

PLUMBING FIXTURE SCHEDULE

SK-1 - DOUBLE SINK - COUNTERTOP MOUNTED - STAINLESS STEEL - COUNTERTOP MOUNT SINK - SINGLE LEVER FAUCET

Double bowl rectangular countertop mount sink, 1 hole, 478 mm (18-13/16") x 794 mm (31-1/4") x 203 mm (8") deep, spillway, backledge, type 304, 18 gauge (1.2mm) stainless steel, satin finish rim and bowl, undercoated to reduce condensation and resonance, factory applied rim seal, 3-1/2" (89mm) crumb cup waste assembly, single lever faucet, center hole only, brass construction, 47mm washerless ceramic disc valve, 8.3 LPM (2.2 GPM) max. Flow outlet, metal swing spout, metal lever handle, pull-out spray with adjustable spray pattern, point of use thermostatic water mixing valve, bronze body, temperature adjustment by using a hex wrench, 10 mm (3/8") inlet compression fittings with stainless steel 508 mm (20") flexible hose and 13 mm (1/2") MNPT outlet connection, built-in checks, housed in 127 mm x 86 mm x 81 mm (5" x 3-3/8" x 3-3/16") enclosure. Set valve temperature at 46 °C (114.8 °F). Note: Provide tee, adaptors and flex, copper tubing to suit installation. Tempered water to hot side of faucet, Chrome finish polished brass, heavy duty angle stop, 10 mm (3/8") I. P. S. inlet x 76 mm (3") long rigid horizontal nipple, V. P. Loose key, escutcheon and flexible copper riser. P-Trap, heavy cast brass adjustable body, with slip nut, 38 mm (1-1/2") inlet, box flange and seamless tubular wall bend.

LAW-1 - LAVATORY - COUNTERTOP MOUNTED - STAINLESS STEEL - HARD-WIRED

Basin, with overflow , 356ø mm x 127 mm (14"ø x 5") high, round, mirror finished rim, for self-rimming - drop-in installation, faucet ledge, undercoated to reduce condensation and resonance. Hard wired faucet, center hole only, chrome finish cast brass construction, 1.9 LPM (0.5 GPM) aerator spray outlet, infrared sensor with screw adjustable range, undercounter filtered solenoid valve with serviceable strainer filter, module control assembly with splashproof junction box and mounting kit. Box mount hard wired transformer, 120 VA / 24 VA 50 A. Note: Provide a ground fault interrupter. Thermostatic mixing valve, solid bimetal (bronze, brass, stainless steel), Hot limit stop set to a maximum of 110 °C (230 °F). Screwdriver adjustment temperature dial with scale: COLD-HOT. Note: Provide tee, adaptors and flex. copper tubing to suit installation. Offset open grid drain, chrome plated cast brass one piece top, 1.5 mm (1/16") tubular 32 mm (1-1/4") tailpiece, less overflow holes. McGuire Chrome finish polished brass, commercial grade 1/4 turn ball valve angle stop, 13 mm (1/2") I. D. Inlet x 127 mm (5") horizontal extension tubes, combination V. P. Loose key handle, escutcheon and flexible copper riser. P-Trap, heavy cast brass adjustable body, with slip nut, 32 mm (1-1/4") inlet, shallow wall flange and seamless tubular wall bend. Vandal-resistant Sanitary Covering, flexible seamless moulded closed-cell PVC resin, formulated with anti-microbial additive to limit the growth of fungus and bacteria, to exposed piping (to protect against heat/contusions) as per local codes.

LAW-2 - LAVATORY - WALL MOUNTED - VITREOUS CHINA - HARD-WIRED - BARRIER-FREE DESIGN

Elongated HET Toilet, vitreous china with antimicrobial surface which inhibits the growth of stain and odor causing bacteria mold and mildew, wall hung, siphon jet flush action, operates in the range of 4.2 L to 6 L (1.1 US Gal to 1.6 US Gal) per flush, condensate channel, 305 mm x 254 mm (12" x 10"), 54 mm (2-1/8") fully glazed internal trapway, back outlet, 38 mm (1-1/2") dia. Top spud. Heavy duty toilet seat, for elongated bowl open front, white solid plastic, less cover, reinforced stainless steel check hinges, metal flat washers stainless steel posts and nuts. Exposed flush valve, chrome plated, 4.8 L (1.28 US Gal) factory set flow, quiet action diaphragm type with dual filter by-pass, infrared sensor located on a 125 mm x 125 mm (4-15/16" x 4-15/16") stainless steel plate, courtesy flush over-ride button, flush tube for 292 mm (11-1/2") rough-in, high pressure vacuum breaker, located above the toilet (sensor to clear toilet seat cover), 5 VA Power Required per unit. Note: Provide 4" (102 mm) square electrical box for mounting sensor plate. Box mount hard wired transformer, 120 VA / 24 VA 50 A. Note: Provide a ground fault interrupter. Single Horizontal Toilet Carrier, mounted on concrete floor, 102 mm (4") dia. Ducco coated cast iron fittings, ducco coated heavy duty legs, cast iron faceplate. Minimum space required: 356 mm (14") finished metal stud wall to back of pipe space.

WC-1 - TOILET - WALL HUNG - VITREOUS CHINA - NO TOUCH - HARD-WIRED - GENERAL USE

Elongated HET Toilet, vitreous china with antimicrobial surface which inhibits the growth of stain and odor causing bacteria mold and mildew, wall hung, siphon jet flush action, operates in the range of 4.2 L to 6 L (1.1 US Gal to 1.6 US Gal) per flush, condensate channel, 305 mm x 254 mm (12" x 10"), 54 mm (2-1/8") fully glazed internal trapway, back outlet, 38 mm (1-1/2") dia. Top spud. Heavy duty toilet seat, for elongated bowl open front, white solid plastic, less cover, reinforced stainless steel check hinges, metal flat washers stainless steel posts and nuts. Exposed flush valve, chrome plated, 4.8 L (1.28 US Gal) factory set flow, quiet action diaphragm type with dual filter by-pass, infrared sensor located on a 125 mm x 125 mm (4-15/16" x 4-15/16") stainless steel plate, courtesy flush over-ride button, flush tube for 292 mm (11-1/2") rough-in, high pressure vacuum breaker, located above the toilet (sensor to clear toilet seat cover), 5 VA Power Required per unit. Note: Provide 4" (102 mm) square electrical box for mounting sensor plate. Box mount hard wired transformer, 120 VA / 24 VA 50 A. Note: Provide a ground fault interrupter. Single Horizontal Toilet Carrier, mounted on concrete floor, 102 mm (4") dia. Ducco coated cast iron fittings, ducco coated heavy duty legs, cast iron faceplate. Minimum space required: 356 mm (14") finished metal stud wall to back of pipe space.

WC-2 - TOILET - WALL HUNG - VITREOUS CHINA - HARD-WIRED - BARRIER-FREE DESIGN

Elongated HET Toilet, vitreous china with antimicrobial surface which inhibits the growth of stain and odor causing bacteria mold and mildew, wall hung, siphon jet flush action, operates in the range of 4.2 L to 6 L (1.1 US Gal to 1.6 US Gal) per flush, condensate channel, 305 mm x 254 mm (12" x 10"), 54 mm (2-1/8") fully glazed internal trapway, back outlet, 38 mm (1-1/2") dia. Top spud. Heavy duty toilet seat, for elongated bowl open front, white solid plastic, less cover, reinforced stainless steel check hinges, metal flat washers stainless steel posts and nuts. Exposed flush valve, chrome plated, 4.8 L (1.28 US Gal) factory set flow, quiet action diaphragm type with dual filter by-pass, infrared sensor located on a 125 mm x 125 mm (4-15/16" x 4-15/16") stainless steel plate, courtesy flush over-ride button, flush tube for 292 mm (11-1/2") rough-in, high pressure vacuum breaker, located above the toilet (sensor to clear toilet seat cover), 5 VA Power Required per unit. Note: Provide 4" (102 mm) square electrical box for mounting sensor plate. Box mount hard wired transformer, 120 VA / 24 VA 50 A. Note: Provide a ground fault interrupter. Back support, satin finish stainless steel 16 mm (1-1/4") dia. Tubing, antique white solid core plastic laminate panel. Single Horizontal Toilet Carrier, mounted on concrete floor, 102 mm (4") dia. Ducco coated cast iron fittings, ducco coated heavy duty legs, cast iron faceplate. Minimum space required: 356 mm (14") finished metal stud wall to back of pipe space. Note: See architectural elevations for mounting height. Architect to approve final mounting location prior to installation.

UR-1 - WATERLESS URINAL - WALL HUNG - VITREOUS CHINA - BARRIER-FREE DESIGN

Waterless Urinal, vitreous china, Waterlesswall hung, drain flange coupler, mounting hardware, - mechanical-free design flushing system with refillable sealant liquid cartridge - minimum of at least 15 000 uses. Urinal Carrier, mounted on concrete floor, heavy duty one piece construction steel pipe legs welded to black base feet support, steel hanger plates. Minimum space required: for one and three units(6") 152 mm (6") for four or more units - 203 mm (8") finished metal stud wall to back of pipe space. Wall Access Cleanout, with 102 mm (4") V. P. Round S. S. Cover.152 mm (6") finished wall to back of pipe space. Note: See architectural elevations for mounting height. Architect to approve final mounting location prior to installation.

MS-1 - MOP SINK - FLOOR MOUNTED - PRECAST TERRAZZO - TWO HANDLE FAUCET

Square service / Mop sink, 610 mm (24") x 610 mm (24") x 254 mm (10") deep, floor mounted, molded stone, plain curbs, stainless steel drain with strainer, 3" (76mm) outlet. Wall mounted two handle faucet, 8" (203mm) centerset, solid brass exposed body construction, ceramic 1/4 turn cartridge, 8.3 LPM (2.2 GPM) max flow aerator outlet, metal red and blue index buttons 102 mm (4") long wrist blade handle with vandal resistant screw. Provide P-Trap, same material as the connecting pipe drain.

FD-1 - FLOOR DRAINS - FINISHED AREAS

Floor Drain, all ducco coated, 9" (220mm) dia. cast iron floor, reversible flashing clamp with seepage openings, no-hub outlet, 3" (76mm) Outlet square strainer, 6" (152mm), vandal proof screws chrome plated.

RPBA-1 - REDUCED PRESSURE BACKFLOW ASSEMBLY

Backflow Preventer, Reduced Pressure Zone Assembly (RP), Lead-Free, 1/4" lead-free bronze body construction,quarter-turn ball valves,1/2" (13mm) outlet air gap fitting (piped to nearest floor drain), shall be installed for health hazard cross-connections in piping systems. Shall be installed at each potential health hazard location to prevent backflow due to backpressure and/or backpressure when the water supply. The assembly shall consist of compact, space saving design, large body passages provides low pressure drop, an internal pressure differential relief valve located in a zone between two positive seating check modules with captured springs and silicone seat discs. Seats and seat discs shall be replaceable in both check modules and the relief valve. There shall be no threads or screws in the waterway exposed to line fluids. Service of all internal components shall be through a single access cover secured with stainless steel bolts. Body and shutoffs shall be constructed using Lead Free bronze materials. The assembly shall also include two resilient seated isolation valves, wye strainer with 20 mesh screen, four resilient seated test cocks. For 1/4" to 2" (8 - 50mm) Suitable for supply pressure up to 175psi (12 bar), Water temperature: 33°F - 180°F (0.5° - 75°C). For 2-1/2" and 3" (65 and 80mm) are suitable for water pressures up to 175psi (12.1 bar) and water temperature at 110°F (43°C) continuous, 140°F (60°C) intermittent. The assembly shall meet the requirements of: USC Manual 8th Edition/ASSE Std. 1013, AWWA Std. C511; CSA B64.4. Check with local authority having jurisdiction regarding degree of hazard present, vertical orientation, frequency of testing or other installation requirements.

DIFFUSERS AND GRILLES SCHEDULE

EQUIPMENT TAG	DESCRIPTION/TYPE	MANUFACTURER	MODEL NUMBER	NOTES
S-1	600x600 SQUARE PLAQUE DIFFUSER	-	-	1, 2, 4
S-2	300x300 SQUARE PLAQUE DIFFUSER	-	-	1, 2, 4
S-3	1200 LINEAR 25MM 1-SLOT SUPPLY DIFFUSER	-	-	1, 2, 3, 4, 5
S-4	600x600 STEEL MODULAR CORE DIFFUSER	-	-	1, 2, 3, 4
S-5	400x2050 ALUMINIUM HEAVY-DUTY FLOOR GRILLE	-	-	1, 2, 3
R-1	EGG-CRATE RETURN GRILLE	-	-	1, 2, 3, 4
E-1	LOUVRED RETURN GRILLE	-	-	1, 2, 3, 4
T-1	STEEL DOOR GRILLE	-	-	1, 2, 3, 4

NOTES:

- BORDER STYLES TO BE COMPATIBLE WITH ADJACENT WALLS, FLOORS, AND CEILING SYSTEMS. REFER TO ARCHITECTURAL DRAWINGS.
- NC LEVELS BASED ON OCTAVE BANDS 2-7 SOUND POWER LEVELS MINUS A ROOM ABSORPTION OF 10 DB, MEASURED PER ASHRAE 70-91.
- PROVIDE OPPOSED BLADE DAMPERS FOR GRILLES LOCATED WHERE VOLUME DAMPERS ARE NOT ACCESSIBLE
- DIFFUSERS AND GRILLES TO BE WHITE POWDER-COAT
- C/W SDBI INSULATED PLENUM

ELECTRIC HEATER SCHEDULE

EQUIPMENT TAG	LOCATION	TYPE	CAPACITY (KW)	POWER	REMARKS
FF-1	B1 WOMEN'S WASHROOM CEILING	ELECTRIC	2.0	208/3/60	ALL

NOTES:

- CONTRACTOR TO COORDINATE INSTALLATION WITH DIV. 16
- INTEGRAL T-STAT
- RECESS MOUNTED IN CEILING

MECHANICAL MOTORLIST

EQUIPMENT TAG	EQUIPMENT DESCRIPTION	EQUIPMENT LOCATION	LOAD AMP	POWER	VOLT	PH	EQUIPMENT S	I	STARTER S	I	C	TYPE	CONTROL S	I	C	TYPE	EMERGENCY POWER REQ.	REMARKS
AC-1	LAN ROOM AC UNIT	PASSPORT OFFICE		7KW	208	1	MECH	MECH	ELEC	ELEC	ELEC	INT	MECH	MECH	MECH	DDC	Y	1
CU-1	CONDENSING UNIT	B2 PARKING GARAGE	35		208	1	MECH	MECH	ELEC	ELEC	ELEC	INT	MECH	MECH	MECH	DDC	Y	1
AC-2	LAN ROOM AC UNIT	PASSPORT OFFICE		7KW	208	1	MECH	MECH	ELEC	ELEC	ELEC	INT	MECH	MECH	MECH	DDC	Y	1
CU-2	CONDENSING UNIT	B2 PARKING GARAGE	35		208	1	MECH	MECH	ELEC	ELEC	ELEC	INT	MECH	MECH	MECH	DDC	Y	1
VAV BOXES	VAV BOX WITH HW REHEAT VALVE	PASSPORT OFFICE			120	1	MECH	MECH	ELEC	ELEC	ELEC	INT	MECH	MECH	MECH	DDC	N	1
PL. FIXTURES	HARD-WIRED PL. FIXTURES	VARIOUS WASHROOMS			120	1	MECH	MECH	ELEC	ELEC	ELEC	INT	MECH	MECH	MECH	INT	N	1
DHWT-1	ELECTRIC HOT WATER HEATER	B1 JANITOR CLOSET		3KW	120	1	MECH	MECH	ELEC	ELEC	ELEC	INT	MECH	MECH	MECH	TSTAT	N	1
DHWT-2	ELECTRIC HOT WATER HEATER	FEDERAL BUILDING EAST CRU		3KW	120	1	MECH	MECH	ELEC	ELEC	ELEC	INT	MECH	MECH	MECH	TSTAT	N	1
FF-1	FORCE-FLOW HEATER	B-1 FEDERAL WOMEN'S WASHROOM		2KW	208	3	MECH	MECH	-	-	-	-	MECH	MECH	MECH	TSTAT	N	1
SF-6	SUPPLY FAN (MOTOR ONLY)	POST OFFICE PENTHOUSE		15KW	575	3	MECH	MECH	ELEC	ELEC	ELEC	VFD	MECH	MECH	MECH	DDC	N	1
EF-10	EXHAUST FAN	POST OFFICE PENTHOUSE		5KW	575	3	MECH	MECH	ELEC	ELEC	ELEC	VFD	MECH	MECH	MECH	DDC	N	1
EF-11	EXHAUST FAN	POST OFFICE PENTHOUSE		5KW	575	3	MECH	MECH	ELEC	ELEC	ELEC	VFD	MECH	MECH	MECH	DDC	N	1
EF-11-L	KITCHEN EXHAUST FAN	POST OFFICE PENTHOUSE		2.25KW	575	3	MECH	MECH	ELEC	ELEC	ELEC	VFD	MECH	MECH	MECH	DDC	N	1
SF-11	SUPPLY FAN (MOTOR ONLY)	B3 MECHANICAL ROOM		7.5KW	575	3	MECH	MECH	ELEC	ELEC	ELEC	VFD	MECH	MECH	MECH	DDC	N	1
RF-5	RETURN FAN (MOTOR ONLY)	B3 MECHANICAL ROOM		11.5KW	575	3	MECH	MECH	ELEC	ELEC	ELEC	VFD	MECH	MECH	MECH	DDC	N	1
-	3ø15-AMP CIRCUITS - GENERAL USE	B3 MECHANICAL ROOM	15		120	1	-	-	-	-	-	-	-	-	-	-	N	
-	3ø15-AMP CIRCUITS - GENERAL USE	POST OFFICE PENTHOUSE	15		120	1	-	-	-	-	-	-	-	-	-	-	N	

INT = INTEGRAL PART OF UNIT
LIGHT = WIRED TO LIGHT SWITCH
DDC = DIRECT DIGITAL CONTROL SYSTEM
PCS = PACKAGE CONTROL SYSTEM
TSTAT = CONTROLLED BY THERMOSTAT (120V) (SUPPLIED BY DIV.15 AND WIRED BY DIV 16)
MPS = MOTOR PROTECTION SWITCH
MAG = MAGNETIC STARTER
MRR = MOTOR RATED RELAY
VFD = VARIABLE FREQUENCY DRIVE
R-STAT = REVERSE ACTING T-STAT
CONT = CONTINUOUS

DEFINITIONS:

VOLT = REQUIRED SUPPLY VOLTAGE
PH = POWER PHASE
S = SUPPLIED BY DIV.
I = INSTALLED BY DIV.
C = CONNECTED BY DIV.

NOTES:

- ALL DISCONNECT SWITCHES BY DIV. 16) REVERSE ACTING T-STAT PROVIDED BY DIV. 15, INSTALLED AND CONNECTED BY DIV. 16.
- ALLOW 5 BREAKERS AND CIRCUITS DISTRIBUTED FOR VAV BOXES AND ASSOCIATED RE-HEAT CONTROL VALVES

DOMESTIC WATER HEATER SCHEDULE

EQUIPMENT TAG	LOCATION	SERVICE	TANK DESCRIPTION	MANUFACTURER	MODEL	VOLUME (L)	INPUT (KW)	RECOVERY CAPACITY (GPH)	TEMP. RISE (DEG F)	POWER	OPERATING WEIGHT (LBS)	NOTES
DHWT-1	JANITOR CLOSET	JANITOR SINK	ELECTRIC HOT WATER HEATER	-	-	30	3.0	12	100	208V/3/60	100	1, 2, 4
DHWT-2	B1 WASHROOM CEILING	RETAIL DHW	ELECTRIC HOT WATER HEATER	-	-	30	3.0	12	100	208V/3/60	100	1, 2, 4

NOTES:

- PROVIDE TEMP AND PRESSURE VALVE WITH A LOW WATER CUT-OFF.
- 3-YEAR TANK WARRNTY
- 5-YEAR WARRANTY
- INSULATED TO ASHRAE 90.1B STANDARD

VAV TERMINAL BOX SCHEDULE

EQUIP. TAG	LOCATION	SERVICE	INLET SIZE (ROUND)	MAX. AR FLOW (LPS)	MIN. AIR FLOW (LPS)	EAT (°C)	LAT (°C)	EWT (°C)	LWT (°C)	WATER FLOW (L/s)	NOTES
VAV-01	B1 PASSPORT OFFICE CEILING SPACE	1001 WAITING AREA	350	875	175	13	24	82	71	0.13	1,2,3
VAV-02	B1 PASSPORT OFFICE CEILING SPACE	1001 WAITING AREA	350	875	175	13	24	82	71	0.13	1,2,3
VAV-03	B1 PASSPORT OFFICE CEILING SPACE	1001 WAITING AREA	350	875	175	13	24	82	71	0.13	1,2,3
VAV-04	B1 PASSPORT OFFICE CEILING SPACE	1019 COLL. AREA	350	580	115	13	24	82	71	0.08	1,2,3
VAV-05	B1 PASSPORT OFFICE CEILING SPACE	1020 PROD. AREA	350	695	140	13	24	82	71	0.10	1,2,3
VAV-06	B1 PASSPORT OFFICE CEILING SPACE	MANAGER'S OFF.	200	108	28	13	24	82	71	0.02	1,2,3
VAV-07	B1 PASSPORT OFFICE CEILING SPACE	PRINT ROOM	250	180	35	13	24	82	71	0.02	1,2,3
VAV-08	B1 PASSPORT OFFICE CEILING SPACE	LAB ROOM	100	45	15	13	24	82	71	0.00	1,2,3
VAV-09	B1 PASSPORT OFFICE CEILING SPACE	VARIOUS	350	465	95	13	24	82	71	0.07	1,2,3
VAV-10	B1 PASSPORT OFFICE CEILING SPACE	QUIET ROOM	100	45	10	13	24	82	71	0.01	1,2,3
VAV-11	B1 PASSPORT OFFICE CEILING SPACE	MEETING ROOM	100	45	10	13	24	82	71	0.01	1,2,3
VAV-11A	B1 PASSPORT OFFICE CEILING SPACE	LRG MEETING ROOM	350	375	75	13	24	82	71	0.05	1,2,3
VAV-12	B1 PASSPORT OFFICE CEILING SPACE	VARIOUS	350	545	110	13	24	82	71	0.08	1,2,3
VAV-13	B1 PASSPORT OFFICE CEILING SPACE	BLDG CORE	350	375	75	13	24	82	71	0.05	1,2,3
VAV-14	B1 PASSPORT OFFICE CEILING SPACE	MEETING ROOM	200	125	25	13	24	82	71	0.02	1,2,3
VAV-15	B1 PASSPORT OFFICE CEILING SPACE	INTERVIEW ROOM	100	50	10	13	24	82	71	0.01	1,2,3
VAV-16	B1 PASSPORT OFFICE CEILING SPACE	1001 WAITING AREA	350	875	175	13	24	82	71	0.13	1,2,3
VAV-17	B1 PASSPORT OFFICE CEILING SPACE	B2 LEVEL	350	190	190	13	24	82	71	0.03	1,2,3

NOTES:

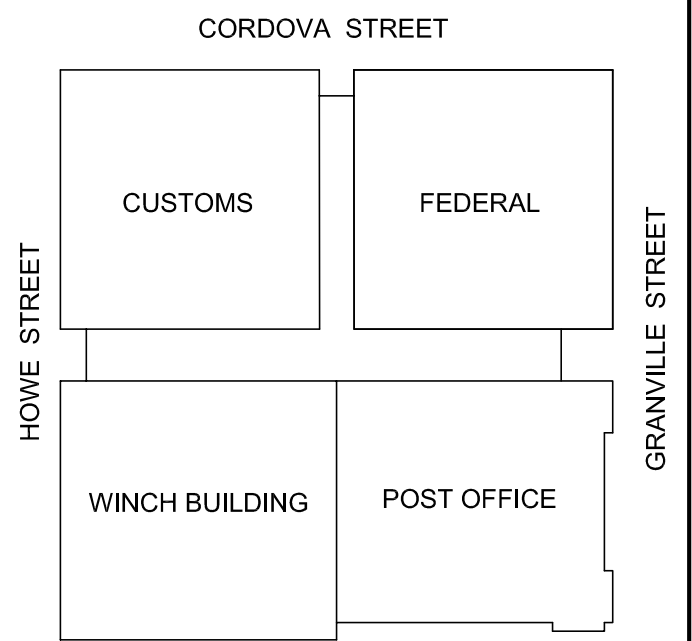
- ALL VAV BOXES ARE TO BE POWERED AND CONTROLLED BY THE DDC SYSTEM (24V)
- UNIT TO COME WITH 15mm DUAL DENSITY LINER.
- ACTUATOR AND CONTROLS TO BE SUPPLIED BY CONTINUOUS CONTRACTOR
- UNIT COMPLETE WITH PACKAGED ACOUSTIC ATTENUATOR (900MM LENGTH)

COMPUTER ROOM AIR CONDITIONING UNIT SCHEDULE

TAG	AC-1	AC-2
QUANTITY	1	1
LOCATION	HALLWAY	HALLWAY
SERVICE	LAN ROOM	LAN ROOM
MANUFACTURER	-	-
MODEL TYPE	-	-
UNIT WEIGHT (LB)	-	-
SUPPLY FAN		
TAG	AC-1	AC-2
NORMAL VOLUME (CFM)	1,000	1,000
EXTERNAL STATIC (IN. W.G.)	0.5	0.5
MOTOR (HP)	0.8	0.8
POWER SUPPLY	208 V / 1 PH	208 V / 1 PH
RE-HEAT COIL		
TYPE	ELECTRIC	ELECTRIC
CAPACITY (MBH)	13.6	13.6
KW	4	
COOLING COIL		
TOTAL CAPACITY (MBH)	24	24
SENSIBLE CAPACITY (MBH)	20	20
AIR FLOW (CFM)	1,000	1,000
EAT DB (DEG. F)	72.0	72.0
EAT WB (DEG. F)	60.0	60.0
LAT DB (DEG. F)	55.0	55.0
LAT WB (DEG. F)	52.1	52.1
HUMIDIFIER		
TYPE	ELECTRIC	ELECTRIC
CAPACITY (LBS/HR)	5.0	5.0
KW	1.7	
REMARKS		
	ALL	ALL

NOTES:

- UNITS TO RUN AS LEAD-LAG, ALTERNATING ON ADJUSTABLE SCHEDULE
- UNIT TO BE SUPPLIED COMPLETE WITH CONDENSATE PUMP
- UNITS STO BE CAPABLE OF 80M HORIZONTAL AND 4M VERTICAL REFRIGERANT RUN TO CONDENSER



0	ISSUED FOR TENDER	2013/04/24
Revision/ Révision	Description/Description	Date/Date
Client/client		

Project title/Titre du projet
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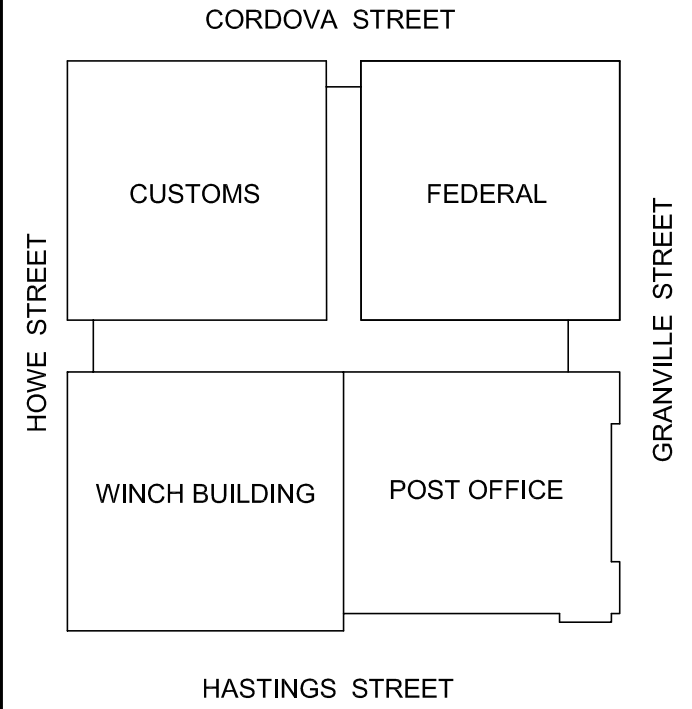
PWGSC Project Manager/Administrateur de Projets TPSGC
Tom Dunphy

Regional Manager, Architectural and Engineering Services

COOLING COIL SCHEDULE															
EQUIPMENT TAG	LOCATION	AIR FLOW (L/s)	TOTAL CAPACITY (kW)	QUANTITY	COIL AREA A (m ²)	MAX FACE VELOCITY (m/s)	EDB	EWB	LDB	LWB	NEW HYDRONIC		EWT	LWT	REMARKS
							(Deg C)	(Deg C)	(Deg C)	(Deg C)	(L/s)	GYLCOL %	(Deg C)	(Deg C)	
CC-6	POST OFFICE PENTHOUSE	6135	161	1	3.53	1.75	26.5	20	13	13	6.9	0%	7.2	13	1,2,3,5
NOTES: 1. COIL IS A REPLACEMENT COIL 2. REFER TO DRAWINGS FOR LOCATION AND SIZE. 3. COIL TO BE MOUNTED INSIDE OF THE AIR HANDLER UNIT C/W MOUNTING FRAME AND S/S COND. PAN 4. COIL TO BE MOUNTED INSIDE OF THE BUILT-UP AIR HANDLER UNIT 5.COILS TO BE CONNECTED WITH COMMON SUPPLY AND RETURN HEADERS															

