

PLUMBING CONNECTION SCHEDULE					
FIXTURE NAME	DCW SIZE	DHW SIZE	SAN SIZE	SUPPLIED BY	INSTALLED BY
WC	1/2		3	MECH	MECH
LAV	1/2	1/2	1 1/4	MECH	MECH
BATH	1/2	1/2	1 1/2	MECH	MECH
KS	1/2	1/2	1 1/2	MECH	MECH
NFWH	3/4			MECH	MECH
FD	3/8		3	MECH	MECH
HD	3/8		3	MECH	MECH
CLOTHES WASHER	—	1/2	1 1/2	MECH	MECH
DISH WASHER	1/2	1/2	*	MECH	MECH
BACK WATER VALVE (BWV)			4	MECH	MECH
NOTES: 1. BWV TO BE "MAINLINE" NORMALLY OPEN WITH ACCESS BOX 2. PIPE SIZES ARE NPS					

DRAWING LIST

DRAWING NUMBER	NAME
M-001	SITE PLAN, LEGEND, SCHEDULES AND NOTES
M-002	SPECIFICATION
M-100	TYPICAL UNIT PLUMBING LAYOUT
M-110	TYPICAL UNIT HVAC LAYOUT
M-200	BLOCK LAYOUT
M-220	BLOCK FOUNDATION PLAN
M-300	TYPICAL UNIT SCHEMATICS AND DETAILS
M-310	GAS RISER

ENERGY RECOVERY VENTILATOR							
REF	AIR FLOW (CFM)	E.S.P. ("W.C.)	VOLTS	PH	WATTS	EDH 120V (kW)	REMARKS
HRV	115	0.4"	120	1	160	1.0	VANEE V150H75NS, SIDE PORTS, 5" DIAMETER.
NOTES: 1. APPARENT SENSIBLE EFFECTIVENESS: 81% AT -25C 2. SENSIBLE RECOVERY EFFICIENCY: 60% AT -25C 3. SENSIBLE RECOVERY EFFICIENCY: 75% AT OC, 30 L/S, 70% @ 55 L/S 4. NEGATIVE PRESSURE DEFROST 5. AUTO BALANCING 6. MOTORIZED DAMPERS 7. INTEGRATED DRAIN WITH HOSE 8. MERV 8 FILTERS 9. MAIN 24V WALL CONTROLLER 10. PROVIDE AUXILIARY CONTROLLER IN EACH 2ND BATHROOM AND/OR POWDER ROOM							

HOT WATER HEATER, SUPPLIED BY ENERCARE

NAME	HEATING MBH INPUT MIN/MAX	WATTS	VOLTS	FLOW RATE	WEIGHT LBS	MAKE AND MODEL
HW	12/180	180	120/1	10.1 GPM	110	NAVIER NPE-210A2/S2
NOTES: 1. ALL INSTALLATION BY MECHANICAL CONTRACTOR. 2. ENSURE MINIMUM 24" CLEAR IN FRONT OF UNIT. 3. WATER FLOW RATE BASED ON 35F TEMP RISE. 4. UP TO 15:1 TURNDOWN 5. BUILT-IN CONTROLS 6. UEF RATINGS: 0.95 7. NAV 30009323A VALVE KIT 8. CONDENSATE NEUTRALIZER 9. OUTDOOR VENT KIT 10. GAS VENT SYSTEM TO BE CERTIFIED TO ULC S636, CONCENTRIC VENT SYSTEM, SIDEWALL OR ROOF AS INDICATED.						

CONDENSING UNIT SCHEDULE					
REF	COOLING MBH	VOLT	MCA	FUSE (MOCP)	MAKE AND MODEL
CU-01	18.0	208/1Ph.	10	15	COMFORT-AIRE CMA SERIES
CU-02	24.0	208/1Ph.	14	20	COMFORT-AIRE CMA SERIES
NOTES: 1. PROVIDE ALL REFRIGERANT PIPING, CONTROLS AND STARTUP 2. INSTALL ON BALCONY STAND, TOP TO BE LEVEL WITH BALCONY RAILING. 3. MATCH WITH FCU/CASED COIL					

FAN COIL UNIT WITH CASED COIL

NAME	COOLING TOTAL MBH	SENSIBLE MBH	HEATING MBH	CFM	AMPS	ELECTRICAL V/Ph/M/MCA/MOP	WEIGHT LBS	MAKE AND MODEL
FCU-01	18.0	15.3	22, 120	600	6.0	120/1/430/8.6/15/70		IFLOW IFLH SERIES
FCU-02	24.0	15.3	25, 120	800	6.0	120/1/430/8.6/15/70		IFLOW IFLH SERIES
NOTES: 1. PROVIDE CASED COOLING COIL. NOMINAL CAPACITY AS INDICATED. 2. PIPE CONDENSATE TO FLOOR DRAIN IN THE UTILITY ROOM.								

GRILLE AND DIFFUSER SCHEDULE

REF	FUNCTION	FRAME OR BORDER TYPE	DUCT/NECK SIZE	COLOUR	INTER. BALANCE DAMPER	REMARKS
SA	SUPPLY	DRYWALL	12"x4"	BY ARCH.	YES	E.H. PRICE, 5200, 45' DOUBLE DEFLECTION BLADE, VOLUME DAMPER
SA2	SUPPLY	FLOOR	12"x4"	BY ARCH.	YES	E.H. PRICE, 5200, 45' DOUBLE DEFLECTION BLADE, VOLUME DAMPER
EA	EXHAUST	DRYWALL	18"x10"	BY ARCH.	YES	E.H. PRICE, 530, 45' SINGLE DEFLECTION BLADE
RA	RETURN	DRYWALL	12"x36"	BY ARCH.	YES	E.H. PRICE, 530, 45' SINGLE DEFLECTION BLADE

EXHAUST FAN SCHEDULE

REF	CFM	VOLT	MCA	MOP	MAKE AND MODEL
DBF	100	120/1Ph.	—	15	REVERSOMATIC PWS100 WHERE INDICATED
DBF SHALL HAVE AMP SENSOR SUPPLIED BY MECH INSTALLED BY ELEC.					

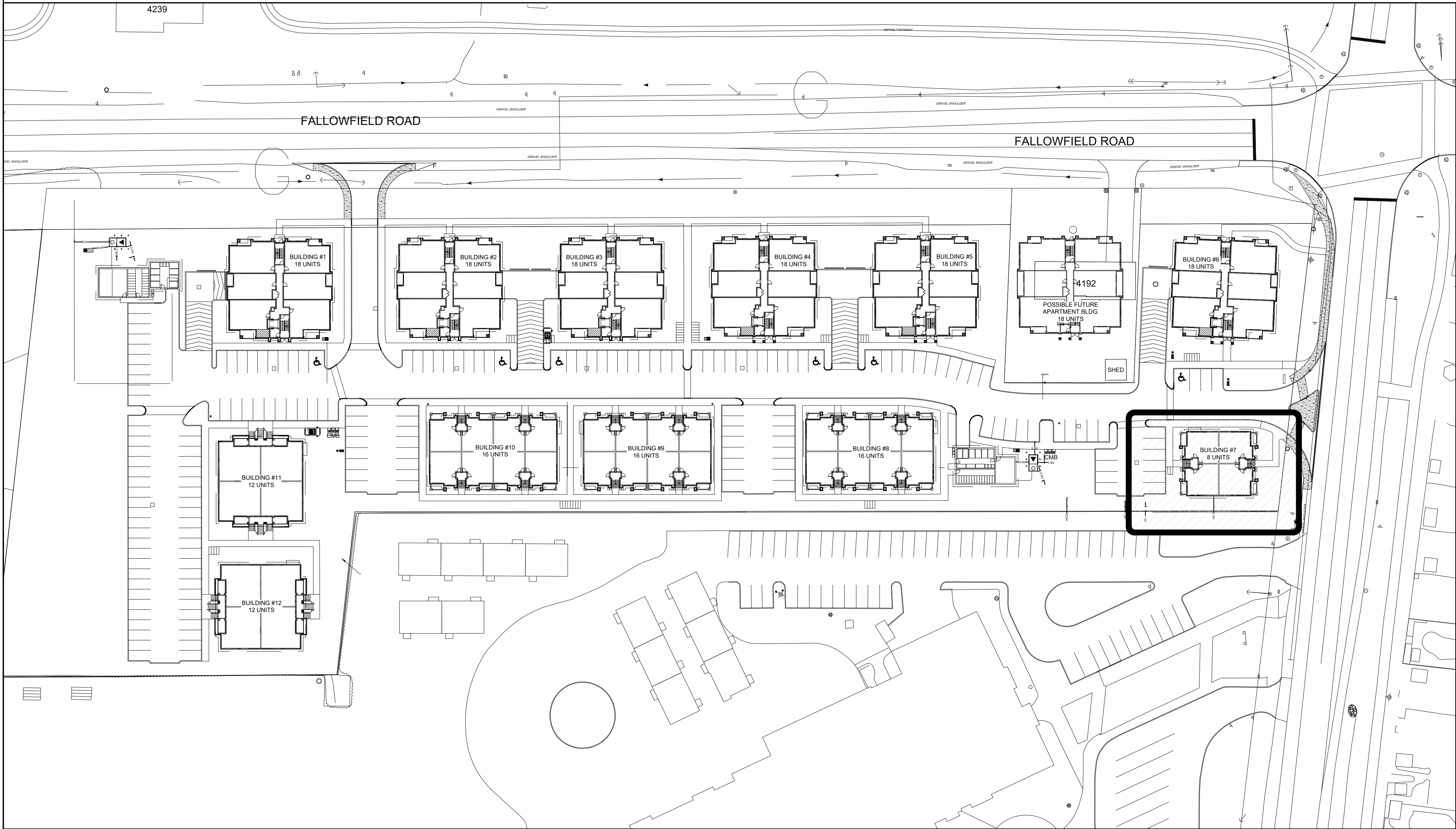
LEGEND	
①	PROGRAMMABLE THERMOSTAT
②	24V THERMAL RECOVERY VENTILATOR CONTROLLER
↘	BRANCH DUCT CONNECTION WITH BALANCING DAMPER
	FLEXIBLE CONNECTION
↗	SQUARE TO ROUND TRANSITION
⊞	SUPPLY GRILLE UP
⊞⊞	SUPPLY GRILLE DOWN OR IN FLOOR
— L —	LIQUID REFRIGERANT LINE
— S —	SUCTION REFRIGERANT LINE
— SAN —	SANITARY DRAIN ABOVE GRADE/FLOOR
— SAN —	SANITARY DRAIN BURIED
— ST —	STORM DRAIN BURIED
— WT —	WEEPING TILE
— — —	DOMESTIC COLD WATER
— — —	DOMESTIC HOT WATER
— G —	GAS PIPE, 7" W.C.
↘ ↗	PIPE DROPS, PIPE RISES
⊞⊞	DIELECTRIC UNION
⊞⊞ FD	FLOOR DRAIN WITH TRAP
⊞⊞ FFD	FUNNEL FLOOR DRAIN
○ H.D.	HUB DRAIN
⊞⊞	GAS PETCOCK
⊞⊞	ISOLATING VALVE
— —	CLEANOUT ABOVE FLOOR
—D—	CLEANOUT IN FLOOR
◆	DCW CONNECTION TO FAUCET
●	DHW CONNECTION TO FAUCET
⊞⊞	TEMPERATURE/PRESSURE RELIEF VALVE

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THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE SPECIFICATION. WHERE CONFLICT ARISES THE MORE STRINGENT OF THE TWO SHALL APPLY.

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23-007M



7	ISSUED FOR CONSTRUCTION	29 AUG 2024	CC
6	ISSUED FOR TENDER REV-2	10 JUN 2024	CC
5	ISSUED FOR CONSTRUCTION	16 MAY 2024	CC
4	ISSUED FOR TENDER REV-1	29 APR 2024	CC
3	ISSUED FOR TENDER	08 MAR 2024	CC
2	ISSUED FOR PERMIT	19 JAN 2024	CC
1	ISSUED FOR 66% PROGRESS	22 DEC 2023	CC
NO.	REVISION	DATE	BY
THE CONTRACT DOCUMENTS ARE THE PROPERTY OF QM&E.			
THE CONTRACTOR SHALL OBTAIN A FULL SET OF ALL CONSULTANTS' DESIGN DOCUMENTS PRIOR TO STARTING WORK.			
QM&E BEARS NO RESPONSIBILITY FOR INTERPRETATIONS OF THESE DOCUMENTS BY OTHERS.			
UPON WRITTEN APPLICATION QM&E WILL PROVIDE WRITTEN CLARIFICATION REGARDING THE INTENT OF THE CONTRACT DOCUMENTS.			
QM&E REVIEW OF SHOP DRAWINGS SUBMITTED BY THE CONTRACTOR IS FOR DESIGN CONFORMANCE ONLY.			
DRAWINGS ARE NOT TO BE SCALED FOR CONSTRUCTION. CONTRACTOR TO VERIFY ALL CONDITIONS AND DIMENSIONS, ON SITE, REQUIRED TO PERFORM THE WORK AND REPORT ANY DISCREPANCIES WITH THE CONTRACT DOCUMENTS TO THE DESIGN TEAM BEFORE COMMENCING WORK.			

