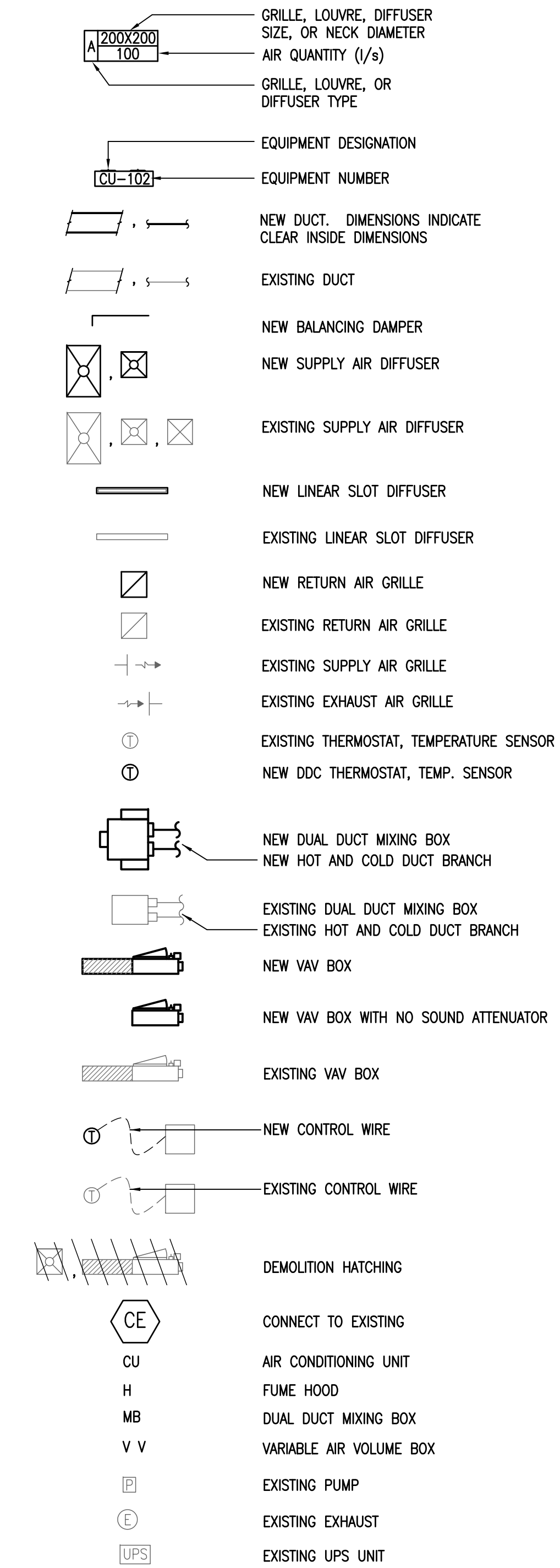


**MECHANICAL LEGEND**

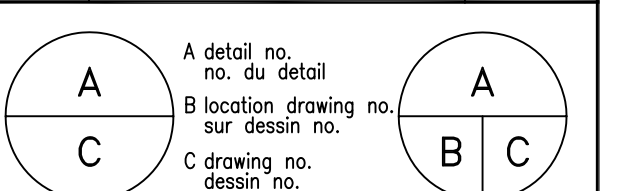


DRAWING LIST		
DRAWING NUMBER	REV.	DESCRIPTION
M0.0		MECHANICAL LEGEND AND DRAWING LIST
M1.0		FIRST FLOOR EXISTING MECHANICAL GENERAL ARRANGEMENT PLAN
M1.1		FIRST FLOOR MECHANICAL QUADRANT 1 DEMOLITION PLAN
M1.2		FIRST FLOOR MECHANICAL QUADRANT 2 DEMOLITION PLAN
M1.3		FIRST FLOOR MECHANICAL QUADRANT 3 DEMOLITION PLAN
M1.4		FIRST FLOOR MECHANICAL QUADRANT 4 DEMOLITION PLAN
M2.0		FIRST FLOOR NEW MECHANICAL GENERAL ARRANGEMENT PLAN
M2.1		FIRST FLOOR MECHANICAL QUADRANT 1 NEW PLAN
M2.2		FIRST FLOOR MECHANICAL QUADRANT 2 NEW PLAN
M2.3		FIRST FLOOR MECHANICAL QUADRANT 3 NEW PLAN
M2.4		FIRST FLOOR MECHANICAL QUADRANT 4 NEW PLAN
M3.0		SECOND FLOOR EXISTING MECHANICAL GENERAL ARRANGEMENT PLAN
M3.1		SECOND FLOOR MECHANICAL QUADRANT 1 DEMOLITION PLAN
M3.2		SECOND FLOOR MECHANICAL QUADRANT 2 DEMOLITION PLAN
M3.3		SECOND FLOOR MECHANICAL QUADRANT 3 DEMOLITION PLAN
M3.4		SECOND FLOOR MECHANICAL QUADRANT 4 DEMOLITION PLAN
M4.0		SECOND FLOOR NEW MECHANICAL GENERAL ARRANGEMENT PLAN
M4.1		SECOND FLOOR MECHANICAL QUADRANT 1 NEW PLAN
M4.2		SECOND FLOOR MECHANICAL QUADRANT 2 NEW PLAN
M4.3		SECOND FLOOR MECHANICAL QUADRANT 3 NEW PLAN
M4.4		SECOND FLOOR MECHANICAL QUADRANT 4 NEW PLAN
M5.0		PENTHOUSE MECHANICAL PLAN
M6.0		AIRFLOW MAP
M7.0		EQUIPMENT SCHEDULES MECHANICAL - 1 OF 2
M7.1		EQUIPMENT SCHEDULES MECHANICAL - 2 OF 2
M8.0		DETAILS MECHANICAL

**GENERAL NOTES**

- LEGALLY DISPOSE OF UNUSED EXISTING DUCTWORK AND MATERIALS. TURN OVER ANY REUSEABLE OR SALVAGEABLE MATERIAL TO OWNER AT OWNERS DISCRETION AND DECISION.
- EXIST. MECHANICAL DWGS. ARE APPROX. LOCATIONS ONLY. EXACT LOCATIONS TO BE CONFIRMED AND VERIFIED ON SITE.
- REMOVE AND RE-CONNECT ANY EXIST. EQUIPMENT, PIPING, CONDUCT, ETC. AS REQUIRED TO COMPLETE ALL NEW WORK.
- COORDINATE ALL NEW WORK WITH OWNER TO ACCOMMODATE OWNER'S SCHEDULE. PROVIDE 48 HRS NOTICE PRIOR TO STARTING ANY NEW WORK.
- WORK WILL ONLY BE ALLOWED IN ONE AREA AT A TIME AS DESIGNATED BY OWNER.
- WORK IN OFFICES AND LABORATORIES MUST OCCUR AT NIGHT TO ALLOW NORMAL OFFICE AND LABORATORY FUNCTIONS AND HVAC FUNCTIONS.

revisions	date
2	ISSUED FOR TENDER 31/03/13
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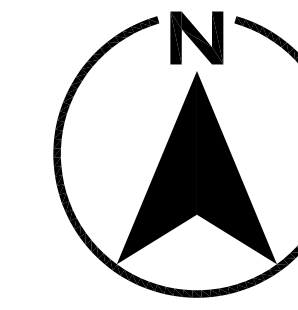


project projet  
**CFIA**  
**BURNABY LAB**  
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drawing dessin  
**MECHANICAL LEGEND**  
**AND DRAWING LIST**

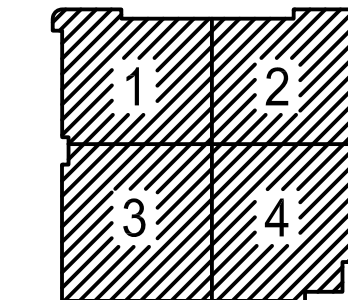
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date	-	
drawn	JL	dessiné
date	-	
reviewed	MLG	examiné
date	-	
approved	SC	approuvé
date	-	
Tender	-	Submission
PWC Project Manager	Administrateur de projets TPC	
project number	no. du projet	
	<b>121-24459-00</b>	
drawing no.	no. du dessin	
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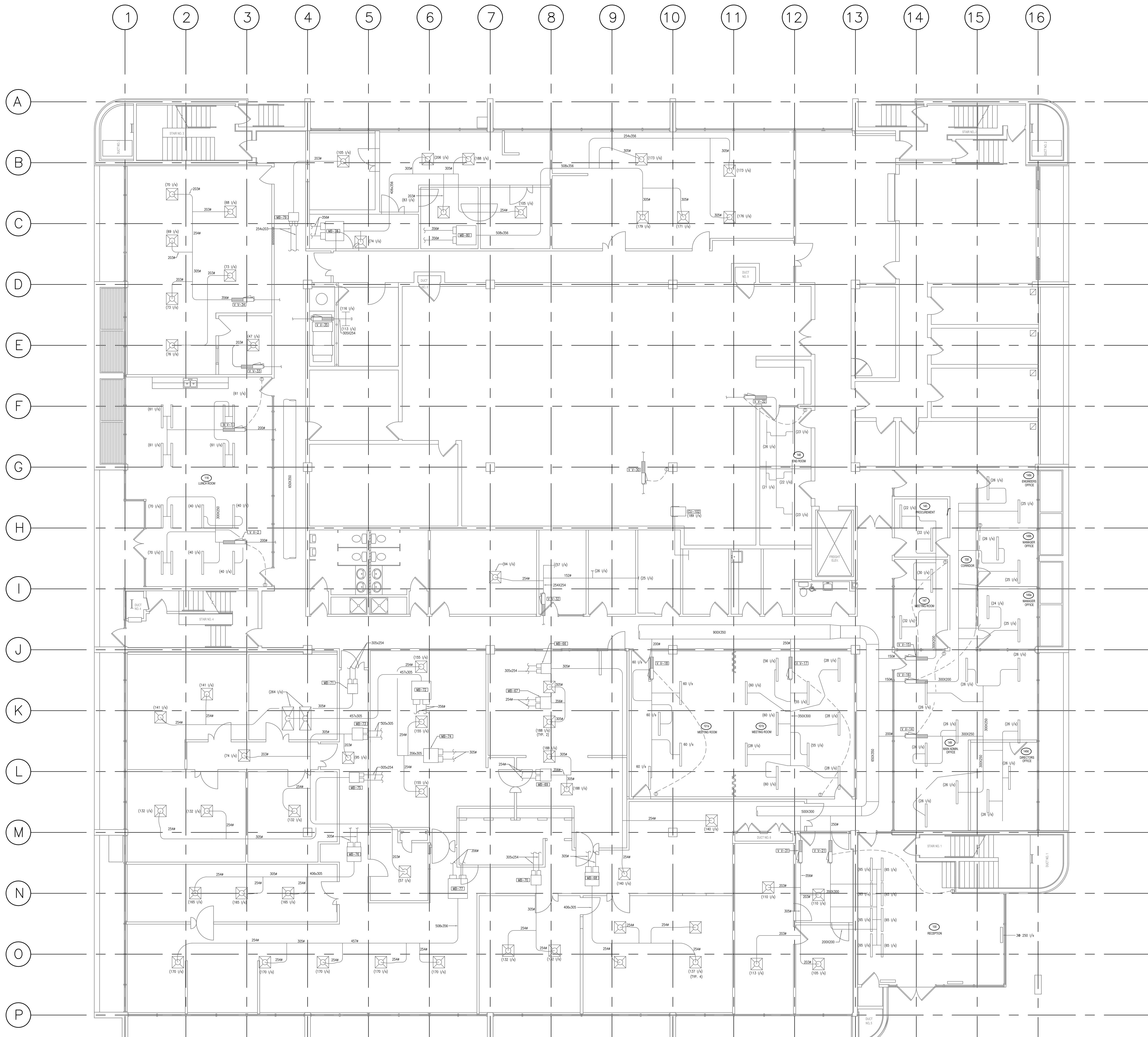


**GENERAL NOTES**

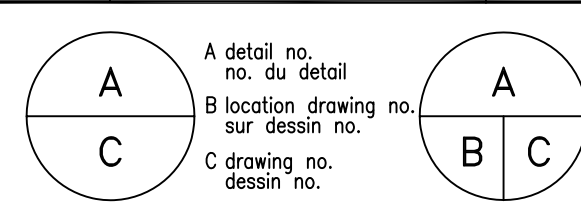
- REFER TO QUADRANT DRAWINGS FOR ENLARGED FLOOR PLAN.



KEYPLAN



revisions	date
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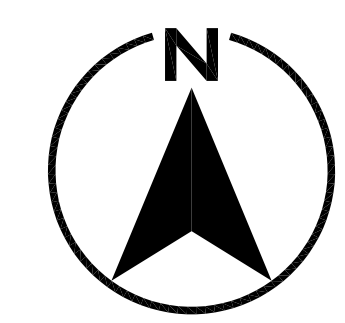


project **CFIA** projet  
**BURNABY LAB**  
**MIXING BOX REPLACEMENT**  
 3155 WILLINGDON GREEN, BURNABY, B.C.

drawing **FIRST FLOOR** dessin  
**EXISTING MECHANICAL**  
**GENERAL ARRANGEMENT**  
**PLAN**  
 1:100

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drawn	JL	dessiné
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date	-	
approved	SC	approuvé
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Tender	-	Submission

PWC Project Manager Administrateur de projets TPC  
 project number no. du projet  
**121-24459-00**  
 drawing no. no. du dessin  
**M1.0**

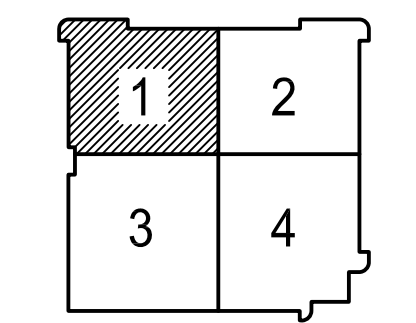


**KEYNOTES FOR M1.1 TO M1.4**

- ① REMOVE EXISTING VAV BOX AND ALL ASSOCIATED CONTROL WIRING AND SUPPLY BRANCH DUCTING. TO BE REPLACED WITH NEW VAV BOX AND CONTROL WIRING AND SUPPLY BRANCH TO MAIN DUCT.
- ② EXISTING DUCTWORK TO BE REMOVED.
- ③ EXISTING MIXING BOX/VAV BOX TO REMAIN.
- ④ REMOVE & REPLACE EXIST THERMOSTAT WITH NEW DDC THERMOSTAT.
- ⑤ EXISTING DIFFUSER TO REMAIN.



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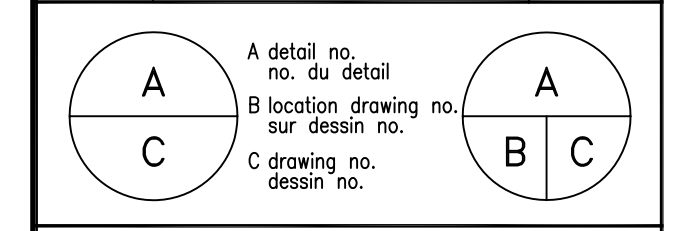


**KEYPLAN**

REFER TO M1.2 FOR CONTINUATION

REFER TO M1.3 FOR CONTINUATION

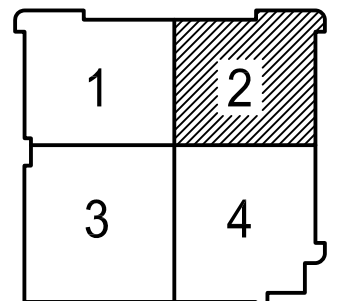
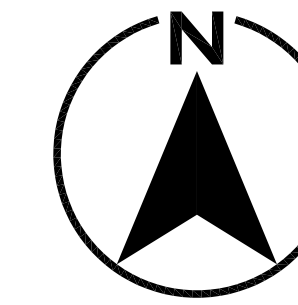
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2	ISSUED FOR TENDER 31/03/13
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**MIXING BOX REPLACEMENT**  
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drawing **FIRST FLOOR MECHANICAL QUADRANT 1 DEMOLITION PLAN** dessin

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designed SC concu
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drawn JL dessine
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reviewed MLG examine
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approved SC approuve
date -
Tender - Soumission
PWC Project Manager Administrateur de projets TPC
project number 121-24459-00 no. du projet
drawing no. M1.1 no. du dessin

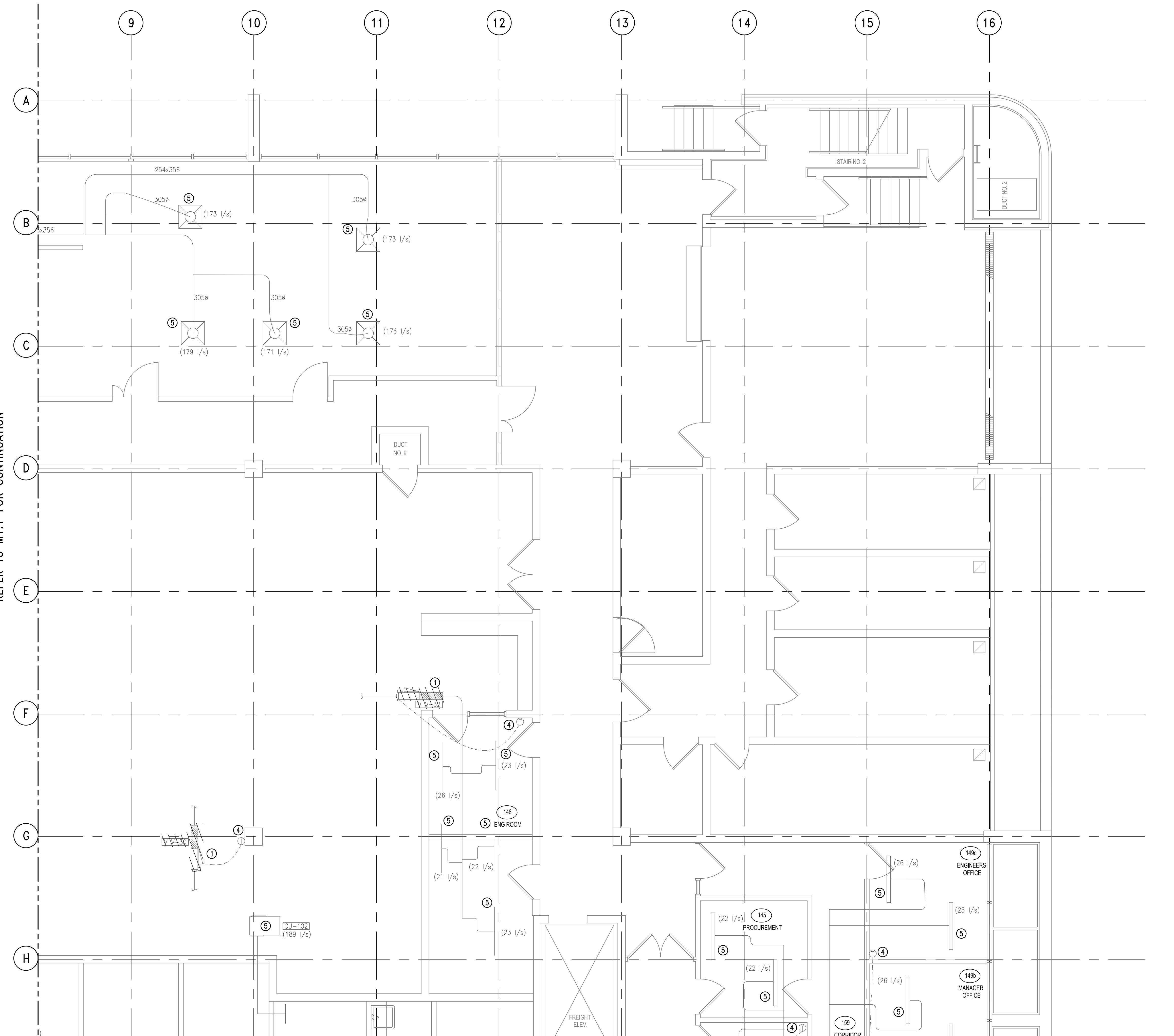


KEYPLAN

**KEYNOTES FOR M1.1 TO M1.4**

- ① REMOVE EXISTING VAV BOX AND ALL ASSOCIATED CONTROL WIRING AND SUPPLY BRANCH DUCTING. TO BE REPLACED WITH NEW VAV BOX AND CONTROL WIRING AND SUPPLY BRANCH TO MAIN DUCT.
- ② EXISTING DUCTWORK TO BE REMOVED.
- ③ EXISTING MIXING BOX/VAV BOX TO REMAIN.
- ④ REMOVE & REPLACE EXIST THERMOSTAT WITH NEW DDC THERMOSTAT.
- ⑤ EXISTING DIFFUSER TO REMAIN.

