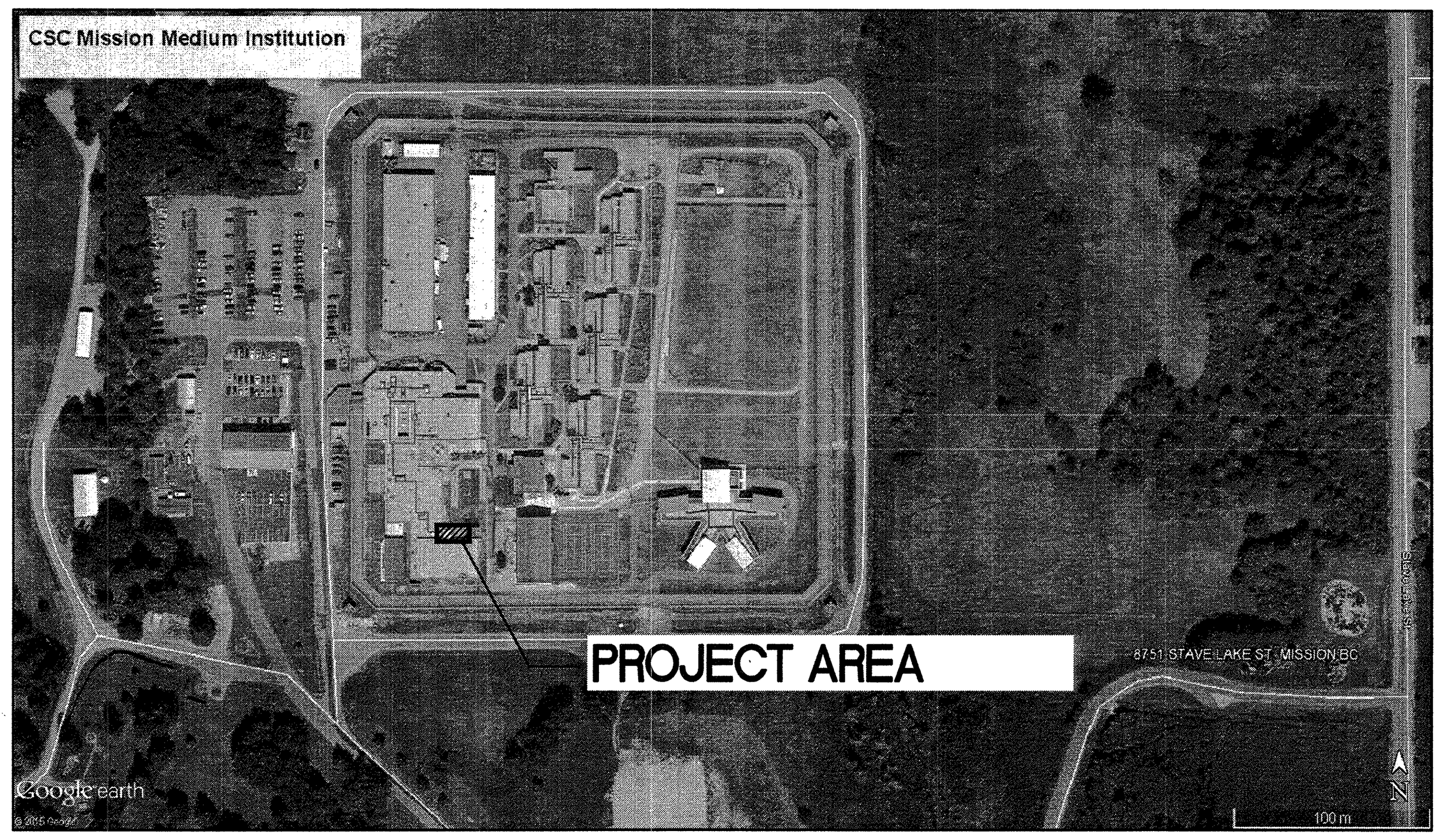

N

1 SITE PLAN M-001 SCALE: N.T.S.

DRAWING LIST:

DWG. NO.	NAME	DESCRIPTION
1 OF 3	M001	MECHANICAL LEGEND, NOTES AND SITE PLAN
2 OF 3	M101	HVAC DEMOLITION
3 OF 3	M102	HVAC NEW, MECHANICAL DETAILS, MECHANICAL EQUIPMENT SCHEDULES

GENERAL NOTES :

1. THESE CONTRACT DRAWINGS ARE IN PART DIAGRAMMATIC, INTENDED TO CONVEY THE SCOPE OF WORK AND INDICATE GENERAL ARRANGEMENT OF EQUIPMENT AND PIPING. THE CONTRACTOR SHALL CONFIRM AND LAY-OUT EXACT LOCATIONS, SIZES, AND ELEVATIONS OF ALL CRITICAL LOCATIONS AND DIMENSIONS AT THE SITE AND PROVIDE ANY NECESSARY OFFSETS AND ADJUSTMENTS TO SUIT SITE CONDITIONS AND AVOID CONFLICT WITH OTHER TRADES PRIOR TO COMMENCING WITH WORK.
2. ALL TRADES TO CLOSELY COORDINATE ALL WORK WITH THE PRIME CONTRACTOR, AS WELL AS ALL OTHER AFFECTED SUB-TRADES.
3. THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO BE COMPLIMENTARY. ANYTHING CALLED FOR IN THE SPECIFICATIONS OR SHOWN ON THE DRAWINGS SHALL BE CONSIDERED AS APPEARING IN BOTH. EACH DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWINGS FROM ALL OTHER DISCIPLINES, AS WELL AS WITH ALL APPLICABLE SECTIONS OF THE SPECIFICATIONS.
4. UNLESS OTHERWISE SPECIFIED, ALL MATERIALS AND EQUIPMENT REQUIRED FOR THIS WORK SHALL BE NEW, OF GOOD QUALITY AND SHALL BE FURNISHED, DELIVERED, ERECTED, CONNECTED AND FINISHED IN EVERY DETAIL, AND SHALL BE SELECTED AND ARRANGED SO AS TO FIT PROPERLY INTO THE BUILDING SPACES. WHERE NO SPECIFIC KIND OR QUALITY OF MATERIAL IS GIVEN, A GOOD STANDARD ITEM AS APPROVED BY THE CONSULTANT SHALL BE FURNISHED. WHERE SPECIFIC INSTALLATION METHOD IS NOT GIVEN, INSTALL IN ACCORDANCE WITH GOOD PRACTICE.
5. USE SKILLED AND QUALIFIED, FITTERS, PLUMBERS, METAL WORKERS, WELDERS, HELPERS, AND LABOURERS REQUIRED TO UNLOAD, TRANSFER, ERECT, CONNECT UP, ADJUST, START, OPERATE AND TEST SUCH SYSTEMS. HELPERS AND UNQUALIFIED WORKERS SHALL BE DIRECTLY SUPERVISED AT ALL TIMES WHILE WORKING ON THE SITE BY QUALIFIED TRADES PERSONS.
6. PATCH AND MAKE GOOD ALL CEILINGS, ROOFS, WALLS, FLOORS, AND ALL ARCHITECTURAL FEATURES ALTERED OR REMOVED IN THE PERFORMANCE OF THE WORK.

