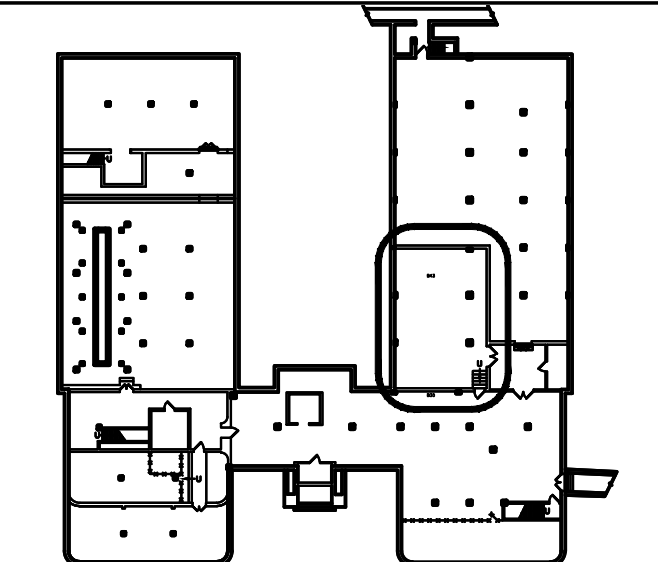




GENERAL NOTES

- CONTRACTOR TO VERIFY ALL DIMENSIONS AND CLEARANCES ON SITE PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES AND/OR OMISSIONS TO DEPARTMENTAL REPRESENTATIVE.
- CONTRACTOR MUST VISIT THE SITE AND FULLY FAMILIARIZE THEMSELVES WITH THE SCOPE OF THE WORK PRIOR TO PROJECT COMMENCEMENT.
- ALL TRADES TO COORDINATE WORK ON SITE, WITH APPROVAL OF DEPARTMENTAL REPRESENTATIVE TO AVOID ANY CONFLICTS AND/OR INTERFERENCE.
- ANY AND ALL REQUIRED SHUTDOWNS SHALL BE COORDINATED WITH DEPARTMENTAL REPRESENTATIVE.
- INSTALLATION OF ALL SYSTEMS SHALL BE IN ACCORDANCE WITH APPLICABLE CODES AND STANDARDS.
- CONTRACTOR TO BE RESPONSIBLE FOR REINSTATEMENT AND REPAIR OF ANY DAMAGE CAUSED BY WORK.
- CONTRACTOR SHALL PREVENT THE SPREAD OF DUST AND DEBRIS BEYOND AREA OF WORK AND CLEAN ALL SURFACES AT COMPLETION.

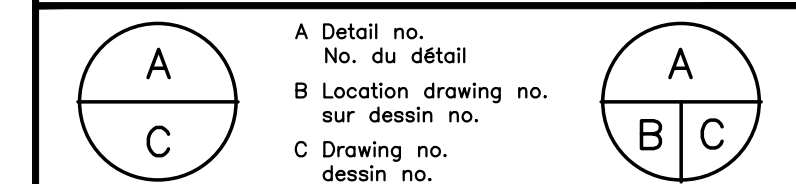
KEY PLAN PLAN CLÉ



No.	Date	Revision	By:
2	31-10-2023	ISSUED FOR TENDER	ZM
1	11-09-2023	ISSUED FOR TRANSLATION	ZM
0	23-08-2023	ISSUED FOR REVIEW	ZM

Date Printed: \_\_\_\_\_ Date imprimée: \_\_\_\_\_

- Verify all dimensions and site conditions and be responsible for same.
- Vérifier toutes les dimensions et l'état des lieux et en assumer la responsabilité.



project: BUILDING M-09  
 09AHU03 RETROFIT

MONTREAL ROAD CAMPUS

MECHANICAL PLANS, DIAGRAMS, AND SCHEDULES

designed	conçu	date	date
Z M		AUG 2023	
drawn	dessiné	scale	échelle
Z M		AS NOTED	
checked	vérifié	sheet	feuille
J W G		1 of/da 1	
approved	approuvé	W.O.no.	D.T.no.
FG			

dwg.no.: 6275-M01 dessin no.:

GENERAL DRAWING NOTES:

- FOR CLARITY, ONLY LOWER PORTION OF 09AHU03 AND RELEVANT PIPING ARE SHOWN IN THE PLANS.
- SCHEDULE ALL WORK TO MINIMIZE THE DOWNTIME OF THE AIR HANDLING UNIT.
- WORK DESCRIBED IN DEMOLITION NOTES 1 TO 6 INCLUSIVE SHOULD BE CARRIED AS SOON AS POSSIBLE AFTER CONTRACT AWARD.
- WORK DESCRIBED IN NEW WORK NOTES 7 TO 10 INCLUSIVE SHOULD BE CARRIED OUT AFTER THE NEW HEATING COIL IS RECEIVED.
- A WEEKEND SHUT-DOWN OF 09AHU03 WILL BE SCHEDULED FOR INSTALLATION OF THE NEW HEATING COIL INSIDE THE UNIT. THE REST OF PIPING, INSULATION, CONTROL AND COMMISSIONING SHOULD BE COMPLETED WHILE THE UNIT IS RUNNING.

DEMOLITION NOTES:

- REMOVE ALL ACM (ASBESTOS CONTAINED MATERIAL) LOCATED IN MECHANICAL ROOM B43. REFER TO DESIGNATED SUBSTANCES REPORT AND SPECIFICATION FOR DETAILS.
- REMOVE DISCONNECTED STEAM PRE-HEAT COIL C/W ALL RELATED STEAM AND CONDENSATE PIPING AS SHOWN. CAP STEAM AND CONDENSATE PIPE AT MAIN.
- REMOVE EXISTING FILTER RACK TO MAKE ROOM FOR NEW PRE-HEAT COIL.
- REMOVE EXISTING ACCESS DOOR, RELOCATE TO NEW LOCATION ON THE OUTSIDE AIR DUCTWORK, REFER TO DETAIL 3 FOR NEW LOCATION.
- RELOCATE EXISTING BAS DIFFERENTIAL PRESSURE SENSOR TO NEW FILTER RACK LOCATION.

NEW WORK NOTES:

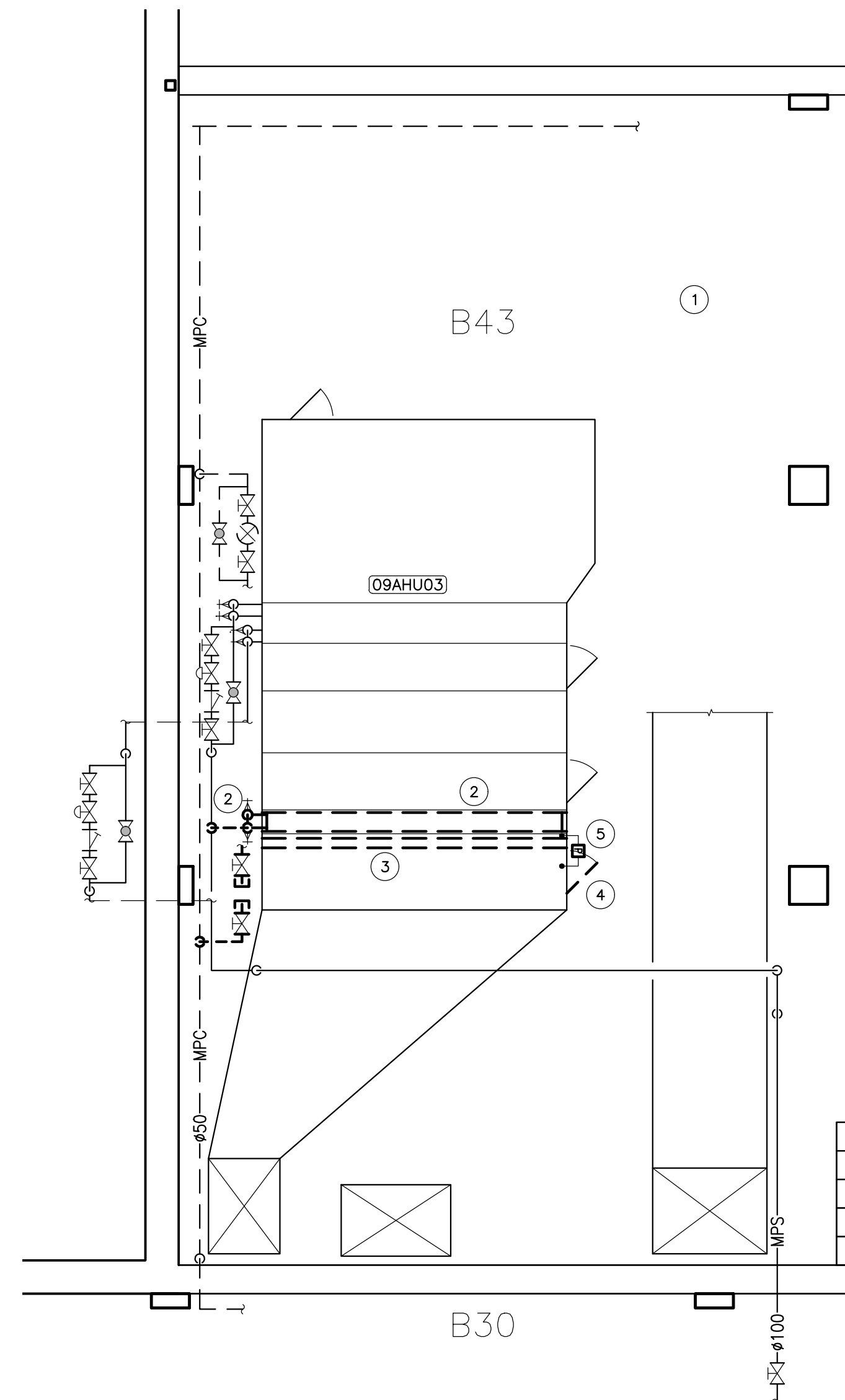
- RELOCATE EXISTING ACCESS DOOR TO NEW LOCATION SHOWN. PROVIDE SUPPORT UNDER OUTSIDE AIR DUCTWORK IN SHADED AREA TO SUPPORT MAINTENANCE PERSONAL TO ACCESS THE FILTER RACK. CONTRACTOR TO SUBMIT STRUCTURAL SUPPORT SHOP DRAWING STAMPED BY PROFESSIONAL ENGINEER FOR APPROVAL.
- PROVIDE NEW FILTERS RACK C/W FILTERS FOR SIX (6) 610x610x50 (mm) MERV 13 FILTERS. FILTERS TO BE CAMPBELL AQ13 OR APPROVED EQUAL.
- PROVIDE SHEET METAL ISOLATION PLATES AROUND THE NEW FILTER RACK TO BLOCK AIR FLOW AROUND THE FILTER RACK. ISOLATION PLATES SHOULD BE INSULATED AS PER SPEC.
- INSTALL BAS DIFFERENTIAL PRESSURE SENSOR AT THE NEW FILTER RACK LOCATION.
- INSULATE FRESH AIR DUCTWORK UPSTREAM OF AIR HANDLING UNIT INSIDE THE MECHANICAL ROOM AS PER SPEC.
- AFTER THE NEW FILTERS ARE INSTALLED, BALANCE SUPPLY AIR FLOW TO 4250 L/s (9000 CFM) BY REPLACING/ADJUSTING SUPPLY FAN PULLEYS. BALANCE EXHAUST AIR FLOW TO KEEP HIGH BAY ROOM 141 UNDER A NEGATIVE PRESSURE OF -25 PA COMPARE TO OUTSIDE.
