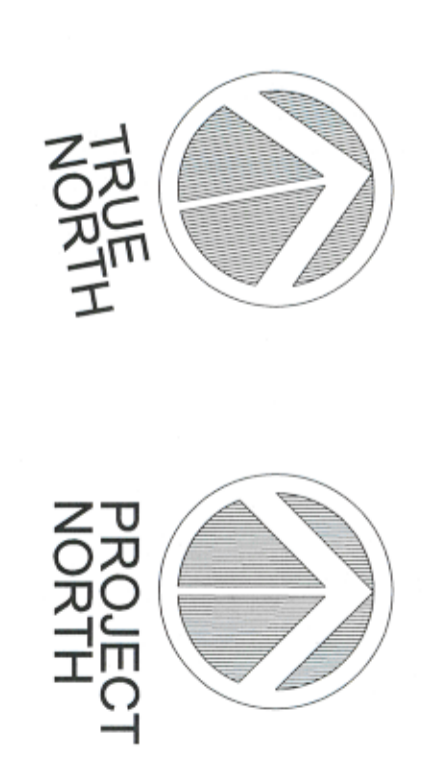


1 BOILER ROOM RENOVATION PLAN  
M1.01 SCALE = 1:50



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 Pacific Region  
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Description/Description		
Client/Client		

**CANADIAN FOOD INSPECTION AGENCY**

**BURNABY LAB BOILER REPLACEMENT**  
**3155 WILLINGDON GREEN, BURNABY, BC, CANADA**

**BOILER ROOM RENOVATION PLAN**

Project No./No. du projet	Sheet/Feuille	Revision/Version
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Project title / Titre du projet

**BURNABY LAB BOILER  
REPLACEMENT  
3155 WILLINGDON GREEN,  
BURNABY, BC, CANADA**

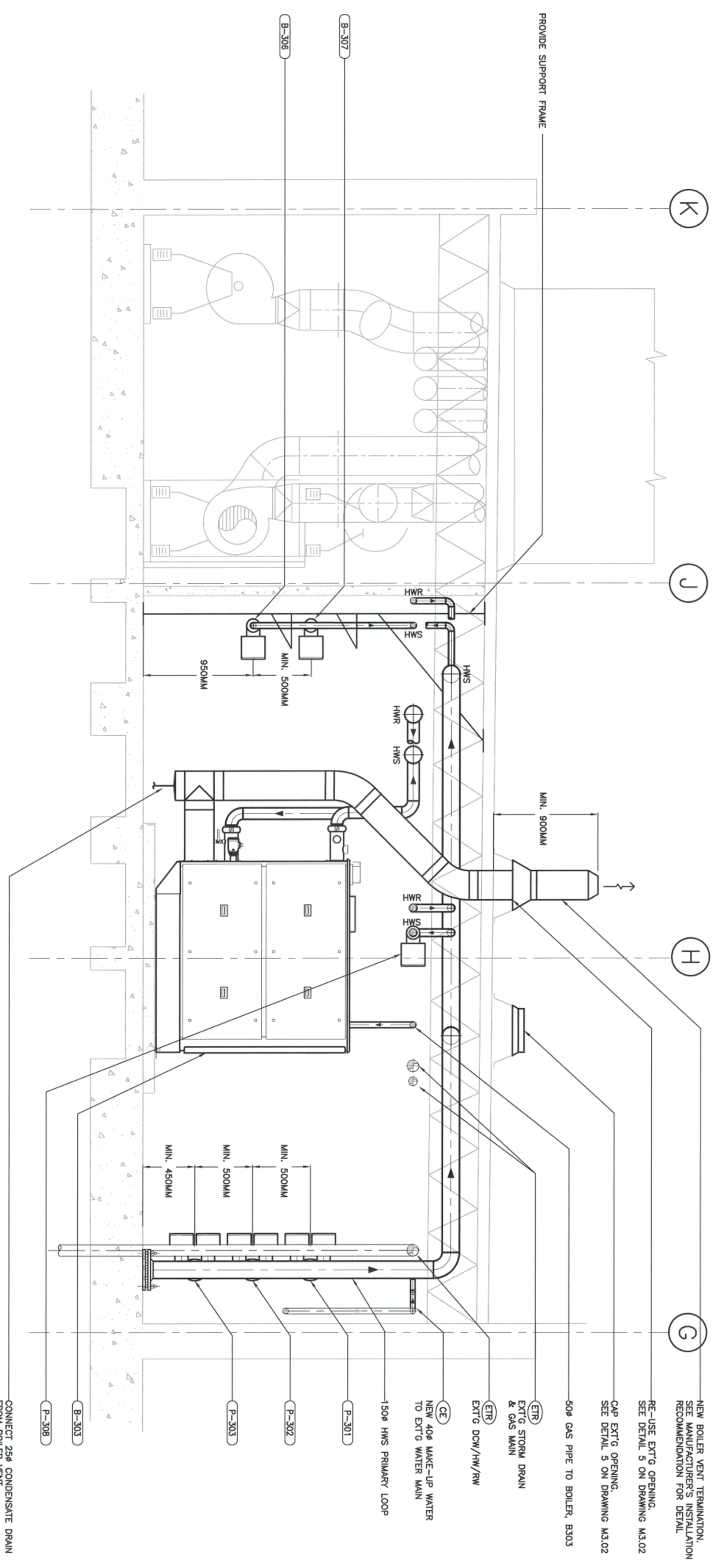
**CANADIAN FOOD  
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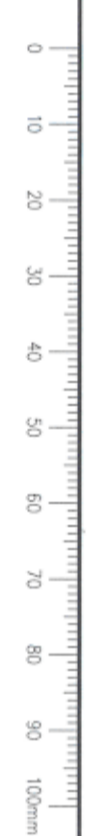
Revision / Description / Client / Item	Date / Date
1 ISSUED FOR FINAL REVIEW Description / Description	13.11.15 12th / 20th

BOILER ROOM ELEVATION PLAN

Project No./No. du projet	Sheet/Feuille	Revision no./ no. de révision
-	M2.01	1
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1 BOILER ROOM ELEVATION PLAN  
SCALE = 1:50





BOILER SCHEDULE									
UNIT NO.	LOCATION	SERVICE	MAKE/MODEL	TURNDOWN	INPUT	OUTPUT	V/P/H/1/2	EFFICIENCY	NOTES
B-301	PERNHOUSE MECHANICAL ROOM	HEATING	HHS20/SYMC SC-3000	5:1	800 kW	644 kW	208 / 3 / 60	95%	ALL
B-302	PERNHOUSE MECHANICAL ROOM	HEATING	HHS20/SYMC SC-3000	5:1	800 kW	644 kW	208 / 3 / 60	95%	ALL
B-303	PERNHOUSE MECHANICAL ROOM	HEATING	HHS20/SYMC SC-3000	5:1	800 kW	644 kW	208 / 3 / 60	95%	ALL

NOTES:  
1. UNIFORM FLOW AT DESIGN 4.5 L/S  
2. PACKAGED WITH CONTROLS AND VENT

PUMP SCHEDULE										
UNIT NO.	LOCATION	SERVICE	MAKE/MODEL	INTERVAL VSD	TYPE	FLOW RATE	MAX. TEMP.	SP	V/P/H/1/2	NOTES
P-301	PERNHOUSE MECHANICAL ROOM	PRIMARY LOOP	GRIUNDY/MAKNO 65-150F	YES	NONE	11.1 L/S	90°C	135 009	208 / 1 / 60	1,2
P-302	PERNHOUSE MECHANICAL ROOM	PRIMARY LOOP	GRIUNDY/MAKNO 65-150F	YES	NONE	11.1 L/S	90°C	135 009	208 / 1 / 60	1,2
P-303	PERNHOUSE MECHANICAL ROOM	PRIMARY LOOP	GRIUNDY/MAKNO 65-150F	YES	NONE	11.1 L/S	90°C	135 009	208 / 1 / 60	1,2
P-304	PERNHOUSE MECHANICAL ROOM	RETURN CIRCUIT	GRIUNDY/MAKNO 32-100F	YES	NONE	1.5 L/S	90°C	45 009	115 / 1 / 60	2
P-307	PERNHOUSE MECHANICAL ROOM	UNIT HEATERS & RADIATOR COILS	GRIUNDY/MAKNO 40-100F	YES	NONE	1.5 L/S	90°C	45 009	115 / 1 / 60	2
P-308	PERNHOUSE MECHANICAL ROOM	UNIT HEATERS & RADIATOR COILS	GRIUNDY/MAKNO 40-100F	YES	NONE	2 L/S	90°C	72 009	115 / 1 / 60	2
P-309	PERNHOUSE MECHANICAL ROOM	RADIATOR COILS	GRIUNDY/MAKNO 32-60F	YES	NONE	0.63 L/S	90°C	27 009	115 / 1 / 60	2

