

LEGEND	
TOP TAKE OFF	
BOTTOM TAKE OFF	
ELBOW RISING	
ELBOW DROPPING	
BALL VALVE	
GLOBE VALVE	
CIRCUIT BALANCING VALVE	
CHECK VALVE	
BUTTERFLY VALVE	
2-WAY CONTROL VALVE	
SHUT-OFF VALVE VERTICAL MOUNT	
LOCKSHIELD VALVE	
PLUG VALVE	
PRESSURE REDUCING VALVE	
RELIEF VALVE	
3-WAY CONTROL VALVE	
PUMP SUCTION GUIDE	
TRIPLE DUTY VALVE	
OS & Y VALVE	
AUTOMATIC AIR VENT	
STRAINER	
EXPANSION JOINT C/W GUIDES	
PUMP	
THERMOMETER / THERMOMETER WELL	
PRESSURE GAUGE / PRESSURE TAP	
FLOW METER / FLOW SWITCH	
UNION OR FLANGE	
GLYCOL HEATING SUPPLY (GLYS)	
GLYCOL HEATING RETURN (GLYR)	
SUPPLY DUCT (UP & DOWN)	
RETURN DUCT (UP & DOWN)	
EXHAUST DUCT (UP & DOWN)	
ROUND DUCT (UP & DOWN)	
FLEXIBLE DUCT CONNECTION	
EXHAUST/RETURN AIR DIFFUSER (CEILING TYPE)	
FIRE DAMPER OR SMOKE DAMPER	
MECHANICAL ITEMS TO BE REMOVED	
EXTERNAL LINED DUCTWORK	
FROM ABOVE	F.A.
SUPPLY AIR	S/A
OUTSIDE AIR	O/A
RETURN AIR	R/A
EXHAUST AIR	E/A

ENGINEERING CONSULTANT:

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CONSULTANT:

SEAL:

PROFESSIONAL ENGINEER  
D.L. CARBILL  
MEMBER 24075  
13 01 25  
13 JAN 2013

Association of Professional Engineers & Geoscientists  
of Saskatchewan  
CERTIFICATE OF AUTHORIZATION  
GENIVAR Inc.  
Number C0868  
Permitted to Consult under the  
Discipline Sk. Reg. No. Signature  
MECH. 24675

CLIENT:

CANADIAN FOOD INSPECTION AGENCY  
AGENCE CANADIENNE D'INSPECTION DES ALIMENTS

CLIENT REF. #:

PROJECT:

CANADIAN FOOD  
INSPECTION AGENCY  
BOILER REPLACEMENT  
SASKATOON, SASKATCHEWAN

KEY PLAN:

DISCLAIMER:

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IS	RE	DATE	DESCRIPTION
A		01.25.13	ISSUED FOR TENDER

