSTMENT AS REQUIRED TO SUIT LENGTH OF REFRIGERATION PIPING.
   - .3 FOR REFRIGERATION SYSTEMS LARGER THAN 3 TONS OF COOLING OR AIR CONDITIONING SYSTEMS LARGER THAN 5 TONS, CONTRACTOR SHALL SUPPLY A TSSA CERTIFICATE ON COMPLETION OF INSTALLATION AND PROVIDE TO CONSULTANT.
   - .4 PROVIDE 1"(25mm) INSULATION ON ALL INDOOR & OUTDOOR REFRIGERATION PIPING. SUCTION AND LIQUID LINES SHALL BOTH BE INSULATED OUTSIDE OF BUILDING.
   - .5 PROVIDE UV RESISTANT ALUMINUM JACKET ON OUTDOOR REFRIGERATION PIPING EQUAL TO "3M VENTURECLAD".
4. HOT WATER HEATING PIPING:
   - .1 PIPING UP TO INCLUDING 2"(50mm): PIPING SHALL BE BLACK STEEL SCHEDULE 40 WITH MALLEABLE STEEL THREADED SCREW FITTINGS OR COPPER WITH SOLDER JOINTS.
   - .2 PIPING 2-1/2"(63mm) AND OVER: PIPING SHALL BE BLACK STEEL SCHEDULE 40 WITH WELDED FITTINGS.
   - .3 BRASS ADAPTERS SHALL BE PROVIDED AT ALL CONNECTIONS BETWEEN COPPER TUBING AND FERROUS PIPING.
   - .4 PROVIDE AUTOMATIC AIR VENTS C/W BALL VALVE AT ALL HIGH POINTS. REFER TO SPECIFICATIONS BELOW.
   - .5 PROVIDE DRAIN VALVES C/W HOSE CONNECTION AND CAP AT ALL LOW POINTS AND AS NOTED ON DETAILS.
   - .6 ALLOW FOR ANY CHEMICAL TREATMENT OR GLYCOL FILL TO BRING SYSTEM TO ACCEPTABLE LEVELS AND SUBMIT REPORTS.
5. PIPE HANGERS:
   - .1 ADJUSTABLE WROUGHT IRON CLEVIS TYPE AND/OR ADJUSTABLE RING WITH THREADED SUSPENSION RODS.
   - .2 FOR COPPER PIPING (INCLUDING PIPING WITHIN WALLFIN ENCLOSURE) PROVIDE COPPER PLATED OR EPOXY TYPE HANGERS OR PROVIDE SEPARATION OF DISSIMILAR METALS WITH APPROVED DIELECTRIC MATERIALS. INSULATING TAPE IS NOT ACCEPTABLE.
   - .3 WHERE HANGERS WRAP AROUND OUTSIDE OF PIPE INSULATION, PROVIDE SADDLES TO PREVENT CRUSHING OF INSULATION.
   - .4 PIPE HANGER SPACING
     - -SIZES UP TO 1-1/4"(32mm) = 8'(2.5m) SPACING
     - -SIZES 1-1/2"(38mm) TO 2"(50mm) = 10'(3m) SPACING
     - -SIZES 2-1/2"(63mm) AND OVER = 12'(3.5m) SPACING
   - .5 PROVIDE HANGER WITHIN 12"(300mm) OF EVERY ELBOW
6. VALVES AND ACCESSORIES:
   - .1 ALL VALVES SHALL BE LINE SIZED UNLESS OTHERWISE NOTED. (CBVs GENERALLY NOT LINE SIZE).
   - .2 CIRCUIT BALANCING VALVES SHALL BE IMI TA STAS/STAD/STAF SERIES (NO ALTERNATES ACCEPTABLE). MOUNT WITH PORTS UPRIGHT OR AT LEAST 90° UP FROM BOTTOM. SUBMIT SHOP DRAWINGS COMPLETE WITH VALVE SIZING SCHEDULE.
   - .3 BALL VALVES SHALL BE EQUAL TO KITZ 58 & 59.
   - .4 BUTTERFLY VALVES SHALL BE EQUAL TO KITZ #6122 OR #6141.
   - .5 AUTOMATIC AIR VENTS SHALL BE EQUAL TO:
     - -WALLFINS, CONVECTORS, RADS: "MAID-O-MIST" #67 COMPLETE WITH BALL VALVE
     - -PIPE MAINS & LINES, MECHANICAL ROOMS, EQUIPMENT, COILS, CEILING SPACES AND ALL OTHER SPACES EXCEPT NOTED ABOVE: "MAID-O-MIST" #71 COMPLETE WITH BALL VALVE
7. WATER TREATMENT:
   - .1 ALLOW FOR CHEMICAL TREATMENT TO BRING SYSTEM TO ACCEPTABLE LEVELS AND SUBMIT REPORTS.
   - .2 OBTAIN THE SERVICES OF MK SERVICES FOR ALL WATER TREATMENT.
8. DUCT INSULATION:
   - .1 ACOUSTIC DUCT INSULATION
     - .1 FIBERGLASS INSULATION, COATED TO PREVENT FIBRE EROSION AT AIR VELOCITIES UP TO 400 fpm.
     - .2 ALL SUBSTRATE MATERIAL TO BE NON-DARKENED, CONTRASTING COLOUR FROM LINER LAYER.
     - .3 THICKNESS: 1" (25mm)
   - .2 THERMAL DUCT INSULATION
     - .1 INSULATION SHALL BE PRECOVERED, PREFORMED RIGID FIBROUS GLASS INSULATION COMPLETE WITH FOIL OR KRAFT ALL-PURPOSE JACKET.
     - .2 0.75 PCF (12 kg/m³) DENSITY, 0.29 K-VALUE WITH 25/50 FLAME SPREAD/SMOKE DEVELOPMENT CLASSIFICATION IN ACCORDANCE WITH CAN/ULC S102.
     - .3 SUPPLY, RETURN AND EXHAUST DUCT APPLICATION THICKNESS: 1" (25mm) MINIMUM.
     - .4 OUTDOOR AIR INTAKE DUCT APPLICATION THICKNESS: 2"(50mm) MINIMUM
     - .5 RECOVERING JACKETS (INTERIOR): ULC LISTED "THERMO CANVAS", TREATED COTTON FABRIC.
9. PIPE INSULATION:
   - .1 PROVIDE 1-1/2"(38mm) PIPE INSULATION ON ALL HEATING PIPING SIZES UP TO AND INCLUDING 1-1/4"(32mm)
   - .2 PROVIDE 2"(50mm) PIPE INSULATION ON ALL HEATING PIPING SIZES 1-1/2"(38mm) AND OVER
   - .3 PROVIDE 1"(25mm) PIPE INSULATION ON ALL VENT PIPING 10'(3m) BACK FROM ROOF
   - .4 EXTERNAL PIPE INSULATION SHALL BE RIGID, SECTIONAL FIBERGLASS TYPE AND BE COMPLETE WITH FACTORY SUPPLIED ALL PURPOSE VAPOUR BARRIER. PRE-FORMED INSULATION SHALL BE USED AT PIPE FITTINGS, VALVES, ETC. PROVIDE NON-CRUSHING INSULATION AT ALL PIPE HANGERS AND PROVIDE SADDLES.
   - .5 PROVIDE PVC JACKET ON ALL INSULATION IN EXPOSED AREAS.
10. GAS PIPING
    - .1 ALL GAS PIPING SHALL BE INSTALLED IN ACCORDANCE WITH CSA B149.1:20 AND APPLICABLE TSSA CODE ADOPTION DOCUMENTS.
    - .2 ABOVE GROUND GAS PIPING SHALL BE ASTM A53 SCHEDULE 40 SEAMLESS WROUGHT STEEL WITH STANDARD THREADED MALLEABLE FITTINGS TO ANSI B16.3 (SIZE 2"(50mm) AND SMALLER). PAINT INDOOR PIPING WITH 2 COATS OF YELLOW PAINT IN ACCORDANCE WITH CODE. ALL OUTSIDE PIPING AND SUPPORTS SHALL BE PAINTED WITH 2 COATS OF WEATHERPROOF YELLOW PAINT. ALL PIPING TO BE LABELED WITH SERVICE PRESSURE.
    - .3 GAS PIPING ROOF SUPPORTS SHALL BE RUBBER BLOCKS EQUAL TO COOPER B-LINE.
11. ACCESS DOORS/COVERS
    - .1 FLUSH ACCESS DOOR - UNIVERSAL: ACUDOR #UF-5000 UNIVERSAL ACCESS DOORS, 14 GA. (1.7mm) STEEL, BAKED ENAMEL PRIME COAT, CONTINUOUS CONCEALED HINGE, WITH POSITIVE AND SELF-OPENING SCREWDRIVER OPERATED LOCK. DOORS IN WASHROOMS SHALL BE STAINLESS STEEL. ALL OTHER PANELS SHALL BE BAKED ENAMEL PRIME COATED FOR FIELD PAINTING. MINIMUM SIZE OF PANELS SHALL BE 12"x18" (300mmx450mm). WHEREVER POSSIBLE 24"x24" (600mmx600mm) PANELS SHALL BE USED.
    - .2 RECESSED ACCESS DOOR - DRYWALL AREA: ACUDOR #DW-5015 SERIES RECESSED ACCESS DOOR, 16 GA. (1.5mm) STEEL, BAKED ENAMEL PRIME COAT, WITH CONCEALED PIVOTING ROD TYPE HINGE AND SELF-OPENING SCREWDRIVER OPERATED LOCK. DOOR TO BE RECESSED 5/8" (14mm) TO RECEIVE DRYWALL. FLANGE OF DOOR TO BE GALVANIZED STEEL TAPING BEADING TO PROVIDE FINISH OF DRYWALL JOINTS FOR FIELD PAINTING.

HVAC NOTES:

1. CONCEAL ALL SERVICES IN CEILING SPACES AND FURRED CONSTRUCTION UNLESS INSTALLED IN UNFINISHED OR EXPOSED AREAS OR IF SPECIFICALLY NOTED TO BE EXPOSED.
2. ALL GAS PIPING WORK TO BE COMPLETED BY A TSSA CERTIFIED GAS FITTER WITH THE COMMENSURATE CLASSIFICATION FOR THE SYSTEM / APPLIANCE CAPACITY.
3. COORDINATE INSTALLATION WITH ALL OTHER TRADES.
4. REFER TO REFLECTED CEILING PLAN TO CONFIRM EXACT LOCATION OF GRILLES AND DIFFUSERS. LIGHTING TAKES PRECEDENCE.
5. PROVIDE ACOUSTIC INSULATION IN ALL TRANSFER DUCTS AND AS INDICATED ON DRAWINGS. SEAL ALL EXPOSED ENDS OF INSULATION.
6. PROVIDE TURNING VANES IN ALL SQUARE ELBOWS AND SHORT RADIUS ELBOWS FOR SUPPLY AIR DUCTS.
7. TEMPORARILY SEAL ALL OPEN DUCTS THROUGHOUT CONSTRUCTION TO PREVENT DUST AND DIRT FROM ENTERING THE SYSTEM. WHERE THE CONTRACTOR DOES NOT CONFORM THEY ARE RESPONSIBLE FOR CLEANING OF THE SYSTEMS IN A MANNER APPROVED BY THE CONSULTANT.
8. SEAL ALL JOINTS ON ALL SUPPLY & RETURN AIR DUCTS WITH DURODYNE DUCT SEALER IN CONFORMANCE TO CLASS 'C' ASHRAE 90.1 AND SMACNA STANDARDS. USE CLEAR DUCT SEALER OR SEAL BEHIND JOINTS FOR ALL EXPOSED DUCTWORK.
9. BRANCH DUCTWORK TO DIFFUSERS TO BE SAME SIZE AS DIFFUSER NECK.
10. PROVIDE BALANCE DAMPERS ON ALL BRANCH DUCTS CLOSE TO MAIN TAKE-OFF. REVIEW WITH BALANCING CONTRACTOR TO CONFIRM LOCATIONS OF ALL BALANCE DAMPERS PRIOR TO CONSTRUCTION.
11. FLEXIBLE DUCT SHALL ONLY BE USED IN SUPPLY AIR APPLICATIONS FOR CONNECTIONS TO DIFFUSERS IN DROPPED CEILING. FLEXIBLE DUCT SHALL BE MAXIMUM 6' (1.8m) IN LENGTH AND SHALL BE SECURELY FASTENED TO DUCTS AND DIFFUSERS. PROVIDE HANGERS AND FLEXIBLE DUCTWORK WITHOUT SHARP 90ºs, SAGGING, OR CRUSHING OF DUCT. FLEXIBLE DUCT IS NOT ACCEPTABLE IN ANY OTHER APPLICATION.
12. PROVIDE EXTERNAL INSULATION ON ALL SUPPLY AIR DUCTS, ALL OUTSIDE AIR DUCTS AND ON ALL EXHAUST DUCTS WITHIN 8' (2.4m) OF OUTSIDE WALL/ROOF INCLUDING RIGID AND FLEXIBLE DUCT.
13. CONFIRM EXACT LOCATIONS OF SENSORS WITH ENGINEER AND OWNER. MOUNT SENSORS AT 59" (1500mm) AFF. ENSURE THAT SENSOR LOCATIONS WILL NOT BE AFFECTED BY DIRECT SUNLIGHT, COLD WALLS OR MILLWORK.
14. ALL INDOOR CONTROL WIRING SHALL BE RUN IN EMT CONDUIT OR FT6 (EMT SHALL BE USED IN EXPOSED AREAS). LAST 3' SHALL BE BX WHEN USING CONDUIT. ALL OUTDOOR CONTROL WIRING SHALL BE RUN IN LIQUIDTIGHT. ALL CONTROL WIRING SHALL RUN PARALLEL TO BUILDING LINES AND TIGHT TO ROOF DECK OR WALLS. ALL CONTROL WIRING PASSING THROUGH WALLS SHALL BE RUN IN EMT CONDUIT C/W BUSHINGS AT EACH END.
15. PROVIDE SLEEVES FOR PIPES THROUGH ALL NEW BLOCK WALLS. FILL VOIDS AROUND PIPES. ENSURE NO CONTACT BETWEEN DISSIMILAR METALS.
16. SUPPLY DRYWALL ACCESS DOORS FOR CONCEALED FIRE AND BALANCE DAMPERS AND ANY OTHER CONCEALED DEVICES AND TURN OVER TO THE GENERAL CONTRACTOR FOR INSTALLATION. DOORS TO BE GALVANIZED STEEL FOR FIELD PAINTING. DOORS SHALL BE RATED WHERE INSTALLED IN FIRE SEPARATIONS.
17. DRAIN HEATING SYSTEMS AS REQUIRED FOR NEW WORK. FILL, FLUSH, TEST AND TREAT (CHEMICAL TREATMENT) AFTER WORK IS COMPLETE. PROVIDE ALL PORTS, VALVES AND GAUGES AS REQUIRED. SUBMIT CHEMICAL TREATMENT REPORT TO ENGINEER. FREEZING OF PIPING TO ALLOW ISOLATION OF WORK AREA IS ACCEPTABLE IN LIEU OF DRAINING.
18. ALL CBVs SHALL BE MOUNTED WITH PORTS IN HORIZONTAL (90°) POSITION.
19. PROVIDE EXTERNAL INSULATION ON ALL HEATING PIPING EXCEPT IN WALLFIN ENCLOSURES.
20. PROVIDE FIRE STOPPING AROUND ALL NEW PIPING THROUGH FIRE SEPARATIONS IN ACCORDANCE WITH CAN/ULC-S115.
21. LABEL ALL EXISTING AND NEW HEATING PIPING IN AREAS OF WORK COMPLETE WITH FLOW ARROWS. LABELS SHALL BE MAX 3m(10') SPACING AND ON EITHER SIDE OF WALLS. LABELING MUST BE COMPLETE PRIOR TO NEW CEILING BEING INSTALLED OTHERWISE IT IS THE CONTRACTORS RESPONSIBILITY TO REMOVE CEILING TILES FOR INSPECTION AT THE DIRECTION OF THE CONSULTANT.
22. LABEL CEILING TILE WITH PERMANENT ADHESIVE LABELS OR LAMACOID NAMEPLATES FOR ACCESS TO MECHANICAL ITEMS.
23. OBTAIN THE SERVICES OF A NEBB, CAABC OR NBCTA ACCREDITED BALANCING COMPANY TO BALANCE THE COMPLETE HVAC SYSTEM. PROVIDE REPORT TO ENGINEER FOR REVIEW. REFER TO SPECIFICATIONS FOR APPROVED AGENTS.
24. PROVIDE TESTING AND STARTUP OF ALL NEW EQUIPMENT AND PROVIDE REPORTS TO THE ENGINEER FOR REVIEW.

PLUMBING NOTES:

1. PROVIDE BEFORE AND AFTER SCOPING/FLUSHING.
2. PROVIDE CLEANOUTS AS REQUIRED BY CODE. SIZE OF CLEANOUTS TO BE SAME SIZE AS SANITARY LINES.
3. PROVIDE ALL TRENCHING, EXCAVATING AND BACKFILL FOR UNDERGROUND PLUMBING. ALL SAW CUTTING AND RESTORATION OF CONCRETE FLOOR IS BY GENERAL CONTRACTOR. COORDINATE WITH SAME.
4. PROVIDE NEW PLUMBING VENTS THROUGH SECOND FLOOR AND THROUGH ROOF AS REQUIRED BY CODE OR TIE INTO EXISTING WHERE POSSIBLE. SUPPLY AND INSTALL ROOF VENTS AS PER SPECIFICATIONS. ALL ROOFING WORK INCLUDING CUTTING, FLASHING AND MODIFICATIONS TO ROOF MEMBRANE SHALL BE BY GENERAL CONTRACTOR. COORDINATE WITH SAME.
5. PROVIDE ISOLATION VALVES AT ALL FIXTURES.
6. INSULATE ALL NEW DOMESTIC HOT, COLD AND TEMPERED WATER PIPING WITH 1"(25mm) INSULATION. PROVIDE PVC JACKET OVER INSULATION IN EXPOSED AREAS.
7. PROVIDE SLEEVES FOR PIPES THROUGH ALL NEW BLOCK WALLS. FILL VOIDS AROUND PIPES. ENSURE NO CONTACT BETWEEN DISSIMILAR METALS.
8. PROVIDE FIRE STOPPING AROUND ALL PIPING THROUGH FIRE SEPARATIONS IN ACCORDANCE WITH CAN/ULC-S115.
9. COORDINATE EXACT LOCATION OF NEW FLOOR DRAINS WITH GENERAL CONTRACTOR TO SUIT FLOOR SLOPE.
10. PROVIDE TRAP SEAL PRIMER FOR ALL FLOOR DRAINS USING PRIMER SPECIFIED IN PLUMBING FIXTURE SCHEDULE. PRIMERS SHALL BE CONCEALED. MOUNT IN CEILING SPACE AND RUN LINE CONCEALED DOWN WALL AND UNDER FLOOR TO DRAIN.
11. LABEL ALL NEW PIPING IN AREAS OF WORK COMPLETE WITH SERVICE AND FLOW ARROWS. LABELS SHALL BE MAX 3m(10') SPACING AND ON EITHER SIDE OF WALLS.
12. SUPPLY ACCESS DOORS WHERE REQUIRED AND TURN OVER TO GENERAL CONTRACTOR FOR INSTALLATION. REFER TO PLUMBING FIXTURE SCHEDULE.
13. PROVIDE ESCUTCHEONS AROUND WATER AND SANITARY PIPING THROUGH WALL, FLOOR OR MILLWORK AT ALL FIXTURES.
14. LABEL CEILING GRID AT ACCESS TO ALL DEVICES.
15. FLUSH AND PERFORM A VIDEO INSPECTION OF ALL UNDERGROUND PIPING SYSTEMS AFTER CONSTRUCTION AND IMMEDIATELY PRIOR TO APPLYING FOR SUBSTANTIAL COMPLETION.

GENERAL NOTES:

1. WORK TO BE COMPLETED OUTSIDE REGULAR HOURS:
   - .1 ANY WORK THAT CREATES DISRUPTION TO REGULAR SCHOOL OR OCCUPANT ACTIVITIES AND OPERATIONS SHALL BE DONE OUTSIDE OF REGULAR BUSINESS SCHOOL HOURS. THIS INCLUDES BUT IS NOT LIMITED TO SERVICE INTERRUPTIONS, WORK THAT GENERATES NOISE, WORK THAT GENERATES VIBRATIONS, WORK THAT GENERATES FUMES/SMELLS, ETC.
   - .2 ANY WORK INSIDE OR OUTSIDE, THAT CREATES RISK TO BUILDING OCCUPANTS SHALL BE DONE OUTSIDE OF REGULAR SCHOOL HOURS.
   - .3 ANY WELDING SHALL BE DONE OUTSIDE REGULAR SCHOOL HOURS.
2. OBTAIN, ARRANGE AND PAY FOR ALL REQUIRED PERMITS AND INSPECTIONS.
3. THE CONTRACTOR AND ITS SUB-TRADES SHALL ATTEND BI-WEEKLY SITE MEETINGS OR AS ARRANGED BY CONSULTANT OR OWNER.
4. OBTAIN AND REVIEW THE DESIGNATED SUBSTANCE REPORT FROM THE CLIENT AND COORDINATE ANY DESIGNATED SUBSTANCE ISSUES WITH THE CLIENT PRIOR TO ANY WORK BEING DONE.
5. PROVIDE SHOP DRAWINGS ELECTRONICALLY IN PDF FORMAT TO CONSULTANT FOR REVIEW. ALL SHOP DRAWINGS MUST BE REVIEWED, STAMPED AND SIGNED BY THE MECHANICAL CONTRACTOR PRIOR TO SUBMITTING TO THE CONSULTANT. REVIEW SHALL INCLUDE BUT NOT BE LIMITED TO: VERIFYING UNIT VOLTAGE WITH ELECTRICIAN AND/OR SITE, EQUIPMENT PERFORMANCE, DIMENSIONS AND CLEARANCES.
6. THOROUGHLY REVIEW AND COORDINATE WITH SITE CONDITIONS AND COMPLETE DRAWING SET PRIOR TO PRICING AND INSTALLATION.
7. INSTALL ALL WORK IN CONFORMANCE WITH MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS.
8. DO NOT USE ANY NEW PERMANENT EQUIPMENT FOR TEMPORARY USE DURING CONSTRUCTION WITHOUT WRITTEN APPROVAL. WHERE SYSTEMS ARE USED AND ARE CONTAMINATED BY DUST OR DIRT, THE CONTRACTOR SHALL CLEAN IN A MANNER ACCEPTABLE TO THE CONSULTANT.
9. MAINTAIN AS-BUILT DRAWINGS ON AN ON-GOING BASIS. DRAWINGS SHALL BE AVAILABLE FOR PERIODIC REVIEW BY THE CONSULTANT DURING CONSTRUCTION.
10. ALL WORK SHALL COMPLY WITH APPLICABLE CODES.
11. REMOVE ALL REDUNDANT EQUIPMENT, MATERIALS AND GARBAGE FROM SITE AND DISPOSE OF IN AN APPROVED MANNER. REDUNDANT EQUIPMENT AND MATERIALS SHALL NOT BE ABANDONED IN PLACE.
12. ALL CUTTING AND CORING SHALL BE BY THIS CONTRACTOR. COORDINATE PATCHING WITH GENERAL CONTRACTOR. TRENCHING, EXCAVATION AND BACKFILL FOR UNDERGROUND PLUMBING SHALL BE BY THIS CONTRACTOR. ALL SAW CUTTING AND RESTORATION OF CONCRETE FLOOR BY GENERAL CONTRACTOR. COORDINATE WITH SAME.
13. COORDINATE ROOFING FOR DUCT AND PIPE ROOF PENETRATIONS WITH GENERAL CONTRACTOR. PROVIDE PITCH POCKETS FOR ALL SERVICES THROUGH ROOF UNLESS SERVICES CAN BE FED THROUGH BASE OF EQUIPMENT.
14. MAINTAIN REQUIRED ACCESS AND CLEARANCE TO ALL EQUIPMENT AND SYSTEMS AS REQUIRED BY CODE AND AS PER MANUFACTURER'S REQUIREMENTS.
15. TAG ALL EQUIPMENT WITH LAMACOID NAMEPLATES. TAG ALL VALVES WITH LAMACOID NAMEPLATES OR BRASS TAGS ON CHAINS.
16. LABEL ALL EXISTING AND NEW PIPING IN AREA OF WORK WITH SERVICE AND FLOW ARROWS EVERY 10'(3m) AND ON EITHER SIDE OF WALLS.
17. THE CONTRACTOR SHALL ARRANGE FOR INSPECTIONS BY THE ENGINEER PRIOR TO CEILINGS AND WALLS BEING CLOSED IN. WHERE THIS HAS NOT BEEN ARRANGED IT IS THE CONTRACTOR'S RESPONSIBILITY TO REMOVE CEILING TILES OR ACCESS DOORS FOR INSPECTION AT THE DIRECTION OF THE CONSULTANT. THE CONTRACTOR SHALL ARRANGE FOR ROUGH-IN INSPECTIONS BY THE ENGINEER PRIOR TO INSULATING OR CONCEALING ANYTHING. WHERE THIS HAS NOT BEEN ARRANGED IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXPOSE SERVICES FOR INSPECTION AT THE DIRECTION OF THE CONSULTANT.
18. PERFORM TESTING AND START UP OF ALL SYSTEMS AS REQUIRED BY CODE, THE CONSULTANT, MANUFACTURER'S REQUIREMENTS, AND AUTHORITIES HAVING JURISDICTION. SUBMIT REPORTS TO THE CONSULTANT.
19. INSTRUCT AND DEMONSTRATE TO THE OWNER ON PROPER OPERATION OF THE SYSTEM. RECORD AND SUBMIT A LOG DATED AND SIGNED BY ALL ATTENDEES.
20. UPON COMPLETION OF THE PROJECT THE CONSULTANT WILL DO A FINAL REVIEW. UPON RECEIVING THE FINAL INSPECTION REPORT, THE CONTRACTOR MUST CORRECT AND SIGN BACK THE INSPECTION REPORT INDICATING ALL DEFICIENCIES ARE COMPLETED. A RE-INSPECTION WILL ONLY BE DONE ONCE THE CONSULTANT RECEIVES THIS IN WRITING. WHERE THE CONSULTANT PERFORMS THE RE-INSPECTION AND THE WORK IS NOT COMPLETE, THE CONTRACTOR IS RESPONSIBLE FOR REIMBURSING THE CONSULTANT FOR THE FIELD REVIEW. THE FEE FOR ADDITIONAL REVIEWS WILL BE AT THE CONSULTANT'S HOURLY RATES PLUS MILEAGE AND APPLICABLE TAXES TO BE PAID DIRECTLY TO THE CONSULTANT PRIOR TO PERFORMING THE NEXT FIELD REVIEW.
21. PROVIDE ONE (1) YEAR WARRANTY ON ALL MATERIAL AND LABOUR FROM THE DATE OF SUBSTANTIAL COMPLETION.
22. PROGRESS DRAWS SHALL INCLUDE MINIMUM $1,500.00 FOR MANUALS AND AS-BUILT DRAWINGS. TOTAL AMOUNT SHALL REMAIN UNBILLED UNTIL MANUALS AND AS-BUILT DRAWINGS HAVE BEEN SUBMITTED AND APPROVED.
23. PROVIDE ONE(1) ELECTRONIC COPY OF MAINTENANCE MANUALS ON USB AND BY WEB TRANSFER. MANUAL SHALL INCLUDE:
    - TABLE OF CONTENTS
    - CONTRACTOR INFORMATION
    - WARRANTY LETTER
    - SHOP DRAWINGS
    - O&Ms
    - INSPECTION & TEST REPORTS
    - AS-BUILT DRAWINGS.

    AS-BUILT DRAWINGS SHALL INCLUDE COMPLETE MECHANICAL DRAWING SET WITH ANY CHANGES MARKED CLEARLY AND NEATLY IN COLOUR. AS-BUILTS SHALL BE STAMPED ACCORDINGLY BY THE CONTRACTOR (ALL DRAWINGS). DRAWINGS SHALL BE SUBMITTED IN FULL SIZE. SUBSTANTIAL COMPLETION WILL NOT BE AWARDED UNTIL THE MANUALS AND AS-BUILTS HAVE BEEN SUBMITTED TO THE CONSULTANT AND THE CONSULTANT HAS APPROVED.

BALANCING SPECIFICATIONS:

1. OBTAIN THE SERVICES OF A 3rd PARTY ACCREDITED BALANCING COMPANY TO BALANCE THE RENOVATED AIR AND WATER HVAC SYSTEM.
2. PROVIDE PRELIMINARY REPORT TO ENGINEER FOR REVIEW AND COMMENTS.
3. ALLOW FOR ONE FOLLOW-UP SITE VISIT FOR ADJUSTMENTS.
4. RETURN TO SITE FOR ANY ADJUSTMENTS AND SUBMIT FINAL REPORT TO ENGINEER AND CONTRACTOR. FOR INCLUSION INTO MAINTENANCE MANUAL.
5. ACCEPTABLE AGENTS:
   - .1 QUALITY AIR DISTRIBUTION INC
     CONTACT: MIKE NOONAN
     TEL: (289)892-7168
     EMAIL: mike@qualityairdistribution.com
   - .2 DESIGN TEST & BALANCE
     CONTACT: SURRINDER SINGH
     TEL: (905)886-6513
     EMAIL: mail@designtest.ca
   - .6 FLOWSET BALANCING
     CONTACT: CHRIS PITHER
     PHONE: (416)410-9793 OR (647)321-5114
     EMAIL: chrisp@flowset.com
   - .7 AIR FLOW TESTING AND BALANCING
     CONTACT: PAUL LIVIE
     PHONE: 613-372-2244 OR 613-876-9314
     EMAIL: airflowtesting@gmail.com
   - .8 COMPLETE SYSTEMS BALANCING
     CONTACT: TREVOR KELLY
     PHONE: 705-760-0390
     EMAIL: trevork@csbalancing.com

MECHANICAL LEGEND

	NEW
	EXISTING
	DEMOLITION
	SUPPLY DUCTS (UP / DOWN)
	RETURN DUCTS (UP / DOWN)
	EXHAUST DUCTS (UP / DOWN)
	ROUND DUCTS (UP / DOWN)
	FLEXIBLE DUCT
	ACOUSTIC LINED DUCT
	TURNING VANES
	BALANCE DAMPER
FD	FIRE DAMPER
SD	SPLITTER DAMPER
	SUPPLY DIFFUSER
	RETURN/EXHAUST CEILING GRILLE
S	BAS SPACE SENSOR
	DOMESTIC COLD WATER (DCW)
	DOMESTIC HOT WATER (DHW)
AS AS	ABOVEGROUND SANITARY LINE
S S	UNDERGROUND SANITARY LINE
	PLUMBING VENT
HS HS	HOT WATER HEATING SUPPLY (HS)
HR HR	HOT WATER HEATING RETURN (HR)
G-R G-R	GAS PIPING ON ROOF
R R	REFRIGERATION LINE
	ELBOW RISING
	ELBOW DROPPING
	BRANCH RISING FROM TEE
	BRANCH DROPPING FROM TEE
	SHUT-OFF BALL VALVE
	BUTTERFLY VALVE
	CHECK VALVE
	REDUCER
	STRAINER
	UNION
	BAS 2-WAY CONTROL VALVE
	CIRCUIT BALANCING VALVE (CBV)
AAV	AUTOMATIC AIR VENT C/W 1/4" BALL VALVE AND NIPPLE/COUPLING (MINI BALL VALVES NOT ACCEPTABLE)
TS	PIPE TEMPERATURE SENSOR C/W WELL
FD	FLOOR DRAIN
CO CO	STACK / FLOOR CLEANOUT
WC-1	FIXTURE TAG
TYPE / ID	EQUIPMENT SYMBOLS — TYPE OF EQUIPMENT NUMBER DESIGNATION
QTY TYPE / SIZE / AIR	GRILLE SYMBOLS — TYPE SIZE (mm) AIR FLOW (cfm)
QTY TYPE / SIZE-1 / SIZE-2 / CAPACITY	RADIATION SYMBOLS — TYPE FIN LENGTH (mm) ENCLOSURE LENGTH (mm) CAPACITY (MBH)

MECHANICAL ABBREVIATIONS

EX	EXISTING TO REMAIN
AFF	ABOVE FINISHED FLOOR
CTE	CONNECT TO EXISTING
C/W	COMPLETE WITH
U/S	UNDERSIDE
S/A	SUPPLY AIR
R/A	RETURN AIR
E/A	EXHAUST AIR
TMV	THERMOSTATIC MIXING VALVE
TSP	TRAP SEAL PRIMER

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No.	Date	Description	By
A	2025-12-22	ISSUED FOR PERMIT & TENDER	BRT

STAMPS:

LICENSED PROFESSIONAL ENGINEER
B. R. TIMSON
100511696
DEC 22/25
PROVINCE OF ONTARIO

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www.cima.ca

CLIENT:
BAYVIEW HEIGHTS PS
1400 GARVOLIN AVE PICKERING, ON L1W 1J6

PROJECT NAME:
Bayview Heights Public School - Elevator Renovation

SHEET TITLE:
LEGENDS & NOTES

DISCIPLINE:

DRAFTER: SR	SCALE: AS NOTED
DESIGNER: BRT	DATE: 2025-12-22
APPROVER: BRT	CHECKER: BRT
PROJECT No: A0001195	DRAWING No: M-001
SHEET No: 1 of 7	

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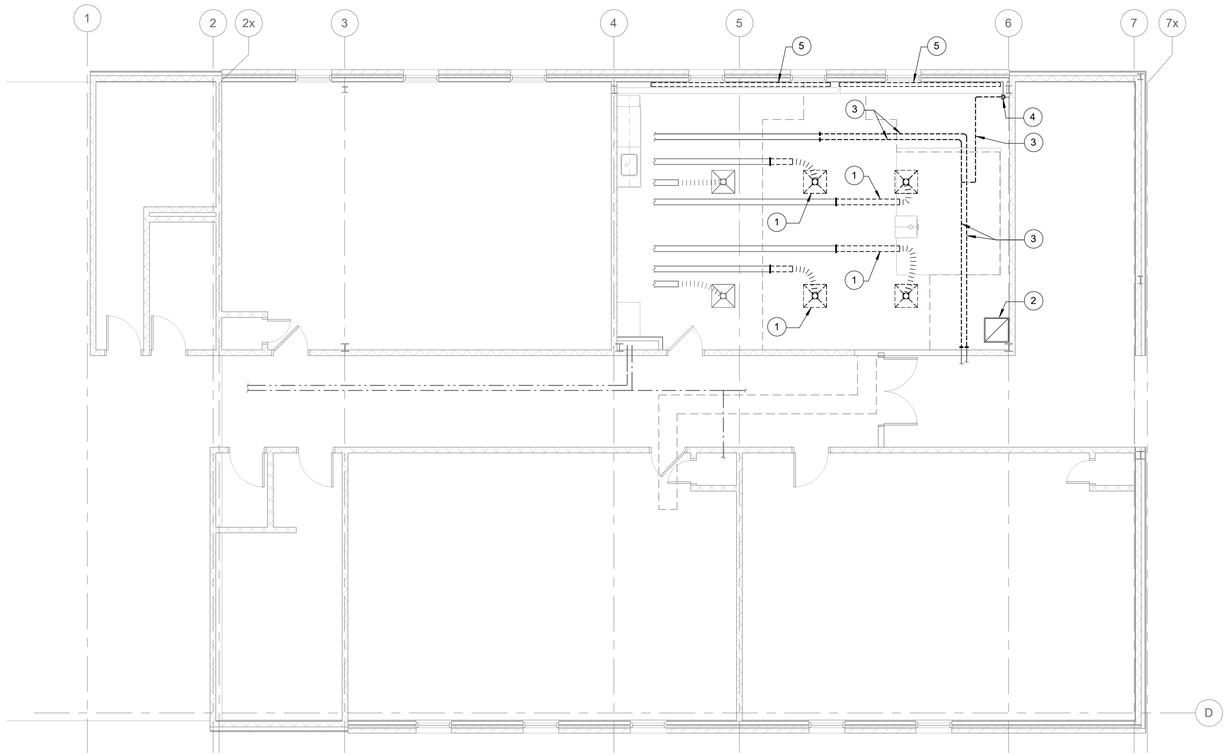

