

**SITE PLAN**  
1  
1:300

**SEPW Architecture Inc.**  
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**HDA ENGINEERING LTD.**  
Mechanical Engineering Consultants  
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P:306-525-9815 F:306-525-6369 E:hda@hdaeng.com



Association of Professional Engineers & Geoscientists of Saskatchewan  
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HDA ENGINEERING LTD.  
Number C981  
Permission to Consult Held by:  
Discipline: Sk. Reg. No. Signature  
Mech. 6093 G. Dawson

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0	ISSUED FOR TENDER	2015/12/04
Revision/	Description/Description	Date/Date
Client/client		

Project title/Titre du projet

**NEW MODULAR POLICE BUILDING AND EMPLOYEE HOUSING BLACK LAKE, SASKATCHEWAN**

Approved by/Approve par

Designed by/Concept par  
TKC

Drawn by/Dessine par  
CHK

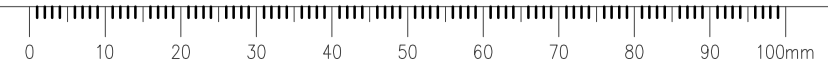
Project Manager/Administrateur de Projets

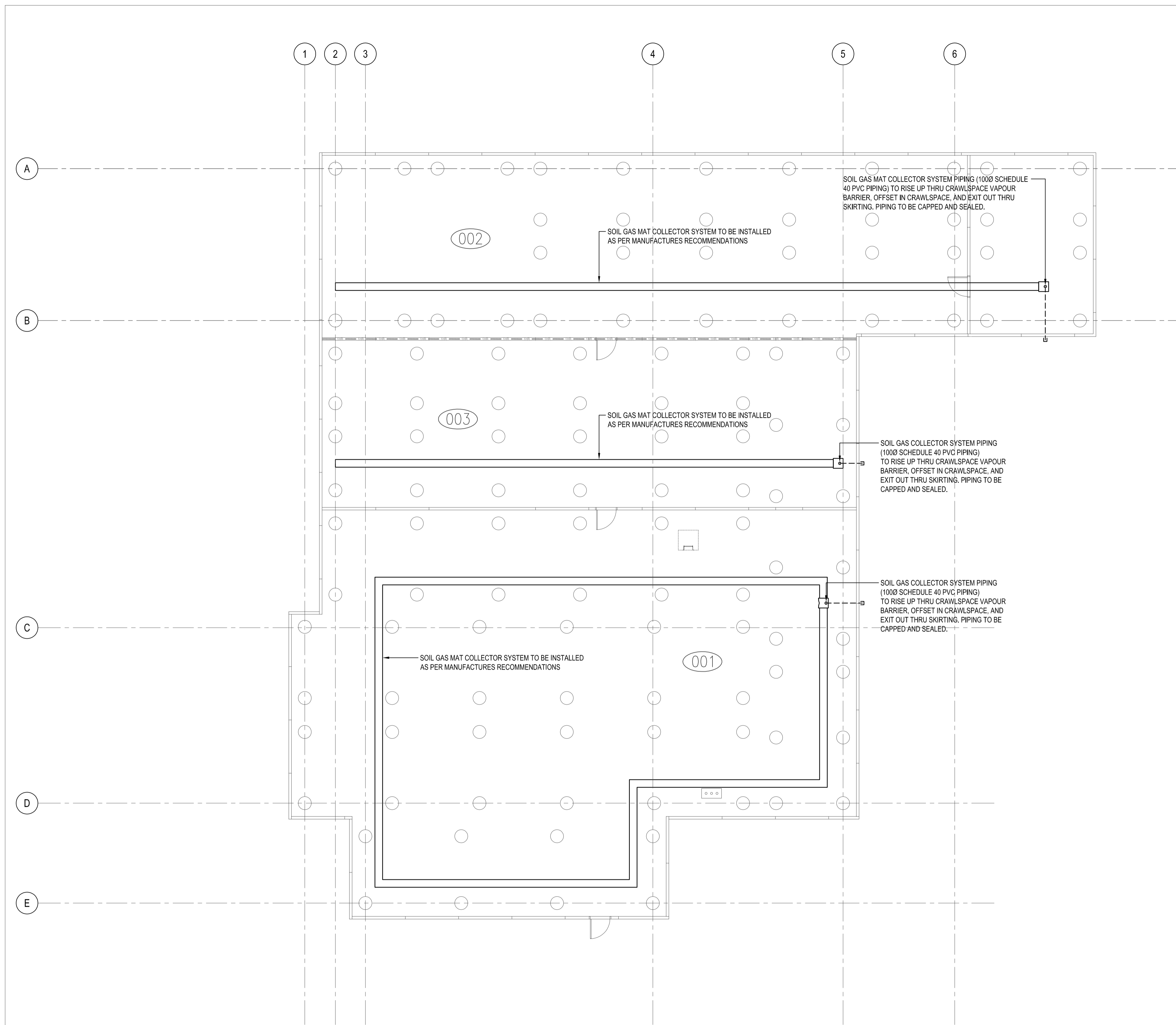
Architectural and Engineering Resources Manager/  
Ressources Architectural et de Directeur d'Ingénierie


Client/client

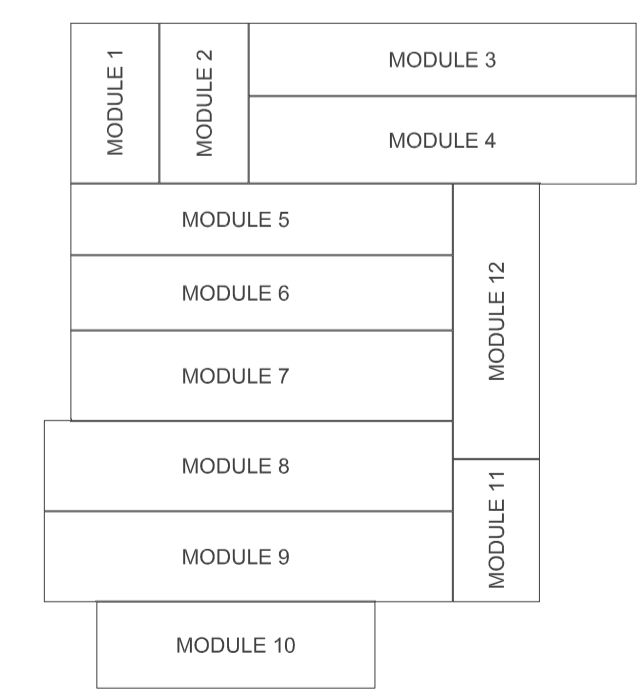
Drawing title/Titre du dessin  
**BLACK LAKE SITE PLAN**

Project No./No. du projet	Sheet/Fauille	Revision no./La Révision no.
S-03-2014	M1.3	0

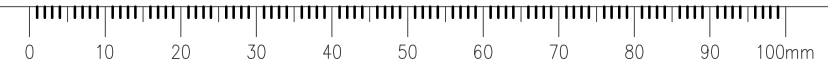




 **1**  
CRAWLSPACE PLAN – SOIL GAS COLLECTOR SYSTEM  
1:100

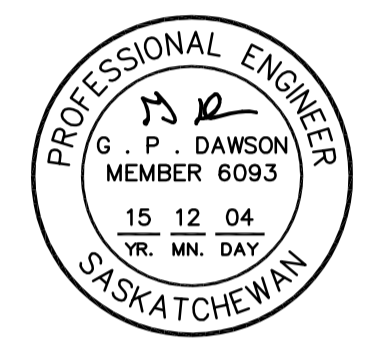


**2**  
KEY PLAN  
N.T.S.



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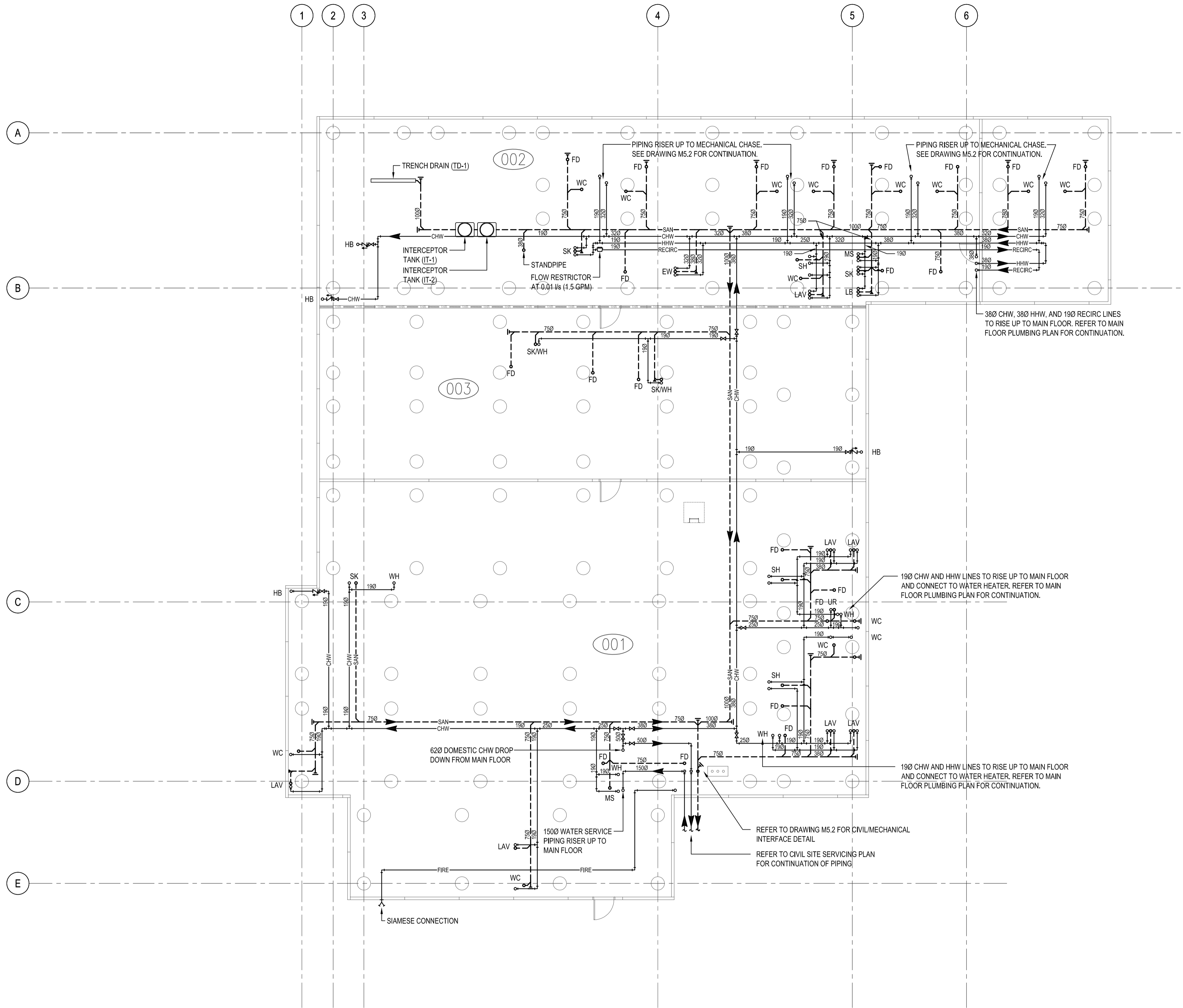
Project title/Titre du projet  
**NEW MODULAR POLICE BUILDING AND EMPLOYEE HOUSING  
 BLACK LAKE, SASKATCHEWAN**

Approved by/Approve par  
 Designed by/Concept par  
**TKC**  
 Drawn by/Dessine par  
**CHK**  
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Architectural and Engineering Resources Manager/  
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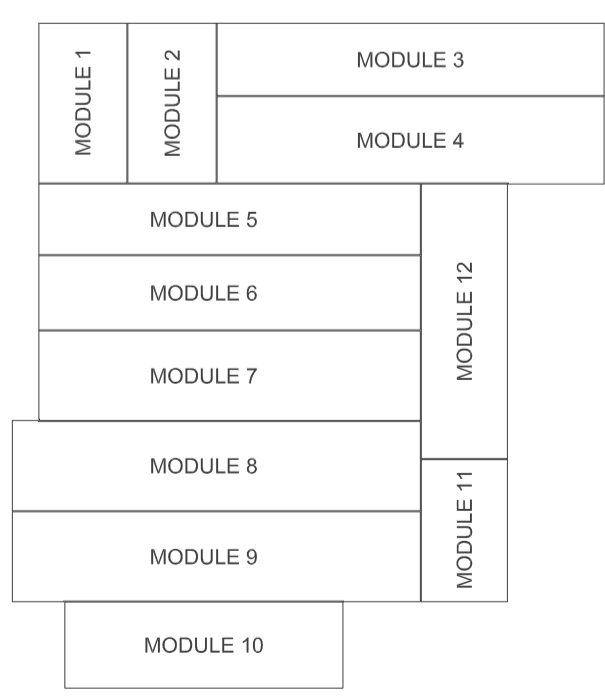
Drawing title/Titre du dessin  
**CRAWLSPACE PLAN  
 SOIL GAS COLLECTOR SYSTEM**

Project No./No. du projet <b>S-03-2014</b>	Sheet/Feuille <b>M2.0</b>	Revision no./La Révision no. <b>0</b>
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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 12Ø 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.
  - MAKE ALL CONNECTIONS FOR EQUIPMENT SUPPLIED BY OTHERS. REFER TO DETAILS FOR CONNECTIONS.

**1**  
CRAWLSPACE PLAN – PLUMBING  
1:100



**2**  
KEY PLAN  
N.T.S.



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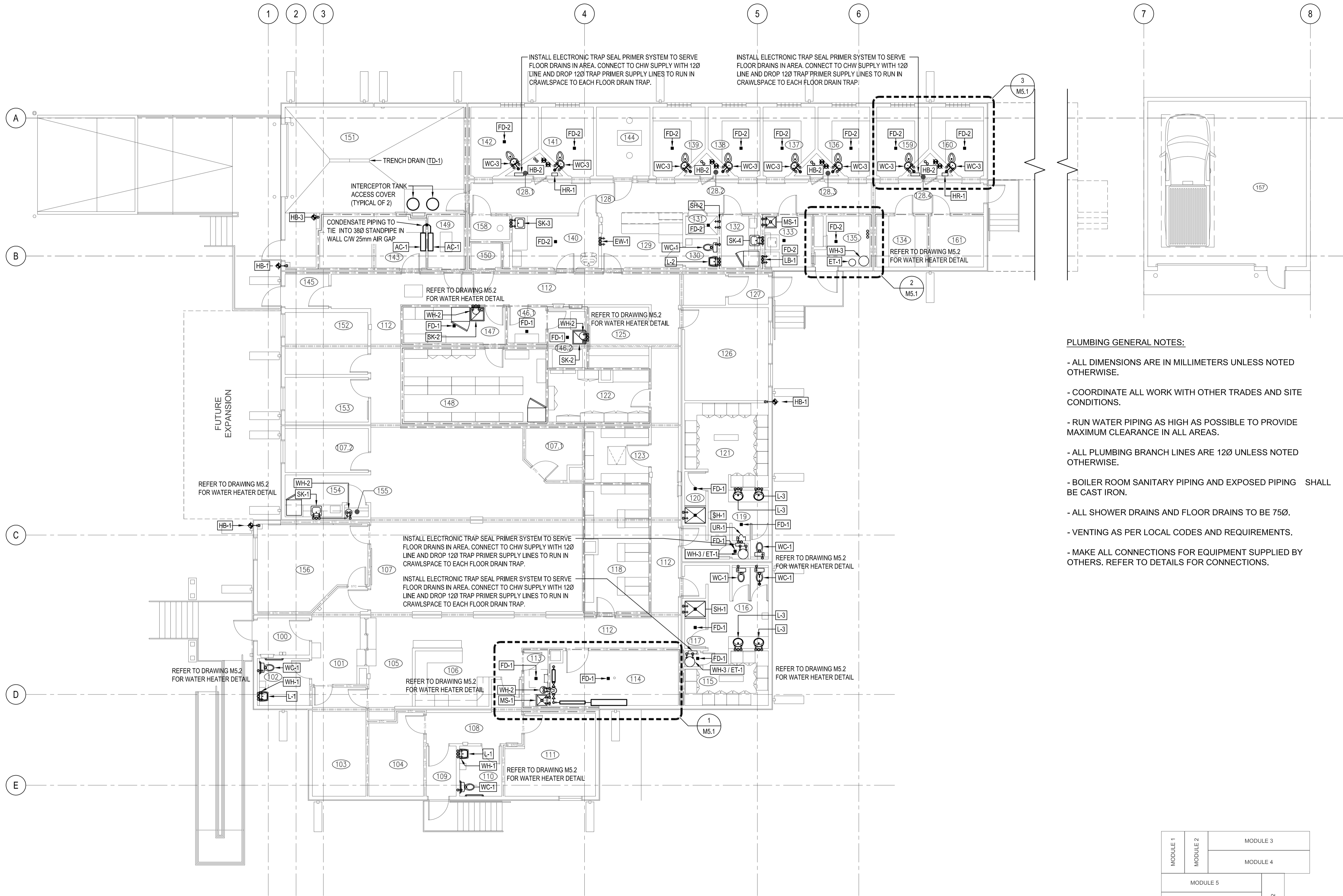
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**CRAWLSPACE PLAN PLUMBING**

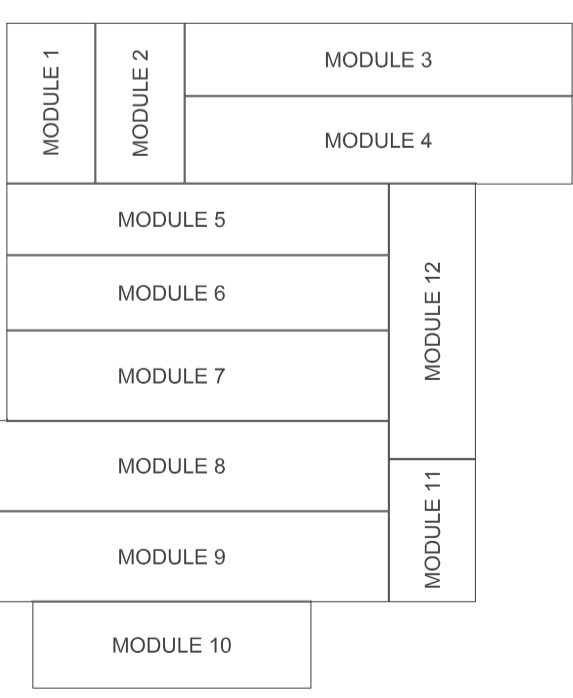
Project No./No. du projet <b>S-03-2014</b>	Sheet/Fauille <b>M2.1</b>	Revision no./La Révision no. <b>0</b>
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1 MAIN FLOOR PLAN - PLUMBING  
1:100

PLUMBING GENERAL NOTES:

- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
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2 KEY PLAN  
N.T.S.

