

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.

AIR COOLED CONDENSING UNIT: AAOB operating on R-410a refrigerant complete with scroll compressors, factory mounted and wired, air cooled condenser with protective grilles, hail guards, protective wire base guards, architectural sheet metal enclosure, liquid line solenoid valves, filter dryers, sight glasses, expansion valves, insulated suction lines, weather tight lockable control panel, control power transformer, low limit lockout starter and terminal strip for control by EMCS. Unit shall have capacity modulation in response to load. Each unit to be complete with factory start-up by factory trained technicians.

CU-2: Model CFA-009-B-0-8-DCOOK. Unit cooling capacity 9 tons nominal at 35 deg.C (95 deg.F) Ambient air, (12.8 EER) and 7.22 deg.C (45 deg.F) suction temperature. Single point power connection. 208V/60/3 phase, 35 FLA, 39 MCA, 50 Maximum Overcurrent. Maximum casing radiated sound power to be 0dB at 63Hz, 91dB at 125Hz, 88dB at 250Hz, 86dB at 500Hz, 86dB at 1000Hz, 82dB at 2000Hz, 80dB at 4000Hz, 79dB at 8000Hz. Unit has two step compressors and two refrigerant circuits with hot gas bypass for load modulation on lead circuit.

CU-3: Model CFA-025-C-0-8-DCOOK. Unit cooling capacity 25 tons nominal at 35 deg.C (95 deg.F) Ambient air, (11.4 EER) and 7.22 deg.C (45 deg.F) suction temperature. Single point power connection. 208V/60/3 phase, 118 FLA, 130 MCA, 175 Maximum Overcurrent. Maximum casing radiated sound power to be 0dB at 63Hz, 91dB at 125Hz, 88dB at 250Hz, 86dB at 500Hz, 86dB at 1000Hz, 82dB at 2000Hz, 80dB at 4000Hz, 79dB at 8000Hz. Unit has two step compressors and two refrigerant circuits with hot gas bypass for load modulation on lead circuit.

AIR SEPARATOR: Bell & Gossett Model R tangential type air separator complete with strainer. Unit to be line size, WPT connectors, complete with blow down connection and drain valve, and Amrol Model 720 automatic air eliminator. Provide and install complete with pressure relief valve piped to floor, in accordance with requirements of TSASK.

CONDENSATE NEUTRALIZATION TANK: Axiom Model NT25 Condensate Neutralization Tank complete with 25mm (1") side inlet, 25mm (1") side outlet, constructed of one piece seamless polypropylene (corrosion resistant material), 18 Litres (4.8 gallon) tank capacity and complete with an initial charge of 40 lbs of neutralizing media.

COOLING UNIT: Mitsubishi Electric, Model PKA Series wall mounted air conditioner complete with all mounting hardware, multi-directional air flow, auto swing vanes, super quiet operation, variable compressor speed inverter technology, R-410A refrigerant, auto restart after power failure, filter, and micro-processor controls. Drain water lift mechanism based on Maxi Orange Model MXO-115, to handle up to 10 GPH @ 0' head and 3.8 GPH @ 65' head, piped to nearest drain c/w 1" indirect connection gap, power to be 115V/60/1 phase. Power to A/C unit is supplied from the outdoor condensing unit on terminals S1 & S2. Outdoor condensing unit complete with crank case heater for ultra-low ambient operation to -40 deg.C (-40 deg.F). Unit shall carry a 7-year compressor warranty. Compressor shall be variable speed scroll. Mount condensing unit on concrete pad by others. Factory trained representative shall start-up and set up unit including recording of all settings and start-up sheets for inclusion in maintenance manuals.

Air Conditioning Unit AC-1 (Room 111): Model PKA-A24KA, wall mounted room air conditioner. SEER: 17.0, EER: 10.6. Unit shall provide 3.52-7.04 Kw (12-24 MBH) of cooling. Power shall be 208V/60/1 phase. Power Input 2,270 Watts, Max Fuse: 15 Amps. MCA: 1.0 Unit fan shall supply 300 L/s (635 CFM) on low speed and 366 L/s (775 CFM) on high speed. Unit Weight: 46 lbs.

Outdoor Condensing Unit CU-1 (Roof): Model PUY-A24NH3. Power shall be 208V/60/1 phase. Max Fuse: 30 Amps. MCA: 18 Amps. Unit Weight: 163 lbs.

DOMESTIC HOT WATER HEATER DWH-1 AND DWH-2: A.O. Smith Cyclone Mk1, Model BTH-120A, power vent, high efficiency commercial gas water heater, fully condensing up to 95% thermal efficiency, 60 gallons (227 litres) tank size, 120 MBH (35 kW gas input, 138 U.S. gallon/hour recovery at 100 deg.F (623 litre/hour recovery at 56 deg.C) temperature rise. Electrical 120V/60/1 phase plug-in connection. Unit to be mounted on a concrete housekeeping pad, refer to structural.

DOMESTIC WATER SERVICE 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.

EXPANSION TANKS, ET-1 (Heating Water System): Amrol AX-Series Model AX-60V, 33.6 US Gallons (127 litres) total volume, 11.3 US Gallons (43 litres) Max Acceptance, diaphragm design, 406 mm diameter x 1143 mm tall (16" x 45"). Unit to be mounted on concrete housekeeping pad with free standing integral floor stand. Installation to be complete with isolation valve, drain, and drain isolation valve. Provide and install pressure relief valve piped to floor, in accordance with requirements of TSASK.

EXPANSION TANK ET-2 (Domestic Hot Water System): Amrol Therm-x-trol Series Model ST-12, 4.4 gallon total volume, 11" diameter x 15" high. Installation shall be complete with isolation valve and drain valve.

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

FIRE EXTINGUISHERS:

Carbon Dioxide Fire Extinguisher: 4.5 kg (10 lb) Carbon dioxide fire extinguisher with 10BC rating c/w wall bracket.

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.

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.

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

FIRE PUMP FP-1: 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 Control.

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 PUMP CONTROLLER: Tornatche 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.

FLOW LIMITING VALVE: Automatic flow limiting valve complete with isolation valve, and gauge ports. If valve is to be installed on supply side (depends on valve purchased), valve may include wye strainer indicated in schematics. If flow limiting valve is to be installed on Return Side (depends on valve purchased), separate wye strainer must be purchased for system. Units to be sized based on flow requirements and installed as per manufacturer's recommendations.

CIRCUIT BALANCE VALVES: Armstrong sized for flow required, installed in accordance with manufacturer's recommendations.

GAS DETECTORS: Armstrong, AMC-1AD1 single zone gas monitor complete with one AMC-1222 Series combination carbon monoxide sensors and nitrogen dioxide sensors. Monitor to have a minimum coverage area of 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.

HEATING BOILERS B-1 AND B-2: Aerco Benchmark Model BMK 1500. Natural gas fired, condensing fire tube design with modulating forced draft power burners and positive pressure vent discharge. 440 kW (1,500 MBH) input, 383-418 kW (1,305-1,425 MBH) heat output (based on return water temperature). Thermal efficiency shall increase as firing rate decreases. Each boiler to be complete with auto reset low water cutoff, circuit breaker, high limit, flow switch, tridicator and relief valves piped to floor. Mount boilers on 100-mm high concrete housekeeping pads. Boilers shall be controlled through EMCS. Electrical (each boiler): 120V/60/1 phase, 16 FLA. Boiler shall be complete with 5 year manufacturer warranty on all parts and 10 year manufacturer warranty on heat exchanger. Boiler to be capable of operating with variable flow from 3.8 L/s (60 GPM) to 1.58 L/s (2 GPM) at a design entering water temperature of 48.9 Deg.C. (120 Deg.F.) and a 22.2 Deg.C. (40 Deg.F.) temperature rise.

HEATING SYSTEM ANTIFREEZE: Supply and install 30% inhibited propylene glycol and 70% water solution. Glycol shall be coordinated with requirements of boiler system being supplied.

LOUVRES: 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.

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 and installed by the controls contractor.

REVERSE OSMOSIS SYSTEM: Watts Model PWROK4 lead free 4-stage reverse osmosis system to handle up to 60 gallons per day (227 litres per day), complete with automatic shutoff, top mount designer faucet with air gap, and 3-gallon water storage holding tank. Unit to come with one complete set of replacement filters.

SIDE STREAM FILTERS: Filterite Model LM010 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.

SYSTEM FILL SF-1: Hydronic system feeder shall be AXIOM INDUSTRIES LTD. Model SF100. System shall include 208 litres (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 diverting valve for purging air and agitating contents of storage tank; pressure regulating valve adjustable (35 - 380 KPa; 5 - 55 psig) complete with pressure gauge; integral replaceable strainer; built-in check valve; union connection; 12 mm (1/2") x 900 mm (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 115/60/1, 0.7 Amps. 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 VALVE: Shall not be permitted, provide individual valves as indicated on Schematic.

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

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 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 to be beveled 2mm 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 Virtucum.

S-2: E.H. Price, Model 300x300/SPD/31/B12, square plaque diffuser, white powder coat finish.

S-3: E.H. Price, Model 600x600/SPD/31/B12, square plaque diffuser, white powder coat finish.

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

S-5: E.H. Price, Model 48 IN./ASPI220/1/21/XX/B12, 48" long Adjusta-slot Linear Diffuser complete with insulated plenum, 1 slot with 2" slot width, exposed frame, mitered end flange, white powder coat finish.

S-6: E.H. Price, Model 400x400/PDN/1/B12, perforated diffuser, 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 to be beveled 2mm 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 Virtucum.

E-2: E.H. Price, Model 530/F/L/A/B12, louvered return grille, surface mounted, front blades parallel to long dimension, countersunk screwholes, white powder coat finish.

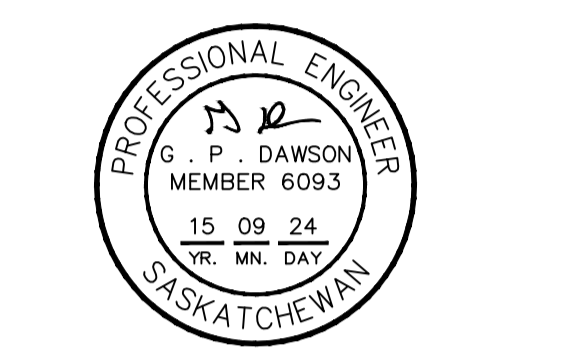
E-3: E.H. Price, Model 510ZD/F/L/A/B12, louvered return grille complete with steel damper, duct mounted, front blades parallel to long dimension, countersunk screwholes, white powder coat finish.

R-1: E.H. Price, Model 80/TB/B12, eggcrate face return, t-bar lay-in, white powder coat finish.

R-2: E.H. Price, Model 530/F/L/A/B12, louvered return grille, surface mounted, front blades parallel to long dimension, countersunk screwholes, white powder coat finish.

T-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 to be beveled 2mm 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 Virtucum.

T-2: E.H. Price, Model 530/F/L/A/B12, louvered return grille, surface mounted, front blades parallel to long dimension, countersunk screwholes, white powder coat finish.



DO NOT SCALE DRAWINGS

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Revision/	Description/Description	Date/Date
Client/client		

Project Title/Titre du projet

**NEW POLICE BUILDING
ONION LAKE, SASKATCHEWAN**

Approved by/Approve par

Designed by/Concept par
GPD

Drawn by/Dessine par
JNM

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

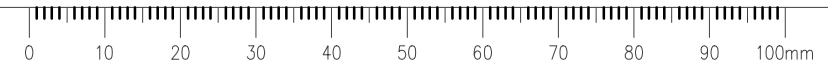
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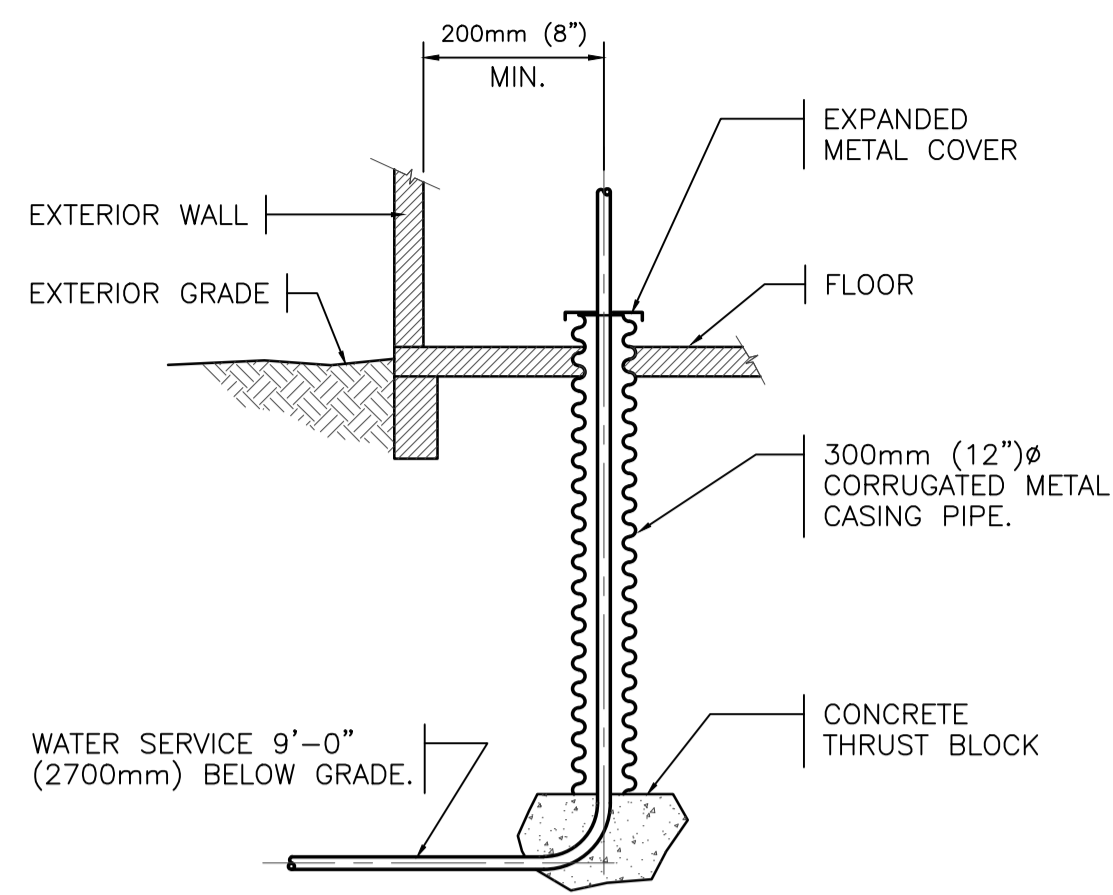
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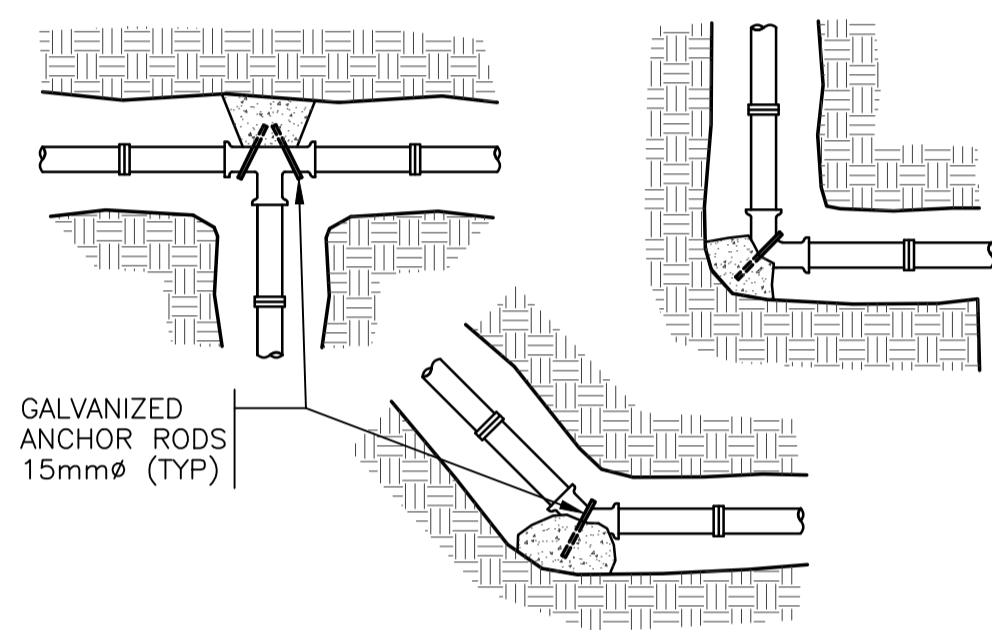
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WATER SERVICE ENTRY DETAIL n.t.s.

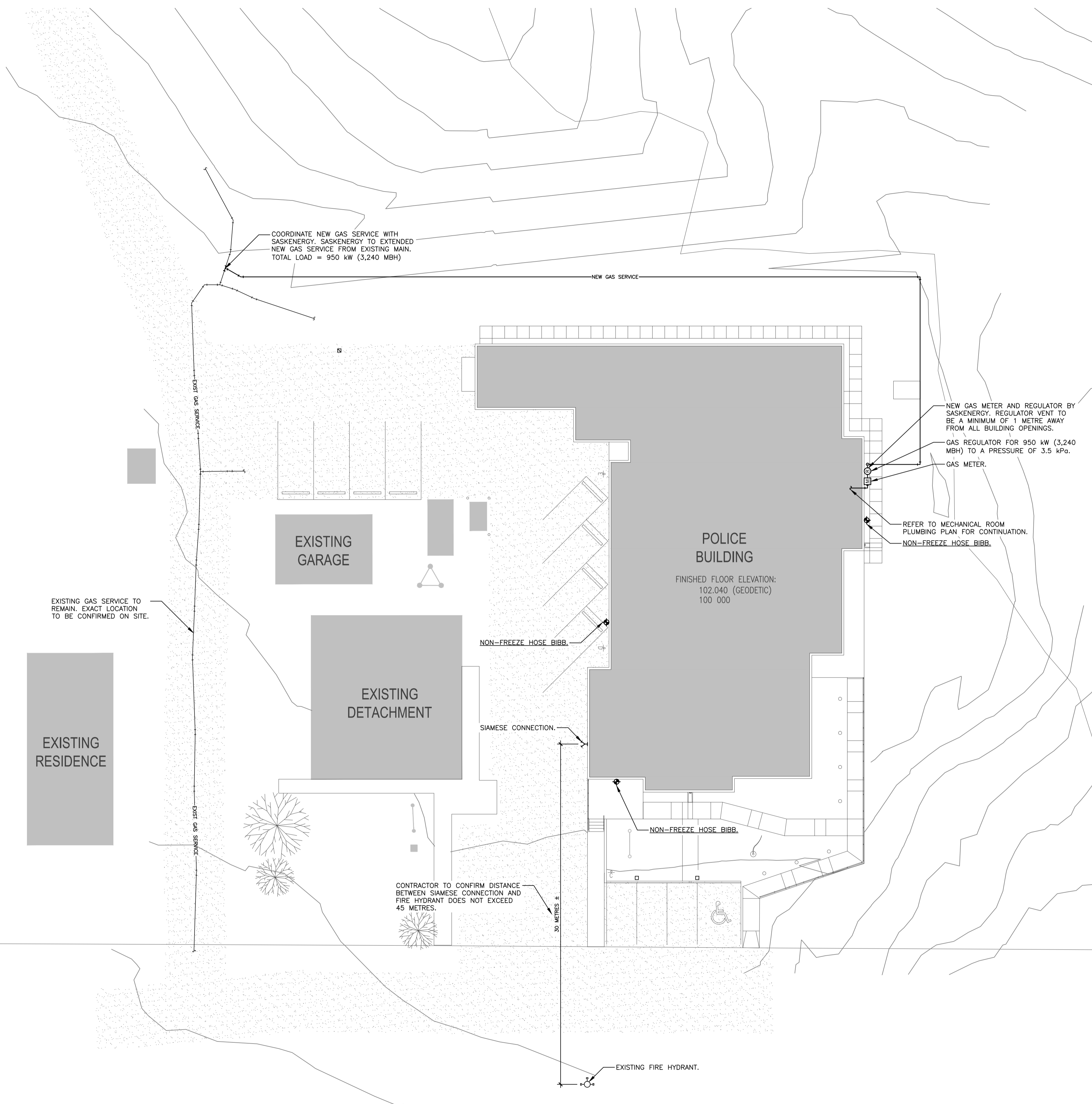


MINIMUM AREA OF CONCRETE THRUST BLOCK FROM FITTING TO SOLID GROUND
(CONCRETE STRENGTH 20MPa @ 28 DAYS)

SIZE OF PIPE	45° BEND	90° BEND	TEE
100 mm	7 dm SQ	20 dm SQ	10 dm SQ
150 mm	20 dm SQ	27 dm SQ	20 dm SQ
200 mm	27 dm SQ	47 dm SQ	37 dm SQ
250 mm	42 dm SQ	74 dm SQ	54 dm SQ

NOTE: ALL UNITS ARE IN SQUARE DECIMETERS

THRUST BLOCK DETAIL n.t.s.