THE JUNCTION PHOENIX  
PLANNED UNIT DEVELOPMENT  
BLOCK 7  
  
OTTAWA, ONTARIO

**Q M & E**  
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CURRENT DATE	Aug 29, 2024 — 3:20pm
SCALE	NTS
DRAWN	TM
DESIGNED	CWC
CHECKED	LVOL
PROJECT	23-007
DRAWING NUMBER	M-001

SITE PLAN, LEGEND,  
SCHEDULES AND NOTES



1. MECHANICAL GENERAL CONDITIONS

1.1. SCOPE

1.1.1. THE PROJECT CONSISTS OF: NEW STACKED TOWNHOMES COMPLETE WITH GAS, HVAC, PLUMBING AND CONNECTION TO CIVIL SERVICES.

1.1.2. PROVIDE COMPLETE GAS, HVAC AND PLUMBING AS GENERALLY SHOWN ON DRAWINGS AND DESCRIBED HEREIN. CO-ORDINATE INSTALLATION WITH THE VARIOUS TRADES.

1.1.3. FURNISH INSPECTION CERTIFICATES PRIOR TO FINAL PAYMENT TO SHOW THAT ALL INTENDED WORK CONFORMS WITH DRAWINGS AND SPECIFICATIONS AND WITH BY-LAWS AND REGULATIONS OF ALL AUTHORITIES HAVING JURISDICTION.

1.2. DRAWINGS AND SPECIFICATIONS

1.2.1. PROJECT DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY TO THIS GENERAL SPECIFICATION. IN CASES OF CONFLICT, AMBIGUITY, OR DOUBT, APPLY TO THE ENGINEER FOR A RULING IN WRITING.

1.2.2. DRAWINGS IN PART ARE DIAGRAMMATIC AND INTENDED TO CONVEY THE SCOPE OF WORK AND GENERAL LAYOUT OF MECHANICAL SYSTEMS. DO NOT SCALE DRAWINGS.

1.2.3. LINE BREAKS ARE FOR CLARITY AND DO NOT NECESSARILY SHOW ORDER OF INSTALLATION.

1.2.4. ALL JOBS MUST BE COMPLETE, PERFORMED AND FINISHED IN A WORKMANLIKE MANNER. ALL WORK AND MATERIALS OF AN INCIDENTAL NATURE NECESSARY TO PRODUCE THE FINISHED JOB AS SPECIFIED, SHALL BE SUPPLIED EVEN WHEN NOT LISTED OR DESCRIBED IN DETAIL.

1.2.5. NO DEVIATIONS FROM THE SPECIFICATIONS OR DRAWINGS WILL BE ALLOWED WITHOUT WRITTEN PERMISSION FROM THE ENGINEER.

1.3. COORDINATION

1.3.1. MECHANICAL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ARCHITECTURAL, ELECTRICAL, STRUCTURAL, AND CIVIL PLANS.

1.3.2. CONTRACTOR SHALL OBTAIN THE LATEST ARCHITECTURAL, MECHANICAL, ELECTRICAL, STRUCTURAL, AND CIVIL DRAWINGS AND SPECIFICATIONS PRIOR TO COMMENCING WORK.

1.3.3. ARCHITECTURAL DRAWINGS TO DETERMINE NUMBER AND LOCATION OF FIXTURES.

1.3.4. DUCT AND PIPING TO BE CAREFULLY MAINTAINED IN ADVANCE OF INSTALLATION. SUBMIT LAYOUT DRAWINGS FOR REVIEW PRIOR TO FABRICATION AND INSTALLATION.

1.3.5. CONTRACTOR IS TO COORDINATE LOCATIONS OF DUCTWORK, PIPING, AND FIXTURES WITH OTHER TRADES. IT IS THE INTENT OF THESE DRAWINGS THAT THE MECHANICAL CONTRACTOR PROVIDE COMPLETE EQUIPMENT AND FITTINGS, WHETHER OR NOT ALL SUCH ITEMS ARE EXPLICITLY SHOWN ON THESE DRAWINGS. IN ALL CASES OF UNCERTAINTY THE ENGINEER SHALL BE REQUESTED IN WRITING TO PROVIDE CLARIFICATION IN WRITING.

1.4. CERTIFIED ROUGH-IN DIMENSIONS

1.4.1. ROUGH-IN DIMENSIONS FOR MECHANICAL SERVICES SHALL BE OBTAINED FROM THE EQUIPMENT SUPPLIERS IN ADVANCE OF THE BUILDING CONSTRUCTION AND SHALL FORM PART OF THE CONTRACT DRAWINGS.

1.5. EXAMINATION OF SITE

1.5.1. THE CONTRACTOR SHALL, BEFORE TENDERING, VISIT THE SITE AND EXAMINE WORK CONDITIONS AND NOTIFY THE CONSULTANT OF ANY DISCREPANCIES BEFORE TENDER CLOSING.

1.5.2. SUBMISSION OF TENDER IS DEEMED TO BE CONFIRMATION THAT THE CONTRACTOR HAS INSPECTED THE SITE AND EXAMINED ALL CONTRACT DOCUMENTS. NO EXTRAS WILL BE CONSIDERED FOR FAILURE TO COMPLY WITH THE ABOVE.

1.6. SHOP DRAWINGS

1.6.1. WITHIN 10 DAYS OF AWARD OF CONTRACT SUBMIT PDF COPIES OF SHOP DRAWINGS FOR ALL MECHANICAL SYSTEM COMPONENTS C/W DESCRIPTIVE DATA. ENSURE TO EXPLICITLY IDENTIFY INFORMATION ON THE SHOP DRAWINGS APPLICABLE FOR REVIEW AND THE PROJECT. REVIEW OF DRAWINGS INDICATES ONLY THAT THE QUALITY AND GENERAL DESIGN OF THE EQUIPMENT IS ACCEPTABLE.

1.6.2. VERIFICATION OF DIMENSIONS ON THE LOCATION OF CONNECTIONS TO THE EQUIPMENT SHALL BE THE FULL RESPONSIBILITY OF THE CONTRACTOR. DO NOT SUBSTITUTE ALTERNATIVES TO EQUIPMENT SPECIFIED UNLESS APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. ALL PROBLEMS ARISING FROM ANY SUCH SUBSTITUTED EQUIPMENT WILL BE CONSIDERED SOLELY THE RESPONSIBILITY OF THE CONTRACTOR MAKING THE SUBSTITUTION.

1.6.3. SHOP DRAWINGS SHALL SHOW: OVERALL DIMENSIONS, ROUGHING-IN DIMENSIONS AND CLEARANCE DIMENSIONS. CERTIFIED PERFORMANCE DATA INDICATING OPERATING FLOWS, PRESSURES, MAXIMUM TEMPERATURE AND PRESSURES, ENTERING AND LEAVING CONDITIONS OF AIR AND FLUID, OPERATING WEIGHT, ELECTRICAL CHARACTERISTICS AND BREAK HORSEPOWER REQUIREMENTS. GAUGE OF FABRICATED MATERIAL AND TYPE OF FINISH.

1.7. AS BUILT DRAWINGS

1.7.1. SHOW ALL REVISIONS AND ALTERATIONS OF THE ENTIRE MECHANICAL CONTRACT ON ONE SET OF PRINTS AND SUBMIT TO ENGINEER PRIOR TO SUBSTANTIAL COMPLETION OF JOB. AS BUILTS ARE TO BE KEPT ON SITE AND UPDATED DAILY. NO CHANGES TO THE ORIGINAL LAYOUT OR SPECIFICATION WILL BE PERMITTED WITHOUT WRITTEN AUTHORIZATION FROM THE CONSULTANT.

1.8. EQUIPMENT AND MAINTENANCE MANUALS

1.8.1. SUPPLY MAINTENANCE AND OPERATION MANUALS FOR EACH PIECE OF MAJOR APPARATUS AND EQUIPMENT, IN PDF FORMAT. INCLUDE NAMES OF SPARE PARTS SUPPLIERS, AND ADDRESSES. INCLUDE INDEX PAGE.

1.9. HOISTING AND RIGGING

1.9.1. IN ACCORDANCE WITH THE CONSTRUCTION SCHEDULE, PROVIDE FOR TRANSPORTATION OF EQUIPMENT AND MATERIALS TO THE SITE AND FOR RIGGING, HAULING, STORAGE AND SETTING IN PLACE OF EQUIPMENT.

1.10. CONCEALMENT

1.10.1. CONCEAL ALL PIPING AND DUCTWORK IN PARTITIONS, WALLS AND BETWEEN FLOOR AND CEILINGS. PROVIDE ACCESS DOORS AT ALL VALVES, CLEANOUTS, AND FIRE DAMPERS, ETC. IN FINISHED AREAS ONLY.

1.11. CUTTING AND PATCHING

1.11.1. CUTTING, DRILLING, AND PATCHING REQUIRED BY THE PASSAGE OF PIPES, AND DUCTS THROUGH WALLS, FLOORS AND ROOF STRUCTURES DOES NOT FORM PART OF THIS CONTRACT, AND IS TO BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

1.12. SEALING

1.12.1. SEAL ALL PENETRATIONS OF WALLS BY PIPING, CONTROL WIRING, AND DUCTWORK. PROVIDE APPROPRIATE FIRE STOPPING.

1.13. ESCUTCHEON PLATES

1.13.1. ESCUTCHEON COVERS TO BE PROVIDED FOR ALL PIPING PASSING THROUGH WALLS, FLOORS AND CEILINGS IN ALL FINISHED AREAS.

1.14. MATERIALS SPECIFIED

1.14.1. MATERIALS AND EQUIPMENT DESCRIBED ON THE DRAWINGS ARE USED TO ESTABLISH A STANDARD OF MATERIALS AND WORKMANSHIP TO WHICH CONTRACTOR AND SUBCONTRACTOR SHALL ADHERE. WHERE MANUFACTURER'S TRADE NAMES ARE USED, THE TENDER PRICE SHALL BE BASED UPON THOSE PRODUCTS. CONTRACTOR MAY LIST OTHER MANUFACTURERS' EQUIPMENT AS ALTERNATES ONLY AT THE TIME OF TENDER. SUBMISSION OF ALTERNATES WILL NOT BE ALLOWED AFTER TENDER CLOSING. ALL ALTERNATES MUST BE APPROVED IN WRITING BY THE CONSULTANT PRIOR TO TENDER CLOSING AND APPROVAL ISSUED BY ADDENDUM. NO ADDENDUM WILL BE ISSUED FOR THIS PURPOSE WITHIN THREE WORKING DAYS OF TENDER CLOSING.

1.15. WORKMANSHIP

1.15.1. MAINTAIN ON SITE, A COMPETENT FOREMAN TO SUPERVISE THE WORK FOR THE DURATION OF THE CONTRACT. FOLLOW RECOMMENDED STANDARDS OF INSTALLATION AS PUBLISHED BY APPLICABLE INDUSTRY OR TRADE ASSOCIATIONS. ONLY FIRST CLASS WORKMANSHIP IS ACCEPTABLE.

1.16. PROTECTION AND CLEANING

1.16.1. PROTECT ALL MATERIALS AND EQUIPMENT SUPPLIED DURING CONSTRUCTION UNTIL THE BUILDING IS FORMALLY ACCEPTED BY THE OWNER.

1.16.2. STORE MATERIALS AND EQUIPMENT DELIVERED TO THE SITE IN A SAFE, DRY LOCATION. AFTER INSTALLATION, PROTECT ALL EQUIPMENT AND PLUMBING, FIXTURES USING SHIPPING CRATES, CARTONS, OR TARPAILLINS.