REFER TO M1.1 FOR CONTINUATION



REFER TO M1.4 FOR CONTINUATION

revisions	no. du detail	date
2	ISSUED FOR TENDER	31/03/13
1	ISSUED FOR 99% REVIEW	27/03/13

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project **CFIA** projet  
**BURNABY LAB**  
**MIXING BOX REPLACEMENT**  
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drawing **FIRST FLOOR MECHANICAL QUADRANT 2 DEMOLITION PLAN** dessin  
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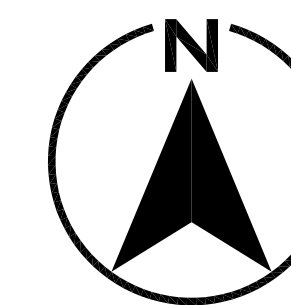
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Tender	-	Submission

PWC Project Manager Administrateur de projets TPC  
 project number no. du projet  
**121-24459-00**

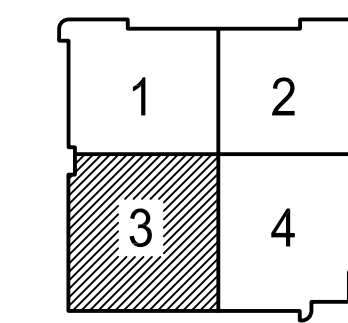
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**M1.2**



REFER TO M1.1 FOR CONTINUATION



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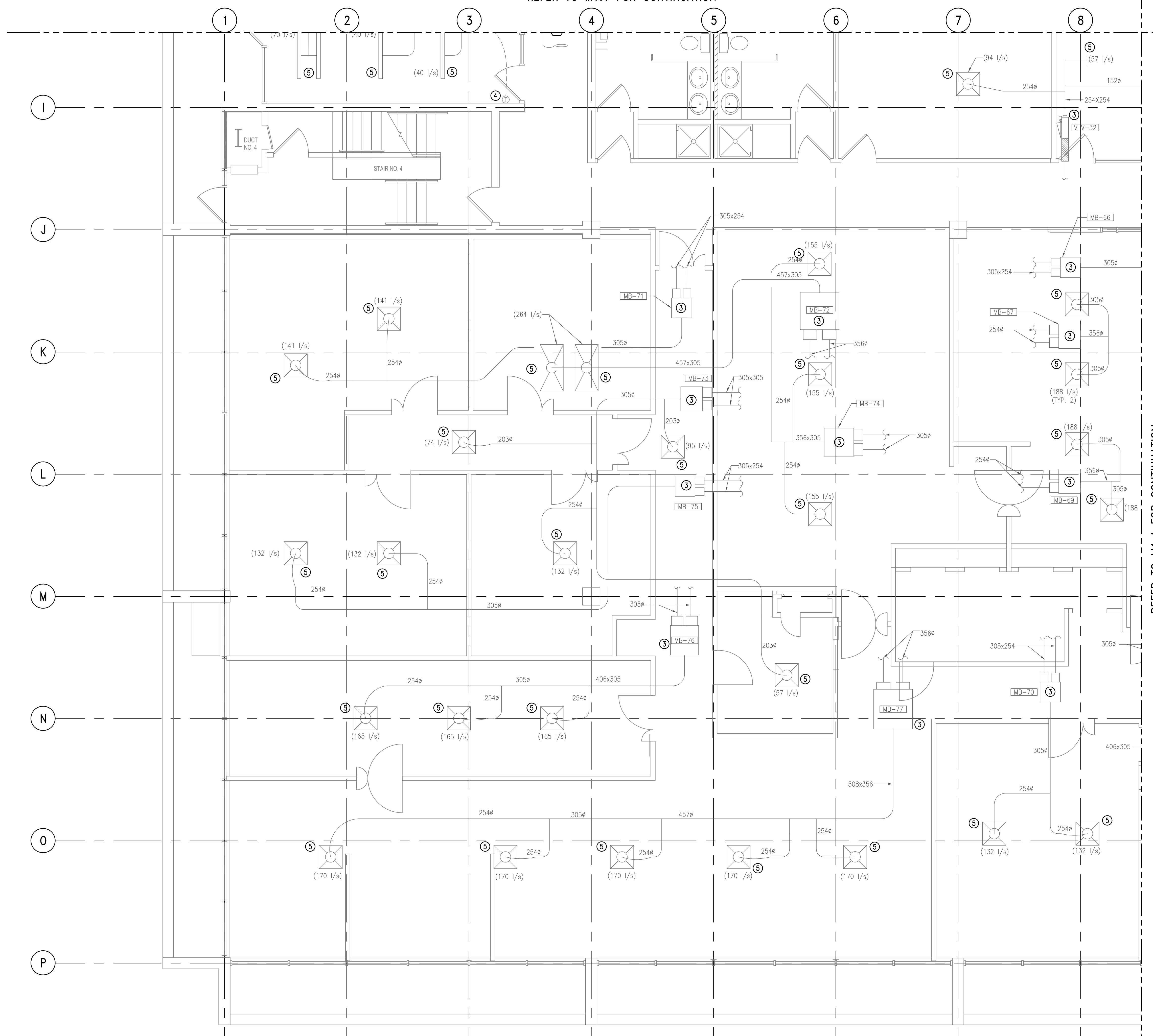


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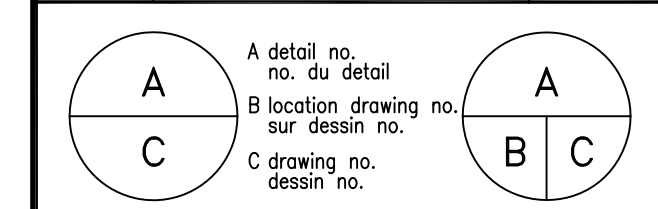
KEYNOTES FOR M1.1 TO M1.4

- ① REMOVE EXISTING VAV BOX AND ALL ASSOCIATED CONTROL WIRING AND SUPPLY BRANCH DUCTING. TO BE REPLACED WITH NEW VAV BOX AND CONTROL WIRING AND SUPPLY BRANCH TO MAIN DUCT.
- ② EXISTING DUCTWORK TO BE REMOVED.
- ③ EXISTING MIXING BOX/VAV BOX TO REMAIN.
- ④ REMOVE & REPLACE EXIST THERMOSTAT WITH NEW DDC THERMOSTAT.
- ⑤ EXISTING DIFFUSER TO REMAIN.

REFER TO M1.4 FOR CONTINUATION

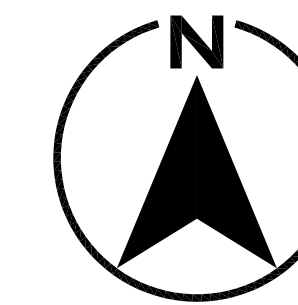


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1	ISSUED FOR 99% REVIEW 27/03/13

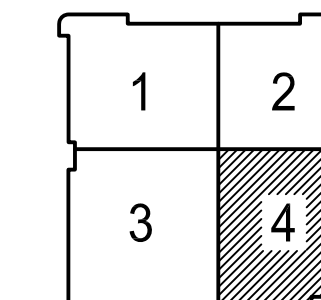


project		projet	
<b>CFIA</b>			
BURNABY LAB			
MIXING BOX REPLACEMENT			
3155 WILLINGDON GREEN, BURNABY, B.C.			
drawing		dessin	
<b>FIRST FLOOR MECHANICAL</b>			
<b>QUADRANT 3</b>			
<b>DEMOLITION PLAN</b>			
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Tender	-	Submission	
PWC Project Manager	Administrateur de projets TPC		
project number	no. du projet		
<b>121-24459-00</b>			
drawing no.	no. du dessin		
<b>M1.3</b>			

REFER TO M1.2 FOR CONTINUATION



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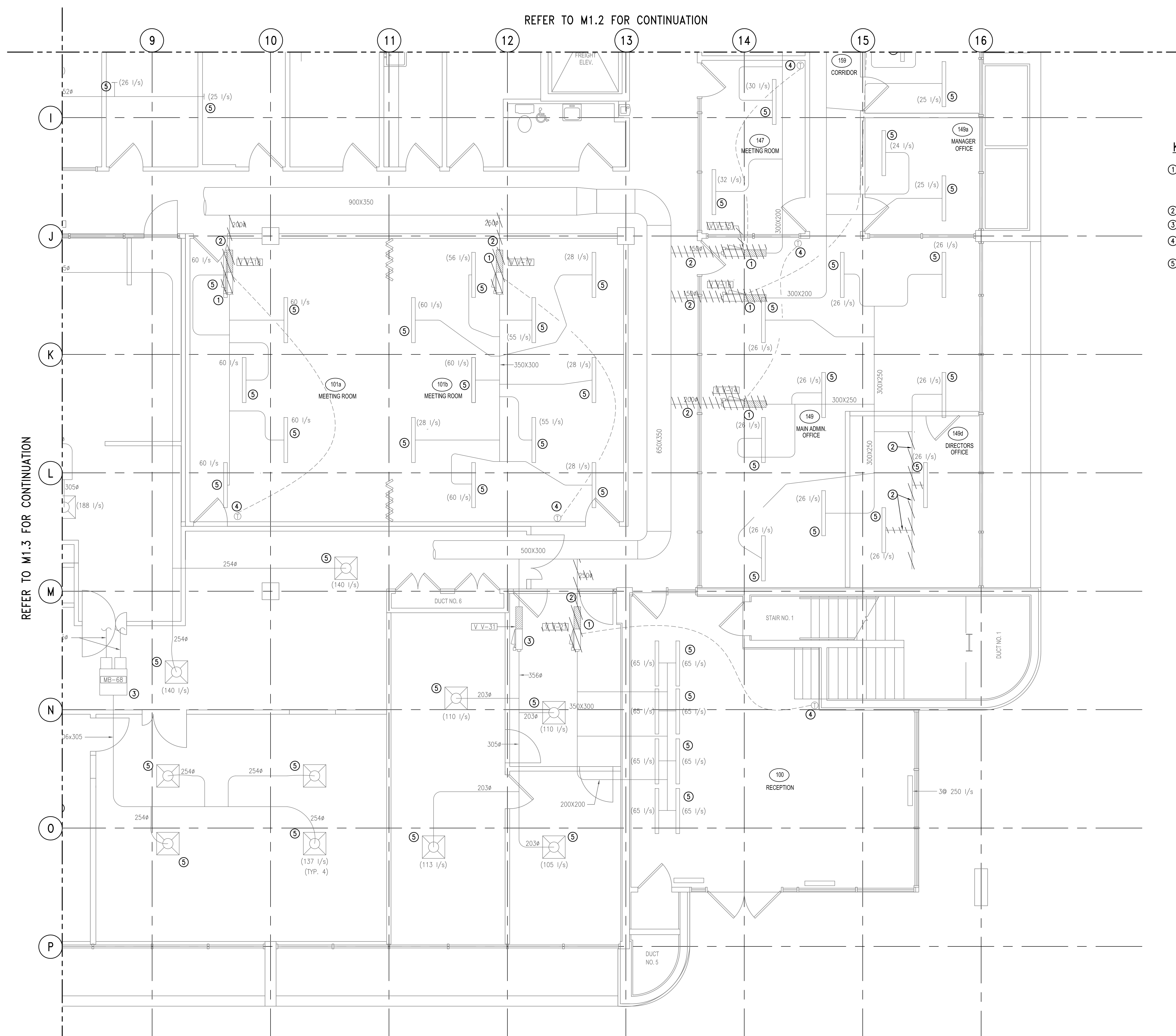


KEYPLAN

KEYNOTES FOR M1.1 TO M1.4

- ① REMOVE EXISTING VAV BOX AND ALL ASSOCIATED CONTROL WIRING AND SUPPLY BRANCH DUCTING. TO BE REPLACED WITH NEW VAV BOX AND CONTROL WIRING AND SUPPLY BRANCH TO MAIN DUCT.
- ② EXISTING DUCTWORK TO BE REMOVED.
- ③ EXISTING MIXING BOX/VAV BOX TO REMAIN.
- ④ REMOVE & REPLACE EXIST THERMOSTAT WITH NEW DDC THERMOSTAT.
- ⑤ EXISTING DIFFUSER TO REMAIN.

REFER TO M1.3 FOR CONTINUATION



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1	ISSUED FOR 99% REVIEW 27/03/13

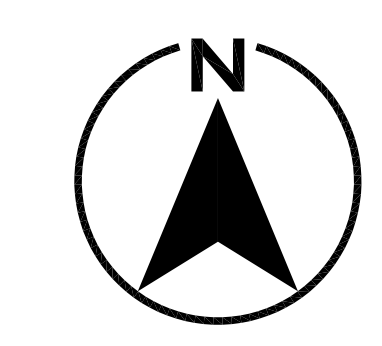
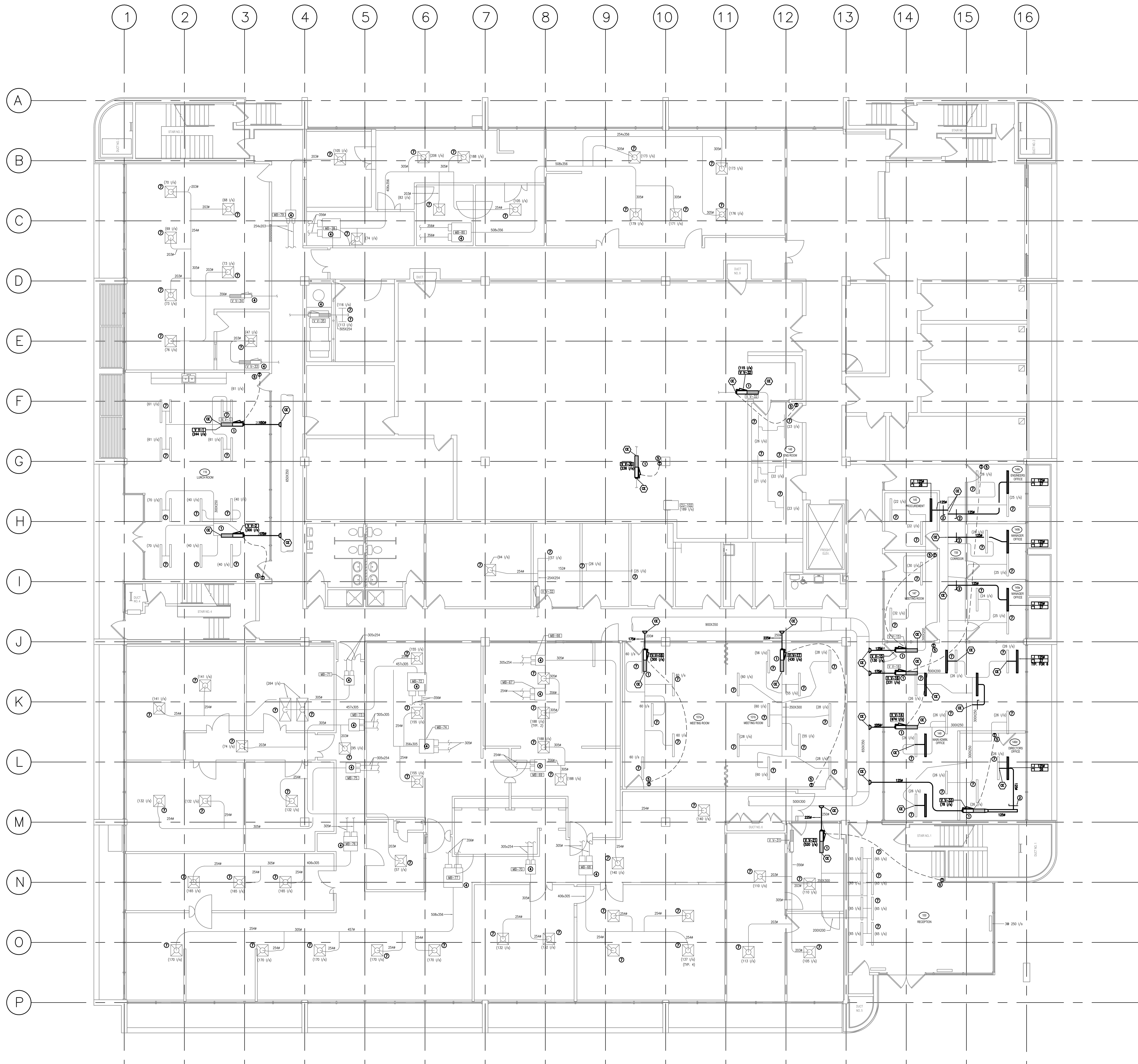
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C	C drawing no. dessin no.	C

project **CFIA** projet  
**BURNABY LAB**  
**MIXING BOX REPLACEMENT**

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drawing **FIRST FLOOR MECHANICAL** dessin  
**QUADRANT 4**  
**DEMOLITION PLAN**

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drawn JL dessine
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reviewed MLG examine
date -
approved SC approuve
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PWC Project Manager Administrateur de projets TPC
project number 121-24459-00 no. du projet
drawing no. M1.4 no. du dessin

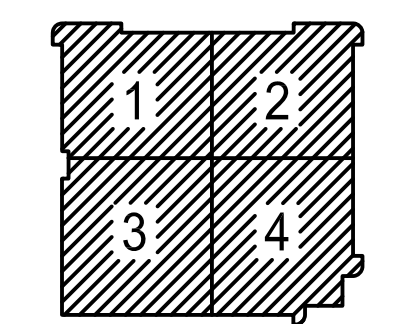


**GENERAL NOTES**

1. REFER TO QUADRANT DRAWINGS FOR ENLARGED FLOOR PLAN.

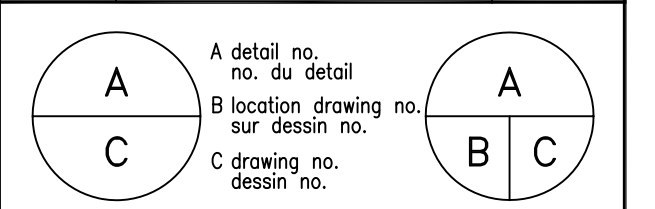


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KEYPLAN

revisions	date
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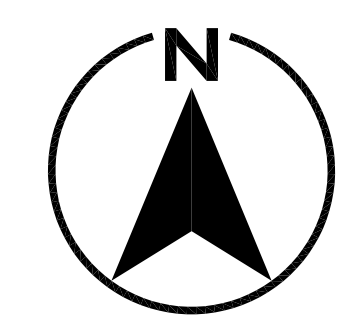
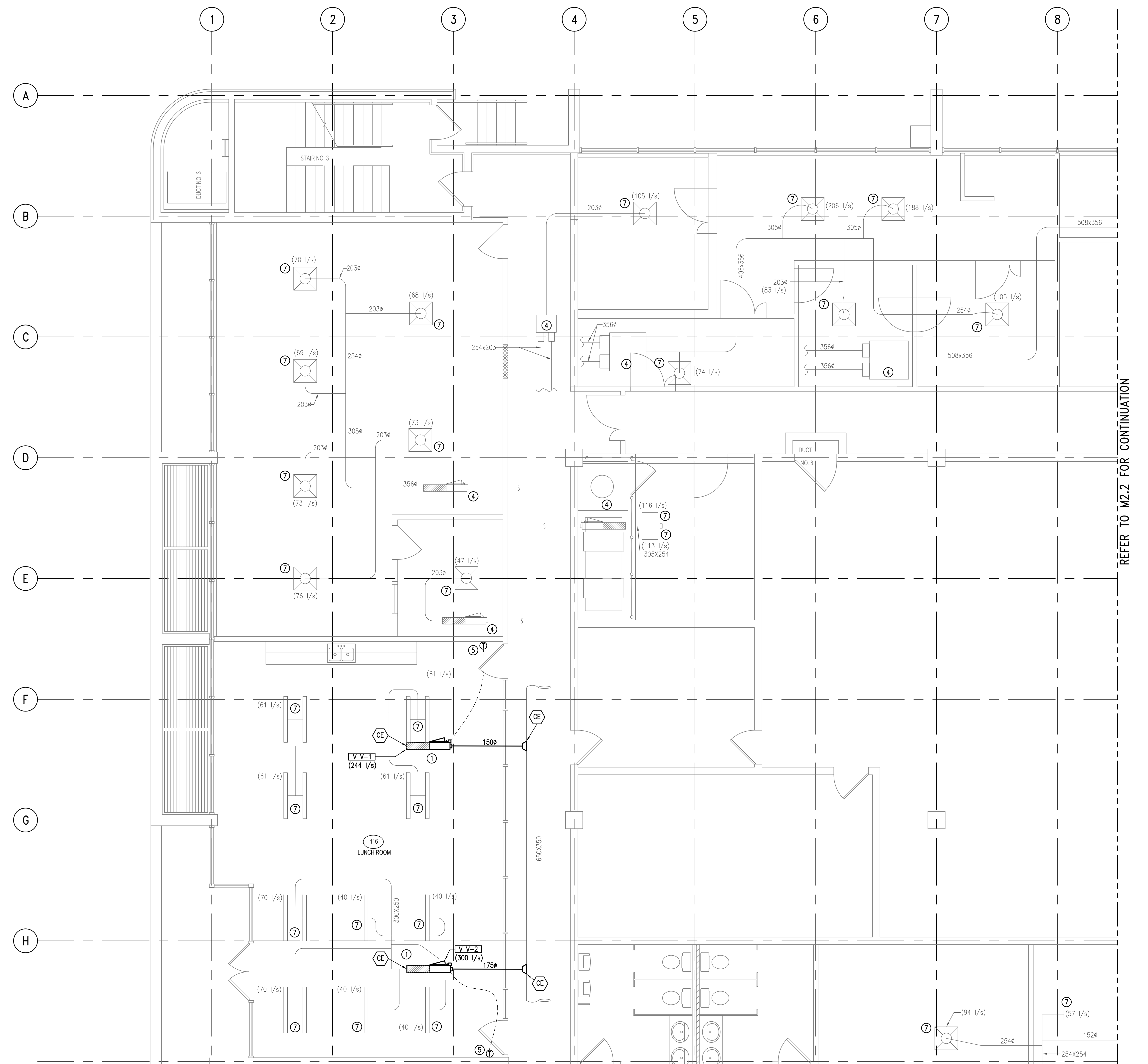


project **CFIA** projet  
**BURNABY LAB**  
**MIXING BOX REPLACEMENT**  
 3155 WILLINGDON GREEN, BURNABY, B.C.

drawing **FIRST FLOOR** dessin  
**NEW MECHANICAL**  
**GENERAL ARRANGEMENT**  
**PLAN**  
 1:100

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date	-	
drawn	JL	dessiné
date	-	
reviewed	MLG	examiné
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approved	SC	approuvé
date	-	
Tender	-	Submission

PWC Project Manager Administrateur de projets TPC  
 project number no. du projet  
**121-24459-00**  
 drawing no. no. du dessin  
**M2.0**

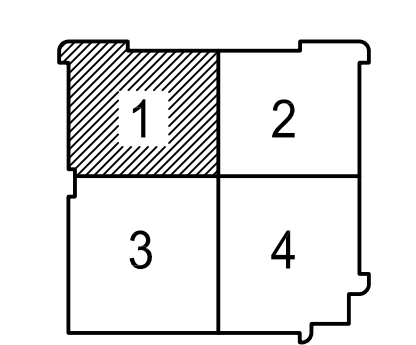


**KEYNOTES FOR M2.1 TO M2.4**

- ① NEW VAV BOX WITH CONTROL WIRING. SUPPLY OUTLETS TO BE RE-BALANCE AS INDICATED. REFER TO DWG. M7.1 FOR EQUIPMENT SCHEDULE.
- ② NEW BALANCING DAMPER.
- ③ KEYNOTE NOT USED.
- ④ EXISTING MIXING BOX/VAV BOX.
- ⑤ NEW DDC THERMOSTAT.
- ⑥ NEW DIFFUSER.
- ⑦ EXISTING DIFFUSER.