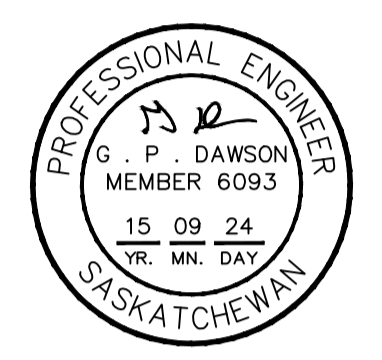


1 SITE PLAN
1:200



SEPW Architecture Inc.
 100-3725 Parizeau Street, Regina, SK S4S 0A8 ph: (306) 566-2255
 102-3718 Kiewit Place, Saskatoon, SK S7P 0A6 ph: (306) 652-6457
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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: Mech. Reg. No. 6093 Signature: G. P. Dawson

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Revision/Revision	Description/Description	Date/Date
5		
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0	ISSUED FOR TENDER	20150904

Project Title/Titre du projet
NEW POLICE BUILDING
ONION LAKE, SASKATCHEWAN

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

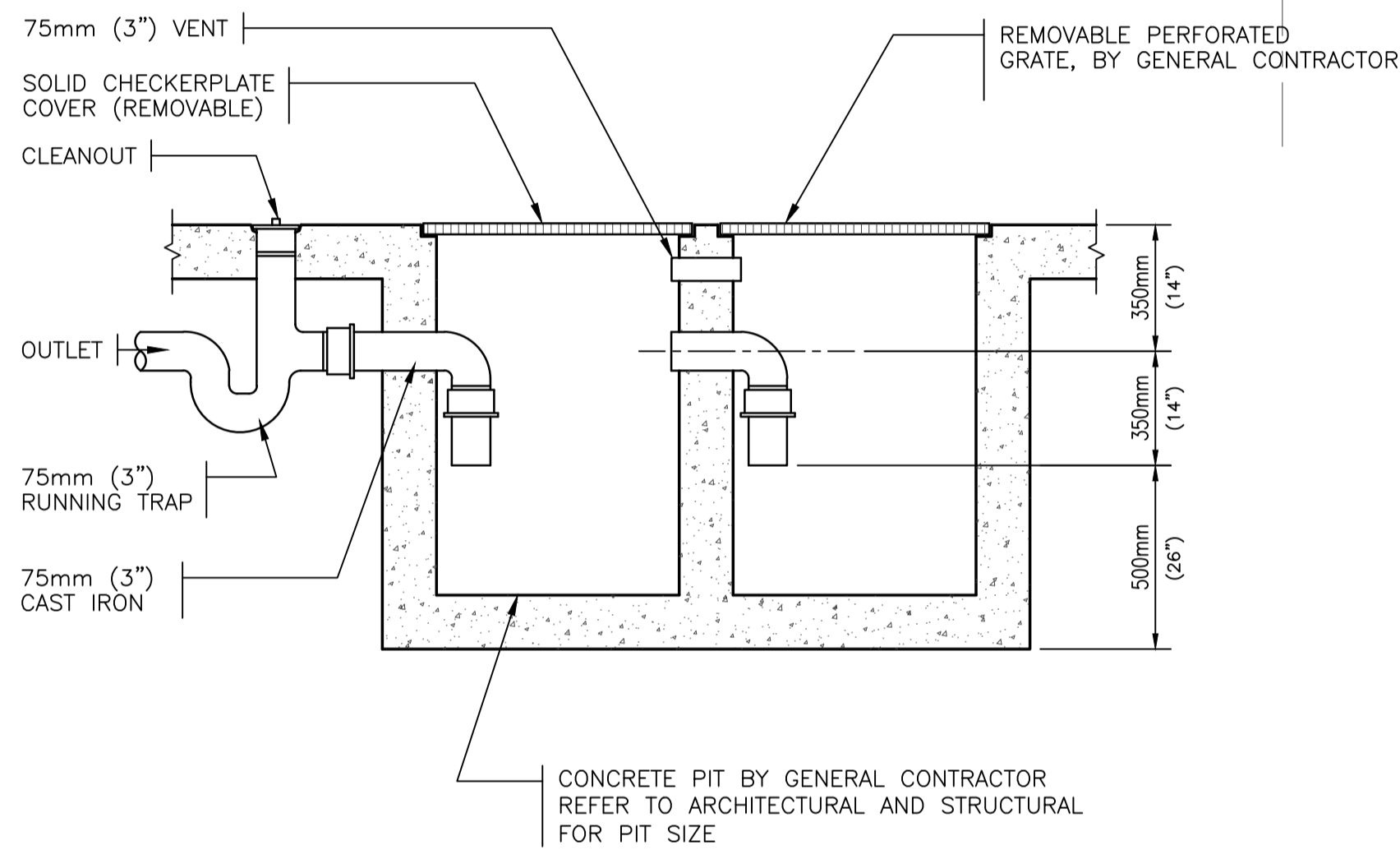
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 Ressources Architectural et de Directeur d'ingénierie
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Drawing Title/Titre du dessin
SITE PLAN

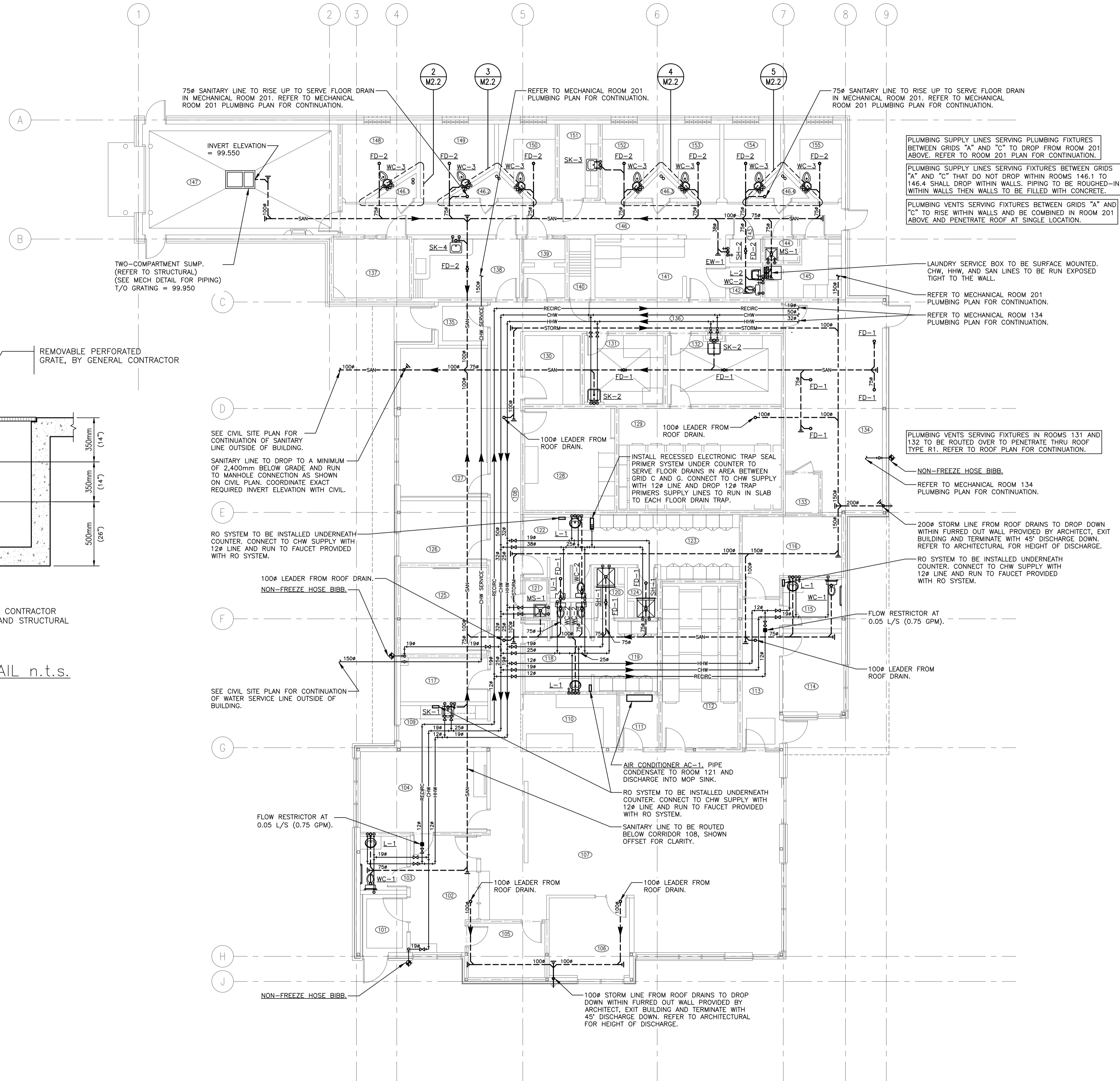
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PLUMBING GENERAL NOTES:

- 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.
- ALL PLUMBING BRANCH LINES ARE 19Ø UNLESS NOTED OTHERWISE.
- 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.
- PROVIDE ISOLATION GAS VALVE ON GAS LINE TO ALL EQUIPMENT.
- MAKE ALL CONNECTIONS FOR EQUIPMENT SUPPLIED BY OTHERS. REFER TO DETAILS FOR CONNECTIONS.



TWO-COMPARTMENT SUMP DETAIL n.t.s.



1 MAIN FLOOR PLAN
1:100



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**NEW POLICE BUILDING
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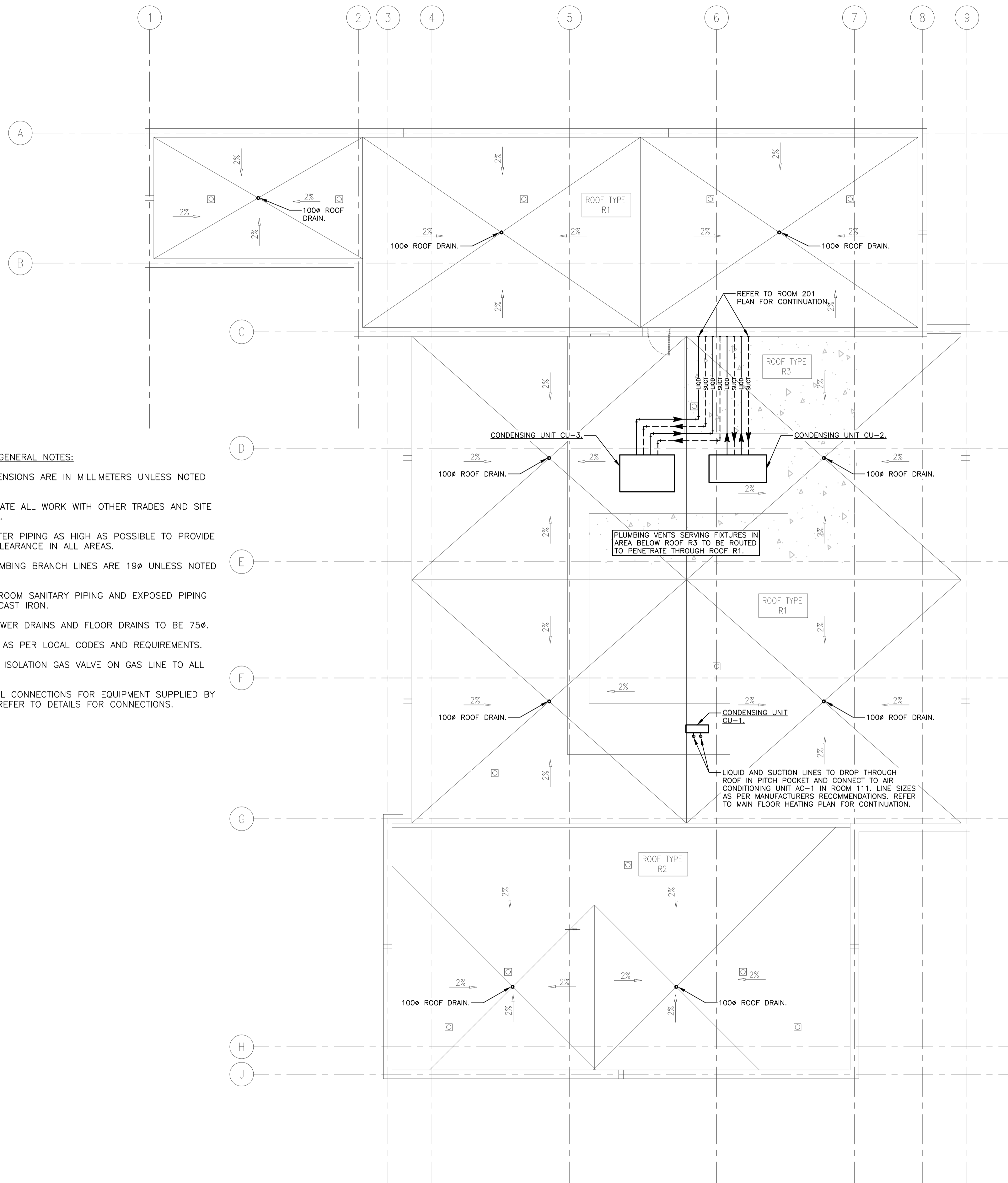
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**MAIN FLOOR PLAN
PLUMBING**

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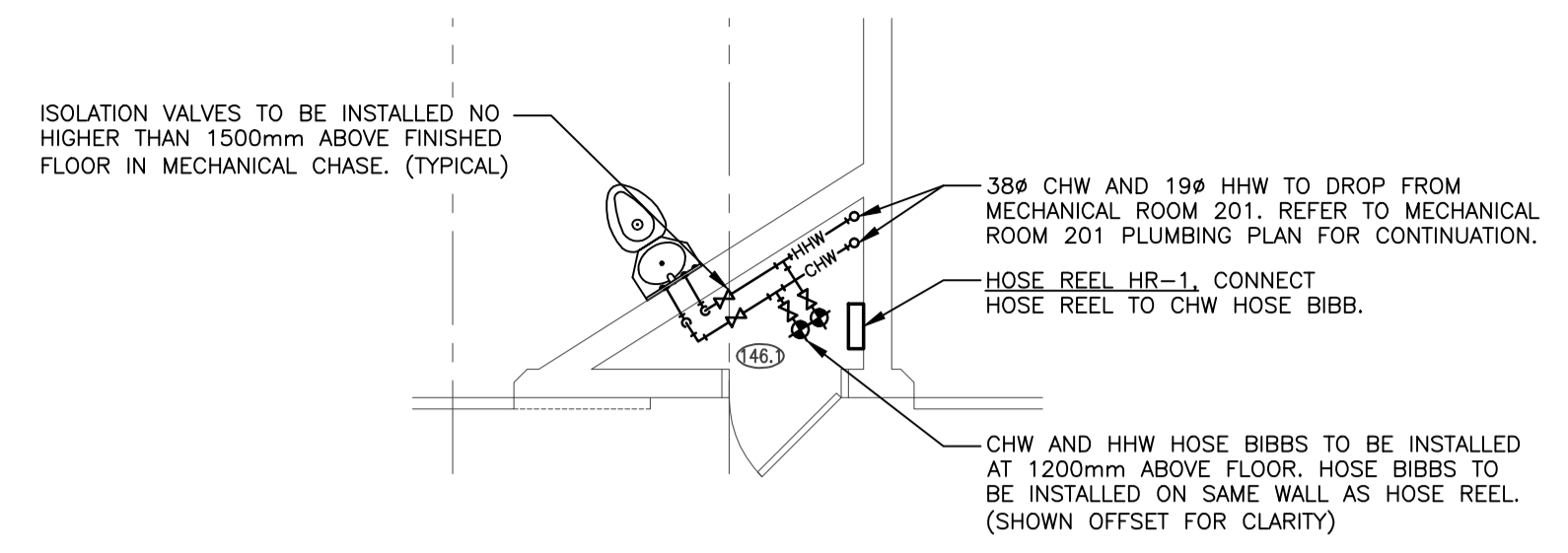
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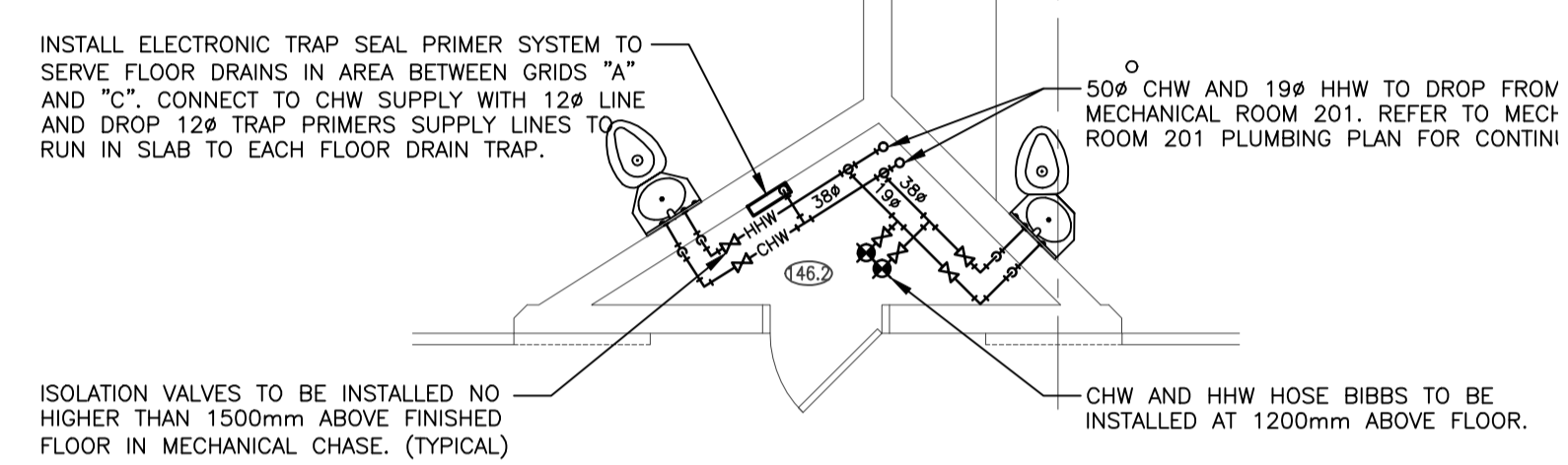


