

ST. MICHEAL (BRIGHT'S GROVE)

BOILER REPLACEMENT

BRIGHT'S GROVE

ONTARIO

C&B PROJECT NO. 6758

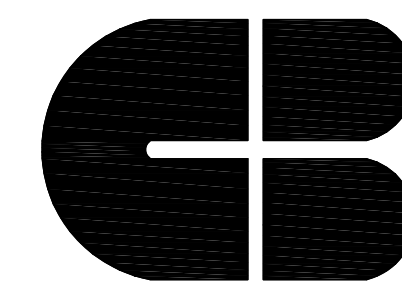
MARCH 14, 2011

ISSUED FOR TENDER



**ST. CLAIR CATHOLIC
DISTRICT SCHOOL BOARD**

Lighting the Way ~ Rejoicing in Our Journey



Chorley + Bisset

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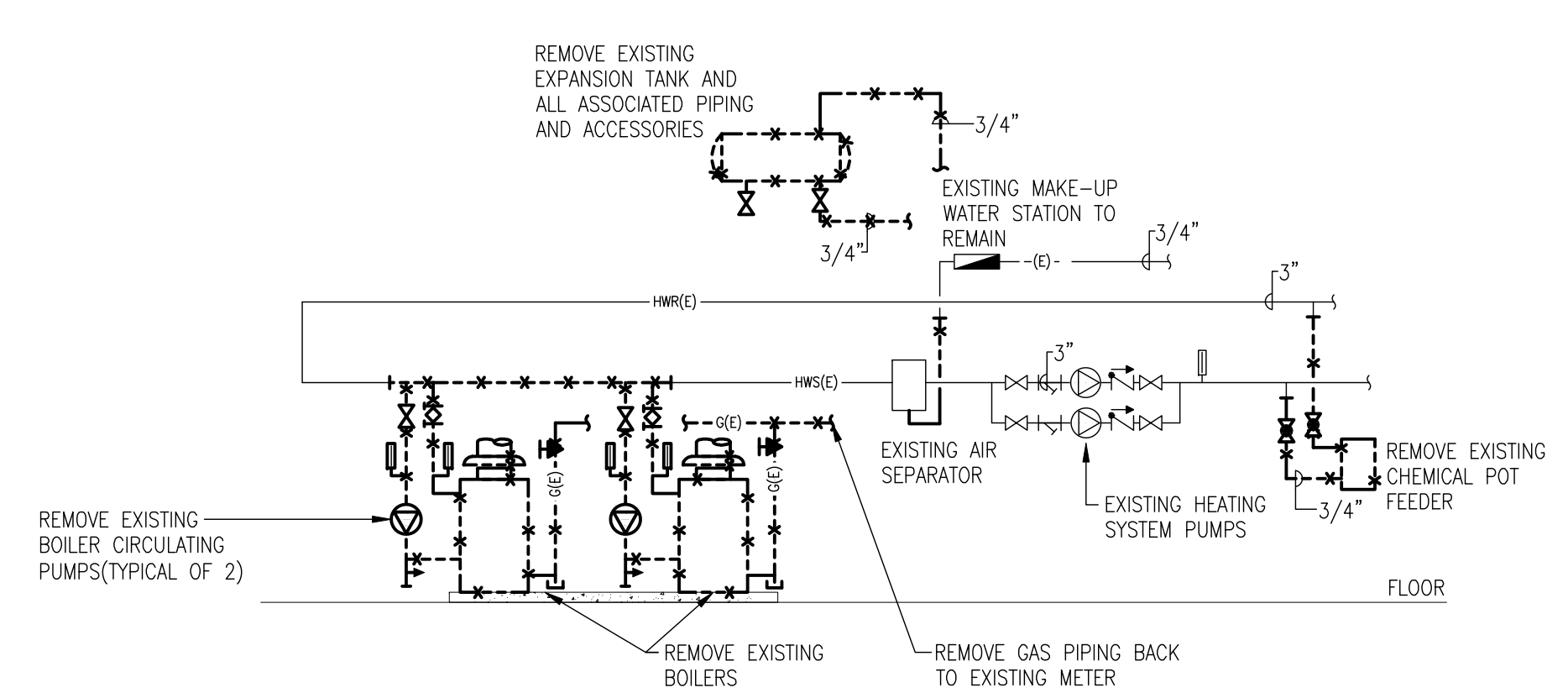
MECHANICAL