1.16.3. AFTER COMPLETION OF THE CONTRACT, REMOVE ALL DEBRIS, AND REPLACE ANY DAMAGED COMPONENTS. CLEAN EQUIPMENT AND LUBRICATE FAN AND MOTOR BEARINGS.

1.17. ACCESS DOORS

1.17.1. PROVIDE ACCESS DOORS, FOR ALL CONCEALED VALVES, PETCOCKS, CLEANOUTS, AIR VENTS, DAMPERS, AND OTHER EQUIPMENT WHICH REQUIRES MAINTENANCE OR ADJUST. WHERE REQUIRED, ACCESS DOORS SHALL HAVE THE SAME FIRE RATING AS SURROUNDING STRUCTURE.

1.18. SCAFFOLDING

1.18.1. SUPPLY, ERECT AND REMOVAL SCAFFOLDING NECESSARY FOR THE PERFORMANCE OF THE WORK.

1.19. GUARANTEE

1.19.1. THE CONTRACTOR SHALL FURNISH THE OWNER WITH A WRITTEN GUARANTEE FOR THE SATISFACTION OF ALL WORK AND EQUIPMENT INSTALLED UNDER THIS CONTRACT AND REPLACE AT NO COST TO THE OWNER) IMMEDIATELY, ANY PART WHICH MAY FAIL OR PROVE DEFECTIVE WITHIN A PERIOD OF 12 MONTHS AFTER FINAL ACCEPTANCE OF THE COMPLETE CONTRACT.

1.19.2. THIS GENERAL GUARANTEE SHALL NOT ACT AS A WAIVER FOR ANY SPECIFIED GUARANTEE THAT IS GREATER THAN 12 MONTHS.

1.20. RELATED WORK

1.20.1. ELECTRICAL: POWER SUPPLIES TO MECHANICAL EQUIPMENT, AND LINE VOLTAGE CONTROL WIRING ARE RESPONSIBILITY OF ELECTRICAL TRADE AND DON'T FORM PART OF THIS CONTRACT.

1.21. DISCREPANCIES

1.21.1. BRING TO THE ATTENTION OF THE ENGINEER ANY DISCREPANCIES ON THESE DRAWINGS DURING THE TENDER PERIOD. CLAIMS FOR EXTRA PAYMENT BASED SOLELY MISINTERPRETATIONS OF THE REQUIREMENTS WILL NOT BE CONSIDERED.

1.22. PERMITS & CERTIFICATES

1.22.1. CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED AND PAY ALL PERMIT AND INSPECTION FEES.

1.23. CODES & STANDARDS

1.23.1. CONFORM TO ALL APPLICABLE AND STANDARDS INCLUDING BUT NOT LIMITED TO:  
THE ONTARIO BUILDING CODE 2012 WITH ALL AMENDMENTS.  
CITY AND REGIONAL BYLAWS AND STANDARDS.  
THE PLUMBING CODE.  
GAS UTILIZATION CODE.  
NFPA CODES.

2. T.S.A.  
C.G.A  
SMACNA  
ASHRAE STANDARDS.

1.24. PERFORMANCE

1.24.1. CO-ORDINATE WORK WITH THAT OF OTHER TRADES. CONFIRM EXACT LOCATIONS OF ALL EQUIPMENT ON SITE PRIOR TO INSTALLATION. DRAWINGS INDICATE APPROXIMATE LOCATIONS ONLY. CLEAN AND TOUCH UP ALL SURFACES OF SHOP PAINTED EQUIPMENT SCRATCHED OR MARKED DURING SHIPMENT OR INSTALLATION.

1.24.2. DO NOT OPERATE EXHAUST OF AIR CONDITIONING FAN DURING OPERATIONS SUCH AS SANDING. REPLACE ALL FILTERS AT COMPLETION OF PROJECT AND LEAVE ONE SET OF SPARE FILTERS FOR EACH PIECE OF EQUIPMENT SITE FOR USE BY CLIENT.

1.25. IDENTIFICATION

1.25.1. DO IDENTIFICATION WORK IN ACCORDANCE WITH CGSB 24-OP-3A EXCEPT WHERE SPECIFIED OTHERWISE.

1.25.2. PROVIDE ULC AND/OR CSA REGISTRATION PLATES, AS REQUIRED BY RESPECTIVE AGENCY.

1.25.3. INDICATE SIZE, EQUIPMENT MODEL, MANUFACTURER'S NAME, SERIAL NUMBER, VOLTAGE, CYCLE, PHASE AND POWER OF MOTORS.

1.25.4. TO CGSB 24-OP-3A, IDENTIFY MEDIUM BY LETTERED LEGEND, CLASSIFICATION BY PRIMARY AND SECONDARY COLOURS, DIRECTION OF FLOW BY ARROWS.

1.26. DEFINITIONS

1.26.1. FOR THE PURPOSES OF THESE SPECIFICATIONS THE FOLLOWING DEFINITIONS SHALL APPLY:  
1. "CONCEALED" – HIDDEN FROM NORMAL SIGHT IN FURRED SPACES, SHAFTS, CEILING SPACES, WALLS AND PARTITIONS.  
2. "EXPOSED" – ALL MECHANICAL WORK NORMALLY VISIBLE, INCLUDING WORK IN EQUIPMENT ROOMS, TUNNELS, ETC...  
3. "PROVIDE" – (AND TENSES OF "PROVIDE") SUPPLY, INSTALL AND CONNECT COMPLETE.  
4. "INSTALL" – (AND TENSES OF "INSTALL") INSTALL AND CONNECT COMPLETE.  
5. "SUPPLY" – SUPPLY ONLY.  
6. "APPROVED" – ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION AND/OR ACCEPTABLE TO THE ENGINEER.  
7. "AUTHORITY HAVING JURISDICTION" – THE ORGANIZATION, OFFICE, OR INDIVIDUAL RESPONSIBLE FOR APPROVING EQUIPMENT, AN INSTALLATION, OR A PROCEDURE.  
8. "IDENTIFIED" – CAPABLE OF BEING RECOGNIZED BY A PERSON OF NORMAL VISION WITHOUT CAUSING UNCERTAINTY ABOUT THE LOCATION OR OPERATING PROCESS OF THE IDENTIFIED ITEM.

1.27. FABRICATION DRAWINGS

1.27.1. THE FABRICATION OF THE DUCTWORK WILL BE DETERMINED FROM FIELD MEASUREMENTS BY THIS CONTRACTOR. THIS CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE DUCTWORK WITH ALL OTHER TRADES. THIS CONTRACTOR SHALL PROVIDE FABRICATION AND INTERFERENCE DRAWINGS TO DETERMINE ROUTING OF THE DUCTWORK AND SHALL PROVIDE ALL OFFSETS, ELBOWS AND TRANSITIONS AS REQUIRED TO MAKE A FULLY OPERATIONAL SYSTEM.

1.28. NOT USED

2. PLUMBING

2.1. GENERAL

2.1.1. THE PLUMBING AND DRAINAGE SYSTEMS SHALL BE IN ACCORDANCE WITH MUNICIPAL AND PROVINCIAL CODES AND BY-LAWS HAVING JURISDICTION.

2.1.2. NUMBER AND LOCATIONS OF FIXTURES TO BE GOVERNED BY ARCHITECTURAL DRAWINGS.

2.2. CCTV

2.2.1. ALL STORM AND SANITARY UNDERGROUND TO BE CCTV CHECKED PRIOR TO FINAL HANDOVER.

2.2.2. STORM AND SANITARY UNDERGROUND SHALL BE CCTV CHECKED PRIOR TO FINAL HANDOVER.

2.2.3. THE CCTV REPORT REQUIRED BY THE SPEC FOR STORM AND SAN SHALL BE ACCOMPANIED BY A COPY OF OUR MECHANICAL DRAWING SHOWING THE STARTING POINT AND ENDING POINT USED TO PRODUCE EACH VIDEO FILE.

2.2.4. ANY DEFICIENCIES SHALL BE RECTIFIED.

2.2.5. EXACT EXTENT OF CCTV SUBJECT TO MODIFICATIONS DETERMINED ON SITE AS A RESULT OF SITE CONDITIONS OR AFTER CONSULTANT AGREEMENT.

2.3. BURIED PIPING

2.3.1. TYPICAL WEEPERS AND SUBSLAB DRAINAGE PIPE DESIGN AND INSTALLATION IS THE RESPONSIBILITY OF OTHERS. FINAL CONNECTION TO STORM PIPING BY MECHANICAL CONTRACTOR. COORDINATE ON RELATIVE ORIENTATION OF BOTH SETS OF PIPING. ASSUME SUBSLAB PIPING AT 20' CENTERS.

2.3.2. CONNECT BUILDING SAN PIPE TO SITE PIPE 36" AWAY FROM FOUNDATION.

2.3.3. CONNECT BUILDING STORM PIPE TO SITE PIPE 36" AWAY FROM FOUNDATION.

2.3.4. CONNECT BUILDING WATER PIPE TO SITE PIPE 36" AWAY FROM FOUNDATION.

2.3.5. ALL BURIED SANITARY PIPING SHALL BE A MINIMUM OF 4 NPS DIAMETER UNLESS OTHERWISE NOTED.

2.3.6. PROVIDE SLEEVES FOR ALL SANITARY AND STORM PIPES THAT PENETRATE THE GRADE BEAMS.

2.3.7. COORDINATE THE LOCATION OF ALL THE BURIED PIPES WITH GRADE BEAMS AND FOOTINGS.

2.3.8. THE DOMESTIC COLD WATER TO THE BUILDING SHALL HAVE A MINIMUM 2.4 METERS OF COVER WHERE IT PENETRATES THE FLOOR. THE PIPE SHALL NOT SLOPE UP TO THE FLOOR FROM WHERE IN PASSES UNDER THE FOUNDATION FOOTINGS.

2.4. REFERENCE STANDARDS

2.4.1. PROVIDE PIPE, FITTINGS AND VALVES TO THE FOLLOWING STANDARDS:  
1. PIPES AND FITTINGS: CSA, ASTM, ANSI.  
2. VALVES: ANSI.  
3. FIXTURES: CSA 815.

2.5. PIPING INSTALLATION

2.5.1. ARRANGE AND INSTALL PIPING APPROXIMATELY AS INDICATED. FORM RIGHT ANGLES ON PARALLEL LINES WITH BUILDING WALLS. SLOPE PIPING TO ACHIEVE PROPER DRAINAGE AND AIR ELIMINATION. PROVIDE DRAIN VALVES ON ALL LOW POINTS OF THE PIPING SYSTEM. PROVIDE AIR VENTS AT HIGH POINTS OF THE SYSTEM.

2.5.2. ALL PIPING SHALL BE NEW, CLEAN AND FREE FROM CUTTING BURRS AND DEFECTS IN STRUCTURE OR THREADING AND SHALL BE THOROUGHLY BRUSHED AND SCALE BLOW OUT. FLUSH AND CLEAN ALL PIPING SYSTEMS AFTER FINAL TESTING.

2.5.3. FOR DOMESTIC WATER SERVICE USE LEAD FREE SOLDER ON SIZES UP TO 75MM PROVIDE DI-ELECTRIC UNIONS AT ALL COUPLINGS OF FERROUS AND NON-FERROUS PIPE. ALL GROUPS OF FIXTURES SHALL HAVE SHOCK ABSORBERS OF THE SEALED MANUFACTURED TYPE, SIZED TO SUIT THE NUMBER OF FIXTURES SERVED.

2.5.4. PIPES SHALL PENETRATE THE FLOOR ONE (1) FOOT AWAY FROM THE END OF SHEAR WALLS AND BESIDE COLUMNS WHERE SHOWN.

2.5.5. ESCUTCHEON COVERS TO BE PROVIDED FOR ALL PIPING PASSING THROUGH FINISHED WALLS.

2.5.6. PIPE SIZES ARE IN NPS UNLESS OTHERWISE STATED.

2.6. PIPE SUPPORTS AND HANGERS

2.6.1. AUXILIARY STRUCTURAL MEMBERS SHALL BE PROVIDED WHERE PIPING OR DUCT MUST BE SUSPENDED BETWEEN JOISTS AND BEAMS AND OBTAIN APPROVAL FROM THE STRUCTURAL ENGINEER BEFORE INSTALLATION.

2.6.2. THE HANGERS SUPPORTING INSULATED PIPING SHALL FIT AROUND THE OUTSIDE OF THE INSULATION. INSULATION SHIELDS SHALL BE SUPPLIED AND INSTALLED. DO NOT SUSPEND ON PIPE FROM ANOTHER HANGER SPACING: SPACING AND MIDDLE ATTACHMENT (ROD) DIAMETER AS SPECIFIED IN PARAGRAPHS BELOW OR AS IN TABLE BELOW, WHICHEVER IS MORE STRINGENT.