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**NEW MODULAR POLICE BUILDING AND EMPLOYEE HOUSING  
BLACK LAKE, SASKATCHEWAN**

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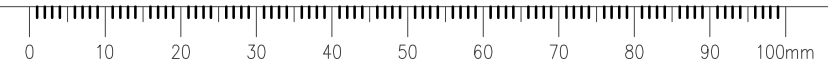
Drawing title/Titre du dessin

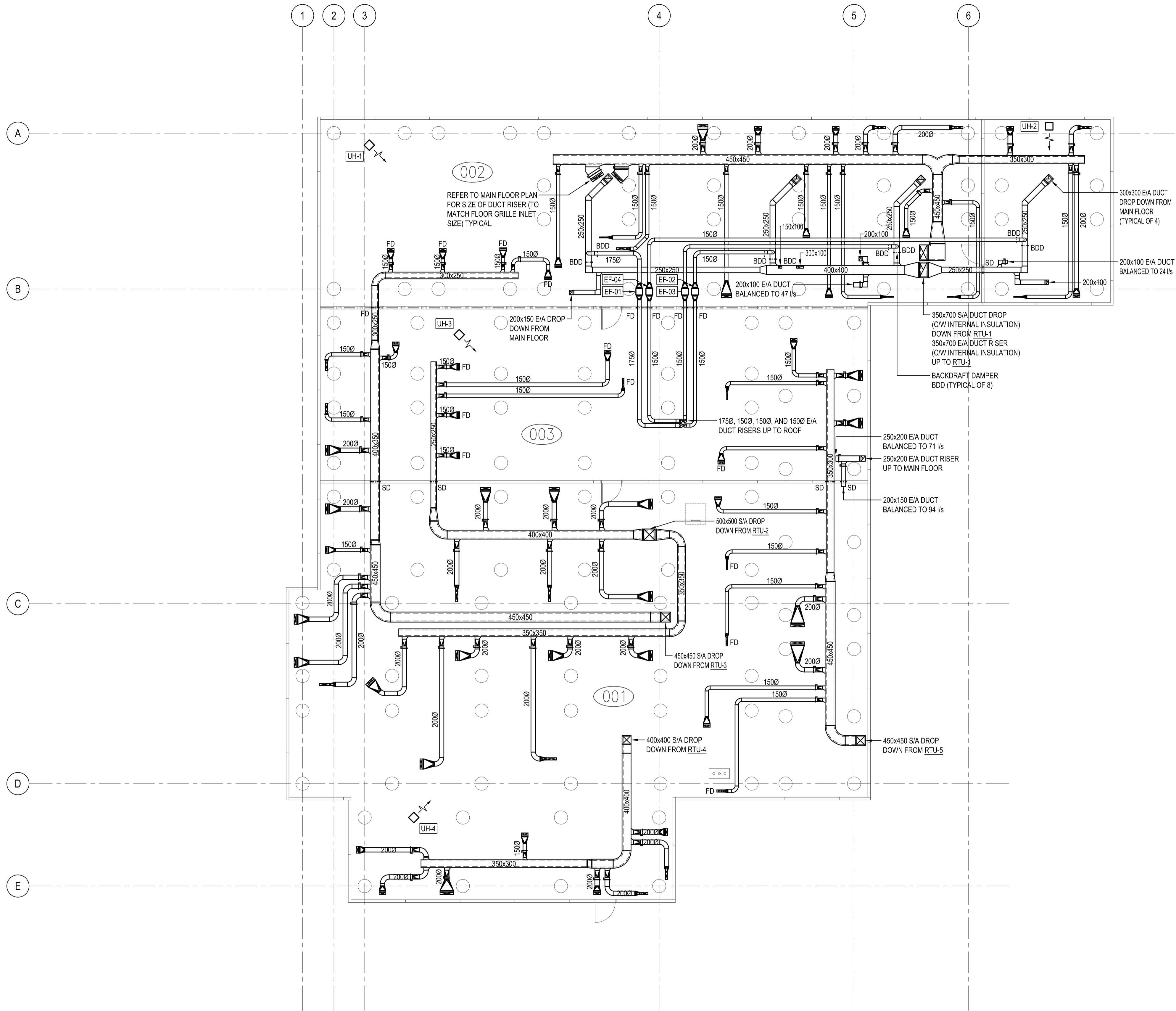
**MAIN FLOOR PLAN  
PLUMBING**

Project No./No. du projet S-03-2014

Sheet/Fauille M2.2

Revision no./La Révision no. 0





**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.
- GOOSENECK DISCHARGE/INTAKE TO TERMINATE A MINIMUM OF 610MM (2') ABOVE FINISHED ROOF. TERMINATION TO BE HORIZONTAL TO REDUCE CHANCE OF DRIVEN SNOW ENTERING DUCT.



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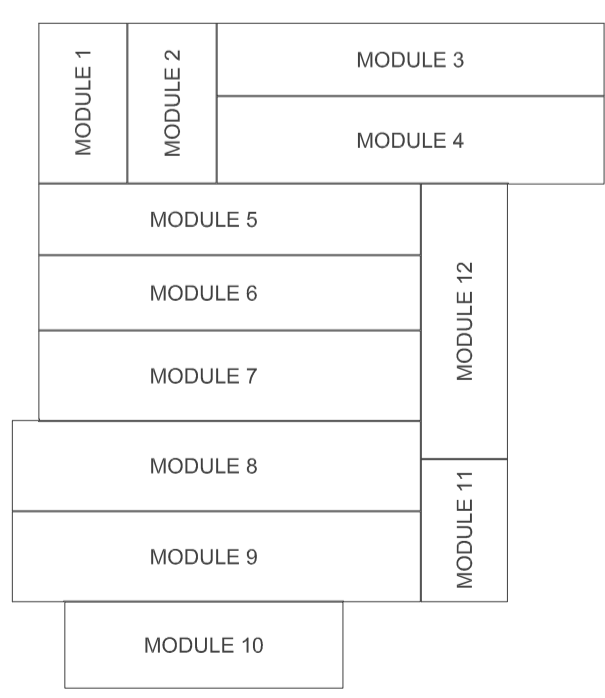
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**CHK**  
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 Ressources Architectural et de Directeur d'Ingénierie  
 Client/client

Drawing title/Titre du dessin  
**CRAWLSPACE PLAN VENTILATION**

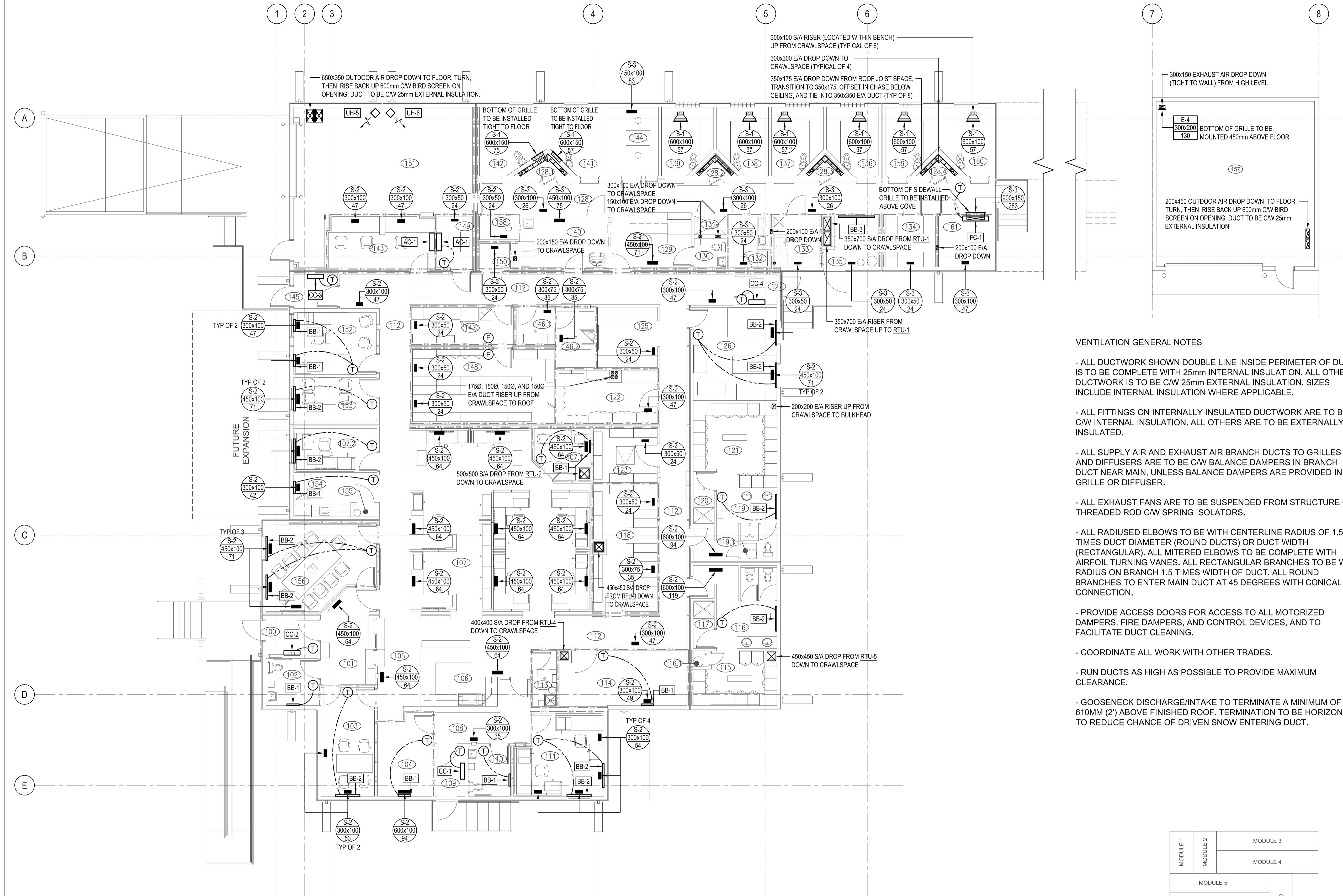
Project No./No. du projet <b>S-03-2014</b>	Sheet/Fauille <b>M3.0</b>	Revision no./La Révision no. <b>0</b>
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**1**  
 CRAWLSPACE PLAN – VENTILATION  
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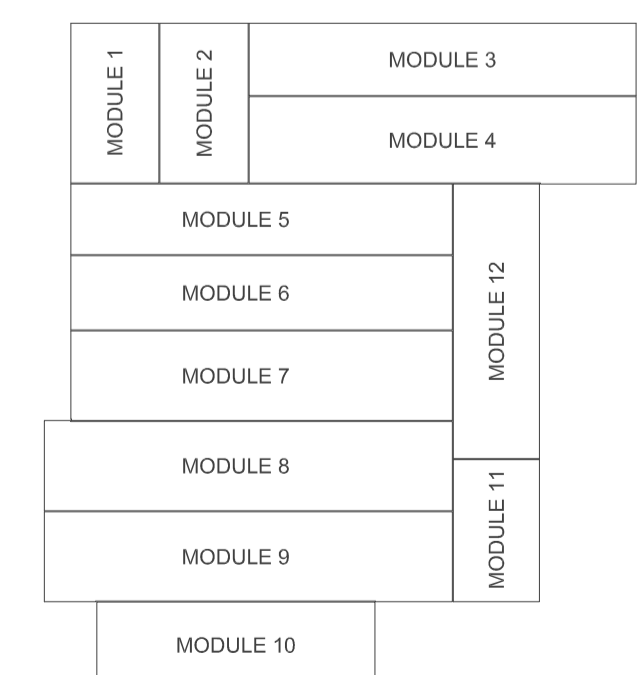


**2**  
 KEY PLAN  
 N.T.S.





**1** MAIN FLOOR PLAN – LOWER VENTILATION  
1:100



**2** KEY PLAN  
N.T.S.

**VENTILATION GENERAL NOTES**

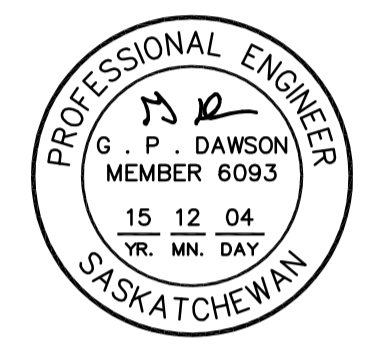
- ALL DUCTWORK SHOWN DOUBLE LINE INSIDE PERIMETER OF DUCT IS TO BE COMPLETE WITH 25mm INTERNAL INSULATION. ALL OTHER DUCTWORK IS TO BE C/W 25mm EXTERNAL INSULATION. SIZES INCLUDE INTERNAL INSULATION WHERE APPLICABLE.
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- RUN DUCTS AS HIGH AS POSSIBLE TO PROVIDE MAXIMUM CLEARANCE.
- GOOSENECK DISCHARGE/INTAKE TO TERMINATE A MINIMUM OF 610MM (2') ABOVE FINISHED ROOF. TERMINATION TO BE HORIZONTAL TO REDUCE CHANCE OF DRIVEN SNOW ENTERING DUCT.



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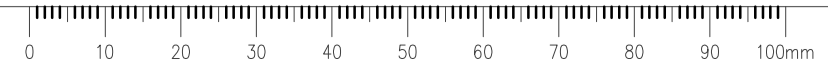
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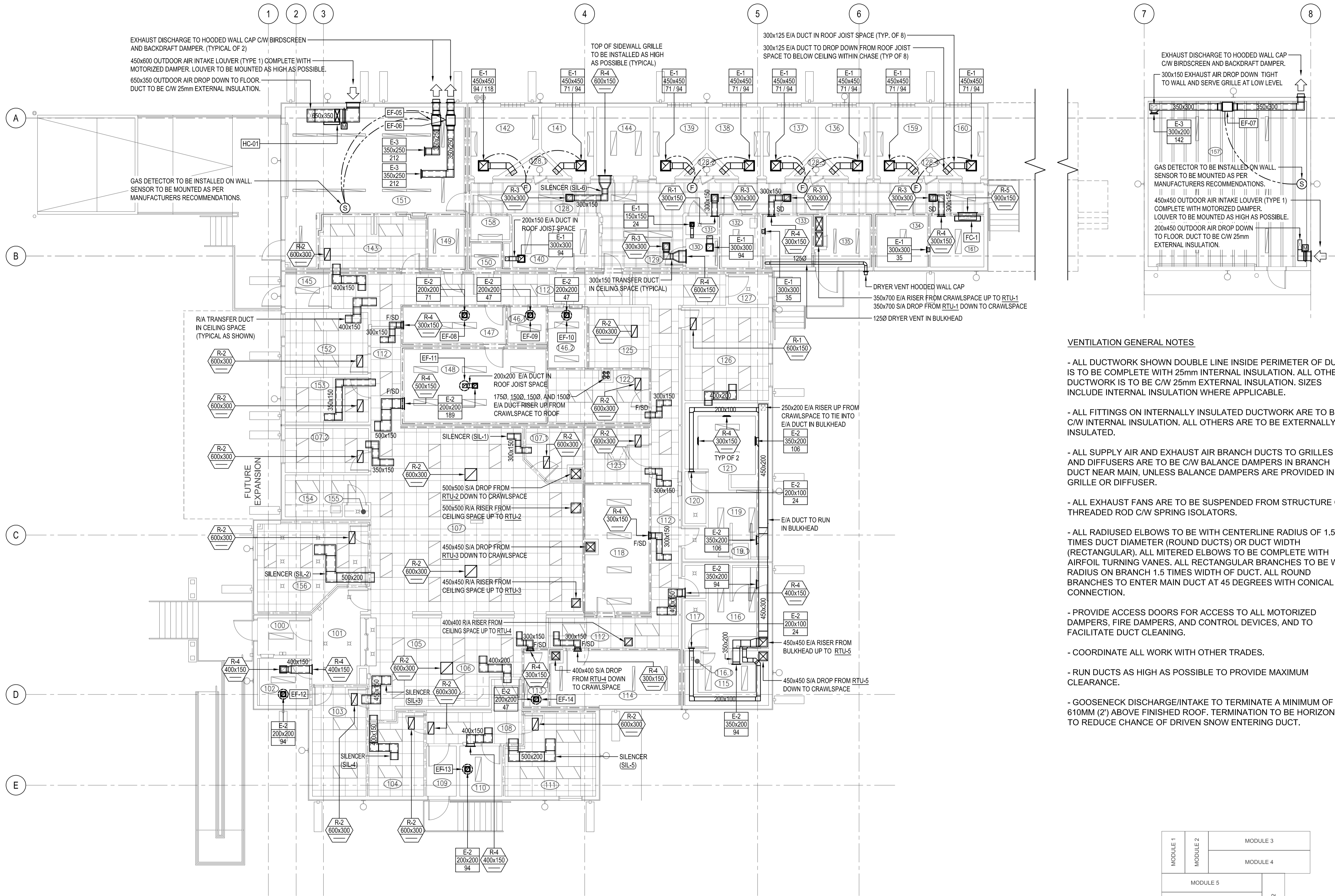
Architectural and Engineering Resources Manager/  
Resources Architectural et de Directeur d'Ingénierie

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**MAIN FLOOR PLAN LOWER VENTILATION**

Project No./No. du projet <b>S-03-2014</b>	Sheet/Fauille <b>M3.1</b>	Revision no./La Révision no. <b>0</b>
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EXHAUST DISCHARGE TO HOODED WALL CAP C/W BIRDSCREEN AND BACKDRAFT DAMPER. (TYPICAL OF 2)  
 450x600 OUTDOOR AIR INTAKE LOUVER (TYPE 1) COMPLETE WITH MOTORIZED DAMPER. LOUVER TO BE MOUNTED AS HIGH AS POSSIBLE.  
 650x350 OUTDOOR AIR DROP DOWN TO FLOOR. DUCT TO BE C/W 25mm EXTERNAL INSULATION.

GAS DETECTOR TO BE INSTALLED ON WALL. SENSOR TO BE MOUNTED AS PER MANUFACTURERS RECOMMENDATIONS.

