

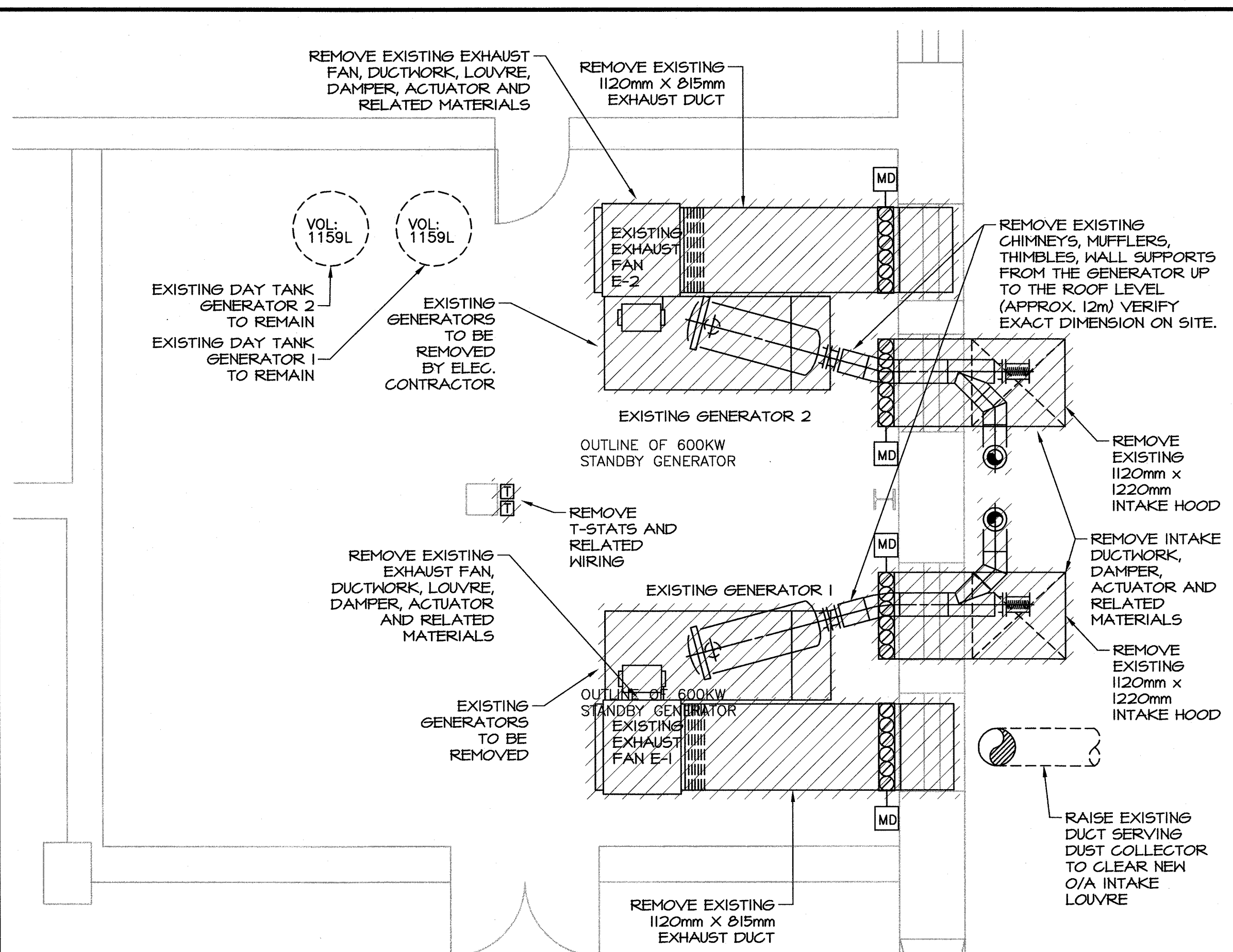
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revisions		date
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GENERATOR REPLACEMENT DORCHESTER PENITENTIARY