1 GROUND FLOOR - DEMOLITION MECHANICAL LAYOUT

SCALE: 1 : 75

GENERAL DEMOLITION NOTES:

1. THE CONTRACTOR SHALL ALLOW FOR DETAILED SITE INVESTIGATION TO CONFIRM ALL SERVICES PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
2. PRE-CONSTRUCTION PHOTOS: THE CONTRACTOR SHALL TAKE PHOTOS OF THE SITE, BUILDING, SERVICES AND FINISHES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. SUCH PHOTOS SHALL INCLUDE ALL AREAS THAT FORM A PART OF THE CONSTRUCTION, BOTH INTERIOR AND EXTERIOR, AND WILL PROVIDE RECORD OF THE GENERAL CONDITION OF THE SITE PRIOR TO CONSTRUCTION. PHOTOS SHALL BE SHARED WITH THE OWNER AND CONSULTANT PRIOR TO ANY CONSTRUCTION STARTING.
3. SCOPE/CAMERA EXISTING UNDERGROUND SANITARY AND STORM PIPING THROUGH WORK AREA TO CONFIRM CONDITION OF PIPE, ROUTING AND INVERTS. SUBMIT REPORT AND VIDEO ON USB.
4. SCAN FLOOR PRIOR TO FLOOR CUTS AND UNDERGROUND PIPING INSTALLATION.
5. DISCONNECT AND REMOVE ALL REDUNDANT EQUIPMENT, FIXTURES, DUCTWORK, PIPING AND OTHER REDUNDANT SERVICES THROUGHOUT AREA OF WORK.
6. REMOVE OBSOLETE ABOVEGROUND SERVICES BACK TO SOURCE/MAINS AND CAP.
7. ANY REDUNDANT RISERS CAN REMAIN WITHIN EXISTING WALLS (WHERE WALLS ARE SCHEDULED TO REMAIN) BUT SERVICES SHALL BE CUT AND CAPPED WITHIN WALL SO FACE OF WALL CAN BE PATCHED AND FINISHED SMOOTH.
8. MAINTAIN VENT PIPING FOR REUSE WHERE POSSIBLE AND REMOVE ANY REDUNDANT.
9. TEMPORARILY SEAL ALL OPEN DUCTS THROUGHOUT CONSTRUCTION TO PREVENT DUST AND DIRT FROM ENTERING THE SYSTEM. WHERE THE CONTRACTOR DOES NOT CONFORM THEY ARE RESPONSIBLE FOR CLEANING OF THE SYSTEMS IN A MANNER APPROVED BY THE CONSULTANT.

DEMOLITION MECHANICAL NOTES:

1. REMOVE EXISTING DIFFUSER, FIRE FLAP AND BLANKET AND FLEXIBLE DUCT AND RETAIN FOR REINSTALLATION. CUT BACK S/A BRANCH DUCT AS REQUIRED TO SUIT NEW ELEVATOR.
2. REMOVE EXISTING R/A GRILLE AND FIRE FLAP AND RETAIN FOR REINSTALLATION.
3. REMOVE 3"ø HS & HR TO REROUTE AROUND NEW ELEVATOR. REMOVE ANY INSULATION AND REDUNDANT HANGERS.
4. REMOVE EXISTING VALVES AND ACCESSORIES FOR WALLFIN ABOVE AND WALLFIN BELOW. RETAIN FOR REINSTALLATION IN NEW LOCATION. REMOVE HS & HR RISERS AND PIPING BACK TO MAIN.
5. CUT BACK AND REMOVE EXISTING WALLFIN ELEMENT AND ENCLOSURE TO SUIT NEW ELEVATOR MACHINE ROOM AND NEW CONNECTIONS.

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No.	Date	Description	By
A	2025-12-22	ISSUED FOR PERMIT & TENDER	BRT

STAMPS:

LICENSED PROFESSIONAL ENGINEER
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CLIENT:
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1400 GARVOLIN AVE PICKERING, ON L1W 1J6

PROJECT NAME:
Bayview Heights Public School - Elevator Renovation

SHEET TITLE:
GROUND FLOOR - DEMO MECHANICAL LAYOUT

DISCIPLINE:

DRAFTER: SR	SCALE: AS NOTED
DESIGNER: BRT	DATE: 2025-12-22
APPROVER: BRT	CHECKER: BRT
PROJECT No: A0001195	DRAWING No: MD101
SHEET No: 2 of 7	

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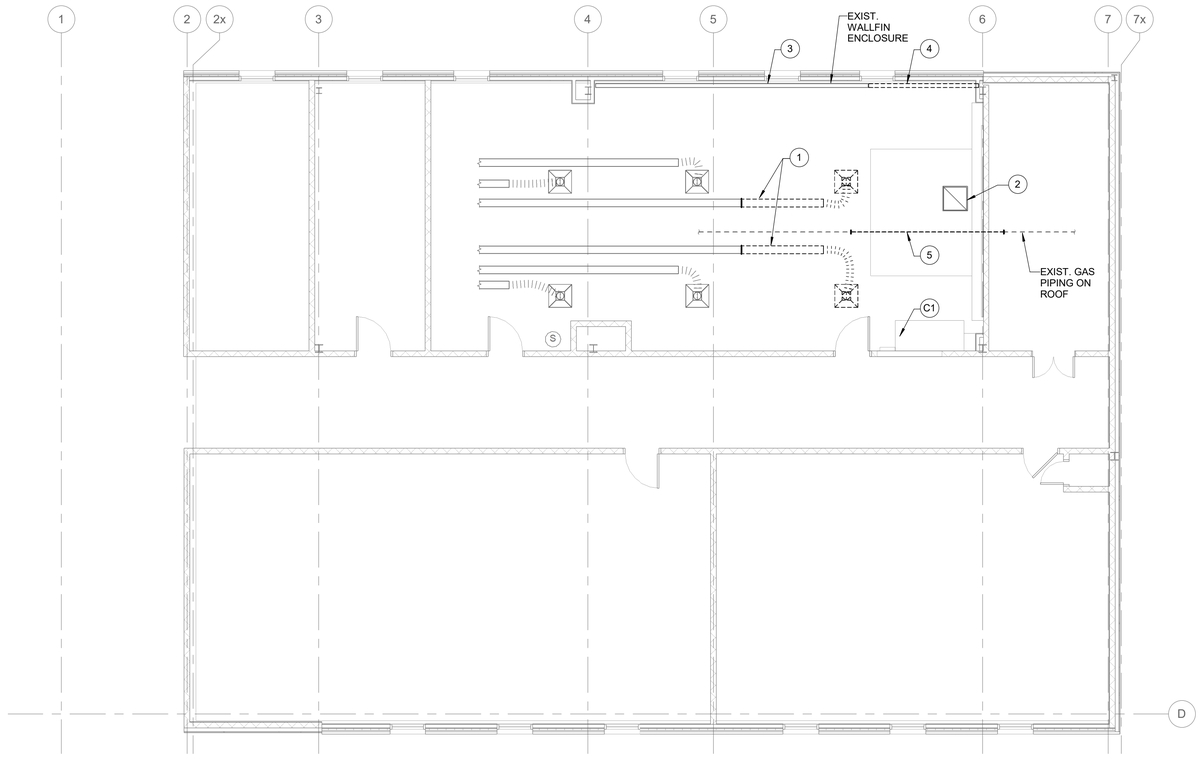

1 SECOND FLOOR - DEMOLITION MECHANICAL LAYOUT

SCALE: 1 : 75

GENERAL DEMOLITION NOTES:

1. THE CONTRACTOR SHALL ALLOW FOR DETAILED SITE INVESTIGATION TO CONFIRM ALL SERVICES PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
2. PRE-CONSTRUCTION PHOTOS: THE CONTRACTOR SHALL TAKE PHOTOS OF THE SITE, BUILDING, SERVICES AND FINISHES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. SUCH PHOTOS SHALL INCLUDE ALL AREAS THAT FORM A PART OF THE CONSTRUCTION, BOTH INTERIOR AND EXTERIOR, AND WILL PROVIDE RECORD OF THE GENERAL CONDITION OF THE SITE PRIOR TO CONSTRUCTION. PHOTOS SHALL BE SHARED WITH THE OWNER AND CONSULTANT PRIOR TO ANY CONSTRUCTION STARTING.
3. SCOPE/CAMERA EXISTING UNDERGROUND SANITARY AND STORM PIPING THROUGH WORK AREA TO CONFIRM CONDITION OF PIPE, ROUTING AND INVERTS. SUBMIT REPORT AND VIDEO ON USB.
4. SCAN FLOOR PRIOR TO FLOOR CUTS AND UNDERGROUND PIPING INSTALLATION.
5. DISCONNECT AND REMOVE ALL REDUNDANT EQUIPMENT, FIXTURES, DUCTWORK, PIPING AND OTHER REDUNDANT SERVICES THROUGHOUT AREA OF WORK.
6. REMOVE OBSOLETE ABOVEGROUND SERVICES BACK TO SOURCE/MAINS AND CAP.
7. ANY REDUNDANT RISERS CAN REMAIN WITHIN EXISTING WALLS (WHERE WALLS ARE SCHEDULED TO REMAIN) BUT SERVICES SHALL BE CUT AND CAPPED WITHIN WALL SO FACE OF WALL CAN BE PATCHED AND FINISHED SMOOTH.
8. MAINTAIN VENT PIPING FOR REUSE WHERE POSSIBLE AND REMOVE ANY REDUNDANT.
9. TEMPORARILY SEAL ALL OPEN DUCTS THROUGHOUT CONSTRUCTION TO PREVENT DUST AND DIRT FROM ENTERING THE SYSTEM. WHERE THE CONTRACTOR DOES NOT CONFORM THEY ARE RESPONSIBLE FOR CLEANING OF THE SYSTEMS IN A MANNER APPROVED BY THE CONSULTANT.

DEMOLITION MECHANICAL NOTES:

1. REMOVE EXISTING DIFFUSER, FIRE FLAP AND BLANKET AND FLEXIBLE DUCT AND RETAIN FOR REINSTALLATION. CUT BACK S/A BRANCH DUCT AS REQUIRED TO SUIT NEW ELEVATOR.
2. REMOVE EXISTING R/A GRILLE AND FIRE FLAP AND RETAIN FOR REINSTALLATION.
3. REMOVE HS & HR PIPING BETWEEN SECTIONS OF WALLFIN ELEMENT THAT WRAPS DOWN TIGHT TO FLOOR. TEMPORARILY REMOVE ENCLOSURE AS REQUIRED AND RETAIN FOR REINSTALLATION.
4. CUT BACK AND REMOVE EXISTING WALLFIN ELEMENT AND ENCLOSURE TO SUIT NEW ELEVATOR MACHINE ROOM AND NEW CONNECTIONS.
5. REMOVE SECTION OF EXISTING 75ø GAS PIPING (ON ROOF) TO SUIT ELEVATOR PENETRATION UP THROUGH ROOF.