ELECTRICAL

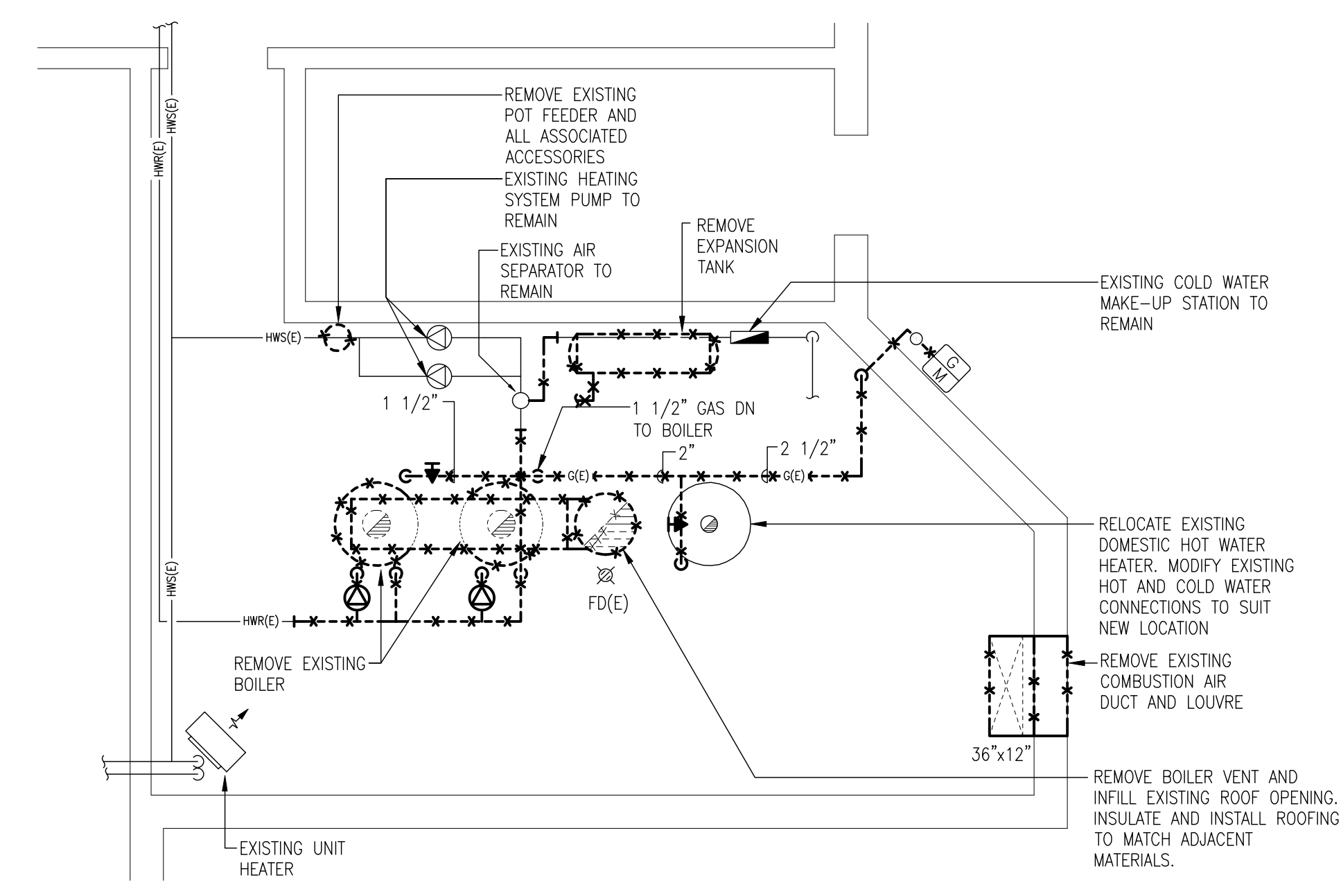
M-1 LEGEND, DRAWING LIST, SCHEDULES & BOILER ROOM DEMOLITION

E-1 LEGEND, SCHEDULES & BOILER ROOM PLAN

M-2 BOILER ROOM PLANS, BOILER SYSTEM SCHEMATIC & DETAILS



BOILER ROOM SCHEMATIC - DEMOLITION
N.T.S.



BOILER ROOM PLAN - DEMOLITION
SCALE: 1/4"=1'-0"

- NOTES:
1. REMOVE ALL REDUNDANT EQUIPMENT ASSOCIATED WITH EXISTING BOILERS.
 2. RESTORE ALL SURFACES WHERE SERVICES ARE REMOVED. REPAIR ALL WALL AND ROOF OPENINGS TO MATCH EXISTING.
 3. CUT BACK AND CAP ALL REDUNDANT PIPING IN BOILER ROOM.
 4. REMOVE REDUNDANT HOUSEKEEPING PADS.
 5. DISCONNECT AND REMOVE EXISTING CONDUITS, CABLES AND DISCONNECT FEEDING EXISTING BOILER BEING REMOVED. PULL CABLES BACK TO SOURCE.
 6. SEE HEATING SYSTEM SCHEMATIC FOR PIPE SIZES.
 7. REINSTALL ALL CONTROL SENSORS IN EXISTING PIPING BEING REMOVED. RECONNECT ALL WIRING TO EXISTING CONTROL PANEL.

MECHANICAL LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	DOMESTIC COLD WATER		CAP
	DOMESTIC HOT WATER		AUTOMATIC AIR VENT
	HOT WATER HEATING SUPPLY		FLOOR DRAIN
	HOT WATER HEATING RETURN		COLD WATER MAKE-UP STATION
	NATURAL GAS		FLANGES
	CONDENSATE DRAIN		PUMP
	EXISTING PIPING TO REMAIN		GAS METER
	EXISTING PIPING TO BE REMOVED		THERMOMETER
	SHUT OFF VALVE		PRESSURE GAUGE
	CHECK VALVE		THERMOWELL
	PRESSURE RELIEF VALVE		EXISTING DUCTWORK TO BE REMOVED
	BALL VALVE		NEW DUCTWORK
	COMBINATION SHUT-OFF & BALANCING VALVE		
	PRESSURE GAUGE COCK		
	DRAIN WITH HOSE CONNECTION		
	UNION		
	STRAINER		

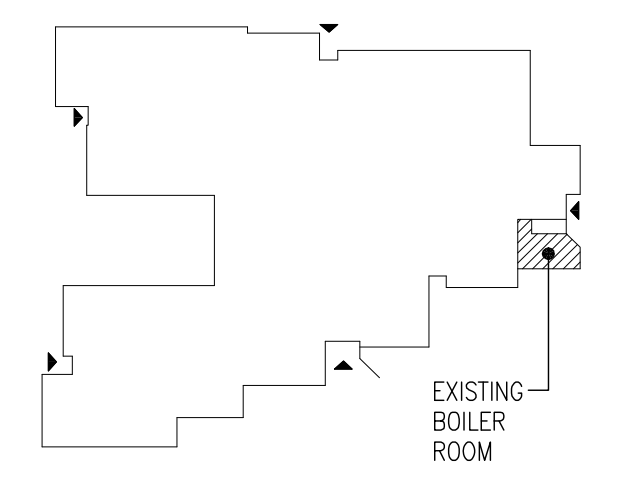
DRAWING LIST	
M-1	LEGEND, DRAWING LIST, SCHEDULES & BOILER ROOM DEMOLITION
M-2	BOILER ROOM PLANS, BOILER SYSTEM SCHEMATIC & DETAILS

