



Western
Health

**DR. CHARLES L. LEGROW HEALTH CENTRE,
PORT AUX BASQUE, NL
HEAT EXCHANGERS & PUMPS REPLACEMENT**



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LIST OF DRAWINGS

- | | |
|-------------|---|
| ME-1 | LEVEL 1 PLAN "B" - MECHANICAL AND ELECTRICAL DEMOLITION LAYOUT |
| ME-2 | LEVEL 1 PLAN "B" - MECHANICAL AND ELECTRICAL NEW LAYOUT |
| ME-3 | MECHANICAL SCHEDULES, DETAILS & LEGEND |

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DRAWING NOTES:

- NEW SHELL AND TUBE HEAT EXCHANGERS. PROVIDE ANY PIPING, FITTINGS ETC., AS REQUIRED TO CONNECT SUPPERS. EXISTING PIPING SHALL BE ISOLATED AND REPLACED ONE AT A TIME TO ENSURE HEATING SYSTEM REMAINS OPERATIONAL. FOR DESCRIPTION SEE SCHEDULE AND DETAIL. 1
- NEW CHILLED WATER PUMPS. PROVIDE ANY PIPING, FITTINGS ETC., AS REQUIRED TO CONNECT PUMPS INTO EXISTING PIPING. PUMPS SHALL BE REPLACED ONE AT A TIME TO ENSURE HEATING SYSTEM REMAINS OPERATIONAL. FOR DESCRIPTION SEE SCHEDULE AND DETAIL. 2
- NEW HEATING WATER PUMPS. PROVIDE ANY PIPING, FITTINGS ETC., AS REQUIRED TO CONNECT PUMPS INTO EXISTING PIPING. PUMPS SHALL BE REPLACED ONE AT A TIME TO ENSURE HEATING SYSTEM REMAINS OPERATIONAL. FOR DESCRIPTION SEE SCHEDULE AND DETAIL. 2
- NEW THERMAL EXPANSION TANK, "AMTROL" MODEL No. ST-210VC TANK VOLUME 30.0GAL. MAX. ACCEPTANCE VOLUME 35.0GAL, OR APPROVED EQUAL. 3

SCHEDULING NOTE:

- ALL SCHEDULES SHALL BE APPROVED BY OWNER AND CONTRACTOR. ANY SHUT-DOWNS OF MAIN EQUIPMENT SHALL BE COORDINATED AND APPROVED BY OWNER.

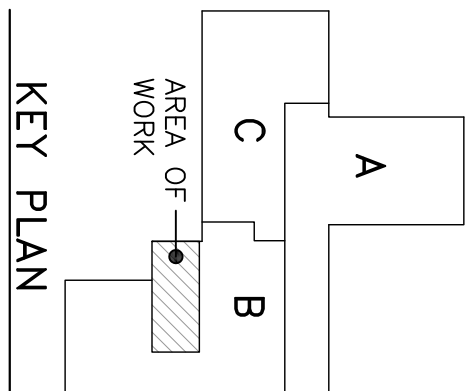
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GENERAL NOTES:

- MODIFY EXISTING PIPING TO SUIT NEW EQUIPMENT INSTALLATION.
- PROVIDE ALL NEW PIPE AND FITTINGS TO CONNECT NEW EQUIPMENT TO EXISTING PIPING.
- RECONNECT WIRING & CONDUIT AFTER REPLACEMENT OF PUMPS. EXTEND AS NECESSARY. MAKE FINAL CONNECTION TO PUMP WITH FLEXIBLE METAL CONDUIT.
- INSPECT MOTOR STARTERS WITHIN MCC. REPLACE FUSES WITH NEW. MATCH EXISTING. ADJUST OVERLOADS AS NECESSARY TO MATCH NEW MOTORS.
- ALL EXISTING PIPE SIZES SHALL BE CONFIRMED BY THE CONTRACTOR AND ADJUSTMENTS MADE TO PIPE SIZES IF NECESSARY.

