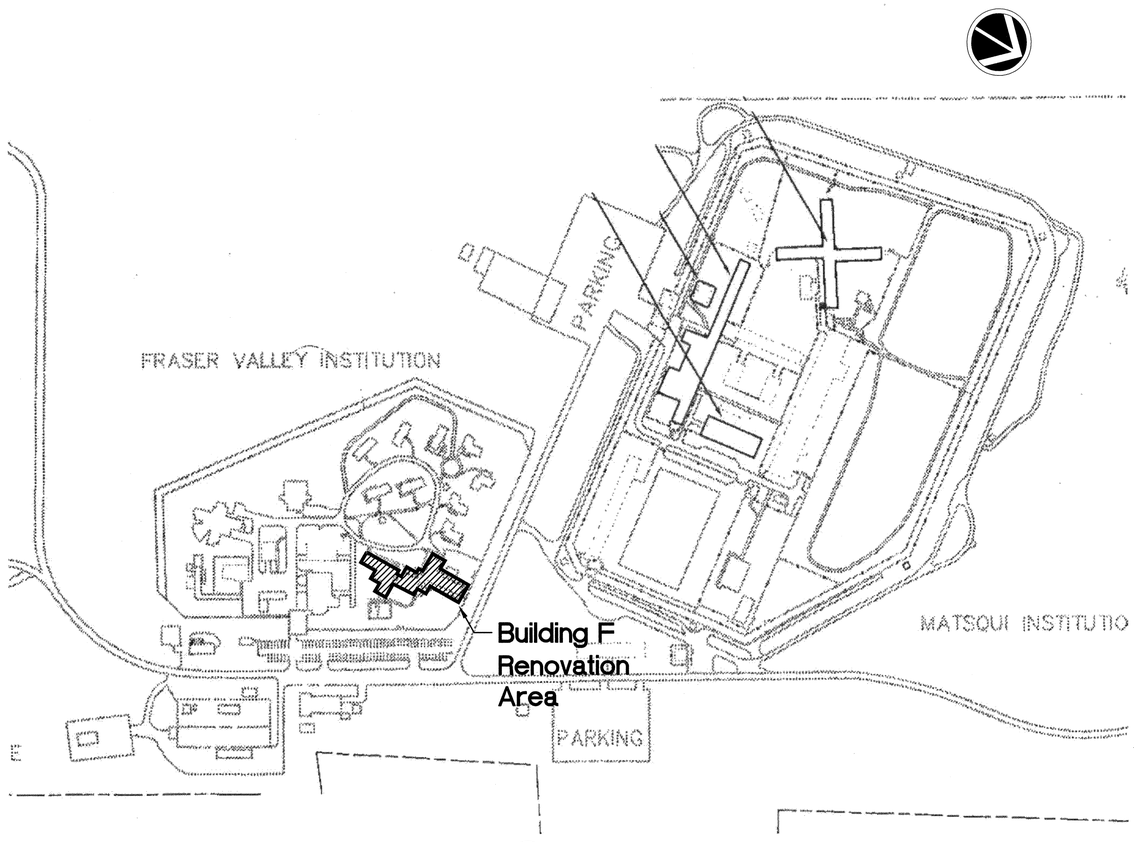


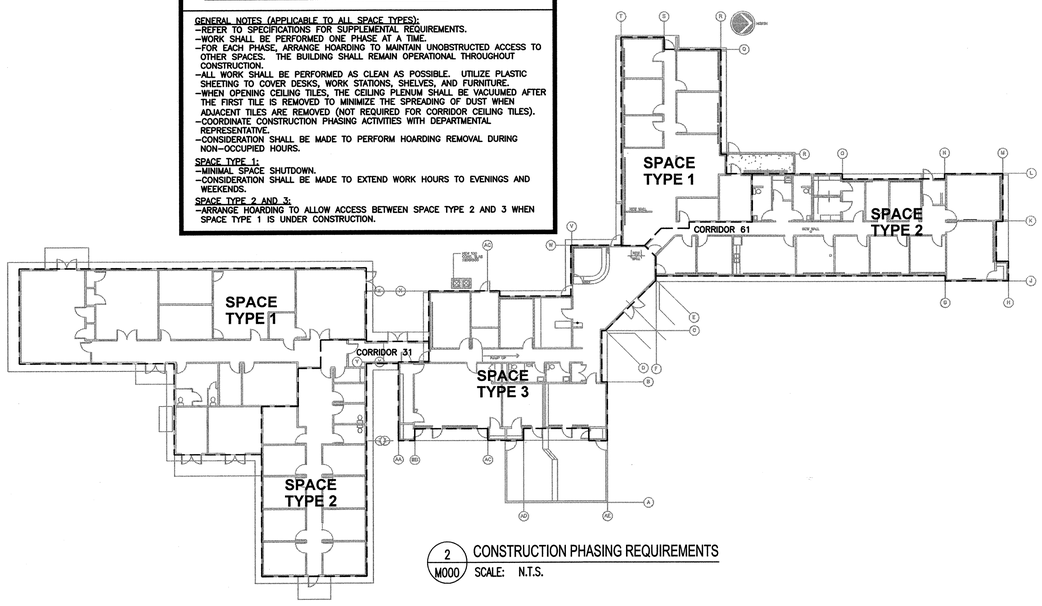
1 M000 SITE PLAN
SCALE: N.T.S.

CONSTRUCTION PHASING

GENERAL NOTES (APPLICABLE TO ALL SPACE TYPES):
- REFER TO SPECIFICATIONS FOR SUPPLEMENTAL REQUIREMENTS.
- WORK SHALL BE PERFORMED ONE PHASE AT A TIME.
- FOR EACH PHASE, ARRANGE HOARDING TO MAINTAIN UNOBSTRUCTED ACCESS TO OTHER SPACES. THE BUILDING SHALL REMAIN OPERATIONAL THROUGHOUT CONSTRUCTION.
- ALL WORK SHALL BE PERFORMED AS CLEAN AS POSSIBLE. UTILIZE PLASTIC SHEETING TO COVER DESKS, WORK STATIONS, SHELVES, AND FURNITURE.
- WHEN OPENING CEILING TILES, THE CEILING PLENUM SHALL BE VACUUMED AFTER THE FIRST TILE IS REMOVED TO MINIMIZE THE SPREADING OF DUST WHEN ADJACENT TILES ARE REMOVED (NOT REQUIRED FOR CORRIDOR CEILING TILES).
- COORDINATE CONSTRUCTION PHASING ACTIVITIES WITH DEPARTMENTAL REPRESENTATIVE.
- CONSIDERATION SHALL BE MADE TO PERFORM HOARDING REMOVAL DURING NON-OCCUPIED HOURS.

SPACE TYPE 1:
- MINIMAL SPACE SHUTDOWN.
- CONSIDERATION SHALL BE MADE TO EXTEND WORK HOURS TO EVENINGS AND WEEKENDS.

SPACE TYPE 2 AND 3:
- ARRANGE HOARDING TO ALLOW ACCESS BETWEEN SPACE TYPE 2 AND 3 WHEN SPACE TYPE 1 IS UNDER CONSTRUCTION.



2 M000 CONSTRUCTION PHASING REQUIREMENTS
SCALE: N.T.S.

GENERAL NOTES

1. CONTACT THE DEPARTMENTAL REPRESENTATIVE FOR ALL WORK AFFECTING THE BASE BUILDING HVAC, PLUMBING OR LIFE SAFETY SYSTEMS.
2. WORK IN CORRIDORS AND HALLWAYS SHALL BE PERFORMED AFTER HOURS AND/OR WEEKENDS. DEVELOP WORK SCHEDULE AND SUBMIT TO DEPARTMENTAL REPRESENTATIVE PRIOR TO START OF WORK.
3. PROVIDE TEMPORARY HEATING AND VENTILATION. HVAC SYSTEM SHALL BE OPERATIONAL THROUGHOUT.
4. PATCH AND MAKE GOOD ALL DAMAGED CEILING/WALL/ROOF/FLOORING FOR NEW AND DEMOLITION MECHANICAL WORK. REPLACE ANY DAMAGE AND/OR CUT CEILING TILE. COORDINATE WITH GENERAL CONTRACTOR.
5. LOCATION OF EXISTING EQUIPMENT SHOWN ON THIS DRAWING IS FOR INFORMATION ONLY. CONTRACTOR SHOULD REVIEW AND CHECK THE EXACT LOCATION, SIZE, ELEVATION AND INVERT OF ALL EXISTING EQUIPMENT AND PIPING ON SITE PRIOR TO COMMENCING WITH WORK.
6. MODIFY THE SIZE AND ROUTING OF NEW DUCTWORK AND PIPING AS REQUIRED TO SUIT THE SITE CONDITIONS WITHOUT EXTRA COST TO THE OWNER. PROVIDE ADEQUATE OFFSETS, AND TRANSITIONS ON NEW DUCTWORK AS REQUIRED TO SUIT SITE CONDITIONS. CAPTURE ALL VARIATIONS ON ASBUILT DRAWINGS. SUBMIT AS-BUILT DRAWINGS ON COMPLETION OF PROJECT.
7. WHERE EXISTING DIFFUSERS ARE RELOCATED TO OPPOSITE SIDE OF EXISTING DUCT TAP ON SUPPLY MAINS, A NEW DUCT TAP WILL BE PROVIDED FOR CONNECTION.
8. ALL FAULTY OR NON-COMPLYING DUCT CONNECTIONS ON EXISTING DIFFUSER RUNOUTS TO BE UPGRADED TO MEET INSTALLATION STANDARDS.
9. PROVIDE BALANCING DAMPER TO EACH TAKE OFF.
10. PROVIDE INSULATION ON NEW SUPPLY AIR DUCTWORK TO MATCH EXISTING INSULATION ON S/A DUCT MAINS, AND WHERE INDICATED.
11. PROVIDE DUCT CLEANING TO ALL NEW AND EXISTING DUCTWORK. SUBMIT DUCT CLEANING CERTIFICATE.
12. REBALANCE DIFFUSERS AND GRILLES TO INDICATED AIR FLOW. SUBMIT AIR BALANCING REPORT.
13. SEISMICALLY RESTRAIN ALL RELOCATED AND NEW FURNACES, CONDENSING UNITS, DIFFUSERS, GRILLES AND ANY OTHER EQUIPMENT. SUBMIT SEISMIC LETTERS OF ASSURANCE FROM SEISMIC PROFESSIONAL ENGINEER.
14. PROVIDE FIRE STOPPING FOR ALL PENETRATIONS THROUGH FIRE RATED WALLS. SUBMIT FIRE STOPPING CERTIFICATE.
15. CONTRACTOR TO ENSURE ALL TEMPERATURE SENSOR AND COVERS ARE PROTECTED FROM DAMAGE. REPORT ANY DAMAGED TEMPERATURE SENSORS TO THE DEPARTMENTAL REPRESENTATIVE PRIOR TO START OF WORK. ALLOW TO REPLACE IN PRICING.
16. TEMPERATURE SENSORS ARE TO BE CHECKED FOR PROPER OPERATION AND ARE TO BE CALIBRATED. DAMAGED TEMPERATURE SENSORS AND COVERS TO BE REPORTED TO THE DEPARTMENTAL REPRESENTATIVE.
17. CONTRACTOR TO REVISE TEMPERATURE SENSOR ZONING AS SHOWN ON THE DRAWING. CALIBRATE ALL TEMPERATURE SENSORS. SUBMIT SENSOR CALIBRATION REPORT.
18. WHERE HVAC EQUIPMENT (FURNACE, EXHAUST FAN, BASEBOARD HEATERS) HAVE BEEN REMOVED, REMOVE ALL ASSOCIATED ABANDONED CONTROLS AND CONTROL WIRING, DUCTWORK AND SHEET METAL ACCESSORIES.
19. COORDINATE WITH ELECTRICAL CONTRACTOR TO DECOMMISSION ELECTRICAL POWER, WIRING AND CIRCUITS.

ROOM NUMBERS AND NAMES

REFER TO FLOOR PLANS FOR ROOM NUMBER LOCATIONS.

01 PROGRAMS ROOM	41 STORAGE CLOSET
02 CLOSET	42 SPIRITUALITY SPACE
03 CLOSET	43 WASHROOM
04 PROGRAMS ROOM	44 B.F. WASHROOM
05 OFFICE	45 STORAGE CLOSET
06 COMPUTER ROOM	46 FOYER
07 CLASSROOM	47 IMO TWO
08 LIBRARY OFFICE	48 PHOTOCOPY / FAX
09 RESOURCE CENTRE	49 CLERICAL AREA
10 CORRIDOR	50 COMM ROOM
11 B.F. INMATE WASHROOM	51 CLERICAL AREA
12 ELECTRICAL ROOM	52 OFFICE
13 MEETING ROOM	53 OFFICE
14 STORAGE ROOM	54 OFFICE
15 MECHANICAL ROOM	55 OFFICE
16 STORAGE ROOM	56 OFFICE
17 WAITING ROOM	57 CORRIDOR
18 JANITORS CLOSET	58 OFFICE
19 STORAGE ROOM	59 OFFICE
20 STAFF WASHROOM	60 MECHANICAL ROOM
21 STAFF WASHROOM	61 CORRIDOR
22 OFFICE	62 COFFEE ROOM
23 OFFICE	63 MALE WASHROOM
24 OFFICE	64 JANITORS CLOSET
25 OFFICE	65 FEMALE WASHROOM
26 CORRIDOR	66 MATERIAL STORAGE
27 OFFICE	67 VAULT
28 OFFICE	68 OFFICE
29 OFFICE	69 OFFICE
30 OFFICE	70 OPTOMETRIST
31 CORRIDOR	71 OFFICE
32 OFFICE	72 OFFICE
33 MECHANICAL ROOM	73 OFFICE
34 ELECTRICAL ROOM	74 COMPUTER TRAINING ROOM
35 OFFICE	75 BOARD ROOM
36 LIFER STORE	76 STORAGE CLOSET
37 STORAGE ROOM	77 NORTHWEST ENTRANCE
38 STORAGE CLOSET	78 FILE STORAGE
39 SPIRITUALITY SPACE	79 STORAGE CLOSET
40 STORAGE CLOSET	80 STORAGE CLOSET
	81 STORAGE CLOSET
	84 CORRIDOR

FIRE SUPPRESSION NOTES

1. REFER TO SPECIFICATIONS FOR SUPPLEMENTAL REQUIREMENTS.
2. RELOCATE AND RE-PIPE EXISTING SPRINKLER LINES TO ACCOMMODATE NEW MECHANICAL DUCTING, EQUIPMENT, AND SERVICES.
3. RELOCATE EXISTING SPRINKLER HEADS IN THE MECHANICAL ROOMS TO ACCOMMODATE NEW EQUIPMENT AND DUCT LOCATIONS.

MECHANICAL LEGEND:

EQUIPMENT TAG

NEW AIR TERMINAL TAG
RETURN R
SUPPLY S
EXHAUST E
TYPE
FLOW (L/S)
SIZE (MM)

AIR FLOW TAG FOR EXISTING TERMINALS (L/S)
MECHANICAL EQUIPMENT TAG (FU 3)
AIR FLOW DIRECTION

AIR DISTRIBUTION

DUCTWORK TO BE REMOVED
EXISTING DUCTWORK
NEW DUCTWORK
SINGLE LINE DUCTWORK
CAPPED OFF DUCT
ACOUSTIC INSULATION
EXISTING/NEW BALANCING DAMPER
CAP-OFF
EXISTING DIFFUSER OR GRILLE TO REMAIN
EXISTING DIFFUSER OR EQUIPMENT TO BE REMOVED
RETURN AIR GRILLE
EXHAUST AIR GRILLE
CONNECT TO EXISTING — CTE
EXISTING TO REMAIN — ETR
DOOR UNDERCUT 25MM — UC
BACK DRAFT DAMPER — BDD
FIRE DAMPER — FD
MOTORIZED DAMPER C/W ACTUATOR — M
ACCESS PANEL (450X450) U.N.O. — A/P

CONTROLS

CONTROL WIRING
NEW THERMOSTAT — T
RELOCATED EXISTING THERMOSTAT — T_R
EXISTING THERMOSTAT TO BE REMOVED
CARBON DIOXIDE SENSOR — CO_2
OCCUPANCY SENSOR — OS
SMOKE SENSOR — SS

PLUMBING

GAS LINE — G
DCW LINE
SANITARY LINE — SAN
SANITARY LINE BELOW SLAB — SAN
VENT LINE — V
FLOOR DRAIN — FD
CLEAN-OUT THROUGH FLOOR — CO
CLEAN-OUT END OF RUN — CO

MECHANICAL DRAWING LIST

NO.	NAME	DESCRIPTION	SCALE
1 OF 10	M000	SITE PLAN, MECHANICAL LEGEND, NOTES	N.T.S.
2 OF 10	M101	DEMOLITION PLAN – I (OLD BUILDING)	1:100
3 OF 10	M102	DEMOLITION PLAN – II (NEW BUILDING)	1:100
4 OF 10	M103	NEW CONSTRUCTION PLAN – I (OLD BUILDING)	1:100
5 OF 10	M104	NEW CONSTRUCTION PLAN – II (NEW BUILDING)	1:100
6 OF 10	M105	MECHANICAL DETAILS – FURNACE DUCT SECTIONS	1:25
7 OF 10	M106	GAS, PLUMBING AND DRAINAGE DETAILS	1:50
8 OF 10	M107	MECHANICAL DETAILS	N.T.S.
9 OF 10	M108	MECHANICAL EQUIPMENT SCHEDULES	N.T.S.
10 OF 10	M109	REFLECTED CEILING PLANS AND RENOVATION NOTES	N.T.S.

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Stantec Project Number: 115615075

Dimensions
The Contractor shall verify all dimensions, and immediately report any errors and/or omissions to Stantec. DO NOT SCALE DRAWINGS.