2.6.3. 1. PLUMBING PIPING: MOST STRINGENT REQUIREMENTS OF CANADIAN PLUMBING CODE, PROVINCIAL CODE, OR AUTHORITY HAVING JURISDICTION.  
2. FIRE PROTECTION: TO APPLICABLE FIRE CODE.  
3. GAS PIPING: UP TO NPS 1/2: EVERY 1800.  
4. COPPER PIPING: UP TO NPS 1/2: EVERY 1800.  
5. FLEXIBLE JOINT ROLL GROOVE PIPE: IN ACCORDANCE WITH TABLE BELOW, BUT NOT LESS THAN ONE HANGER AT JOINTS.  
6. WITHIN 12" OF EACH HORIZONTAL ELBOW.

PIPE SIZE NPS

ROD DIAMETER

MAXIMUM SPACING STEEL (MM)

MAXIMUM SPACING COPPER (MM)

UP TO

1 1/4

10

2100

1800

1 1/2

10

2700

2400

2

10

3000

2700

2 1/2

10

3600

3000

3

10

3600

3000

3 1/2

10

3900

3300

2.6.1. HANGER INSTALLATION: OFFSET HANGER SO THAT ROD IS VERTICAL IN OPERATING POSITION. ADJUST HANGERS TO EQUALIZE LOAD.

2.7. EXPANSION

2.7.1. PROVIDE ANCHORS, GUIDES AND LOOPS TO COMPENSATE FOR EXPANSION AND CONTRACTION OF THE PIPEWORK. ERECT PIPING SO THAT THE WEIGHT DOES NOT FALL UPON THE CAST CONNECTIONS OR APPARATUS.

2.8. TESTING PIPING

2.8.1. FILL ALL NEW WATER SYSTEMS WITH WATER AND HYDRAULICALLY TEST WITH A PRESSURE OF ONE AND ONE-HALF TIMES THE WORKING PRESSURE AND MAINTAIN SUCH PRESSURE FOR 24 HOURS. SHOULD LEAKS APPEAR DURING THE TESTS, REPAIR THE DEFECT, AND RETEST.

2.9. VALVES

2.9.1. ALL VALVES TO BE FROM ONE MANUFACTURER.

2.9.2. ALL PLUMBING FIXTURES SHALL HAVE ISOLATING VALVES.

2.9.3. ALL VALVES AND STRAINERS TO BE LINE SIZE.

2.9.4. ALL VALVES TO BE SUITABLE FOR REPAIRING. VALVES FORTHROTTLING PURPOSES AND BY-PASS VALVES TO BE GLOBE TYPE. UNLESS OTHERWISE SPECIFIED OR NOTED, VALVES TO BE ANSI CLASS 200 WOG OR 125/200 WOG NON-SHOCK, SCREWED OR SOLDERED ENDS, MALLEABLE IRON HANDLE.

4. EQUIPMENT ROOMS, PROVIDE OS & Y.  
SPECIFIED PRODUCT FOR DOMESTIC COLD AND HOT WATER VALVES: SEE TABLE 2.9.5.

2.9.5. FIT COMPOSITION DISC GLOBE VALVES FOR DOMESTIC HOT WATER SERVICE WITH DISCS SUITABLE FOR HOT WATER TO A MAXIMUM TEMPERATURE OF 77°C.

2.9.1. FIT COMPOSITION DISC GLOBE VALVES FOR DOMESTIC HOT WATER SERVICE WITH DISCS SUITABLE FOR HOT WATER TO A MAXIMUM TEMPERATURE OF 77°C.

2.10. PIPING MATERIAL SCHEDULE

2.10.1. ALL PIPING OF THE PLUMBING SYSTEMS SHALL COMPLY WITH REQUIREMENTS OF THE O.B.C., SECTION 7. SEE TABLE 2.10.1.

2.10.2. NO PLASTIC PIPING SHALL BE INSTALLED IN A RETURN AIR PLENUM UNLESS IT MEETS THE REQUIREMENTS OF THE SECTION 3.4.3.4(1) OF THE O.B.C. (FLAME SPREAD LESS THAN 25, SMOKE DEVELOPMENTS LESS THAN 50), ALL PENETRATIONS OF FIRE RATED SEPARATIONS MUST BE SEALED BY APPROVED FIRE STOPPING MATERIALS.

2.10.3. ALL PIPING SYSTEMS SHALL BE INSTALLED AS PER MANUFACTURERS RECOMMENDED INSTALLATION PROCEDURES.

2.11. SEE BELOW FOR SUGGESTED PLUMBING FIXTURES SUBJECT TO APPROVAL.

2.11.1. WC: FLOOR MOUNT UNIVERSAL ACCESS 2-PIECE FLUSH TANK 4.8 L/FLUSH WATER CLOSET, SEAT WITH COVER, WHITE. 1/2 NPS DW, 3 NPS DRAIN, VENT.

2.11.2. LAV: UNDERMOUNT UNIVERSAL ACCESS LAV, SINGLE LEVER 5.7 L/M FAUCET, RED/BLUE INDICATOR ON HANDLE, TRAP, DRAIN, PLUG. 1/2 NPS DW, 1 1/4 NPS SAN, VENT.

2.11.3. BATH: WHITE 60"x30" REINFORCED ACRYLIC, TRAP, DRAIN, TRIM TO BE SINGLE LEVER PRESSURE BALANCING MIXING VALVE, ADJUSTABLE HIGH LIMIT, INTEGRAL STOPS, 6.8 L/MIN SHOWER HEAD, CHROME. 1/2 NPS DW, 1 1/2 NPS SAN, VENT.

2.11.4. SH: SHOWER, WHITE, 48"x35"x75" REINFORCED ACRYLIC, TRAP, DRAIN, FAUCET TO BE SINGLE LEVER PRESSURE BALANCING VALVE, ADJUSTABLE HIGH LIMIT, INTEGRAL STOPS, 6.8 L/MIN SHOWER HEAD, CHROME. 1/2 NPS DW, 1 1/2 NPS SAN, VENT.

2.11.5. KS: UNDERMOUNT KITCHEN SINK, DOUBLE BOWL, STAINLESS STEEL, UNDERMOUNT, SINGLE LEVER 5.7 L/M FAUCET, 4" CENTRES, TRAP, DRAIN, CRUMB CUP STRAINER, SOUND DEADENING PAD. 1/2 NPS DW, 1 1/4 NPS SAN, VENT.

2.11.6. W/D: NEW WASHER/DRYER, VALVED DOMESTIC COLD AND HOT WATER CONNECTIONS, 2NPS DRAIN FOR WASHER, STAINLESS STEEL WATER HAMMER ARRESTORS, PDI-WH 201.

2.11.7. FD: GENERAL DUTY FLOOR DRAIN, CAST IRON BODY ROUND, ADJUSTABLE HEAD, SEDIMENT BASKET, NICKEL BRONZE STRAINER, INTEGRAL SEEPAGE PAN AND CLAMPING COLLAR, TRAP SEAL PRIMER CONNECTION.

2.11.8. FFD: SAME AS FD WITH ADDED FUNNEL.

2.11.9. THE CONTRACTOR SHALL CONFER WITH THE OWNER ON FINAL SELECTION OF ALL PLUMBING FIXTURES PRIOR TO FINALIZING THE CONTRACT AND SUBMITTING THE SHOP DRAWINGS.

2.11.10. FRIDGE: PROVIDE A 3/8" DOMESTIC COLD WATER (DCW) LINE AND ISOLATING VALVE FOR A REFRIGERATOR CONNECTION.

3. NOT USED

4. NOT USED

5. HEATING, VENTILATING AND AIR CONDITIONING

5.1. DUCTWORK

5.1.1. UNLESS OTHERWISE NOTED, ALL DUCTWORK SHALL BE FABRICATED FROM GALVANIZED IRON 0.22 KG. ZINC COATING MIN.

5.1.2. USE 0.50 MM THICK UP TO 300 MM LONGEST SIDE.

5.1.3. USE 0.60 MM THICK UP TO 720 MM LONGEST SIDE.

5.1.4. USE 0.80 MM THICK UP TO 1370 MM LONGEST SIDE.

5.1.2. ALL RECTANGULAR DUCTWORK SHALL BE MANUFACTURED FROM "CROSS-BROKEN" SHEETS, PROVIDE BALANCING DAMPERS AT EACH BRANCH TAKE-OFF.

5.1.3. FLEXIBLE NON-COLLAPSIBLE SEMI-RIGID ALUMINUM DUCT TO BE NO MORE THAN 36" LONG.

5.1.4. DETAILS, CONSTRUCTION AND MATERIALS NOT SPECIFIED HEREIN SHALL BE AS PER THE LATEST EDITION ASHRAE AND SMACNA STANDARDS.

5.1.5. FABRICATE DUCTWORK IN A WORKMANLIKE MANNER, WITH AIR-TIGHT SEAMS. CURVED SECTIONS OF DUCTWORK SHALL HAVE AN INSIDE RADIUS OF NOT LESS THAN THE WIDTH OF THE DUCT.

5.1.6. BRACE AND SUPPORT DUCT IN SUCH A MANNER THAT IT WILL NOT SAG, IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS.

5.1.7. JOINTS UP TO 450 MM TO BE STANDARD DRIVE SLIPS. JOINTS 450 MM AND OVER TO BE PITTSBURGH SEAM LONGITUDINAL DRIVE SLIP.

5.1.8. DUCT LEAKAGE SHALL NOT BE MORE THAN 5% OF TOTAL SYSTEM DESIGN WHEN SYSTEM IS OPERATING AT DESIGN CAPACITY. FLOWS TO EACH ROOM OR AREA SHALL BE BALANCED TO GIVE PROPORTIONALLY THE SAME FLOW AS INDICATED ON THE DRAWINGS.

5.1.9. SUPPORT DUCT ON HANGERS. SIZE, SPACING AND SUPPORT ROD DIAMETER IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS.

5.1.10. ALL DUCT SIZES LISTED ARE CLEAR INSIDE DIMENSIONS.

5.2. TURNING VANES

5.2.1. ALL SQUARE ELBOWS SHALL HAVE DOUBLE WALL TURNING VANES. SQUARE ELBOWS SHALL NOT BE USED IN LIEU OF LONG RADIUS ELBOWS.

5.3. ACCESS DOORS

5.3.1. SEE ALSO 1.17. PROVIDE DUCT ACCESS DOORS AS INDICATED OR REQUIRED FOR ACCESS TO FIRE OR OTHER DAMPERS AND FOR SERVICE OR INSPECTION, AND FOR CLEANOUTS WHERE REQUIRED ON SPECIALTY ITEMS. HINGED TYPE ACCESS DOORS 300 MM X 300 MM UNLESS OTHERWISE STATED, COMPLETE WITH TWO SASH LOCKS. ACCESS DOOR SHALL NOT COMPROMISE THE FIRE RATING OF THE PARTITION INTO WHICH IT IS INSTALLED.

5.4. DAMPERS

5.4.1. SPLITTERS: SHALL BE MANUFACTURED FROM THE SAME THICKNESS OF METAL AS THE DUCT AND SECURELY HINGED AT THE LEAVING EDGE AND MADE OF TWO THICKNESSES OF METAL SO THAT THE ENTERING EDGE HAS A ROUNDED SURFACE.

5.4.2. BALANCING: PROVIDE MANUAL DAMPERS AT EACH BRANCH TAKE-OFF IN ALL LOW.

5.4.3. PRESSURE DUCTWORK. FABRICATE FROM 1.2 MM THICK GALVANIZED STEEL OR HEAVIER.

5.4.4. DAMPERS FOR DUCTS UP TO 300 MM SHALL BE ONE BLADE. DAMPERS FOR DUCTS OF DEPTH GREATER THAN 300 MM DEEP SHALL BE OPPOSED BLADE TYPE.

5.4.5. BACKDRAFT: AUTOMATIC MULTI-BLADE LOW LEAKAGE LOUVER TYPE CONSTRUCTED OF LIGHT GAUGE ALUMINUM. BLADES TO BE JOINED WITH A TIE BAR, HAVE RUSTPROOF SHAFTS AND BRONZE BUSHINGS. BLADES TO HAVE FELT EDGES.