TOP OF SIDEWALL GRILLE TO BE INSTALLED AS HIGH AS POSSIBLE (TYPICAL)

300x125 E/A DUCT IN ROOF JOIST SPACE (TYP. OF 8)  
 300x125 E/A DUCT TO DROP DOWN FROM ROOF JOIST SPACE TO BELOW CEILING WITHIN CHASE (TYP. OF 8)

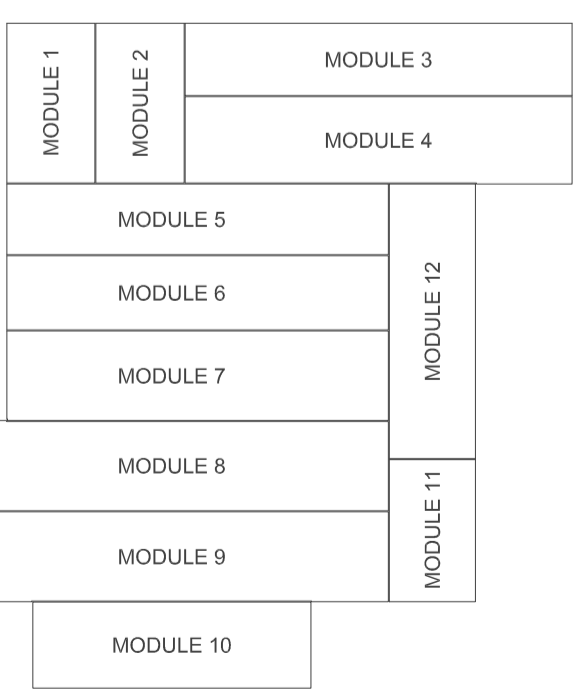
EXHAUST DISCHARGE TO HOODED WALL CAP C/W BIRDSCREEN AND BACKDRAFT DAMPER.  
 300x150 EXHAUST AIR DROP DOWN TIGHT TO WALL AND SERVE GRILLE AT LOW LEVEL

GAS DETECTOR TO BE INSTALLED ON WALL. SENSOR TO BE MOUNTED AS PER MANUFACTURERS RECOMMENDATIONS.  
 450x450 OUTDOOR AIR INTAKE LOUVER (TYPE 1) COMPLETE WITH MOTORIZED DAMPER. LOUVER TO BE MOUNTED AS HIGH AS POSSIBLE.  
 200x450 OUTDOOR AIR DROP DOWN TO FLOOR. DUCT TO BE C/W 25mm EXTERNAL INSULATION.

**VENTILATION GENERAL NOTES**

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- RUN DUCTS AS HIGH AS POSSIBLE TO PROVIDE MAXIMUM CLEARANCE.
- GOOSENECK DISCHARGE/INTAKE TO TERMINATE A MINIMUM OF 610MM (2') ABOVE FINISHED ROOF. TERMINATION TO BE HORIZONTAL TO REDUCE CHANCE OF DRIVEN SNOW ENTERING DUCT.

**1** MAIN FLOOR PLAN – CEILING VENTILATION  
 1:100



**2** KEY PLAN  
 N.T.S.



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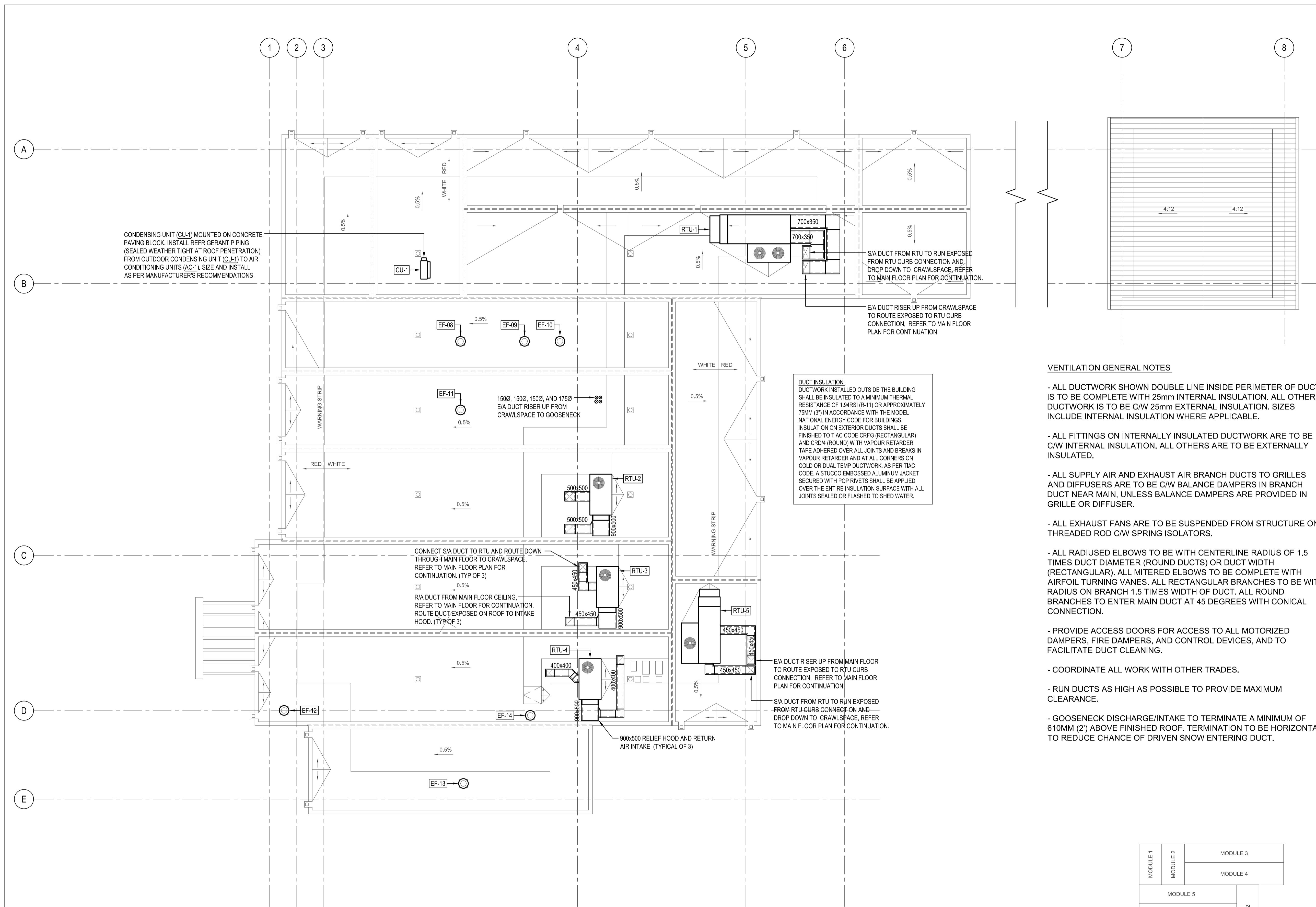
Drawing title/Titre du dessin

**MAIN FLOOR PLAN CEILING VENTILATION**

Project No./No. du projet  
**S-03-2014**

Sheet/Fauille  
**M3.2**

Revision no./La Révision no.  
**0**

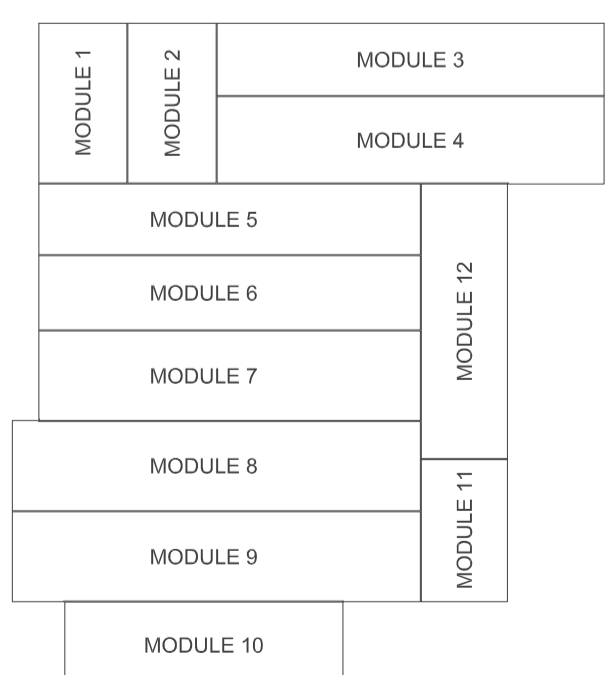


CONDENSING UNIT (CU-1) MOUNTED ON CONCRETE PAVING BLOCK. INSTALL REFRIGERANT PIPING (SEALED WEATHER TIGHT AT ROOF PENETRATION) FROM OUTDOOR CONDENSING UNIT (CU-1) TO AIR CONDITIONING UNITS (AC-1). SIZE AND INSTALL AS PER MANUFACTURER'S RECOMMENDATIONS.

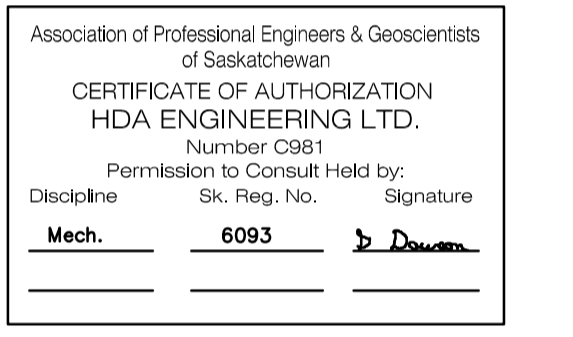
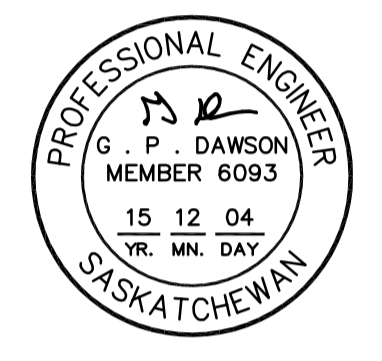
**DUCT INSULATION:**  
DUCTWORK INSTALLED OUTSIDE THE BUILDING SHALL BE INSULATED TO A MINIMUM THERMAL RESISTANCE OF 1.94RSI (R-11) OR APPROXIMATELY 75MM (3) IN ACCORDANCE WITH THE MODEL NATIONAL ENERGY CODE FOR BUILDINGS. INSULATION ON EXTERIOR DUCTS SHALL BE FINISHED TO TIAC CODE CRF3 (RECTANGULAR) AND CRD4 (ROUND) WITH VAPOUR RETARDER TAPE ADHERED OVER ALL JOINTS AND BREAKS IN VAPOUR RETARDER AND AT ALL CORNERS ON COLD OR DUAL TEMP DUCTWORK. AS PER TIAC CODE. A STUCCO EMBOSSED ALUMINUM JACKET SECURED WITH POP RIVETS SHALL BE APPLIED OVER THE ENTIRE INSULATION SURFACE WITH ALL JOINTS SEALED OR FLASHED TO SHED WATER.

**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.
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- COORDINATE ALL WORK WITH OTHER TRADES.
- RUN DUCTS AS HIGH AS POSSIBLE TO PROVIDE MAXIMUM CLEARANCE.
- GOOSENECK DISCHARGE/INTAKE TO TERMINATE A MINIMUM OF 610MM (2') ABOVE FINISHED ROOF. TERMINATION TO BE HORIZONTAL TO REDUCE CHANCE OF DRIVEN SNOW ENTERING DUCT.



2 KEY PLAN  
N.T.S.



**DO NOT SCALE DRAWINGS**

Revision/Revision	Description/Description	Date/Date
0	ISSUED FOR TENDER	2015/12/04
1		
2		
3		
4		
5		

Project title/Titre du projet

**NEW MODULAR POLICE BUILDING AND EMPLOYEE HOUSING  
BLACK LAKE, SASKATCHEWAN**

Approved by/Approve par

Designed by/Concept par  
TKC

Drawn by/Dessine par  
CHK  
Project Manager/Administrateur de Projets

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

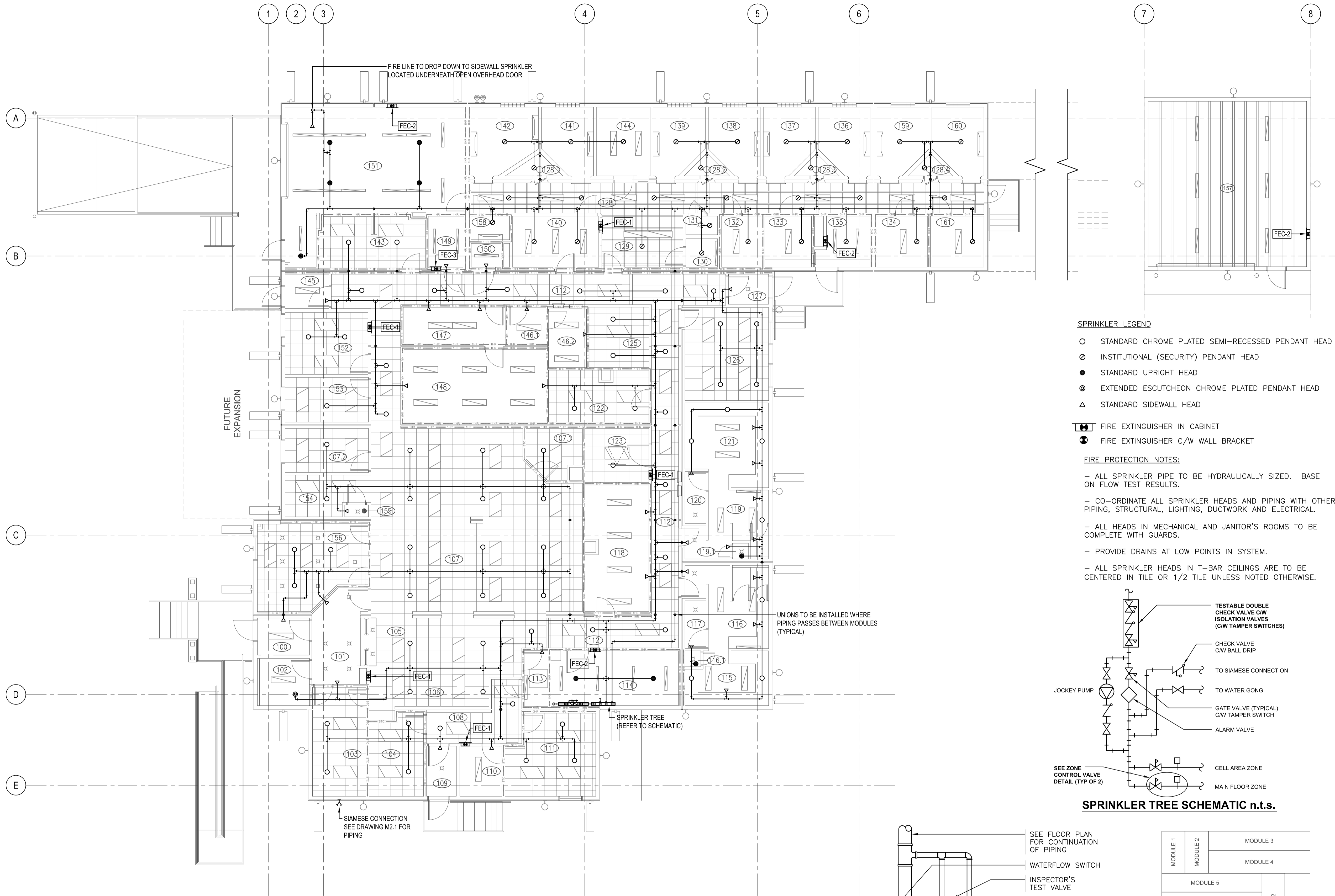
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Drawing title/Titre du dessin

**ROOF PLAN  
VENTILATION**

Project No./No. du projet S-03-2014	Sheet/Fauille M3.3	Revision no./La Révision no. 0
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**1**  
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1:100  
MAIN FLOOR PLAN – FIRE PROTECTION

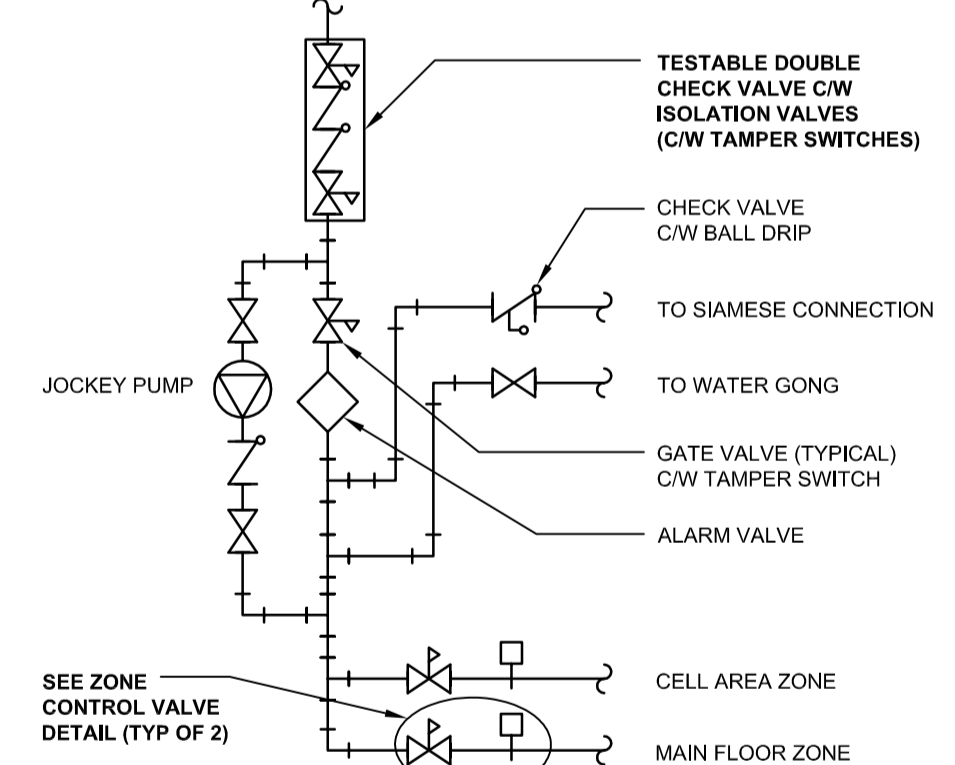
**SPRINKLER LEGEND**

- STANDARD CHROME PLATED SEMI-RECESSED PENDANT HEAD
- ⊗ INSTITUTIONAL (SECURITY) PENDANT HEAD
- STANDARD UPRIGHT HEAD
- ⊙ EXTENDED ESCUTCHEON CHROME PLATED PENDANT HEAD
- △ STANDARD SIDEWALL HEAD

