Part 1 General

1.1 ADDENDUM FORM

.1 This Addendum forms part of the Contract Documents and modifies the Bidding Documents dated 19 May 2017 with amendments and additions noted below.

.2 Acknowledge receipt of this Addendum in the space provided in the Bid Form. Failure to do so may disqualify the Bidder at the Owner's discretion.

.3 This addendum consists of three (3) pages plus the following list of drawings:

No.	Drawing Title	Issue Date
M1.0	Keyplan, and Symbol Legend	August 9, 2017
M1.1	Existing Ceiling HVAC Layout	May 19, 2017
M1.2	Existing Raised Floor HVAC Layout	May 19, 2017
M1.3	Existing Underfloor HVAC Layout	May 19, 2017
M2.1	Existing and New PlumbingLayout	May 19, 2017
M3.1	New Ceiling HVAC Layout	May 19,2017
M3.2	New Raised Floor HVAC Layout	May 19, 2017
M3.3	New Underfloor HVAC Layout	May 19, 2017
M4.1	New Underfloor Piping Layout	May 19, 2017
M5.1	Sprinkler Layout	May 19, 2017
M6.1	Mechanical Schedules	May 19, 2017
M7.1	Mechanical Details and Control Schematic	May 19, 2017

1.2 CHANGES TO PROJECT MANUAL

.1 SECTION 01 10 00 – SUMMARY OF WORK

.1 **Delete** paragraph 1.3, Supplementary Information for Progress Payments, entirely.

1.3 CHANGES TO DRAWINGS

.1 DRAWINGS M1.0 TO M7.1 – Mechanical Drawings

.1 Replace all Mechanical Drawings with the attached Mechanical Drawings.

1.4 CLARIFICATIONS

.1 What type, make and model of windows are on GL 17 between G&M, are they demountable frames?

.1 A: Refer to spec Section 08 50 00. Windows are not demountable.

.2 Is there a lock required for the security window in waiting room 400, if so what is the specification of same?

.1 A. Keyed lock with removable cylinder.

.3 What type of glass in the security window in room 400?

.1 A. Refer to spec section 08 56 53, paragraph 2.2.7.

.4 Mobile Storage Shelving - since the end panels are to match existing shelving (2.1.5) what is the make and model number of the existing system

.1 A. Supplied by MCA mobile systems, make and model number not available.

.5 Is Teknion Altos demountable walls an approved alternate?

.1 A. Any product meeting the technical spec is acceptable.

.6 There is no specification on the flattened metal mesh.

.1 A. Refer to spec Section 09 21 16, paragraph 2.3.

.7 ID1.2 Note 5 remove windows, does this mean remove complete wall too?

.1 A. Yes, wall is dashed as per demolition legend.

.8 ID2.2 Note 1 Remove posts, is this in reference to the handrail supports?

.1 A. Yes.

.9 ID2.1 Note 2 Is the floor structurally designed to carry the high density storage system?

.1 A. Yes.

.10 ID2.1 Note 16 Acoustic Quilt details vague, thickness and fastening details required.

.1 A. Refer to spec section 09 81 00, paragraph 2.3, and detail 7 on sheet ID2.2. The product included in the bid will have its own unique mounting requirements.

.11 ID2.1 Note 18 Blocking…provide specific locations, elevation and required dimension for blocking required.

.1 A. Refer to elevation 4 on sheet id3.3 and specification section 06 10 00 paragraph 3.2.

.12 ID3.2 Detail 1 What is option 1 for?

.1 A. Disregard “option 1” text.

.13 Please advise information on existing System. Manufacturer, pictures, Sizes.

.1 A. Noted above. Shelving system sizes:

Fixed units 915mm wide, 383 mm deep, 1930 mm high – 6 adjustable shelves with removable dividers.

Mobile units 915mm wide, 760 mm deep, 1930 mm high – 6 adjustable shelves with removable dividers.

.14 These specs are for a mid-size, aluminum – grouted track and smaller carriage profile, only a 3 ¾ wheel. We can provide almost 5” wheel, dual flanged – will this be acceptable?

.1 A. New product must match existing.

.15 Are sprinklers in the room? (Note: Fire safety codes require 18” of clearance from the shelving units to the sprinkler heads)

.1 A. Yes, clearances have been accommodated with sizes noted above.

.16 Please select desired shelving height: 65” 76” 86” or 97”

.1 A. See .13 above.

.17 Is locking security required?

.1 A. No.

.18 The specs do not mention decking or floor covering. I am assuming with this low-profile aluminum rail they are describing in the spec, flooring or decking is not needed or required. Our system will include decking (subfloor). Please confirm is incline ramp, (ADA) entrance is required?

.1 A. Provide ramp on one side of aisles.

.19 Are reference shelves required?

.1 A. No.

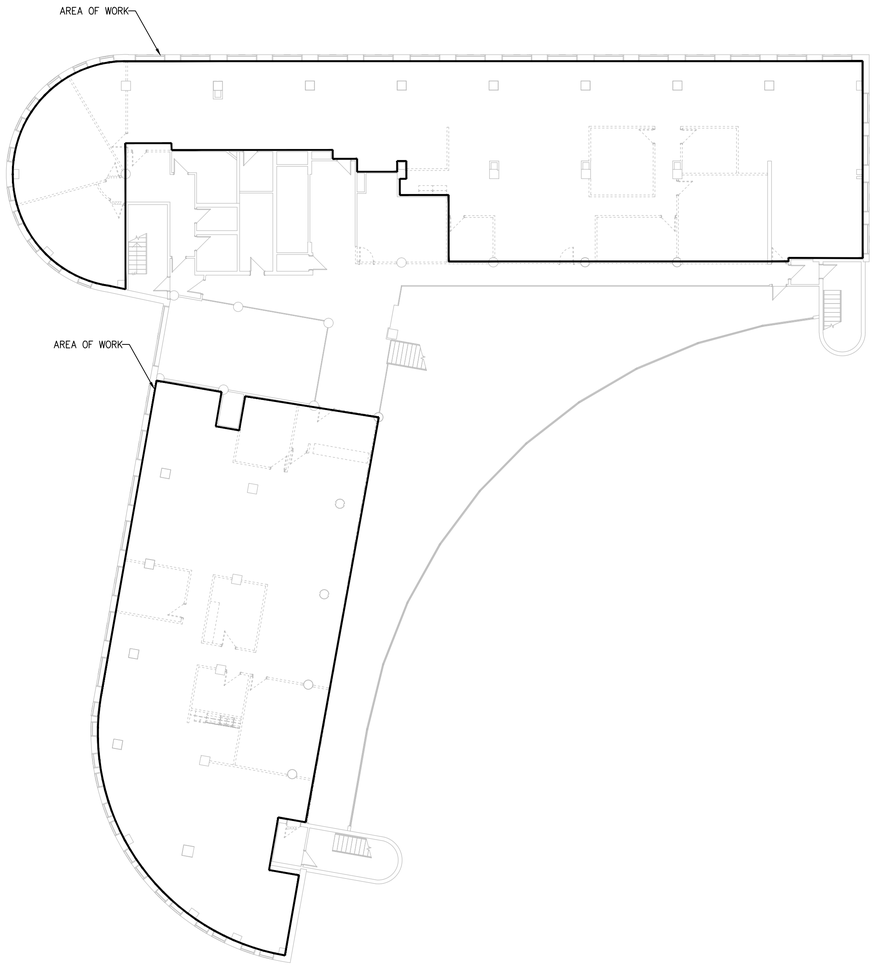
.20 Letter or Legal Depth Files? Side/End Tab or Top Tab file folders?(Note: Top tab files can be stored on fixed shelves using side-tab conversion labels or we can provide Rollout Drawer options for top tab folders.)

.1 A. Match sizes in .13 above.

.21 Please indicate preference: Fixed Shelves or Rollout Drawers? If drawer are required, what height: 4.5”, 6”, & 10.5”.

.1 A. No.