5.5. THERMOSTATS

5.5.1. ALL THERMOSTATS TO BE 7-DAY PROGRAMMABLE PROVIDED BY MECHANICAL CONTRACTOR

5.6. EXHAUSTS AND INTAKES

5.6.1. MAINTAIN MINIMUM 72" SEPARATION BETWEEN VENTS/EXHAUSTS AND AIR INTAKES.

5.6.2. ALIGN ALL GRILLES AND DIFFUSERS TO THE CEILING LAUOUT AND COORDINATE WITH LIGHTING FIXTURES.

5.7. NOT USED

5.8. CONTROLS

5.8.1. ALL CONTROL WIRING 50V AND LOWER BY MECHANICAL CONTRACTOR. ALL 120V AND HIGHER AND 3 PHASE WIRING BY ELECTRICAL CONTRACTOR

6. INSULATION

6.1. GENERAL

6.1.1. INSULATE ALL DOMESTIC WATER PIPING WITH 1" THICK THERMAL INSULATION.

6.1.2. NOT USED.

6.1.3. INSULATE SAN OFFSETS AS INDICATED AND WHERE OVER NON-WASHROOM AREAS INSIDE SUITES.

6.1.4. APPLY PIPE INSULATION WHEN REQUIRED HYDROSTATIC TESTS HAVE BEEN COMPLETED.

6.1.5. INSULATION SHALL BE APPLIED TO CLEAN DRY PIPE AND DUCTS. ALL DUCT JOINTS BUTTED FIRMLY AND LAPPED WITH 100 MM WIDE STRIP OF APPROVED ADHESIVE VAPOUR PROOF TAPE.

6.1.6. COVER ALL PIPE FITTINGS USING FABRICATED SECTION FROM THE PIPE COVERING.

6.1.7. APPLY AN APPROVED VAPOUR BARRIER OVER ALL PIPES HAVING GULF SURFACES AND ENSURE A SUITABLE SEAL.

6.2. DOMESTIC WATER PIPING

6.2.1. PROVIDE FIBREGLASS FLEXIBLE INSULATION FACED WITH "RGRGR" VAPOUR BARRIER. ADHERE INSULATION WITH 100MM STRIPS OF INSULATION BONDING ADHESIVE AT 200MM. O.C. TAPE ALL JOINTS AS PER SUPPLIER'S INSTRUCTIONS.

6.3. NOT USED.

6.4. NOT USED.

6.5. DUCTWORK (THERMAL)

6.5.1. WHERE INDICATED ON DRAWINGS AND

6.5.1.1. INSULATE A/C DUCTWORK WITHIN COMMON AREA CEILING SPACE WITH 25MM FIBREGLASS INSULATION AND ANTI-SWEAT VAPOUR BARRIER. INSULATE ALL EXTERIOR DUCTWORK WITH 50MM FIBREGLASS INSULATION AND "RFRFRK" VAPOUR BARRIER C/W 2 LAYERS OF WATERPROOFING. INSULATE ALL EXHAUST DUCTWORK PASSING THROUGH AN EXTERIOR WALL 1800MM BACK FROM WALL WITH 50MM FIBREGLAS INSULATION AND ANTI-SWEAT VAPOUR BARRIER. INSULATE ALL FRESH AIR INTAKE DUCTS WITH 2" THICK INSULATION C/W VAPOUR BARRIER.

6.6. DUCTWORK (ACOUSTIC)

6.6.1. WHERE INDICATED ON DRAWINGS AND

6.6.1.1. PROVIDE 25MM THICK RIGID FIBREGLAS WITH A DENSITY OF 32 KG/CU.M. COAT THE EXPOSED SURFACE WITH A BLACK NEOPRENE COMPOUND. LINER TO BE GLUE AND SCREW FASTENED WITH METAL EDGING. INCREASE DUCT SIZES SHOWN ON DRAWINGS TO ACCOMMODATE INSULATION THICKNESS WHERE ACOUSTIC INSULATION IS REQUIRED.

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2.9.5 VALVE SCHEDULE

VALVE	CRANE			JENKINS		
	SCREWED	SOLDER	FLANGE	SCREWED	SOLDER	FLANGE
GATE 2 NPS & UNDER	428	1320		810	313	
GATE 2 1/2 NPS & OVER			465			454
GLOBE 2 NPS & UNDER	7	1310		1068	106BP	
GLOBE 2 1/2 NPS AND OVER			351			142
CHECK 2 NPS & UNDER	37	1342		4092	4093	
CHECK 2 1/2 NPS & OVER			373			567

2.10.1 PIPING MATERIAL SCHEDULE

PLUMBING PIPING			
SERVICE	MATERIAL	JOINT	PRESSURE
H & CW DOMESTIC ABOVE GROUND	COPPER TYPE "L" OR UPONOR AQUALPEX	SOLDER	PLUMBING CODE
SANITARY, STORM, VENT BELOW GROUND	PVC (DWV) TO CSA B181.2 ABS (DWV) TO CSA B181.1	SOLVENT WELDED	PLUMBING CODE
SANITARY VENT ABOVE GROUND	COPPER (DWV) TO ASTM CAST IRON PVC-SYSTEM 15	SOLDER AND MJ MECHANICAL JOINTS FOR CAST IRON SOLVENT WELDING	PLUMBING CODE
BUILDING SEWER	PVC-SDR-35	SOLVENT	PLUMBING CODE

THE JUNCTION PHOENIX  
PLANNED UNIT DEVELOPMENT  
BLOCK 7  
OTTAWA, ONTARIO

Q

M&E  
ENGINEERING

9 GURDWARA ROAD, SUITE 200, NEPEAN, ON K2E 7X6  
TEL: (613) 366-4763 e-mail: mail@qmeengineering.com

CURRENT DATE  
Aug 29, 2024 ~ 3:20pm

SCALE NTS

DRAWN TM

DESIGNED CWC

CHECKED LVLD

PROJECT 23-007

DRAWING NUMBER  
M-002

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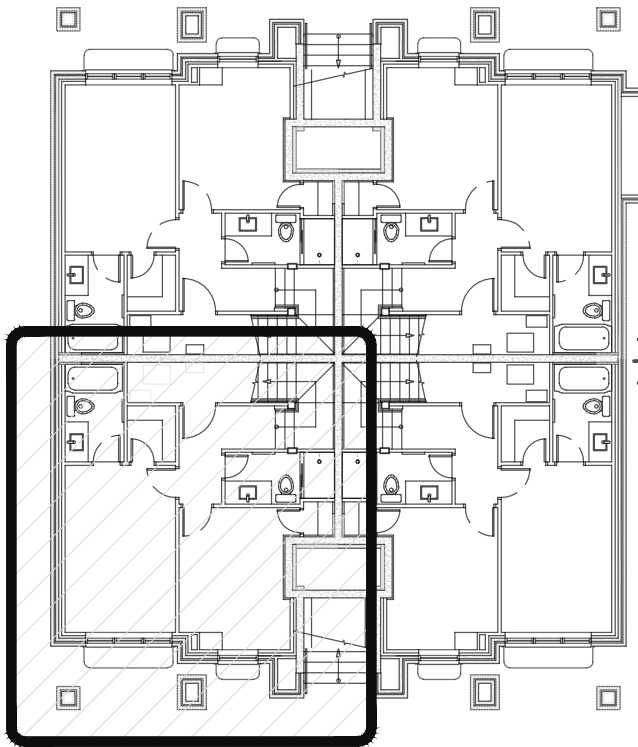
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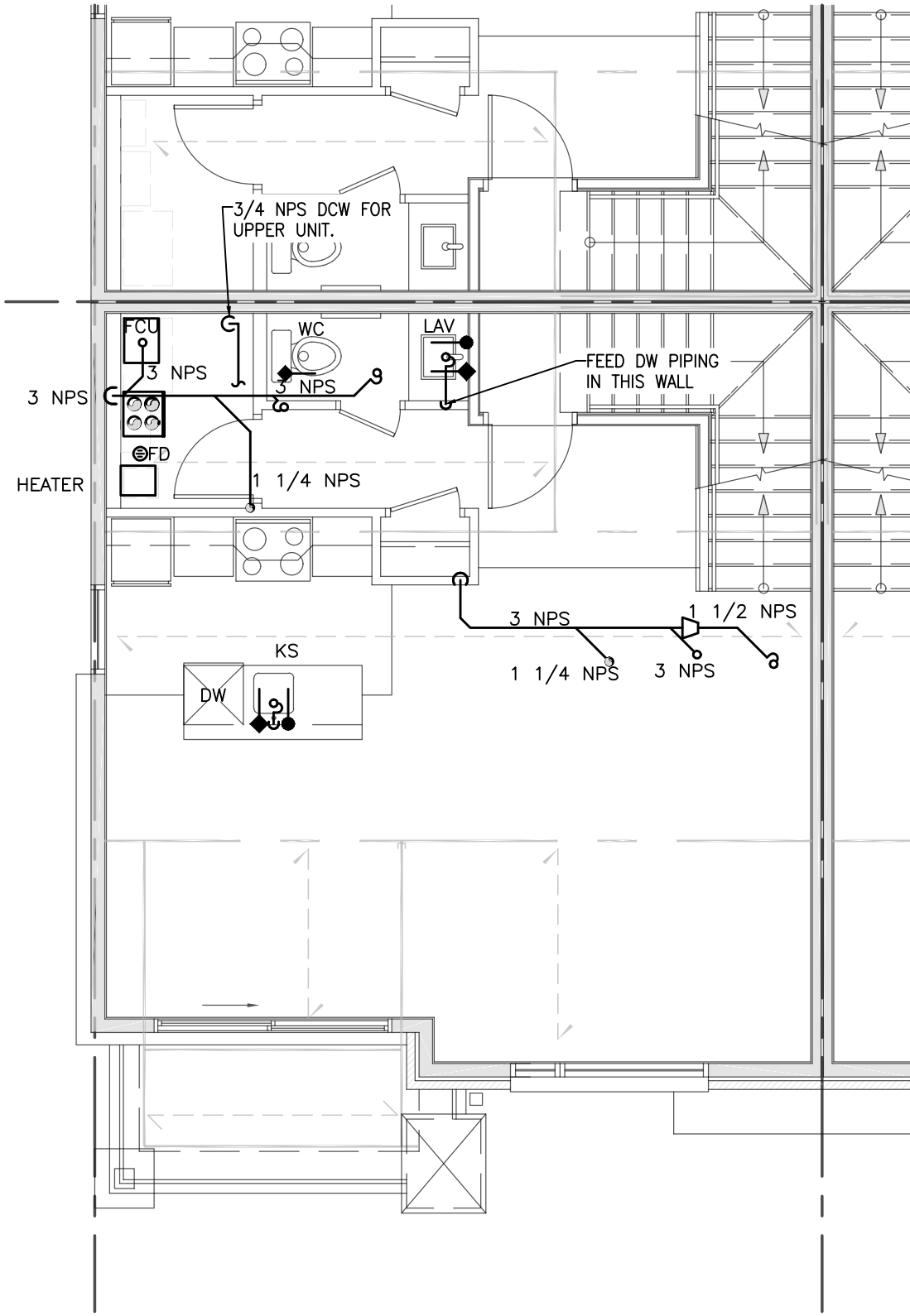
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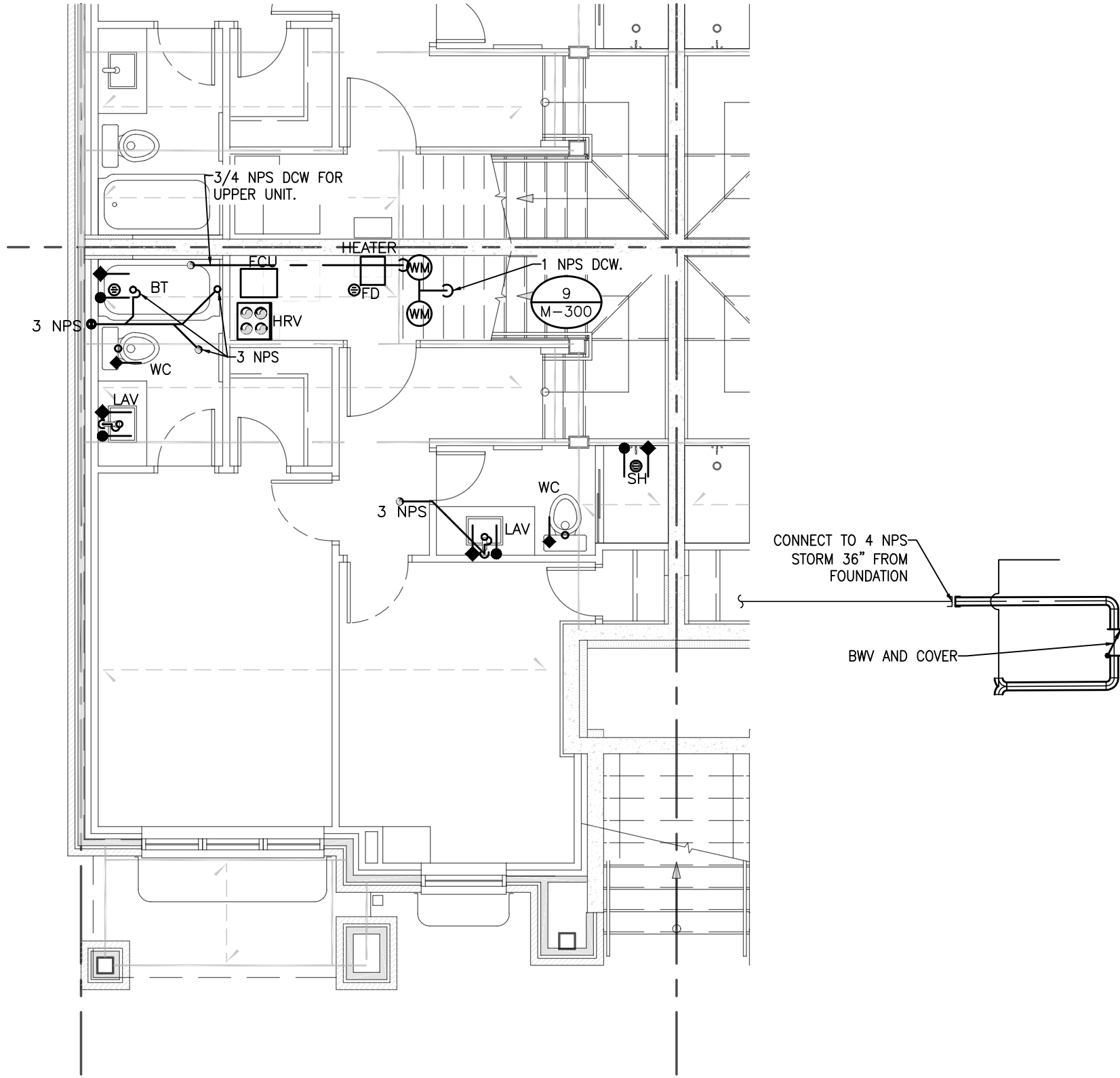
### KEY PLAN