MECHANICAL LEGEND:

TAGS AND SYMBOLS

AIR TERMINAL TAG
SUPPLY S
RETURN R
EXHAUST E
LOUVRE L

4x E-1 169 250x250 — QUANTITY, TYPE, FLOW (L/S), SIZE (MM)

- AIR FLOW TAG FOR EXISTING AIR TERMINAL (L/S) — 169
- MECHANICAL EQUIPMENT TAG — ACU 1; EXIST. ACU 1
- CONNECT TO EXISTING — CE
- EXISTING TO REMAIN — ER
- SPECIFIC KEY NOTE — #
- DRAWING REVISION NO. — 2
- SECTION NO. AND CUT LINE — 5 M102 — SECTION NO. ON SHEET NO.
- SECTION/DETAIL DESCRIPTION — 5 M102 SECTION/DETAIL SCALE: 1:50 — SECTION/DETAIL NO. ON SHEET NO.
- ACCESS PANEL (450X450) U.N.O. — AP
- DOOR UNDERCUT 25MM — UC
- FLOW DIRECTION – AIR
- FLOW DIRECTION – FLUID

HVAC PIPING SYMBOLS

- FLANGE CONNECTION
- UNION CONNECTION
- PIPE CAP — CAP
- PIPE BREAK
- PIPING ELBOW DOWN
- PIPING ELBOW UP
- PIPING TEE UP
- PIPING TEE DOWN
- PIPING TEE
- GATE VALVE
- GLOBE VALVE
- TRIPLE DUTY VALVE — TDV
- PRESSURE REDUCING VALVE
- CHECK VALVE – SWING GATE TYPE
- RELIEF VALVE – PRESSURE AND TEMPERATURE
- CIRCUIT BALANCING VALVE C/W PRESSURE PORTS
- STRAINER
- RELIEF AIR VALVE (AT EACH HIGHPOINT) — AV
- PUMP WITH REDUCER ON BOTH ENDS
- PIPE THERMOMETER
- PIPE PRESSURE GAUGE — P
- PIPE PRESSURE GAUGE AND COCK
- BACKFLOW PREVENTER, REDUCED PRESSURE ZONE (RPZ) TYPE — OR — RPBP
- 2-WAY CONTROL VALVE C/W ACTUATOR – CONNECT TO DDC
- 3-WAY CONTROL VALVE C/W ACTUATOR – CONNECT TO DDC
- SOLENOID VALVE — S
- PIPE TEMPERATURE SENSOR – CONNECT TO DDC — T
- PIPE PRESSURE SENSOR – CONNECT TO DDC — P
- PIPE DIFFERENTIAL PRESSURE SENSOR – CONNECT TO DDC — DP
- PIPE FLOW SWITCH – CONNECT TO DDC — F

HVAC CONTROLS SYMBOLS

- CONTROL WIRING
- THERMOSTAT — T
- WALL MOUNTED SWITCH — S
- WALL MOUNTED VARIABLE SPEED SWITCH — V
- CARBON DIOXIDE SENSOR — CO_2
- SMOKE SENSOR — SS
- MOTORIZED DAMPER C/W ACTUATOR — M

HVAC DUCTING SYMBOLS

- SQUARE ELBOW WITH MULTI-BLADE TURNING VANES
- SUPPLY DUCT TOWARD, AWAY
- RETURN OR TRANSFER DUCT TOWARD, AWAY
- EXHAUST DUCT TOWARD, AWAY
- OUTDOOR AIR DUCT TOWARD, AWAY
- ROUND DUCT TOWARD, AWAY
- BRANCH TAKEOFF SQUARE->SQUARE
- BRANCH TAKEOFF SQUARE->ROUND
- BRANCH TAKEOFF ROUND->ROUND

HVAC

	NEW	EXISTING
DUCTWORK RECTANGULAR	300x400	300x400
DUCTWORK ROUND	300ø	300ø
SINGLE LINE DUCTWORK	300ø	300ø
CAPPED OFF DUCT	CAP	CAP
ACOUSTIC DUCT LINER		
BALANCING DAMPER	OR	OR
BACKDRAFT DAMPER BDD = BACKDRAFT DAMPER BBD = "BALANCED" BACKDRAFT DAMPER	BDD OR BDD	BDD OR BDD
FIRE DAMPER	FD OR FD	FD OR FD
SUPPLY AIR GRILLE OR DIFFUSER	OR	OR
RETURN AIR GRILLE		
EXHAUST AIR GRILLE		
HEATING WATER SUPPLY PIPING	HWS	HWS
HEATING WATER RETURN PIPING	HWR	HWR
REFRIGERANT PIPES	R	R
HVAC DRAINAGE PIPING	D	D
HVAC MAKE-UP WATER PIPING	MAKE-UP	MAKE-UP

PLUMBING

	NEW	EXISTING
GAS PIPING	G	G
DOMESTIC COLD WATER PIPING	DCW	DCW
DOMESTIC HOT WATER PIPING	DHW	DHW
DOM. HOT WATER RECIRC. PIPING	DHWR	DHWR
SANITARY PIPING	SAN	SAN
SANITARY PIPING BELOW SLAB	SAN	SAN
STORM PIPING	STM	STM
STORM PIPING BELOW SLAB	STM	STM
SANITARY VENT PIPING	V	V
FLOOR DRAIN	FD	FD

