

**The following changes in the bid documents are effective immediately. This addendum will form part of the contract documents.**

## **DRAWINGS**

### **A1.1. A001 COVER PAGE, DRAWING LIST, ASSEMBLY SCHEDULE**

1. Refer to GENERAL NOTES, STAGING AREA:  
**DELETE** note A and **REPLACE** with the following:

A. CONTRACTOR TO TEMPORARILY REMOVE 3RD FLOOR WINDOW AND FRAME, INCLUDING ANY ADDITIONAL REQUIRED CLADDING OR TRIM, AND OUTFIT ACCORDINGLY TO ACCOMMODATE GARBAGE CHUTE. PROVIDE ANY ADDITIONAL TEMPORARY MEASURES TO WEATHERSEAL ALTERED OPENING AND CHUTE, SUBMIT PROPOSED MODIFICATIONS TO DEPARTMENTAL REPRESENTATIVE FOR REVIEW. CHUTE TO BE SECURED WITH A GRILLE AND PADLOCK AT INTERIOR OF 3RD FLOOR TO PREVENT INTRUSION FROM EXTERIOR TO THE APPROVAL OF DEPARTMENTAL REPRESENTATIVE. PROVIDE TEMPORARY HINGED CLOSURE TO SEAL OPENING THERMALLY WHEN NOT IN USE. FULLY REMOVE CHUTE AT END OF CONSTRUCTION AND REINSTATE EXISTING WINDOW, TRIM, AND CLADDING TO PREVIOUS CONDITION.

2. Refer to GENERAL NOTES, STAGING AREA:  
**ADD** the following:

B. GENERAL CONTRACTOR IS RESPONSIBLE FOR SECURITY OF STAGING AREA.

C. STAGING AREA TO BE USED FOR THE PARKING OF NO MORE THAN ONE VEHICLE.

D. PROTECT EXISTING SHRUBS AND OTHER VEGETATION WITHIN STAGING AREA FROM THE WORK.

### **A1.2. A111 3RD FLOOR DEMOLITION PLAN**

1. Refer to detail 1/A111 3RD FLOOR DEMOLITION PLAN:  
Existing door to room 3220 to be shown with dashed line indicating it is to be removed.

### **A1.3. A121 CONSTRUCTION / FINISH PLANS**

1. Refer to GENERAL NOTES, A121:  
**DELETE** note letter "K" and **REPLACE** with "L".
2. Refer to GENERAL NOTES, A121:  
**ADD** the following:

M. PROVIDE FIRE RETARDENT TREATED PLYWOOD OVER SECURITY DOORS ABOVE CEILING FOR MOUNTING OF SECURITY SERVICES, REFER TO ELECTRICAL.

N. PATCH AND MAKE GOOD ALL LOCATIONS WALL-MOUNTED INTERCOM HAVE BEEN REMOVED, TYPICAL. REFER TO ELECTRICAL.

3. Refer to DRAWING NOTES, A121:

**DELETE** note 1 and **REPLACE** with the following:

1. EXISTING METAL BENCHWORK. DISASSEMBLE, TRANSPORT TO SHOP FOR ELECTROSTATIC COATING, TRANSPORT BACK TO SITE AND REASSEMBLE. COLOUR TO MATCH NEW BENCHWORK. PROVIDE NEW EPOXY COUNTERTOP, REFER TO SPECIFICATION SECTION 12 35 53.13.

4. Refer to DRAWING NOTES, A121:

**DELETE** note 10 and **REPLACE** with the following:

10. PROVIDE ONE LAYER 13mm GOOD ONE SIDE, FIRE RETARDENT TREATED PLYWOOD TO WALL SURFACE FROM FLOOR TO UNDERSIDE OF CEILING.”

5. Refer to detail 1/A121 3RD FLOOR CONSTRUCTION / FINISH PLAN:

**DELETE** portion of drawing between gridlines 4, 5, J, and H, and **REPLACE** with same portion indicated on ADD1-SKA2.

6. Refer to LEGEND, A121:

**DELETE** wording “NEW BENCHWORK TO BE PROVIDED IN CONTRACT” and **REPLACE** with the following:

NEW STEEL LABORATORY CASEWORK TO BE PROVIDED IN CONTRACT.  
REFER TO SPECIFICATION SECTION 12 35 53.13.

7. Refer to LEGEND, A121:

**ADD** legend item NEW ARCHITECTURAL WOODWORK as indicated on ADD1-SKA2.

#### A1.4. A202 INTERIOR ELEVATIONS

1. Refer to details 1/A202 and 2/A202:

**DELETE** equipment item number “63” and **REPLACE** with item number “61” in all three location.

#### A1.5. A501 DETAILS

1. Refer to detail A202 – SECTION DETAIL – TYPICAL PARTITION TYPE P2 & P3:

**DELETE** numbers A202 and **REPLACE** with A501.  
**DELETE** note #7 and **REPLACE** with “15”

2. Refer to DRAWING NOTES, A501:

**ADD** the following:

15. ACOUSTIC SEALANT

**A1.6. A601 DOOR ELEVATIONS AND SCHEDULE**

1. Refer to 3/A601 DOOR SCHEDULE:
  1. Door No. D3111.1 – **DELETE** door type “B” and **REPLACE** with “C”.
  2. Door No. D3100.1 – **ADD** door type “C”. **DELETE** door material type “FW” and **REPLACE** with “HM”. **ADD** frame type “2”.
  3. Door No. D3100.3 – **DELETE** all door and frame information and **REPLACE** with the following:

DOOR – TYPE “B”, WIDTH 600, HEIGHT 2135, THICKNESS 44, MATERIAL HM, FINISH PAINT  
FRAME – TYPE “1”, MATERIAL HM, FINISH PAINT  
HAND – RHR  
FIRE RATING (HR) – 0.75 HR  
REMARKS – TYPE “B” SECURITY DOOR
  4. Door No. D3120.1 – **DELETE** all door and frame information and **REPLACE** with the following:

DOOR – TYPE “A”, WIDTH 1100, HEIGHT 2135, THICKNESS 44, MATERIAL HM, FINISH PAINT  
FRAME – TYPE “1”, MATERIAL HM  
HAND – RH  
FIRE RATING – 0.75 HR
  5. Door D3120.2 – **DELETE** door type “A” and **REPLACE** with “C”.
  6. Door D3100.2 – **DELETE** door type “A” and **REPLACE** with “C”. **DELETE** door material type “FW” and **REPLACE** with “HM”.
2. Refer to detail 1/A601 DOOR ELEVATIONS:

**DELETE** DOOR TYPE C, NARROW LIGHT elevation and **REPLACE** with elevation as indicated on sketch ADD1 – SKA1.
3. Refer to detail 2/A601 ELEVATIONS DOOR FRAMES:

**ADD** FRAME TYPE 2 as indicated on sketch ADD1 – SKA1.
4. Refer to DRAWING NOTES, A601:

**DELETE** note 3 and **REPLACE** with the following:

  3. SAFETY GLASS, REFER TO SPECIFICATIONS.
5. Refer to DRAWING NOTES, A601:

**ADD** the following:

  7. WIRED GLASS, REFER TO SPECIFICATIONS.

## **SPECIFICATIONS**

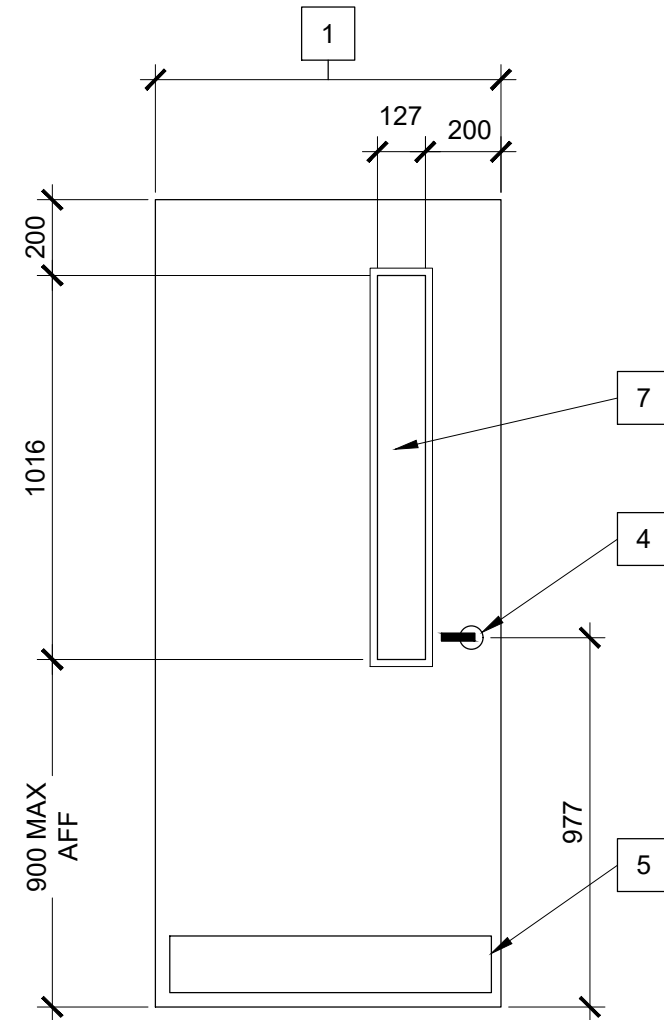
### **A1.7. SECTION 01 00 10 GENERAL INSTRUCTIONS:**

1. **DELETE** item 1.4.3.2 and **REPLACE** with the following:
  - .2 Departmental Representative shall be responsible to provide services, including those of manufacturer for fire protection systems, to isolate and protect all devices relating to:
    - .1 modification of fire alarms, fire suppression, extinguishing or protection systems; and/or
    - .2 cutting, welding, soldering or other construction activities that might activate fire protection systems.

Coordinate with Departmental Representative so that these services are provided on a daily basis, as required, as approved by Departmental Representative, or as noted below.

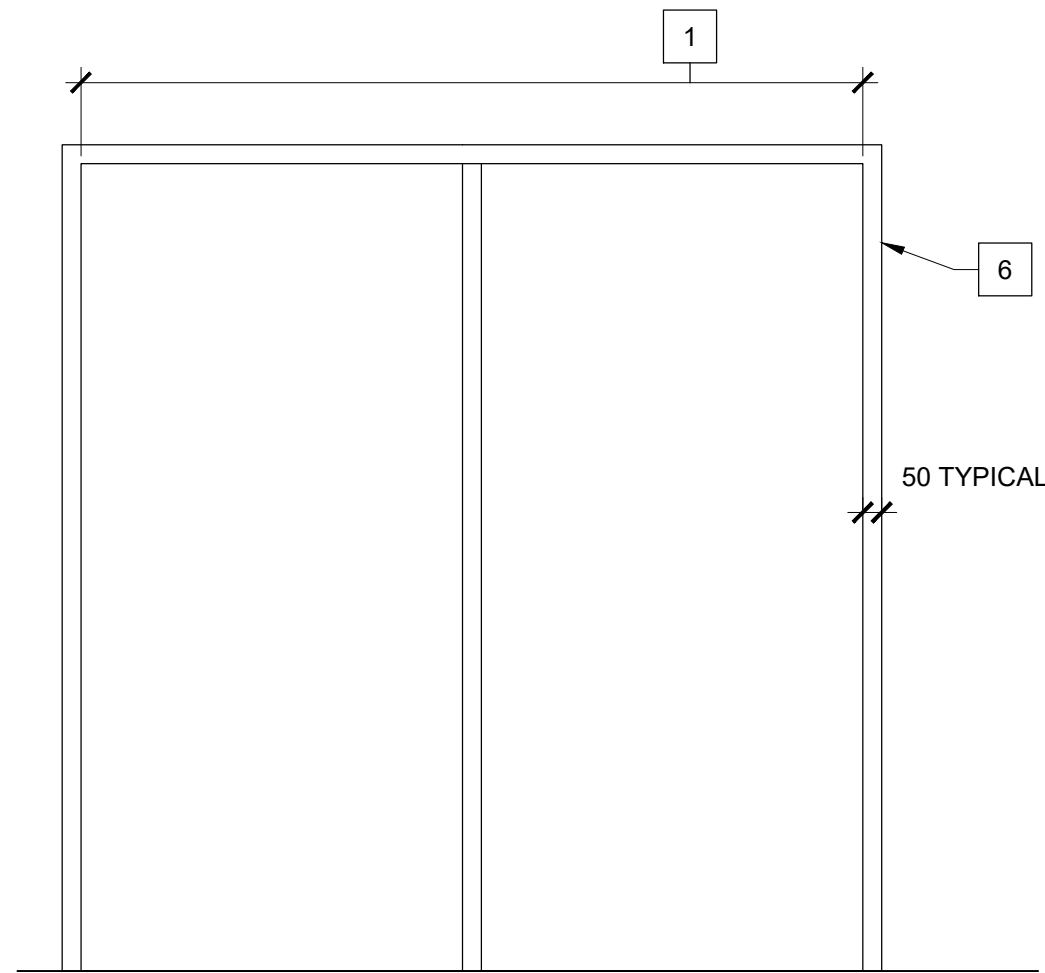
### **A1.8. SECTION 08 80 50 GLAZING:**

1. **ADD** item 2.1.2.2:
  - .2 Wired glass: to CAN/CGSB-12.11,
    - .1 Type 1-polished both sides (transparent)
    - .2 Wire mesh style 3-square



DOOR TYPE C  
NARROW LIGHT

1  
A601  
**ELEVATIONS  
DOORS (PARTIAL)**  
SCALE 1:20



FRAME TYPE 2

2  
A601  
**ELEVATIONS  
DOOR FRAMES (PARTIAL)**  
SCALE 1:20



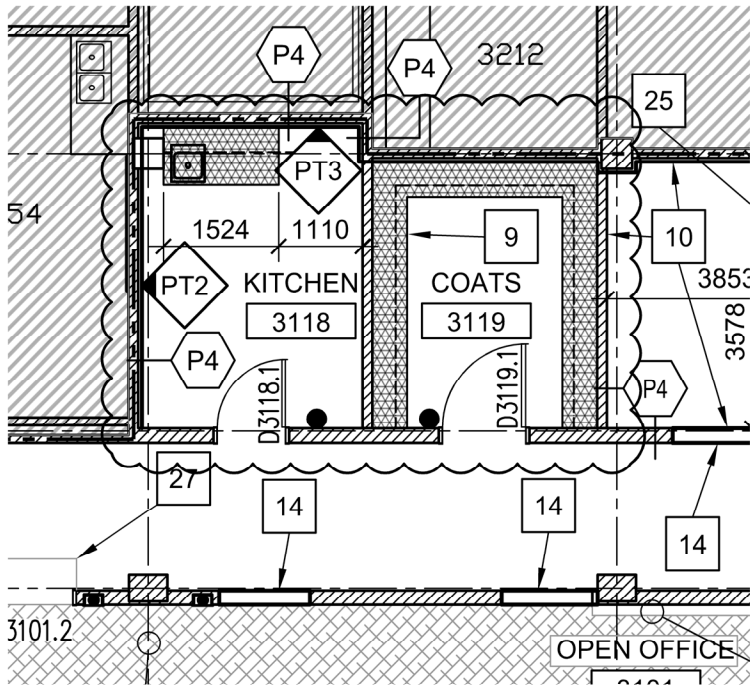
revisions	description	date
1	ISSUED FOR ADD. No. 1	2019/02/05

A detail no. / no. du détail  
 B location drawing no. / sur dessin no.  
 C drawing no. / dessin no.

project / projet  
**ADDENDA A1  
 DID LAB  
 RENOVATION**  
 OTTAWA ONTARIO

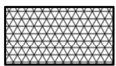
drawing / dessin  
**DOOR & FRAME  
 ELEVATION**

Designed By / Conçu par	PK/RR
Date / (yyyy/mm/dd)	
Drawn By / Dessiné par	PM
Date / (yyyy/mm/dd)	
Reviewed By / Examiné par	RR
Date / (yyyy/mm/dd)	
Approved By / Approuvé par	PK
Date / (yyyy/mm/dd)	
Tender / Soumission	
Project Manager / Administrateur de projets	ANNE RICHARDS
Project no. / No. du projet	PTS 4845
Drawing no. / No. du dessin	ADD1 - SKA1



1
A121
**3RD FLOOR  
CONSTRUCTION / FINISH PLAN (PARTIAL)**  
 SCALE 1:100

**LEGEND, A121 (PARTIAL)**



NEW ARCHITECTURAL WOODWORK TO BE PROVIDED IN CONTRACT. REFER TO SPECIFICATION SECTION 06 40 00.



project <b>DID LAB RENOVATION</b> OTTAWA ONTARIO	projet Designed By PK/RR Date JAN 2019 Drawn By PM Date JAN 2019 Reviewed By PK Date JAN 2019 Approved By RR Date JAN 2019 Tender ANNE RICHARDS Project Manager	Conçu par (yyyy/mm/dd) Dessiné par (yyyy/mm/dd) Examiné par (yyyy/mm/dd) Approuvé par (yyyy/mm/dd) Soumission Administrateur de projets	 <b>Canada</b>	Publics Works and Government Services Canada Travaux publics et services gouvernementaux Canada	
drawing <b>CONSTRUCTION / FINISH PLAN (PARTIAL)</b>	dessin	Project no. <b>PTS 4845</b>	No. du projet	Drawing no. <b>ADD1 - SKA1</b>	No. du dessin

**The following changes in the bid documents are effective immediately. This addendum will form part of the contract documents.**

**DRAWINGS**

**M1.1 M001 MECHANICAL DRAWING LIST, LEGENDS & SCHEDULES and Attached Sketch ADD1-SKM1**

- .1 Add airflow schedule, refer to sketch ADD1-SKM1.
- .2 Add M307 to Drawing List, refer to attached sketch ADD1-SKM1.