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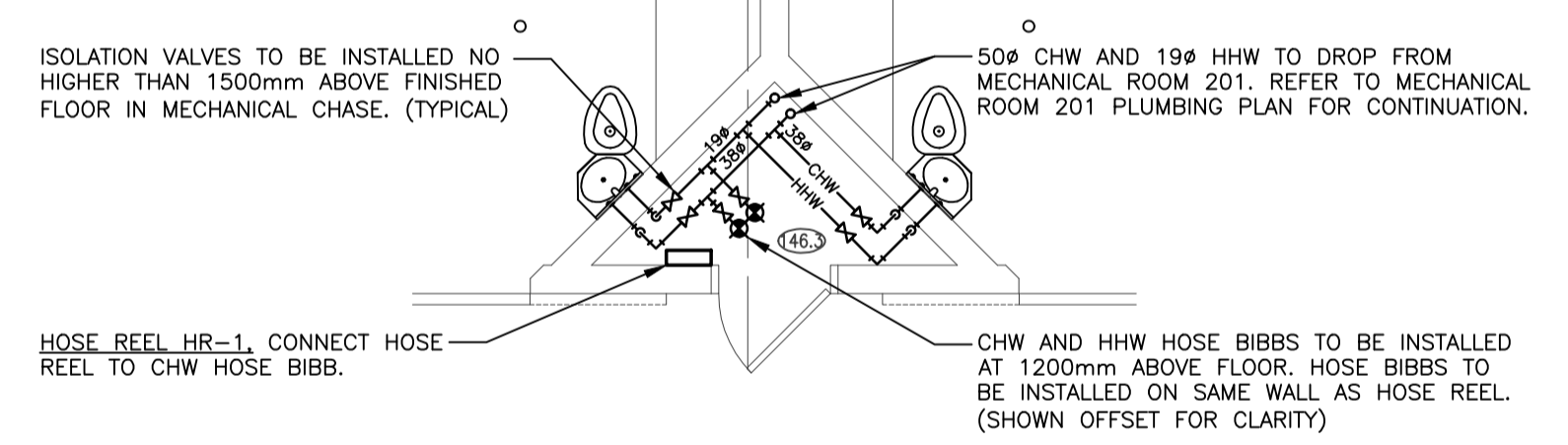
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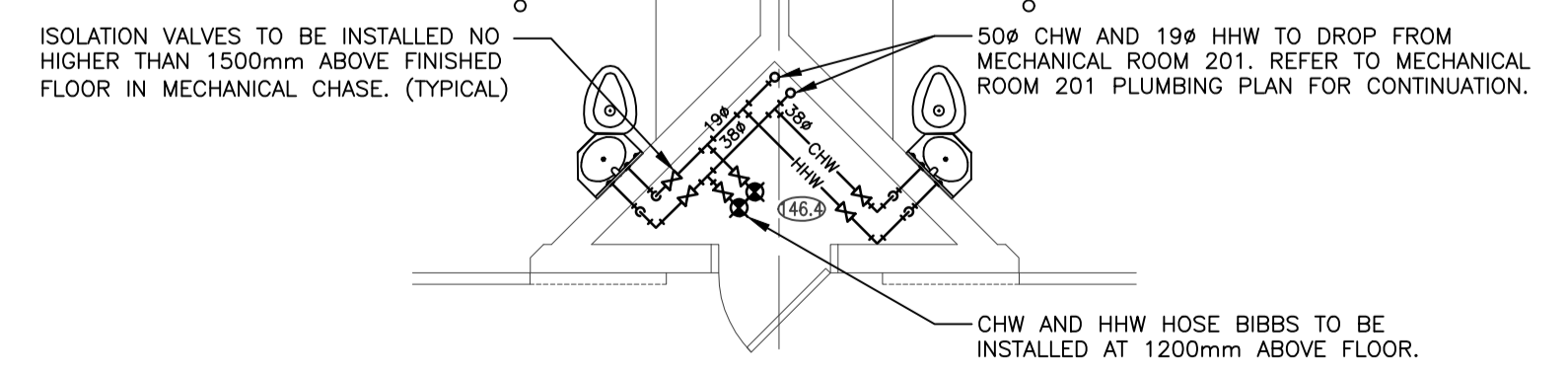
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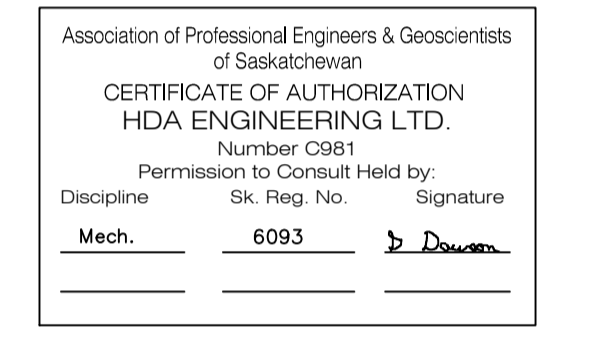
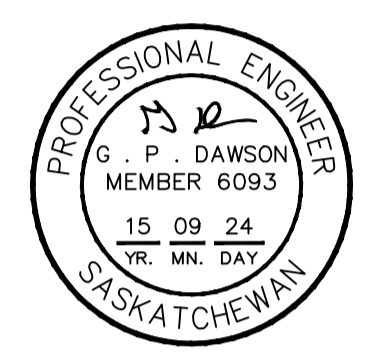
3 CHASE 146.2
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4 CHASE 146.3
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5 CHASE 146.4
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**NEW POLICE BUILDING
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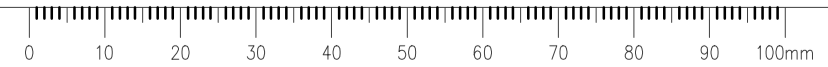
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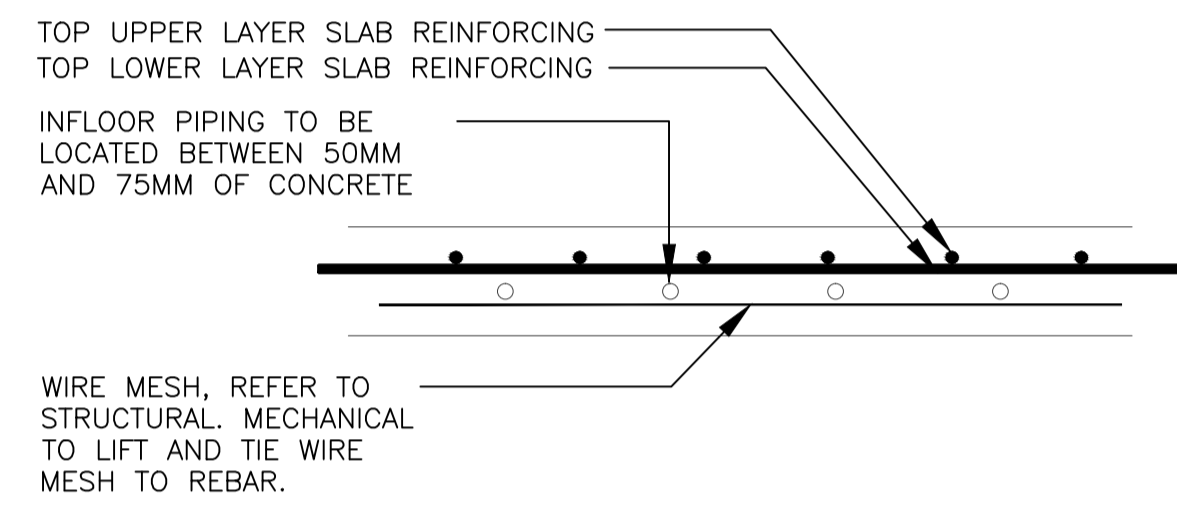
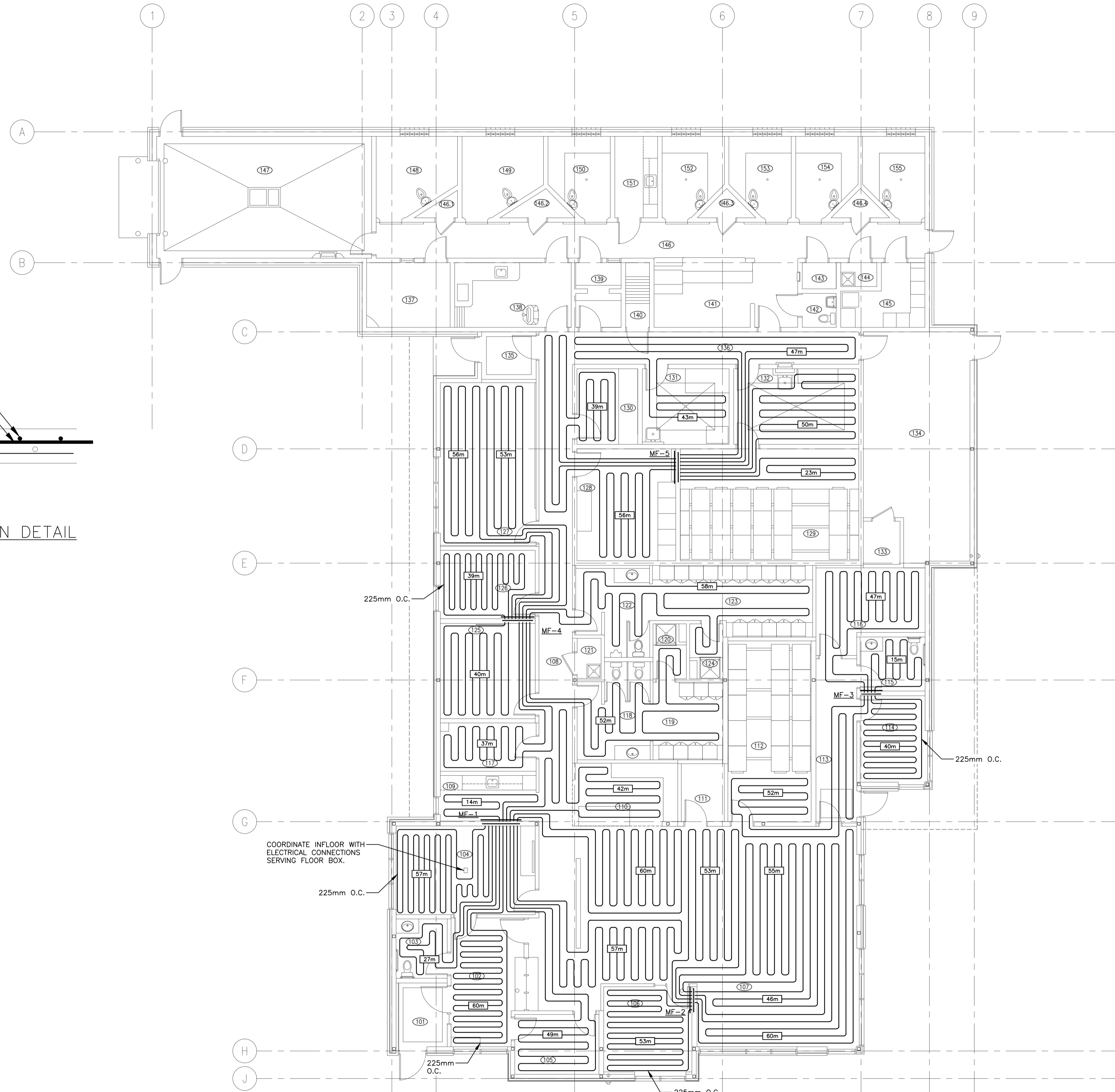
**ROOF PLAN AND PLUMBING
CHASE PLANS**

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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 TO BE 19ø UNLESS NOTED OTHERWISE. ALL RUNOUTS TO UNIT HEATERS AND FORCE FLOWS TO BE 25ø UNLESS NOTED OTHERWISE.
- ISOLATION VALVES ARE REQUIRED ON BRANCH LINES AT MAINS IN ADDITION TO EQUIPMENT ISOLATION VALVES WHERE BRANCH LINES ARE 3m (10') OR GREATER IN LENGTH.



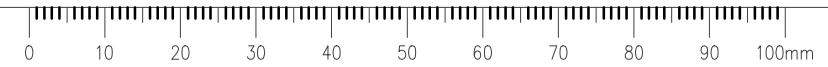
INFLOOR PIPING INSTALLATION DETAIL

COORDINATE INFLOOR WITH ELECTRICAL CONNECTIONS SERVING FLOOR BOX.

CONTRACTOR TO ENSURE THAT NO INFLOOR PIPING IS RUN UNDER WALL OR PERMANENT MILLWORK LOCATIONS (TO AVOID NAIL OR FASTENER PENETRATIONS THROUGH PIPING).

ALL INFLOOR PIPING SPACED AT 300mm O.C. UNLESS NOTED OTHERWISE.

1 MAIN FLOOR PLAN
1:100



DO NOT SCALE DRAWINGS

Revision/Revision	Description/Description	Date/Date
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0	ISSUED FOR TENDER	2015/09/04

Project Title/Titre du projet
**NEW POLICE BUILDING
ONION LAKE, SASKATCHEWAN**

Approved by/Approve par
GPD

Designed by/Concept par
JNM

Drawn by/Dessine par
JNM

Project Manager/Administrateur de Projets

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

Client/client

Project No./No. du projet
24/2014

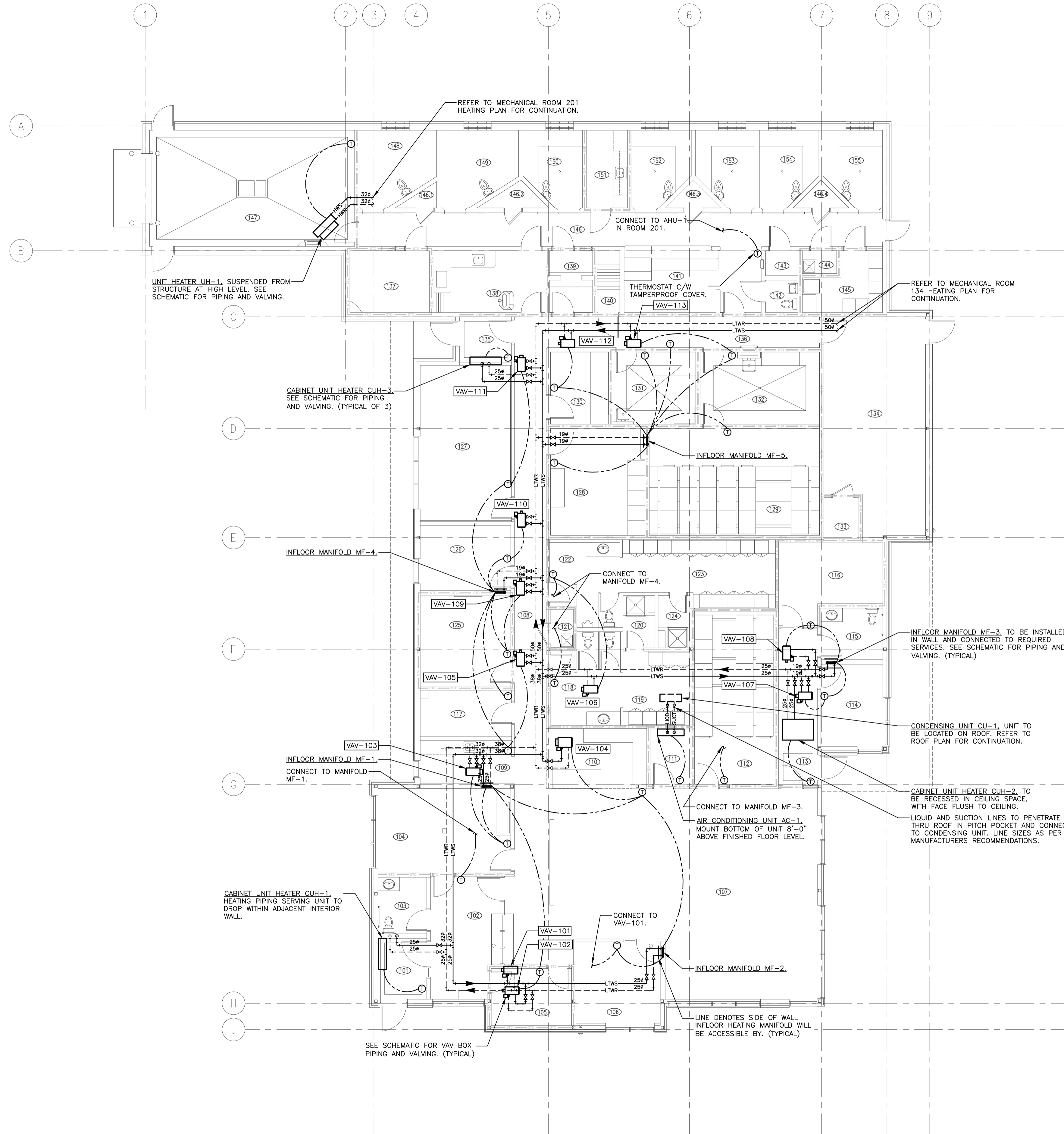
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M3.1

Revision no./
La Révision no.

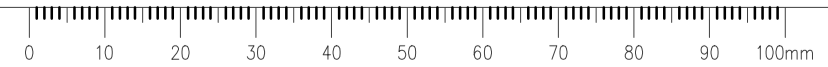


GENERAL HEATING NOTES:

- 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 TO BE 19ø UNLESS NOTED OTHERWISE. ALL RUNOUTS TO UNIT HEATERS AND FORCE FLOWS TO BE 25ø UNLESS NOTED OTHERWISE.
- ISOLATION VALVES ARE REQUIRED ON BRANCH LINES AT MAINS IN ADDITION TO EQUIPMENT ISOLATION VALVES WHERE BRANCH LINES ARE 3m (10') OR GREATER IN LENGTH.



1 MAIN FLOOR PLAN
1:100



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 Permission to Consult Held by:
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0	ISSUED FOR TENDER	20150904

Project title/Titre du projet

**NEW POLICE BUILDING
ONION LAKE, SASKATCHEWAN**

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Architectural and Engineering Resources Manager/
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Client/client

Drawing title/Titre du dessin

**MAIN FLOOR PLAN
HEATING**

Project No./No. du projet 24/2014	Sheet/ Feuille M3.2	Revision no./ La Révision no.
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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.

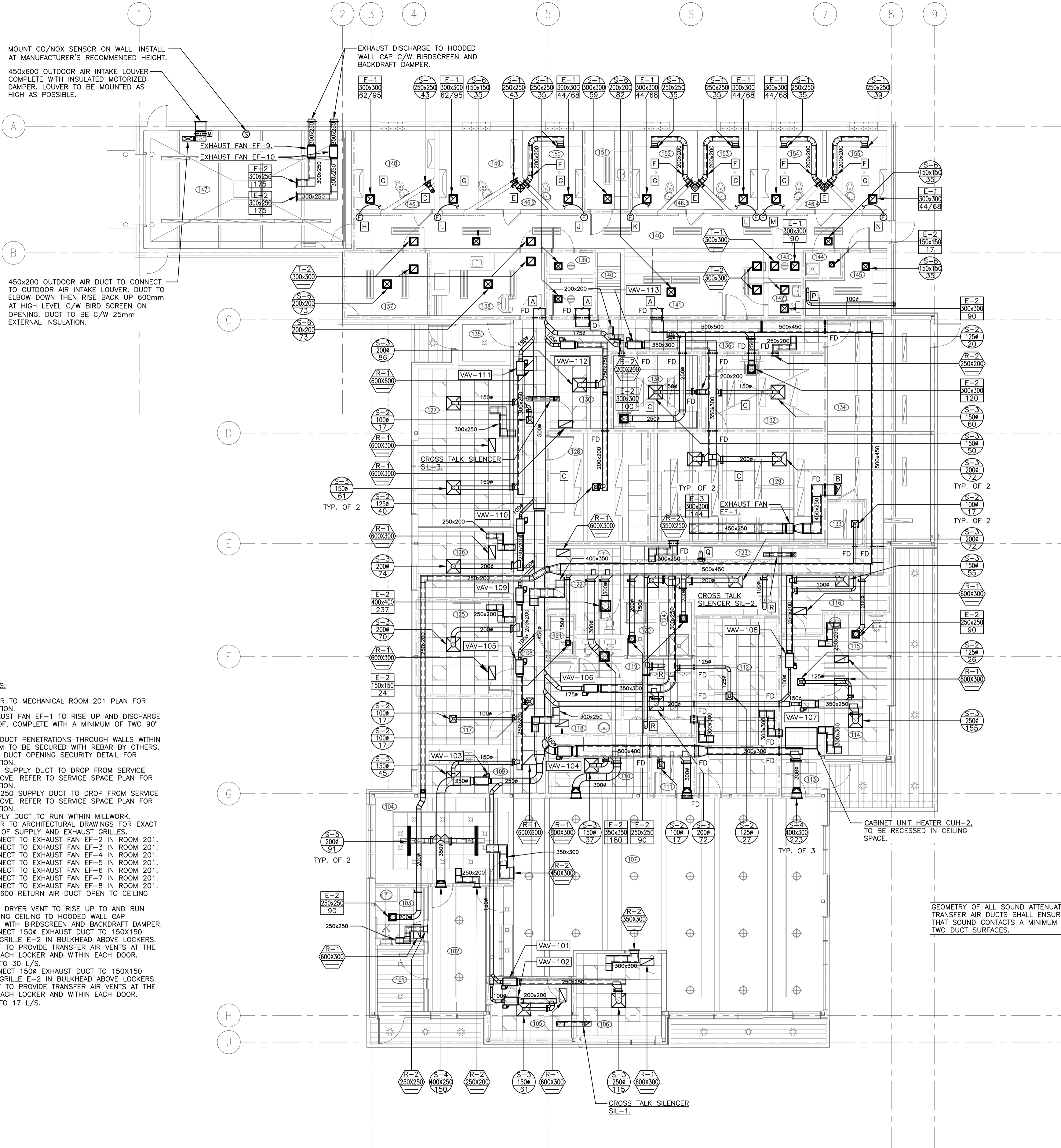
– PROVIDE ACCESS DOORS FOR ACCESS TO ALL MOTORIZED DAMPERS, FIRE DAMPERS, AND CONTROL DEVICES, AND TO FACILITATE DUCT CLEANING.

– COORDINATE ALL WORK WITH OTHER TRADES.

– RUN DUCTS AS HIGH AS POSSIBLE TO PROVIDE MAXIMUM CLEARANCE.

– BALANCE ALL DIFFUSERS TO BE THE SAME WITH AVAILABLE AIR IN EACH VARIABLE AIR VOLUME BOX (UNLESS NOTED OTHERWISE).

– NO TAKE-OFF IS PERMITTED IN DUCTWORK DOWNSTREAM OF VAV BOX FOR A MINIMUM DISTANCE OF 1,500mm TO PERMIT SOUND ATTENUATION.



