

ISSUED FOR TENDER

07/05/2021



Public Services and
Procurement Canada

Services publics et
Approvisionnement Canada

AIR HANDLER #4 REFURBISHMENT THE VALOUR BUILDING

151 SPARKS ST. OTTAWA, ONTARIO

Canada

Public Services and Procurement Canada / Services publics et Approvisionnement Canada
Real Property Branch / Direction générale des biens immobiliers

MORRISON HERSHFIELD

LEGEND	
SYMBOL	DESCRIPTION
SINGLE LINE SYMBOL	
	MOULDED-CASE CIRCUIT BREAKER
	FUSE
	SOLENOID
	OVERLOAD
	ISOLATION SWITCH
	FUSIBLE ISOLATION SWITCH
	FUSIBLE ISOLATION SWITCH UNIT
	TRANSFORMER
	"DELTA" CONNECTION
	"WYE" (OR "STAR") CONNECTION
	GROUND
LEGEND	
SYMBOL	DESCRIPTION
POWER	
	DIRECT CONNECTION
	DISCONNECT SWITCH

LEGEND	
SYMBOL	DESCRIPTION
PIPING	
	HYDRONIC SUPPLY PIPING
	HYDRONIC RETURN PIPING
	NEW PIPING
	EXISTING PIPING
	PIPING TO BE REMOVED
LEGEND	
SYMBOL	DESCRIPTION
PIPING ACCESSORIES	
	ISOLATION VALVE - BUTTERFLY
	CONTROL VALVE
	STRAINER

SHEET LIST - MECHANICAL	
SHEET NUMBER	SHEET NAME
-	COVER SHEET, LIST OF DRAWINGS, LEGEND
M100	FLOOR PLAN; EXISTING MECHANICAL ROOM, LOWER VIEW
M101	FLOOR PLAN; EXISTING MECHANICAL ROOM, UPPER VIEW
M200	REFURBISHMENT ACTIVITIES; IMAGES, DETAILS, & SCOPE
M201	REFURBISHMENT ACTIVITIES; IMAGES, DETAILS, & SCOPE
SHEET LIST - ELECTRICAL	
SHEET NUMBER	SHEET NAME
E100	FLOOR PLAN; EXISTING ELECTRICAL
E101	FLOOR PLAN; NEW ELECTRICAL
E200	DETAILS & SCHEMATICS



Contractor to verify all dimensions & conditions on site and immediately notify the departmental representative of all discrepancies.

revisions	description	date
A	ISSUED FOR TENDER	2021-07-05

A C	A detail no. no. du détail B location drawing no. sur dessin no. C drawing no. dessin no.	A B C
--------	--	-------------

project projet

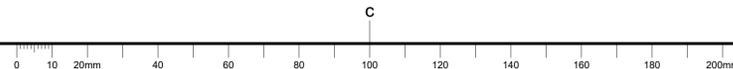
AHU 4 REFURBISHMENT

THE VALOUR BUILDING
(151 SPARKS ST. OTTAWA ON.)

drawing dessin

FRONT PAGE LIST OF DRAWINGS LEGEND

Designed By	G. HEBB	Conçu par
Date	2020-12-01	(yyyy/mm/dd)
Drawn By	S. GAGNON	Dessiné par
Date	2020-12-01	(yyyy/mm/dd)
Reviewed By	G. HEBB	Examiné par
Date		(yyyy/mm/dd)
Approved By	B. MICHEL	Approuvé par
Date		(yyyy/mm/dd)
Tender		Soumission
Project Manager		Administrateur de projets
Project no.	R.101143.001	No. du projet
	(2021852)	
Drawing no.		No. du dessin





Contractor to verify all dimensions & conditions on site and immediately notify the departmental representative of all discrepancies.

A	ISSUED FOR TENDER	2021-07-05
---	-------------------	------------

revisions	description	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
AHU 4 REFURBISHMENT
 THE VALOUR BUILDING
 (151 SPARKS ST. OTTAWA ON.)

drawing / dessin
FLOOR PLAN EXISTING MECHANICAL LOWER VIEW

Designed By	G. HEBB	Conçu par
Date	2020-12-01	(yyyy/mm/dd)
Drawn By	S. GAGNON	Dessiné par
Date	2020-12-01	(yyyy/mm/dd)
Reviewed By	G. HEBB	Examiné par
Date		(yyyy/mm/dd)
Approved By	B. MICHELS	Approuvé par
Date		(yyyy/mm/dd)
Tender		Soumission
Project Manager		Administrateur de projets
Project no.	R.101143.001	No. du projet
	(2021852)	
Drawing no.		No. du dessin
	M100	

GENERAL REFURBISHMENT ACTIVITIES
 1) CLEAN INTERIOR OF UNIT AREAS

SUPPLY FAN REFURBISHMENT
 1. CLEAN COMPLETE FAN ASSEMBLY INCLUDING COMPLETE SQUIRREL CAGE BLOWER FAN ASSEMBLY AND IMPELLERS.
 2. REPLACE FAN BEARINGS.
 3. REPLACE FAN MOTOR MOUNTING WITH ONE PROVIDING 2-AXIS DEGREE OF FREEDOM ON THE HORIZONTAL.
 4. RETAIN THE SERVICE OF A DYNAMIC BALANCING SPECIALIST TO DYNAMICALLY BALANCE SUPPLY FAN.
 5. OBTAIN BALANCING REPORT BY DYNAMIC BALANCER AND ENSURE UNIT IS BALANCED TO INDUSTRY STANDARDS.
 6. REPLACE MACHINE/BELT GUARD.