END OF ADDENDUM NUMBER NO. 7



1 / M1.0 KEY PLAN
1: 200

DRAWING LIST	
DWG NO.	DRAWING TITLE
M1.0	KEY PLAN, SYMBOL SCHEDULE AND DRAWING LIST
M1.1	EXISTING CEILING HVAC LAYOUT
M1.2	EXISTING RAISED FLOOR HVAC LAYOUT
M1.3	EXISTING UNDERFLOOR HVAC LAYOUT
M2.1	EXISTING AND NEW PLUMBING LAYOUT
M3.1	NEW CEILING HVAC LAYOUT
M3.2	NEW RAISED FLOOR HVAC LAYOUT
M3.3	NEW UNDERFLOOR HVAC LAYOUT
M4.1	NEW UNDERFLOOR PIPING LAYOUT
M5.1	SPRINKLER LAYOUT
M6.1	MECHANICAL SCHEDULES
M7.1	MECHANICAL DETAILS AND CONTROL SCHEMATIC

SYMBOL SCHEDULE:

- ● RECESSED PENDENT TYPE SPRINKLER HEAD
- △ HORIZONTAL SIDEWALL TYPE SPRINKLER HEAD
- ○ UPRIGHT TYPE SPRINKLER HEAD
- ER DENOTES EXISTING TO BE RELOCATED SPRINKLER HEAD
- A DENOTES NEW ADDITION SPRINKLER HEAD
- R DENOTES RELOCATED SPRINKLER HEAD
- D DENOTES EXISTING TO BE REMOVED
- SUPPLY DIFFUSER
- ○ SUPPLY DIFFUSER (ROUND)
- RETURN GRILLE
- STC 45 OR 55 RATED CROSSTALK SILENCER
- SB SECURITY BAR
- EXISTING DOMESTIC COLD WATER
- EXISTING DOMESTIC HOT WATER
- NEW DOMESTIC COLD WATER
- NEW DOMESTIC HOT WATER
- EXISTING DUCT
- NEW DUCT

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Revision	Description	Date
5		
4	RE-ISSUED FOR AMMENDMENTS	Aug. 09, 2017
3	ISSUED FOR CONSTRUCTION	May 19, 2017
2	ISSUED FOR REVIEW 99% CONSTRUCTION DOCUMENTS	Apr. 25, 2017
1	66% CD SUBMISSION	Feb. 24, 2017
0	DESIGN DEVELOPMENT SUBMISSION	Jan. 20, 2017

Client / client

PSPC/SPAC

5th Floor, 10025 Jasper Avenue
Edmonton. AB

Project title / Projet

5101 50th Avenue
Yellowknife, NWT

4th Floor Tenant Fit-Up
Greenstone Building

Designed by / Conçu par
PA/RR

Drawn by / Dessiné par
FD

Approved by / Approuvé par
DH

PWGSC Project Manager / Administrateur de Projets TPSGC
Brenda Embury

Drawing title / Titre du dessin

KEYPLAN,
AND SYMBOL LEGEND

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.060383	M1.0 OF 12	4

1 M1.1 EXISTING CEILING HVAC LAYOUT
1:125

GENERAL NOTES:

1. DO NOT SCALE THIS DRAWING, CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO INSTALLATION AND REPORT ANY DISCREPANCY TO THE DEPARTMENTAL REPRESENTATIVE.
2. THE DRAWING ONLY SHOWS A GENERAL SCHEMATIC OF NEW SYSTEMS. ROUTING OF DUCTWORK AND UNITS LOCATIONS SHALL SUIT SITE CONDITIONS AND MAY HAVE TO BE CHANGED TO AVOID CONFLICTS WITH STRUCTURE, DUCTS AND PIPES. WHEN CONFLICT CANNOT BE AVOIDED, THE DUCTWORK SHALL BE MODIFIED AS REQUIRED.
3. CONTRACTOR SHALL INCLUDE FOR AND PROVIDE ALL COORDINATION BETWEEN TRADES AND CONSULTANT ON AND OFF SITE AS REQUIRED FOR INSTALLATION OF MECHANICAL AND ELECTRICAL SYSTEMS, WHERE MINOR REROUTING OF DUCTWORK OR SERVICES IS REQUIRED DUE TO ONSITE CONDITIONS, IT SHALL BE PERFORMED AT NO ADDITIONAL COST.
4. COORDINATE ALL GRILLE AND DIFFUSER LOCATIONS WITH LIGHTING LAYOUT.
5. CONFORM TO SPECIFICATIONS AND MANUFACTURER GUIDES FOR MATERIALS AND UNITS' INSTALLATION DETAILS.

(#) DRAWING NOTES:

1. DEMOLISH BACK EXHAUST DIFFUSER AND BRANCH DUCT TO THIS POINT.
2. PREPARE AND MODIFY FOR NEW DUCT CONNECTION. REFER TO DRAWING NEW CEILING HVAC LAYOUT FOR NEW LOCATION.
3. EXISTING GRILLE TO BE RELOCATED INTO NEW EX-1 OFFICE. EXTEND GRILLE INTO ROOM WITH RIGID DUCTWORK. REFER TO DRAWING NEW CEILING HVAC LAYOUT FOR NEW LOCATION.
4. EXISTING GRILLE TO BE RELOCATED INTO THE NEW BULKHEAD. REFER TO DRAWING NEW CEILING HVAC LAYOUT FOR NEW LOCATION.
5. EXISTING GRILLES TO REMAIN. TYPICAL.

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PERMIT TO PRACTICE
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Signature
Date MAY 19/17
PERMIT NUMBER: P 1060
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Edmonton. AB

Project title / Projet

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Yellowknife, NWT

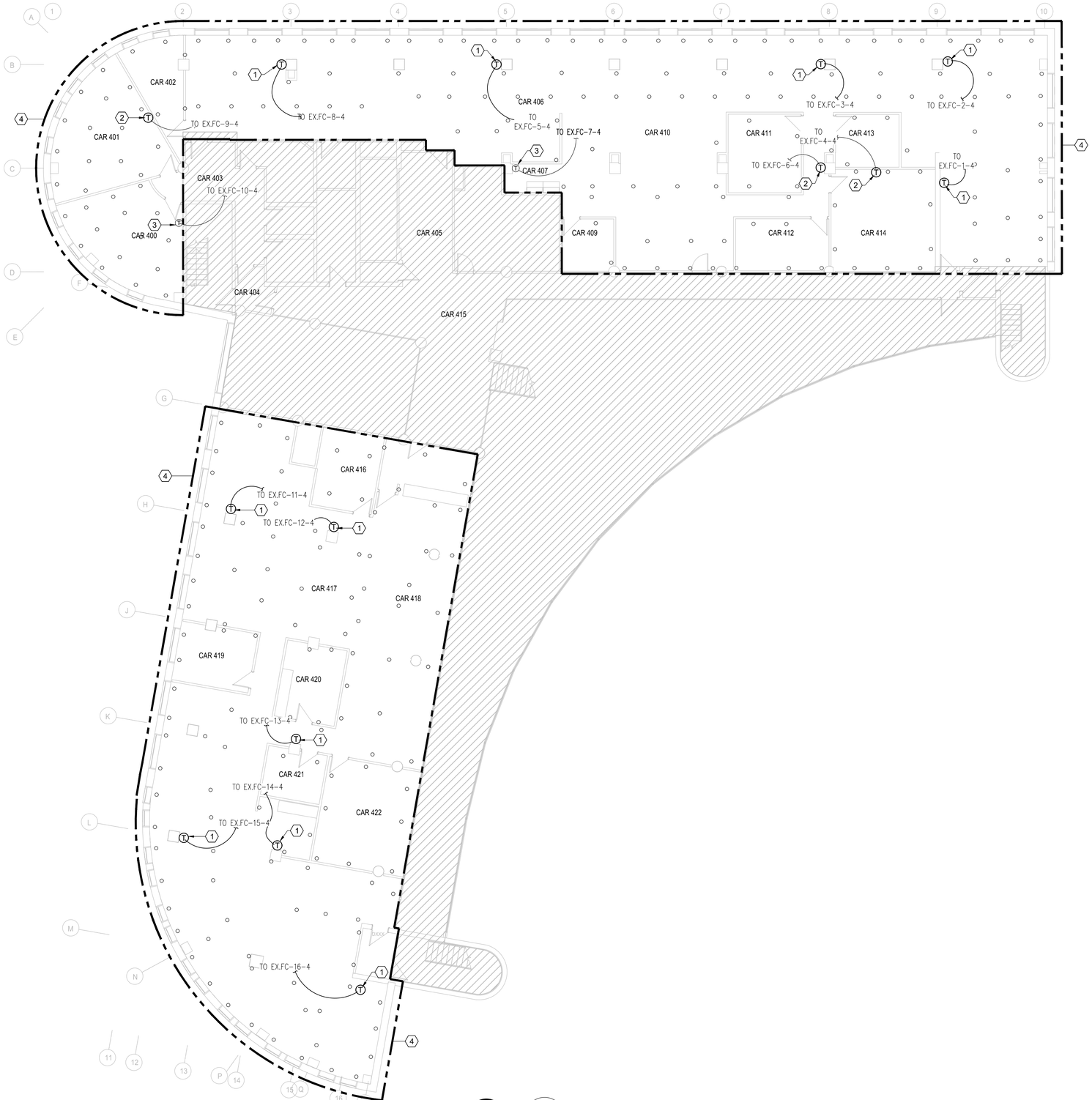
4th Floor Tenant Fit-Up
Greenstone Building