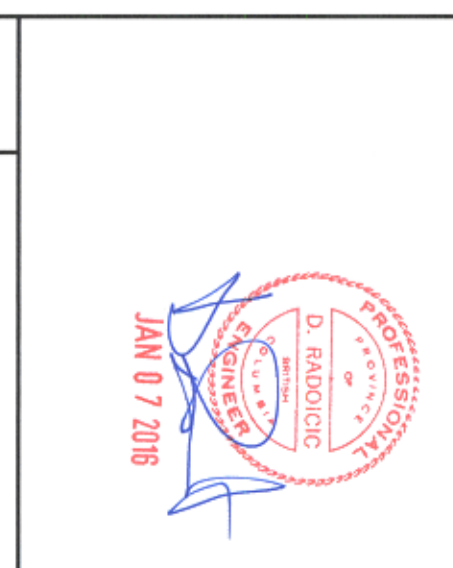
NOTES:  
1. TURNDOWN HEAD  
2. COMPLETE WITH BUCKET ORP

CONTROL VALVE SCHEDULE									
UNIT NO.	LOCATION	SERVICE	TYPE	FLOW	PRESSURE DIFF.	CV	NOTES		
CV-301	PERNHOUSE MECHANICAL ROOM	BOILER B-1	2MVC-2P	16.4 L/S	6 MPa	300	1		
CV-302	PERNHOUSE MECHANICAL ROOM	BOILER B-2	2MVC-2P	16.4 L/S	6 MPa	300	1		
CV-303	PERNHOUSE MECHANICAL ROOM	BOILER B-3	2MVC-2P	16.4 L/S	6 MPa	300	1		
CV-304	PERNHOUSE MECHANICAL ROOM	RAADIATOR LOOP	2MVC-4M0	3 L/S	12 009	35			
CV-305	PERNHOUSE MECHANICAL ROOM	PRIMARY LOOP	2MVC-4M0	4.75 L/S	15 009	50			

NOTES:  
1. TUBE BOILER CONNECTION

AIR SEPARATOR SCHEDULE									
UNIT NO.	LOCATION	SERVICE	TYPE	FLOW	SPROCKET VARIATION	FLOW	SIZE	NOTES	
AS-301	PERNHOUSE MECHANICAL ROOM	UNIT HEATERS AND RADIATOR FLOW UNITS	SPROCKET VARIATION	2 L/S	SPROCKET VARIATION	0.63 L/S	60	1	
AS-302	PERNHOUSE MECHANICAL ROOM	RADIATOR COILS	SPROCKET VARIATION	32	SPROCKET VARIATION	0.63 L/S	32	1	
AS-303	PERNHOUSE MECHANICAL ROOM	RADIATOR COILS	SPROCKET VARIATION	3 L/S	SPROCKET VARIATION	0.63 L/S	50	1	

NOTES:  
1. PIPE TO ROOM



**CANADIAN FOOD INSPECTION AGENCY**

Project title/Titre du projet  
**BURNABY LAB BOILER REPLACEMENT**  
**3155 WILLINGDON GREEN, BURNABY, BC, CANADA**

Project No./No. du projet: **M3.01**  
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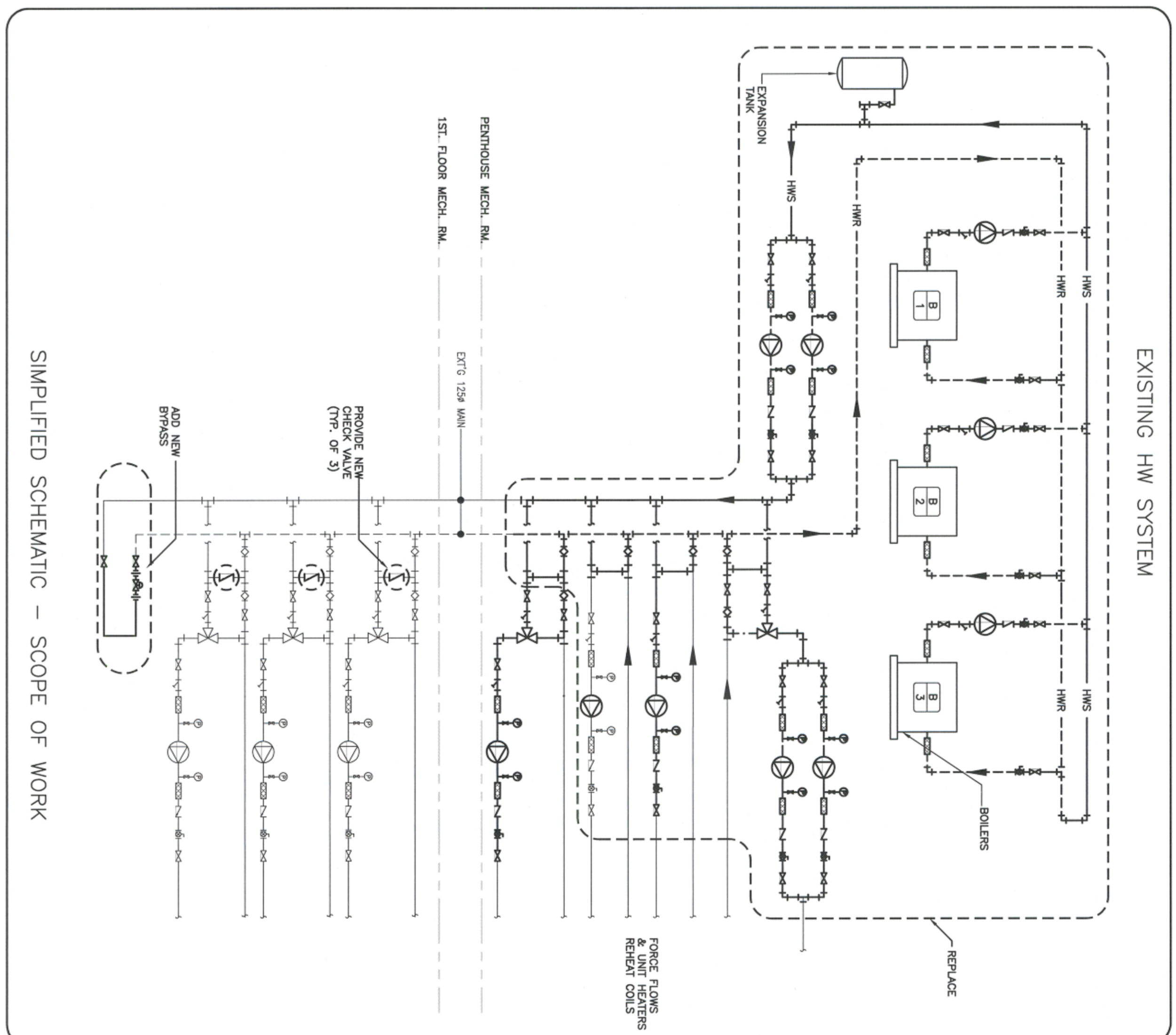
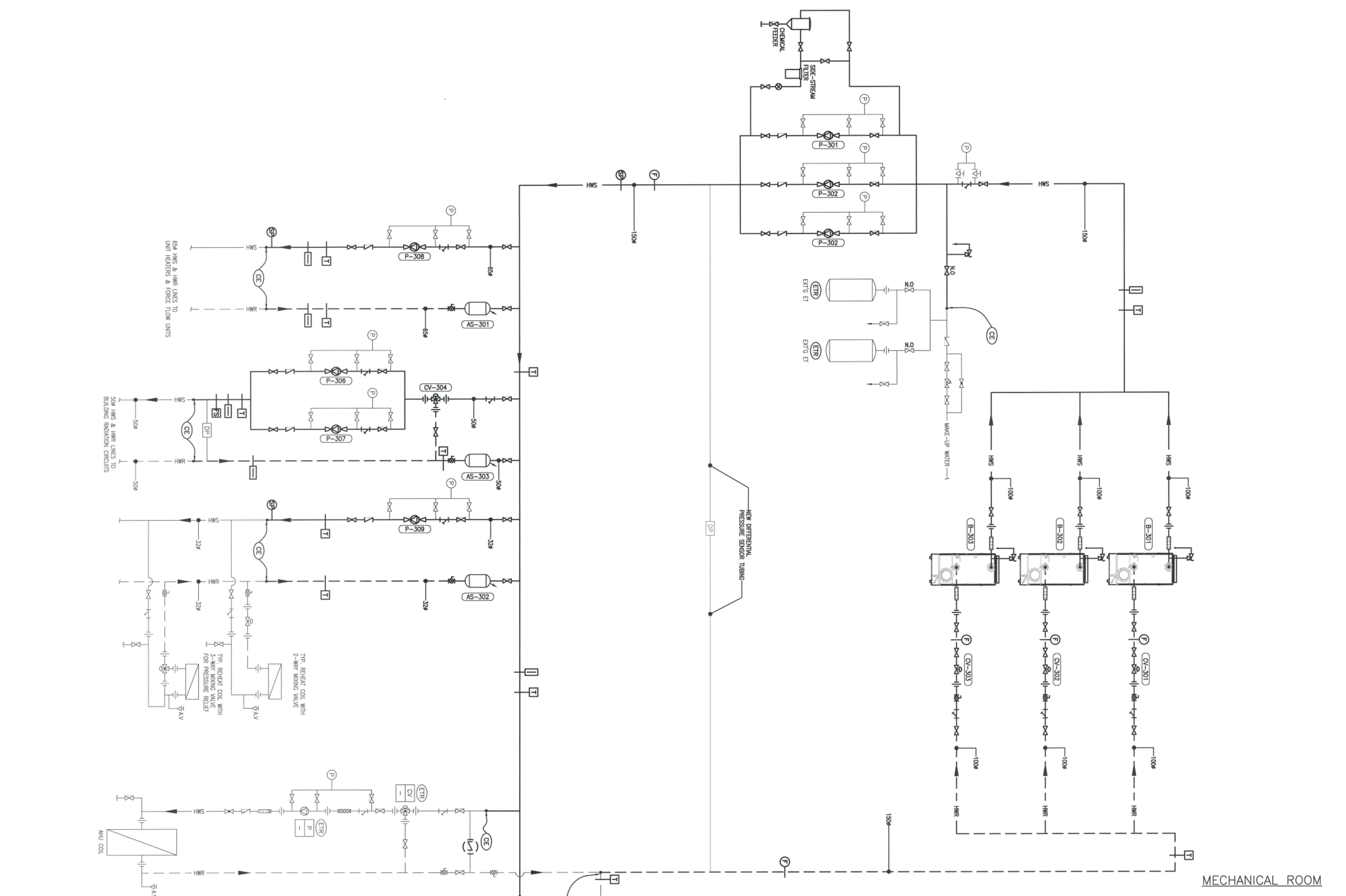
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MECHANICAL SCHEDULES