- PROVIDE NEW PRE-HEAT FACE & BYPASS STEAM COIL. REFER TO SCHEDULE FOR COIL SPECS. SUPPORT THE COIL USING SUPPORT LEGS FABRICATED WITH ANGLE STEEL ON BOTH ENDS AND IN THE MIDDLE OF COIL. CONTRACTOR TO SUBMIT STRUCTURAL SUPPORT SHOP DRAWING STAMPED BY PROFESSIONAL ENGINEER FOR APPROVAL.
- PROVIDE SHEET METAL ISOLATION PLATES AROUND THE NEW PRE-HEAT COIL TO BLOCK AIR FLOW AROUND THE COIL. ISOLATION PLATES SHOULD BE INSULATED AS PER SPEC.
- PROVIDE NEW STEAM PIPE C/W ALL VALVES AND ACCESSORIES. REFER TO PIPING DIAGRAM FOR DETAILS. INSULATE ALL NEW AND EXISTING STEAM PIPE INSIDE THE MECHANICAL ROOM AS PER SPEC, INCLUDING INSIDE THE AIR HANDLING UNIT.
- PROVIDE NEW CONDENSATE PIPE C/W ALL VALVES AND ACCESSORIES. REFER TO PIPING DIAGRAM AND SCHEDULE FOR DETAILS. INSULATE ALL NEW AND EXISTING CONDENSATE PIPE INSIDE THE MECHANICAL ROOM AS PER SPEC, INCLUDING PIPE INSIDE THE AIR HANDLING UNIT.
- AFTER THE PRE-HEAT COIL IS INSTALLED, BALANCE SUPPLY AIR FLOW AGAIN TO 4250 L/s (9000 CFM). BALANCE EXHAUST AIR FLOW TO KEEP HIGH BAY ROOM 141 UNDER A NEGATIVE PRESSURE OF -25 PA COMPARE TO OUTSIDE.

