

LEGEND - PIPING

-----	DEMOLITION	Ⓜ	METER
_____	EXISTING TO REMAIN	∇	CHECK VALVE
_____	NEW CONSTRUCTION	▽	REDUCER
_____	CHILLED WATER SUPPLY	⊗	MOTORIZED CONTROL VALVE
_____	CHILLED WATER RETURN	⊙	PUMP
_____	CONDENSER COOLING WATER SUPPLY	N.O.	VALVE DESCRIPTION-NORMALLY OPEN
_____	CONDENSER COOLING WATER RETURN	N.C.	VALVE DESCRIPTION-NORMALLY CLOSED
_____	REFRIGERANT PIPING (LIQUID)	TDV	TRIPLE DUTY VALVE
_____	REFRIGERANT HOT GAS PIPING (DISCHARGE)	□	TIE-POINT
⊗	BALL VALVE	TP XX	COOLING TOWER
∇	STRAINER	CT-X	POT FEEDER
≡	UNION	PF	ECCENTRIC REDUCER INSTALLED FLAT ON TOP
	BUTTERFLY VALVE	F.O.T	
⊗	SOLENOID VALVE		
⊗	BALANCING VALVE		
⊗	PRESSURE REDUCING VALVE		
⊗	PRESSURE GAUGE		
⊗	THERMOMETER		

LEGEND - PLUMBING

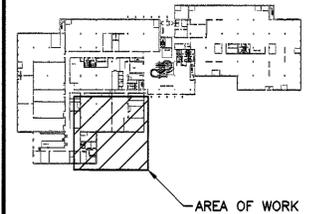
-----	DOMESTIC COLD WATER
_____	SANITARY LINE
⊗FD	FLOOR DRAIN
⊗FFD	FUNNEL FLOOR DRAIN
⊗CO	CLEAN OUT

LEGEND - CONTROLS

-----	WIRING
⊗	PUMP
⊗T-x	TEMPERATURE SENSOR AND THERMOWELL
⊗	MOTORIZED CONTROL VALVE
⊗	SOLENOID
⊗	REFRIGERANT SENSOR
⊗	PNEUMATIC DAMPER
⊗	FLOW SWITCH



KEYPLAN:



NOTES

SEQUENCE OF WORK - CHILLERS INSTALLATION

SOURCE OF AIR CONDITIONING MUST BE MAINTAINED TO SERVER ROOMS AND OTHER CRITICAL ROOMS AT ALL TIMES DURING CONSTRUCTION (THESE SPACES ARE CURRENTLY SERVED BY THE 100 TON SMARTD AND 45 TON MCQUAY CHILLERS). DURING SHUTDOWN OF COOLING SYSTEM, THE OWNER WILL PROVIDE TEMPORARY A/C FROM AN EXISTING ROOFTOP AIR HANDLING UNIT AND PORTABLE A/C UNITS. THIS SHUT DOWN TO OCCUR ON A WEEKEND WITH MAXIMUM PERMISSIBLE TIME FRAME OF 48 HOURS. CONTRACTOR TO PROVIDE 14 DAYS NOTICE PRIOR TO CHANGE OVER. THE FOLLOWING IS THE SUGGESTED ORDER OF EQUIPMENT REMOVAL AND NEW EQUIPMENT INSTALLATION TO MINIMIZE THE SHUTDOWN TIMEFRAME OF THE CHILLERS SERVING THE SERVER ROOMS AND OTHER CRITICAL SPACES. GENERAL CONSTRUCTION TO TAKE PLACE DURING THE NON-COOLING SEASON WHEN THE COOLING TOWERS AND CHILLERS SERVING THE BUILDING MAIN AHU'S ARE NORMALLY SHUTDOWN.