BOILER SCHEDULE										
SYMBOL NUMBER	SERVICE	MANUFACTURER	MODEL	INPUT [MBH]	OUTPUT [MBH]	CONNECTIONS			VOLTAGE	REMARKS
						WATER	GAS	VENT		
BLR-501 A/B/C	HEATING SYSTEM	LOCHINVAR	KBN801	800	752	2"	1"	6"	120/1/60	LOW NOx BURNER - MODULATING

PUMP SCHEDULE									
PUMP NUMBER	SERVICE	MANUFACTURER	MODEL	FLOW [GPM]	HEAD [FT]	RPM	MOTOR [HP]	ELECTRICAL	
								VOLTAGE	PHASE
CP-301 A/B/C	BOILER	ITT	60-2 x 5-1/4	75.2	15	1750	3/4	208	3

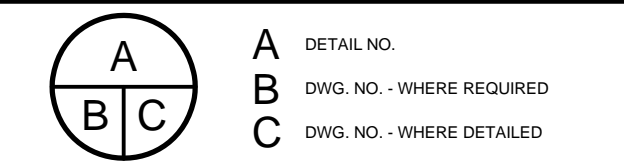
EXPANSION TANK SCHEDULE						
PUMP NUMBER	SERVICE	MANUFACTURER	MODEL	TOTAL VOLUME [GAL]	ACCEPTANCE VOLUME [GAL]	FILL PRESSURE [psi]
ET-1	HEATING SYSTEM	AMTROL	200-L	53	-	12

ABBREVIATIONS									
AFF	ABOVE FINISHED FLOOR	GA	GAUGE	MBH	BTU PER HOUR (THOUSAND)	PSI	POUNDS PER SQUARE INCH	SEC	SECOND
AMP	AMPERE	GAL	GALLONS	MIN	MINIMUM	PSIA	PSI ABSOLUTE	V	VOLT
BTU	BRITISH THERMAL UNIT	HP	HORSEPOWER	NTS	NOT TO SCALE	PSIG	PSI GAUGE	VA	VOLT AMPERE
FPM	FEET PER MINUTE	KW	KILOWATT	PD	PRESSURE DROP	RPM	REVOLUTIONS PER MINUTE		
FT	FEET	MAX	MAXIMUM						



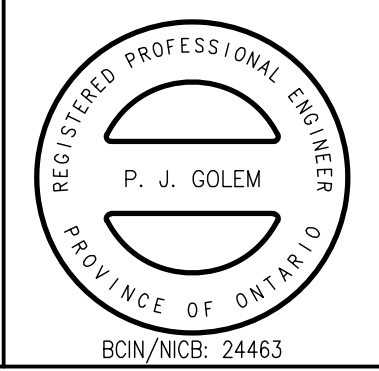
KEY PLAN
N.T.S.

No.	By	Revisions	Date
1	PJG	ISSUED FOR BOARD REVIEW	FEB. 16, 2011
2	PJG	ISSUED FOR BOARD REVIEW	FEB. 25, 2011
3	PJG	ISSUED FOR TENDER	MAR. 14, 2011



DO NOT SCALE THE DRAWINGS. ALL MEASUREMENTS ARE TO BE CHECKED AND VERIFIED ON SITE BY THE CONTRACTOR. ANY DISCREPANCIES ARE TO BE REPORTED TO THE CONSULTANT BEFORE PROCEEDING WITH THE WORK.

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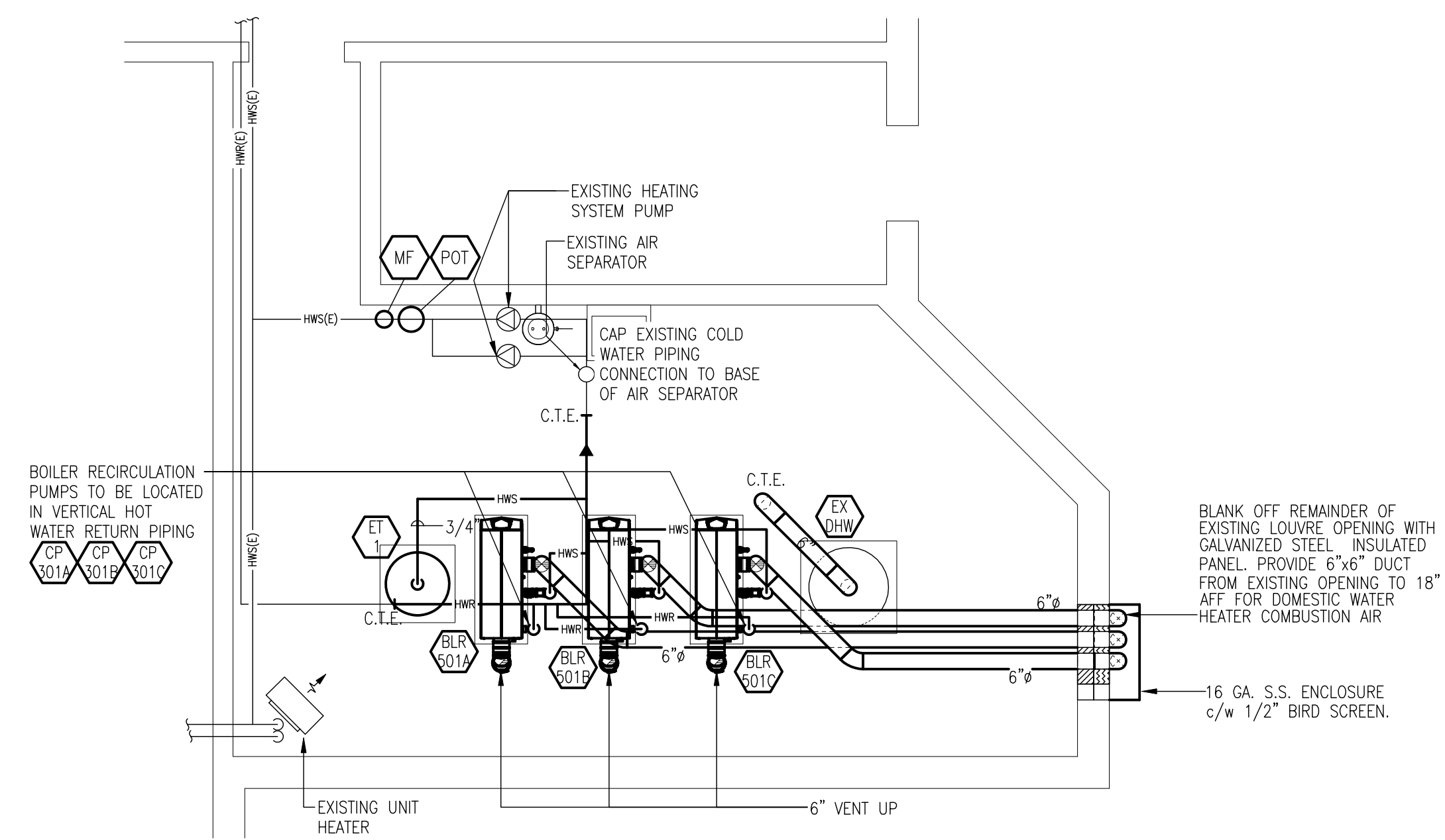