KEY NOTES:

- A. REFER TO MECHANICAL ROOM 201 PLAN FOR CONTINUATION.
- B. EXHAUST FAN EF-1 TO RISE UP AND DISCHARGE THRU ROOF, COMPLETE WITH A MINIMUM OF TWO 90° ELBOWS.
- C. ALL DUCT PENETRATIONS THROUGH WALLS WITHIN THIS ROOM TO BE SECURED WITH REBAR BY OTHERS. REFER TO DUCT OPENING SECURITY DETAIL FOR CONTINUATION.
- D. 150ø SUPPLY DUCT TO DROP FROM SERVICE SPACE ABOVE. REFER TO SERVICE SPACE PLAN FOR CONTINUATION.
- E. 250x250 SUPPLY DUCT TO DROP FROM SERVICE SPACE ABOVE. REFER TO SERVICE SPACE PLAN FOR CONTINUATION.
- F. SUPPLY DUCT TO RUN WITHIN MILLWORK.
- G. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF SUPPLY AND EXHAUST GRILLES.
- H. CONNECT TO EXHAUST FAN EF-2 IN ROOM 201.
- I. CONNECT TO EXHAUST FAN EF-3 IN ROOM 201.
- J. CONNECT TO EXHAUST FAN EF-4 IN ROOM 201.
- K. CONNECT TO EXHAUST FAN EF-5 IN ROOM 201.
- L. CONNECT TO EXHAUST FAN EF-6 IN ROOM 201.
- M. CONNECT TO EXHAUST FAN EF-7 IN ROOM 201.
- N. CONNECT TO EXHAUST FAN EF-8 IN ROOM 201.
- O. 600x600 RETURN AIR DUCT OPEN TO CEILING SPACE.
- P. 100ø DRYER VENT TO RISE UP TO AND RUN TIGHT ALONG CEILING TO HOODED WALL CAP COMPLETE WITH BIRDSCREEN AND BACKDRAFT DAMPER.
- Q. CONNECT 150ø EXHAUST DUCT TO 150x150 EXHAUST GRILLE E-2 IN BULKHEAD ABOVE LOCKERS. ARCHITECT TO PROVIDE TRANSFER AIR VENTS AT THE TOP OF EACH LOCKER AND WITHIN EACH DOOR. BALANCE TO 30 L/S.
- R. CONNECT 150ø EXHAUST DUCT TO 150x150 EXHAUST GRILLE E-2 IN BULKHEAD ABOVE LOCKERS. ARCHITECT TO PROVIDE TRANSFER AIR VENTS AT THE TOP OF EACH LOCKER AND WITHIN EACH DOOR. BALANCE TO 17 L/S.

1 MAIN FLOOR PLAN
1:100



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Client/client		

Project title/Titre du projet

NEW POLICE BUILDING
ONION LAKE, SASKATCHEWAN

Approved by/Approve par

Designed by/Concept par
GPD

Drawn by/Dessine par
JNM

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Architectural and Engineering Resources Manager/
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MAIN FLOOR PLAN
VENTILATION

Project No./No. du projet

24/2014

Sheet/ Feuille

M4.1

Revision no./ La Révision no.

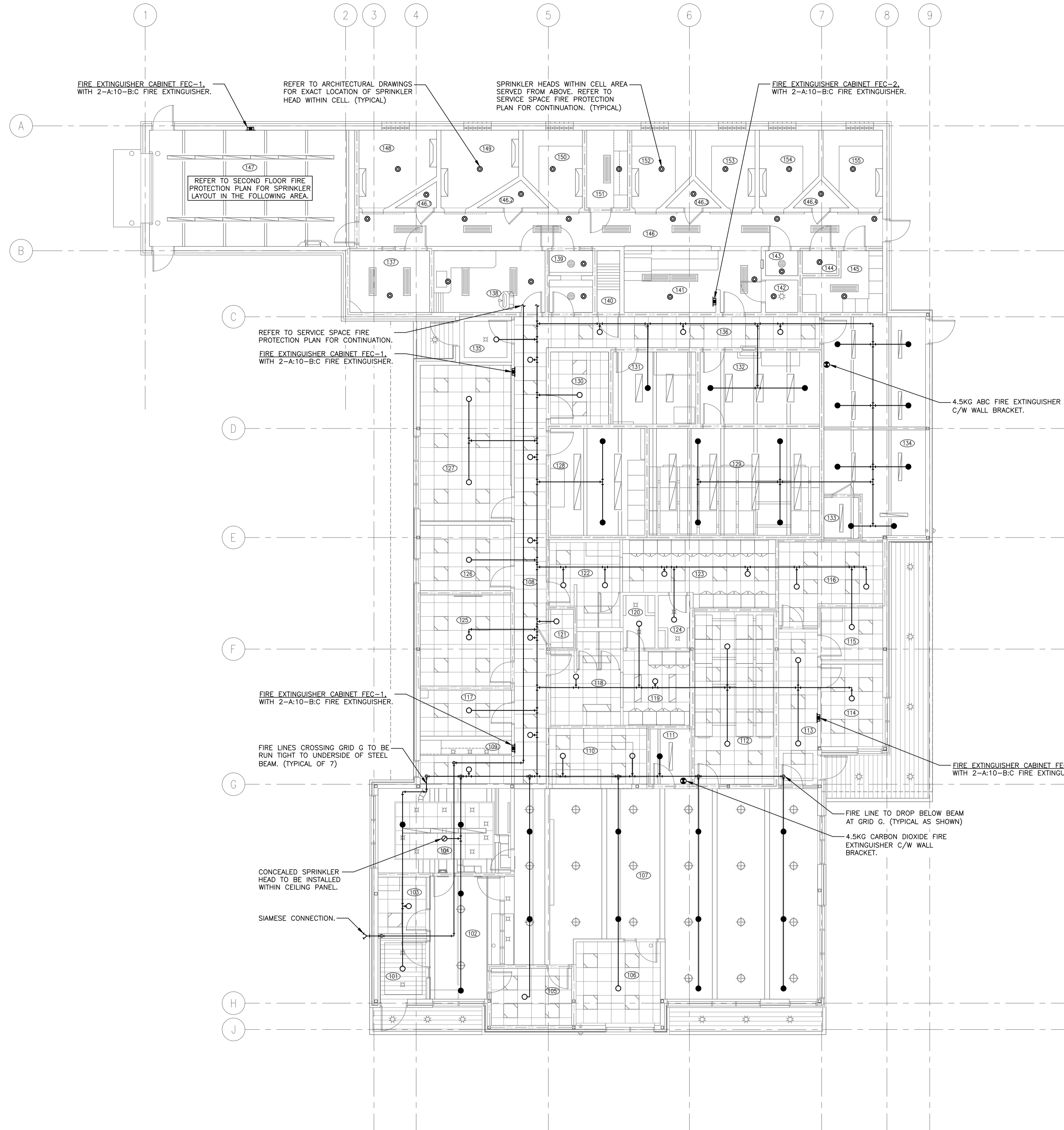


SPRINKLER LEGEND

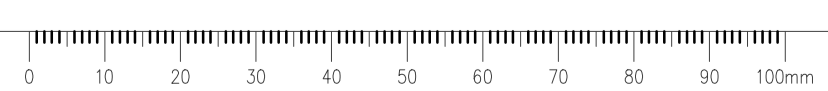
- STANDARD CHROME PLATED SEMI-RECESSED PENDANT HEAD
- ⊙ INSTITUTIONAL (SECURITY) PENDANT HEAD
- ⊖ FULLY RECESSED CONCEALED CHROME PLATED PENDANT HEAD
- STANDARD UPRIGHT HEAD
- △ STANDARD SIDEWALL HEAD
- ▣ FIRE EXTINGUISHER IN WALL CABINET
- ⊗ FIRE EXTINGUISHER C/W WALL BRACKET

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.
- HEADS IN BOILER ROOM TO BE HIGH TEMPERATURE RATED.
- 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.



1 MAIN FLOOR PLAN
1:100



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**NEW POLICE BUILDING
ONION LAKE, SASKATCHEWAN**

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**MAIN FLOOR PLAN
FIRE PROTECTION**

Project No./No. du projet	Sheet/ Feuille	Revision no./ La Révision no.
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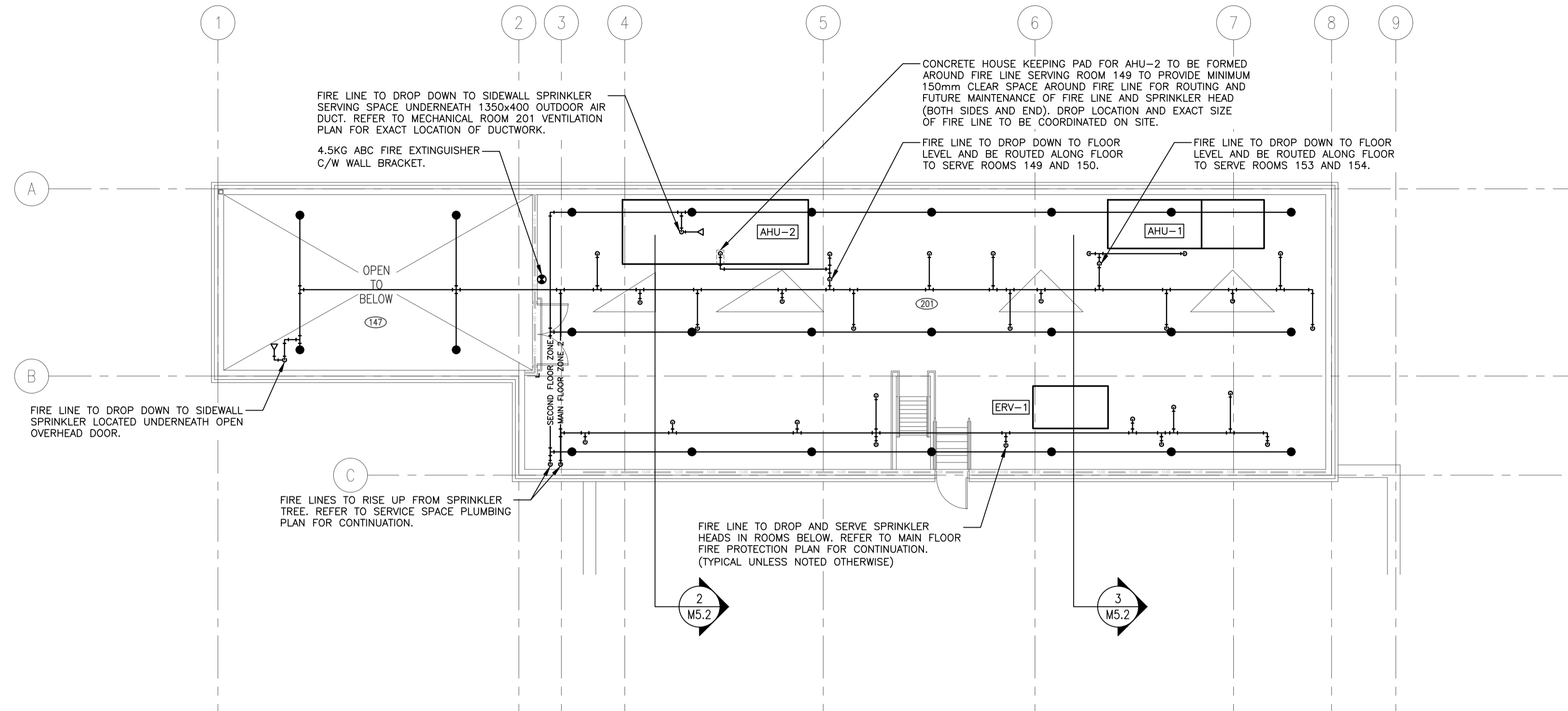


SPRINKLER LEGEND

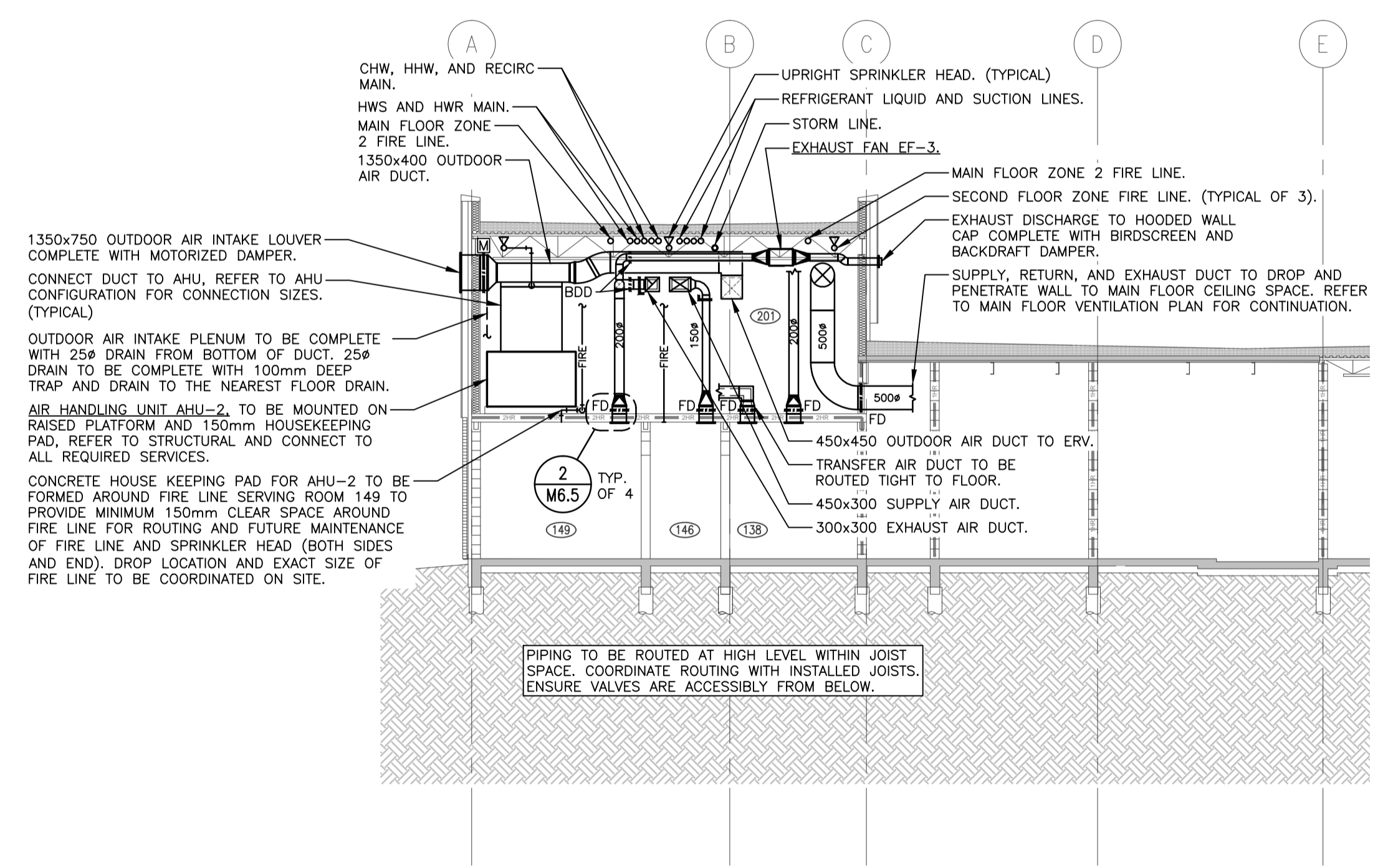
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- ☒ FIRE EXTINGUISHER IN WALL CABINET
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FIRE PROTECTION NOTES:

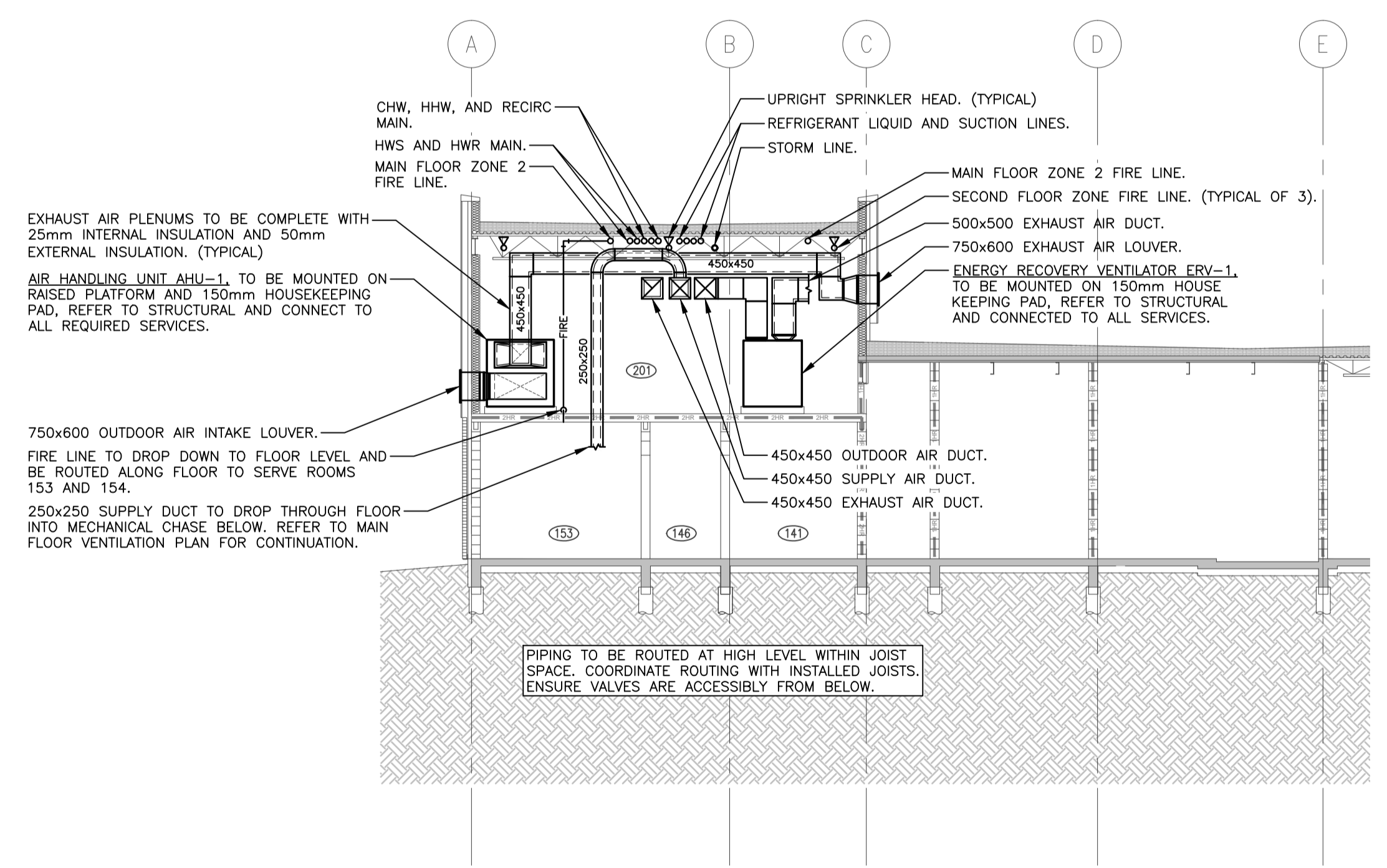
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- HEADS IN BOILER ROOM TO BE HIGH TEMPERATURE RATED.
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- ALL SPRINKLER HEADS IN T-BAR CEILINGS ARE TO BE CENTERED IN TILE OR 1/2 TILE UNLESS NOTED OTHERWISE.