PROJECT NO: CFIA / GENIVAR  
L0683 / 121-26464

DATE:  
2013-01-25

ORIGINAL SCALE:  
AS NOTED

DESIGNED BY:  
AJ

DRAWN BY:  
AJ

CHECKED BY:  
EL

DISCIPLINE:  
MECHANICAL

TITLE:  
PARTIAL MECHANICAL  
ROOM AND EQUIPMENT  
LAYOUT

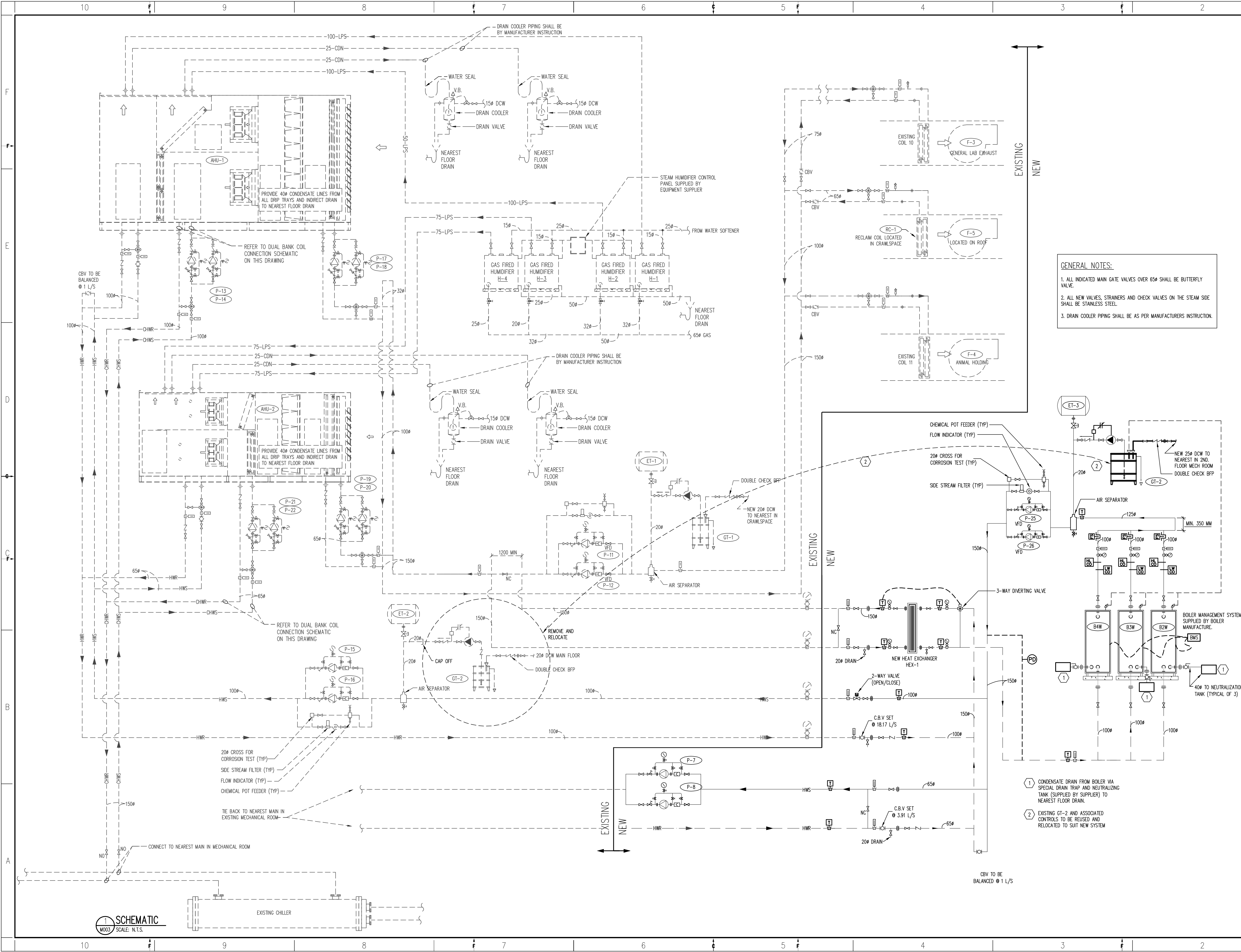
SHEET NUMBER:  
M001

SHEET #:  
1 OF 4

ISSUE:  
ISSUED FOR TENDER

DATE OF: JAN. 25, 2013

REV #:  
A



- GENERAL NOTES:**
1. ALL INDICATED MAIN GATE VALVES OVER 65# SHALL BE BUTTERFLY VALVE.
  2. ALL NEW VALVES, STRAINERS AND CHECK VALVES ON THE STEAM SIDE SHALL BE STAINLESS STEEL.
  3. DRAIN COOLER PIPING SHALL BE AS PER MANUFACTURERS INSTRUCTION.

**1 SCHEMATIC**  
M003 SCALE: N.T.S.

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ACIA**  
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L0683 / 121-26464

DATE: 2013-01-25

ORIGINAL SCALE:  
AS NOTED

DESIGNED BY:  
AJ

DRAWN BY:  
AJ

CHECKED BY:  
EL

DISCIPLINE: MECHANICAL

TITLE: SYSTEM SCHEMATIC

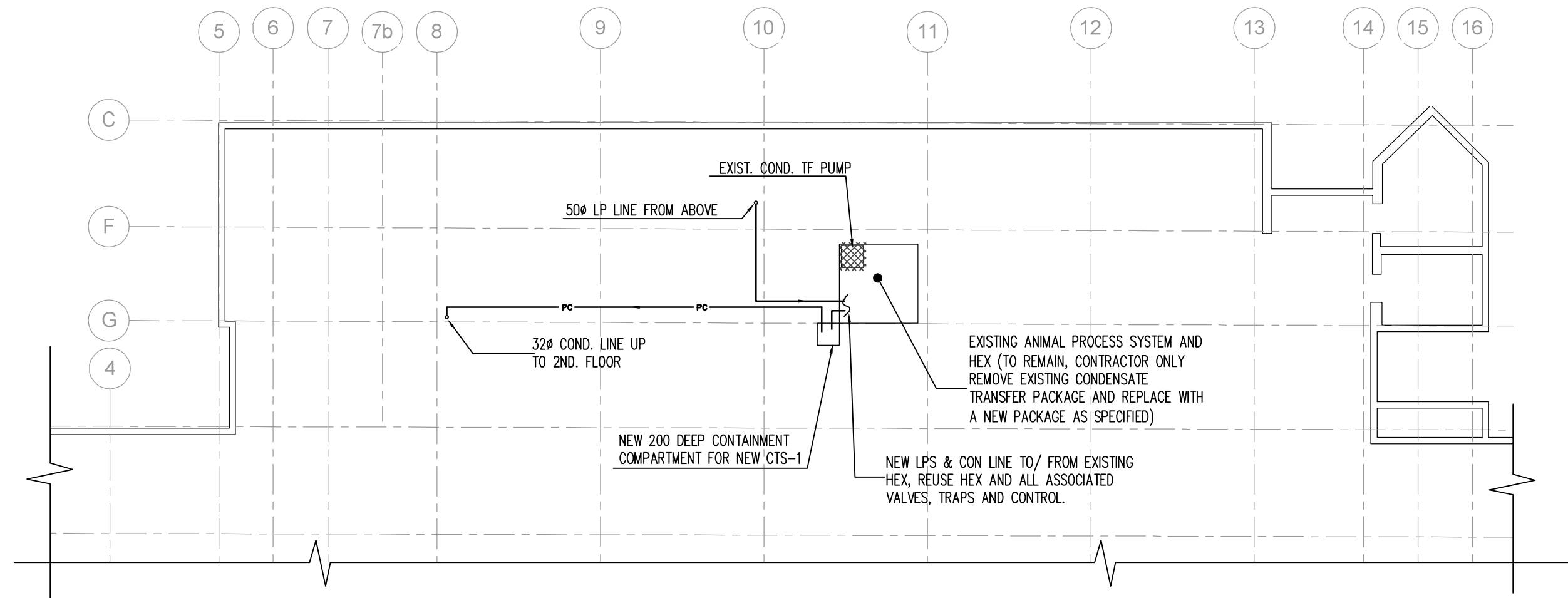
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SHEET #: 2 OF 4