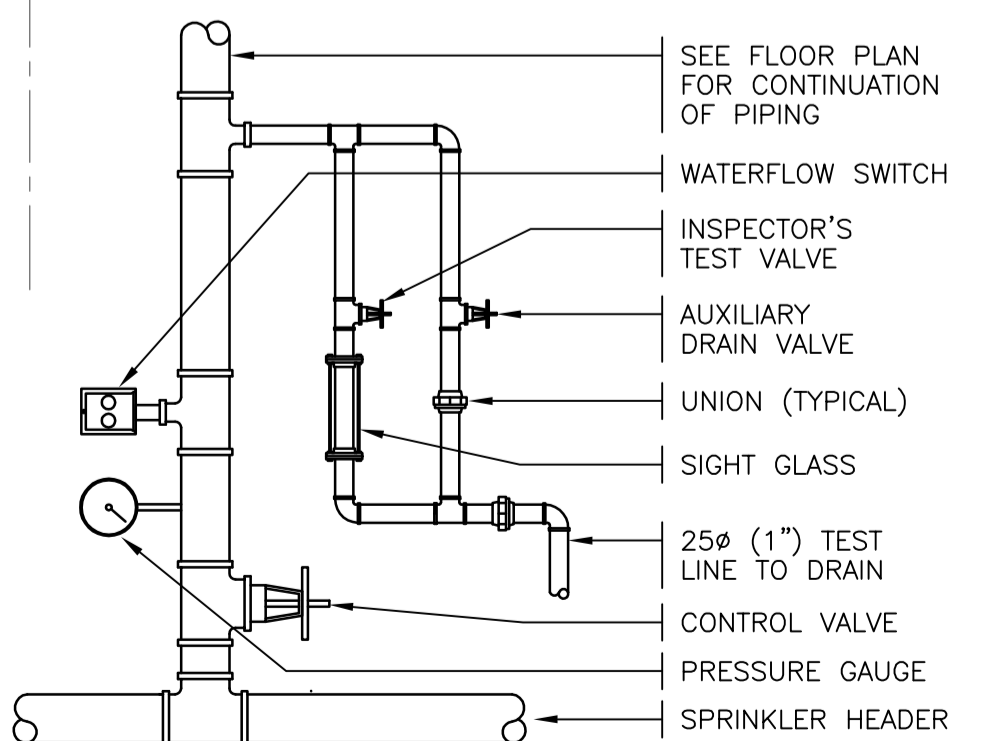
- ☒ FIRE EXTINGUISHER IN CABINET
- ☑ FIRE EXTINGUISHER C/W WALL BRACKET

**FIRE PROTECTION NOTES:**

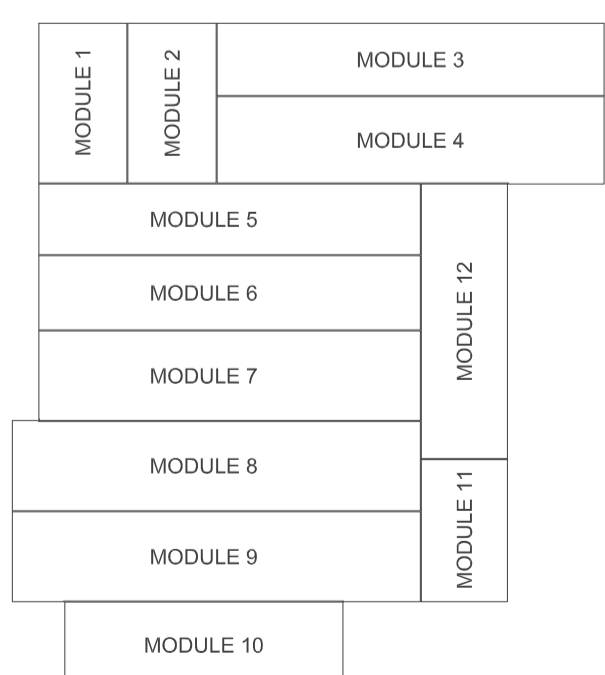
- ALL SPRINKLER PIPE TO BE HYDRAULICALLY SIZED. BASE ON FLOW TEST RESULTS.
- CO-ORDINATE ALL SPRINKLER HEADS AND PIPING WITH OTHER PIPING, STRUCTURAL, LIGHTING, DUCTWORK AND ELECTRICAL.
- ALL HEADS IN MECHANICAL AND JANITOR'S ROOMS TO BE COMPLETE WITH GUARDS.
- PROVIDE DRAINS AT LOW POINTS IN SYSTEM.
- ALL SPRINKLER HEADS IN T-BAR CEILINGS ARE TO BE CENTERED IN TILE OR 1/2 TILE UNLESS NOTED OTHERWISE.



**SPRINKLER TREE SCHEMATIC n.t.s.**



**2**  
-  
N.T.S.  
FIRE PROTECTION ZONE CONTROL VALVE SCHEMATIC



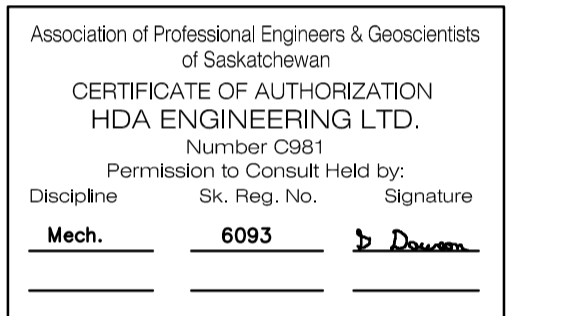
**2**  
-  
N.T.S.  
KEY PLAN



100 - 3725 Paton Street Regina, SK S4S 6A8 ph: (306) 566-2255  
102 - 3718 Kiewit Place Saskatoon SK S7P 5A6 ph: (306) 665-6457  
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HDA ENGINEERING LTD.  
Mechanical Engineering Consultants  
1580 Angus Street Regina, Saskatchewan S4L 1Z1  
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Revision/Revision Client/client	Description/Description	Date/Date
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0	ISSUED FOR TENDER	2015/12/04

Project title/Titre du projet

**NEW MODULAR POLICE BUILDING AND EMPLOYEE HOUSING BLACK LAKE, SASKATCHEWAN**

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Project Manager/Administrateur de Projets

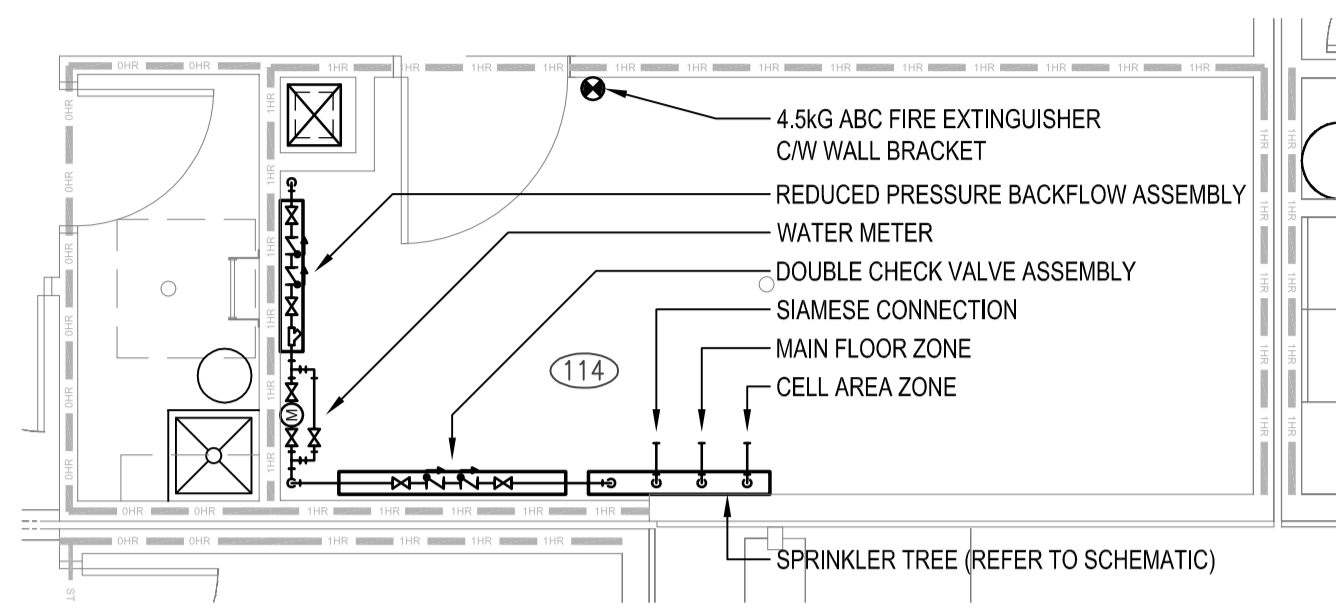
Architectural and Engineering Resources Manager/  
Ressources Architectural et de Directeur d'Ingénierie

Client/client

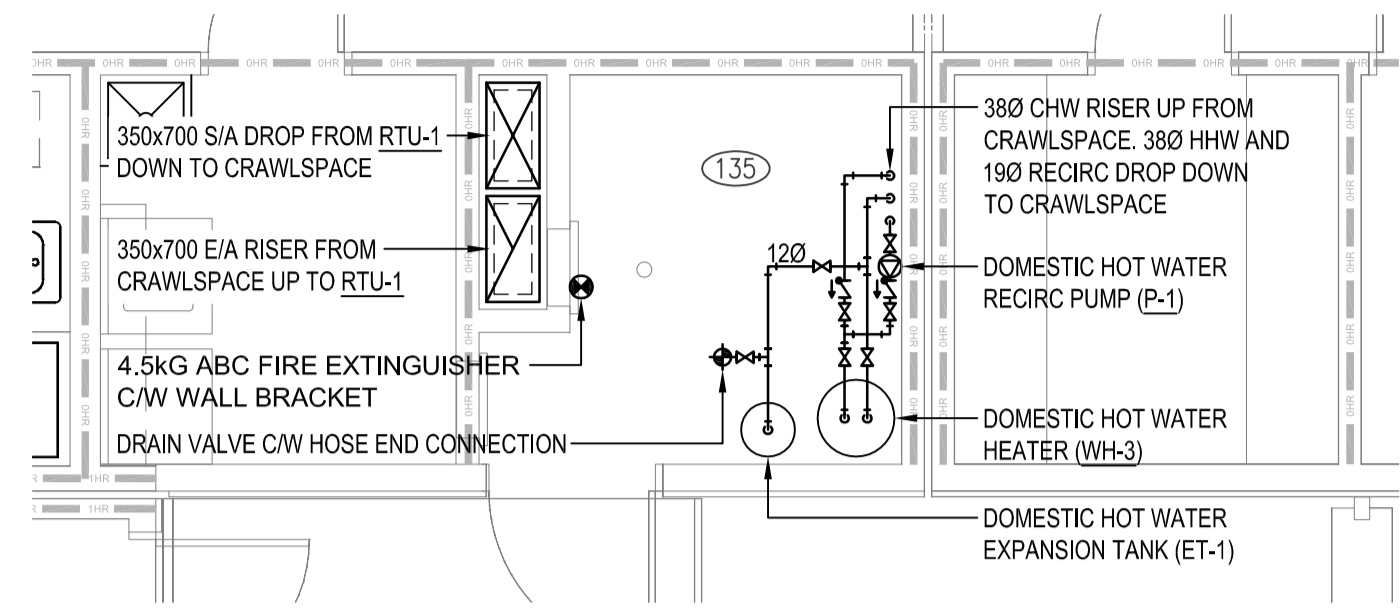
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**MAIN FLOOR PLAN FIRE PROTECTION**

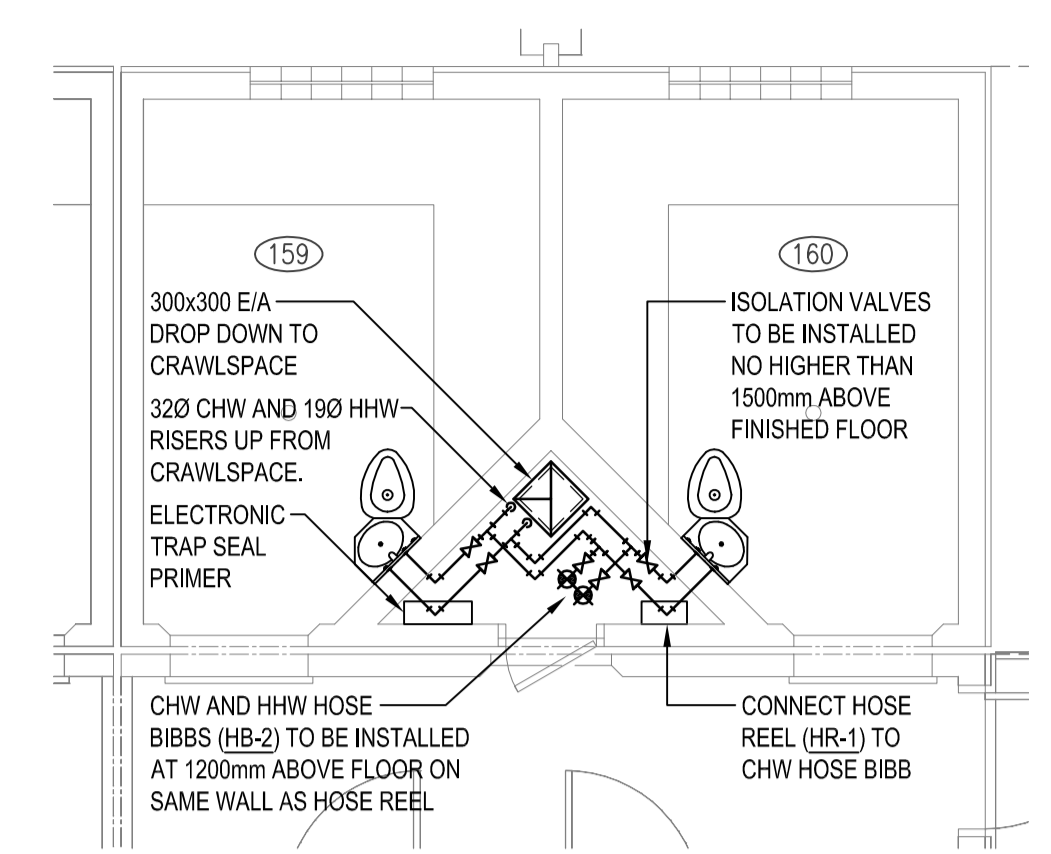
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S-03-2014	M4.1	0