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CATHOLIC SCHOOL**
**ST. CLAIR CATHOLIC
DISTRICT SCHOOL BOARD**
BRIGHT'S GROVE, ONTARIO

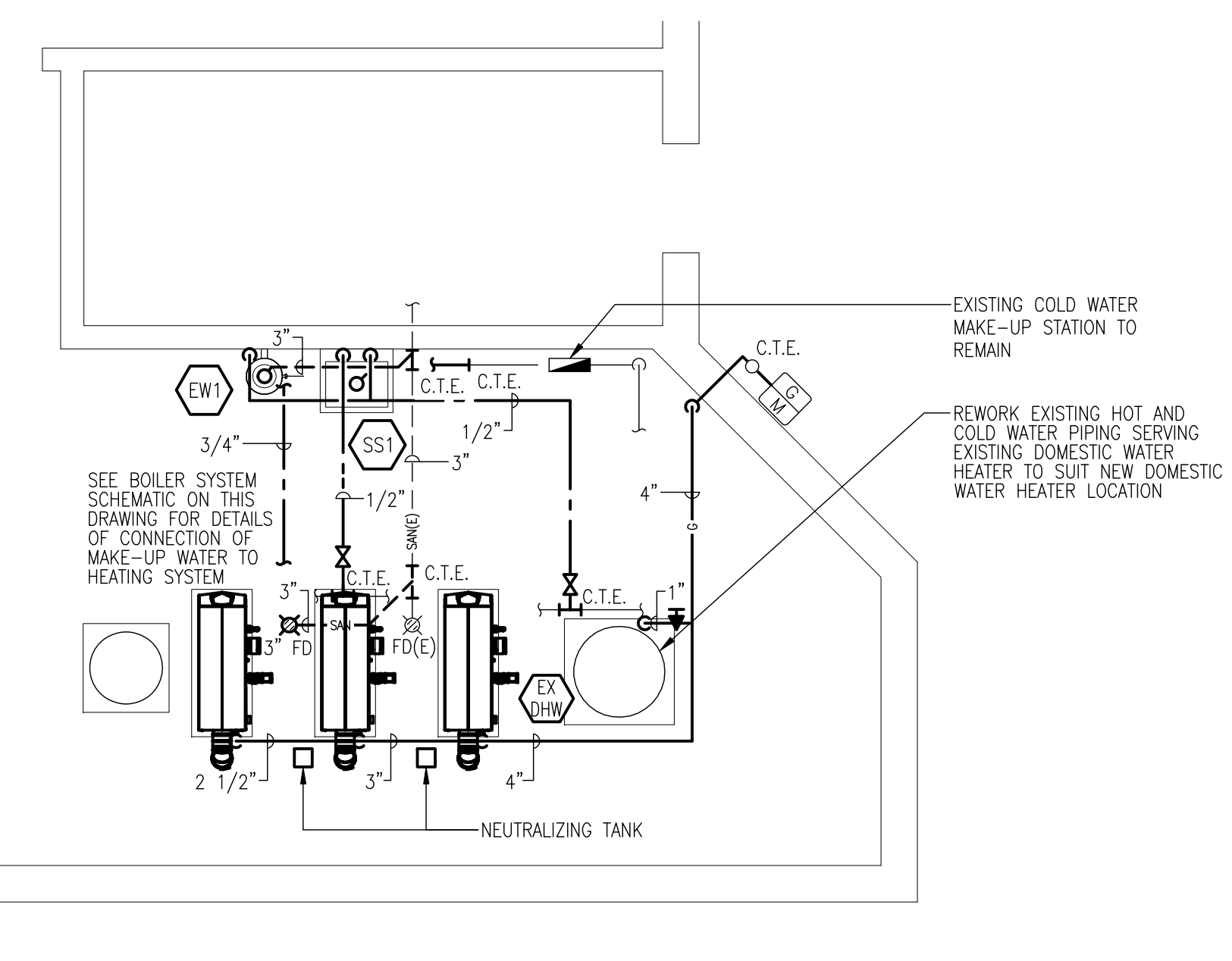
Drawing Title
**LEGEND, DRAWING LIST, SCHEDULES,
& BOILER ROOM DEMOLITION**

Drawn	Checked	Approved	Drawing No.
JMJ	JDF	PJG	M-1
Scale	Date	Project No.	Rev. No.
AS NOTED	MAR. 11, 2011	6758	