1 SECOND FLOOR PLAN
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2 BUILDING SECTION
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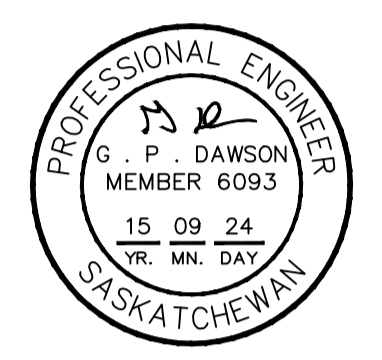
3 BUILDING SECTION
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Client/client

NEW POLICE BUILDING
ONION LAKE, SASKATCHEWAN

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SECOND FLOOR PLAN
FIRE PROTECTION
SECTIONS

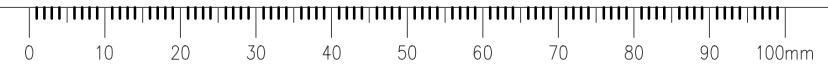
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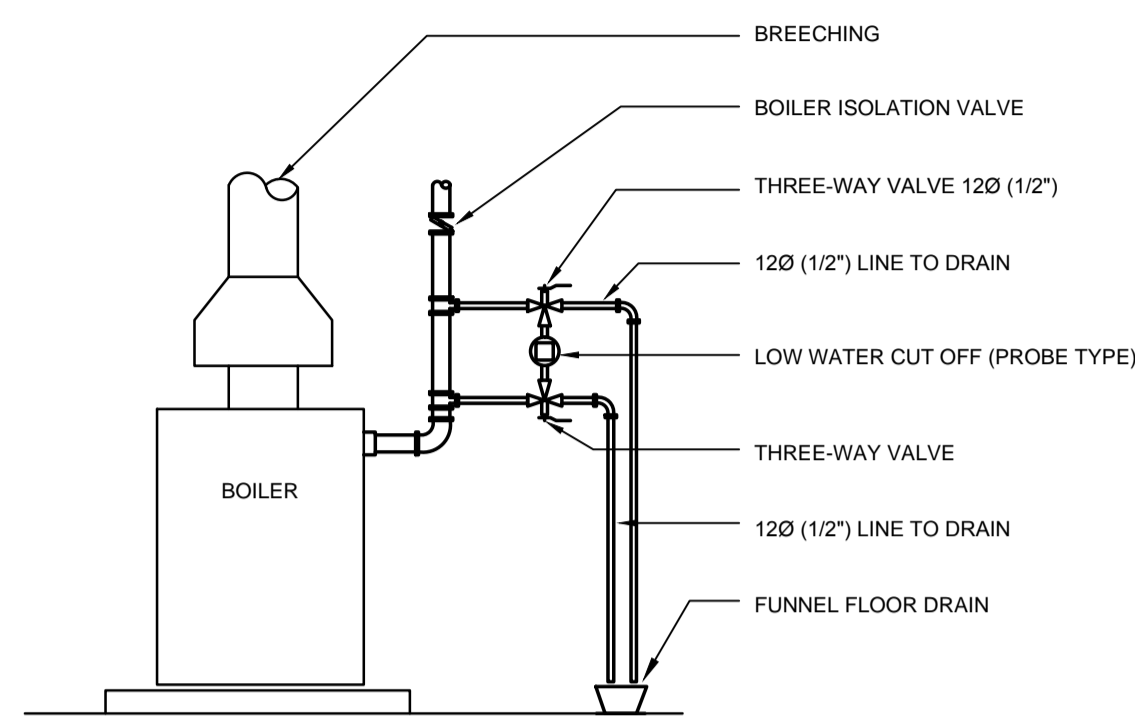
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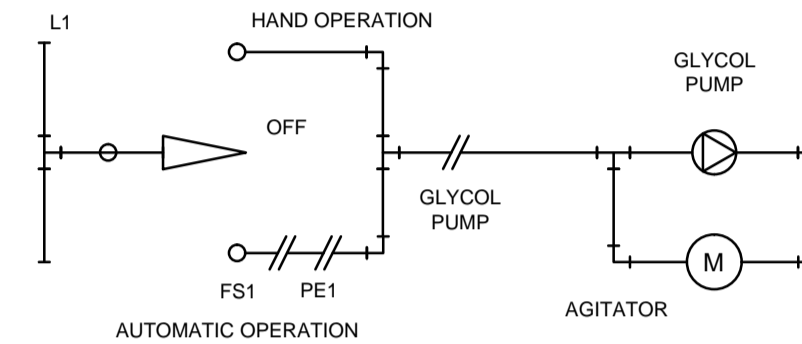
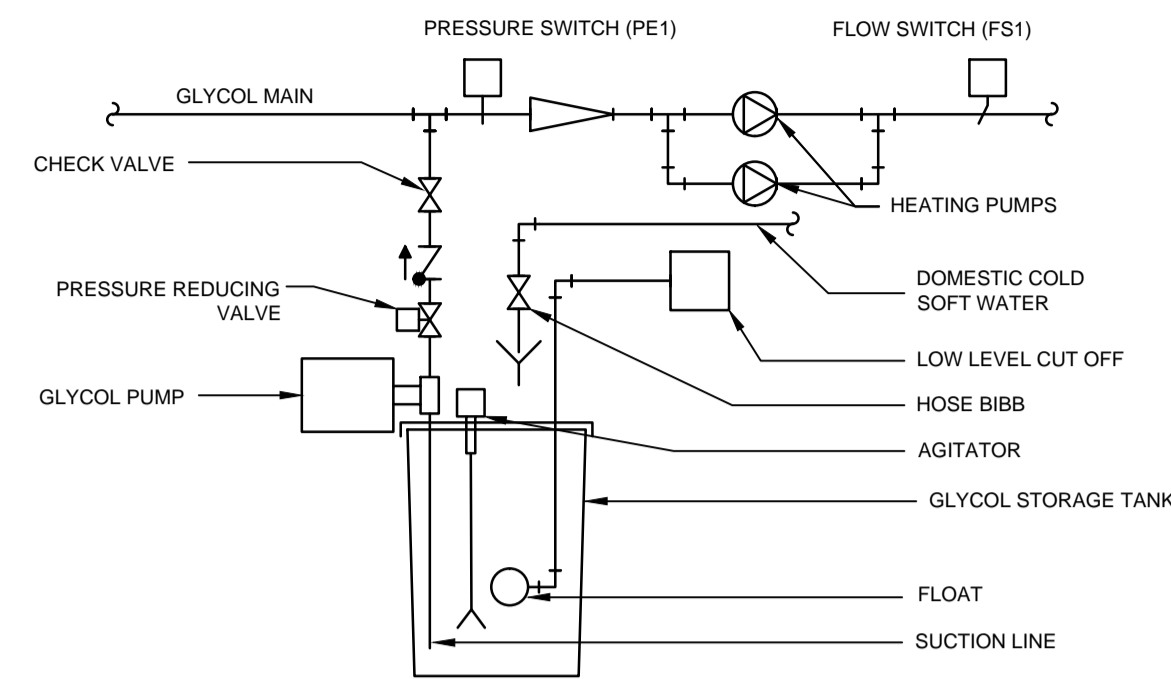
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NOTE: PROBE TYPE LOW WATER CUT OFF SHALL BE PLACED DIRECTLY ON HEATING MAIN WITHOUT THREE-WAY VALVE AND ASSOCIATED DRAIN PIPING WHERE ALLOWED BY LOCAL BOILER INSPECTOR. CONTRACTOR TO CONFIRM ON SITE.

LOW WATER CUT OFF SCHEMATIC



GLYCOL FILL SYSTEM SCHEMATIC

PLUMBING GENERAL NOTES:

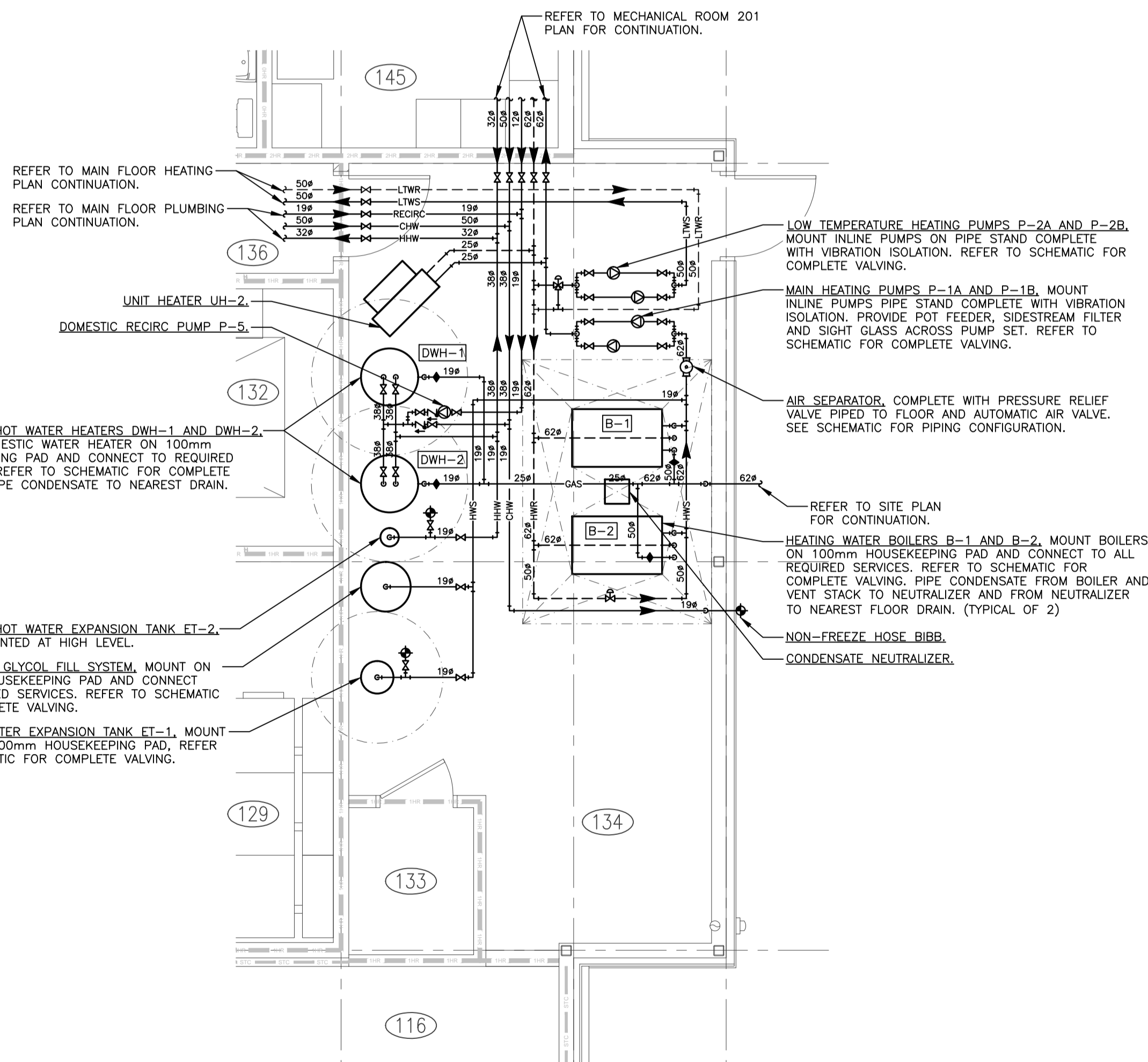
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
- COORDINATE ALL WORK WITH OTHER TRADES AND SITE CONDITIONS.
- RUN WATER PIPING AS HIGH AS POSSIBLE TO PROVIDE MAXIMUM CLEARANCE IN ALL AREAS.
- ALL PLUMBING BRANCH LINES ARE 19Ø UNLESS NOTED OTHERWISE.
- BOILER ROOM SANITARY PIPING AND EXPOSED PIPING SHALL BE CAST IRON.
- ALL SHOWER DRAINS AND FLOOR DRAINS TO BE 75Ø.
- VENTING AS PER LOCAL CODES AND REQUIREMENTS.
- PROVIDE ISOLATION GAS VALVE ON GAS LINE TO ALL EQUIPMENT.
- MAKE ALL CONNECTIONS FOR EQUIPMENT SUPPLIED BY OTHERS. REFER TO DETAILS FOR CONNECTIONS.

GENERAL HEATING NOTES:

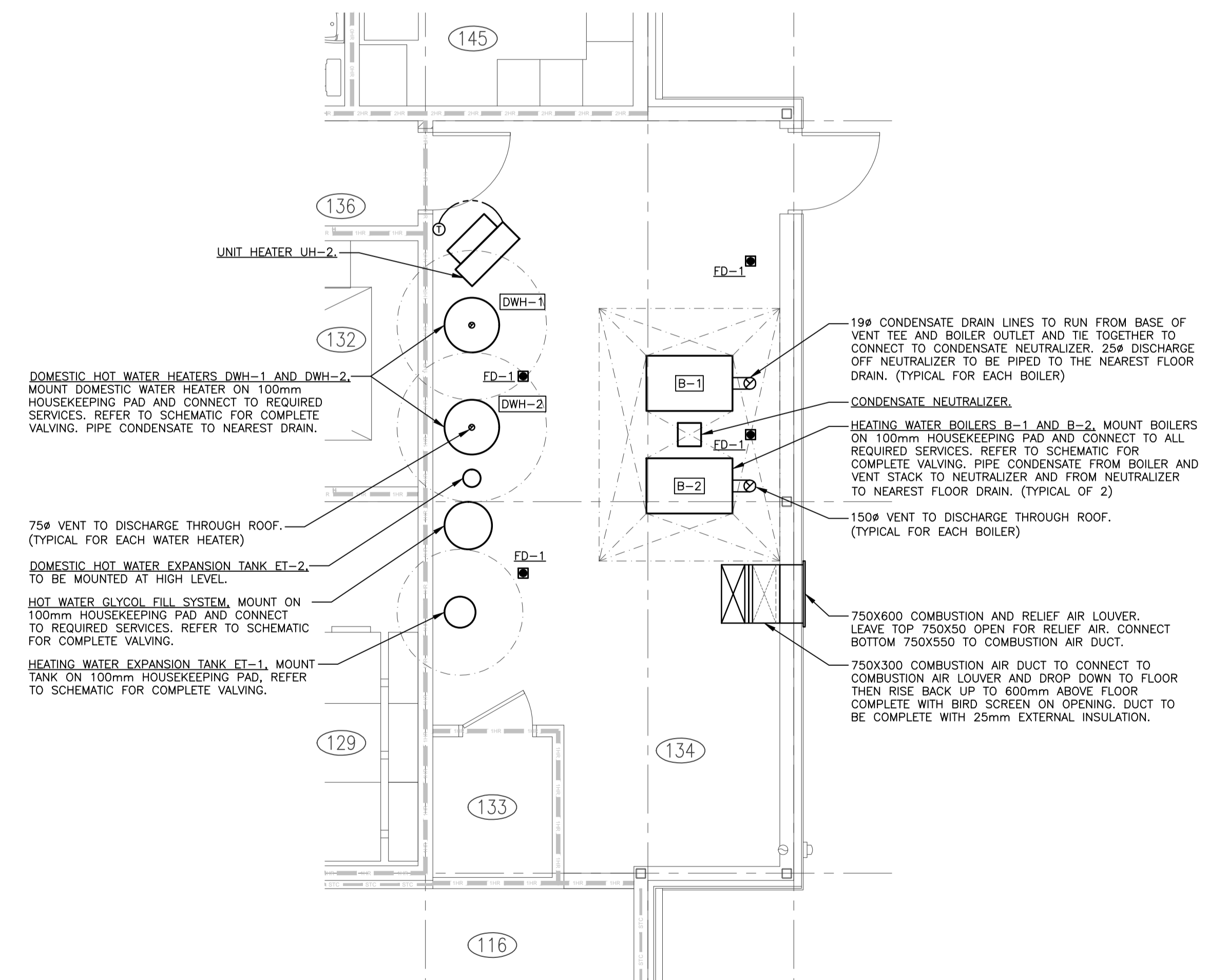
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
- COORDINATE ALL WORK WITH OTHER TRADES AND SITE CONDITIONS.
- RUN PIPING AS HIGH AS POSSIBLE.
- INSTALL AUTO AIR VENTS WITH PET COCKS AT ALL HIGH POINTS IN THE SYSTEM PIPING.
- REFER TO DETAIL SHEETS FOR EQUIPMENT CONNECTIONS.
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- ISOLATION VALVES ARE REQUIRED ON BRANCH LINES AT MAINS IN ADDITION TO EQUIPMENT ISOLATION VALVES WHERE BRANCH LINES ARE 3m (10') OR GREATER IN LENGTH.

VENTILATION GENERAL NOTES:

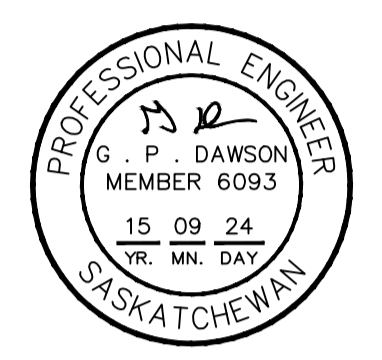
- ALL DUCTWORK SHOWN DOUBLE LINE INSIDE PERIMETER OF DUCT IS TO BE COMPLETE WITH 25mm INTERNAL INSULATION. ALL OTHER DUCTWORK IS TO BE C/W 25mm EXTERNAL INSULATION. SIZES INCLUDE INTERNAL INSULATION WHERE APPLICABLE.
- ALL FITTINGS ON INTERNALLY INSULATED DUCTWORK ARE TO BE C/W INTERNAL INSULATION. ALL 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 CLEANING.
- COORDINATE ALL WORK WITH OTHER TRADES.
- RUN DUCTS AS HIGH AS POSSIBLE TO PROVIDE MAXIMUM CLEARANCE.
- BALANCE ALL DIFFUSERS TO BE THE SAME WITH AVAILABLE AIR IN EACH VARIABLE AIR VOLUME BOX (UNLESS NOTED OTHERWISE).
- NO TAKE-OFF IS PERMITTED IN DUCTWORK DOWNSTREAM OF VAV BOX FOR A MINIMUM DISTANCE OF 1,500mm TO PERMIT SOUND ATTENUATION.



1 PLUMBING AND HEATING PLAN
1:50



2 VENTILATION PLAN
1:50



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Project Title/Titre du projet

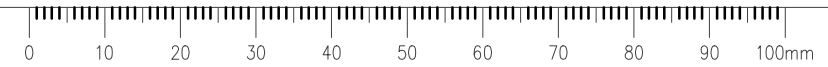
**NEW POLICE BUILDING
ONION LAKE, SASKATCHEWAN**

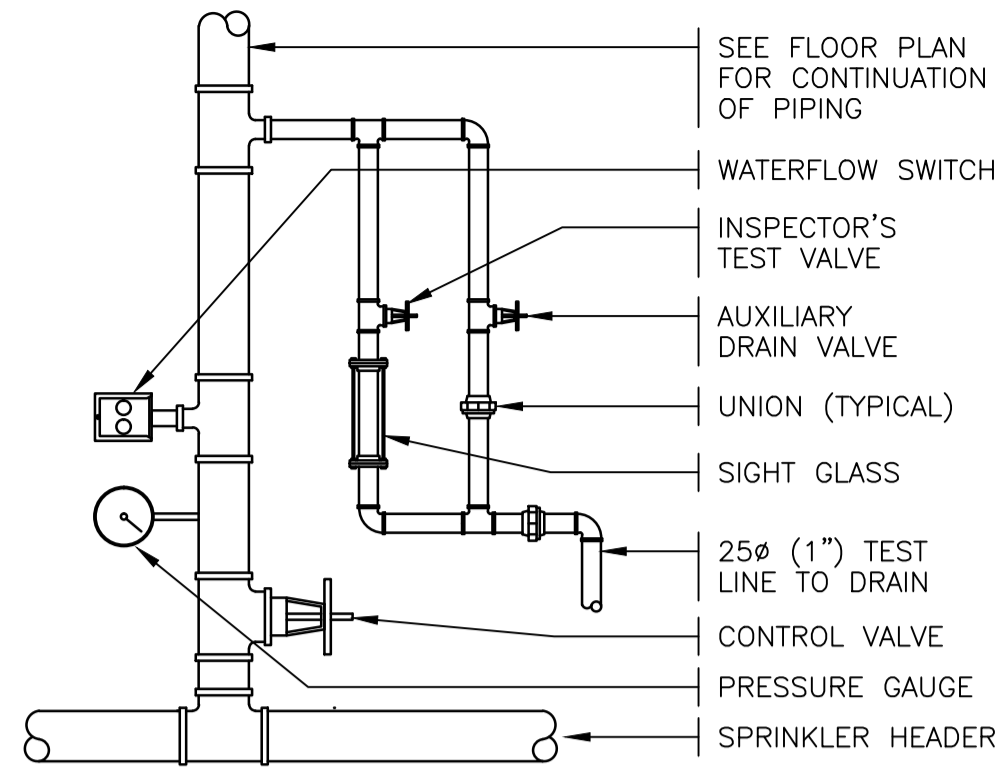
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Ressources Architectural et de Directeur d'ingénierie

Client/client
Drawing title/Titre du dessin
**MECHANICAL ROOM 134
PLUMBING, HEATING, AND
VENTILATION PLANS**

Project No./No. du projet	Sheet/ Feuille	Revision no./ La Révision no.
24/2014	M6.1	





FIRE PROTECTION ZONE CONTROL VALVE SCHEMATIC

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.
- ALL PLUMBING BRANCH LINES ARE 19Ø UNLESS NOTED OTHERWISE.
- 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.
- PROVIDE ISOLATION GAS VALVE ON GAS LINE TO ALL EQUIPMENT.
- MAKE ALL CONNECTIONS FOR EQUIPMENT SUPPLIED BY OTHERS. REFER TO DETAILS FOR CONNECTIONS.