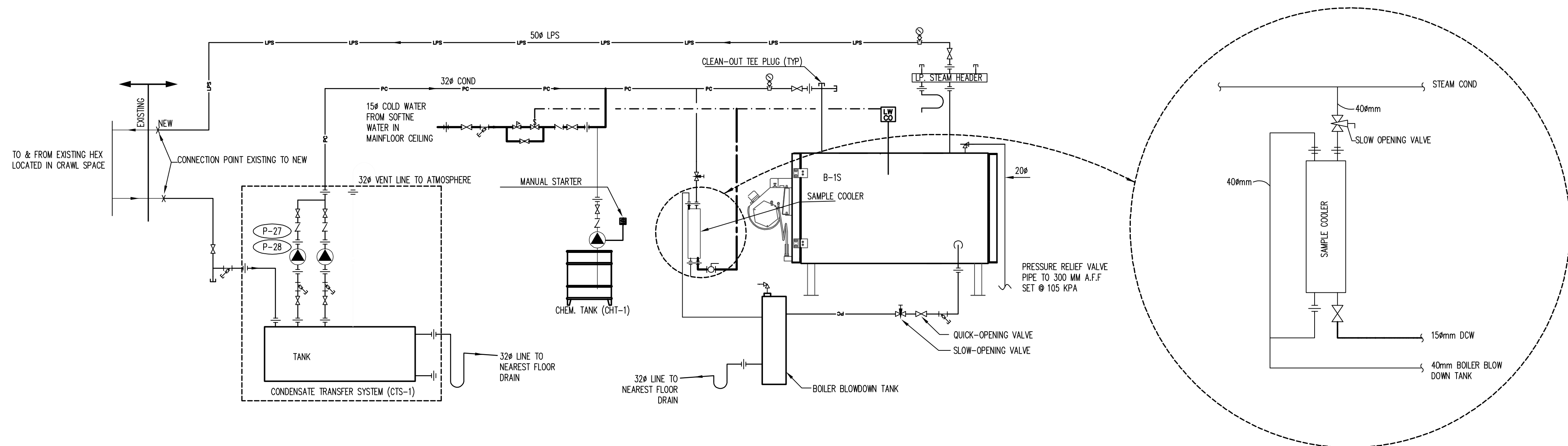
ISSUE: ISSUED FOR TENDER

DATE OF: JAN. 25, 2013

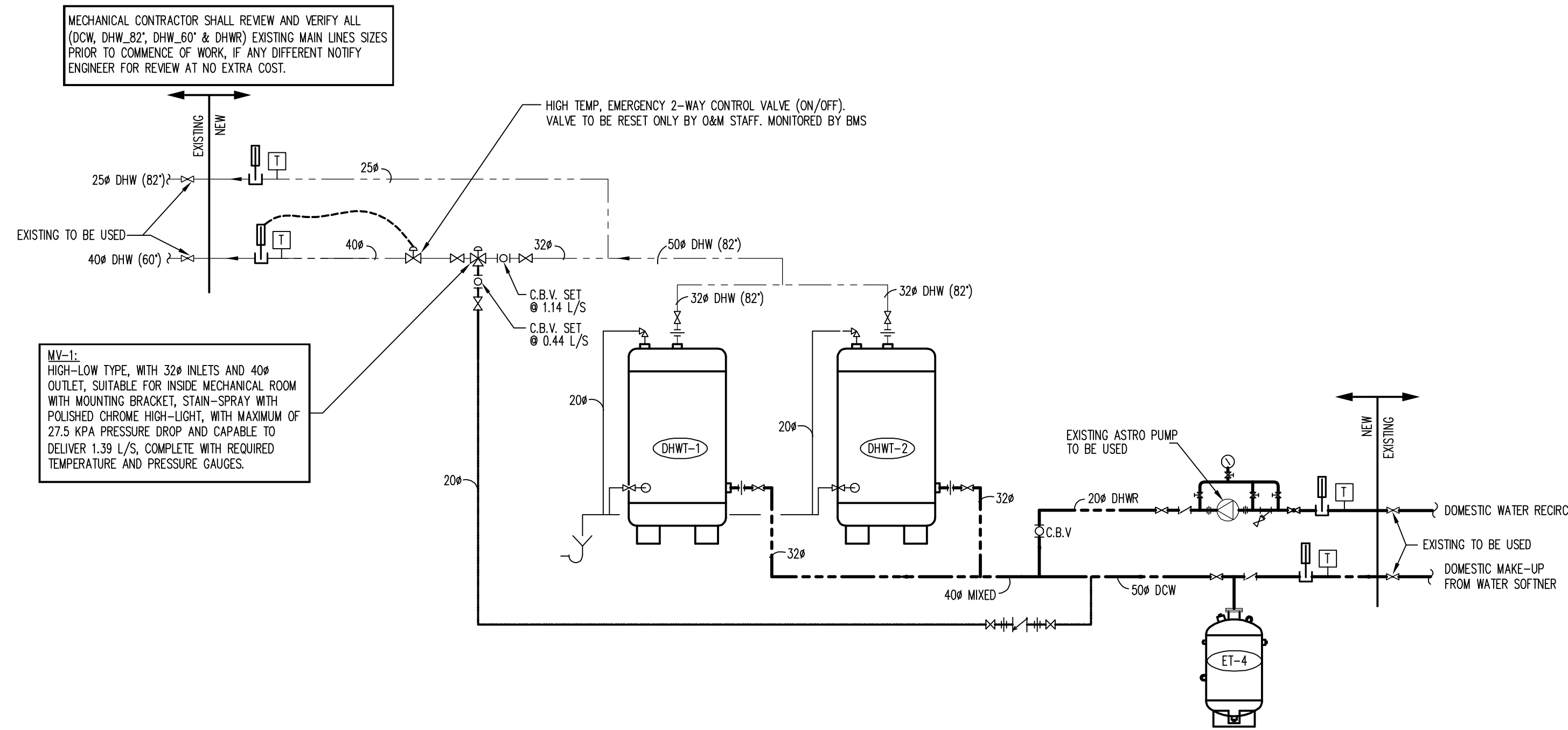
REV # A



1 CRAWL SPACE PLAN  
MO04 SCALE: 1:150



2 STEAM SYSTEM EQUIPMENT SCHEMATIC  
MO04 SCALE: N.T.S.



3 DOMESTIC WATER HEATER SCHEMATIC  
MO04 SCALE: N.T.S.

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PROJECT:

CANADIAN FOOD INSPECTION AGENCY  
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L0683 / 121-26464