**M1.2 M203 MECHANICAL THIRD FLOOR – BLOCK 1 PLUMBING NEW WORK**

- .1 Replace Note No. 4 with “Provide connection from R.O. system to dishwasher, faucet & Millipore system.”
- .2 Add Note Bubble No. 7 next to the sink in Lab 3113.

**M1.3 Issued for Tender Drawing M302 – MECHANICAL THIRD FLOOR – BLOCK 1 HVAC DEMOLITION dated January 7, 2019 and Attached Drawing M302 – MECHANICAL THIRD FLOOR – BLOCK 1 HVAC DEMOLITION**

- .1 Replace with attached Drawing M302.

**M1.4 Issued for Tender Drawing M305 – MECHANICAL THIRD FLOOR – BLOCK 1 HVAC AND UTILITIES NEW WORK dated January 7, 2019 and Attached Drawing M305 – MECHANICAL THIRD FLOOR – BLOCK 1 HVAC AND UTILITIES NEW WORK**

- .1 Replace with attached Drawing M305.

**M1.5 Issued for Tender Drawings M306 – MECHANICAL THIRD FLOOR – BLOCK 2 HVAC AND UTILITIES NEW WORK dated January 7, 2019 and Attached Drawings M306 – MECHANICAL THIRD FLOOR – BLOCK 2 HVAC AND UTILITIES NEW WORK**

- .1 Replace with attached Drawing M306.

**M1.6 Attached Drawing M307 – MECHANICAL PENTHOUSE – BLOCK 1 HVAC DEMOLITION AND NEW WORK**

- .1 Add attached Drawing M307 to Tender documents.

**E1.1 E2 DID LAB RENOVATIONS – LIGHTING & FIRE ALARM DEMOLITION WORK**

- .1 **DELETE** drawing note No. 3 and  
**REPLACE** with “Existing ceiling mounted occupancy sensor to be temporarily disconnected to allow for ceiling replacement. Reinstate upon completion of architectural work. Although occupancy sensors do not currently control lighting, they shall be reconnected to existing controls. Extend wiring and provide new sensors to match existing as required. Refer to drawing E3 for new layout.”

**E1.2 E3 DID LAB RENOVATIONS – LIGHTING & FIRE ALARM NEW WORK**

- .1 **DELETE** Issued for Tender drawing E3 and  
**REPLACE** with attached revised drawing E3.

**E1.3 E4 DID LAB RENOVATIONS – POWER & SYSTEMS DEMOLITION WORK**

- .1 **DELETE** portion of plan 1/E4 in the area bounded by gridlines 3, 7, J and O and  
**REPLACE** with same portions indicated on sketch ADD1-SKE1.

**E1.4 E5 DID LAB RENOVATIONS – POWER & SYSTEMS NEW WORK**

- .1 **DELETE** portions of plan 1/E5 in the area bounded by gridlines 7, 10, L and O and  
**REPLACE** with same portions indicated on sketch ADD1-SKE2.

**E1.5 E6 DID LAB RENOVATIONS – COMMUNICATIONS NEW WORK**

- .1 **DELETE** portions of plan 1/E6 in the area in the area of gridlines 4H and  
**REPLACE** with same portions indicated on sketch ADD1-SKE2.

**E1.6 E1 DID LAB RENOVATIONS – ELECTRICAL LEGENDS, DETAILS & DRAWING LIST**

- .1 **DELETE** portion of ‘POWER & SYSTEMS LEGEND’ and  
**REPLACE** with same portion indicated on sketch ADD1-SKE2.

**E1.7 E9 DID LAB RENOVATIONS – NEW ELECTRICAL PANEL SCHEDULES**

- .1 **DELETE** panel schedules for panels ‘132EPB’ and ‘132EPA and  
**REPLACE** with same panel schedules indicated on sketch ADD1-SKE3.

**E1.8 E10 DID LAB RENOVATIONS – NEW ELECTRICAL PANEL SCHEDULES CONTINUED**

- .1 **DELETE** panel schedules for panels ‘132NPF’ and ‘132EPD’ and  
**REPLACE** with same panel schedules indicated on sketch ADD1-SKE4.



**E1.9 ATTACHED DRAWING E11 DID LAB RENOVATIONS – PENTHOUSE ELECTRICAL WORK**

- .1 **ADD** attached drawing E11 to Tender documents.

**SPECIFICATIONS**

**1 Section 25 30 02 – EMCS: FIELD CONTROL DEVICES**

**.1 Add Article 2.4 as follows:**

2.4 AUTOMATIC AIR VALVE (AAV)

- .1 Pressure independent Venturi air valve over a differential pressure range of 150 to 750 kPa.
- .2 General all air valves to be fully modulating and full shut-off type.
- .3 General exhaust air valves: bodies to be constructed of 16 gauge aluminum or galvanized steel shaft support brackets to be made of 316 stainless steel all bearing surfaces to be a Teflon or Celenex composite.
- .4 Fume hood air valves: valve to have baked on corrosion resistant phenolic coating on body and shaft or to be made of 304 stainless steel shaft support brackets to be made of 316 stainless steel all bearing surfaces to be a Teflon or Celenex composite.
- .5 Air valves to be c/w airflow measuring station high speed electric valve controller with digital inputs capable of accepting command from BAS, factory calibrated for airflow characterization curve.
- .6 Air valve controller to receive command signal from BAS and provide feedback reading for airflow to BAS.

**.2 Add Article 2.5 as follows:**

2.5 LABORATORY FUME HOOD CONTROLLER

- .1 Fume hood controller shall monitor and control the measured face velocity of a fume hood independent of sash position and duct static pressure.

- .2 Fume hood controller shall use a sidewall sensor to measure the average fume hood face velocity. The sidewall sensor shall have the sensitivity to measure the effects of obstructions and duct static pressure fluctuations on the average fume hood face velocity. The fume hood sensor shall have a resolution of 0.005 m/s and shall detect any change in the face velocity within 0.005 m/s. Volumetric airflow measurements used to imply fume hood face velocity shall not be acceptable.
- .3 Fume hood controller shall be completely independent for each individual fume hood. The fume hood control system shall control the face velocity independent of other fume hood and laboratory control systems. The fume hood controller shall be able to respond to face velocity disturbances caused by events including but not limited to sash movement.
- .4 Fume hood controller shall have a PID control algorithm with two sets of tuning constants. The two sets of tuning constants enable fast response to large disturbances while maintaining stability at setpoint. The control sensitivity defining the breakpoint between input and steady state response shall be adjustable. The fume hood face velocity control system shall update the control output 20 times per second.
- .5 Controller to be c/w local audible and visual alarms. Alarms and relay contacts shall be enabled whenever the measured face velocity falls below a user configurable low alarm set point or rises above a user configurable high alarm set point. A mute key shall silence the audible alarm.
- .6 Calibration shall be done electronically through the use of the integral keypad. Calibration shall consist of adjusting the sensor zero point and sensor span to match a reference measurement. Password protection of the calibration items shall limit unauthorized access. Neither remote calibration nor calibrating through the use of potentiometers is acceptable. Factory calibration alone is not permitted.
- .7 Fume hood controller shall have an emergency key and an emergency input contact, either of which shall completely open that fume hood's damper for maximum exhaust in the event of a spill.
- .8 For energy-efficiency, the fume hood controller shall have a setback input contact and a setback key, either of which shall initiate control for that fume hood at a reduced face velocity setpoint. The fume hood controller shall automatically adjust high and low alarm set points to avoid nuisance alarms when setback mode is enabled.

- .9 Fume hood controller shall use a sidewall sensor to measure the average fume hood face velocity. The sidewall sensor shall use a precision platinum RTD, ceramic coated for corrosion resistance and ease of maintenance. The sidewall sensor shall be temperature compensated over a range of 13°C to 35°C. Systems employing a thermistor-based face velocity sensor or measuring the exhaust flow volume and open sash area to calculate face velocity are not allowed.
- .10 Fume hood controller shall have a graphic display of the measured average face velocity and all configuration parameters. Configuration shall be done through a keypad integral to the controller. Password protection shall limit unauthorized access to configuration parameters. The controller shall have indicator lights for alarm, mute, or normal operating conditions. High, low or no flow alarm contacts shall close in the appropriate alarm condition. An analog output of face velocity shall be user-configurable to either 0 to 10V or 4 to 20 mA. The fume hood monitor shall have an RS 485 communications port, supporting BACnet® IP protocol for seamless integration.

Enclosures: Sketch ADD1-SKM1  
Drawings M203, M302, M305 to M307  
Sketches ADD1-SKE1, ADD1-SKE2, ADD1-SKE3 & ADD1-SKE4  
Drawings E3 & E11

**END OF ADDENDUM No. 1**

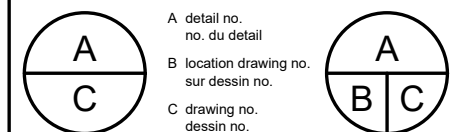


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GENL. Project #2018-363

Contractor to verify all dimensions & conditions on site and immediately notify the engineer of all discrepancies.

5	ISSUED FOR ADDENDUM 1	2019-01-31
4	ISSUED FOR TENDER	2019-01-07
3	ISSUED FOR TENDER REVIEW	2018-11-27
2	ISSUED FOR 99% REVIEW	2018-11-02
1	ISSUED FOR 66% REVIEW	2018-10-12

revisions	description	date
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project \_\_\_\_\_ projet \_\_\_\_\_

## DID LAB RENOVATIONS

OTTAWA, ONTARIO

drawing \_\_\_\_\_ dessin \_\_\_\_\_

### MECHANICAL DRAWING LIST, LEGENDS & SCHEDULES

Designed By SH Conçu par

Date JAN 2019 (yyyy/mm/dd)

Drawn By JC Dessiné par

Date JAN 2019 (yyyy/mm/dd)

Reviewed By SH Examiné par

Date JAN 2019 (yyyy/mm/dd)

Approved By SH Approuvé par

Date JAN 2019 (yyyy/mm/dd)

Tender ANNE RICHARDS Soumission

Project Manager Administrateur de projets

Project no. PTS 4845 No. du projet

Drawing no. ADD1-SKM1 No. du dessin

### AIR FLOW SCHEDULE

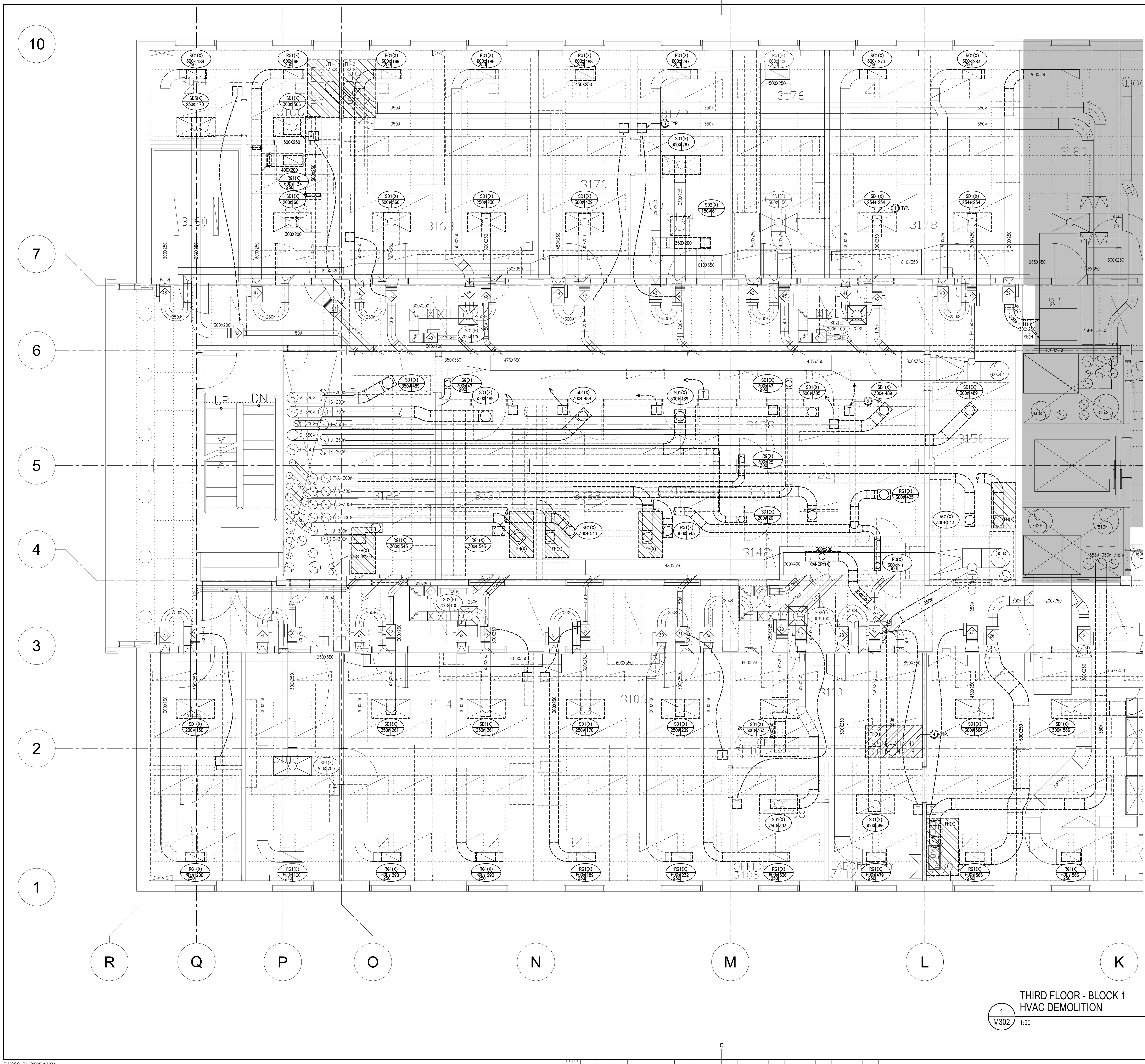
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	MIN. (L/s)	MAX. (L/s)	MIN. (L/s)	MAX. (L/s)		MIN. (L/s)	MAX. (L/s)	
3101	450	1125	0	0	0	225	900	+255
3120	50	50	0	0	0	50	50	0
3119	50	50	0	0	0	50	50	0
3118	25	50	0	0	0	50	75	-25
3101A	75	75	0	0	0	50	50	+25
3102	75	75	0	0	0	50	50	+25
3103	75	75	0	0	0	50	50	+25
3104A	75	75	0	0	0	50	50	+25
3104	250	800	0	0	450	0	550	-200
3104B	200	200	0	0	150	100	100	-50
3105	100	150	0	0	0	150	200	-50
3107	830	2810	1030	2960	50	0	0	-200
3117	200	300	0	0	0	300	400	-100
3116	50	150	0	0	0	0	100	+50
3115	100	100	0	0	0	50	50	+50
3114	350	350	0	0	50	350	350	-50
3113	300	800	200	540	100	50	550	-50
3100	300	300	0	0	0	0	0	+300
3111	100	100	0	0	0	0	0	+100