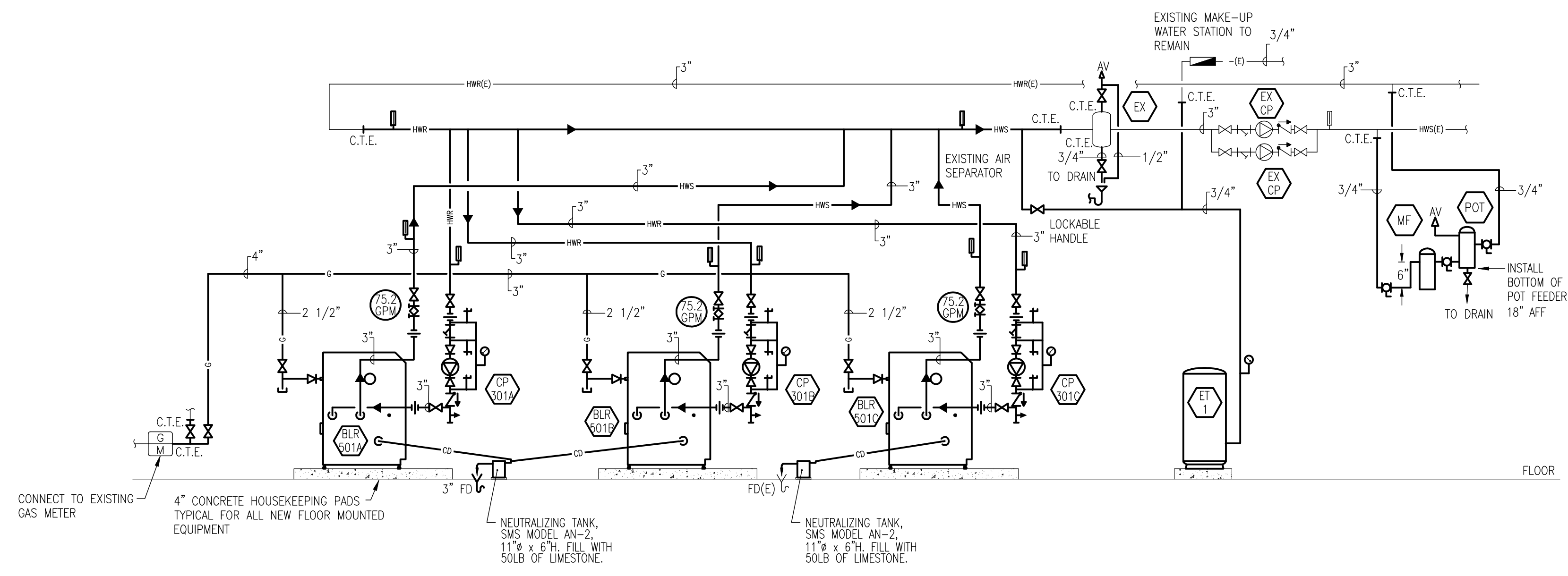
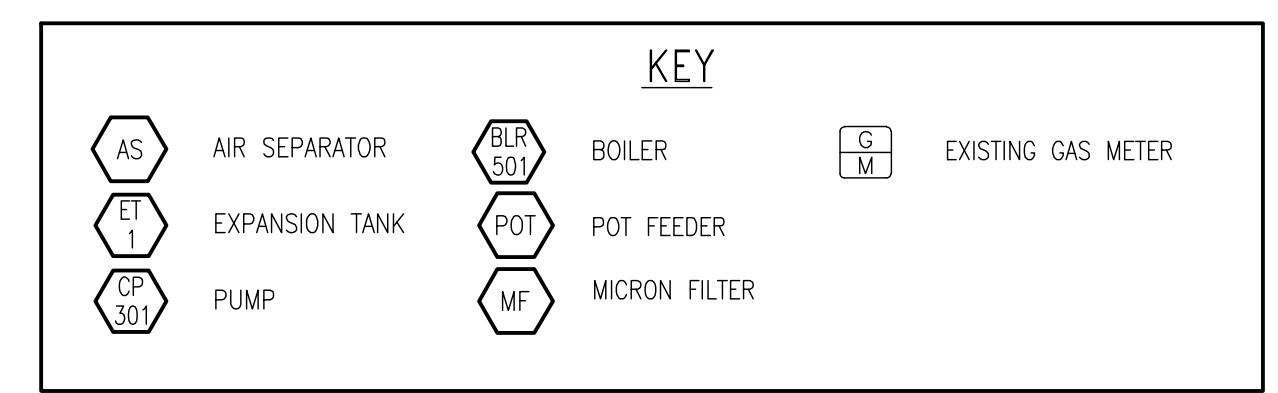
BOILER ROOM PLAN - HEATING AND VENTILATION
SCALE: 1/4"=1'-0"

- NOTES:
1. BOILER RELIEF VALVE SUPPLIED BY BOILER MANUFACTURER. PIPE DISCHARGE TO DRAIN.
 2. ALL BOILER DRAINAGE PIPING TO BE COPPER.
 3. THERMOWELLS SUPPLIED AND INSTALLED BY DIVISION 15.
 4. SHUT OFF VALVES MAY BE BALL STYLE FOR PIPES 2" AND SMALLER OR BUTTERFLY STYLE FOR PIPES OVER 2". DO NOT USE GATE VALVES.
 5. PROVIDE AUTOMATIC AIR VENTS AT ALL HIGH POINTS IN PIPING.
 6. SEE DETAIL ON THIS DRAWING FOR BOILER GAS FLUE AND COMBUSTION AIR DUCT DETAIL.