drawing dessin

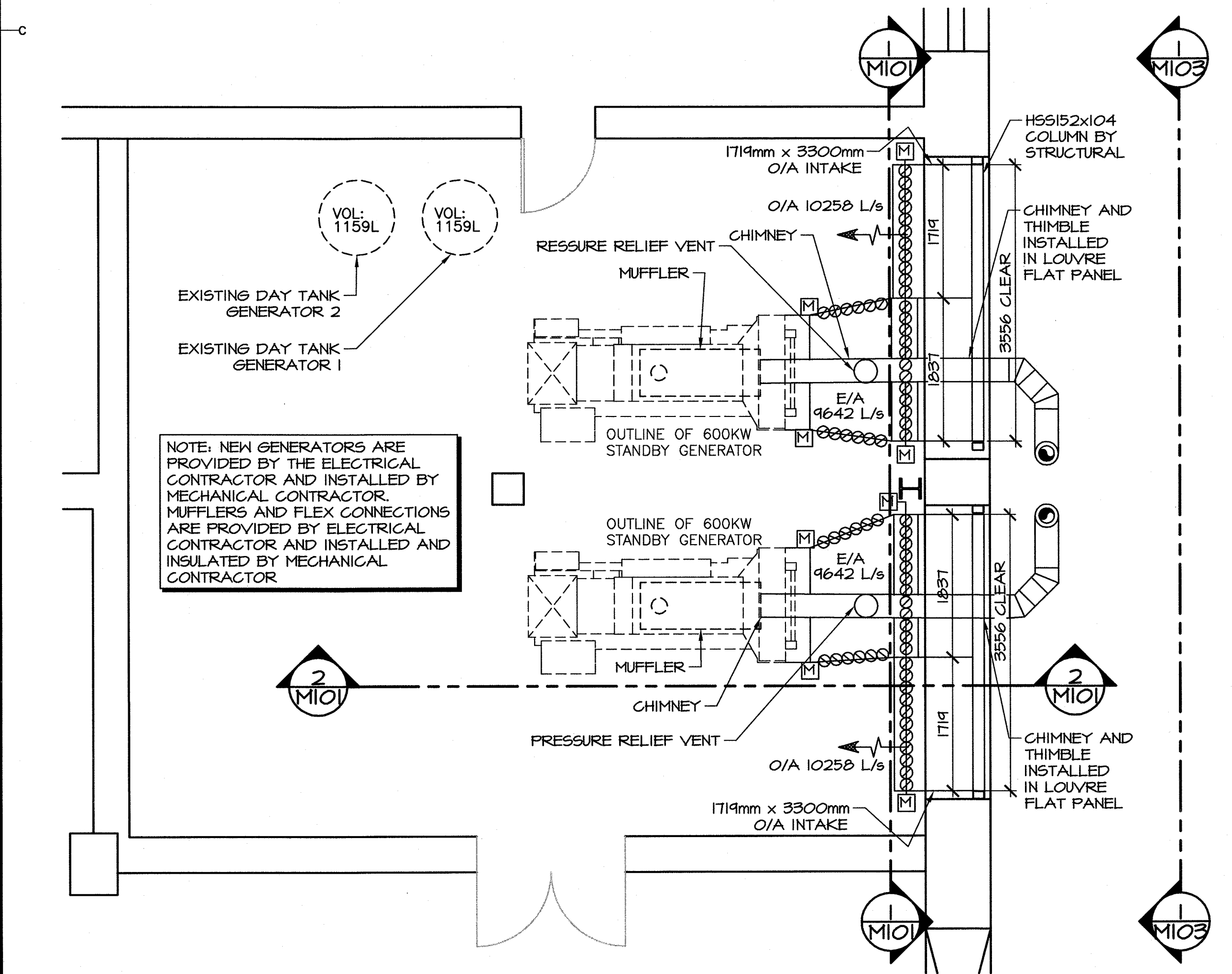
VENTILATION LAYOUTS, SECTIONS AND CONTROL SCHEMATICS

designed	TDM	conçu
date	SEPTEMBER 3, 2015	
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GENERATOR ROOM - DEMOLITION PLAN