EXHAUST FAN SCHEDULE													
EQUIPMENT TAG	QTY	SERVICE	LOCATION	TYPE	MANUFACTURER	MODEL	AIR FLOW (LPS)	E. S. P. (PA)	FAN (RPM)	MOTOR (KW)	DRIVE TYPE	ELEC (V/PH/HZ)	REMARKS
RF-5	1	GENERAL EXHAUST	FEDERAL B3 MECH ROOM	AXIAL			9440	375	1,774	11.19	DIRECT	575/60/3	
EF-11	1	GENERAL EXHAUST	POST OFFICE PENTHOUSE	CABINET			1500	375	1,774	0.56	BELT	575/60/3	
EF-11	1	KITCHEN EXHAUST	POST OFFICE KITCHEN	KITCHEN-UPBLAS			2300	375	1,774	2.20	BELT	575/60/3	1, 2
NOTES: 1. C/W VFD 2. FAN TO BE RATED FOR NFPA 96 AND KITCHEN-TYPE EXHAUST FAN													

POINTS LIST											
No.	POINT DESCRIPTION	POINT LABEL	POINT LOCATION	EQUIP. TAG	DIGITAL IN	DIGITAL OUT	ANALOGUE IN	ANALOGUE OUT	COMMENTS		
HVAC											
Typical Fan on VFD (refer to drawings and equipment schedules for quantities and locations)											
	Supply Fan Start/Stop	SF/RF/EF-XX	C	VARIOUS			ER				
	Supply Fan Status	SF/RF/EF-XX	S	VARIOUS				CR			
	Supply Fan Differential Pressure	SF/RF/EF-XX	DPT	VARIOUS		PSW		DPT			
	Supply Fan VSD Alarm	SF/RF/EF-XX	VSD-A	VARIOUS			AUX			Through BAC-Net	
	Supply Fan VSD Start/Stop (Proof)	SF/RF/EF-XX	VSD-CS	VARIOUS			ER	CR		Through BAC-Net	
	Supply Fan VSD Output	SF/RF/EF-XX	VSD	VARIOUS				VSD		Through BAC-Net	
	Supply Fan VSD Manual Reset	SF/RF/EF-XX	VSD-MR	VARIOUS			ER			Through BAC-Net	
	Supply Fan Fire Alarm Shut Down	SF/RF/EF-XX	FAS	VARIOUS			AUX			Thru fire alarm panel	
	Supply Fan Discharge Static Pressure	SF/RF/EF-XX	DSPT	VARIOUS				SPT			
Typical Constant Flow Fan (refer to drawings and equipment schedules for quantities and locations)											
	Supply Fan Start/Stop	SF/RF/EF-XX	C	VARIOUS			ER				
	Supply Fan Status	SF/RF/EF-XX	S	VARIOUS				CR			
	Supply Fan Differential Pressure	SF/RF/EF-XX	DPT	VARIOUS		PSW		DPT			
	Supply Fan Fire Alarm Shut Down	SF/RF/EF-XX	FAS	VARIOUS			AUX			Thru fire alarm panel	
	Supply Fan Discharge Static Pressure	SF/RF/EF-XX	DSPT	VARIOUS				SPT			
Fan Coil units (refer to drawings and equipment schedules for quantities and locations)											
Typical Fan Coil (Heating/Reheat & Cooling)											
	Fan Coil Start/Stop	FC-XX-	C	VARIOUS			ER				
	Fan Coil Status	FC-XX-	S	VARIOUS				CR			
	Supply Air Temperature	FC-XX-	SAT	VARIOUS				DTS			
	Heating Coil Valve	FC-XX-	HCV	VARIOUS				VPS	VME		
	Cooling Coil Valve	FC-XX-	CCV	VARIOUS				VPS	VME		
	Space Temperature	FC-XX-	ST	VARIOUS				RTS			
Typical Fan Coil (Cooling Only)											
	Fan Coil Start/Stop	FC-XX-	C	VARIOUS			ER				
	Fan Coil Status	FC-XX-	S	VARIOUS				CR			
	Supply Air Temperature	FC-XX-	SAT	VARIOUS				DTS			
	Cooling Coil Valve	FC-XX-	CCV	VARIOUS				VPS	VME		
	Space Temperature	FC-XX-	ST	VARIOUS				RTS			
Typical Fan Coil (Heating Only)											
	Fan Coil Start/Stop	FC-XX-	C	VARIOUS			ER				
	Fan Coil Status	FC-XX-	S	VARIOUS				CR			
	Supply Air Temperature	FC-XX-	SAT	VARIOUS				DTS			
	Heating Coil Valve	FC-XX-	HCV	VARIOUS				VPS	VME		
	Space Temperature	FC-XX-	ST	VARIOUS				RTS			
LAN AC Units (refer to drawings and equipment schedules for quantities and locations)											
	LAN Unit Enable/Disable	AC-XX-	C	Manager's Office #1013			ER				
	Space Temperature		ST	LAN Room #1012				RTS			
	Space Humidity		HS	LAN Room #1012				RHS			
	Humidifier Enable/Disable	AC-XX-H-	C	Manager's Office #1013			ER				
	Status	AC-XX-	S	Manager's Office #1013				CR			
	Alarm	AC-XX-	A	Manager's Office #1013		AUX					
Typical VAV Box with Reheat (refer to drawings and equipment schedules for quantities and locations)											
	VAV Enable/Disable	VAV-XX-	C	VARIOUS			ER				
	Space Temperature		ST	VARIOUS				RTS			
	VAV Set Point	VAV-XX-	SP	VARIOUS					0-10V		
	Velocity Sensor Reading	VAV-XX-	V	VARIOUS				VPT			
	Reheat Coil Control Valve Set Point	VAV-XX-	RH-SP	VARIOUS					VME		
	Reheat Coil Control Valve Position Feedback	VAV-XX-	RH-POS	VARIOUS				VPS			
	Space CO2 sensors		CO2					CO2			refer to drawings for quantities
Coil Control Valves (refer to drawings and equipment schedules for quantities and locations)											
	Heating Coil Control Valve Set Point	HC-XX-	SP	VARIOUS					VME		
	Heating Coil Control Valve Position Feedback	HC-XX-	POS	VARIOUS				VPS			
	Cooling Coil Control Valve Set Point	CC-XX-	SP	VARIOUS					VME		
	Cooling Coil Control Valve Position Feedback	CC-XX-	POS	VARIOUS				VPS			
Air Dampers (refer to drawings and equipment schedules for quantities and locations)											
	Return Air Damper Set Point	CD-XX-	SP	VARIOUS					DME		
	Return Air Damper Position Feedback	CD-XX-	POS	VARIOUS				DPS			
	Outdoor Air Damper Set Point	CD-XX-	SP	VARIOUS					DME		
	Outdoor Air Damper Position Feedback	CD-XX-	POS	VARIOUS				DPS			
	Exhaust Air Damper Set Point	CD-XX-	SP	VARIOUS					DME		
	Exhaust Air Damper Position Feedback	CD-XX-	POS	VARIOUS				DPS			
Passport Galleria pressurization control											
	Pressure Differential Sensors		PDS					PDS			allow for two (2)
Atrium pressurization control											
	Pressure Differential Sensors		PDS					PDS			allow for two (2)
FOR REQUIRED CONTROL WORK ON ELECTRICAL ITEMS (SUCH AS LIGHTING CONTROL, SECURITY, ETC.), PLEASE REFER TO ELECTRICAL SPECIFICATION. INCLUDE ALL OTHER CONTROL HARDWARE AND WORK IN YOUR PRICING, NECESSARY TO MAKE SYSTEM OPERATIONAL (REGARDELESS IF CONSTRUCTION DOCUMENTS ARE MISSING SOME CONTROL POINTS OR NOT). COORDINATE WITH ELECTRICAL TRADE INTERLOCK OF MAKE-UP AIR AND EXHAUST FAN SERVING "LEONE" KITCHEN. ALLOW FOR RE-COMMISSIONING AND ANY CONTROL WORK REQUIRED TO RE-COMMISSION EXISTING NATURAL VENTILATION DAMPERS (4 OF THEM IN TOTAL) SERVING ATRIUM AREA. ALL CONTROL VALVES SERVING VAV'S ARE TO BE PRESSURE INDEPENDENT CONTROL VALVES											
DEVICE TYPE											
ATS AVERAGING DUCT TEMPERATURE SENSOR	ES ENERGY STATION (FLOW, SUP. TEMP.& RET. TEMP.)			RTS ROOM TEMPERATURE SENSOR/CS WINDOW CONTACT SWITCH							
AUX AUXILIARY CONTACT	ESW END SWITCH			RT&HS ROOM TEMPERATURE AND HUMIDITY SENSORS/SSGW MEASURING STATION							
CO2 CO2 SENSOR	FMS ELECTRONIC FLOW MEASURING STATION			RY RELAY							
CR CURRENT RELAY (SENSOR)	FS FREEZE PROTECTION			SD SMOKE DETECTOR SENSOR WTS WELL TEMPERATURE SENSOR							
DHS DUCT HUMIDITY SENSOR	FST FLOW STATION (flow measuring device)			SPT STATIC PRESSURE TRANSMITTERS OUTDOOR HUMIDITY SENSOR							
DME DAMPER ACTUATOR MODULATING ELCTRONIC	FSW FLOW SWITCH			VME VALVE ACTUATOR MODULATING/DELTA/CONTACT							
DPS DAMPER POSITION (POSITIVE FEEDBAK)	HS HUMIDITY SENSOR			ROS ROOM OCCUPANCY SENSOR RY RELAY							
DPT DIFFERENTIAL PRESSURE TRANSMITTERS OR PRESSURE DIFF. SENSOR	MFT			VPS VALVE POSITION (POSITIVE FEEDBACK) LARY CONTACT (DRY CONTACT, RELAY, OR SUCH)							
DTE DAMPER ACTUATOR TWO POSITION ELECTRONIC	OTS			VPT VELOCITY PRESSURE TRANSMITTER/ULTRASONIC LEVEL INDICATOR							
DTS DUCT TEMPERATURE SENSOR	PSW			VSD VARIABLE FREQUENCY DRIVE CT CURRENT TRANSMITTER							
ER ELECTRIC RELAY	ROS			VTE VALVE ACTUATOR TWO POSITION ELECTRONIC							



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Project title/Titre du projet
757 W HASTINGS ST, VANCOUVER

SINCLAIR CENTRE
SINCLAIR CENTRE
REVITALIZATION
PROJECT

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Preetipal Paul

Drawing title/Titre du dessin

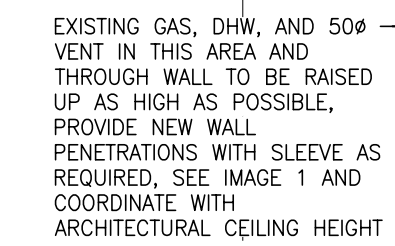
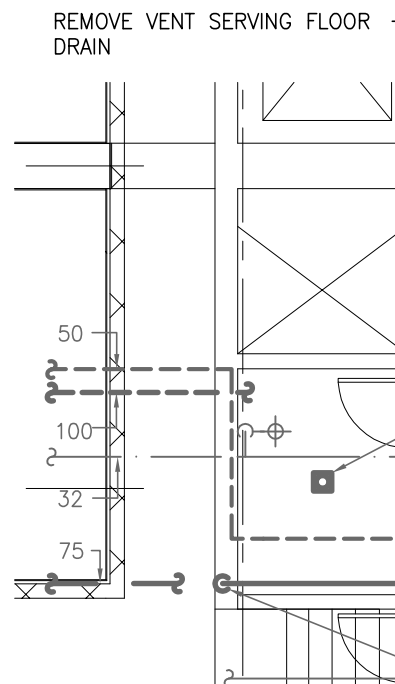
PHASE 2:
MECHANICAL
SCHEDULES &
DDC POINTS LIST

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GENERAL NOTES:

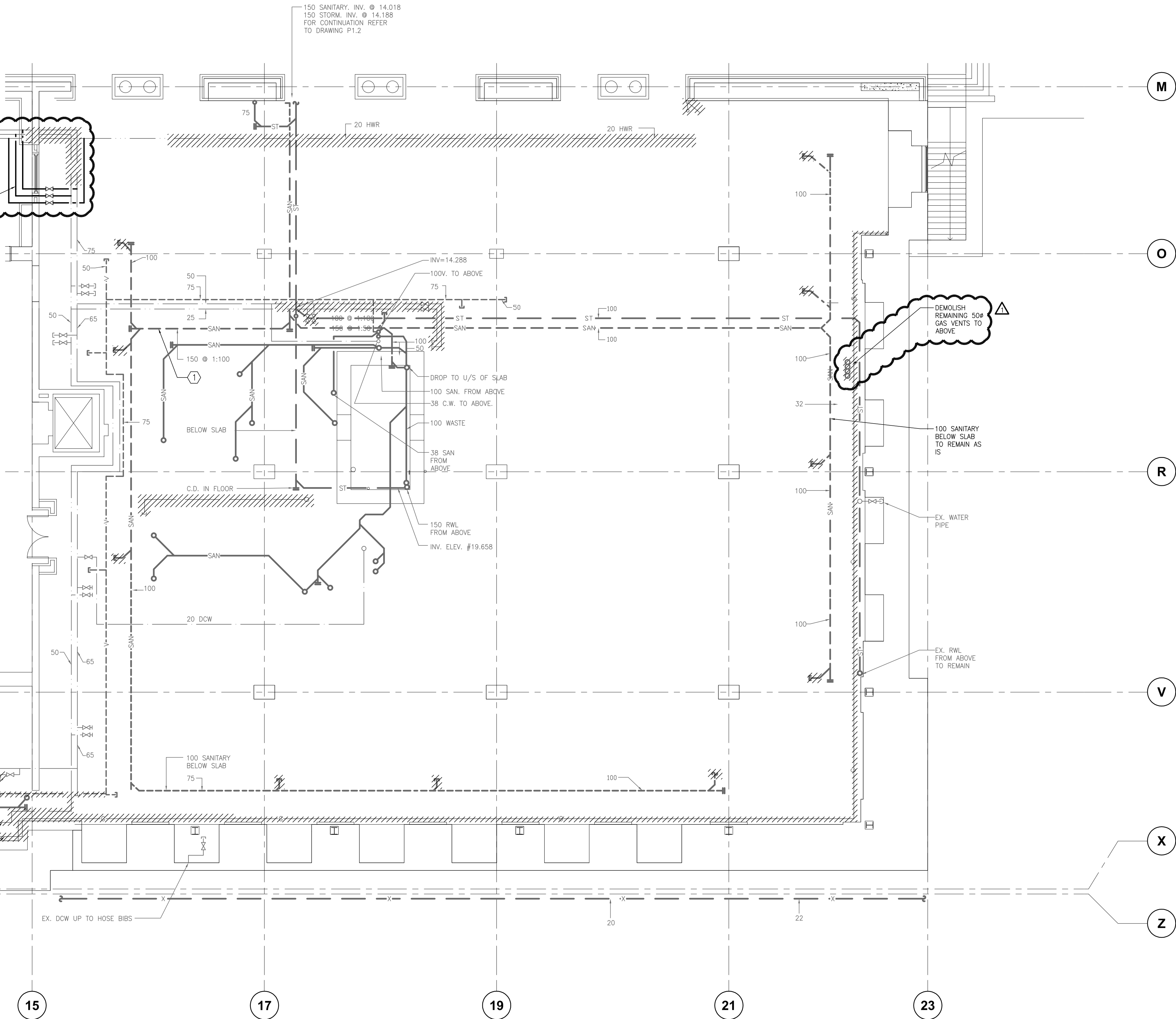
- DEMOLISH ALL REMAINING PLUMBING AND PIPING FROM FORMER FOOD SERVICE, INCLUDING DCW, DHW, VENT, AND GAS LINES. INTENT IS TO REMOVE ANY REMAINING SERVICES THAT ARE NO LONGER NECESSARY, AND TO LEAVE AS MUCH ROOM AND CEILING SPACE AS POSSIBLE SO AS NOT TO INTERFERE WITH NEW PASSPORT OFFICE SERVICES.
- DECOMMISSION, CAP, SEAL AND MAKE GOOD ALL REMAINING SANITARY SERVICES FLUSH WITH FLOOR SLAB, INCLUDING GREASE TRAPS, ETC. ALLOW FOR 204 STUB-OUTS AND 204 SINKS. COORDINATE WITH ARCHITECTURAL FINISHES AND FLOOR DETAILS.
- CONTRACTOR SHOULD REVIEW AND BE AWARE OF ALL STRUCTURAL DRAWINGS, SHOWING PLANNED SEISMIC UPGRADE WORK.
- MAINTAIN OPERATION OF ALL BELOW-GRADE PIPING AND MECHANICAL SERVICES IN EXCAVATED AREAS. CONTRACTOR TO ALLOW FOR TEMPORARY SUPPORT OR RE-ROUTING IF ANY EXISTING EXHAUSTION OR MECHANICAL WORK. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR MORE INFORMATION.

