

BUILDING KEY PLAN

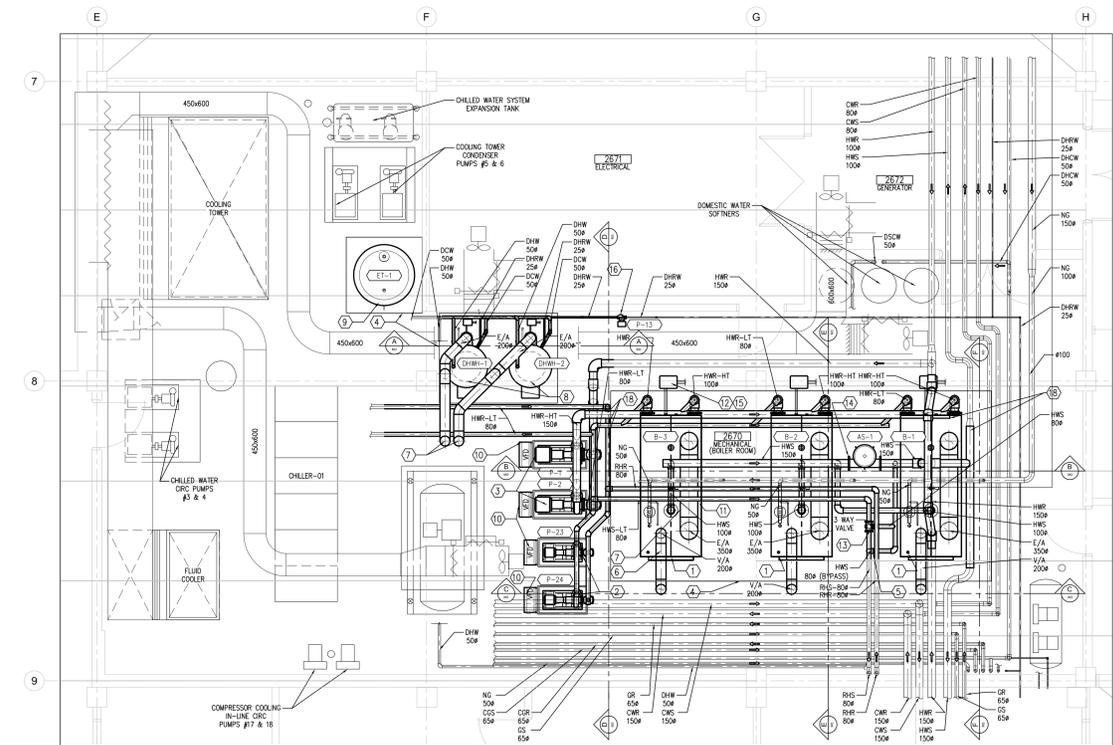
LEGEND

GENERAL NOTES:

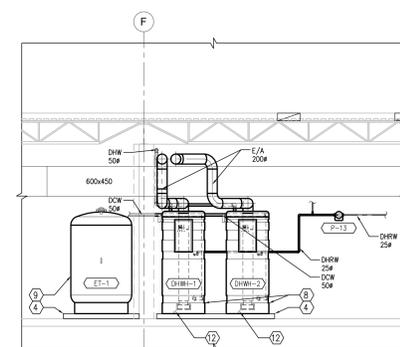
- DO NOT SCALE THIS DRAWING. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO INSTALLATION AND REPORT ANY DISCREPANCY TO THE DEPARTMENTAL REPRESENTATIVE.
- CONTRACTOR SHALL INCLUDE FOR AND PROVIDE ALL COORDINATION BETWEEN TRADES AND CONSULTANT ON AND OFF SITE AS REQUIRED FOR INSTALLATION OF MECHANICAL AND ELECTRICAL SYSTEMS. WHERE MINOR REROUTING OF SERVICES IS REQUIRED DUE TO ON-SITE CONDITIONS, IT SHALL BE PERFORMED AT NO ADDITIONAL COST.
- FIRE STOP ALL PIPE PENETRATIONS WHERE THEY PASS THROUGH FIRE-RATED WALLS. CONFIRM ON-SITE FOR LOCATION OF RATED WALLS AND THEIR RATING IN HOURS.
- CONFORM TO SPECIFICATIONS AND MANUFACTURER GUIDES FOR MATERIALS AND UNITS' INSTALLATION DETAILS.
- CHECK FOR ASBESTOS BEFORE PERFORMING DEMOLITION WORK. ASBESTOS REMOVAL TO BE DONE BY OTHERS.
- PIPING ROUTE AND SIZING WAS DRAFTED BASED ON SITE MARKUPS AND ORIGINAL DRAWINGS. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO INSTALLATION AND REPORT ANY DISCREPANCY TO THE DEPARTMENTAL REPRESENTATIVE.
- PROVIDE TEMPORARY HEATING AS REQUIRED. DO NOT USE NEW EQUIPMENT FOR THIS PURPOSE WITHOUT THE EXPRESS CONSENT OF THE ENGINEER. REFER TO DRAWING M12.
- SCHEDULING OF ALL WORK SHALL BE ARRANGED WITH THE OWNER. COORDINATE THE SHUT-DOWN OF EXISTING UTILITIES AND SERVICES AS REQUIRED FOR CONNECTIONS OF NEW WORK WITHIN THE BUILDING MAY HAVE TO BE PERFORMED DURING NON-REGULAR HOURS, AND MUST CONFORM TO THE WORK RULES OF THE BUILDING, AS DIRECTED BY THE OWNER.