FIRE SUPPRESSION

	NEW	EXISTING
SPRINKLER PIPING	SP	SP
SPRINKLER HEAD – PENDANT		
SPRINKLER HEAD – UPRIGHT		

DEMOLITION

- EXISTING EQUIPMENT TO BE REMOVED — OR
- EXISTING DUCTWORK OR PIPING TO BE REMOVED — OR
- EXISTING DIFFUSER OR GRILLE TO BE REMOVED — OR
- EXISTING THERMOSTAT, SENSOR, OR SWITCH TO BE REMOVED
- EXISTING VALVE ACCESSORIES TO BE REMOVED
- RELOCATE EXISTING EQUIPMENT — R OR R

Public Works and Government Services Canada
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REAL PROPERTY SERVICES
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SERVICES IMMOBILIERS
Région de Pacifique

Stantec

Nov. 8, 2016

Revision/Révision	Description/Description	Date/Date
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Client/client

CORRECTIONAL SERVICE CANADA

Project title/Titre du projet

**MISSION MEDIUM INSTITUTION
MISSION, BC**

**BUILDING A-R (RECREATION)
HVAC UNIT REPLACEMENT**

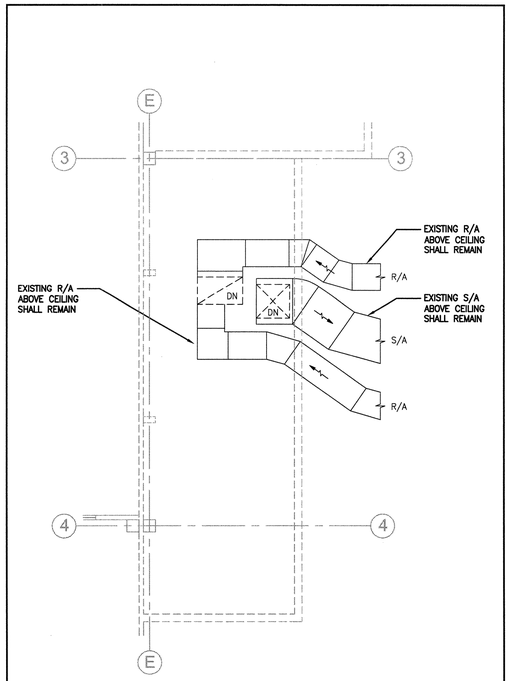
Consultant Signature Box Only

Designed by/Concept par
Jimmy Ng
Drawn by/Dessine par
Lynart Bantog
PWGSC Project Manager/Administrateur de Projets TPSGC
Daryl Sinclair
PWGSC, Regional Manager, Architectural and Engineering Services/ Gestionnaire régionale, Services d'architectural et de génie, TPSGC
Preetipal Paul

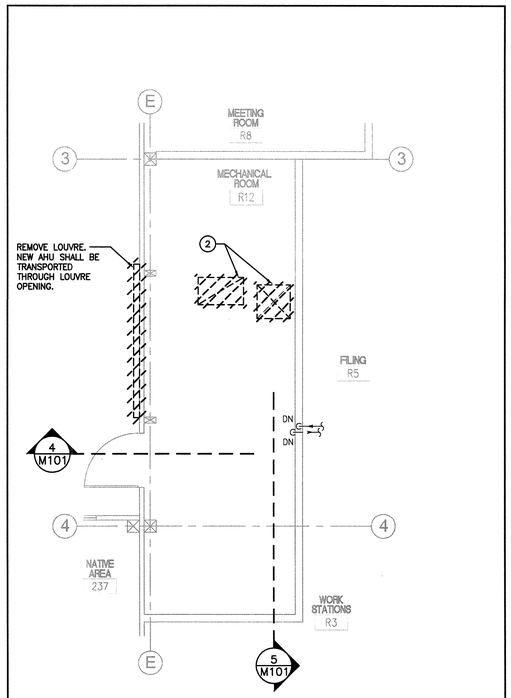
Drawing title/Titre du dessin

**MECHANICAL LEGEND,
NOTES, AND SITE PLAN**

Project No./No. du projet	Sheet/Feuille	Revision no./La Révision no.
R.082470.001	M001 1 OF 3	0



1 M101 MECHANICAL ROOM R12
ABOVE CEILING – EXISTING HVAC
SCALE: 1:50



2 M101 MECHANICAL ROOM R12
HIGH–LEVEL (2700MM AFF) – DEMOLITION
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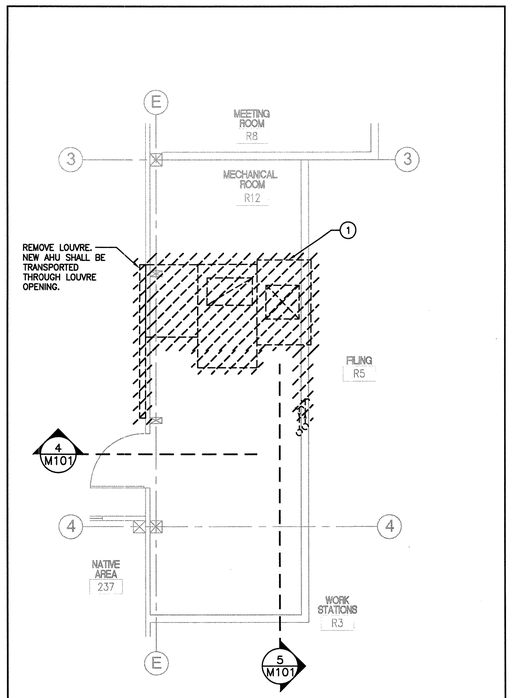
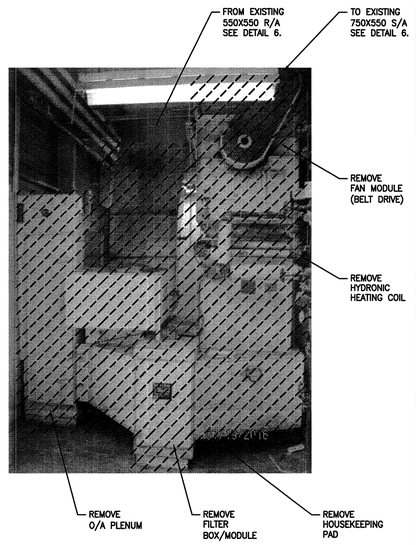
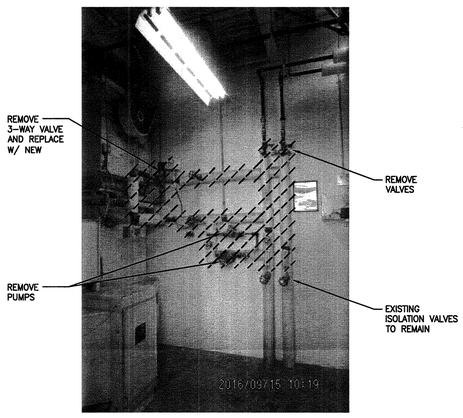