COOLING COIL REFURBISHMENT
 1. CONDENSATE PAN REFURBISHMENT & NEW CONDENSATE TRAP (SEE DETAILS). REMOVE CORROSION AND APPLY SILICON-BASED COATING TO THE PAN'S INTERIOR SURFACE.
 2. INSTALL NEW CONDENSATE DRAIN c/w ADEQUATELY SIZED CONDENSATE TRAP. SEE DETAIL 1/M200 AND 2/M200.
 3. COMB COIL FINS.

DOOR REFURBISHMENT
 1. REMOVE AND DISPOSE OF EXISTING LATCHBOLT AND LEVER.
 2. PREPARE DOOR SURFACE FOR NEW LATCHBOLT AND NEW LEVER.
 3. SUPPLY AND INSTALL NEW LATCHBOLT AND NEW LEVER.

RETURN PLENUM REFURBISHMENT
 1. RE-CALIBRATE RETURN AIR AIRFLOW STATIONS.

COMPRESSORS 1 & 2
 1. REMOVE AND DISPOSE OF EXISTING COMP. #1 AND COMP. #2.
 2. ELECTRICAL TO REMOVE ELECTRICAL CONNECTIONS.

SUPPLY PLENUM REFURBISHMENT
 1. PATCH PENETRATION WITHIN SUPPLY PLENUM. LOCATED ON THE TOP OF THE PLENUM. SIZE APPROXIMATELY 100mmX100mm.

FILTER BANK REFURBISHMENT
 1. REPLACE BAG FILTERS AND PLEATED FILTERS.
 2. BAG FILTERS: QTY 25 - 610x610x533 MERV 13
 3. PLEATED FILTERS: QTY 25 - 610x610x50 MERV 8

RETURN FAN REFURBISHMENT
 1. RETAIN THE SERVICES OF A SPECIALIST TO CLEAN AND DYNAMICALLY BALANCE RETURN FAN (INCLUDING HOUSING, INTERIOR, AND IMPELLERS). PROVIDE REPORT TO DEPARTMENTAL REPRESENTATIVE.
 2. REMOVE EXISTING INLET VANES.
 3. REPLACE FAN MOTOR MOUNTING WITH ONE PROVIDING 2-AXIS DEGREES OF FREEDOM ON THE HORIZONTAL.
 4. REPLACE MACHINE/BELT GUARD.

HEATING COIL REFURBISHMENT
 1. INSTALL NEW FULL HEIGHT BLANKING PLATE TO PREVENT AIR BYPASS AROUND COIL. SPACE APPROXIMATELY 150mm WIDE.
 2. COMB COIL FINS.
 3. PATCH A SMALL NUMBER OF HOLES VARYING IN SIZE. NONE LARGER THAN 300mmX300mm.

NEW HUMIDIFIER HUM-12
 1. INSTALL NEW HUM-12 IN LOCATION SHOWN.
 2. MAINTAIN SERVICE CLEARANCE IN FRONT OF UNIT OF 914mm.
 3. PROVIDE STRUCTURE TO SUPPORT HUMIDIFIERS.

HUMIDIFIER SCHEDULE

UNIT NO.	LOCATION	UNIT REF.	CAPACITY kg/hr	VOLTAGE	MCA	MOCP	NOTES
HUM-1	MECH RM 353	AHU-4	37.4	575/3/60	27 A	35 A	1, 2, 3, 4, 5
HUM-2	MECH RM 353	AHU-4	37.4	575/3/60	27 A	35 A	1, 2, 3, 4, 5

NOTES:
 1. PROVIDE ELECTRODE STEAM HUMIDIFIER.
 2. PROVIDE SHORT ABSORPTION STEAM HEADER. COMPLETE ABSORPTION WITHIN 30cm.
 3. PROVIDE HIGH LEVEL HUMIDISTAT & AIR PROVING SWITCH.
 4. ENABLE/DISABLE AND DEMAND PROVIDED BY BAS.
 5. PROVIDE ONBOARD CONTROLLER CAPABLE OF STAGING HUMIDIFIERS. LEAD/LAG CONTROL.

1 EXISTING MECHANICAL ROOM, LOWER VIEW
 1:50



Contractor to verify all dimensions & conditions on site and immediately notify the departmental representative of all discrepancies.

A ISSUED FOR TENDER 2021-07-05

revisions	description	date
A	detail no. no. du detail	A
B	location drawing no. sur dessin no.	B
C	drawing no. dessin no.	C