GENERAL HEATING NOTES:

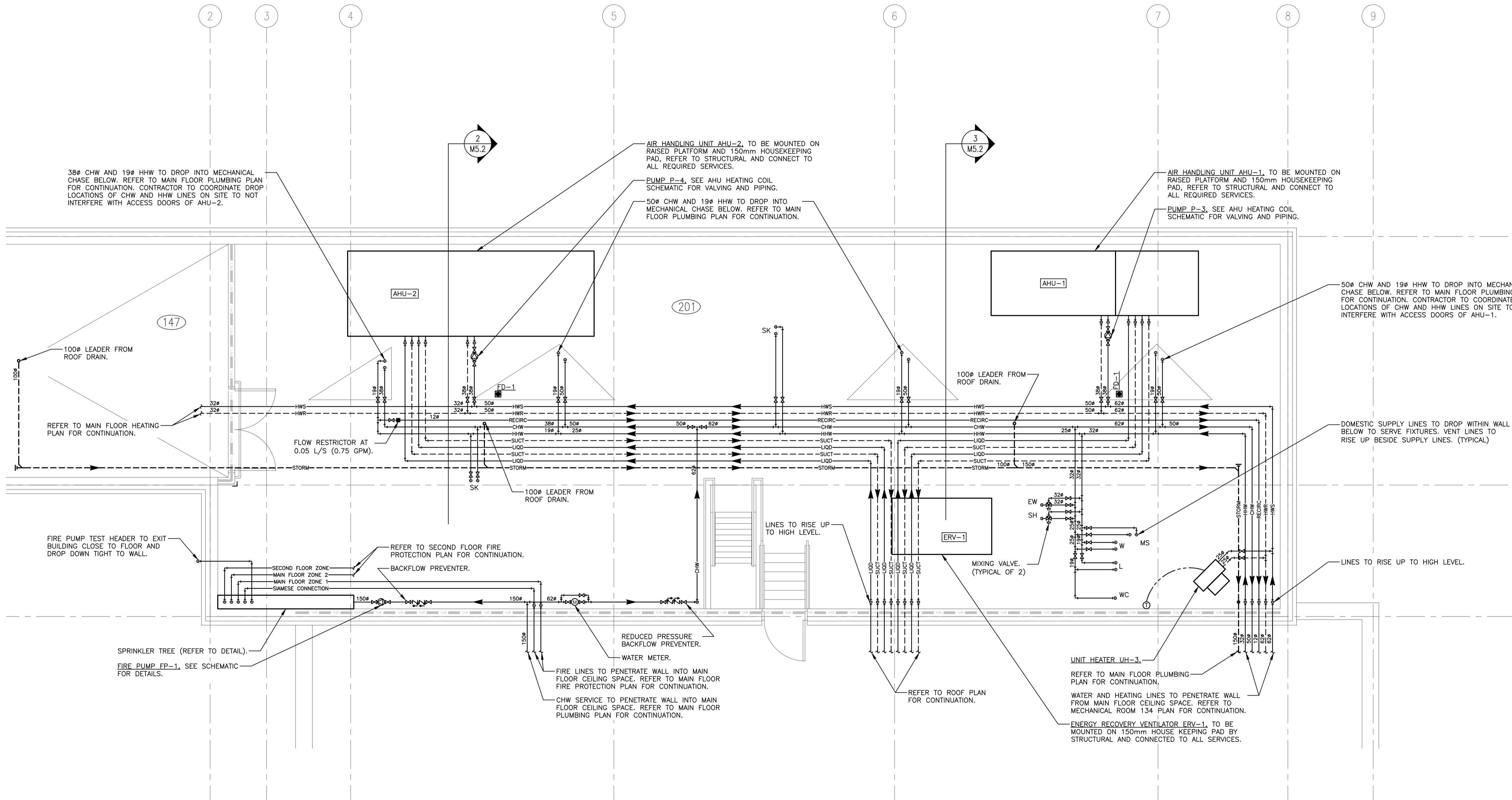
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- ALL RUNOUTS TO REHEAT COILS TO BE 19Ø UNLESS NOTED OTHERWISE. ALL RUNOUTS TO UNIT HEATERS AND FORCE FLOWS TO BE 25Ø UNLESS NOTED OTHERWISE.
- ISOLATION VALVES ARE REQUIRED ON BRANCH LINES AT MAINS IN ADDITION TO EQUIPMENT ISOLATION VALVES WHERE BRANCH LINES ARE 3m (10') OR GREATER IN LENGTH.

SPRINKLER LEGEND

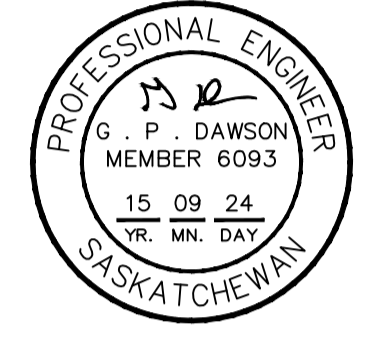
- STANDARD CHROME PLATED SEMI-RECESSED PENDANT HEAD
- ⊙ INSTITUTIONAL (SECURITY) PENDANT HEAD
- ⊘ FULLY RECESSED CONCEALED CHROME PLATED PENDANT HEAD
- STANDARD UPRIGHT HEAD
- △ STANDARD SIDEWALL HEAD
- ☒ FIRE EXTINGUISHER IN WALL CABINET
- ⊗ FIRE EXTINGUISHER C/W WALL BRACKET

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.
- HEADS IN BOILER ROOM TO BE HIGH TEMPERATURE RATED.
- 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.



1 PLUMBING AND HEATING PLAN
1:50



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Project Title/Titre du projet

NEW POLICE BUILDING
ONION LAKE, SASKATCHEWAN

Approved by/Approve par

Designed by/Concept par
GPD

Drawn by/Dessine par
JNM

Project Manager/Administrateur de Projets

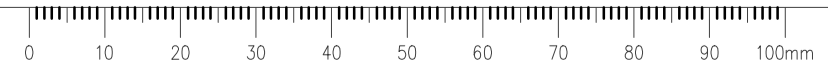
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Ressources Architectural et de Directeur d'ingénierie

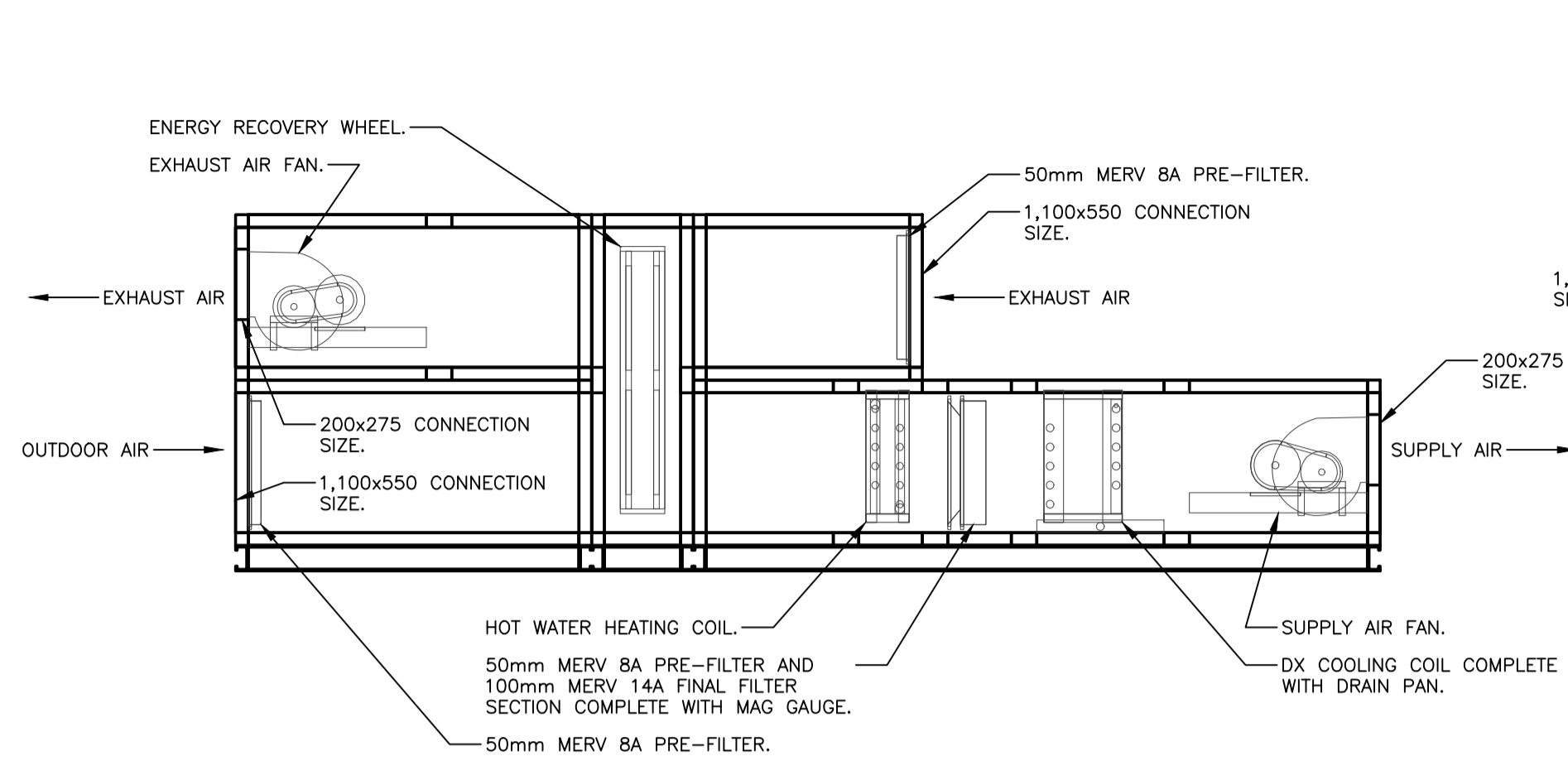
Client/client

Drawing title/Titre du dessin

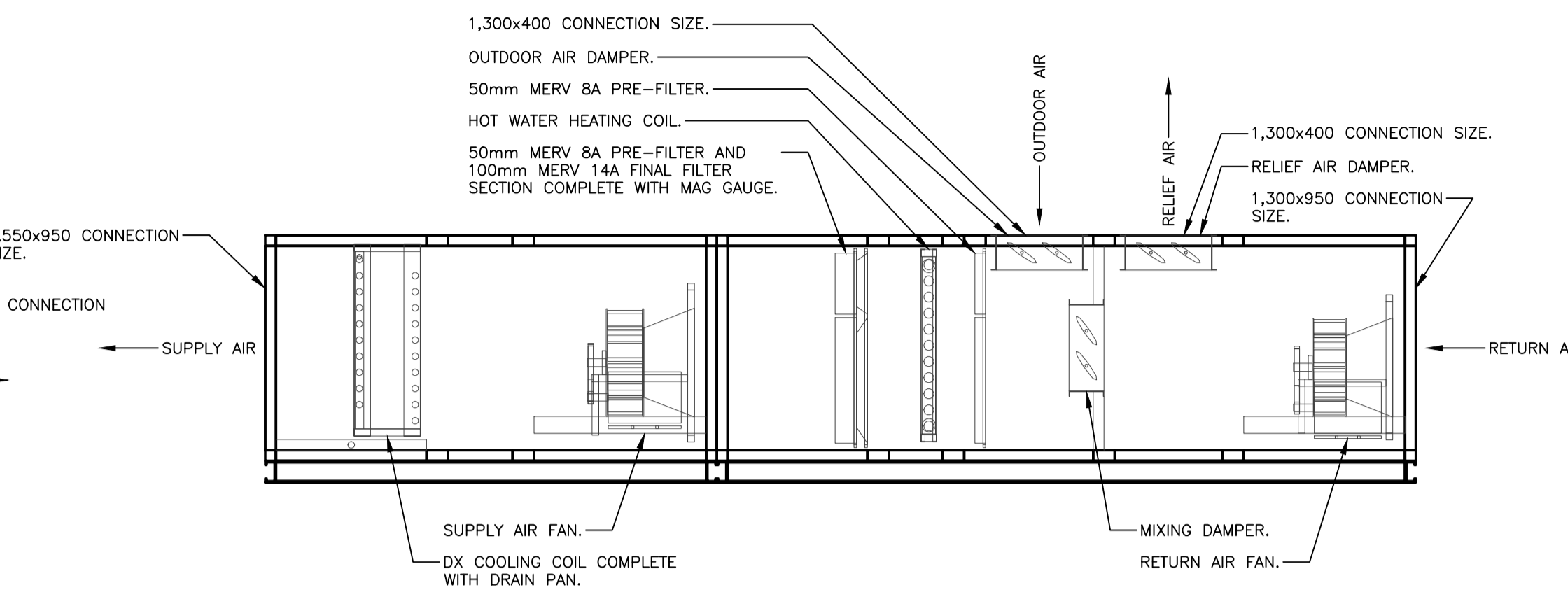
MECHANICAL ROOM 201
PLUMBING AND HEATING PLAN

Project No./No. du projet	Sheet/ Feuille	Revision no./ La Révision no.
24/2014	M6.2	





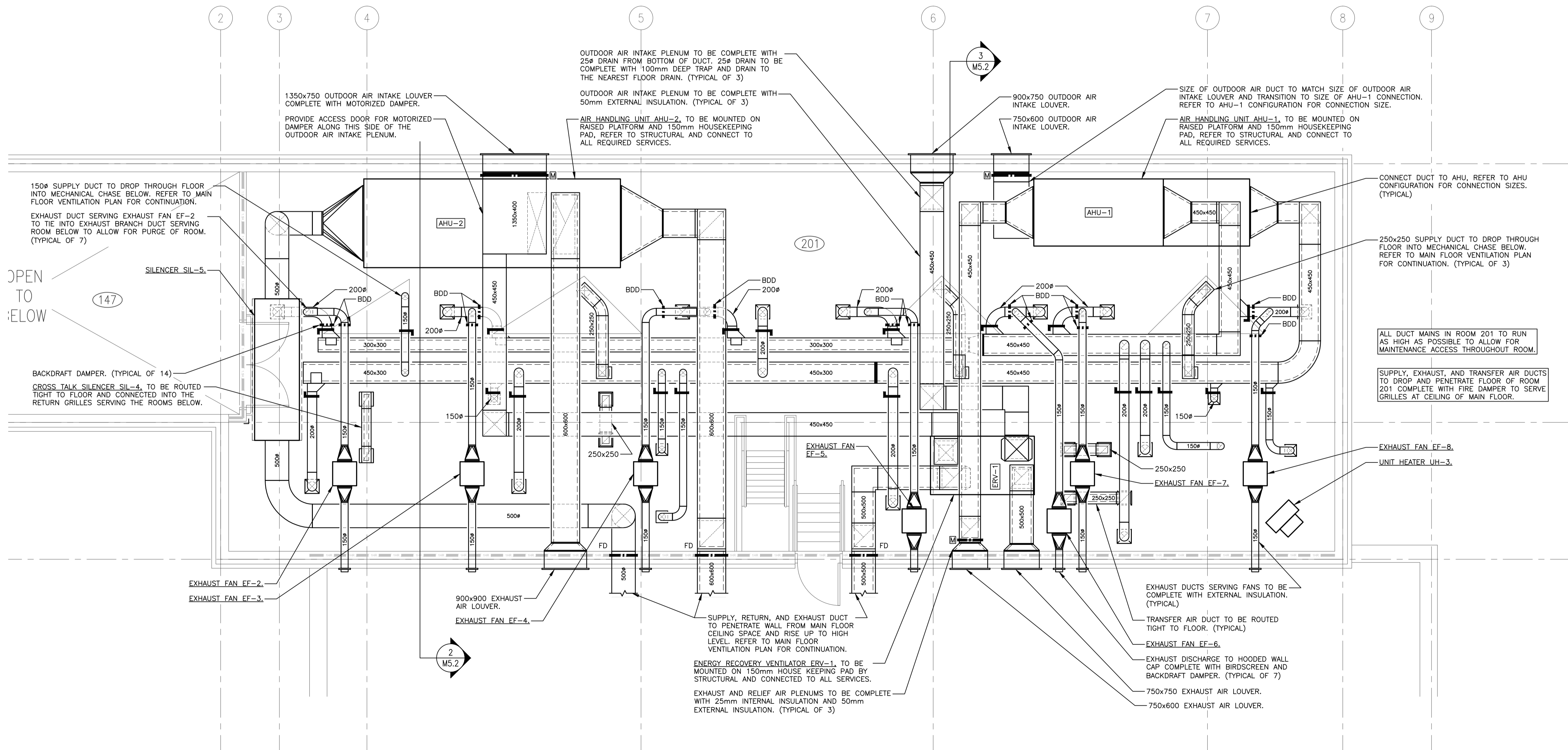
AHU-1 CONFIGURATION



AHU-2 CONFIGURATION

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.
- BALANCE ALL DIFFUSERS TO BE THE SAME WITH AVAILABLE AIR IN EACH VARIABLE AIR VOLUME BOX (UNLESS NOTED OTHERWISE).
- NO TAKE-OFF IS PERMITTED IN DUCTWORK DOWNSTREAM OF VAV BOX FOR A MINIMUM DISTANCE OF 1,500mm TO PERMIT SOUND ATTENUATION.



1 VENTILATION PLAN
1:50



100-3725 Prince Street, Regina, SK S4S 0A8 ph: (306) 566-2255
102-3718 Kiewit Place, Saskatoon, SK S7P 0A6 ph: (306) 652-4457
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Number: C981
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Discipline: Mech. 6093 Signature: G. P. Dawson

