

UHNBC FLUOROSCOPY REPLACEMENT

PHASE 2 - GENERAL FLUORO

1475 EDMONTON STREET, PRINCE GEORGE, BC V2M 1S2

ISSUED FOR CONSTRUCTION OCTOBER 13, 2021



A3.02B PHASE 2B/C - RCP

A4.01 SECTIONS

LOCATION PLAN SEEKEY PLAN UNIVERSITY HOSPITAL OF NORTHERN BRITISH COLUMBIA **EDMONTON STREET**

INFECTION CONTROL REQUIREMENTS

- FOR ALL CONSTRUCTION WORK WITHIN THE HOSPITAL, CONTRACTORS MUST FOLLOW INFECTION CONTROL PROCEDURES AS REQUIRED BY:
- . CSA STANDARDS Z317.13.12 "FUNDAMENTALS FOR INFECTION CONTROL DURING CONSTRUCTION,
- RENOVATION AND MAINTENANCE OF HEALTH CARE FACILITIES" b. NORTHERN HEALTH AUTHORITY CLINICAL PRACTICE STANDARD "INFECTION CONTROL DURING
- CONSTRUCTION, RENOVATIONS, AND MAINTENANCE OF HEALTH CARE FACILITIES" THIS PROJECT IS CLASSIFIED AS
- PHASE 2A CLERICAL SPACE / RAD OFFICE / PORTER ROOM POPULATION RISK GROUP = 1 (OFFICE AREA - NON-CLINICAL) CONSTRUCTION ACTIVITY TYPES = **D**
- GUIDELINES FOR INFECTION CONTROL MEASURES = CLASS III / IV PHASE 2A/2B/2C - X-RAY CONTROL ROOM / GEN FLUORO / RECOVERY ROOM POPULATION RISK GROUP = 3 (DIAGNOSTIC IMAGING) CONSTRUCTION ACTIVITY TYPES = **D**
- GUIDELINES FOR INFECTION CONTROL MEASURES = CLASS IV
- WITH THE HOSPITAL TO REVIEW AND OBTAIN APPROVAL FOR THE PROPOSED INFECTION CONTROL MEASURES.
- MEASURES CONSTRUCTION REPORT" TO NORTHERN HEALTH AUTHORITY FOR APPROVAL CONTRACTORS TO OBSERVE THE FOLLOWING INFECTION CONTROL PRECAUTIONS FOR WORKING AT THE

). CONTRACTOR TO COORDINATE WITH NHA AND THE HOSPITAL AND SUBMIT A "RISK REDUCTION

- DISCHARGE OPENINGS OF ROOFTOP EXHAUST DUCTS. INFECTION CONTROL REQUIRES THAT WORKERS MUST BE MADE AWARE OF THE FACT THAT HOSPITAL EXHAUST DUCTS MAY CARRY DUST AND SPORE PARTICLES, HOWEVER, NOT ACTIVE TB. DUST AND SPORES, RESIDING IN THESE DUCTS, MAY BE DISCHARGED TO THE EXTERIOR WITH THE AIR MASS CREATED WITHIN THESE DUCTS
- . ALTHOUGH THE LEVEL OF RISK FOR POTENTIAL CONTAMINATION IS LOW, IT IS ADVISABLE THAT CONSTRUCTION WORKER'S, ESPECIALLY THOSE WHO ARE SENSITIVE TO RESPIRATORY ILLNESSES, WEAR APPROPRIATE DUST MASKS CAPABLE OF FILTERING FINE PARTICULATES.

GUIDANCE TO CONSTRUCTION SITES **OPERATING DURING COVID-19**

AS THE CHALLENGES CAUSED BY THE CORONAVIRUS OUTBREAK CONTINUE TO SHIFT, THE B.C. GOVERNMENT AND B.C.'S PROVINCIAL HEALTH OFFICER, DR. BONNIE HENRY, ARE TAKING UNPRECEDENTED MEASURES TO SLOW THE TRANSMISSION OF

RECENTLY, DR. HENRY ISSUED AN ORDER UNDER THE BC'S PUBLIC HEALTH ACT PROHIBITING THE GATHERING OF PEOPLE IN EXCESS OF 50 PEOPLE AT A PLACE OF WHICH YOU ARE THE OWNER, OCCUPIER OR OPERATOR, OR FOR WHICH YOU ARE OTHERWISE RESPONSIBLE. WE UNDERSTAND THAT EMPLOYERS IN THE CONSTRUCTION INDUSTRY ARE ASKING FOR CLARITY ABOUT WHAT THIS MEANS FOR THEM

WHILE THIS ORDER DOES NOT APPLY TO CONSTRUCTION SITES AS A WHOLE, WE ARE DIRECTING EMPLOYERS TO TAKE AL NECESSARY PRECAUTIONS TO MINIMIZE THE RISKS OF COVID 19 TRANSMISSION AND ILLNESS TO YOU AND YOUR EMPLOYEES.

- THERE SHOULD BE NO MORE THAN 50 PEOPLE IN THE SAME SPACE IN ANY CIRCUMSTANCES WHERE POSSIBLE EMPLOYEES SHOULD MAINTAIN A DISTANCE OF 2 METRES APART FROM EACH OTHER POST SIGNAGE THAT LIMITS THE NUMBER OF OCCUPANTS IN ANY ELEVATOR TO FOUR PEOPLE AT A TIME.
- REDUCE IN-PERSON MEETINGS AND OTHER GATHERINGS AND HOLD SITE MEETINGS IN OPEN SPACES OR OUTSIDE INCREASE THE NUMBER OF HANDWASHING STATIONS AND POST SIGNAGE THAT IDENTIFIES THEIR LOCATION MAINTAIN A LIST OF EMPLOYEES THAT ARE CURRENTLY WORKING ON SITES AND UPDATE THIS LIST DAILY. ALL COMMON AREAS AND SURFACES SHOULD BE CLEANED AT THE END OF EACH DAY. EXAMPLES INCLUDE
- WASHROOMS, SHARED OFFICES, COMMON TABLES, DESKS, LIGHT SWITCHES, AND DOOR HANDLES. ANYONE WITH COVID-19 LIKE SYMPTOMS SUCH AS SORE THROAT, FEVER, SNEEZING, OR COUGHING MUST SELF-ISOLATE AT HOME FOR 14 DAYS.

SECTION 4.85 OF THE OCCUPATIONAL HEALTH AND SAFETY REGULATION DOES PROVIDE FOR A MINIMUM STANDARD AROUND THE PROVISION OF WASHROOMS AND HAND WASHING FACILITIES. WHERE PLUMBED FACILITIES ARE IMPRACTICABLE, EMPLOYERS MUST PROVIDE ACCESS TO PORTABLE WASHROOM AND HAND-WASHING FACILITIES, THOSE FACILITIES MUST BE MAINTAINED IN GOOD WORKING ORDER, AND MUST BE PROVIDED WITH THE SUPPLIES NECESSARY FOR THEIR USE.

EMPLOYERS SHOULD REASSESS THEIR WORK ENVIRONMENT EVERY DAY AND KEEP UPDATED WITH THE INFORMATION POSTED ON THE PROVINCE'S WEBSITE: https://www2.gov.bc.ca/gov/content/safety/emergencypreparedness-response-recovery/covid-19-provincial-support

DRAWING LIST

89.3 m² (961 ft²)

ARCHITECTURAL

A5.01 WALL SCHEDULES A5.02 DOOR & WINDOW SCHEDULES A5.03 ROOM, FINISHES & FIXT. SCHED. A1.01 LOCATION PLAN & GENERAL NOTES A5.04 TYPICAL DETAILS

A2.01A PHASE 2A - DEMOLITION PLAN A2.01B PHASE 2B/C - DEMOLITION PLAN

A3.01B PHASE 2B/C - DEMOLITION RCP

A3.02A PHASE 2A - RCP

A2.02A PHASE 2A - FRAMING PLAN A2.02B PHASE 2B/C - FRAMING PLAN

A2.03A PHASE 2A - FINISHES & FIXT. PLAN A2.03B PHASE 2B/C - FINISHES & FIXT. PLAN A2.04A PHASE 2A - FURNITURE & EQUIP. PLAN

A2.04B PHASE 2B/C - FURNITURE & EQUIP. PLAN A2.06 ROOF PLAN A3.01A PHASE 2A - DEMOLITION RCP

STRUCTURAL S21 GENERAL NOTES & KEY PLAN

S22 TYPICAL DETAILS ROOM

S23 LEVEL 1 RCP & GEN FLUORO & RECOVERY S24 LEVEL 1 RCP CLERICAL WORK SPACE & ROOF S25 RESERVED S26 CONTROL ROOM, RAD OFFICE AND PORTER

MECHANICAL

LEVEL 0 EXIST. SANITARY DEMO PLAN M5.200 LEVEL 1 EXIST. PLUMBING DEMO PLAN M5.201 LEVEL 1 EXIST. MEDIC. GAS DEMO PLAN M5.202 SPECIFICATIONS LEVEL 1 EXIST. MECH. DEMO PLAN LEVEL 1 EXISTING MECHANICAL PLAN

LEVEL 1 EXIST. FIRE SUPPRESSION ELECTRICAL M1.300 DEMO PLAN LEVEL 1 EXISTING FIRE SUPPRESSION E1.01 M2.100 E2.02 LEVEL O SANITARY PLAN LEVEL 1 PLUMBING PLAN M2.101 E2.03

LEVEL 1 MEDICAL GAS PLAN E3.01 M2.200 LEVEL 1 MECHANICAL PLAN E3.02 M2.201 LEVEL 1 MECHANICAL PLAN ROOF MECHANICAL PLAN M2.202 LEVEL 1 FIRE SUPPRESSION PLAN M2.300 LEVEL 1 FIRE SUPPRESSION PLAN M2.301 M4.200 DFTAILS