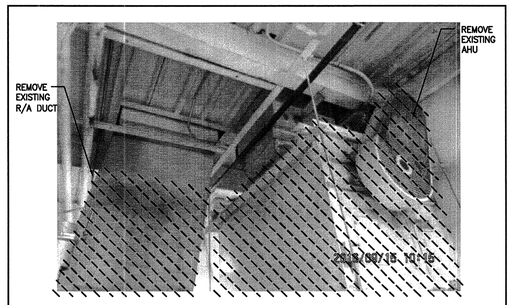
3 M101 MECHANICAL ROOM R12
LOW–LEVEL (1000MM AFF) – DEMOLITION
SCALE: 1:50



4 M101 AHU ELEVATION VIEW – DEMOLITION
SCALE: N.T.S.



5 M101 PIPING ELEVATION VIEW – DEMOLITION
SCALE: N.T.S.



6 M101 DUCT PENETRATION VIEW – DEMOLITION
SCALE: N.T.S.

SPECIFIC KEY NOTES :

1. REMOVE AND REPLACE WITH NEW – AIR HANDLING UNIT (C/W HEATING COIL, FILTER BOX PLENUM).
2. REMOVE DUCT TRANSITION CONNECTION AND REPLACE WITH NEW DUCT TRANSITION TO NEW AHU.

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BUILDING A-R (RECREATION)
HVAC UNIT REPLACEMENT

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HVAC DEMOLITION

Project No./No. du projet	Sheet/ Feuille	Revision no./ La Révision no.
R.082470.001	M101 2 OF 3	0

PWGSC – A1 – 841x594

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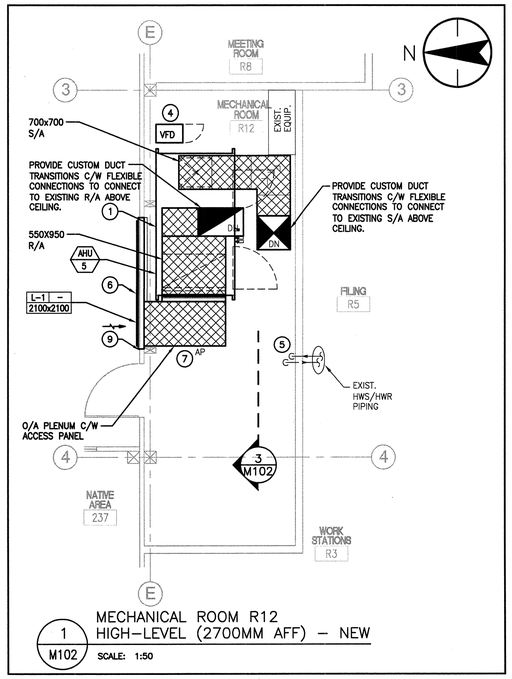
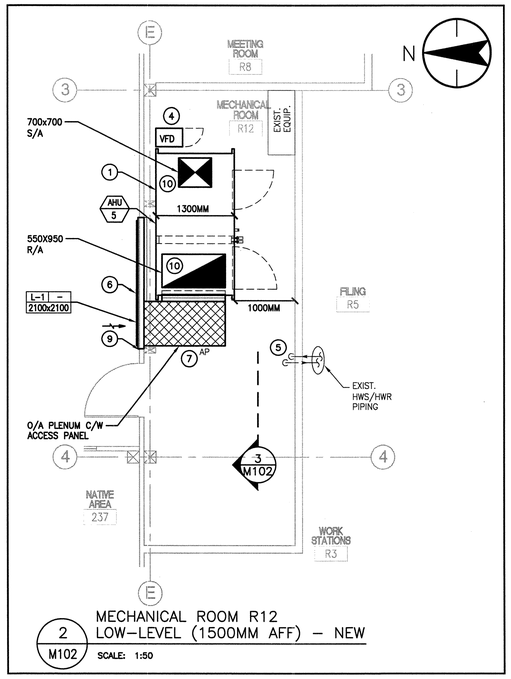


1 M102 MECHANICAL ROOM R12 HIGH-LEVEL (2700MM AFF) – NEW
SCALE: 1:50



2 M102 MECHANICAL ROOM R12 LOW-LEVEL (1500MM AFF) – NEW
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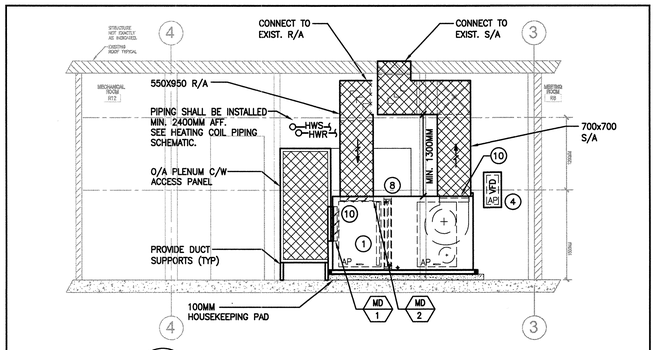
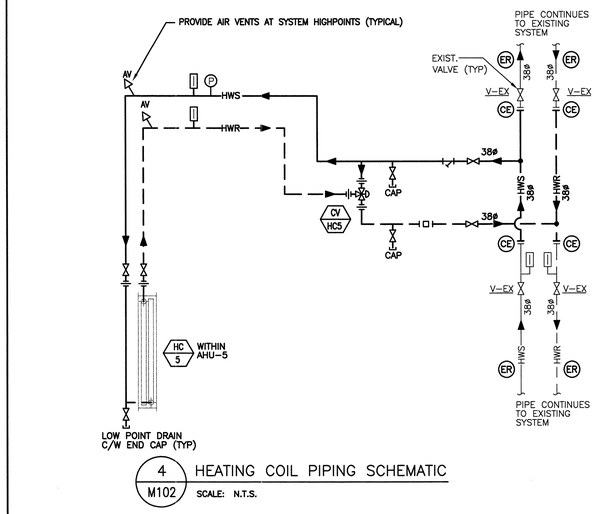