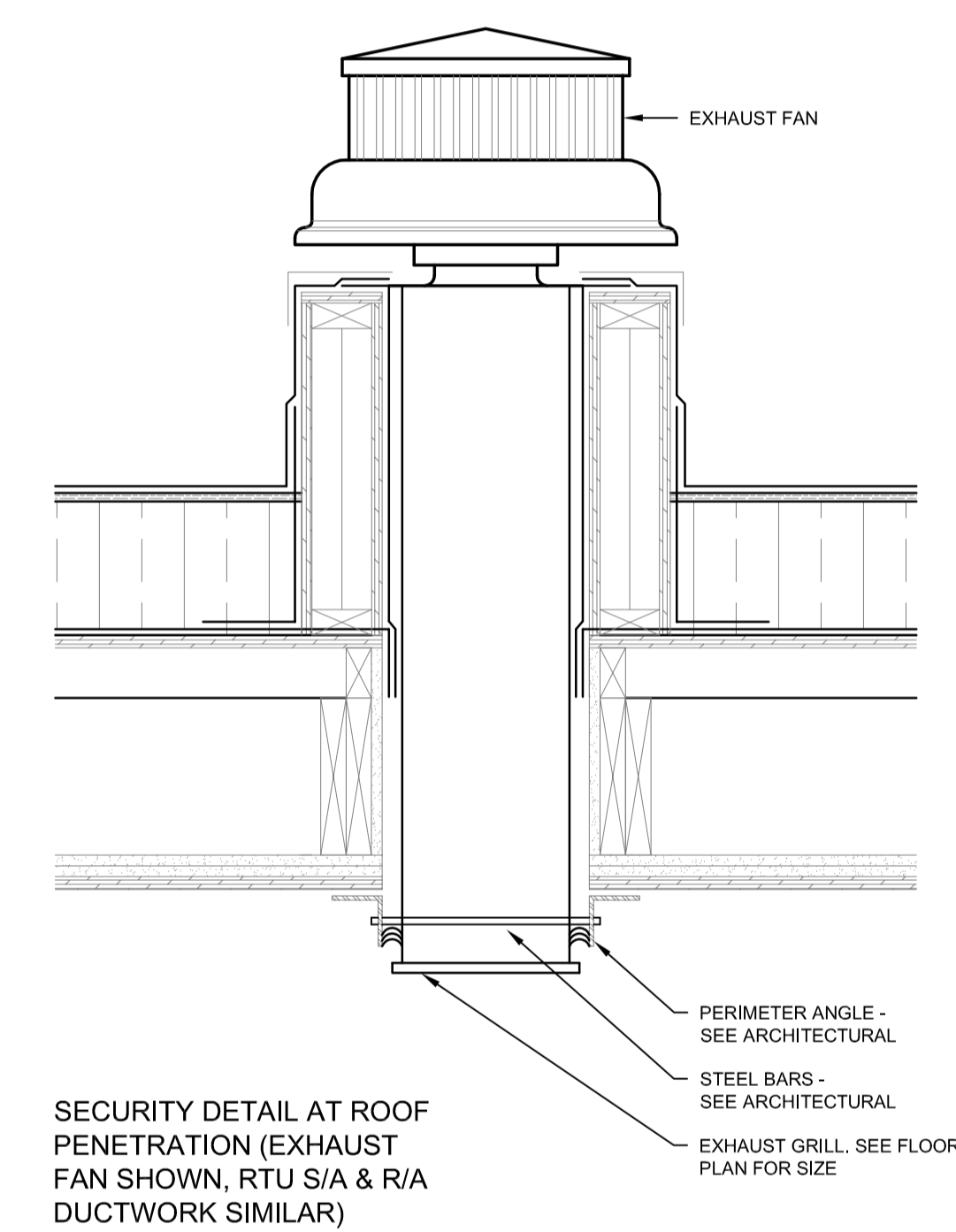
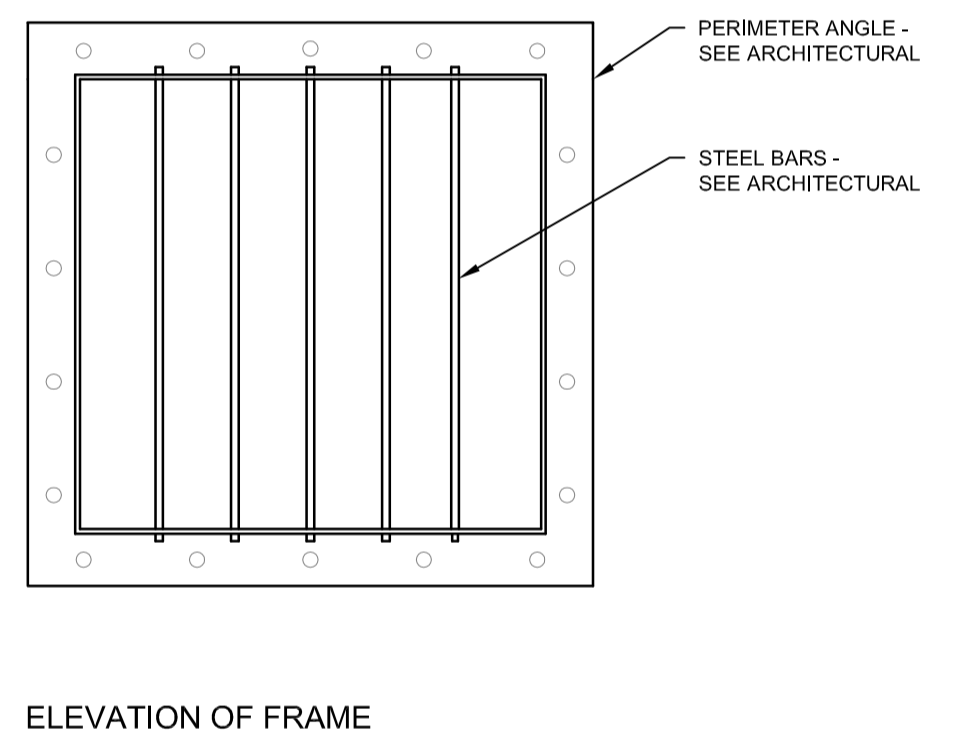
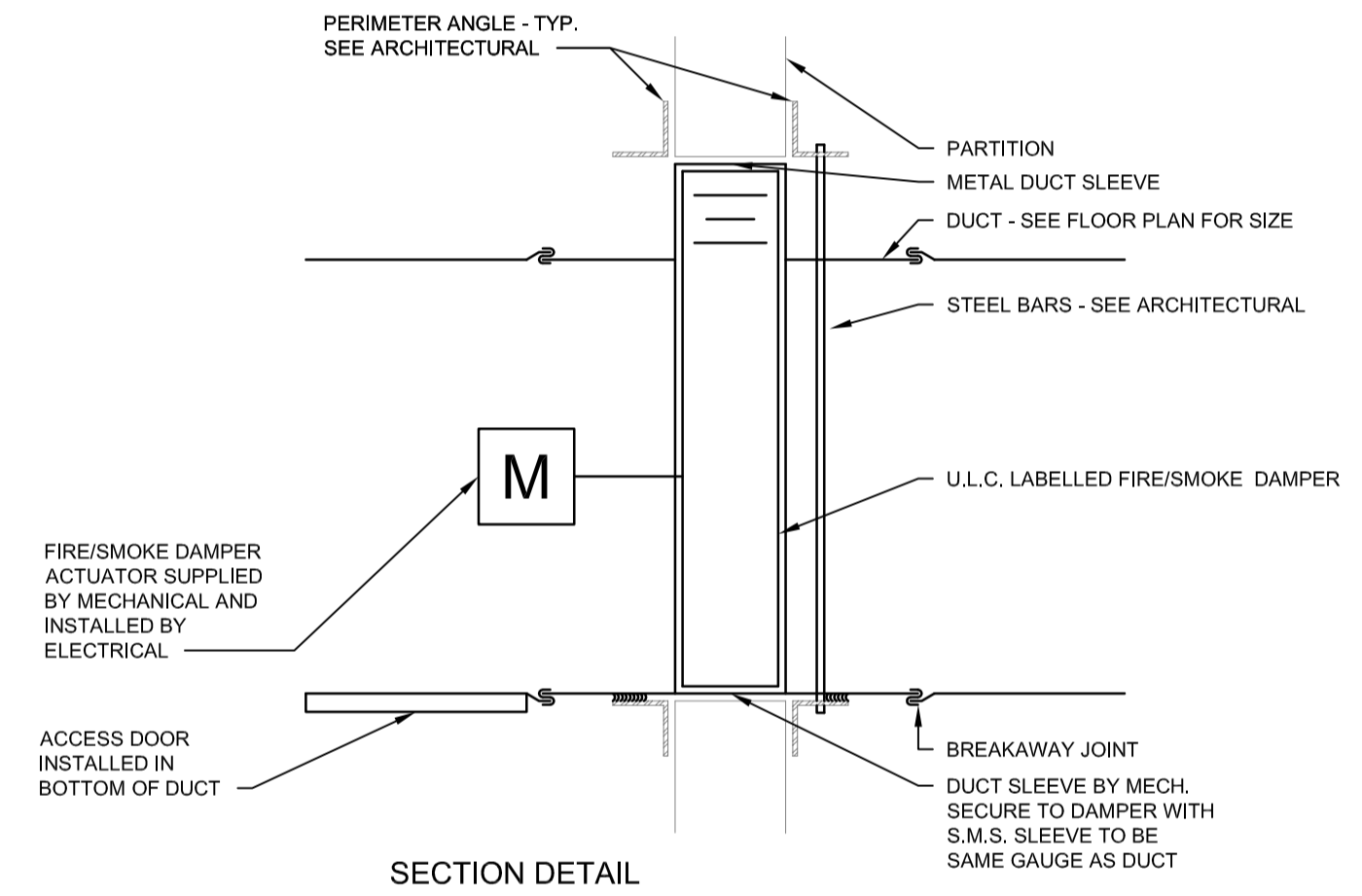
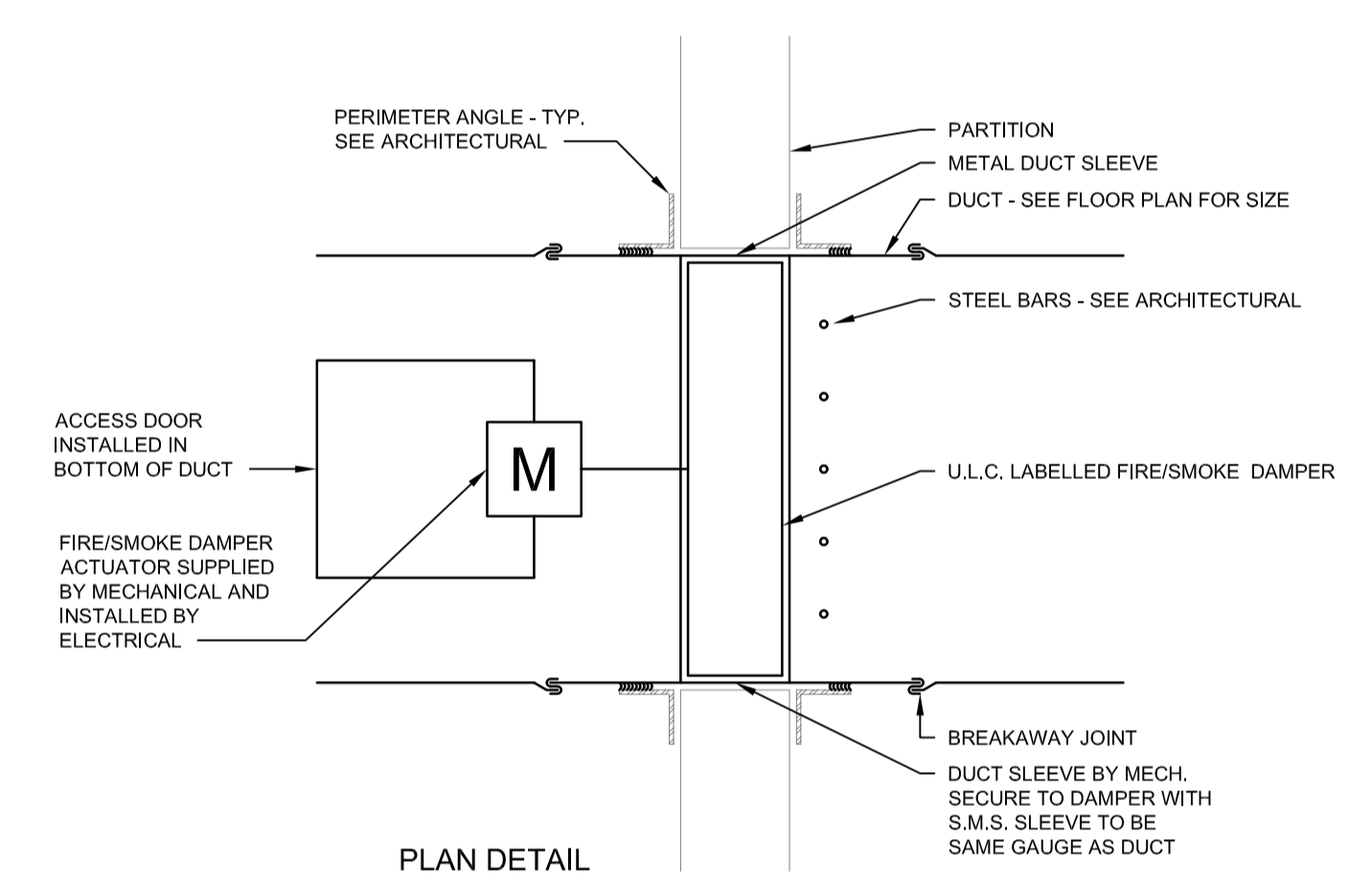
1 114 MECHANICAL ROOM  
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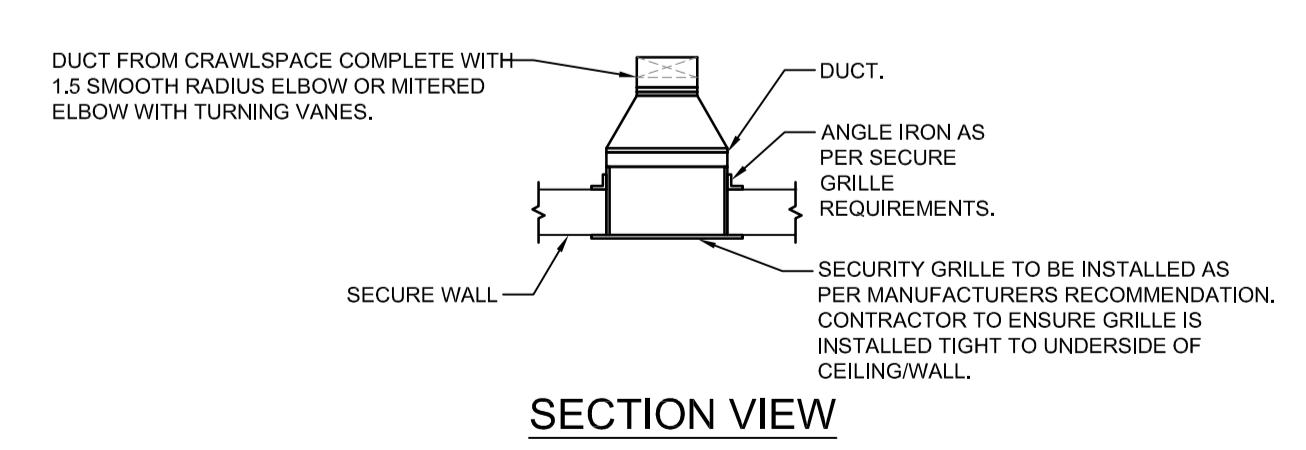
2 135 MECHANICAL ROOM  
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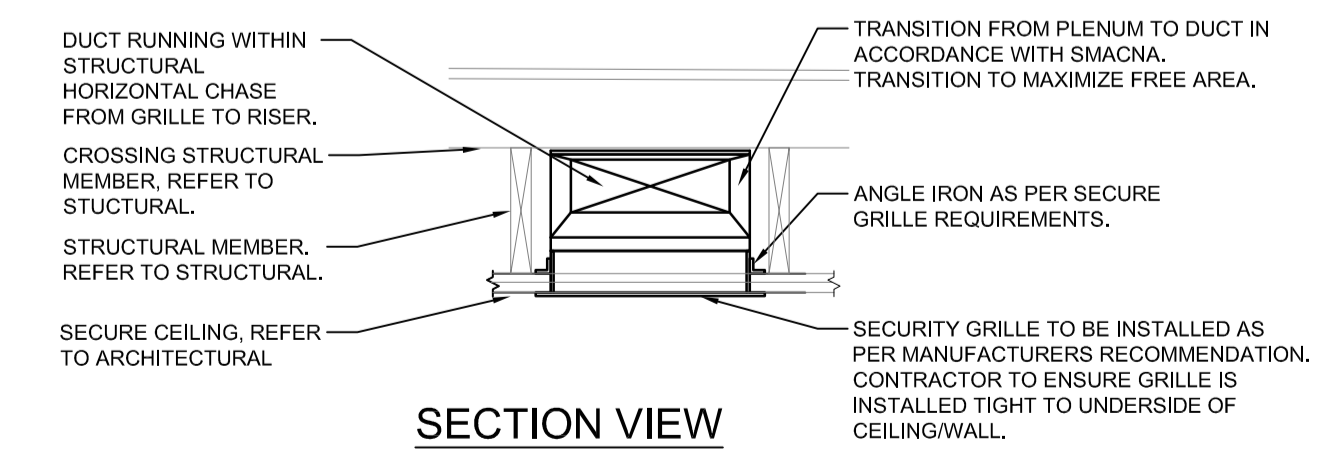
3 TYPICAL MECHANICAL CHASE  
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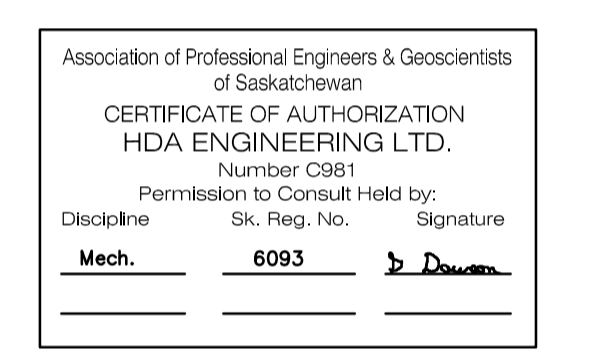
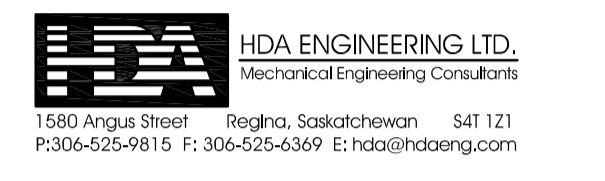
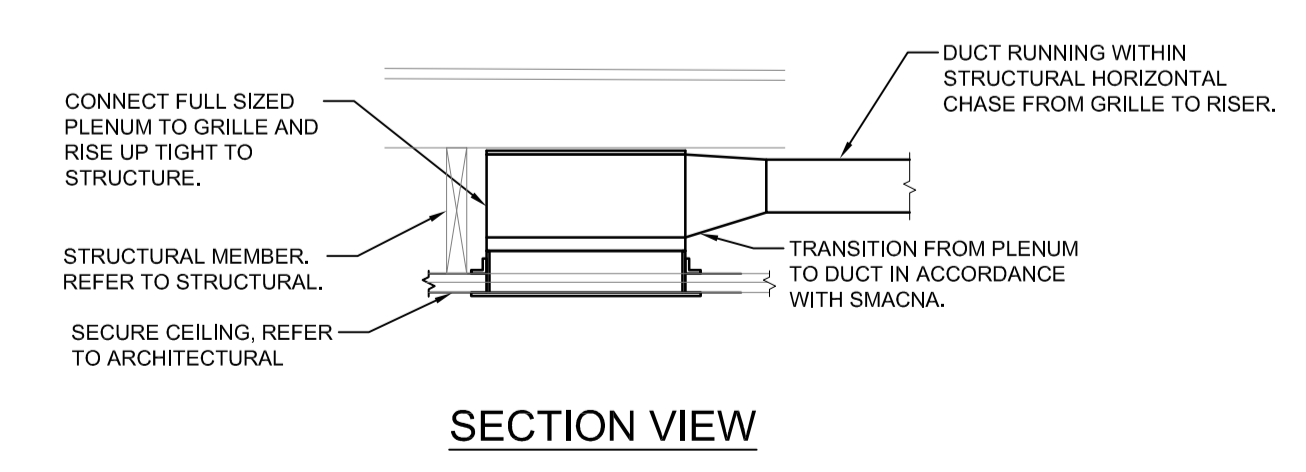
SECURITY DUCT PENETRATION DETAIL (FOR DUCTS LARGER THAN 300x300)  
 N.T.S.



SECURITY S/A DETAIL  
 N.T.S.



SECURITY E/A DETAIL  
 N.T.S.



