

#### EQUIPMENT SCHEDULE:

The design is based on the equipment listed here and noted in the Equipment Schedule Tables. Refer to Section 21 05 01 Article 1.24 ALTERNATE MATERIALS & EQUIPMENT for responsibilities when utilizing equipment that differs from the basis of design but still meets the design intent and the process to apply to use equipment that alters the design intent.

**MAKE-UP AIR UNIT (RTU-3):** Engineered Air Model FW31/DJS20/O/Q Outdoor in-direct fired make up air unit. Unit to be complete with down discharge and custom roof curb duct transition to side discharge. Supply fan to provide to 331 l/s air flow @ 187 Pa E.S.P. (700cfm airflow @ 0.75" E.S.P.). 44.0 kW (150 MBH) natural gas heating input to provide 88.3 degree C (159 degree F) temperature rise. DX cooling to provide 6.9 kW (23.5 MBH) on R-410A refrigerant. Unit to be complete with 16 ga. cabinet complete with 25mm (1") insulation; inlet lower c/w birdscreen; Outdoor air drain pan; cooling coil drain pan; filter section c/w 50mm pleated filters in metal frames; Tamco 9000 on/off inlet dampers; internal blower/motor assembly isolation; factory mounted VFD mounted in a ventilated cabinet; hinged access doors c/w leverlock handles; M-TRAC electronic discharge air control with remote setpoint; 15:1 turndown burner; auto bypass low limit; ambient heat lockout control; down discharge; NEMA 12 remote control panel complete with unit on/off auto switch with indicating light; heat on light and clogged filter light; factory start up assistance. Electrical 1 HP 208V/60/3 phase motor. FLA = 26.5 Maximum breaker size = 35 amps. Approximate weight = 1180 kg (2600 lbs). Remote controller to be located in mechanical room. Controller to be complete with a time clock for occupied / unoccupied mode.

**PACKAGED HEAT/COOL ROOF TOP UNITS:** Natural gas-fired electric cooling packaged roof top units complete with factory roof curb, integrated modular control with programmable thermostat. Units to be complete with gravity relief with damper and hood, coil guards c/w plastic guards, fully modulating economizers, MERV 8 filters, starters, disconnects and all integral controls and wiring, stainless steel heat exchanger, PVC condensate drain trap, belt drive motor, fresh air tempering sensor and controls, and R410A refrigerant. Provide low ambient compressor lockouts, anti-cycle timers and minimum damper position switches.

**RTU-4: 377 l/s air flow @ 162 Pa external static (800 cfm air flow at 0.65" external static), 14.1 kW (48 MBH input), 11.7 kW (40 MBH output), 7.1 kW (24.2 MBH) output cooling.** Supply Fan Motor: 1/3 HP. Electrical: 230V/60/1 phase. MOP = 20 amps, MCA = 14.8. Outdoor air damper to close completely in unoccupied mode and minimum 71 l/s (150 cfm) of outdoor air shall be supplied in occupied mode. Total weight = 163 kg (359 lbs). Unit based on York PCG4A240502X1

**RTU-5: 377 l/s air flow @ 162 Pa external static (800 cfm air flow at 0.65" external static), 14.1 kW (48 MBH input), 11.7 kW (40 MBH output), 7.1 kW (24.2 MBH) output cooling.** Supply Fan Motor: 1/3 HP. Electrical: 230V/60/1 phase. MOP = 20 amps, MCA = 14.8. Outdoor air damper to close completely in unoccupied mode and minimum 71 l/s (150 cfm) of outdoor air shall be supplied in occupied mode. Total weight = 163 kg (359 lbs). Unit based on York PCG4A240502X1

**RTU-6: 706 l/s @ 150 Pa (1500 cfm air flow at 0.6" external static), 36.7 kW (125 MBH) input, 29.3 kW (100 MBH) output, 14.7 kW (50.2 MBH) total cooling.** Supply Fan Motor: 1-1/2 HP. Electrical: 230V/60/1 phase. MOP = 45 amps, MCA = 33.5. Outdoor air damper to close completely in unoccupied mode and minimum 142 l/s (300 cfm) of outdoor air shall be supplied in occupied mode. Total weight = 304 kg (671 lbs). Unit based on York ZE048N10P1ABA4.

**SMOKE DAMPERS:** ULC listed types as noted on drawings. Dampers to be installed in strict accordance with manufacturer's recommendations and authority having jurisdiction. Damper to be complete with motorized low voltage actuator and smoke detection system, supplied with damper. Actuator and detector to be factory wired complete with alarm contact for connection to fire alarm.

**FIRE/SMOKE DAMPERS:** ULC listed types as noted on drawings. Dampers to be installed in strict accordance with manufacturer's recommendations and authority having jurisdiction. Damper to be complete with motorized low voltage actuator and smoke detection system, supplied with damper. Actuator and detector to be factory wired complete with alarm contact for connection to fire alarm.

**RANGE HOOD (RHD):** Broan QS2 Series, Model QS230WWN, under cabinet hood, 762mm (30") wide, vertical ducted discharge, complete with micromesh grease filter, dual halogen bulbs (PAR20) to be supplied by Mechanical Contractor, back draft damper and three-speed electronic control. Air flow 142 l/s (300 cfm), 0.9 sonos (norm) 4.5 sonos (high), 115V/60/1 phase. Finish: white.

**MOTORIZED DAMPERS:** Tamco Series 9000 BF, thermally broken extruded aluminum dampers. Damper frame shall be no less than 4" deep and insulated with polystyrene on all four sides. Entire frame shall be thermally broken. Blades shall be extruded aluminum less than 8" width, internally insulated with expanded polyurethane foam, thermally broken, and mounted in opposed blade action. Blade and frame seals to be extruded silicone secured in an integral slot. Dampers to be rated to operate in temperatures between -72 deg.F and 185 deg.F. Pressure drop of dampers, when fully open, to not exceed 0.03" at 1000 fpm. Dampers to be flanged to duct and installed in strict accordance with manufacturer's installation guidelines. Intermediate or tubular steel structural support is required for all dampers that consist of two or more sections in either height or width or both. Actuators to be supplied by Mechanical Contractor and installed by Electrical.

**LOUVRE (TYPE 1):** Price Model DE635, stationary extruded 152mm (6") deep aluminum drainable blades positioned at 35 degrees, extruded aluminum frame and supports, all welded construction, integral perimeter caulking stop, 12mm x 12mm (1/2" x 1/2") 16 gauge expanded aluminum bird screen without frame, finish to be baked enamel with colour as selected by Architect.

**LOUVRE (TYPE 2):** Price Model NJE2, stationary extruded 51mm (2") deep aluminum J-style blades positioned at 30 degrees, extruded aluminum frame and supports, all welded construction, integral perimeter caulking stop, 12mm x 12mm (1/2" x 1/2") 16 gauge expanded aluminum bird screen without frame, finish to be baked enamel with colour as selected by Architect.

**FIRE DAMPERS:** ULC listed types as noted on drawings. Dampers to be installed in strict accordance with manufacturer's recommendations and authority having jurisdiction.

**WATER METER:** New water meter to approval of Ahtahkakoop Municipal Authority complete with bypass valve.

**DOMESTIC WATER SERVICE REDUCED PRESSURE DOUBLE CHECK VALVE ASSEMBLY:** Watts Series 957 lead free line size reduced pressure testable double check valve assembly complete with quarter turn shut-off valves and bronze wye strainer.

**FIRE PROTECTION DOUBLE CHECK VALVE ASSEMBLY:** Watts Model 757 line size testable double check valve assemble complete with OSY shut-off valves.

**DOMESTIC HOT WATER HEATERS DWH-1 AND DWH-2:** A.O. Smith Cyclone HE, Model BTX-80, powervent, high efficiency commercial gas water heater, fully condensing up to 90% thermal efficiency, 189 litres (50 gallons) tank size, 22.3 kW (76.0 MBH) gas input, 314 litres/hour recovery at 56 deg.C temperature rise (83 U.S. gallon/hour recovery at 100 deg.F). Electrical 120V/60/1 phase plug-in connection. Unit to be installed with drain pan piped to floor drain.

**AIR CONDITIONING UNIT (AC-1 & AC-2):** Mitsubishi Electric Twin System Model PKA-A12HA, wall mounted room air conditioner. SEER: 15.2. EER: 10.1. Unit shall provide 1.76-3.52 Kw (6.0-12.0 MBH) of cooling. Power shall be 208V/60/1 phase. Power to A/C unit is supplied from the outdoor condensing unit on terminals S1 & S2. Power Input 1,190 Watts, Maximum Fuse: 15 Amps. MCA: 1.0 Unit fan shall supply 151 L/s (320 CFM) on low speed, 175 L/s (370 CFM) on medium speed, and 200 L/s (425 CFM) on high speed. Unit shall be complete with R-410A refrigerant, all mounting hardware, auto vane and swing mode, super quiet operation, filter, pre-charged refrigerant line set and microprocessor controls including Slim Smart Remote. Unit shall be complete with Mini Aqua condensate pump mounted within drain pan of unit. Pump to be wired with unit.

**OUTDOOR CONDENSING UNIT (CU-1):** Mitsubishi Electric Twin System Model PUY-A24NHA4. Power shall be 208V/60/1 phase. MCOP: 30 Amps. MCA: 18. Unit shall carry a 6-year compressor warranty. Compressor shall be variable speed scroll. Unit shall be complete with optional controls and equipment for low ambient operation to -40 deg. C (-40 deg. F) including wind guards. Mount unit on rubber isolating pads on concrete pad, see structural.

**FP-1 (Fire Pump):** The pump shall provide rated capacity equal to or greater than the calculated fire protection flow requirements, estimated at this time to be 31.5 L/s (500 GPM) and a differential pressure of 40 PSI. Pump to be single, Motor - 15 HP, 208V/60/3 phase. Specification based on Aurora Series 911UL/FM Vertical Inline Fire Pump. Pump on dedicated service, refer to Fire Pump Controller.

**FIRE PUMP CONTROLLER:** Tornatech UL listed FM approved GPS Series soft start soft stop fire pump controller. Electrical: horse power to be matched to fire pump with 208 Volt/3 phase power.

**SPRINKLER JOCKEY PUMP:** As part of the main sprinkler tree located in the Service Space 201. Motor: 250 Watt, 115V/60/1 phase, complete with auto and manual control.

**FIRE EXTINGUISHER CABINET FEC-1:** National Fire Equipment Ltd. Model 102RS-SS semi-recessed stainless steel cabinet with glass in door, complete with ABC dry chemical fire extinguisher with 2-A: 10-B-C rating.

**FIRE EXTINGUISHER CABINET FEC-2:** National Fire Equipment Ltd. Model 102RS-SUR-SS surface mounted stainless steel cabinet with glass in door, complete with ABC dry chemical fire extinguisher with 2-A: 10-B-C rating.

**WALL HUNG FIRE EXTINGUISHER:** 4.5 kg (10 lb) ABC dry chemical fire extinguisher with 4-A: 60-B-C rating c/w wall bracket.

**CARBON DIOXIDE FIRE EXTINGUISHER:** 4.5 kg (10 lb) Carbon dioxide fire extinguisher with 10BC rating c/w wall bracket.

**FIRE DEPARTMENT CONNECTION:** National Fire Equipment Ltd., Model 229 flush mounted, siamese double clapper, bronze finish with caps, chains, and bronze base plate. Installation to be complete with ball drip check valve piped to drain.

**GAS DETECTOR:** Armstrong, AMC-1AD1 single zone gas monitor complete with one AMC-1222 Series combination carbon monoxide sensor and nitrogen dioxide sensor. Monitor to have a minimum coverage area of 15240mm (50' radius) and to be complete with low, high, and fail indicators, two 10 Amp relays, selectable time delay, audible alarm with silencer. Electrical: 120V/60/1 phase.

**BOILERS B-1 & B-2:** Viessmann Vitodens 200-W Model B2HA100, Wall mounted gas condensing boiler with modulating gas valve and burner. 103kW (352 MBH) gas input, 308MBH heat output. Each boiler to be complete with 24 volt controls, auto reset low water cut-off, circuit breaker, high limit, tridicator, relief valves piped to floor, modulating control, and flow switch. Boilers to be started by factory certified technician complete with written report submitted to Engineer. Electrical connection: 120V/60/1 phase. Acceptable equal products: Weil McLain EVG-399; Triangle Tube Trimax 399.