BAS NOTES AND SEQUENCE OF OPERATION:

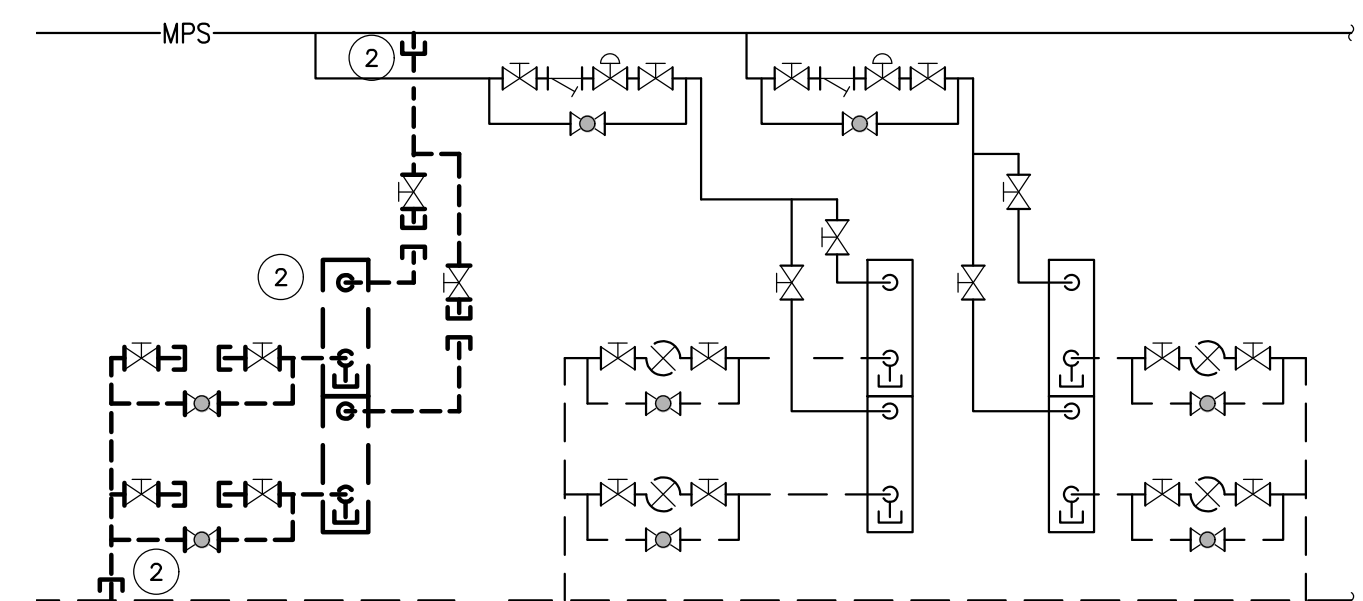
- ALL BAS WORK SHALL BE CARRIED OUT BY ANSWORTH CANADA. CONTACT: ARRON DOBSON, (613)247-7938, EMAIL: AARON.DOBSON@ANSWORTH.COM
- IN SUMMER MODE, BAS SYSTEM SHALL CLOSE MAIN STEAM VALVE V1. MAIN STEAM VALVE V1 SHALL BE ON/OFF, NOT MODULATING VALVE, WITH SLOW ACTING ACTUATOR, WITH A MINIMUM OPEN TO CLOSED AND CLOSED TO OPEN TIME OF THREE (3) MINUTES.
- IN WINTER MODE, BAS SYSTEM SHALL OPEN MAIN STEAM VALVE V1, AND MODULATE FACE & BYPASS DAMPER TO MAINTAIN DISCHARGE AIR TEMPERATURE SET POINT.
- EXISTING CONTROL VALVE TO RE-HEAT COIL SHALL BE CLOSED UNDER NORMAL OPERATION.
- IF DISCHARGE AIR TEMPERATURE REMAINS LOWER THAN SET POINT FOR MORE THAN 30 MINUTES, WITH PRE-HEAT COIL RUNNING AT 100% CAPACITY, BAS SYSTEM SHALL MODULATE CONTROL VALVE TO RE-HEAT COIL TO MAINTAIN DISCHARGE AIR TEMPERATURE SET POINT.
- BAS SYSTEM SHALL MONITOR THE DIFFERENTIAL PRESSURE ACROSS FILTER AND GENERATE AN ALARM WHEN DIFFERENTIAL PRESSURE REACHES 250 Pa. (1" W. C.)

MECHANICAL DRAWING SYMBOLS LEGEND

SYMBOL	DESCRIPTION
---	TYPICAL EXISTING
---	TYPICAL NEW
---	TYPICAL DEMOLITION / REMOVALS
---	MPS - MEDIUM PRESSURE STEAM SUPPLY
---	MPC - MEDIUM PRESSURE CONDENSATE RETURN
○	PIPE UP
○	PIPE DOWN
⌈	CAP
⌋	CONTINUE
⌋	UNION
⌋	REDUCER - ECCENTRIC (BOTTOM FLAT)
⌋	GATE VALVE
⌋	GLOBE VALVE
⌋	2-WAY CONTROL VALVE (PNEUMATIC)
⌋	2-WAY CONTROL VALVE (ELECTRONIC)
⌋	STRAINER
⌋	SWING CHECK VALVE (15' TYPE)
⌋	STEAM TRAP
⌋	FLEXIBLE CONNECTION
⌋	SPRING LOADED VACUUM BREAKER
⌋	PRESSURE GAUGE
⌋	ACTUATOR