PROFESSIONAL ENGINEER — PROVINCE OF BRITISH COLUMBIA — JA NG — 25048
AUG 12 2015

4	Issued for Tender	2015.Aug.06
3	Issued for 99% Client Review	2015.Jun.12
2	Issued for 66% Client Review	2015.May.21
1	Design Brief	2015.Apr.01
Revision/ Revision	Description/Description	Date/Date

Client/client
CORRECTIONAL SERVICE CANADA

Project title/Titre du projet
FRASER VALLEY INSTITUTION
ABBOTSFORD, BRITISH COLUMBIA

BUILDING F
HVAC UPGRADE

Consultant Signature Box Only

Designed by/Concept par
KZ/LB

Drawn by/Dessine par
DN/LB

PWGSC Project Manager/Administrateur de Projets TPSGC
Tony Tang

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

Drawing title/Titre du dessin
Site Plan,
Mechanical Legend,
Notes

Project No./No. du projet	Sheet/ Feuille	Revision no./ La Révision no.
R.074982.001	M000 1 OF 10	4

DM5XXXXXX

PWGSC – A1 – 841x594

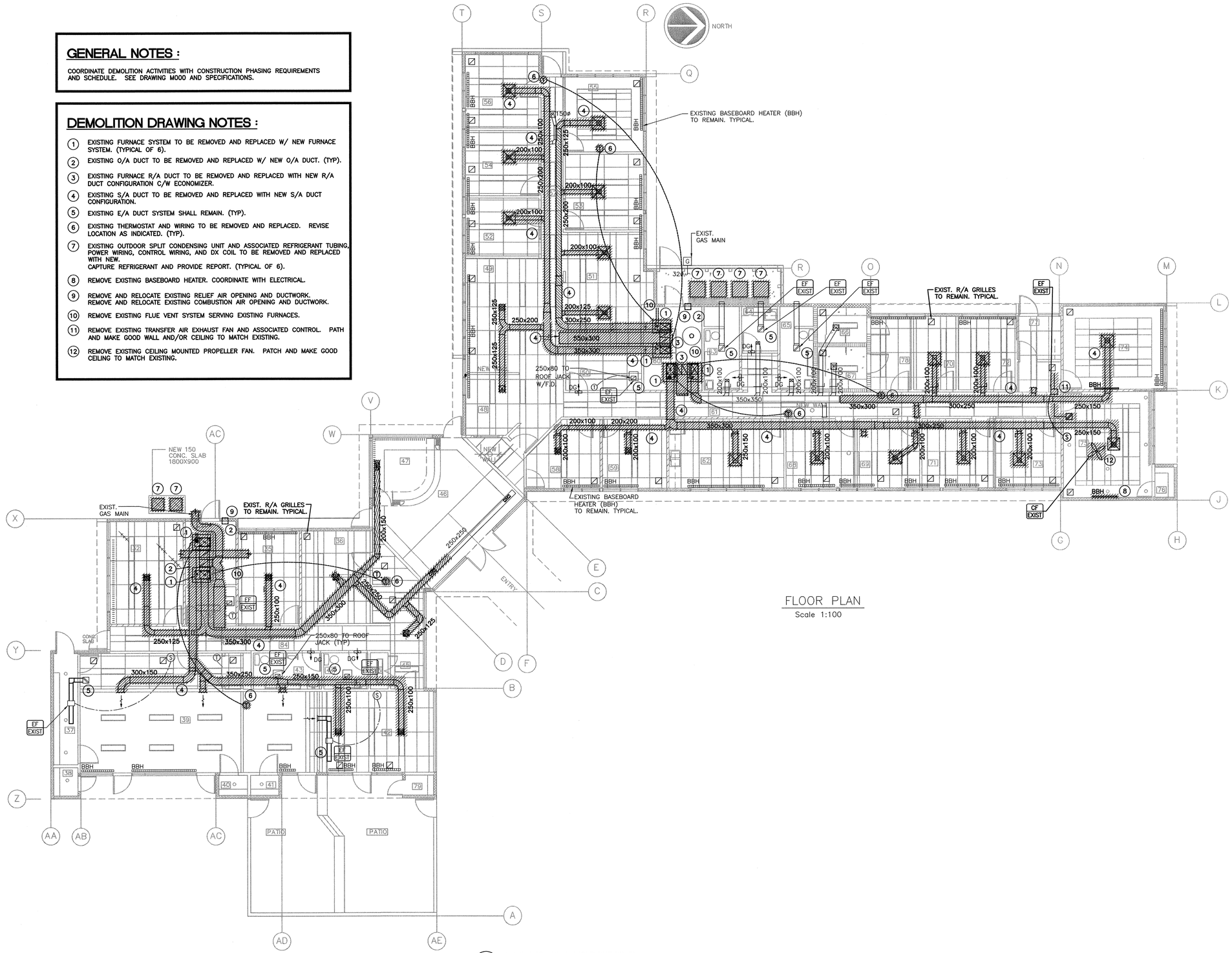
0 10 20 30 40 50 60 70 80 90 100mm

GENERAL NOTES :

COORDINATE DEMOLITION ACTIVITIES WITH CONSTRUCTION PHASING REQUIREMENTS AND SCHEDULE. SEE DRAWING M000 AND SPECIFICATIONS.

DEMOLITION DRAWING NOTES :

1. EXISTING FURNACE SYSTEM TO BE REMOVED AND REPLACED W/ NEW FURNACE SYSTEM. (TYPICAL OF 6).
2. EXISTING O/A DUCT TO BE REMOVED AND REPLACED W/ NEW O/A DUCT. (TYP).
3. EXISTING FURNACE R/A DUCT TO BE REMOVED AND REPLACED WITH NEW R/A DUCT CONFIGURATION C/W ECONOMIZER.
4. EXISTING S/A DUCT TO BE REMOVED AND REPLACED WITH NEW S/A DUCT CONFIGURATION.
5. EXISTING E/A DUCT SYSTEM SHALL REMAIN. (TYP).
6. EXISTING THERMOSTAT AND WIRING TO BE REMOVED AND REPLACED. REVISE LOCATION AS INDICATED. (TYP).
7. EXISTING OUTDOOR SPLIT CONDENSING UNIT AND ASSOCIATED REFRIGERANT TUBING, POWER WIRING, CONTROL WIRING, AND DX COIL TO BE REMOVED AND REPLACED WITH NEW.
   CAPTURE REFRIGERANT AND PROVIDE REPORT. (TYPICAL OF 6).
8. REMOVE EXISTING BASEBOARD HEATER. COORDINATE WITH ELECTRICAL.
9. REMOVE AND RELOCATE EXISTING RELIEF AIR OPENING AND DUCTWORK. REMOVE AND RELOCATE EXISTING COMBUSTION AIR OPENING AND DUCTWORK.
10. REMOVE EXISTING FLUE VENT SYSTEM SERVING EXISTING FURNACES.
11. REMOVE EXISTING TRANSFER AIR EXHAUST FAN AND ASSOCIATED CONTROL. PATH AND MAKE GOOD WALL AND/OR CEILING TO MATCH EXISTING.
12. REMOVE EXISTING CEILING MOUNTED PROPELLER FAN. PATCH AND MAKE GOOD CEILING TO MATCH EXISTING.



1 M101 DEMOLITION PLAN I (OLD BUILDING)
SCALE: 1:100

FLOOR PLAN
Scale 1:100

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Stantec Project Number: 115615075

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2	Issued for 66% Client Review	2015.May.21
1	Design Brief	2015.Apr.01

Client/client
CORRECTIONAL SERVICE CANADA

Project title/Titre du projet
FRASER VALLEY INSTITUTION
ABBOTSFORD, BRITISH COLUMBIA

BUILDING F
HVAC UPGRADE

Consultant Signature Box Only

Designed by/Concept par
KZ/LB

Drawn by/Dessine par
DN/LB

PWGSC Project Manager/Administrateur de Projets TPSGC
Tony Tang

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Preetipal Paul

Drawing title/Titre du dessin
Demolition Plan - I
(Old Building)

Project No./No. du projet	Sheet/Feuille	Revision no./ La Révision no.
R.074982.001	M101 2 OF 10	4

PWGSC – A1 – 841x594

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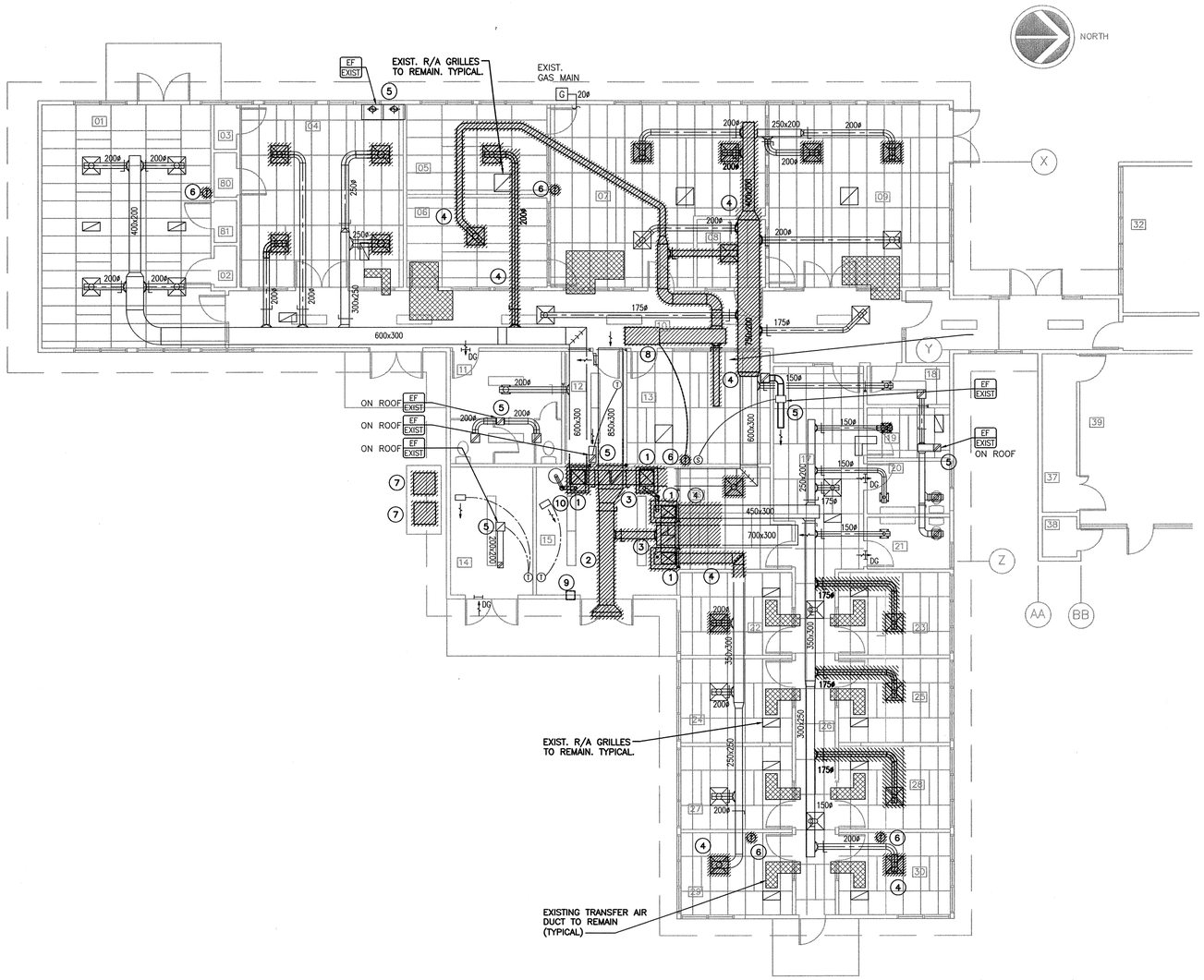

1 / M102 DEMOLITION PLAN I (NEW BUILDING)
SCALE: 1:100

GENERAL NOTES :

COORDINATE DEMOLITION ACTIVITIES WITH CONSTRUCTION PHASING REQUIREMENTS AND SCHEDULE. SEE DRAWING M000 AND SPECIFICATIONS.

DEMOLITION DRAWING NOTES :

1. EXISTING FURNACE SYSTEM TO BE REMOVED AND REPLACED W/ NEW FURNACE SYSTEM. (TYPICAL OF 4).
2. EXISTING O/A DUCT TO BE REMOVED AND REPLACED W/ NEW O/A DUCT. (TYP).
3. EXISTING FURNACE R/A DUCT TO BE REMOVED AND REPLACED WITH NEW R/A DUCT CONFIGURATION C/W ECONOMIZER.
4. EXISTING S/A DUCT TO BE REMOVED AND REPLACED WITH NEW S/A DUCT CONFIGURATION.
5. EXISTING E/A DUCT SYSTEM SHALL REMAIN. (TYP).
6. EXISTING THERMOSTAT AND WIRING TO BE REMOVED AND REPLACED. REVISE LOCATION AS INDICATED. (TYP).
7. EXISTING OUTDOOR SPLIT CONDENSING UNIT AND ASSOCIATED REFRIGERANT TUBING, POWER WIRING, CONTROL WIRING, AND DX COIL TO BE REMOVED AND REPLACED WITH NEW. CAPTURE REFRIGERANT AND PROVIDE REPORT. (TYPICAL OF 4).
8. EXISTING S/A FAN AND ASSOCIATED DUCTS, CONTROL WIRING, AND POWER WIRING TO BE REMOVED FROM CEILING SPACE (TYP.)
9. REMOVE AND RELOCATE EXISTING RELIEF AIR OPENING AND DUCTWORK. REMOVE AND RELOCATE EXISTING COMBUSTION AIR OPENING AND DUCTWORK.
10. REMOVE EXISTING FLUE VENT SYSTEM SERVING EXISTING FURNACES.

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AUG 12 2015

Revision/Revision	Description/Description	Date/Date
4	Issued for Tender	2015.Aug.06
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2	Issued for 66% Client Review	2015.May.21
1	Design Brief	2015.Apr.01

Client/client
CORRECTIONAL SERVICE CANADA

Project title/Titre du projet
FRASER VALLEY INSTITUTION
ABBOTSFORD, BRITISH COLUMBIA

BUILDING F
HVAC UPGRADE

Consultant Signature Box Only

Designed by/Concept par
KZ/LB

Drawn by/Dessine par
DN/LB

PWGSC Project Manager/Administrateur de Projets TPSGC
Tony Tang

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

Drawing title/Titre du dessin
Demolition Plan - II (New Building)

Project No./No. du projet	Sheet/Feuille	Revision no./ La Révision no.
R.074982.001	M102 3 OF 10	4

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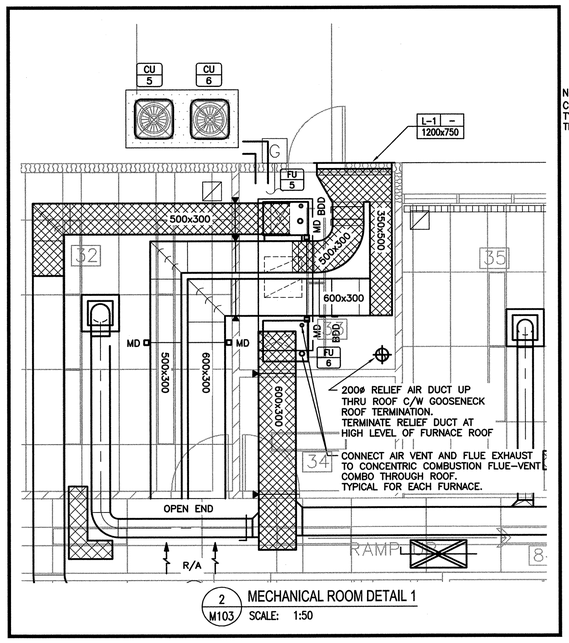
PWGSC – A1 – 841x594

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

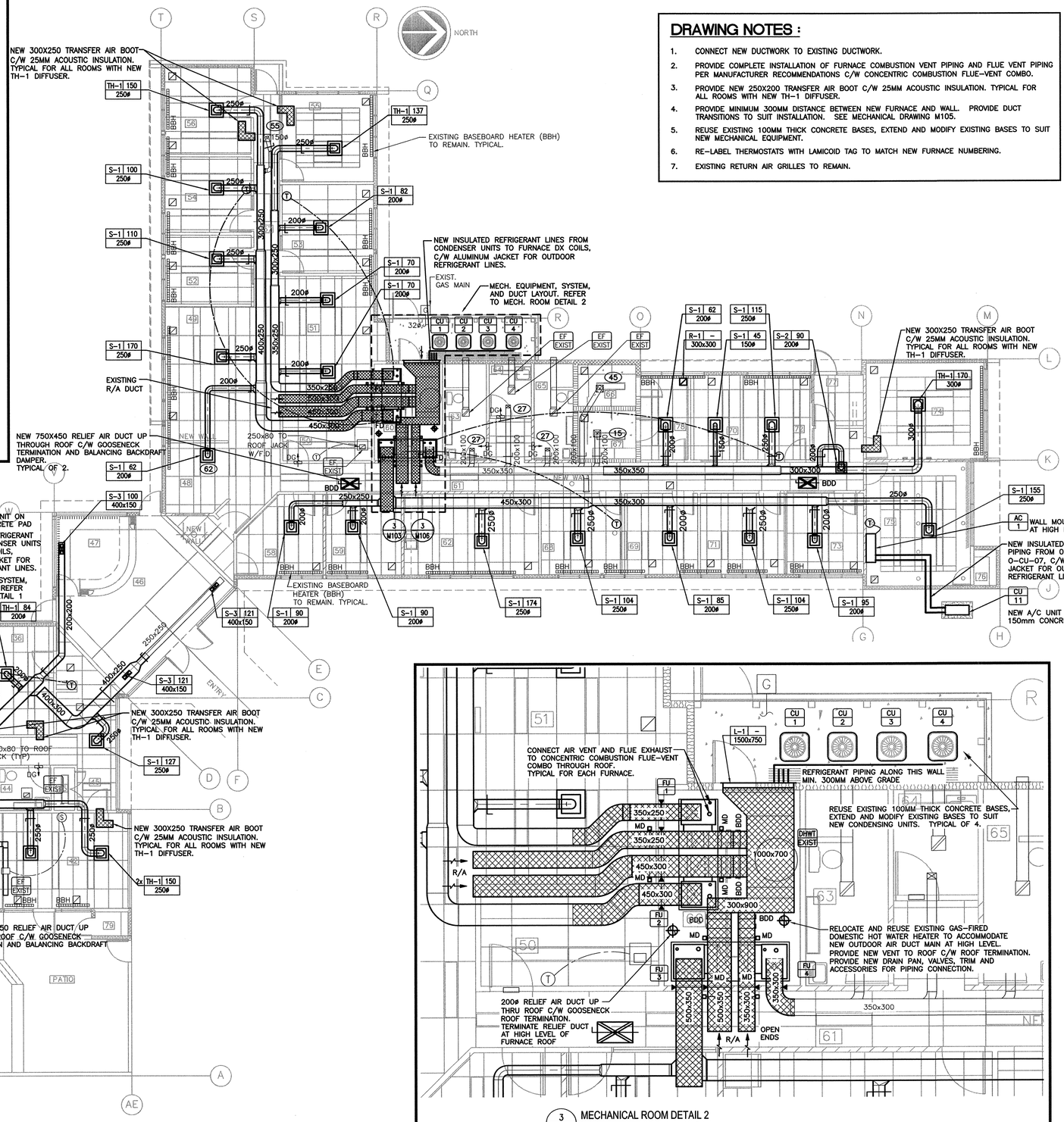
DM5XXXXXX

DRAWING NOTES :

1. CONNECT NEW DUCTWORK TO EXISTING DUCTWORK.
2. PROVIDE COMPLETE INSTALLATION OF FURNACE COMBUSTION VENT PIPING AND FLUE VENT PIPING PER MANUFACTURER RECOMMENDATIONS C/W CONCENTRIC COMBUSTION FLUE-VENT COMBO.
3. PROVIDE NEW 250X200 TRANSFER AIR BOOT C/W 25MM ACOUSTIC INSULATION. TYPICAL FOR ALL ROOMS WITH NEW TH-1 DIFFUSER.
4. PROVIDE MINIMUM 300MM DISTANCE BETWEEN NEW FURNACE AND WALL. PROVIDE DUCT TRANSITIONS TO SUIT INSTALLATION. SEE MECHANICAL DRAWING M105.
5. REUSE EXISTING 100MM THICK CONCRETE BASES, EXTEND AND MODIFY EXISTING BASES TO SUIT NEW MECHANICAL EQUIPMENT.
6. RE-LABEL THERMOSTATS WITH LAMICOID TAG TO MATCH NEW FURNACE NUMBERING.
7. EXISTING RETURN AIR GRILLES TO REMAIN.