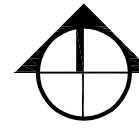


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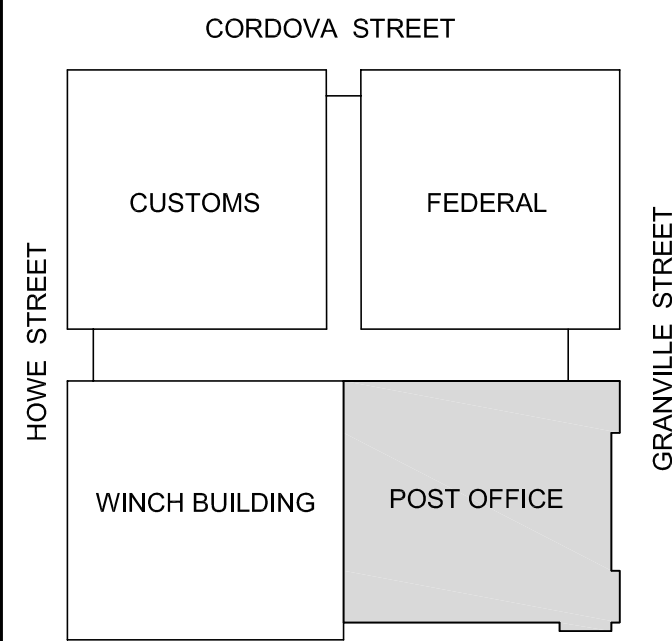


1 PLUMBING - PASSPORT OFFICE - LEVEL B1
M1.01 SCALE: 1:100





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1	Client/client	

Project title/Titre du projet
757 W HASTINGS ST, VANCOUVER
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SINCLAIR CENTRE
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PHASE 2:
PLUMBING RENOVATION
POST OFFICE LEVEL B1

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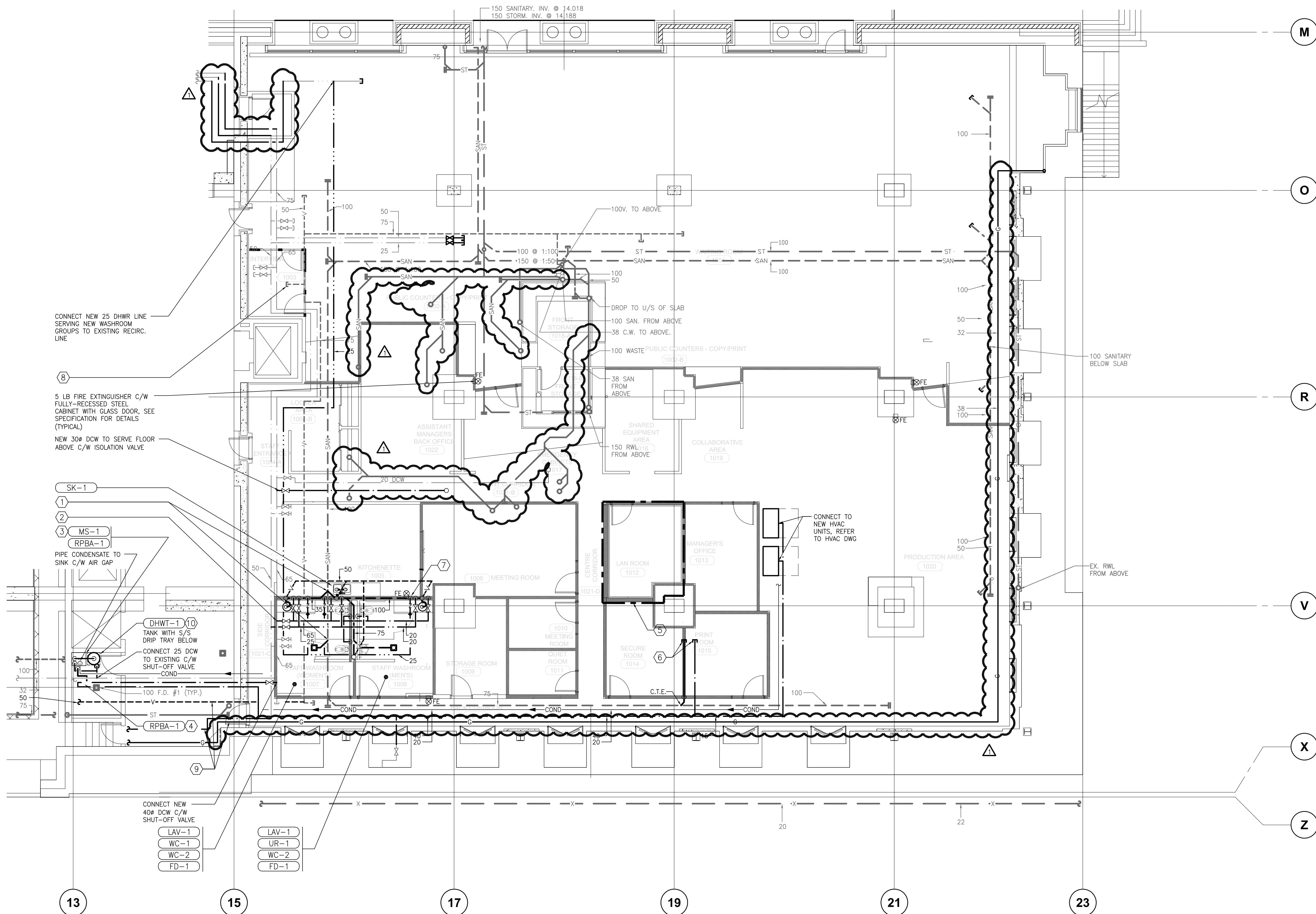
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GENERAL NOTES:

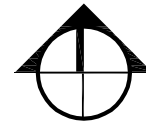
1. ALL EXISTING AND NEW DCW, DHW, DHWR PIPING TO BE FULLY INSULATED AS PER MECHANICAL SPECIFICATION.
2. ALL CAPPED CONNECTIONS TO BE C/W ISOLATION VALVES.

DRAWING NOTES:

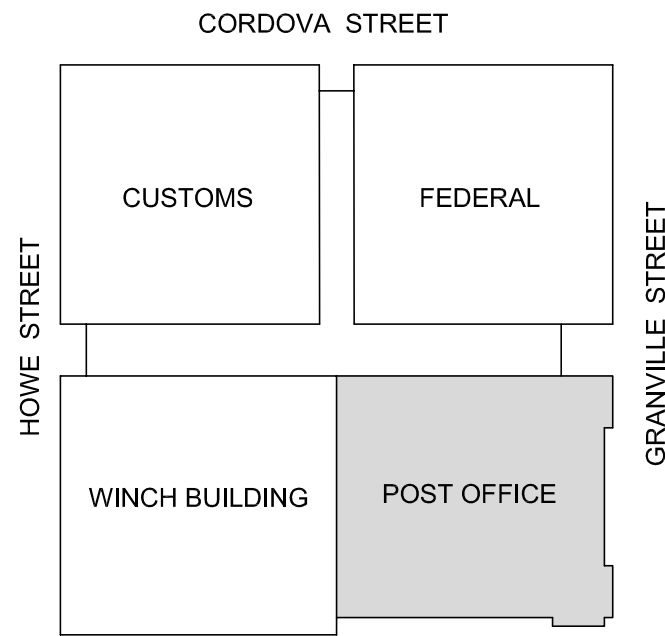
1. CONNECT NEW WASHROOM DRAINAGE TO EXISTING SANITARY LINE. C/W CLEANOUTS AS REQUIRED. ALLOW FOR CUTTING AND PATCHING OF EXISTING SLAB AS REQUIRED
2. CONNECT NEW DCW/DHW TO EXISTING LINES, TO SERVE NEW WASHROOM GROUP
3. INSTALL NEW MOP SINK C/W WALL-MOUNTED FAUCET. DCW LINE TO BE TAKEN OFF EXISTING DCW LINE SERVING HOSE BIB. INSTALL NEW 3KW ELECTRIC WALL-MOUNTED DOMESTIC HOT WATER HEATER. BOTH DCW AND DHW TO BE C/W RPBA.
4. PROVIDE NEW 40# DCW LINE C/W RPBA AS INDICATED TO SERVE EXTERIOR HOSE BIBS, LAN UNITS AND FUTURE UPSTAIRS KITCHENETTE. PIPE TO MOP SINK C/W AIR GAP. HVAC UNITS TO BE C/W CONDENSATE PUMP PIPED TO JANITORS SINK WITH NEW 20# CONDENSATE LINE
5. NO WATER OR DRAIN PIPING TO REMAIN OR BE INSTALLED ABOVE NEW LAN ROOM
6. PROVIDE NEW 20# DCW, 50# SANITARY CAPPED CONNECTIONS FOR FLOOR ABOVE. SANITARY TO BE INSTALLED IN NEW WALL AND CONNECTED TO EXISTING
7. NEW RECIRCULATION LINES TO BE INSTALLED DOWN IN WALL TO FIXTURES LEVEL. C/W BALANCING AND CHECK VALVES
8. CAP ALL UNUSED VENTS (ALLOW FOR 20# TYP.)
9. RAISE EXISTING VENT, DHW AND GAS LINES TIGHT TO UNDERSIDE OF STRUCTURE AND MINIMUM 600 AWAY FROM NEW CONCRETE WALLS. REFER TO ARCHITECTURAL DRAWINGS FOR NEW CEILING HEIGHT (REFER TO M1.01 FOR ADDITIONAL DETAIL)
10. COORDINATE ALL MOUNTING AND SUPPORT OF DHWT AT HIGH LEVEL WITH DIV. 22



1 PLUMBING - PASSPORT OFFICE - LEVEL B1
M1.02 SCALE: 1:100



PROJECT
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Project title/Titre du projet
757 W HASTINGS ST, VANCOUVER
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SINCLAIR CENTRE
REVITALIZATION
PROJECT

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Drawing title/Titre du dessin

PHASE 2:
FP RENOVATION
POST OFFICE LEVEL B1

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R041365.001

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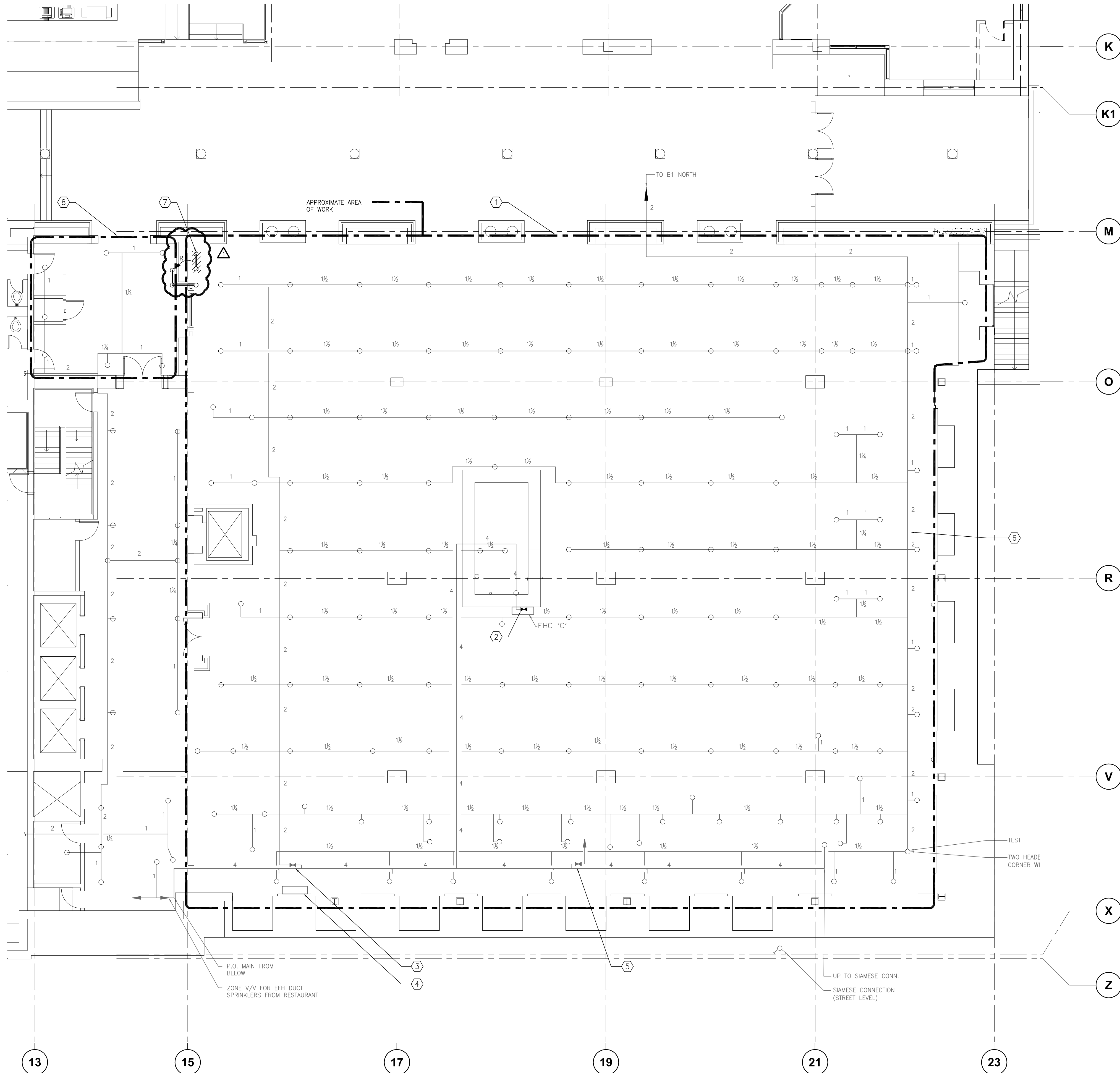
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FIRE PROTECTION NOTES:

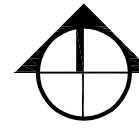
- REVIEW SITE CONDITIONS, PROJECT DRAWINGS (INCLUDING ARCHITECTURAL FLOOR PLANS, REFLECTED CEILING PLANS, AND ELEVATIONS, ELECTRICAL LIGHT FIXTURE LAYOUT DRAWINGS, MECHANICAL HVAC DRAWINGS) AND PROVIDE FULL SPRINKLER COVERAGE AS PER NFPA 13 AND CBC REQUIREMENTS. SITE WALKTHROUGH IS MANDATORY.
- THESE DRAWINGS ARE ONLY FOR GENERAL PURPOSES AS THEY ARE BASED ON EXISTING SITE CONDITIONS. A SITE WALKTHROUGH IS MANDATORY FOR SPRINKLER CONTRACTOR.
- SPRINKLER CONTRACTOR TO ALLOW FOR ALL REQUIRED WORK TO ACCOMMODATE NEW PASSPORT OFFICE RENOVATION WORK.
- CONTRACTOR TO ENSURE PROVISIONS ARE MADE FOR OPERATING FIRE PROTECTION SYSTEM WHILE WORK IS BEING COMPLETED.
- CONTRACTOR TO PROVIDE REQUIRED AS-BUILT INFO TO MECHANICAL CONTRACTOR.
- ANY ADDITIONAL SPRINKLER HEADS THAT MAY BE REQUIRED TO COMPLETE FINAL DESIGN ARE CONSIDERED TO BE IN THE SCOPE OF WORK. ADDING OR REMOVING SPRINKLER HEADS OTHER THAN THOSE SHOWN IS NOT CONSIDERED TO BE A CHANGE OF CONTRACT AMOUNT.
- THE SPRINKLER HEAD LOCATIONS SHOWN ARE FOR INFORMATION ONLY (BASED ON AS-BUILT DRAWINGS).
- RE-VERIFY ZONE VALVES WITH FIRE ALARM PANEL.
- RE-LOCATE SPRINKLERS TO MATCH NEW CEILING HEIGHT AS WELL AS RE-LOCATION TO CENTRE OF NEW CEILING TILES (REFER TO ARCH. DWGS.) FOR ALL SPRINKLER HEADS.
- PROVIDE ALL NEW SPRINKLER HEADS, INCLUDING CHROME PENDANT SPRINKLERS IN ALL AREAS WITH CEILING AND UPRIGHT IN AREAS WITH NO CEILING, AS PER NFPA 13.
- ALLOW FOR RE-WORK OF 50% OF PIPING TO PROVIDE REQUIRED CLEARANCE FROM ROUTING OF NEW SERVICES.
- CONTRACTOR TO TEST COMPLETE SYSTEM.

DRAWING NOTES:

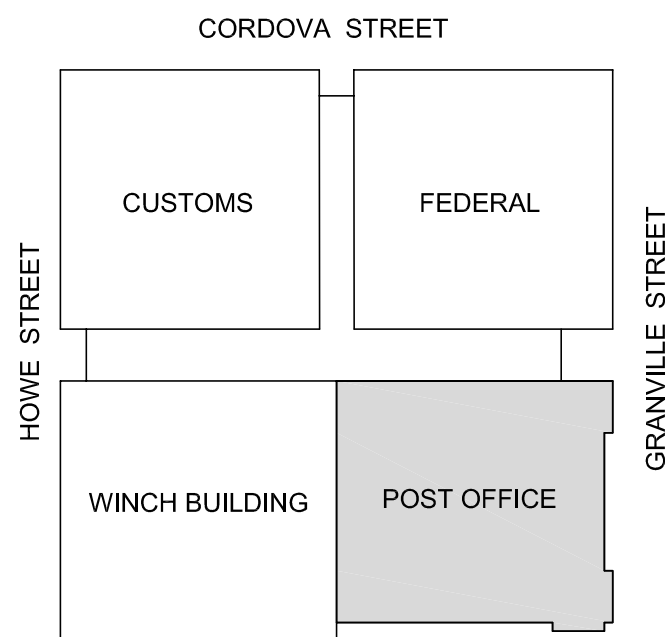
- SPRINKLER TO NFPA 13 REQUIREMENTS, INCLUDING ALL FIRE PROTECTION NOTES ABOVE. ALLOW FOR ADJUSTMENT OF SPRINKLER HEADS AND PIPING TO SUIT NEW ARCHITECTURAL LAYOUT AND CEILING HEIGHT, INCLUDING REPLACEMENT OF ALL SPRINKLER HEADS AND RE-ROUTING OF EXISTING OF PIPING TO PROVIDE REQUIRED CLEARANCES FROM NEW SERVICES.
- RE-LOCATE EXISTING FIRE HOSE CABINET IN COORDINATION WITH ARCHITECTURAL DRAWINGS.
- RECOMMISSION EXISTING FLOW AND TAMPER SWITCHES
- REMOVE EXISTING KITCHEN HOOD FIRE SUPPRESSION CONTROL PANEL. COORDINATE WITH ELECTRICAL TRADE, INCLUDING DISCONNECTION FROM FIRE ALARM PANEL.
- DISCONNECT ZONE VALVE AND FLOW SWITCH FOR EF11 DUCT SPRINKLERS FROM FIRE ALARM PANEL AND REMOVE SPRINKLERS FROM DEMOLISHED EF-11 KITCHEN EXHAUST DUCTWORK
- PROVIDE NEW TEST DRAINS & ZONE DRAINS FOR THIS AREA. COORDINATE EXACT LOCATION WITH DEPARTMENTAL REPRESENTATIVE.
- ALLOW FOR RE-LOCATION AND DIVERSION (ALLOW 10M, EIGHT (8) ELBOWS) OF 100# SPRINKLER LINE SERVING ESCADA SPACE TO OPPOSITE SIDE OF WALL TO ALLOW ROOM FOR SEISMIC UPGRADE WORK, INCLUDING SLEEVE THROUGH NEW WALL AND OFFSET ON THE FLOOR ABOVE. REFER TO STRUCTURAL DRAWINGS FOR MORE INFORMATION. IN ADDITION, ALLOW FOR OFFSET OF PIPE AT HIGH LEVEL ON FLOOR ABOVE FROM.
- ALLOW FOR RE-WORK OF SPRINKLER HEADS AND PIPING IN THIS ALCOVE TO ALLOW FOR SEISMIC UPGRADES AND TO SUIT ARCHITECTURAL CHANGES, TYPICAL FOR FLOOR ABOVE. SEE ARCHITECTURAL DRAWINGS FOR DETAILS



1 FIRE PROTECTION - POST OFFICE - LEVEL B1
M1.03 SCALE: 1:100



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SINCLAIR CENTRE
SINCLAIR CENTRE
REVITALIZATION
PROJECT

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Preetipal Paul

Drawing title/Titre du dessin

PHASE 2:
HYDRONIC RENOVATION
POST OFFICE LEVEL B1

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R041365.001

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1 IMAGE 1: PIPING IN N-W CORNER B1
M1.04 SCALE: N.T.S.



1 IMAGE 2: PIPING IN N-W CORNER L1
M1.04 SCALE: N.T.S.

GENERAL NOTES:

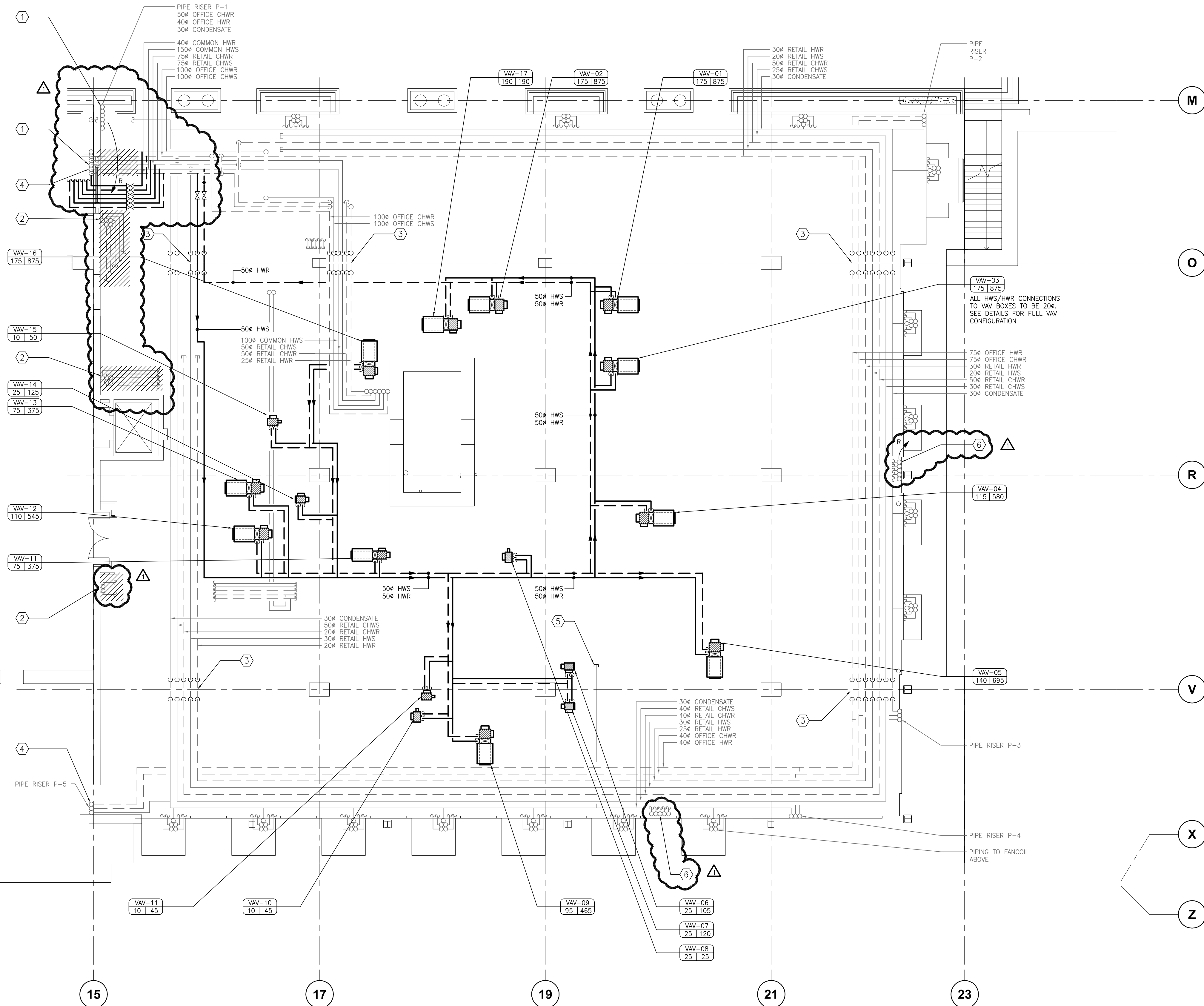
- REFER TO STRUCTURAL DRAWINGS FOR NEW SEISMIC UPGRADES, INCLUDING NEW 600MM SEISMIC WALL ALONG GRIDLINE 15 AND DRAG STRUTS ALONG GRIDLINES O AND V. EXISTING HYDRONIC LINES, RISERS, AND CONNECTIONS TO FANCOILS ABOVE MUST BE OFFSET, RE-LOCATED, OR DISCONNECTED AND CAPPED TO ACCOMMODATE THESE UPGRADES.
- REFER TO DRAWINGS M1.03 AND M1.06 FOR ADDITIONAL INFORMATION ON FIRE PROTECTION AND HVAC IN THIS AREA.

DRAWING NOTES:

- RE-LOCATE PIPE RISER P-1 (ALLOW FOR SIX(6) 50# WELDED, INSULATED PIPES), AND DIVERT ALL MAINS (ASSUME 10M OF 150# WELDED PIPE AND EIGHT (8) ELBOWS) TO SOUTH TO ALLOW FOR NEW SEISMIC UPGRADES. OFFSET RISER AND ALL PIPING AGAINST WALL FOR 3M ON FLOOR ABOVE. SLEEVE PIPING THROUGH NEW WALL AS REQUIRED. SEE IMAGES 1 AND 2. PROVIDE NEW ISOLATION VALVES ON EACH LINE ON LEVELS B1 AND B2. LOCATIONS TO BE COORDINATED ON SITE.
- DEMO FANCOIL ON FLOOR ABOVE AS WELL AS EXISTING FANCOIL PIPING TO ABOVE AND CAP OFF. ENSURE ADEQUATE ROOM IS AVAILABLE FOR NEW SEISMIC WALL.
- OFFSET OF HYDRONIC LINES AS REQUIRED TO ACCOMMODATE NEW SEISMIC DRAG STRUT.
- INSTALL PIPE SLEEVES AROUND EXISTING SERVICES, PRIOR TO NEW CONCRETE WALL INSTALLATION.
- INSTALL NEW 25# CONDENSATE LINE FOR FUTURE SPACE ABOVE. CONNECT TO EXISTING.
- RE-LOCATE HWS/R, CHWS/R, CONDENSATE RISERS TO FANCOILS ABOVE TO WINDOW BAYS TO ALLOW FOR NEW CONCRETE. SEE STRUCTURAL/ARCHITECTURAL DWGS.
- CONTRACTOR TO ALLOW FOR DIVERSION OF 50# CHWS/R, 40# HWS/R, 50# CONDENSATE IN RISER W-4 IN SOUTHWEST CORNER OF WINCH BUILDING FOR 15M VERTICALLY. SEE STRUCTURAL DRAWINGS FOR DETAILS OF UPGRADE.