Designed by / Conçu par: **PA**
Drawn by / Dessiné par: **FD**
Approved by / Approuvé par: **DH**
PWGSC Project Manager / Administrateur de Projets TPSGC: **Brenda Embury**

Drawing title / Titre du dessin

EXISTING CEILING HVAC LAYOUT

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.060383	M1.1 OF 12	3



1 M1.2 EXISTING RAISED FLOOR HVAC LAYOUT
1:125

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3. CONTRACTOR SHALL INCLUDE FOR AND PROVIDE ALL COORDINATION BETWEEN TRADES AND CONSULTANT ON AND OFF SITE AS REQUIRED FOR INSTALLATION OF MECHANICAL AND ELECTRICAL SYSTEMS, WHERE MINOR REROUTING OF DUCTWORK OR SERVICES IS REQUIRED DUE TO ONSITE CONDITIONS, IT SHALL BE PERFORMED AT NO ADDITIONAL COST.
4. COORDINATE ALL GRILLE AND DIFFUSER LOCATIONS WITH FURNITURE LAYOUT.
5. CONFORM TO SPECIFICATIONS AND MANUFACTURER GUIDES FOR MATERIALS AND UNITS' INSTALLATION DETAILS.

(#) DRAWING NOTES:

1. EXISTING FAN COIL THERMOSTAT AND ASSOCIATED WIRING TO BE REMOVED. FAN COIL CONTROL WILL BE BASED ON NEW TERMINAL UNIT THERMOSTATS.
2. THERMOSTAT TO BE RELOCATED. EXTEND WIRING AS REQUIRED. REFER TO NEW RAISED FLOOR HVAC LAYOUT FOR NEW LOCATION OF THERMOSTAT.
3. EXISTING THERMOSTAT TO REMAIN.
4. RELOCATE EXISTING 200ø ROUND FLOOR DIFFUSERS TO SUIT NEW ROOM LAYOUT. REFER TO RAISED FLOOR – NEW LAYOUT FOR RECOMMENDED LOCATION OF ROUND FLOOR DIFFUSERS. INFORM THE ENGINEER FOR ANY DISCREPANCIES.

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PWGSC Project Manager / Administrateur de Projets TPSGC: **Brenda Embury**

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EXISTING RAISED FLOOR HVAC LAYOUT

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R.060383	M1.2 OF 12	3

PWGSC – A1 – 841X594

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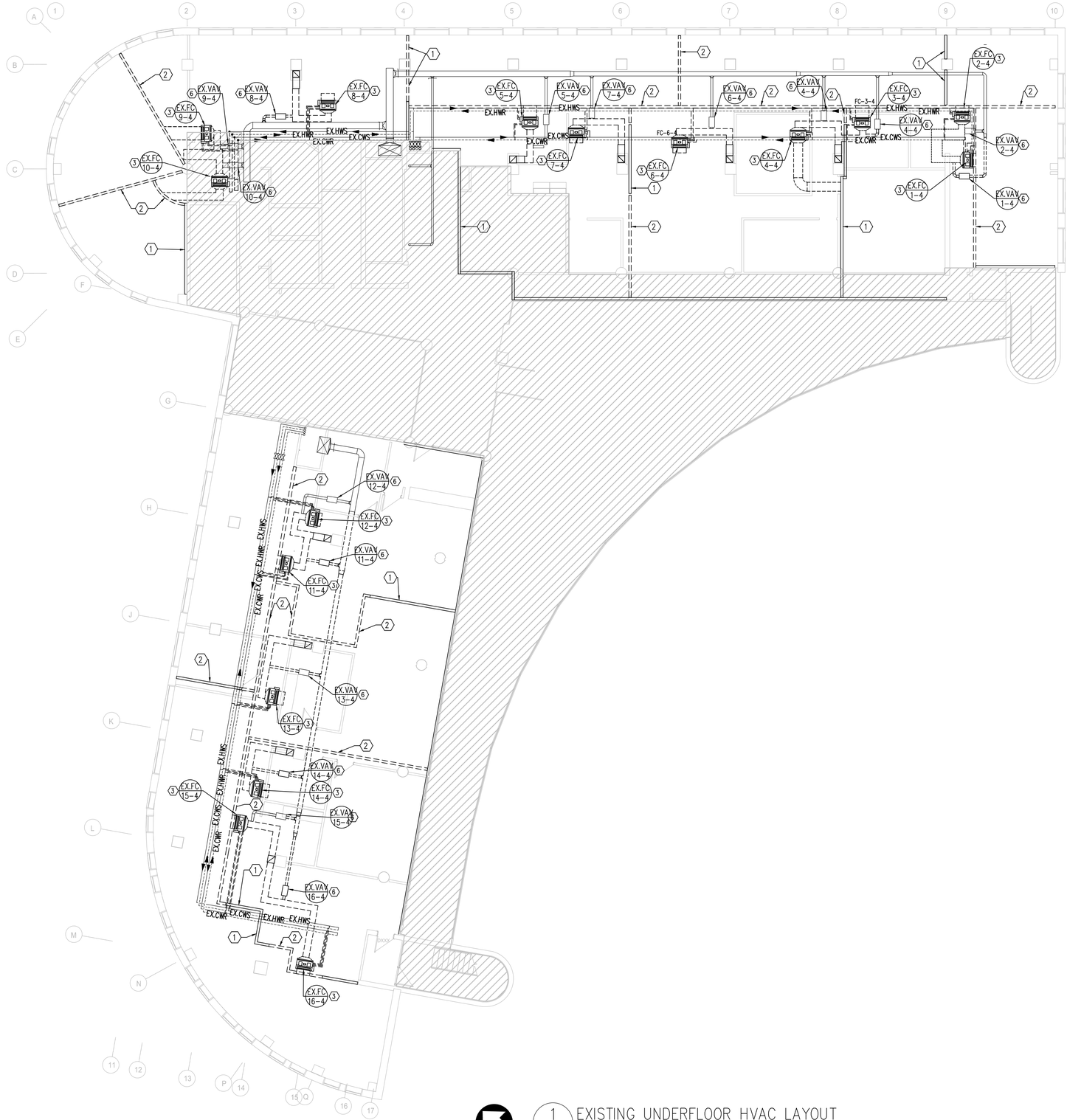

1 M1.3 EXISTING UNDERFLOOR HVAC LAYOUT
1:125

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5. CONFORM TO SPECIFICATIONS AND MANUFACTURER GUIDES FOR MATERIALS AND UNITS' INSTALLATION DETAILS.

(#) DRAWING NOTES:

1. EXISTING AIR SYSTEM DIVIDER TO REMAIN.
2. EXISTING AIR SYSTEM DIVIDER TO BE DEMOLISHED.
3. EXISTING FAN COIL TO BE RELOCATED. EXTEND OR REDUCE ALL SERVICES REQUIRED SUCH AS DUCT WORK, HYDRONIC PIPING, CONDENSATE PIPING AND CONTROL/ELECTRICAL WIRING. INCLUDING REPAIR OF ALL INSULATION.
4. EXISTING FAN COIL TO REMAIN.
5. DEMOLISH EXISTING DUCTWORK SHOWN DASHED.
6. EXISTING VAV TO BE RELOCATED. REFER TO NEW UNDERFLOOR HVAC LAYOUT FOR NEW LOCATION.