DEMOLITION CONTROLS NOTES :

C1. REMOVE EXISTING SPACE SENSOR AND RETAIN FOR REINSTALLATION. REMOVE ANY REDUNDANT CONTROL WIRING

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A	2025-12-22	ISSUED FOR PERMIT & TENDER	BRT

STAMPS:

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1400 GARVOLIN AVE PICKERING, ON L1W 1J6

PROJECT NAME:
Bayview Heights Public School - Elevator Renovation

SHEET TITLE:
SECOND FLOOR - DEMO MECHANICAL LAYOUT

DISCIPLINE:
MECHANICAL

DRAFTER: SR	SCALE: AS NOTED
DESIGNER: BRT	DATE: 2025-12-22
APPROVER: BRT	CHECKER: BRT
PROJECT No: A0001195	DRAWING No: MD102
SHEET No: 3 of 7	

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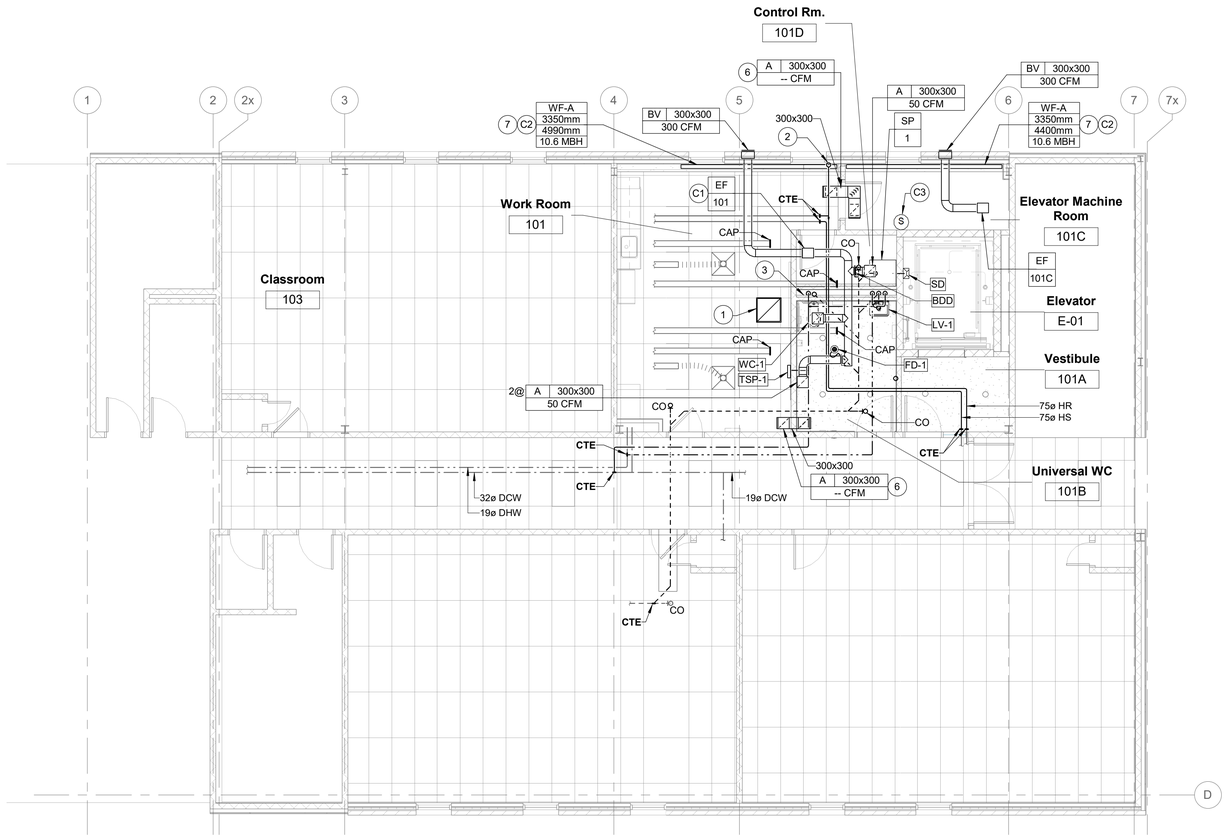

1 GROUND FLOOR - NEW MECHANICAL LAYOUT

SCALE: 1 : 75

TYPICAL PLUMBING PIPE SIZING

	DCW	DHW	DTW	SAN.	VENT
WC (TANK TYPE)	13ø	--	--	75ø	38ø
LAVATORY	--	--	13ø	32ø	32ø
SINK	13ø	13ø	--	38ø	32ø
75ø FD	--	--	--	75ø	38ø
100ø FD	--	--	--	100ø	38ø
PROVIDE ISOLATION VALVES AT ALL FIXTURES					

GENERAL NEW MECHANICAL NOTES:

1. WORK TO BE COMPLETED OUTSIDE REGULAR HOURS:
   .1 ANY WORK THAT CREATES DISRUPTION TO REGULAR SCHOOL OR OCCUPANT ACTIVITIES AND OPERATIONS SHALL BE DONE OUTSIDE OF REGULAR BUSINESS SCHOOL HOURS. THIS INCLUDES BUT IS NOT LIMITED TO SERVICE INTERRUPTIONS, WORK THAT GENERATES NOISE, WORK THAT GENERATES VIBRATIONS, WORK THAT GENERATES FUMES/SMELLS, ETC.
   .2 ANY WORK INSIDE OR OUTSIDE, THAT CREATES RISK TO BUILDING OCCUPANTS SHALL BE DONE OUTSIDE OF REGULAR SCHOOL HOURS.
   .3 ANY WELDING SHALL BE DONE OUTSIDE REGULAR SCHOOL HOURS.
2. THE CONTRACTOR SHALL INVESTIGATE AND CONFIRM SERVICES ON SITE PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO CONSULTANT.
3. PRE-CONSTRUCTION PHOTOS: THE CONTRACTOR SHALL TAKE PHOTOS OF THE SITE, BUILDING, SERVICES AND FINISHES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. SUCH PHOTOS SHALL INCLUDE ALL AREAS THAT FORM A PART OF THE CONSTRUCTION, BOTH INTERIOR AND EXTERIOR, AND WILL PROVIDE RECORD OF THE GENERAL CONDITION OF THE SITE PRIOR TO CONSTRUCTION. PHOTOS SHALL BE SHARED WITH THE OWNER AND CONSULTANT PRIOR TO ANY CONSTRUCTION STARTING.
4. SCOPE/CAMERA EXISTING UNDERGROUND SANITARY AND STORM PIPING THROUGH WORK AREA TO CONFIRM CONDITION OF PIPE, ROUTING AND INVERTS. SUBMIT REPORT AND VIDEO ON USB.
5. SCAN FLOOR PRIOR TO FLOOR CUTS AND UNDERGROUND PIPING INSTALLATION.
6. REFER TO ARCHITECTURAL DRAWINGS AND/OR GENERAL CONTRACTOR FOR CEILING HEIGHTS TO ENSURE ALL SERVICES ARE CONCEALED WITHIN AVAILABLE CEILING SPACE. RUN ALL NEW SERVICES UP IN JOIST SPACE AND BETWEEN LIGHTS AS NOTED OR AS REQUIRED.
7. COORDINATE ALL SERVICES WITH ALL TRADES PRIOR TO INSTALLATION.
8. COVER ALL FLOOR DRAINS DURING CONSTRUCTION TO PREVENT DEBRIS FROM FALLING IN DRAINS.
9. PROVIDE NEW PLUMBING VENTS THROUGH SECOND FLOOR AND THROUGH ROOF AS REQUIRED OR TIE INTO EXISTING WHERE POSSIBLE.
10. INSULATE AND LABEL ALL NEW PIPING. PROVIDE PVC JACKET ON ALL EXPOSED PIPING.
11. FIRE STOP ALL NEW PIPING THROUGH RATED WALLS IN AREA OF WORK.
12. SUPPLY ACCESS DOORS FOR MECHANICAL DEVICES ABOVE DRYWALL CEILING AND TURN OVER TO GENERAL CONTRACTOR FOR INSTALLATION.
13. ELECTRICAL CONTRACTOR TO PROVIDE BACK BOX, CONDUIT AND PULL STRING FOR WALL SENSORS IN NEW WALLS. COORDINATE WITH ELECTRICAL.
14. LABEL CEILING GRID AT ACCESS TO MECHANICAL EQUIPMENT AND DEVICES WITH LAMACOID NAMEPLATE.
15. THE CONTRACTOR SHALL FLUSH, SCOPE, AND PROVIDE VIDEO INSPECTION OF THE SANITARY SYSTEM AFTER COMPLETION OF WORK AND PRIOR TO SUBSTANTIAL COMPLETION. FLUSHING, SCOPING AND VIDEO SHALL INCLUDE AREA OF WORK TO WHERE IT TIES INTO THE MAIN. SUBMIT REPORT AND VIDEO ON USB.
16. TEMPORARILY SEAL ALL OPEN DUCTS THROUGHOUT CONSTRUCTION TO PREVENT DUST AND DIRT FROM ENTERING THE SYSTEM. WHERE THE CONTRACTOR DOES NOT CONFORM THEY ARE RESPONSIBLE FOR CLEANING OF THE SYSTEMS IN A MANNER APPROVED BY THE CONSULTANT.

NEW MECHANICAL NOTES:

1. REINSTALL EXISTING R/A GRILLE AND FIRE FLAP IN NEW T-BAR CEILING.
2. REINSTALL EXISTING VALVES AND ACCESSORIES FOR WALLFIN ABOVE AND WALLFIN BELOW. PROVIDE NEW HS & HR RISERS DOWN TO GROUND FLOOR WALLFIN AND SECOND FLOOR WALLFIN.
3. 13ø DCW & DHW DOWN IN WALL OR CHASE TO NEW SINK.
4. 13ø DCW & DHW DOWN IN CHASE TO NEW LAV. 13ø DCW & DHW DOWN IN CHASE TO NEW TMV. RUN 13ø DCW & DTW TO LAV FAUCET. MOUNT TMV IN NEW LAV SHROUD.
5. 200ø E/A FROM FAN OUT THROUGH WALL TO LOUVER. THERMALLY INSULATE 2.4m BACK FROM WALL.
6. 300x150 ACOUSTICALLY LINED TRANSFER ELBOW.
7. PROVIDE NEW WALLFIN AND ENCLOSURE FOR ELEVATOR ROOM. INSTALL DEDICATED VALVES AND ACCESSORIES AS PER DETAIL.

CONTROLS WORKING NOTES

1. PROVIDE CONTROLS AND CONTROL WIRING FOR NEW FAN
2. SUPPLY NEW CONTROL VALVE FOR WALLFIN AND TURN OVER TO THE MECHANICAL CONTRACTOR FOR INSTALLATION.
3. PROVIDE NEW BAS SPACE SENSOR FOR ELEVATOR ROOM TEMPERATURE CONTROL.