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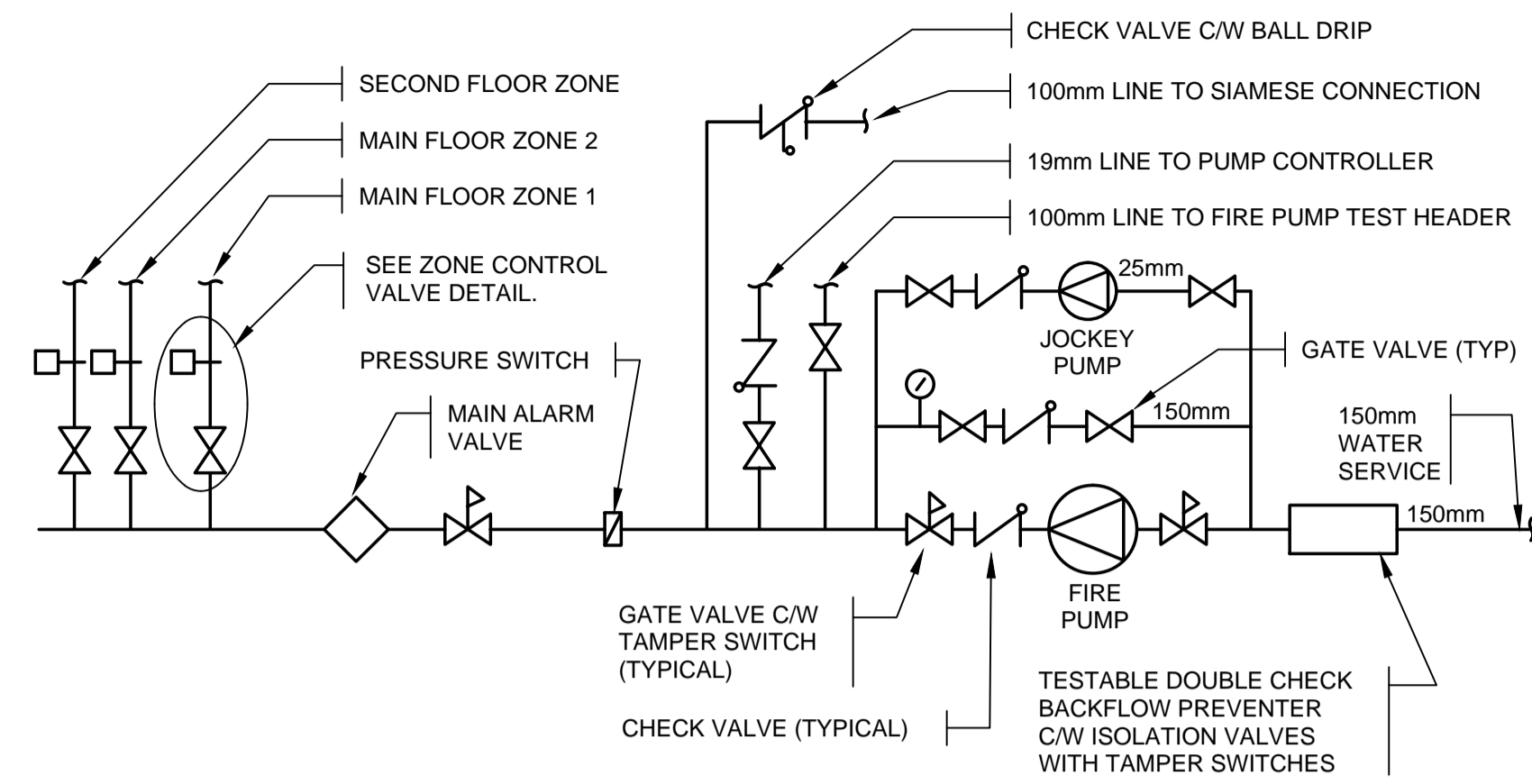
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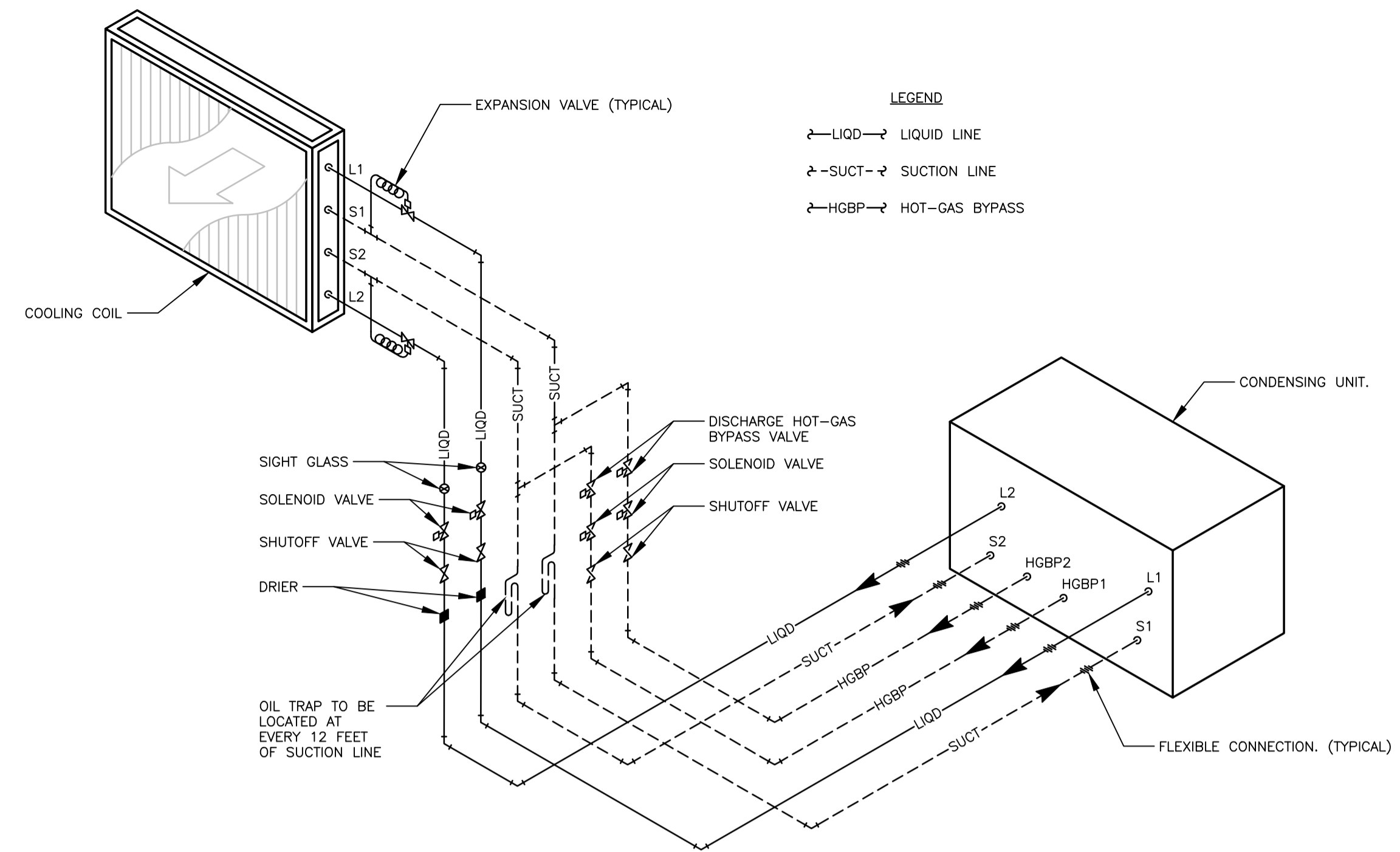
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Drawing title/Titre du dessin
MECHANICAL ROOM 201
VENTILATION PLAN

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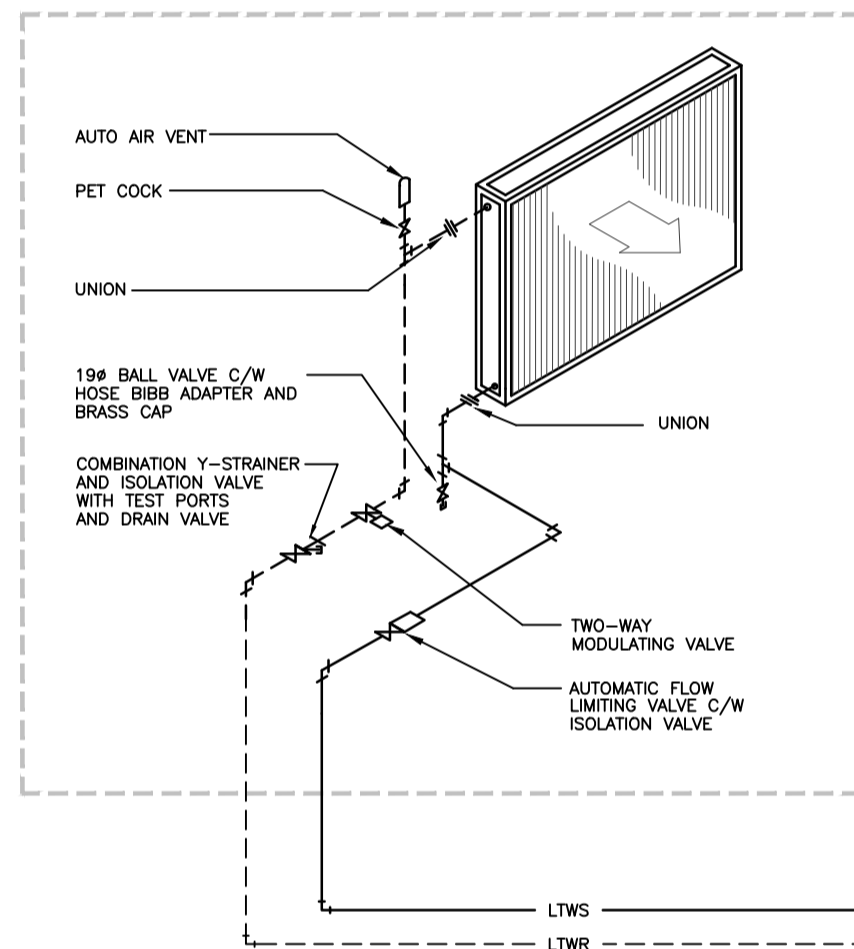


SPRINKLER TREE SCHEMATIC n.t.s.



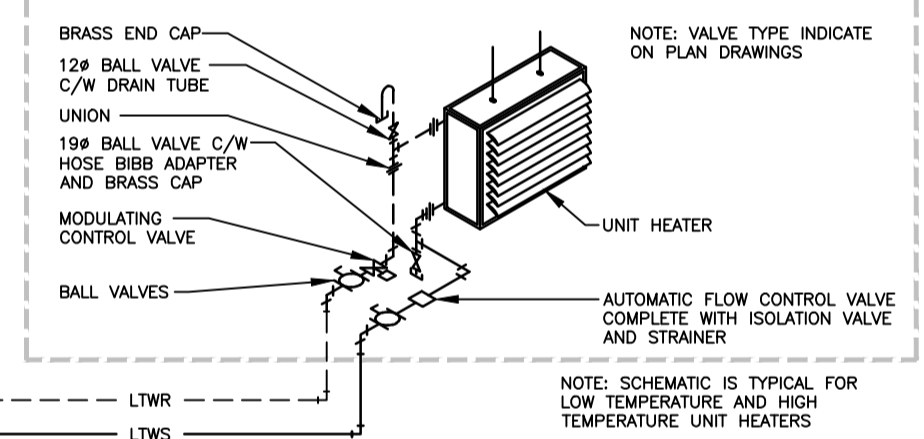
COOLING COIL SCHEMATIC

REHEAT COIL PIPING SCHEMATIC

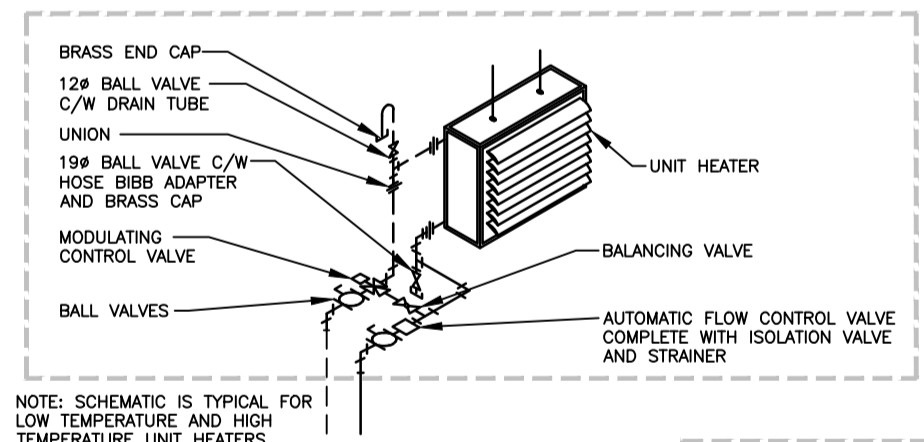


THE DETAILS AND SCHEMATICS ARE DRAWN IN ACCORDANCE WITH AN AUTOMATIC FLOW RESTRICTOR DESIGNED TO BE INSTALLED ON THE SUPPLY SIDE OF THE TERMINAL DEVICE. INSTALLATION OF ALTERNATE AUTOMATIC FLOW RESTRICTOR CONFIGURATIONS SHALL ENSURE THAT THE INTENT OF THE DETAILS AND SCHEMATICS ARE MET. THE TERMINAL DEVICE AND ALL ASSOCIATED EQUIPMENT SHALL BE ISOLATED FROM THE SYSTEM MAINS, INCLUDING THE AUTOMATIC FLOW RESTRICTOR. A STRAINER SHALL BE INSTALLED UPSTREAM OF THE CONTROL VALVES AND TERMINAL DEVICE REGARDLESS OF WHETHER THE AUTOMATIC FLOW RESTRICTORS PURCHASED NEED TO BE PROTECTED.

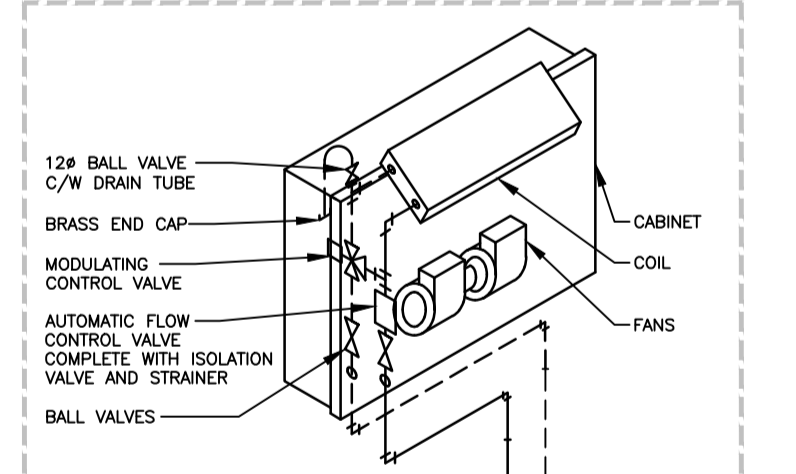
TYPICAL UNIT HEATER PIPING SCHEMATIC TWO WAY CONTROL VALVE



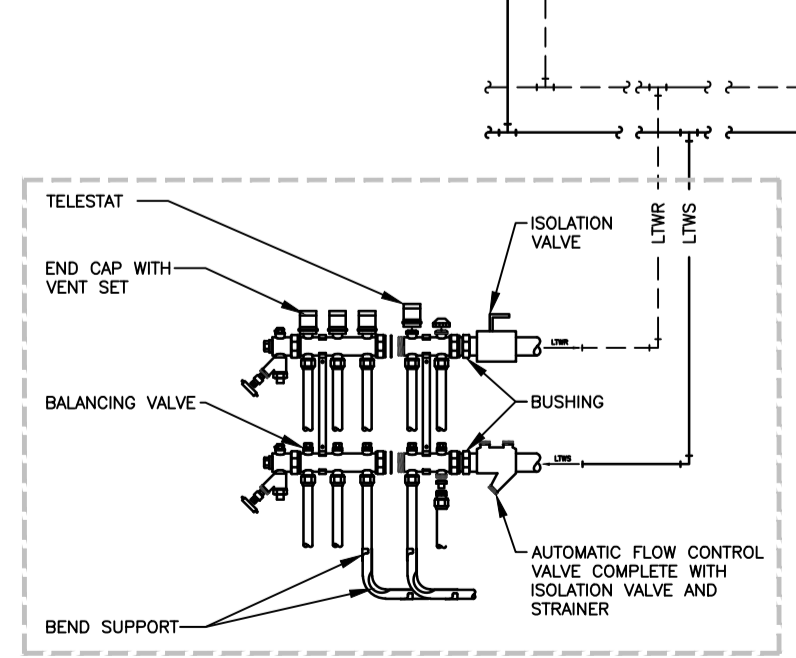
TYPICAL UNIT HEATER PIPING SCHEMATIC THREE WAY CONTROL VALVE



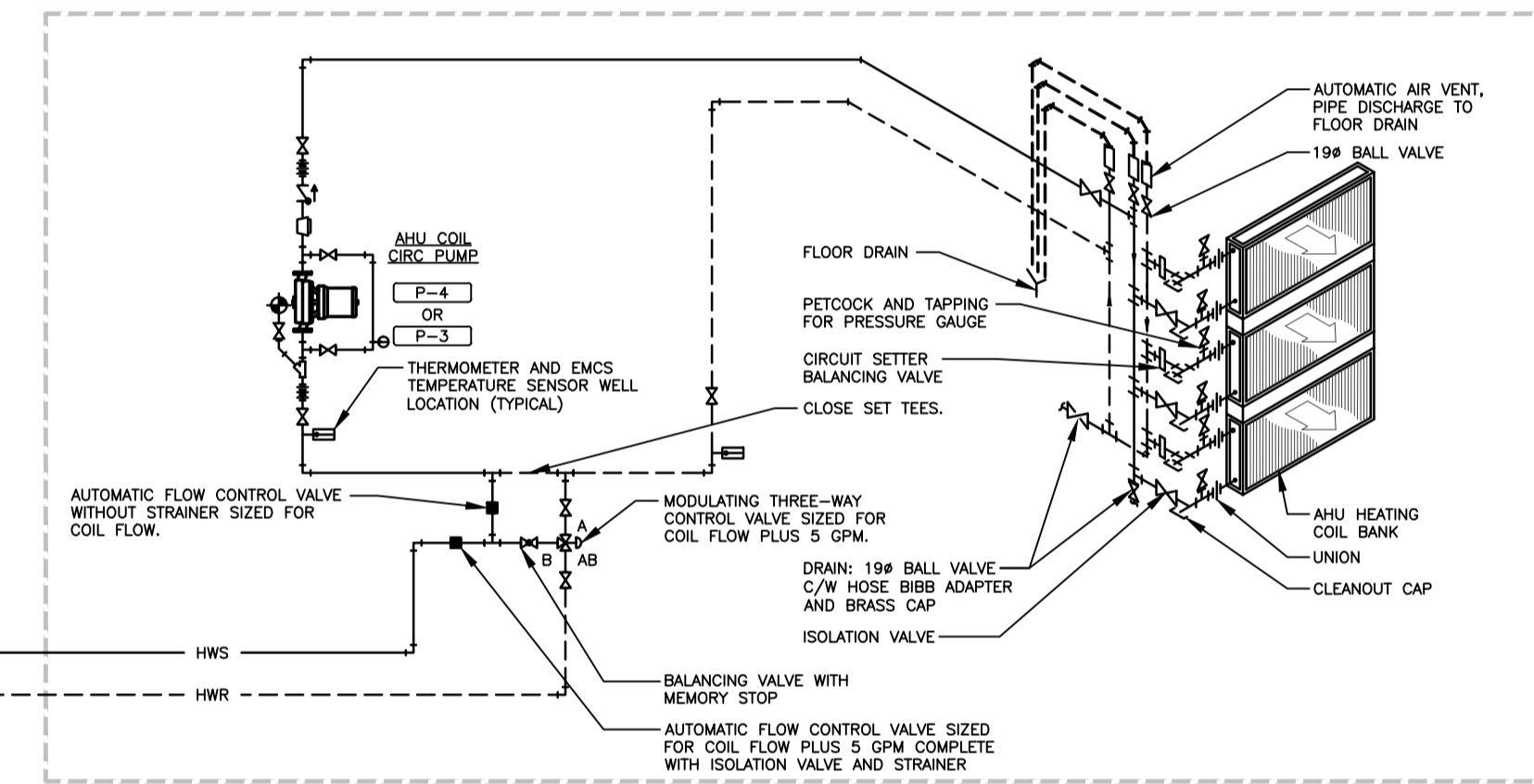
TYPICAL FORCE FLOW PIPING SCHEMATIC



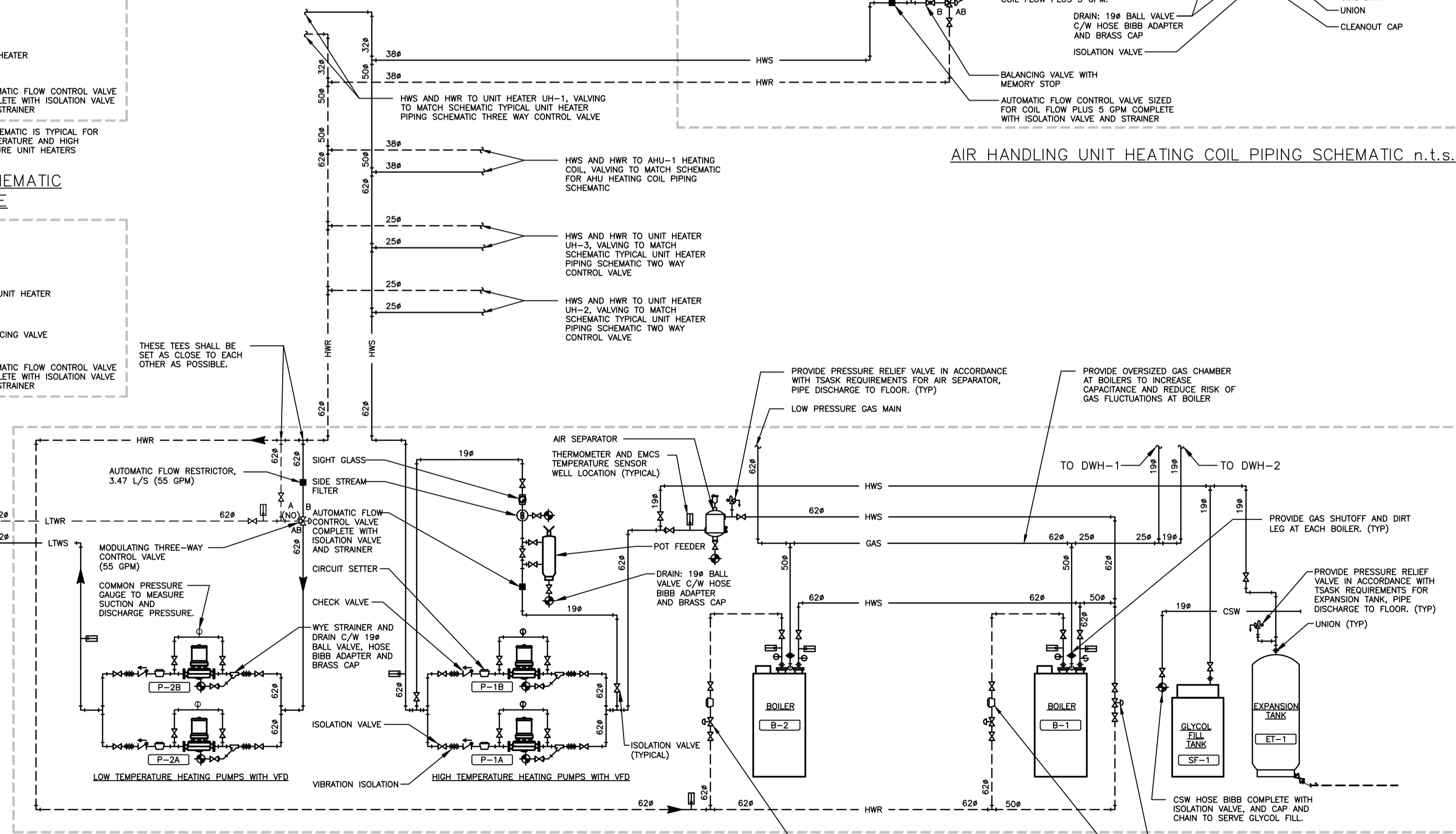
TYPICAL IN-FLOOR HEATING MANIFOLD SCHEMATIC



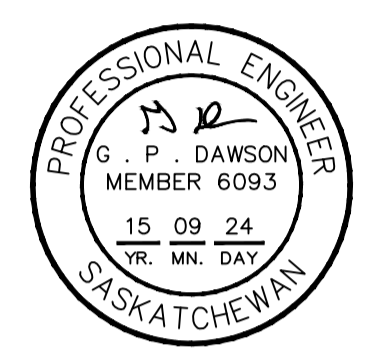
1 HEATING SCHEMATIC N.T.S.