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Drawing title / Titre du dessin

EXISTING UNDERFLOOR HVAC LAYOUT

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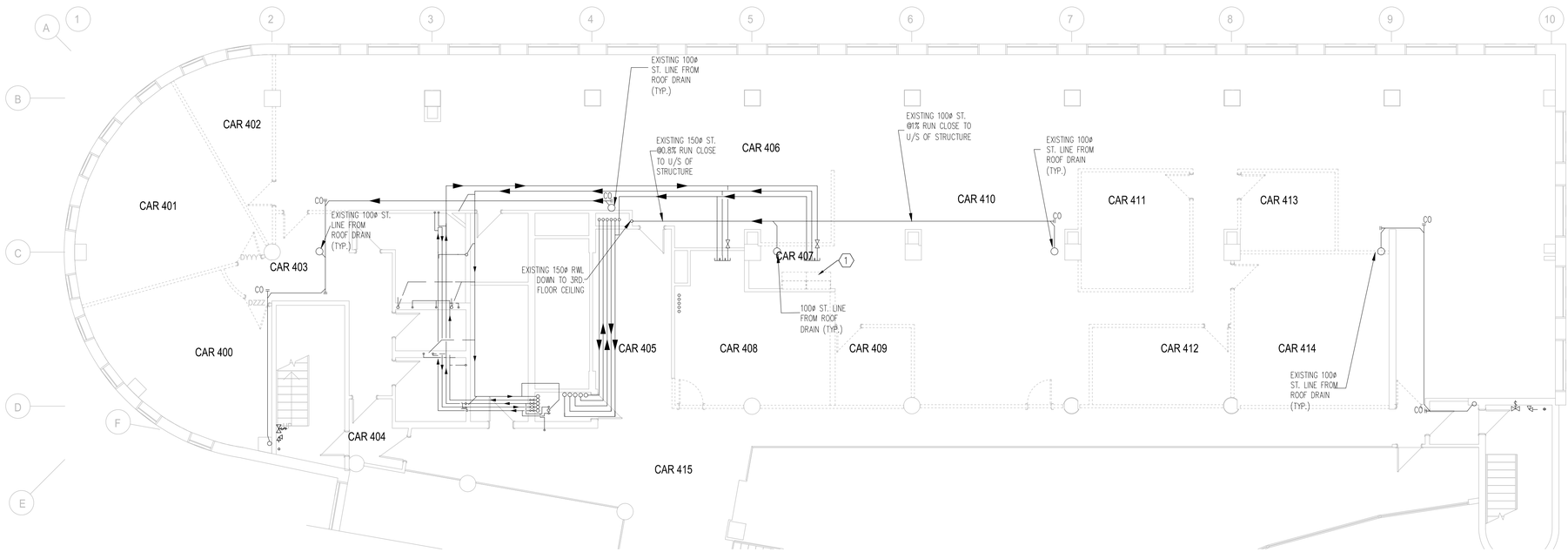
R.060383	M1.3 OF 12	3



1 M2.1 EXISTING PLUMBING LAYOUT
1:100

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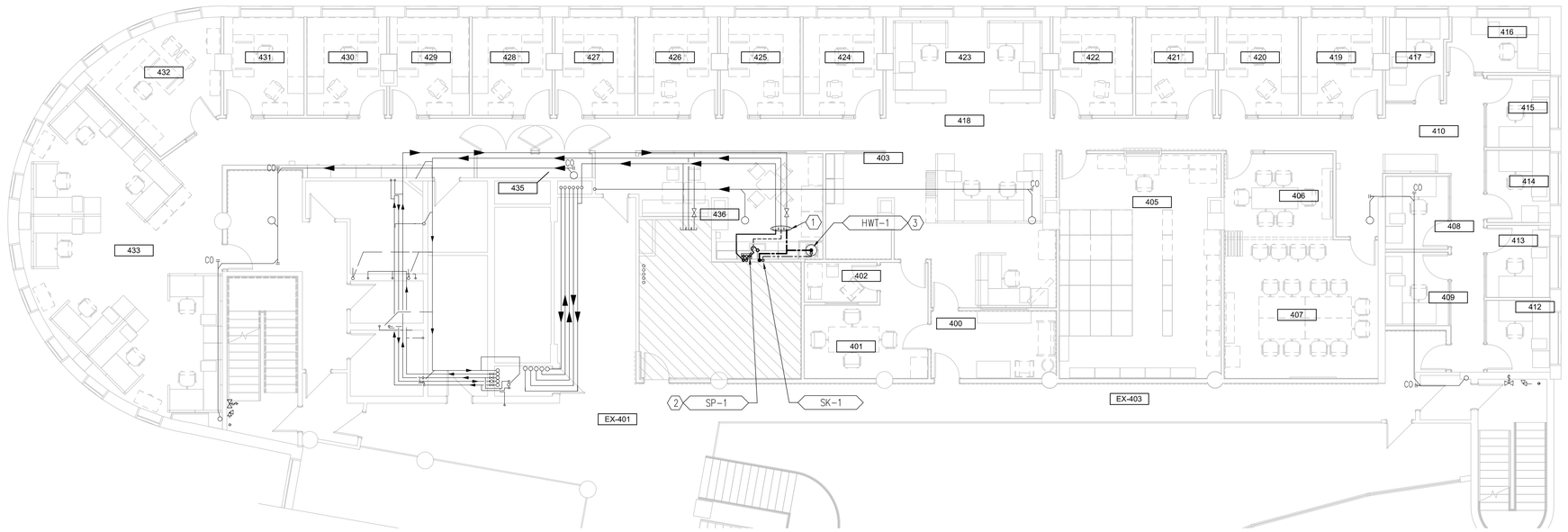
5. CONFORM TO SPECIFICATIONS AND MANUFACTURER GUIDES FOR MATERIALS AND UNITS' INSTALLATION DETAILS.

(#) EXISTING DRAWING KEYNOTES:

1. EXISTING SINK TO BE DEMOLISHED. DISCONNECT AND CAP-OFF EXISTING DCW IN CEILING SPACE AND PROVIDE SHUT-OFF VALVE. REMOVE EXISTING POINT-OF-USE HOT WATER HEATER INCLUDING DHW PIPING. REMOVE EXISTING UNDER-COUNTER SEWAGE SUMP PUMP. DISCONNECT AND CAP-OFF EXISTING SEWAGE DISCHARGE AND VENT IN CEILING SPACE AND PREPARE FOR NEW CONNECTIONS.



2 M2.1 NEW PLUMBING LAYOUT
1:100

NEW CONSTRUCTION (#) DRAWING KEYNOTES:

1. CONNECT NEW 38mmø SEWAGE PUMP DISCHARGE, 38mmø VENT AND 19mmø DCW TO EXISTING CAPPED-OFF SERVICES RESPECTIVELY. CONTRACTOR TO COORDINATE PIPE ROUTING AND CONFIRM EXACT LOCATION ON SITE.
2. PIPE 38mmø SINK DRAIN TO NEW SEWAGE PUMP. PIPE SEWAGE PUMP DISCHARGE AND VENT UP THROUGH WALL AND RUN IN CEILING SPACE. REFER TO SCHEDULE AND SPECIFICATION FOR MORE INFORMATION OF SEWAGE PUMP. REFER TO ARCHITECTURAL DETAILS.
3. NEW ELECTRIC HOT WATER TANK IN CABINET. PROVIDE SUPPORTS AND DRAIN PAN. CONNECT NEW 19mmø DCW AS SHOWN. PIPE DRAIN PAN DIRECTLY TO KITCHEN SINK FIXTURE LEG. REFER TO DETAIL, SCHEDULE AND SPECIFICATION FOR MORE INFORMATION OF HOT WATER TANK. REFER TO ARCHITECTURAL DETAILS.

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PWGSC Project Manager / Administrateur de Projets TPSGC: **Brenda Embury**

Drawing title / Titre du dessin

EXISTING AND NEW PLUMBINGLAYOUT

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.060383	M2.1 OF 12	3

PWGSC – A1 – 841X594

0 10 20 30 40 50 60 70 80 90 100mm

1 M3.1 NEW CEILING HVAC LAYOUT
1:100

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DRAWING KEYNOTES:

1. CONNECT NEW EXHAUST DUCT TO EXISTING APPROXIMATELY AT THIS LOCATION.
2. PROVIDE NEW EXHAUST GRILLE.
3. RELOCATED EXISTING TRANSFER GRILLE IN BULKHEAD TO NEW EX-1 OFFICE. EXTEND WITH RIGID DUCTWORK TO EXISTING GRILLE OPENING.
4. NEW 300X200 CROSSTALK SILENCER IN EXISTING BULKHEAD. TYPICAL.
5. NEW TRANSFER AIR GRILLE. PROVIDE NEW DUCTWORK AND CONNECT TO EXISTING BULKHEAD.
6. TYPICAL CROSS TALK SILENCER TO TRANSFER AIR FROM ENCLOSED ROOMS BACK TO OPEN AREA. 300x200 WITH ACOUSTIC LINING AND T-1 GRILLE ON BOTH ENDS. TYPICAL.
7. NEW LOCATION OF GRILLE.
8. ACOUSTICALLY LINED 300x200 CROSS TALK SILENCER.
9. PROVIDE SECURITY BARS.