M4.201

REFERENCE DRAWINGS SIEMENS AXIOM ARTIS ZEE MP INSTALL DETAILS DWGS (4 PAGES) **SCHEDULES** GULDMANN PATIENT LIFT DWGS (6 PAGES) **SPECIFICATIONS SPECIFICATIONS**

ELECTRICAL DEMOLITION

LEVEL 1 RCP

LEVEL 1 CONSTRUCTION PLAN

LEVEL 1 ADDITIONAL SCOPE

ELECTRICAL SPEC'S - KEY PLANS

ELECTRICAL DETAILS

PROJECT INFO & CODE ANALYSIS

1475 EDMONTON STREET, PRINCE GEORGE, BC V2M 1S2 LOT 4 DL343, PLAN 34806 **LEGAL DESCRIPTION:** PROJECT AREA: PHASE 2A: 89.3 SM PHASE 2B: 54.1 SM PHASE 2C: 64.5 SM TOTAL: 207.9 SM CODE ANALYSIS:

DIVISION B, PARTS 1, 7, 8 AND 10

CODE REFERENCE: BRITISH COLUMBIA BUILDING CODE 2018 (INCLUDING LATEST AMENDMENTS) **CODE APPLICATIONS** DIVISION A, PARTS 1, 2 AND 3 1.3.2.1

DIVISION B, PARTS 3, 4, 5 AND 6 1.3.3.2 DIVISION C, PARTS 1 & 2 1.3.4.1 **MAJOR OCCUPANCIES:** EXISTING - GROUP B, DIVISION 2 (TREATMENT - HOSPITAL) 3.1.2.1 PROPOSED - NO CHANGE SEPARATION OF MAJOR **EXISTING - NOT APPLICABLE** 3.1.3.1

OCCUPANCIES: PROPOSED - NOT APPLICABLE OCCUPANT LOAD: TREATMENT = 10.0 SM PER PERSON PHASE 2A OCCUPANT LOAD CLERICAL SPACE $= 35.9 \, \text{SM} / 10.0 \, \text{SM} = 4$ PHASE 2B OCCUPANT LOAD $= 54.1 \, \text{SM} / 10.0 \, \text{SM} = 5$

PHASE 2C OCCUPANT LOAD

GROUP B, DIVISION 2, ANY HEIGHT, ANY AREA, SPRINKLERED **BUILDING SIZE**: 3.2.2.38 **EXISTING BUILDING HEIGHT: 5-STOREY** PROPOSED - NO CHANGE

 $= 64.5 \, \text{SM} / 10.0 \, \text{SM} = 6$

MAX BUILDING AREA ALLOWED: ANY AREA EXISTING BUILDING AREA: 13,503 SM (145,350 SF) PROPOSED - NO CHANGE

FIRE SUPPRESSION: REQUIRED - BUILDING TO BE SPRINKLERED THROUGHOUT 3.2.2.38 **EXISTING - SPRINKLERED THROUGHOUT** PROPOSED - NO CHANGE CONSTRUCTION TYPE: **REQUIRED - NONCOMBUSTIBLE CONSTRUCTION** 3.2.2.38

PROPOSED - NONCOMBUSTIBLE CONSTRUCTION FIRE RESISTANCE RATING REQUIRED (FLOOR) - 2 HOUR F.R.R. NONCOMBUSTIBLE CONST. EXISTING - 2 HOUR F.R.R. CONC. SLAB PROPOSED - NO CHANGE

EXISTING - NONCOMBUSTIBLE CONSTRUCTION

ROOF - NO RATING REQUIRED EXISTING - CONC. SLAB CONSTRUCTION PROPOSED - NO CHANGE

COLUMN & LOADBEARING WALL - SAME AS SUPPORTED ASSEMBLY REQUIRED EXISTING - 2 HOUR F.R.R. CONC. CONSTRUCTION PROPOSED - NO CHANGE

SEPARATION OF SUITES 3.3.1.1 **EXISTING - NO CHANGE** PUBLIC CORRIDOR **EXISTING - NO CHANGE** 3.3.1.4 **SEPARATIONS:**

REQUIRED PROVIDED MIN 2 EXCEPT 1 REQUIRED IF: 2 (1 REQUIRED) FROM ROOM OR SUITES SPRINKLERED THROUGHOUT YES - PHASE 2A: 35.9 SM FLOOR AREA < 200 SM (2,153 SF) YES - PHASE 2B: 54.1 SM YES - PHASE 2C: 64.5 SM TRAVEL DISTANCE < 25 M (82 FT) YES - PHASE 2A: 6.5 SM

YES - PHASE 2B: 10.5 SM YES - PHASE 2C: 7.5 SM NOT APPLICABLE **NOT APPLICABLE** DISTANCE BETWEEN EGRESS DOORWAYS: EGRESS DOORWAY WIDTH: MIN 800mm (31.5") CLEAR **NOT APPLICABLE** MIN 1050mm (42") CLEAR MIN 1118 mm (44") WIDE TO MOVE PATIENT BEDS

NO. OF EXITS FROM MIN 2 REQUIRED EXISTING - NO CHANGE 3.4.2.1 FLOOR AREAS **DISTANCE BETWEEN EXITS:** ¹ DIAGONAL OF FLOOR AREA BUT EXISTING - NO CHANGE 3.4.2.3 NOT LESS THAN 9 M (29.5 FT) TRAVEL DISTANCE TO EXITS: MAX 45 M (148 FT) 3.4.2.5 (1)c EXISTING - NO CHANGE EXIT WIDTH FOR DOORWAYS: MIN 6.1mm X OCCUP. LOAD EXISTING - NO CHANGE 3.4.3.2 CORRIDOR (AGGREGATE) MIN 1100mm (43.3") WIDE EXISTING - NO CHANGE 3.4.3.2 (1)a

MIN 2 HR (AS REQ'D UNDER 3.2.2) EXISTING - NO CHANGE FIRE SEPARATION OF EXITS FROM FLOOR MIN 2 HOUR ABOVE: WASHROOM PROVISION REQUIREMENTS EXISTING - NO CHANGE

TO BE VERIFIED HANDICAPPED PROVISION ACCESSIBLE WASHROOM REQUIREMENTS EXISTING - NO CHANGE TO BE VERIFIED

NOT APPLICABLE

DOORWAY (AGGREGATE) MIN 800mm (31.50") WIDE

GENERAL NOTES

GENERAL

1.3.3.1

3.1.17.1

3.3.1.5

3.3.1.5(2)

3.3.1.13

3.3.3.4(2)

3.7.2.2 (9)

3.8.2.3(2) &

3.8.2.26

1.1 DO NOT SCALE THESE DRAWINGS. SEEK ARCHITECT FOR CLARIFICATION ON ANY MISSING DIMENSIONS

1.2 VERIFY ALL DIMENSIONS AND SITE CONDITIONS ON SITE. ANY DISCREPANCIES FOUND ARE TO BE REPORTED IMMEDIATELY TO THE ARCHITECT PRIOR TO COMMENCEMENT OF WORK.

1.3 ALL DIMENSIONS ARE GIVEN IN METRIC MEASURE EXCEPT NOTED OTHERWISE. FRAME CONSTRUCTION DIMENSIONS ARE FROM THE OUTSIDE FACE OF FINISH OF EXTERIOR WALLS, AND FROM THE FINISHED FACE OF INTERIOR PARTITIONS, UNLESS NOTED OTHERWISE.

1.4 ALL DRAWINGS AND NOTES SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND DRAWINGS OF OTHER CONSULTANTS. ANY DISCREPANCIES, ERRORS OR OMISSIONS IN THE DOCUMENTS SHALL BE REPORTED TO THE ARCHITECT BEFORE WORK IN THAT AREA CAN COMMENCE.

PROJECT AREA IN DASHED LINES DENOTES APPROXIMATE LIMITS FOR THE WORK IN PLAN. WORK IS NOT NECESSARILY LIMITED TO THE AREA ENCLOSED - ALSO REFER TO M&E DWGS FOR WORK OUTSIDE PROJECT

1.6 ALL WORK SHOWN WITHIN PROJECT AREA IS CONSIDERED AS NEW AND BE INCLUDED IN CONTRACT EXCEPT NOTED AS EXISTING ON CONSTRUCTION DOCUMENTS.

1.7 ALL CONSTRUCTION AND INSTALLATION IS TO BE QUOTED AND PERFORMED IN ACCORDANCE WITH THE CURRENT ISSUE OF THE BRITISH COLUMBIA BUILDING CODE 2018 AND ITS AMENDMENTS, AS WELL AS ALL OTHER CODES BY-LAWS, AND REGULATIONS HAVING JURISDICTION.

1.8 ALL WORK PERFORMED BY TRADES AND SUB-TRADES SHALL MEET THE MINIMUM REQUIREMENTS OF WORKMANSHIP AS ACCEPTED IN THEIR OWN TRADE OR TRADE ASSOCIATION.

1.9 ALL MATERIALS, FIXTURES AND EQUIPMENT MUST BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS'

1.10 Contractor to supply all new materials and perform all work to fulfill the intent of the CONTRACT DOCUMENTS.

1.11 CONTRACTOR TO PROVIDE ALL NECESSARY COORDINATION AND SUPERVISION OF ALL SUB-TRADES.

1.12 NO STRUCTURAL ITEMS TO BE REMOVED, CUT OR ALTERED OTHER THAN THOSE SHOWN ON STRUCTURAL

1.13 CONTRACTOR TO ENSURE ALL CONSTRUCTION AND STORAGE OF MATERIALS AND EQUIPMENT TO BE CONFINED WITHIN THE PROJECT AREA THROUGHOUT CONSTRUCTION PERIOD. IN NO CIRCUMSTANCES SHALL ANY EXISTING EXIT ROUTE BE OBSTRUCTED.