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



**LEGEND:**  
 CE CONNECT TO EXISTING  
 ER) EXISTING TO REMAIN  
 (R) REMOVE

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JAN 07 2018

1 ISSUED FOR FINAL REVIEW Date: 13.11.15 13115	13115 13115
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**CANADIAN FOOD INSPECTION AGENCY**

Project Title/Titre du projet  
**BURNABY LAB BOILER REPLACEMENT**  
**3155 WILLINGDON GREEN, BURNABY, BC, CANADA**

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Designed by/Concepté par  
**DR**

Drawn by/Dessiné par  
**FE**

Project Manager/Administrateur de Projets: TRSQC

Project Engineer/Ingénieur de Projets: TRSQC

Project Supervisor/Superviseur de Projets: TRSQC

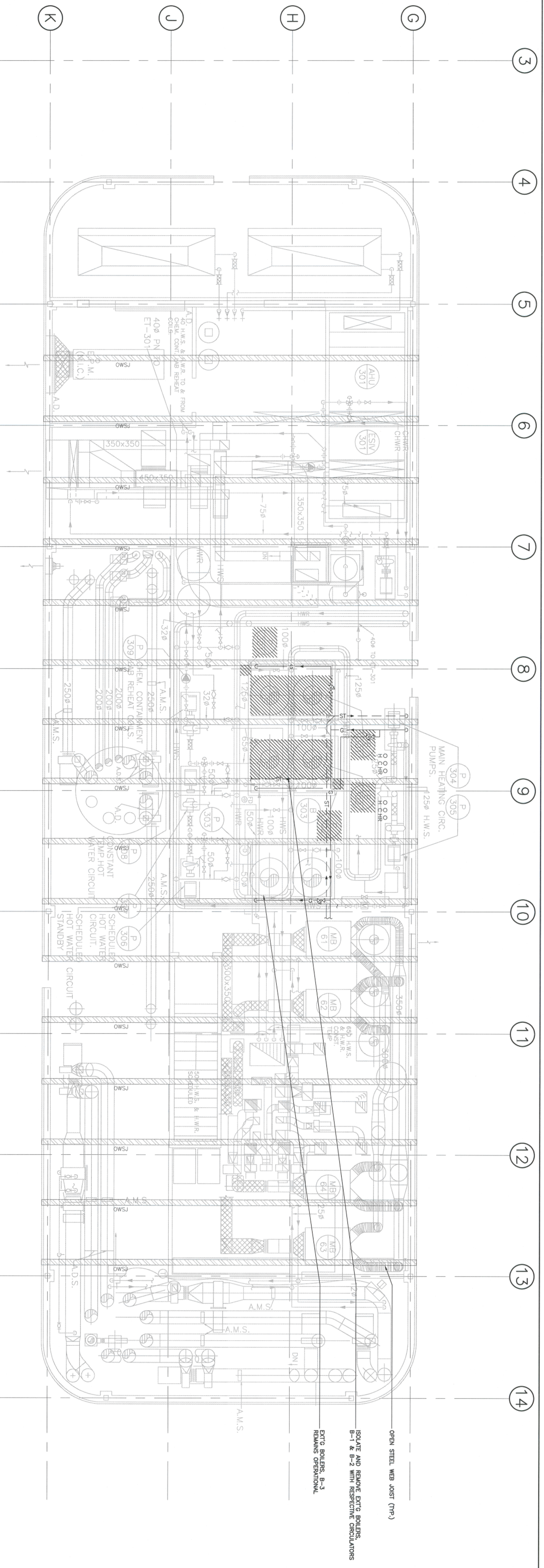
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**HOT WATER SYSTEM SCHEMATIC**

Project No./N<sup>o</sup>. du projet: M4.01

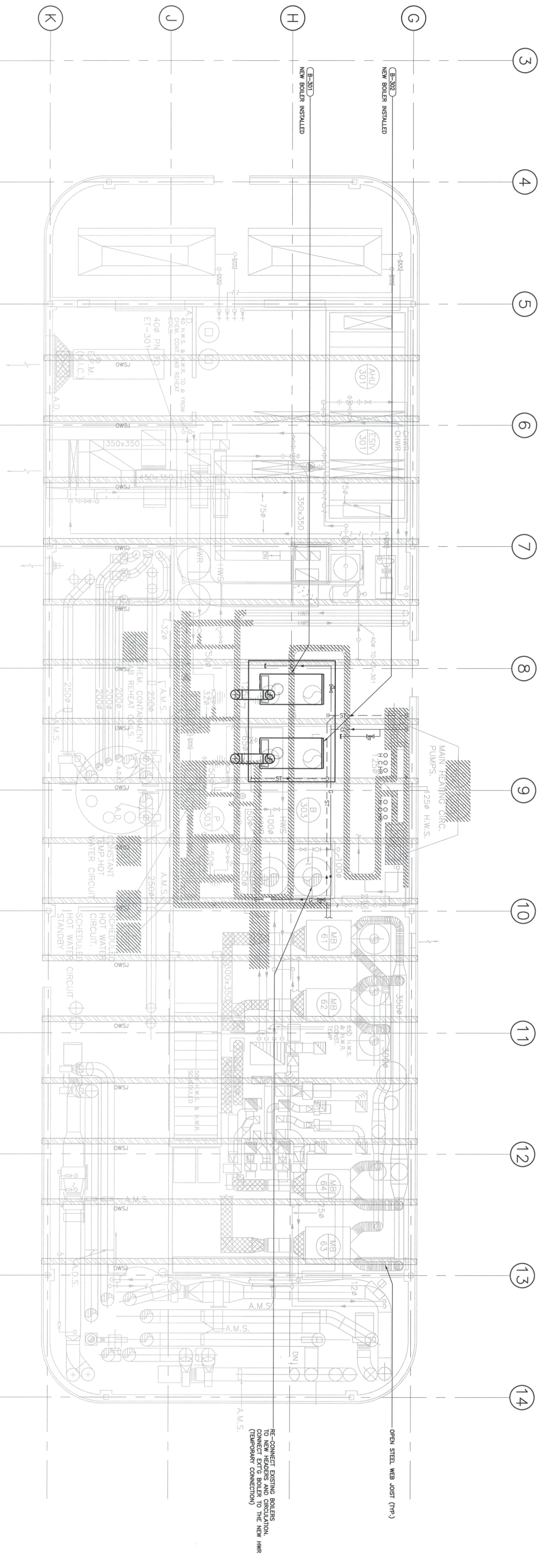
Revision No./N<sup>o</sup>. de révision: 1