project AHU 4 REFURBISHMENT

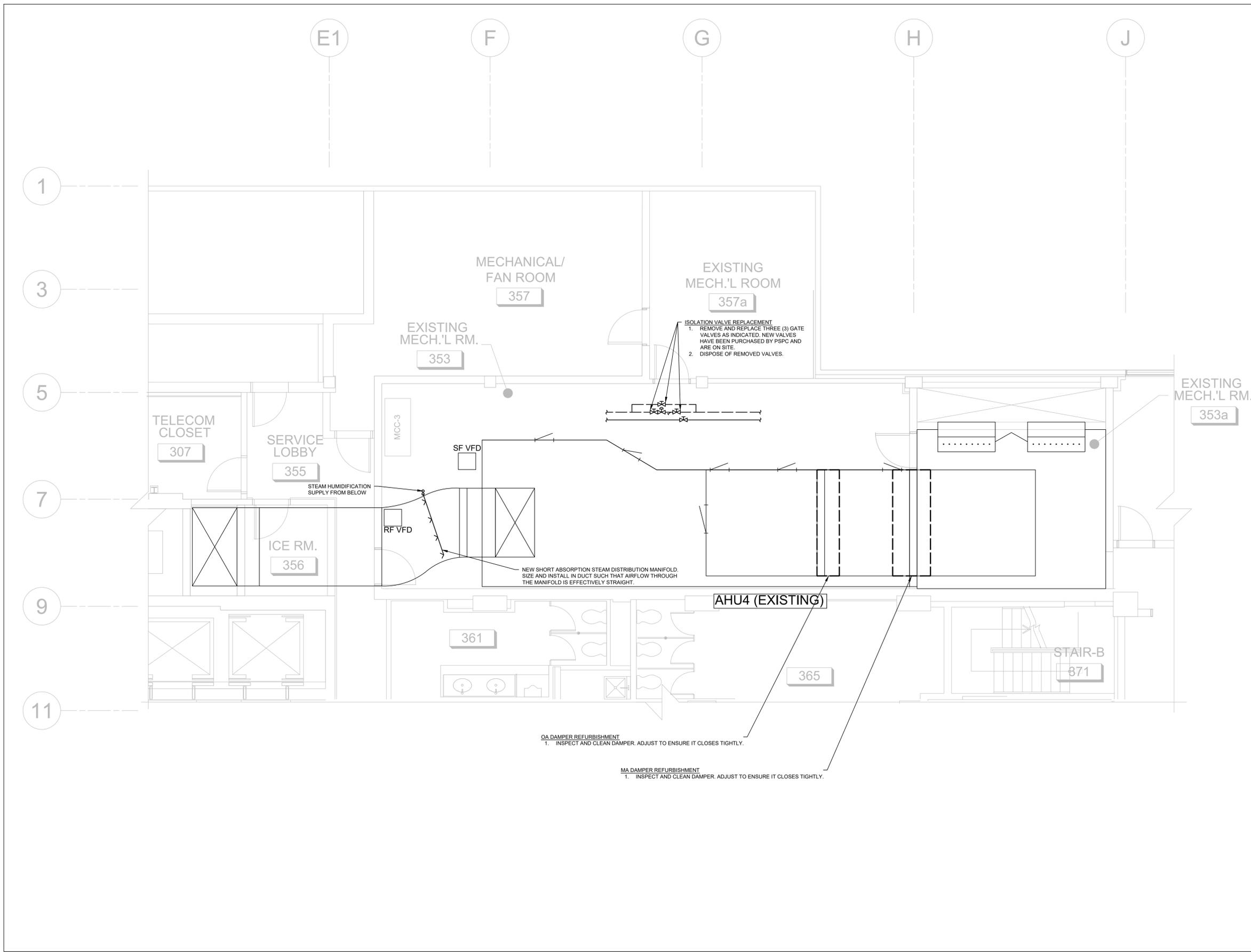
AHU 4 REFURBISHMENT

THE VALOUR BUILDING
 (151 SPARKS ST. OTTAWA ON.)

drawing FLOOR PLAN EXISTING MECHANICAL UPPER VIEW

Designed By	G. HEBB	Conçu par	G. HEBB
Date	2020-12-01	(yyyy/mm/dd)	
Drawn By	S. GAGNON	Dessiné par	S. GAGNON
Date	2020-12-01	(yyyy/mm/dd)	
Reviewed By	G. HEBB	Examiné par	G. HEBB
Date		(yyyy/mm/dd)	
Approved By	B. MICHELS	Approuvé par	B. MICHELS
Date		(yyyy/mm/dd)	
Tender		Soumission	

Project Manager	Administrateur de projets
Project no.	No. du projet
R.101143.001	(2021852)
Drawing no.	No. du dessin
M101	



1 EXISTING MECHANICAL ROOM, UPPER VIEW
 1:50





CORRODED DRAIN PAN TO BE CLEANED AND COATED WITH BRUSH-ON POLYMER TO RESTORE WATER TIGHTNESS.
 INSTALL NEW CONDENSATE TRAP. SEE DETAIL 2/M200.

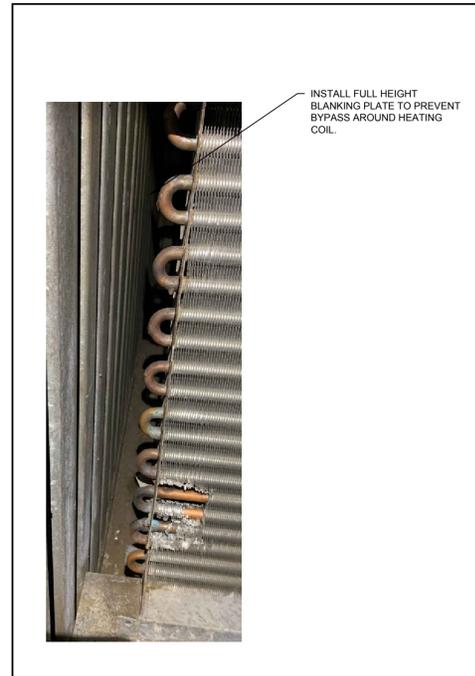
300

1 DRAIN PAN REFURBISHMENT
 NTS



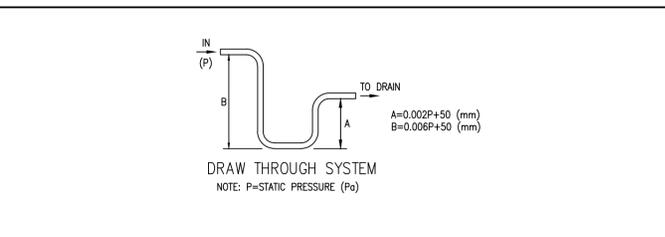
REPLACE BAG FILTERS.
 REPLACE PLEATED FILTERS ON OPPOSITE SIDE.