1.14 CONTRACTOR TO POST ALL NECESSARY SAFETY AND EXIT SIGNS AT AND AMEND AS REQUIRED TO MAINTAIN A SAFE ENVIRONMENT WITHIN AND IN THE VICINITY OF THE SITE THROUGHOUT THE CONSTRUCTION PERIOD.

1.15 Contractor to maintain proper means of egress from project area at all times throughou1 THE CONSTRUCTION PERIOD.

.16 CONTRACTOR TO NOTIFY, COORDINATE AND SEEK APPROVAL FROM HOSPITAL & SECURITY DEPT. 72 HOURS IN ADVANCE PRIOR TO ANY WORK OUTSIDE PROJECT AREA AS WELL AS ANY MECH, ELEC, PLUMB, FIRE SERVICES AND MEDICAL GASES SHUT OFF. IF SUCH WORK NEEDS TO BE PERFORMED AFTER REGULAR HOURS AND SO THAT ANY INTERRUPTION OF THE NORMAL OPERATION OF THE SPACES OUTSIDE THE PROJECT AREA, SUCH AFTER HOUR WORK WILL BE PART OF THIS CONTRACT.

.17 DELIVERY OF MATERIALS AND DISPOSAL OF GARBAGE MUST BE CARRIED OUT IN SEALED BINS AFTER REGULAR HOURS THROUGH SERVICE CORRIDORS AS PERMITTED BY THE HOSPITAL.

1.18 SUPPLY, DELIVERY AND ASSEMBLY OF FURNITURE AND FIXTURES INDICATED AS BY OWNER ARE NOT PART OF THIS CONTRACT. CONTRACTOR IS RESPONSIBLE ONLY FOR COORDINATION OF THE ABOVE, PLUS INSTALLATION IF SPECIFIED.

1.19 $\,$ Supply and delivery of electrical appliances are by owner. Contractor is responsible for hook UP OF ELECTRICAL APPLIANCES.

1.20 FOLLOW ALL RULES AS RECOMMENDED UNDER "GUIDANCE TO CONSTRUCTION SITES OPERATING

DURING COVID-19"

ABBREVIATIONS

D)	AT / EACH AT				
\/C	AIR CONDITIONER	C 1	CALLEE	- 4.	
BHR	ALCOHOL BASE HAND RUB	GA	GAUGE	R/A	RETURN AIR
ACOUST	ACOUSTICAL	GB	GRAB BAR	REF	REFERENCE
۸DJ	ADJUSTABLE	GWB	GYPSUM WALL BOARD	REFL	REFLECTED
۸FÉ	ABOVE FINISHED FLOOR	Н	HIGH	REQ'D	REQUIRED
ALUM	ALUMINUM	HC	HANDICAPPED	RM	ROOM
NTC	ACOUSTIC TILE CEILING	HD	HAND DRYER	RO	ROUGH OPENING
LDG	BUILDING	HGT	HEIGHT	S/A	SUPPLY AIR
LK	BLOCK	HM	HOLLOW METAL	SCH	SCHEDULE
s/S	BOTH SIDES	HMI	HANDICAPPED MIRROR	SD	SOAP DISPENSER
TWN	BETWEEN	HORIZ	HORIZONTAL	SIM	SIMILAR
G	CORNER GUARD	HW	HARD WOOD	SND	SANITARY NAPKIN
ΞH	CLOTHES HOOK	INCL	INCLUDING		DISPOSAL
Ĺ	CENTER LINE	INSUL	INSULATION	SPEC	SPECIFICATION
LNG	CEILING	INT	INTERIOR	SS	STAINLESS STEEL
MU	CONCRETE MASONRY UNIT	JB	JUNCTION BOX	STL	STEEL
ONC	CONCRETE	L	LENGTH	STRUCT	STRUCTURAL
ONSTR	CONSTRUCTION	LAD	LINEAR AIR DIFFUSER	SUSP	SUSPENDED
ONT	CONTINUOUS	LAM	LAMINATE	T&B	TOP & BOTTOM
OORD	COORDINATE	LRA	LINEAR R/A DIFFUSER	T&G	TONGUE & GROO\
T	CERAMIC TILE	LSA	LINEAR S/A DIFFUSER	THK	THICK
DEMO	DEMOLITION / DEMOLISH	M&E	MECH & ELEC	TOC	TOP OF CONCRETE
DIA	DIAMETER		(INCL PLUMB & FS)	TPD	TOILET PAPER
)R	DOOR	MANUF	MANUFACTURER		DISPENSER
)N	DOWN	MAX	MAXIMUM	TYP	TYPICAL
WG(S)	DRAWING(S)	MECH	MECHANICAL	U/C	UNDER COUNTER
/A	EXHAUST AIR	MI	MIRROR	U/S	UNDERSIDE
A	EACH	MTD	MOUNTED	UNO	UNLESS NOTED
L / ELEV	ELEVATION	MTL	METAL		OTHERWISE
LEC	ELECTRICAL	Ν	NEW	VCT	VINYL COMPOSITION
	EQUAL	NIC	NOT IN CONTRACT		TILE
Q X	EXIST	NTS	NOT TO SCALE	VERT	VERTICAL
XP	EXPOSED	NUM/#	NUMBER	VEST	VESTIBULE
XT	EXTERIOR	OD	OUTSIDE DIAMETER	VIF	VERIFIED IN FIELD
D D	FLOOR DRAIN	PL	PROPERTY LINE	W	WIDE
DN	FOUNDATION	PLAS	PLASTIC	W/	WITH
E E	FIRE EXTINGUISHER	PLUMB	PLUMBING	WC	WATER CLOSET
_	I IIXL L/XI II NUUISI ILIX	DIVALID	DIVALIOOD		

PROJECT TEAM

NORTHERN HEALTH AUTHORITY SUITE 600 - 299 VICTORIA ST PRINCE GEORGE, BC V2L 5B8

PARKING PROVISION:

ARCHITECTURAL CONSULTANT: **DCYT ARCHITECTURE**

E - dc@dcytarchitecture.ca

3022 CAMBIE STREET VANCOUVER, BC V5Z 2V9 T - 604 254 0868 T - 778 233 9001 E - kmarcakis@cyla.ca

EXISTING - NO CHANGE

NOT APPLICABLE

STRUCTURAL CONSULTANT: C. Y. LOH ASSOCIATES 1863 POWELL ST VANCOUVER, BC V5L 1H8

MECHANICAL CONSULTANT **IMPACT ENGINEERING** 312 MAIN ST VANCOUVER, BC V6A 2T2 T - 604 992 5920

E - jle@impacteng.ca

FIRE EXTINGUISHER

FINISH

FIXTURE

FILLER PANEL

FIRE RATED

FIRE SERVICES

FLOOR

ELECTRICAL CONSULTANT: NRS ENGINEERING SUITE 212 - 556 N NECHAKO ST PRINCE GEORGE, BC V2K 1A1

E - steve@nrsengineering.ca

T - 250 562 0551

PLYWD

PREFIN

PTD

PTN

PLYWOOD

PAINTED

PARTITION

PRE-FINISHED

PAPER TOWEL HOLDER

IMAGING EQUIPMENT: SIEMENS HEALTHCARE LTD

WP

1577 NORTH SERVICE RD E OAKVILLE, ON L6H 0H6 T - 236 984 5339 E - lee.boon@siemens-healthineers.ca

WOOD

WEIGHT

WALL PROTECTION

WASTE RECEPTACLE

ARCHITECT:



WWW.DCYTARCHITECTURE.CA

WORK OUTSIDE PROJECT AREA **GENERAL NOTES**

1. OBTAIN AUTHORIZATION FROM **HOSPITAL** TO PERFORM WORK OUTSIDE PROJECT AREA PRIOR TO COMMENCEMENT OF WORK

2. ALL WORK OUTSIDE PROJECT AREA AND HOARDING AREA TO BE PERFORMED AFTER REGULAR HOURS.

UNLESS AUTHORIZED BY **HOSPITAL** OTHERWISE 3. SEE M&E DWGS FOR M&E SCOPE OF WORK

4. REMOVE AND REINSTALL CLNG TILES AND GRID AS REQ'D TO PERFORM M&E WORK.

5. REPLACE CLNG TILES WITH NEW TO MATCH EX IF DAMAGED DURING CONSTRUCTION. 6. PERFORM SCANNING OF CONC SLAB TO VERIFY

EXISTING M&E SERVICES & REBAR INSIDE SLAB BEFORE CORING OF SLAB

7. PROVIDE FIRE STOPPING TO MAINTAIN FIRE SEPARATION REQ'D FOR ALL NEW FLOOR AND WALL

8. REMOVE, REPAIR & REFINISH WALL AND FLOOR IF REQ'D FOR M&E WORK

9. REMOVE AND REPAIR EX UNDERSLAB THERMAL INSULATION IF REQ'D FOR INSTALLATION OF NEW M&E SERVICES - SEE M&E DWGS FOR EXTENT OF WORK 10. FOR M&E WORK EXTENDING BELOW THE PROJECT

AREA, CONTRACTOR TO REMOVE, REPAIR & REFINISH EXISTING CEILING AS REQ'D. 11. PROTECT EXISTING FLOOR FINISHES ALONG PATH

NOTE 1-FOR DELIVERY OF GENERAL FLUOROSCOPY

OF TRAVEL FROM ELEVATOR LOBBY TO PROJECT AREA.