- DEMOLISH THE TWO (X2) 400 TON CHILLERS, COOLING TOWERS AND ASSOCIATED CHILLED WATER PUMPS, COOLING TOWER PUMPS AND PIPING.
- COORDINATE WITH OWNER FOR BACKUP A/C. SHUT DOWN THE SMARTD 60 TON AND 45 TON MCQUAY CHILLERS, DRAIN THE SERVER ROOM HEADER AND REMOVE PIPING AT TIE-IN POINT 11 AND TIE-IN POINT 12. INSTALL 150MM TAKE OFF'S WITH BUTTERFLY VALVES AT TIE-IN POINT 11 AND AT TIE-IN POINT 12. INSTALL BUTTERFLY VALVES IN EXISTING LINES AT TAKE-OFFS TO THE 60 TON SMARTD AND THE 45 TON MCQUAY. INSTALL NEW BUTTERFLY VALVES IN THE EXISTING 100MM SUPPLY AND RETURN PIPES THAT INTERCONNECT THE DATA CENTER HEADER TO THE MAIN BUILDING CHILLED WATER SYSTEM. RECHARGE THE SYSTEM WITH WATER AND START UP THE EXISTING SMARTD AND MCQUAY CHILLERS.
- DEMOLISH HEAT EXCHANGER (H/X-2), AND ASSOCIATED CHILLED WATER AND CONDENSER WATER PIPING.
- INSTALL THE NEW 100 TON SERVER ROOM CHILLERS (CH-4, CH-5), CONDENSERS, PUMPS, AND ASSOCIATED PIPING. TIE IN TO THE BUTTERFLY VALVES AT TIE-IN POINT 11 AND TIE-IN POINT 12. PERFORM WATER FILL, ELECTRICAL HOOK UP, REFRIGERANT CHARGE, ETC READY FOR START UP.
- START UP AND COMMISSION THE NEW SERVER ROOM CHILLERS (CH-4, CH-5) AND ASSOCIATED CHILLED WATER PUMPS, CONDENSER ETC. ONCE THEY ARE FULLY COMMISSIONED AND OPERATIONAL, THEN THE EXISTING 60 TON SMARTD AND 45 TON MCQUAY CAN BE SHUT DOWN AND ISOLATED FROM THE CHILLED WATER HEADER.
- DEMOLISH THE OLD SERVER ROOM EQUIPMENT INCLUDING THE SMARTD CHILLER, MCQUAY CHILLER, ALL ASSOCIATED PIPING AND PUMPS. DEMOLISH THE FLUID COOLERS, PUMPS, AND GLYCOL FEED EQUIPMENT.
- PROCEED TO INSTALL THE NEW MAIN BUILDING CHILLERS (CH-1, CH-2, CH-3), COOLING TOWERS, AND ASSOCIATED PUMPS AND PIPING.