SCALE: 1:50

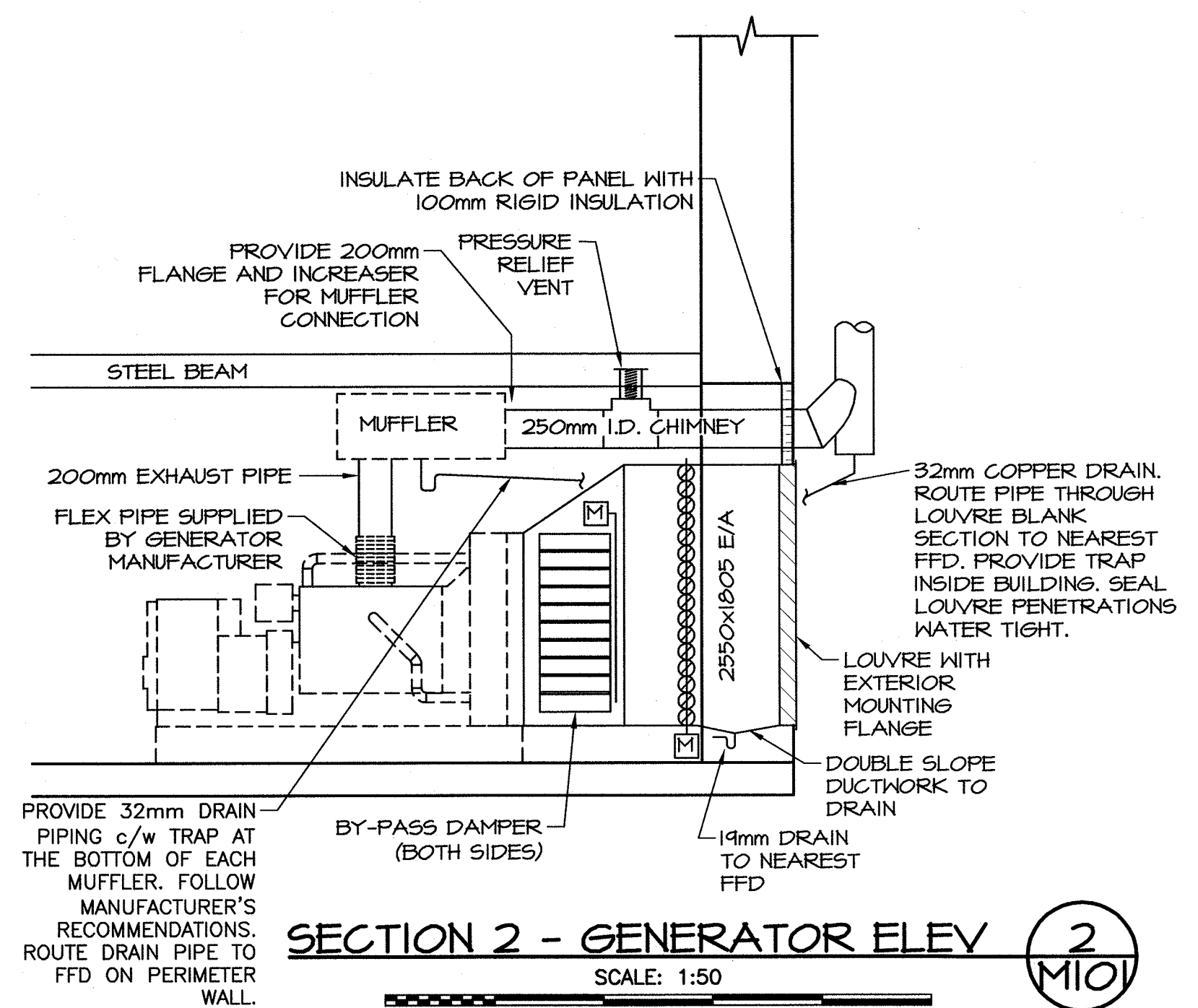


GENERATOR ROOM - NEW VENTILATION LAYOUT

SCALE: 1:50

PIPING LEGEND	
SYMBOL	DESCRIPTION
—	HEATING WATER SUPPLY
---	HEATING WATER RETURN
—GWS—	GLYCOL/WATER SUPPLY
—GWR—	GLYCOL/WATER RETURN
G	PIPE DOWN (DN)
O	PIPE UP (UP)
⌵	GATE VALVE
⌵	CHECK VALVE
⌵	BALANCING VALVE
⌵	CONTROL VALVE (ELEC.)
⌵	STRAINER
⌵	PRESSURE GAUGE c/w PETCOCK
⌵	PRESSURE GAUGE c/w PETCOCK (STM)
⌵	HOSE END DRAIN
⌵	UNION
⌵	THERMOSTAT (ELECTRONIC)
⌵	EQUIPMENT TAG

COIL #1



SECTION 2 - GENERATOR ELEV

SCALE: 1:50

LEGEND

- D1: DAMPER No.1, COMBUSTION AIR INSULATED DAMPER, 798 L/s
- D2: DAMPER No.2, FRESH AIR INSULATED DAMPERS, 9642 L/s
- D3: DAMPER No.3, BY-PASS INSULATED DAMPER, 4730 L/s
- D4: DAMPER No.4, BY-PASS INSULATED DAMPER, 4730 L/s
- D5: DAMPER No.5, EXHAUST AIR INSULATED DAMPERS, 9642 L/s
- M1: COMBUSTION AIR DAMPER ACTUATOR(S), BELIMO, FAST ACTING 15 SECOND, 24V, ON/OFF.
- M2: F/A DAMPER ACTUATOR(S), BELIMO 24V, MODULATING.
- M3: BYPASS AIR DAMPER ACTUATOR(S), BELIMO 24V, MODULATING.
- M4: BYPASS DAMPER ACTUATOR(S), BELIMO 24V, MODULATING.
- M5: E/A DAMPER ACTUATOR(S), BELIMO 24V, MODULATING.
- T1: THERMOSTAT, HONEYWELL (OR EQUAL) ELECTRONIC MODULATING TYPE, 0-10V OUTPUT c/w AUXILIARY SWITCH AND THERMOMETER.
- TRANSFORMER 120V - 24V