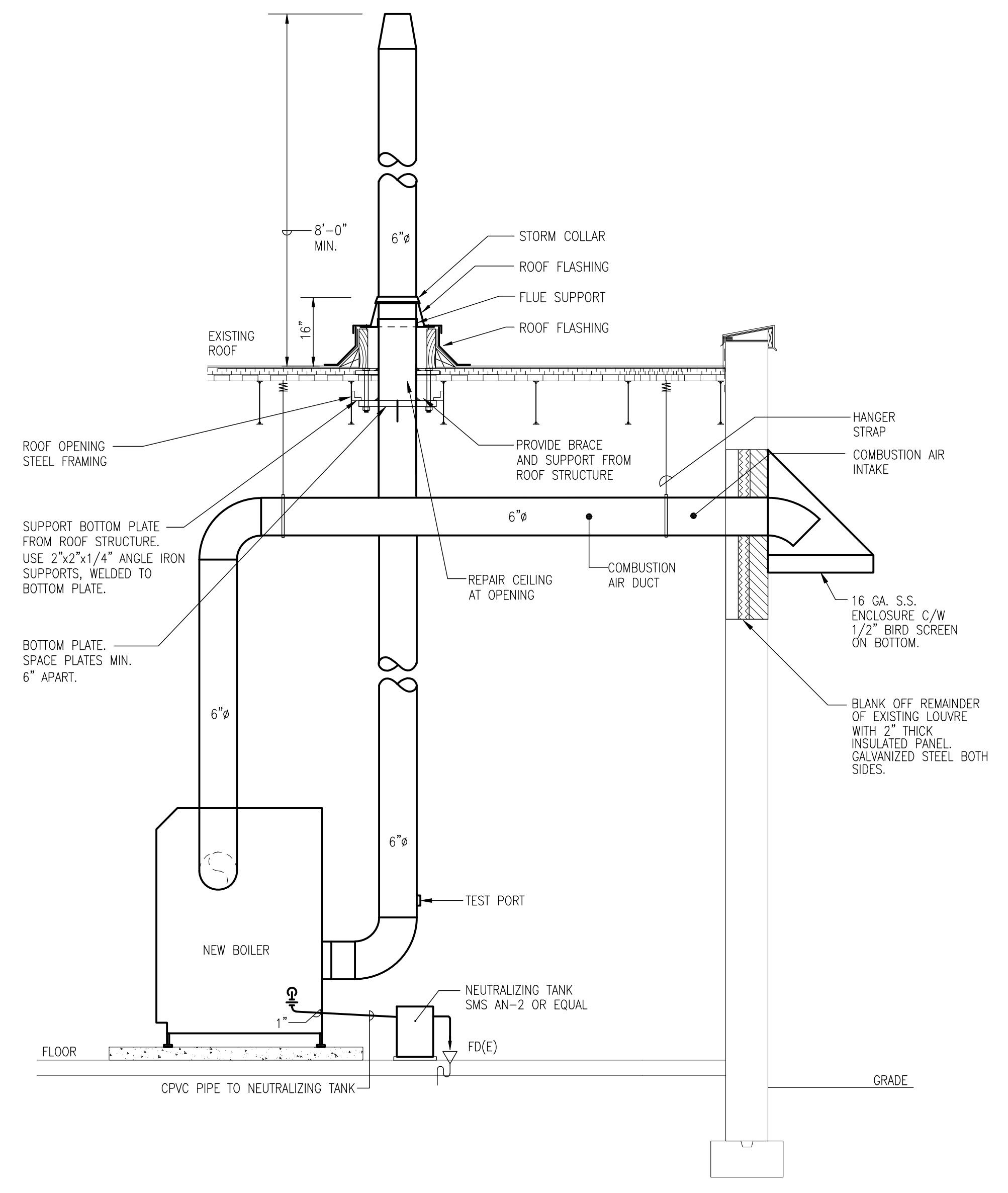


BOILER ROOM PLAN - PLUMBING
SCALE: 1/4"=1'-0"

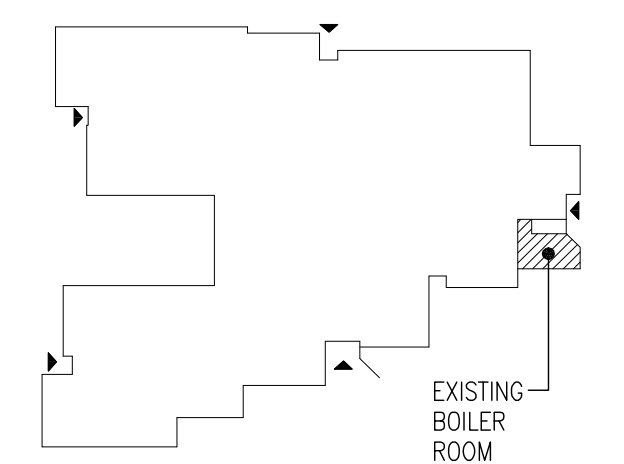
- NOTES:
1. MINIMUM BELOW GRADE SANITARY DRAINAGE PIPE SIZE IS 3".



BOILER SYSTEM SCHEMATIC - N.T.S.



BOILER VENT THROUGH ROOF AND COMBUSTION AIR DUCT DETAIL
N.T.S.



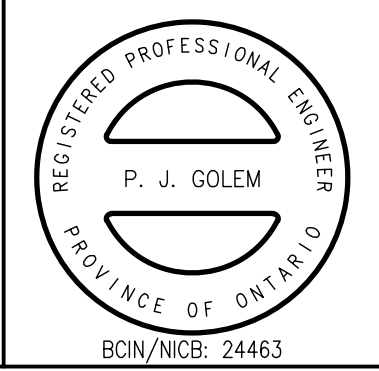
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A B C	A	DETAIL NO.
	B	DWG. NO. - WHERE REQUIRED
	C	DWG. NO. - WHERE DETAILED

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BRIGHT'S GROVE, ONTARIO

Drawing Title
**BOILER ROOM PLANS,
BOILER SYSTEM SCHEMATIC,
& DETAILS**

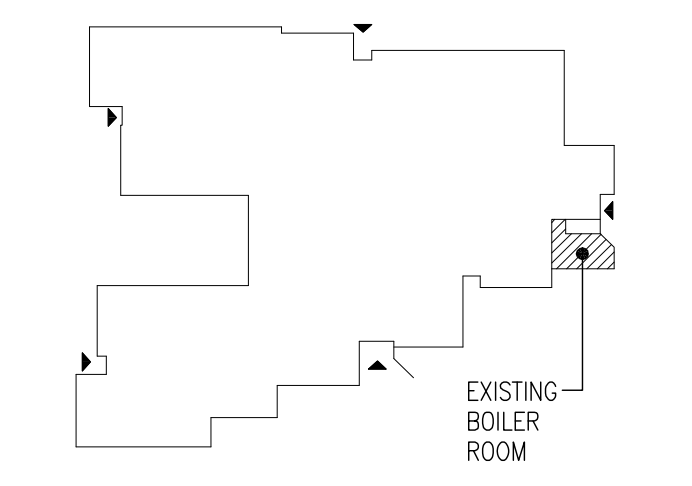
Drawn JMJ	Checked JDF	Approved PJG	Drawing No. M-2
Scale AS NOTED	Date MAR. 11, 2011	Project No. 6758	Rev. No.