2 / M103 MECHANICAL ROOM DETAIL 1
SCALE: 1:50



1 / M103 NEW CONSTRUCTION PLAN I (OLD BUILDING)
SCALE: 1:100

3 / M103 MECHANICAL ROOM DETAIL 2
SCALE: 1:50

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1	Design Brief	2015.Apr.01

Client/client
CORRECTIONAL SERVICE CANADA

Project title/Titre du projet
FRASER VALLEY INSTITUTION
ABBOTSFORD, BRITISH COLUMBIA

BUILDING F
HVAC UPGRADE

Consultant Signature Box Only

Designed by/Concept par
KZ/LB

Drawn by/Dessine par
DN/LB

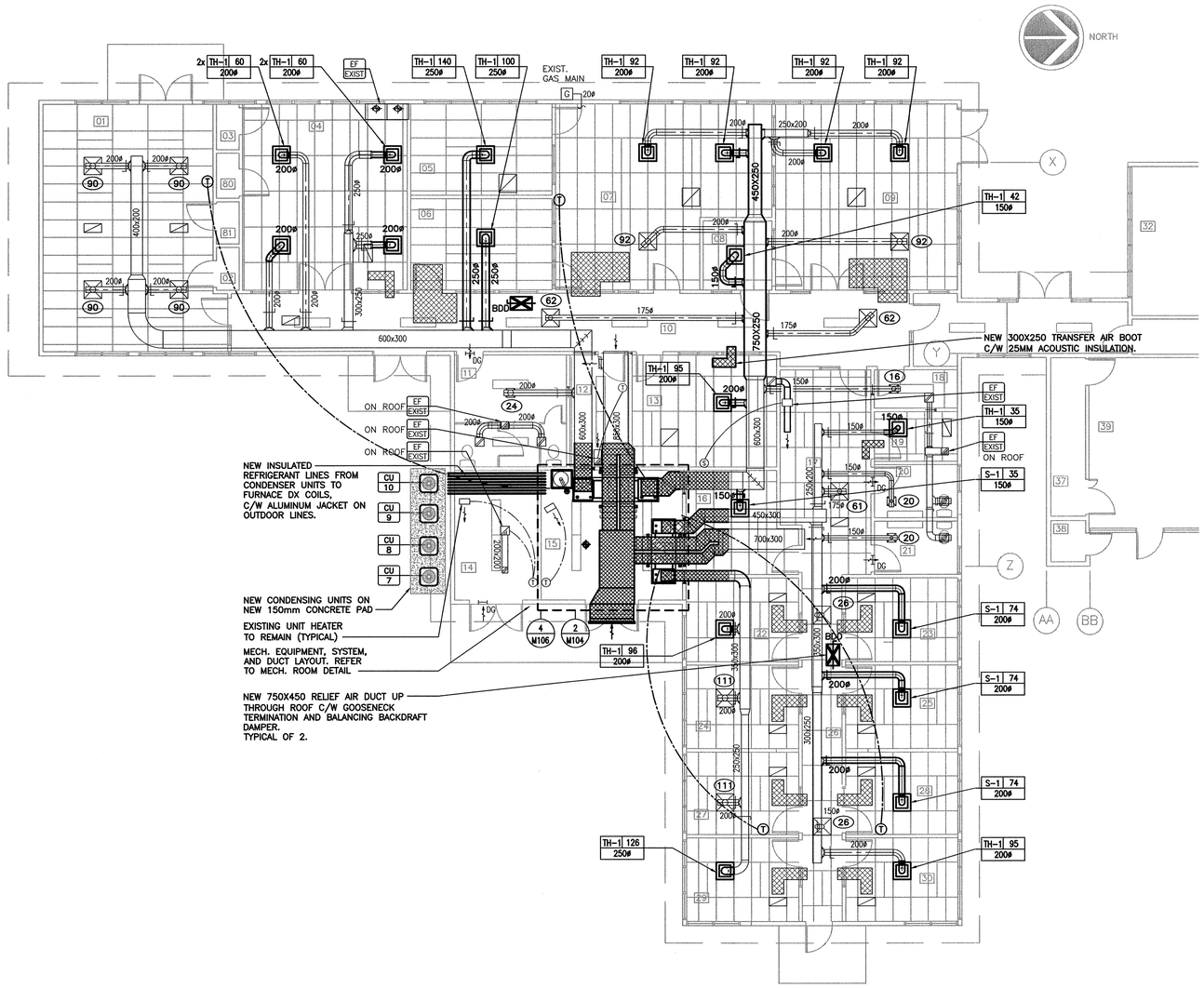
PWGSC Project Manager/Administrateur de Projets TPSGC
Tony Tang

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

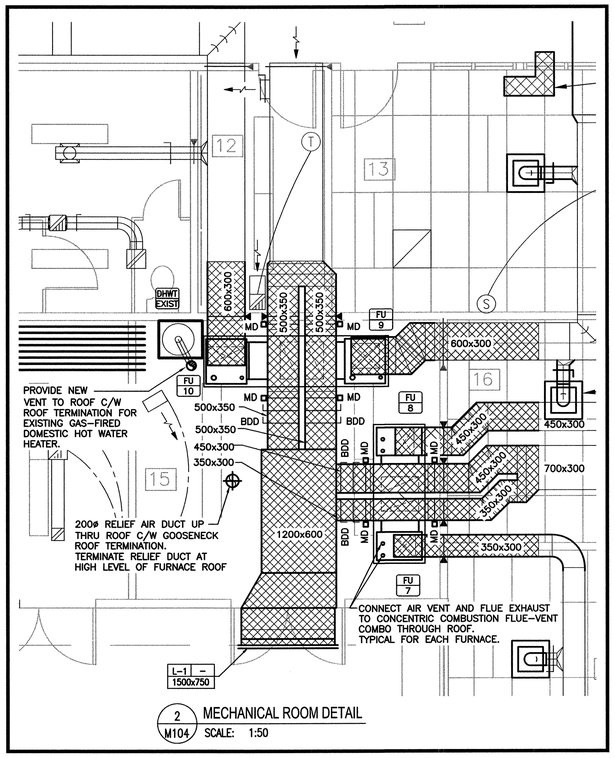
Drawing title/Titre du dessin
New Construction Plan - I (Old Building)

Project No./No. du projet	Sheet/ Feuille	Revision no./ La Révision no.
R.074982.001	M103 4 OF 10	4

DM5XXXXXX



1 / M104 NEW CONSTRUCTION PLAN II (NEW BUILDING)
SCALE: 1:100



2 / M104 MECHANICAL ROOM DETAIL
SCALE: 1:50

DRAWING NOTES :

1. CONNECT NEW DUCTWORK TO EXISTING DUCTWORK.
2. PROVIDE COMPLETE INSTALLATION OF FURNACE COMBUSTION VENT PIPING AND FLUE VENT PIPING PER MANUFACTURER RECOMMENDATIONS C/W CONCENTRIC COMBUSTION FLUE-VENT COMBO.
3. PROVIDE MINIMUM 300MM DISTANCE BETWEEN NEW FURNACE AND WALL. PROVIDE DUCT TRANSITIONS TO SUIT INSTALLATION. SEE MECHANICAL DRAWING M105.
4. REUSE EXISTING 100MM THICK CONCRETE BASES, EXTEND AND MODIFY EXISTING BASES TO SUIT NEW MECHANICAL EQUIPMENT.
5. RE-LABEL THERMOSTATS WITH LAMICOID TAG TO MATCH NEW FURNACE NUMBERING.
6. EXISTING RETURN AIR GRILLES TO REMAIN.

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PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA J.H. NG 25438 AUG 12 2015

Revision/ Revision	Description/Description	Date/Date
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2	Issued for 66% Client Review	2015.May.21
1	Design Brief	2015.Apr.01

Client/client
CORRECTIONAL SERVICE CANADA

Project title/Titre du projet
FRASER VALLEY INSTITUTION
ABBOTSFORD, BRITISH COLUMBIA

BUILDING F
HVAC UPGRADE

Consultant Signature Box Only

Designed by/Concept par
KZ/LB

Drawn by/Dessine par
DN/LB

PWGSC Project Manager/Administrateur de Projets TPSGC
Tony Tang

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

Drawing title/Titre du dessin
New Construction Plan - II (New Building)

Project No./No. du projet	Sheet/Feuille	Revision no./ La Révision no.
R.074982.001	M104 5 OF 10	4

DM5XXXXXX

2015/Aug/12, 11:46am lbantog M-104 (A1) \\Cd1200-f03\workgroup11561\active\115615075\03_design_and_construction\02_design\03_drawings\02_work_in_progress_drawings\Mechanical\A1102-M104_new-building.dwg

PWGSC – A1 – 841x594

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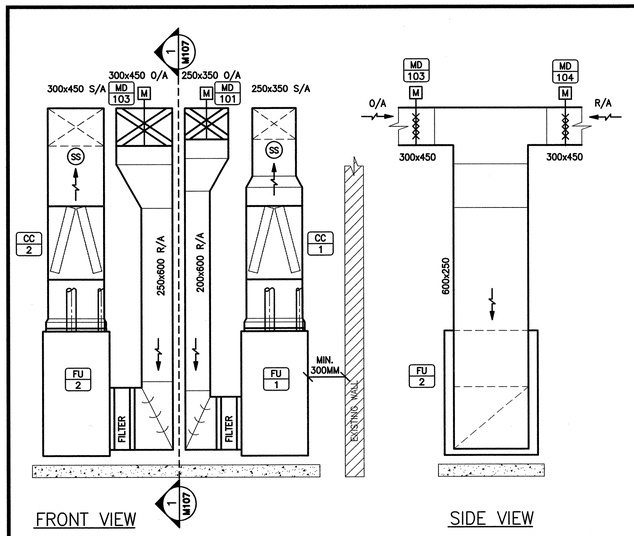
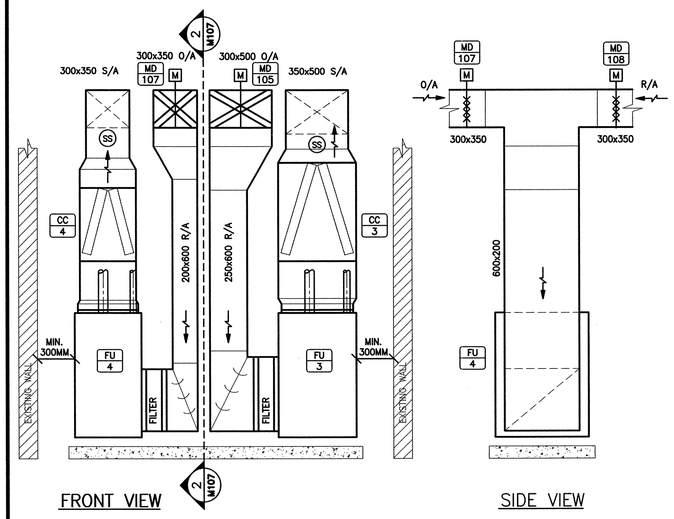


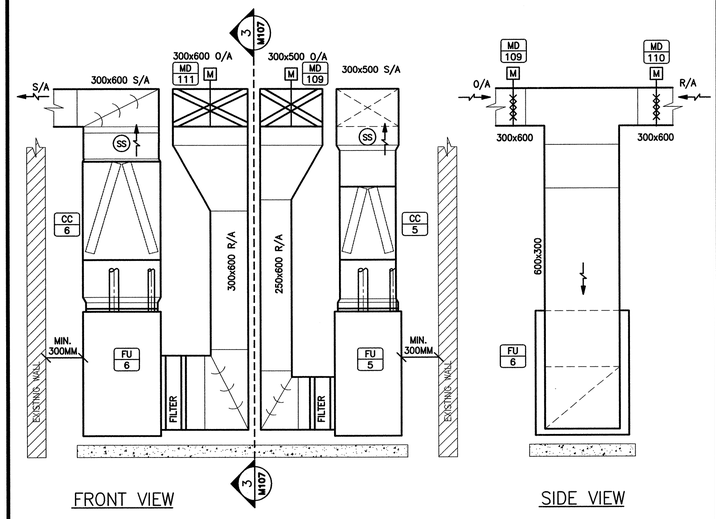
1 M107 FURNACE SECTIONS FU–2, FU–1

SCALE: 1:25



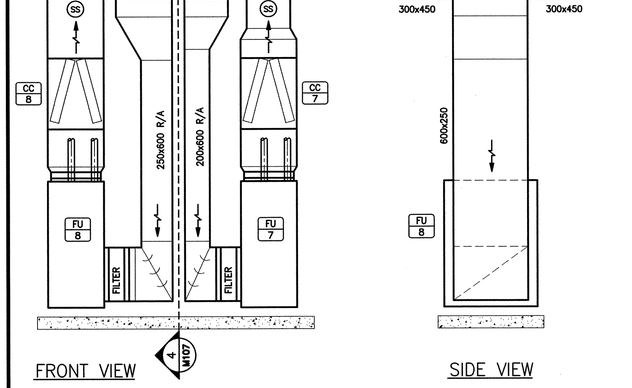
2 M-107 FURNACE SECTIONS FU–4, FU–3

SCALE: 1:25



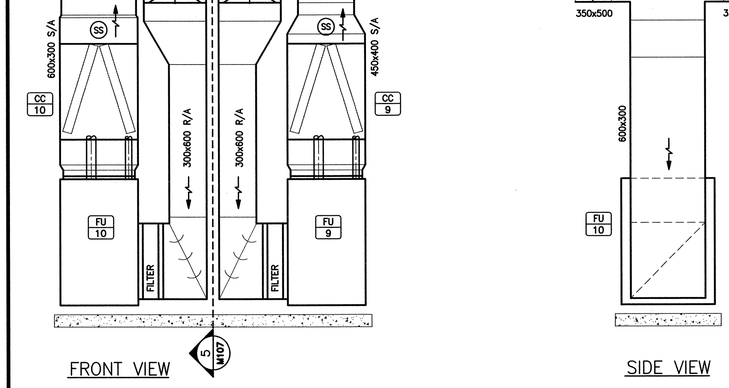
3 M-107 FURNACE SECTIONS FU–5, FU–6

SCALE: 1:25



4 M-107 FURNACE SECTIONS FU–8, FU–7

SCALE: 1:25



5 M-107 FURNACE SECTIONS FU–10, FU–9

SCALE: 1:25

GENERAL NOTES:

1. FURNACE, MAJOR COMPONENTS, AND MAJOR DUCT ROUTING HAS BEEN INDICATED ONLY. PROVIDE COMPLETE FURNACE SYSTEM INSTALLATION INCLUDING SEISMIC RESTRAINTS, VIBRATION ISOLATION, GAS PIPING, AND DRAIN PIPING AS SPECIFIED.
2. PROVIDE COMBUSTION AIR VENT AND FLUE EXHAUST UP THROUGH ROOF C/W CONCENTRIC COMBUSTION FLUE–VENT COMBO. TYPICAL FOR EACH FURNACE.
3. RELOCATE EXISTING SMOKE SENSOR INTO NEW S/A DUCT. RE–TEST AND VERIFY OPERATION.
4. PROVIDE INSULATION ON SUPPLY AND RETURN DUCTWORK. SEE FLOOR PLANS.

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

REAL PROPERTY SERVICES
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Fax. 604.696.8100
www.stantec.com

Stantec Project Number: 115615075

Dimensions
The Contractor shall verify all dimensions, and immediately report any errors and/or omissions to Stantec. DO NOT SCALE DRAWINGS.

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA J.H. NG 25038 AUG 12 2015

Revision/ Revision	Description/Description	Date/Date
4	Issued for Tender	2015.Aug.06
3	Issued for 99% Client Review	2015.Jun.12
2	Issued for 66% Client Review	2015.May.21
1	Design Brief	2015.Apr.01

Client/client
CORRECTIONAL SERVICE CANADA

Project title/Titre du projet
FRASER VALLEY INSTITUTION
ABBOTSFORD, BRITISH COLUMBIA

BUILDING F
HVAC UPGRADE

Consultant Signature Box Only

Designed by/Concept par
KZ/LB

Drawn by/Dessine par
DN/LB

PWGSC Project Manager/Administrateur de Projets TPSGC
Tony Tang

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

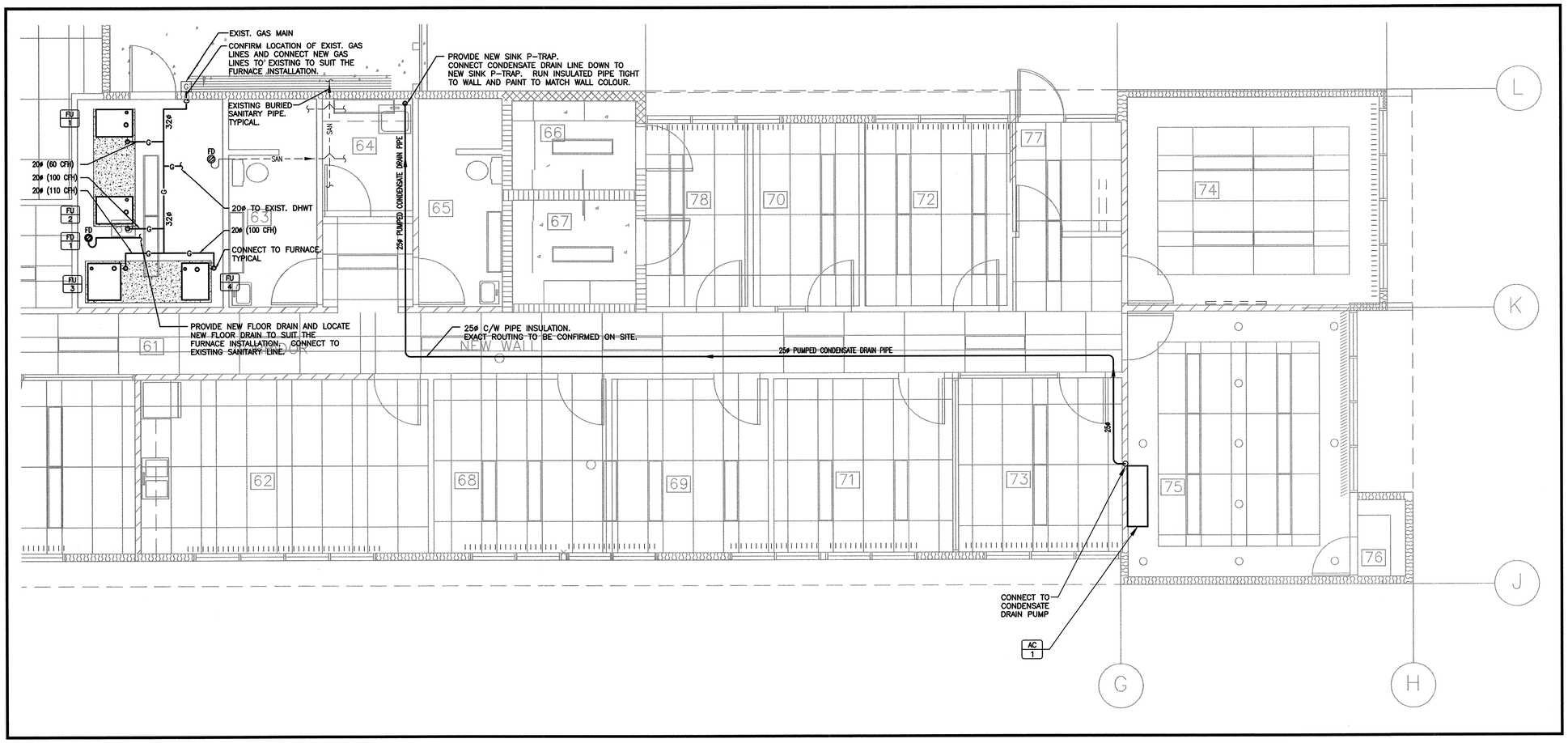
Drawing title/Titre du dessin
Mechanical Details
Furnace Duct Sections