**PUMPS P-3 & P-4 (Main Heating Pumps):** Pumps shall be in-line circulators with cast iron construction for space heating. In-line pumps shall be supported from the floor with pipe stands or supported from structure with hangers. Installation shall be as per manufacturer's instructions. Pumps to be complete with variable frequency drives. Pumps to have self sensing pressure capabilities, complete with set up by factory approved technician. Taco Model SKV1507 to pump 60 GPM maximum water flow at 40' head. Motor: 1.5 HP, 208V/60/3 phase.

**PUMPS (Wet Rotor):** Pumps shall be Grundfos wet rotor in-line, 3 speed circulators with cast iron construction for space heating. In-line pumps shall be supported from the floor with pipe stands or supported from structure with hangers. Installations on air handling units to be complete with flexible pipe connections. Installation shall be as per manufacturer's instructions.

**P-1 & P-2 (Boiler Circ Pumps):** Grundfos Model UPS32-80/2 to pump 30 GPM water flow at 18' head. Motor: 1/2 HP, 230V/60/1 phase.

**DOMESTIC HOT WATER RECIRC PUMP (P-5):** Taco, Model L0515, cartridge circulator pump, 0.19 l/s flow at 38.8 kPa (3 GPM flow at 13' head), bronze casing (volute), Motor: 30 Watts (1/25 H.P.), 3,250 RPM, 115V/60/1 phase. Disconnect switch to be provided by Electrical.

**DOMESTIC BOOSTER PUMP (P-6a/6b):** Design based on ITT booster package model Technoflow 10SV duplex VS variable speed packaged domestic pressure booster system with vertical multi-stage pump. Provide pressure bypass for low flow control. Pump system including all pumps to operate from integral system controls. Each pump to be complete with integral dedicated VFD control. Unit to be complete with Technologic 1500 series pump controller, isolation valves, and check valve on pump discharge. Controller to be complete with all standard features and no-flow shutdown, low suction pressure cut-out, high system pressure alarm, audible alarm with reset, hard wired an serial communications with Building Automation System, automatic AFD bypass, and system differential pressure sensor. Minimum pump efficiency: 69%. 1.58 L/S (25 GPM), 227.1 kPa (76") head. Motor: 560 watts (3/4 HP), 208V/60/3 phase.

**SUMP PUMP (SP-1):** Myers Model SSM33, submersible pump, oil filled with overload protection, cast iron housing, cast iron seal plate, mechanical seal, cast iron impeller, complete with control panel, automatic level control, alarms, and secondary alarm contact. Capacity 1.58 l/s (15 GPM) at 44.8 kPa (22") head. Motor: 373 Watt, 115V/60/1 phase complete with 4.5 meter cord and plug.

**FLOW RESTRICTOR:** Griswold Flowcon, automatic flow control valve complete with isolation valve, strainer and gauge ports. Units to be sized based on flow requirements and installed as per manufacturer's recommendations.

**CONDENSATE NEUTRALIZATION TANK:** Axiom Model NT25 Condensate Neutralization Tank complete with two 1" side inlet/outlet, constructed of polyethylene (corrosion resistant material), 4.8 gallon tank capacity and complete with an initial charge of 40 lbs of neutralizing media. Pipe boiler exhaust condensate line to inlet of tank and pipe discharge to floor drain

**SYSTEM FILL SF-1:** Hydronic system feeder shall be AXIOM INDUSTRIES LTD. Model SF100. System shall include 55 US gallon storage/mixing tank with cover; pump suction hose with inlet strainer; pressure pump with thermal cut-out; integral pressure switch; integral check valve; cord and plug; pre-charged accumulator tank with EPDM diaphragm; manual diverter valve for purging air and agitating contents of storage tank; pressure regulating valve adjustable 5 - 55 psig complete with pressure gauge; integral replaceable strainer; built-in check valve; union connection; 1/2" x 36" long flexible connection hose with check valve; low level pump cut-out. Pressure pump shall be capable of running dry without damage. Power supply 115/60/0.7 A. Unit shall be completely pre-assembled and certified by a recognized testing agency to CSA standard C22.2 No 68. Unit to be complete with Low Level Alarm Panel c/w Remote Monitoring Dry Contacts and Selectable Audible Alarm.

**TRIPLE DUTY / MULTI-PURPOSE VALVES:** Taco, or approved equal, sized for flow required, installed in accordance with manufacturer's recommendations.

**HEATING SYSTEM ANTIFREEZE:** Supply and install 30% inhibited propylene glycol and 70% water solution. Glycol utilized shall meet the requirements of the boiler manufacturer and boiler construction. Contractor to provide one extra barrel of glycol for owner.

**HYDRAULIC / AIR SEPARATOR:** Taco model 5900 FlexBalance series inline decoupler with air and dirt separation. Unit shall incorporate internal structure to remove air and dirt. Unit shall include a top mounted automatic air vent and a bottom mounted blow down valve. Unit shall be rated to 125 Psi and 270 deg. F temperature. Unit shall be manufactured to ASME Section VIII Div. 1. Piping connections shall be flanged or grooved depending on contractor's preference and shall be coordinated at order time. Provide relief valve for vessel in accordance with requirements of Technical Safety Authority of Saskatchewan, piped to floor (with same pressure rating as boiler relief valves)

**EXPANSION TANK ET-1 (Heating Water System):** Taco, or approved equal, Model CA300-125, 79 gallon total volume, full acceptance volume, 24" diameter x 57-3/4" high. Installation to be complete with isolation valve and drain valve piped to glycol tank. Provide relief valve for vessel in accordance with requirements of Technical Safety Authority of Saskatchewan, piped to floor (with same pressure rating as boiler relief valves).

**DOMESTIC HOT WATER EXPANSION TANK (ET-2):** Taco Model PAX30, suitable for domestic hot water, 30 litre (8 gallon) total volume, 19 litre (5.0 gallon) acceptance volume, 356 mm (14") diameter x 648 mm (25-1/2") height. Unit to be mounted suspended from structure. Installation to be complete with isolation valve and drain valve piped to floor drain.

**SIDE STREAM FILTERS:** Filterite Model LM1010 replaceable media side stream filter, complete with sight glass and one case of thirty 20 micron cartridges and one case of thirty 5 micron cartridges.

**RADIATION TYPE A:** Engineered Air Model WF-1A single row wall fin and 305mm (12") cabinet. 100mmX100mmX19mm (4" x 4" x 3/4") diameter cu/al element. Output: 848 W/M (882 BTU/FT) with 62.8 deg. C (145 deg.F) average water temperature. 18.3 deg. C (65 deg.F.) entering air temperature (derated 9% for 30% glycol). Installation to be complete with hangers, isolators, end caps, filler plates, inside and outside corners. Cabinet to be 1.5mm (16 gauge) satin coat steel with electrostatic enamel baked on finish, color as selected by Architect.

#### DIFFUSERS AND GRILLES:

**S-1:** All registers located in the cell area to be laminate face assembly consisting of 3mm steel sheet for the body and 3.2mm steel sheet for the face. Face complete with 3mm staggered round holes and reinforced with solid steel at 150mm o.c. Face sheet to be spot welded to the reinforcing bars at 3 locations for each bar. Cover to overlap opening by 50mm on all sides. Grille face frame and compressed frames to be manufactured from steel angle, 32mm x 32mmx 6mm, welded to plenum body. Edge of face frame to be beveled 2mm and all exposed welds and joints to be dresses invisible. Finish to be prime painted. Grilles to be fastened to construction with minimum 4-10mm diameter X 50mm long stainless steel bolts with tamperproof heads. Acceptable product: Simpson Installations Ltd. Model V2, Chubb OP-20V, Eneround or Virtucorn.

**S-2:** E.H. Price, Model LBPH25C/1000/60, heavy duty linear bar grille, extruded aluminum construction, pencil proof bar spacing with 0° deflection, 25mm heavy duty extruded aluminum frame with reinforcing support bars and mitered corners, brushed aluminum with clear coat finish

**S-3:** E.H. Price, Model LBMH25C/1000/60, extra heavy duty linear bar grille, extruded aluminum mandrel construction, pencil proof bar spacing with 0° deflection, 25mm heavy duty extruded aluminum frame with reinforcing support bars and mitered corners, brushed aluminum with clear coat finish

**S-4:** E.H. Price, Model 520D/F/L/A/B12, louvered supply grille c/w steel damper, surface mounted, front blades parallel to long dimension, countersunk screwholes, white powder coat finish.

**E-1:** All registers located in the cell area to be laminate face assembly consisting of 3mm steel sheet for the body and 3.2mm steel sheet for the face. Face complete with 3mm staggered round holes and reinforced with solid steel at 150mm o.c. Face sheet shall be spot welded to the reinforcing bars at 3 locations for each bar. Cover to overlap opening by 50mm on all sides. Grille face frame and compressed frames to be manufactured from steel angle, 32mm x 32mmx 6mm, welded to plenum body. Edge of face frame and all exposed welds and joints to be dresses invisible. Finish to be factory powder coat, off-white colour. Grilles to be fastened to construction with minimum 4-10mm diameter X 50mm long stainless steel bolts with tamperproof heads. Acceptable product: Simpson Installations Ltd. Model V2, Chubb OP-20V, Eneround or Virtucorn.

**E-2:** E.H. Price, Model 530D/F/L/A/B12, louvered exhaust grille c/w steel damper, surface mounted, front blades parallel to long dimension, countersunk screwholes, white powder coat finish.

**E-3:** E.H. Price, Model 510D/F/L/A/B12, louvered exhaust grille complete with steel damper, duct mounted, front blades parallel to long dimension, countersunk screwholes, white powder coat finish.

**E-4:** E.H. Price, Model 90L/A/B12, heavy gauge steel grille, duct mounted, front blades parallel to long dimension, countersunk screwholes, white powder coat finish.

**R-1:** All registers located in the cell area to be laminate face assembly consisting of 3mm steel sheet for the body and 3.2mm steel sheet for the face. Face complete with 3mm staggered round holes and reinforced with solid steel at 150mm o.c. Face sheet shall be spot welded to the reinforcing bars at 3 locations for each bar. Cover to overlap opening by 50mm on all sides. Grille face frame and compressed frames to be manufactured from steel angle, 32mm x 32mmx 6mm, welded to plenum body. Edge of face frame and all exposed welds and joints to be dresses invisible. Finish to be factory powder coat, off-white colour. Grilles to be fastened to construction with minimum 4-10mm diameter X 50mm long stainless steel bolts with tamperproof heads. Acceptable product: Simpson Installations Ltd. Model V2, Chubb OP-20V, Eneround or Virtucorn.

**R-2:** E.H. Price, Model 80/TB/B12, eggcrate face return, t-bar lay-in, white powder coat finish.

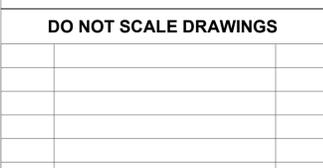
**R-3:** E.H. Price, Model 80/F/A/B12, eggcrate face return, surface mounted, countersunk screwholes, white powder coat finish.

**R-4:** E.H. Price, Model 530/F/L/A/B12, deflection louvered return grille, surface mounted, front blades parallel to long dimension, countersunk screwholes, white powder coat finish.