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1 BOILER ROOM DEMOLITION PLAN (PHASING 1)  
SCALE = 1:50



2 BOILER ROOM DEMOLITION PLAN (PHASING 2)  
SCALE = 1:50

- NOTE:**
1. REMOVE AND REPLACE EXISTING BOILERS B-1 & B-2 WITH RESPECTIVE CIRCULATORS B-1 & B-2.
  2. CONNECT EXISTING BOILERS B-1 & B-2 TO NEW HEADERS AND CIRCULATION.
  3. REMOVE EXISTING BOILERS B-1 & B-2.
  4. FLUSH NEW PIPING, SET TEMPORARY OPERATION WITH BOILER B-3.
  5. INSTALL NEW BOILERS B-1 & B-2, CONNECT TO HEADER (READY FOR OPERATION).



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3155 WILLINGDON GREEN,  
BURNABY, BC, CANADA

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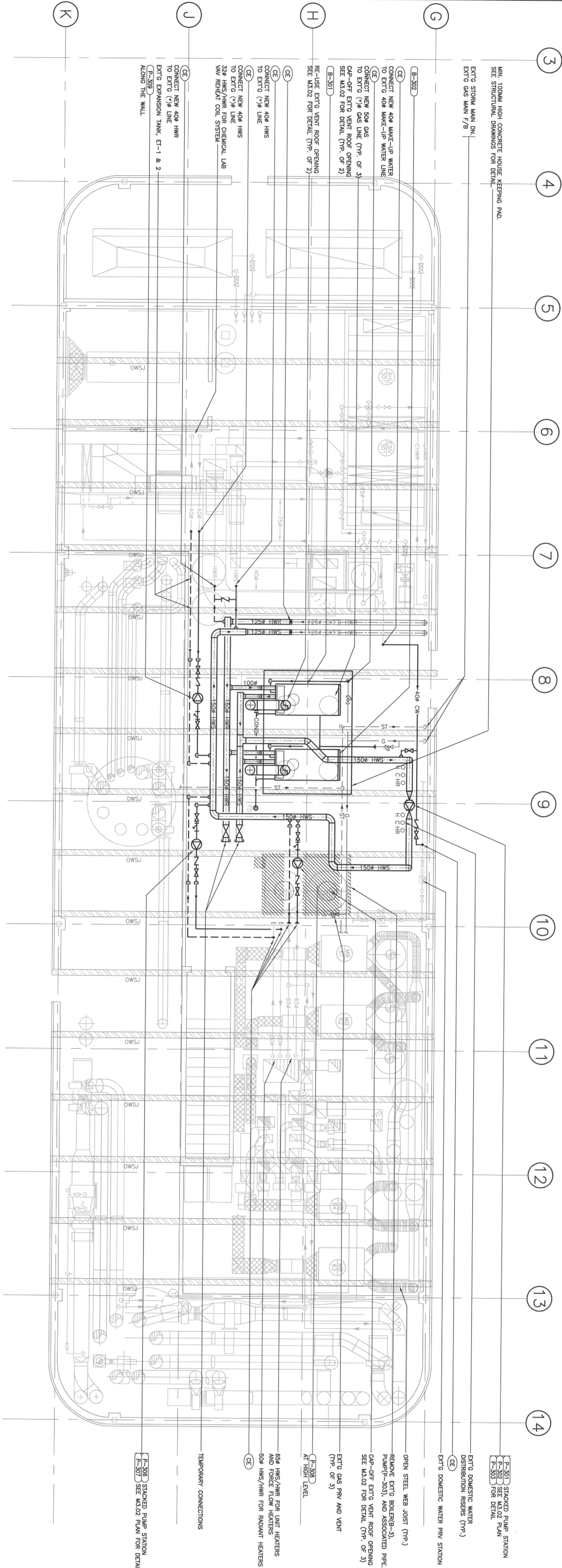
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Project Manager/Administrateur de projets  
**TRSC**

Project Manager/Administrateur de projets  
**TRSC**

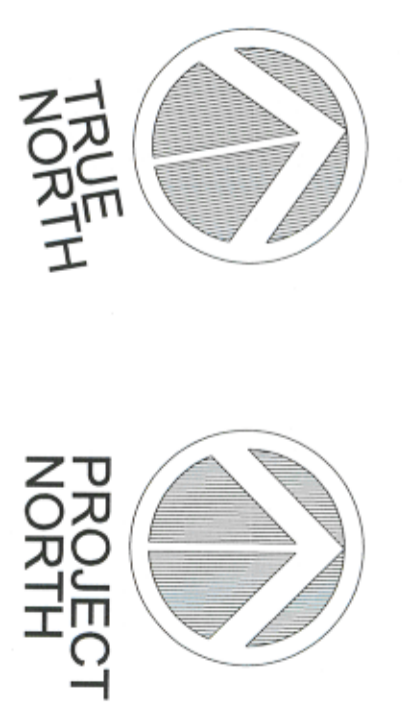
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**BOILER ROOM DEMOLITION PLAN (PHASING 1 & 2)**

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1 BOILER ROOM DEMOLITION PLAN (PHASING 3)  
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NOTE:  
1. BOILERS B-1 & B-2 OPERATIONAL & FUNCTIONAL.  
2. REPLACE BOILER B-3



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FE  
Project Manager/Administrateur de Projets TRSJC

Notes:  
- Révisé: Révision, ajout de détails et de notes.  
- Révisé: Révision, ajout de détails et de notes.  
- Révisé: Révision, ajout de détails et de notes.

Drawing Title/Titre du dessin  
BOILER ROOM DEMOLITION PLAN  
(PHASING 3)