### DRAWING LIST

Sheet Number	Sheet Title
MECHANICAL	
M001	DRAWING LIST, LEGENDS & SCHEDULES
MECHANICAL: GRND FLOOR – BLOCK 1	
M301	HVAC DEMOLITION
M304	HVAC & PLUMBING NEW WORK
MECHANICAL: THIRD FLOOR	
M101	FIRE PROTECTION DEMOLITION & NEW WORK
MECHANICAL: THIRD FLOOR – BLOCK 1	
M201	PLUMBING DEMOLITION
M203	PLUMBING NEW WORK
M302	HVAC DEMOLITION
M305	HVAC AND UTILITIES NEW WORK
MECHANICAL: THIRD FLOOR – BLOCK 2	
M202	PLUMBING DEMOLITION
M204	PLUMBING NEW WORK
M303	HVAC DEMOLITION
M306	HVAC AND UTILITIES NEW WORK
MECHANICAL: PENTHOUSE – BLOCK 1	
M307	HVAC DEMOLITION AND NEW WORK

REFERENCE DRAWING M101





- DRAWING NOTES**
- REMOVE EXISTING DIFFUSERS & GRILLES C/W ASSOCIATED DUCTWORK AS INDICATED. RETAIN FOR REUSE IN NEW WORK.
  - REMOVE TEMPERATURE SENSORS IN CENTRAL LAB AREA C/W WIRING BACK TO PENTHOUSE MECHANICAL ROOM.
  - REMOVE TEMPERATURE SENSORS C/W ASSOCIATED WIRING AS INDICATED. RETAIN FOR REUSE IN NEW WORK.
  - REMOVE EXISTING FUMEHOODS AS INDICATED.

Government of Canada / Gouvernement du Canada

**Canada**

**PETER J. KINDREE ARCHITECT**

79 Hinton Avenue N.  
Ottawa K1Y 0Z7 (613) 860-1530

**Goodkey Weedmark Consulting Engineers**

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PROJECT #2018-363

N.I.C.

KEY PLAN

L'ENTREPRENEUR DEVRA VÉRIFIER TOUTES LES DIMENSIONS ET LES CONDITIONS SUR LE CHANTIER ET AVISER SANS DÉLAI LE REPRÉSENTANT DU MINISTÈRE DE TOUTE ANOMALIE.

Contractor to verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

revisions	description	date
5	ISSUED FOR ADDENDUM 1	2019-01-31
4	ISSUED FOR TENDER	2019-01-07
3	ISSUED FOR TENDER REVIEW	2018-11-27
2	ISSUED FOR 90% REVIEW	2018-11-02
1	ISSUED FOR 66% REVIEW	2018-10-12

A	A detail no. du detail	A
C	B location drawing no. sur dessin no. dessin no.	B
	C drawing no. dessin no.	C

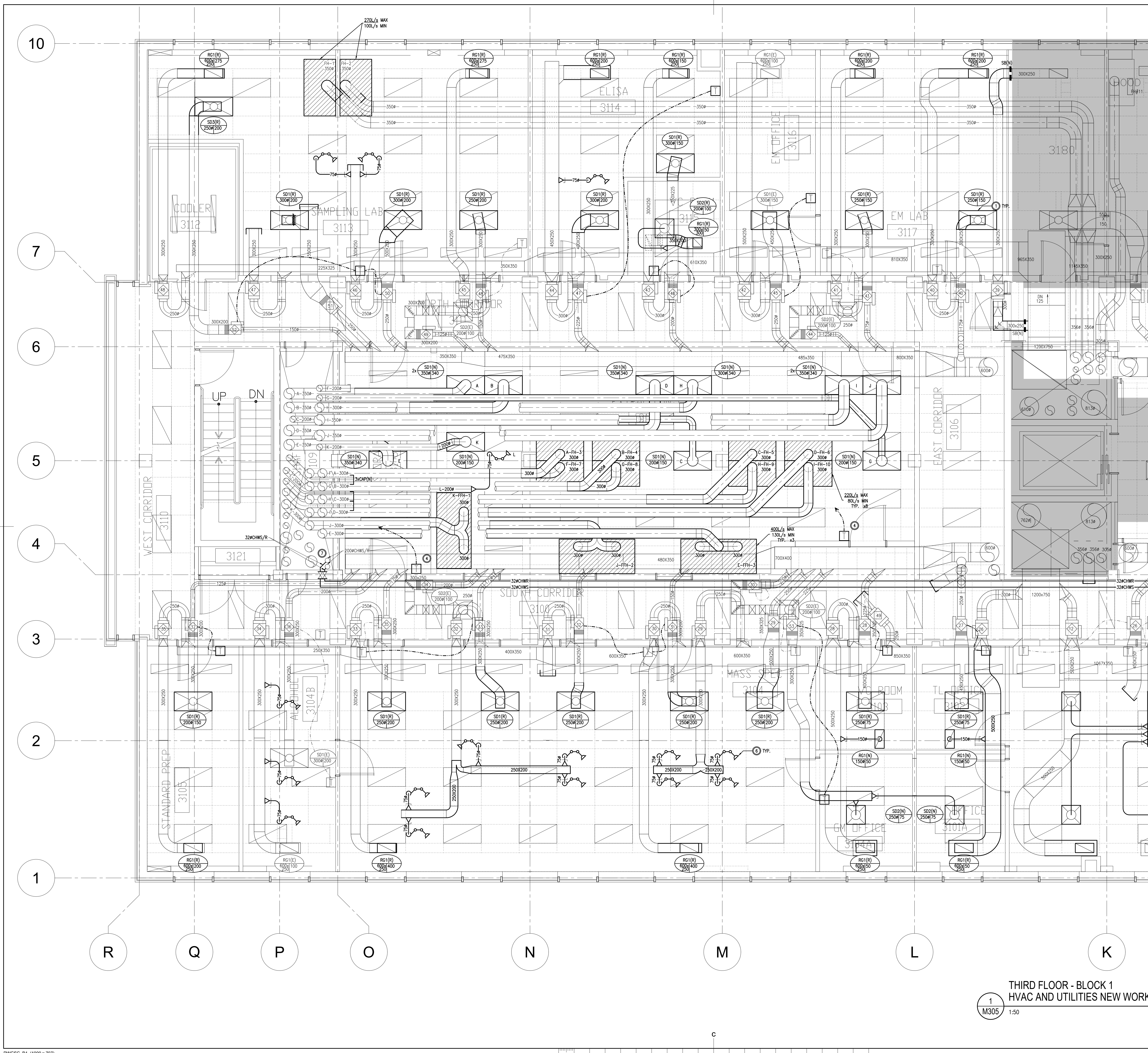
project DID LAB RENOVATIONS  
OTTAWA, ONTARIO

drawing MECHANICAL  
THIRD FLOOR - BLOCK 1  
HVAC DEMOLITION

Designed By	SH	Conçu par	
Date	JAN 2019	(yyyy/mm/dd)	
Drawn By	JC	Dessiné par	
Date	JAN 2019	(yyyy/mm/dd)	
Reviewed By	SH	Examiné par	
Date	JAN 2019	(yyyy/mm/dd)	
Approved By	SH	Approuvé par	
Date	JAN 2019	(yyyy/mm/dd)	
Tender	ANNE RICHARDS	Soumission	
Project Manager	Administrateur de projets		
Project no.	No. du projet		
	PTS 4845		
Drawing no.	No. du dessin		
	M302		

THIRD FLOOR - BLOCK 1  
HVAC DEMOLITION  
1  
M302 1:50





- DRAWING NOTES**
- REINSTALL EXISTING DIFFUSERS & GRILLES RETAINED FROM DEMOLITION. EXTEND EXISTING DUCTWORK AS INDICATED.
  - PROVIDE NEW LAMINAR DIFFUSERS. EXTEND DUCTWORK AS INDICATED.
  - PROVIDE NEW FUMEHOODS. EXTEND DUCTWORK AS INDICATED.
  - PROVIDE NEW TEMPERATURE SENSORS AS INDICATED C/W WIRING TO CONTROLLERS IN PENTHOUSE MECHANICAL ROOM. UPDATE GRAPHICS ACCORDINGLY.
  - INSTALL TEMPERATURE SENSORS RETAINED FROM DEMOLITION. MODIFY WIRING AS INDICATED. UPDATE GRAPHICS ACCORDINGLY.
  - PROVIDE NEW EXTRACTOR ARMS C/W ASSOCIATED DUCTWORK. BALANCE TO 50L/S EACH.
  - PROVIDE NEW CONNECTIONS TO EXISTING CHWS/R RISERS C/W ISOLATION VALVES. CONNECTIONS TO BE MADE USING HOT TAPS. ALLOW FOR REMOVAL & RE-INSTALLATION OF TWO EXHAUST AIR DUCTS TO ACCESS RISERS.

Government of Canada / Gouvernement du Canada

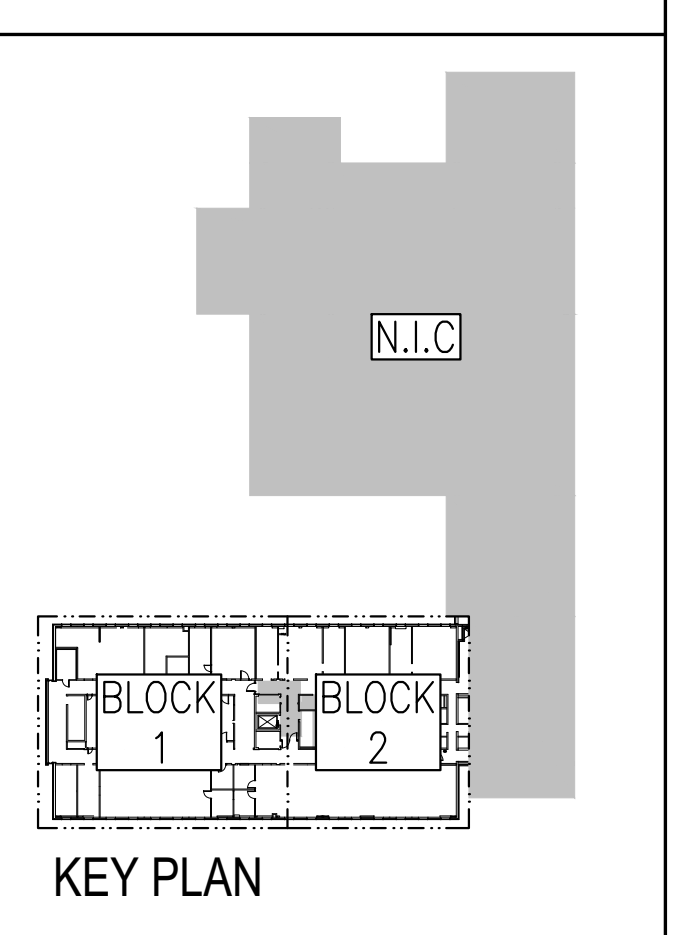
**Canada**

**PETER J. KINDREE ARCHITECT**

79 Hinton Avenue N. Ottawa, Ontario K1Y 0Z7 (613) 860-1530

**Goodkey Weedmark Consulting Engineers**

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1688 Woodward Dr. Ottawa, Ontario Canada K2C 3R8 OVAL Project #2018-363  
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L'ENTREPRENEUR DEVRA VÉRIFIER TOUTES LES DIMENSIONS ET LES CONDITIONS SUR LE CHANTIER ET AVISER SANS DÉLAI LE REPRESENTANT DU MINISTÈRE DE TOUTE ANOMALIE.

Contractor to verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

revisions	description	date
5	ISSUED FOR ADDENDUM 1	2019-01-31
4	ISSUED FOR TENDER	2019-01-07
3	ISSUED FOR TENDER REVIEW	2018-11-27
2	ISSUED FOR 90% REVIEW	2018-11-02
1	ISSUED FOR 66% REVIEW	2018-10-12

A detail no. no. du détail	A
B location drawing no. sur dessin no.	B
C drawing no. dessin no.	C

**DID LAB RENOVATIONS**

OTTAWA, ONTARIO

drawing / dessin

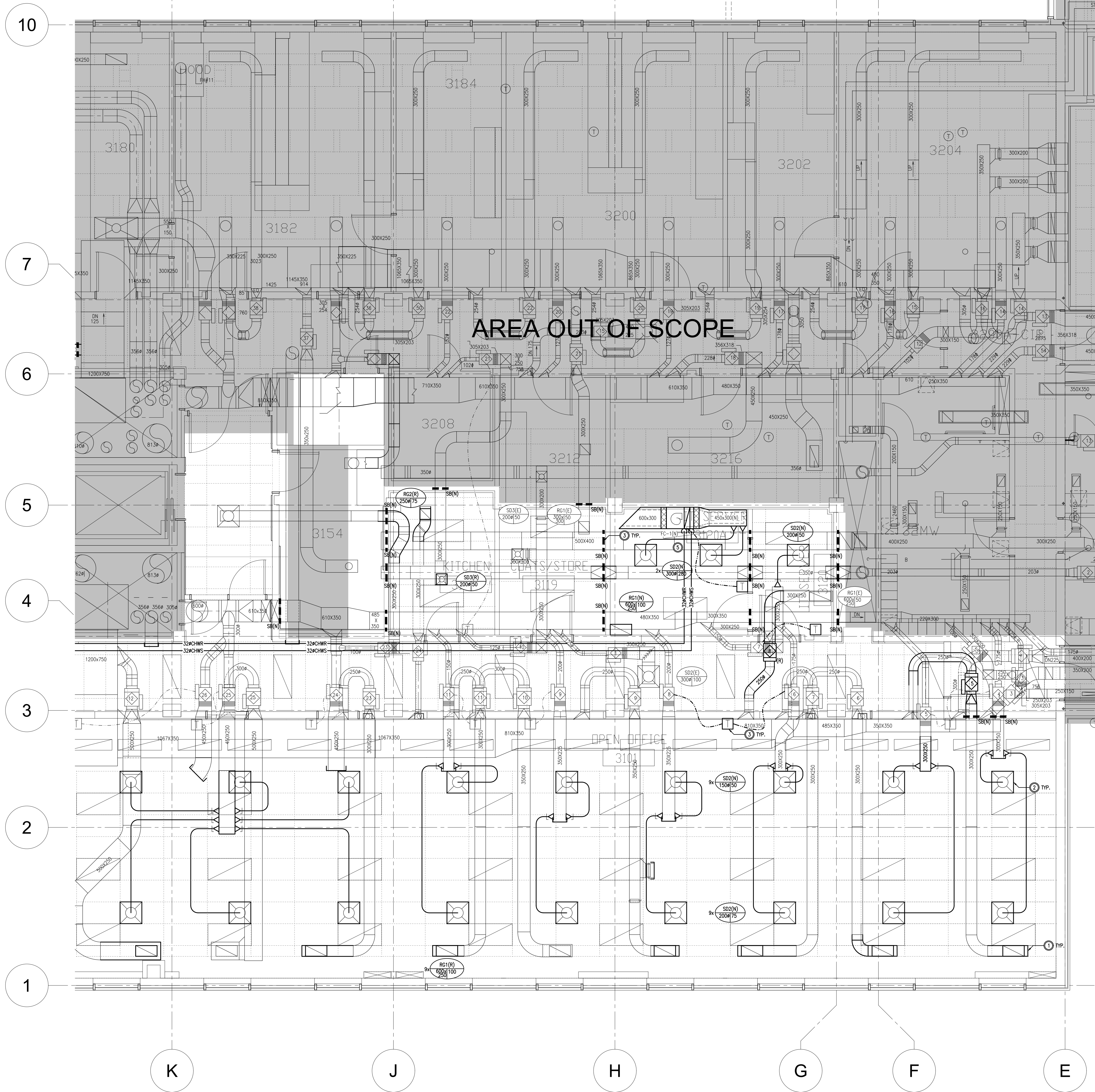
**MECHANICAL THIRD FLOOR - BLOCK 1 HVAC AND UTILITIES NEW WORK**

Designed By / Conçu par	SH
Date	JAN 2019 (yyyy/mm/dd)
Drawn By / Dessiné par	JC
Date	JAN 2019 (yyyy/mm/dd)
Reviewed By / Examiné par	SH
Date	JAN 2019 (yyyy/mm/dd)
Approved By / Approuvé par	SH
Date	JAN 2019 (yyyy/mm/dd)
Tender / Soumission	ANNE RICHARDS
Project Manager / Administrateur de projets	ANNE RICHARDS
Project no. / No. du projet	PTS 4845
Drawing no. / No. du dessin	M305