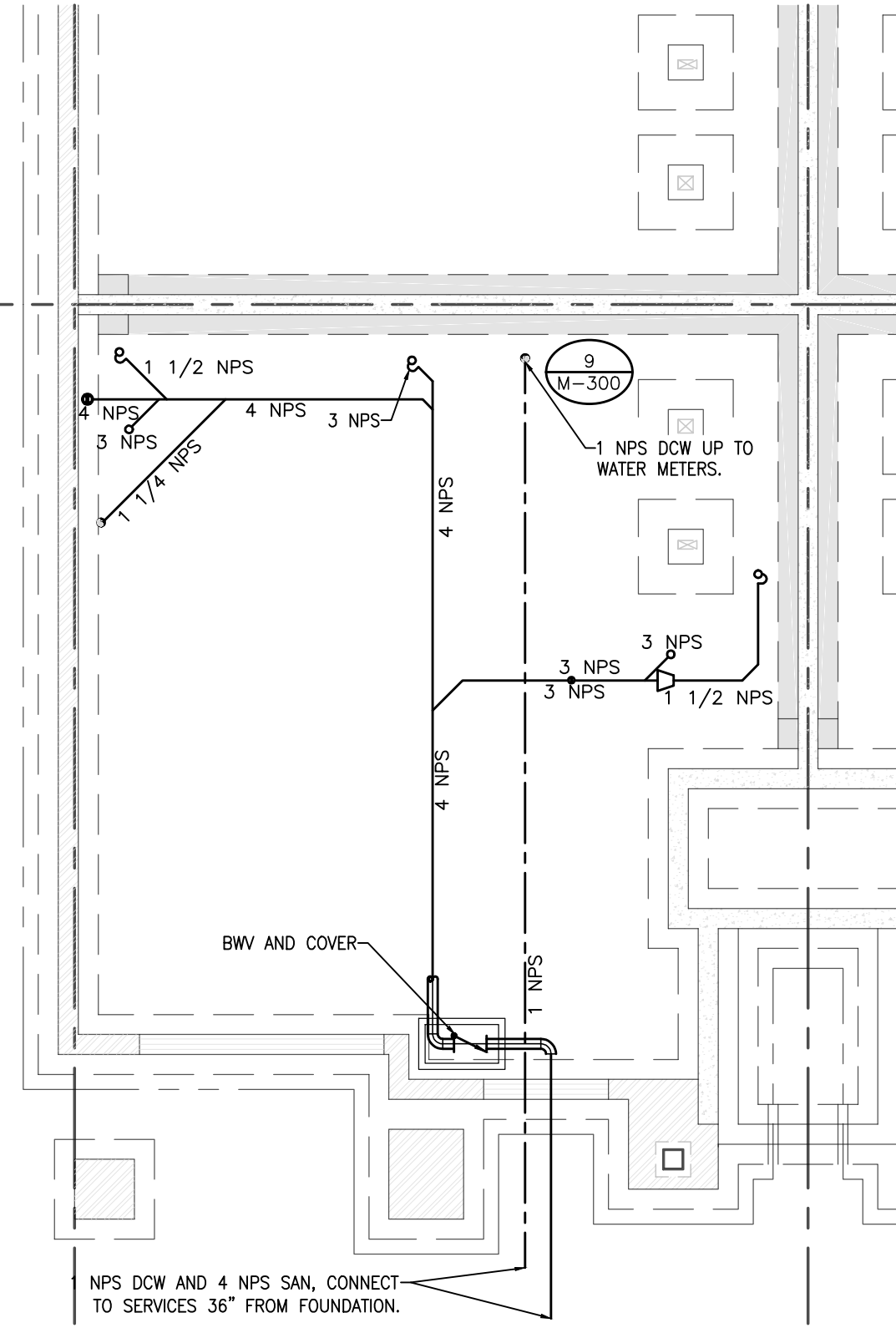
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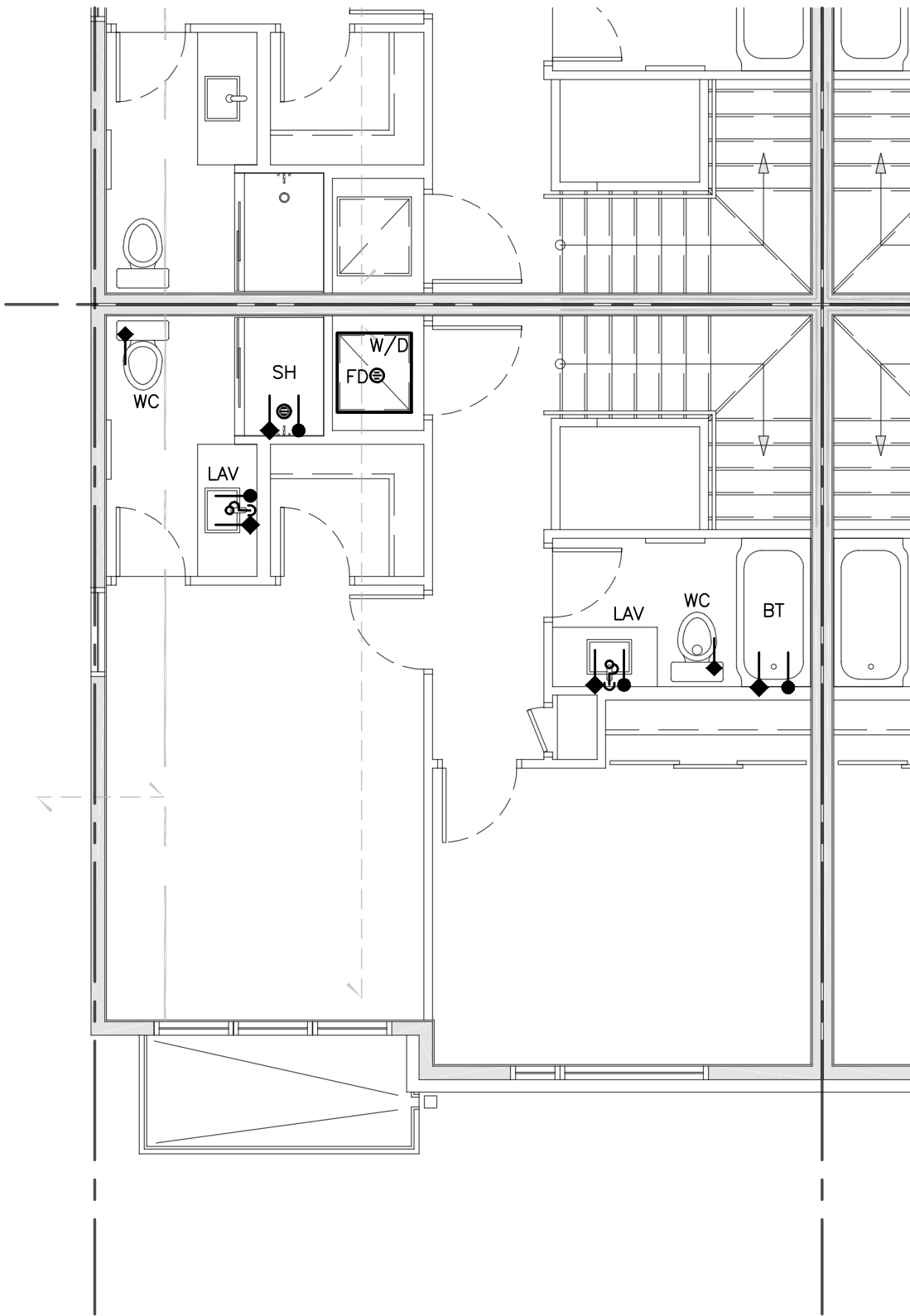
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UPPER UNIT: MAIN FLOOR  
FLOOR AREA: 633 ft²



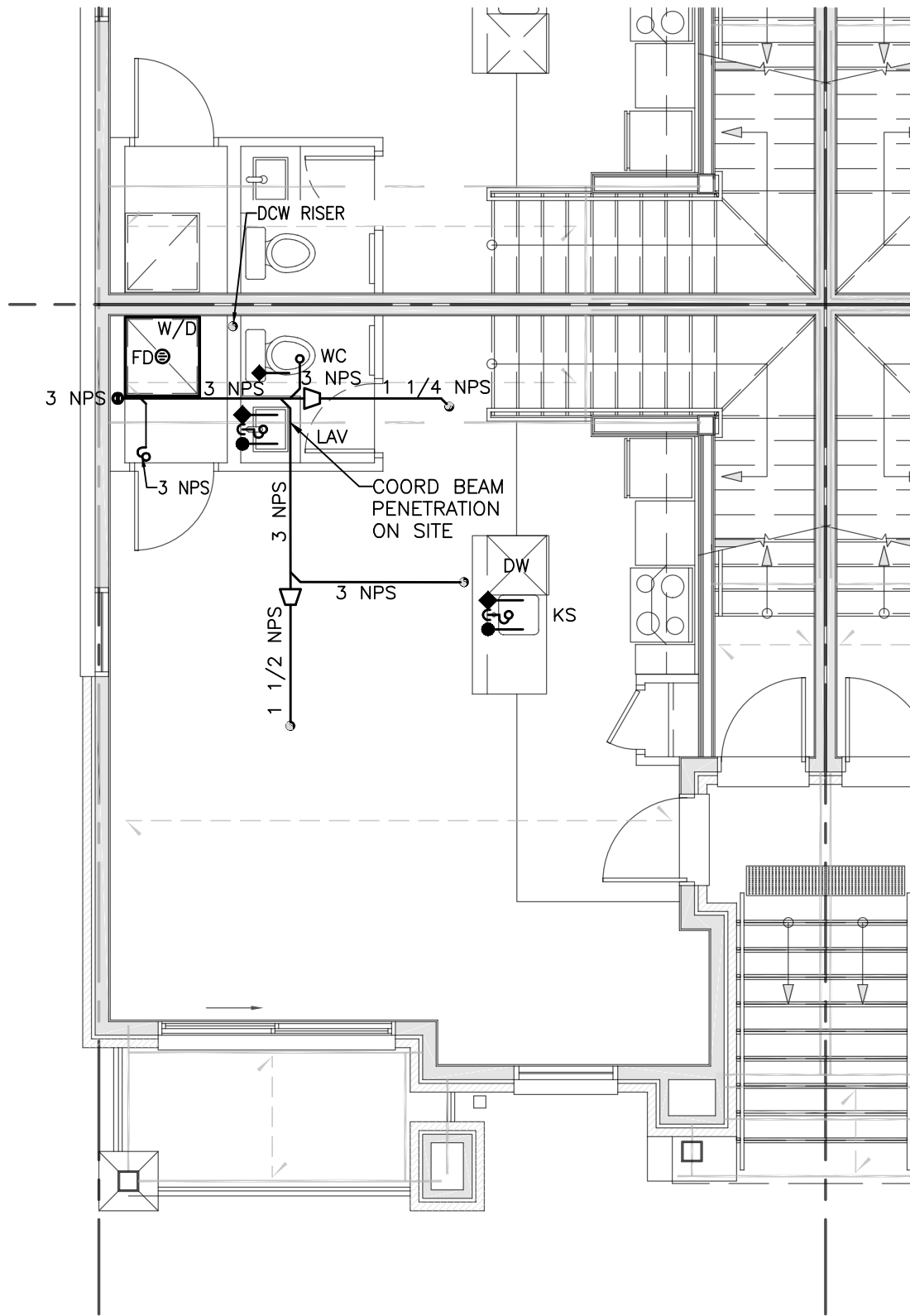
END UNIT  
LOWER UNIT: LOWER FLOOR  
FLOOR AREA: 613 ft²