GENERAL MECHANICAL DEMOLITION NOTES

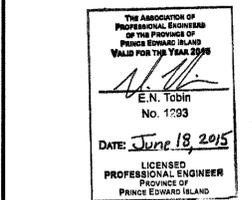
- VISIT THE SITE AND ESTABLISH CONDITIONS PRIOR TO SUBMITTING THE TENDER
- CONTRACTOR TO VERIFY SITE CONDITIONS AND OBSTRUCTIONS PRIOR TO CONSTRUCTION. NOT ALL EXISTING PIPING IS SHOWN FOR CLARITY.
- REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PLACING ORDERS AND PROCEEDING WITH THE CONSTRUCTION.
- PROVIDE ALL LIFTING, HOISTING, RIGGING, AERIAL ACCESS AND OTHER EQUIPMENT REQUIRED FOR PERFORMANCE OF WORK.
- REMOVE ALL DEMOLISHED MATERIAL FROM SITE AND PAY ALL TRANSPORTATION, TIPPING AND OTHER FEES ASSOCIATED WITH MATERIAL DISPOSAL.
- REPAIR AND MAKE GOOD DAMAGE TO ANY OTHER WORK AT NO EXTRA CHARGE.
- DO NOT ALLOW CONSTRUCTION MATERIAL TO ACCUMULATE ON SITE. CLEAN UP AT THE END OF EACH DAY AND AT THE COMPLETION OF THE JOB.
- CONTRACTOR TO COORDINATE ALL DEMOLITION WORK WITH BUILDING OPERATORS TO ENSURE HEATING SYSTEM REMAINS OPERATIONAL AT ALL TIMES.
- HEATING SYSTEM ACCESSORIES TO BE REMOVED AND RELOCATED TO ALLOW NEW CONSTRUCTION PROCESS ONLY.
- COORDINATE COOLING TOWER DEMOLITION AND CONSTRUCTION WITH UNDERGROUND FUEL LINES AND ELECTRICAL TO REMAIN.
- POT FEEDERS TO BE REMOVED WITH ASSOCIATED PUMPS. REUSE BROMINE FEEDER WITH NEW CONSTRUCTION
- CONTRACTOR TO REFERENCE SCHEMATIC DRAWING TO CONFIRM ALL ASSOCIATED ACCESSORY EQUIPMENT FOR REMOVALS AND TIE-INS.
- REMOVE ALL CONCRETE HOUSEKEEPING PADS. REINSTATE AND PAINT TO MATCH SURROUNDING.

SCHEDULES

TIE IN POINT SCHEDULE

ID	SERVICE	LOCATION	JOINT TYPE*	PIPE SIZE*	ELEVATION	NOTES	DWG REFERENCE
TP-1	BLDG CHILLED WATER RETURN	MECH RM	TBD	200	2.75M AFF	PROVIDE THERMOMETER (SEE DWG M-6)	M-3, M-5, M-6,
TP-2	BLDG CHILLED WATER SUPPLY	MECH RM	TBD	200	2.73M AFF	PROVIDE THERMOMETER (SEE DWG M-6)	M-3, M-5, M-6,
TP-3	COOLING TOWER WATER, CT-3	MECH RM	TBD	250	TBD	TIE IN @ ELBOW IN PIT	M-3, M-5, M-6, M-8
TP-4	COOLING TOWER WATER, CT-3	MECH RM	TBD	250	1.05M AFF	TIE IN AFTER VALVE	M-3, M-5, M-6, M-8
TP-5	COOLING TOWER WATER, CT-2	MECH RM	TBD	250	TBD	TIE IN @ ELBOW IN PIT	M-3, M-5, M-6, M-8
TP-6	COOLING TOWER WATER, CT-2	MECH RM	TBD	250	1.05M AFF	TIE IN AFTER VALVE	M-3, M-5, M-6, M-8
TP-11	SERVER RM CHILLED WATER RETURN	MECH RM	TBD	100	2.3M AFF		M-3, M-5, M-6,
TP-12	SERVER RM CHILLED WATER SUPPLY	MECH RM	TBD	100	2.3M AFF		M-3, M-5, M-6,
TP-15	COOLING TOWER MAKEUP WATER	MECH RM	THREADED	50	3.7M AFF		M-3, M-5, M-6, M-9

*NOTE: JOINT TYPE TO BE CONFIRMED BY CONTRACTOR WHEN INSULATION IS REMOVED. PIPE SIZE OF EXISTING PIPE BASED ON BUILDING AS BUILT DRAWINGS. CONTRACTOR TO CONFIRM.



P4	ISSUED FOR TENDER	JUN 19 2015
P3	ISSUED FOR 100% REVIEW	MAY 4 2015
P2	ISSUED FOR 99% REVIEW	MAR 23 2015
revisions		date

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 / projet
JOSEPH A GHIZ
BUILDING CHILLER PLANT REPLACEMENT

SUMMERSIDE, PEI

drawing / dessin

GENERAL LEGEND MECHANICAL NOTES & SCHEDULES

designed SF / conceu
 date JAN, 2015

drawn TC / dessine
 date JAN, 2015

approved NT / approuve
 date JAN, 2015

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