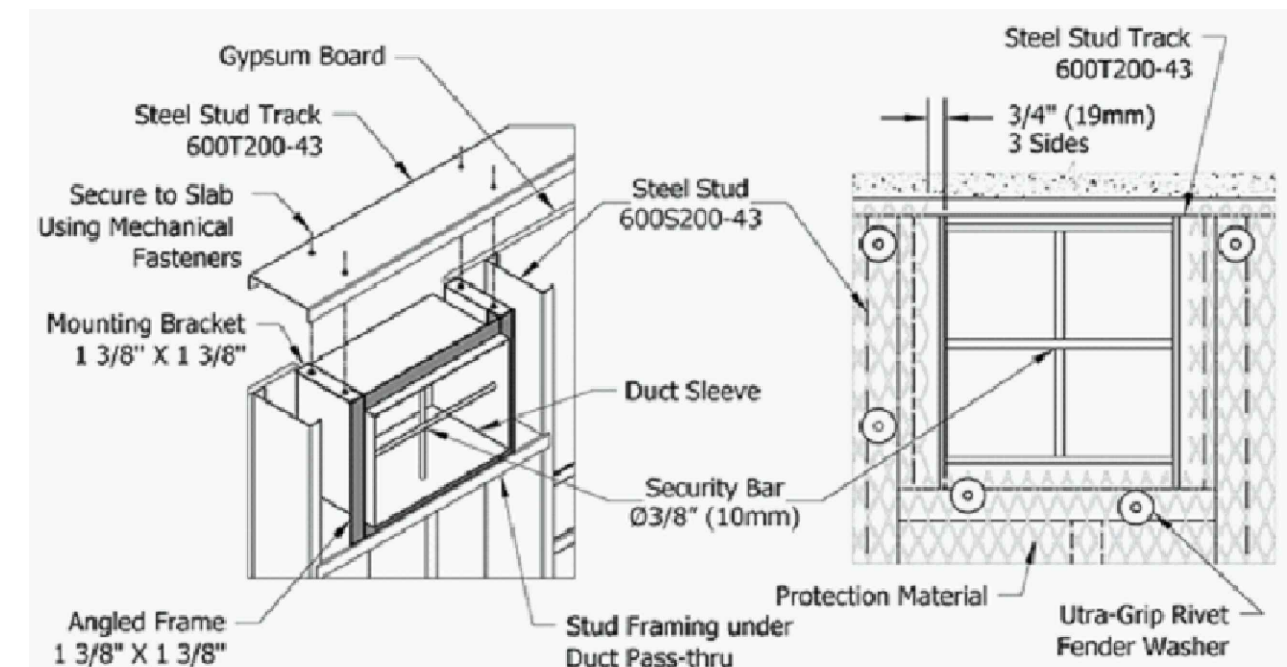
**THIRD FLOOR - BLOCK 1 HVAC AND UTILITIES NEW WORK**

1 M305 1:50

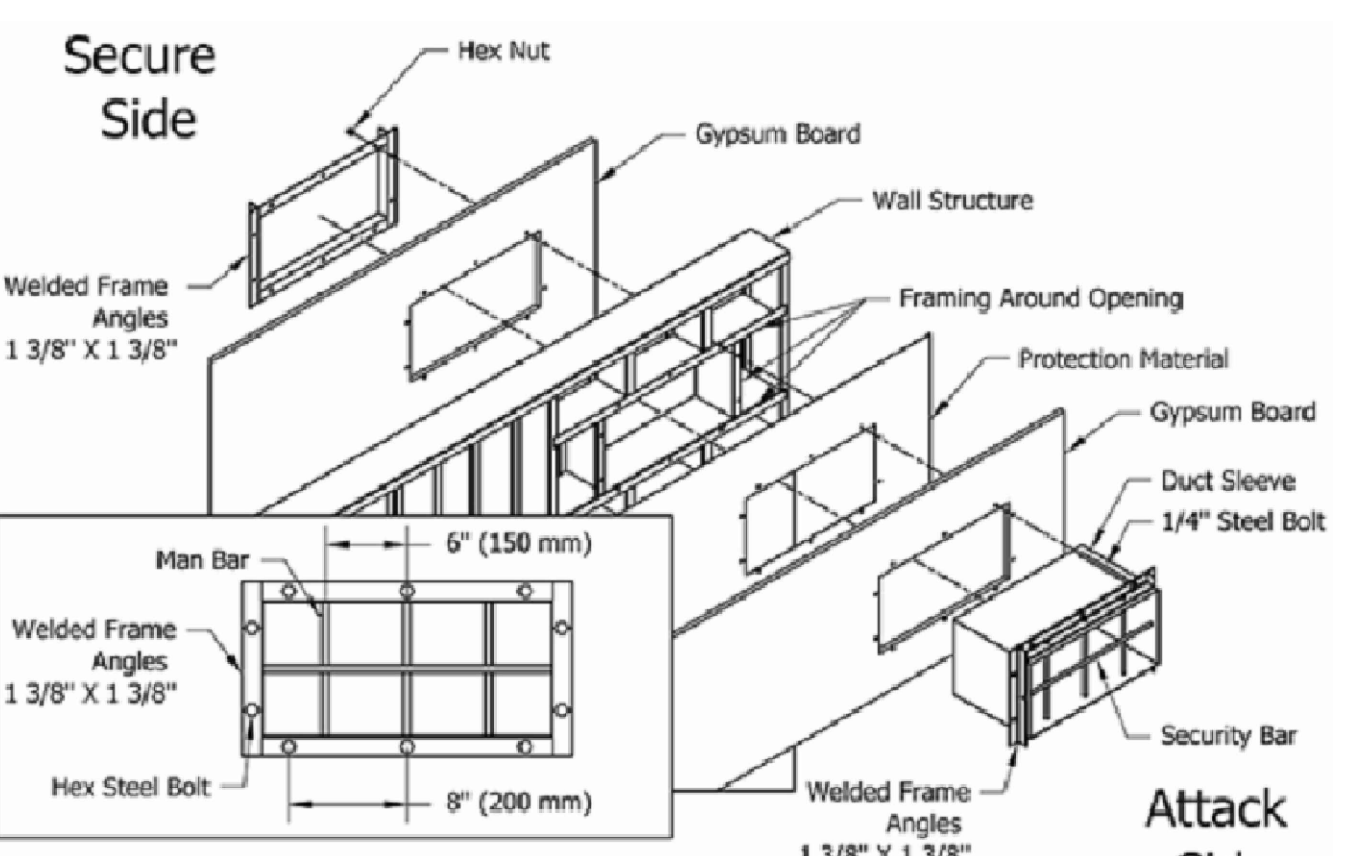




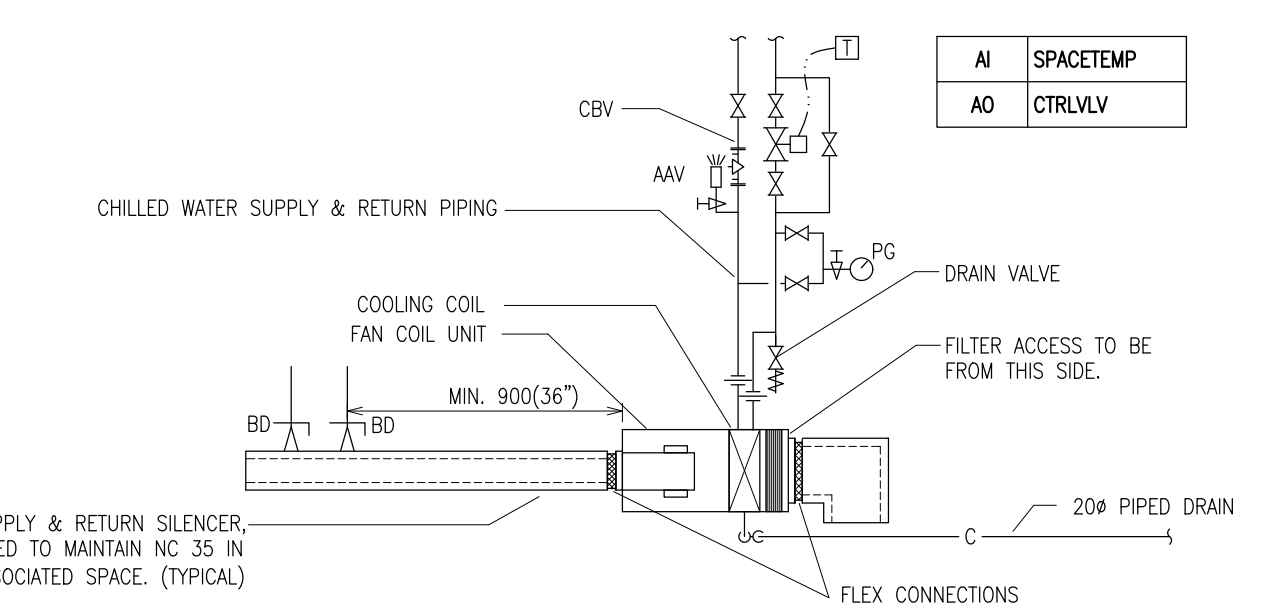
- DRAWING NOTES**
- REINSTALL GRILLES RETAINED FROM DEMOLITION. EXTEND EXISTING DUCTWORK AS INDICATED.
  - PROVIDE NEW SUPPLY DIFFUSERS. EXTEND EXISTING DUCTWORK AS INDICATED.
  - INSTALL TEMPERATURE SENSORS RETAINED FROM DEMOLITION. MODIFY WIRING AS INDICATED. UPDATE GRAPHICS ACCORDINGLY.
  - PROVIDE SECURITY BARS IN EXISTING DUCTWORK. REFER TO DETAIL 2/M306 & 3/M306.
  - PROVIDE CHILLED WATER PIPING FROM NEW FAN COIL TO EXISTING RISERS IN SHAFT.



**2**  
M306 N.T.S.  
CEILING MOUNT DUCT SECURITY BAR CONNECTION (SB)



**3**  
M306 N.T.S.  
SURFACE MOUNT DUCT SECURITY BAR CONNECTION (SB)



**4**  
M306 N.T.S.  
TYPICAL HORIZONTAL FAN COIL UNIT - DETAIL

Government of Canada / Gouvernement du Canada

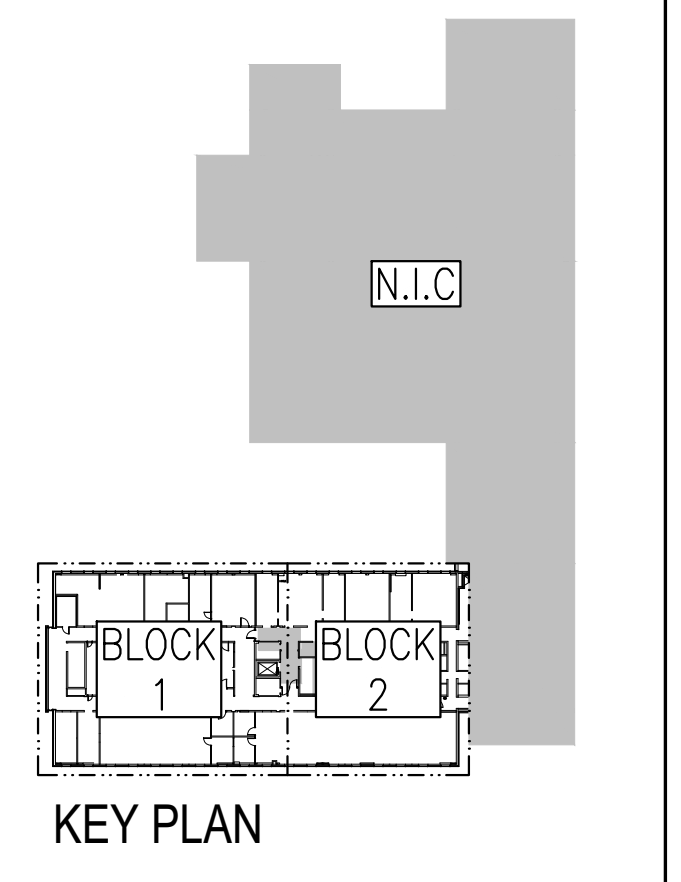
**Canada**

**PETER J. KINDREE ARCHITECT**

79 Hinton Avenue N.  
Ottawa K1Y 0Z7 (613) 860-1530

**Goodkey Weedmark Consulting Engineers**

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OWA Project #2018-363



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1	ISSUED FOR 66% REVIEW	2018-10-12

revisions	description	date
A	A detail no. no. du detail	
B	B location drawing no. sur dessin no.	
C	C drawing no. dessin no.	