RAISED FLOOR CEILING

DETAIL KEYNOTES:

1. PROVIDE STC 45 OR 55 RATED SILENCER, TYPICAL FOR ALL ENCLOSED ROOMS. REFER TO ARCHITECTURAL FOR ROOM PARTITION STC RATING.
2. PROVIDE STC 45 OR 55 RATED CROSSTALK SILENCER FOR TRANSFER AIR FROM OFFICE TO CORRIDOR.
3. EXISTING BULKHEAD AND TRANSFER GRILLE.
4. PROVIDE STC 45 OR 55 RATED CROSSTALK SILENCER.

2 M3.1 CROSSTALK AND SILENCER TYPICAL DETAIL
NTS

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Client / client

PSPC/SPAC

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Edmonton. AB

Project title / Projet

5101 50th Avenue
Yellowknife, NWT

4th Floor Tenant Fit-Up
Greenstone Building

Designed by / Conçu par: **PA**
Drawn by / Dessiné par: **FD**
Approved by / Approuvé par: **DH**
PWGSC Project Manager / Administrateur de Projets TPSGC: **Brenda Embury**

Drawing title / Titre du dessin

NEW CEILING
HVAC LAYOUT

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.060383	M3.1 OF 12	3

1 M3.2 NEW RAISED FLOOR HVAC LAYOUT
1:125

2 M3.2 AIRSHAFT DETAIL-1
NTS

GENERAL NOTES:

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4. COORDINATE ALL GRILLE AND DIFFUSER LOCATIONS WITH LIGHTING LAYOUT.
5. CONFORM TO SPECIFICATIONS AND MANUFACTURER GUIDES FOR MATERIALS AND UNITS' INSTALLATION DETAILS.
6. ALL DIFFUSERS TO BE CENTERED TO THE FLOOR TILE.
7. GENERAL NOTES FOR THERMOSTAT HEIGHTS @ 1050mm. CENTER LINE.

(#) DRAWING KEYNOTES:

1. RETURN AIR SHAFT FROM RAISED FLOOR TO HIGH LEVEL RETURN GRILLE. SEE DETAIL.
2. NEW LOCATION OF EXISTING THERMOSTAT.
3. FAN POWERED BOX THERMOSTAT LOCATED ON THE WALL AT ACCESSIBLE HEIGHT.
4. NEW LOCATION OF EXISTING ROUND FLOOR DIFFUSERS. TYPICAL.
5. TRANSFER FAN THERMOSTAT LOCATED ON THE WALL AT 48" A.F.F.
6. EXISTING THERMOSTAT.

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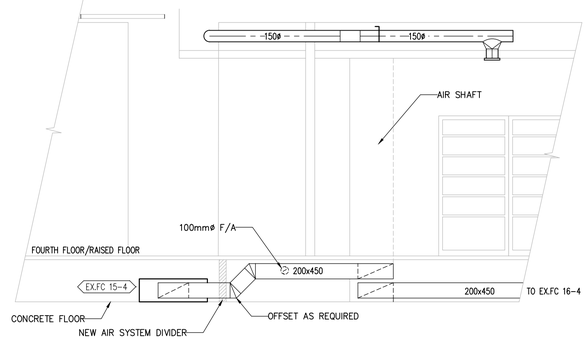
NEW RAISED FLOOR HVAC LAYOUT

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.060383	M3.2 OF 12	3

2 SECTION – 1
M3.3 M3.3 NTS

3 SECTION – 2
M3.3 M3.3 NTS



4 SECTION – 3
M3.3 M3.3 NTS

1 NEW UNDERFLOOR HVAC LAYOUT
M3.3 1:1.25

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5. CONFORM TO SPECIFICATIONS AND MANUFACTURER GUIDES FOR MATERIALS AND UNITS' INSTALLATION DETAILS.

(1) DRAWING KEYNOTES:

1. NEW DUCT CONNECTION TO THIS POINT.
2. NEW AIR SYSTEM DIVIDER. TYPICAL.

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NEW UNDERFLOOR HVAC LAYOUT

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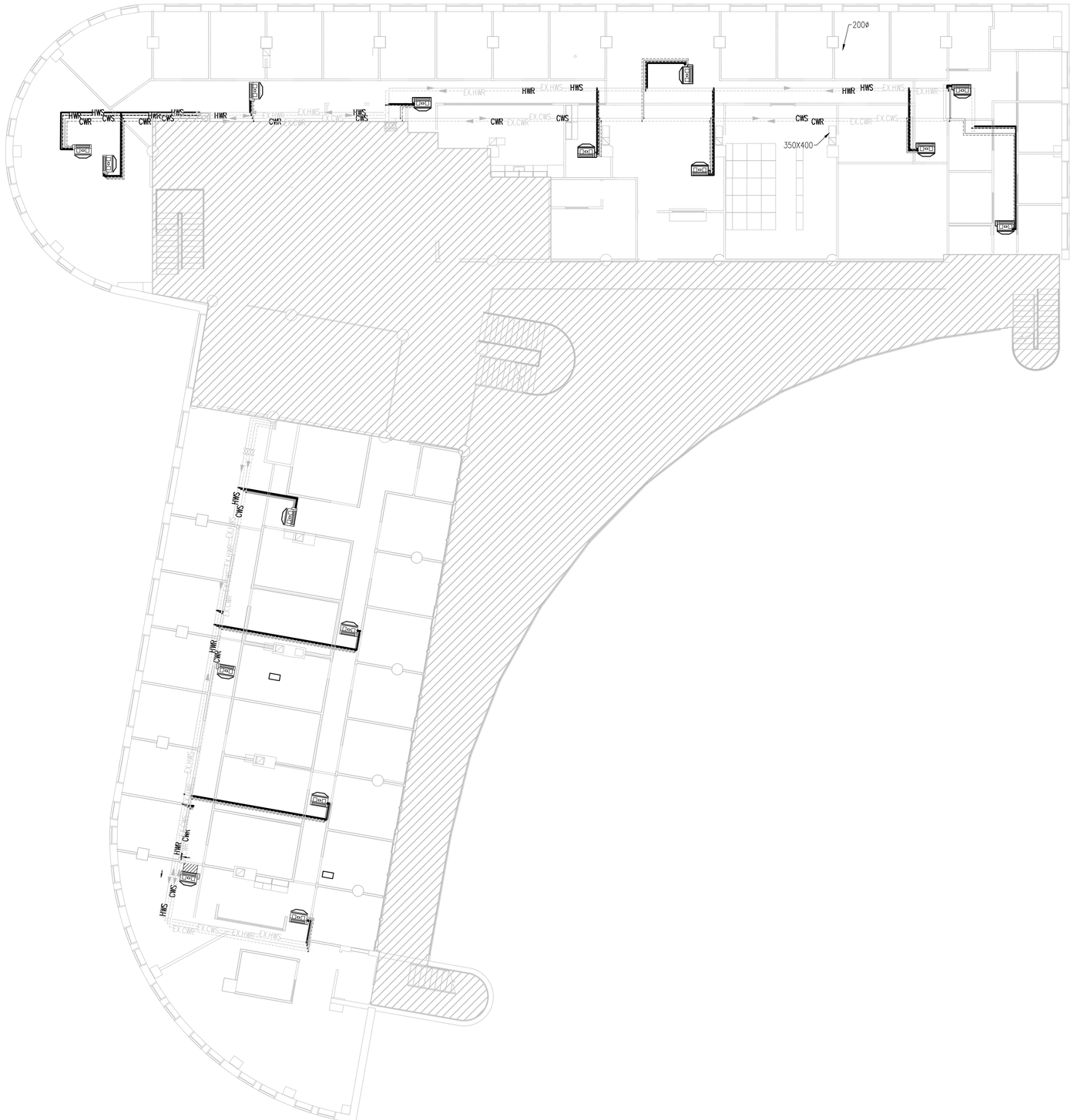
R.060383	M3.3 OF 12	3



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1 M4.1 NEW UNDER FLOOR PIPING LAYOUT
1:125

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PWGSC Project Manager / Administrateur de Projets TPSGC: **Brenda Embury**

Drawing title / Titre du dessin

NEW UNDERFLOOR PIPING LAYOUT

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.060383	M4.1 OF 12	3

PWGSC – A1 – 841X594

0 10 20 30 40 50 60 70 80 90 100mm

1 M5.1 SPRINKLER LAYOUT
1:125

GENERAL NOTES:

1. SPRINKLER SYSTEM INSTALLATION SHALL STRICTLY CONFORM WITH NFPA 13 AND ALL AUTHORITIES HAVING JURISDICTION.
2. ALL PIPE LOCATIONS TO BE MEASURED ON SITE BY THE FIRE PROTECTION CONTRACTOR PRIOR TO FABRICATION AND INSTALLATION.
3. ALL DIMENSIONS SHOWN ARE CENTER TO CENTER.
4. SPRINKLER MAINS, BRANCHLINES ROUTING AND FINAL LOCATIONS AND HEIGHT OF SPRINKLER HEADS TO BE COORDINATED TO THE EXISTING LOCATIONS OF MECHANICAL EQUIPMENTS AND ROUTING OF DUCTS BY THE FIRE PROTECTION CONTRACTOR.
5. WHERE CEILING HEIGHTS ARE CHANGED, RELOCATE ALL SERVICES AND EQUIPMENT TO SUIT ADJUSTED CEILING HEIGHT. REFER TO ARCHITECTURAL DRAWINGS.
6. ALL SPRINKLER HEADS TO BE REMOVED/RELOCATED SHALL BE REPLACED WITH NEW SPRINKLER HEADS.
7. FIRE EXTINGUISHER TO BE 10lbs. IN CABINET OR WALL MOUNTED SUPPLIED BY OWNER. CONFIRM WITH ARCHITECT OR OWNER FOR INSTALLATION REQUIREMENT.
8. CAP-OFF ALL SPRINKLER PIPING WHERE SPRINKLER HEADS TO BE DEMOLISHED AND SPRINKLER PIPING THAT WILL NOT BE UTILIZED.

DRAWING KEYNOTES:

1. EXISTING FIRE EXTINGUISHER TO BE RELOCATED.
2. NEW LOCATION FIRE EXTINGUISHER
3. NEW 10 LBS. ABC TYPE FIRE EXTINGUISHER. COORDINATE WITH ARCHITECT TYPE OF INSTALLATION.
4. EXISTING FIRE EXTINGUISHER TO REMAIN.

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PWGSC Project Manager / Administrateur de Projets TPSGC: **Brenda Embury**

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SPRINKLER LAYOUT

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.060383	M5.1 OF 12	3

PLUMBING FIXTURE SCHEDULE

FIXTURES	SPECIFICATION	WASTE IN(mm)	CW IN (mm)	HW IN (mm)	VENT IN (mm)	ALTERNATE MANUFACTURERS
SK-1	FRANKE MMERCIAL #S6810-1P SINGLE BOWL COUNTERTOP MOUNT SINK, 460mm (18-1/8") x 511mm (20-1/8") x 254mm (10") DEEP, COUNTER MOUNTED, NO LEDGE, MOUNTING KIT PROVIDED, FULLY UNDERCOATED TO REDUCE CONDENSATION AND RESONANCE, FACTORY APPLIED RIM SEAL. AMERICAN STANDARD #4101.100 ARCH SINGLE CONTROL KITCHEN FAUCET WITH SWIVEL PULL-OUT SPRAY, TOGGLE BUTTON ACTIVATION DECK MOUNTED, CHROME PLATED SOLID CAST BRASS LEAD-FREE BODY, SINGLE LEVER, 1/4 TURN CERAMIC DISC VALVE CARTRIDGES, WITH PRESSURE COMPENSATING 5.7 LPM (1.5GPM) AERATOR OUTLET. ZURN THERMOSTATIC MIXING VALVE MODEL 1070, BRONZE ASTM B 584 W/NICKEL PLATING, INTERNAL BRASS, 1/2" OUTLET CONNECTION, OUTLET TEMPERATURE RANGE OF 95°F-115°F. OPEN GRID DRAIN, CHROME PLATED CAST BRASS ONE PIECE TOP, 17 GA. (1.5mm) TUBULAR 32mm (1-1/4") TAILPIECE, FAUCET SUPPLIES, CHROME PLATED POLISHED BRASS, HEAVY DUTY ANGLE STOPS, 10mm (3/8") I.P.S. INLET x 76mm (3") LONG RIGID HORIZONTAL NIPPLES, V.P. LOOSE KEYS, ESCUTCHEONS AND FLEXIBLE COPPER RISER. P-TRAP, HEAVY CAST BRASS ADJUSTABLE BODY, WITH SLIP NUT, 32mm (1-1/4") SIZE, SHALLOW WALL FLANGE AND SEAMLESS TUBULAR WALL BEND.	1-1/2" (38)	1/2" (13)	1/2" (13)	1-1/2" (38)	**SINK**: KOHLER, ELKAY **FAUCET**: SLOAN, CHICAGO FAUCETS, KOHLER, DELTA
SP-1	SANIFLO SANIVITE DRAIN WATER PUMP, PRE-ASSEMBLE SYSTEM WITH LOW INLETS AND BUILT-IN CHECK VALVES., HANDLE HOT WATER AND GREASE BUILD-UP. DISCHARGE FLOW RATE OF 18GPM (68LPM) AT 16' (48 kPa). MAXIMUM TEMPERATURE OF 140°F (60°C).	1-1/2" (38)	N/A	N/A	1-1/2" (38)	GRUNDFOS, LITTLE GIANT
HWT-1	DOMESTIC WATER HEATER - WATER HEATER HAVING ELECTRICAL INPUT OF 3kW, 12 GPH RECOVERY RATE AT 100°F TEMPERATUR RISE, STORAGE CAPACITY OF 6 GALLONS. WATER HEATER SHALL HAVE THE CSA SEAL OF CERTIFICATION AND BE FACTORY EQUIPPED WITH A CSA/ASME RATED TEMPERATURE AND PRESSURE RELIEF VALVE.	N/A	3/4" (19)	1/2" (13)	N/A	RHEEM RUUD, A.O. SMITH, BRADFORD WHITE

DIFFUSER AND GRILLE SCHEDULE (Based on E. H. PRICE)

TAG	MODEL	ACCESSORIES	REMARKS
S-1	DFLG FLOOR SUPPLY GRILLE	OBD, DB	REFER TO DRAWING FOR FACE SIZE, 16 DEGREE DEFLECTION TOWARD EXTERIOR WALL AND 6 MM SPACING
R-1	DFLG FLOOR RETURN GRILLE	DB	REFER TO DRAWING FOR FACE SIZE, 0 DEGREE DEFLECTION AND 6 MM SPACING
R-2	510 LOURVRED return TRILL	-	REFER TO DRAWING FOR FACE SIZE
E-1	EGG CRATE RETURN GRILLE	-	REFER TO DRAWING FOR FACE SIZE
T-1	510 LOURVRED TRANSFER TRILL	-	REFER TO DRAWING FOR FACE SIZE

ACCESSORIES:
OBD - OPPOSED BLADE BALANCING DAMPER
DB - DIRT BUCKET

NOTES: 1. PROVIDE BORDER AND FRAME STYLE TO SUIT SURFACE BEING INSTALLED ON.

APPROVED MANUFACTURERS: EH PRICE, TITUS, NAILOR

FAN SCHEDULE

TAG	MANUFACTURER	TYPE	MODEL	RPM	AIR FLOW RATE (L/s)	AIR FLOW RATE (CFM)	E.S.P. (Pa)	E.S.P. (in.WC)	MOTOR (W)	MOTOR (HP)	SONES	ACCESSORIES
TF-1	GREENHECK	I	CSP-A410	1,000	113	240	62	0.25	116	FRAC	2.0	SC, SH

FAN TYPES:
C CENTRIFUGAL R ROOF I IN-LINE CE CEILING EXHAUST CU CENTRIFUGAL UP BLAST
TA TUBE AXIAL W WALL MF MIXED FLOW P PROPELLER CF CEILING FAN

ABBREVIATIONS:

BG	BELT GUARD	MT	MANUAL RESET TIMER	SD	SCROLL DRAIN
AS	ADJUSTABLE SHEAVES	NSW	NON-SPARKING WHEEL	FC	FACTORY CURB
SC	SOLID STATE SPEED CONTROL	SH	SPRING HANGERS	BS	BIRDSCREEN
IG	INLET GRILLE	VP	VIBRATION PADS	MC	MOUNTING COLLAR
BD	BACKDRAFT DAMPER	SM	SPRING MOUNT	WH	WEATHERPROOF HOUSING
F	FILTER	WC	WALL CAP	RC	ROOF CAP
E	EPOXY COATING	DS	DISCONNECT SWITCH	AD	ACCESS DOOR
IH	INLET HOOD	MDW	MOTION DETECTOR, WALL MTD.	GN	GOOSENECK
TS	THERMOSTAT				