DATE: 2013-01-25

ORIGINAL SCALE: AS NOTED

DESIGNED BY: AJ

DRAWN BY: AJ

CHECKED BY: EL

DISCIPLINE: MECHANICAL

TITLE: PARTIAL CRAWLSPACE LAYOUT, SCHEMATIC AND EQUIPMENT SCHEDULES

SHEET NUMBER: MO03

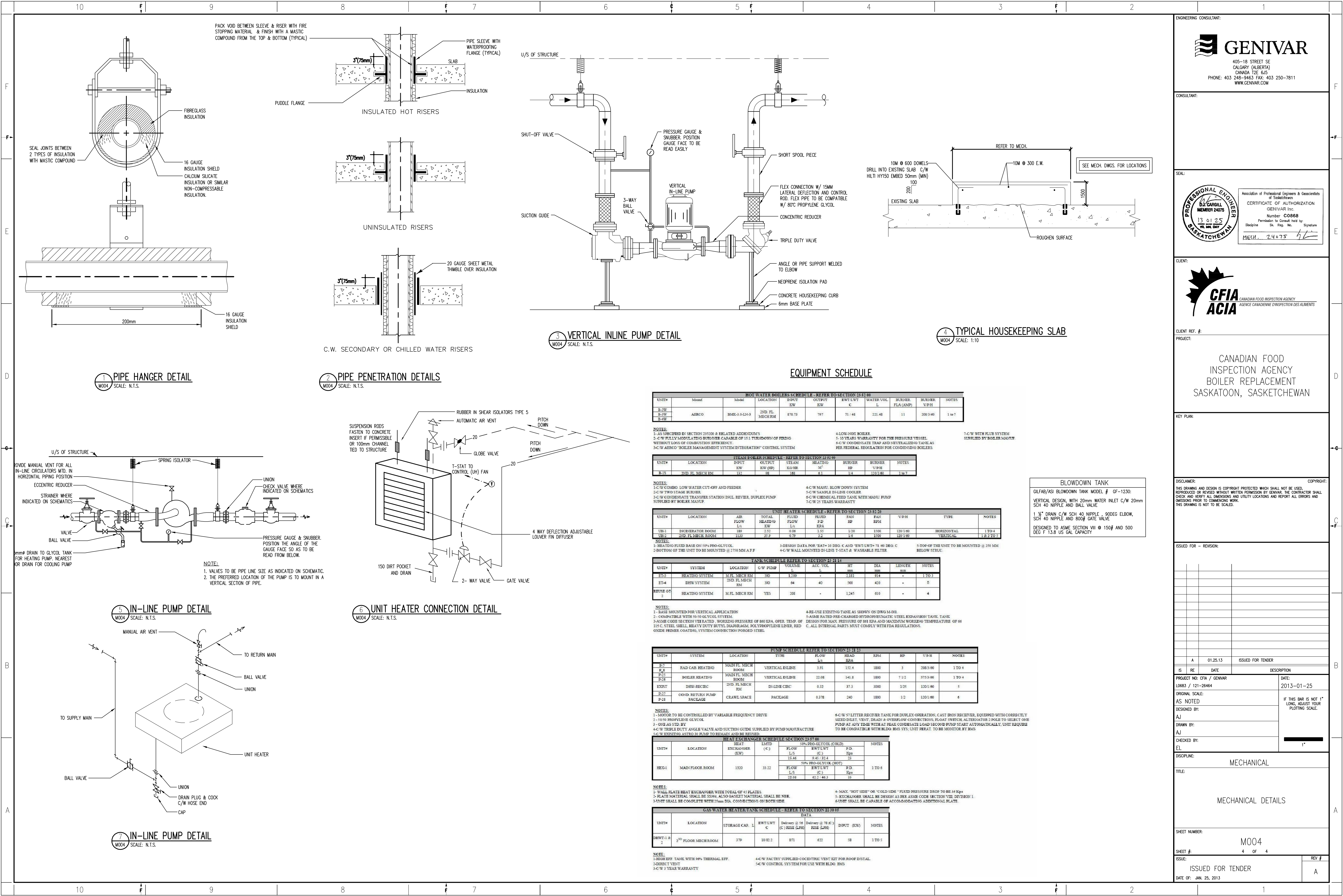
SHEET #: 3 OF 4

ISSUE: ISSUED FOR TENDER

DATE OF: JAN. 25, 2013

REV # A



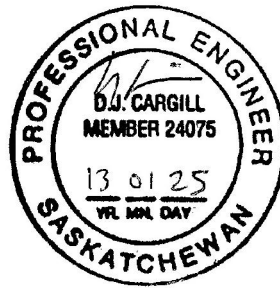


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
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AGENCE CANADIENNE D'INSPECTION DES ALIMENTS

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PROJECT:

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INSPECTION AGENCY  
BOILER REPLACEMENT  
SASKATOON, SASKATCHEWAN

**KEY PLAN:**

**DISCLAIMER:**


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**BLOWDOWN TANK**  
GILFAB/ASI BLOWDOWN TANK MODEL # GF-1230:  
VERTICAL DESIGN, WITH 20mm WATER INLET C/W 20mm  
SCH 40 NIPPLE AND BALL VALVE  
1 1/2" DRAIN C/W SCH 40 NIPPLE, 90DEG ELBOW,  
SCH 40 NIPPLE AND 800# GATE VALVE  
DESIGNED TO ASME SECTION VIII @ 150# AND 500  
DEG F 13.8 US GAL CAPACITY

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ORIGINAL SCALE: AS NOTED DESIGNED BY: A.J DRAWN BY: A.J CHECKED BY: EL	IF THIS BAR IS NOT 1" LONG, ADJUST YOUR PLOTTING SCALE.   1"

DISCIPLINE: MECHANICAL

TITLE:

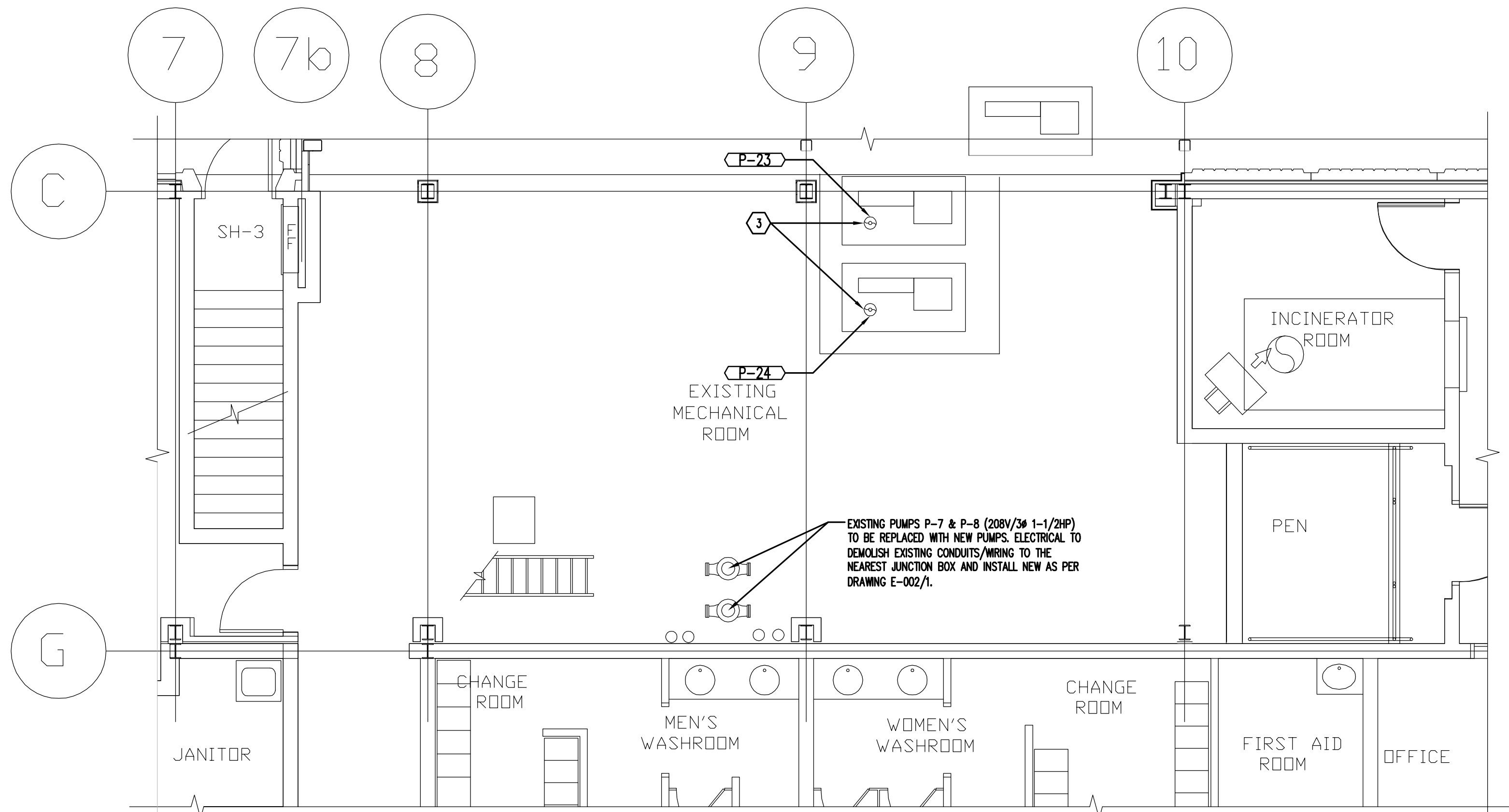
MECHANICAL DETAILS

SHEET NUMBER: M004

SHEET #:		4	OF	4
ISSUE:				REV #

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DATE OF: JAN. 25, 2013	

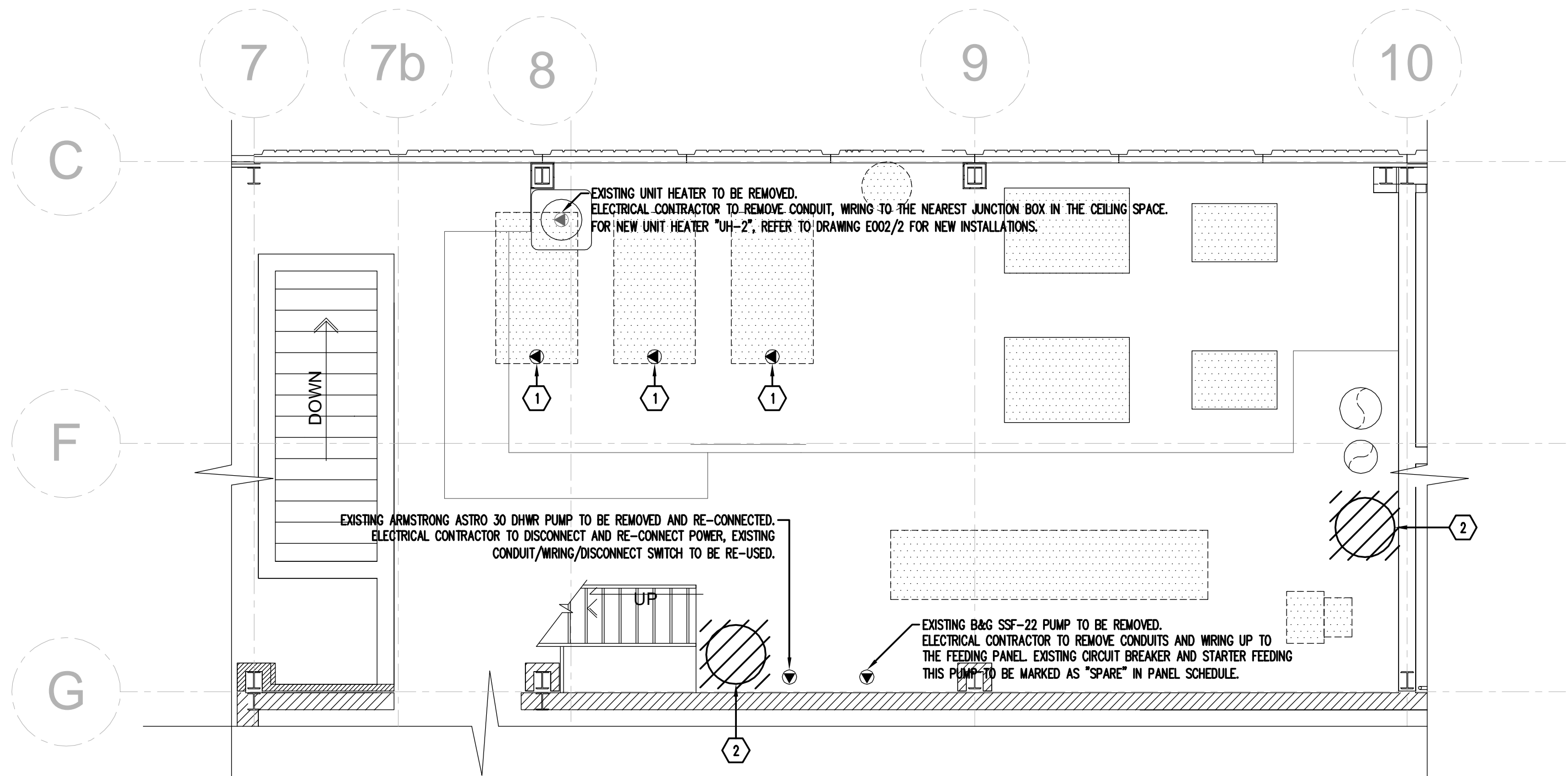




1 MECHANICAL ROOM MAIN FLOOR DEMOLITION LAYOUT  
E-001 / SCALE: 1:50

KEY NOTES:

- 1 ELECTRICAL DEMOLITION REQUIREMENTS TO EXISTING THREE (3) STEAM BOILERS TO BE AS FOLLOWS:  
ELECTRICAL DEVICE AND ITS ASSOCIATED CONDUIT AND WIRING SHALL BE REMOVED UP TO THE CEILING SPACES, EXISTING THREE FUSED SWITCHES (208V/3Ø/15A) IN "MCC-2" FEEDING THESE THREE (3) EXISTING STEAM BOILERS TO BE REPLACED WITH THREE 208V/3Ø/20A NEW FUSED SWITCHES FOR NEW BOILERS. CHANGE THE LAMICOID LABELS ON "MCC-2" TO SUIT NEW BOILER DESCRIPTIONS.
- 2 ELECTRICAL DEMOLITION REQUIREMENTS TO TWO EXISTING HOT WATER TANKS:  
ELECTRICAL DEVICES AND ITS ASSOCIATED CONDUIT AND WIRING SHALL BE REMOVED UP TO THE CEILING SPACES, EXISTING CIRCUIT BREAKERS FEEDING TWO EXISTING HOT WATER TANKS TO BE REUSED FOR TWO NEW HOT WATER TANKS (REFER TO DRAWING E002 KEY NOTE 3 FOR DETAILS). UPDATE PANEL SCHEDULE UPON COMPLETION.
- 3 ELECTRICAL DEMOLITION REQUIREMENTS TO EXISTING CONDENSING PUMPS P-23 & P-24:  
ELECTRICAL DEVICES AND ITS ASSOCIATED CONDUIT AND WIRING SHALL BE REMOVED UP TO MCC "MCC-X" IN MECHANICAL ROOM, EXISTING MCC SECTION LAMICOID FEEDING THESE LOADS TO BE MARKED AS "SPARE".