A. CONTRACTOR TO COORDINATE WITH HOSPITAL 72 HOURS IN ADVANCE FOR DELIVERY OF EQUIPMENT.

B. CONTRACTOR TO MAKE GOOD EXTERIOR AND

INTERIOR WALLS, FLOORS AND CEILING, IF DAMAGED

DURING EQUIPMENT DELIVERY. C. CONTRACTOR TO PROVIDE PROTECTIVE COVERING. FOR WALL, FLOOR AND CEILING AS REQUIRED BY HOSPITAL ALONG THE DELIVERY ROUTE.

12	ISSUED FOR CONSTRUCTION	OCT 13, 2021	RC
11	ISSUED FOR BP REVISION 1 5	AUG 4, 2021	RC
10	TENDER ADDENDUM 5	JULY 26, 2021	RC
9	NOT ISSUED	1	1
8	TENDER ADDENDUM 1	JUNE 10, 2021	RC
7	ISSUED FOR TENDER	JUNE 4, 2021	RC
6	ISSUED FOR 80% CD	MAY 21, 2021	RC
5	ISSUED FOR BP SUBMISSION	MAY 7, 2021	RC
4	NOT ISSUED	-	-
3	NOT ISSUED	-	-
2	NOT ISSUED	-	-
1	NOT ISSUED	-	-

DATE

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No. REVISION



UHNBC **FLUOROSCOPY REPLACEMENT**

1475 EDMONTON STREET, PRINCE GEORGE BC V2M 1S2

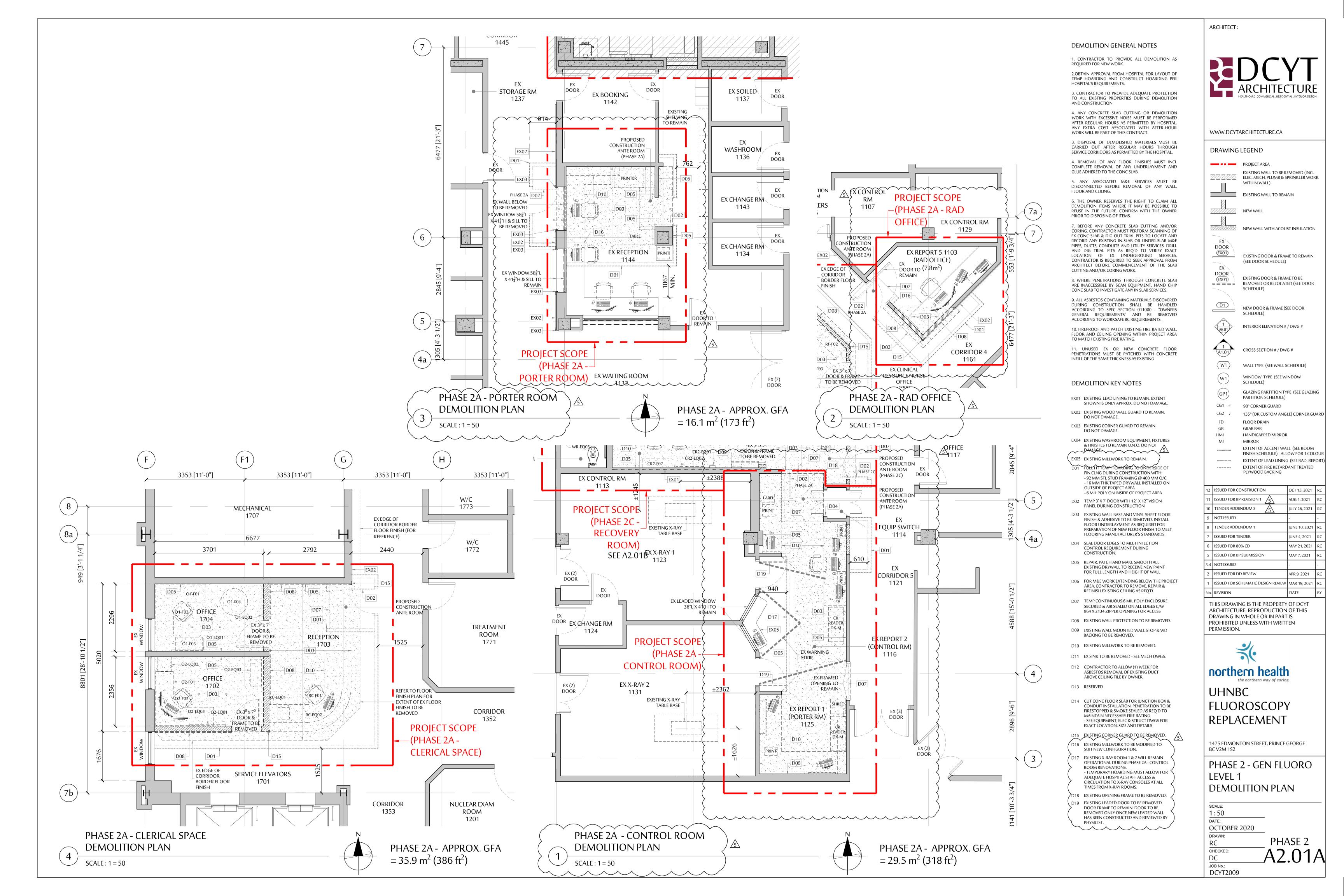
PHASE 2 - GEN FLUORO **LOCATION PLAN & GENERAL NOTES**

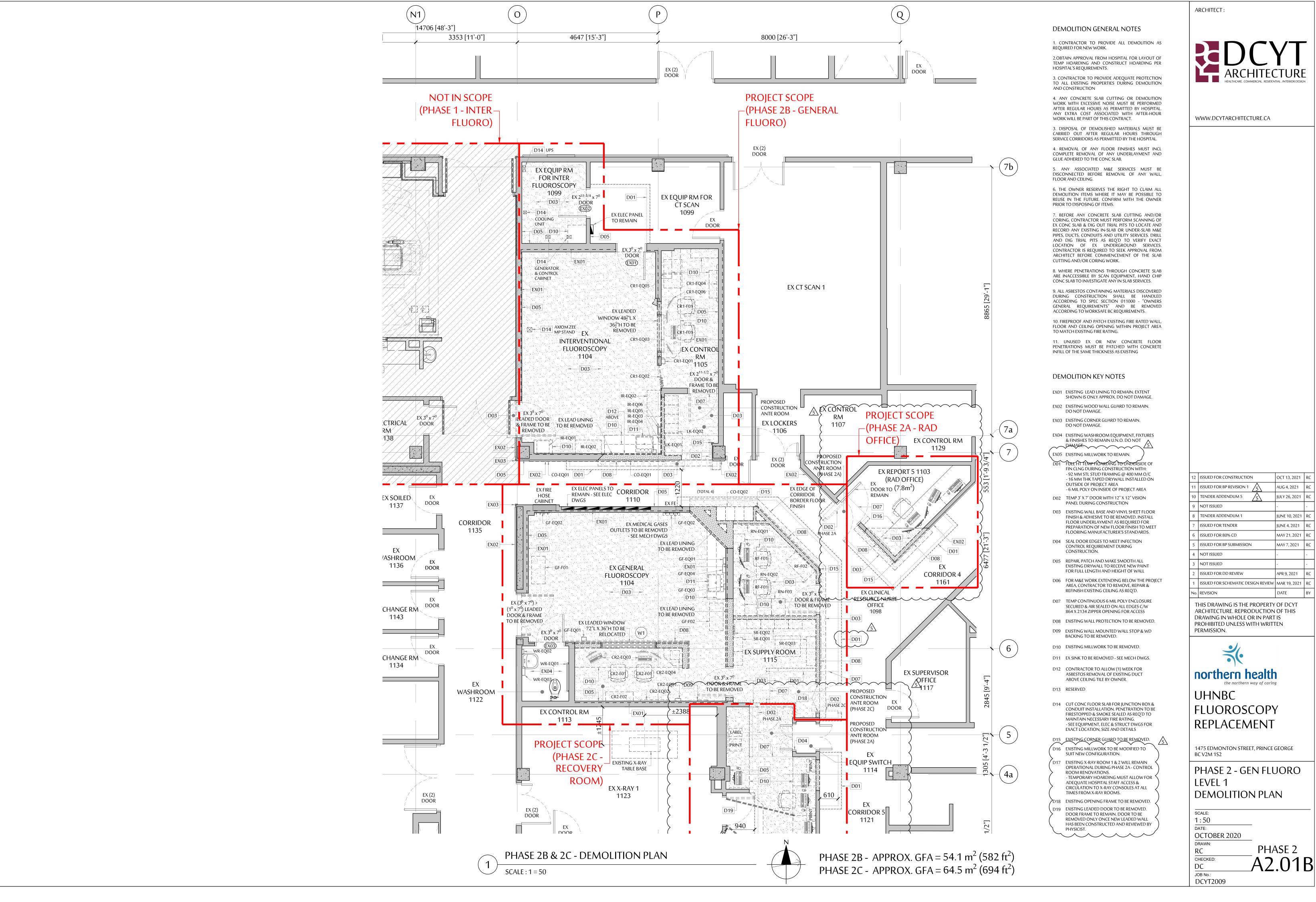
AS NOTED OCTOBER 2020 RC

SCALE:

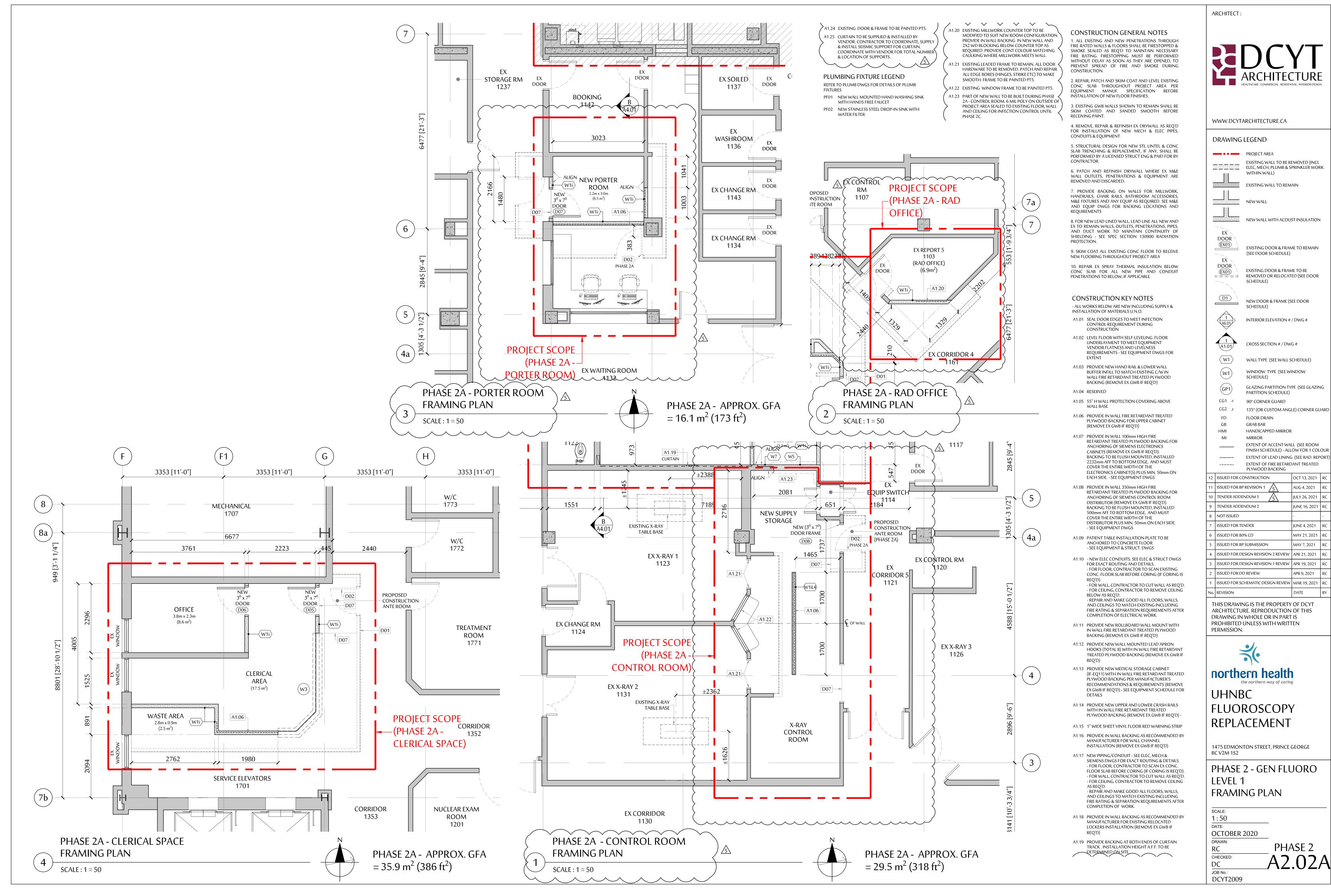
PHASE 2

CHECKED DC JOB No.: DCYT2009

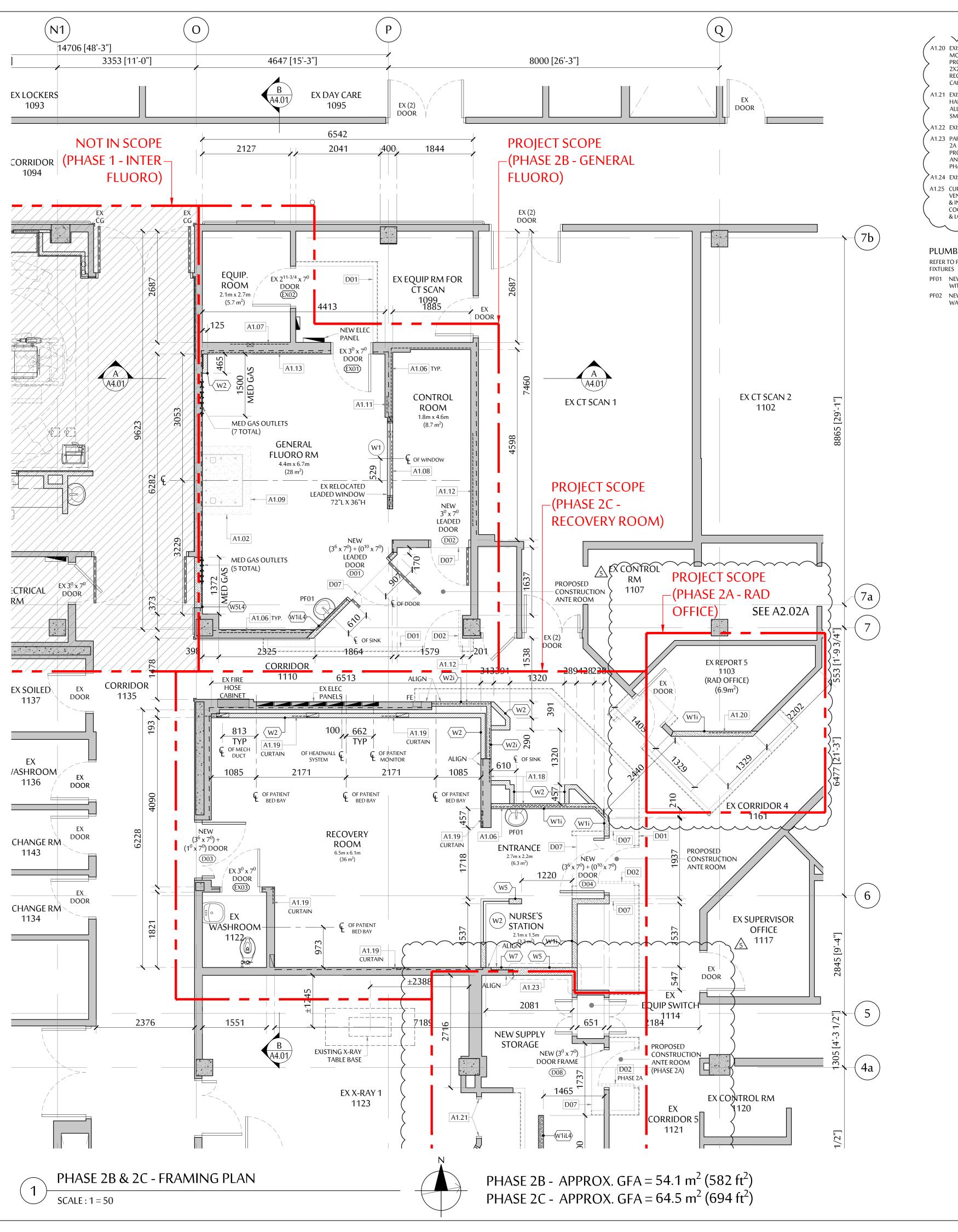




10	TENDER ADDENDUM 5	JULY 26, 2021
9	NOT ISSUED	-
8	TENDER ADDENDUM 1	JUNE 10, 2021
7	ISSUED FOR TENDER	JUNE 4, 2021
6	ISSUED FOR 80% CD	MAY 21, 2021
5	ISSUED FOR BP SUBMISSION	MAY 7, 2021
4	NOT ISSUED	-
3	NOT ISSUED	-
2	ISSUED FOR DD REVIEW	APR 9, 2021
1	ISSUED FOR SCHEMATIC DESIGN REVIEW	MAR 19, 2021
No.	REVISION	DATE







A1.20 EXISTING MILLWORK COUNTER TOP TO BE

MODIFIED TO SUIT NEW ROOM CONFIGURATION.

PROVIDE IN WALL BACKING IN NEW WALL AND
2X2 WD BLOCKING BELOW COUNTER TOP AS

CONSTRU

REQUIRED. PROVIDE CONT COLOUR MATCHING CAULKING WHERE MILLWORK MEETS WALL.

A1.21 EXISTING LEADED FRAME TO REMAIN. ALL DOOR HARDWARE TO BE REMOVED. PATCH AND REPAIR ALL EDGE BORES (HINGES, STRIKE ETC) TO MAKE

SMOOTH. FRAME TO BE PAINTED PT5.

 \vee \vee \vee \vee

A1.22 EXISTING WINDOW FRAME TO BE PAINTED PT5.

A1.23 PART OF NEW WALL TO BE BUILT DURING PHASE
2A - CONTROL ROOM. 6 MIL POLY ON OUTSIDE OF
PROJECT AREA SEALED TO EXISTING FLOOR, WALL
AND CEILING FOR INFECTION CONTROL UNTIL
PHASE 2C.

A1.24 EXISTING DOOR & FRAME TO BE PAINTED PT5.

A1.25 CURTAIN TO BE SUPPLIED & INSTALLED BY

VENDOR. CONTRACTOR TO COORDINATE, SUPPLY
& INSTALL SEISMIC SUPPORT FOR CURTAIN.

COORDINATE WITH VENDOR FOR TOTAL NUMBER
& LOCATION OF SUPPORTS.