NOTES:
1. INSTALL ALL UNITS ON VIBRATION ISOLATORS
APPROVED MANUFACTURERS: GREENHECK, LOREN COOK, TWIN CITIES

FAN COIL AND VAV FLOWS (Existing Equipment)

TAG	Airflow L/S	TAG	Airflow L/S
FC-1.4	427	VAV-1.4	44
FC-2.4	251	VAV-2.4	33
FC-3.4	320	VAV-3.4	70
FC-4.4	328	VAV-4.4	83
FC-5.4	427	VAV-5.4	69
FC-6.4	365	VAV-6.4	81
FC-7.4	404	VAV-7.4	83
FC-8.4	538	VAV-8.4	72
FC-9.4	438	VAV-9.4	277
FC-10.4	438	VAV-10.4	267
FC-11.4	550	VAV-11.4	75
FC-12.4	438	VAV-12.4	70
FC-13.4	342	VAV-13.4	71
FC-14.4	430	VAV-14.4	83
FC-15.4	571	VAV-15.4	71
FC-16.4	509	VAV-16.4	56

FAN POWERED TERMINAL UNIT SCHEDULE (Based on EH PRICE)

TAG	AREA SERVED		UNIT SIZE	AIRFLOW RATE MAXIMUM (L/s)	AIRFLOW RATE MAXIMUM (CFM)
FTU-01	ROOM 432	FDBU SERIES	10	108	229
FTU-02	ROOM 431	FDBU SERIES	10	108	229
FTU-03	ROOM 430	FDBU SERIES	10	108	229
FTU-04	ROOM 429	FDBU SERIES	10	108	229
FTU-05	ROOM 428	FDBU SERIES	10	108	229
FTU-06	ROOM 427	FDBU SERIES	10	107	227
FTU-07	ROOM 426	FDBU SERIES	10	107	227
FTU-08	ROOM 425	FDBU SERIES	10	107	227
FTU-09	ROOM 424	FDBU SERIES	10	107	227
FTU-10	ROOM 422	FDBU SERIES	10	80	170
FTU-11	ROOM 421	FDBU SERIES	10	80	170
FTU-12	ROOM 420	FDBU SERIES	10	80	170
FTU-13	ROOM 419	FDBU SERIES	10	80	170
FTU-14	ROOM 417	FDBU SERIES	10	75	159
FTU-15	ROOM 416	FDBU SERIES	10	100	212
FTU-16	ROOM 415	FDBU SERIES	10	75	159
FTU-17	ROOM 414	FDBU SERIES	10	100	212
FTU-18	ROOM 406	FDBU SERIES	10	64	136
FTU-19	ROOM 408	FDBU SERIES	10	100	212
FTU-20	ROOM 409	FDBU SERIES	10	64	136
FTU-21	ROOM 413	FDBU SERIES	10	100	212
FTU-22	ROOM 412	FDBU SERIES	10	150	318
FTU-23	ROOM 401, ROOM 402	FDBU SERIES	10	80	170
FTU-24	OPEN WORKSTATION (SOUTH)	FDBU SERIES	10	130	276
FTU-25	ROOM 459	FDBU SERIES	10	130	276
FTU-26	ROOM 458	FDBU SERIES	10	130	276
FTU-27	ROOM 457	FDBU SERIES	10	130	276
FTU-28	ROOM 456	FDBU SERIES	10	140	297
FTU-29	ROOM 455	FDBU SERIES	10	140	297
FTU-30	ROOM 454	FDBU SERIES	10	140	297
FTU-31	OPEN WORKSTATION - 448d	FDBU SERIES	10	140	297
FTU-32	ROOM 450	FDBU SERIES	10	80	170
FTU-33	OPEN WORKSTATION - 448d	FDBU SERIES	10	120	254
FTU-34	ROOM 447	FDBU SERIES	10	300	636
FTU-35	ROOM 446	FDBU SERIES	10	120	254
FTU-36	ROOM 468	FDBU SERIES	10	90	191
FTU-37	ROOM 445	FDBU SERIES	10	120	254
FTU-38	ROOM 467	FDBU SERIES	10	90	191
FTU-39	ROOM 444	FDBU SERIES	10	90	191
FTU-40	ROOM 466	FDBU SERIES	10	90	191
FTU-41	ROOM 443	FDBU SERIES	10	90	191
FTU-42	ROOM 465	FDBU SERIES	10	90	191
FTU-43	ROOM 442	FDBU SERIES	10	90	191
FTU-44	ROOM 464	FDBU SERIES	10	90	191
FTU-45	ROOM 441	FDBU SERIES	10	90	191
FTU-46	ROOM 463	FDBU SERIES	10	90	191
FTU-47	ROOM 440	FDBU SERIES	10	90	191
FTU-48	ROOM 438	FDBU SERIES	10	90	191
FTU-49	ROOM 462	FDBU SERIES	10	90	191

NOTES:
1. COMPLETE WITH ECM FOR VARIABLE AIR FLOW.
2. COORDINATE CONTROLS WITH CONTROLS CONTRACTOR. INTEGRATE WITH EXISTING BMS.
BMS SYSTEM TO POLE ALL FTU THERMOSTATS SERVED BY A SINGLE FAN COIL TO DETERMINE IF FANCOIL SHOULD BE IN HEATING OR COOLING.
BMS SYSTEM TO POLE ALL FTU CO2 SEBSORS SERVED BY A SINGLE VENTILATON VAV BOX TO CONTROL VENTILATION AIR.
3. THERMOSTATS TO HAVE INTERGRAL CO2 SENSOR FOR CONTROL OF VENTILATION IR VAV BOXES. MOUNT ALL THERMSTATS AT ACCESSIBLE HEIGHTS.

ACCEPTABLE MANUFACTURERS: EH PRICE, TITUS, NAILOR.

Public Works and Government Services Canada / Travaux publics et Services gouvernementaux Canada
REAL PROPERTY SERVICES
Western Region
SERVICES IMMOBILIERS
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NT/NU

PERMIT TO PRACTICE
HDK CONSULTING INCORPORATED
Signature
Date MAY 19/17
PERMIT NUMBER: P 1060
NT/NU Association of Professional Engineers and Geoscientists

Revision	Description	Date
5		
4		
3	ISSUED FOR CONSTRUCTION	May 19, 2017
2	ISSUED FOR REVIEW 99% CONSTRUCTION DOCUMENTS	Apr. 25, 2017
1	66% CD SUBMISSION	Feb. 24, 2017
0	DESIGN DEVELOPMENT SUBMISSION	Jan. 20, 2017

Client / client

PSPC/SPAC

5th Floor, 10025 Jasper Avenue
Edmonton. AB

Project title / Projet

5101 50th Avenue
Yellowknife, NWT

4th Floor Tenant Fit-Up
Greenstone Building

Designed by / Conçu par: **PA**
Drawn by / Dessiné par: **FD**
Approved by / Approuvé par: **DH**
PWGSC Project Manager / Administrateur de Projets TPSGC: **Brenda Embury**

Drawing title / Titre du dessin

MECHANICAL SCHEDULES

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.060383	M6.1 OF 12	3

PWGSC – A1 – 841X594
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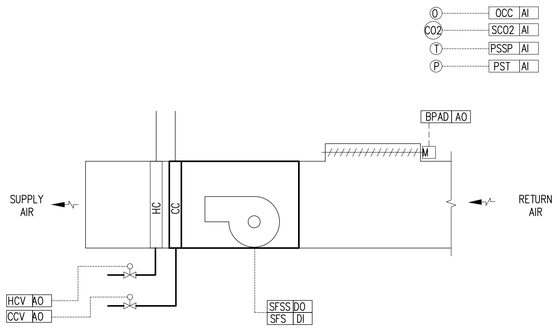
M6.1