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KEYPLAN

REFER TO M2.2 FOR CONTINUATION

REFER TO M2.3 FOR CONTINUATION

revisions	date
2	ISSUED FOR TENDER 31/03/13
1	ISSUED FOR 99% REVIEW 27/03/13

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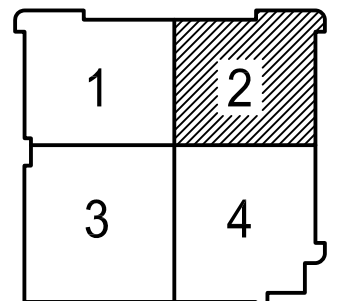
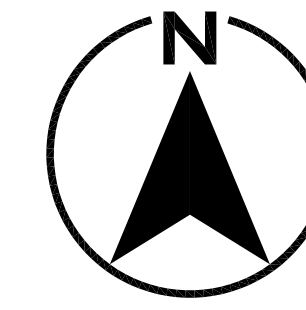
project **CFIA** projet  
**BURNABY LAB**  
**MIXING BOX REPLACEMENT**  
 3155 WILLINGDON GREEN, BURNABY, B.C.

drawing **FIRST FLOOR MECHANICAL** dessin  
**QUADRANT 1**  
**NEW PLAN**

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date -
reviewed MLG examine
date -
approved SC approuve
date -
Tender - Soumission

PWC Project Manager Administrateur de projets TPC  
 project number 121-24459-00 no. du projet

drawing no. **M2.1** no. du dessin

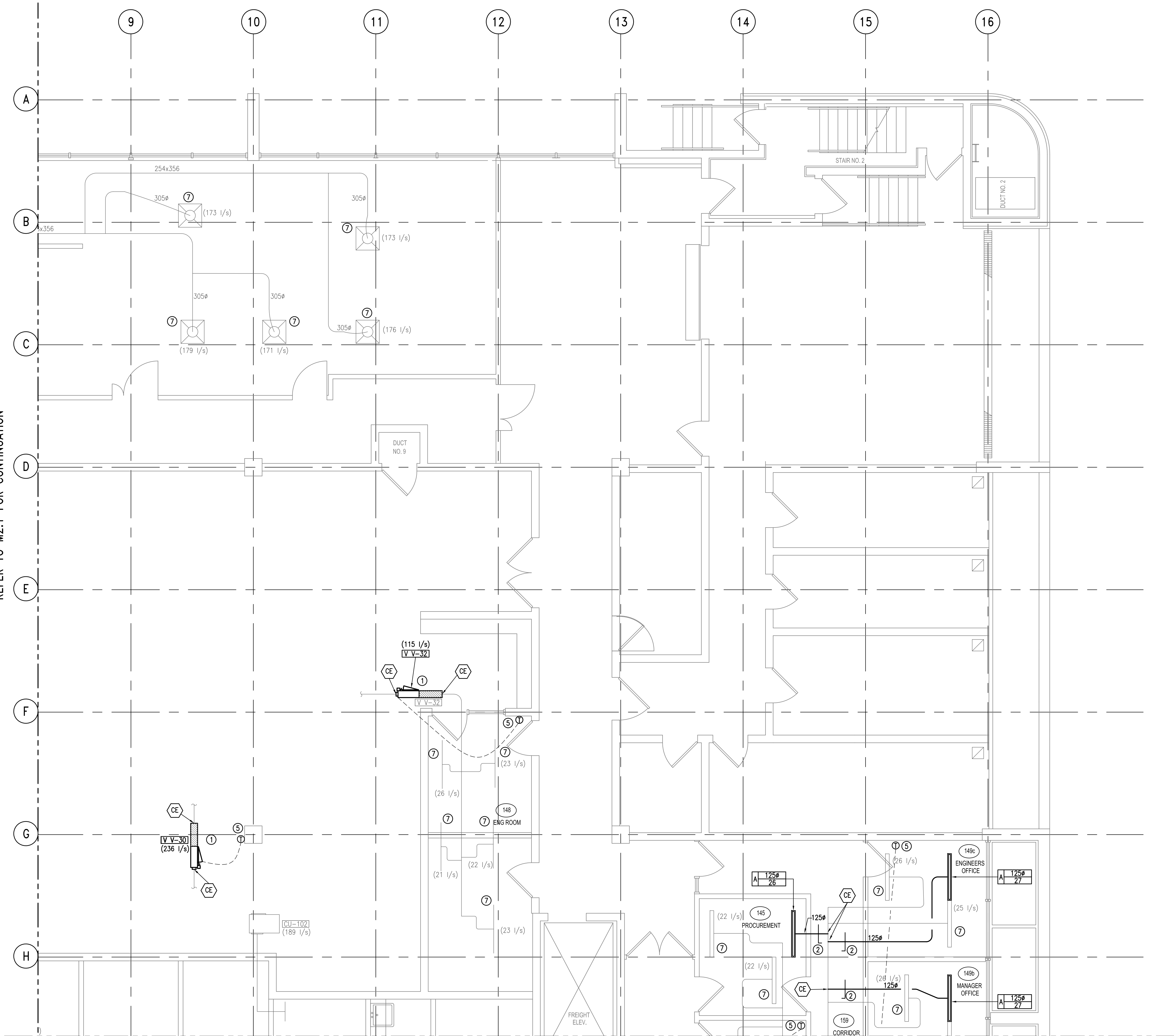


KEYPLAN

**KEYNOTES FOR M2.1 TO M2.4**

- ① NEW VAV BOX WITH CONTROL WIRING. SUPPLY OUTLETS TO BE RE-BALANCE AS INDICATED. REFER TO DWG. M7.1 FOR EQUIPMENT SCHEDULE.
- ② NEW BALANCING DAMPER.
- ③ KEYNOTE NOT USED.
- ④ EXISTING MIXING BOX/VAV BOX.
- ⑤ NEW DDC THERMOSTAT.
- ⑥ NEW DIFFUSER.
- ⑦ EXISTING DIFFUSER.

REFER TO M2.1 FOR CONTINUATION



REFER TO M2.4 FOR CONTINUATION

revisions	date
2	ISSUED FOR TENDER 31/03/13
1	ISSUED FOR 99% REVIEW 27/03/13

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A	A	A
C	B	C

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

project **CFIA** projet  
**BURNABY LAB**  
**MIXING BOX REPLACEMENT**  
 3155 WILLINGDON GREEN, BURNABY, B.C.

drawing **FIRST FLOOR MECHANICAL** dessin  
**QUADRANT 2**  
**NEW PLAN**

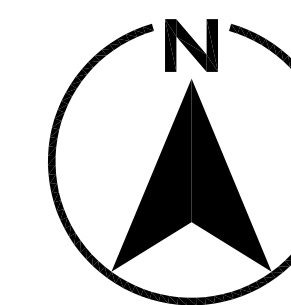
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Tender	-	Submission

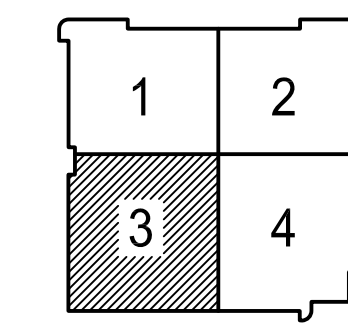
PWC Project Manager Administrateur de projets TPC  
 project number no. du projet  
**121-24459-00**

drawing no. no. du dessin  
**M2.2**

REFER TO M2.1 FOR CONTINUATION



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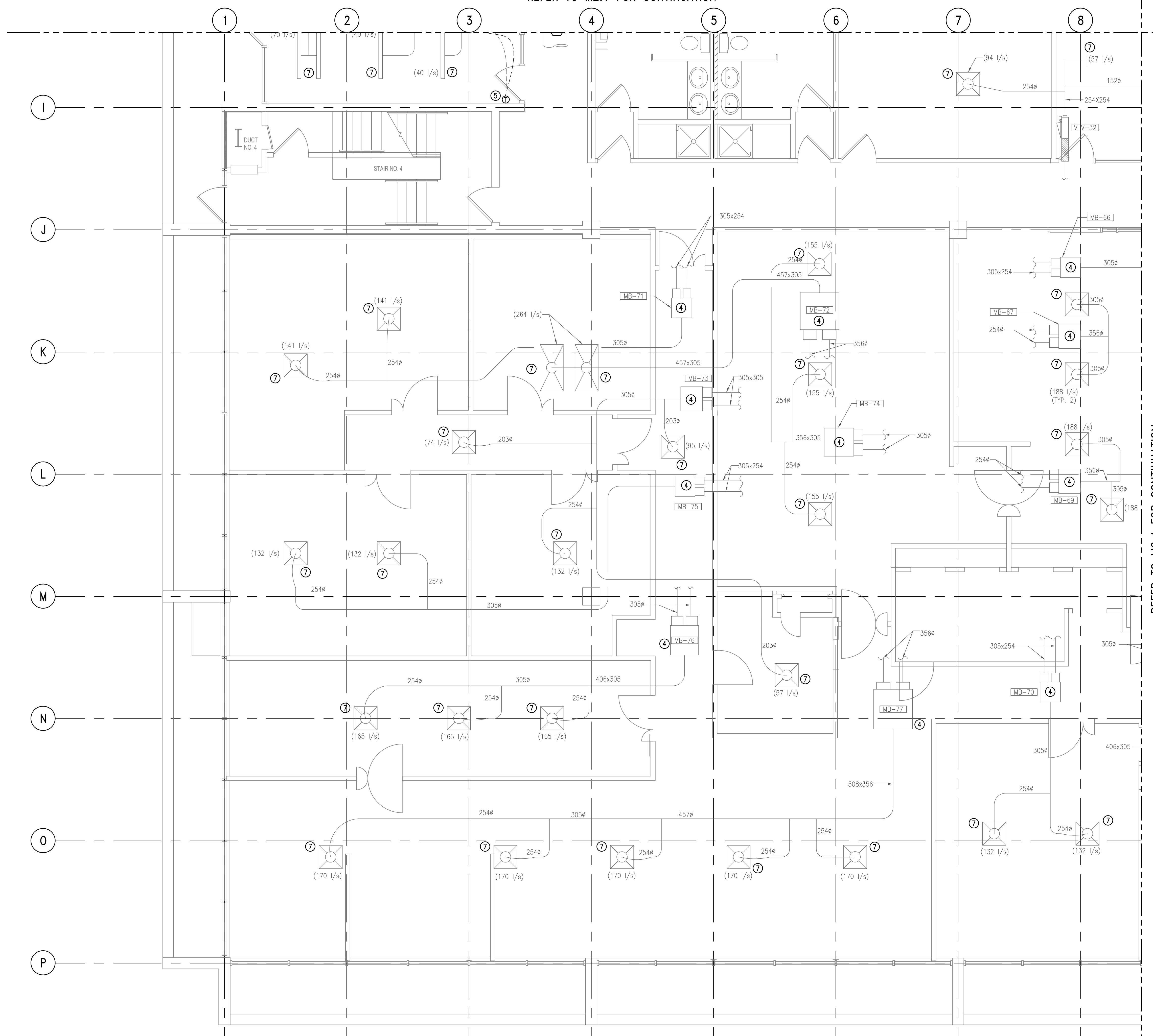


KEYPLAN

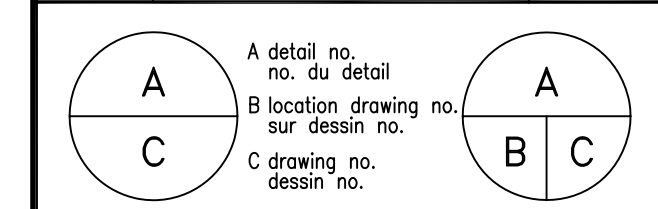
KEYNOTES FOR M2.1 TO M2.4

- ① NEW VAV BOX WITH CONTROL WIRING. SUPPLY OUTLETS TO BE RE-BALANCE AS INDICATED. REFER TO DWG. M7.1 FOR EQUIPMENT SCHEDULE.
- ② NEW BALANCING DAMPER.
- ③ KEYNOTE NOT USED.
- ④ EXISTING MIXING BOX/VAV BOX.
- ⑤ NEW DDC THERMOSTAT.
- ⑥ NEW DIFFUSER.
- ⑦ EXISTING DIFFUSER.

REFER TO M2.4 FOR CONTINUATION



revisions	date
2	ISSUED FOR TENDER 31/03/13
1	ISSUED FOR 99% REVIEW 27/03/13



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**MIXING BOX REPLACEMENT**  
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drawing **FIRST FLOOR MECHANICAL** dessin  
**QUADRANT 3**  
**NEW PLAN**

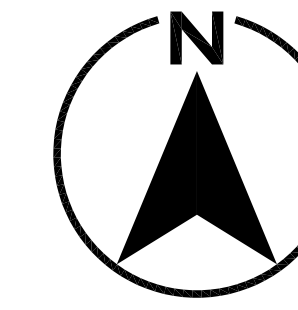
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designed SC concu
date -
drawn JL dessine
date -
reviewed MLG examine
date -
approved SC approuve
date -
Tender - Soumission

PWC Project Manager Administrateur de projets TPC  
 project number no. du projet  
**121-24459-00**

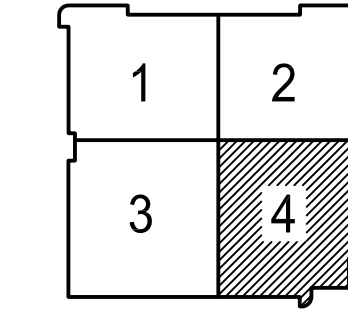
drawing no. no. du dessin  
**M2.3**



REFER TO M2.2 FOR CONTINUATION



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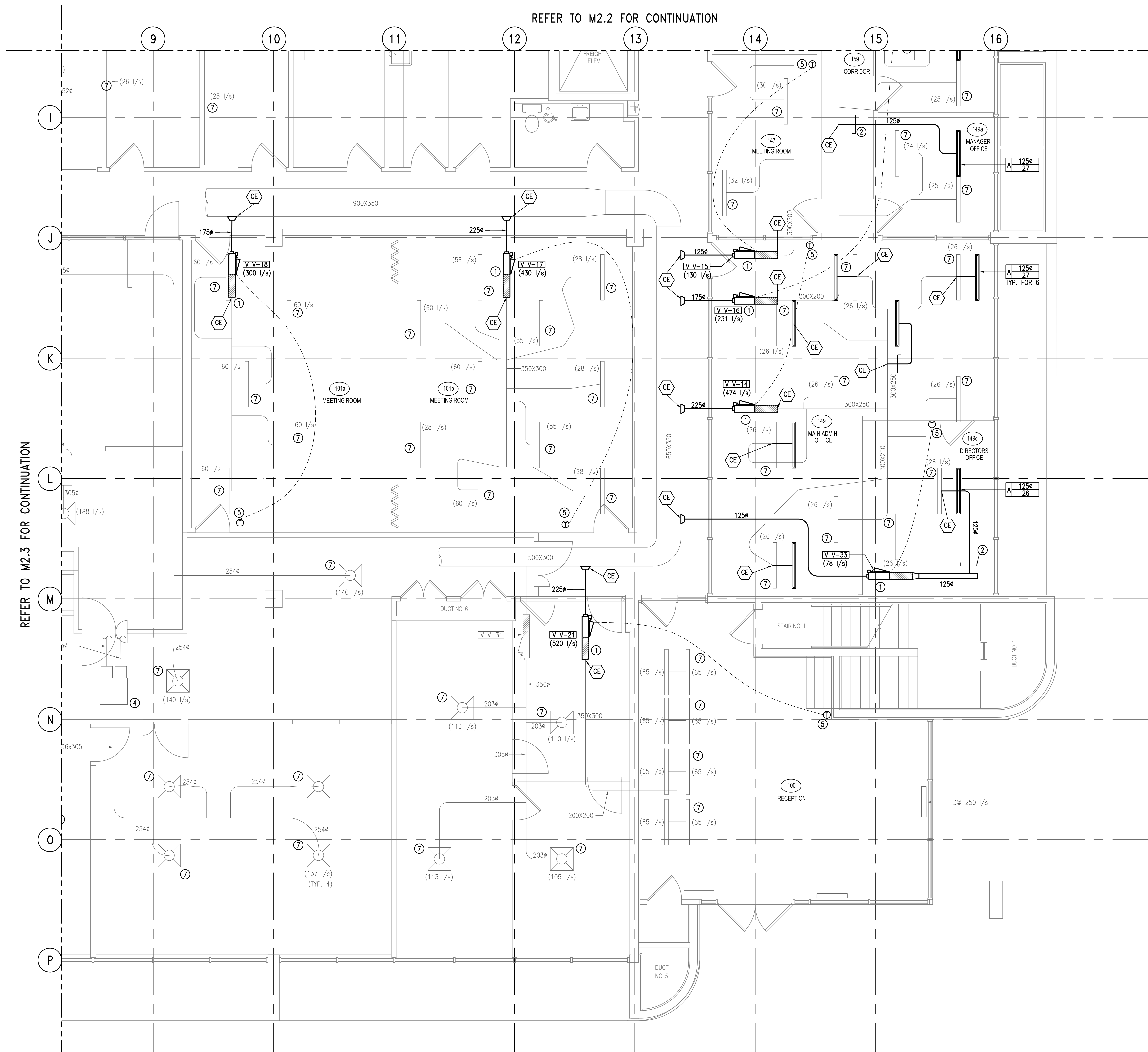


KEYPLAN

KEYNOTES FOR M2.1 TO M2.4

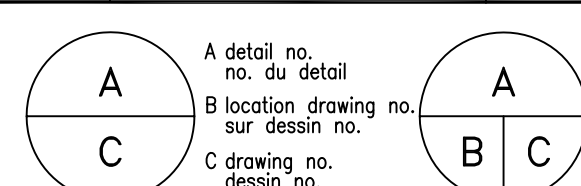
- ① NEW VAV BOX WITH CONTROL WIRING. SUPPLY OUTLETS TO BE RE-BALANCE AS INDICATED. REFER TO DWG. M7.1 FOR EQUIPMENT SCHEDULE.
- ② NEW BALANCING DAMPER.
- ③ KEYNOTE NOT USED.
- ④ EXISTING MIXING BOX/VAV BOX.
- ⑤ NEW DDC THERMOSTAT.
- ⑥ NEW DIFFUSER.
- ⑦ EXISTING DIFFUSER.

REFER TO M2.3 FOR CONTINUATION



2	ISSUED FOR TENDER	31/03/13
1	ISSUED FOR 99% REVIEW	27/03/13

revisions date



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

project projet

**CFIA**  
BURNABY LAB  
MIXING BOX REPLACEMENT

3155 WILLINGDON GREEN, BURNABY, B.C.

drawing dessin  
**FIRST FLOOR MECHANICAL  
QUADRANT 4  
NEW PLAN**

1:50

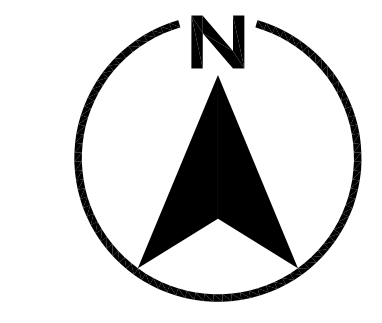
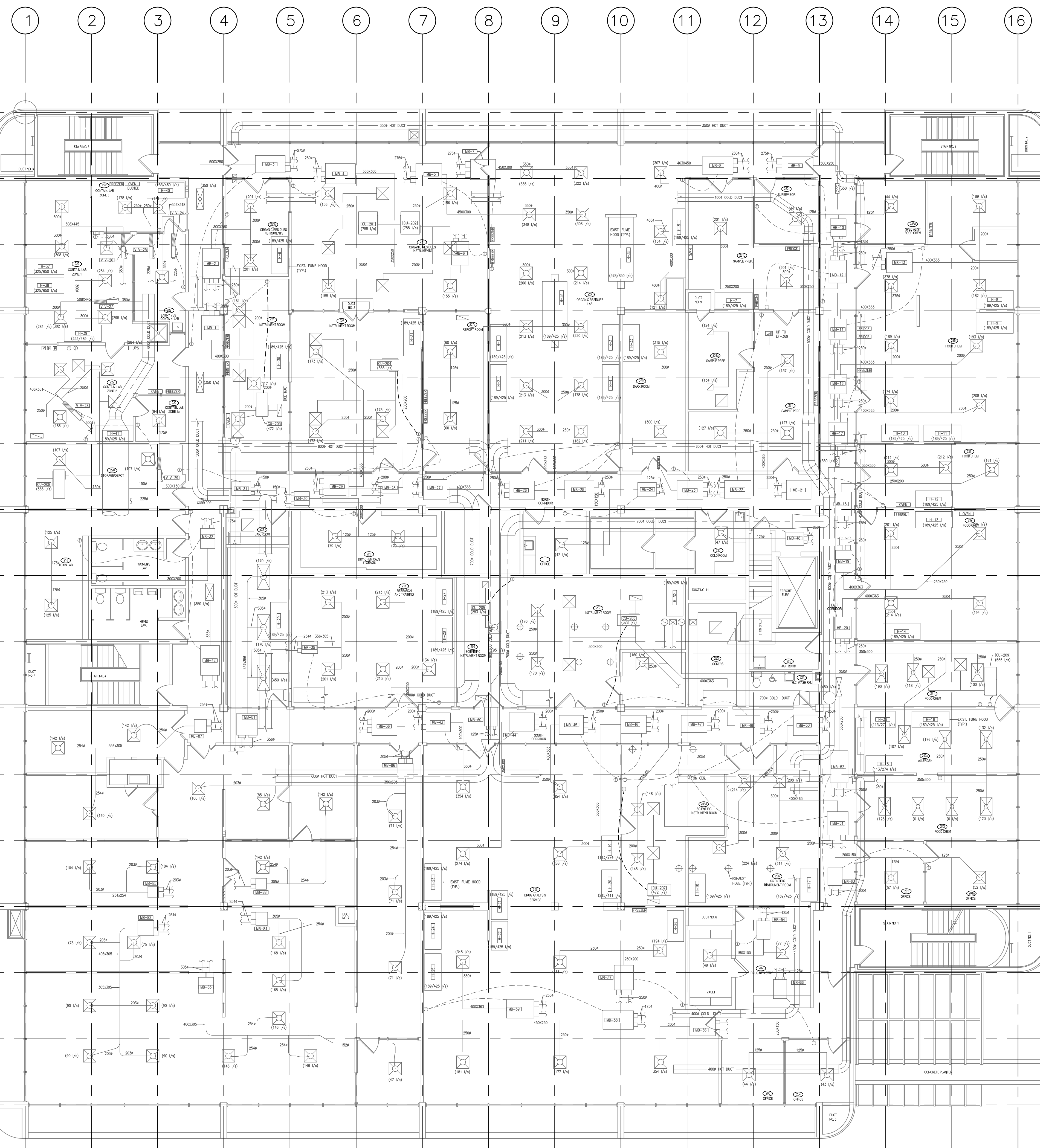
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date	-	-
drawn	JL	dessiné
date	-	-
reviewed	MLG	examiné
date	-	-
approved	SC	approuvé
date	-	-
Tender	-	Submission

PWC Project Manager Administrateur de projets TPC  
project number no. du projet

121-24459-00

drawing no. no. du dessin

M2.4

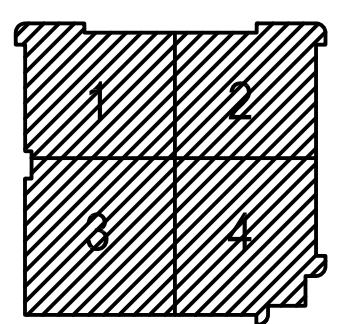


**GENERAL NOTES**

- REFER TO QUADRANT DRAWINGS FOR ENLARGED FLOOR PLAN.