**R-5:** E.H. Price, Model LBMH25C/1000/60, extra heavy duty linear bar grille, extruded aluminum mandrel construction, pencil proof bar spacing with 0° deflection, 25mm heavy duty extruded aluminum frame with reinforcing support bars and mitered corners, countersunk screwholes, brushed aluminum with clear coat finish

| Exhaust Fan Schedule   |           |             |          |           |             |          |       |         |          |            |              |         |           |            |
|--|-----------|-------------|----------|-----------|-------------|----------|-------|---------|----------|------------|--------------|---------|-----------|------------|
| Intline Cabinet: Design based on Greenheck CSP Models. Housings to be lined with 12 mm thick acoustic insulation. Motor to be mounted on resilient elastic grommets. Fan shall have forward curved centrifugal wheel AMCA rated for air and sound performance. Units shall be complete with canvas duct connections, backdraft dampers, and flat roof discharge caps with birdscreen. Suspend fan from structure with spring isolation hangers. Unit to be complete with factory mounted and wired solid state speed control for air flow balance. |           |             |          |           |             |          |       |         |          |            |              |         |           |            |
| General Information  |           |             |          | Airflow   |             |          |       |         | Motor    |            |              |         |           |            |
| Tag  | Serving   | Wheel       | Model    | Wheel RPM | Sound Sones | Flow L/S | (CFM) | S.P. Pa | in. w.c. | Control    | Drive Loss % | H.P. kW | hp        | V / Hz / P |
| EF-01  | 133 / 134 | Centrifugal | CSP-A190 | 1,400     | 3.0         | 47       | (100) | 125     | (0.50)   | LS - T     | Direct       | 0.100   | ( 1/8 )   | 120/60/1   |
| EF-02  | 138 / 144 | Centrifugal | CSP-A190 | 1,400     | 3.0         | 47       | (100) | 125     | (0.50)   | LS - T     | Direct       | 0.100   | ( 1/8 )   | 120/60/1   |
| EF-03  | 148 / 150 | Centrifugal | CSP-A190 | 1,400     | 3.0         | 47       | (100) | 125     | (0.50)   | LS - T     | Direct       | 0.100   | ( 1/8 )   | 120/60/1   |
| EF-04  | 151 / 156 | Centrifugal | CSP-A190 | 1,400     | 3.0         | 47       | (100) | 125     | (0.50)   | LS - T     | Direct       | 0.100   | ( 1/8 )   | 120/60/1   |
| EF-05  | 132       | Centrifugal | CSP-A710 | 1,080     | 2.5         | 212      | (450) | 125     | (0.50)   | 24/7       | Direct       | 0.325   | ( 1/2 )   | 120/60/1   |
| EF-06  | 132       | Centrifugal | CSP-A710 | 1,080     | 2.5         | 212      | (450) | 125     | (0.50)   | CO Monitor | Direct       | 0.325   | ( 1/2 )   | 120/60/1   |
| EF-07  | 165       | Centrifugal | CSP-A780 | 1,600     | 3.5         | 283      | (600) | 125     | (0.50)   | CO Monitor | Direct       | 0.405   | ( 3/4 )   | 120/60/1   |
| EF-11  | 143       | Centrifugal | SP-A710  | 1,080     | 2.5         | 189      | (400) | 125     | (0.50)   | 24/7       | Direct       | 0.325   | ( 1/2 )   | 120/60/1   |
| <b>Roof Exhaust:</b> Design based on Greenheck G Models. Centrifugal direct drive roof exhaust fan, backward inclined fan, aluminum construction, statically and dynamically balanced, AMCA rated for air and sound performance, complete with disconnect switch, backdraft damper, birdscreen, roof curbs and vibration isolators. Motor: ECM with potentiometer dial pre-mounted and wired on motor for speed control with 80% usable turndown, balancer to use speed control for balancing.   |           |             |          |           |             |          |       |         |          |            |              |         |           |            |
| EF-08  | 153       | Centrifugal | G-070    | 1,050     | 1.5         | 71       | (150) | 31      | (0.125)  | LS - LV    | Direct       | 0.01    | ( 1/100 ) | 120/60/1   |
| EF-09  | 154       | Centrifugal | G-065    | 1,050     | 1.8         | 47       | (100) | 31      | (0.125)  | 24/7       | Direct       | 0.01    | ( 1/100 ) | 120/60/1   |
| EF-10  | 142       | Centrifugal | G-075    | 1,050     | 2.8         | 94       | (200) | 31      | (0.125)  | LS - LV    | Direct       | 0.01    | ( 1/80 )  | 120/60/1   |
| EF-12  | 102       | Centrifugal | G-075    | 1,050     | 2.8         | 94       | (200) | 31      | (0.125)  | 24/7       | Direct       | 0.01    | ( 1/80 )  | 120/60/1   |
| EF-13  | 110       | Centrifugal | G-075    | 1,050     | 2.8         | 94       | (200) | 31      | (0.125)  | 24/7       | Direct       | 0.01    | ( 1/80 )  | 120/60/1   |
| EF-14  | 113       | Centrifugal | G-060    | 1,050     | 1.9         | 24       | (50)  | 31      | (0.125)  | 24/7       | Direct       | 0.01    | ( 1/100 ) | 120/60/1   |
| EF-15  | 163       | Centrifugal | G-075    | 1,050     | 2.8         | 94       | (200) | 31      | (0.125)  | 24/7       | Direct       | 0.00    | ( 1/200 ) | 120/60/1   |

Control  
LS-LV Local Switch - Line Voltage  
LS-T Local Switch - Timer  
CO Monitor- Fan to run from CO Monitor  
24/7- Fan to operate 24 hours a day, 7 days a week



| Revision/Revision | Description/Description | Date/Date  |
|-------------------|-------------------------|------------|
| 0                 | ISSUED FOR TENDER       | 2016/08/12 |

Client/client  
**DO NOT SCALE DRAWINGS**  
Project title/Titre du projet  
**NEW MODULAR POLICE BUILDING  
AHTAHKAKOOP, SASKATCHEWAN**

Approved by/Approve par  
Designed by/Concept par  
TKC  
Drawn by/Dessine par  
JDL  
Project Manager/Administrateur de Projets

Architectural and Engineering Resources Manager/  
Ressources Architectural et de Directeur d'ingénierie

Client/client

Drawing title/Titre du dessin

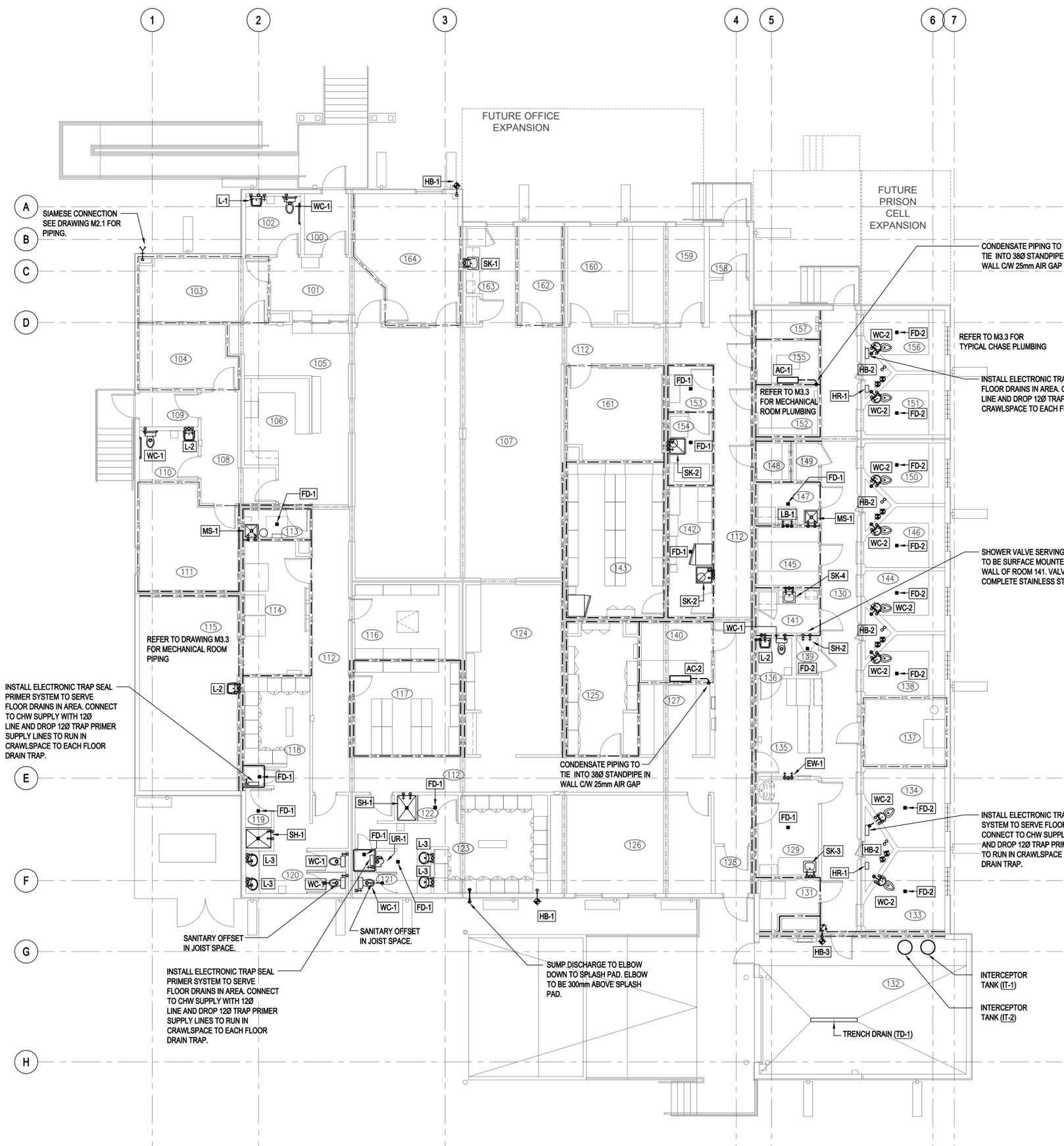
**EQUIPMENT SCHEDULE**

|   |                              |  |
|---|------------------------------|--|
| Project No./No. du projet<br><b>S-35-2014</b> | Sheet/Fauille<br><b>M1.1</b> | Revision no./<br>La Révision no.<br><b>0</b> |
|---|------------------------------|--|









- PLUMBING GENERAL NOTES:**
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
  - COORDINATE ALL WORK WITH OTHER TRADES AND SITE CONDITIONS.
  - RUN WATER PIPING AS HIGH AS POSSIBLE TO PROVIDE MAXIMUM CLEARANCE IN ALL AREAS.
  - BOILER ROOM SANITARY PIPING AND EXPOSED PIPING SHALL BE CAST IRON.
  - ALL SHOWER DRAINS AND FLOOR DRAINS TO BE 75Ø.
  - VENTING AS PER LOCAL CODES AND REQUIREMENTS.
  - MAKE ALL CONNECTIONS FOR EQUIPMENT SUPPLIED BY OTHERS. REFER TO DETAILS FOR CONNECTIONS.



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Project title/Titre du projet  
**NEW MODULAR POLICE BUILDING  
 AHTAHKAKOOP, SASKATCHEWAN**

Approved by/Approve par  
 Designed by/Concept par  
 Drawn by/Dessine par  
 Project Manager/Administrateur de Projets

Architectural and Engineering Resources Manager/  
 Ressources Architectural et de Directeur d'Ingénierie

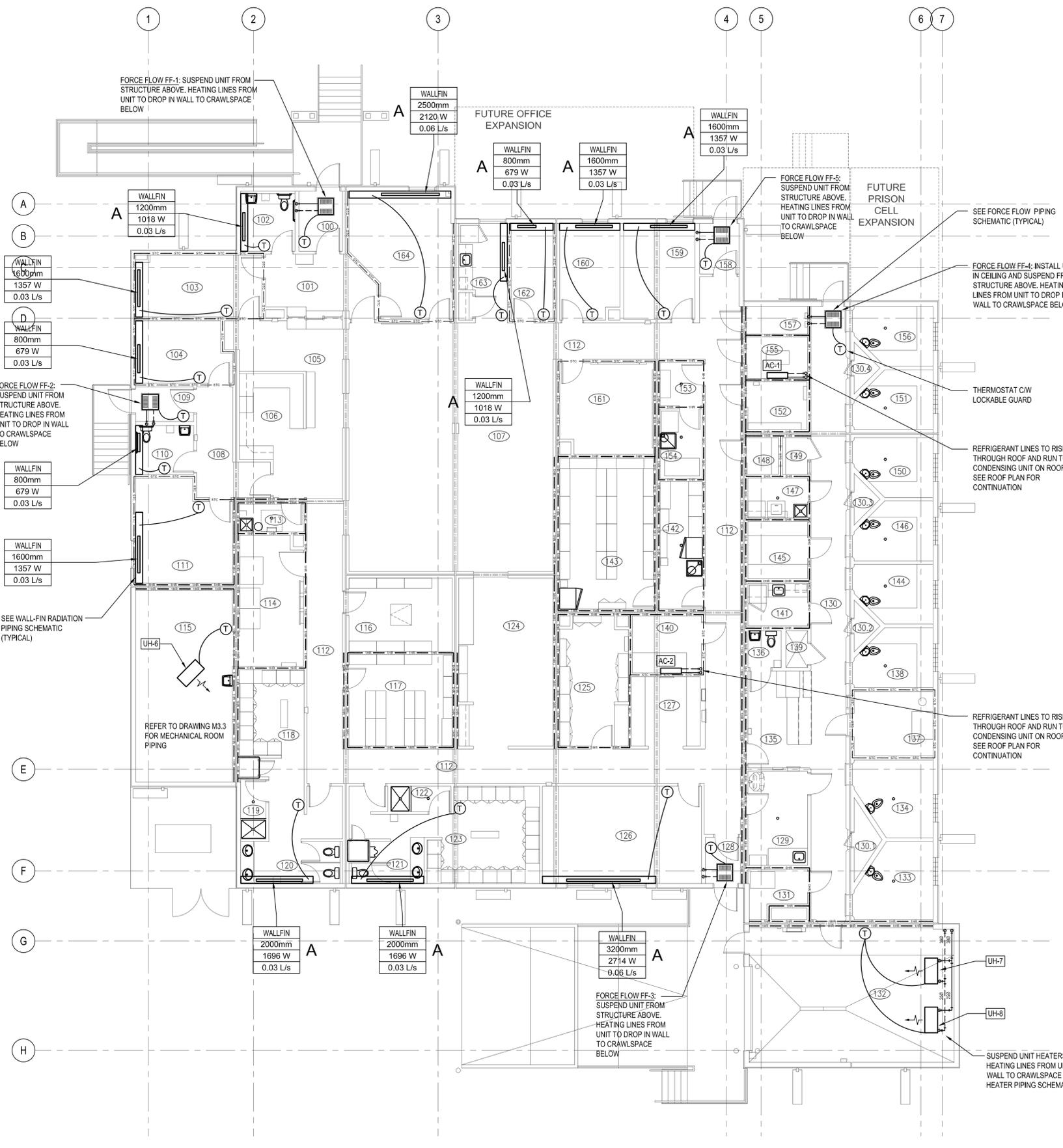
Drawing title/Titre du dessin  
**MAIN FLOOR PLUMBING PLAN**