END UNIT  
FOUNDATION PLAN  
TO BE READ IN CONJUNCTION WITH STRUCTURAL DRAWINGS S000 & I00



END UNIT  
UPPER UNIT: UPPER FLOOR  
FLOOR AREA: 621 ft²



END UNIT  
LOWER UNIT: MAIN FLOOR  
FLOOR AREA: 575 ft²

### THE JUNCTION PHOENIX PLANNED UNIT DEVELOPMENT BLOCK 7

OTTAWA, ONTARIO

**Q | M & E**  
ENGINEERING

9 GUROWARA ROAD, SUITE 200, NEPEAN, ON K2E 7X6  
TEL: (613) 366-4763 e-mail: mail@qmengineering.com

7	ISSUED FOR CONSTRUCTION	29 AUG 2024	CC
6	ISSUED FOR TENDER REV-2	10 JUN 2024	CC
5	ISSUED FOR CONSTRUCTION	16 MAY 2024	CC
4	ISSUED FOR TENDER REV-1	29 APR 2024	CC
3	ISSUED FOR TENDER	08 MAR 2024	CC
2	ISSUED FOR PERMIT	19 JAN 2024	CC
1	ISSUED FOR 66% PROGRESS	22 DEC 2023	CC

NO.	REVISION	DATE	BY

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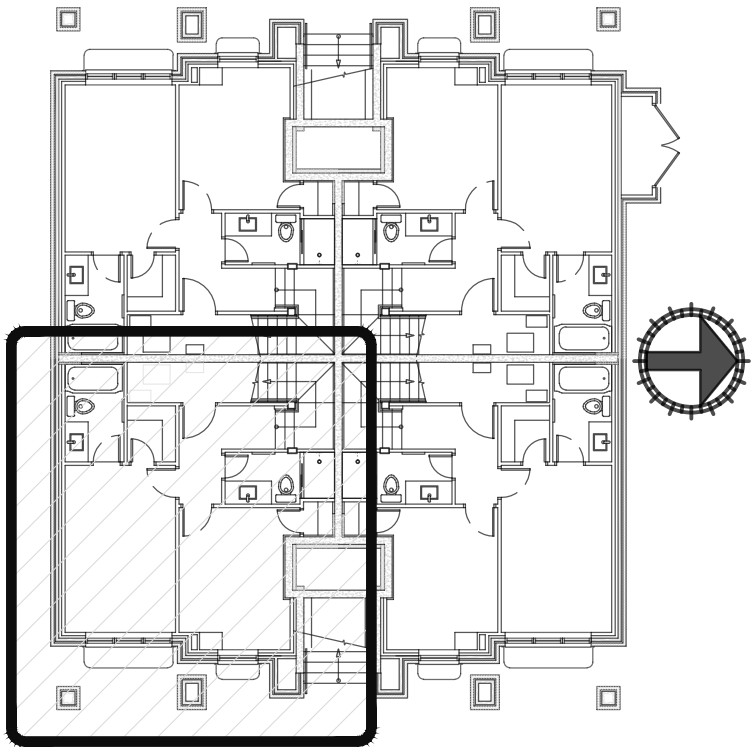
CURRENT DATE	Aug 29, 2024 - 3:20pm
SCALE	3/16"=1'-0"
DRAWN	TM
DESIGNED	CWC
CHECKED	LVDL
PROJECT	23-007
DRAWING NUMBER	M-100

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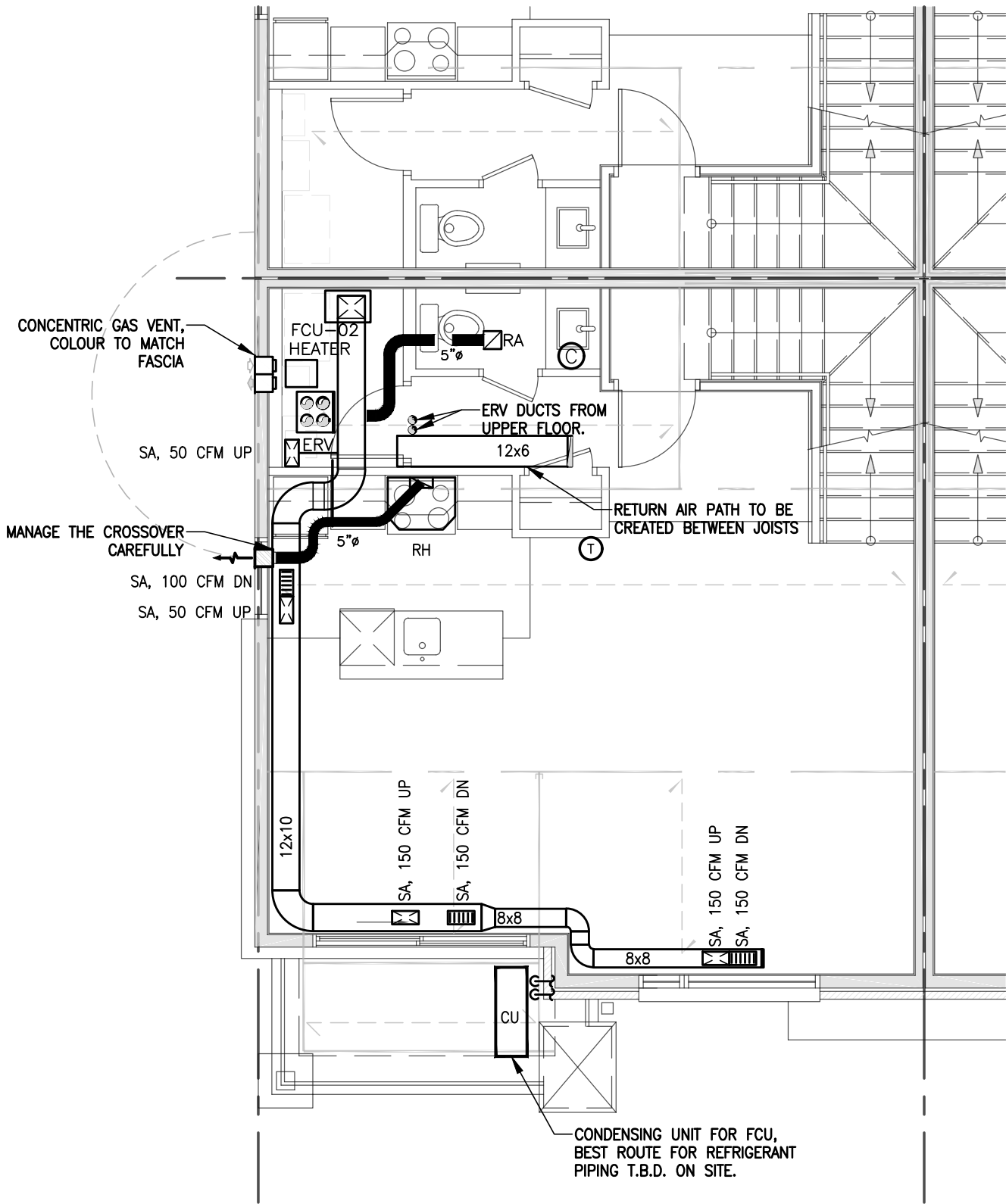
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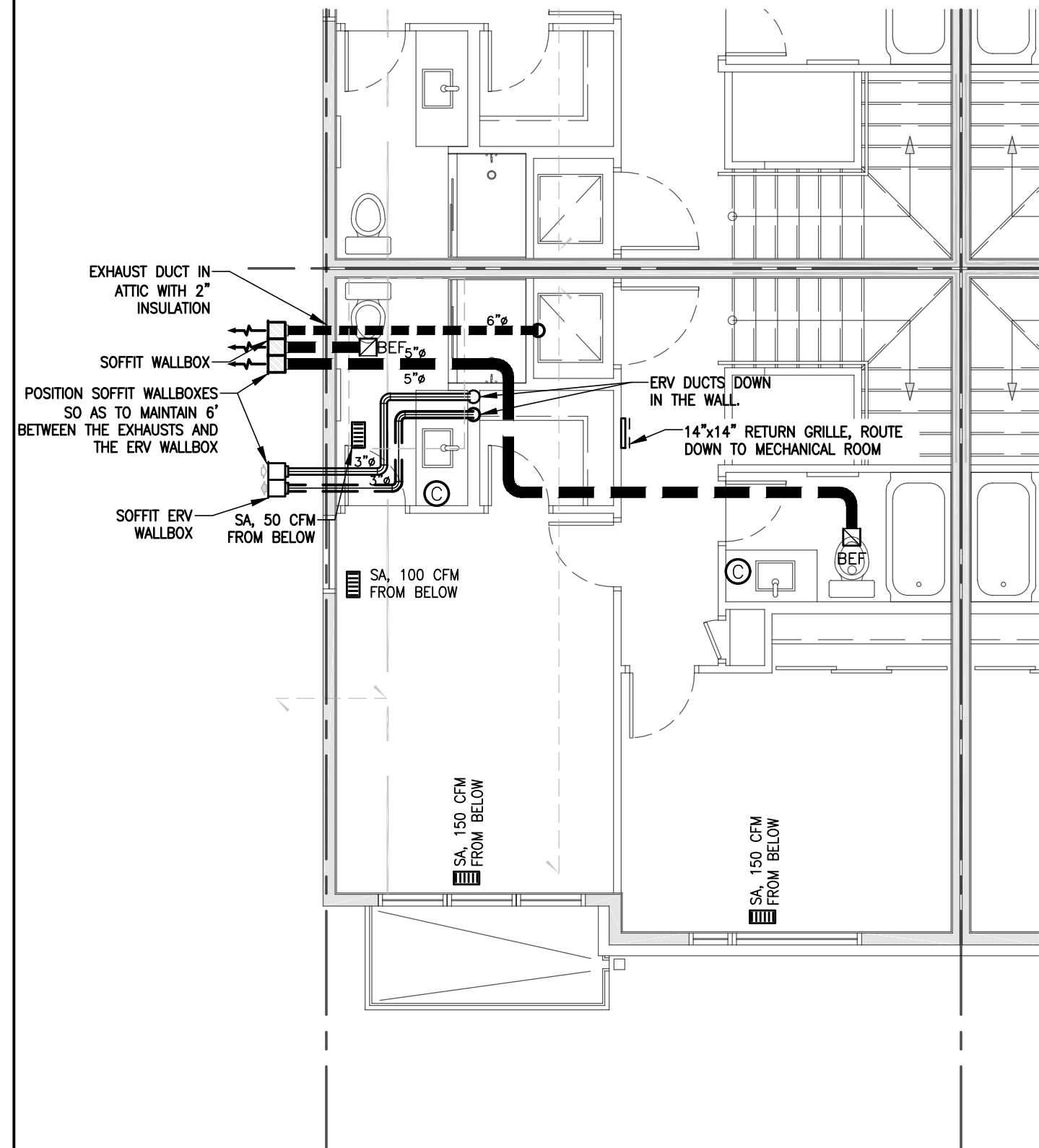
KEY PLAN