Project No./No. du projet	Sheet/ Feuille	Revision no./ La Révision no.
R.074982.001	M105 6 OF 10	4

PWGSC – A1 – 841x594

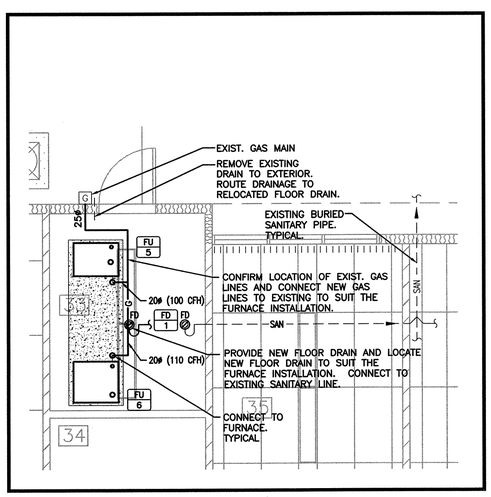
0 10 20 30 40 50 60 70 80 90 100mm

DM5XXXXXX



1 / M106 15 - MECHANICAL ROOM - GAS, PLUMBING AND DRAINAGE
SCALE: 1:50

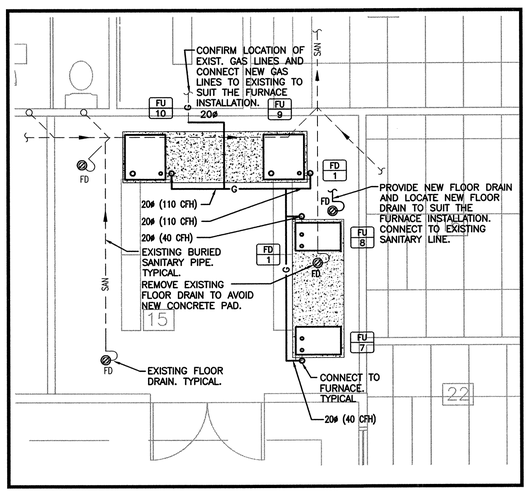
2 / M106 AC-1 CONDENSATE DRAIN
SCALE: 1:50



3 / M106 60 - MECHANICAL ROOM - GAS, PLUMBING AND DRAINAGE
SCALE: 1:50

DRAWING NOTES:

1. PROVIDE COMPLETE CONDENSATE DRAINAGE SYSTEM PIPING TO EXISTING MECHANICAL ROOM FLOOR DRAINS. RUN DRAINAGE TO AVOID TRIPPING HAZARDS. PROVIDE INLINE ACID NEUTRALIZER FOR FURNACE CONDENSATE. TYPICAL FOR EACH FURNACE.
2. PROVIDE COMPLETE CONDENSATE DRAINAGE SYSTEM PIPING TO EXISTING MECHANICAL ROOM FLOOR DRAINS. RUN DRAINAGE TO AVOID TRIPPING HAZARDS. PROVIDE DRAIN PIPING TO COLLECT DX COOLING COIL CONDENSATE. TYPICAL FOR EACH DX COOLING COIL.
3. PROVIDE COMPLETE GAS PIPING CONNECTION FROM EXISTING GAS PIPE TO NEW FURNACE C/W GAS COCK AND FITTINGS. MODIFY EXISTING GAS PIPE AND PRV TO SUIT THE FURNACE INSTALLATION AND IN ACCORDANCE WITH FURNACE MANUFACTURER RECOMMENDATIONS. TYPICAL FOR EACH FURNACE.
4. PROVIDE COMPLETE PUMPED DRAIN PIPE SYSTEM FROM NEW AC-1 TO JANITOR ROOM SINK P-TRAP.
5. PROVIDE MINIMUM 300MM DISTANCE BETWEEN NEW FURNACE AND WALL. PROVIDE DUCT TRANSITIONS TO SUIT INSTALLATION. SEE MECHANICAL DRAWING M105.
6. REUSE EXISTING 100MM THICK CONCRETE BASES, EXTEND AND MODIFY EXISTING BASES TO SUIT NEW MECHANICAL EQUIPMENT.
7. COORDINATE PLACEMENT OF NEW FLOOR DRAIN TO AVOID TRIPPING HAZARDS. BREAK CONCRETE TO EXPOSE PIPES AND ALLOW PIPE EXTENSION, PROVIDE P-TRAP AND PRESSURE-TYPE TRAP PRIMER, AND REPAIR/RESTORE FLOOR FINISHES.



4 / M106 33 - MECHANICAL ROOM - GAS, PLUMBING AND DRAINAGE
SCALE: 1:50

Public Works and Government Services Canada
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www.stantec.com

Stantec Project Number: 115615075

Dimensions
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PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA J.H. NG 25039 MECHANICAL
AUG 12 2015

Revision/ Revision	Description/Description	Date/Date
4	Issued for Tender	2015.Aug.06
3	Issued for 99% Client Review	2015.Jun.12
2	Issued for 66% Client Review	2015.May.21
1	Design Brief	2015.Apr.01

Client/client
CORRECTIONAL SERVICE CANADA

Project title/Titre du projet
FRASER VALLEY INSTITUTION
ABBOTSFORD, BRITISH COLUMBIA

BUILDING F
HVAC UPGRADE

Consultant Signature Box Only

Designed by/Concept par
KZ/LB

Drawn by/Dessine par
DN/LB

PWGSC Project Manager/Administrateur de Projets TPSGC
Tony Tang

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

Drawing title/Titre du dessin
Gas, Plumbing and Drainage Details

Project No./No. du projet	Sheet/ Feuille	Revision no./ La Révision no.
R.074982.001	M106 7 OF 10	4

DM5XXXXXX

PWGSC – A1 – 841x594

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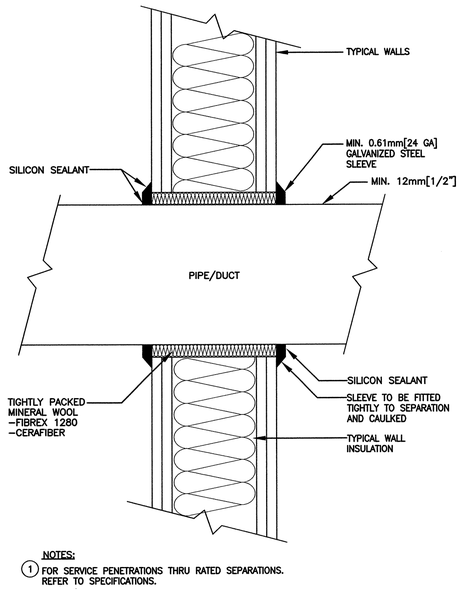
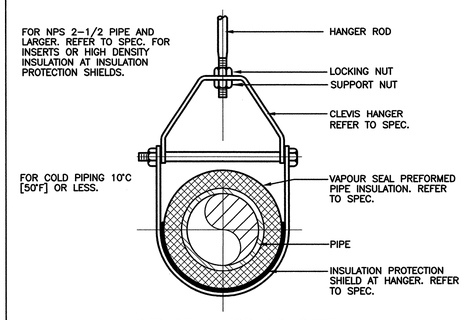
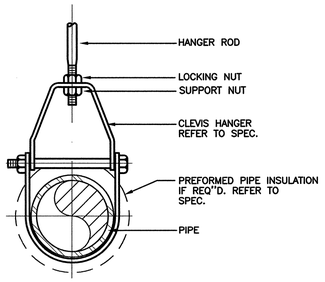


NOTES:
(1) FOR SERVICE PENETRATIONS THRU RATED SEPARATIONS. REFER TO SPECIFICATIONS.

1 / M–107 SERVICE PENE. THRU NON–RATED WALLS
SCALE: N.T.S.

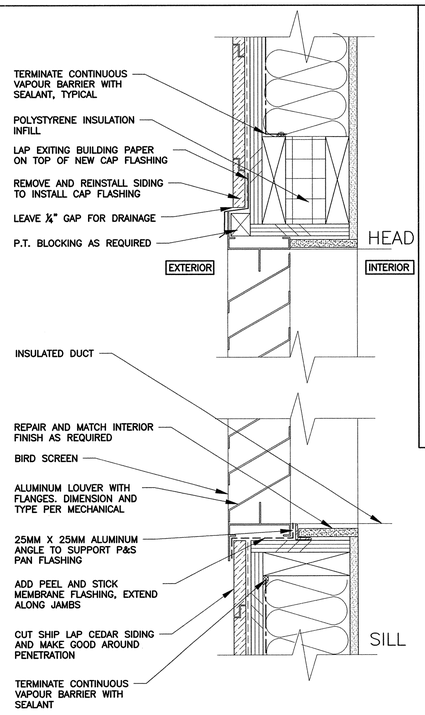


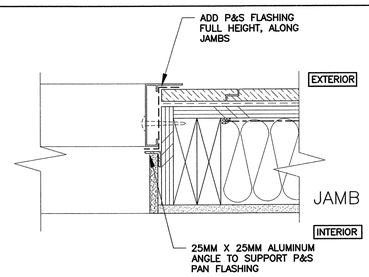
HANGER DETAIL FOR PIPING WITH VAPOUR SEALED INSULATION



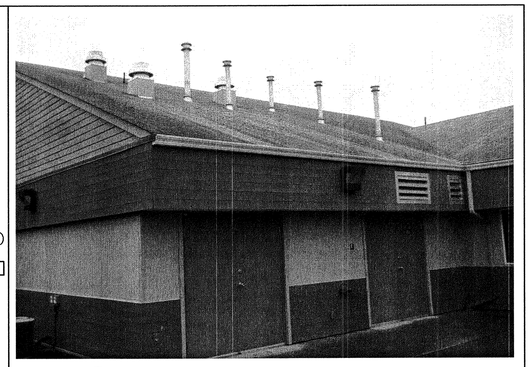
HANGER DETAIL FOR INSULATED HOT PIPING UP TO NPS 3 (75mm) OR ALL SIZES OF BARE PIPE

4 / M–107 PIPE HANGERS
SCALE: N.T.S.

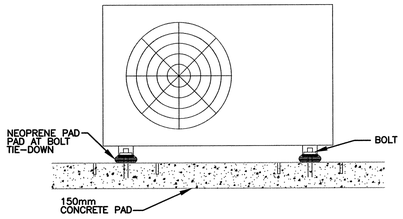




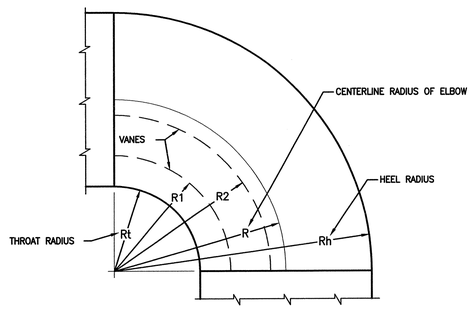
6 / M–107 LOUVER: HEAD, SILL & JAMB
SCALE: 1:5



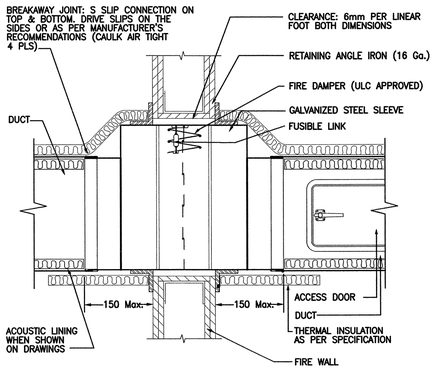
7 / M–107 PHOTO EXISTING BUILDING
SCALE: NTS



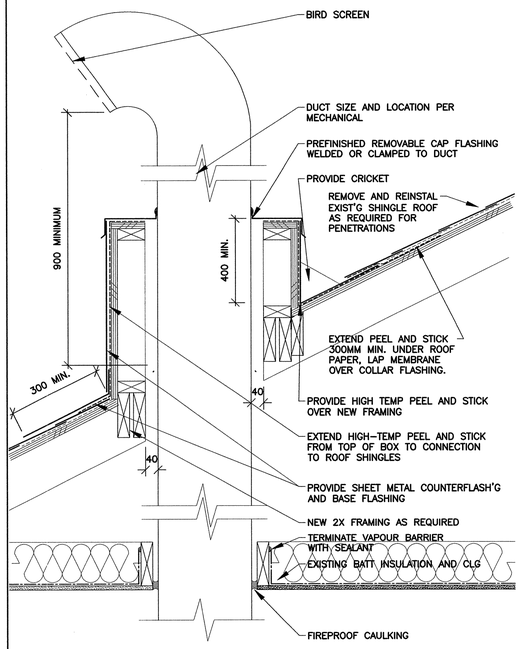
2 / M–107 CONDENSING UNIT CU–11 DETAIL
SCALE: N.T.S.



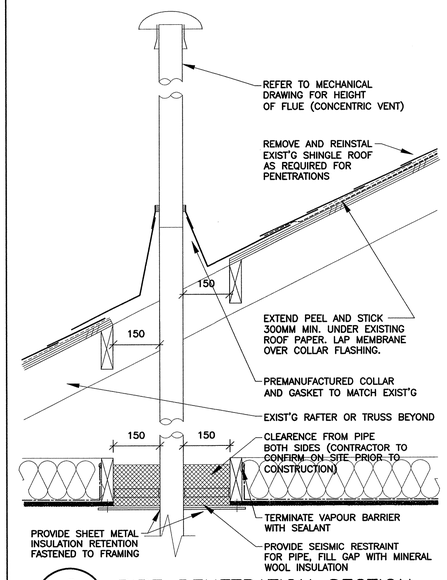
3 / M–107 RECTANGULAR ELBOW VANE LOCATION
SCALE: N.T.S.



5 / M–107 FIRE DAMPER (TYPE–B) DETAIL
SCALE: N.T.S.



8 / M–107 DUCT PENETRATION SECTION
SCALE: 1:10



9 / M–107 PIPE PENETRATION SECTION
SCALE: 1:10

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

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Pacific Region
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Stantec Project Number: 115615075

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PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA J.H. NG 25038
AUG 12 2015

Revision/ Revision	Description/Description	Date/Date
4	Issued for Tender	2015.Aug.06
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2	Issued for 66% Client Review	2015.May.21
1	Design Brief	2015.Apr.01

Client/client
CORRECTIONAL SERVICE CANADA

Project title/Titre du projet
FRASER VALLEY INSTITUTION
ABBOTSFORD, BRITISH COLUMBIA

BUILDING F
HVAC UPGRADE

Consultant Signature Box Only

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PWGSC Project Manager/Administrateur de Projets TPSGC
Tony Tang

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Preetipal Paul

Drawing title/Titre du dessin
Mechanical Details

Project No./No. du projet	Sheet/ Feuille	Revision no./ La Révision no.
R.074982.001	M107 8 OF 10	4

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PWGSC – A1 – 841x594

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

DM5XXXXXX

GAS-FIRED FURNACES SCHEDULE

EXISTING TAG	NEW TAG	SERVICE	CFM [L/S]	ESP (IN)	MANUF.	MODEL	AMPACITY/MOP (AMP)	MOTOR (HP)	ELECTRICAL	COOLING CAP (MBH)	HEATING OUT/IN (MBH)	FILTER SIZE (IN)	NOTES	ACCEPTABLE MATERIALS
FO-1	FU-1	NORTH ZONE AT WEST WING OLD BUILDING	760 [359]	0.75	TRANE	TUH2B060A9V3VA	11.1/15.0	0.5	115/1/60	24	58.2 / 60	17x25x1	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15	CARRIER, LENNOX
FO-2	FU-2	SOUTH ZONE AT WEST WING OLD BUILDING	1370 [647]	0.75	TRANE	TUH2C100A9V4VA	13.5/20.0	0.75	115/1/60	42	96.7 / 100	20x25x1	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15	CARRIER, LENNOX
FO-3	FU-3	EAST ZONE AT NORTH WING OLD BUILDING	1900 [897]	0.75	TRANE	TUH2D120A9H51A	14.1/20.0	1	115/1/60	60	104.5 / 110	24x25x1	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15	CARRIER, LENNOX
FO-4	FU-4	WEST ZONE AT NORTH WING OLD BUILDING	1320 [623]	0.75	TRANE	TUH2C100A9V4VA	13.5/20.0	0.75	115/1/60	42	96.7 / 100	20x25x1	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15	CARRIER, LENNOX
FO-5	FU-5	EAST ZONE AT EAST WING OLD BUILDING	1500 [708]	0.75	TRANE	TUH2C100A9V4VA	13.5/20.0	0.75	115/1/60	42	96.7 / 100	20x25x1	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15	CARRIER, LENNOX
FO-6	FU-6	WEST ZONE AT EAST WING OLD BUILDING	1850 [873]	0.75	TRANE	TUH2D120A9H51A	14.1/20.0	1	115/1/60	60	104.5 / 110	24x25x1	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15	CARRIER, LENNOX
FN-1	FU-7	SOUTH ZONE AT EAST WING NEW BUILDING	920 [434]	0.75	TRANE	TUH2B040A9H21A	9.7/15.0	0.5	115/1/60	30	38 / 40	17x25x1	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15	CARRIER, LENNOX
FN-2	FU-8	NORTH ZONE AT EAST WING NEW BUILDING	1070 [505]	0.75	TRANE	TUH2B040A9H21A	9.7/15.0	0.5	115/1/60	30	38 / 40	17x25x1	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15	CARRIER, LENNOX
FN-3	FU-9	NORTH ZONE AT SOUTH WING NEW BUILDING	1830 [864]	0.75	TRANE	TUH2D120A9H51A	14.1/20.0	1	115/1/60	60	104.5 / 110	24x25x1	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15	CARRIER, LENNOX
FN-4	FU-10	SOUTH ZONE AT SOUTH WING NEW BUILDING	1830 [864]	0.75	TRANE	TUH2D120A9H51A	14.1/20.0	1	115/1/60	60	104.5 / 110	24x25x1	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15	CARRIER, LENNOX

NOTES:
1. REFER TO MECHANICAL SPECIFICATION FOR ADDITIONAL REQUIREMENTS FOR STARTER AND CONTROL PANEL.
2. C/W ISOLATED NEOPRENE PAD.
3. C/W DX COOLING COIL. SEE DX COOLING COIL SCHEDULE.
4. C/W GAS-FIRED HEATING BURNER, AND GAS TRAIN W/ GAS PRV.
5. C/W FACTORY MOUNTED MICROPROCESSOR CONTROLLER, THERMOSTAT AND ALL CONTROL HARDWARE.
6. TOP DISCHARGE OPENING.
7. –
8. CUSTOM BUILT ECONOMIZER BOX WITH MOTORIZED DAMPERS CONTROLLED BY FURNACE MICROPROCESSOR CONTROLLER. SEE MOTORIZED DAMPER SCHEDULE.
9. PROVIDE HOUSE KEEPING PAD.
10. PROVIDE CONDENSATE DRAIN KIT, COOLING COIL DRAIN PAN, AND INLINE ACID NEUTRALIZER.
11. DIRECT DRIVE BLOWER.
12. REDUNDANT, GAS VALVE.
13. VARIABLE SPEED BLOWER, TWO STAGE HEATING, VARIABLE CAPACITY GAS CONTROL VALVE.
14. ASHRAE 90.1-2010 COMPLIANCE.
15. PROVIDE CONCENTRIC COMBUSTION FLUE-VENT COMBO.
16. PROVIDE FILTER, C/W V-SIDE FILTER RACK KIT (EXTERNAL).