| Project No./No. du projet | Sheet/Fauille | Revision no./La Révision no. |
|---------------------------|---------------|------------------------------|
| S-35-2014                 | M2.2          | 0                            |

1  
 M2.2  
 1:100  
**MAIN FLOOR PLUMBING PLAN**

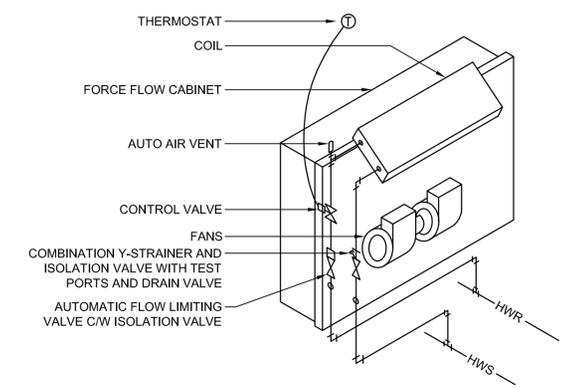






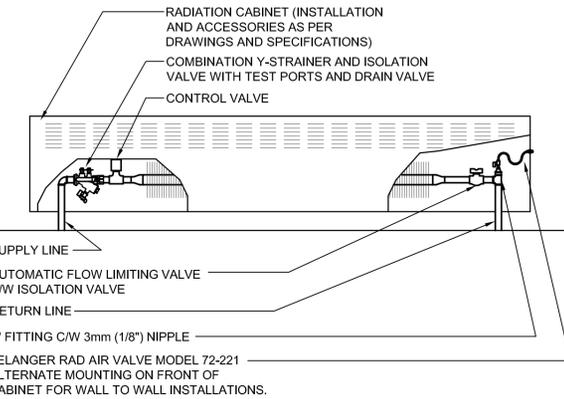
**1 MAIN FLOOR HEATING PLAN**  
M3.2 1:100

- GENERAL HEATING NOTES:**
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
  - COORDINATE ALL WORK WITH OTHER TRADES AND SITE CONDITIONS.
  - RUN PIPING AS HIGH AS POSSIBLE.
  - INSTALL AUTO AIR VENTS WITH PET COCKS AT ALL HIGH POINTS IN THE SYSTEM PIPING.
  - REFER TO DETAIL SHEETS FOR EQUIPMENT CONNECTIONS.
  - ALL RUNOUTS TO REHEAT COILS, RADIANT PANELS, OR WALL-FIN RADIATION TO BE 190 UNLESS NOTED OTHERWISE. ALL RUNOUTS TO UNIT HEATERS AND FORCE FLOWS TO BE 250 UNLESS NOTED OTHERWISE.

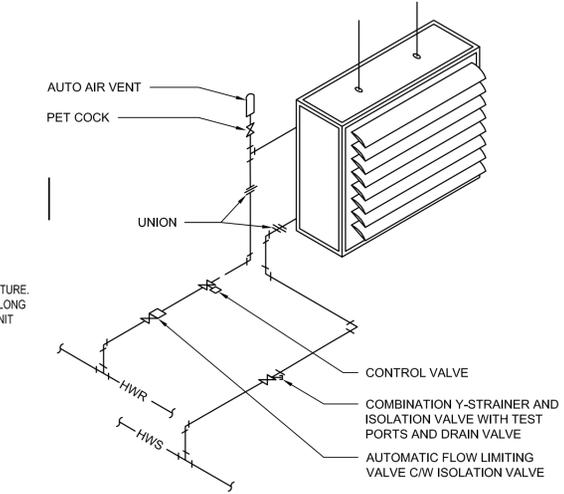


**FORCE FLOW PIPING SCHEMATIC (CONTROL VALVE)**

NOTE: IF RETURN SIDE AUTOMATIC FLOW RESTRICTOR IS PROVIDED, FLOW RESTRICTOR SHALL BE WITHOUT STRAINER AND AN ISOLATION VALVE AND STRAINER SHALL BE INSTALLED UPSTREAM OF RADIATION.



**WALL FIN RADIATION PIPING SCHEMATIC**



**UNIT HEATER PIPING SCHEMATIC (CONTROL VALVE)**



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Project title/Titre du projet  
**NEW MODULAR POLICE BUILDING  
 AHTAHKAKOOP, SASKATCHEWAN**

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Drawing title/Titre du dessin  
**MAIN FLOOR HEATING PLAN**

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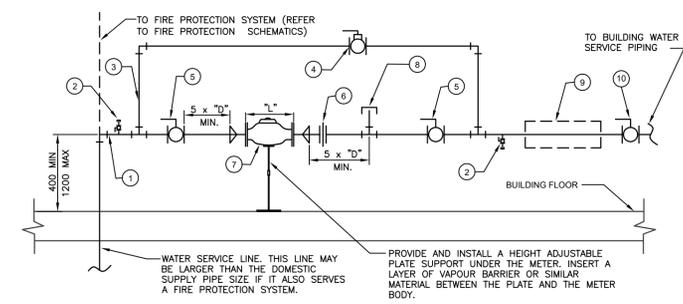
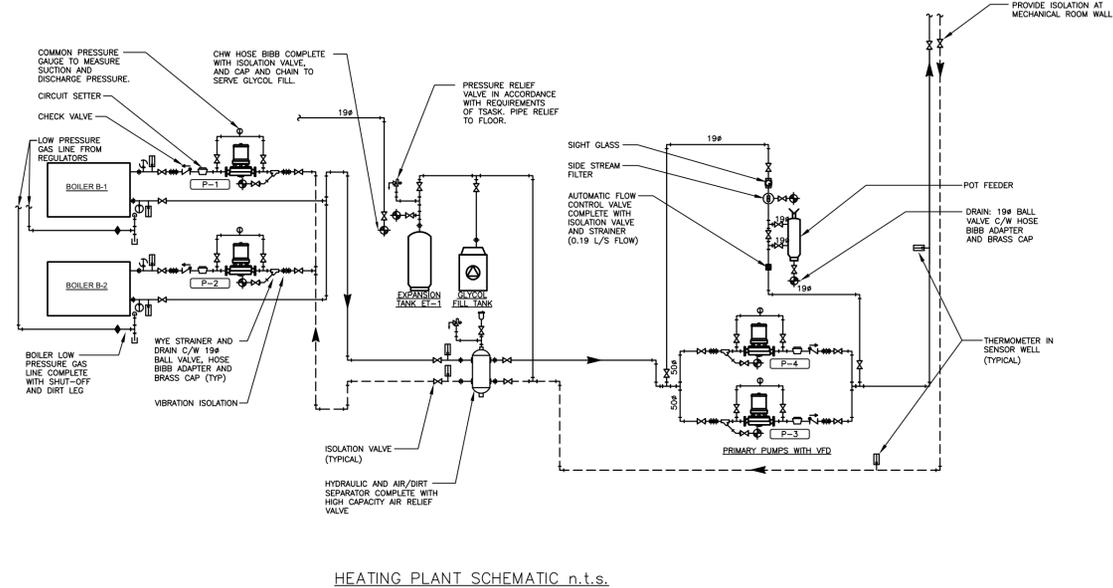
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**AHTAHKAKOOP, SASKATCHEWAN**

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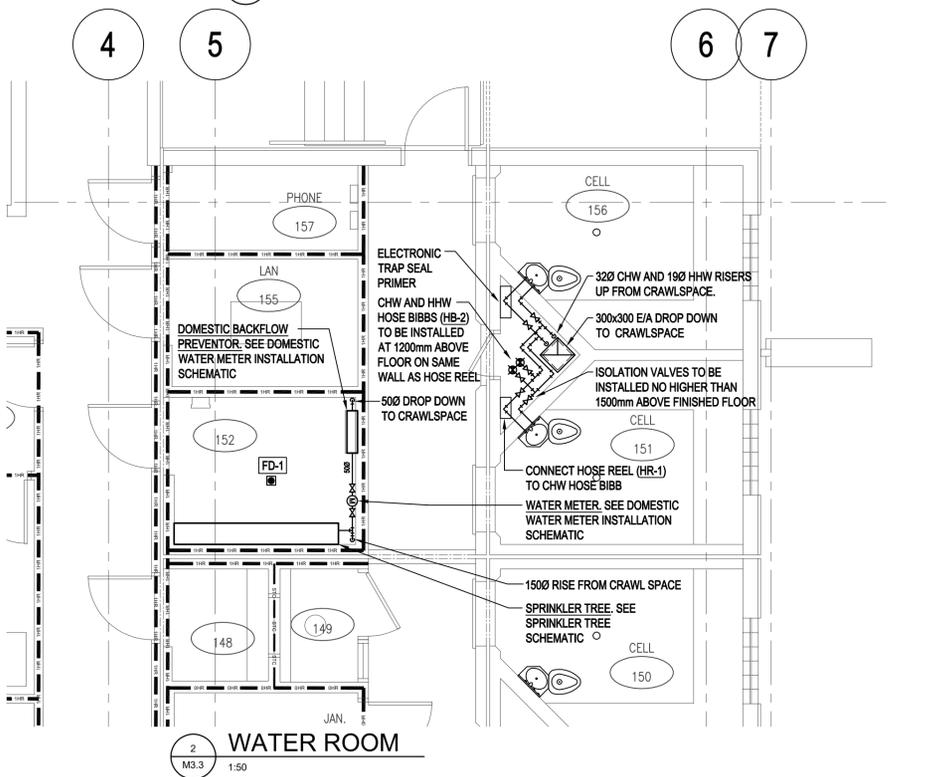
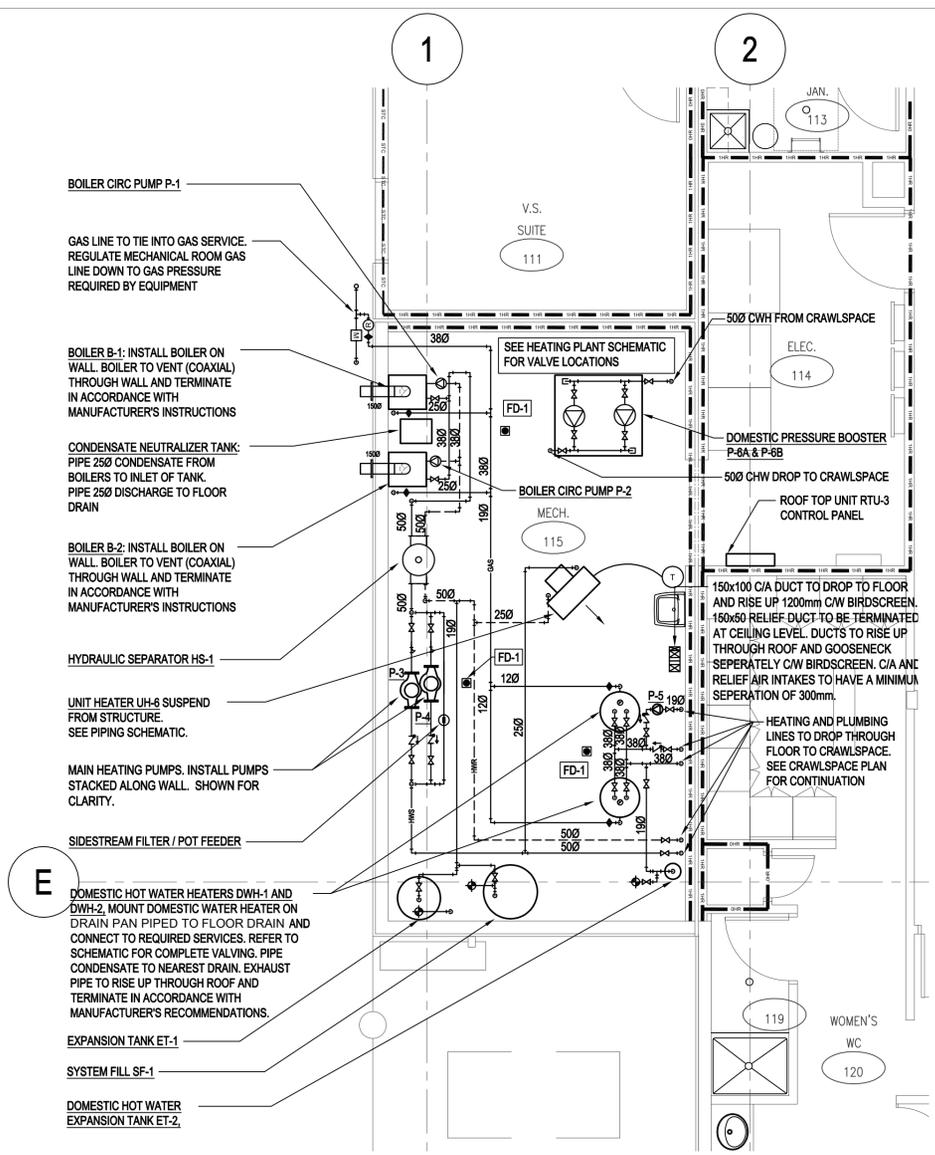
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**MECHANICAL ROOM PLANS**