3 M102 AHU ELEVATION – NEW
SCALE: 1:50



4 M102 HEATING COIL PIPING SCHEMATIC
SCALE: N.T.S.

AIR HANDLING UNIT

UNIT TAG	SERVICE	TYPE	SUPPLY AIR FLOW L/S (CFM)	MIN. OUTDOOR AIR FLOW L/S (CFM)	EXTERNAL S.P. Pa (IN)	FAN MOTOR HP	UNIT ELECTRICAL VOLT/PH/HZ	WEIGHT KG (LBS)	NOTES	BASIS OF DESIGN MAKE	BASIS OF DESIGN MODEL	ACCEPTABLE MATERIALS
AHU-5	RECREATION BUILDING	INDOOR, HORIZONTAL, HEATING ONLY	3057 (6480)	764 (1620)	436 (1.75)	7.5	575/3/60	704 (1552)	1 TO 5	ENGINEERED AIR	CUSTOM 18/18 MPFC	HAAKON, CLIMATE CRAFT

1. REFER TO MECHANICAL SPECIFICATIONS FOR SUPPLEMENTAL REQUIREMENTS.
2. PROVIDE MERV-8 FILTERS
3. PROVIDE HINGED ACCESS DOORS C/W GASKET (SEALS) AROUND DOORS.
4. PROVIDE SINGLE POINT POWER CONNECTION, FOR VFD INTERFACE.
5. PROVIDE CUSTOM SIZE DIMENSIONS TO SUIT SPACE CONSTRAINTS.
6. C/W LOW LEAKAGE INSULATED O/A AND R/A DAMPERS
7. C/W VARIABLE FREQUENCY DRIVE WITH BACNET INTERFACE. VFD SHALL BE (REMOTE) WALL MOUNTED TO ALLOW SERVICE AND OPERATIONAL CLEARANCES.
8. C/W HYDRONIC HEATING COIL. SEE HEATING COIL SCHEDULE. FUTURE COIL REMOVAL SHALL BE FROM TOP OF AHU.

HEATING COIL SCHEDULE

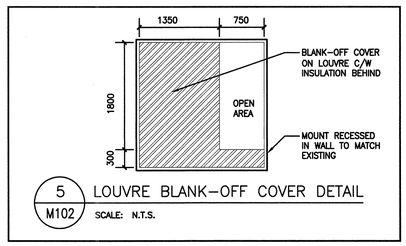
TAG N0.	SERVICE	TOTAL CAPACITY KW (MBH)	AIR FLOW L/S (CFM)	EAT °C (°F)	LAT °C (°F)	AIR P.D. PA (IN)	FLUID FLOW L/S (GPM)	EWT °C (°F)	LWT °C (°F)	FLUID P.D. KPA (FT)	FLUID TYPE	HEADER DIAM. Ø MM (IN)	NO. OF ROWS	MAX. FACE VELOCITY M/S (FPM)	NOTES	BASIS OF DESIGN MAKE	BASIS OF DESIGN MODEL	ACCEPTABLE MATERIALS
			AIR				FLUID									BASIS OF DESIGN		ACCEPTABLE MATERIALS
HC-5	AHU-5 HEATING	63.7 (217)	3057 (6480)	11.1 (52)	27.8 (82)	24.7 (0.1)	0.88 (14.0)	82.2 (180)	65.6 (150)	4.3 (1.4)	WATER	38 (1.5)	1	2.5 (496)	1,2,3	ENGINEERED AIR	CUSTOM	HAAKON, CLIMATE CRAFT

NOTES:
1. EQUIPMENT IS PART OF AHU-5. REFER TO MECHANICAL SPECIFICATIONS FOR SUPPLEMENTAL REQUIREMENTS.
2. BASED ON: RA-T= 18°C (65°F), OA-T = -11°C (12.2°F), 25% MIN. O/A.
3. AHRI STANDARD 410 CERTIFIED.
4. INLET AND OUTLET ON SAME END.
5. TUBE SIZE 16MM (5/8") OD; FIN SURFACE CORRUGATED;
6. COIL SIZE [H x L] 836X1448 (33"x57")
7. COIL FPI = 10.

CONTROL VALVE SCHEDULE

TAG No.	LOCATION	TYPE	MAX. P.D. PA (PSI)	CV	NOTES
CV-HC5	MECH. ROOM	3-WAY	20.6 (3)	10.0	1,2,3

NOTES:
1. SEE SPECIFICATIONS SECTION 230913.
2. C/W ELECTRIC ACTUATOR.
3. CONSTRUCTION: BODY=FORGED BRASS, NICKEL PLATED; BALL=STAINLESS STEEL; STEM=STAINLESS STEEL; SEATS=PTFE; PACKING=2 EPDM O-RINGS, LUBRICATED.



5 M102 LOUVRE BLANK-OFF COVER DETAIL
SCALE: N.T.S.

LOUVRE SCHEDULE

TAG No.	LOCATION	MAX. AIR FLOW	DIMENSIONS	DEPTH mm (FT-IN)	MIN. FREE AREA % Percent	AIR P.D. Pa (in w.g.)	NOTES	BASIS OF DESIGN MAKE	BASIS OF DESIGN MODEL	ACCEPTABLE MATERIALS
L-1	MECH. ROOM	SEE DRAWINGS	SEE DRAWINGS	100 (4")	50%	25 (0.1)	1,2,3,4,5	E.H. PRICE	DE 439	NAILOR, TITUS

NOTES:
1. SELECT LOUVRE FASTENING TYPE TO SUIT BUILDING CONSTRUCTION.
2. CONFIRM THE EXACT SIZE ON SITE PRIOR TO ORDERING. MAXIMUM FACE VELOCITY 900FPM.
3. C/W BIRD AND INSECT SCREEN.
4. DRAINABLE.
5. ALL WELD ALUMINUM CONSTRUCTION

GENERAL NOTES:

1. PROVIDE ALL DUCTING, PIPING, FITTINGS, AND TRANSITIONS AS REQUIRED TO AVOID EXISTING PIPING, STRUCTURE AND OTHER SERVICES.
2. PROVIDE COMPLETE AHU SYSTEM INCLUDING HEATING COIL PIPING, CONTROLS, VALVES, FITTINGS, AND PIPE ACCESSORIES. SEE HEATING COIL SCHEMATIC FOR SUPPLEMENTARY DETAILS.
3. PROVIDE 50MM THERMAL DUCT INSULATION ON ALL DUCTWORK. SEE SPECIFICATIONS 230713.
4. PROVIDE 40MM PIPE INSULATION ON ALL PIPING. SEE SPECIFICATIONS 230715.
5. PROVIDE NEW 100MM CONCRETE HOUSE KEEPING PAD.
6. PROVIDE NEW HWS AND HWR PIPING TO HEATING COIL AND PIPING ACCESSORES. REFER TO DETAIL 4/M102. MOUNT TIGHT TO WALL, DO NOT BLOCK AHU ACCESS DOORS.
7. PROVIDE NEW LOUVRE. COORDINATE LOUVRE INSTALLATION WITH BUILDING CLADDING PROJECT (CURRENTLY IN PROGRESS), PROVIDE ADDITIONAL HARDWARE AS NEEDED FOR WEATHER TIGHT INSTALLATION AND STRUCTURAL SUPPORT. SEE DETAIL 5/M102.
8. PROVIDE CONTROL HARDWARE, ACTUATORS, VALVES, SENSORS, WIRING AND CONDUIT AS REQUIRED FOR COMPLETE INSTALLATION. MODIFY CONTROLS SEQUENCE OF OPERATION AS NEEDED.
9. REMOVE AND REPLACE SPACE TEMPERATURE SENSOR WITH NEW SENSOR. CONNECT TO DDC. SPACE TEMPERATURE SENSOR IS LOCATED IN THE EXISTING R/A DUCT.

SPECIFIC KEY NOTES :

1. PROVIDE NEW AIR HANDLING UNIT C/W HEATING COIL, FILTER BOX PLENUM, DUCT PLENUMS AND CONTROLS. SEE HEATING COIL SCHEMATIC FOR SUPPLEMENTARY DETAILS.
2. PROVIDE NEW DUCT TRANSITION CONNECTION TO NEW AHU.
3. PROVIDE NEW 3-WAY CONTROL VALVE. REFER TO HEATING COIL PIPING SCHEMATIC.
4. PROVIDE NEW VFD FOR AHU, WALL MOUNTED TO ALLOW FOR ADEQUATE SERVICE AND OPERATING CLEARANCES. MECHANICAL CONTRACTOR SHALL FIELD INSTALL VFD, INSTALL ALL WIRING BETWEEN VFD AND MOTOR.
5. PROVIDE NEW HWS AND HWR PIPING AND PIPING ACCESSORIES. REFER TO HEATING COIL PIPING SCHEMATIC. PIPING SHALL BE INSTALLED TIGHT TO WALL AND/OR AT MIN. 2400MM AFF TO ALLOW SERVICE ACCESS CLEARANCE.
6. PROVIDE NEW O/A LOUVRE, RECESSED INTO EXISTING FACADE, PROVIDE SHEET METAL BLANK-OFF COVER PANELS C/W INSULATION. CONNECT TO NEW O/A PLENUM. SEE DETAIL 5/M102.
7. PROVIDE DUCT ACCESS PANEL 750X750.
8. INSTALL DUCT WORK AT HIGH LEVEL TO ALLOW FOR FUTURE COIL REMOVAL CLEARANCE FROM TOP OF AHU.
9. PATCH AND REPAIR EXTERIOR FACADE (METAL CLADDING AND COLOUR) TO MATCH EXISTING. PROVIDE ADDITIONAL MATERIAL AS NEEDED TO COVER EXCESS OPENINGS.
10. PROVIDE FLEXIBLE DUCT CONNECTIONS AT AHU INTAKES AND OUTLETS AS PER THE MANUFACTURER'S INSTALLATION GUIDE.

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HVAC NEW,
MECHANICAL DETAILS,
MECHANICAL EQUIP. SCHEDULES

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R.082470.001	M102 3 OF 3	0

PWGSC – A1 – 841x594

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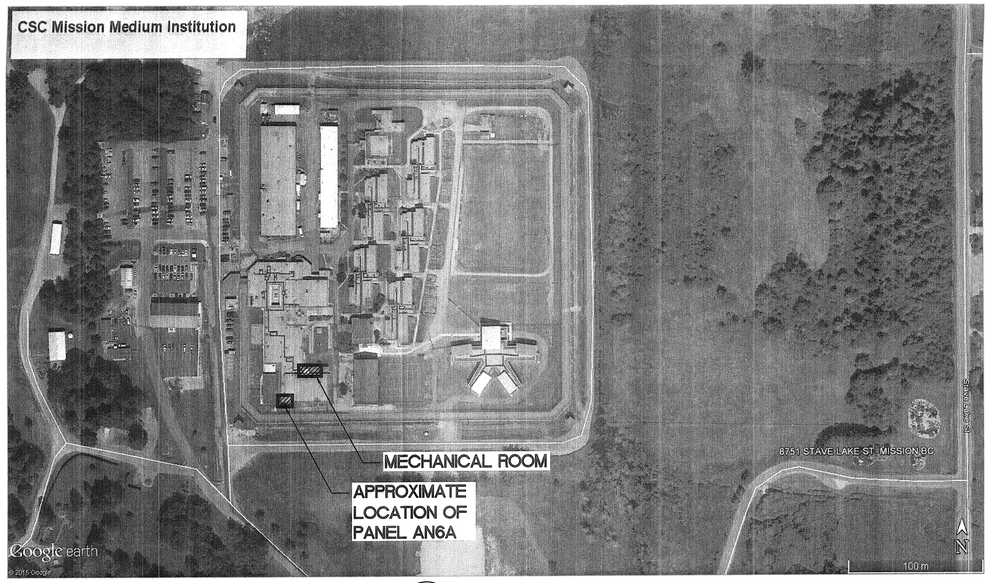


1 / E-001 SITE PLAN
SCALE: N.T.S.