3 BAG FILTER RE-ALIGNMENT
 NTS

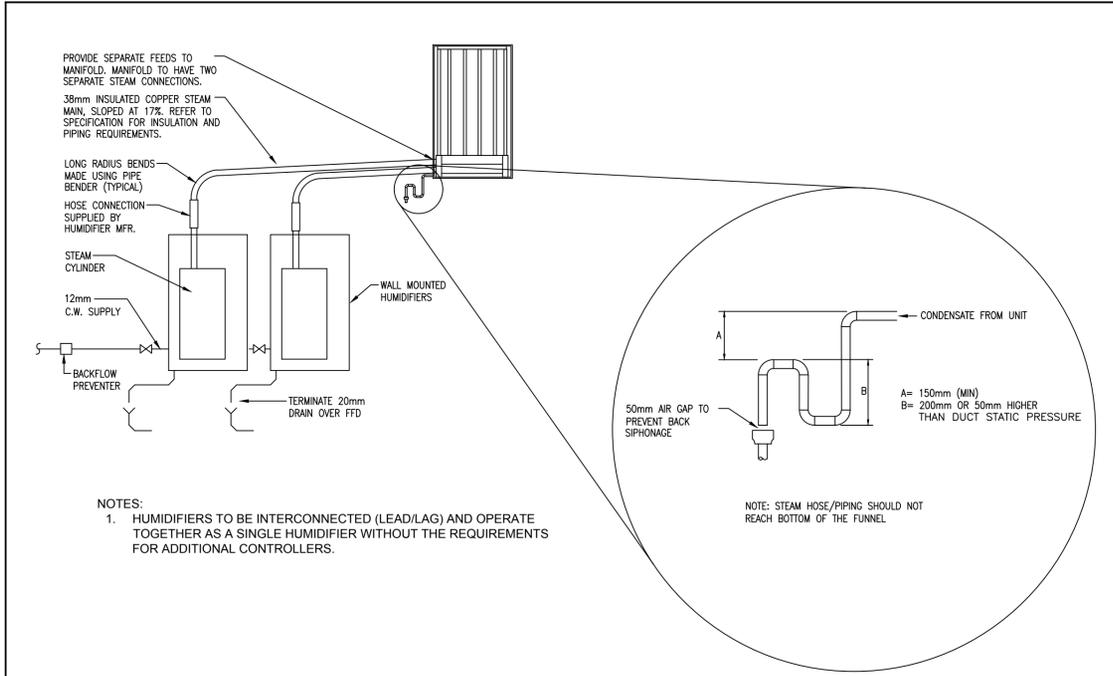


INSTALL FULL HEIGHT BLANKING PLATE TO PREVENT BYPASS AROUND HEATING COIL.

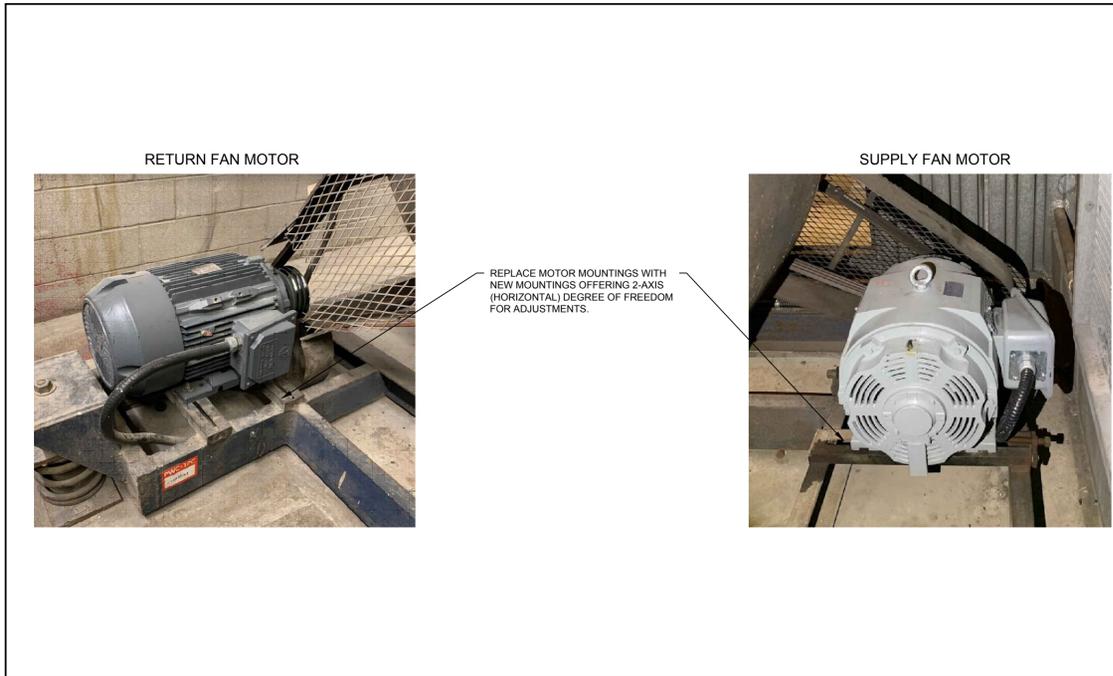
4 HC BLANKING PLATE
 NTS



6 NEW CONDENSATE DRAIN
 NTS



2 NEW HUMIDIFIER INSTALLATION
 NTS



5 MOTOR MOUNTING REPLACEMENT
 NTS

Canada
 Public Services and Procurement Canada / Services publics et Approvisionnement Canada
 Real Property Branch / Direction générale des biens immobiliers

MORRISON HERSHFIELD

Contractor to verify all dimensions & conditions on site and immediately notify the departmental representative of all discrepancies.