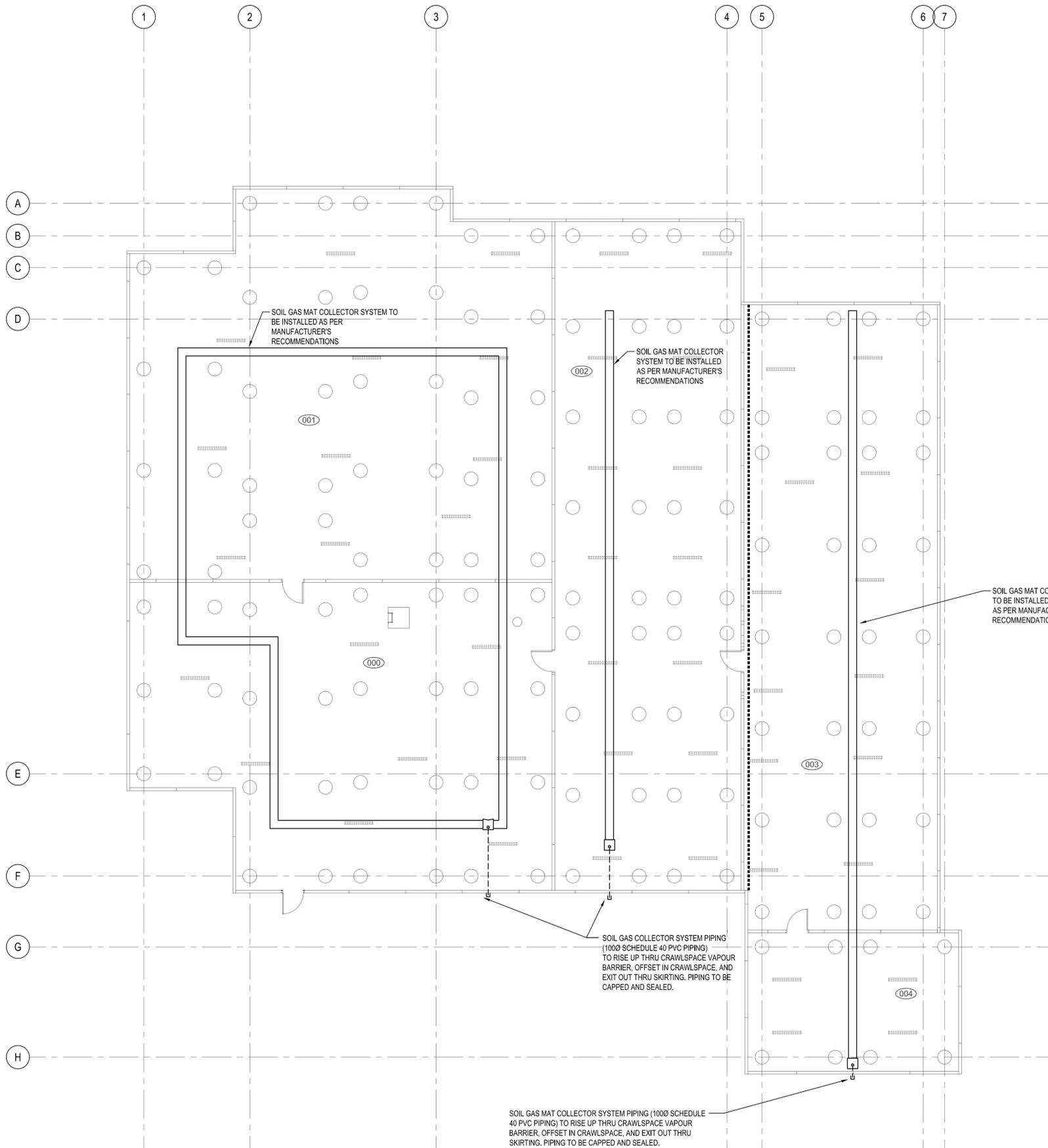
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- LEGEND:
- DOMESTIC WATER SUPPLY PIPE. ISOLATING VALVES AND BYPASS VALVE MUST BE THE SAME SIZE AS THIS LINE OR THE INCOMING WATER SERVICE LINE - WHICHEVER IS SMALLER.
  - 6mm CONNECTION c/w BALL VALVE AND THREAD PLUG. ORIENT EACH CONNECTION AS SHOWN.
  - METER BYPASS LINE. THIS PIPING MAY BE ABOVE OR BELOW OR TO EITHER SIDE OF THE METER BUT IF IT IS ABOVE IT MUST BE A MINIMUM OF 500mm CLEAR ABOVE THE METER REGISTER HEAD.
  - METER BYPASS VALVE. THIS VALVE IS TO BE EITHER A BALL OR BUTTERFLY STYLE VALVE AND MUST BE EQUIPPED WITH A FACTORY SUPPLIED, QUARTER TURN LOCKABLE LEVER ACTUATOR. IF REQUIRED, THE LOCK WILL BE PROVIDED AND INSTALLED BY A REPRESENTATIVE OF THE MUNICIPALITY. BEFORE ORDERING, ENSURE PROPOSED VALVE IS APPROVED BY MUNICIPALITY, IF THE MUNICIPALITY DOES NOT HAVE AN APPROVED VALVE LIST PROVIDE VALVE IN ACCORDANCE WITH SPECIFICATIONS.
  - METER ISOLATING VALVES - 2 REQUIRED AT LOCATIONS SHOWN. VALVES TO BE EITHER BALL OR BUTTERFLY STYLE WITH QUARTER TURN LEVER ACTUATOR. IF THERE IS A FIRE PROTECTION SYSTEM SERVED FROM THE WATER SERVICE THE ISOLATING VALVE UPSTREAM OF THE METER MUST BE A LOCKABLE TYPE. BEFORE ORDERING, ENSURE PROPOSED VALVE IS APPROVED BY MUNICIPALITY, IF THE MUNICIPALITY DOES NOT HAVE AN APPROVED VALVE LIST PROVIDE VALVE IN ACCORDANCE WITH SPECIFICATIONS.
  - QUICK DISCONNECT SUCH AS PIPE UNION OR GROOVED COUPLING.
  - WATER METER. METER SIZE WILL BE DETERMINED BY THE MUNICIPALITY. METER WILL BE SUPPLIED AND INSTALLED ONLY BY MUNICIPALITY. WATER METER MUST BE MOUNTED IN THE HORIZONTAL POSITION. PROVIDE PIPING CONNECTIONS AS REQUIRED FOR METER INSTALLATION. METER SPACER WILL BE PROVIDED BY MUNICIPALITY FOR USE BY THE PIPING CONTRACTOR.
  - 65mm CONNECTION WITH NPT THREAD CAP. ORIENT CONNECTION TOWARD THE MOST ACCESSIBLE DIRECTION FOR CONNECTION AND EXTENSION OF A TEST HOSE.
  - BACKFLOW PREVENTION ASSEMBLY c/w ISOLATING VALVES AS SPECIFIED OR REQUIRED BY THE MUNICIPALITY CROSS CONNECTION CONTROL COORDINATOR. ASSEMBLY MAY BE INSTALLED IN THE VERTICAL IF THE ASSEMBLY IS CSA APPROVED FOR MOUNTING IN THAT ORIENTATION. BACKFLOW PREVENTERS MAY ONLY BE INSTALLED DOWNSTREAM OF THE WATER METER AS SHOWN.
  - BALL OR BUTTERFLY TYPE ISOLATING VALVE FOR BACKFLOW PREVENTER.

NOTES:  
 - PIPING MATERIALS AND INSTALLATION MUST COMPLY WITH THE CANADIAN PLUMBING CODE AND THE MUNICIPAL STANDARD CONSTRUCTION SPECIFICATIONS. PROVIDE ADDITIONAL SUPPORT IF REQUIRED TO ENSURE NO STRAIN IS TRANSMITTED TO EITHER THE METER OR BACKFLOW PREVENTER.  
 -IF METER SIZE DOES NOT MATCH WATER SERVICE SIZE, PROVIDE AND INSTALL ALL REQUIRED REDUCERS AND INCREASERS. NOTE THAT USE OF THREADED REDUCING BUSHINGS IS NOT ALLOWED. REDUCERS AND INCREASERS TO BE INSTALLED AS CLOSE TO THE METER AS POSSIBLE. NOTE THAT IN SOME CASES MUNICIPALITY WILL PROVIDE TWO SMALLER METERS IN LIEU OF ONE LARGE METER.  
 -DIMENSION "D" IS THE NOMINAL DIAMETER OF THE DOMESTIC WATER SUPPLY PIPE.  
 -DIMENSION "L" IS THE LENGTH OF A FULL DOMESTIC PIPE SIZE WATER METER. OVERALL PIPE RUN PROVIDED MUST ALLOW FOR INSTALLATION OF A METER OF THIS LENGTH.