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A	2025-12-22	ISSUED FOR PERMIT & TENDER	BRT

STAMPS:

LICENSED PROFESSIONAL ENGINEER
B. R. TIMSON
100511696
DEC 22/25
PROVINCE OF ONTARIO

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1400 GARVOLIN AVE PICKERING, ON L1W 1J6

PROJECT NAME:
Bayview Heights Public School - Elevator Renovation

SHEET TITLE:
GROUND FLOOR - NEW MECHANICAL LAYOUT

DISCIPLINE:

DRAFTER: SR	SCALE: AS NOTED
DESIGNER: BRT	DATE: 2025-12-22
APPROVER: BRT	CHECKER: BRT
PROJECT No: A0001195	DRAWING No: M-101
SHEET No: 4 of 7	

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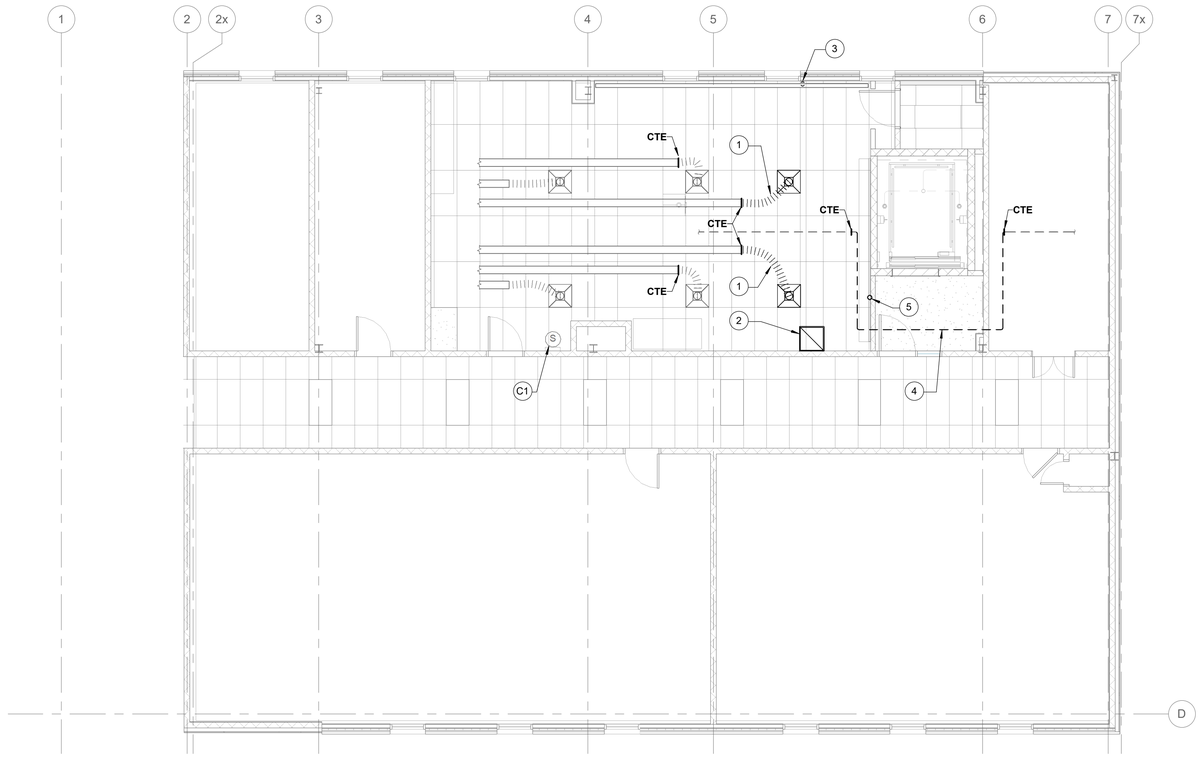

1 SECOND FLOOR - NEW MECHANIACAL LAYOUT

SCALE: 1 : 75

TYPICAL PLUMBING PIPE SIZING					
	DCW	DHW	DTW	SAN.	VENT
WC (TANK TYPE)	13ø	--	--	75ø	38ø
LAVATORY	--	--	13ø	32ø	32ø
SINK	13ø	13ø	--	38ø	32ø
75ø FD	--	--	--	75ø	38ø
100ø FD	--	--	--	100ø	38ø
PROVIDE ISOLATION VALVES AT ALL FIXTURES					

GENERAL NEW MECHANICAL NOTES:

1. WORK TO BE COMPLETED OUTSIDE REGULAR HOURS:
   .1 ANY WORK THAT CREATES DISRUPTION TO REGULAR SCHOOL OR OCCUPANT ACTIVITIES AND OPERATIONS SHALL BE DONE OUTSIDE OF REGULAR BUSINESS SCHOOL HOURS. THIS INCLUDES BUT IS NOT LIMITED TO SERVICE INTERRUPTIONS, WORK THAT GENERATES NOISE, WORK THAT GENERATES VIBRATIONS, WORK THAT GENERATES FUMES/SMELLS, ETC.
   .2 ANY WORK INSIDE OR OUTSIDE, THAT CREATES RISK TO BUILDING OCCUPANTS SHALL BE DONE OUTSIDE OF REGULAR SCHOOL HOURS.
   .3 ANY WELDING SHALL BE DONE OUTSIDE REGULAR SCHOOL HOURS.
2. THE CONTRACTOR SHALL INVESTIGATE AND CONFIRM SERVICES ON SITE PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO CONSULTANT.
3. PRE-CONSTRUCTION PHOTOS: THE CONTRACTOR SHALL TAKE PHOTOS OF THE SITE, BUILDING, SERVICES AND FINISHES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. SUCH PHOTOS SHALL INCLUDE ALL AREAS THAT FORM A PART OF THE CONSTRUCTION, BOTH INTERIOR AND EXTERIOR, AND WILL PROVIDE RECORD OF THE GENERAL CONDITION OF THE SITE PRIOR TO CONSTRUCTION. PHOTOS SHALL BE SHARED WITH THE OWNER AND CONSULTANT PRIOR TO ANY CONSTRUCTION STARTING.
4. SCOPE/CAMERA EXISTING UNDERGROUND SANITARY AND STORM PIPING THROUGH WORK AREA TO CONFIRM CONDITION OF PIPE, ROUTING AND INVERTS. SUBMIT REPORT AND VIDEO ON USB.
5. SCAN FLOOR PRIOR TO FLOOR CUTS AND UNDERGROUND PIPING INSTALLATION.
6. REFER TO ARCHITECTURAL DRAWINGS AND/OR GENERAL CONTRACTOR FOR CEILING HEIGHTS TO ENSURE ALL SERVICES ARE CONCEALED WITHIN AVAILABLE CEILING SPACE. RUN ALL NEW SERVICES UP IN JOIST SPACE AND BETWEEN LIGHTS AS NOTED OR AS REQUIRED.
7. COORDINATE ALL SERVICES WITH ALL TRADES PRIOR TO INSTALLATION.
8. COVER ALL FLOOR DRAINS DURING CONSTRUCTION TO PREVENT DEBRIS FROM FALLING IN DRAINS.
9. PROVIDE NEW PLUMBING VENTS THROUGH SECOND FLOOR AND THROUGH ROOF AS REQUIRED OR TIE INTO EXISTING WHERE POSSIBLE.
10. INSULATE AND LABEL ALL NEW PIPING. PROVIDE PVC JACKET ON ALL EXPOSED PIPING.
11. FIRE STOP ALL NEW PIPING THROUGH RATED WALLS IN AREA OF WORK.
12. SUPPLY ACCESS DOORS FOR MECHANICAL DEVICES ABOVE DRYWALL CEILING AND TURN OVER TO GENERAL CONTRACTOR FOR INSTALLATION.
13. ELECTRICAL CONTRACTOR TO PROVIDE BACK BOX, CONDUIT AND PULL STRING FOR WALL SENSORS IN NEW WALLS. COORDINATE WITH ELECTRICAL.
14. LABEL CEILING GRID AT ACCESS TO MECHANICAL EQUIPMENT AND DEVICES WITH LAMACOID NAMEPLATE.
15. THE CONTRACTOR SHALL FLUSH, SCOPE, AND PROVIDE VIDEO INSPECTION OF THE SANITARY SYSTEM AFTER COMPLETION OF WORK AND PRIOR TO SUBSTANTIAL COMPLETION. FLUSHING, SCOPING AND VIDEO SHALL INCLUDE AREA OF WORK TO WHERE IT TIES INTO THE MAIN. SUBMIT REPORT AND VIDEO ON USB.
16. TEMPORARILY SEAL ALL OPEN DUCTS THROUGHOUT CONSTRUCTION TO PREVENT DUST AND DIRT FROM ENTERING THE SYSTEM. WHERE THE CONTRACTOR DOES NOT CONFORM THEY ARE RESPONSIBLE FOR CLEANING OF THE SYSTEMS IN A MANNER APPROVED BY THE CONSULTANT.

NEW MECHANICAL NOTES:

1. REINSTALL EXISTING DIFFUSER, FIRE FLAP AND BLANKET AND FLEXIBLE DUCT. CONNECT TO END OF EXISTING BRANCH DUCT AND REPAIR INSULATION.
2. REINSTALL EXISTING R/A GRILLE AND FIRE FLAP IN NEW T-BAR CEILING.
3. EXTEND HS & HR THROUGH EXISTING WALLFIN ENCLOSURE TO CONNECT TO NEW RISER UP FROM GROUND FLOOR. TRIM EXISTING ENCLOSURE TO SUIT NEW STORAGE ROOM AND REINSTALL.
4. OFFSET SECTION OF 75ø GAS PIPING (ON ROOF) TO SUIT ELEVATOR PENETRATION UP THROUGH ROOF. PROVIDE NEW RUBBER PIPE SUPPORTS AS REQUIRED AND PAINT ALL NEW PIPING WITH TWO (2) COATS OF YELLOW INCLUDING BOTTOM OF PIPE AND AT ALL PIPE SUPPORTS.
5. RUN NEW VENTING UP FROM SUMP PIT AND WASHROOM FIXTURES IN NEW WALL TO NEW ROOF VENT. COORDINATE ROOFING.

NEW CONTROLS NOTES :

C1. REINSTALL EXISTING SPACE SENSOR. EXTEND CONTROL WIRING AS REQUIRED TO SUIT REVISED LOCATION.

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No.	Date	Description	By
A	2025-12-22	ISSUED FOR PERMIT & TENDER	BRT

STAMPS:

LICENSED PROFESSIONAL ENGINEER
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100511696
DEC 22/25
PROVINCE OF ONTARIO

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CLIENT:
BAYVIEW HEIGHTS PS
1400 GARVOLIN AVE PICKERING, ON L1W 1J6

PROJECT NAME:
Bayview Heights Public School - Elevator Renovation

SHEET TITLE:
SECOND FLOOR - NEW MECHANICAL LAYOUT

DISCIPLINE:

DRAFTER: SR	SCALE: AS NOTED
DESIGNER: BRT	DATE: 2025-12-22
APPROVER: BRT	CHECKER: BRT
PROJECT No: A0001195	DRAWING No: M-102
SHEET No: 5 of 7	

PRINT DATE:2025-12-22 3:02:19 PM
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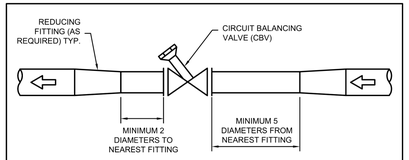
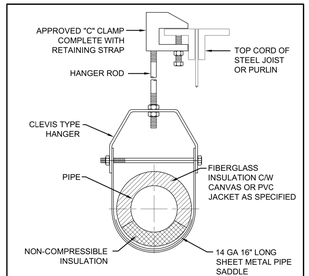
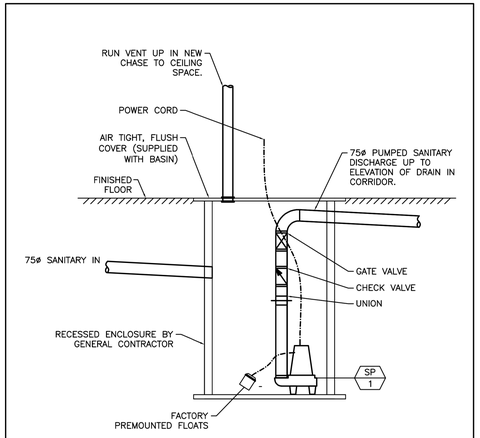


CIRCUIT BALANCING VALVE INSTALLATION DETAIL
NTS



NOTE: <1-1/4" HANGERS MAY BE PIPE SIZE

INSULATED PIPE HANGER DETAIL
NTS



SUMP PUMP DETAIL
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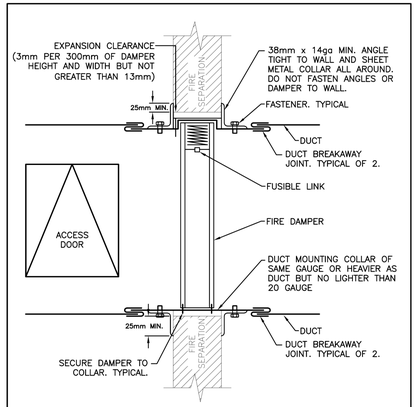

FIRE DAMPER DETAIL
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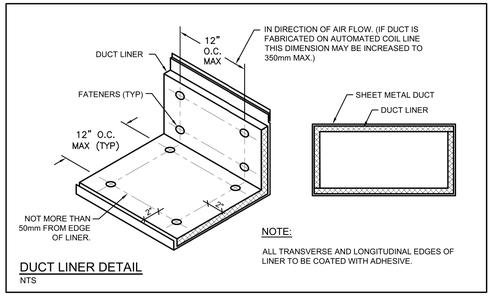
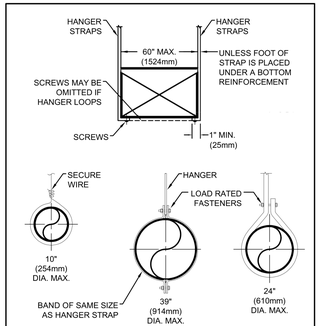
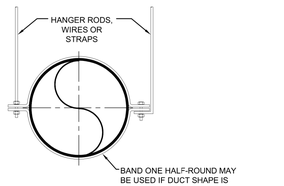


NOTE:
ALL TRANSVERSE AND LONGITUDINAL EDGES OF LINER TO BE COATED WITH ADHESIVE.