A	ISSUED FOR TENDER	2021-07-05
revisions	description	date

A detail no. no. du détail
 B location drawing no. sur dessin no.
 C drawing no. dessin no.

project projet

AHU 4 REFURBISHMENT

THE VALOUR BUILDING
 (151 SPARKS ST. OTTAWA ON.)

drawing dessin

REFURBISHMENT ACTIVITIES IMAGES, DETAILS, & SCOPE

Designed By	G. HEBB	Conçu par
Date	2020-12-01	(yyyy/mm/dd)
Drawn By	S. GAGNON	Dessiné par
Date	2020-12-01	(yyyy/mm/dd)
Reviewed By	G. HEBB	Examiné par
Date		(yyyy/mm/dd)
Approved By	B. MICHELS	Approuvé par
Date		(yyyy/mm/dd)
Tender		Soumission
Project Manager		Administrateur de projets
Project no.	R.101143.001	No. du projet
	(2021852)	
Drawing no.	M200	No. du dessin



- REMOVE EXISTING INLET VANES (BOTH SIDES)
- REMOVE AND REPLACE BELT GUARD

 1. CLEAN COMPLETE FAN ASSEMBLY INCLUDING COMPLETE SQUIRREL CAGE BLOWER FAN ASSEMBLY AND IMPELLERS.
 2. REPLACE FAN BEARINGS.
 3. RETAIN THE SERVICE OF A DYNAMIC BALANCING SPECIALIST TO DYNAMICALLY BALANCE SUPPLY FAN.
 4. OBTAIN BALANCING REPORT BY DYNAMIC BALANCER AND ENSURE UNIT IS BALANCED TO INDUSTRY STANDARDS.



1. CLEAN COMPLETE FAN ASSEMBLY INCLUDING COMPLETE SQUIRREL CAGE BLOWER FAN ASSEMBLY AND IMPELLERS.
 2. REPLACE FAN BEARINGS.
 3. RETAIN THE SERVICE OF A DYNAMIC BALANCING SPECIALIST TO DYNAMICALLY BALANCE SUPPLY FAN.
 4. OBTAIN BALANCING REPORT BY DYNAMIC BALANCER AND ENSURE UNIT IS BALANCED TO INDUSTRY STANDARDS.
- REMOVE AND REPLACE BELT GUARD
 - RECALIBRATE AIRFLOW STATION



1 RETURN FAN FURBISHMENT
NTS

2 SUPPLY FAN REFURBISHMENT
NTS



Contractor to verify all dimensions & conditions on site and immediately notify the departmental representative of all discrepancies.

A	ISSUED FOR TENDER	2021-07-05
---	-------------------	------------

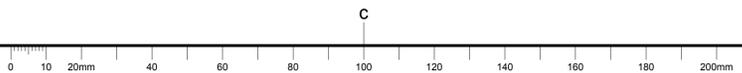
revisions	description	date
A	A detail no. no. du detail	A
B	B location drawing no. sur dessin no.	B
C	C drawing no. dessin no.	C

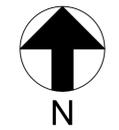
project / projet
AHU 4 REFURBISHMENT
THE VALOUR BUILDING
(151 SPARKS ST. OTTAWA ON.

drawing / dessin
REFURBISHMENT ACTIVITIES IMAGES, DETAILS, & SCOPE

Designed By	G. HEBB	Conçu par
Date	2020-12-01	(yyyy/mm/dd)
Drawn By	S. GAGNON	Dessiné par
Date	2020-12-01	(yyyy/mm/dd)
Reviewed By	G. HEBB	Examiné par
Date		(yyyy/mm/dd)
Approved By	B. MICHELIS	Approuvé par
Date		(yyyy/mm/dd)
Tender		Soumission

Project Manager	Administrateur de projets
Project no.	No. du projet
R.101143.001	(2021852)
Drawing no.	No. du dessin
M201	





Contractor to verify all dimensions & conditions on site and immediately notify the departmental representative of all discrepancies.

A	ISSUED FOR TENDER	2021-07-05
revisions	description	date

A	A detail no. / no. du détail	A
B	B location drawing no. / sur dessin no.	B
C	C drawing no. / dessin no.	C