1 HYDRONIC - PASSPORT OFFICE - LEVEL B1
M1.04 SCALE: 1:100





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SINCLAIR CENTRE
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REVITALIZATION
PROJECT

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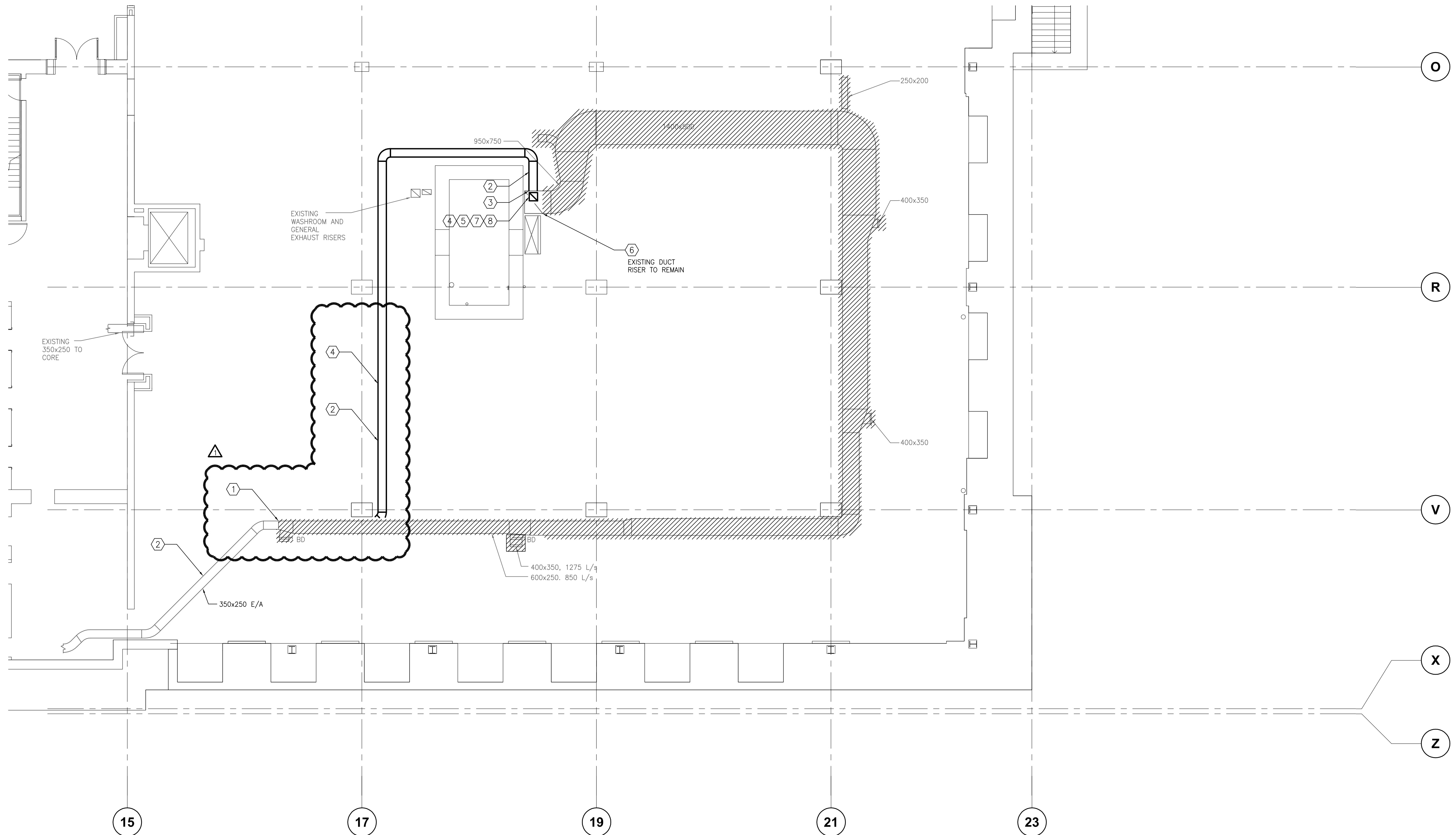
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**PHASE 2:
HVAC DEMOLITION &
KITCHEN EXHAUST -
POST OFFICE LEVEL B1**


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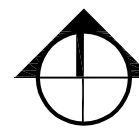
- REMOVAL NOTES:
 1. REMAINING KITCHEN EXHAUST DUCTWORK AND ALL ASSOCIATED HANGERS, ETC. IN THIS SPACE TO BE DEMOLISHED, INCLUDING REMAINING CONNECTIONS FROM DEMOLISHED KITCHEN HOODS. CONTRACTOR TO ATTEND MANDATORY SITE WALKTHROUGH.
- RENOVATION NOTES:
 1. CONNECT NEW 350X250 STAINLESS STEEL (18 GAUGE) OR 16 GAUGE BLACK IRON FULLY WELDED KITCHEN EXHAUST DUCTWORK TO EXISTING AT THIS APPROXIMATE LOCATION. (THIS DUCT WILL SERVE EXISTING KITCHEN HOOD IN "LEONE" SPACE)
 2. COMPLETE KITCHEN EXHAUST DUCTWORK NEW AND EXISTING WITHN PASSPORT OFFICE SPACE SHALL BE WRAPPED WITH TWO (2) LAYERS OF 3M "FIRE-WRAP".
 3. FULLY WELDED PENETRATIONS OF NEW KITCHEN EXHAUST DUCTWORK THROUGH EXISTING KITCHEN EXHAUST DUCTWORK (THAT WILL BE CONVERTED TO KITCHEN EXHAUST DUCTWORK).
 4. INSTALLATION OF NEW KITCHEN EXHAUST DUCTWORK TO BE IN FULL COMPLIANCE WITH NFPA 96 (ACCESS PANELS, CLEANOUTS, ETC).
 5. INSTALL NEW KITCHEN EXHAUST DUCTWORK INSIDE EXISTING DUCT RISER. PROVIDE ACCESS PANELS AND CLEANOUTS ON EACH FLOOR. PLEASE NOTE THAT CONTRACTOR SHOULD ALLOW FOR ACCESS PANELS THROUGH FIRE-RATED SHAFT. ALLOW ACCESS PANELS THROUGH KITCHEN EXHAUST DUCT (TO BE CONVERTED TO GENERAL EXHAUST) AND CLEANOUTS FOR THE NEW KITCHEN EXHAUST DUCTWORK ON EACH FLOOR.
 6. EXISTING KITCHEN EXHAUST DUCTWORK RISER TO BE CONVERTED TO GENERAL EXHAUST AND ALSO USED AS SHAFT FOR NEW KITCHEN EXHAUST DUCTWORK. EXISTING KITCHEN DUCTWORK IS TO BE COMPLETELY CLEANED/INSIDE PRIOR TO INSTALLATION OF NEW.
 7. RUN NEW KITCHEN EXHAUST DUCT INSIDE GENERAL EXHAUST RISER UP TO ROOF KITCHEN EXHAUST UPBLAST FAN (FULLY-WELDED PENETRATIONS OF NEW KITCHEN EXHAUST DUCT THROUGH GENERAL EXHAUST DUCT WITHIN PENTHOUSE MECHANICAL ROOM).
 8. APPROXIMATE VERTICAL LENGTH OF NEW KITCHEN EXHAUST DUCTWORK IS 25M.



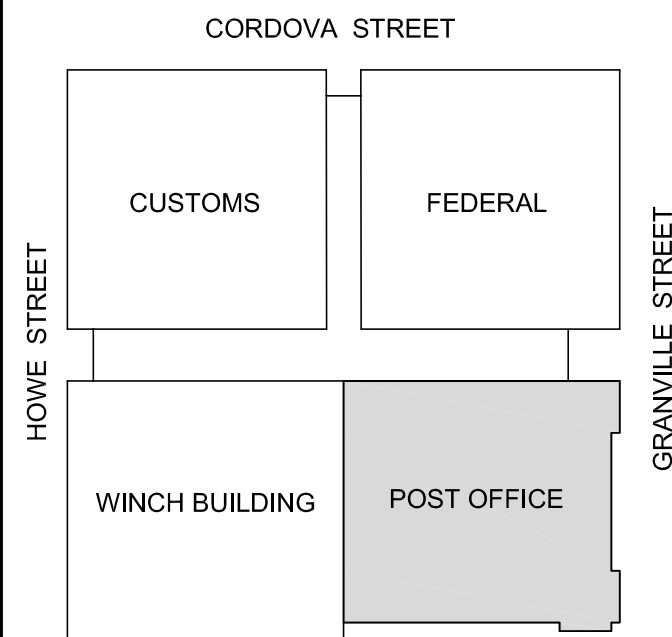
NORTH



1 DEMOLITION - HVAC DUCTWORK - POST OFFICE - LEVEL B1
M1.05 SCALE: 1:100



PROJECT
NORTH



HASTINGS STREET



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Client/client		

Project Title/Titre du projet
757 W HASTINGS ST, VANCOUVER

SINCLAIR CENTRE
SINCLAIR CENTRE
REVITALIZATION
PROJECT

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Drawing Title/Titre du dessin

PHASE 2:
HVAC RENOVATION
POST OFFICE LEVEL B1

Project No./No. du
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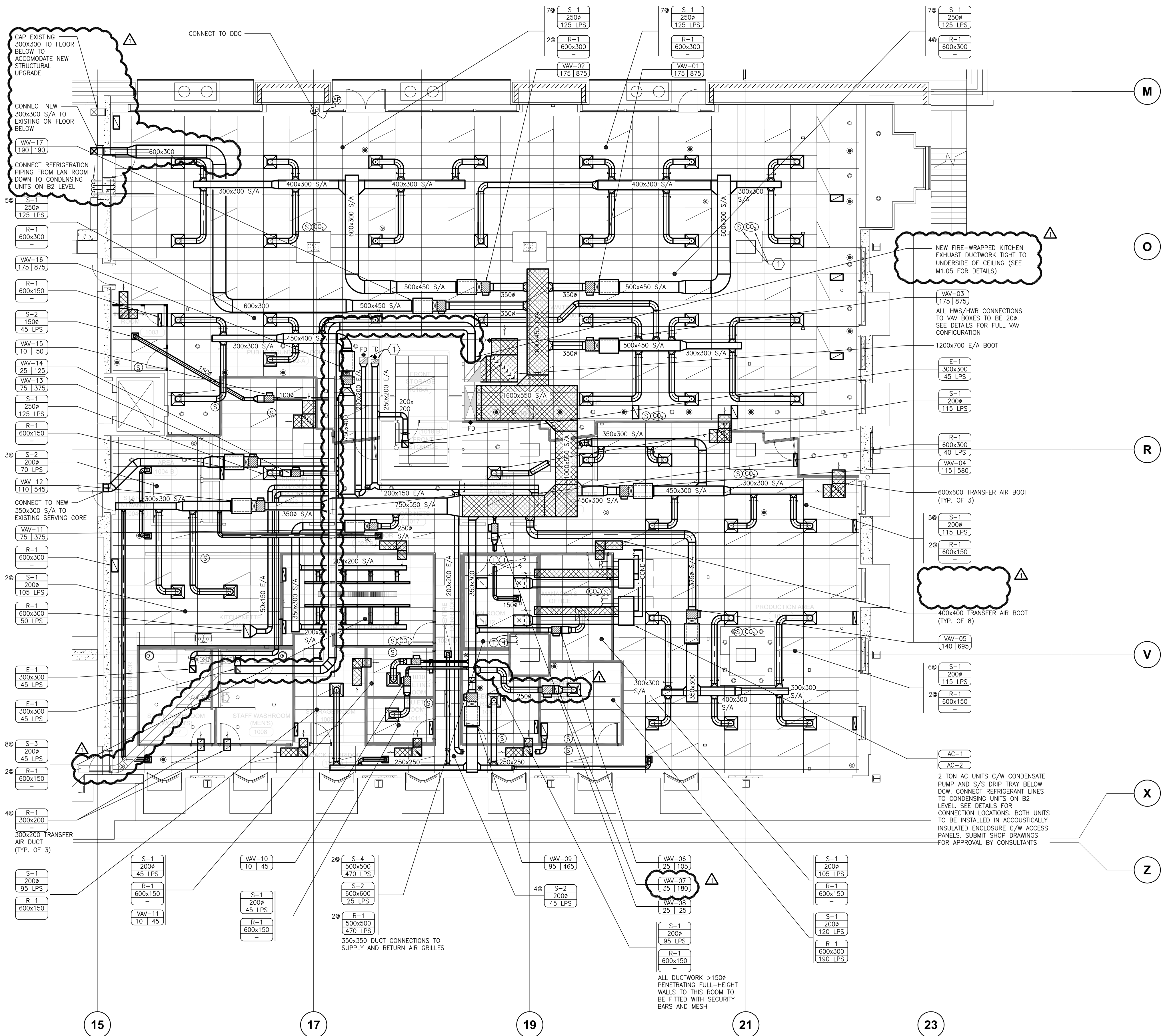
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La Révision
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DRAWING NOTES:

- CONNECT NEW EXHAUST DUCTWORK TO EXISTING RISERS. ALLOW FOR INSTALLATION OF NEW FIRE DAMPERS
- ALL SENSORS CONNECTED TO BUILDING AUTOMATION SYSTEM (BAC), TYP. FOR ALL
- COMPLETE PASSPORT GALLERIA FLOOR IS TO HAVE ITS B-B-C CONTROLLER (INTEGRATED TO DDC THRU BACNET-IP)

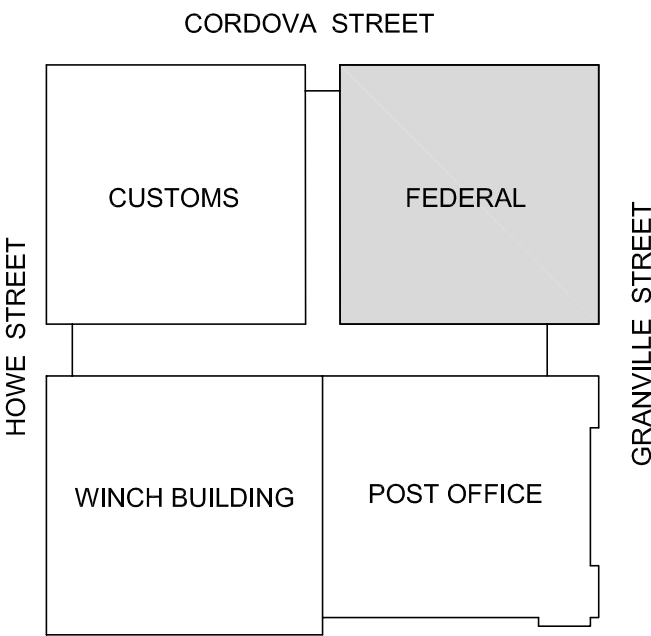
DRAWING NOTES:

- DUCTWORK LAYOUT IS DIAGRAMMATIC AND SHOWS GENERAL LAYOUT. EXACT SITE CONDITIONS WILL DEFINE EXACT ROUTING AND DUCT CONFIGURATION.
- ALL DUCTWORK (EXCEPT EXHAUST DUCTWORK) IS TO BE INSULATED AS PER ASHRAE 90.1 (2007)
- IN AREAS WITH DRY WALL CEILING USE YOUNG "REGULATORS" OR INSTALL VOLUME DAMPERS OUTSIDE OF DRY CEILING AREA.
- ALL RE-HEAT COILS SERVING VAVS ARE TO BE PIPED COMPLETE WITH ISOLATION VALVES, PRESSURE INDEPENDENT CHARACTERIZED DISK CONTROL VALVES (PICCV), MANUAL VENT, DRAIN PORT (WITH ISOLATION VALVE), AND HOSE CONNECTION END CAP.
- NO VOLUME DAMPERS ARE ALLOWED TO BE INSTALLED AT TERMINALS. INSTALL ALL CONTROL DAMPERS FAR ENOUGH AWAY TO AVOID NOISE EFFECT.
- DUCT SIZE FOR BRANCHES SERVING VAVS (NOT SHOWN FOR CLARITY). DUCT SIZES TO MATCH VAV BOX NECK SIZE OR ANOTHER DUCT WITH THE SAME CROSS SECTIONAL AREA.