2 MECHANICAL ROOM SECOND FLOOR DEMOLITION LAYOUT  
E-001 / SCALE: 1:50

ENGINEERING CONSULTANT:



CONSULTANT:

SEAL:



CLIENT:



CLIENT REF. #:

PROJECT:

CANADIAN FOOD  
INSPECTION AGENCY  
BOILER REPLACEMENT  
SASKATOON, SASKATCHEWAN

KEY PLAN:

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L0883 / 121-26464	2013-01-25

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AS NOTED	
DESIGNED BY:	

WY
DRAWN BY:
WY
CHECKED BY:
MJ

DISCIPLINE:	ELECTRICAL
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TITLE:

ELECTRICAL DEMOLITION LAYOUTS

SHEET NUMBER:

E001

SHEET #:

1 of 2

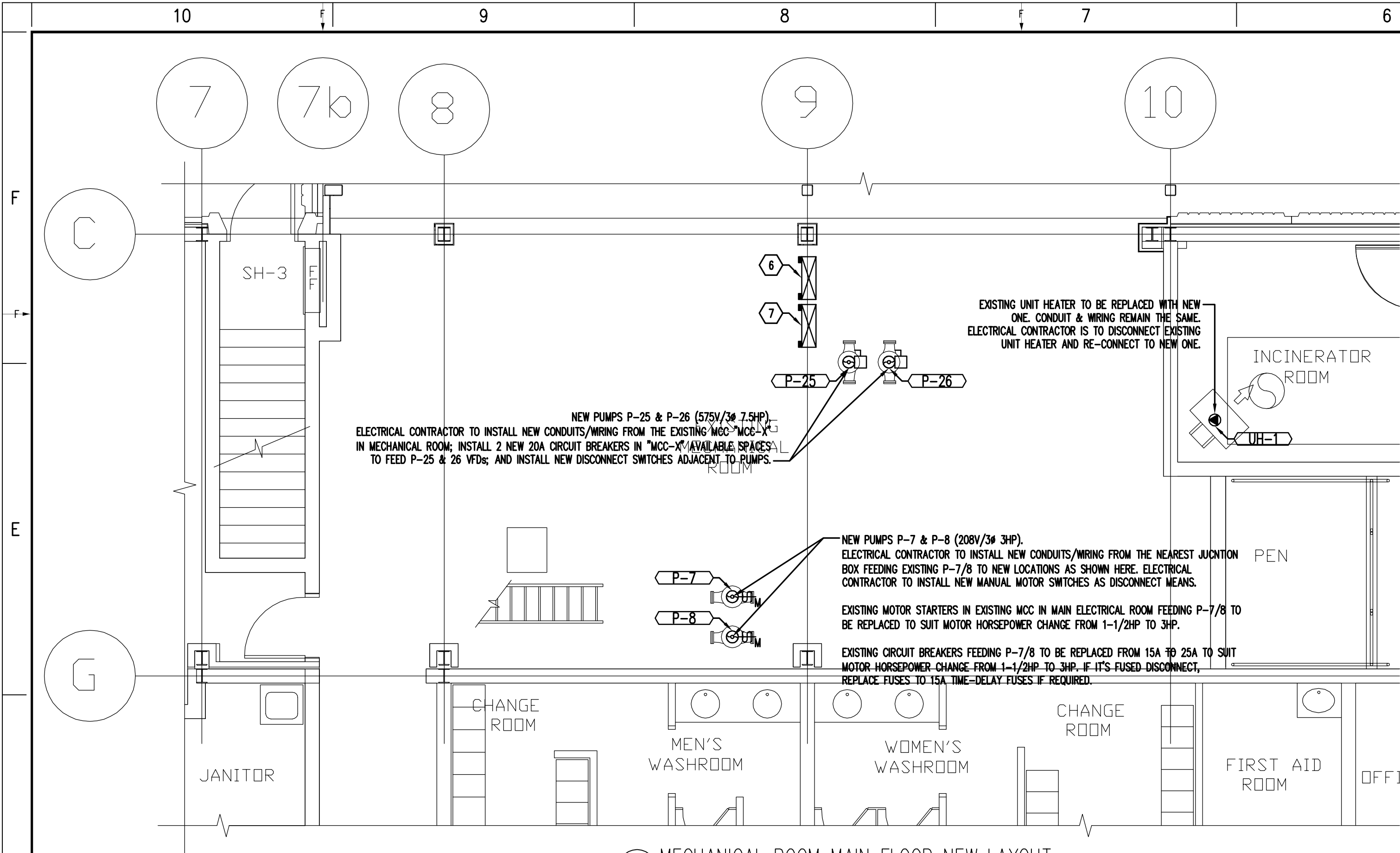
ISSUE:

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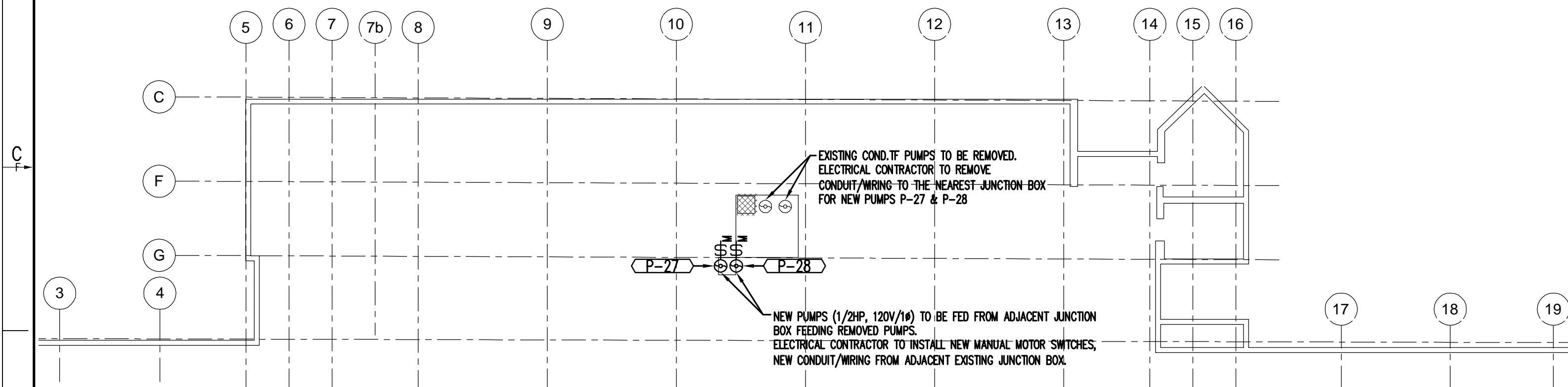
DATE OF: JAN. 25, 2013