ELECTRICAL SYMBOLS

	POWER PANELBOARD
	MOTOR c/w DISCONNECT SWITCH
M	MOTOR C/W MANUAL MOTOR SWITCH
	MOTOR C/W MAGNETIC MOTOR STARTER
	CONTROL PANEL, AS NOTED
DS	FIRE ALARM SMOKE DETECTOR, DUCT MOUNTED
E	EXISTING TO REMAIN
R	EXISTING TO BE REMOVED

ELECTRICAL GENERAL NOTES

1. ANY CIRCUITING SHOWN IS FOR REFERENCE ONLY. CONFIRM AVAILABLE CIRCUITS IN PANELS. INDICATE ACTUAL CIRCUITS ON RECORD DRAWINGS.
2. KEEP EXISTING FIRE ALARM SYSTEM AND DEVICES ACTIVE DURING CONSTRUCTION. THERE SHALL BE NO DISRUPTION TO THE SYSTEM.
3. PROTECT ALL EXISTING DEVICES AND EQUIPMENT THAT ARE TO REMAIN. EXTEND, REMOVE OR RELOCATE ALL ELECTRICAL DEVICES AS NOTED AND REQUIRED TO MEET THE DESIGN INTENT.
4. EXISTING CIRCUITS AND DEVICES ARE SHOWN FOR REFERENCE AND DESIGN CLARITY ONLY.
5. RELOCATE, IN A CONCEALED MANNER TO SUIT NEW CONDITIONS, EXISTING ELECTRICAL EQUIPMENT, DEVICES AND WIRING ETC. MOUNTED IN OR ON WALLS THAT ARE REMOVED, RELOCATED OR REFINISHED.
6. EXISTING SITE AND BUILDING INFORMATION ON THESE DRAWINGS WERE OBTAINED FROM CASUAL SITE OBSERVATION AND INFORMATION PROVIDED BY OTHERS. VERIFY EXISTING SITE CONDITIONS AND IMMEDIATELY NOTIFY DEPARTMENTAL REPRESENTATIVE OF ANY SITE CONDITION THAT MIGHT HINDER OR OBSTRUCT THE ELECTRICAL INSTALLATION AND/OR DESIGN INTENT.
7. APPROXIMATE LOCATIONS OF EXISTING AND NEW DEVICES ARE SHOWN. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF EXISTING DEVICES. CONTRACTOR SHALL CONFIRM EXACT MEASUREMENTS AND LOCATIONS ON SITE. CONTRACTOR SHALL CONFIRM WIRE SIZE ON SITE AND VERIFY VOLTAGE DROP CALCULATIONS, TO ENSURE CORRECT WIRE SIZING AND SYSTEM OPERATION.
8. FIELD VERIFY AND TEST ALL MODIFIED ELECTRICAL AND CONTROL SYSTEMS TO ENSURE THEY ARE FULLY FUNCTIONAL AND OPERATIONAL AS PER THE DESIGN INTENT. SUBMIT TEST RESULTS TO DEPARTMENTAL REPRESENTATIVE.
9. PROVIDE AND INSTALL ALL CONDUIT, CONDUCTORS, JUNCTION BOXES AND RECEPTACLES UNLESS OTHERWISE NOTED ON THE DRAWINGS.
10. CONTRACTOR SHALL READ THESE DRAWINGS IN CONJUNCTION WITH THE CANADIAN ELECTRICAL CODE (CURRENT EDITION), MECHANICAL DRAWINGS, NATIONAL BUILDING CODE (CURRENT EDITION), AND ALL OTHER PROJECT RELATED DOCUMENTATION. SCOPE OF WORK IS NOT LIMITED TO THESE DRAWINGS BUT INCLUDES ALL ITEMS AS LISTED ON DRAWINGS, SPECIFICATION, AND ALL OTHER PROJECT RELATED DOCUMENTATION.
11. FIELD COORDINATE ELECTRICAL DEVICES AND EQUIPMENT WITH OTHER DIVISIONS ON SITE. ADJUST ELECTRICAL DEVICE AND EQUIPMENT PLACEMENT AS REQUIRED TO SUIT FIELD CONDITIONS. ALL NEW ELECTRICAL INSTALLATION SHALL BE IN CONFORMANCE WITH THE CANADIAN ELECTRICAL CODE (CURRENT EDITION) AND BC BUILDING CODE (CURRENT EDITION) INCLUDING CLEARANCES AND SETBACKS.
12. COORDINATE INSTALLATION OF ELECTRICAL DEVICES AND COMPONENTS WITH EQUIPMENT MANUFACTURERS AND SUPPLIER. NOT ALL SYSTEM COMPONENTS ARE SHOWN. PROVIDE ALL COMPONENTS, DEVICES, AND MATERIAL AS REQUIRED TO ENSURE INSTALLATION OF A COMPLETE AND FUNCTIONAL SYSTEM.
13. CONFIRM WIRING SIZING AND PERFORM VOLTAGE DROP CALCULATIONS FOR EACH WIRE RUN BACK TO EACH SOURCE PANEL.
14. INSTALL ALL WIRING IN CONDUIT SYSTEMS AS INDICATED. ALL CONDUITS SHALL BE SECURELY FASTENED TO THE BUILDING STRUCTURE.
15. SEPARATE POWER, FIRE ALARM AND CONTROL WIRING IN SEPARATE CONDUIT SYSTEMS.
16. BOND ALL NON-CURRENT CARRYING METAL PARTS OF THE SYSTEM AS REQUIRED BY CODE. ENSURE ALL PARTS OF THE SYSTEM ARE GROUNDED AND EXISTING GROUNDING AND BONDING SYSTEMS ARE PROTECTED AND MAINTAIN CONDUCTIVITY. ALL BOND CONDUCTORS TO BE COPPER COMPRESSION TYPE AND GROUND CONDUCTORS TO BE SOLID COPPER.
17. VERIFY NEW ELECTRICAL SYSTEMS ARE TESTED, COMMISSIONED, AND READY FOR USE PRIOR TO TURNOVER TO THE INSTITUTION. FIELD TEST THE ENTIRE SYSTEM AND ENSURE IT IS OPERATIONAL AND READY FOR USE. COORDINATE WITH MANUFACTURER OF ALL SYSTEMS AND COMMISSION AS PART OF THIS SCOPE OF WORK. SUBMIT ALL TEST AND COMMISSIONING REPORTS TO DEPARTMENTAL REPRESENTATIVE.
18. UNLESS OTHERWISE NOTED ALL GROUNDING WIRES COLORS SHALL BE GREEN WITH A YELLOW STRIPE.