**BELOW CRAWLSPACE VENTILATION PLAN**



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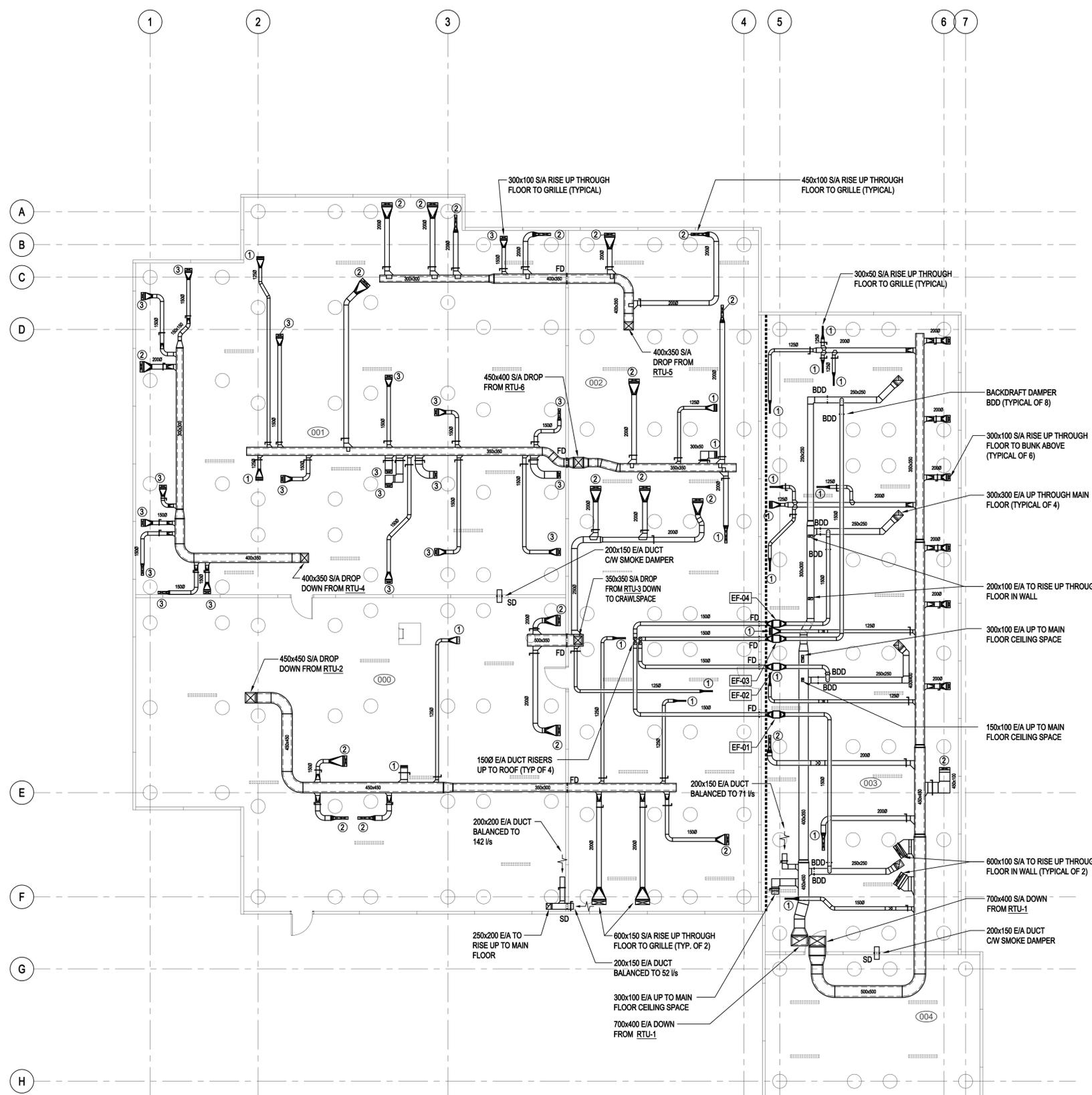
Project title/Titre du projet  
**NEW MODULAR POLICE BUILDING  
 AHTAHKAKOOP, SASKATCHEWAN**

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 Designed by/Concept par  
 TKC  
 Drawn by/Dessine par  
 JDL  
 Project Manager/Administrateur de Projets

Architectural and Engineering Resources Manager/  
 Ressources Architectural et de Directeur d'Ingénierie  
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Drawing title/Titre du dessin  
**BELOW CRAWLSPACE  
 VENTILATION PLAN**

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| S-35-2014                 | M4.0          | 0                            |



- KEY NOTES**
- ① 300x50 S/A RISE UP THROUGH FLOOR TO GRILLE
  - ② 450x100 S/A RISE UP THROUGH FLOOR TO GRILLE
  - ③ 300x100 S/A RISE UP THROUGH FLOOR TO GRILLE

**VENTILATION GENERAL NOTES**

- ALL DUCTWORK SHOWN DOUBLE LINE INSIDE PERIMETER OF DUCT IS TO BE COMPLETE WITH 25mm INTERNAL INSULATION. ALL OTHER DUCTWORK IS TO BE C/W 25mm EXTERNAL INSULATION. SIZES INCLUDE INTERNAL INSULATION WHERE APPLICABLE.
- ALL FITTINGS ON INTERNALLY INSULATED DUCTWORK ARE TO BE C/W INTERNAL INSULATION. ALL OTHERS ARE TO BE EXTERNALLY INSULATED.
- ALL SUPPLY AIR AND EXHAUST AIR BRANCH DUCTS TO GRILLES AND DIFFUSERS ARE TO BE C/W BALANCE DAMPERS IN BRANCH DUCT NEAR MAIN. UNLESS BALANCE DAMPERS ARE PROVIDED IN GRILLE OR DIFFUSER.
- ALL EXHAUST FANS ARE TO BE SUSPENDED FROM STRUCTURE ON THREADED ROD C/W SPRING ISOLATORS.
- ALL RADIUSSED ELBOWS TO BE WITH CENTERLINE RADIUS OF 1.5 TIMES DUCT DIAMETER (ROUND DUCTS) OR DUCT WIDTH (RECTANGULAR). ALL MITERED ELBOWS TO BE COMPLETE WITH AIRFOIL TURNING VANES. ALL RECTANGULAR BRANCHES TO BE WITH RADIUS ON BRANCH 1.5 TIMES WIDTH OF DUCT. ALL ROUND BRANCHES TO ENTER MAIN DUCT AT 45 DEGREES WITH CONICAL CONNECTION.
- PROVIDE ACCESS DOORS FOR ACCESS TO ALL MOTORIZED DAMPERS, FIRE DAMPERS, AND CONTROL DEVICES, AND TO FACILITATE DUCT CLEANINGS.
- COORDINATE ALL WORK WITH OTHER TRADES.
- RUN DUCTS AS HIGH AS POSSIBLE TO PROVIDE MAXIMUM CLEARANCE.



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 AHTAHKAKOOP, SASKATCHEWAN**

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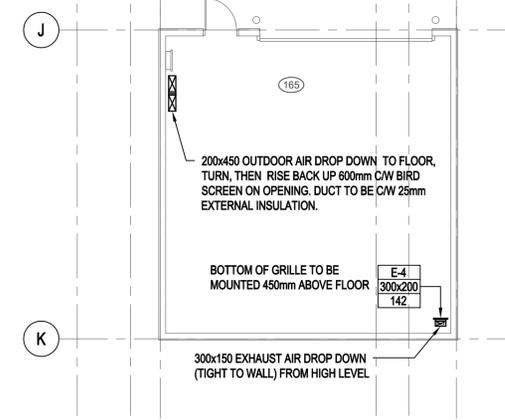
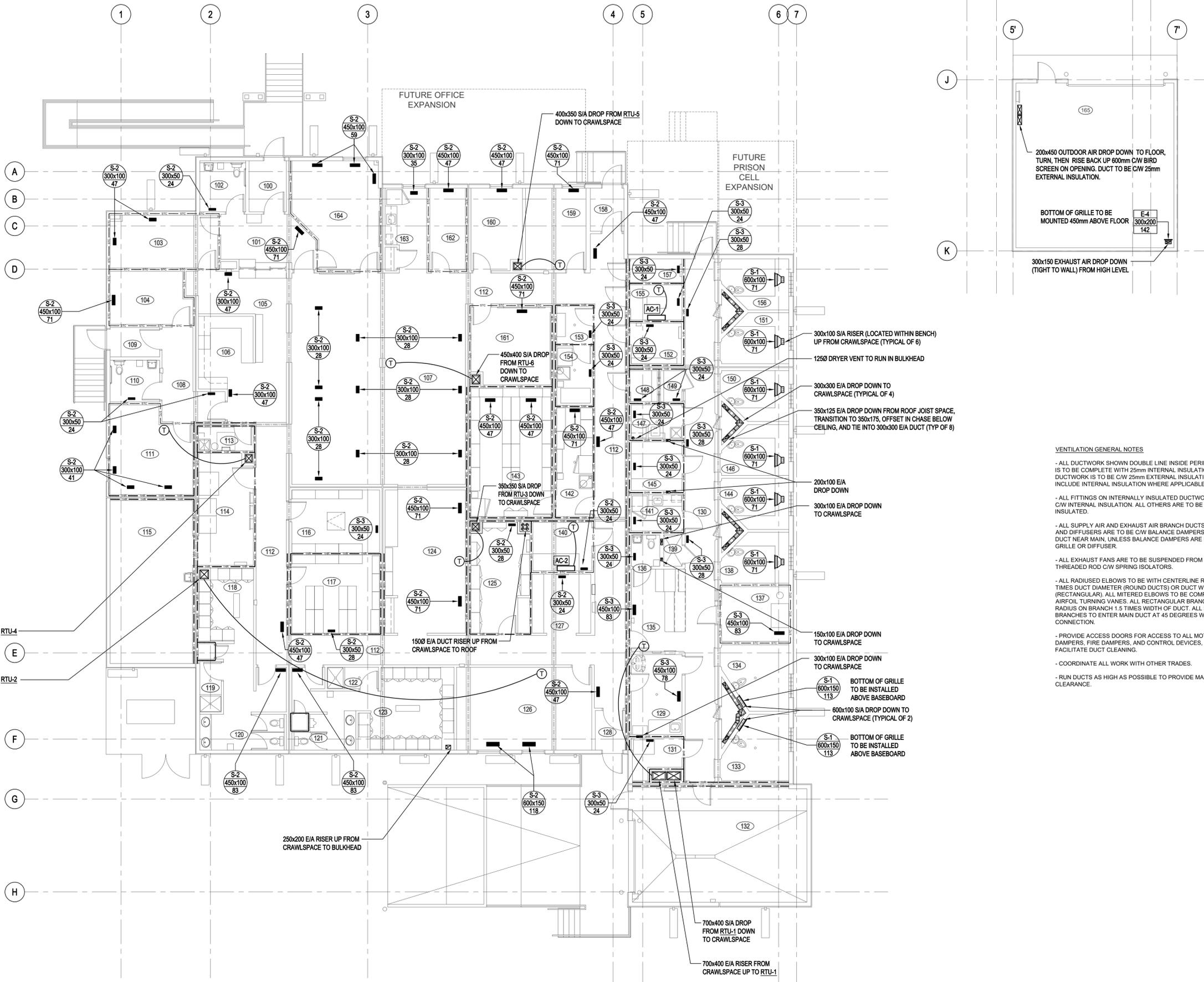
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**CRAWLSPACE VENTILATION PLAN**

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| S-35-2014                 | M4.1          | 0                            |

**CRAWLSPACE PLAN - VENTILATION**

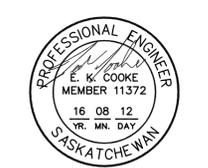




- VENTILATION GENERAL NOTES**
- ALL DUCTWORK SHOWN DOUBLE LINE INSIDE PERIMETER OF DUCT IS TO BE COMPLETE WITH 25mm INTERNAL INSULATION. ALL OTHER DUCTWORK IS TO BE C/W 25mm EXTERNAL INSULATION. SIZES INCLUDE INTERNAL INSULATION WHERE APPLICABLE.
  - ALL FITTINGS ON INTERNALLY INSULATED DUCTWORK ARE TO BE C/W INTERNAL INSULATION. ALL OTHERS ARE TO BE EXTERNALLY INSULATED.
  - ALL SUPPLY AIR AND EXHAUST AIR BRANCH DUCTS TO GRILLES AND DIFFUSERS ARE TO BE C/W BALANCE DAMPERS IN BRANCH DUCT NEAR MAIN. UNLESS BALANCE DAMPERS ARE PROVIDED IN GRILLE OR DIFFUSER.
  - ALL EXHAUST FANS ARE TO BE SUSPENDED FROM STRUCTURE ON THREADED ROD C/W SPRING ISOLATORS.
  - ALL RADIUS ELBOWS TO BE WITH CENTERLINE RADIUS OF 1.5 TIMES DUCT DIAMETER (ROUND DUCTS) OR DUCT WIDTH (RECTANGULAR). ALL MITERED ELBOWS TO BE COMPLETE WITH AIRFOIL TURNING VANES. ALL RECTANGULAR BRANCHES TO BE WITH RADIUS ON BRANCH 1.5 TIMES WIDTH OF DUCT. ALL ROUND BRANCHES TO ENTER MAIN DUCT AT 45 DEGREES WITH CONICAL CONNECTION.
  - PROVIDE ACCESS DOORS FOR ACCESS TO ALL MOTORIZED DAMPERS, FIRE DAMPERS, AND CONTROL DEVICES, AND TO FACILITATE DUCT CLEANING.
  - COORDINATE ALL WORK WITH OTHER TRADES.
  - RUN DUCTS AS HIGH AS POSSIBLE TO PROVIDE MAXIMUM CLEARANCE.