ELECTRICAL LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	COMBINATION MAGNETIC STARTER		ELECTRICAL PANEL
	MANUAL STARTER	EX	EXISTING DEVICE TO REMAIN
	MOTOR	REM	EXISTING DEVICE TO BE REMOVED
	CIRCUIT BREAKER	NEW	NEW DEVICE

MECHANICAL EQUIPMENT SCHEDULE													
ITEM	DESCRIPTION	LOCATION	hp	MCA	PHASE	VOLTS	STARTER/CONTROL TYPE	FEED FROM	BREAKER SIZE	FUSE SIZE	CONDUCTOR SIZE	CONDUIT SIZE	REMARKS/NOTES
BLR-501 A,B,C	BOILER	BOILER ROOM	FHP		1	120	MAN	PANEL 'M2'	15	1	2#12	3/4"	
CP-301 A,B,C	BOILER CIRCULATION PUMP	BOILER ROOM	3/4		3	208	FVNR	PANEL 'M2'	15	3	3#12	3/4"	

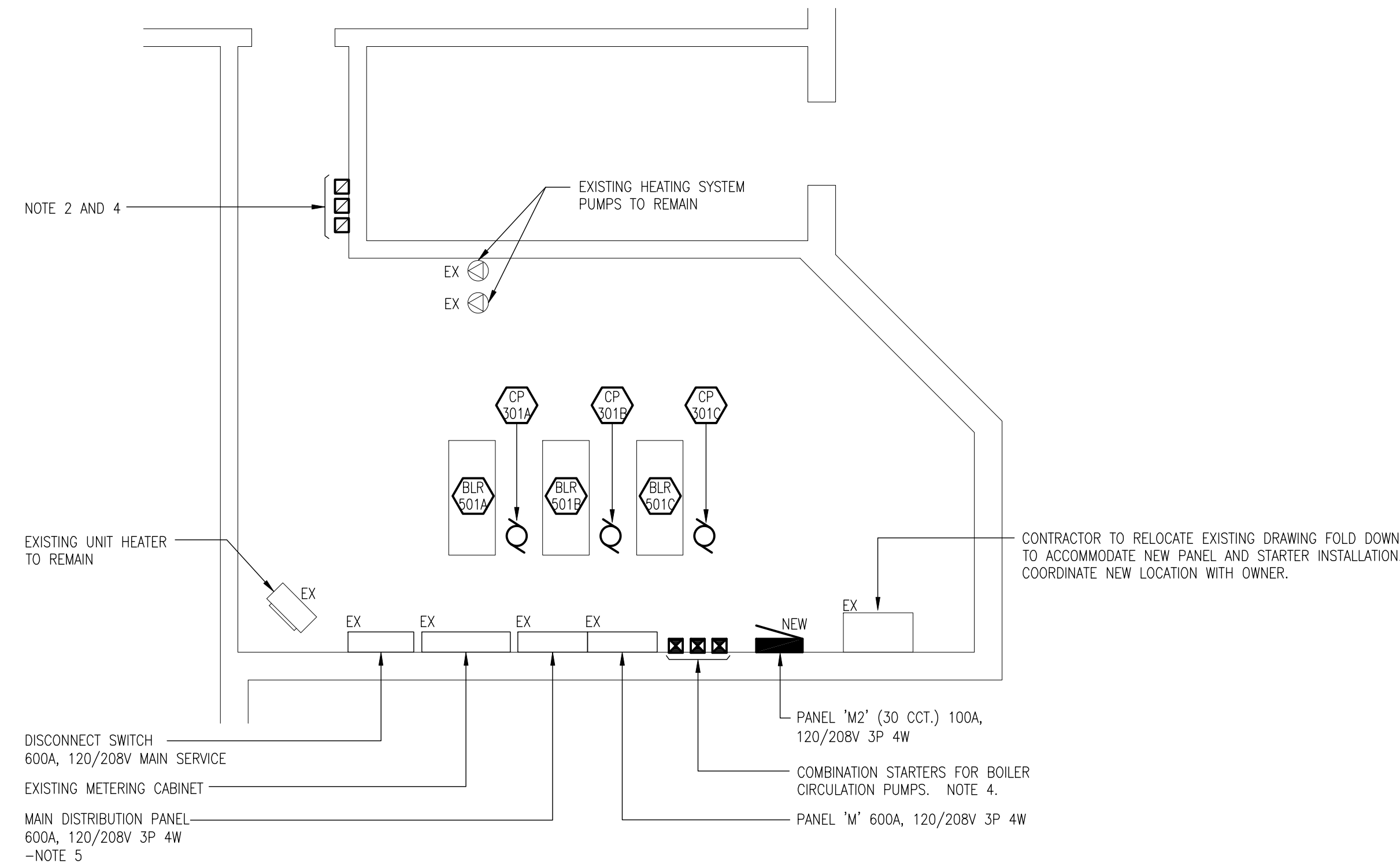
NOTES:
 1. DIVISION 16 TO OBTAIN COPIES OF MECHANICAL EQUIPMENT SHOP DRAWINGS AND COORDINATE ELECTRICAL SERVICES.
 2. PROVIDE LOCAL NON-FUSED DISCONNECT SWITCHES AT MOTORS IN ACCORDANCE WITH SECTION 28-604 OF THE ONTARIO ELECTRICAL SAFETY CODE.
 3. UNLESS INDICATED OTHERWISE ALL CONTROL WIRING IS BY DIVISION 15.