NEW SYSTEMS KEYNOTES:

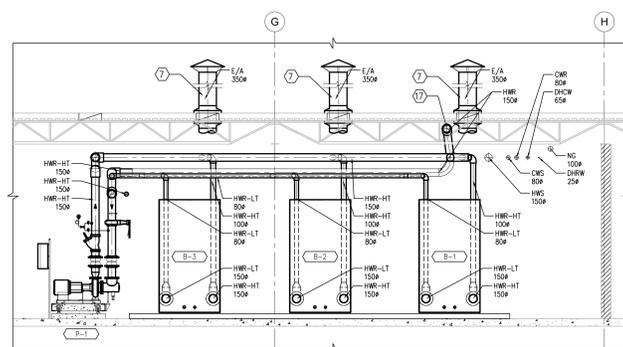
- PROVIDE THREE NEW CONDENSING BOILER. REFER TO DRAWING M13 FOR MORE INFORMATION.
- PROVIDE TWO NEW RADIATION RECIRCULATION PUMPS WITH VFDs. PROVIDE NEW PIPING, CONNECTING NEW PUMPS TO NEW BOILERS AND EXISTING SYSTEMS.
- PROVIDE TWO NEW HOT WATER CIRCULATION PUMPS WITH VFDs. PROVIDE NEW PIPING, CONNECTING NEW PUMPS TO NEW BOILERS AND EXISTING SYSTEMS.
- PROVIDE NEW HOUSEKEEPING PADS. REFER TO STRUCTURAL DRAWINGS FOR MORE DETAILS.
- PROVIDE NEW PIPING AS INDICATED. REFER TO DRAWING M9 FOR MORE DETAILS.
- NEW DIRECT VENT DUCT. PROVIDE NEW ROOF PENETRATION FOR THE PROPOSED SYSTEM INSTALLATION.
- NEW STACK VENT DUCT. PROVIDE NEW CHIMNEY AND USE EXISTING ROOF PENETRATION FOR EXHAUST SYSTEM. COORDINATE ON-SITE.
- PROVIDE TWO NEW DOMESTIC HOT WATER HEATERS AND CONNECT TO EXISTING SYSTEMS. REFER TO DRAWING M13 FOR EQUIPMENT DETAILS.
- PROVIDE EXPANSION TANK AND CONNECT TO HOT WATER PIPING. REFER TO DRAWINGS M9 AND M13.
- PROVIDE UNRESTRICTED STRUCTURE FOR MOUNTING OF VFD AND SWITCH DISCONNECT. SUBMIT SHOP DRAWING FOR APPROVAL.
- PROVIDE NEW OUTDOOR AIR SENSOR. SITE CONFIRM BEST LOCATION FOR INSTALLATION.
- PROVIDE ACID NEUTRALIZATION TANK ON CONDENSATE DRAIN WATER LINES FOR NEW BOILERS AND DOMESTIC WATER HEATERS AND CONNECT TO EXISTING DRAIN.
- PROVIDE NEW MIXING 3 WAY VALVE WITH BYPASS. COMPLETE WITH VALVES AND FILTERS.
- PROVIDE NEW AIR SEPARATOR AND STRUCTURE. REFER TO SCHEDULE FOR EQUIPMENT DETAILS.
- CONNECT EQUIPMENT TO EXISTING DRAIN, WATER AND NATURAL GAS SYSTEMS (TYPICAL).
- PROVIDE NEW DHW RECIRCULATION PUMP.
- HOT WATER RETURN PIPE TO BE INSTALLED THROUGH GAP IN THE OPEN WEB STEEL JOIST. CONFIRM AND COORDINATE BEST LOCATION ON-SITE.
- COORDINATE REMOVAL AND INSTALLATION OF NEW SYSTEMS WITH EXISTING DUCTS AND PIPING BELOW. ALLOW FOR ADJUSTMENTS AS REQUIRED.