**DO NOT SCALE DRAWINGS**

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Revision/Revision	Description/Description	Date/Date
Client/client		

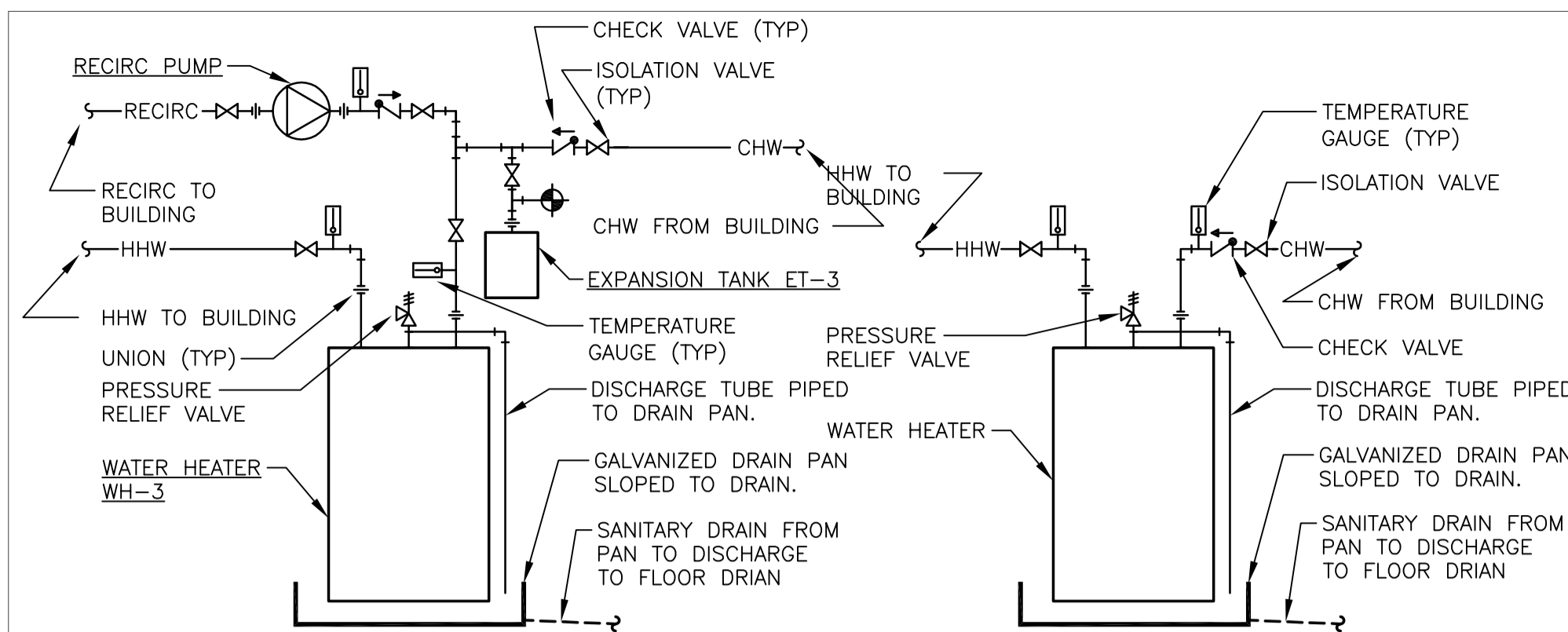
Project title/Titre du projet  
**NEW MODULAR POLICE BUILDING AND EMPLOYEE HOUSING BLACK LAKE, SASKATCHEWAN**

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

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

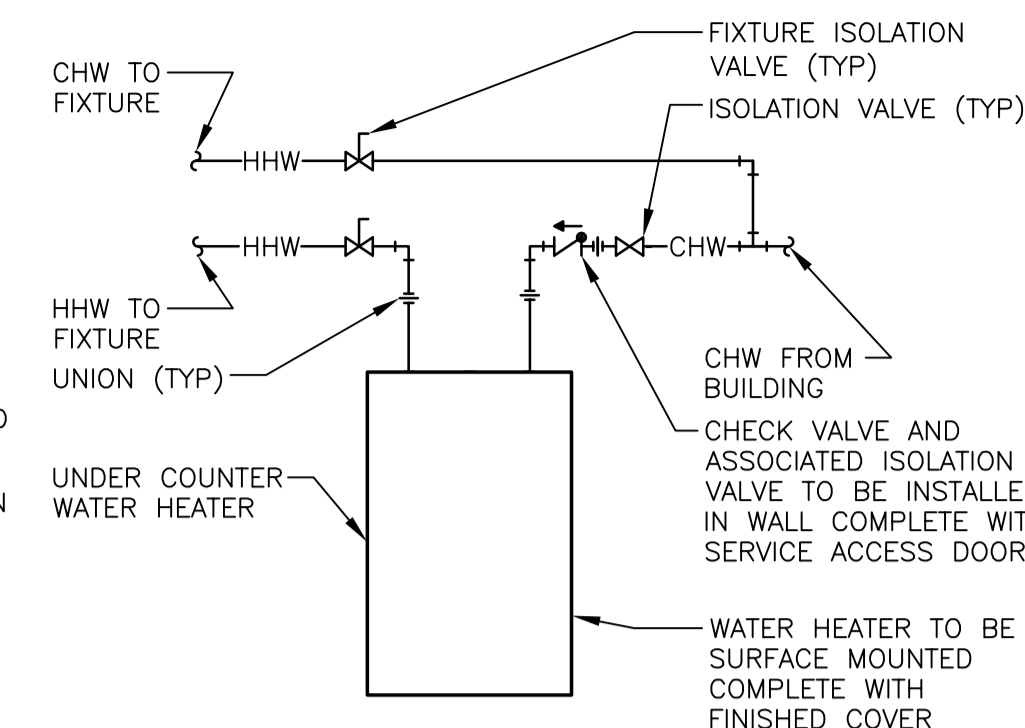
Drawing title/Titre du dessin  
**MECHANICAL ROOM DETAILS**

Project No./No. du projet	Sheet/Fauille	Revision no./La Révision no.
S-03-2014	M5.1	0

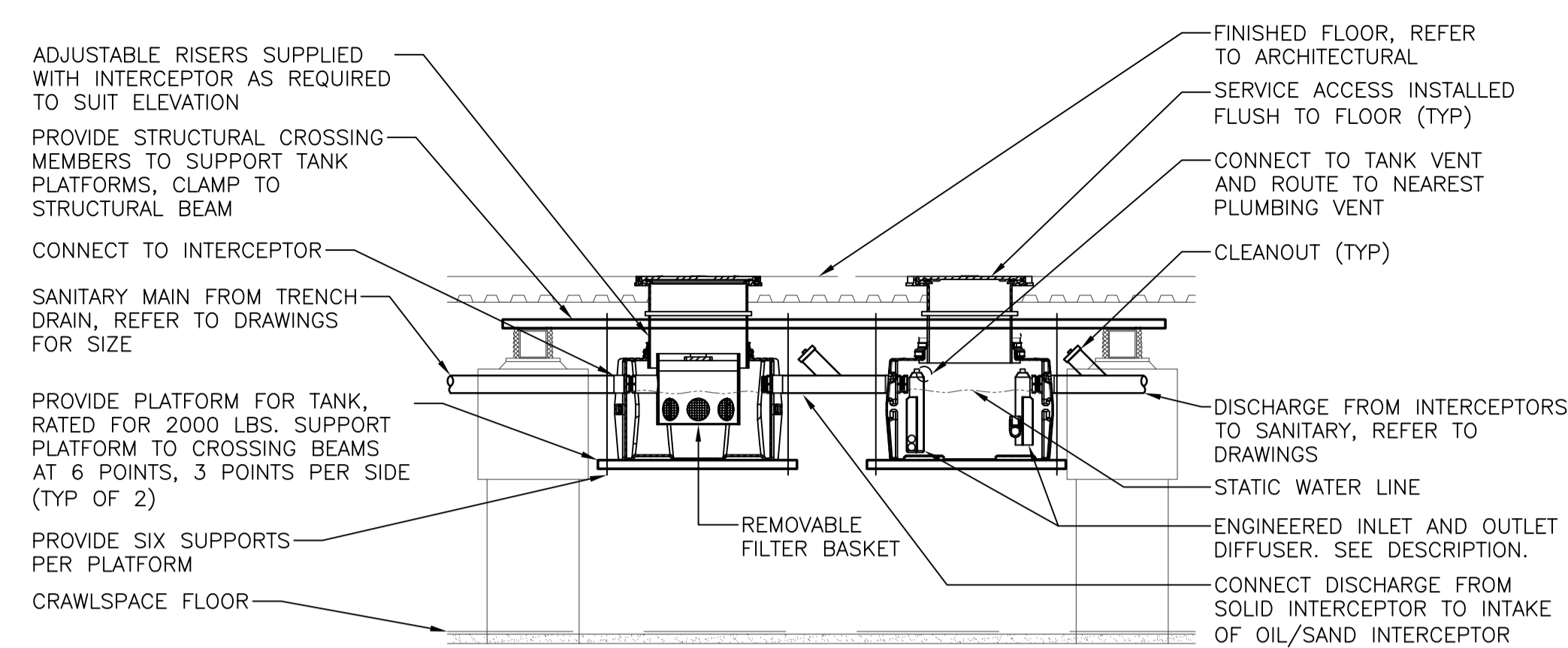


WATER HEATER WITH RECIRC DETAIL

WATER HEATER W/O RECIRC DETAIL

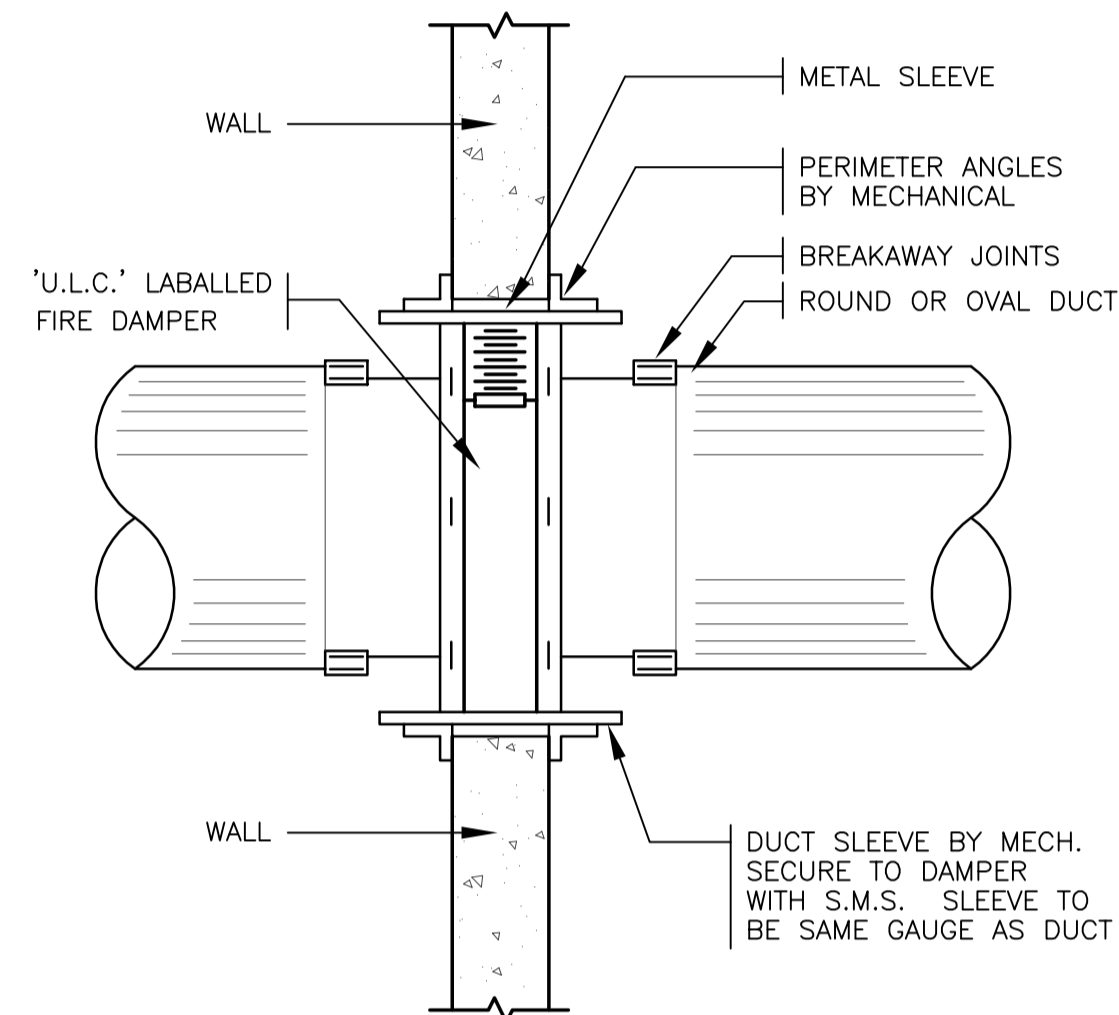


ON DEMAND UNDERCOUNTER WATER HEATER DETAIL

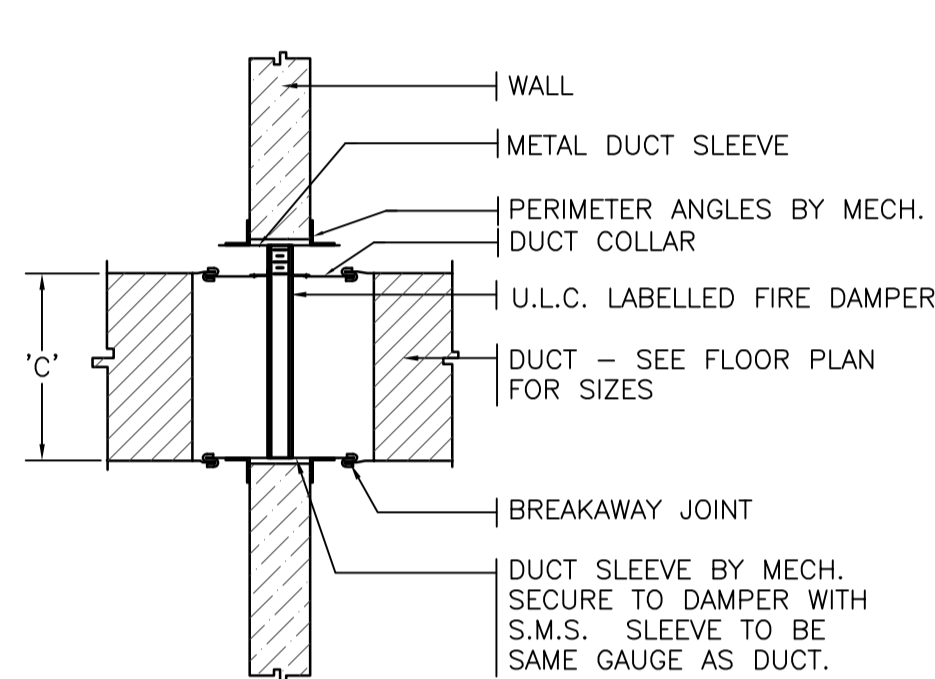


INTERCEPTOR DETAIL N.T.S.

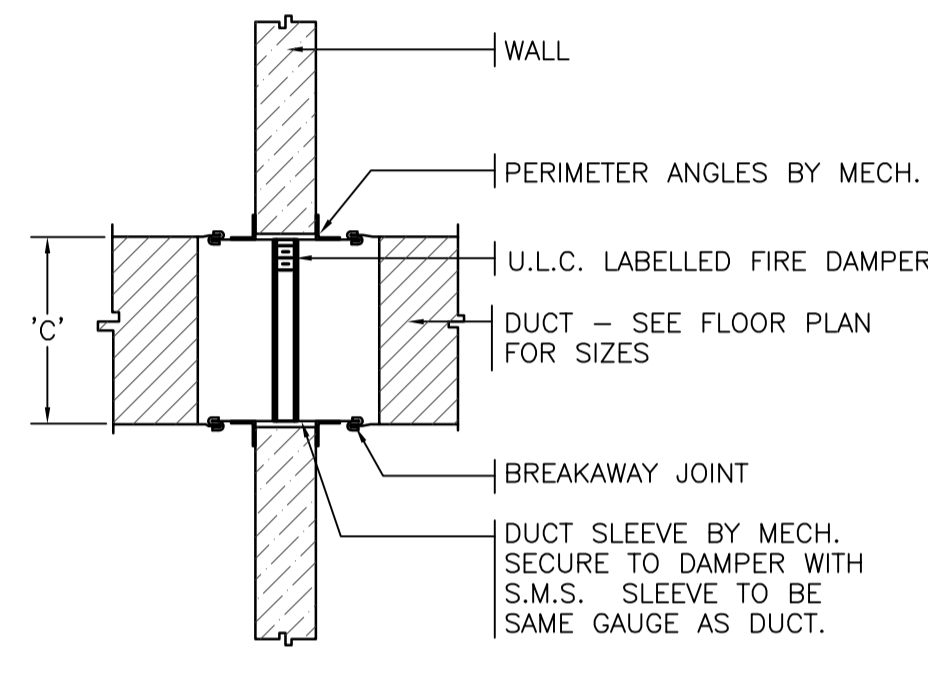
NOTE: WATER HEATER PROVIDED SHALL BE RATED TO BE INSTALLED WITHOUT A TEMPERATURE AND PRESSURE RELIEF VALVE



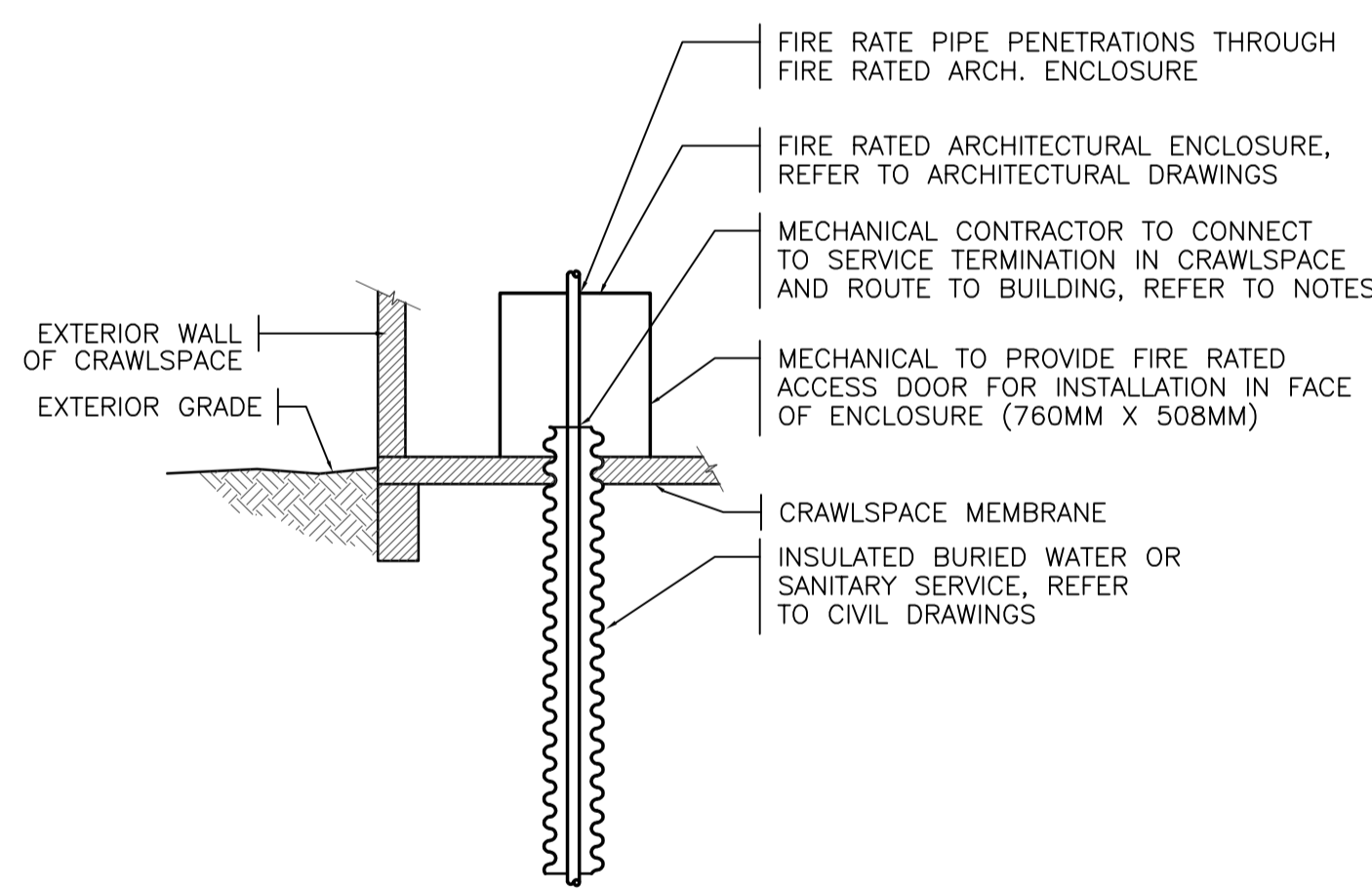
TYPE 'C' FIRE DAMPER n.t.s.