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 AHTAHKAKOOP, SASKATCHEWAN**

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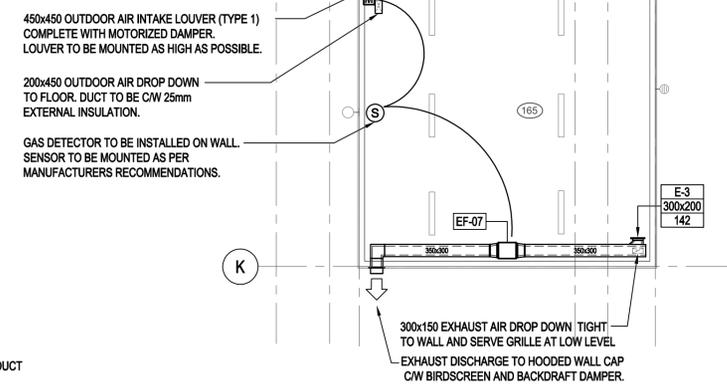
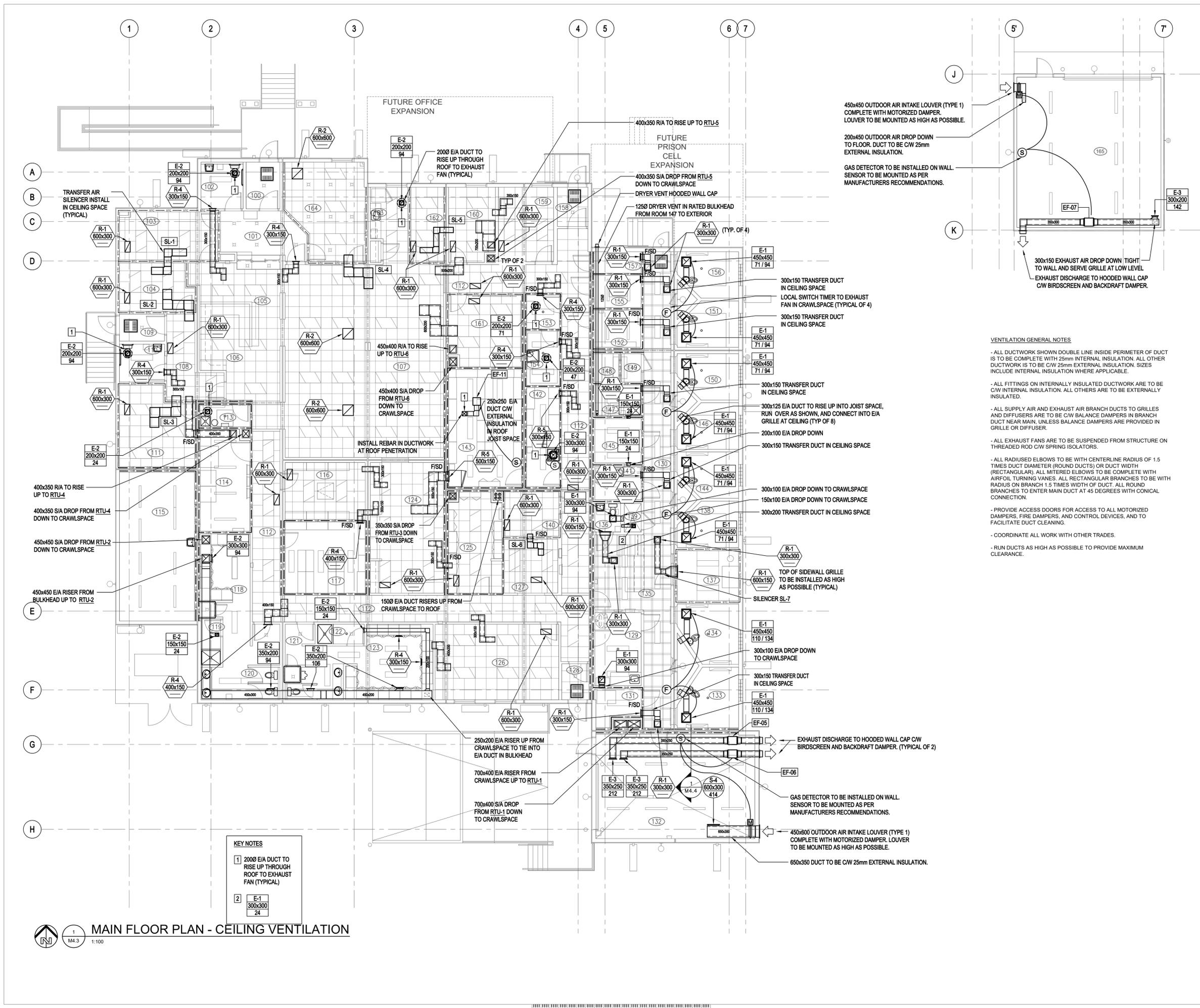
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**MAIN FLOOR LOWER  
 VENTILATION PLAN**

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| S-35-2014                 | M4.2          | 0                            |

**MAIN FLOOR PLAN - VENTILATION**  
 1:100





- VENTILATION GENERAL NOTES**
- ALL DUCTWORK SHOWN DOUBLE LINE INSIDE PERIMETER OF DUCT IS TO BE COMPLETE WITH 25mm INTERNAL INSULATION. ALL OTHER DUCTWORK IS TO BE C/W 25mm EXTERNAL INSULATION. SIZES INCLUDE INTERNAL INSULATION WHERE APPLICABLE.
  - ALL FITTINGS ON INTERNALLY INSULATED DUCTWORK ARE TO BE C/W INTERNAL INSULATION. ALL OTHERS ARE TO BE EXTERNALLY INSULATED.
  - ALL SUPPLY AIR AND EXHAUST AIR BRANCH DUCTS TO GRILLES AND DIFFUSERS ARE TO BE C/W BALANCE DAMPERS IN BRANCH DUCT NEAR MAIN, UNLESS BALANCE DAMPERS ARE PROVIDED IN GRILLE OR DIFFUSER.
  - ALL EXHAUST FANS ARE TO BE SUSPENDED FROM STRUCTURE ON THREADED ROD C/W SPRING ISOLATORS.
  - ALL RADIUSED ELBOWS TO BE WITH CENTERLINE RADIUS OF 1.5 TIMES DUCT DIAMETER (ROUND DUCTS) OR DUCT WIDTH (RECTANGULAR). ALL MITERED ELBOWS TO BE COMPLETE WITH AIRFOIL TURNING VANES. ALL RECTANGULAR BRANCHES TO BE WITH RADIUS ON BRANCH 1.5 TIMES WIDTH OF DUCT. ALL ROUND BRANCHES TO ENTER MAIN DUCT AT 45 DEGREES WITH CONICAL CONNECTION.
  - PROVIDE ACCESS DOORS FOR ACCESS TO ALL MOTORIZED DAMPERS, FIRE DAMPERS, AND CONTROL DEVICES, AND TO FACILITATE DUCT CLEANING.
  - COORDINATE ALL WORK WITH OTHER TRADES.
  - RUN DUCTS AS HIGH AS POSSIBLE TO PROVIDE MAXIMUM CLEARANCE.

- KEY NOTES**
- 2000 E/A DUCT TO RISE UP THROUGH ROOF TO EXHAUST FAN (TYPICAL)
  - E-1 300x300 24



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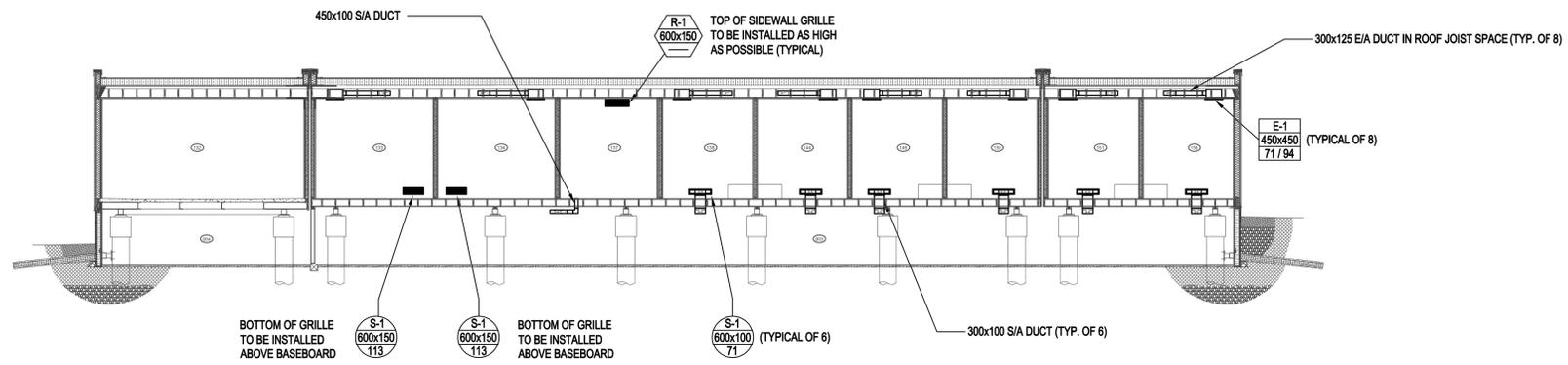
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**MAIN FLOOR CEILING**  
**VENTILATION PLAN**

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**MAIN FLOOR PLAN - CEILING VENTILATION**