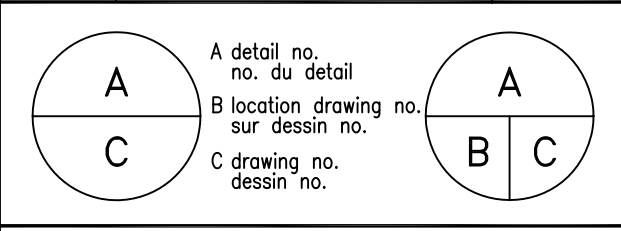


**GENIVAR**  
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 FAX: (604) 736-1519



**KEYPLAN**

2	ISSUED FOR TENDER	31/03/13
1	ISSUED FOR 99% REVIEW	27/03/13
revisions		date

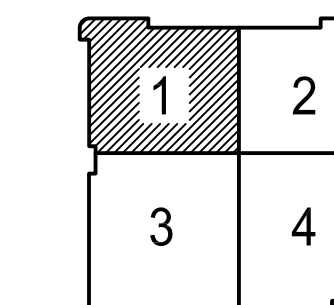
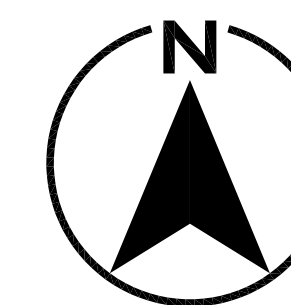


project **CFIA** project  
**BURNABY LAB**  
**MIXING BOX REPLACEMENT**  
 3155 WILLINGDON GREEN, BURNABY, B.C.

drawing **SECOND FLOOR** dessin  
**EXISTING MECHANICAL**  
**GENERAL ARRANGEMENT**  
**PLAN**  
 1:100

designed	SC	conçu
date	-	
drawn	JL	dessiné
date	-	
reviewed	MLG	examiné
date	-	
approved	SC	approuvé
date	-	
Tender	-	Submission

PWC Project Manager Administrateur de projets TPC  
 project number no. du projet  
**121-24459-00**  
 drawing no. no. du dessin  
**M3.0**



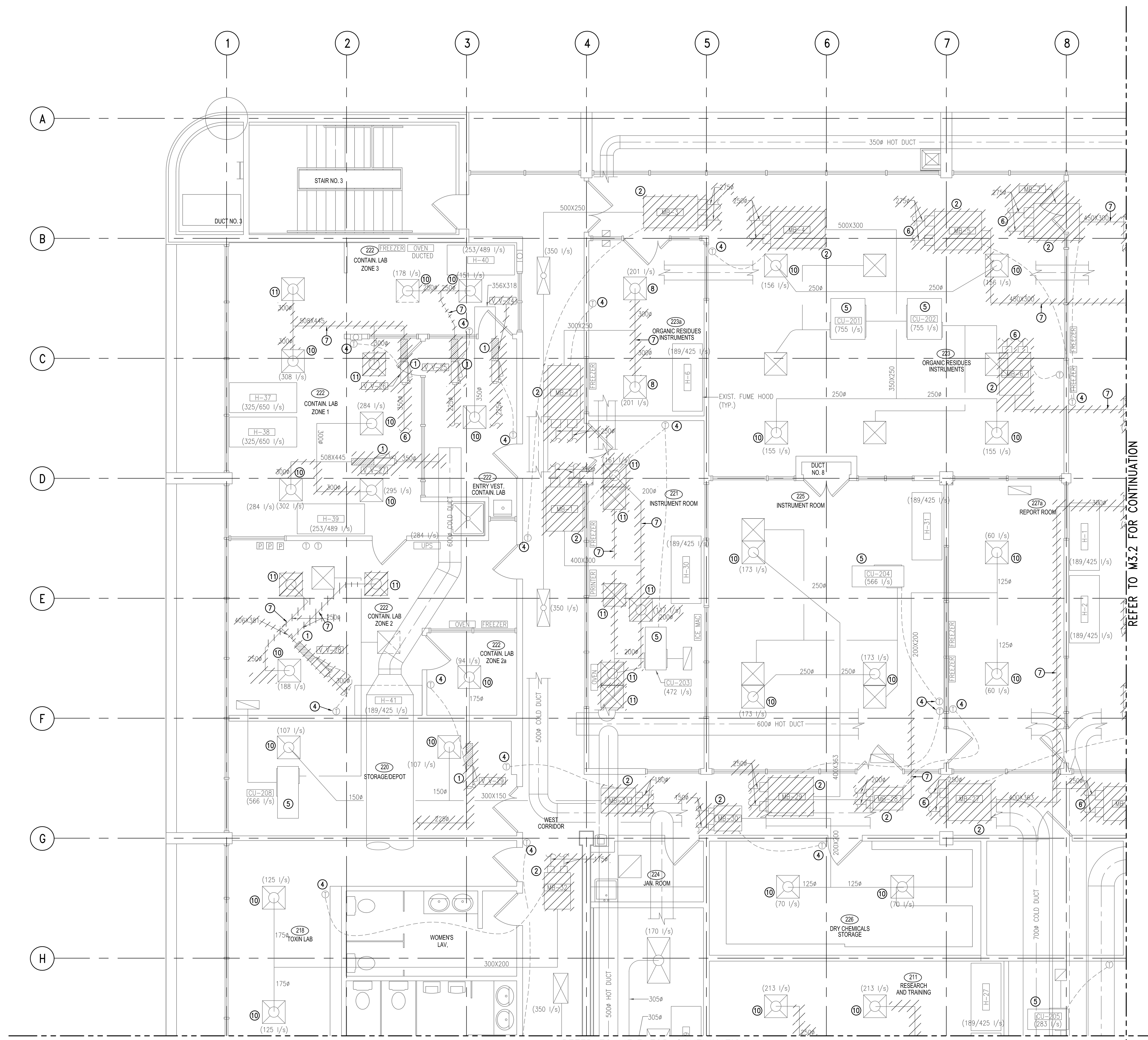
KEYPLAN

**KEYNOTES FOR M3.1 TO M3.4**

- ① REMOVE EXISTING VAV BOX AND ASSOCIATED CONTROL WIRING AND SUPPLY BRANCH.
- ② REMOVE EXISTING DUAL DUCT MIXING BOX AND ASSOCIATED CONTROL WIRING, HOT AND COLD SUPPLY BRANCHES.
- ③ EXISTING MIXING BOX/VAV BOX TO REMAIN.
- ④ REMOVE & REPLACE EXIST THERMOSTAT WITH NEW DDC THERMOSTAT.
- ⑤ EXISTING A/C UNIT TO REMAIN.
- ⑥ CAP OFF BRANCH DUCTS FOR REMOVED MIXING/VAV BOXES AT THE MAIN DUCT AND PROVIDE NEW BALANCE DAMPER, REFER DETAIL 7.0 ON DRAWING M8.0.
- ⑦ EXISTING DUCTWORK TO BE REMOVED.
- ⑧ RELOCATE EXISTING HEPA FILTER DIFFUSER.
- ⑨ RELOCATE EXISTING DIFFUSER. SEE NEW LOCATION ON DWG. M4- SERIES IN EACH QUADRANT RESPECTIVELY.
- ⑩ EXISTING DIFFUSER TO REMAIN.
- ⑪ REMOVE EXISTING DIFFUSER.

**GENERAL NOTES**

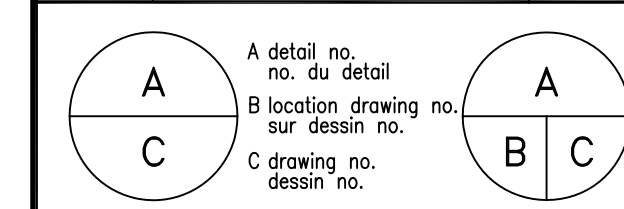
1. SEAL ALL OPENINGS AT CORRIDOR AND ROOM WALLS.



REFER TO M3.2 FOR CONTINUATION

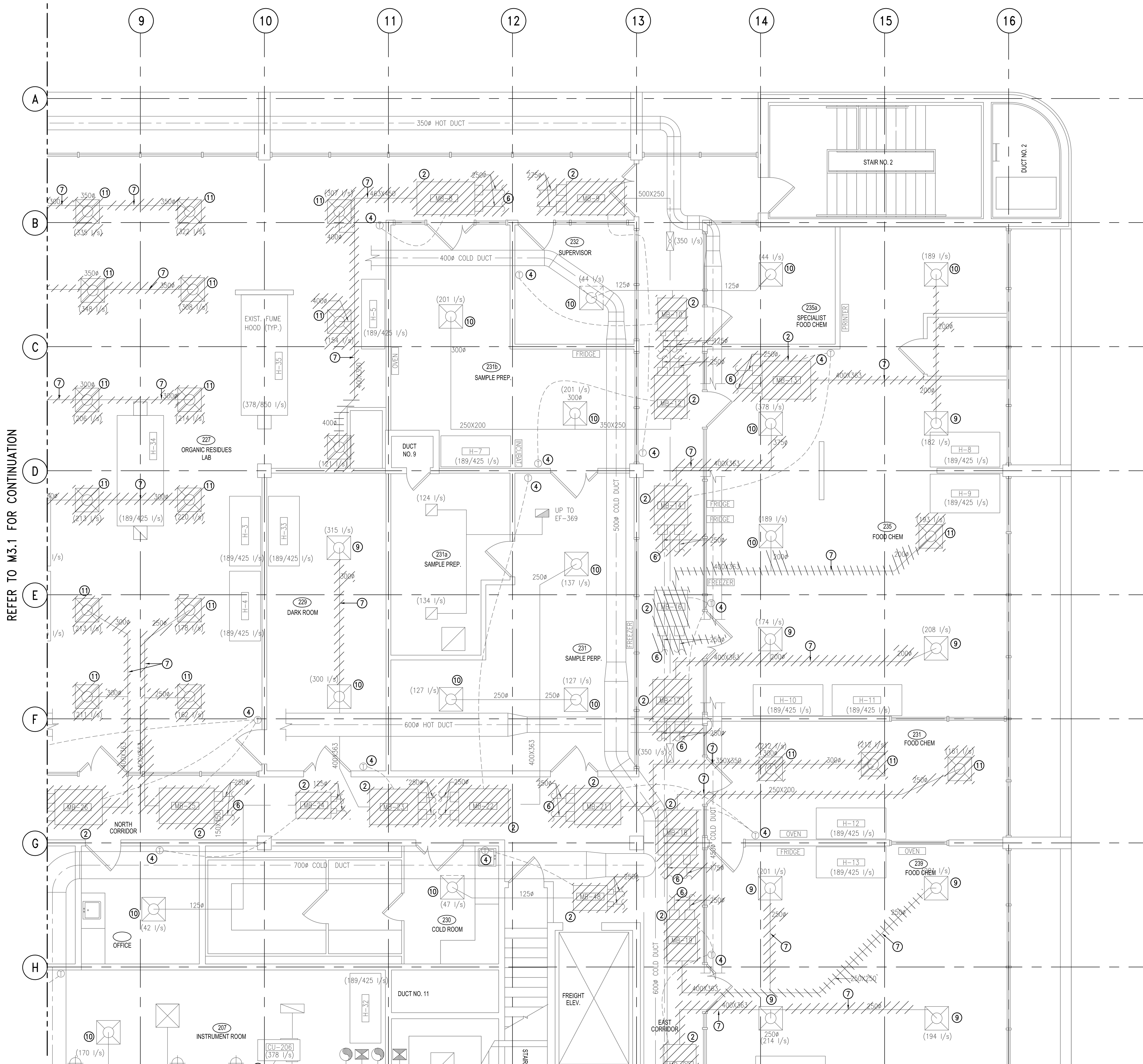
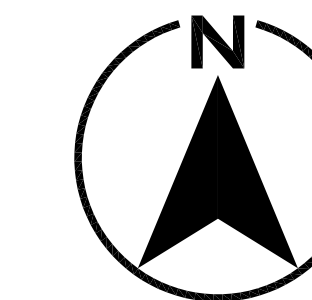
REFER TO M3.3 FOR CONTINUATION

2	ISSUED FOR TENDER	31/03/13
1	ISSUED FOR 99% REVIEW	27/03/13
revisions		date



project	<b>CFIA</b>		projet
	BURNABY LAB		
	MIXING BOX REPLACEMENT		
	3155 WILLINGDON GREEN, BURNABY, B.C.		
drawing	SECOND FLOOR MECHANICAL		dessin
	QUADRANT 1		
	DEMOLITION PLAN		
1:50			
designed	SC	conçu	
date	-		
drawn	JL	dessiné	
date	-		
reviewed	MLG	examiné	
date	-		
approved	SC	approuvé	
date	-		
Tender	-	Submission	
PWC Project Manager	Administrateur de projets TPC		
project number	no. du projet		
	121-24459-00		
drawing no.	no. du dessin		
	M3.1		





REFER TO M3.4 FOR CONTINUATION

**KEYNOTES FOR M3.1 TO M3.4**

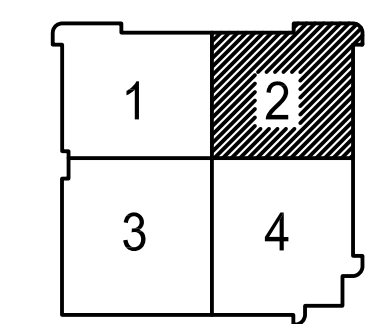
- ① REMOVE EXISTING VAV BOX AND ASSOCIATED CONTROL WIRING AND SUPPLY BRANCH.
- ② REMOVE EXISTING DUAL DUCT MIXING BOX AND ASSOCIATED CONTROL WIRING, HOT AND COLD SUPPLY BRANCHES.
- ③ EXISTING MIXING BOX/VAV BOX TO REMAIN.
- ④ REMOVE & REPLACE EXIST THERMOSTAT WITH NEW DDC THERMOSTAT.
- ⑤ EXISTING A/C UNIT TO REMAIN.
- ⑥ CAP OFF BRANCH DUCTS FOR REMOVED MIXING/VAV BOXES AT THE MAIN DUCT AND PROVIDE NEW BALANCE DAMPER, REFER DETAIL 7.0 ON DRAWING M8.0.
- ⑦ EXISTING DUCTWORK TO BE REMOVED.
- ⑧ RELOCATE EXISTING HEPA FILTER DIFFUSER.
- ⑨ RELOCATE EXISTING DIFFUSER. SEE NEW LOCATION ON DWG. M4 SERIES IN EACH QUADRANT RESPECTIVELY.
- ⑩ EXISTING DIFFUSER TO REMAIN.
- ⑪ REMOVE EXISTING DIFFUSER.

**GENERAL NOTES**

1. SEAL ALL OPENINGS AT CORRIDOR AND ROOM WALLS.

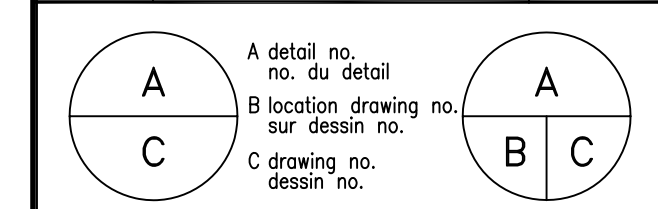


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KEYPLAN

2	ISSUED FOR TENDER	31/03/13
1	ISSUED FOR 99% REVIEW	27/03/13
revisions		date



project **CFIA** projet  
**BURNABY LAB**  
**MIXING BOX REPLACEMENT**

3155 WILLINGDON GREEN, BURNABY, B.C.

drawing **SECOND FLOOR MECHANICAL QUADRANT 2** dessin  
**DEMOLITION PLAN**

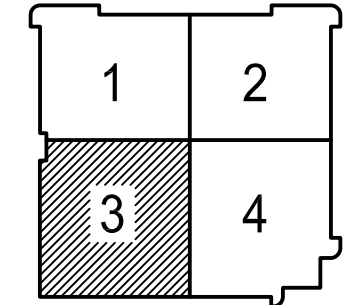
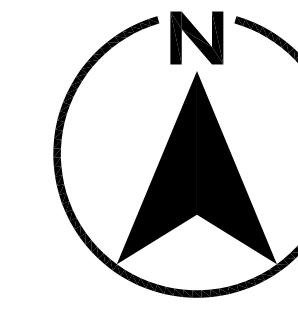
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reviewed	MLG	examiné
date	-	
approved	SC	approuvé
date	-	
Tender	-	Submission

PWC Project Manager Administrateur de projets TPC  
project number no. du projet

121-24459-00

drawing no. no. du dessin  
**M3.2**

REFER TO M3.1 FOR CONTINUATION



KEYPLAN

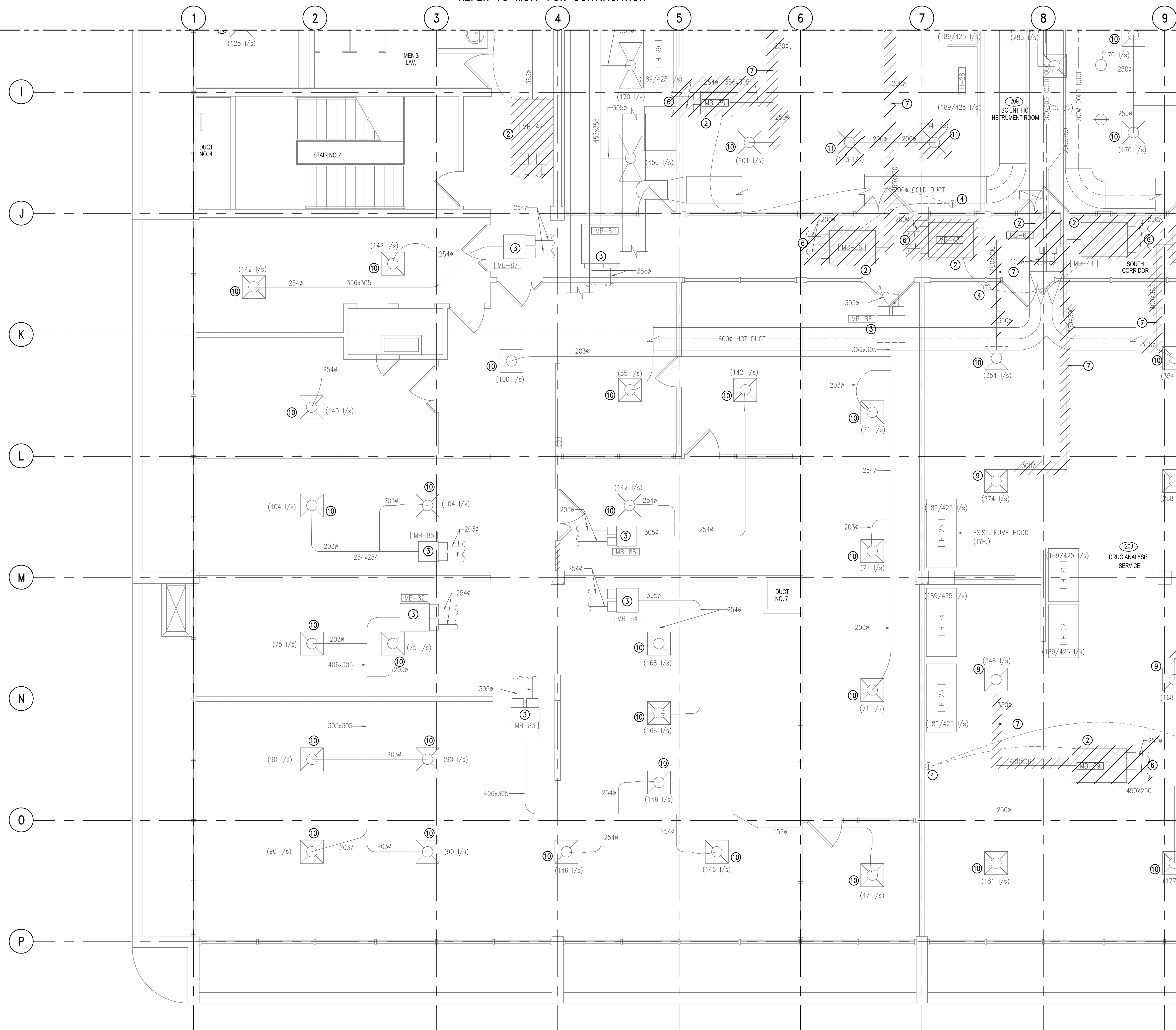
**KEYNOTES FOR M3.1 TO M3.4**

- ① REMOVE EXISTING VAV BOX AND ASSOCIATED CONTROL WIRING AND SUPPLY BRANCH.
- ② REMOVE EXISTING DUAL DUCT MIXING BOX AND ASSOCIATED CONTROL WIRING, HOT AND COLD SUPPLY BRANCHES.
- ③ EXISTING MIXING BOX/VAV BOX TO REMAIN.
- ④ REMOVE & REPLACE EXIST THERMOSTAT WITH NEW DDC THERMOSTAT.
- ⑤ EXISTING A/C UNIT TO REMAIN.
- ⑥ CAP OFF BRANCH DUCTS FOR REMOVED MIXING/VAV BOXES AT THE MAIN DUCT AND PROVIDE NEW BALANCE DAMPER, REFER DETAIL 7.0 ON DRAWING MB.0.
- ⑦ EXISTING DUCTWORK TO BE REMOVED.
- ⑧ RELOCATE EXISTING HEPA FILTER DIFFUSER.
- ⑨ RELOCATE EXISTING DIFFUSER. SEE NEW LOCATION ON DWG. M4 SERIES IN EACH QUADRANT RESPECTIVELY.
- ⑩ EXISTING DIFFUSER TO REMAIN.
- ⑪ REMOVE EXISTING DIFFUSER.