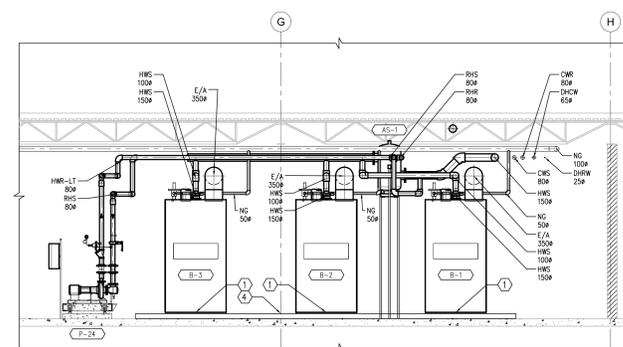
1 BOILER ROOM - NEW SYSTEMS
 M3 1/50



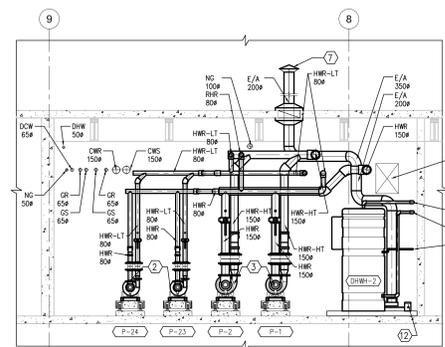
A SECTION - DOMESTIC HOT WATER HEATER DETAIL
 M3 1/50



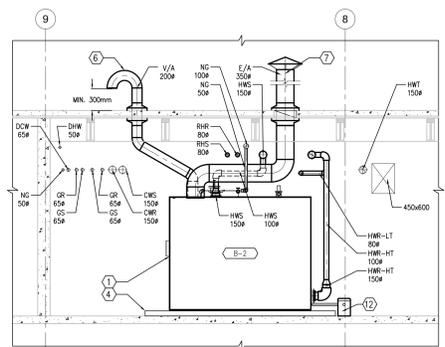
B SECTION - BOILERS DETAIL 01
 M3 1/50



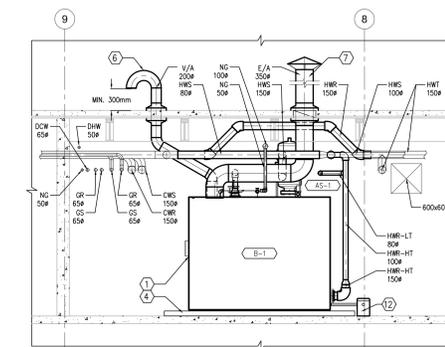
C SECTION - BOILERS DETAIL 02
 M3 1/50



D PUMP DETAIL - PROPOSED
 M3 1/50



E BOILER DETAIL - PROPOSED
 M3 1/50



F BOILER DETAIL - PROPOSED
 M3 1/50



revisions	description	date
1	ISSUED FOR CONSTRUCTION	30-JUN-2017
0	ISSUED FOR BIDD REVIEW	28-APR-2017

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

NHRC MECHANICAL UPGRADES BOILERS REPLACEMENT
 NATIONAL HYDROLOGY RESEARCH CENTRE
 11 INNOVATION BOULEVARD
 SASKATOON, SASKATCHEWAN

BOILER ROOM NEW SYSTEMS

Designed By MIG	Conçu par MIG
Date 2017/04/28	(yyyy/mm/dd)
Drawn By MIG	Dessiné par MIG
Date 2017/04/28	(yyyy/mm/dd)
Reviewed By DHT	Examiné par DHT
Date 2017/06/19	(yyyy/mm/dd)
Approved By DHT	Approuvé par DHT
Date 2017/06/23	(yyyy/mm/dd)

Tender
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EC Proj no.
 NHRC-010

Consultant Proj no.
 16131

Drawing no.
M3