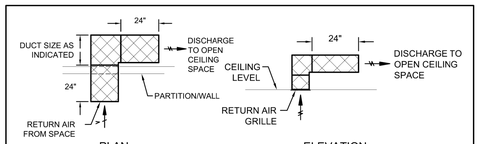
DUCT LINER DETAIL
NTS



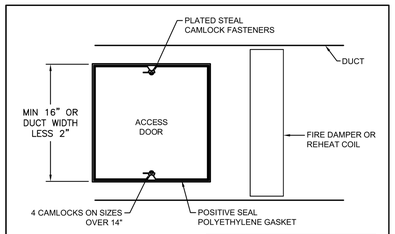
NOTE: HANGERS MUST NOT DEFORM DUCT SHAPE



STRAP HANGERS
NTS

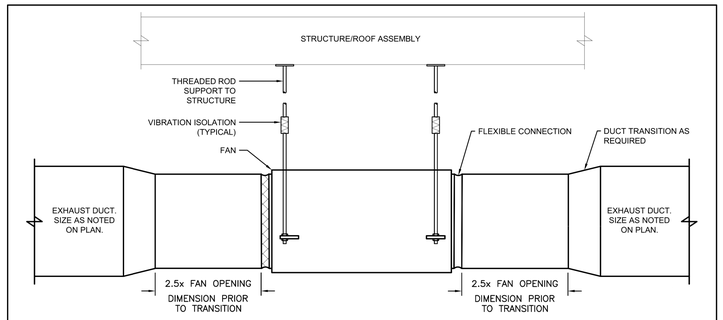


TRANSFER DUCT WITH SOUND ATTENUATION DETAIL
NTS



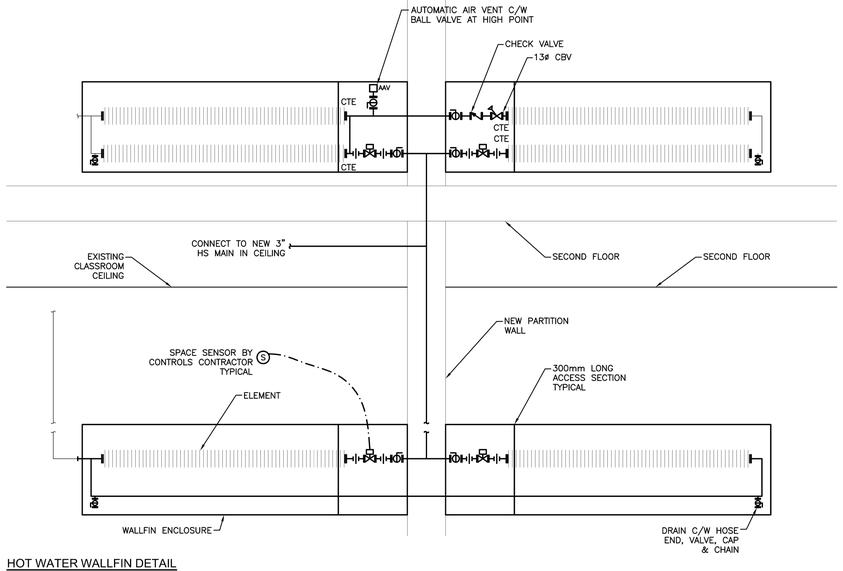
ACCESS DOOR EQUAL TO:
SQUARE/RECTANGLE: NAILOR 085CL
FLAT OVAL: NAILOR 0800
SIZE:
SQUARE/RECTANGLE: 16x16"
FLAT OVAL: 18x10"

DUCT ACCESS DOOR DETAIL
NTS

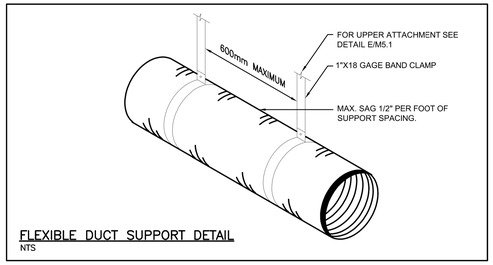


SUSPENDED INLINE EXHAUST FAN DETAIL
NTS

NOTES:
1. PIPE HANGERS SHALL BE EPOXY COATED FOR ALL COPPER PIPING.
2. EXACT PIPING ARRANGEMENT MAY VARY. COORDINATE WITH PIPE RISER LOCATIONS FOR EACH.
3. WHERE WALLFIN PIPING IS LARGER THAN SUPPLY AND RETURN PIPING USE BRASS ECCENTRIC REDUCING ADAPTERS.
4. WALLFIN ENCLOSURE SHALL BE INSTALLED 4"(100mm) AFF.
5. PROVIDE INSULATION C/W PVC WRAP & ESCUTCHEON FOR ANY EXPOSED PIPING DOWN THROUGH FLOOR.



HOT WATER WALLFIN DETAIL
NTS



FLEXIBLE DUCT SUPPORT DETAIL
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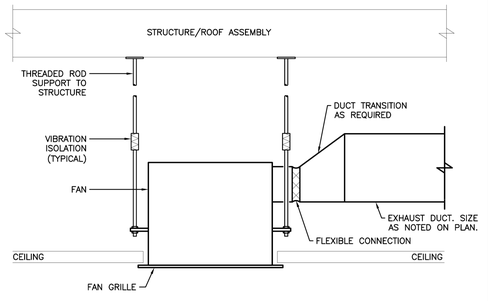
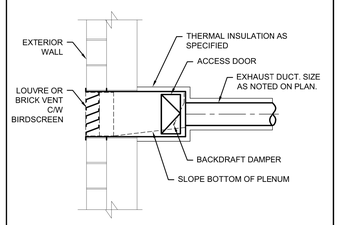


CEILING MOUNTED EXHAUST FAN DETAIL
NTS



EXTERIOR WALL LOUVRE DETAIL
NTS

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A	2025-12-22	ISSUED FOR PERMIT & TENDER	BRT

STAMPS:

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PROJECT NAME:
Bayview Heights Public School - Elevator Renovation

SHEET TITLE:
DETAILS

DISCIPLINE:
MECHANICAL

DRAFTER: SR	SCALE: AS NOTED
DESIGNER: BRT	DATE: 2025-12-22
APPROVER: BRT	CHECKER: BRT
PROJECT No: A0001195	DRAWING No: M-501
SHEET No: 6 of 7	

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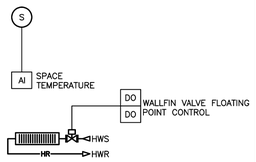
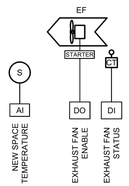


WALLFIN CONTROL SCHEMATIC
NTS



EXHAUST FAN CONTROL SCHEMATIC (BAS CONTROL)
NTS

CONTROLS SCOPE OF WORK:

1. THE MECHANICAL CONTRACTOR SHALL RETAIN THE INSTALLING CONTROLS CONTRACTOR FOR ALL NEW BAS CONTROLS WORK UNDER A CASH ALLOWANCE. ONCE THE CONTRACT IS AWARDED, THE DDSB SHALL SELECT A PRE-QUALIFIED INSTALLING CONTROLS CONTRACTORS BASED ON THE SCOPE OF WORK OUTLINED ON THE DRAWINGS. THE MECHANICAL PRIME CONTRACTOR SHALL CARRY THE SUCCESSFUL INSTALLING CONTROLS CONTRACTOR AS A SUB-TRADE UNDER THE ALLOTTED CASH ALLOWANCE (REFER TO CASH ALLOWANCE SPECIFICATION). DDSB TO SUPPLY ALL PNEUMATICS DEMO PARTS (NOT PART OF CASH ALLOWANCE).
2. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMO ELECTRIC (120V) CONTROLS WORK.
3. THE INSTALLING CONTROLS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMO AND NEW ELECTRONIC AND BAS CONTROLS WORK.
4. DDSB SHALL SUPPLY ALL REQUIRED SENSORS, RELAYS, CURRENT SWITCHES, CONTROL ENCLOSURES, AND ALL OTHER NECESSARY CONTROL DEVICES FOR A FULLY OPERATIONAL SYSTEM EXCEPT AS NOTED HEREIN AND TURN OVER TO INSTALLING CONTROLS CONTRACTOR FOR INSTALLATION. (THE EXISTING BAS SYSTEM IS SIEMENS CONTROLS).
5. DDSB SHALL SUPPLY ALL ELECTRIC (24V) AND NEW BAS CONTROL VALVES AND TURN OVER CONTROL VALVE BODIES TO MECHANICAL CONTRACTOR FOR INSTALLATION. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PICKING UP VALVES FROM DDSB OFFICE AND TRANSPORTING VALVES TO SITE. COORDINATE WITH DDSB.
6. DDSB SHALL SUPPLY ALL NEW TEMPERATURE SENSOR WELLS AND TURN OVER TO MECHANICAL CONTRACTOR FOR INSTALLATION. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PICKING UP WELLS FROM DDSB OFFICE AND TRANSPORTING WELLS TO SITE. COORDINATE WITH DDSB.
7. SCOPE OF WORK SHALL INCLUDE BUT IS NOT LIMITED TO:
   .1 REMOVAL OF REDUNDANT CONTROLS.
   .2 PROVIDE COMPLETE CONTROL OF NEW CONDENSING UNITS CU-6 & CU-7.
6. MECHANICAL CONTRACTOR AND INSTALLING CONTROLS CONTRACTOR SHALL TAKE PRECAUTIONS DURING DEMOLITION AND NEW WORK TO ENSURE BAS COMMUNICATIONS WIRING REMAINS FULLY FUNCTIONAL AND OPERATIONAL DURING RENOVATION. CONTROLS CONTRACTOR SHALL PROVIDE ANY TEMPORARY WIRING REQUIRED TO MAINTAIN SYSTEM UPTIME AND INTEGRITY.
7. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PATCHING, REPAIRING, AND SEALING ANY WALLS, CEILINGS, OR EQUIPMENT WHERE EXISTING CONTROLS DEVICES ARE REMOVED. COORDINATE LOCATION AND PATCHING FOR NEW CONTROLS WITH INSTALLING CONTROLS CONTRACTOR.