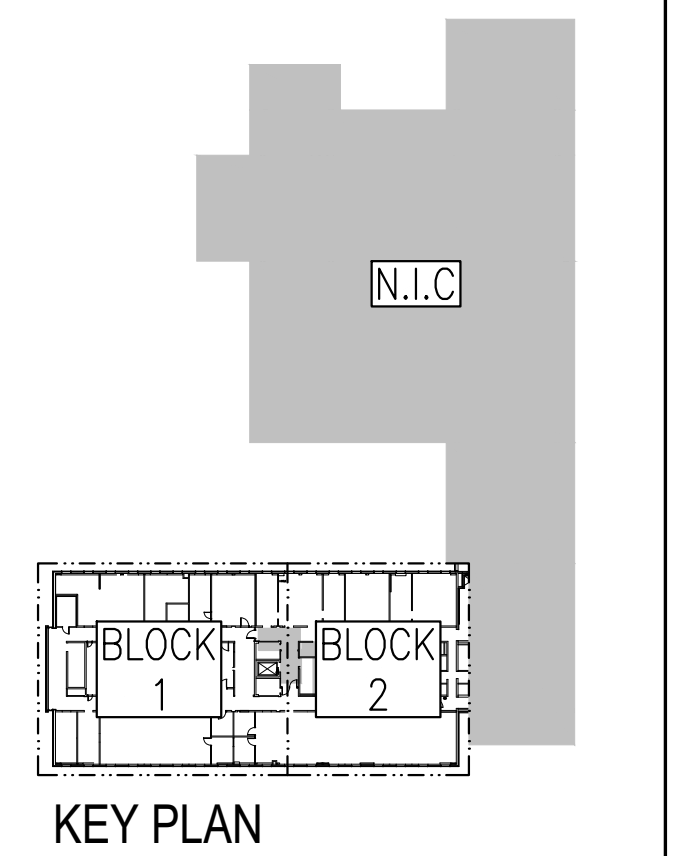
**DID LAB RENOVATIONS**

OTTAWA, ONTARIO

**MECHANICAL THIRD FLOOR - BLOCK 2 HVAC AND UTILITIES NEW WORK**

Designed By	SH	Conçu par	
Date	JAN 2019	(yyyy/mm/dd)	
Drawn By	JC	Dessiné par	
Date	JAN 2019	(yyyy/mm/dd)	
Reviewed By	SH	Examiné par	
Date	JAN 2019	(yyyy/mm/dd)	
Approved By	SH	Approuvé par	
Date	JAN 2019	(yyyy/mm/dd)	
Tender	ANNE RICHARDS	Soumission	
Project Manager	Administrateur de projets		
Project no.	No. du projet		
	<b>PTS 4845</b>		
Drawing no.	No. du dessin		
	<b>M306</b>		





L'ENTREPRENEUR DEVRA VÉRIFIER TOUTES LES DIMENSIONS ET LES CONDITIONS SUR LE CHANTIER ET AVISER SANS DÉLAI LE REPRÉSENTANT DU MINISTÈRE DE TOUTE ANOMALIE.  
 Contractor to verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

revisions	description	date
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3	ISSUED FOR TENDER REVIEW	2018-11-27
2	ISSUED FOR 90% REVIEW	2018-11-02
1	ISSUED FOR 60% REVIEW	2018-10-12

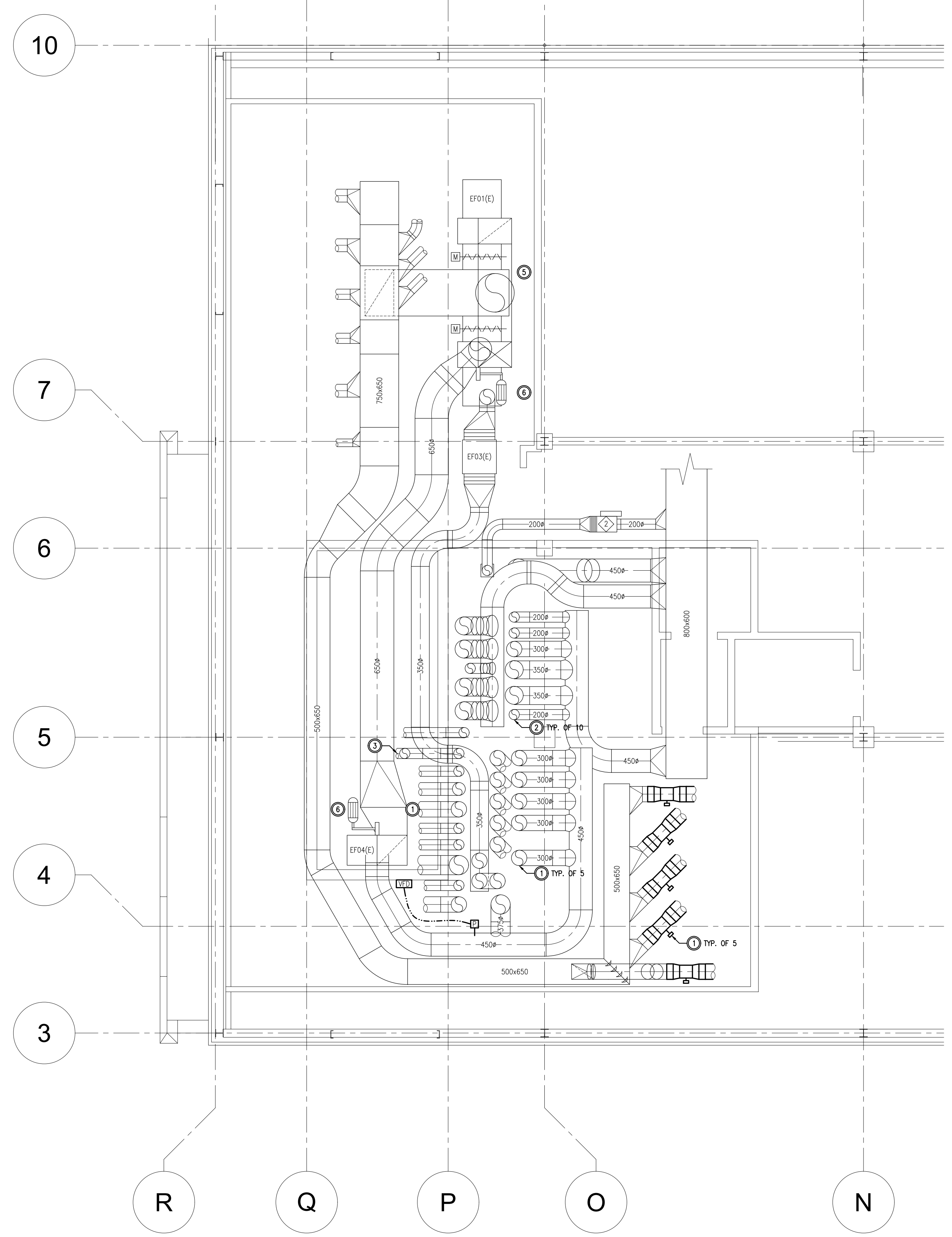
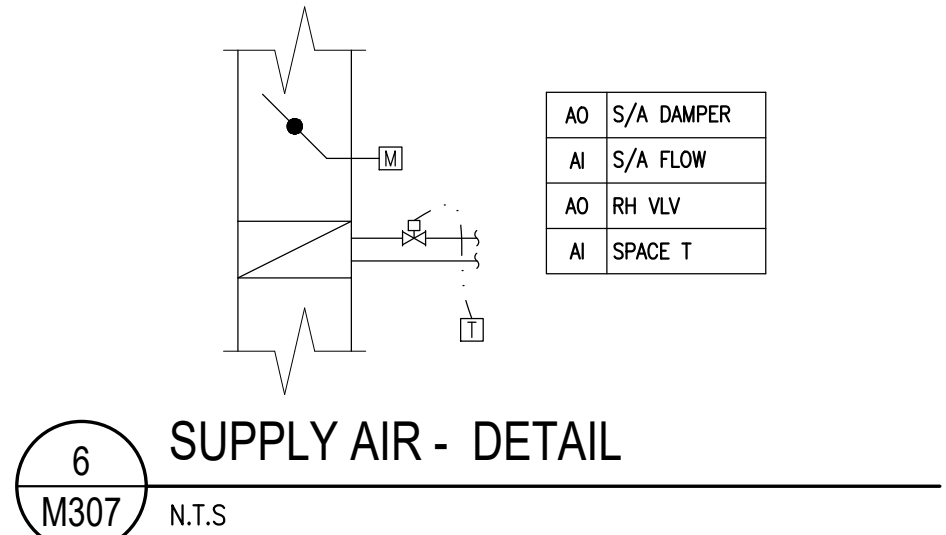
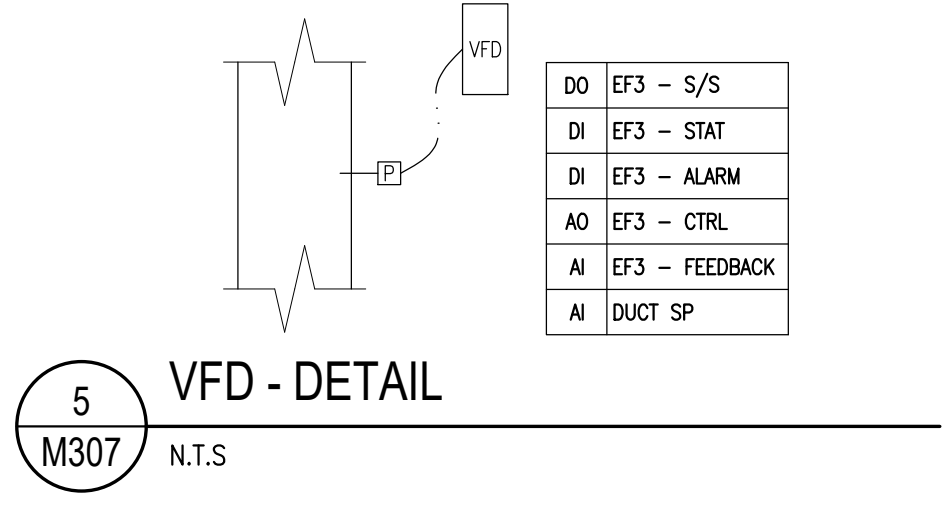
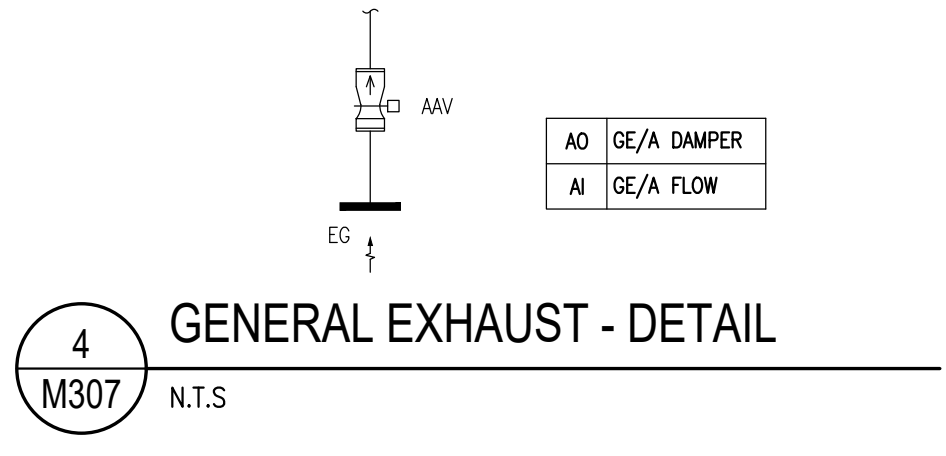
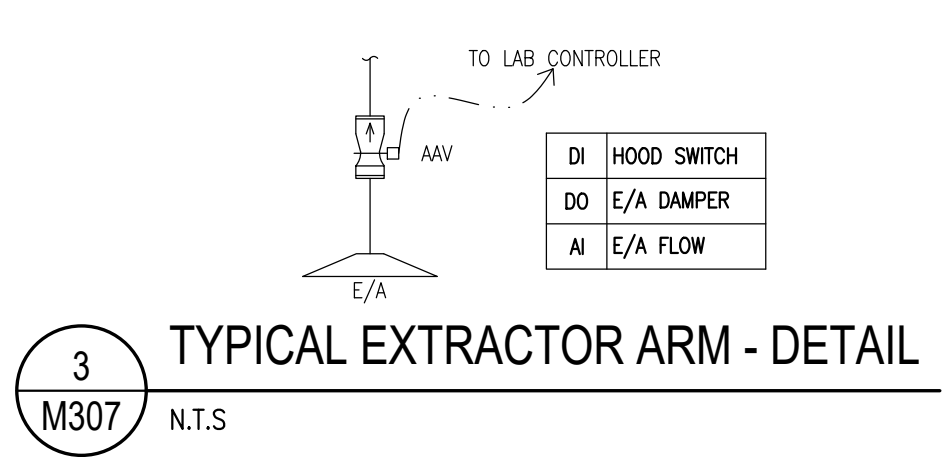
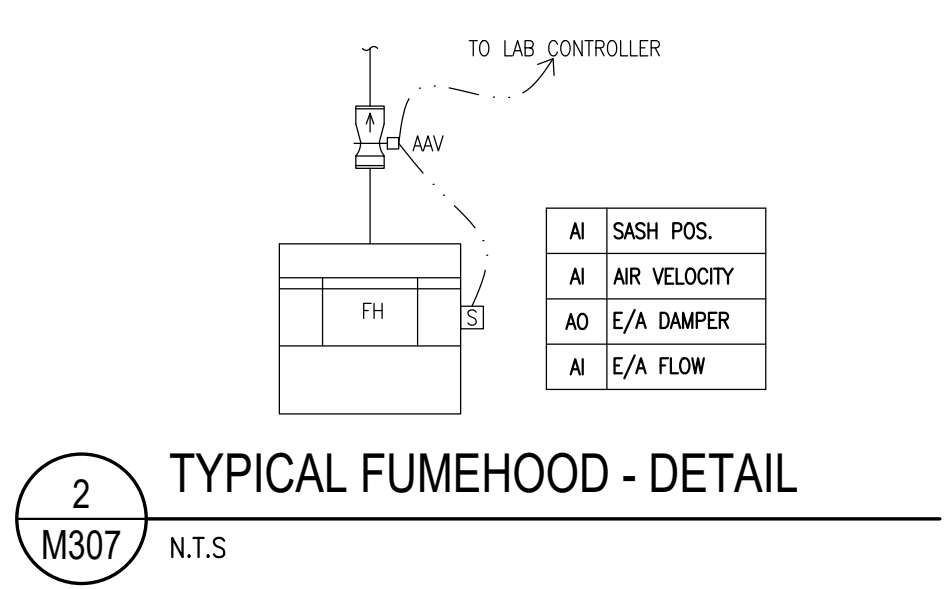
A	A
C	C

project: **DID LAB RENOVATIONS**  
 OTTAWA, ONTARIO

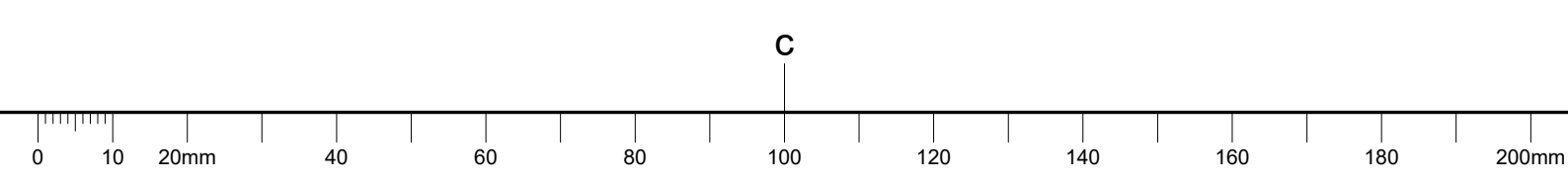
drawing: **MECHANICAL PENTHOUSE - BLOCK 1 HVAC DEMOLITION AND NEW WORK**

Designed By	SH	Conçu par	SH
Date	JAN 2019	(yyyy/mm/dd)	
Drawn By	JC	Dessiné par	JC
Date	JAN 2019	(yyyy/mm/dd)	
Reviewed By	SH	Examiné par	SH
Date	JAN 2019	(yyyy/mm/dd)	
Approved By	SH	Approuvé par	SH
Date	JAN 2019	(yyyy/mm/dd)	
Tender	ANNE RICHARDS	Submission	
Project Manager	Administrateur de projets		
Project no.	PTS 4845	No. du projet	
Drawing no.	M307	No. du dessin	