PLUMBING FIXTURE LEGEND
REFER TO PLUMB DWGS FOR DETAILS OF PLUMB

PF01 NEW WALL MOUNTED HAND WASHING SINK WITH HANDS FREE FAUCET

PF02 NEW STAINLESS STEEL DROP-IN SINK WITH WATER FILTER

CONSTRUCTION GENERAL NOTES

1. ALL EXISTING AND NEW PENETRATIONS THROUGH FIRE RATED WALLS & FLOORS SHALL BE FIRESTOPPED & SMOKE SEALED AS REQ'D TO MAINTAIN NECESSARY FIRE RATING. FIRESTOPPING MUST BE PERFORMED WITHOUT DELAY AS SOON AS THEY ARE OPENED, TO PREVENT SPREAD OF FIRE AND SMOKE DURING CONSTRUCTION.

2. REPAIR, PATCH AND SKIM COAT AND LEVEL EXISTING CONC SLAB THROUGHOUT PROJECT AREA PER EQUIPMENT MANUF. SPECIFICATION BEFORE INSTALLATION OF NEW FLOOR FINISHES.

3. EXISTING GWB WALLS SHOWN TO REMAIN SHALL BE SKIM COATED AND SANDED SMOOTH BEFORE

RECEIVING PAINT.

4. REMOVE, REPAIR & REFINISH EX DRYWALL AS REQ'D FOR INSTALLATION OF NEW MECH & ELEC PIPES,

5. STRUCTURAL DESIGN FOR NEW STL LINTEL & CONC SLAB TRENCHING & REPLACEMENT, IF ANY, SHALL BE PERFORMED BY A LICENSED STRUCT ENG & PAID FOR BY

6. PATCH AND REFINISH DRYWALL WHERE EX M&E WALL OUTLETS, PENETRATIONS & EQUIPMENT ARE REMOVED AND DISCARDED.

CONDUITS & EQUIPMENT.

7. PROVIDE BACKING ON WALLS FOR MILLWORK, HANDRAILS, CHAIR RAILS, BATHROOM ACCESSORIES, M&E FIXTURES AND ANY EQUIP AS REQUIRED. SEE M&E AND EQUIP DWGS FOR BACKING LOCATIONS AND REQUIREMENTS

8. FOR NEW LEAD LINED WALL, LEAD LINE ALL NEW AND EX TO REMAIN WALLS, OUTLETS, PENETRATIONS, PIPES, AND DUCT WORK TO MAINTAIN CONTINUITY OF SHIELDING - SEE SPEC SECTION 130900 RADIATION PROTECTION.

9. SKIM COAT ALL EXISTING CONC FLOOR TO RECEIVE NEW FLOORING THROUGHOUT PROJECT AREA

10. REPAIR EX SPRAY THERMAL INSULATION BELOW CONC SLAB FOR ALL NEW PIPE AND CONDUIT PENETRATIONS TO BELOW, IF APPLICABLE.

CONSTRUCTION KEY NOTES

- ALL WORKS BELOW ARE NEW INCLUDING SUPPLY & INSTALLATION OF MATERIALS U.N.O.

A1.01 SEAL DOOR EDGES TO MEET INFECTION
CONTROL REQUIREMENT DURING

A1.02 LEVEL FLOOR WITH SELF-LEVELING FLOOR UNDERLAYMENT TO MEET EQUIPMENT VENDOR FLATNESS AND LEVELNESS REQUIREMENTS - SEE EQUIPMENT DWGS FOR EXTENT

A1.03 PROVIDE NEW HAND RAIL & LOWER WALL BUFFER INFILL TO MATCH EXISTING C/W IN WALL FIRE RETARDANT TREATED PLYWOOD BACKING (REMOVE EX GWB IF REQ'D)

A1.04 RESERVED

CONSTRUCTION

A1.05 55" H WALL PROTECTION COVERING ABOVE WALL BASE

A1.06 PROVIDE IN WALL FIRE RETARDANT TREATED PLYWOOD BACKING FOR UPPER CABINET (REMOVE EX GWB IF REQ'D)

A1.07 PROVIDE IN WALL 100mm HIGH FIRE
RETARDANT TREATED PLYWOOD BACKING FOR
ANCHORING OF SIEMENS ELECTRONICS
CABINETS (REMOVE EX GWB IF REQ'D).
BACKING TO BE FLUSH MOUNTED, INSTALLED
2232mm AFF TO BOTTOM EDGE, AND MUST
COVER THE ENTIRE WIDTH OF THE
ELECTRONICS CABINET(S) PLUS MIN. 50mm ON
EACH SIDE. - SEE EQUIPMENT DWGS

A1.08 PROVIDE IN WALL 350mm HIGH FIRE
RETARDANT TREATED PLYWOOD BACKING FOR
ANCHORING OF SIEMENS CONTROL ROOM
DISTRIBUTOR (REMOVE EX GWB IF REQ'D).
BACKING TO BE FLUSH MOUNTED, INSTALLED
500mm AFF TO BOTTOM EDGE, AND MUST
COVER THE ENTIRE WIDTH OF THE
DISTRIBUTOR PLUS MIN. 50mm ON EACH SIDE.
- SEE EQUIPMENT DWGS

A1.09 PATIENT TABLE INSTALLATION PLATE TO BE ANCHORED TO CONCRETE FLOOR
- SEE EQUIPMENT & STRUCT. DWGS

A1.10 - NEW ELEC CONDUITS. SEE ELEC & STRUCT DWGS FOR EXACT ROUTING AND DETAILS.
- FOR FLOOR, CONTRACTOR TO SCAN EXISTING CONC. FLOOR SLAB BEFORE CORING (IF CORING IS REQ'D).
- FOR WALL, CONTRACTOR TO CUT WALL AS REQ'D.
- FOR CEILING, CONTRACTOR TO REMOVE CEILING BELOW AS REQ'D.
- REPAIR AND MAKE GOOD ALL FLOORS, WALLS, AND CEILINGS TO MATCH EXISTING INCLUDING

AND CEILINGS TO MATCH EXISTING INCLUDING
FIRE RATING & SEPARATION REQUIREMENTS AFTER
COMPLETION OF ELECTRICAL WORK.

A1.11 PROVIDE NEW ROLLBOARD WALL MOUNT WITH

IN WALL FIRE RETARDANT TREATED PLYWOOD BACKING (REMOVE EX GWB IF REQ'D)

A1.12 PROVIDE NEW WALL MOUNTED LEAD APRON HOOKS (TOTAL 8) WITH IN WALL FIRE RETARDANT TREATED PLYWOOD BACKING (REMOVE EX GWB IF

A1.13 PROVIDE NEW MEDICAL STORAGE CABINET
(IF-EQ11) WITH IN WALL FIRE RETARDANT TREATED
PLYWOOD BACKING PER MANUFACTURER'S
RECOMMENDATIONS & REQUIREMENTS (REMOVE
EX GWB IF REQ'D) - SEE EQUIPMENT SCHEDULE FOR

A1.14 PROVIDE NEW UPPER AND LOWER CRASH RAILS WITH IN WALL FIRE RETARDANT TREATED PLYWOOD BACKING (REMOVE EX GWB IF REQ'D)

A1.15 1" WIDE SHEET VINYL FLOOR RED WARNING STRIP

A1.16 PROVIDE IN WALL BACKING AS RECOMMENDED BY MANUFACTURER FOR WALL CHANNEL INSTALLATION (REMOVE EX GWB IF REQ'D)

A1.17 NEW PIPING/CONDUIT - SEE ELEC, MECH &
SIEMENS DWGS FOR EXACT ROUTING & DETAILS.
- FOR FLOOR, CONTRACTOR TO SCAN EX CONC.
FLOOR SLAB BEFORE CORING (IF CORING IS REQ'D).
- FOR WALL, CONTRACTOR TO CUT WALL AS REQ'D.
- FOR CEILING, CONTRACTOR TO REMOVE CEILING
AS REQ'D.
- REPAIR AND MAKE GOOD ALL FLOORS, WALLS,
AND CEILINGS TO MATCH EXISTING INCLUDING

A1.18 PROVIDE IN WALL BACKING AS RECOMMENDED BY MANUFACTURER FOR EXISTING RELOCATED LOCKERS INSTALLATION (REMOVE EX GWB IF

FIRE RATING & SEPARATION REQUIREMENTS AFTER

A1.19 PROVIDE BACKING AT BOTH ENDS OF CURTAIN TRACK . INSTALLATION HEIGHT A.F.F. TO BE DETERMINED ON SITE.

COMPLETION OF WORK.