**GENERAL NOTES**

1. SEAL ALL OPENINGS AT CORRIDOR AND ROOM WALLS.

REFER TO M3.4 FOR CONTINUATION



revisions	date
2	ISSUED FOR TENDER 31/03/13
1	ISSUED FOR 99% REVIEW 27/03/13

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

project **CFIA** projet  
project **BURNABY LAB** projet  
project **MIXING BOX REPLACEMENT** projet

3155 WILLINGDON GREEN, BURNABY, B.C.

drawing **SECOND FLOOR MECHANICAL** dessin  
drawing **QUADRANT 3** dessin  
drawing **DEMOLITION PLAN** dessin

1:50

designed	SC	conçu
date	-	-
drawn	JL	dessiné
date	-	-
reviewed	MLG	examiné
date	-	-
approved	SC	approuvé
date	-	-
Tender	-	Submission

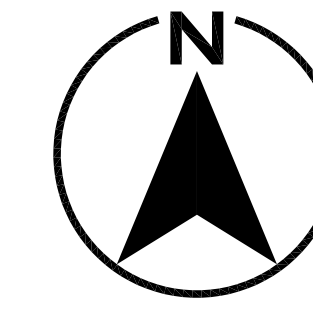
PWC Project Manager Administrateur de projets TPC  
project number no. du projet

121-24459-00

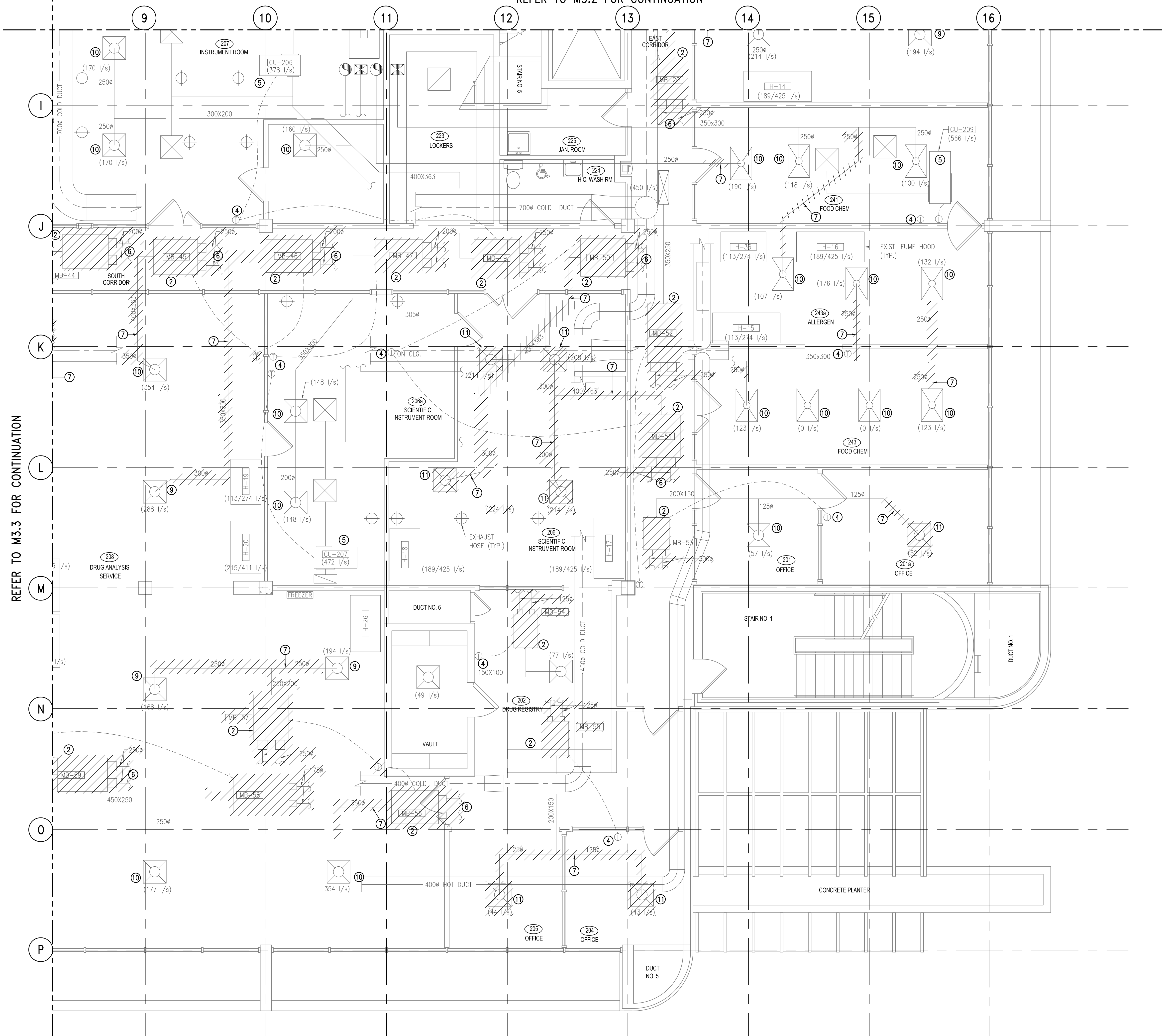
drawing no. no. du dessin

M3.3

REFER TO M3.2 FOR CONTINUATION



REFER TO M3.3 FOR CONTINUATION



**KEYNOTES FOR M3.1 TO M3.4**

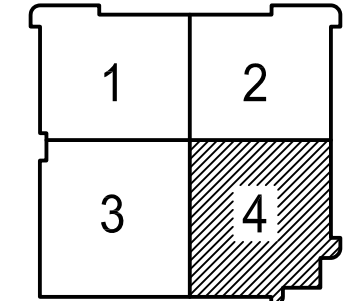
- ① REMOVE EXISTING VAV BOX AND ASSOCIATED CONTROL WIRING AND SUPPLY BRANCH.
- ② REMOVE EXISTING DUAL DUCT MIXING BOX AND ASSOCIATED CONTROL WIRING, HOT AND COLD SUPPLY BRANCHES.
- ③ EXISTING MIXING BOX/VAV BOX TO REMAIN.
- ④ REMOVE & REPLACE EXIST THERMOSTAT WITH NEW DDC THERMOSTAT.
- ⑤ EXISTING A/C UNIT TO REMAIN.
- ⑥ CAP OFF BRANCH DUCTS FOR REMOVED MIXING/VAV BOXES AT THE MAIN DUCT AND PROVIDE NEW BALANCE DAMPER, REFER DETAIL 7.0 ON DRAWING M8.0.
- ⑦ EXISTING DUCTWORK TO BE REMOVED.
- ⑧ RELOCATE EXISTING HEPA FILTER DIFFUSER.
- ⑨ RELOCATE EXISTING DIFFUSER. SEE NEW LOCATION ON DWG. M4 SERIES IN EACH QUADRANT RESPECTIVELY.
- ⑩ EXISTING DIFFUSER TO REMAIN.
- ⑪ REMOVE EXISTING DIFFUSER.

**GENERAL NOTES**

1. SEAL ALL OPENINGS AT CORRIDOR AND ROOM WALLS.



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KEYPLAN

revisions	description	date
2	ISSUED FOR TENDER	31/03/13
1	ISSUED FOR 99% REVIEW	27/03/13

A	A detail no.	A
B	B location drawing no.	B
C	C drawing no.	C

project **CFIA** projet  
**BURNABY LAB**  
**MIXING BOX REPLACEMENT**

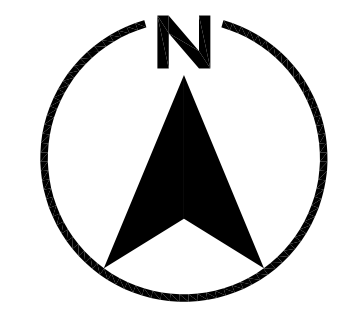
3155 WILLINGDON GREEN, BURNABY, B.C.

drawing **SECOND FLOOR MECHANICAL** dessin  
**QUADRANT 4**  
**DEMOLITION PLAN**

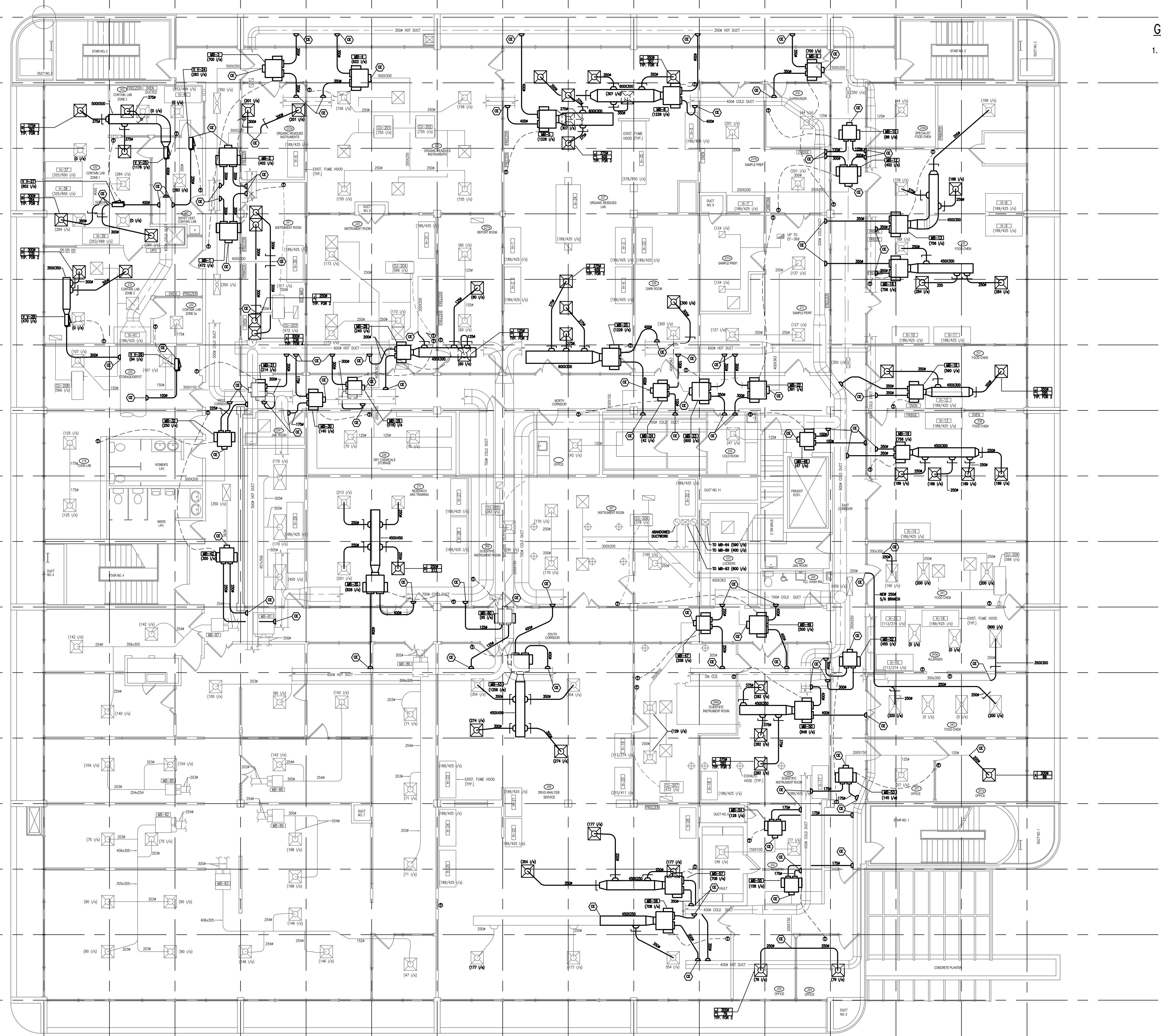
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date	-	
approved	SC	approuvé
date	-	
Tender	-	Submission
PWC Project Manager	Administrateur de projets TPC	
project number	no. du projet	
<b>121-24459-00</b>		
drawing no.	no. du dessin	
<b>M3.4</b>		



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16



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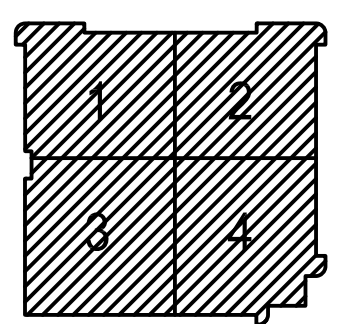


**GENERAL NOTES**

- REFER TO QUADRANT DRAWINGS FOR ENLARGED FLOOR PLAN.

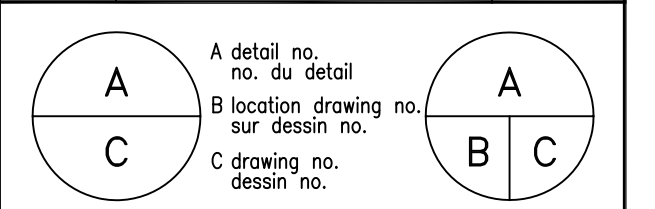


**GENIVAR**  
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VANCOUVER, BRITISH COLUMBIA, CANADA V6J 4Y3  
TELEPHONE: (604) 736-5421  
FAX: (604) 736-1519



KEYPLAN

revisions	date
2	ISSUED FOR TENDER 31/03/13
1	ISSUED FOR 99% REVIEW 27/03/13



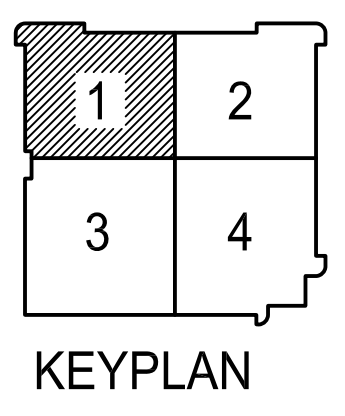
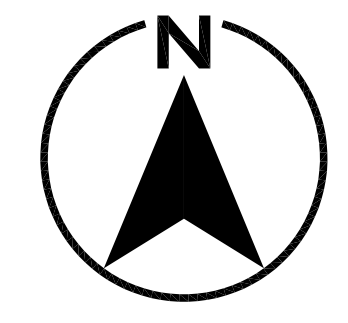
project **CFIA** project  
**BURNABY LAB**  
**MIXING BOX REPLACEMENT**  
3155 WILLINGDON GREEN, BURNABY, B.C.

drawing **SECOND FLOOR** dessin  
**NEW MECHANICAL**  
**GENERAL ARRANGEMENT**  
**PLAN**  
1:100

designed	SC	conçu
date	-	
drawn	JL	dessiné
date	-	
reviewed	MLG	examiné
date	-	
approved	SC	approuvé
date	-	
Tender	-	Submission

PWC Project Manager Administrateur de projets TPC  
project number no. du projet  
**121-24459-00**

drawing no. no. du dessin  
**M4.0**



**KEYNOTES FOR M4.1 TO 4.4**

- ① NEW VAV BOX WITH ASSOCIATED CONTROL WIRING. SEE DETAIL 5 ON DRAWING M8.0. SUPPLY OUTLETS TO BE RE-BALANCE AS INDICATED. REFER TO DWG. M7.0 FOR EQUIPMENT SCHEDULE.
- ② NEW MIXING BOX WITH ASSOCIATED CONTROL WIRING. SEE DETAIL 3 ON DRAWING M8.0. SUPPLY OUTLETS TO BE RE-BALANCE AS INDICATED. REFER TO DWG. M7.0 FOR EQUIPMENT SCHEDULE.
- ③ EXISTING DIFFUSER RELOCATED TO NEW LOCATION.
- ④ RELOCATED EXISTING HEPA FILTER DIFFUSER
- ⑤ NEW DDC THERMOSTAT.
- ⑥ NEW DIFFUSER.
- ⑦ EXISTING DIFFUSER.
- ⑧ EXISTING ABANDONED DIFFUSER.

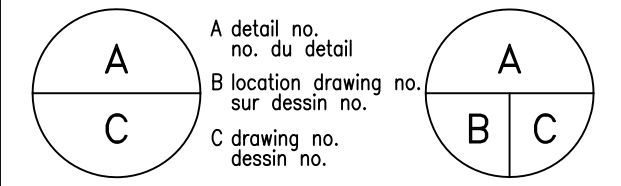
**GENERAL NOTES**

1. SEAL ALL OPENINGS AT CORRIDOR AND ROOM WALLS.
2. TAKE OFFS FROM HIGH VELOCITY DUAL DUCTS TO MIXING BOXES TO BE SAME DIA. AS INLET TO BOX SERVED. USE CONICAL DUCT INTO MAIN DUCT.
3. ALL DUCTS DOWNSTREAM OF MIXING BOXES & VAV BOXES TO BE LOW PRESSURE, LOW VELOCITY.
4. ALL DUCTS UPSTREAM OF VAV BOXES TO BE MEDIUM PRESSURE, LOW VELOCITY CONSTRUCTION.
5. ALL 90° RIGHT ANGLE DUCT ELBOWS TO BE C/W TURNING VANES.
6. REUSE DIFFUSERS WITH NECK DIAMETER SAME SIZE AS THE BRANCH DUCT SHOWN.

REFER TO M4.2 FOR CONTINUATION

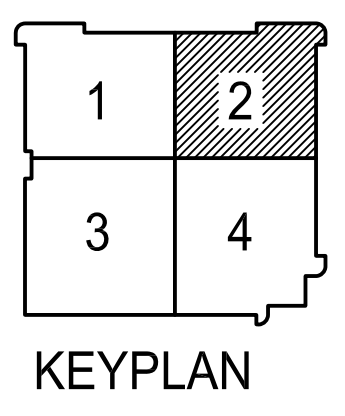
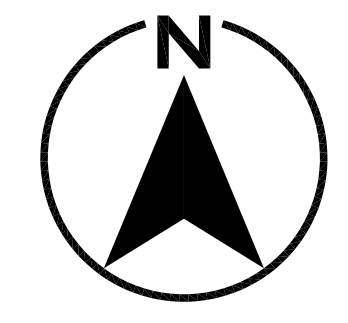
REFER TO M4.3 FOR CONTINUATION

2	ISSUED FOR TENDER	31/03/13
1	ISSUED FOR 99% REVIEW	27/03/13
revisions		date



project	<b>CFIA</b>		projct
	BURNABY LAB		
	MIXING BOX REPLACEMENT		
	3155 WILLINGDON GREEN, BURNABY, B.C.		
drawing	SECOND FLOOR MECHANICAL		dessin
	QUADRANT 1		
	NEW PLAN		
1:50			
designed	SC	concu	
date	-		
drawn	JL	dessine	
date	-		
reviewed	MLG	examine	
date	-		
approved	SC	approuve	
date	-		
Tender	-	Submission	
PWC Project Manager	Administrateur de projets TPC		
project number	121-24459-00		
drawing no.	M4.1		no. du dessin



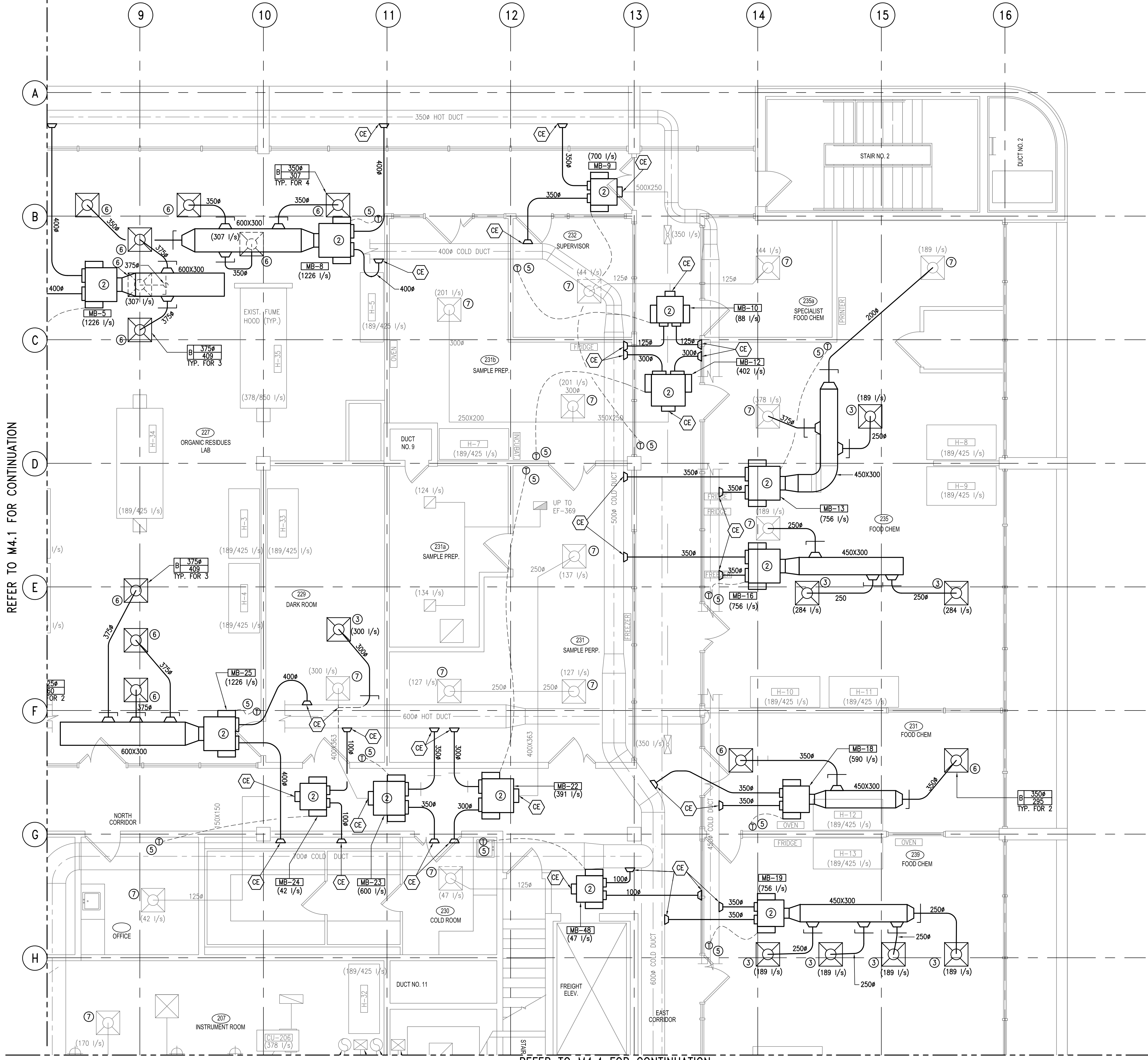


**KEYNOTES FOR M4.1 TO 4.4**

- ① NEW VAV BOX WITH ASSOCIATED CONTROL WIRING. SEE DETAIL 5 ON DRAWING M8.0. SUPPLY OUTLETS TO BE RE-BALANCE AS INDICATED. REFER TO DWG. M7.0 FOR EQUIPMENT SCHEDULE.
- ② NEW MIXING BOX WITH ASSOCIATED CONTROL WIRING. SEE DETAIL 3 ON DRAWING M8.0. SUPPLY OUTLETS TO BE RE-BALANCE AS INDICATED. REFER TO DWG. M7.0 FOR EQUIPMENT SCHEDULE.
- ③ EXISTING DIFFUSER RELOCATED TO NEW LOCATION.
- ④ RELOCATED EXISTING HEPA FILTER DIFFUSER
- ⑤ NEW DDC THERMOSTAT.
- ⑥ NEW DIFFUSER.
- ⑦ EXISTING DIFFUSER.
- ⑧ EXISTING ABANDONED DIFFUSER.

**GENERAL NOTES**

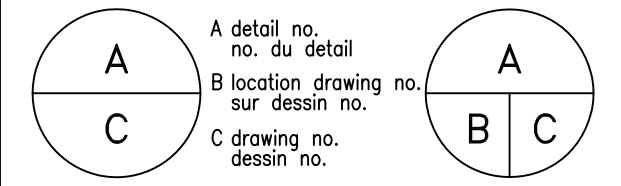
1. SEAL ALL OPENINGS AT CORRIDOR AND ROOM WALLS.
2. TAKE OFFS FROM HIGH VELOCITY DUAL DUCTS TO MIXING BOXES TO BE SAME DIA. AS INLET TO BOX SERVED. USE CONICAL DUCT INTO MAIN DUCT.
3. ALL DUCTS DOWNSTREAM OF MIXING BOXES & VAV BOXES TO BE LOW PRESSURE, LOW VELOCITY.
4. ALL DUCTS UPSTREAM OF VAV BOXES TO BE MEDIUM PRESSURE, LOW VELOCITY CONSTRUCTION.
5. ALL 90° RIGHT ANGLE DUCT ELBOWS TO BE C/W TURNING VANES.
6. REUSE DIFFUSERS WITH NECK DIAMETER SAME SIZE AS THE BRANCH DUCT SHOWN.