DIRECT EXPANSION (DX) COOLING COIL SCHEDULE

UNIT TAG	SERVICE	MANUF.	MODEL	REFRIGERANT	NOM. COOLING CAPACITY (MBH)	COIL P.D. (IN.)	EAT/LAT (DEG.F)	WIDTH (INCHES)	NOTES	ACCEPTABLE MATERIALS
CC-1	FURNACE FU-1 COOLING	TRANE	4TXCB	R-410A	SEE FURNACE FU-1	0.25	80 / 55	17.5	1,2,3,4	CARRIER, LENNOX
CC-2	FURNACE FU-2 COOLING	TRANE	4TXCB	R-410A	SEE FURNACE FU-2	0.25	80 / 55	17.5	1,2,3,4	CARRIER, LENNOX
CC-3	FURNACE FU-3 COOLING	TRANE	4TXCD	R-410A	SEE FURNACE FU-3	0.25	80 / 55	24.5	1,2,3,4	CARRIER, LENNOX
CC-4	FURNACE FU-4 COOLING	TRANE	4TXCB	R-410A	SEE FURNACE FU-4	0.25	80 / 55	17.5	1,2,3,4	CARRIER, LENNOX
CC-5	FURNACE FU-5 COOLING	TRANE	4TXCB	R-410A	SEE FURNACE FU-5	0.25	80 / 55	17.5	1,2,3,4	CARRIER, LENNOX
CC-6	FURNACE FU-6 COOLING	TRANE	4TXCD	R-410A	SEE FURNACE FU-6	0.25	80 / 55	24.5	1,2,3,4	CARRIER, LENNOX
CC-7	FURNACE FU-7 COOLING	TRANE	4TXCB	R-410A	SEE FURNACE FU-7	0.25	80 / 55	17.5	1,2,3,4	CARRIER, LENNOX
CC-8	FURNACE FU-8 COOLING	TRANE	4TXCB	R-410A	SEE FURNACE FU-8	0.25	80 / 55	17.5	1,2,3,4	CARRIER, LENNOX
CC-9	FURNACE FU-9 COOLING	TRANE	4TXCD	R-410A	SEE FURNACE FU-9	0.25	80 / 55	24.5	1,2,3,4	CARRIER, LENNOX
CC-10	FURNACE FU-10 COOLING	TRANE	4TXCD	R-410A	SEE FURNACE FU-10	0.25	80 / 55	24.5	1,2,3,4	CARRIER, LENNOX

NOTES:
1. REFER TO MECHANICAL SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
2. PROVIDE REFRIGERANT TUBES, POWER AND CONTROL WIRING TO EACH DX COOLING COIL. REFER TO MANUFACTURER'S MANUAL FOR ADDITIONAL INSTALLATION REQUIREMENTS.
3. CONNECT TO FURNACE MICROPROCESSOR CONTROLLER.
4. PREMIUM, CONVERTIBLE, CASED "A" COIL, HIGH EFFICIENCY, UPFLOW.

CONDENSING UNITS SCHEDULE

UNIT TAG	SERVICE	MANUF.	MODEL	NOMINAL COOLING CAPACITY	REFRIGERANT	ELECTRICAL	POWER (HP)	MIN. CIRCUIT AMPACITY	SEER (BTUH/WATT)	NOTES	ACCEPTABLE MATERIALS
CU-1	FURNACE FU-1 DX COIL	TRANE	4TTR7024	SEE FURNACE FU-1	R-410A	208/1/60	0.125	18.0	17.75	1,2,3,4	CARRIER, LENNOX
CU-2	FURNACE FU-2 DX COIL	TRANE	4TTA3042	SEE FURNACE FU-2	R-410A	208/3/60	0.2	18.0	13.25	1,2,3,4	CARRIER, LENNOX
CU-3	FURNACE FU-3 DX COIL	TRANE	4TTA3060	SEE FURNACE FU-3	R-410A	208/3/60	0.2	21.0	13.00	1,2,3,4	CARRIER, LENNOX
CU-4	FURNACE FU-4 DX COIL	TRANE	4TTA3042	SEE FURNACE FU-4	R-410A	208/3/60	0.2	18.0	13.25	1,2,3,4	CARRIER, LENNOX
CU-5	FURNACE FU-5 DX COIL	TRANE	4TTA3042	SEE FURNACE FU-5	R-410A	208/3/60	0.2	18.0	13.25	1,2,3,4	CARRIER, LENNOX
CU-6	FURNACE FU-6 DX COIL	TRANE	4TTA3060	SEE FURNACE FU-6	R-410A	208/3/60	0.2	21.0	13.00	1,2,3,4	CARRIER, LENNOX
CU-7	FURNACE FU-7 DX COIL	TRANE	4TTA3030	SEE FURNACE FU-7	R-410A	208/3/60	0.125	10.0	14.00	1,2,3,4	CARRIER, LENNOX
CU-8	FURNACE FU-8 DX COIL	TRANE	4TTA3030	SEE FURNACE FU-8	R-410A	208/3/60	0.125	10.0	12.00	1,2,3,4	CARRIER, LENNOX
CU-9	FURNACE FU-9 DX COIL	TRANE	4TTA3060	SEE FURNACE FU-9	R-410A	208/3/60	0.2	21.0	13.00	1,2,3,4	CARRIER, LENNOX
CU-10	FURNACE FU-10 DX COIL	TRANE	4TTA3060	SEE FURNACE FU-10	R-410A	208/3/60	0.2	21.0	13.00	1,2,3,4	CARRIER, LENNOX

NOTES:
1. REFER TO MECHANICAL SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
2. PROVIDE REFRIGERANT TUBES, POWER AND CONTROL WIRING TO EACH OUTDOOR CU. REFER TO MANUFACTURER'S MANUAL FOR ADDITIONAL INSTALLATION REQUIREMENTS.
3. CONTRACTOR TO PROVIDE MIN. 150MM HIGH HOUSE KEEPING PAD FOR OUTDOOR UNIT INSTALLATION.
4. CONNECT TO FURNACE MICROPROCESSOR CONTROLLER.

SPLIT AIR CONDITIONING UNITS SCHEDULE

UNIT TAG	MANUF.	MODEL	SERVICE	REFRIGERANT	TOTAL COOLING CAPACITY MBH [KW]	ELECTRICAL	MIN. AMPACITY	NOTES	ACCEPTABLE MATERIALS
AC-1	MITSUBISHI	INDOOR: PKA-A24HA	CONFERENCE ROOM 75	R-410A	18 [5,274]	208/1/60	1A (15A MAX FUSE)	1,2,3,4,5,6,7	TRANE, DAIKIN
CU-11		OUTDOOR: PUZ-A24NHA3				208/1/60	18A (25 MAX BREAKER SIZE)		

NOTES:
1. REFER TO MECHANICAL SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
2. C/W WALL MOUNTED PROGRAMMABLE TOUCH SCREEN T-STAT.
3. PROVIDE REFRIGERANT TUBES, POWER AND CONTROL WIRING TO EACH OUTDOOR CU, INDOOR AC UNIT. REFER TO MANUFACTURER'S MANUAL FOR ADDITIONAL INSTALLATION REQUIREMENTS.
4. CONTRACTOR TO PROVIDE MIN. 150MM HIGH HOUSE KEEPING PAD FOR OUTDOOR UNIT INSTALLATION.
5. C/W CEILING MOUNTED KIT AND
6. C/W IN-LINE CONDENSATE DRAIN PUMP, C/W HIGH WATER LEVEL ALARM.
7. C/W ELECTRIC HEATING COIL.
8. C/W MICROPROCESSOR CONTROLLER.

DIFFUSER, GRILLE & REGISTER SCHEDULE

UNIT NO.	TYPE	MANUFACTURER	MODEL	OVERALL DIMENSION	NOTES	ACCEPTABLE MATERIALS
S-1	SQUARE PLAQUE DIFFUSER	E.H. PRICE	600x600/SPD/B12	600x600	1	NAILOR, TITUS
S-2	SQUARE PLAQUE DIFFUSER	E.H. PRICE	450x450/SPD/B12	450x600	1	NAILOR, TITUS
S-3	DOUBLE BLADE REGISTER	E.H. PRICE	520D/F/S/A/B12	SEE DRAWINGS	1	NAILOR, TITUS
E-1	EGG CRATE EXHAUST	E.H. PRICE	80/F/A/B12	SEE DRAWINGS	–	NAILOR, TITUS
L-1	EXTERIOR LOUVER	AIROLITE	K6776	SEE DRAWINGS	2, 3	E.H. PRICE
DG-1	DOOR GRILLE	E.H. PRICE	STG1/BF-B12	SEE DRAWINGS	–	NAILOR, TITUS
DG-2	FIRE RATED DOOR GRILLE	AIR LOUVRES	1900-A	SEE DRAWINGS	4	E.H. PRICE, NAILOR
TH-1	THERMAFUSER DIFFUSER	ACUTHERM	ST-HC-RX-I-SCMS	600x600	8	E.H. PRICE

NOTES:
1. PROVIDE DIFFUSERS AND GRILLES WITH BORDER STYLES THAT ARE COMPATIBLE WITH ADJACENT WALLS, CEILINGS OR DOOR SYSTEMS. CONFIRM ON SITE BEFORE ORDERING.
2. C/W BIRD AND INSECT SCREEN.
3. MATCH FINISH/COLOR WITH EXISTING EXTERIOR WALL COLOR.
4. FIRE RATED DOOR GRILLE (MIN 1 HR FIRE RATING). SPRING-LOADED FUSIBLE LINK. CONTRACTOR TO CONFIRM THICKNESS OF DOOR PRIOR TO ORDERING.
5. DIFFUSER NECK SIZE AND/OR LINEAR LENGTH AS PER DRAWINGS.
6. C/W SUPPLY AIR PLENUM.
7. 2-SLOT DIFFUSER FOR UP TO 200 CFM [94.4 L/S], 3-SLOT DIFFUSER FOR 201 TO 300 CFM [141.6 L/S], AND 4-SLOT DIFFUSER FOR OVER 300 CFM [141.6 L/S].
8. C/W RELIEF RING, INSULATION, SECURITY HANGER, SENSOR. PROVIDE ACCESSORIES TO MATCH CEILING TYPE.

MOTORIZED DAMPER SCHEDULE

UNIT NO.	SERVICE	MANUF.	MODEL	MAX. AIR FLOW (L/S)	DUCT SIZE (MM)	NOTES	ACCEPTABLE MATERIALS
MD-1	FU-1 OUTDOOR AIR	RUSKIN	CD40X2	359	350x250	1,2,3,4,5	E.H. PRICE, NAILOR
MD-2	FU-1 RETURN AIR	RUSKIN	CD51			1,2,3,4	E.H. PRICE, NAILOR
MD-3	FU-2 OUTDOOR AIR	RUSKIN	CD40X2	647	450x300	1,2,3,4,5	E.H. PRICE, NAILOR
MD-4	FU-2 RETURN AIR	RUSKIN	CD51			1,2,3,4	E.H. PRICE, NAILOR
MD-5	FU-3 OUTDOOR AIR	RUSKIN	CD40X2	897	500x350	1,2,3,4,5	E.H. PRICE, NAILOR
MD-6	FU-3 RETURN AIR	RUSKIN	CD51			1,2,3,4	E.H. PRICE, NAILOR
MD-7	FU-4 OUTDOOR AIR	RUSKIN	CD40X2	623	350x300	1,2,3,4,5	E.H. PRICE, NAILOR
MD-8	FU-4 RETURN AIR	RUSKIN	CD51			1,2,3,4	E.H. PRICE, NAILOR
MD-9	FU-5 OUTDOOR AIR	RUSKIN	CD40X2	708	500x300	1,2,3,4,5	E.H. PRICE, NAILOR
MD-10	FU-5 RETURN AIR	RUSKIN	CD51			1,2,3,4	E.H. PRICE, NAILOR
MD-11	FU-6 OUTDOOR AIR	RUSKIN	CD40X2	873	600x300	1,2,3,4,5	E.H. PRICE, NAILOR
MD-12	FU-6 RETURN AIR	RUSKIN	CD51			1,2,3,4	E.H. PRICE, NAILOR
MD-13	FU-7 OUTDOOR AIR	RUSKIN	CD40X2	434	350x300	1,2,3,4,5	E.H. PRICE, NAILOR
MD-14	FU-7 RETURN AIR	RUSKIN	CD51			1,2,3,4	E.H. PRICE, NAILOR
MD-15	FU-8 OUTDOOR AIR	RUSKIN	CD40X2	505	450x300	1,2,3,4,5	E.H. PRICE, NAILOR
MD-16	FU-8 RETURN AIR	RUSKIN	CD51			1,2,3,4	E.H. PRICE, NAILOR
MD-17	FU-9 OUTDOOR AIR	RUSKIN	CD40X2	864	500x350	1,2,3,4,5	E.H. PRICE, NAILOR
MD-18	FU-9 RETURN AIR	RUSKIN	CD51			1,2,3,4	E.H. PRICE, NAILOR
MD-19	FU-10 OUTDOOR AIR	RUSKIN	CD40X2	864	500x350	1,2,3,4,5	E.H. PRICE, NAILOR
MD-20	FU-10 RETURN AIR	RUSKIN	CD51			1,2,3,4	E.H. PRICE, NAILOR

NOTES:
1. REFER TO MECHANICAL SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
2. CONNECT TO FURNACE MICROPROCESSOR CONTROLLER FOR DAMPER CONTROL. DAMPERS SHALL OPERATE AS AN ECONOMIZER.
3. ALUMINUM CONSTRUCTION, LOW-LEAKAGE.
4. C/W MOTORIZED ELECTRIC ACTUATORS (LOW VOLTAGE) AND ALL CONTROL HARDWARE, TRANSFORMERS, AND WIRING.
5. C/W INSULATED BLADES.

FLOOR DRAIN SCHEDULE

UNIT NO.	SERVICE	MANUFACTURER	SIZE (MM)	NOTES	ACCEPTABLE MATERIALS
FD-1	MECHANICAL ROOM FLOOR DRAIN	WATTS	100	1,2,3	ZURN, JAY R. SMITH, MIFAB

NOTES:
1. CAST IRON FLOOR DRAIN FOR CONCRETE FLOOR.
2. NICKEL BRONZE STRAINER.
3. CAST IRON NON-PLATED PARTS TO BE COATED FOR RUST PREVENTION.
4. C/W P-TRAP AND PRESSURE TYPE TRAP PRIMER.

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Stantec Project Number: 115615075

Dimensions
The Contractor shall verify all dimensions, and immediately report any errors and/or omissions to Stantec. DO NOT SCALE DRAWINGS.

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA J.H. NG 25038 ENGINEER
AUG 12 2015

Revision/ Revision	Description/Description	Date/Date
4	Issued for Tender	2015.Aug.06
3	Issued for 99% Client Review	2015.Jun.12
2	Issued for 66% Client Review	2015.May.21
1	Design Brief	2015.Apr.01

Client/client
CORRECTIONAL SERVICE CANADA

Project title/Titre du projet
FRASER VALLEY INSTITUTION
ABBOTSFORD, BRITISH COLUMBIA

BUILDING F
HVAC UPGRADE

Consultant Signature Box Only

Designed by/Concept par
KZ/LB

Drawn by/Dessine par
DN/LB

PWGSC Project Manager/Administrateur de Projets TPSGC
Tony Tang

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

Drawing title/Titre du dessin
Mechanical Equipment Schedule

Project No./No. du projet	Sheet/Feuille	Revision no./ La Révision no.
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PWGSC – A1 – 841x594

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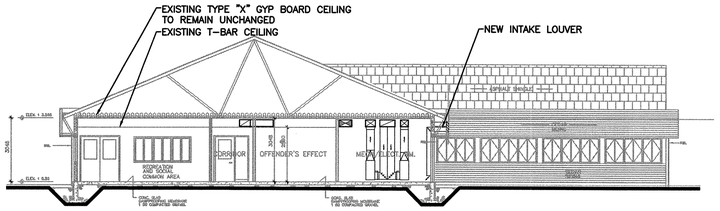

SECTION BB
Scale 1:150

SEE DRAWING M105 FOR FURNACE DUCT SECTIONS.

1 REFLECTED CEILING PLANS
M109 SCALE: 1:150

RCP AND RENOVATION NOTES :

1. REMOVE EXISTING LOUVERS, MODIFY LOUVER OPENING. INSTALL NEW RESIZED LOUVERS (SIZES PER MECHANICAL). MAKE GOOD SIDING AND REPAINT TO MATCH EXISTING. LOUVER HEAD, SILL AND JAMB DETAIL PER DETAIL 6/M107

   PLACE ALL NEW DUCTWORK AND NEW LOUVERS BETWEEN EXISTING WALL STUDS. DO NO DAMAGE OR MODIFY EXISTING WALL STUDS, HEADERS, BEAMS OR TRUSSES. MUST NOTIFY DEPARTMENTAL REPRESENTATIVE IF EXISTING CONDITIONS REQUIRE MODIFICATIONS TO THE EXISTING WOOD FRAME.

2. REMOVE AND REPLACE T-BAR CEILING (TEES, PANELS AND WIRES) FOR INSTALLATION OF NEW MECHANICAL EQUIPMENT, DUCTS AND DIFFUSERS. REMOVE AND REINSTALL HATCHES, LUMINARIES AND SPRINKLER HEADS AS REQUIRED. PAINT ALL CEILING TO MATCH EXITING COLOUR.

3. PROVIDE NEW OR ENLARGED CONCRETE PAD FOR NEW MECHANICAL EQUIPMENT. PAD SIZES PER MECHANICAL

4. REMOVE AND REBUILD TYPE "X" DRYWALL CEILING AS REQUIRED FOR INSTALLATION OF NEW MECHANICAL EQUIPMENT. REMOVE AND REINSTALL HATCHES, LUMINARIES AND SPRINKLER HEADS. . PAINT AND MAKE GOOD TO MATCH EXISTING.