1 HVAC - PASSPORT OFFICE - LEVEL B1

M1.06 SCALE: 1:100



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757 W HASTINGS ST, VANCOUVER
SINCLAIR CENTRE
SINCLAIR CENTRE
REVITALIZATION
PROJECT

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Tom Dunphy

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Prentiss Paul

Drawing title/Titre du dessin

PHASE 2:
HVAC RENOVATION
FEDERAL LEVEL B1

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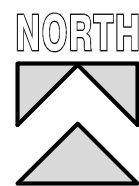
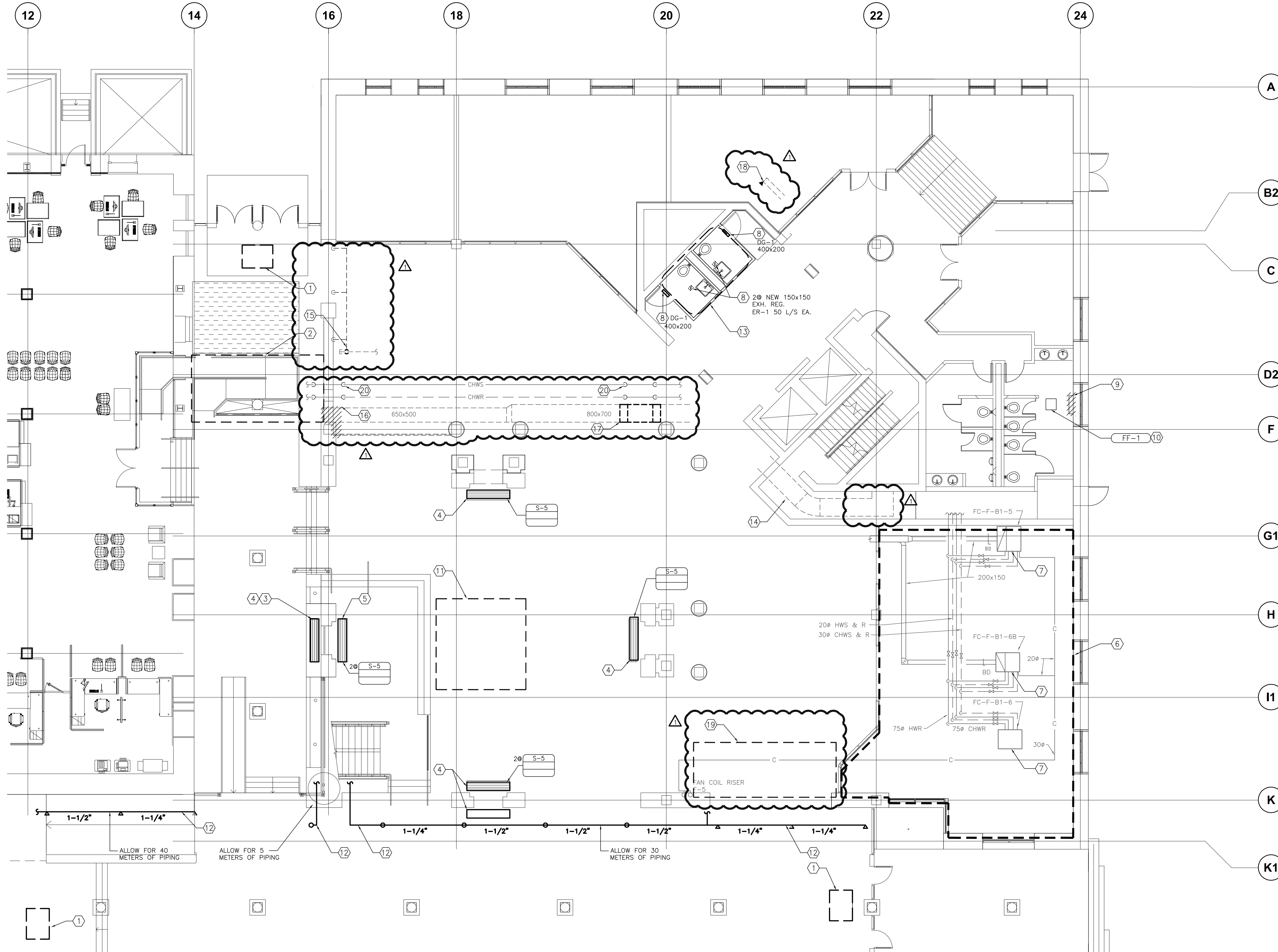
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GENERAL NOTES:

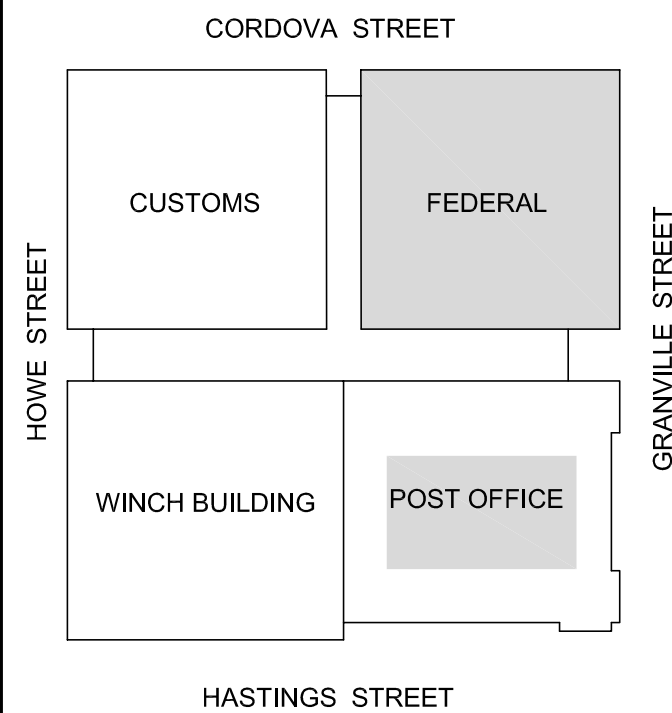
1. PROVIDE FOUR (4) NEW 300x300 ALUMINUM CEILING GRILLES FOR THE PUBLIC WASHROOMS
2. PROVIDE FOUR (4) NEW 500x500 ALUMINUM DOOR GRILLES FOR THE PUBLIC WASHROOMS

DRAWING NOTES:

- 1 DEMOLISH EXISTING FORCED FLOW HEATER LOCATED IN EXISTING STEEL CANOPY, INCLUDING WEST CANOPY NOT SHOWN. (DEMOLISH ALL ASSOCIATED COMPONENTS, CAP OFF ALL PIPING, ECT.)
- 2 REVISE SPRINKLER HEADS TO UPRIGHT (INCLUDING MODIFICATIONS TO PIPING ONCE STORAGE BELOW STAIRS IS DEMOLISHED)
- 3 EXTEND AND RE-ROUTE DUCTWORK INSIDE PLANTERS AND CONNECT TO NEW S/S GRILLE ON SIDE AS SHOWN
- 4 DEMOLISH AND REPLACE EXISTING 400x2050 HEAVY DUTY S/A GRILLES (TYP. OF 6 TOTAL)
- 5 REPLACE EXISTING FLOOR MOUNTED AIR SUPPLY GRILLE AND EXTEND DUCTWORK TO RAISED PLATFORM LEVEL AS REQUIRED
- 6 DEMOLISH ALL EXISTING GRILLES, DIFFUSERS, OTHER TENANT DUCTWORK IN RETAIL SPACE BACK TO THE EXISTING FAN COILS. ALL FAN COILS AND OUTDOOR AIR DUCTS TO REMAIN. ALL BASE BUILD
- 7 ALL EXISTING FAN COILS TO REMAIN AS-IS.
- 8 REPLACE EXISTING GRILLES WITH NEW AS INDICATED. THIS SCOPE IS TYPICAL FOR THE FLOOR ABOVE, SEE NOTE 13 BELOW.
- 9 DEMOLISH EXISTING BASEBOARD HEATER IN WOMEN'S WASHROOM. CAP ALL CONNECTIONS, PATCH AND MAKE GOOD WALL AND FLOOR.
- 10 INSTALL NEW FORCE-FLOW ELECTRIC HEATER IN CEILING SPACE. THIS HEATER IS TO BE CONTROLLED BY LOCALIZED THERMOSTAT.
- 11 RE-COMMISSION EXISTING AUTOMATED LOUVRES/DAMPERS AT HIGH LEVEL IN ATRIUM, INCLUDING DDC CONTROL
- 12 CONTRACTOR TO ALLOW FOR TEMPORARY RE-LOCATION OF SPRINKLER LINES AT HIGH ELEVATION ALONG GALLERIA SOUTH GUTTER OF CUSTOMS AND FEDERAL BUILDINGS WHILE SEISMIC UPGRADE WORK IS COMPLETED. REFER TO STRUCTURAL AND ARCHITECTURAL DRAWINGS FOR DETAILS
- 13 GRILLE REPLACEMENTS ARE TYPICAL FOR THE EMPLOYEE WASHROOMS ON THE FLOOR ABOVE
- 14 REPLACE APPROX. 8 METERS OF R/A DUCT (800x700) ON UPPER LEVEL (LEVEL 1), TO ACCOMMODATE NEW SEISMIC UPGRADE. ALLOW FOR NEW INSULATION, ELBOWS, ETC. REFER TO STRUCTURAL DRAWINGS FOR COORDINATION
- 15 DIVERT AND RE-MOUNT EXISTING 40# LINE TO WINDOW SPRINKLERS ON FLOOR ABOVE (LEVEL L1) 1 METER LOWER TO ALLOW FOR NEW STRUCTURAL BEAM ALONG THIS WALL AT HIGH ELEVATION. REFER TO STRUCTURAL DWGS FOR DETAILS
- 16 DEMOLISH APPROX. 1.5 METERS OF EXISTING 650x500 RETURN AIR DUCT ON FLOOR ABOVE (LEVEL L1) TO ACCOMMODATE NEW STRUCTURAL BEAM (SEE STRUCTURAL DWGS FOR DETAILS). ALLOW FOR WORK WITH HAZARDOUS MATERIALS WORK ON DUCTWORK. SEAL DUCT AND CONNECTION TO R/A GRILLE. ALLOW FOR NEW INSULATION, ETC. AND MAKE GOOD.
- 17 DIVERT/REPLACE APPROX. 2 METERS OF R/A DUCT (800x700) ON UPPER LEVEL (LEVEL 1), TO PASS BELOW NEW SEISMIC UPGRADE. ALLOW FOR NEW INSULATION, ELBOWS, ETC. REFER TO STRUCTURAL DRAWINGS FOR COORDINATION.
- 18 PROVIDE AND INSTALL NEW APPROX. 300x250 FIRE DAMPER ON EXISTING SUPPLY AIR DUCT AT HIGH ELEVATION ON FLOOR ABOVE (LEVEL L1). CONTRACTOR TO COORDINATE FINAL SIZE ON SITE.
- 19 CONTRACTOR TO ALLOW FOR DIVERSION/REPLACEMENT OF 20 METERS OF HYDRONIC PIPING IN THE CEILING SPACE ON FLOOR ABOVE (LEVEL L1), INCLUDING APPROX. 24 NEW ELBOWS, NEW INSULATION WITH VAPOUR BARRIER, ETC. REFER TO STRUCTURAL DRAWINGS FOR COORDINATION
- 20 DIVERT CHWS/R PIPING AS REQUIRED TO ACCOMMODATE STRUCTURAL UPGRADES



1 HVAC - FEDERAL BUILDING - LEVEL B1
M2.03 SCALE: 1:100



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757 W HASTINGS ST, VANCOUVER
SINCLAIR CENTRE
SINCLAIR CENTRE
REVITALIZATION
PROJECT

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Drawing title/Titre du dessin

PHASE 2:
HVAC RENOVATION
PENTHOUSE AND LEVEL
B3 MECH ROOM

Project No./No. du
projet
R041365.001

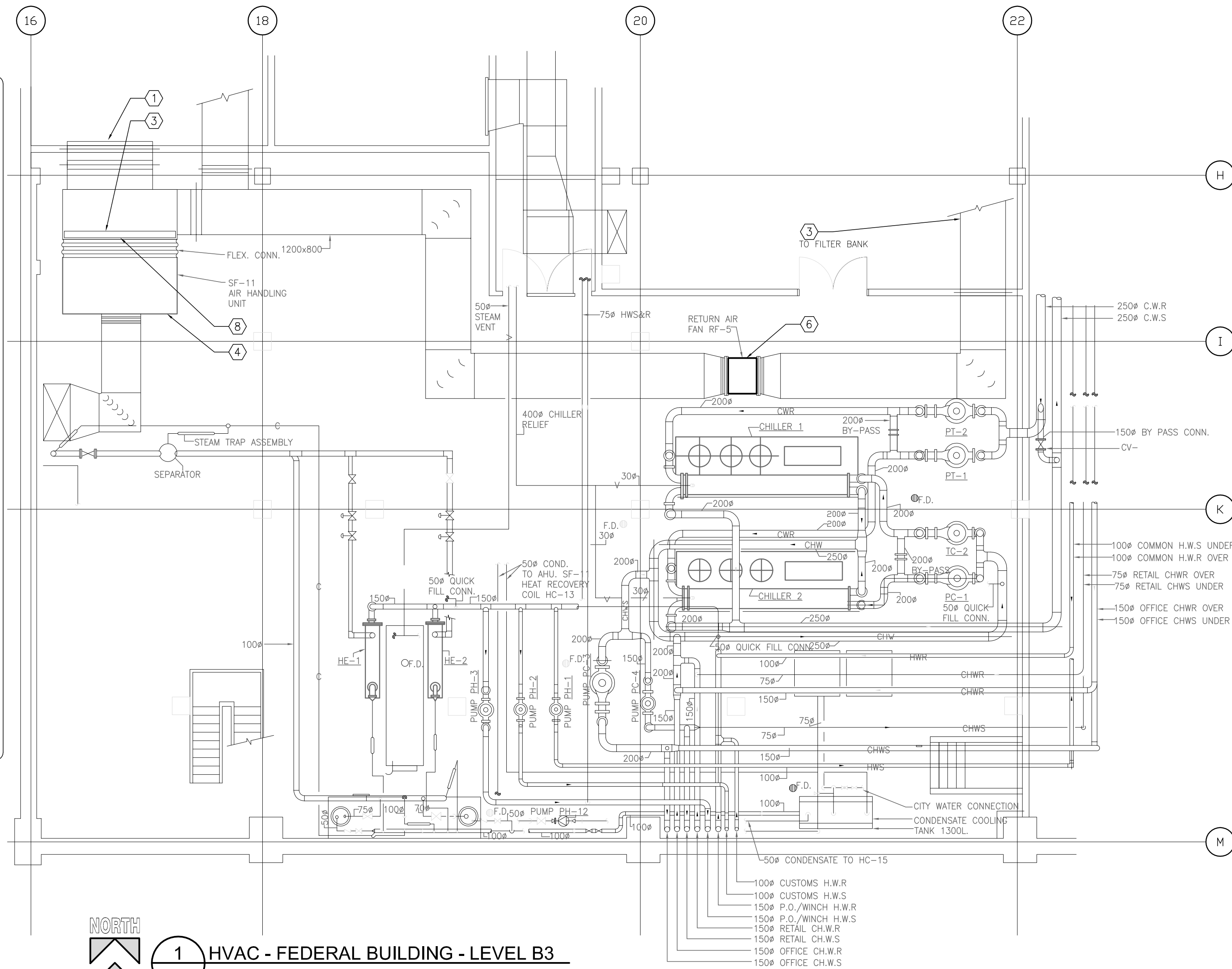
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- GENERAL NOTES:
- RE-COMMISSION AND RE-BALANCE ALL EXISTING SYSTEMS AFFECTED BY THIS SCOPE OF WORK TO ENSURE PROPER OPERATION OF SYSTEMS, MEETING DESIGN INTENT.
 - ALL NEW VFDs TO BE SUPPLIED BY CONTROL CONTRACTOR