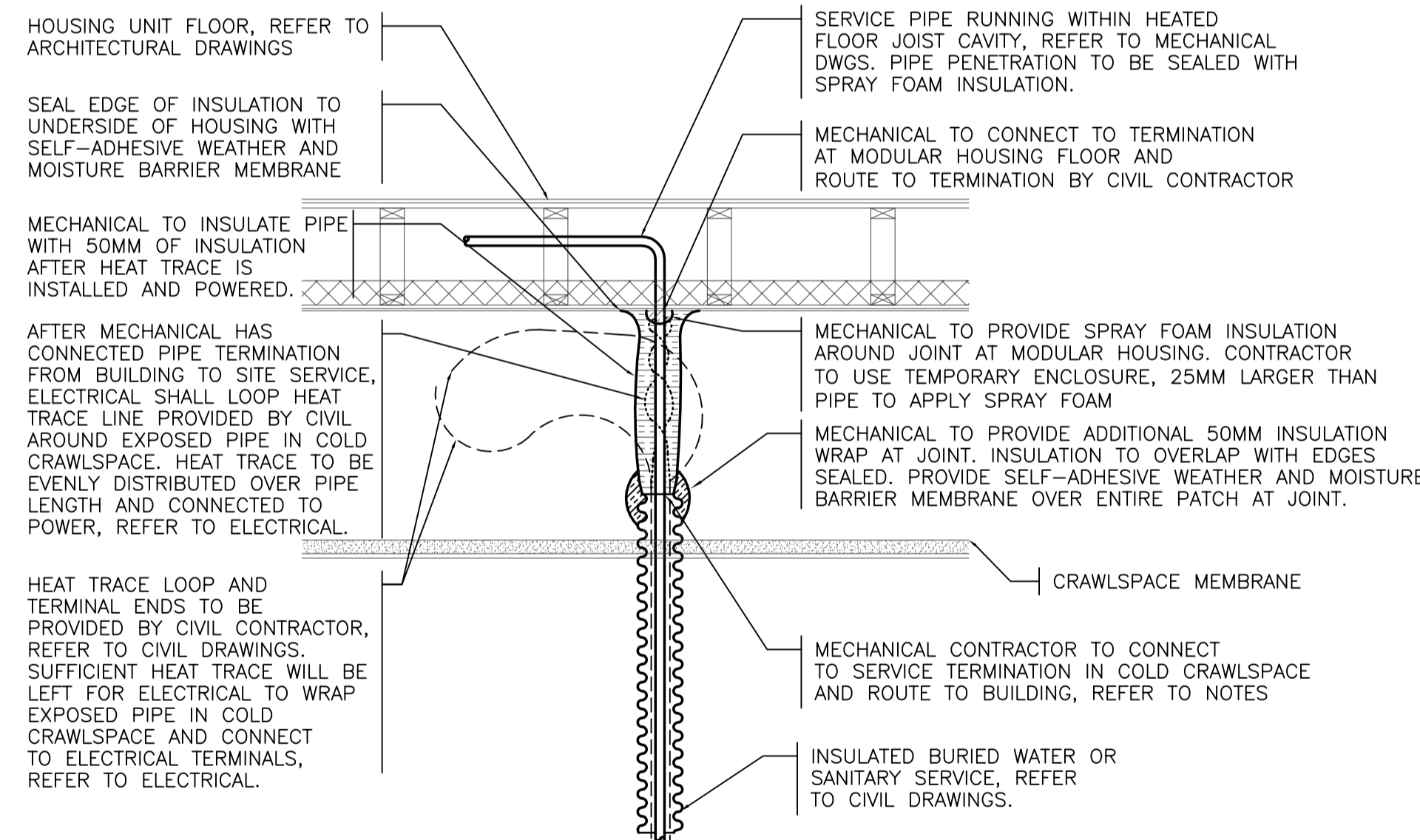
TYPE 'B' FIRE DAMPER - n.t.s.



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



POLICE BUILDING CIVIL/MECHANICAL INTERFACE DETAIL n.t.s.



HOUSING CIVIL/MECHANICAL INTERFACE DETAIL n.t.s.

NOTES:

MECHANICAL AND CIVIL CONTRACTORS SHALL COORDINATE SERVICE CONNECTION POINTS. SERVICE CONNECTIONS TO BE AS FOLLOWS:

**WATER SERVICE TO POLICE BUILDING:** DR-11 POLYPIPE, SIZE AS INDICATED ON DRAWINGS, TERMINATED BY CIVIL CONTRACTOR WITH FLANGE. MECHANICAL CONTRACTOR TO ROUTE FROM FLANGE TO BUILDING, COORDINATE FLANGE CONNECTION WITH CIVIL.

**DOMESTIC WATER MAIN TO HOUSING UNITS:** SDR-9 POLYPIPE, FUSION WELDED, SIZE AS INDICATED ON DRAWINGS. MECHANICAL CONTRACTOR TO PROVIDE TERMINATION COUPLER TO CIVIL CONTRACTOR FOR CONNECTION OF PIPE WITHIN THE BUILDING TO BURIED PIPE. COUPLER TO BE FUSION WELD ON BURIED SIDE, MATCHING SYSTEM UTILIZED ON SITE AND FITTING STYLE MATCHED TO CHOSEN EXPOSED PIPE INSTALLATION MATERIAL.

**SANITARY SERVICE:** SDR-28 PVC, MECHANICAL JOINT, SIZE AS INDICATED ON DRAWINGS. MECHANICAL CONTRACTOR MAY UTILIZE CLAMPED FLEXIBLE COUPLING TO JOIN BURIED PIPE TERMINATION TO BUILDING PIPE. BUILDING SERVICE CLEANOUT TO BE LOCATED OUTSIDE OF FIRE RATED COVER. NOTE THAT DRAWINGS ARE BASED ON MAINTAINING SUFFICIENT ELEVATION TO ENTER TOP OF ARCHITECTURAL ENCLOSURE. IF PIPE ELEVATION DROPS ON SITE TO COORDINATE WITH OTHER TRADES, IT IS PERMISSIBLE TO ENTER ENCLOSURE FROM SIDE PROVIDE ACCESS DOOR LOCATION IS NOT AFFECTED.

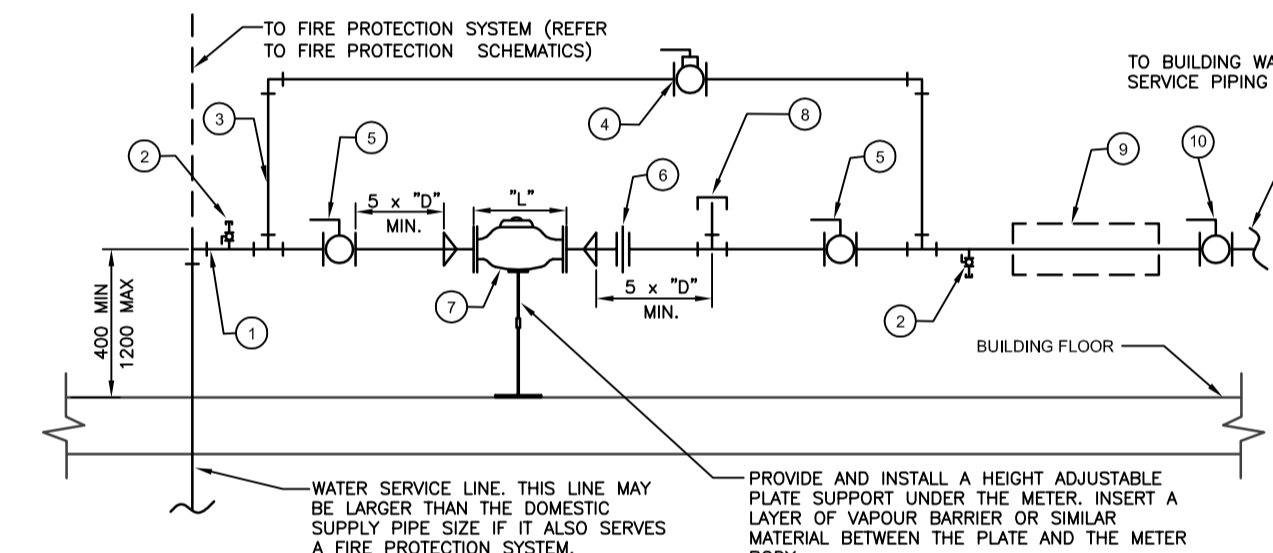
NOTES:

MECHANICAL AND CIVIL CONTRACTORS SHALL COORDINATE SERVICE CONNECTION POINTS. SERVICE CONNECTIONS TO BE AS FOLLOWS:

**WATER SERVICE TO EACH HOUSING UNIT:** SDR-9 POLYPIPE, FUSION WELDED, SIZE AS INDICATED ON DRAWINGS. MECHANICAL CONTRACTOR TO PROVIDE TERMINATION COUPLER TO CIVIL CONTRACTOR FOR CONNECTION OF PIPE WITHIN THE BUILDING TO BURIED PIPE. COUPLER TO BE FUSION WELD ON BURIED SIDE, MATCHING SYSTEM UTILIZED ON SITE AND FITTING STYLE MATCHED TO CHOSEN EXPOSED PIPE INSTALLATION MATERIAL.

**SANITARY SERVICE:** SDR-28 PVC, MECHANICAL JOINT, SIZE AS INDICATED ON DRAWINGS. MECHANICAL CONTRACTOR MAY UTILIZE CLAMPED FLEXIBLE COUPLING TO JOIN BURIED PIPE TERMINATION TO BUILDING PIPE. BUILDING SERVICE CLEANOUT TO BE LOCATED OUTSIDE OF FIRE RATED COVER. NOTE THAT DRAWINGS ARE BASED ON MAINTAINING SUFFICIENT ELEVATION TO ENTER TOP OF ARCHITECTURAL ENCLOSURE. IF PIPE ELEVATION DROPS ON SITE TO COORDINATE WITH OTHER TRADES, IT IS PERMISSIBLE TO ENTER ENCLOSURE FROM SIDE PROVIDE ACCESS DOOR LOCATION IS NOT AFFECTED.

**SELF-ADHESIVE WEATHER AND MOISTURE BARRIER MEMBRANE:** TO CONSIST OF AN SBS RUBBERIZED ASPHALT COMPOUND, INTEGRALLY LAMINATED TO A GLASS SCRIM REINFORCED ALUMINUM FOIL. TO BE SPECIFICALLY DESIGNED TO BE SELF-ADHERED TO A PREPARED SUBSTRATE PROVIDING A WEATHER BARRIER. BASIS OF DESIGN IS BAKOR FOLSKIN®.



LEGEND:  
1. 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.  
2. 6mm CONNECTION c/w BALL VALVE AND THREAD PLUG. ORIENT EACH CONNECTION AS SHOWN.  
3. 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.  
4. 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.  
5. 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.  
6. QUICK DISCONNECT SUCH AS PIPE UNION OR GROOVED COUPLING.  
7. 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.  
8. 65mm CONNECTION WITH NPT THREAD CAP. ORIENT CONNECTION TOWARD THE MOST ACCESSIBLE DIRECTION FOR CONNECTION AND EXTENSION OF A TEST HOSE.  
9. 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.  
10. BALL OR BUTTERFLY TYPE ISOLATING VALVE FOR BACKFLOW PREVENTER.

PROVIDE AND INSTALL A HEIGHT ADJUSTABLE PLATE SUPPORT UNDER THE METER. INSERT A LAYER OF VAPOUR BARRIER OR SIMILAR MATERIAL BETWEEN THE PLATE AND THE METER BODY.

WATER SERVICE LINE. THIS LINE MAY BE LARGER THAN THE DOMESTIC SUPPLY PIPE SIZE IF IT ALSO SERVES A FIRE PROTECTION SYSTEM.

TO FIRE PROTECTION SYSTEM (REFER TO FIRE PROTECTION SCHEMATICS)

TO BUILDING WATER SERVICE PIPING

450 MIN (200 MAX)

5 x 70" MIN.

5 x 70" MIN.

BUILDING FLOOR

MECHANICAL TO CONNECT TO TERMINATION AT MODULAR HOUSING FLOOR AND ROUTE TO TERMINATION BY CIVIL CONTRACTOR

MECHANICAL TO PROVIDE SPRAY FOAM INSULATION AROUND JOINT AT MODULAR HOUSING CONTRACTOR TO USE TEMPORARY ENCLOSURE, 25MM LARGER THAN PIPE TO APPLY SPRAY FOAM

MECHANICAL TO PROVIDE ADDITIONAL 50MM INSULATION WRAP AT JOINT. INSULATION TO OVERLAP WITH EDGES SEALED. PROVIDE SELF-ADHESIVE WEATHER AND MOISTURE BARRIER MEMBRANE OVER ENTIRE PATCH AT JOINT.

MECHANICAL CONTRACTOR TO CONNECT TO SERVICE TERMINATION IN COLD CRAWLSPACE AND ROUTE TO BUILDING, REFER TO NOTES

INSULATED BURIED WATER OR SANITARY SERVICE, REFER TO CIVIL DRAWINGS.

SEAL EDGE OF INSULATION TO UNDERSIDE OF HOUSING WITH SELF-ADHESIVE WEATHER AND MOISTURE BARRIER MEMBRANE

HOUSING UNIT FLOOR, REFER TO ARCHITECTURAL DRAWINGS

SERVICE PIPE RUNNING WITHIN HEATED FLOOR JOIST CAVITY, REFER TO MECHANICAL DWGS. PIPE PENETRATION TO BE SEALED WITH SPRAY FOAM INSULATION.

MECHANICAL TO INSULATE PIPE WITH 50MM OF INSULATION AFTER HEAT TRACE IS INSTALLED AND POWERED.

AFTER MECHANICAL HAS CONNECTED PIPE TERMINATION FROM BUILDING TO SITE SERVICE, ELECTRICAL SHALL LOOP HEAT TRACE LINE PROVIDED BY CIVIL AROUND EXPOSED PIPE IN COLD CRAWLSPACE. HEAT TRACE TO BE EVENLY DISTRIBUTED OVER PIPE LENGTH AND CONNECTED TO POWER, REFER TO ELECTRICAL

HEAT TRACE LOOP AND TERMINAL ENDS TO BE PROVIDED BY CIVIL CONTRACTOR, REFER TO CIVIL DRAWINGS. SUFFICIENT HEAT TRACE WILL BE LEFT FOR ELECTRICAL TO WRAP EXPOSED PIPE IN COLD CRAWLSPACE AND CONNECT TO ELECTRICAL TERMINALS, REFER TO ELECTRICAL

MECHANICAL TO PROVIDE ADDITIONAL 50MM INSULATION WRAP AT JOINT. INSULATION TO OVERLAP WITH EDGES SEALED. PROVIDE SELF-ADHESIVE WEATHER AND MOISTURE BARRIER MEMBRANE OVER ENTIRE PATCH AT JOINT.