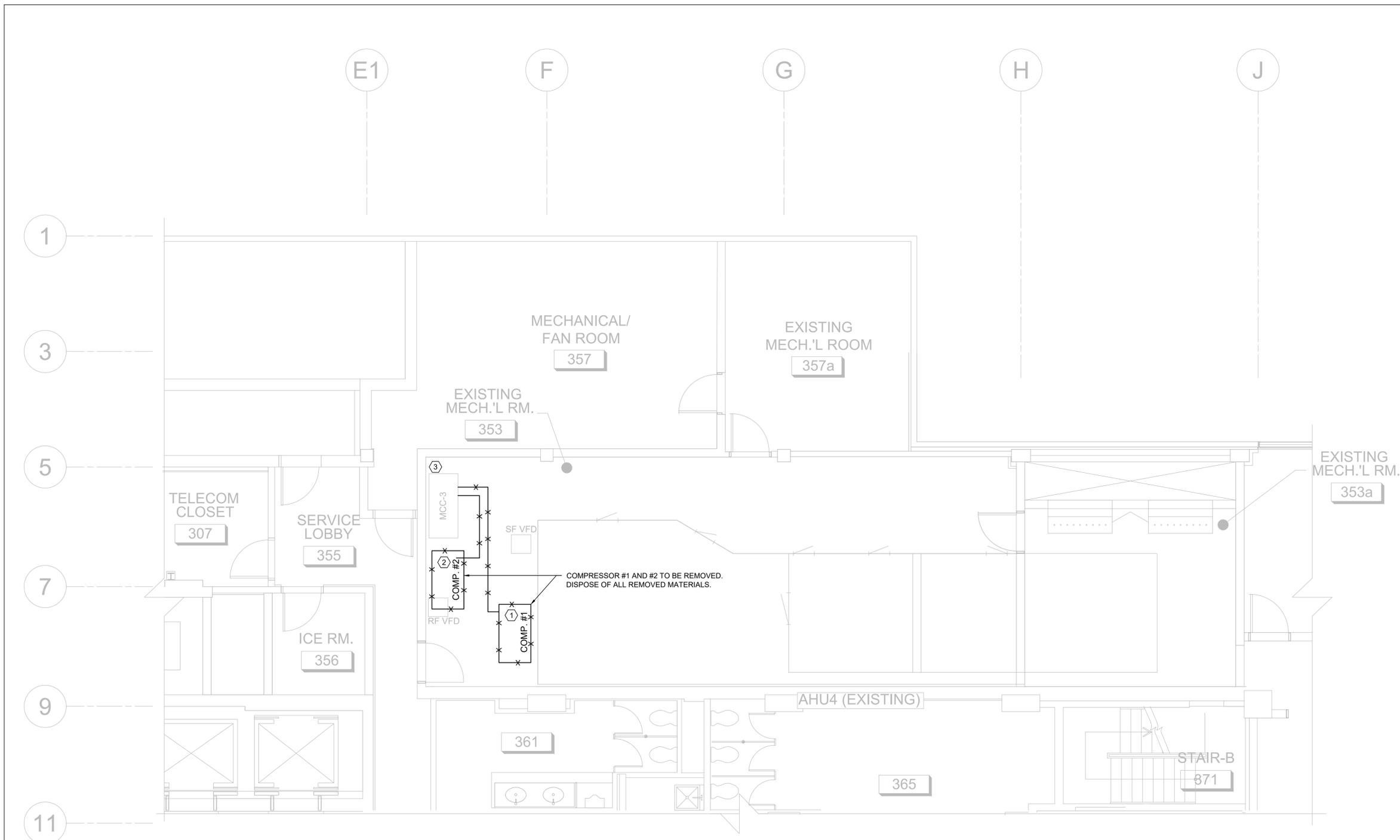
project / projet
AHU 4 REFURBISHMENT
 THE VALOUR BUILDING
 (151 SPARKS ST. OTTAWA ON.)

drawing / dessin
FLOOR PLAN EXISTING ELECTRICAL

Designed By	J. FLEMING	Conçu par
Date	2020-12-01	(yyyy/mm/dd)
Drawn By	S. GAGNON	Dessiné par
Date	2020-12-01	(yyyy/mm/dd)
Reviewed By	J. FLEMING	Examiné par
Date		(yyyy/mm/dd)
Approved By	A. NG	Approuvé par
Date		(yyyy/mm/dd)
Tender		Soumission

Project Manager / Administrateur de projets
 Project no. / No. du projet
R.101143.001 (2021852)
 Drawing no. / No. du dessin

E100



DRAWING NOTES (REMOVALS)

- ① REMOVE EXISTING SUPPLY FOR COMPRESSOR #1 INCLUDING CONDUIT FROM MCC-3. DISPOSE OF ALL REMOVED MATERIALS.
- ② REMOVE EXISTING SUPPLY FOR COMPRESSOR #2 (COMPRESSOR #19 IN MCC-3) INCLUDING CONDUIT FROM MCC-3. DISPOSE OF ALL REMOVED MATERIALS.
- ③ EXISTING BREAKER FOR COMPRESSOR #1 AND #2 TO BE RELABELLED AS "SPARE".

1 EXISTING ELECTRICAL LAYOUT
 1:50



Contractor to verify all dimensions & conditions on site and immediately notify the departmental representative of all discrepancies.

revisions	description	date
A	ISSUED FOR TENDER	2021-07-05

A	A detail no. / no. du détail	A
B	B location drawing no. / sur dessin no.	B
C	C drawing no. / dessin no.	C