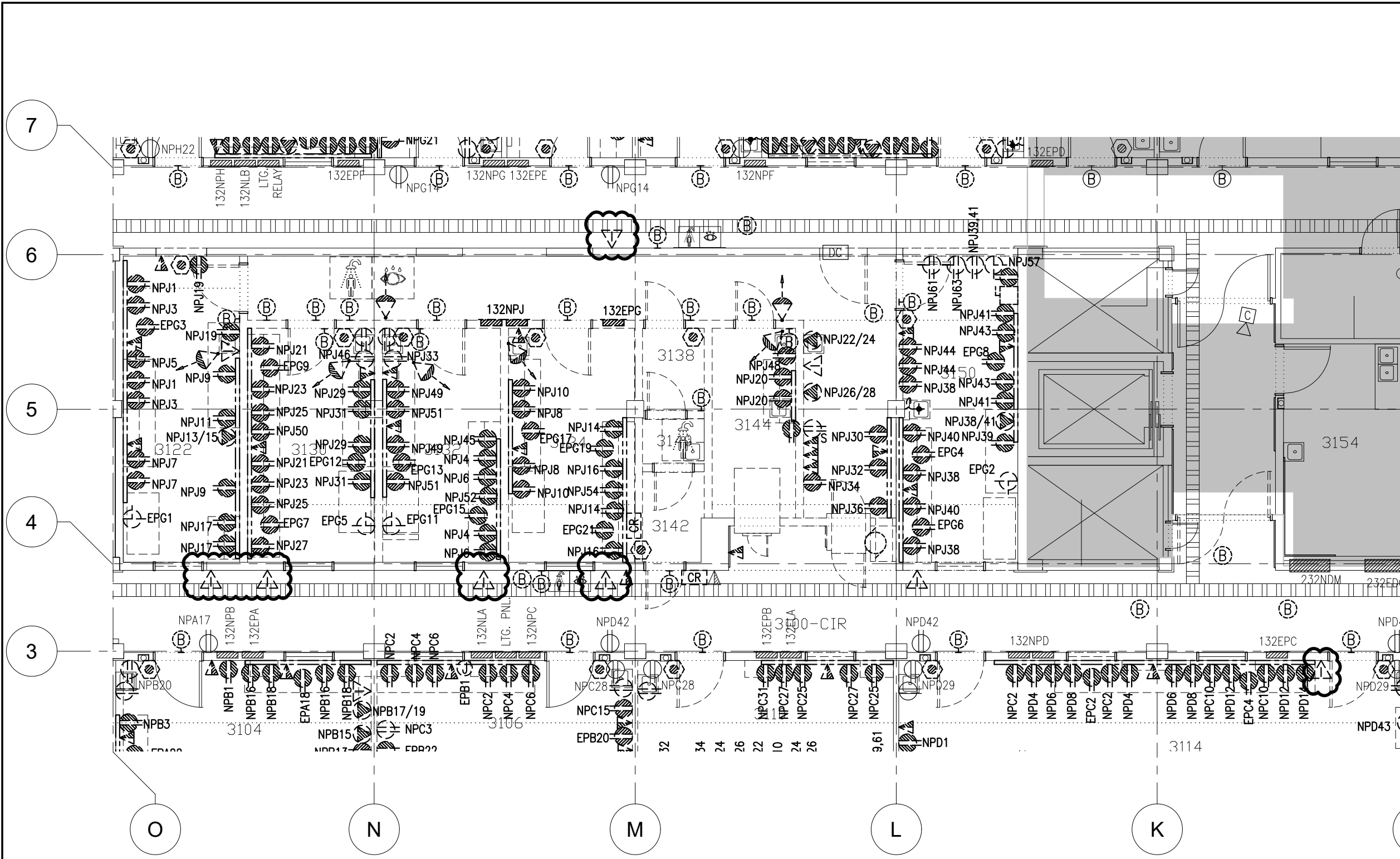
- DRAWING NOTES**
- REPLACE EXISTING PNEUMATIC MOTORIZED DAMPER WITH DDC AIR VALVE C/W HIGH SPEED ACTUATOR. VALVE TO BE CONTROLLED BY ASSOCIATED SASH CONTROLLER AND CONNECTED TO NEW LAB CONTROLLER.
  - REMOVE PNEUMATIC ACTUATOR ON EXISTING BUBBLE TIGHT DAMPER. REPLACE ACTUATOR ON SUPPLY AIR DAMPER WITH NEW DDC AND CONNECT DAMPER AND AIRFLOW SENSOR TO NEW LAB CONTROLLER. REPLACE EXISTING 13# PNEUMATIC CONTROL VALVE ON REHEAT COIL WITH NEW 13# DDC CONTROL VALVE. CONNECT TO NEW LAB CONTROLLER.
  - REPLACE EXISTING PNEUMATIC MOTORIZED DAMPER WITH DDC AIR VALVE. VALVE TO BE CONSTANT VOLUME AND CONNECTED TO NEW LAB CONTROLLER.
  - REMOVE ALL PNEUMATIC AND DDC CONTROLS ASSOCIATED WITH DAMPERS, ACTUATORS AND VALVES TO BE REPLACED.
  - REPLACE EXISTING STACK ABOVE ROOF WITH NEW 4m HIGH STACK C/W 350# CONE ON DISCHARGE. REPLACE EXISTING MOTOR WITH 560 WATTS INVERTER DUTY MOTOR AND VFD. VFD TO BE CONTROLLED TO MAINTAIN CONSTANT DUCT STATIC PRESSURE IN THE EXHAUST MANIFOLD.
  - REPLACE EXISTING STACK ABOVE ROOF WITH NEW 4m HIGH STACK C/W 350# CONE ON DISCHARGE. REPLACE EXISTING MOTOR WITH 560 WATTS INVERTER DUTY MOTOR AND VFD. VFD TO BE CONTROLLED TO MAINTAIN CONSTANT DUCT STATIC PRESSURE IN THE EXHAUST MANIFOLD.



**1**  
**M307** 1:50  
**PENTHOUSE - UPPER LEVEL - BLOCK 1 HVAC DEMOLITION & NEW WORK**







**3RD FLOOR  
POWER & SYSTEMS - DEMOLITION WORK**

1  
ADD1-SKE1 1:100

2018-01-31	ISSUED FOR ADDE1	-
DATE	REVISION	REF

THE ENGINEER WAVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS AND THE DESIGN INTENT THEY CONVEY, OR FOR PROBLEMS WHICH ARISE FROM OTHER FAILURE TO OBTAIN AND / OR FOLLOW THE ENGINEER'S GUIDANCE WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCES, AMBIGUITIES OR CONFLICTS WHICH ARE ALLEGED.

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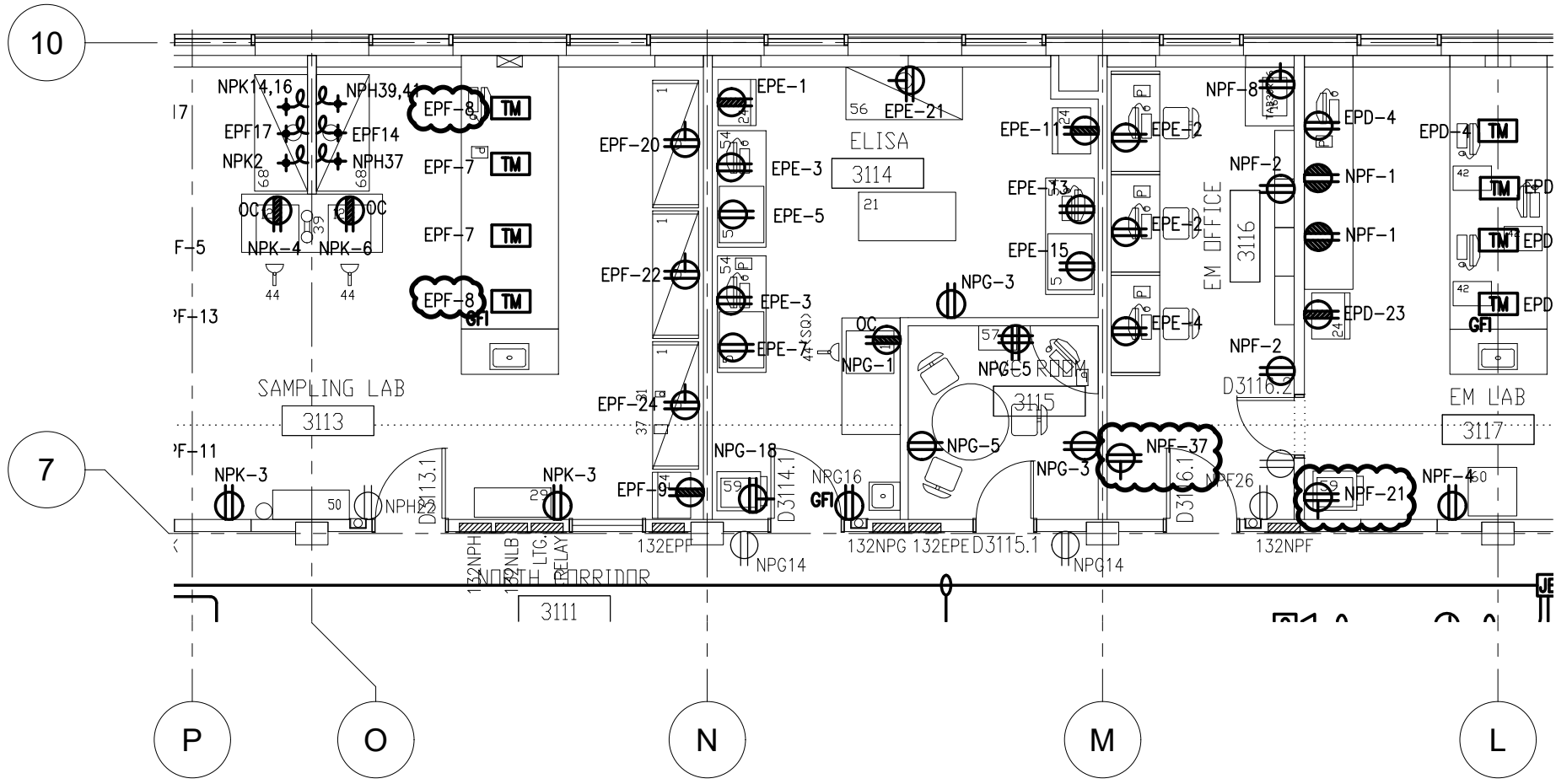


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PROJECT/PROJET  
**DID LAB RENOVATIONS**

TITLE/TITRE  
**POWER & SYSTEMS  
DEMOLITION WORK**

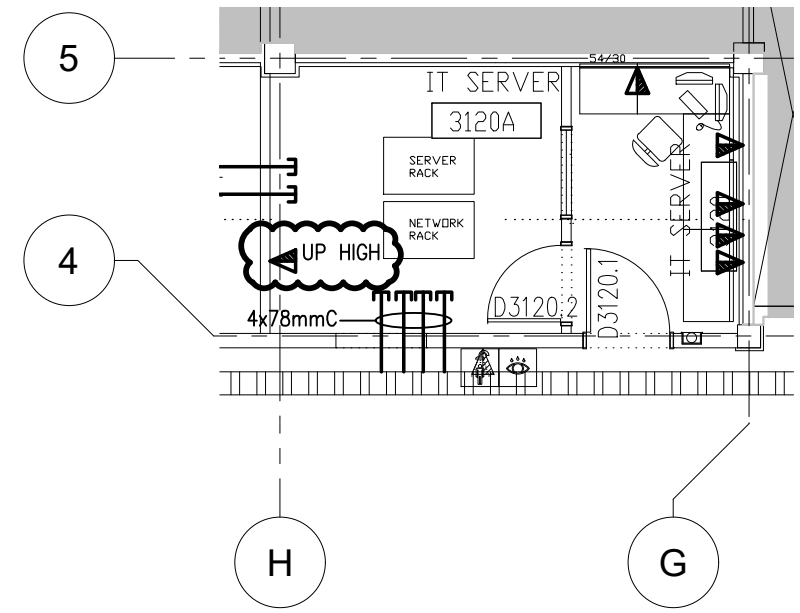
Scale	AS NOTED
Échelle	
Design by	E.DROUIN
Conçu par	
Drawn by	E.DROUIN
Dessiné par	
Reviewed by	A.MIKHAIEL
Examiné par	
Date	JANUARY 2019
Date	
Project no./ No. du projet	2018-363
DWG. No. No. DESSIN	
	ADD1-SKE1



**3RD FLOOR  
POWER & SECURITY -NEW WORK**

1  
ADD1-SKE2

1:100



**3RD FLOOR  
COMMUNICATIONS - NEW WORK**

2  
ADD1-SKE2

1:100

▽	INTERCOM STATION
▽	DATA/TELEPHONE OUTLET BACK BOX
CR	CARD READER
ES	ELECTRICAL STRIKE
DC	DOOR CONTACT
SPLIT	36" x 10" x 6" SPLITTER BOX w/ HINGED FRONT COVER
BZ	BUZZER
KP	KEYPAD
CK	100mm x 100mm BOX FOR SECURITY CAMERA
JB	250mm x 250mm SECURITY JUNCTION BOX WITH PURPLE COVER
J	200mm X 200mm SECURITY JUNCTION BOX WITH WHITE COVER

3  
ADD1-SKE2

**PARTIAL ELECTRICAL LEGEND**

1:100

2018-01-31	ISSUED FOR ADDE1	-
DATE	REVISION	REF

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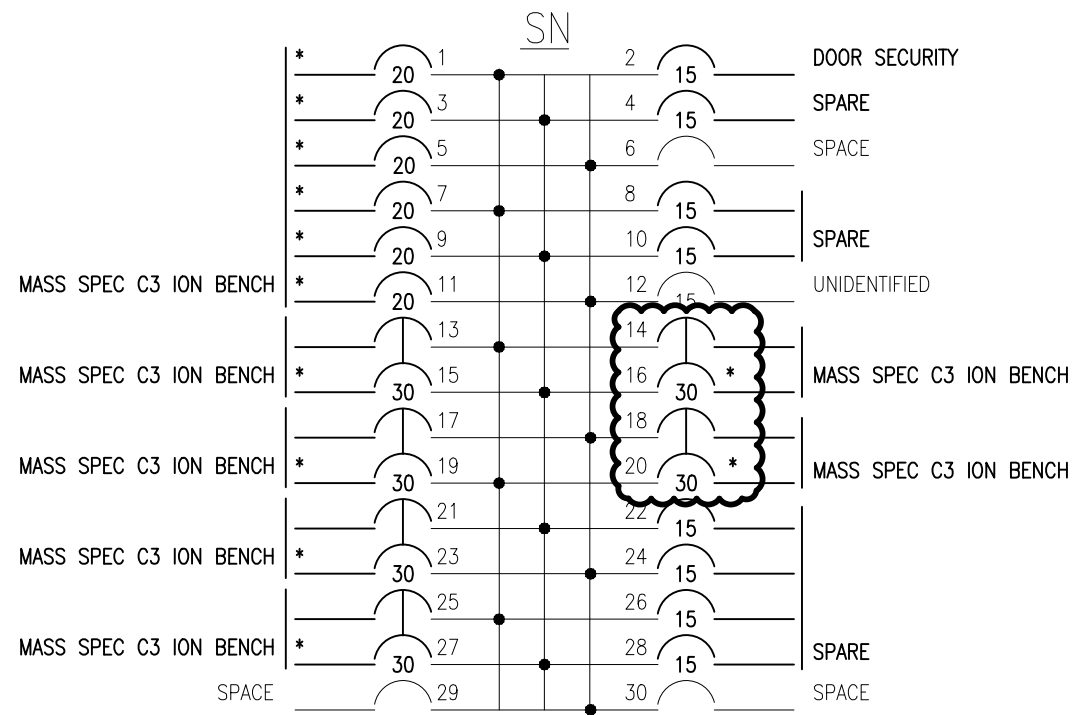
PROJECT/PROJET  
**DID LAB RENOVATIONS**

TITLE/TITRE  
**POWER & SECURITY NEW WORK**

Scale	AS NOTED
Échelle	
Design by	E.DROUIN
Conçu par	
Drawn by	E.DROUIN
Dessiné par	Project no./ No. du projet 2018-363
Reviewed by	A.MIKHAIEL
Examiné par	DWG. No. No. DESSIN
Date	JANUARY 2019
Date	ADD1-SKE2