AIR OUTLET SCHEDULE

TAG	A	BV
TYPE	FIRE RATED LOUVERED FACE RETURN	EXTRUDED ALUMINUM BRICK VENT
MANUFACTURER	NAILOR	NAILOR
MODEL	6155H	16BVE
SIZE	SEE DRAWINGS	SEE DRAWINGS
COLOUR	AW	STANDARD FINISH
NOTES	-SINGLE DEFLECTION -1/2" BLADE SPACING AT 45° -CEILING FIRESTOP FLAP -165°F FUSIBLE LINK -ULC LISTED	-4" DEEP -ALUMINUM INSECT SCREEN
ALTERNATE MANUFACTURERS	NAILOR, TITUS, METALAIRE, KRUEGER	

NEW HOT WATER WALLFIN SCHEDULE

TAG		WF-1
MANUFACTURER		SIGMA
WALLFIN MODEL		SWE-S (PAINTED)
ELEMENT		ELMT-44C075
TYPE		SLOPE LOUVERED TOP OUTLET OPEN BOTTOM INLET
FLUID		WATER (0% GLYCOL)
ENCLOSURE HEIGHT	in.	18
ENCLOSURE DEPTH	in.	5-1/4
ENCLOSURE LENGTH		SITE MEASURE
ENCLOSURE COLOUR		SNOW WHITE (SUBMIT COLOUR CHART)
ELEMENT LENGTH		REFER TO DRAWINGS
HEATING CAPACITY	btuh/ft	854
EWT/LWT	°F	160/140
NO OF TIERS/ROWS		1
COPPER TUBING DIA.	in.	3/4"
ALUMINUM FINS	in.	4"x4"
CONTROLS		-CONTROL VALVE AND SENSOR. REFER TO DETAILS.
ACCESSORIES		-24" LONG REMOVABLE ACCESS SECTION. -CONTINUOUS COVER C/W SPACERS, JOINERS ETC, AS REQUIRED -SLOPE LOUVERED TOP OUTLET OPEN BOTTOM INLET
NOTES		CONTRACTOR / SUPPLIER SHALL SITE MEASURE ALL ELEMENT AND ENCLOSURE LENGTHS & HEIGHTS PRIOR TO ORDERING MATERIAL. LENGTHS & HEIGHTS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
ALTERNATE MANUFACTURERS		ENGINEERED AIR

FAN SCHEDULE

TAG		EF-101C	EF-101
SERVICE		ELEVATOR MACHINE ROOM	UNIVERSAL WASHROOM
TYPE		INLINE CENTRIFUGAL	IN-LINE
MANUFACTURER		BROAN	GREENHECK VARI-GREEN
MODEL		L300MG	SQ-70-VG
AIR FLOW	cfm	300	150(HIGH)/80(LOW)
EXTERNAL STATIC	in.wc.	0.25	0.25
SOUND		53dBA/6.9 SONES	41 dBA/2.9 SONES
FAN RPM		1441	2970/878
FAN MOTOR	hp	FRACTIONAL	FRACTIONAL
FAN TYPE		DIRECT DRIVE C/W FSC	VARIABLE DIRECT DRIVE
AMPS	amps	0.9	2.6
ELECTRICAL	volt/ph	120/1	120/1
DIMENSIONS	inches	14 SQ x 17 L	12W x 15L x 12H
APPROX. WEIGHT	lbs	62	42
CONTROLS		-TIE INTO BAS FOR TEMPERATURE CONTROL	-LOW SPEED BY OCCUPIED SCHEDULE, H/GH SPEED BY TIMER (TIMER BY ELECTRICAL)
ACCESSORIES		-HANGING ISOLATOR KIT -FAN SPEED CONTROLLER -NEMA-1 DICONNECT	-HANGING ISOLATOR KIT -BACKDRAFT DAMPER -DUAL SPEED VARIGREEN CONTROLLER
ALTERNATE MANUFACTURERS		REVERSOMATIC, ZONEX	NO ALTERNATES ALLOWED

SUMP PUMP SCHEDULE

TAG		SP-1
SERVICE		ELEVATOR PIT
MANUFACTURER		LIBERTY PUMPS
MODEL		ELV280
TYPE		SUBMERSIBLE
FLOW	gpm	50
PRESSURE LOSS	feet	15
DISCHARGE	inches	1-1/2"
DIAMETER SOLIDS	inches	3/4"
MOTOR	hp	1/2
RPM	rpm	1800
ELECTRICAL	volt/ph	120/1
FLA/STARTING	amps	8.0
NOTES/ ACCESSORIES		ELV SERIES SUBMERSIBLE SUMP PUMP WITH OILTECTOR CONTROL: -PUMP AS ABOVE -LOAD RATED ACCESS COVER WITH VENT -25' OIL RESISTANT SJEOOW POWER CORD -NEMA 1 CONTROL PANEL -PRE-SET LEVEL SENSORS & FLOATS C/W OILTECTOR CONTROL SYSTEM; SENSES PRESENCE OF OIL, ONLY ALLOWING WATER TO BE PUMPED FROM BASIN; SEPARATE HIGH WATER/OIL LEVEL ALARMS; FULLY AUTOMATIC OPERATION WITH NO FIELD ADJUSTMENTS REQUIRED -AUXILIARY ALARM CONTACTS FOR SECURITY TIE-IN -DISCHARGE CHECK VALVE -24" DIAMETER SIMPLEX BASIN, 84" HIGH (CONTRACTOR TO VERIFY HEIGHT TO SUIT SCUPPER DRAIN)
ALTERNATE MANUFACTURERS		REFER TO SPECIFICATIONS

PLUMBING FIXTURE SCHEDULE

WC-1 FLOOR MOUNTED TOILET - VITREOUS CHINA - FLUSH VALVE - BARRIER FREE

American Standard Madera FloWise Right Height Elongated #3461.001 High Efficiency, Low consumption Toilet, white vitreous china with EverClean antimicrobial surface which inhibits the growth of stain and odor causing bacteria mold and mildew, elongated bowl, White Finish, Floor Mounted, siphon jet flush action, operates in the range of 4.2 L to 6 L (1.1 US Gal to 1.6 US Gal) per flush, condensate channel, 420mm rim height, 305 mm x 254 mm (12" x 10") water surface, elongated bowl, 54 mm (2-1/8") fully glazed internal trapway, 38 mm (1-1/2") dia. Top spud, floor outlet, bolt caps, Toilet seat not included.
Delta TECK 811201-48 Manual Water Closet Flush Valve, piston-operated delivering 1.28gpf (4.8L/m) volume, non-hold open handle, cast-brass body and stop.
Centoco #820STS.407 Toilet Seat, extra heavy duty, black finish, For elongated bowl, open front, Solid plastic, With cover, stainless steel self-sustaining check hinges, metal flat washers stainless steel posts and nuts.
McGuire #LFH166LKN3 Toilet Supply, Chrome plated finish polished brass, heavy duty angle stops, 13 mm (1/2") I.P.S. Inlet x 76 mm (3") long rigid horizontal nipples, V.P. Loose keys, Escutcheon and flexible copper risers.
Provide Floor Flange, (Same material as the connecting pipe drain), with all brass bolts and with rubber gasket.

LV-1 WALL HUNG BASIN - SINGLE HANDLE FAUCET - BARRIER FREE

American Standard Murro with EverClean #0954.004EC.020/0062.000EC.020 Basin, 3 holes, 4" (102 mm) center, 540 mm x 520 mm x 165 mm (21-1/4" x 20-1/2" x 6-1/2") high, Vitreous china, White Finish, for carrier with concealed arms, Rear overflow, recessed self-draining faucet ledge, semi-pedestal P-trap cover.
Moen Commercial #8894 M-Press faucet with 4" deck plate, chrome plated brass construction, vandal resistant, ADA lever style handle, cycle time adjustment from 5 to 60 seconds, 0.5 gpm (1.9L/min) vandal-resistant multi-stream laminar flow limits water discharge to a maximum of 0.25 gpc (0.96L/cycle) @ 30 seconds or 0.20 gpc (0.76L/cycle) @ 24 seconds.
McGuire #LFH165LKN3 Faucet Supplies, Chrome plated finish polished brass, heavy duty angle stops, 10 mm (3/8") I.P.S. Inlet x 76 mm (3") long rigid horizontal nipples, V.P. Loose keys, Escutcheon and flexible copper risers.
McGuire #8872C P-Trap, heavy cast brass adjustable body, with slip nut, 32 mm (1-1/4") size, Shallow wall flange and Seamless tubular wall bend.
McGuire PROWRAP #PW2000 Sanitary Covering vandal-resistant, flexible seamless moulded closed-cell PVC resin, formulated with anti-microbial additive to limit the growth of fungus and bacteria, to exposed piping (to protect against heat/contusions) as per local codes.
Watts #WCA-411 Basin Carrier, concealed arms, wall flanges to attach to backing plate secured in wall with locking device and levelling screws, heavy gauge steel uprights with integral welded feet. For one unit: 102 mm (4") for two to six units in a row: 152 mm (6") finished metal stud wall to back of pipe space.
Lawler TMM-1070, bronze body construction, high temperature limit stop with shut off temperature of 118° (+/- 3°F), integral rubber duck-bill back-flow checks within inlets, temperature adjustment dial, thermostatic mechanical mixing valve with outlet temperature range within 95-115°F (35-46°C), ASSE 1070 approved, valve shall control temperature from a low of 1/2gpm, 1gpm at 10psi and 1.6gpm at 20psi drop across the valve, 3/8"Ø compression fit inlets and outlets, ASSE Lead Free Certified.
Alternates: Symmons, Powers, Leonard, RADA.

FD - FLOOR DRAINS - FINISHED AREA - ADJUSTABLE STRAINER

Watts #FD-100-C-7-A5-1 Floor Drain - epoxy coated, cast iron body, reversible flashing clamp with primary and secondary weepholes, trap primer connection with plug, no hub outlet. Watts-A5-1 5" (127mm) diameter, nickel bronze, adjustable, round strainer.
Alternates: Zurn, J.R. Smith

SCUPPER DRAIN - BACKWATER VALVE - PIT DRAIN

Watts #BV-600-14 Backwater Valve - epoxy coated, cast iron body, backwater valve with bronze seat and flapper, epoxy coated cast iron grate and frame, secured angle grate, flat grate, no hub outlet.

CO - CLEANOUTS / ACCESS COVERS - ADJUSTABLE CLEANOUTS

Watts #CO-200-R-34G Cleanout - epoxy coated, cast iron body, with 5" (127mm) round, adjustable, gasketed, nickel bronze top, ABS plug with neoprene gasket, no hub outlet.
Alternates: Zurn, J.R. Smith

ACCESS DOORS/COVERS - FLUSH ACCESS DOOR - UNIVERSAL

Acudor #UF-5000 Universal Access Doors, 14 GA. (1.7mm) steel, baked enamel prime coat, continuous concealed hinge, with positive and self-opening screwdriver operated lock. Doors in washroom shall be stainless steel. All other panels shall be baked enamel prime coated for field painting. Minimum size of panels shall be 12" x 18" (300mm x 450mm). Wherever possible 24" x 24" (600mm x 600mm) panels shall be used.

WATER HAMMER ARRESTORS - PPP SC SERIES

SMS INC. #SC Series Water Hammer Arrestors with brass piston in a type 'K' copper casing size according to manufacturer's recommendations to eliminate water hammer and shock from piping system. Provide Water Hammer Arrestors on hot and cold water supplies to all quick valves, solenoids, and plumbing fixtures, and locate in an upright position between the last two fixtures on a line, or horizontally at the end of line closest to supply source. On projects exceeding five stories in height, provide water hammer arrestors on domestic water risers as follows. Locate arrestors at the end of riser opposite supply source.

TSP - TRAP SEAL PRIMERS

Sioux Chief #695-ES01, surface mount electronic trap primer, single outlet, solenoid valve, vacuum breaker, configurable electronic primer controller, water hammer arrestor, 120VAC power, 1/2" (13mm) inlet and outlet. Provide manifold as required to suit number of traps.

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PROJECT NAME:

Bayview Heights Public School - Elevator Renovation

SHEET TITLE:

SCHEDULES & CONTROLS

DISCIPLINE:

MECHANICAL

DRAFTER:	SCALE:
SR	AS NOTED
DESIGNER:	DATE:
BRT	2025-12-22
APPROVER:	CHECKER:
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A0001195	M-601
SHEET No:	
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