AIR HANDLING UNIT HEATING COIL PIPING SCHEMATIC n.t.s.



HEATING PLANT SCHEMATIC n.t.s.



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Project Title/Titre du projet

NEW POLICE BUILDING
 ONION LAKE, SASKATCHEWAN

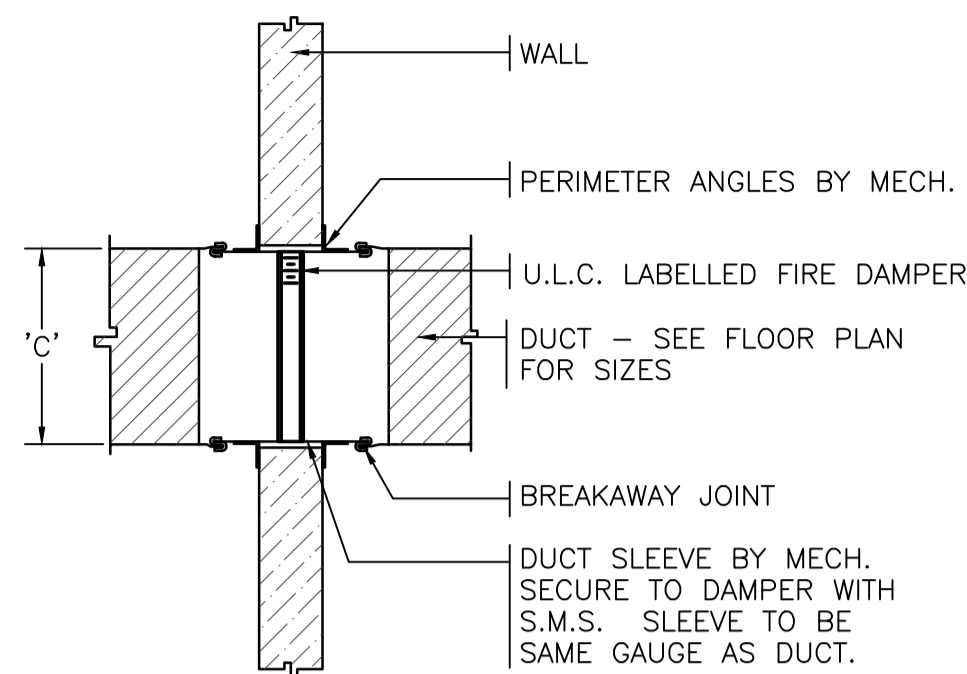
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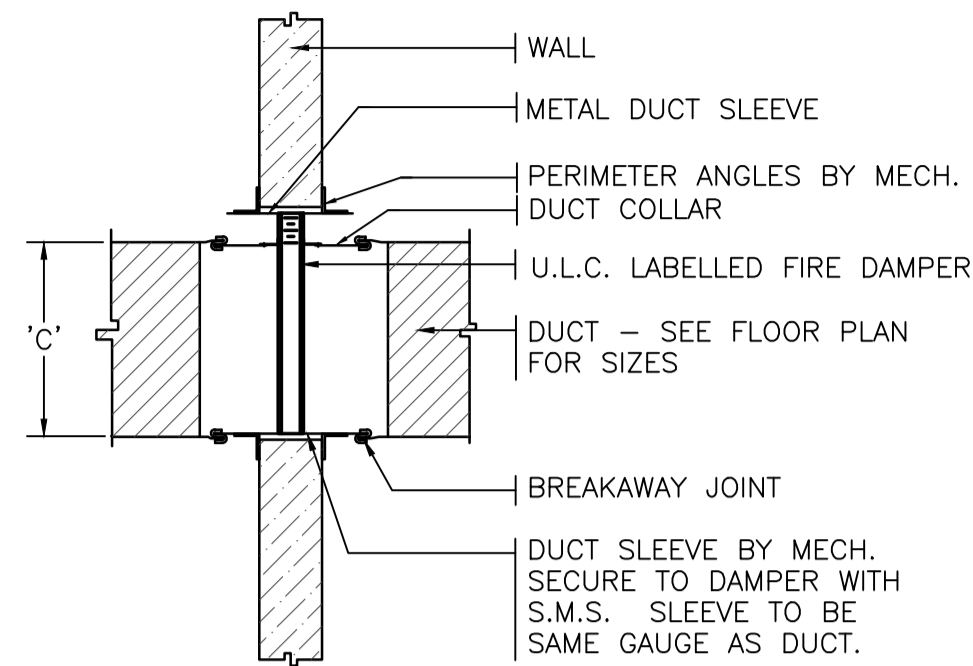
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MECHANICAL SCHEMATICS

Project No./No. du projet: 24/2014
 Sheet/Feuille: M6.4
 Revision no./Lo Révision no.: 1



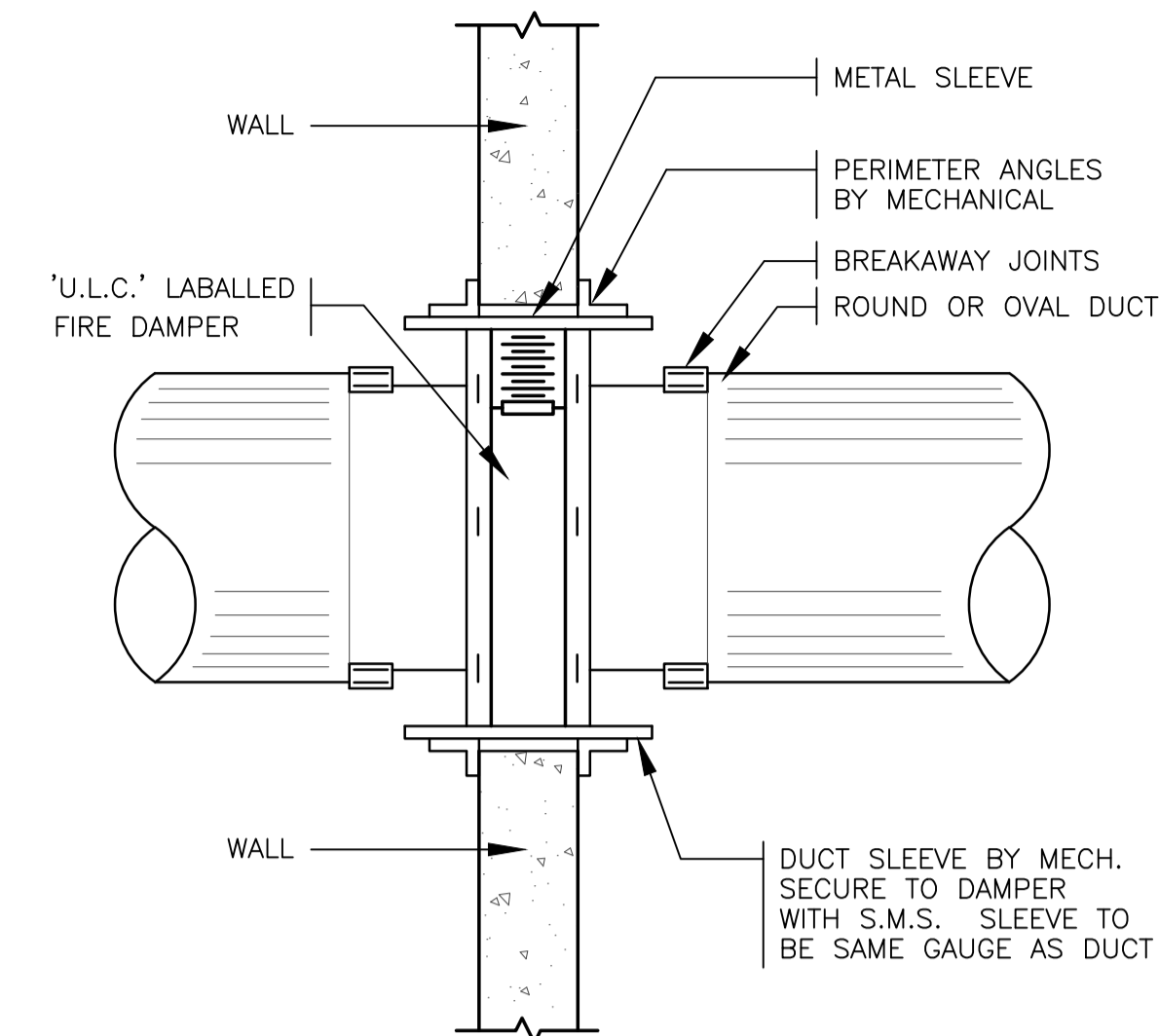
FOR DUCTS WITH 'C' DIMENSION 300 (12") AND LARGER.

TYPE 'A' FIRE DAMPER - n.t.s.

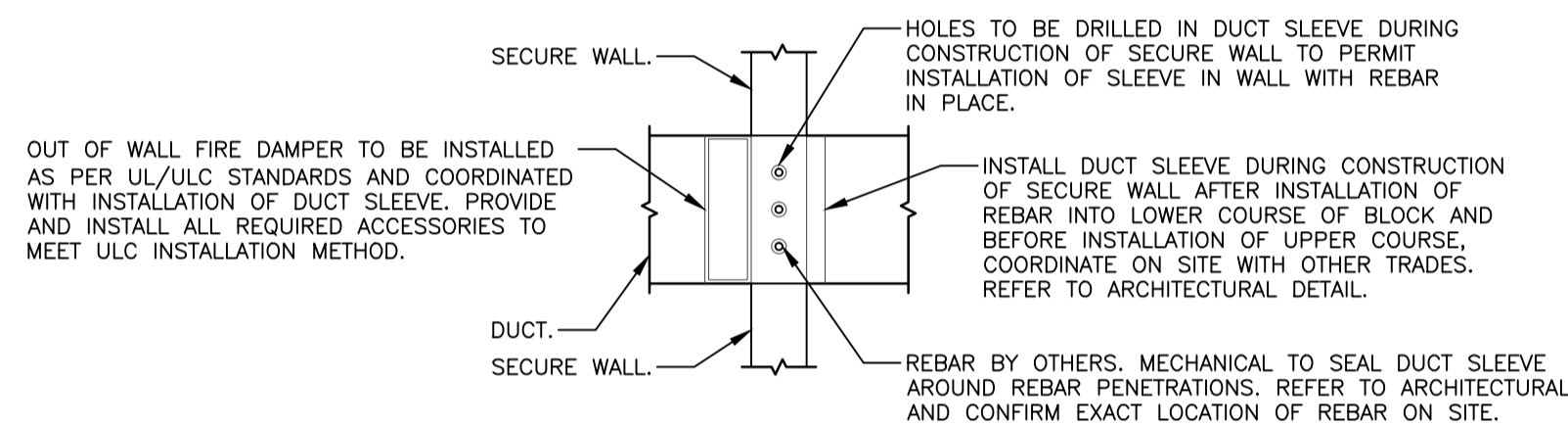


FOR DUCTS WITH 'C' DIMENSION SMALLER THAN 300 (12")

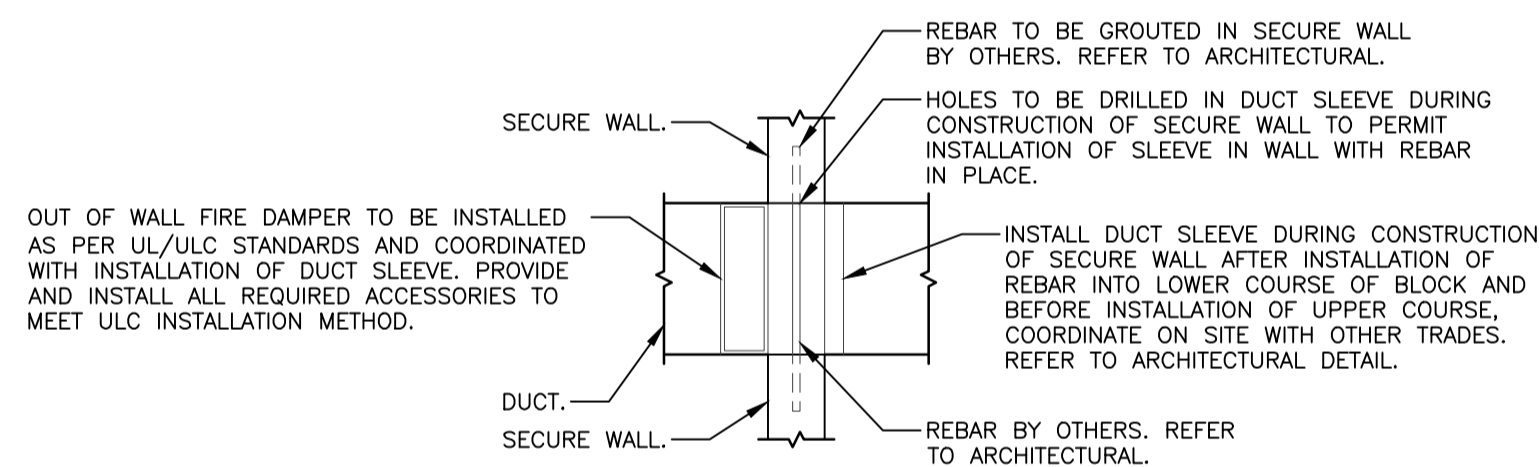
TYPE 'B' FIRE DAMPER - n.t.s.



TYPE 'C' FIRE DAMPER n.t.s.

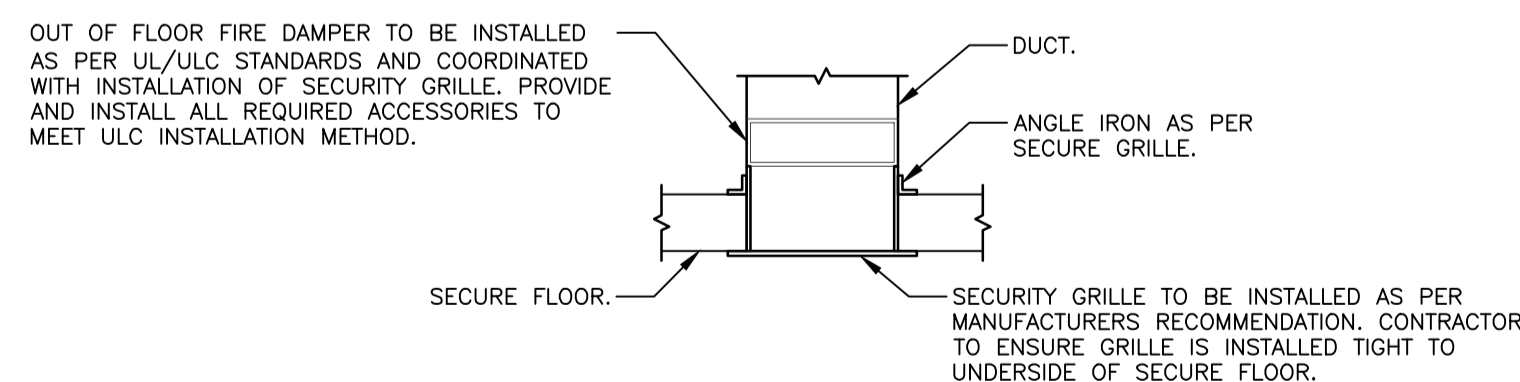


PLAN VIEW



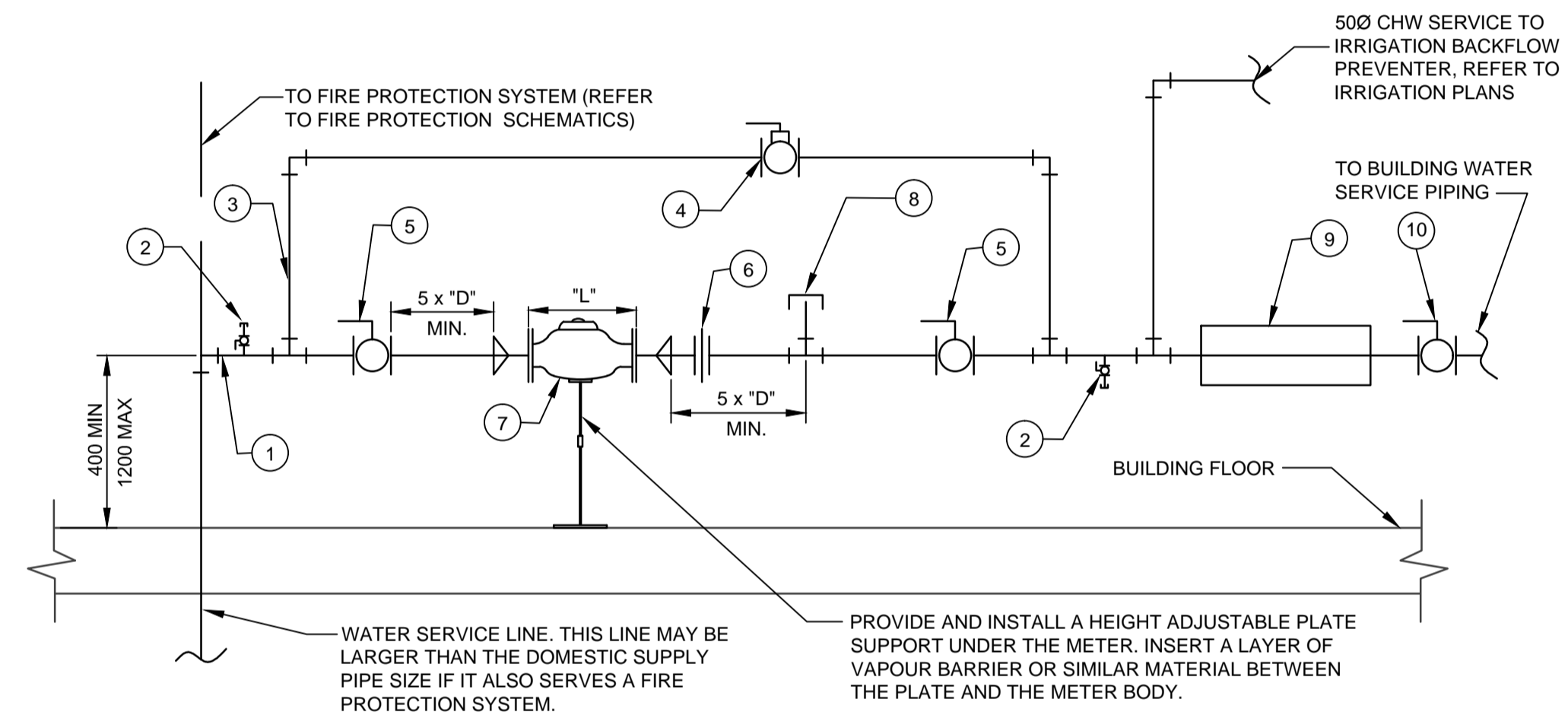
SECTION VIEW

1 DUCT OPENING SECURITY DETAIL N.T.S.



SECTION VIEW

2 SECURE GRILLE DETAIL N.T.S.



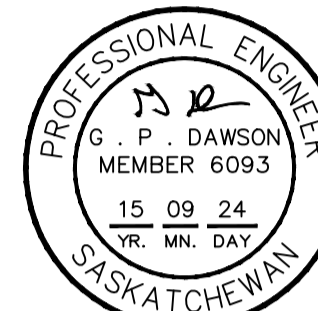
LEGEND:

- 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 VALVES 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 VALVES 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.

DOMESTIC WATER METER INSTALLATION SCHEMATIC



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MECHANICAL SCHEMATICS

Project No./No. du projet

24/2014

Sheet/ Feuille

M6.5

Revision no./ La Révision no.