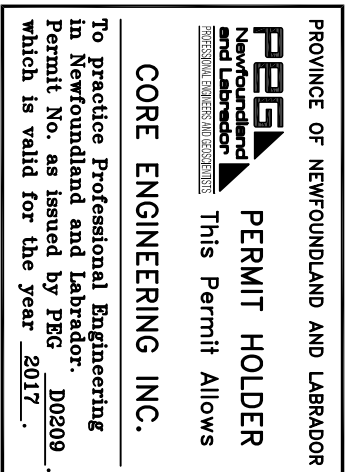
GENERAL NOTES

- CONTRACTOR MUST VERIFY AND COORDINATE ALL DIMENSIONS AND CONDITIONS ON SITE BEFORE PROCEEDING WITH ANY PORTION OF THIS WORK. DO NOT SCALE FROM DRAWING.
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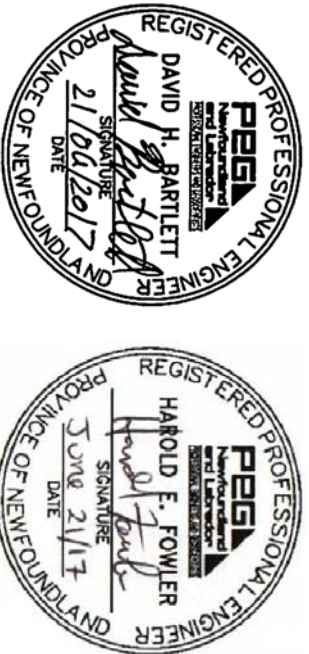


Rev. No.	Description	Date
R0	ISSUED FOR TENDER	21/06/17

REVISIONS



Professional Stamp



Consultant:



Client:



Project Title:

DR. CHARLES L. LEGROW
HEALTH CENTRE,
HEAT EXCHANGERS & PUMPS
REPLACEMENT
PORT AUX BASQUE

Drawing Title:

LEVEL 1 PLAN "B"
MECHANICAL & ELECTRICAL
NEW LAYOUT

Drawn By:	Checked By:
S.M.	H.F. & D.B.

Date:	Project No.:
JUNE 2017	17-2672

Scale:	AS SHOWN
Dwg. No.	ME-2

LEVEL 1 PLAN "B" – MECHANICAL AND ELECTRICAL NEW LAYOUT

SCALE: 1:50



MECHANICAL LEGEND

== LPC ==	EXISTING LOW PRESSURE CONDENSATE PIPING
== LPS ==	EXISTING LOW PRESSURE STEAM PIPING
== PC ==	EXISTING PUMPED CONDENSATE PIPING
== CMS ==	EXISTING CHILLED WATER SUPPLY PIPING
== CMR ==	EXISTING CHILLED WATER RETURN PIPING

SHELL AND TUBE HEAT EXCHANGER SCHEDULE

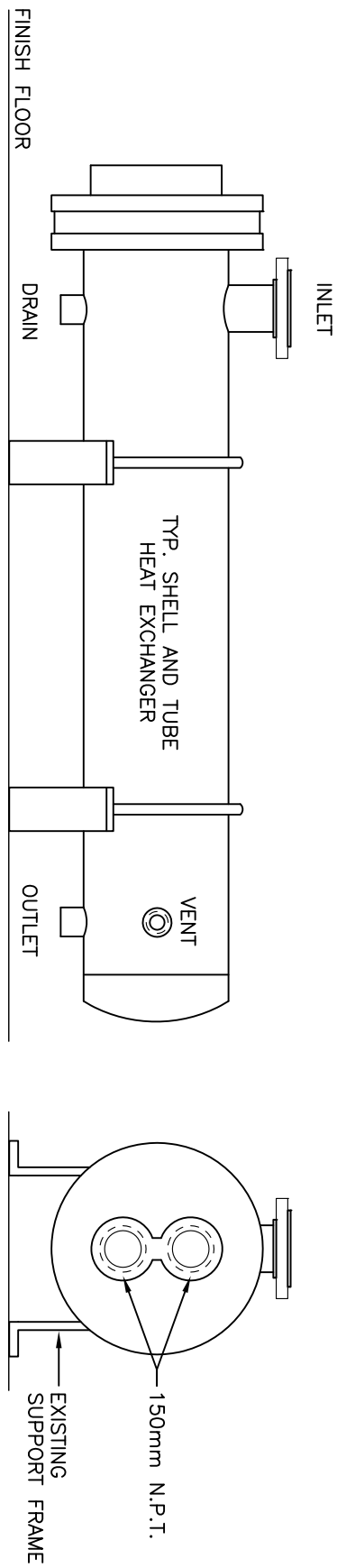
TAG	MANUFACTURER	MODEL	CAPACITY (KW)	SHELL SIDE			TUBE SIDE			NUMBER OF PASSES	MAX ASSEMBLY LENGTH (M)	SHELL MATERIAL	TUBE MATERIAL	REMARKS				
				FLUID	FLOW (KG/HR)	STEAM °C	OPERATING PRESS(KG/CM2)	DESIGN PRESS(Pa)	FLUID						FLOW (L/S)	EMT °C	LMT °C	MAX PRESS. DROP (KPa)
HEX-1	ARMSTRONG	WS-147-2-1	586	STEAM	938	103.9	13.8	1034	WATER	3.6	42.8	82.2	103	862	2	2.33	PLAIN STEEL	COPPER DOWN CLAMPS AND BOLTS TO BE SUPPLIED WITH HOLD DOWN CLAMPS AND BOLTS
HEX-2	ARMSTRONG	WS-147-2-1	586	STEAM	938	103.9	13.8	1034	WATER	3.6	42.8	82.2	103	862	2	2.33	PLAIN STEEL	COPPER DOWN CLAMPS AND BOLTS