REFER TO M4.1 FOR CONTINUATION

REFER TO M4.4 FOR CONTINUATION

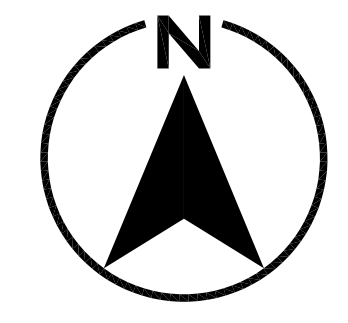
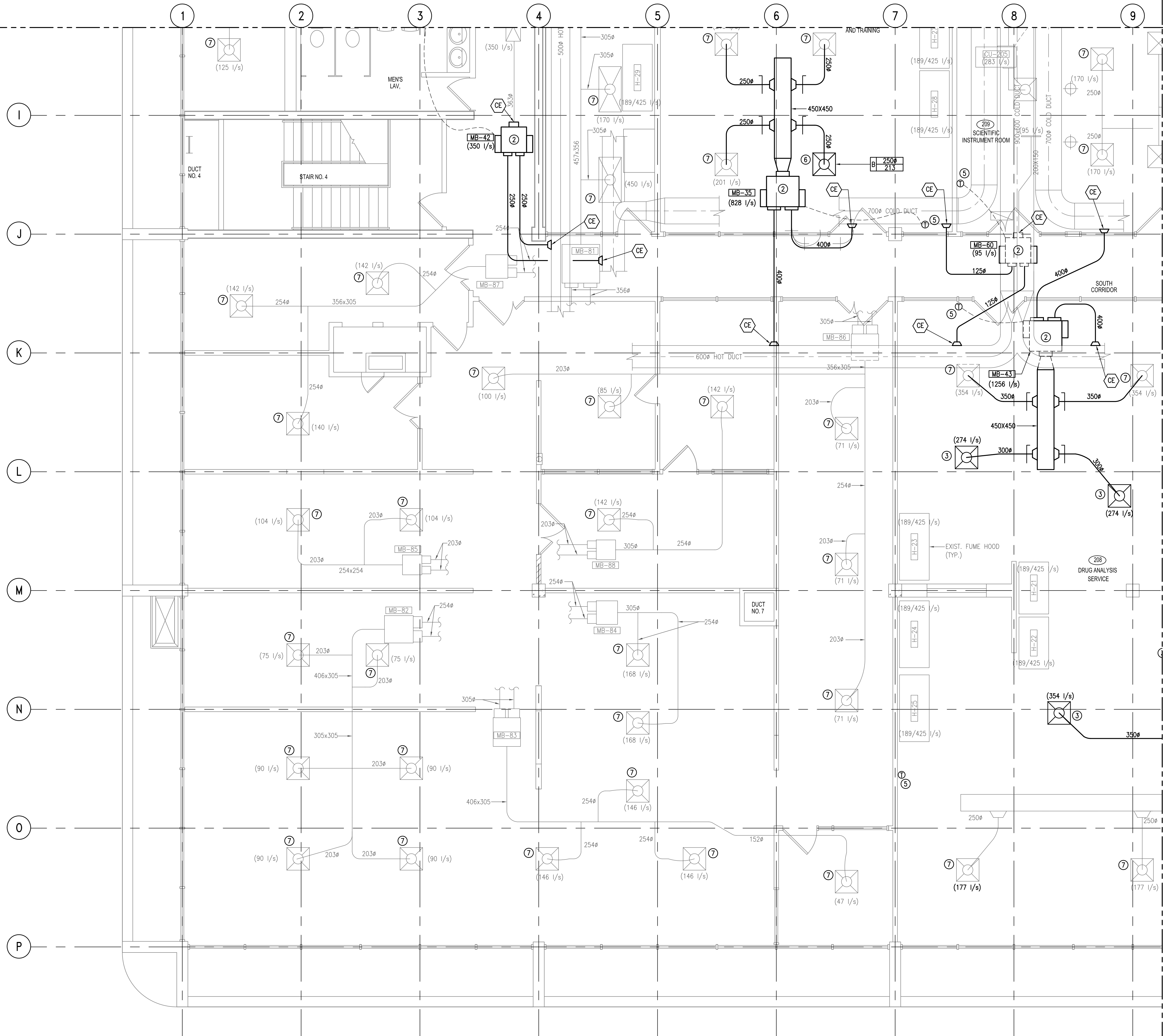
2	ISSUED FOR TENDER	31/03/13
1	ISSUED FOR 99% REVIEW	27/03/13
revisions		date



project	<b>CFIA</b>		projet
	BURNABY LAB		
	MIXING BOX REPLACEMENT		
	3155 WILLINGDON GREEN, BURNABY, B.C.		
drawing	dessin		
	SECOND FLOOR MECHANICAL QUADRANT 2		
	NEW PLAN		
1:50			
designed	SC	conçu	
date	-		
drawn	JL	dessiné	
date	-		
reviewed	MLG	examiné	
date	-		
approved	SC	approuvé	
date	-		
Tender	-	Submission	
PWC Project Manager	Administrateur de projets TPC		
project number	no. du projet		
	121-24459-00		
drawing no.	no. du dessin		
	M4.2		



REFER TO M4.1 FOR CONTINUATION



**KEYNOTES FOR M4.1 TO 4.4**

- ① NEW VAV BOX WITH ASSOCIATED CONTROL WIRING. SEE DETAIL 5 ON DRAWING M8.0. SUPPLY OUTLETS TO BE RE-BALANCE AS INDICATED. REFER TO DWG. M7.0 FOR EQUIPMENT SCHEDULE.
- ② NEW MIXING BOX WITH ASSOCIATED CONTROL WIRING. SEE DETAIL 3 ON DRAWING M8.0. SUPPLY OUTLETS TO BE RE-BALANCE AS INDICATED. REFER TO DWG. M7.0 FOR EQUIPMENT SCHEDULE.
- ③ EXISTING DIFFUSER RELOCATED TO NEW LOCATION.
- ④ RELOCATED EXISTING HEPA FILTER DIFFUSER
- ⑤ NEW DDC THERMOSTAT.
- ⑥ NEW DIFFUSER.
- ⑦ EXISTING DIFFUSER.
- ⑧ EXISTING ABANDONED DIFFUSER.

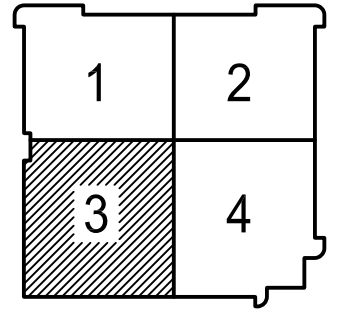
**GENERAL NOTES**

- 1. SEAL ALL OPENINGS AT CORRIDOR AND ROOM WALLS.
- 2. TAKE OFFS FROM HIGH VELOCITY DUAL DUCTS TO MIXING BOXES TO BE SAME DIA. AS INLET TO BOX SERVED. USE CONICAL DUCT INTO MAIN DUCT.
- 3. ALL DUCTS DOWNSTREAM OF MIXING BOXES & VAV BOXES TO BE LOW PRESSURE, LOW VELOCITY.
- 4. ALL DUCTS UPSTREAM OF VAV BOXES TO BE MEDIUM PRESSURE, LOW VELOCITY CONSTRUCTION.
- 5. ALL 90° RIGHT ANGLE DUCT ELBOWS TO BE C/W TURNING VANES.
- 6. REUSE DIFFUSERS WITH NECK DIAMETER SAME SIZE AS THE BRANCH DUCT SHOWN.

REFER TO M4.4 FOR CONTINUATION

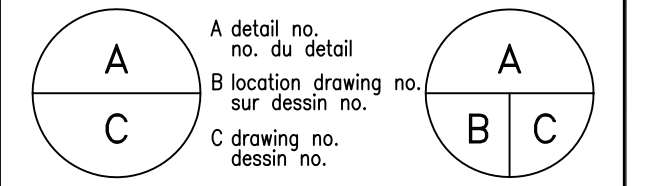


**GENIVAR**  
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KEYPLAN

revisions	date
2	ISSUED FOR TENDER 31/03/13
1	ISSUED FOR 99% REVIEW 27/03/13



project **CFIA** projet  
**BURNABY LAB**  
**MIXING BOX REPLACEMENT**

3155 WILLINGDON GREEN, BURNABY, B.C.

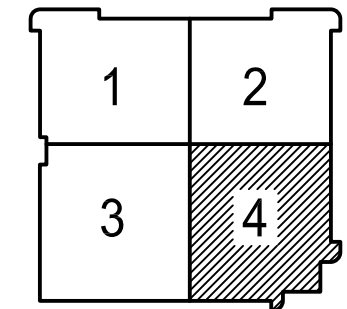
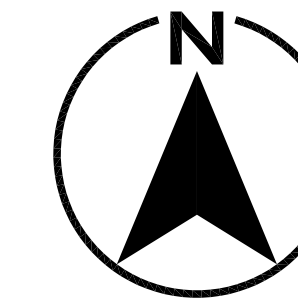
drawing **SECOND FLOOR MECHANICAL** dessin  
**QUADRANT 3**  
**NEW PLAN**

1:50	
designed SC	conçu
date -	
drawn JL	dessiné
date -	
reviewed MLG	examiné
date -	
approved SC	approuvé
date -	
Tender -	Submission

PWC Project Manager Administrateur de projets TPC  
 project number no. du projet  
**121-24459-00**

drawing no. no. du dessin  
**M4.3**

REFER TO M4.2 FOR CONTINUATION



KEYPLAN

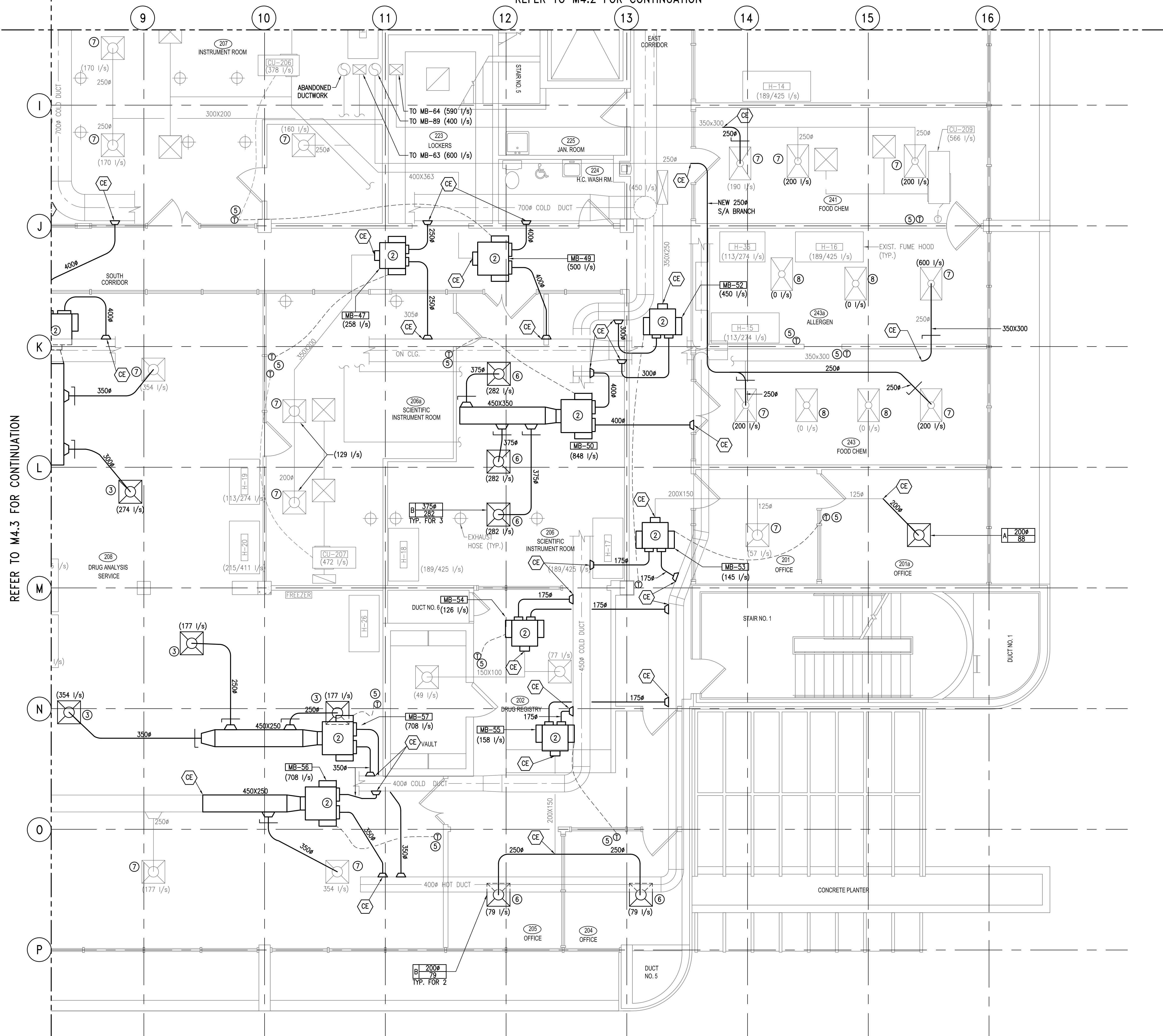
**KEYNOTES FOR M4.1 TO 4.4**

- ① NEW VAV BOX WITH ASSOCIATED CONTROL WIRING. SEE DETAIL 5 ON DRAWING M8.0. SUPPLY OUTLETS TO BE RE-BALANCE AS INDICATED. REFER TO DWG. M7.0 FOR EQUIPMENT SCHEDULE.
- ② NEW MIXING BOX WITH ASSOCIATED CONTROL WIRING. SEE DETAIL 3 ON DRAWING M8.0. SUPPLY OUTLETS TO BE RE-BALANCE AS INDICATED. REFER TO DWG. M7.0 FOR EQUIPMENT SCHEDULE.
- ③ EXISTING DIFFUSER RELOCATED TO NEW LOCATION.
- ④ RELOCATED EXISTING HEPA FILTER DIFFUSER
- ⑤ NEW DDC THERMOSTAT.
- ⑥ NEW DIFFUSER.
- ⑦ EXISTING DIFFUSER.
- ⑧ EXISTING ABANDONED DIFFUSER.

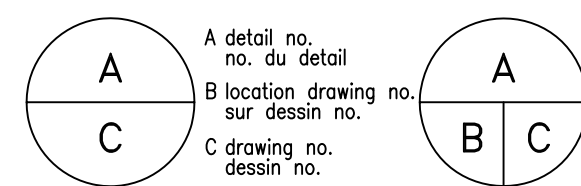
**GENERAL NOTES**

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2. TAKE OFFS FROM HIGH VELOCITY DUAL DUCTS TO MIXING BOXES TO BE SAME DIA. AS INLET TO BOX SERVED. USE CONICAL DUCT INTO MAIN DUCT.
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REFER TO M4.3 FOR CONTINUATION



revisions	description	date
2	ISSUED FOR TENDER	31/03/13
1	ISSUED FOR 99% REVIEW	27/03/13



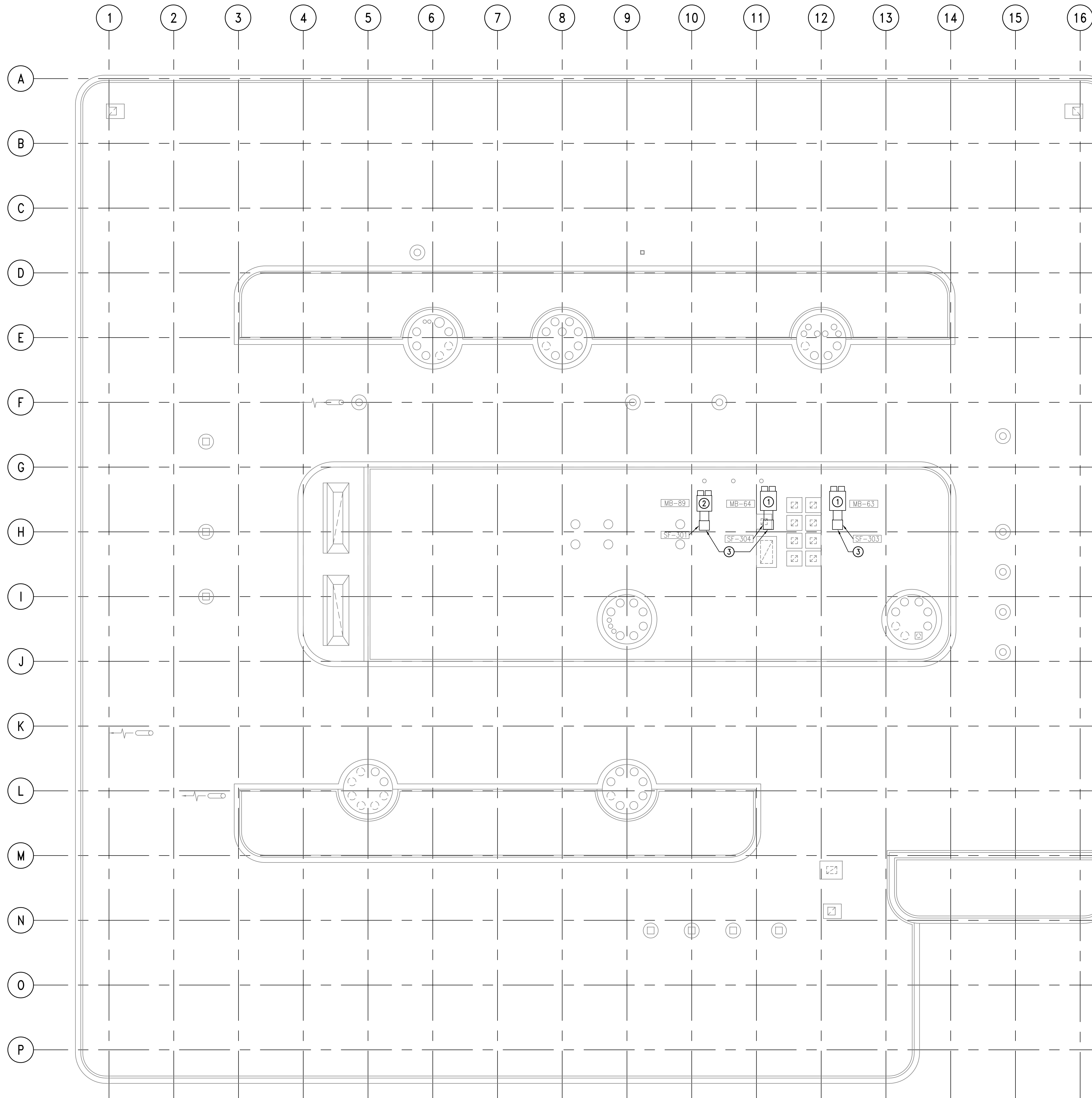
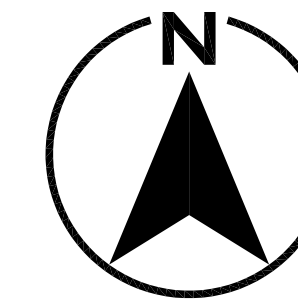
project **CFIA** projet  
**BURNABY LAB**  
**MIXING BOX REPLACEMENT**  
3155 WILLINGDON GREEN, BURNABY, B.C.

drawing **SECOND FLOOR MECHANICAL** dessin  
**QUADRANT 4**  
**NEW PLAN**

designed	date	conçu	date
SC	-	conçu	-
drawn	date	JL	dessiné
MLG	-	MLG	examiné
approved	date	SC	approuvé
Tender	-	-	Submission

PWC Project Manager Administrateur de projets TPC  
project number no. du projet  
**121-24459-00**

drawing no. no. du dessin  
**M4.4**



**KEYNOTES**

- ① EXISTING MIXING BOX AND ASSOCIATED CONTROL WIRING TO BE REPLACED WITH NEW MIXING BOX AND WIRING.
- ② EXISTING MIXING BOX TO REMAIN.
- ③ REMOVE EXISTING BOOSTER SUPPLY FAN AND REPLACE WITH DUCTWORK.



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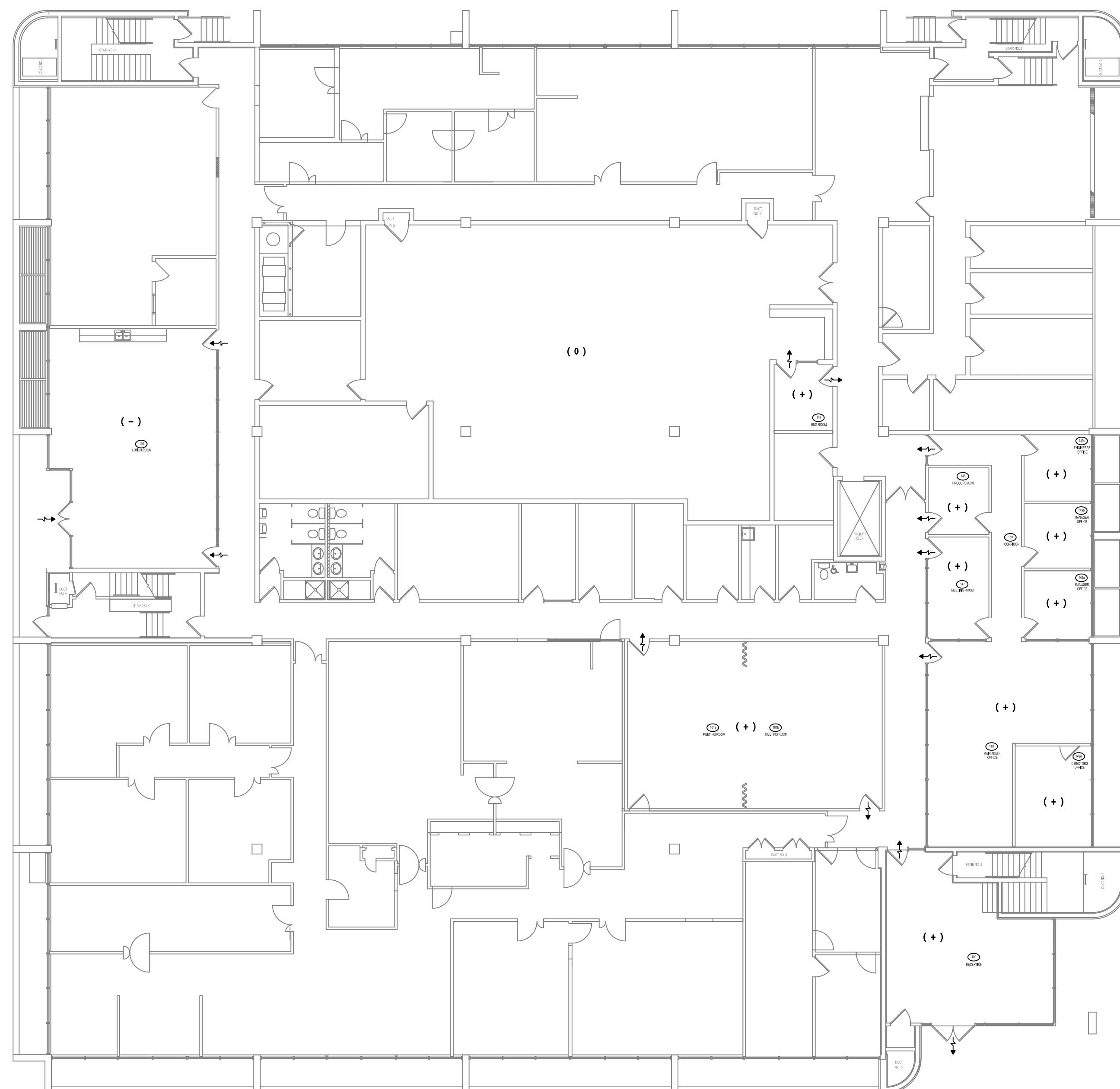
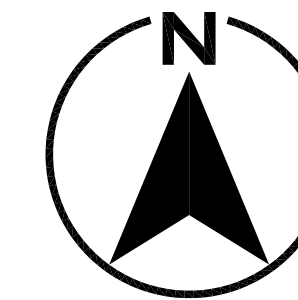
A	A detail no. no. du detail	A
B	B location drawing no. sur dessin no.	B
C	C drawing no. dessin no.	C

project **CFIA** projet  
**BURNABY LAB**  
**MIXING BOX REPLACEMENT**  
 3155 WILLINGDON GREEN, BURNABY, B.C.