5. PATCH, FILL AND MAKE GOOD EXISTING TYPE "X" GYP CEILING AT DECOMMISSIONED PENETRATIONS. SEAL CONTINUOUS VAPOUR BARRIER AROUND NEW PENETRATIONS. REINSTATE BATT INSULATION WHERE REQUIRED.

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REGISTERED ARCHITECT
JIANG ZHU
AUG 0 6 2015
BRITISH COLUMBIA

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Client/client
CORRECTIONAL SERVICE CANADA

Project title/Titre du projet
FRASER VALLEY INSTITUTION
ABBOTSFORD, BRITISH COLUMBIA

BUILDING F
HVAC UPGRADE

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Designed by/Concept par
KZ/LB

Drawn by/Dessine par
DN/LB

PWGSC Project Manager/Administrateur de Projets TPSGC
Tony Tang

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Preetipal Paul

Drawing title/Titre du dessin
REFLECTED CEILING PLANS AND RENOVATION NOTES

Project No./No. du projet	Sheet/Feuille	Revision no./ La Révision no.
R.074982.001	M109 10 OF 10	4

PWGSC – A1 – 841x594

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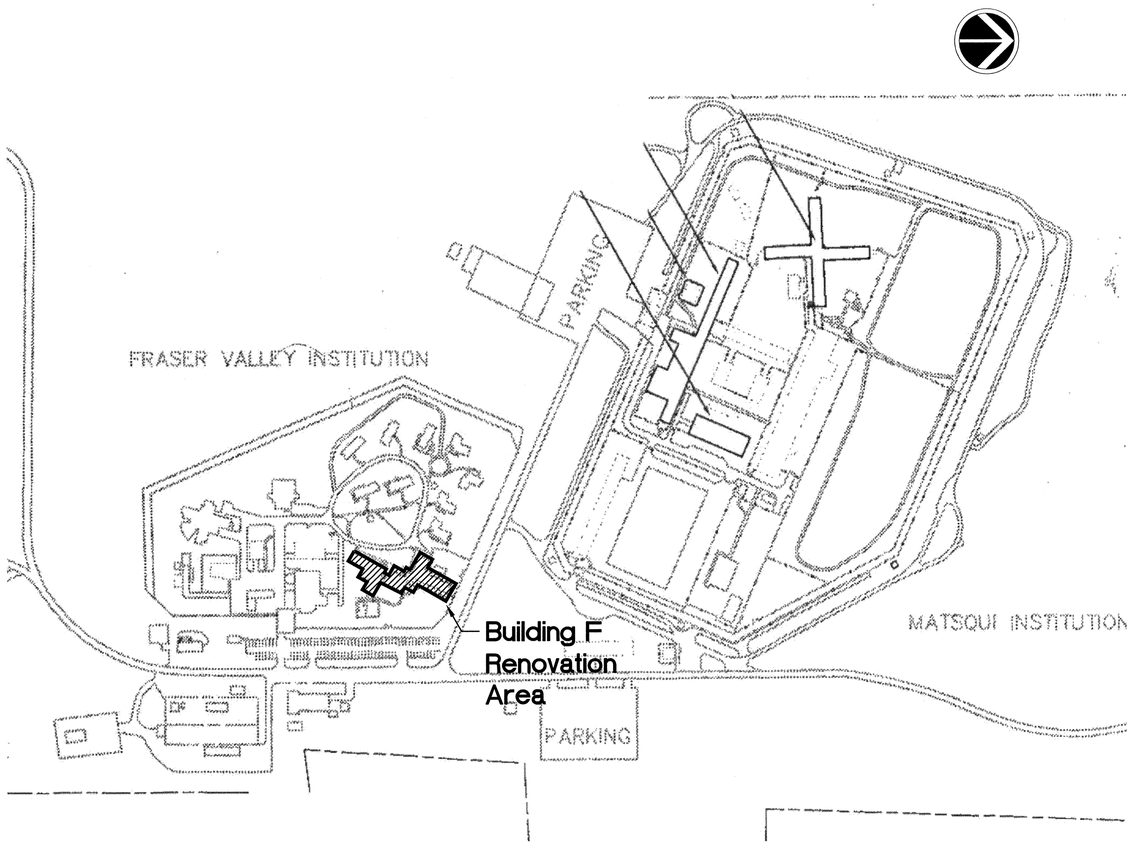

1 / E000 SITE KEY PLAN
SCALE: N.T.S.

DRAWING LIST	
E000	DRAWING LIST, SITE KEY PLAN, SYMBOL LEGEND
E100	DEMOLITION PLAN 1 – OLD BUILDING
E101	DEMOLITION PLAN 2 – NEW BUILDING
E102	NEW CONSTRUCTION PLAN 1 – OLD BUILDING
E103	NEW CONSTRUCTION PLAN 2 – NEW BUILDING
E200	PANEL SCHEDULES, MECHANICAL SCHEDULE

POWER PLAN SYMBOLS	
	DUPLEX 5–15R RECEPTACLE
GF	DUPLEX 5–15R RECEPTACLE C/W INTEGRAL GFCI PROTECTION
	DUPLEX 5–20R RECEPTACLE, T–SLOT
	SINGLE 5–15R RECEPTACLE
	SPLIT CIRCUIT DUPLEX 5–15R RECEPTACLE
	TWO DUPLEX 5–15R RECEPTACLES
	SPECIAL RECEPTACLE (TYPE AS INDICATED)
	FLOOR MOUNTED DUPLEX 5–15R RECEPTACLE
	CEILING MOUNTED DUPLEX 5–15R RECEPTACLE
J	CEILING MOUNTED JUNCTION BOX
J	WALL MOUNTED JUNCTION BOX
J	FLOOR MOUNTED JUNCTION BOX
	POWER PANELBOARD
	PANEL (TYPE AS INDICATED – SECURITY, LIGHTING RELAY, ETC.)
	SURFACE RACEWAY (TYPE AS INDICATED)
	PUSHBUTTON (TYPE AND WIRING AS INDICATED)
	GROUND BUS BAR
	MOTOR
	MOTOR c/w DISCONNECT SWITCH
	COMBINATION DISCONNECT AND MAGNETIC MOTOR STARTER
	DISCONNECT SWITCH
	FUSED DISCONNECT SWITCH
	MAGNETIC MOTOR STARTER
T	THERMOSTAT
MP	MANUAL MOTOR STARTER c/w PILOT LIGHT
	CONDUIT STUB
	CONDUIT UP
	CONDUIT DOWN
	DEVICE MOUNTED ABOVE MILLWORK COUNTERTOP

LIGHTING PLAN SYMBOLS	
	RECESSED FLUORESCENT LUMINAIRE, 1'x4'
	RECESSED LUMINAIRE / POT LIGHT, 6" DIAMETER OR LARGER

FIRE ALARM SYMBOLS	
	FIRE ALARM HEAT DETECTOR (RATE OF RISE UNLESS OTHERWISE INDICATED)
S	FIRE ALARM SMOKE DETECTOR
DS	FIRE ALARM SMOKE DETECTOR, DUCT MOUNTED
FACP	FIRE ALARM CONTROL PANEL

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Client/client
CORRECTIONAL SERVICE CANADA

Project title/Titre du projet
FRASER VALLEY INSTITUTION
ABBOTSFORD, BRITISH COLUMBIA

BUILDING F
HVAC UPGRADE

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JD

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AK/JD

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Tony Tang

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

Drawing title/Titre du dessin
Drawing List
Site Key Plan
Symbol Legend

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AUG 12 2015

Project No./No. du projet	Sheet/Feuille	Revision no./ La Révision no.
R.074982.001	E000 1 OF 6	4

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PWGSC – A1 – 841x594

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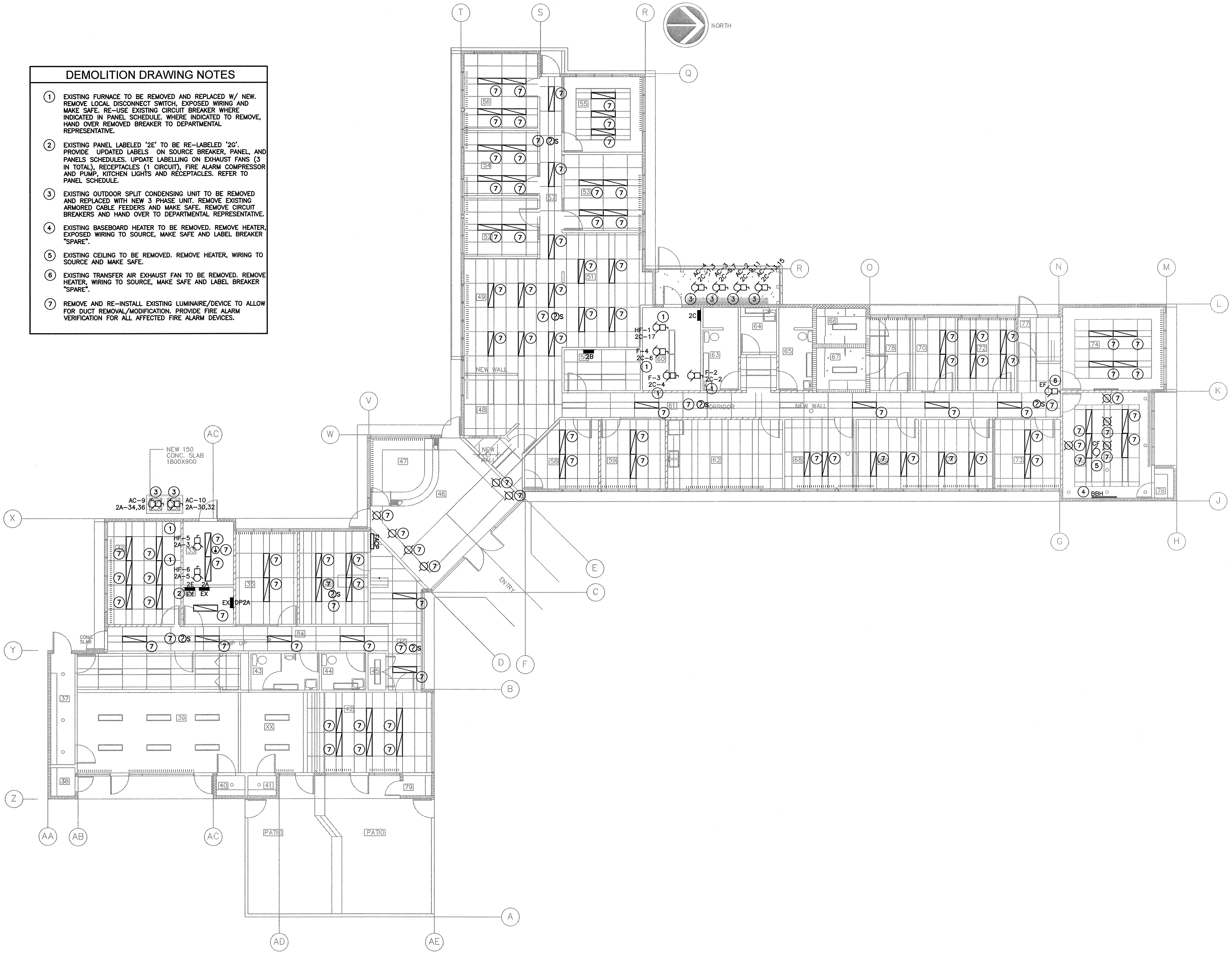

1 DEMOLITION PLAN I (OLD BUILDING)
E100 SCALE: 1:100

DEMOLITION DRAWING NOTES

1. EXISTING FURNACE TO BE REMOVED AND REPLACED W/ NEW. REMOVE LOCAL DISCONNECT SWITCH, EXPOSED WIRING AND MAKE SAFE. RE-USE EXISTING CIRCUIT BREAKER WHERE INDICATED IN PANEL SCHEDULE. WHERE INDICATED TO REMOVE, HAND OVER REMOVED BREAKER TO DEPARTMENTAL REPRESENTATIVE.
2. EXISTING PANEL LABELED '2E' TO BE RE-LABELED '2G'. PROVIDE UPDATED LABELS ON SOURCE BREAKER, PANEL, AND PANELS SCHEDULES. UPDATE LABELLING ON EXHAUST FANS (3 IN TOTAL), RECEPTACLES (1 CIRCUIT), FIRE ALARM COMPRESSOR AND PUMP, KITCHEN LIGHTS AND RECEPTACLES. REFER TO PANEL SCHEDULE.
3. EXISTING OUTDOOR SPLIT CONDENSING UNIT TO BE REMOVED AND REPLACED WITH NEW 3 PHASE UNIT. REMOVE EXISTING ARMORED CABLE FEEDERS AND MAKE SAFE. REMOVE CIRCUIT BREAKERS AND HAND OVER TO DEPARTMENTAL REPRESENTATIVE.
4. EXISTING BASEBOARD HEATER TO BE REMOVED. REMOVE HEATER, EXPOSED WIRING TO SOURCE, MAKE SAFE AND LABEL BREAKER "SPARE".
5. EXISTING CEILING TO BE REMOVED. REMOVE HEATER, WIRING TO SOURCE AND MAKE SAFE.
6. EXISTING TRANSFER AIR EXHAUST FAN TO BE REMOVED. REMOVE HEATER, WIRING TO SOURCE, MAKE SAFE AND LABEL BREAKER "SPARE".
7. REMOVE AND RE-INSTALL EXISTING LUMINAIRE/DEVICE TO ALLOW FOR DUCT REMOVAL/MODIFICATION. PROVIDE FIRE ALARM VERIFICATION FOR ALL AFFECTED FIRE ALARM DEVICES.

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1	Design Brief	2015.Apr.01

Client/client

CORRECTIONAL SERVICE CANADA

Project title/Titre du projet

FRASER VALLEY INSTITUTION
ABBOTSFORD, BRITISH COLUMBIA

BUILDING F
HVAC UPGRADE

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JD

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AK/JD

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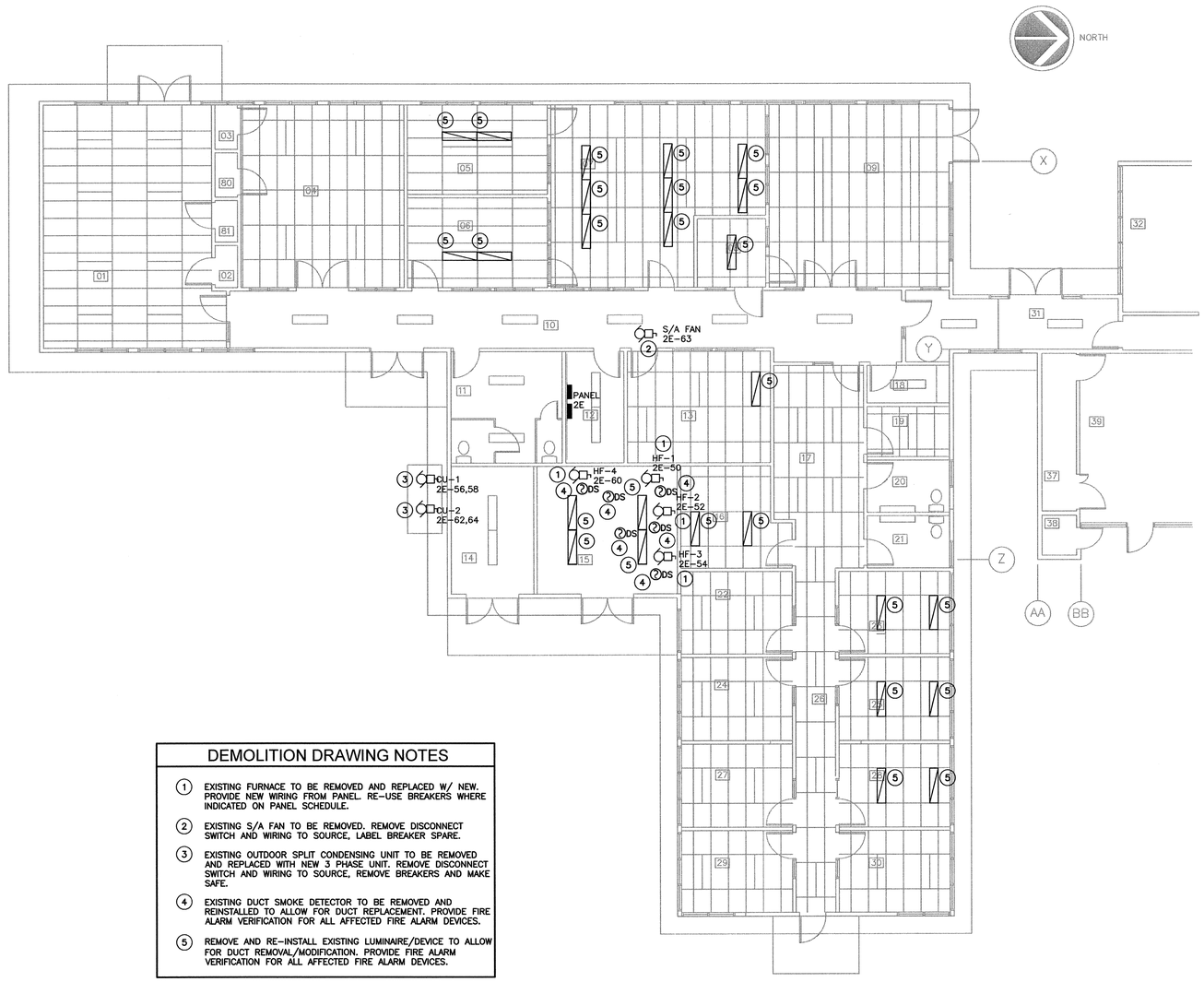
Gestionnaire régionale, Services d'architectural et de génie, TPSGC
Preetipal Paul

Drawing title/Titre du dessin

Demolition Plan 1
Old Building

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA M. J. FOURIE #31736
AUG 12 2015

Project No./No. du projet	Sheet/ Feuille	Revision no./ La Révision no.
R.074982.001	E100 2 OF 6	4



DEMOLITION DRAWING NOTES

1. EXISTING FURNACE TO BE REMOVED AND REPLACED W/ NEW. PROVIDE NEW WIRING FROM PANEL. RE-USE BREAKERS WHERE INDICATED ON PANEL SCHEDULE.
2. EXISTING S/A FAN TO BE REMOVED. REMOVE DISCONNECT SWITCH AND WIRING TO SOURCE, LABEL BREAKER SPARE.
3. EXISTING OUTDOOR SPLIT CONDENSING UNIT TO BE REMOVED AND REPLACED WITH NEW 3 PHASE UNIT. REMOVE DISCONNECT SWITCH AND WIRING TO SOURCE, REMOVE BREAKERS AND MAKE SAFE.
4. EXISTING DUCT SMOKE DETECTOR TO BE REMOVED AND REINSTALLED TO ALLOW FOR DUCT REPLACEMENT. PROVIDE FIRE ALARM VERIFICATION FOR ALL AFFECTED FIRE ALARM DEVICES.
5. REMOVE AND RE-INSTALL EXISTING LUMINAIRE/DEVICE TO ALLOW FOR DUCT REMOVAL/MODIFICATION. PROVIDE FIRE ALARM VERIFICATION FOR ALL AFFECTED FIRE ALARM DEVICES.