DRAWING LIST:

DWG. NO.	NAME	DESCRIPTION	SCALE
1 OF 2	E001	ELECTRICAL LEGEND, NOTES AND SITE PLAN	N.T.S.
2 OF 2	E100	ELECTRICAL FLOOR PLANS, SCHEDULES AND DETAILS	1:50

Public Works and Government Services Canada / Travaux publics et Services gouvernementaux Canada

REAL PROPERTY SERVICES
Pacific Region
SERVICES IMMOBILIERS
Région de Pacifique

Stantec

PROFESSIONAL ENGINEER PROVINCE OF BC — P.J. NECPAL # 38720 — REGISTERED
Nov. 8, 2016

0	Issued For Tender	2016.11.07
Revision/ Revision	Description/Description	Date/Date

Client/client

CORRECTIONAL SERVICE CANADA

Project title/Titre du projet

MISSION MEDIUM INSTITUTION
MISSION, BC

BUILDING A-R (RECREATION)
HVAC UNIT REPLACEMENT

Consultant Signature Box Only

Designed by/Concept par
Peter Necpal

Drawn by/Dessine par
Peter Necpal

PWGSC Project Manager/Administrateur de Projets TPSGC
Daryl Sinclair

PWGSC, Regional Manager, Architectural and Engineering Services/ Gestionnaire régionale, Services d'architectural et de génie, TPSGC
Preetipal Paul

Drawing title/Titre du dessin

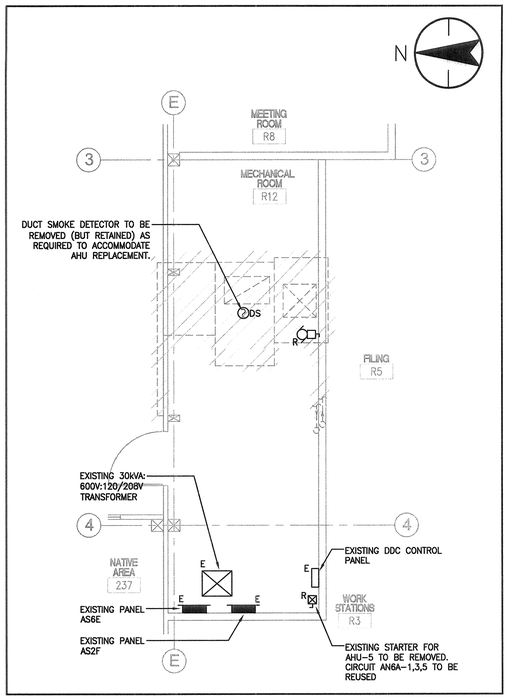
ELECTRICAL LEGEND, NOTES, AND SITE PLAN

Project No./No. du projet	Sheet/ Feuille	Revision no./ La Révision no.
R.082470.001	E001 1 OF 2	0

PWGSC – A1 – 841x594

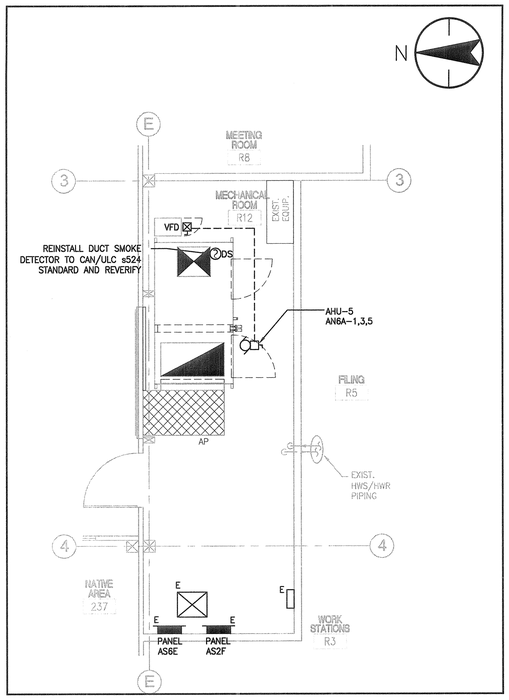
0 10 20 30 40 50 60 70 80 90 100mm

DM5XXXXXX



1 / E100 MECH RM. – DEMOLITION PLAN

SCALE: 1:50



2 / E100 MECH RM. – RENOVATED PLAN

SCALE: 1:50

MECHANICAL EQUIPMENT SCHEDULE																							
REF. NO.	DESCRIPTION	LOCATION	MCC / PANEL CCT NO.	HP	kW	VOLT	PHASE	STAND-BY POWER	CIRCUIT BREAKER RATING AMP	CONDUCTOR QUANTITY (EXCL GROUND) AND SIZE	CONDUIT SIZE (mm)	STARTER / VFD				PILOT				DISCONNECT			NOTES
												TYPE	SUPPLY	INSTALL	WIRE	TYPE	SUPPLY	INSTALL	WIRE	SUPPLY	INSTALL	MOUNT	
AHU-5	AIR HANDLING UNIT	MECH. RM - REC BLDG	AN6A-1,3,5	7.5		600	3	N	3P-20A	3#12	27mmC	VSD	M	M	E	BAS	M	M	M	M	E	E	1, 2, 3

MOTOR STARTING:
D - DIRECT ACROSS THE LINE
D-R - FORWARD/REVERSING
SD - STAR-DELTA STARTING
SD-R - STAR-DELTA (REVERSABLE)
CS - SOFT STARTER
CS-R - SOFT STARTER (REVERSIBLE)
FC - FREQUENCY CONVERTER
FC-R - FREQUENCY CONVERTER (REVERSIBLE)
VSD - VARIABLE SPEED DRIVE

PARTIES RESPONSIBLE
E - ELECTRICAL
M - MECHANICAL
O - OTHER

NOTES:
1. WIRING TO STARTER IS EXISTING. EXTEND CONDUCTORS AS NECESSARY. PROVIDE NEW BREAKER AS INDICATED.
2. REMOVE DUCT SMOKE DETECTOR AND REINSTALL IN SUPPLY AIR DUCT IN ACCORDANCE WITH CAN/ULC s524. PROVIDE VERIFICATION REPORT IN ACCORDANCE WITH CAN/ULC STANDARD S537.
3. DUCT SMOKE DETECTOR TO SHUT DOWN AIR HANDLING UNIT UPON ACTIVATION OF THE FIRE ALARM SYSTEM.

PWGSC – A1 – 841x594

0 10 20 30 40 50 60 70 80 90 100mm

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ELECTRICAL FLOOR PLANS, SCHEDULES AND DETAILS

Project No./No. du projet	Sheet/ Feuille	Revision no./ La Révision no.
R.082470.001	E100 2 OF 2	0

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