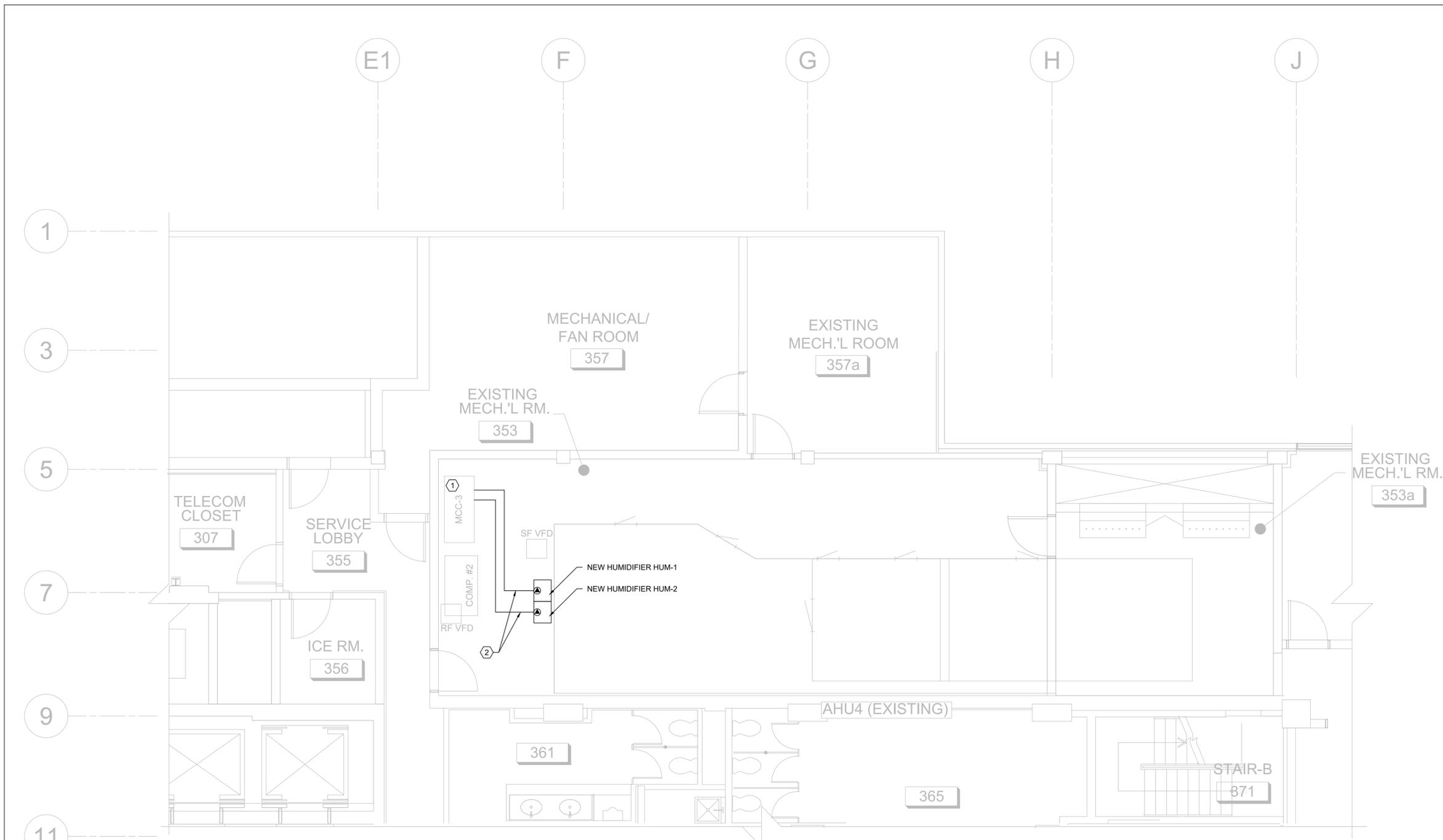
project / projet
AHU 4 REFURBISHMENT
 THE VALOUR BUILDING
 (151 SPARKS ST. OTTAWA ON.)

drawing / dessin
**FLOOR PLAN
 NEW ELECTRICAL**

Designed By	J. FLEMING	Conçu par
Date	2020-12-01	(yyyy/mm/dd)
Drawn By	S. GAGNON	Dessiné par
Date	2020-12-01	(yyyy/mm/dd)
Reviewed By	J. FLEMING	Examiné par
Date		(yyyy/mm/dd)
Approved By	A. NG	Approuvé par
Date		(yyyy/mm/dd)
Tender		Soumission

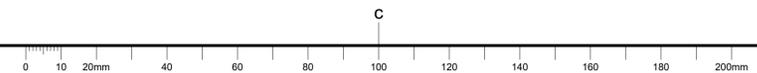
Project Manager / Administrateur de projets
 Project no. / No. du projet
R.101143.001 (2021852)
 Drawing no. / No. du dessin

E101



- DRAWING NOTES (NEW):**
- ① PROVIDE TWO NEW 600V, 3P BREAKERS IN TOP RIGHT SPACE OF MCC-3 FOR NEW HUMIDIFIERS (HUM-01/02) SERVING AHU-4. SEE E200 FOR SIZING.
 - ② PROVIDE A RUN OF 3#10 AWG + #12 BOND IN NEW EMT CONDUIT FROM MCC-3 TO NEW HUMIDIFIERS.

1 EXISTING ELECTRICAL LAYOUT
 1:50





Contractor to verify all dimensions & conditions on site and immediately notify the departmental representative of all discrepancies.

A	ISSUED FOR TENDER	2021-07-05
---	-------------------	------------

revisions	description	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
AHU 4 REFURBISHMENT
 THE VALOUR BUILDING
 (151 SPARKS ST. OTTAWA ON.)