1 / E101 DEMOLITION PLAN II (NEW BUILDING)
SCALE: 1:100

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Fax. 604.696.8100
www.stantec.com

Stantec Project Number: 115615075

Dimensions
The Contractor shall verify all dimensions, and immediately report any errors and/or omissions to Stantec. DO NOT SCALE DRAWINGS.

Revision/ Revision	Description/Description	Date/Date
4	Issued for Tender	2015.Aug.06
3	Issued for 99% Client Review	2015.Jun.12
2	Issued for 66% Client Review	2015.May.21
1	Design Brief	2015.Apr.01

Client/client
CORRECTIONAL SERVICE CANADA

Project title/Titre du projet
FRASER VALLEY INSTITUTION
ABBOTSFORD, BRITISH COLUMBIA

BUILDING F
HVAC UPGRADE

Consultant Signature Box Only

Designed by/Concept par
JD

Drawn by/Dessine par
AK/JD

PWGSC Project Manager/Administrateur de Projets TPSGC
Tony Tang

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

Drawing title/Titre du dessin
Demolition Plan II
New Building

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA M.J. POLITTE 36811 AUG 12 2015

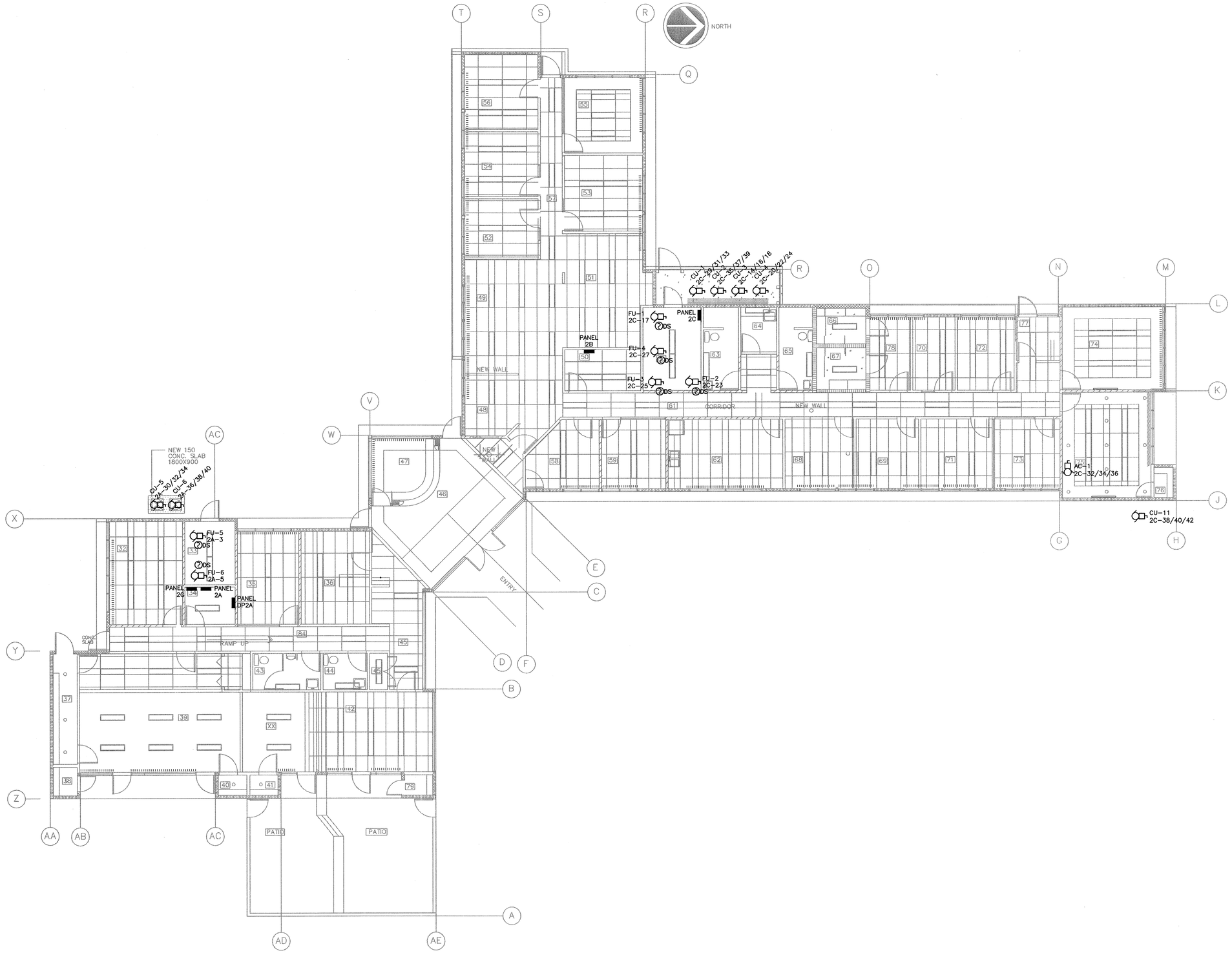
Project No./No. du projet	Sheet/ Feuille	Revision no./ La Révision no.
R.074982.001	E101 3 OF 6	4

2015/Aug/12, 12:16pm Ibantog E101 \\Cd1200-f03\workgroup1\156\active\115615075\03_design_and_construction\02_design\03_drawings\02_work_in_progress_drawings\Electric\E10X.dwg

PWGSC – A1 – 841x594

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

DM5XXXXXX



1 E102 NEW CONSTRUCTION PLAN I (OLD BUILDING)
SCALE: 1:100

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

PWGSC – A1 – 841x594

2015/Aug/12, 12:16pm lbantog E102 \\Cal1200-f03\workgroup\1156\active\115615075\03_design_and_construction\02_design\03_drawings\02_work_in_progress_drawings\Electric\E102.dwg

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

REAL PROPERTY SERVICES
Pacific Region
SERVICES IMMOBILIERS
Région de Pacifique

Stantec
1100 – 111 Dunsmuir Street
Vancouver BC Canada
V6B 6A3
Tel. 604.696.8000
Fax. 604.696.8100
www.stantec.com

Stantec Project Number: 115615075

Dimensions
The Contractor shall verify all dimensions, and immediately report any errors and/or omissions to Stantec. DO NOT SCALE DRAWINGS.

4	Issued for Tender	2015.Aug.06
3	Issued for 99% Client Review	2015.Jun.12
2	Issued for 66% Client Review	2015.May.21
1	Design Brief	2015.Apr.01
Revision/ Revision	Description/Description	Date/Date

Client/client

CORRECTIONAL SERVICE CANADA

Project title/Titre du projet

FRASER VALLEY INSTITUTION
ABBOTSFORD, BRITISH COLUMBIA

BUILDING F
HVAC UPGRADE

Consultant Signature Box Only

Designed by/Concept par
JD

Drawn by/Dessine par
AK/JD

PWGSC Project Manager/Administrateur de Projets TPSGC
Tony Tang

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

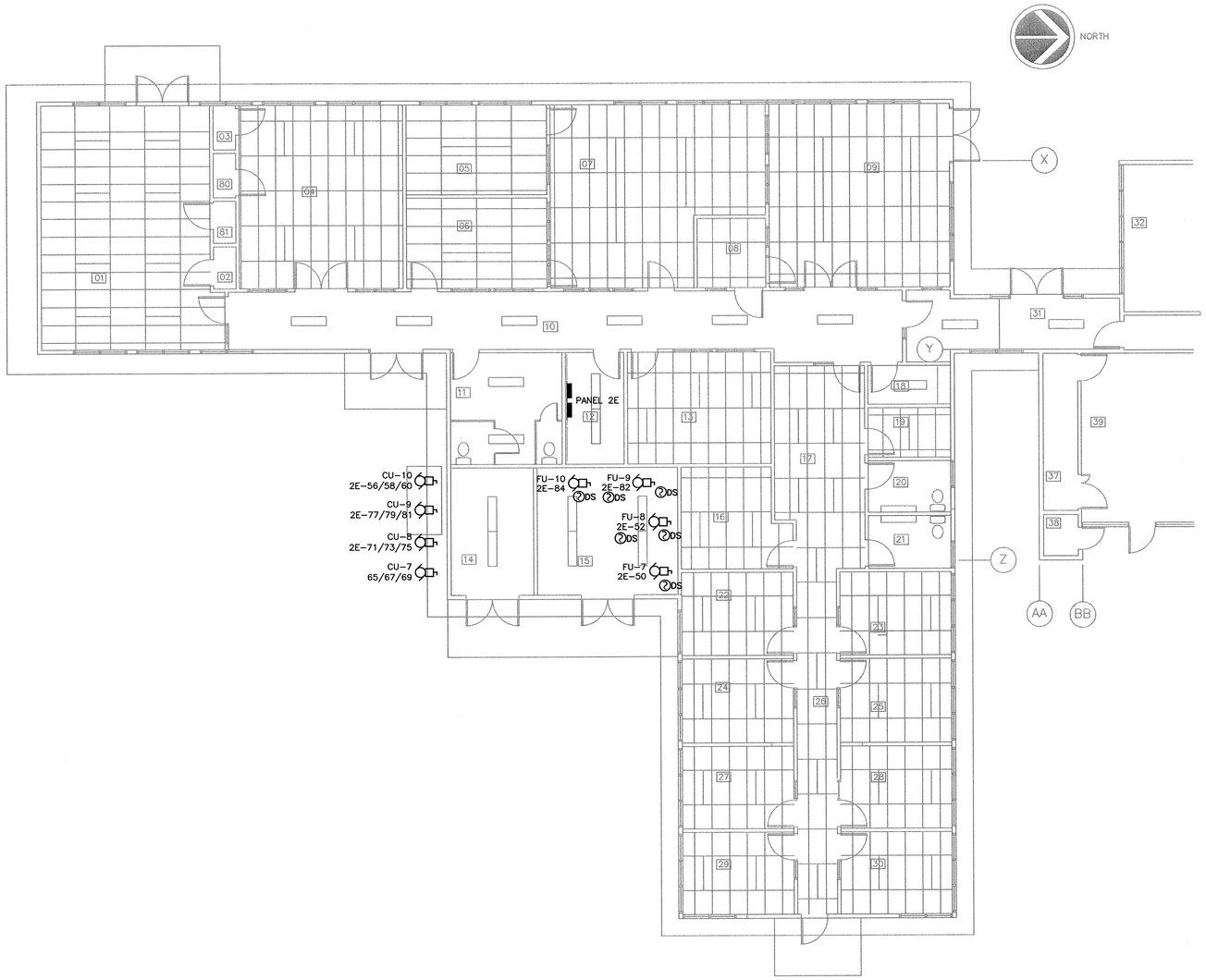
Drawing title/Titre du dessin

New Construction Plan 1
Old Building

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA M. J. DUBE 19135 AUG 12 2015

Project No./No. du projet	Sheet/Feuille	Revision no./ La Révision no.
R.074982.001	E102 4 OF 6	4

DM5XXXXXX



1 / E103 NEW CONSTRUCTION PLAN II (NEW BUILDING)
SCALE: 1:100

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

REAL PROPERTY SERVICES
Pacific Region
SERVICES IMMOBILIERS
Région de Pacifique

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Stantec Project Number: 115615075

Dimensions
The Contractor shall verify all dimensions, and immediately report any errors and/or omissions to Stantec. DO NOT SCALE DRAWINGS.

4	Issued for Tender	2015.Aug.06
3	Issued for 99% Client Review	2015.Jun.12
2	Issued for 66% Client Review	2015.May.21
1	Design Brief	2015.Apr.01
Revision/ Revision	Description/Description	Date/Date

Client/client

CORRECTIONAL SERVICE CANADA

Project title/Titre du projet

FRASER VALLEY INSTITUTION
ABBOTSFORD, BRITISH COLUMBIA

BUILDING F
HVAC UPGRADE

Consultant Signature Box Only

Designed by/Concept par
JD

Drawn by/Dessine par
AK/JD

PWGSC Project Manager/Administrateur de Projets TPSGC
Tony Tang

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

Drawing title/Titre du dessin

New Construction Plan II
New Building

PROFESSIONAL ENGINEER
AUG 12 2015

Project No./No. du projet	Sheet/Feuille	Revision no./ La Révision no.
R.074982.001	E103 5 OF 6	4

DM5XXXXXX

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PWGSC – A1 – 841x594

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

PANEL: 2A(NEW)

LOCATION: -

NOTE	LOAD	TYPE	DESCRIPTION	BRKR	CCT	PHASE	CCT	BRKR	DESCRIPTION	TYPE	LOAD	NOTE
			RECEPTACLE	15A	1	A	2	15A	LIGHTING			
1			FU-5	20A	3	B	4	15A	LIGHTING			
1			FU-6	20A	5	C	6	15A	LIGHTING			
			RECEPTACLE	15A	7	A	8	15A	CORRIDOR LIGHTING			
			RECEPTACLE	20A	9	B	10	15A	LIGHTING			
			RECEPTACLE	15A	11	C	12	15A	STORAGE ROOM LIGHTING			
			RECEPTACLE	15A	13	A	14	15A	LIGHTING			
			VENDING MACHINE	15A	15	B	16	15A	LIGHTING			
			VENDING MACHINE	15A	17	C	18	15A	LIGHTING			
			FIRE ALARM PANEL	15A	19	A	20	15A	LIGHTING			
			CORRIDOR RECEPTACLE	15A	21	B	22	15A	EXTERIOR LIGHTING			
			PROJECTION SCREEN	20A	23	C	24	15A	EXTERIOR LIGHTING			
			MAIN DOOR OPERATOR	15A	25	A	26	15A	EXTERIOR LIGHTING			
			RECEPTACLE	15A	27	B	28	15A	EXIT SIGNS			
			EF-1 FANS	15A	29	C	30					
			EXISTING LOAD	15A	31	A	32	3P 25A	CU-5			1
			EXISTING LOAD	15A	33	B	34					
			RECEPTACLE 40	15A	35	C	36					
			RECEPTACLE 40	15A	37	A	38	3P 30A	CU-6			1
			RECEPTACLE 48	15A	39	B	40					
			EXISTING LOAD	15A	41	C	42					

	LOAD BREAKDOWN	CONNECTED	DERATED		PANEL DESCRIPTION			
L	LIGHTING:	0	100%	0	VOLTAGE	:	208	V
C	COOLING:	0	0%	0	PHASE	:	3	
H	HEATING:	0	100%	0	AMPERAGE	:	0	A
M	MECHANICAL:	0	80%	0	PANEL AMPACITY	:	70	A
R	GENERAL RECEPTACLES:	0	60%	0	MAIN BREAKER	:	-	A
E	OWNER EQUIPMENT:	0	80%	0	# OF TUBS	:	1	
TOTAL:		0	W	0				

NOTE DESCRIPTION

1	NEW EQUIPMENT. PROVIDE NEW CIRCUIT BREAKER, WIRING AND LOCAL DISCONNECT SWITCH.
2	
3	

PANEL: 2A(EXISTING)

LOCATION: -

NOTE	LOAD	TYPE	DESCRIPTION	BRKR	CCT	PHASE	CCT	BRKR	DESCRIPTION	TYPE	LOAD	NOTE
			RECEPTACLE	15A	1	A	2	15A	LIGHTING			
1			FURNACE HF-5	15A	3	B	4	15A	LIGHTING			
1			FURNACE HF-6	15A	5	C	6	15A	LIGHTING			
			RECEPTACLE	15A	7	A	8	15A	CORRIDOR LIGHTING			
			RECEPTACLE	20A	9	B	10	15A	LIGHTING			
			RECEPTACLE	15A	11	C	12	15A	STORAGE ROOM LIGHTING			
			RECEPTACLE	15A	13	A	14	15A	LIGHTING			
			VENDING MACHINE	15A	15	B	16	15A	LIGHTING			
			VENDING MACHINE	15A	17	C	18	15A	LIGHTING			
			FIRE ALARM PANEL	15A	19	A	20	15A	LIGHTING			
			CORRIDOR RECEPTACLE	15A	21	B	22	15A	EXTERIOR LIGHTING			
			PROJECTION SCREEN	20A	23	C	24	15A	EXTERIOR LIGHTING			
			MAIN DOOR OPERATOR	15A	25	A	26	15A	EXTERIOR LIGHTING			
			RECEPTACLE	15A	27	B	28	15A	EXIT SIGNS			
			EF-1 FANS	15A	29	C	30	30	AC-10			1
			EXISTING LOAD	15A	31	A	32					
			EXISTING LOAD	15A	33	B	34	30	AC-9			1
			RECEPTACLE 40	15A	35	C	36					
			RECEPTACLE 40	15A	37	A	38					
			RECEPTACLE 48	15A	39	B	40					
			EXISTING LOAD	15A	41	C	42					

	LOAD BREAKDOWN	CONNECTED	DERATED		PANEL DESCRIPTION			
L	LIGHTING:	0	100%	0	VOLTAGE	:	208	V
C	COOLING:	0	0%	0	PHASE	:	3	
H	HEATING:	0	100%	0	AMPERAGE	:	0	A
M	MECHANICAL:	0	80%	0	PANEL AMPACITY	:	70	A
R	GENERAL RECEPTACLES:	0	60%	0	MAIN BREAKER	:	-	A
E	OWNER EQUIPMENT:	0	80%	0	# OF TUBS	:	1	
TOTAL:		0	W	0				

NOTE DESCRIPTION

1	EXISTING EQUIPMENT TO BE REMOVED. REMOVE LOCAL DISCONNECT SWITCH AND EXPOSED WIRING AND MAKE SAFE. REMOVE BREAKERS AND HAND OVER TO DEPARTMENTAL REPRESENTATIVE.
2	
3	

PANEL: 2C(NEW)

LOCATION: -

NOTE	LOAD	TYPE	DESCRIPTION	BRKR	CCT	PHASE	CCT	BRKR	DESCRIPTION	TYPE	LOAD	NOTE
			SPARE	3P 40A	1	A	2	15A	SPARE			1
					3	B	4	15A	SPARE			1
			SPARE	3P 40A	5	C	6	15A	SPARE			1
					7	A	8	15A	RECEPTACLE			
			SPARE	3P 40A	9	B	10	15A	RECEPTACLE			
					11	C	12	15A	LIGHTING			
			SPARE	3P 40A	13	A	14					
					15	B	16	3P 30A	CU-3			3
1			FU-1	15A	17	C	18					
			SPARE	15A	19	A	20					
			SPARE	15A	21	B	22	3P 25A	CU-4			3
2			FU-2	20A	23	C	24					
3			FU-3	20A	25	A	26					
3			FU-4	20A	27	B	28					
					29	C	30					
3			CU-1	3P 25A	31	A	32					
					33	B	34	3P 15A	AC-1	C	2900	
					35	C	36					
3			CU-2	3P25A	37	A	38					
					39	B	40	3P 20A	CU-11	C	4600	
					41	C	42					

	LOAD BREAKDOWN	CONNECTED	DERATED		PANEL DESCRIPTION			
L	LIGHTING:	0	100%	0	VOLTAGE	:	208	V
C	COOLING:	2900	90%	2610	PHASE	:	3	
H	HEATING:	0	0%	0	AMPERAGE	:	7.2446	A
M	MECHANICAL:	0	80%	0	PANEL AMPACITY	:	70	A
R	GENERAL RECEPTACLES:	0	60%	0	MAIN BREAKER	:	-	A
E	OWNER EQUIPMENT:	0	80%	0	# OF TUBS	:	1	
TOTAL:		2900	W	2610				

NOTE DESCRIPTION

1	RE-USE EXISTING CIRCUIT BREAKER, PROVIDE NEW WIRING AND DISCONNECT SWITCH.
2	USE EXISTING 20A SPARE BREAKER FOR NEW FURNACE. PROVIDE NEW WIRING AND LOCAL DISCONNECT SWITCH.
3	PROVIDE NEW BREAKER, WIRING AND LOCAL DISCONNECT SWITCH.