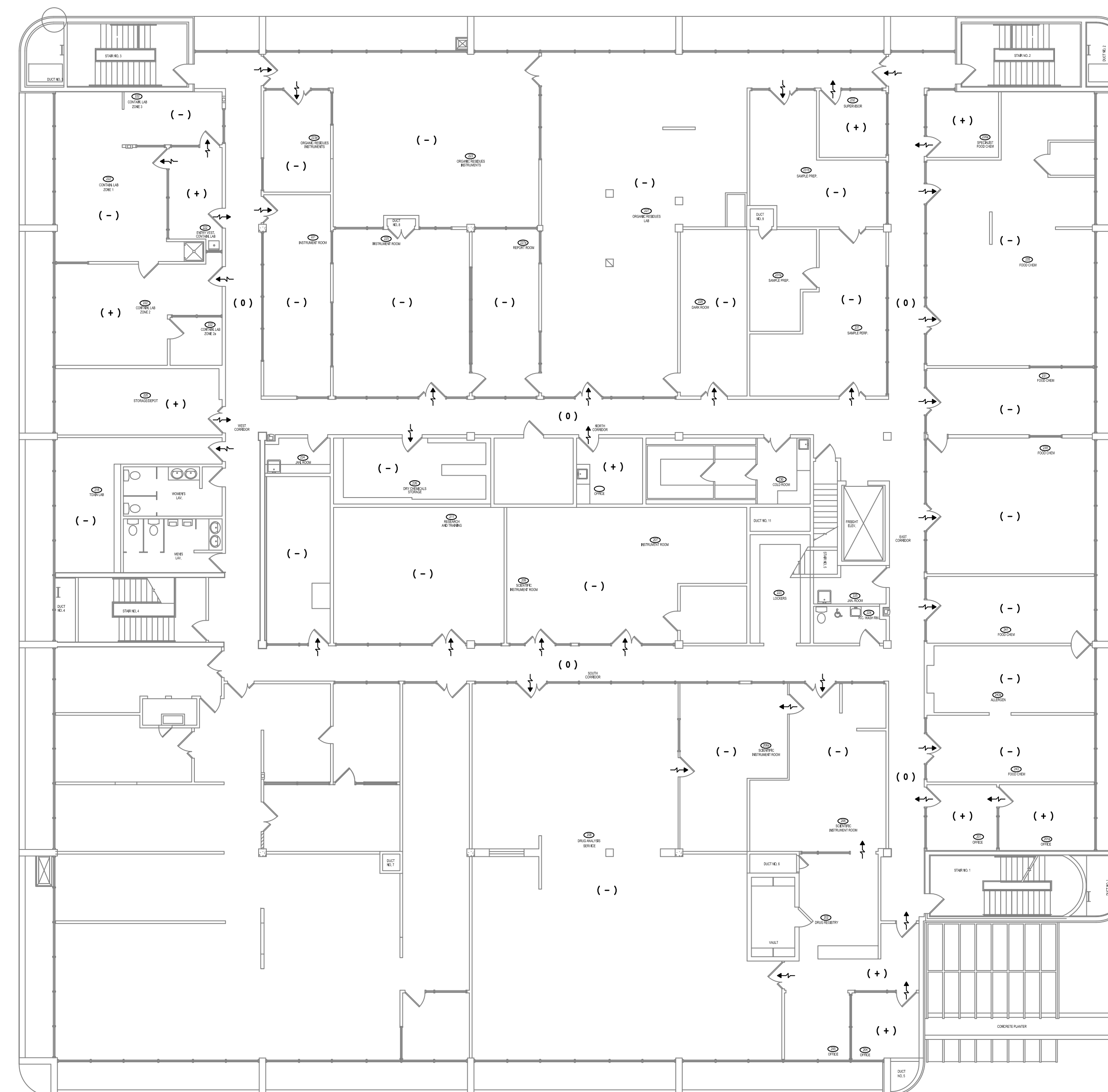
drawing **PENTHOUSE** dessin  
**MECHANICAL PLAN**

1:100		
designed	SC	conçu
date	-	
drawn	JL	dessiné
date	-	
reviewed	MLG	examiné
date	-	
approved	SC	approuvé
date	-	
Tender	-	Submission
PWC Project Manager	Administrateur de projets TPC	
project number	no. du projet	
	<b>121-24459-00</b>	
drawing no.	no. du dessin	
	<b>M5.0</b>	





**FIRST FLOOR AIRFLOW MAP**  
SCALE: NTS



**SECOND FLOOR AIRFLOW MAP**  
SCALE: NTS

**LEGEND**

- ( 0 ) NEUTRAL PREEURE: 25 Pa POSITIVE RELATIVE TO OUTSIDE
- ( - ) NEGATIVE PREEURE: 0-25 Pa NEGATIVE RELATIVE TO OUTSIDE
- ( + ) POSITIVE PREEURE: 50 Pa RELATIVE TO OUTSIDE

revisions		date
2	ISSUED FOR TENDER	31/03/13
1	ISSUED FOR 99% REVIEW	27/03/13

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

project **CFIA** projet  
**BURNABY LAB**  
**MIXING BOX REPLACEMENT**  
 3155 WILLINGDON GREEN, BURNABY, B.C.  
 drawing **AIRFLOW MAP** dessin

N.T.S.		
designed	SC	conçu
date	-	
drawn	JL	dessiné
date	-	
reviewed	MLG	examiné
date	-	
approved	SC	approuvé
date	-	
Tender	-	Submission
PWC Project Manager	Administrateur de projets TPC	
project number	no. du projet	
	<b>121-24459-00</b>	
drawing no.	no. du dessin	
	<b>M6.0</b>	

SECOND FLOOR EXISTING MIXING BOX EQUIPMENT SCHEDULE								
TAG No.	DESCRIPTION	LOCATION	MFR.	MODEL No.	FLOW TYPE	AIR FLOW (l/s)		FUME HOOD TAG No.
						MIN	MAX	
MB-1	MIXING BOX	SECOND FLOOR WEST CORRIDOR	E.H. PRICE	DESV 1100	VARIABLE	0	453	H-30
MB-2	MIXING BOX	SECOND FLOOR WEST CORRIDOR	E.H. PRICE	DESV 1100	VARIABLE	0	402	H-6
MB-3	MIXING BOX	SECOND FLOOR ROOM 223	E.H. PRICE	DESV 1100	VARIABLE	0	705	NONE
MB-4	MIXING BOX	SECOND FLOOR ROOM 223	E.H. PRICE	DHV	CONSTANT	0	755	NONE
MB-5	MIXING BOX	SECOND FLOOR ROOM 223	E.H. PRICE	DESV 1100	VARIABLE	0	660	H-34
MB-6	MIXING BOX	SECOND FLOOR ROOM 223	E.H. PRICE	DESV 1100	VARIABLE	0	424	H-5
MB-7	MIXING BOX	SECOND FLOOR ROOM 223	E.H. PRICE	DESV 1100	VARIABLE	0	660	H-35
MB-8	MIXING BOX	SECOND FLOOR ROOM 227	E.H. PRICE	DESV 1100	VARIABLE	0	426	H-2
MB-9	MIXING BOX	SECOND FLOOR ROOM 227	E.H. PRICE	DESV 1100	VARIABLE	0	635	NONE
MB-10	MIXING BOX	SECOND FLOOR EAST CORRIDOR	E.H. PRICE	DH	CONSTANT	94	94	NONE
MB-12	MIXING BOX	SECOND FLOOR EAST CORRIDOR	E.H. PRICE	DESV 1100	VARIABLE	0	402	H-7
MB-13	MIXING BOX	SECOND FLOOR ROOM 235	E.H. PRICE	DESV 1100	VARIABLE	0	378	H-10
MB-14	MIXING BOX	SECOND FLOOR EAST CORRIDOR	E.H. PRICE	DESV 1100	VARIABLE	0	378	H-9
MB-16	MIXING BOX	SECOND FLOOR EAST CORRIDOR	E.H. PRICE	DESV 1100	VARIABLE	0	378	H-11
MB-17	MIXING BOX	SECOND FLOOR EAST CORRIDOR	E.H. PRICE	DESV 1100	VARIABLE	0	378	H-8
MB-18	MIXING BOX	SECOND FLOOR EAST CORRIDOR	E.H. PRICE	DHV	CONSTANT	0	165	NONE
MB-19	MIXING BOX	SECOND FLOOR EAST CORRIDOR	E.H. PRICE	DESV 1100	VARIABLE	0	378	H-14
MB-20	MIXING BOX	SECOND FLOOR EAST CORRIDOR	E.H. PRICE	DESV 1100	VARIABLE	0	378	H-13
MB-21	MIXING BOX	SECOND FLOOR NORTH CORRIDOR	E.H. PRICE	DESV 1100	VARIABLE	0	425	H-12
MB-22	MIXING BOX	SECOND FLOOR NORTH CORRIDOR	E.H. PRICE	DESV 1100	VARIABLE	0	378	NONE
MB-23	MIXING BOX	SECOND FLOOR NORTH CORRIDOR	E.H. PRICE	DESV 1100	VARIABLE	0	604	H-33
MB-24	MIXING BOX	SECOND FLOOR NORTH CORRIDOR	E.H. PRICE	DH	CONSTANT	47	47	NONE
MB-25	MIXING BOX	SECOND FLOOR NORTH CORRIDOR	E.H. PRICE	DESV 1100	VARIABLE	0	330	H-1
MB-26	MIXING BOX	SECOND FLOOR NORTH CORRIDOR	E.H. PRICE	DESV 1100	VARIABLE	0	425	H-3
MB-27	MIXING BOX	SECOND FLOOR NORTH CORRIDOR	E.H. PRICE	DESV 1100	VARIABLE	0	425	H-5
MB-28	MIXING BOX	SECOND FLOOR NORTH CORRIDOR	E.H. PRICE	DHV	CONSTANT	0	104	NONE
MB-29	MIXING BOX	SECOND FLOOR NORTH CORRIDOR	E.H. PRICE	DESV 1100	VARIABLE	0	519	H-31
MB-30	MIXING BOX	SECOND FLOOR NORTH CORRIDOR	E.H. PRICE	DHV	CONSTANT	0	113	NONE
MB-31	MIXING BOX	SECOND FLOOR NORTH CORRIDOR	E.H. PRICE	DHV	CONSTANT	0	130	NONE
MB-32	MIXING BOX	SECOND FLOOR WEST CORRIDOR	E.H. PRICE	DH	CONSTANT	194	194	NONE
MB-35	MIXING BOX	SECOND FLOOR ROOM 211	E.H. PRICE	DESV 1100	VARIABLE	0	401	H-27
MB-36	MIXING BOX	SECOND FLOOR SOUTH CORRIDOR	E.H. PRICE	DESV 1100	VARIABLE	0	425	H-28
MB-42	MIXING BOX	SECOND FLOOR WEST CORRIDOR	E.H. PRICE	DESV 1100	VARIABLE	0	316	NONE
MB-43	MIXING BOX	SECOND FLOOR SOUTH CORRIDOR	E.H. PRICE	DESV 1100	VARIABLE	0	354	H-26
MB-44	MIXING BOX	SECOND FLOOR SOUTH CORRIDOR	E.H. PRICE	DESV 1100	VARIABLE	0	274	H-19
MB-45	MIXING BOX	SECOND FLOOR SOUTH CORRIDOR	E.H. PRICE	DESV 1100	VARIABLE	0	354	H-24
MB-46	MIXING BOX	SECOND FLOOR SOUTH CORRIDOR	E.H. PRICE	DESV 1100	VARIABLE	0	274	H-21
MB-47	MIXING BOX	SECOND FLOOR SOUTH CORRIDOR	E.H. PRICE	DHV	CONSTANT	0	293	NONE
MB-48	MIXING BOX	SECOND FLOOR NORTH CORRIDOR	E.H. PRICE	DH	CONSTANT	47	47	NONE
MB-49	MIXING BOX	SECOND FLOOR SOUTH CORRIDOR	E.H. PRICE	DESV 1100	VARIABLE	0	496	H-32
MB-50	MIXING BOX	SECOND FLOOR SOUTH CORRIDOR	E.H. PRICE	DESV 1100	VARIABLE	0	425	H-17
MB-51	MIXING BOX	SECOND FLOOR EAST CORRIDOR	E.H. PRICE	DESV 1100	VARIABLE	0	425	H-18
MB-52	MIXING BOX	SECOND FLOOR EAST CORRIDOR	E.H. PRICE	DESV 1100	VARIABLE	0	316	NONE
MB-53	MIXING BOX	SECOND FLOOR EAST CORRIDOR	E.H. PRICE	DH	CONSTANT	109	109	NONE
MB-54	MIXING BOX	SECOND FLOOR ROOM 202	E.H. PRICE	DH	CONSTANT	94	94	NONE
MB-55	MIXING BOX	SECOND FLOOR ROOM 202	E.H. PRICE	DH	CONSTANT	94	94	NONE
MB-56	MIXING BOX	SECOND FLOOR ROOM 208	E.H. PRICE	DESV 1100	VARIABLE	0	354	H-22
MB-57	MIXING BOX	SECOND FLOOR ROOM 208	E.H. PRICE	DESV 1100	VARIABLE	0	354	H-25
MB-58	MIXING BOX	SECOND FLOOR ROOM 208	E.H. PRICE	DESV 1100	VARIABLE	0	354	H-23
MB-59	MIXING BOX	SECOND FLOOR ROOM 208	E.H. PRICE	DESV 1100	VARIABLE	0	354	H-20
MB-60	MIXING BOX	SECOND FLOOR SOUTH CORRIDOR	E.H. PRICE	DHV	CONSTANT	0	330	NONE

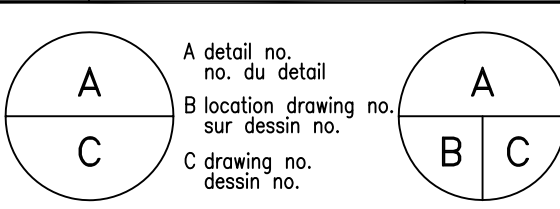
PENTHOUSE EXISTING MIXING BOX EQUIPMENT SCHEDULE CONTINUED								
TAG No.	DESCRIPTION	LOCATION	MFR.	MODEL No.	FLOW TYPE	AIR FLOW (l/s)		FUME HOOD TAG No.
						MIN	MAX	
MB-63	MIXING BOX	PENTHOUSE	E.H. PRICE	DESV 1100	VARIABLE	0	507	H-16
MB-64	MIXING BOX	PENTHOUSE	E.H. PRICE	DESV 1100	VARIABLE	0	189	NONE
MB-89	MIXING BOX	PENTHOUSE	E.H. PRICE	DESV 1100	VARIABLE	0	189	NONE

FIRST/SECOND EXISTING VARIABLE AIR VOLUME EQUIPMENT SCHEDULE								
TAG No.	DESCRIPTION	LOCATION	MFR.	MODEL No.	AIR FLOW (l/s)	AIR FLOW (l/s)		FUME HOOD TAG No.
						MIN	MAX	
V V-1	VARIABLE AIR VOLUME TERMINAL	GROUND FLOOR ROOM 116	E.H. PRICE	ESV 3100	85	243		
V V-2	VARIABLE AIR VOLUME TERMINAL	GROUND FLOOR ROOM 116	E.H. PRICE	ESV 3100	85	300		
V V-14	VARIABLE AIR VOLUME TERMINAL	GROUND FLOOR ROOM 149	E.H. PRICE	ESV 3100	65	234		
V V-15	VARIABLE AIR VOLUME TERMINAL	GROUND FLOOR ROOM 149	E.H. PRICE	ESV 3100	35	110		
V V-16	VARIABLE AIR VOLUME TERMINAL	GROUND FLOOR ROOM 149	E.H. PRICE	ESV 3100	50	150		
V V-17	VARIABLE AIR VOLUME TERMINAL	GROUND FLOOR ROOM 101a	E.H. PRICE	ESV 3100	140	427		
V V-18	VARIABLE AIR VOLUME TERMINAL	GROUND FLOOR ROOM 101	E.H. PRICE	ESV 3100	85	303		
V V-21	VARIABLE AIR VOLUME TERMINAL	GROUND FLOOR ROOM 103	E.H. PRICE	SDV 500	170	452		
W-24	VARIABLE AIR VOLUME TERMINAL	SECOND FLOOR ROOM 222	E.H. PRICE	ESV 3110	283	283		
V V-25	VARIABLE AIR VOLUME TERMINAL	SECOND FLOOR ROOM 222	E.H. PRICE	ESV 1110	0	323		
V V-26	VARIABLE AIR VOLUME TERMINAL	SECOND FLOOR ROOM 222	E.H. PRICE	ESV 1110	0	866		
V V-27	VARIABLE AIR VOLUME TERMINAL	SECOND FLOOR ROOM 222	E.H. PRICE	ESV 1110	0	838		
V V-28	VARIABLE AIR VOLUME TERMINAL	SECOND FLOOR ROOM 222	E.H. PRICE	ESV 3110	472	472		
V V-29	VARIABLE AIR VOLUME TERMINAL	SECOND FLOOR ROOM 220	E.H. PRICE	ESV 3110	94	94		



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2	ISSUED FOR TENDER	31/03/13
1	ISSUED FOR 99% REVIEW	27/03/13
revisions		date



project **CFIA** projet

**BURNABY LAB**

**MIXING BOX REPLACEMENT**

3155 WILLINGDON GREEN, BURNABY, B.C.

drawing **EQUIPMENT SCHEDULES** dessin

**MECHANICAL 1 OF 2**

N.T.S.

designed	SC	conçu
date	-	
drawn	JL	dessiné
date	-	
reviewed	MLG	examiné
date	-	
approved	SC	approuvé
date	-	
Tender	-	Submission
PWC Project Manager	Administrateur de projets TPC	
project number	no. du projet	
	<b>121-24459-00</b>	
drawing no.	no. du dessin	
	<b>M7.0</b>	

SECOND FLOOR NEW MIXING BOX EQUIPMENT SCHEDULE											
TAG No.	DESCRIPTION	LOCATION	SERVICE	MANUFACTURER	MODEL	UNIT SIZE	INLET SIZE (mm)	DESIGN AIR FLOW (l/s)		MAXIMUM CAPACITY AIR FLOW (l/s)	INTERLOCKED FUME HOOD
								MIN	MAX		
MB-1	DUAL DUCT TERMINAL UNIT (MIXING BOX)	WEST CORRIDOR	ROOM 221	TITUS	DEVV	12	300	-	472	940	H-30
MB-2		WEST CORRIDOR	ROOM 223a			12	300	-	402	940	H-6
MB-3		ROOM 223	WEST CORRIDOR			14	350	0	700	1415	-
MB-4		ROOM 223	ROOM 223			14	350	-	622	1415	-
MB-5		ROOM 227	ROOM 227			16	400	-	1227	1886	H-34,35
MB-8		ROOM 227	ROOM 227			16	400	-	1227	1886	H-5,35
MB-9		ROOM 227	EAST CORRIDOR			14	350	0	700	1415	-
MB-10		EAST CORRIDOR	ROOM 232, 235a			5	125	-	88	165	-
MB-12		EAST CORRIDOR	EAST CORRIDOR			12	300	-	402	940	H-7
MB-13		ROOM 235	ROOM 235			14	350	-	756	1415	H-8,9
MB-16		ROOM 235	ROOM 235			14	350	-	756	1415	H-10,11
MB-18		ROOM 231	ROOM 231			14	350	-	590	940	H-12
MB-19		ROOM 239	ROOM 239			14	350	-	756	1415	H-13,14
MB-22		NORTH CORRIDOR	ROOM 231			12	300	-	391	940	-
MB-23		NORTH CORRIDOR	ROOM 229			14	350	-	600	1415	H-33
MB-24		NORTH CORRIDOR	NEW OFFICE			4	100	-	42	106	-
MB-25		ROOM 227	ROOM 227			16	400	-	1226	1886	H-1,2,3,4
MB-28		ROOM 225	ROOM 227a			8	200	-	240	425	-
MB-29		NORTH CORRIDOR	ROOM 225			12	300	-	519	940	H-31
MB-30		NORTH CORRIDOR	ROOM 226			7	175	-	140	305	-
MB-31		NORTH CORRIDOR	ROOM 220			8	200	-	214	425	-
MB-32		WEST CORRIDOR	ROOM 218			9	225	-	250	495	-
MB-35		ROOM 211	ROOM 211			16	400	-	828	1415	H-27,28
MB-42		WEST CORRIDOR	WEST CORRIDOR			10	250	0	350	650	-
MB-43		ROOM 208	ROOM 208			16	400	-	1256	1886	H-19,20,21,23
MB-47		SOUTH CORRIDOR	ROOM 206a			10	250	-	258	650	-
MB-48		NORTH CORRIDOR	ROOM 230			4	100	-	47	106	-
MB-49		SOUTH CORRIDOR	ROOM 207			16	400	-	500	1886	H-32
MB-50		ROOM 206	ROOM 206			16	400	-	848	1415	H-17,18
MB-52		EAST CORRIDOR	EAST CORRIDOR			14	300	0	450	940	-
MB-53		EAST CORRIDOR	ROOM 201,201a			7	175	-	145	305	-
MB-54		ROOM 202	ROOM 202			7	175	-	126	305	-
MB-55		ROOM 202	ROOM 204, 205			7	175	-	158	305	-
MB-56		ROOM 208	ROOM 208			14	350	-	708	1415	H-24,25
MB-57		ROOM 208	ROOM 208			14	350	-	708	1415	H-22,26
MB-60		SOUTH CORRIDOR	ROOM 207			5	125	-	95	200	-
MB-63		PENTHOUSE	ROOM 243a			12	300	-	600	940	H-15,16,36
MB-64		PENTHOUSE	ROOM 241			8	200	-	600	940	-
MB-89		PENTHOUSE	ROOM 243		EXISTING UNIT	12	300	-	400	940	-

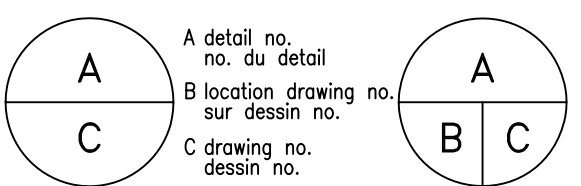
FIRST/SECOND FLOOR NEW VARIABLE AIR VOLUME EQUIPMENT SCHEDULE											
TAG No.	DESCRIPTION	LOCATION	SERVICE	MANUFACTURER	MODEL	UNIT SIZE	INLET SIZE (mm)	AIR FLOW (l/s)		MAXIMUM CAPACITY AIR FLOW (l/s)	INTERLOCKED FUME HOOD
								MIN	MAX		
V V-1	VARIABLE AIR VOLUME TERMINAL	ROOM 116	ROOM 116	TITUS	DESV	5	125	122	244	307	-
V V-2		ROOM 116	ROOM 116			8	200	150	300	425	-
V V-14		ROOM 149	ROOM 149			10	250	237	474	660	-
V V-15		ROOM 149	ROOM 145, 147			5	125	65	130	165	-
V V-16		ROOM 149	ROOM 149a,149b,149c			7	175	116	231	307	-
V V-17		ROOM 101a	ROOM 101a			10	250	215	430	660	-
V V-18		ROOM 101	ROOM 101			8	200	150	300	425	-
V V-21		ROOM 103	ROOM 100 (RECEPTION)			12	300	260	520	943	-
V V-24		ROOM 222	ROOM 222 (VEST.)			8	200	142	283	425	-
V V-25		ROOM 222	ROOM 222 (ZONE 3)			16	400	-	1176	1887	H-37,40
V V-27		ROOM 222	ROOM 222 (ZONE 1)			14	350	-	852	1415	H-38,39
V V-28		ROOM 222	ROOM 222 (ZONE 2)			12	300	-	470	943	H-41
V V-29		ROOM 220	ROOM 222 (ZONE 2)			5	125	47	94	165	-
V V-30		MECHANICAL ROOM	MECHANICAL ROOM			7	175	118	236	307	-
V V-32		MECHANICAL ROOM	ROOM 148			5	125	57,5	115	165	-
V V-33		ROOM 149d	ROOM 149d			5	125	39	78	165	-

NEW SUPPLY AIR DIFFUSERS					
TAG No.	DESCRIPTION	MANUFACTURER	MODEL	REMARKS	
A	LINEAR SLOT DIFFUSER	E.H. PRICE	SDB SERIES, MODEL 50, T-BAR CEILING MOUNTED, 1 SLOT, 1219mm LENGTH	FIRST FLOOR OFFICE, C/W DAMPER	
B	PERFORATED SUPPLY DIFFUSER	E.H. PRICE	PDC SERIES, 600x600, STEEL, T-BAR MOUNTED	SECOND FLOOR OFFICES, LAB SPACES, C/W WITH DAMPER	

NOTE: MB-3, MB-9, MB-42, AND MB-52 ARE VARIABLE VOLUME FOR CORRIDOR PRESSURIZATION.