drawing / dessin
DETAILS & SCHEMATICS

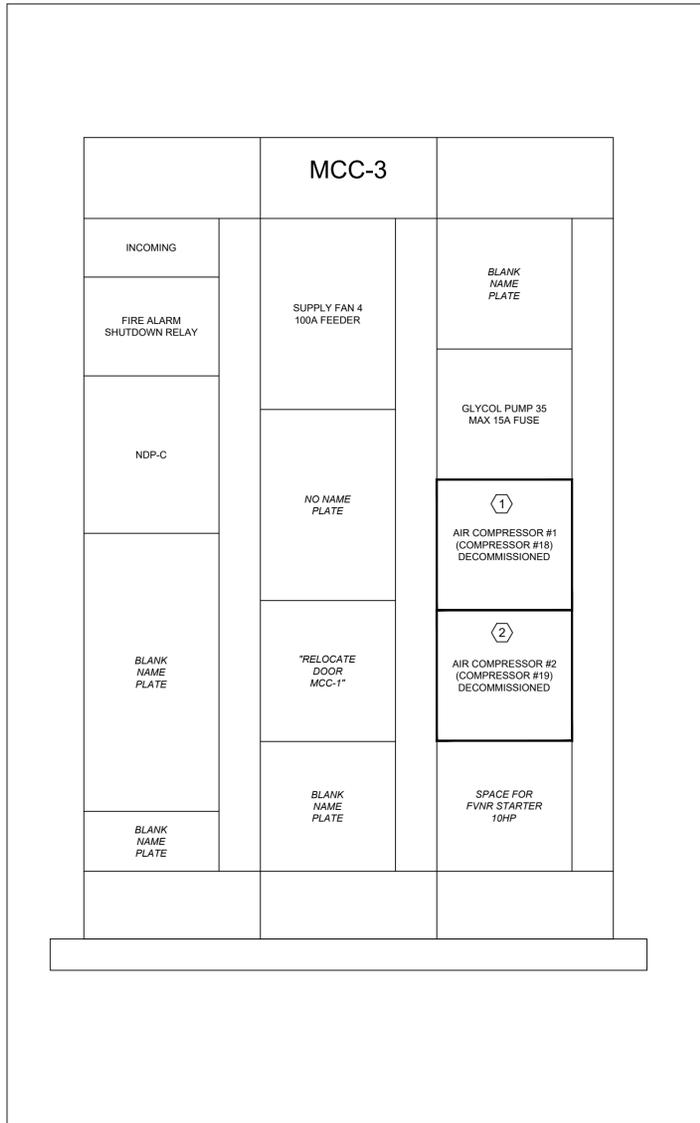
Designed By	J. FLEMING	Conçu par
Date	2020-12-01	(yyyy/mm/dd)
Drawn By	S. GAGNON	Dessiné par
Date	2020-12-01	(yyyy/mm/dd)
Reviewed By	J. FLEMING	Examiné par
Date		(yyyy/mm/dd)
Approved By	A. NG	Approuvé par
Date		(yyyy/mm/dd)
Tender		Soumission
Project Manager		Administrateur de projets
Project no.		No. du projet
	R.101143.001	(2021852)
Drawing no.		No. du dessin
	E200	

GENERAL NOTES

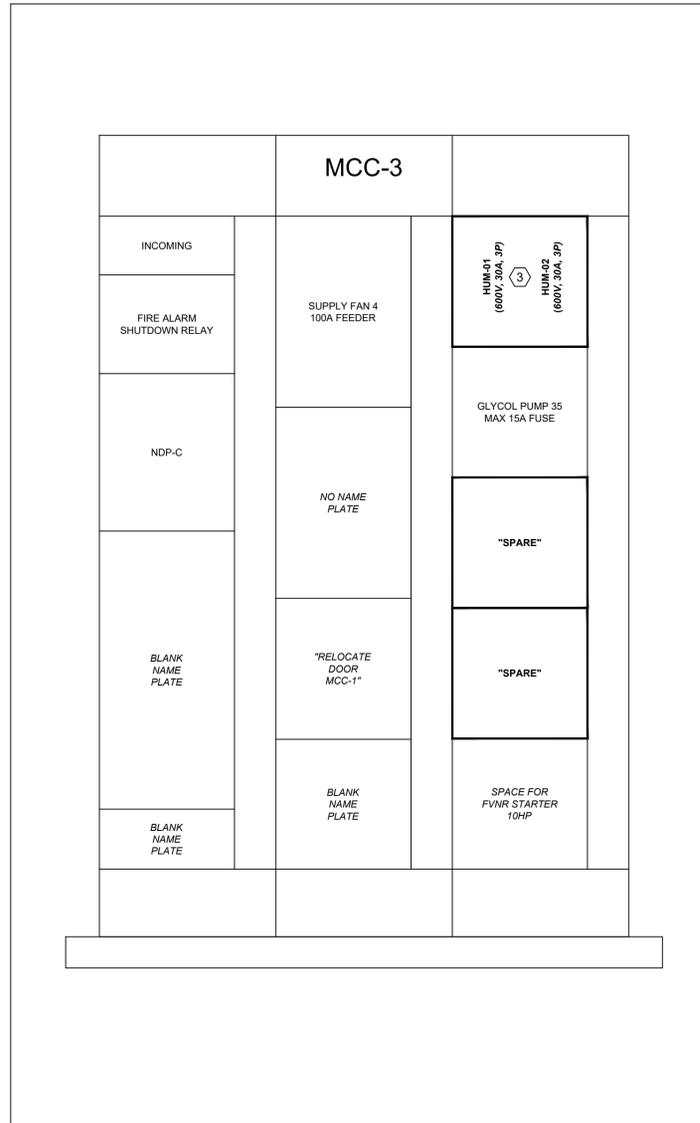
- DESIGN IS BASED ON 100% RATED BREAKERS. 80% RATED BREAKERS ARE ACCEPTABLE IF SIZED SO THAT 80% RATING OF BREAKER MEETS OR EXCEEDS AMPERAGE SHOWN. TRIP SETTING TO MATCH AMPERAGE SHOWN.

DRAWING NOTES

- RELABEL BREAKER FOR AIR COMPRESSOR #1 "SPARE".
- RELABEL BREAKER FOR AIR COMPRESSOR #2 "SPARE".
- PROVIDE TWO NEW 600V, 30A, 3P BREAKERS IN THE TOP-RIGHT SPACE OF MCC-3 AS SHOWN ON DETAIL 2 FOR TWO NEW HUMIDIFIERS (HUM-1 AND HUM-2) SERVING AHU-4. PROVIDE LOCKABLE OPERATING HANDLES MOUNTED ON THE DOOR FOR NEW BREAKERS.



1 MCC-3 ELEVATION - EXISTING
 NTS



2 MCC-3 ELEVATION - NEW
 NTS