REV #

A



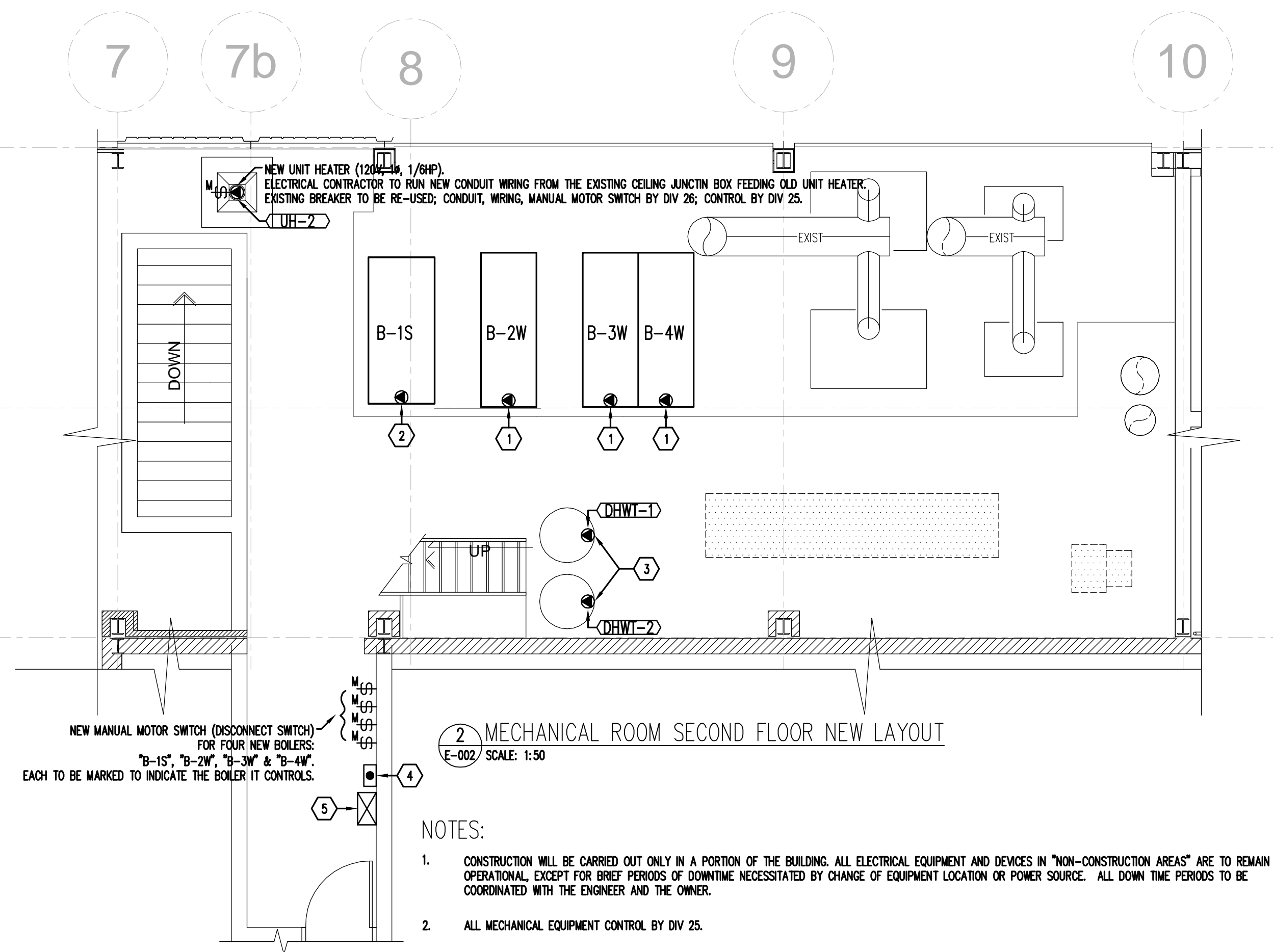
1 MECHANICAL ROOM MAIN FLOOR NEW LAYOUT  
E-002 SCALE: 1:50



3 CRAWL SPACE POWER LAYOUT  
E-002 SCALE: 1:150

KEY NOTES:

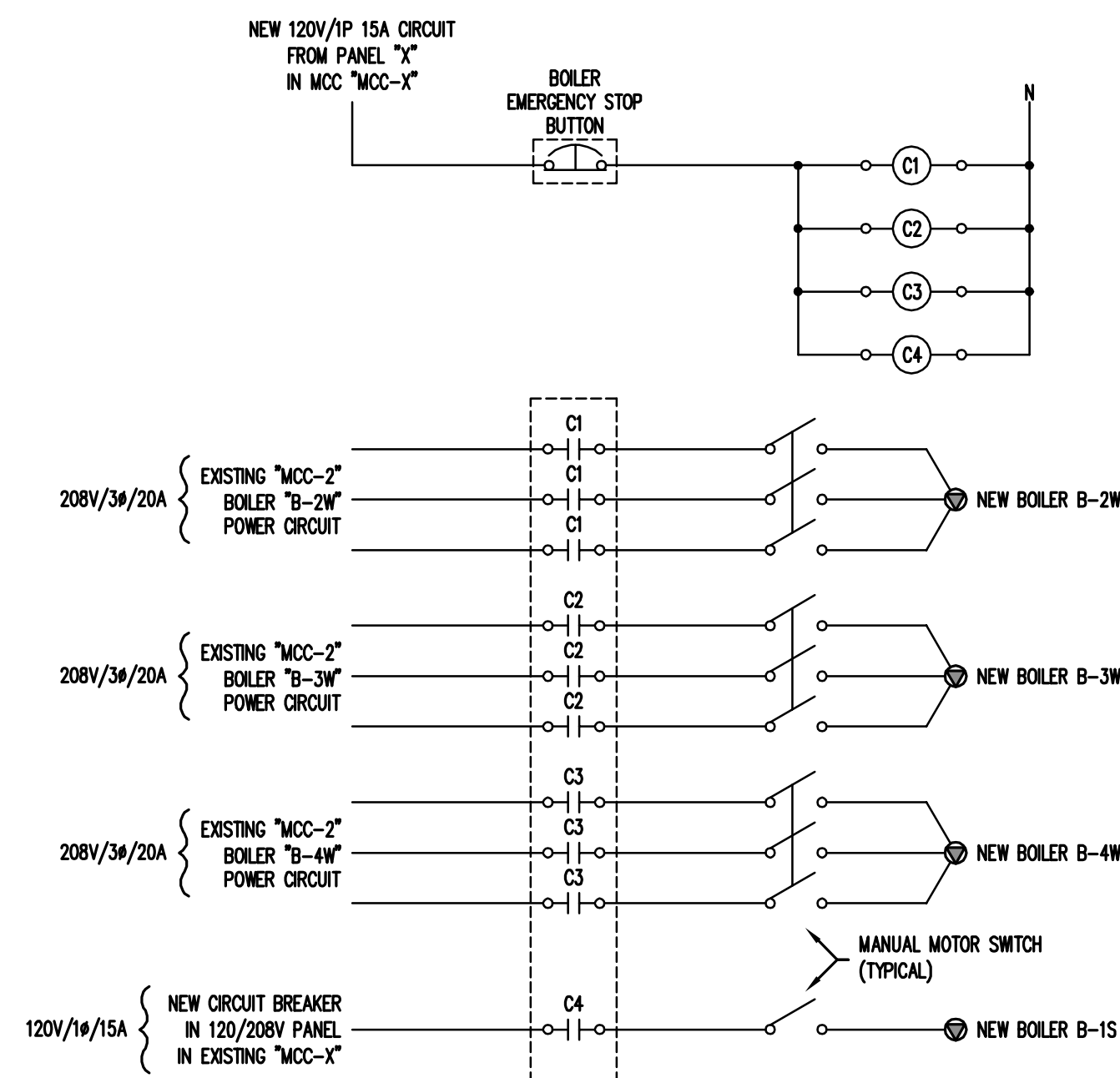
- NEW BOILERS "B-2W, B-3W, B-4W" TO BE FED FROM THREE NEW 208V/3Ø/20A FUSED SWITCHES IN EXISTING "MCC-2" IN MAIN ELECTRICAL ROOM, REFER TO DRAWING E001 KEY NOTE 1 FOR DETAILS. NEW BOILER REQUIRES 5 WIRES, CONTRACTOR TO RUN ADDITIONAL WIRING IF EXISTING WIRING IS NOT SUFFICIENT AND INSTALL NEW CONDUITS IF REQUIRED.
- NEW BOILER "B-1S" TO BE FED FROM EXISTING 120V/208V PANEL IN MCC "MCC-X" IN MECHANICAL ROOM, ELECTRICAL CONTRACTOR TO INSTALL A NEW 1P, 20A CIRCUIT BREAKER AND 16C-3Ø/12 AWG.
- NEW HOT WATER TANKS "DHW-1, DHWT-2" TO BE FED FROM CIRCUITS WHICH FED EXISTING TWO HOT WATER TANKS, REFER TO DRAWING E001 KEY NOTE 2 FOR DETAILS. ELECTRICAL CONTRACTOR TO RUN NEW CONDUITS & WIRING FROM EXISTING CEILING JUNCTION BOXES AS REQUIRED.
- BOILER EMERGENCY STOP BUTTON.
- BOILER EMERGENCY SHUT DOWN CONTROL PANEL. REFER TO E002/4 FOR DETAILS.
- VARIABLE FREQUENCY DRIVE CABINET FOR "P-25". REFER TO SPECIFICATION SECTION 26 29 20 FOR DETAILS. CABLE BETWEEN VFD CABINET AND PUMP TO BE VFD CABLE, REFER TO SPECIFICATION SECTION 26 05 21 FOR DETAILS. VFD CABINET TO BE MOUNTED ON FREE STAND UNISTRUT STRUCTURE BY DIV 26. CONTROL BY DIV.23.
- VARIABLE FREQUENCY DRIVE CABINET FOR "P-26". REFER TO SPECIFICATION SECTION 26 29 20 FOR DETAILS. CABLE BETWEEN VFD CABINET AND PUMP TO BE VFD CABLE, REFER TO SPECIFICATION SECTION 26 05 21 FOR DETAILS. VFD CABINET TO BE MOUNTED ON FREE STAND UNISTRUT STRUCTURE BY DIV 26. CONTROL BY DIV.23.



2 MECHANICAL ROOM SECOND FLOOR NEW LAYOUT  
E-002 SCALE: 1:50

NOTES:




- CONSTRUCTION WILL BE CARRIED OUT ONLY IN A PORTION OF THE BUILDING. ALL ELECTRICAL EQUIPMENT AND DEVICES IN "NON-CONSTRUCTION AREAS" ARE TO REMAIN OPERATIONAL, EXCEPT FOR BRIEF PERIODS OF DOWNTIME NECESSITATED BY CHANGE OF EQUIPMENT LOCATION OR POWER SOURCE. ALL DOWNTIME PERIODS TO BE COORDINATED WITH THE ENGINEER AND THE OWNER.
- ALL MECHANICAL EQUIPMENT CONTROL BY DIV 25.
- MINIMUM ELECTRICAL CONDUIT SIZE IN THIS CONTRACT IS 1" (27mm) TO ACCOMMODATE FUTURE WIRING NEEDS.



4 BOILER EMERGENCY SHUT DOWN SCHEMATIC DIAGRAM  
E-002 SCALE: NTS

NOTES:

- "EMERGENCY BOILERS SHUT DOWN" SIGNAGE SHALL BE INSTALLED RIGHT BESIDE EMERGENCY SHUT DOWN PUSH BUTTON.
- CONTACTORS "C1/C2/C3/C4" TO BE 3-POLE 20A (CONTINUOUS AMPERE RATING).

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CONSULTANT:					
SEAL: 					
CLIENT:  CANADIAN FOOD INSPECTION AGENCY AGENCE CANADIENNE D'INSPECTION DES ALIMENTS					
CLIENT REF. #: PROJECT:					
CANADIAN FOOD INSPECTION AGENCY BOILER REPLACEMENT SASKATOON, SASKATCHEWAN					
KEY PLAN:					
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DATE: 2013-01-25 IF THIS BAR IS NOT 1" LONG, ADJUST YOUR PLOTTING SCALE. 1"					
DISCIPLINE: ELECTRICAL					
TITLE: ELECTRICAL NEW LAYOUTS					
SHEET NUMBER: E002					
SHEET #: 2 OF 2					
ISSUE: ISSUED FOR TENDER					
DATE OF: JAN. 25, 2013					
REV # A					