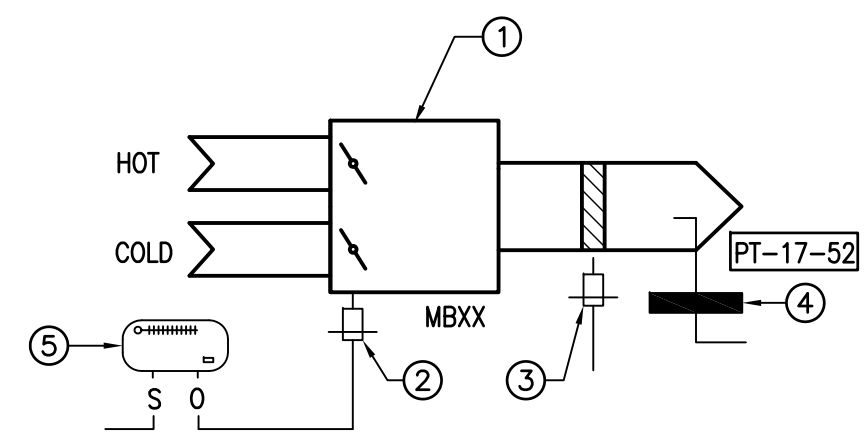
2	ISSUED FOR TENDER	31/03/13
1	ISSUED FOR 99% REVIEW	27/03/13
revisions		date



project projet  
**CFIA**  
 BURNABY LAB  
 MIXING BOX REPLACEMENT  
 3155 WILLINGDON GREEN, BURNABY, B.C.

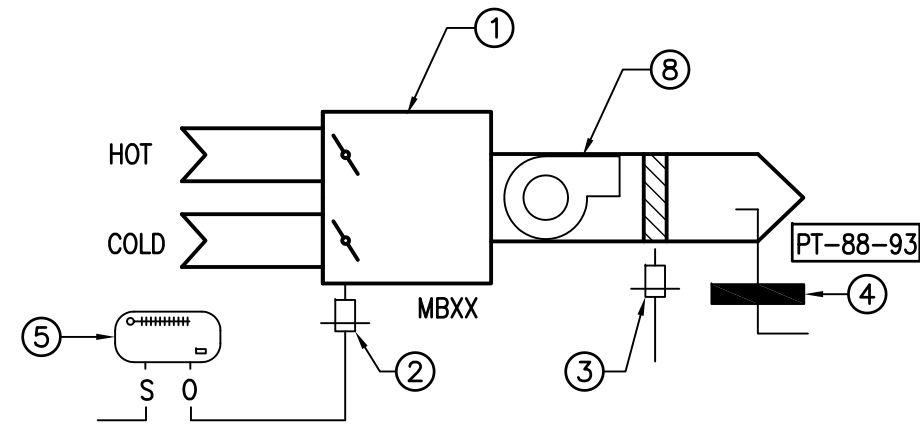
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**EQUIPMENT SCHEDULES**  
**MECHANICAL 2 OF 2**

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reviewed MLG examine
date -
approved SC approuve
date -
Tender - Soumission
PWC Project Manager Administrateur de projets TPC
project number no. du projet
<b>121-24459-00</b>
drawing no. no. du dessin
<b>M7.1</b>



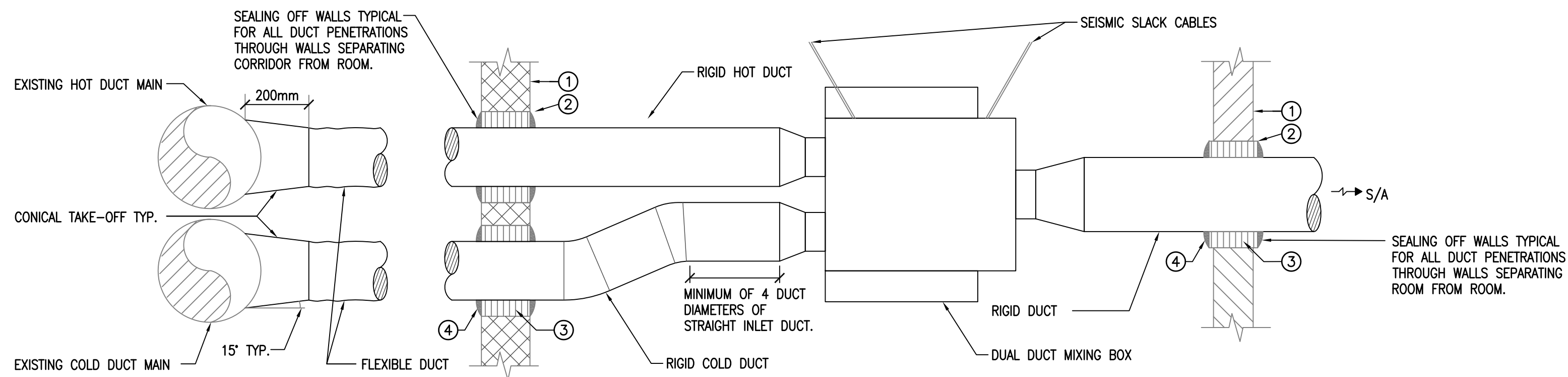
1 DETAIL EXISTING MIXING BOX/ FUME HOOD CONTROL  
N.T.S.

BILL OF MATERIALS			
DEVICE TAG	PART NO	MANUFACTURER	DESCRIPTION
PT-17-52	141-0590	SIEMENS	-0.05-0.2"WG PRESSURE XMITTER 3-15#
PT-XXX	ULP-A-03	GREYSTONE	ULTRA LOW PRESSURE TRANSDUCER. 0.25"WC



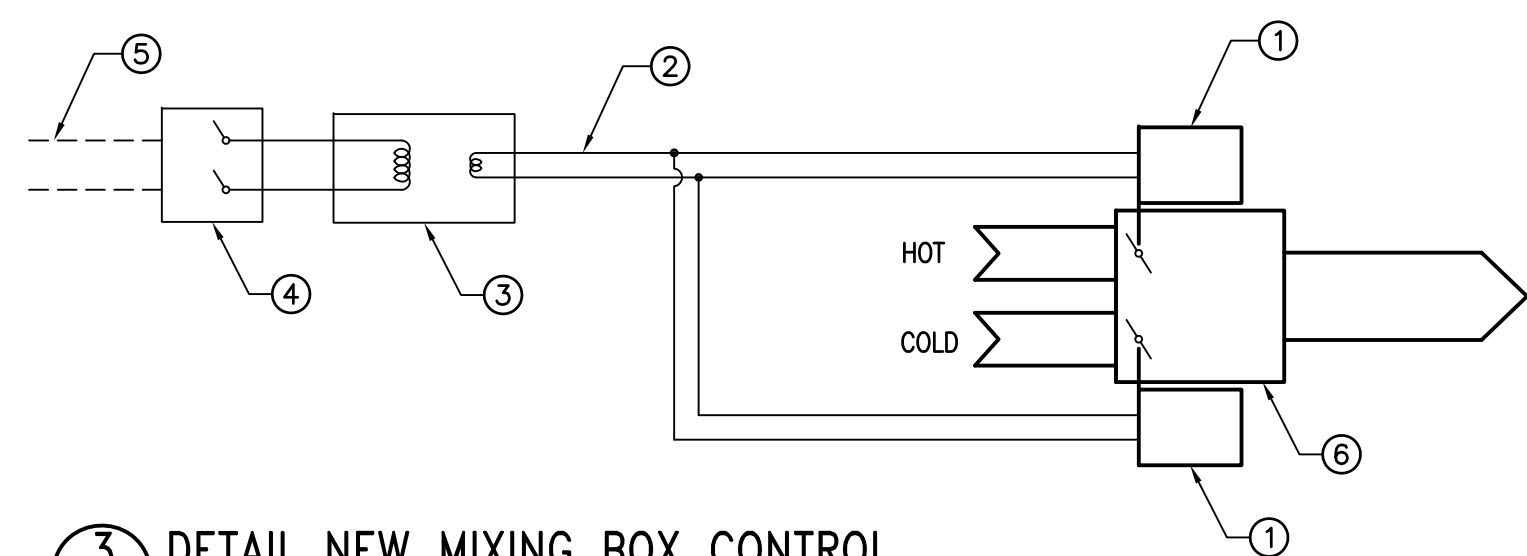
2 DETAIL EXISTING TRACE METALS MIXING BOX/ FUME HOOD CONTROL (TYPICAL FOR MB-89, MB-63, MB-64)  
N.T.S.

BILL OF MATERIALS			
DEVICE TAG	PART NO	MANUFACTURER	DESCRIPTION
PT-88-93	141-0590	SIEMENS	-0.05-0.2"WG PRESSURE XMITTER 3-15#
PT-402,405,522	ULP-A-03	GREYSTONE	ULTRA LOW PRESSURE TRANSDUCER. 0.25"WC



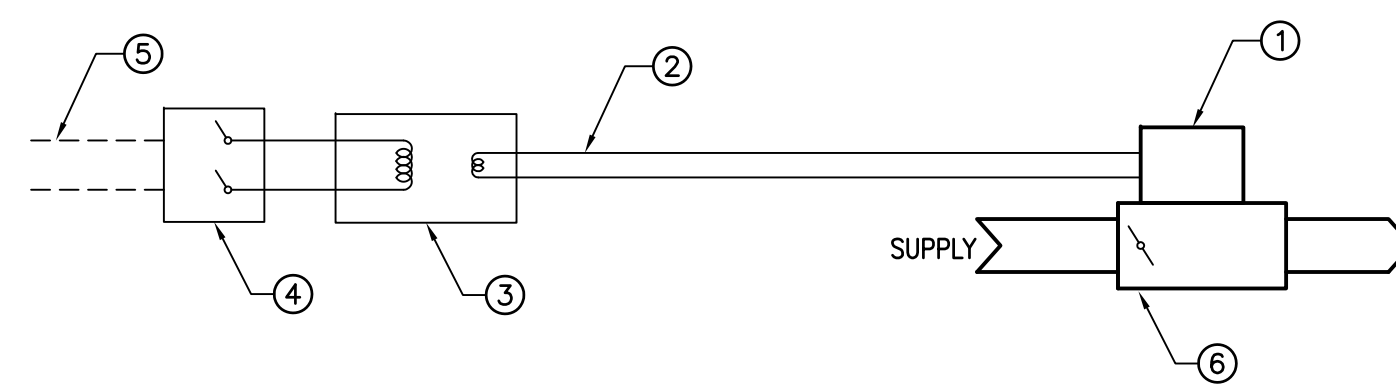
4 DETAIL NEW MIXING BOX DUCT PENETRATIONS THROUGH ACOUSTICAL WALL  
N.T.S.

- 1 ACOUSTICAL WALL.
- 2 24 GA. (MIN.) METAL SLEEVE EXTEND 50mm BEYOND WALL ON ALL 3 SIDES.
- 3 FIBREGLASS INSULATION 1.5 PCF. 100% FILL.
- 4 NON-HARDENING SILICONE SEALANT.



3 DETAIL NEW MIXING BOX CONTROL  
N.T.S.

- \* 1 MB CONTROLLER/ ACTUATOR
- \* 2 24 VAC CONTROL POWER WIRING
- \* 3 120/24 VAC TRANSFORMER
- \* 4 DISCONNECT
- \* 5 120V/ 1PHASE POWER WIRING
- \* 6 DDC PRESSURE INDEPENDENT DUAL DUCT MIXING BOX C/W INTEGRAL MIXER/ ATTENUATOR.
- \* ITEMS PROVIDED BY DDC CONTROLS CONTRACTOR



5 DETAIL NEW VAV BOX CONTROL  
N.T.S.

- \* 1 VAV CONTROLLER/ ACTUATOR
- \* 2 24 VAC CONTROL POWER WIRING
- \* 3 120/24 VAC TRANSFORMER
- \* 4 DISCONNECT
- \* 5 120V/ 1PHASE POWER WIRING
- \* 6 DDC PRESSURE INDEPENDENT VAV TERMINAL BOX C/W INTEGRAL MIXER.
- \* ITEMS PROVIDED BY DDC CONTROLS CONTRACTOR

EXISTING SEQUENCE OF CONTROLS

MIXING BOXES, AHU-101, AHU-102

DUAL DUCT BOXES WITH ESV 1000 VOLUME CONTROLS ARE INTERLOCKED WITH THE SUPPLY FANS AND LOCAL FUME HOODS.

THE VOLUME OF THE BOXES ARE CONTROLLED BY THE DDC SYSTEM. THE VOLUME SET POINT FOR THE BOXES IS DETERMINED BY THE STATUS OF EXHAUST FAN FOR THE FUME HOOD. GENERALLY, AS THE EXHAUST FANS ARE RUNNING THE SUPPLY VOLUME WILL INCREASE OVER THAT WHEN THE EXHAUST FAN IS OFF, AND WHERE APPLICABLE, WHEN THE EXHAUST FAN IS RUNNING ON HIGH SPEED, THE SUPPLY VOLUME SET POINT WILL ADJUST HIGHER STILL.

THE ROOM TEMPERATURE IS CONTROLLED BY A LOCAL THERMOSTAT EITHER SINGLE SET OR DAY/ NIGHT, CONTROLLING THE MIXING DAMPERS IN THE BOXES

SHOULD THE SUPPLY VOLUME NOT BE SUFFICIENT WHEN THE SUPPLY DAMPER IS WIDE OPEN, AN ALARM WILL BE GENERATED AT THE BUILDING OPERATION COMPUTER ADVISING THE OPERATOR OF THIS CONDITION. THE STATIC PRESSURE SET POINT FOR AHU-101/102 WILL BE INCREASED AT A RATE OF 50 PA PER HOUR UNTIL THIS CONDITION IS NO LONGER PRESENT OR UNTIL THE MAXIMUM ALLOWABLE SET POINT FOR THE SYSTEM IS REACHED.

THE EXHAUST FANS ARE ENABLED WHENEVER AHU-101 OR AHU-102 ARE RUNNING. THE EXHAUST DAMPER OPENS FULLY ALL THE TIME. THE AIR FLOW THROUGH THE EXHAUST FAN IS MONITORED AND IF IT IS NOT WITHIN SPECIFIED FLOW RANGE, AND ALARM WILL BE ISSUED AT THE BUILDING OPERATION COMPUTER AND THE FUME HOOD.

(THIS DESCRIBES THE CURRENT OPERATION OF THE DAMPERS AS FOUND IN THE EXISTING PPCL PROGRAM. THE DAMPERS SHOULD CLOSE WHEN THE EF IS OFF)

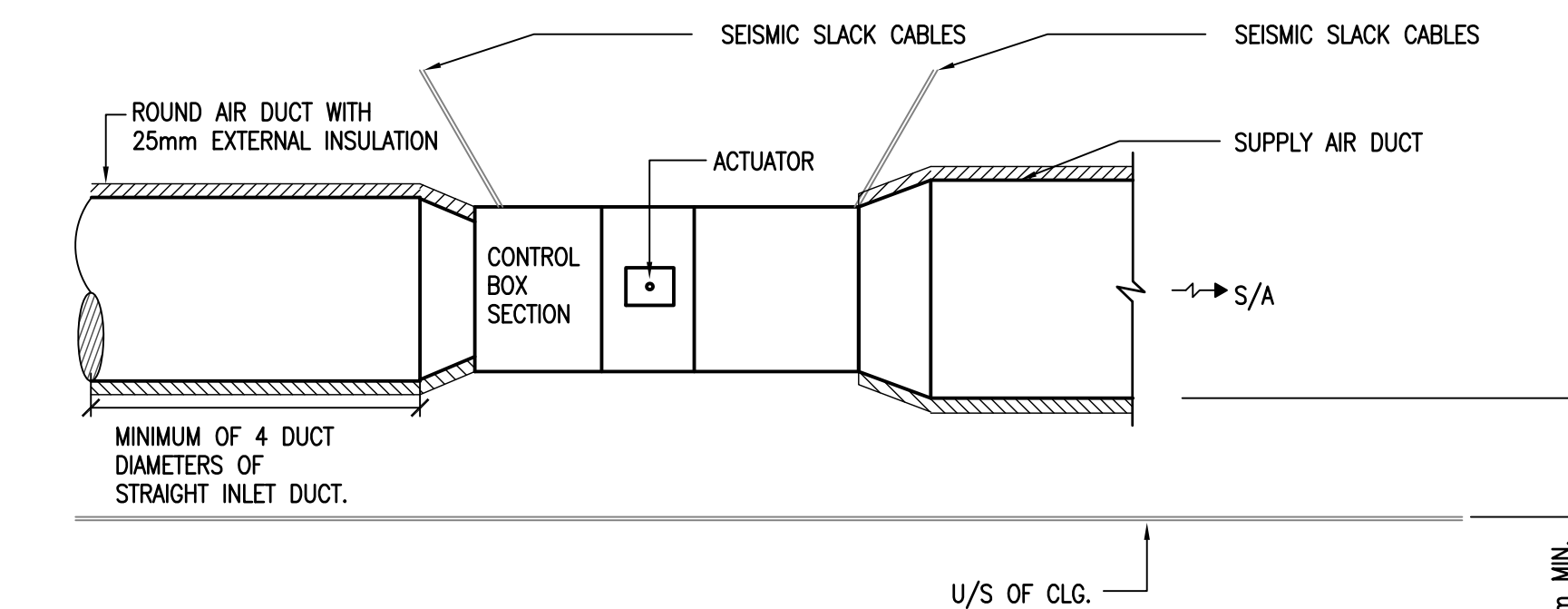
ROOMS 241, 243, AND 243g SUPPLY AIR BOXES HAVE A BOOSTER SUPPLY FAN TO PROVIDE AIR THROUGH A HEPA FILTER TO THE SPACE. THE SPEED OF THESE SUPPLY FANS WILL BE INTERLOCKED TO THE SPEED OF THE ASSOCIATED EXHAUST FANS FOR SUPPLY SF301, 302, AND 303.

SUPPLY FAN SF304 WILL RUN ON HIGH SPEED WHEN EITHER EF374 OR EF375 ARE ON, AND WILL RUN ON HIGH SPEED IF BOTH ARE ON. SUPPLY FAN SF305 WILL RUN ON HIGH SPEED MIXING BOX 65 IS IN OPERATION, WHICH IS WHEN AHU-101 OR 102 IN RUNNING.

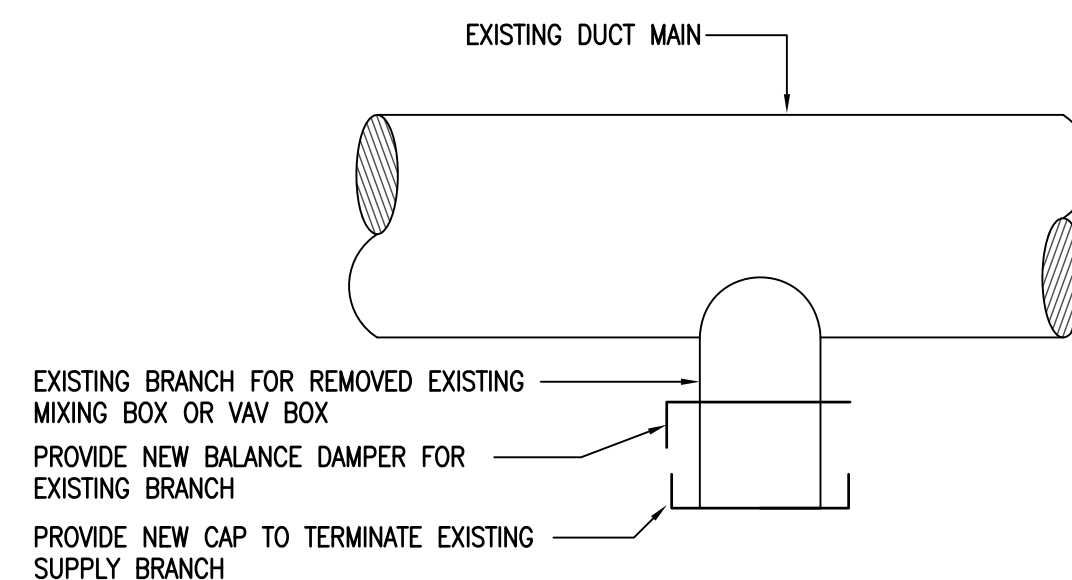
EXHAUST FAN EF349 IS INTERLOCKED TO EXHAUST FANS 319 AND 320. IF NEITHER IS ON, THIS FAN RUNS ON HIGH SPEED. IF ONE IS ON, IT RUNS ON LOW SPEED, AND IF BOTH ARE ON THIS FAN SHUTS DOWN.

EXISTING MIXING BOX/FUME HOOD CONTROL PROPOSED CHANGES

- 1 MIXING BOX AND VOLUME CONTROL TO BE CHANGED
- 2 PNEUMATIC HOT/COLD DAMPERS CONTROL CHANGED TO DDC
- 3 PNEUMATIC DAMPER CONTROL CHANGED TO DDC
- 4 PNEUMATIC VELOCITY PRESSURE SENSOR CHANGED TO DDC
- 5 EXISTING PNEUMATIC THERMOSTAT CHANGED TO DDC
- 6 EXISTING PNEUMATIC FUME HOOD DAMPER CONTROLS TO REMAIN
- 7 EXISTING PNEUMATIC FUME HOOD VELOCITY PRESSURE SENSOR TO REMAIN
- 8 SUPPLY FAN BOOSTER FAN TO BE REMOVED



6 DETAIL NEW VARIABLE AIR VOLUME FOR LABORATORIES  
N.T.S.



7 DETAIL ABANDONED SUPPLY BRANCH TYP. FOR ALL REMOVED MIXING AND VAV BOXES  
N.T.S.

revisions	date
2	ISSUED FOR TENDER 31/03/13
1	ISSUED FOR 99% REVIEW 27/03/13

A	A detail no.	A
B	B location drawing no.	B
C	C drawing no.	C

project CFIA  
projct BURNABY LAB  
MIXING BOX REPLACEMENT  
3155 WILLINGDON GREEN, BURNABY, B.C.  
drawing dessein  
DETAILS MECHANICAL

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date	-	-
reviewed	MLG	examine
date	-	-
approved	SC	approuve
date	-	-
Tender	-	Submission
PWC Project Manager	Administrateur de projets TPC	
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