NOTES:
1. EXCHANGERS TO BE SUPPLIED WITH SHELL DRAIN CONNECTION AND 25mm DIA. NPT TOP RELIEF VALVE CONNECTION.
2. EXCHANGERS TO BE ASME CONSTRUCTION WITH NL GRN.
3. NON-ASBESTOS GASKETS.
4. TUBE BUNDLES TO BE COPPER.
5. SHELL INLET 8"ANSI RF, 2.5" NPT F TUBE AND 6" NPT F

PUMP SCHEDULE

TAG	SERVICE	MANUFACTURER	MODEL	FLUID	TYPE	SIZE	PIPE SIZE	IMP.	DIFF. HEAD (KPa)	FLOW RATE (L/s)	RPM	MOTOR (KW)	ELECTRICAL DATA VOLT PH CYC	REMARKS
P-1	CHILLED WATER SYS	ARMSTRONG	4380	WATER	VERTICAL IN-LINE	3x3x8	75mm	7.61	149.5	17.17	1765	5.6	208 3 60	MOTOR SHALL BE INVERTOR DUTY
P-2	CHILLED WATER SYS	ARMSTRONG	4380	WATER	VERTICAL IN-LINE	3x3x8	75mm	7.61	149.5	17.17	1765	5.6	208 3 60	MOTOR SHALL BE INVERTOR DUTY
P-3	HEATING WATER SYS	ARMSTRONG	4380	WATER	VERTICAL IN-LINE	2x2x8	50mm	7.86	164.5	8.83	1765	3.73	208 3 60	MOTOR SHALL BE INVERTOR DUTY
P-4	HEATING WATER SYS	ARMSTRONG	4380	WATER	VERTICAL IN-LINE	2x2x8	50mm	7.86	164.5	8.83	1765	3.73	208 3 60	MOTOR SHALL BE INVERTOR DUTY
P-5	HEATING WATER SYS	ARMSTRONG	4380	WATER	VERTICAL IN-LINE	2x2x8	50mm	7.86	164.5	8.83	1765	3.73	208 3 60	MOTOR SHALL BE INVERTOR DUTY