1 BUILDING SECTION - VENTILATION  
M4.4 1:100

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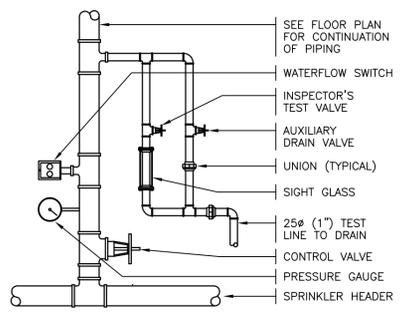
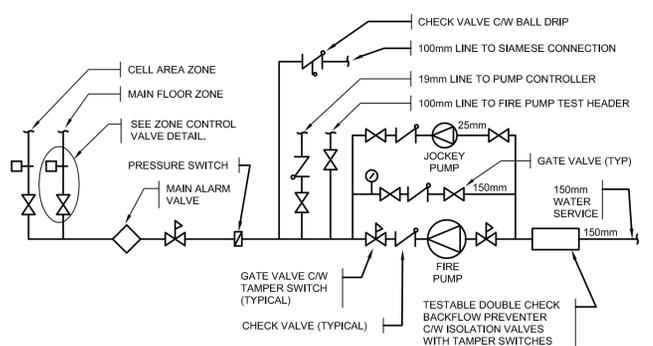
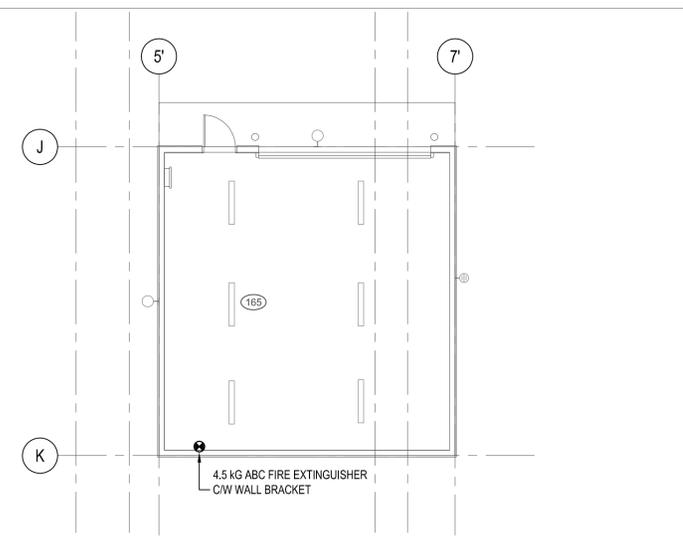
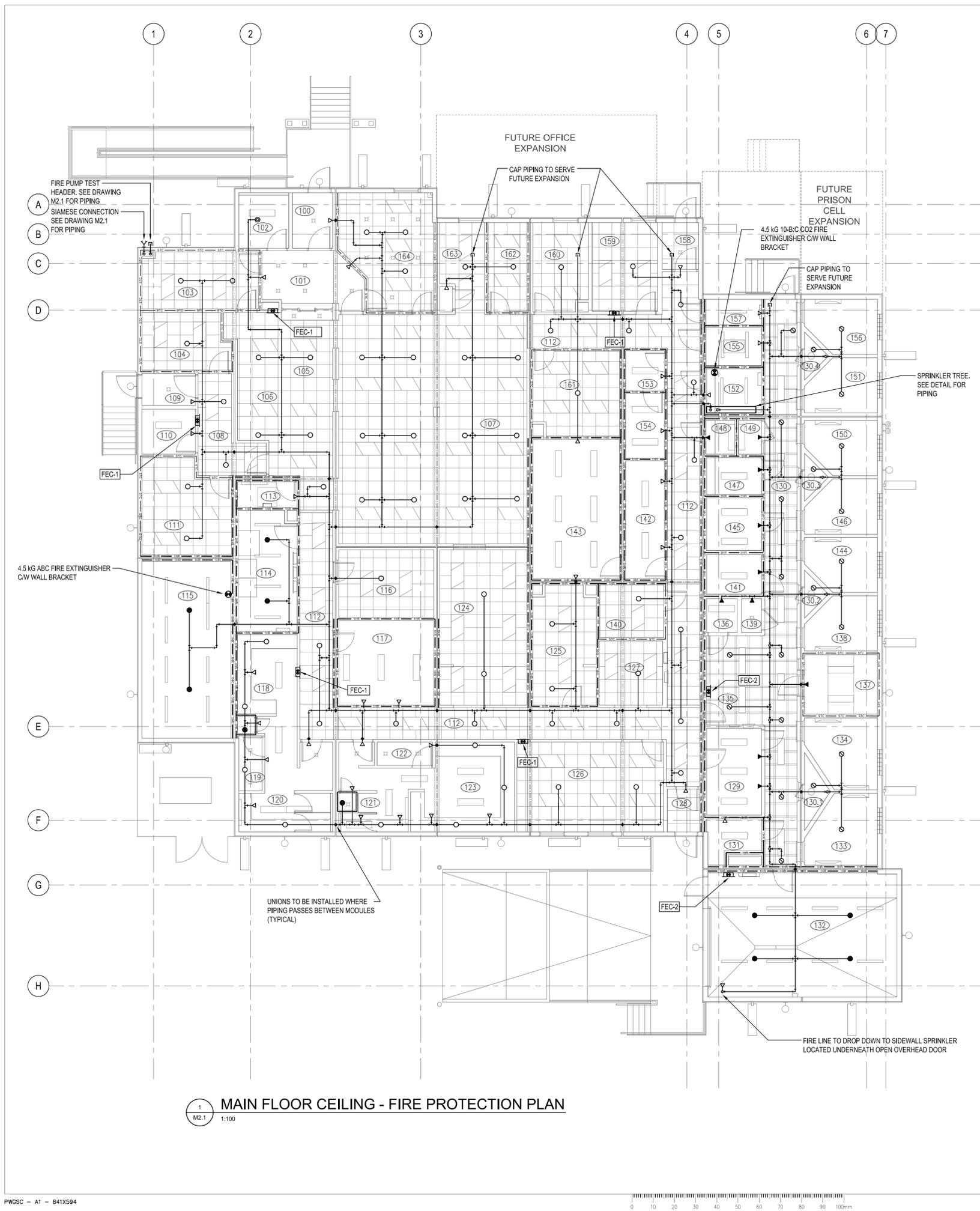
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**BUILDING SECTION  
 VENTILATION**

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|---|-------------------------------|--|





- SPRINKLER LEGEND**
- STANDARD CHROME PLATED SEMI-RECESSED PENDANT HEAD
  - ⊗ INSTITUTIONAL (SECURITY) PENDANT HEAD
  - STANDARD UPRIGHT HEAD
  - ⊙ EXTENDED ESCUTCHEON CHROME PLATED PENDANT HEAD
  - △ STANDARD SIDEWALL HEAD
  - ▲ INSTITUTIONAL (SECURITY) SIDEWALL HEAD
  - 🔧 FIRE EXTINGUISHER IN CABINET
  - 🔥 FIRE EXTINGUISHER C/W WALL BRACKET
- FIRE PROTECTION NOTES:**
- ALL SPRINKLER PIPE TO BE HYDRAULICALLY SIZED. BASE ON FLOW TEST RESULTS.
  - CO-ORDINATE ALL SPRINKLER HEADS AND PIPING WITH OTHER PIPING, STRUCTURAL, LIGHTING, DUCTWORK AND ELECTRICAL.
  - ALL HEADS IN MECHANICAL AND JANITOR'S ROOMS TO BE COMPLETE WITH GUARDS.
  - PROVIDE DRAINS AT LOW POINTS IN SYSTEM.
  - ALL SPRINKLER HEADS IN T-BAR CEILINGS ARE TO BE CENTERED IN TILE OR 1/2 TILE UNLESS NOTED OTHERWISE.

**SEPW Architecture Inc.**  
100 - 3725 Paton Street Regina, SK S4S 6A8 ph: (306) 569-2255  
102 - 3718 Konnar Place Saskatoon SK S7P 5A6 ph: (306) 655-6457  
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**HDA ENGINEERING LTD.**  
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Association of Professional Engineers & Geoscientists of Saskatchewan  
**CERTIFICATE OF AUTHORIZATION**  
HDA ENGINEERING LTD.  
Number C981  
Permission to Consult Held by:  
Discipline: Sk. Reg. No. Signature  
Mech. 6093 J. Dougan

**DO NOT SCALE DRAWINGS**

| Revision/Revision | Description/Description | Date/Date  |
|-------------------|-------------------------|------------|
| 0                 | ISSUED FOR TENDER       | 2016/08/12 |

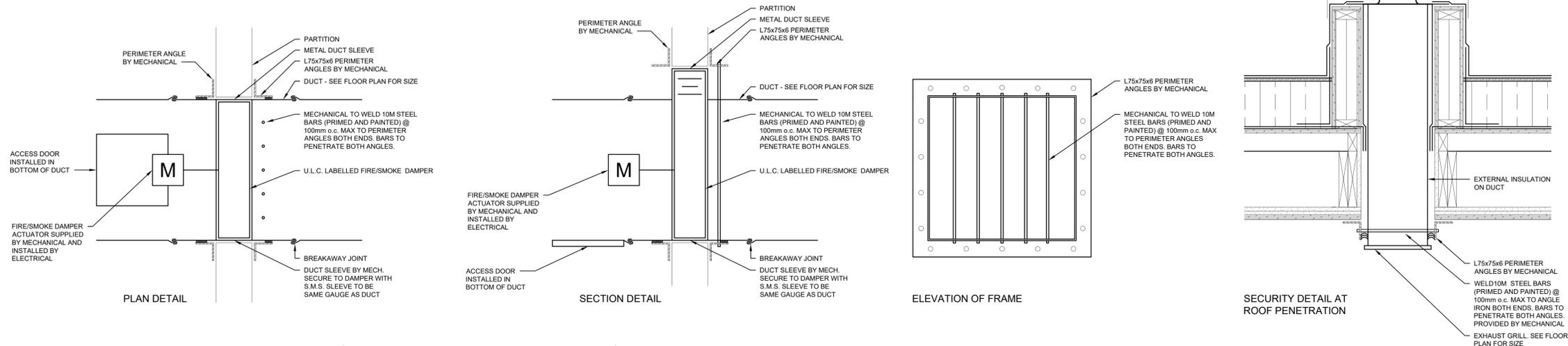
Project title/Titre du projet  
**NEW MODULAR POLICE BUILDING**  
**AHTAHKAKOOP, SASKATCHEWAN**

Approved by/Approve par  
Designed by/Concept par  
TKC  
Drawn by/Dessine par  
JDL  
Project Manager/Administrateur de Projets

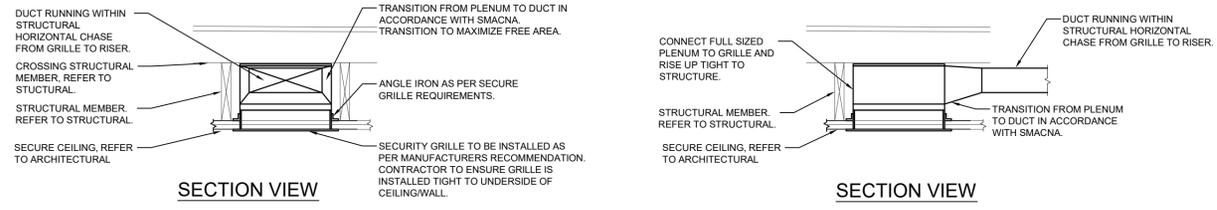
Architectural and Engineering Resources Manager/  
Ressources Architectural et de Directeur d'Ingénierie

Client/client  
Drawing title/Titre du dessin  
**MAIN FLOOR CEILING**  
**FIRE PROTECTION PLAN**

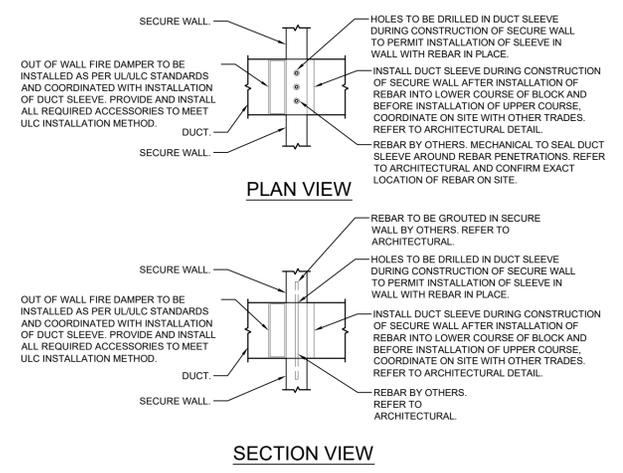
| Project No./No. du projet | Sheet/Feuille | Revision no./La Révision no. |
|---------------------------|---------------|------------------------------|
| S-35-2014                 | M5.1          | 0                            |



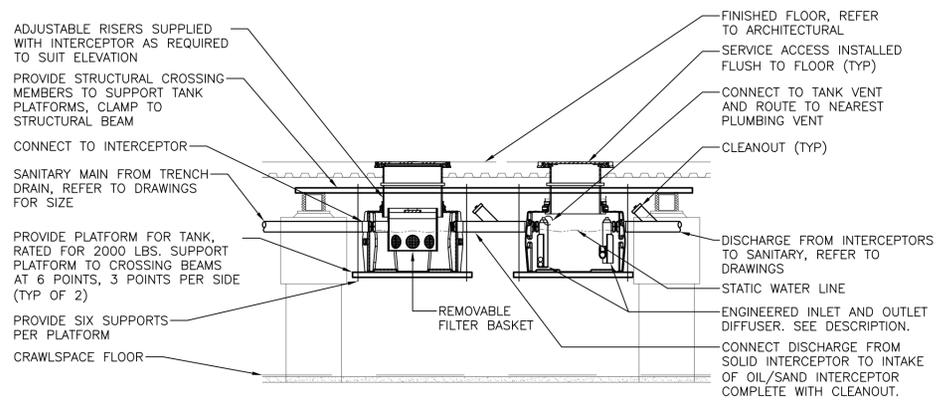
SECURITY DUCT PENETRATION DETAIL (FOR DUCTS LARGER THAN 300x300)  
N.T.S.



SECURITY EXHAUST AIR DETAIL  
N.T.S.



SECURITY DUCT PENETRATION DETAIL  
N.T.S.



INTERCEPTOR DETAIL  
N.T.S.

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 Permission to Consult Held by:  
 Discipline: Mech. Sk. Reg. No. 6093 Signature: J. Dawson

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| 0                 | ISSUED FOR TENDER       | 2016/09/12 |

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Architectural and Engineering Resources Manager/  
 Ressources Architectural et de Directeur d'ingénierie

Client/client  
**DETAILS**

| Project No./No. du projet | Sheet/Feuille | Revision no./La Révision no. |
|---------------------------|---------------|------------------------------|
| S-35-2014                 | M6.1          | 0                            |