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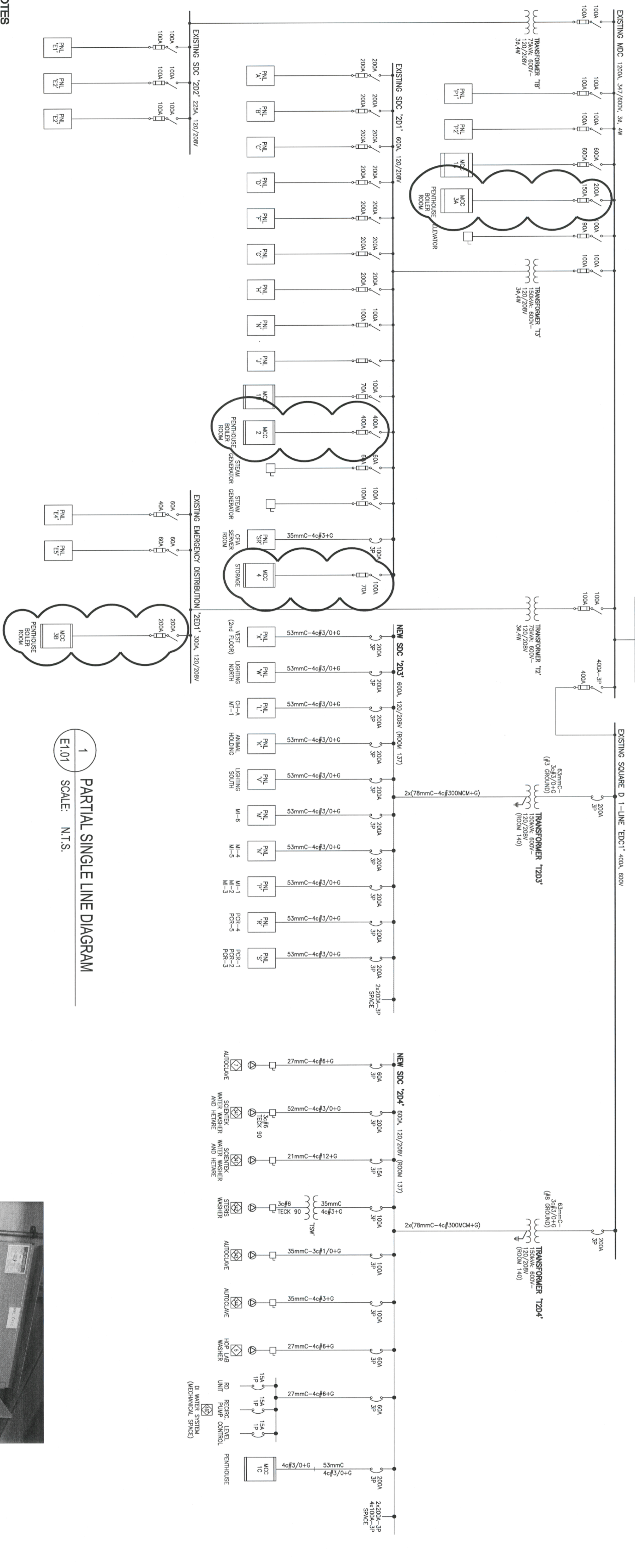