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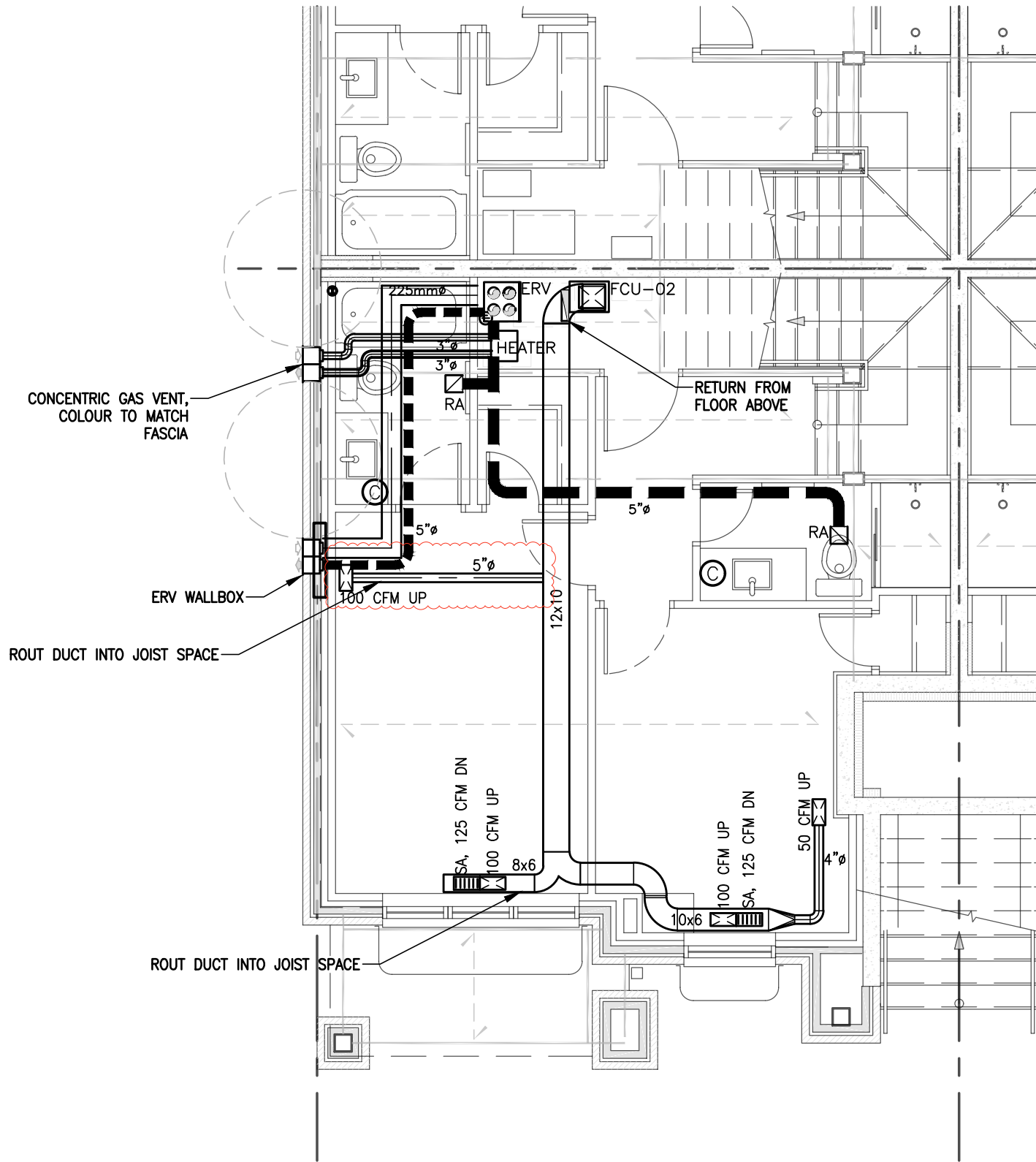
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FLOOR AREA: 633 ff²



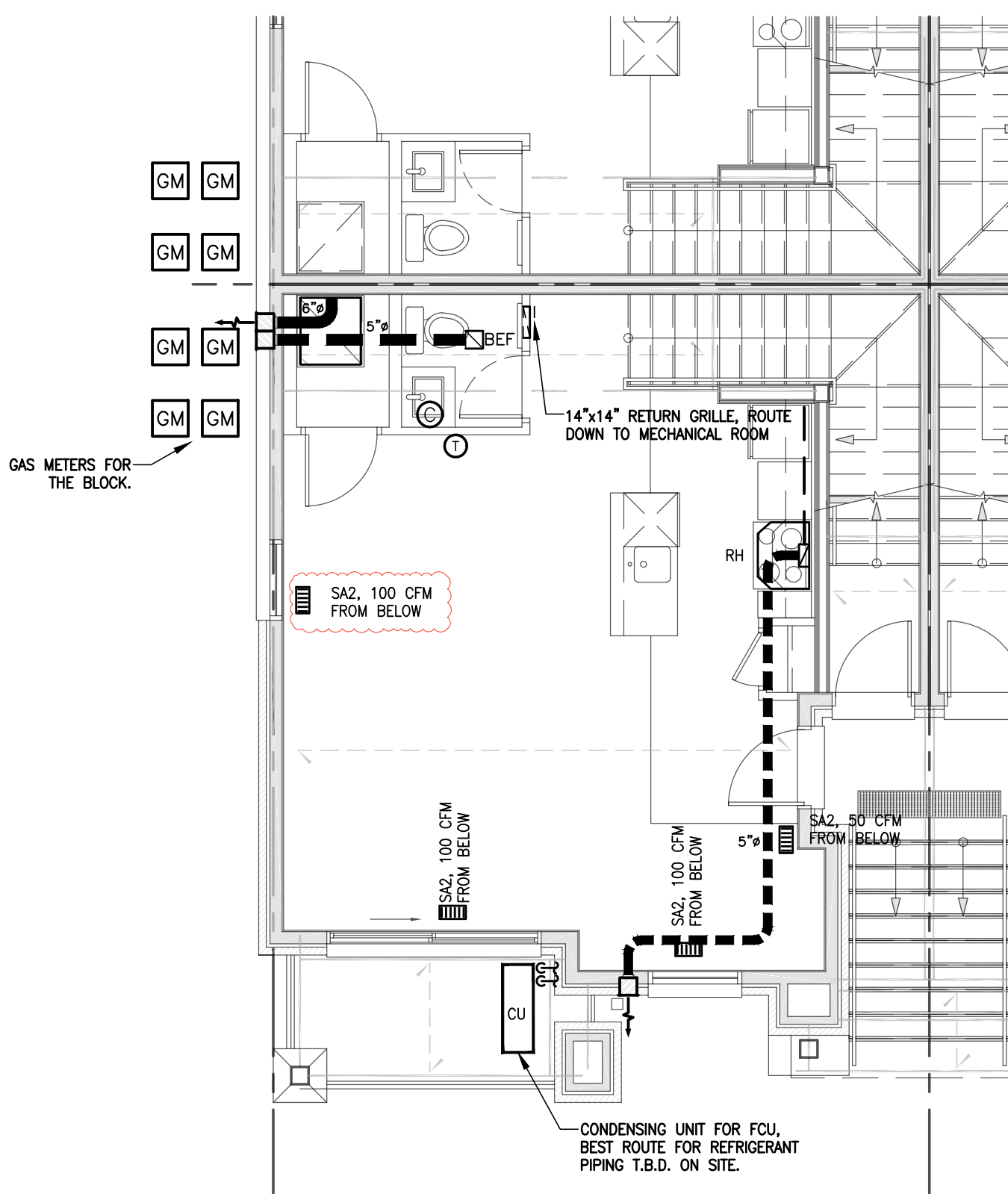
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FLOOR AREA: 621 ff²



END LOWER UNIT: LOWER FLOOR

FLOOR AREA: 613 ff²



END LOWER UNIT: MAIN FLOOR

FLOOR AREA: 575 ff²

THE JUNCTION PHOENIX  
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CURRENT DATE	Aug 29, 2024 - 3:20pm
SCALE	3/16"=1'-0"
DRAWN	TM
DESIGNED	CWC
CHECKED	LVDL
PROJECT	23-007
DRAWING NUMBER	M-110

TYPICAL UNIT  
HVAC LAYOUT

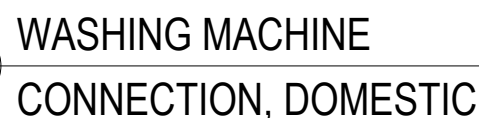
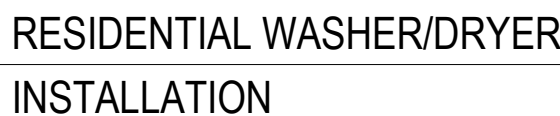


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OTTAWA, ONTARIO

9 GURDWARA ROAD, SUITE 200, NEPEAN, ON K2E 7X  
TEL: (613) 366-4763 e-mail: mail@qmeengineering.com

CURRENT DATE: 01/01/2000

Aug 29, 2024 - 3:20pm

SCALE	NTS
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DRAWN	TM
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DESIGNED	CWC
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CHANGES	EVSE
PROJECT	00-000

PROJECT	23-007
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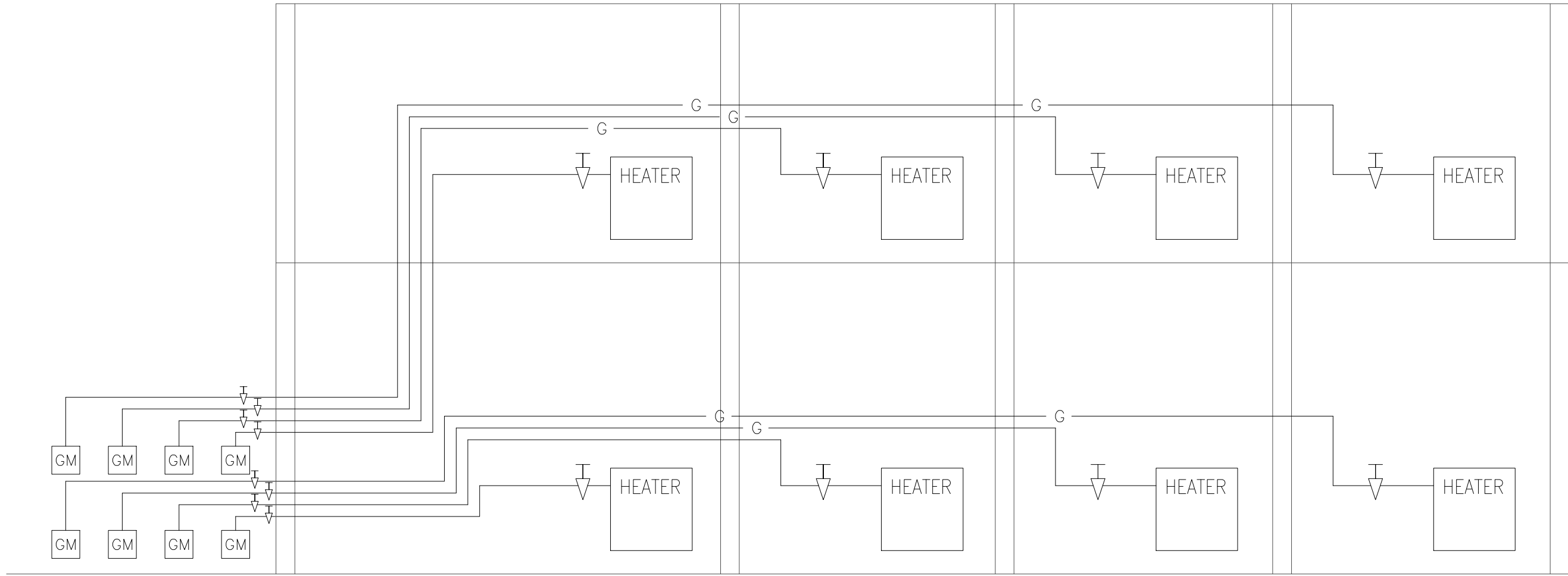
M-300

## TYPICAL UNIT SCHEMATICS AND DETAILS

23-007M

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## NOTES

- ## NOTES

# 1 GAS DISTRIBUTION DIAGRAM

[illegible]