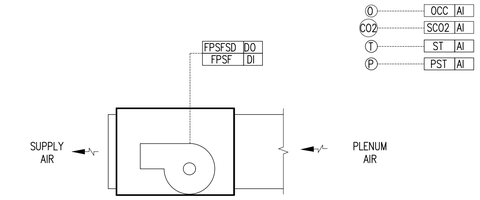


FAN COIL CONTROLS POINTS

POINT	DESIGNATION	TYPE	HARDWARE
SFSS	SUPPLY FAN START STOP	DO	RELAY
SFS	SUPPLY FAN STATUS	DI	CURRENT SENSING RELAY
HCV	HEATING CONTROL VALVE	AO	CONTROL VALVE
CCV	COOLING CONTROL VALVE	AO	CONTROL VALVE
BPAD	BY PASS AIR DAMPER	AO	DAMPER ACTUATOR
OCC	SPACE OCCUPANCY	AI	OCCUPANCY SENSOR
ST	SPACE TEMPERATURE	AI	TEMPERATURE SENSOR
SCO2	SPACE CO2	AI	CO2 SENSOR
PST	PLENUM SPACE TEMPERATURE	AI	TEMPERATURE SENSOR
PSSP	PLENUM STATIC PRESSURE	AI	STATIC PRESSURE SENSOR

NOTES:
1. THE ABOVE IS NOT MEANT TO BE AN INCLUSIVE LIST OF ALL REQUIRED CONTROL POINT. CONTRACTOR SHALL PROVIDE CONTROL POINTS AS REQUIRE TO MEET SEQUENCEOF OPERATION REQUIREMENTS.
2. HEATING OR COOLING STATUS OF FANCOIL TO BE BASED ON ZONES CONNECTED TO RESPECTIVE FANCOILS. BMS TO POLL ALL ZONES TO DETERMINE HEATING OR COOLING STATUS.
3. RESET SUPPLY AIR TEMPERATURE BASED ON OUTSIDE AIR TEMPERATURE, OVERRIDE RESET BASED ON ZONE DEMAND.

1 M7.1 FANCOIL CONTROL SCHEMATIC
NTS

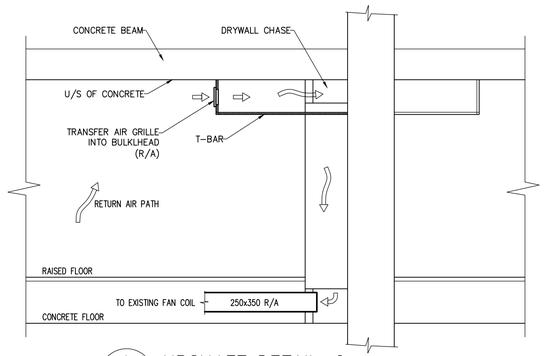


FAN POWERED BOX CONTROLS POINTS

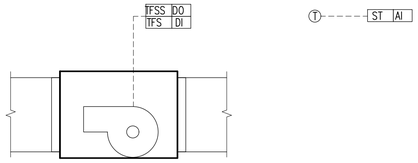
POINT	DESIGNATION	TYPE	HARDWARE
FPSFSD	FAN POWERED BOX SUPPLY FAN SPEED	AO	4-20mA FROM BMS TO FAN POWERED BOX
FPSFS	FAN POWERED BOX SUPPLY FAN STATUS	AI	BACNET SIGNAL FROM CONTROLLER TO BMS
OCC	SPACE OCCUPANCY	AI	OCCUPANCY SENSOR
ST	SPACE TEMPERATURE	AI	TEMPERATURE SENSOR
SCO2	SPACE CO2	AI	CO2 SENSOR
PST	PLENUM SPACE TEMPERATURE	AI	TEMPERATURE SENSOR

NOTES:
1. THE ABOVE IS NOT MEANT TO BE AN INCLUSIVE LIST OF ALL REQUIRED CONTROL POINT. CONTRACTOR SHALL PROVIDE CONTROL POINTS AS REQUIRE TO MEET SEQUENCE OF OPERATION REQUIREMENTS.
2. SPACE TEMPERATURE SETPOINT TO BE USER DEFINED, ADJUSTABLE

2 M7.1 FAN POWERED TERMINAL BOX CONTROL SCHEMATIC
NTS



6 M7.1 AIRSHAFT DETAIL-2
NTS

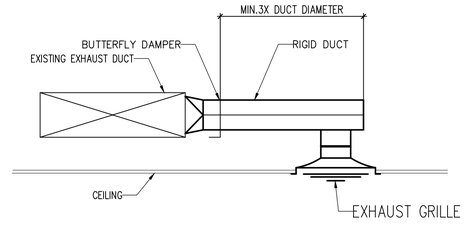


TRANSFER FAN CONTROLS POINTS

POINT	DESIGNATION	TYPE	HARDWARE
TFSS	TRANSFER FAN START STOP	DO	RELAY
TFS	TRANSFER FAN STATUS	DI	CURRENT SENSING RELAY
ST	SPACE TEMPERATURE	AI	TEMPERATURE SENSOR

NOTES:
1. THE ABOVE IS NOT MEANT TO BE AN INCLUSIVE LIST OF ALL REQUIRED CONTROL POINT. CONTRACTOR SHALL PROVIDE CONTROL POINTS AS REQUIRE TO MEET SEQUENCE OF OPERATION REQUIREMENTS.
2. SPACE TEMPERATURE SETPOINT TO BE USER DEFINED, ADJUSTABLE

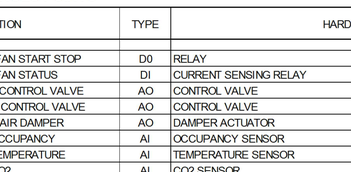
3 M7.1 TRANSFER FAN CONTROL SCHEMATIC
NTS



4 M7.1 EXHAUST GRILLE DETAIL
NTS

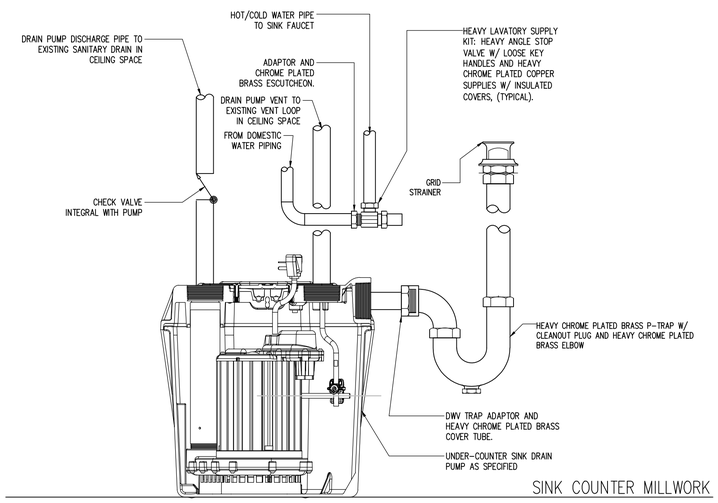
RECTANGULAR TO RECTANGULAR TAKE-OFF / TRANSITION

RECTANGULAR TO ROUND TAKE-OFF

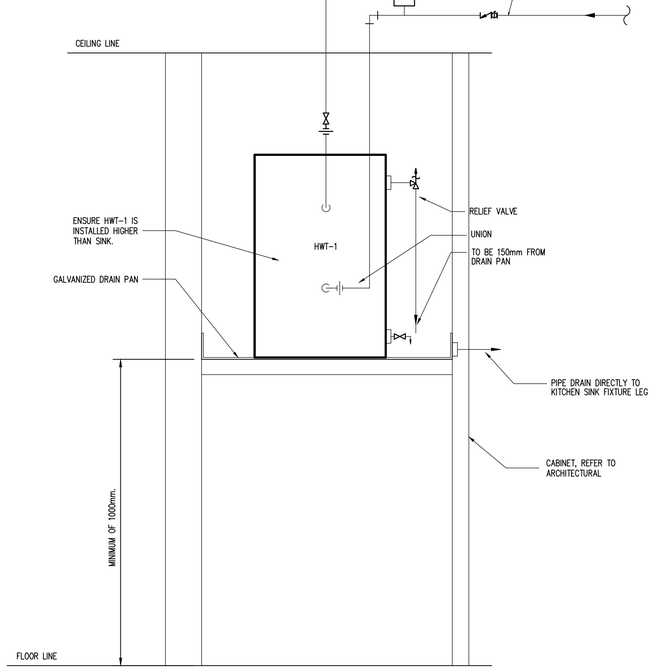


ROUND TO ROUND TAKE-OFF / TRANSITION

5 M7.1 DUCTWORK TAKE-OFFS/TRANSITION DETAILS
NTS



7 M7.1 TYPICAL UNDER-COUNTER DRAIN PUMP PIPING DETAIL
NTS



8 M7.1 DOMESTIC HOT WATER TANK IN CABINET DETAIL
NTS

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MECHANICAL DETAILS AND CONTROL SCHEMATIC

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R.060383	M7.1 OF 12	3