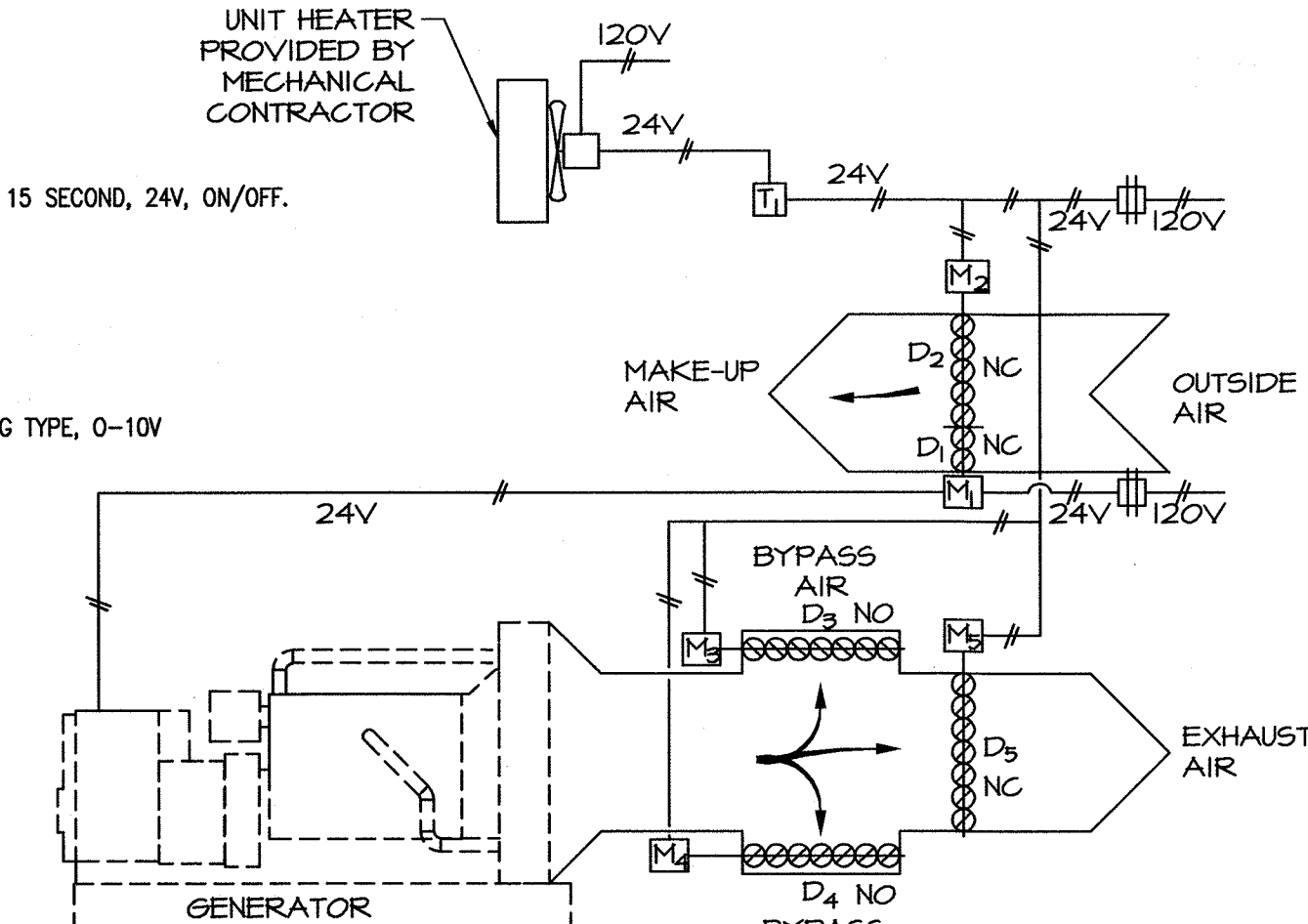
NOTE:
ALL CONTROL COMPONENTS AND WIRING SHALL
BE PROVIDED BY THE CONTROLS CONTRACTOR.
120V WIRING SHALL BE PROVIDED BY ELECTRICAL
CONTRACTOR

CONTROLS SCHEMATIC

TYPICAL OF 2 LOCATIONS - ONE FOR EACH GENERATOR NTS

SEQUENCE OF OPERATION:

ON A CALL FOR HEAT, AUXILIARY SWITCH ON T1 STAT (T1) CLOSING AND STARTS THE UNIT HEATER.
WHEN GENERATOR STARTS, THE GENERATOR RUN CONTACT WILL CLOSE AND CAUSE THE FAST ACTING COMBUSTION AIR DAMPER (D1) TO
OPEN. AIR FROM THE COOLING RADIATOR FAN IS DIRECTED TO THE NORMALLY OPEN BY-PASS DAMPERS (D3 & D4). ON A RISE IN ROOM
TEMPERATURE, BY-PASS DAMPERS (D3 & D4) WILL BEGIN TO MODULATE CLOSED AND THE NORMALLY CLOSED FRESH AIR AND EXHAUST
AIR DAMPERS (D2&D5) WILL MODULATE OPEN TO MAINTAIN TEMPERATURE SETPOINT. ALL MODULATING DAMPERS WORK TOGETHER TO
MAINTAIN TEMPERATURE SETPOINT.



4 M101