MECHANICAL CONTRACTOR TO CONNECT TO SERVICE TERMINATION IN COLD CRAWLSPACE AND ROUTE TO BUILDING, REFER TO NOTES



100-3725 Patsy Street Regina, SK S4S 6A8 ph: (306) 569-2255  
102-3718 Kestrel Place Saskatoon SK S7P 5A6 ph: (306) 655-6457  
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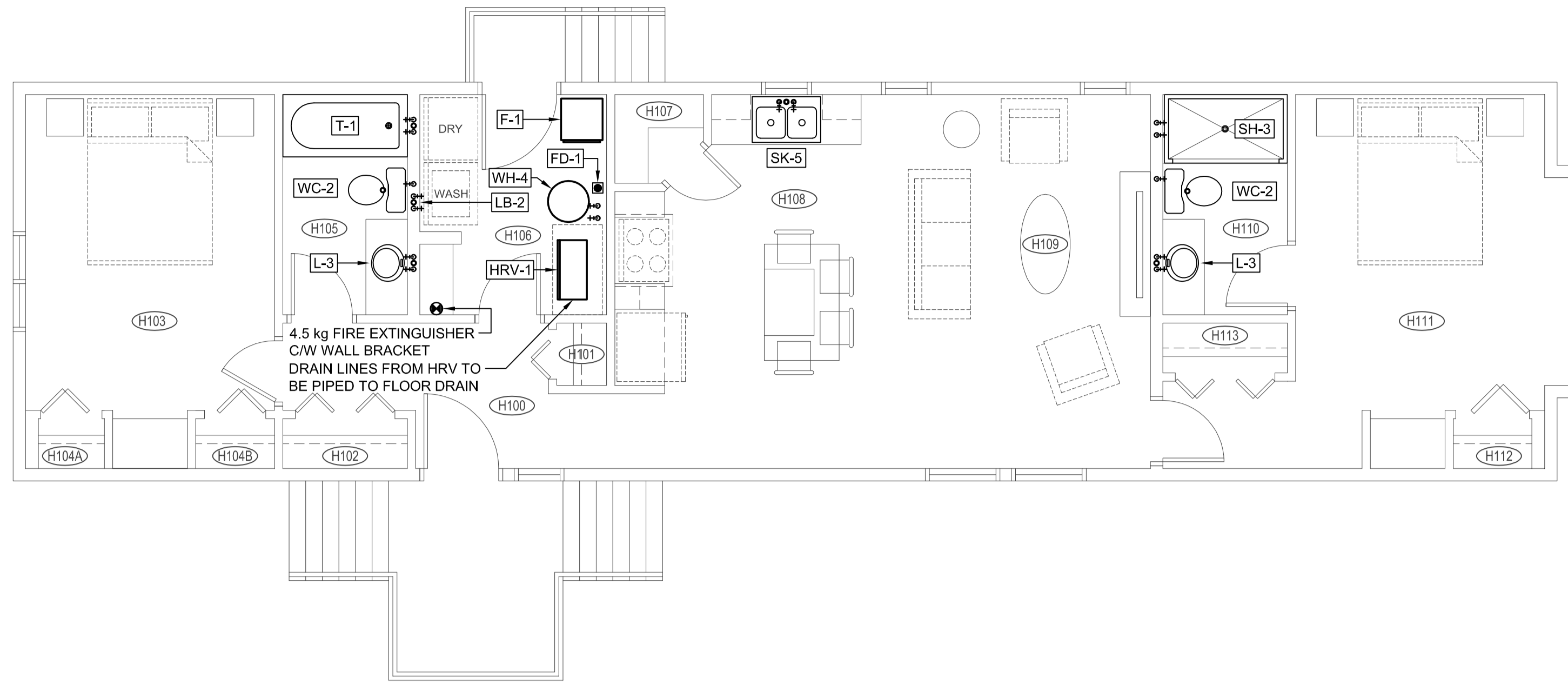
NEW MODULAR POLICE BUILDING AND EMPLOYEE HOUSING BLACK LAKE, SASKATCHEWAN

Approved by/Approve par  
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Drawn by/Dessine par CHK  
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Architectural and Engineering Resources Manager/ Ressources Architectural et de Directeur d'Ingénierie  
Client/client

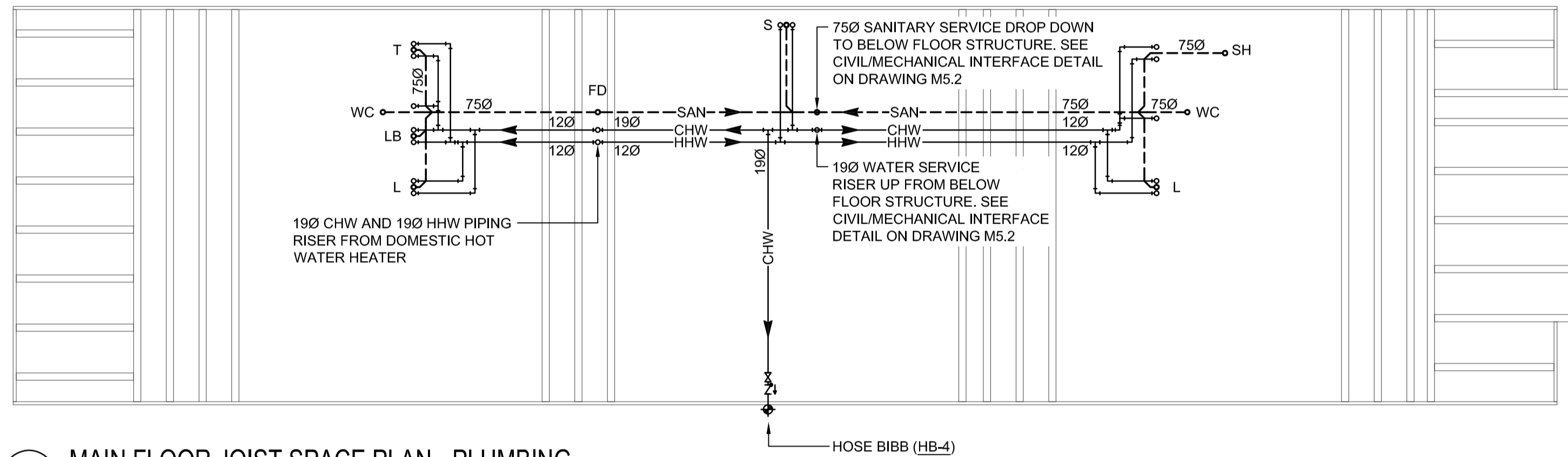
DETAILS AND SCHEMATICS

Project No./No. du projet: S-03-2014  
Sheet/Fauille: M5.2  
Revision no./La Révision no.: 0

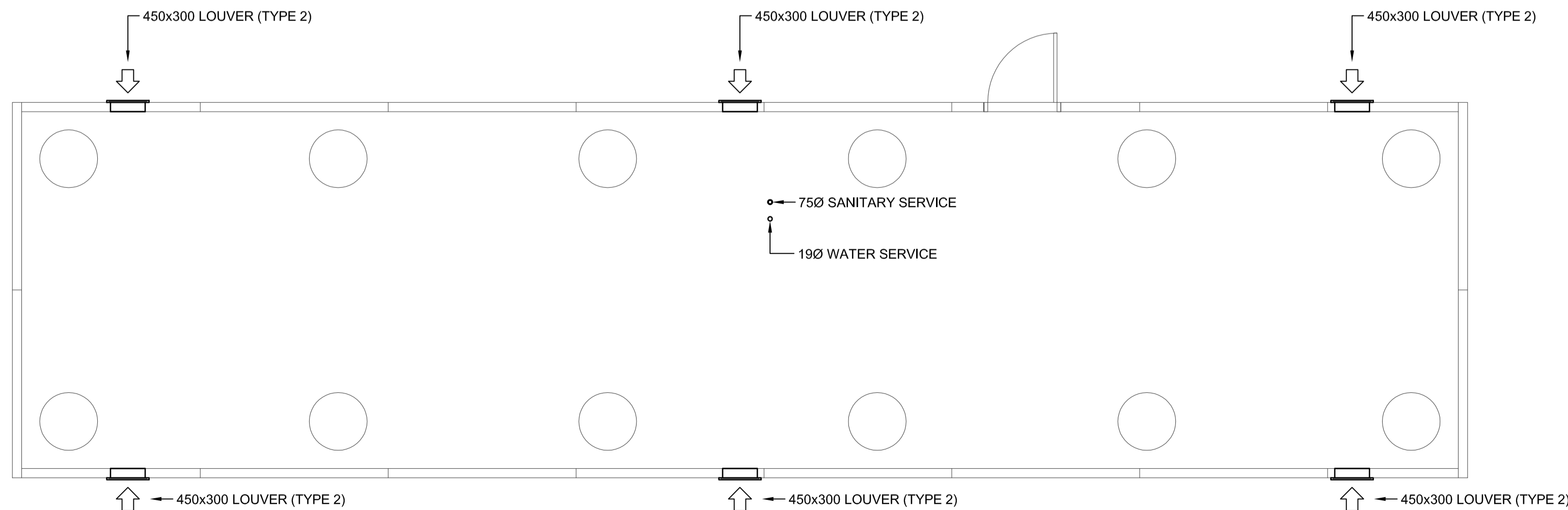




1 MAIN FLOOR PLAN - PLUMBING  
1:50



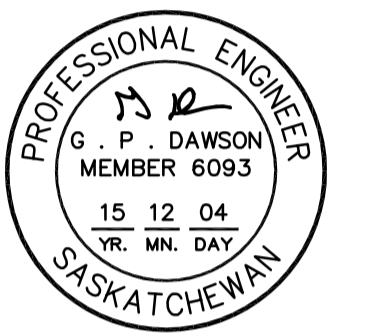
2 MAIN FLOOR JOIST SPACE PLAN - PLUMBING  
1:50



3 CRAWLSPACE PLAN - VENTILATION  
1:50

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 12Ø 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.
- MAKE ALL CONNECTIONS FOR EQUIPMENT SUPPLIED BY OTHERS. REFER TO DETAILS FOR CONNECTIONS.



DO NOT SCALE DRAWINGS

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Revision/Revision	Description/Description	Date/Date
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Project title/Titre du projet

**NEW MODULAR POLICE BUILDING AND EMPLOYEE HOUSING  
BLACK LAKE, SASKATCHEWAN**

Approved by/Approve par

Designed by/Concept par  
TKC

Drawn by/Dessine par  
CHK

Project Manager/Administrateur de Projets

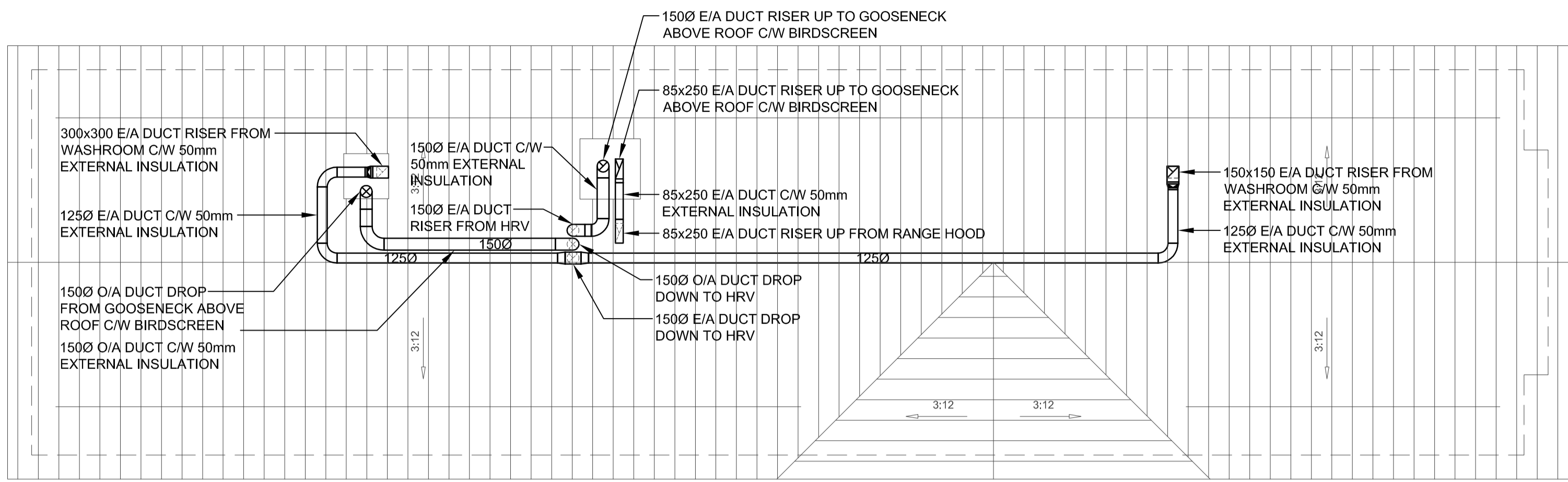
Architectural and Engineering Resources Manager/  
Ressources Architectural et de Directeur d'Ingénierie

Client/client

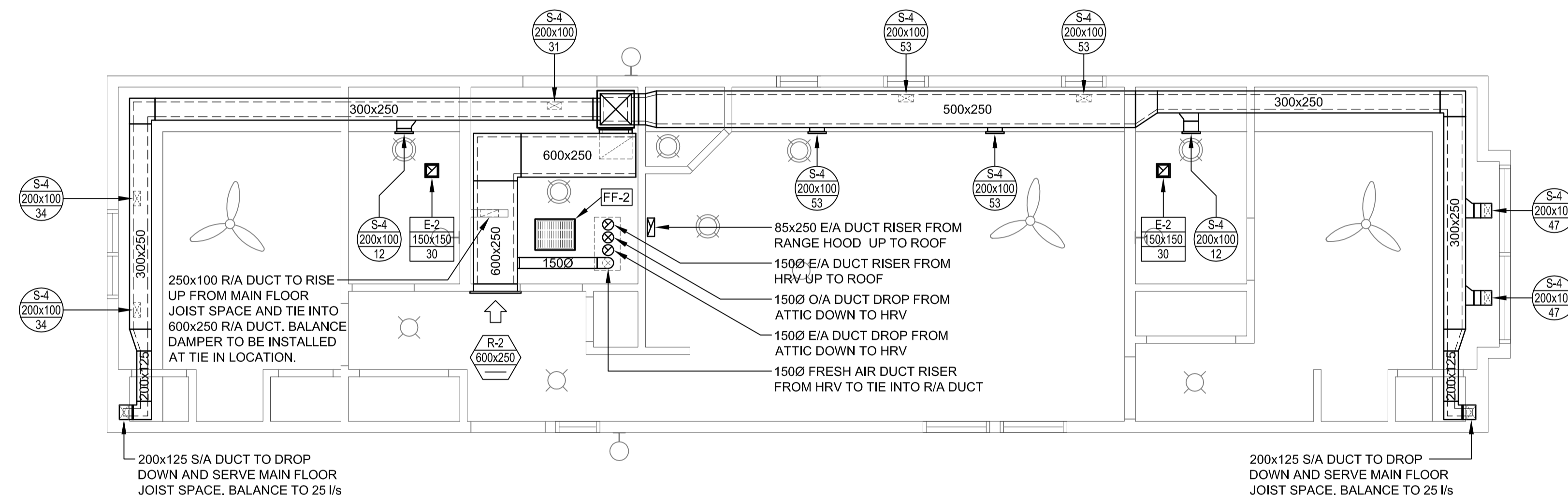
Drawing title/Titre du dessin

**HOUSING UNIT  
PLUMBING**

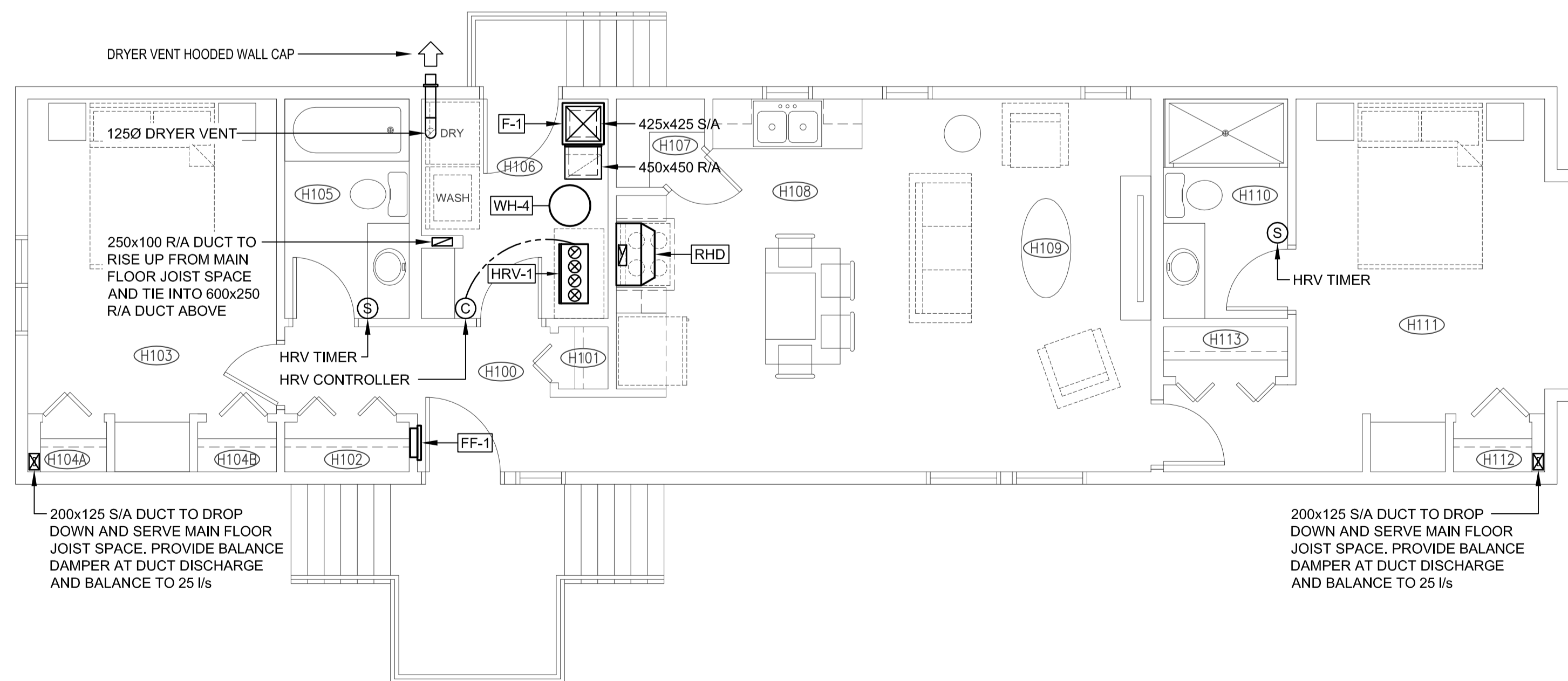
Project No./No. du projet S-03-2014	Sheet/Fauille M6.1	Revision no./La Révision no. 0
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3 ATTIC PLAN – VENTILATION  
1:50



2 CEILING PLAN – VENTILATION  
1:50



1 MAIN FLOOR PLAN – VENTILATION  
1:50

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.

- GOOSENECK DISCHARGE/INTAKE TO TERMINATE A MINIMUM OF 610MM (2') ABOVE FINISHED ROOF. TERMINATION TO BE HORIZONTAL TO REDUCE CHANCE OF DRIVEN SNOW ENTERING DUCT.



DO NOT SCALE DRAWINGS

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0	ISSUED FOR TENDER	2015/12/04
Revision/	Description/Description	Date/Date
Client/client		

Project title/Titre du projet

**NEW MODULAR POLICE BUILDING AND EMPLOYEE HOUSING BLACK LAKE, SASKATCHEWAN**

Approved by/Approve par

Designed by/Concept par  
TKC

Drawn by/Dessine par  
CHK  
Project Manager/Administrateur de Projets

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

Client/client

Drawing title/Titre du dessin

**HOUSING UNIT - MAIN FLOOR PLAN VENTILATION**

Project No./No. du projet	Sheet/Fauille	Revision no./La Révision no.
S-03-2014	M6.2	0