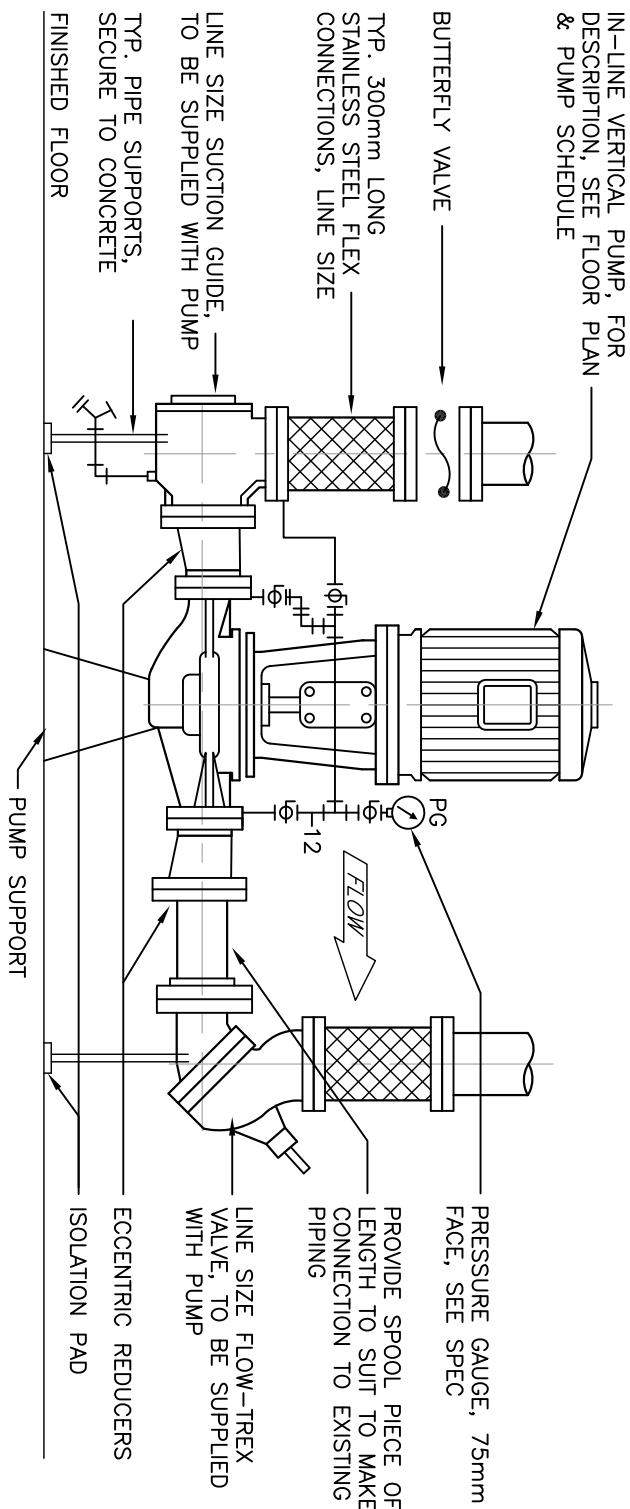
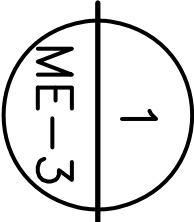
NOTE:
1. ALL PUMPS TO BE SUPPLIED WITH INVERTER DUTY MOTORS(TEC)
2. ALL VERTICAL INLINE PUMPS TO BE SUPPLIED WITH PUMP BASE SUPPORTS, SUCTON STRAINER/DIFFUSER(PIPE LINE SIZE) AND COMB. DISCHARGE WATER(PIPE LINE SIZE)



NOTES:
1. CONFIRM COMPONENTS/ARRANGEMENT WITH APPROVED SHOP DRAWING.

TYP. SHELL & TUBE EXCHANGER SUPPORT DETAIL

SCALE: N.T.S.

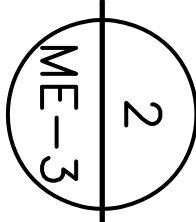


NOTES:
1. CONFIRM COMPONENTS/ARRANGEMENT WITH APPROVED SHOP DRAWING.
2. ALL PIPING, FITTINGS, VALVES, INCLUDING PUMP BODY TO BE INSULATED.

TYP. VERTICAL IN-LINE PUMP ASSEMBLY

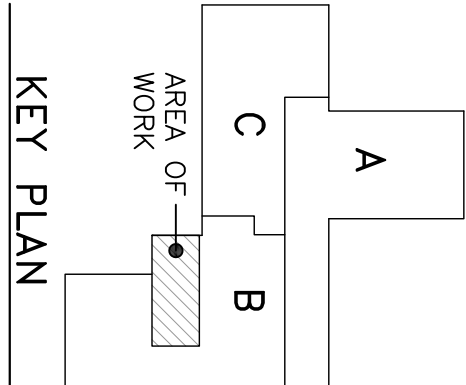
PIPING DETAIL

SCALE: N.T.S.



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REVISIONS

PROFESSIONAL PERMIT
PERMIT HOLDER
CORE ENGINEERING INC.
To practice Professional Engineering Permit No. as issued by PEG. 00209. which is valid for the year 2017.

Professional Stamp



Consultant:

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57 Main Road, St. John's, NL, Canada A1B 4H8
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MECHANICAL SCHEDULES,
DETAILS & LEGEND

Drawn By:	Checked By:
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Dwg. No.	ME-3