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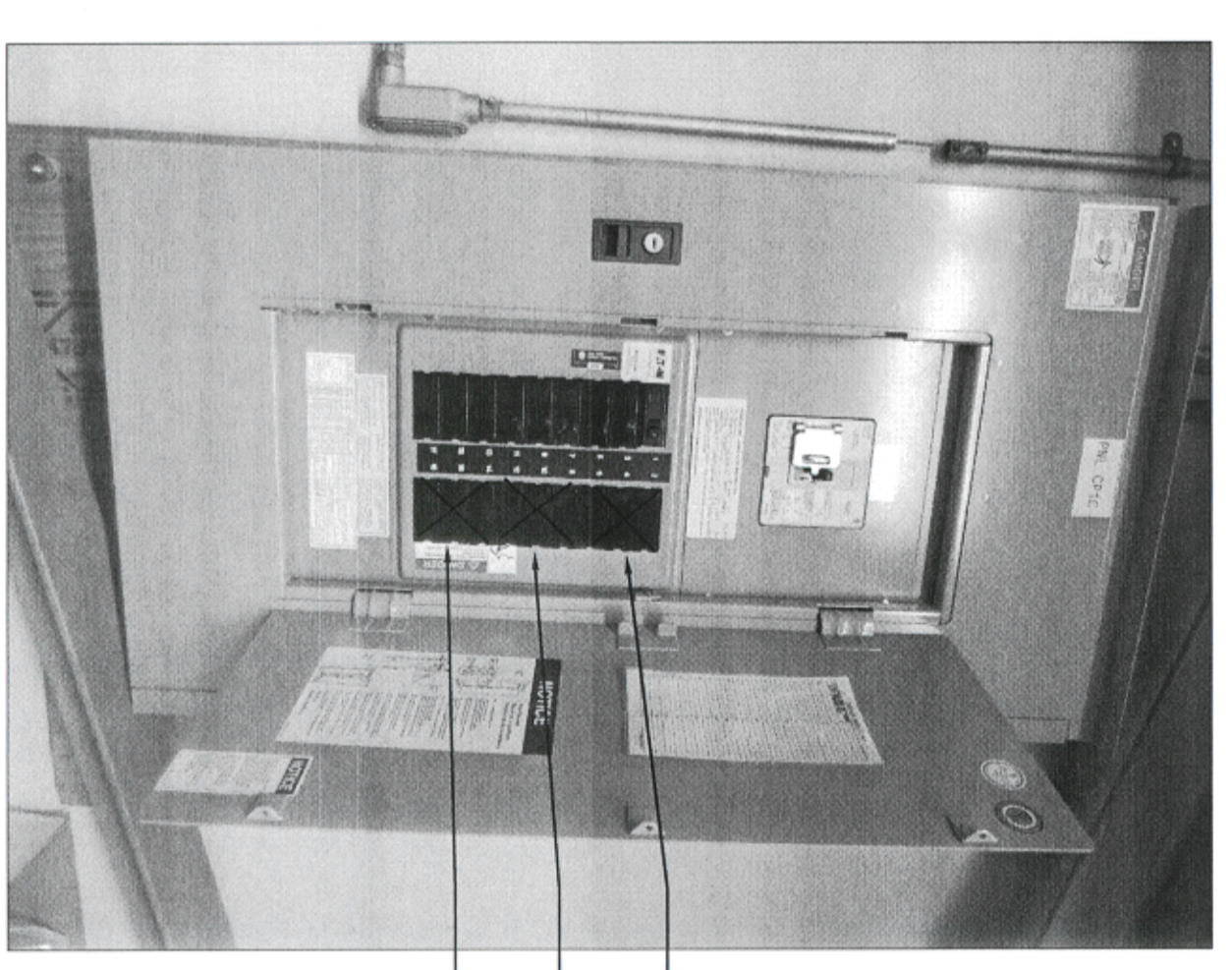
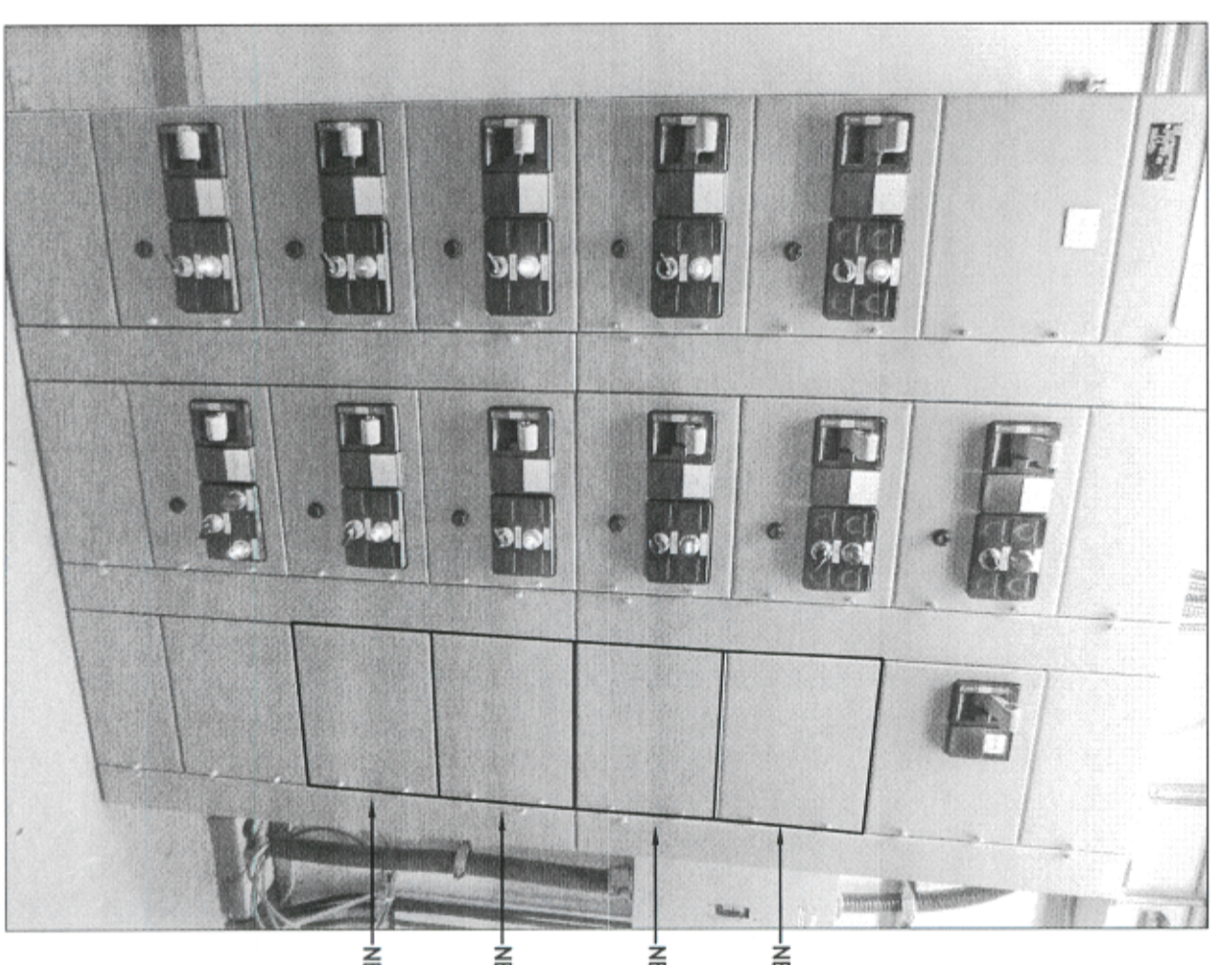
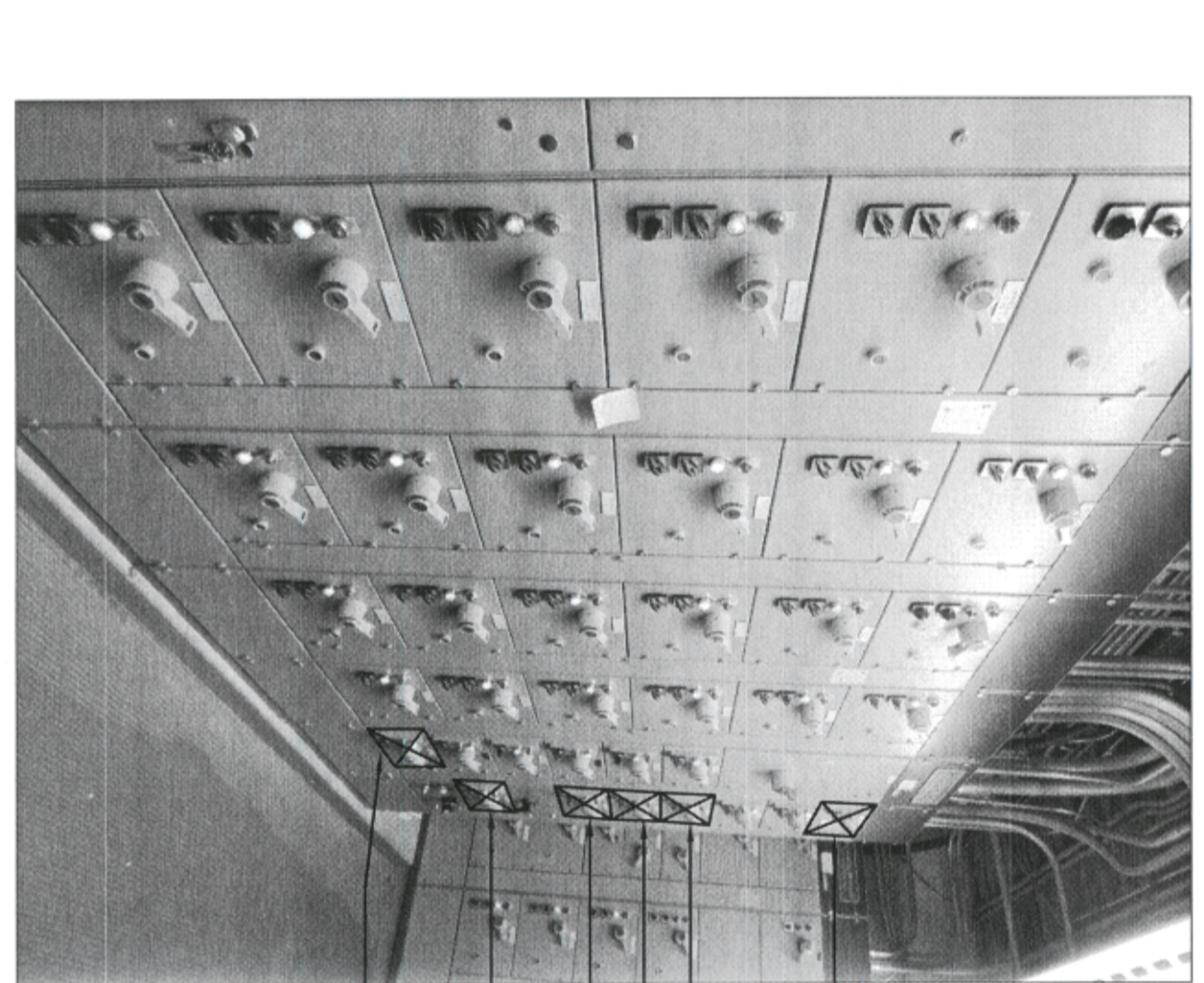
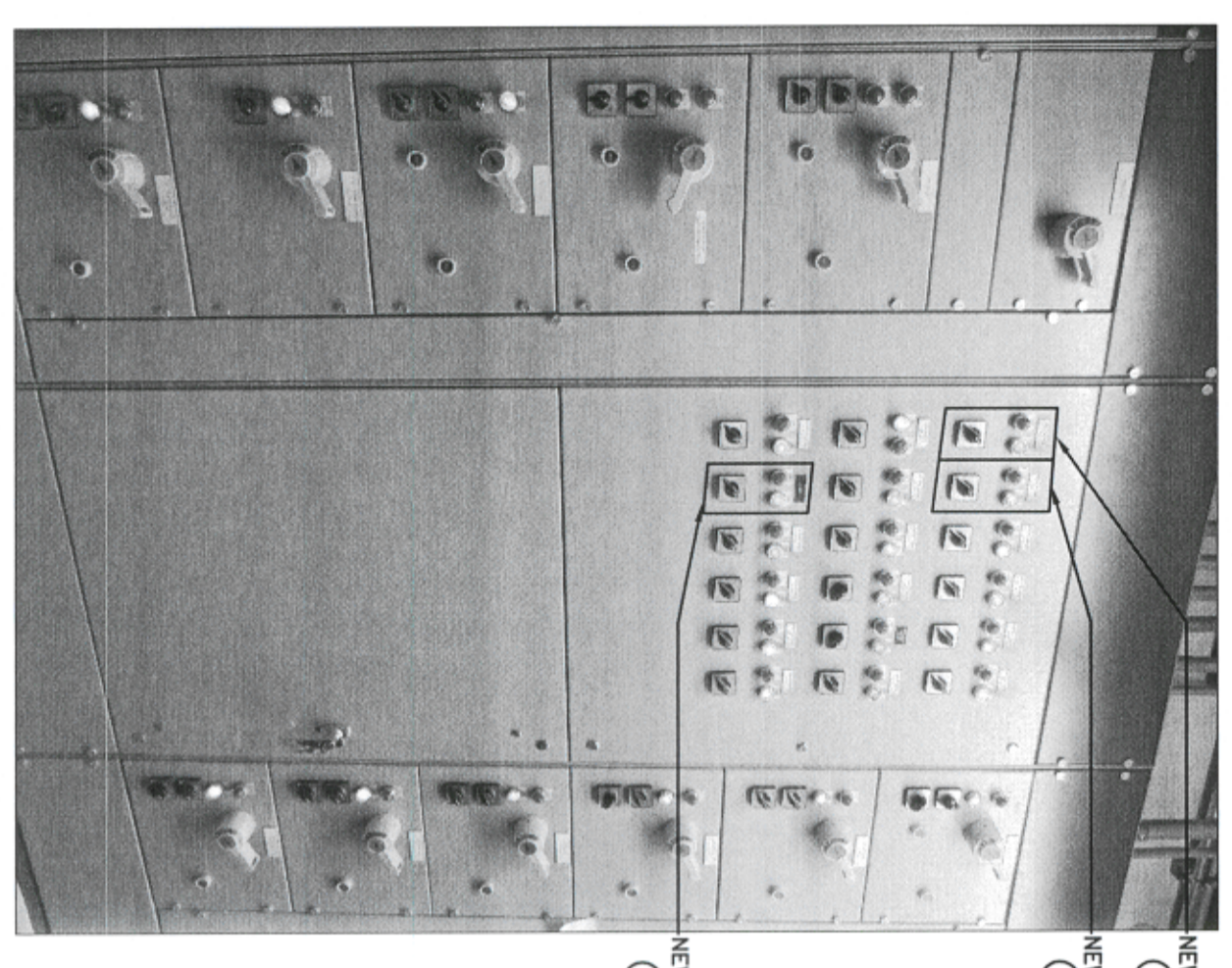