DRAWING NOTES:

- REPLACE ALL PNEUMATICALLY CONTROLLED AIR CONTROL DAMPERS, ACTUATORS, VALVES AND ASSOCIATED ACTUATORS WITH NEW ELECTRONIC, SERVING SF-11 SYSTEM. REPLACE VALVES 50MM THREE-WAY VALVES. PROVIDE ALL NECESSARY MECHANICAL AND CONTROL WORK.
- SPARE.
- REPLACE EXISTING FILTERS WITH NEW
- REPLACE EXISTING ELECTRICAL MOTOR (SERVING SF-11) AND INSTALL NEW "PREMIUM EFFICIENCY" MOTOR (INCLUDING SLEAVES, BELTS, PULLEYS, ETC). NEW MOTOR IS TO BE CONTROLLED BY NEW VFD. UPDATE CONTROL DDC GRAPHICS FOR ALL NEW WORK. EXISTING MOTOR AND FAN ARE 7.46KW, 575/3/60, 9.440L/S AT 375PA. CONTACT "OLYMPIC INTERNATIONAL" (604-986-1400) FOR ADDITIONAL INFO (SUCH AS MOTOR MODEL NUMBER, NEMA FRAME, ETC.)
- SPARE.
- REPLACE EXISTING FAN WITH NEW AXIAL FAN, FAN (PREMIUM EFFICIENCY MOTOR, C/W VFD). PROVIDE ALL MECHANICAL AND CONTROLS WORK AS NECESSARY (INCLUDING CONTROL GRAPHICS UPDATE). EXISTING FAN HAS 11.2KW, 575/3/60 MOTOR (MODEL 380.6P, MYSON), CONTACT DDK-BURNABY FOR ADDITIONAL INFORMATION.
- ALLOW FOR BRUSHING & RE-PAINTING OF UNIT (INSIDE AND OUT)
- RE-BUILD EXISTING FILTER SECTION IN ORDER TO PROVIDE BETTER FILTER REMOVAL ACCESS. PRESENTLY FILTER REMOVAL ACCESS IS ONLY ON GAST SIDE, WHICH MAKES THIS VERY IMPRACTICAL FOR MAINTENANCE PERSONNEL. TAKE INTO ACCOUNT UNIT WIDTH (DEPTH), COORDINATE WITH "SNC LAVALIN" MAINTENANCE PERSONNEL FOR DESIRED ACCESS.

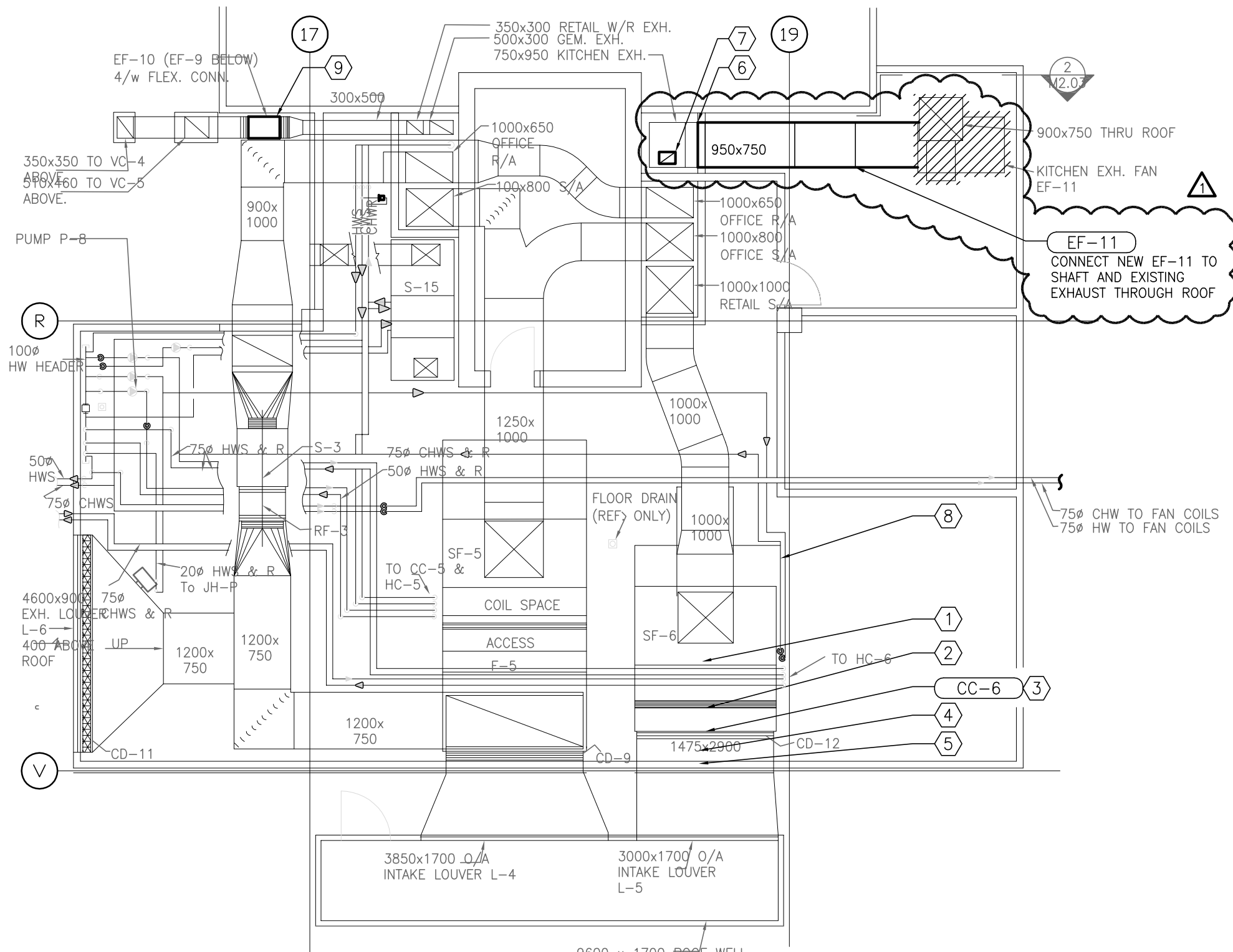


GENERAL NOTES:

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- ALL NEW VFDs TO BE SUPPLIED BY CONTROL CONTRACTOR

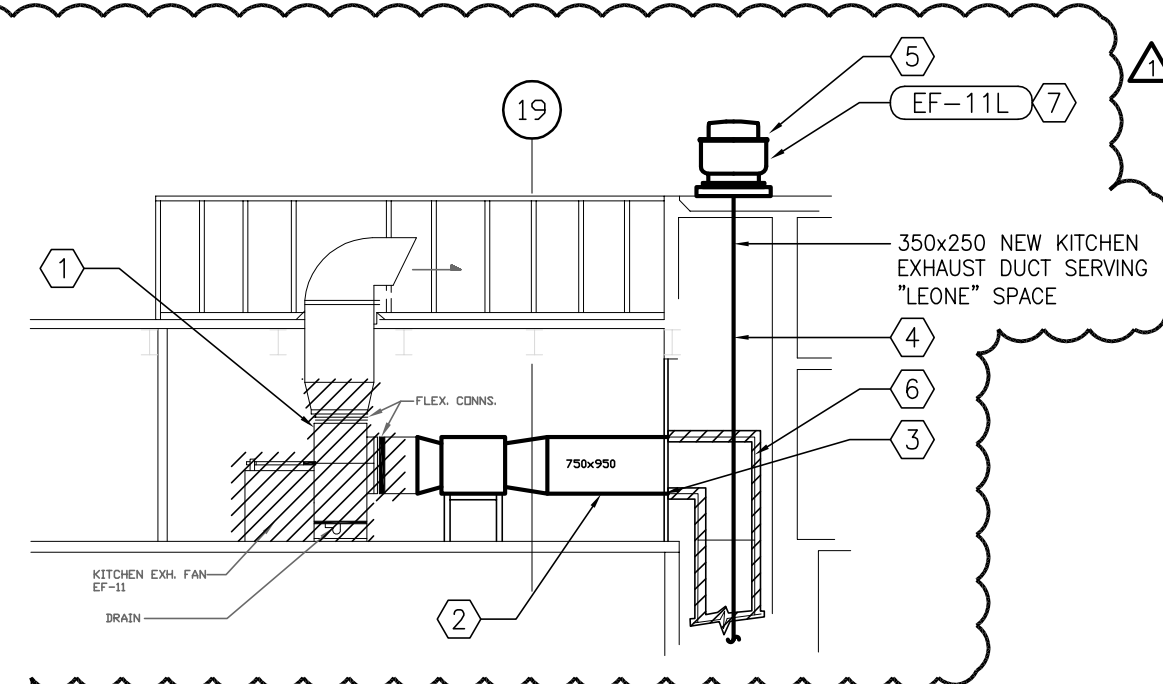
DRAWING NOTES:

- REPLACE EXISTING ELECTRICAL MOTOR (SERVING SF-6) AND INSTALL NEW "PREMIUM EFFICIENCY" MOTOR (C/W VFD, INCLUDING SLEAVES, BELTS, PULLEYS, ETC). INCLUDE ALL MECHANICAL AND CONTROL WORK AS NECESSARY, INCLUDING CONTROL DDC GRAPHICS UPDATE. EXISTING MOTOR INFO (14.92KW, 575/3/60), CONTACT OLYMPIC INTERNATIONAL (604-986-1400) FOR ADDITIONAL MOTOR INFORMATION (SUCH AS MODEL NUMBER, NEMA FRAME, ETC). REPLACE EXISTING BEARING AND HAVE MILLWRIGHT TO ENSURE THAT WHEEL IS DYNAMICALLY BALANCED.
- REPLACE ALL (3) PNEUMATICALLY CONTROLLED VALVES SERVING SF-6 SYSTEM COILS WITH NEW ELECTRONIC CONTROL VALVES. PROVIDE ALL MECHANICAL AND CONTROLS WORK AS REQUIRED (INCLUDING CONTROL VALVES ARE 75MM. ALLOW FOR REPLACEMENT OF ALL PNEUMATIC SENSOR SERVING SF-6 & REPLACED WITH NEW ELECTRONIC TYPE SENSORS.
- REMOVE AND REPLACE EXISTING COOLING COIL WITH NEW CC-6. CONTRACTOR TO PROVIDE ALL NECESSARY CUTTING AND PATCHING, SHEET METAL, CHWS/R CONNECTIONS, ETC. REQUIRED FOR COMPLETE REPLACEMENT AND OPERATION OF COOLING COIL. ALLOW FOR EXISTING HWS/R RE-PIPING AT THE UNIT TO ACCOMMODATE REMOVAL AND REPLACEMENT OF COOLING COIL
- REPLACE EXISTING CONTROL DAMPER PNEUMATICALLY CONTROLLED ACTUATOR WITH NEW ELECTRONICALLY CONTROLLED ACTUATORS
- REPLACE EXISTING FILTERS WITH NEW
- NEW FIRE-RATED ENCLOSURE. PROVIDE ACCESS PANEL TO DUCT
- NEW 350x250 STAINLESS STEEL KITCHEN EXHAUST DUCT UP TO ROOF MOUNTED EXHAUST FAN.
- ALLOW FOR BRUSHING AND RE-PAINTING OF UNIT INSIDE AND OUT.
- INSTALL NEW EXHAUST FAN EF-10 C/W ALL ASSOCIATED COMPONENTS C/W VFD.



DRAWING NOTES:

- DEMOLISH EXISTING KITCHEN FAN AND REPLACE WITH NEW AXIAL FAN COMPLETE WITH NEW VFD. INCLUDE ALL WORK ASSOCIATED WITH FAN REPLACEMENT AND CONNECTION. REPLACEMENT, INCLUDE ALL REQUIRED CONTROL WORK.
- REPLACE EXISTING KITCHEN EXHAUST DUCTWORK TO CONNECT FAN TO SHAFT
- SEALED PENETRATION INTO FIRE-RATED SHAFT C/W ACCESS PANEL TO ACCESS NEW KITCHEN EXHAUST DUCT
- 350x250 NEW STAINLESS STEEL WELDED KITCHEN EXHAUST DUCT COMPLETE WITH 2 LAYERS OF 3M FIRE-WRAP.
- NEW UP BLAST KITCHEN EXHAUST FAN INSTALLED ON ROOF. FAN TO BE CONTROLLED WITH NEW VFD. FAN TO BE UL/CUL-762 RATED WITH HINGE CONNECTION AND GREASE TRAP. COMPLETE WITH NFPA ROOF CURB.
- DELETE EXISTING 750X950 ELBOW AND DUCTWORK ON GENERAL EXHAUST
- COORDINATE EXACT LOCATION OF INSTALLATION AND PENETRATION WITH STRUCTURAL ENGINEER.



3 HVAC - POST OFFICE - PENTHOUSE SECTION
M2.05 SCALE: 1:100