PANEL: 2C(EXISTING)

LOCATION: -

NOTE	LOAD	TYPE	DESCRIPTION	BRKR	CCT	PHASE	CCT	BRKR	DESCRIPTION	TYPE	LOAD	NOTE
1			AC-4	3P 40A	1	A	2	15A	FURNACE 2 (F-2)			1
					3	B	4	15A	FURNACE 3 (F-3)			1
1			AC-3	3P 40A	5	C	6	15A	FURNACE 4 (F-4)			1
					7	A	8	15A	RECEPTACLE			
1			AC-2	3P 40A	9	B	10	15A	RECEPTACLE			
					11	C	12	15A	LIGHTING			
1			AC-1	3P 40A	13	A	14					
					15	B	16					
2			FURNACE 1 (F-1)	15A	17	C	18					
			SPARE	15A	19	A	20					
			SPARE	15A	21	B	22					
			SPARE	20A	23	C	24					
					25	A	26					
					27	B	28					
					29	C	30					
					31	A	32					
					33	B	34					
					35	C	36					
					37	A	38					
					39	B	40					
					41	C	42					

	LOAD BREAKDOWN	CONNECTED	DERATED		PANEL DESCRIPTION			
L	LIGHTING:	0	100%	0	VOLTAGE	:	208	V
C	COOLING:	0	0%	0	PHASE	:	3	
H	HEATING:	0	100%	0	AMPERAGE	:	0	A
M	MECHANICAL:	0	80%	0	PANEL AMPACITY	:	70	A
R	GENERAL RECEPTACLES:	0	60%	0	MAIN BREAKER	:	-	A
E	OWNER EQUIPMENT:	0	80%	0	# OF TUBS	:	1	
TOTAL:		0	W	0				

NOTE DESCRIPTION

1	EXISTING CONDENSING UNIT TO BE REMOVED. REMOVE LOCAL DISCONNECT SWITCH AND WIRING. LABEL BREAKER SPARE.
2	EXISTING FURNACE TO BE REPLACE. RE-USE EXISTING BREAKER. PROVIDE NEW LOCAL DISCONNECT SWITCH AND WIRING
3	EXISTING FURNACE TO BE REMOVED. REMOVE LOCAL DISCONNECT SWITCH AND WIRING. LABEL BREAKER SPARE.

PANEL: 2E(NEW)

LOCATION: -

NOTE	LOAD	TYPE	DESCRIPTION	BRKR	CCT	PHASE	CCT	BRKR	DESCRIPTION	TYPE	LOAD	NOTE
			LTG,TRAINING CENTRE	15A	1	A	2	20A	CTR RECEPT, KITCHEN			
			LTG,KITCHEN,KITCHEN STORAGE	15A	3	B	4	20A	CTR RECEPT, KITCHEN			
			LTG,PROGRAMS/SOCIAL	15A	5	C	6	20A	CTR RECEPT, KITCHEN			
			LTG,CORRIDOR, W/R ELEC.RM.	15A	7	A	8	20A	CTR RECEPT, KITCHEN			
			LTG,CORRIDOR, W/R ELEC.RM.	15A	9	B	10	20A	CTR RECEPT, KITCHEN			
			RECEPTACLE	15A	11	C	12	15A	RECEPT, KITCHEN(FRIDGE)			
			LTG,OFFICES(SOUTH)	15A	13	A	14	15A	RECEPT, KITCHEN(FRIDGE)			
			LTG,OFFICES(NORTH)	15A	15	B	16	15A	RECEPT, KITCHEN(FRIDGE)			
			LTGOFFICE CORRIDOR	15A	17	C	18	15A	CTR RECEPT, KITCHEN			
			LTG,W/R's , JANITOR, AUDIO STORAGE	15A	19	A	20	15A	RECEPT, KITCHEN(RANGE)			
			RECEPT, OFFICE COUNTER	20A	21	B	22	15A	SPARE			
			EXIT LIGHTS	15A	23	C	24	15A	SPLIT RECEPT'S, TRAINING			
			DINING, LTG, BATTER	15A	25	A	26					
			RECEPTACLE	15A	27	B	28	15A	SPLIT RECEPT'S, TRAINING			
			RECEPTACLE	15A	29	C	30					
			RECEPTACLE	15A	31	A	32	15A	SPLIT RECEPT'S, TRAINING			
			RECEPTACLE	15A	33	B	34					
			RECEPTACLE	15A	35	C	36	15A	SPLIT RECEPT'S, TRAINING			
			RECEPTACLE	15A	37	A	38					
			RECEPTACLE	20A	39	B	40	15A	SPLIT RECEPT'S, TRAINING			
			RECEPTACLE	20A	41	C	42					
			G.F.I Recept EXTERIR (EAST)	15A	43	A	44	15A	EXTERIOR LTG CONTROL			
			G.F.I Reecept's. EXT(N.W.)	15A	45	B	46	15A	EXTERIOR LTG WEST			
			RECEPT-LAN CABINET	15A	47	C	48	15A	EXTERIOR LTG ESAT			
			RECEPT-ELEC.ROOM	15A	49	A	50	15A	FU-7			2
			RECEPT-GROUND MAINT	15A	51	B	52	15A	FU-8			2
			RECEPT-MECHANICAL RM	15A	53	C	54	30A	SPARE			1
			EXHAUST FANS EF-1,2,3,4	15A	55	A	56					
			EXISTING LOAD	15A	57	B	58	3P 30A	CU-10			1
			50A HEATER 120V	50A	59	C	60					
					61	A	62	20A	SPARE			
			SPARE	15A	63	B	64					
					65	C	66	15A	HOT WATER TANK			
1			CU-7	3P 15A	67	A	68	15A	FURANCE F/A SHUTDWON			
					69	B	70	15A	UNIT HEATER UH-1			
					71	C	72					
1			CU-8	3P 15A	73	A	74	15A	UNIT HEATER UH-1			
					75	B	76					
					77	C	78	15A	FORCE FLOW HEATER FF-1			
1			CU-9	3P 30A	79	A	80					
					81	B	82	20A	FU-9			1
					83	C	84	20A	FU-10			1

	LOAD BREAKDOWN	CONNECTED	DERATED		PANEL DESCRIPTION			
L	LIGHTING:	0	100%	0	VOLTAGE	:	208	V
C	COOLIN(A/C LOAD	0	0%	0	PHASE	:	3	
H	HEATING:	0	100%	0	AMPERAGE	:	0	A
M	MECHANICAL:	0	80%	0	PANEL AMPACITY	:	225	A
R	GENERAL RECEPTACLES:	0	60%	0	MAIN BREAKER	:	-	A
E	OWNER EQUIPMENT:	0	80%	0	# OF TUBS	:	1	
TOTAL:		0	W	0				

NOTE DESCRIPTION

1	NEW EQUIPMENT. PROVIDE NEW CIRCUIT BREAKER, WIRING AND LOCAL DISCONNECT SWITCH.
2	NEW EQUIPMENT. RE-USE EXISTING CIRCUIT BREAKER, PROVIDE NEW WIRING AND LOCAL DISCONNECT SWITCH.
3	

PANEL: 2E(EXISTING)

LOCATION: -

NOTE	LOAD	TYPE	DESCRIPTION	BRKR	CCT	PHASE	CCT	BRKR	DESCRIPTION	TYPE	LOAD	NOTE
			LTG,TRAINING CENTRE	15A	1	A	2	20A	CTR RECEPT, KITCHEN			
			LTG,KITCHEN,KITCHEN STORAGE	15A	3	B	4	20A	CTR RECEPT, KITCHEN			
			LTG,PROGRAMS/SOCIAL	15A	5	C	6	20A	CTR RECEPT, KITCHEN			
			LTG,CORRIDOR, W/R ELEC.RM.	15A	7	A	8	20A	CTR RECEPT, KITCHEN			
			LTG,CORRIDOR, W/R ELEC.RM.	15A	9	B	10	20A	CTR RECEPT, KITCHEN			
			RECEPTACLE	15A	11	C	12	15A	RECEPT, KITCHEN(FRIDGE)			
			LTG,OFFICES(SOUTH)	15A	13	A	14	15A	RECEPT, KITCHEN(FRIDGE)			
			LTG,OFFICES(NORTH)	15A	15	B	16	15A	RECEPT, KITCHEN(FRIDGE)			
			LTGOFFICE CORRIDOR	15A	17	C	18	15A	CTR RECEPT, KITCHEN			
			LTG,W/R's , JANITOR, AUDIO STORAGE	15A	19	A	20	15A	RECEPT, KITCHEN(RANGE)			
			RECEPT, OFFICE COUNTER	20A	21	B	22	15A	SPARE			
			EXIT LIGHTS	15A	23	C	24	15A	SPLIT RECEPT'S, TRAINING			
			DINING, LTG, BATTER	15A	25	A	26					
			RECEPTACLE	15A	27	B	28	15A	SPLIT RECEPT'S, TRAINING			
			RECEPTACLE	15A	29	C	30					
			RECEPTACLE	15A	31	A	32	15A	SPLIT RECEPT'S, TRAINING			
			RECEPTACLE	15A	33	B	34					
			RECEPTACLE	15A	35	C	36	15A	SPLIT RECEPT'S, TRAINING			
			RECEPTACLE	15A	37	A	38					
			RECEPTACLE	20A	39	B	40	15A	SPLIT RECEPT'S, TRAINING			
			RECEPTACLE	20A	41	C	42					
			G.F.I Recept EXTERIR (EAST)	15A	43	A	44	15A	EXTERIOR LTG CONTROL			
			G.F.I Reecept"s. EXT(N.W.)	15A	45	B	46	15A	EXTERIOR LTG WEST			
			RECEPT-LAN CABINET	15A	47	C	48	15A	EXTERIOR LTG ESAT			
			RECEPT-ELEC.ROOM	15A	49	A	50	15A	FURNACE HF-1			2
			RECEPT-GROUND MAINT	15A	51	B	52	15A	FURNACE HF-2			2
			RECEPT-MECHANICAL RM	15A	53	C	54	30A	FURNACE HF-3			1
			EXHAUST FANS EF-1,2,3,4	15A	55	A	56	40A	CONDENSING UNIT CU-1			1
			EXISTING LOAD	15A	57	B	58					
			50A HEATER 120V	50A	59	C	60	30A	FURNACE HF-4			1
					61	A	62	20A	CONDENSING UNIT CU-2			3
3			NEW FAN	15A	63	B	64					
					65	C	66	15A	HOT WATER TANK			
					67	A	68	15A	FURANCE F/A SHUTDWON			
					69	B	70	15A	UNIT HEATER UH-1			
					71	C	72					
					73	A	74	15A	UNIT HEATER UH-1			
					75	B	76					
					77	C	78	15A	FORCE FLOW HEATER FF-1			
					79	A	80					
					81	B	82					
					83	C	84					

	LOAD BREAKDOWN	CONNECTED	DERATED		PANEL DESCRIPTION			
L	LIGHTING:	0	100%	0	VOLTAGE	:	208	V
C	COOLING:	0	0%	0	PHASE	:	3	
H	HEATING:	0	100%	0	AMPERAGE	:	0	A
M	MECHANICAL:	0	80%	0	PANEL AMPACITY	:	225	A
R	GENERAL RECEPTACLES:	0	60%	0	MAIN BREAKER	:	-	A
E	OWNER EQUIPMENT:	0	80%	0	# OF TUBS	:	1	
TOTAL:		0	W	0				

NOTE DESCRIPTION

1	EXISTING EQUIPMENT TO BE REMOVED. REMOVE LOCAL DISCONNECT SWITCH AND EXPOSED WIRING AND MAKE SAFE. REMOVE BREAKERS AND HAND OVER TO DEPARTMENTAL REPRESENTATIVE.
2	EXISTING EQUIPMENT TO BE REPLACED . RE-USE EXISTING BREAKER. PROVIDE NEW LOCAL DISCONNECT SWITCH AND WIRING
3	EXISTING EQUIPMENT TO BE REMOVED. REMOVE LOCAL DISCONNECT SWITCH AND WIRING. LABEL BREAKER SPARE.

MECHANICAL SCHEDULE

M MECHANICAL
E ELECTRICAL CONTRACTOR

TAG	DESCRIPTION	LOCATION	VOLTAGE (V)	PHASE	HORSEPOWER	LOAD (kW)	FLA (A)	MCA (A)	BREAKER (A)	FEEDER	EQUIPMENT SUPPLIED	EQUIPMENT INSTALLED	EQUIPMENT CONNECTED	DISCONNECT SUPPLIED	DISCONNECT INSTALLED	DISCONNECT CONNECTED	STARTER SUPPLIED	STARTER INSTALLED	STARTER CONNECTED	STARTER TYPE	NOTES
FU-1	FURNACE	MECH RM R60	120	1	1/2	1.33	11.1	13.9	1P 15	#12	M	M	E	E	E	E	-	-	-	-	1
FU-2	FURNACE	MECH RM R60	120	1	3/4	1.62	13.5	16.9	1P 20	#12	M	M	E	E	E	E	-	-	-	-	1
FU-3	FURNACE	MECH RM R60	120	1	1	1.69	14.1	17.6	1P 20	#12	M	M	E	E	E	E	-	-	-	-	1
FU-4	FURNACE	MECH RM R60	120	1	3/4	1.62	13.5	16.9	1P 20	#12	M	M	E	E	E	E	-	-	-	-	1
FU-5	FURNACE	MECH RM R33	120	1	3/4	1.62	13.5	16.9	1P 20	#12	M	M	E	E	E	E	-	-	-	-	1
FU-6	FURNACE	MECH RM R33	120	1	1	1.69	14.1	17.6	1P 20	#12	M	M	E	E	E	E	-	-	-	-	1
FU-7	FURNACE	MECH RM R15	120	1	1/2	1.16	9.7	12.1	1P 15	#12	M	M	E	E	E	E	-	-	-	-	1
FU-8	FURNACE	MECH RM R15	120	1	1/2	1.16	9.7	12.1	1P 15	#12	M	M	E	E	E	E	-	-	-	-	1
FU-9	FURNACE	MECH RM R15	120	1	1	1.69	14.1	17.6	1P 20	#12	M	M	E	E	E	E	-	-	-	-	1
FU-10	FURNACE	MECH RM R15	120	1	1	1.69	14.1	17.6	1P 20	#12	M	M	E	E	E	E	-	-	-	-	1
CU-1	CONDENSING UNIT	OUTDOOR	208	1		3.00	14.4	18	3P 25	#12 Cu	M	M	E	E	E	E	-	-	-	-	
CU-2	CONDENSING UNIT	OUTDOOR	208	3		5.19	14.4	18	3P 25	#12 Cu	M	M	E	E	E	E	-	-	-	-	
CU-3	CONDENSING UNIT	OUTDOOR	208	3		6.05	16.8	21	3P 30	#10 Cu	M	M	E	E	E	E	-	-	-	-	
CU-4	CONDENSING UNIT	OUTDOOR	208	3		5.19	14.4	18	3P 25	#10 Cu	M	M	E	E	E	E	-	-	-	-	
CU-5	CONDENSING UNIT	OUTDOOR	208	3		5.19	14.4	18	3P 25	#12 Cu	M	M	E	E	E	E	-	-	-	-	
CU-6	CONDENSING UNIT	OUTDOOR	208	3		6.05	16.8	21	3P 30	#12 Cu	M	M	E	E	E	E	-	-	-	-	
CU-7	CONDENSING UNIT	OUTDOOR	208	3		2.88	8.0	10	3P 15	#10 Cu	M	M	E	E	E	E	-	-	-	-	
CU-8	CONDENSING UNIT	OUTDOOR	208	3		2.88	8.0	10	3P 15	#12 Cu	M	M	E	E	E	E	-	-	-	-	
CU-9	CONDENSING UNIT	OUTDOOR	208	3		6.05	16.8	21	3P 30	#12 Cu	M	M	E	E	E	E	-	-	-	-	
CU-10	CONDENSING UNIT	OUTDOOR	208	3		6.05	16.8	21	3P 30	#10 Cu	M	M	E	E	E	E	-	-	-	-	
CU-11	CONDENSING UNIT	OUTDOOR	208	3		4.61	12.8	16.0	3P 20	#12 Cu	M	M	E	E	E	E	-	-	-	-	
AC-1	AC UNIT	OFFICE 75	208	3		2.88	8.0	10.0	3P 15	#12 Cu	M	M	E	E	E	E	-	-	-	-	

NOTES:
1 REMOVE AND REINSTALL DUCT SMOKE DETECTORS TO ALLOW FOR NEW DUCTWORK. PROVIDE FIRE ALARM VERIFICATION FOR ALL AFFECTED DEVICES.

GENERAL:
* CONFIRM EXACT SIZE, LOCATION, AND WIRING REQUIREMENTS OF ALL MECHANICAL EQUIPMENT PRIOR TO CONNECTING. ALSO REFER TO DIVISION 15 DRAWINGS.
* REVIEW DIVISION 15 DRAWINGS TO ENSURE LOCATIONS AND QUANTITIES.
* REFER TO PANEL SCHEDULES FOR CIRCUIT NUMBERS.

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

REAL PROPERTY SERVICES
Pacific Region
SERVICES IMMOBILIERS
Région de Pacifique

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Dimensions
The Contractor shall verify all dimensions, and immediately report any errors and/or omissions to Stantec. DO NOT SCALE DRAWINGS.

Revision/Revision	Description/Description	Date/Date
4	Issued for Tender	2015.Aug.06
3	Issued for 99% Client Review	2015.Jun.12
2	Issued for 66% Client Review	2015.May.21
1	Design Brief	2015.Apr.01

Client/client

CORRECTIONAL SERVICE CANADA

Project title/Titre du projet

FRASER VALLEY INSTITUTION
ABBOTSFORD, BRITISH COLUMBIA

BUILDING F
HVAC UPGRADE

Consultant Signature Box Only

Designed by/Concept par
JD

Drawn by/Dessine par
AK/JD

PWGSC Project Manager/Administrateur de Projets TPSGC
Tony Tang

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

Drawing title/Titre du dessin
Panel Schedules
Mechanical Schedules

AUG 12 2015

Project No./No. du projet: R.074982.001
Sheet/Feuille: E200 — 6 OF 6
Revision no./La Révision no.: 4