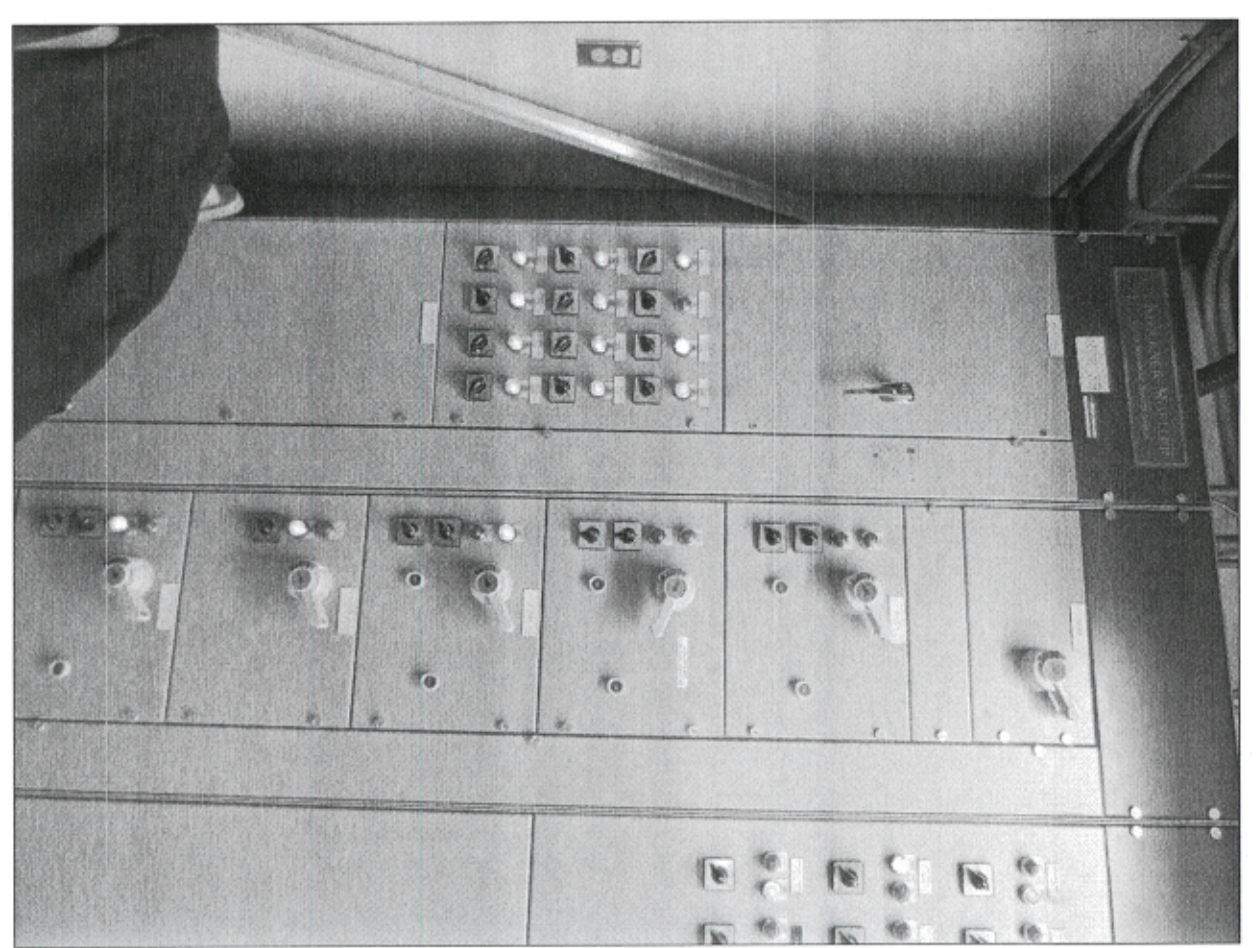
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 3155 WILLINGDON GREEN,  
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 Checked by/ Vérifié par  
 Design/ Projeté par  
 Client/Clientel