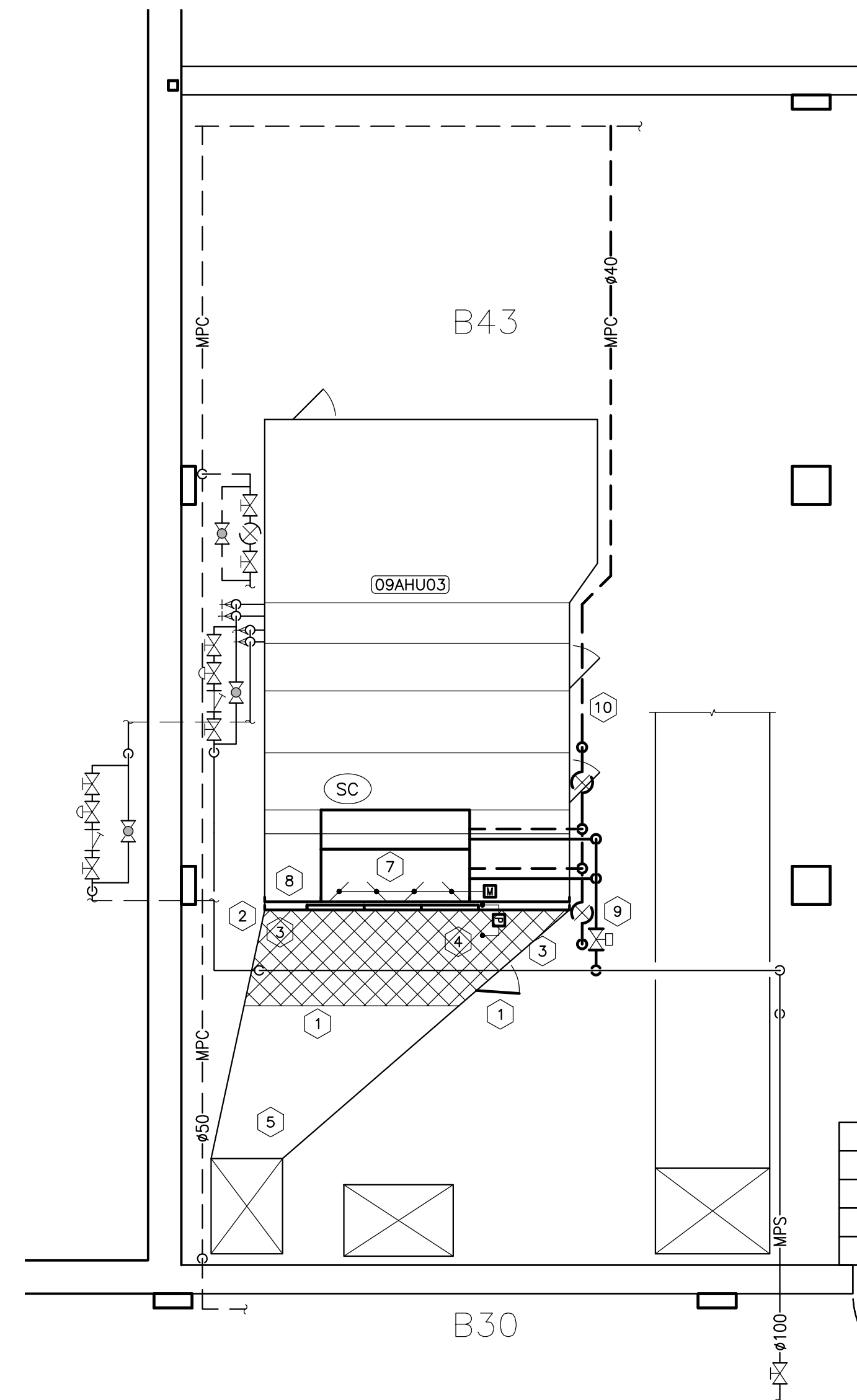
1 PLAN: DEMOLITION  
 MO1 SCALE = 1:50



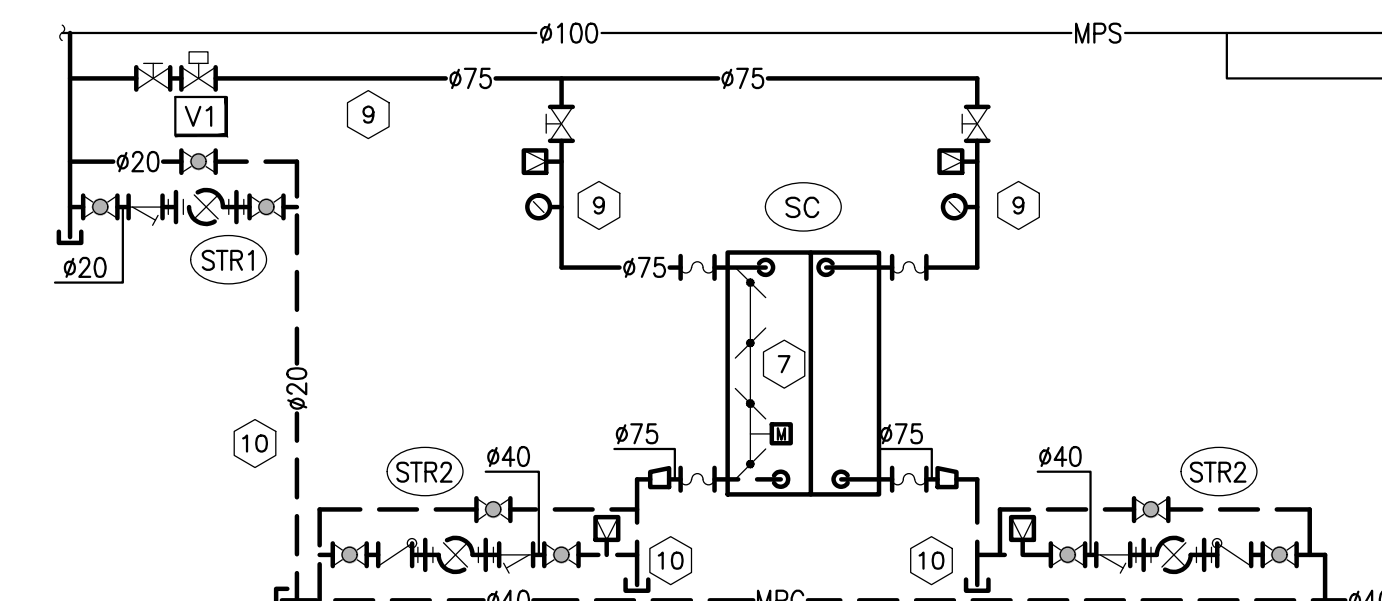
2 PIPE DIAGRAM: DEMOLITION  
 MO1 SCALE = 1:50

FACE & BYPASS STEAM COIL

MANUFACTURER	LJ WING
REF	SC
MODEL	D-54-DS STEAM, DOUBLE SECTION (4 ROW)
AIR FLOW	L/s (CFM) 4,250 (9,000)
ENTERING AIR TEMP.	°C (°F) -34.4 (-30.0)
LEAVING AIR TEMP.	°C (°F) 22.9 (73.3)
STEAM PRESSURE	BAR G (PSIG) 1.38 (20.0)
CONDENSATE LOAD	kg/hr (lb/hr) 488 (1,074)
SENSIBLE HEAT	kW (Btuh) 295.7 (1,008,859)
CASING SIZE (HxWxD)	mm (inch) 1165x1587x978 (45 7/8"x62 1/2"x38 1/2")
DRY WEIGHT	kg (lbs) 428 (944)
REMARKS	C/W DIRECT-COUPLED, SIDE-MOUNTED ACTUATOR WITH 2-10 VDC CONTROL SIGNAL



3 PLAN: NEW INSTALLATION  
 MO1 SCALE = 1:50



4 PIPE DIAGRAM: NEW WORK  
 MO1 SCALE = 1:50

BALL FLOAT TRAP (NPT)

MANUFACTURER	SPIRAX SARCO
REF	STR1
MODEL	FT14-4.5
SIZE	DN20
REMARK	FOR DRIP LEG
REF	STR2
MODEL	FT14-4.5
SIZE	DN40
REMARK	FOR STEAM COILS