**EXISTING  
PANEL 132EPB**

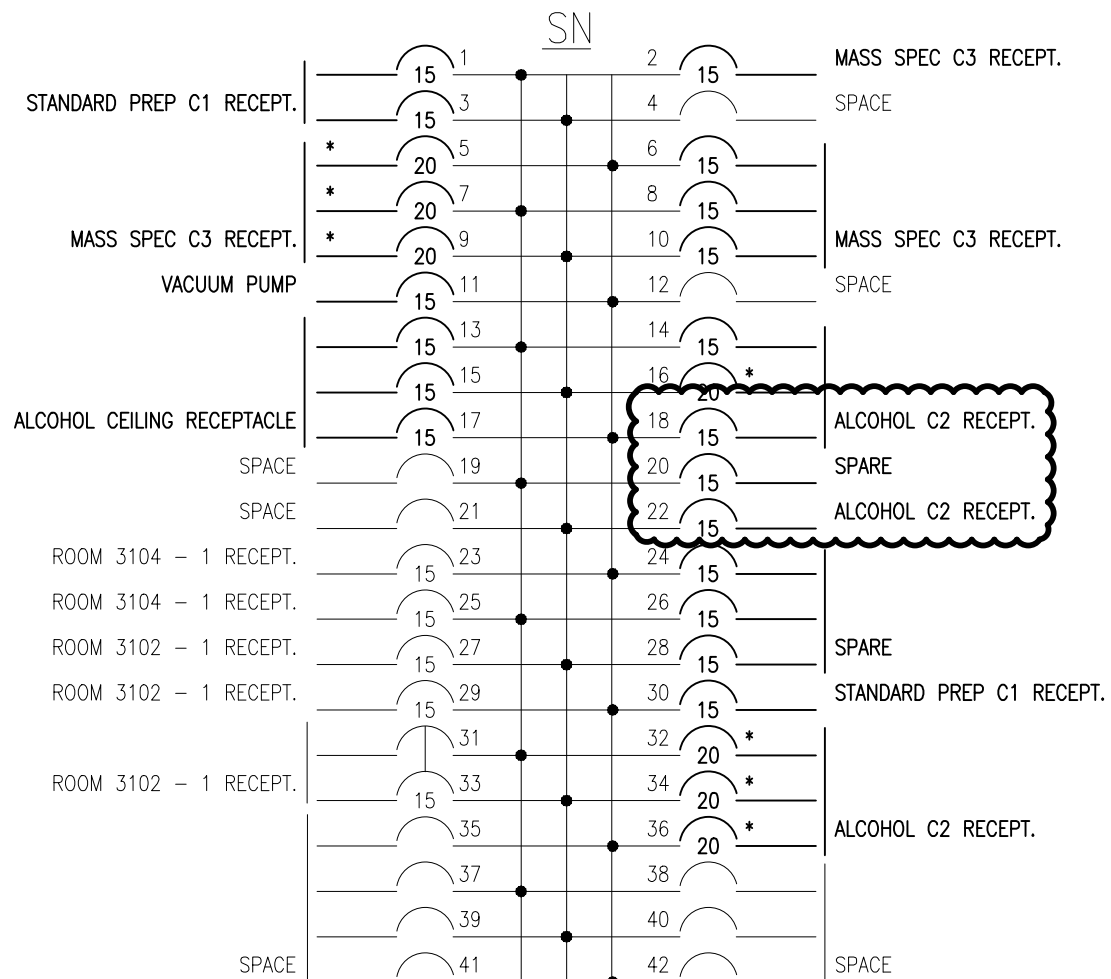
VOLTAGE 120/208V  
 PHASE 3Ø  
 WIRE 4  
 RATING AMPS 100A  
 TRIM RECESSED



\* PROVIDE NEW BREAKER TO MATCH EXISTING

**EXISTING  
PANEL 132EPA**

VOLTAGE 120/208V  
 PHASE 3Ø  
 WIRE 4w  
 RATING AMPS 225A  
 TRIM RECESSED



\* PROVIDE NEW BREAKER TO MATCH EXISTING

2018-01-31	ISSUED FOR ADDE1	-
DATE	REVISION	REF

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 **Goodkey Weedmark**  
*Consulting Engineers*

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 Ottawa Ontario 613 727-5115 Fax  
 Canada K2C 3R8 www.gwal.com Web

PROJECT/PROJET  
**DID LAB RENOVATIONS**

TITLE/TITRE  
**ELECTRICAL PANEL SCHEDULES**

Scale AS NOTED  
 Échelle

Design by E.DROUIN  
 Conçu par

Drawn by E.DROUIN Project no./  
 Dessiné par No. du projet  
 2018-363

Reviewed by A.MIKHAIEL DWG. No.  
 Examiné par No. DESSIN

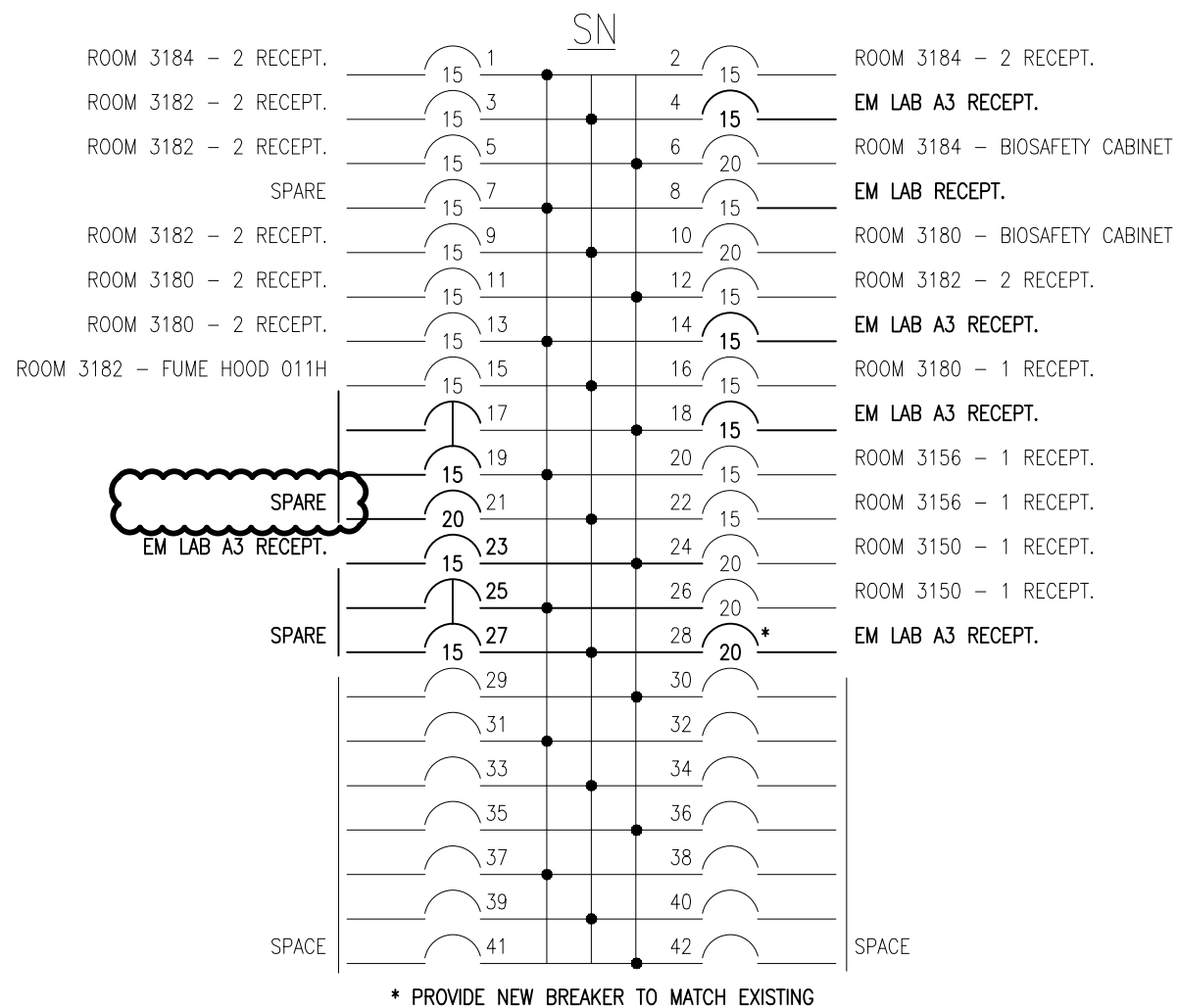
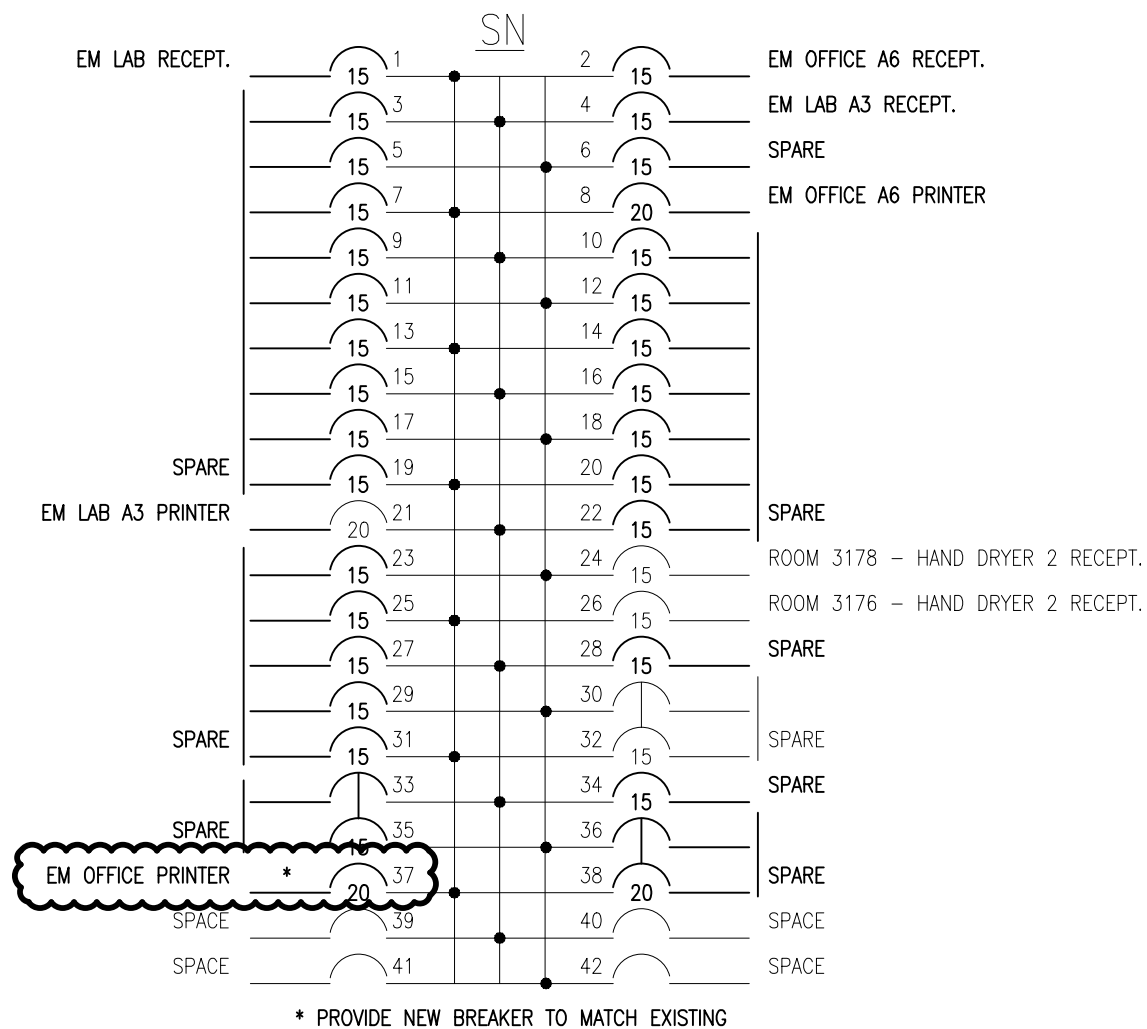
Date JANUARY 2019 ADD1-SKE3  
 Date

**EXISTING  
PANEL 132NPF**

VOLTAGE 120/208V  
 PHASE 3φ  
 WIRE 4w  
 RATING AMPS 225A  
 TRIM RECESSED

**EXISTING  
PANEL 132EPD**

VOLTAGE 120/208V  
 PHASE 3φ  
 WIRE 4w  
 RATING AMPS 225A  
 TRIM RECESSED



2018-01-31	ISSUED FOR ADDE1	-
DATE	REVISION	REF

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**Goodkey Weedmark**  
*Consulting Engineers*

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 Ottawa Ontario 613 727-5115 Fax  
 Canada K2C 3R8 www.gwal.com Web