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- KEY NOTES**
- 1 SWITCH DISCONNECT TO "OFF" POSITION, DISCONNECT BREAKER AND MAKE SURE ALL WIRING FROM LOAD SIDE OF STARTERS, PROVIDE "SPARE" LABEL ON DOOR.
  - 2 PROVIDE NEW CIRCUIT BREAKERS, INDICATOR LIGHTS, AND H-O-A SWITCHES IN EXISTING MCC OR PANEL TO SUIT NEW REQUIREMENTS.
  - 3 INTERFACE/REMOVE EXISTING CONTROLS TO CONNECT TO NEW EQUIPMENT IDENTIFIED.



**EATON CUTTLER HAMMER 100A, 120/208V, 18 CCT, PANEL 'CP1C' CW 60A MAIN BREAKER**

- GENERAL NOTES**
- A. ALL MATERIAL AND INSTALLATION TO MATCH EXISTING.
  - B. PROVIDE NEW FEEDER FOR ALL NEW MECHANICAL UNITS.

**EXISTING KLOCKNER MOELLER 208V, 3Φ, MCC-3B**

**EXISTING KLOCKNER MOELLER MCC-3A & MCC-3B DETAILS**

**EXISTING KLOCKNER MOELLER, 600V, 3Φ, MCC-3A**

**EXISTING EATON CUTTLER HAMMER 600A 120/208V, 3Φ MCC-4**

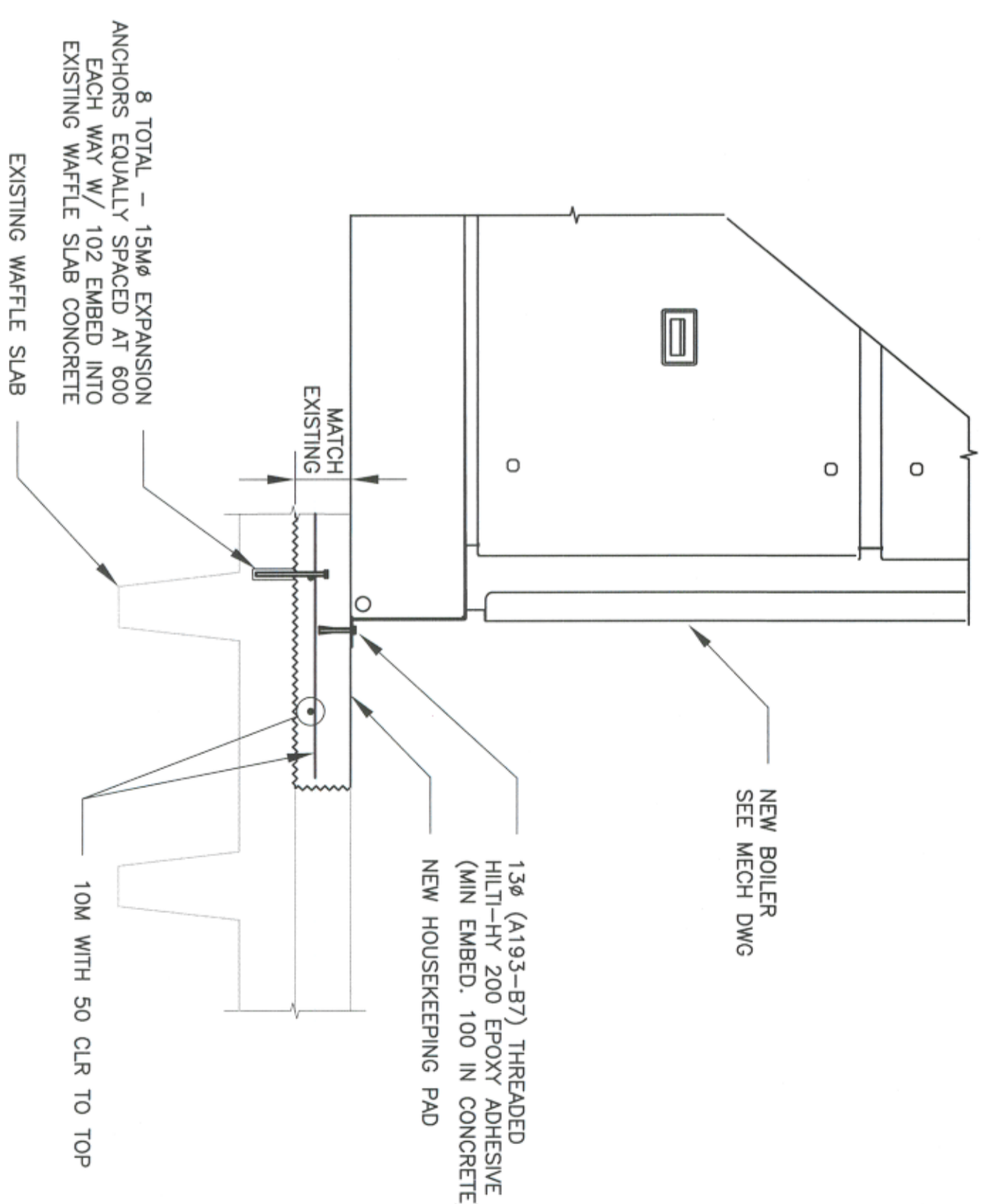
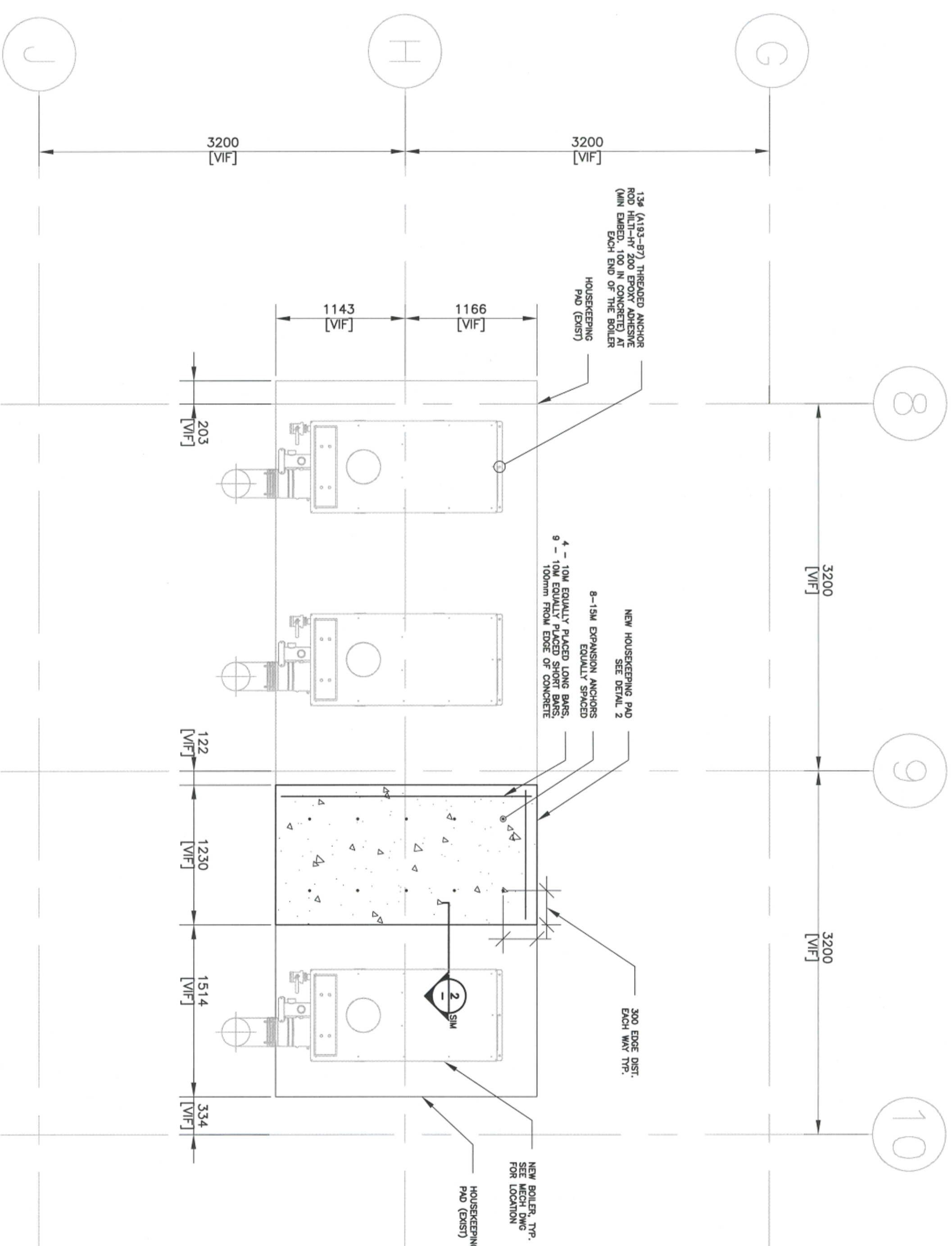
**EATON CUTTLER HAMMER MCC-4 AND PANEL 'CP1C' CW 60A MAIN BREAKER**

**GENERAL NOTES**

1. READ STRUCTURAL DRAWINGS IN CONJUNCTION WITH ALL OTHER PERTINENT CONTRACT DOCUMENTS. COORDINATE STRUCTURAL WORK WITH MECHANICAL AND ELECTRICAL DRAWINGS FOR DETAILED DESIGN. LOADS AND CONDITIONS FOR CHIMNEYS, SLOPES, CURBS, PADS, DRAINAGE AND WATERPROOFING, DUST SCREENS, RECESSES, INSERTS AND OTHER ITEMS.

**DESIGN LOADS:**

1. DEAD LOAD: STRUCTURAL SELF WEIGHT AND EXISTING AS-IS. SEE EXISTING DWG NO. S-13
2. LIVE LOAD: SEE EXISTING DWG NO. S-13
3. GROUND SNOW LOAD: NOT APPLICABLE TO THE CURRENT SCOPE. SEE EXISTING DWG NO. S-13
4. WIND LOAD: NOT APPLICABLE TO THE CURRENT SCOPE. SEE EXISTING DWG NO. S-13
5. SEISMIC:
  - S<sub>g(0.2)</sub> = 0.83
  - S<sub>d(0.1)</sub> = 0.82
  - S<sub>d(1.0)</sub> = 0.32
  - S<sub>d(2.0)</sub> = 0.17
  - P<sub>GA</sub> = 0.46
  - I<sub>e</sub> = 1.0 (NORMAL)
  - M<sub>s</sub> = 1.0 (NORMAL)
  - SITE CLASS = D
  - F<sub>o</sub> = 1.1
  - F<sub>d</sub> = 1.2
  - R<sub>d</sub> = 1.2
  - R<sub>o</sub> = 1.3
  - C<sub>p</sub> = 1.0
  - A<sub>r</sub> = 2.5
  - A<sub>s</sub> = 2.5
  - R<sub>o</sub> = 2.5
  - S<sub>p</sub> = 3.0
6. BOILER OPERATION WEIGHT = 11.2 kN (2500 lbs Max)
7. OTHER EQUIPMENT LOAD : REFER TO MECHANICAL DRAWINGS FOR WEIGHTS AND LOCATIONS.



**REAL PROPERTY SERVICES**  
 Services Immobilières  
 Région de la Capitale-Nationale

**Stantec**

Paula Hudec  
 Government Services  
 Canada

Tamara Potholuk  
 Services Immobilières  
 Canada

**BURNABY LAB BOILER REPLACEMENT**  
 3155 WILLINGDON GREEN,  
 BURNABY, B.C., CANADA

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 DR

Drawn by/dessiné par  
 FE

Project Manager/Administrateur de Projets TRSCC

Client/Client

**CANADIAN FOOD INSPECTION AGENCY**

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STRUCTURAL DESIGN