MOTOR CONTROL ABBREVIATIONS			
ALST	ALTERNATOR STARTER	HQA	HAND-OFF-AUTO SELECTOR SWITCH
COMB	COMBINATION DISCONNECT SWITCH & STARTER ON WALL ADJACENT MOTOR	MAN	MANUAL STARTER
CON	CONTACTOR	MCA	MINIMUM CIRCUIT AMPACITY
DS	UN-FUSED DISCONNECT SWITCH	MCC	MOTOR CONTROL CENTRE
FDS	FUSED DISCONNECT SWITCH	PL	PILOT LIGHT



KEY PLAN
N.T.S.

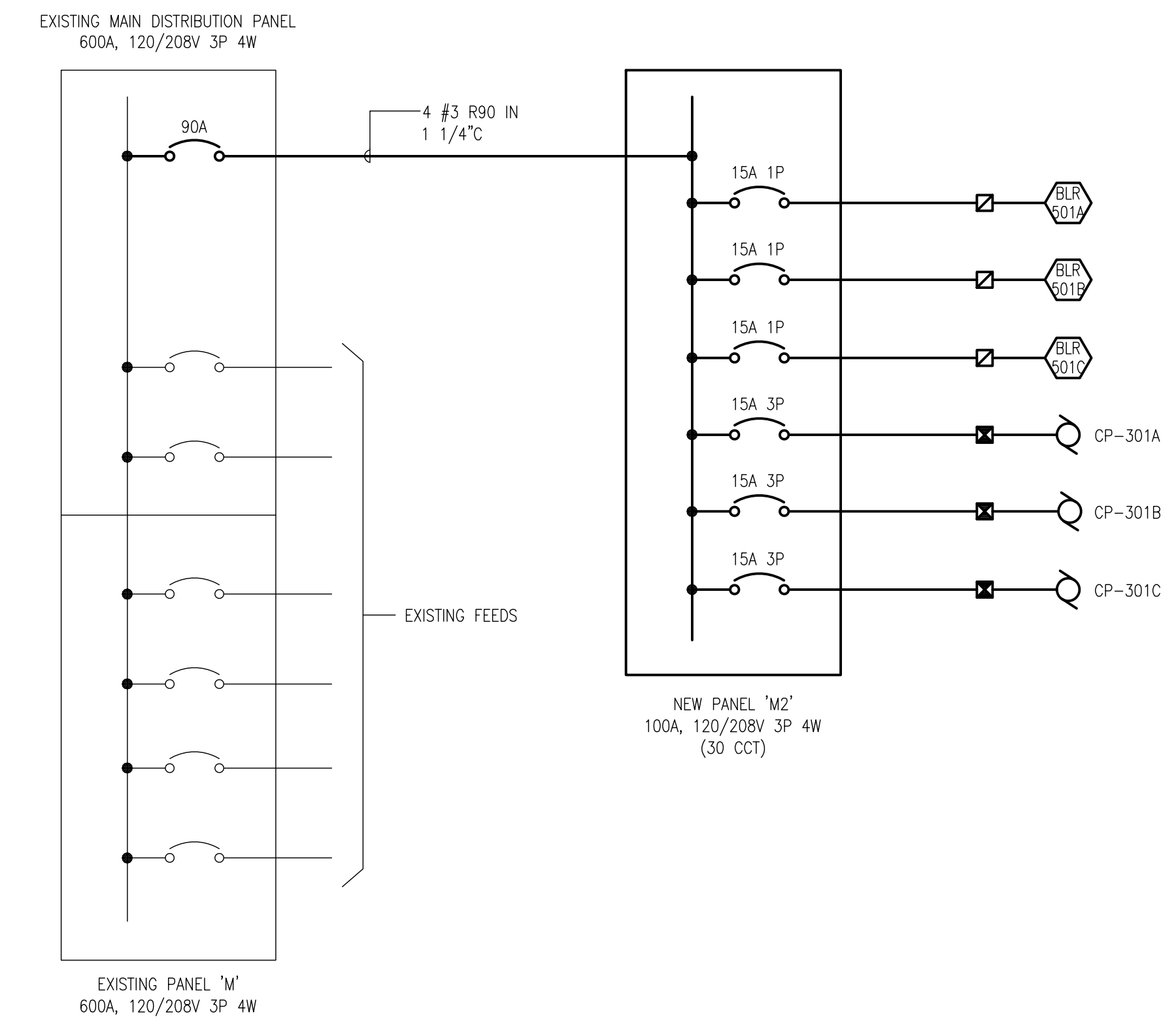
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BOILER ROOM PLAN - ELECTRICAL

SCALE: 1/4"=1'-0"

- NOTES:
- PROVIDE FEEDERS TO ALL NEW BOILERS AND PUMPS. CONNECT TO NEW PANEL 'M2' IN BOILER ROOM. REFER TO PART DISTRIBUTION RISER AND MECHANICAL EQUIPMENT SCHEDULE FOR DETAILS.
 - PROVIDE A SINGLE PHASE MANUAL STARTER C/W LOCKABLE TOGGLE SWITCH ATTACHMENT AND PILOT LIGHT TO BE ALLEN-BRADLEY CAT# 600-TAX216/600-W1 OR APPROVED EQUAL. PROVIDE A SUITABLE ENCLOSURE. PROVIDE ONE FOR EACH BOILER.
 - REFER TO MECHANICAL DRAWINGS FOR EXISTING EQUIPMENT TO BE DEMOLISHED AND REMOVE ALL WIRE, CONDUIT AND MATERIALS BACK TO PANEL. LABEL BREAKERS AS "SPARE".
 - PROVIDE EQUIPMENT ON AVAILABLE WALL SPACE. RELOCATE AS REQUIRED ON SITE WITH CONSULTANT.
 - RELOCATE SPARE BREAKERS IN EXISTING MAIN DISTRIBUTION PANEL TO ACCOMMODATE NEW 90A 3P BREAKER FOR FEED TO NEW PANEL 'M2'. IF BREAKERS ARE REMOVED TO PROVIDE SPACE REQUIRED, RETURN BREAKERS TO OWNER AND PROVIDE BLANK COVERS, AS REQUIRED.



PART DISTRIBUTION RISER
N.T.S.

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BOILER ROOM PLAN

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JSG	GPV	GPV	E-1
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