PROJECT/PROJET  
**DID LAB RENOVATIONS**

TITLE/TITRE  
**ELECTRICAL PANEL  
 SCHEDULES CONTINUED**

Scale AS NOTED  
 Échelle

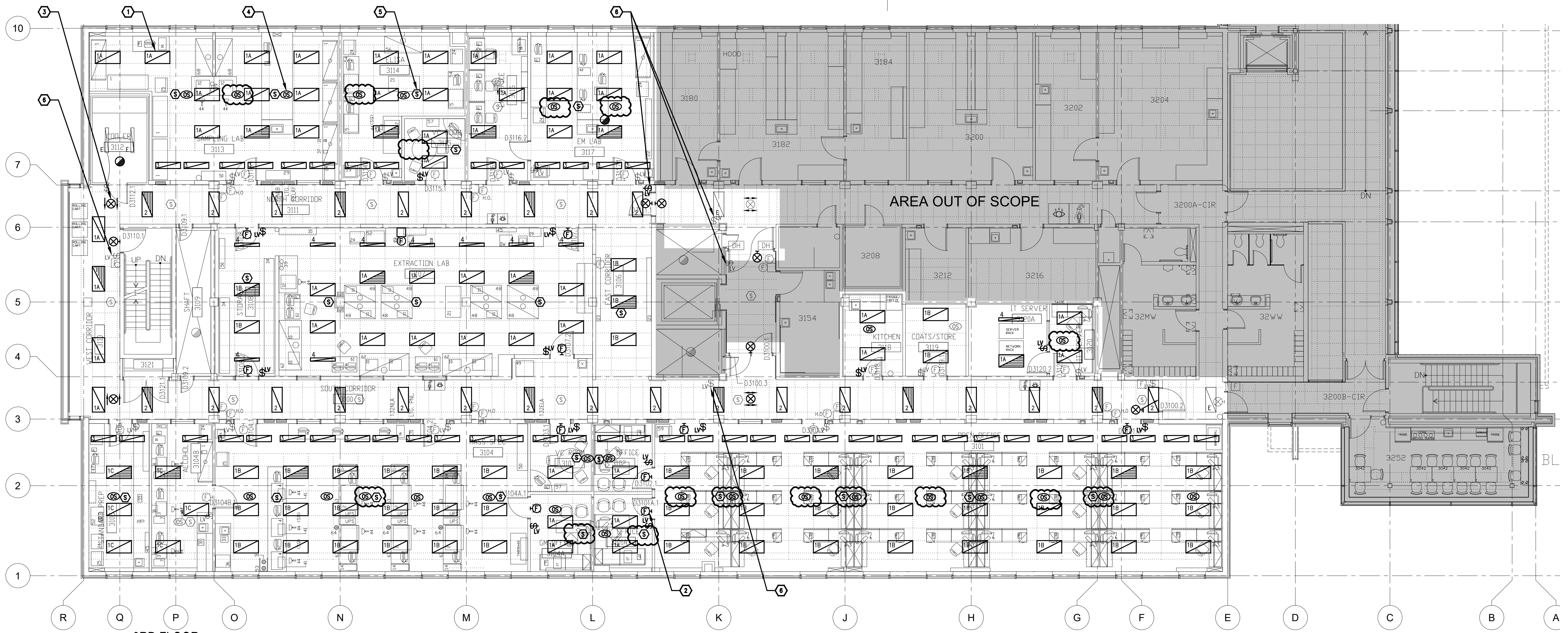
Design by E.DROUIN  
 Conçu par

Drawn by E.DROUIN Project no./  
 Dessiné par No. du projet  
 2018-363

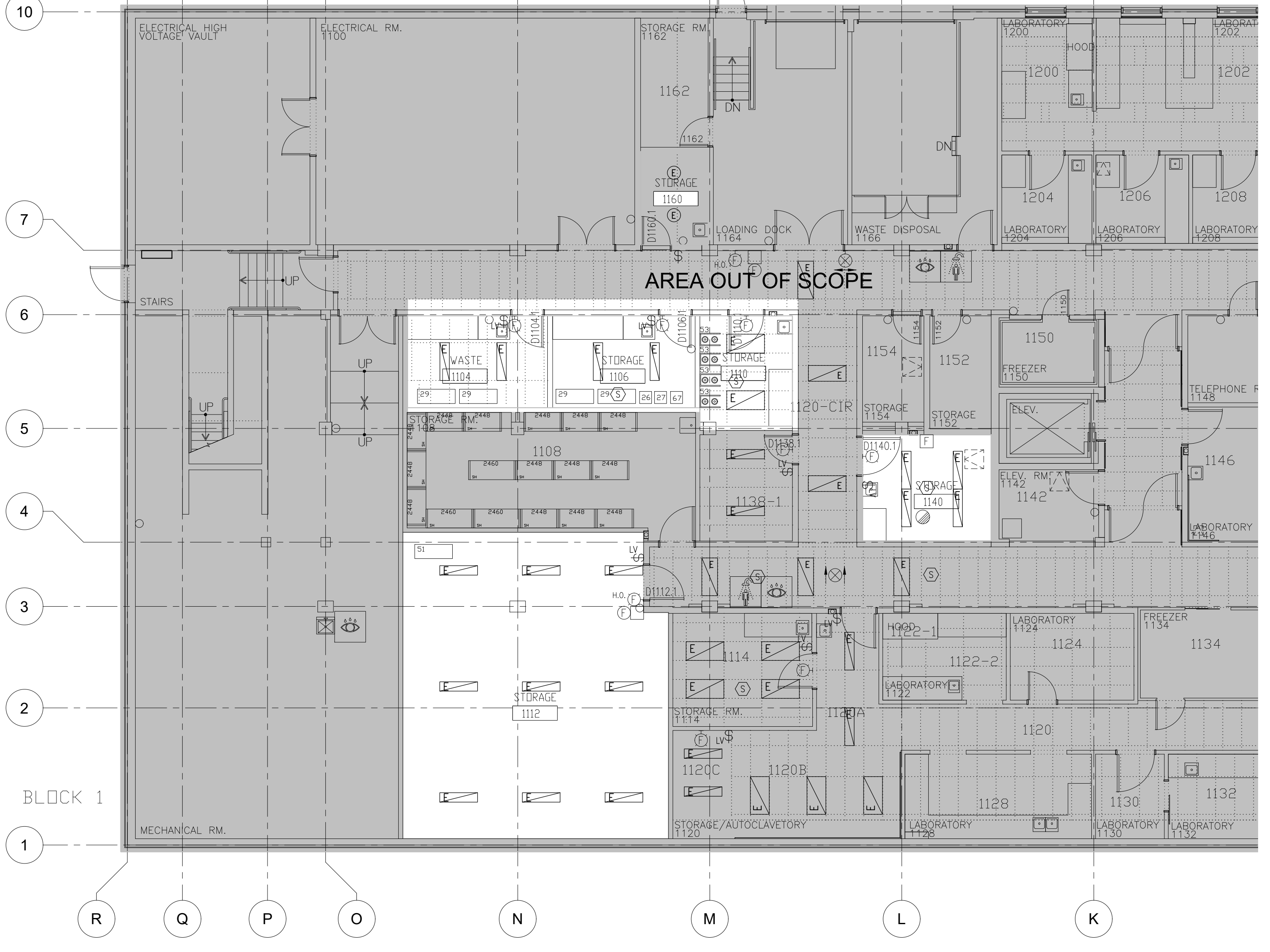
Reviewed by A.MIKHAIEL DWG. No.  
 Examiné par No. DESSIN

Date JANUARY 2019 ADD1-SKE4  
 Date





3RD FLOOR LIGHTING & FIRE ALARM - NEW WORK  
E3 1:100



GROUND FLOOR - LIGHTING & FIRE ALARM  
E3 1:100

- DRAWING NOTES**
- 1. TYPICAL: PROVIDE NEW LIGHT FIXTURE, TYPE AS INDICATED. REFERENCE LIGHT FIXTURE SCHEDULE ON THIS DRAWING. CONNECT TO EXISTING CIRCUIT AND LIGHTING RELAY PANEL FEEDING THE AREA.
  - 2. TYPICAL: PROVIDE NEW OR RELOCATED FIRE ALARM DEVICE TO MATCH BASE BUILDING STANDARDS. CONNECT TO EXISTING FIRE ALARM CIRCUIT FEEDING THE AREA. REPROGRAM FIRE ALARM PANEL AS REQUIRED.
  - 3. TYPICAL: PROVIDE NEW 120/240V PICTOGRAM TYPE EXIT LIGHT. CONNECT TO NEAREST EMERGENCY CIRCUIT FEEDING EXISTING EXIT LIGHTS.
  - 4. TYPICAL: EXISTING CEILING MOUNTED LOW VOLTAGE OCCUPANCY SENSOR SHOWN IN NEW LOCATION. REWIRE OCCUPANCY SENSOR TO EXISTING HVAC CONTROLS. THESE SENSORS ARE NOT CURRENTLY USED FOR LIGHTING CONTROLS. LIGHTS TO BE CONTROLLED VIA LOW VOLTAGE LIGHT SWITCH. REWIRE SWITCHES TO CONTROL LIGHTS WITHIN ROOM.
  - 5. TYPICAL: EXISTING P/A SPEAKER SHOWN IN NEW LOCATION. EXTEND WIRING AS REQUIRED.
  - 6. REWORK EXISTING CORRIDOR LOW VOLTAGE SWITCH TO SOLELY CONTROL LIGHTS WITHIN AREA OF WORK. PROVIDE RELAYS/CONTACTORS AS REQUIRED.

**LIGHTING FIXTURE SCHEDULE**

TYPE	DESCRIPTION	LAMPS PER FIXTURE			VOLT	MOUNTING	REMARKS
		QTY	TYPE	WATTS			
1A	NEW 1212mmL x 603mmW x 60mmD RECESSED BASKET TYPE LED TROFFER; 4000 LUMENS CURVED LINEAR PRISMATIC LENS; 82CR; L80 @ 60,000 HOURS	1	LED	31W	4000K	120V	RECESSED T-BAR FIXTURE TO BE RECESSED IN GYPSUM CEILING IN ROOMS 3120 & 3120A. PROVIDE GYPSUM MOUNTING KIT AS REQUIRED.
1B	NEW 1212mmL x 603mmW x 60mmD RECESSED BASKET TYPE LED TROFFER; 3000 LUMENS CURVED LINEAR PRISMATIC LENS; 82CR; L80 @ 60,000 HOURS	1	LED	23W	4000K	120V	RECESSED T-BAR FIXTURE TO BE RECESSED IN GYPSUM CEILING IN ROOMS 3119. PROVIDE GYPSUM MOUNTING KIT AS REQUIRED.
1C	NEW 1212mmL x 603mmW x 60mmD RECESSED BASKET TYPE LED TROFFER; 4800 LUMENS CURVED LINEAR PRISMATIC LENS; 82CR; L80 @ 60,000 HOURS	1	LED	38W	4000K	120V	RECESSED T-BAR
2	NEW 1212mmL x 502mmW x 70mmD RECESSED BASKET TYPE LED TROFFER; 3000 LUMENS CURVED LINEAR PRISMATIC LENS; 82 CR; L80 @ 60,000 HOURS	1	LED	30W	4000K	120V	RECESSED T-BAR
3	NEW LED RETROFIT KIT FOR 1212mmL x 305mmW RECESSED FIXTURE; 2000 LUMENS CURVED LINEAR PRISMATIC LENS; 82 CR; L80 @ 60,000 HOURS	1	LED	15W	4000K	120V	RECESSED GYPSUM EXISTING RECESSED FRAME TO BE REUSED. REMOVE LENS, TUBES/BALLAST & SOCKETS AND REPLACE WITH RETROFIT KIT. RETROFIT KIT TO BE COMPATIBLE WITH EXISTING FIXTURES: COOPER LIGHTING CAN-FC-232A12/125-120V-M0-M2RNTB1L1120-U
4	NEW 1238mmL SURFACE MOUNTED LED STRIP; 4000 LUMENS CURVED LINEAR PRISMATIC LENS; 82CR; L80 @ 60,000 HOURS	1	LED	35W	4000K	120V	SURFACE/ SUSPENDED PROVIDE T-BAR SURFACE MOUNTING KIT IN EXTRACTION LAB 3107. PROVIDE AIR CRAFT CABLE MOUNTING KIT IN SERVER ROOM 3120A.

NOTES:  
1. ALL ACRYLIC LENSES SHALL BE MINIMUM 0.125" THICK.

L'ENTREPRENEUR DEVRA VÉRIFIER TOUTES LES DIMENSIONS ET LES CONDITIONS SUR LE CHANTIER ET AVISER SANS DÉLAI LE REPRÉSENTANT DU MINISTÈRE DE TOUTE ANOMALIE.  
Contractor to verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

revisions	description	date
5	ISSUED FOR ADDENDUM 1	2019-01-31
4	ISSUED FOR TENDER	2019-01-07
3	ISSUED FOR TENDER REVIEW	2018-11-27
2	ISSUED FOR 99% REVIEW	2018-11-02
1	ISSUED FOR 66% REVIEW	2018-10-12

A detail no. du détail  
B location drawing no. sur dessin  
C drawing no. dessin no.

project project

**DID LAB RENOVATIONS**

OTTAWA, ONTARIO

drawing dessin

**LIGHTING & FIRE ALARM NEW WORK**

Designed By ED Conçu par  
Date NOV 2018 (yyyy/mm/dd)

Drawn By ED Dessiné par  
Date NOV 2018 (yyyy/mm/dd)

Reviewed By AM Examiné par  
Date NOV 2018 (yyyy/mm/dd)

Approved By AM Approuvé par  
Date NOV 2018 (yyyy/mm/dd)

Tender ANNE RICHARDS Soumission

Project Manager Administrateur de projets  
Project no. No. du projet  
**PTS 4845**

Drawing no. No. du dessin  
**E3**



L'ENTREPRENEUR DEVRA VÉRIFIER TOUTES LES DIMENSIONS ET LES CONDITIONS SUR LE CHANTIER ET AVISER SANS DÉLAI LE REPRÉSENTANT DU MINISTÈRE DE TOUTE ANOMALIE.  
 Contractor to verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

5	ISSUED FOR ADDENDUM 1	2019-01-31
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revisions	description	date
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A	A
C	B C

project / projet

DID LAB RENOVATIONS

OTTAWA, ONTARIO

drawing / dessin

PENTHOUSE ELECTRICAL WORK

Designed By / Conçu par

Date / (yyyy/mm/dd)

Drawn By / Dessiné par

Date / (yyyy/mm/dd)

Reviewed By / Examiné par

Date / (yyyy/mm/dd)

Approved By / Approuvé par

Date / (yyyy/mm/dd)

Tender / Soumission

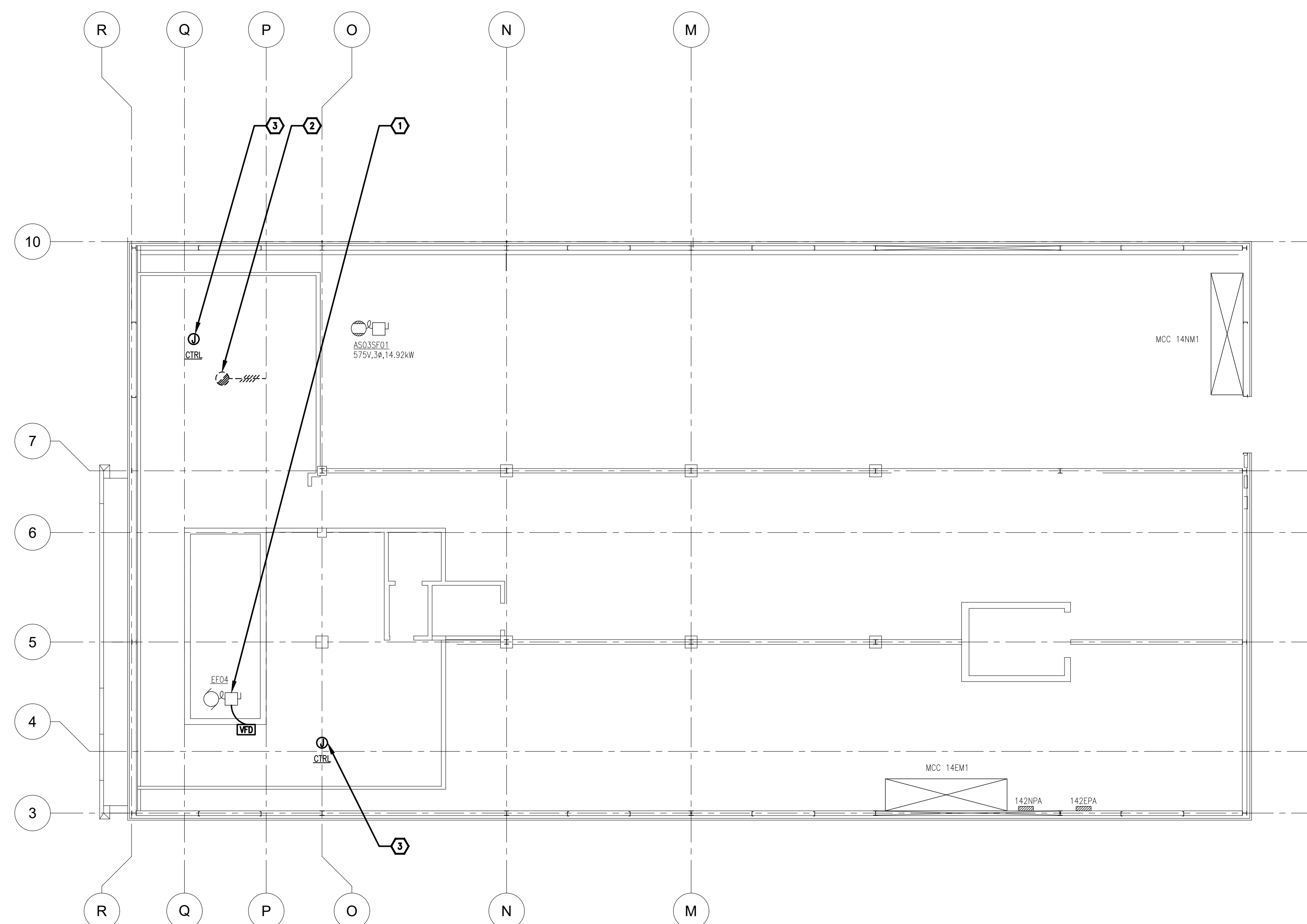
Project Manager / Administrateur de projets

Project no. / No. du projet

PTS 4845

Drawing no. / No. du dessin

E11



- DRAWING NOTES**
- ① EXISTING EXHAUST FAN TO BE REPLACED WITH NEW 3/4HP INVERTER DUTY MOTOR AND VARIABLE FREQUENCY DRIVE. MOTOR AND VFD SUPPLIED BY MECHANICAL CONTRACTOR, WIRED BY ELECTRICAL CONTRACTOR. REUSE EXISTING CIRCUIT. PROVIDE SPEED DRIVE RATED CABLE BETWEEN VFD AND MOTOR.
  - ② DISCONNECT AND REMOVE EXISTING FIRE ALARM DUCT SMOKE DETECTOR AS SHOWN. REMOVE CONDUIT AND WIRING BACK TO NEAREST DEVICE. ENSURE CONTINUATION OF LOOP. RETAIN SERVICES OF EXISTING FIRE ALARM CONTRACTOR TO REPROGRAM PANEL TO REMOVE ALL ABANDONED DEVICES.
  - ③ PROVIDE TWO (2) NEW DEDICATED CIRCUITS FOR MECHANICAL CONTROLS AS SHOWN. CONNECT TO FREE SPACE IN PANEL 14ZEP. COORDINATE EXACT LOCATION WITH MECHANICAL TRADES.

1  
 E11 1:100  
 PENTHOUSE ELECTRICAL WORK