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11	ISSUED FOR BP REVISION 1 5	AUG 4, 2021	RC			
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5	ISSUED FOR BP SUBMISSION	MAY 7, 2021	RC			
4	ISSUED FOR DESIGN REVISION 2 REVIEW	APR 21, 2021	RC			
3	ISSUED FOR DESIGN REVISION 1 REVIEW	APR 19, 2021	RC			
2	ISSUED FOR DD REVIEW	APR 9, 2021	RC			
1	ISSUED FOR SCHEMATIC DESIGN REVIEW	MAR 19, 2021	RC			
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FLUOROSCOPY REPLACEMENT

1475 EDMONTON STREET, PRINCE GEORGE BC V2M 1S2

PHASE 2 - GEN FLUORO LEVEL 1 FRAMING PLAN

SCALE:

1:50

DATE:

OCTOBER 2020

DRAWN:

RC

CHECKED:

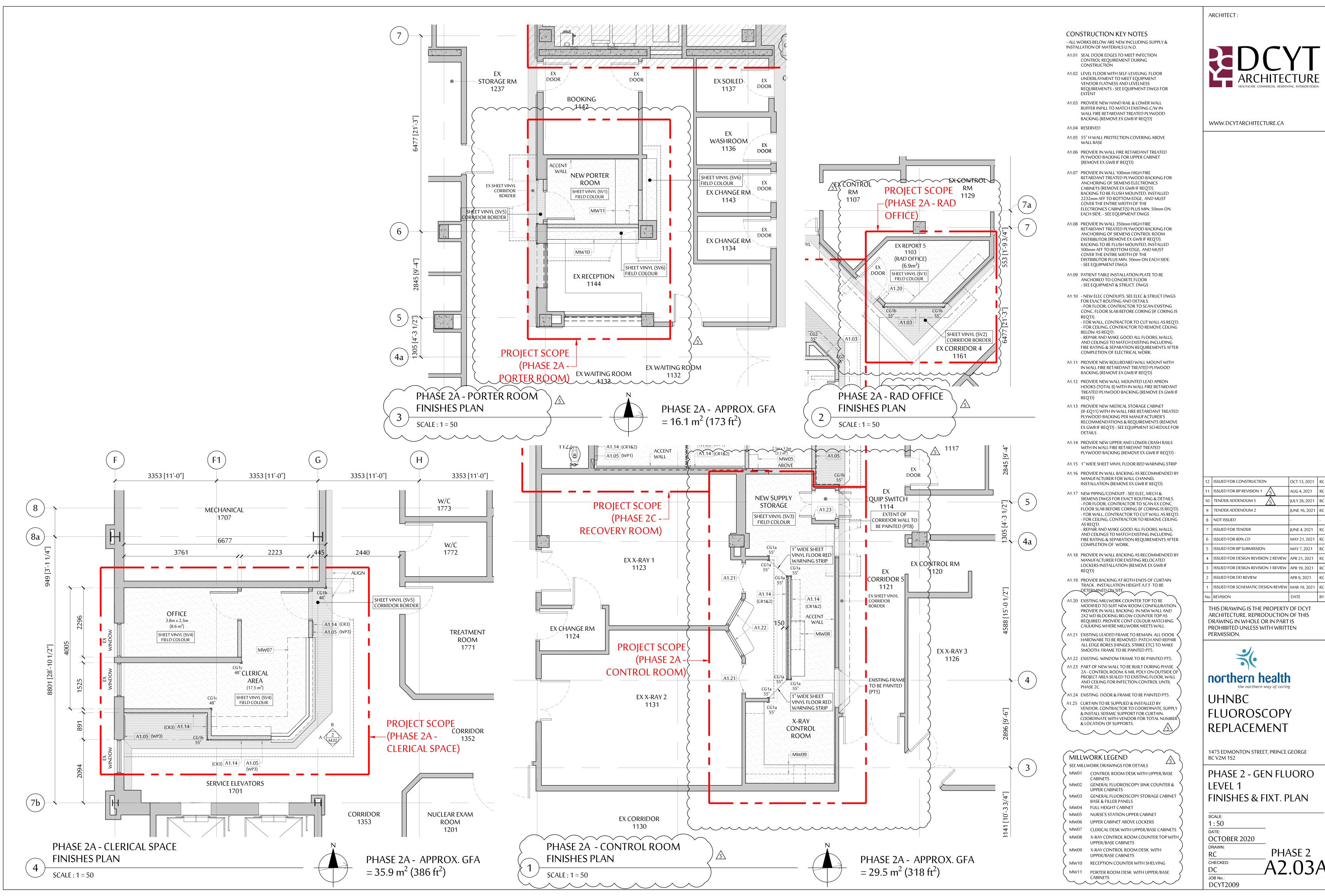
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JOB No.:

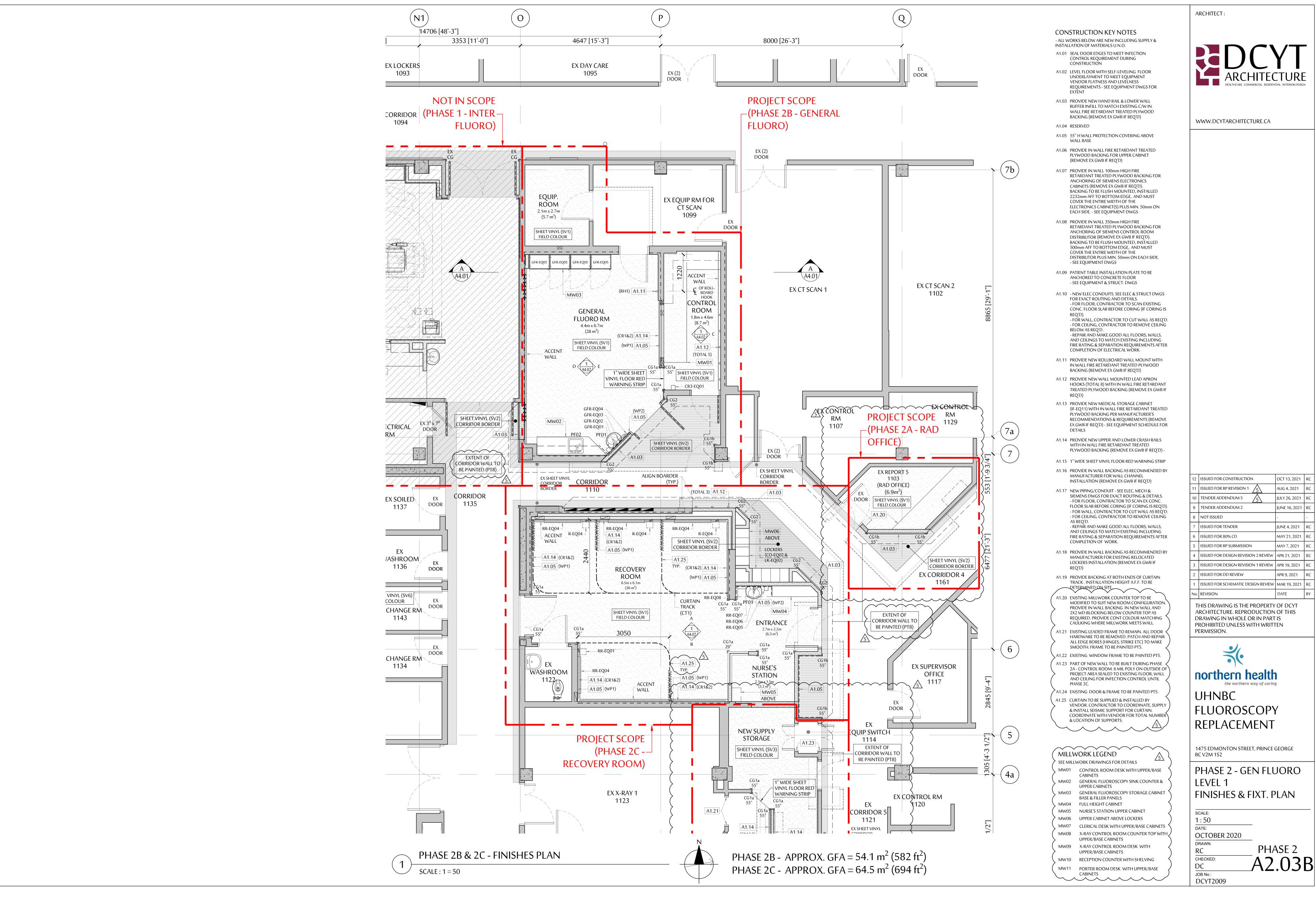
PHASE 2

A2.02

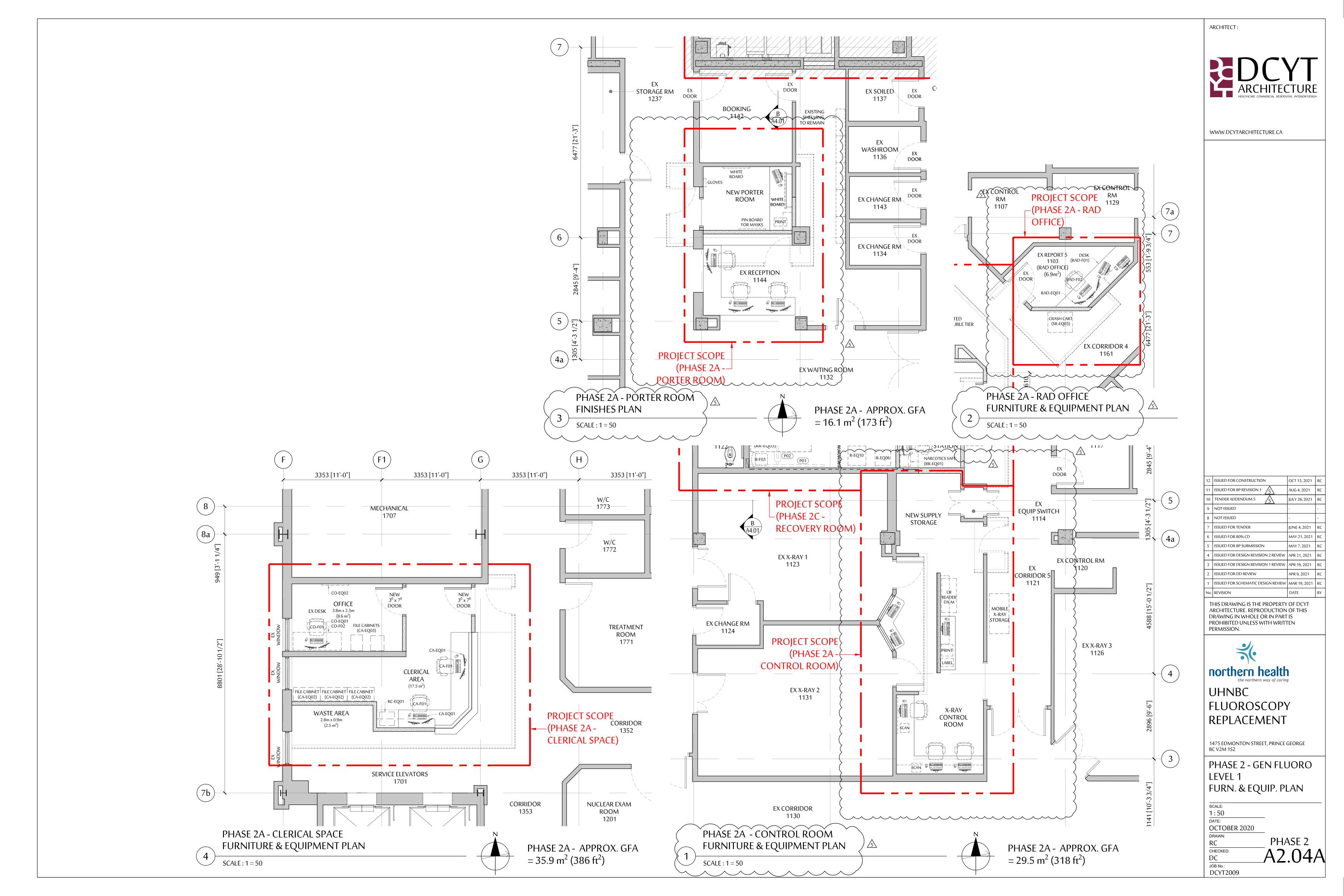
DCYT2009

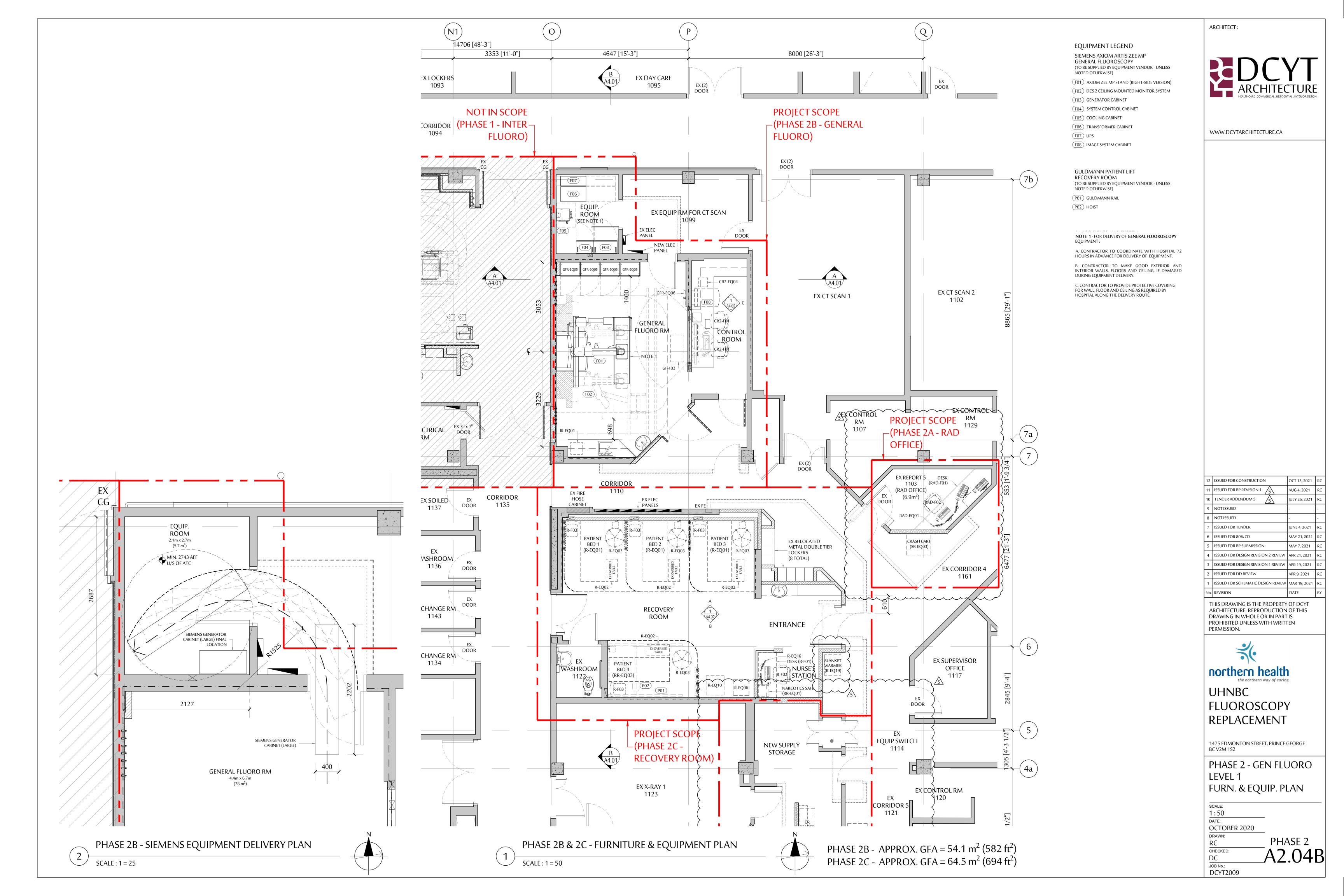


AUG 4, 2021 RC JULY 26, 2021 RC JUNE 16, 2021 RC MAY 21, 2021 RC ISSUED FOR DESIGN REVISION 2 REVIEW | APR 21, 2021 | RC ISSUED FOR DESIGN REVISION 1 REVIEW | APR 19, 2021 | RC



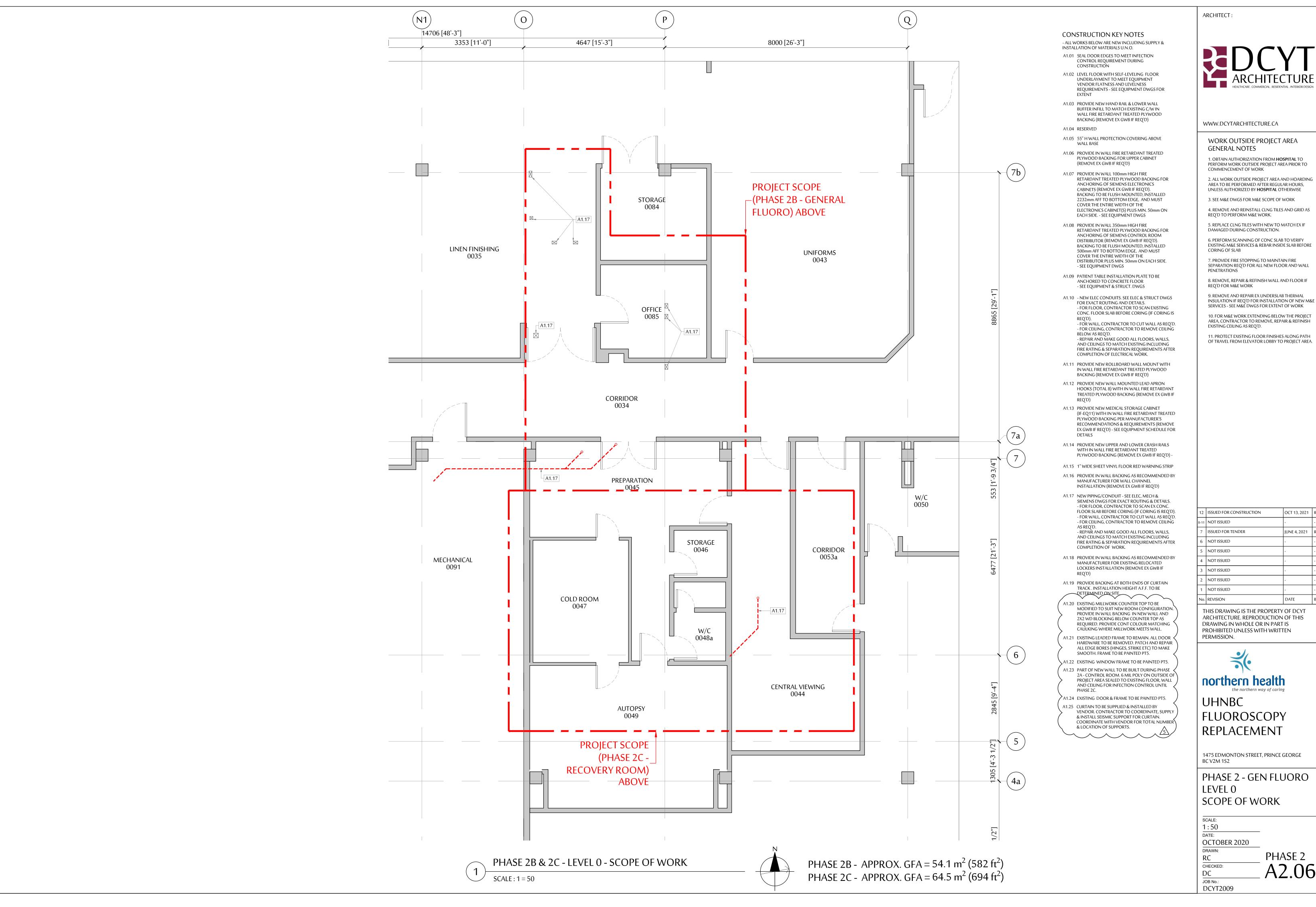
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9	TENDER ADDENDUM 2	JUNE 16, 2021	RC
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1	ISSUED FOR SCHEMATIC DESIGN REVIEW	MAR 19, 2021	RC
No.	REVISION	DATE	BY





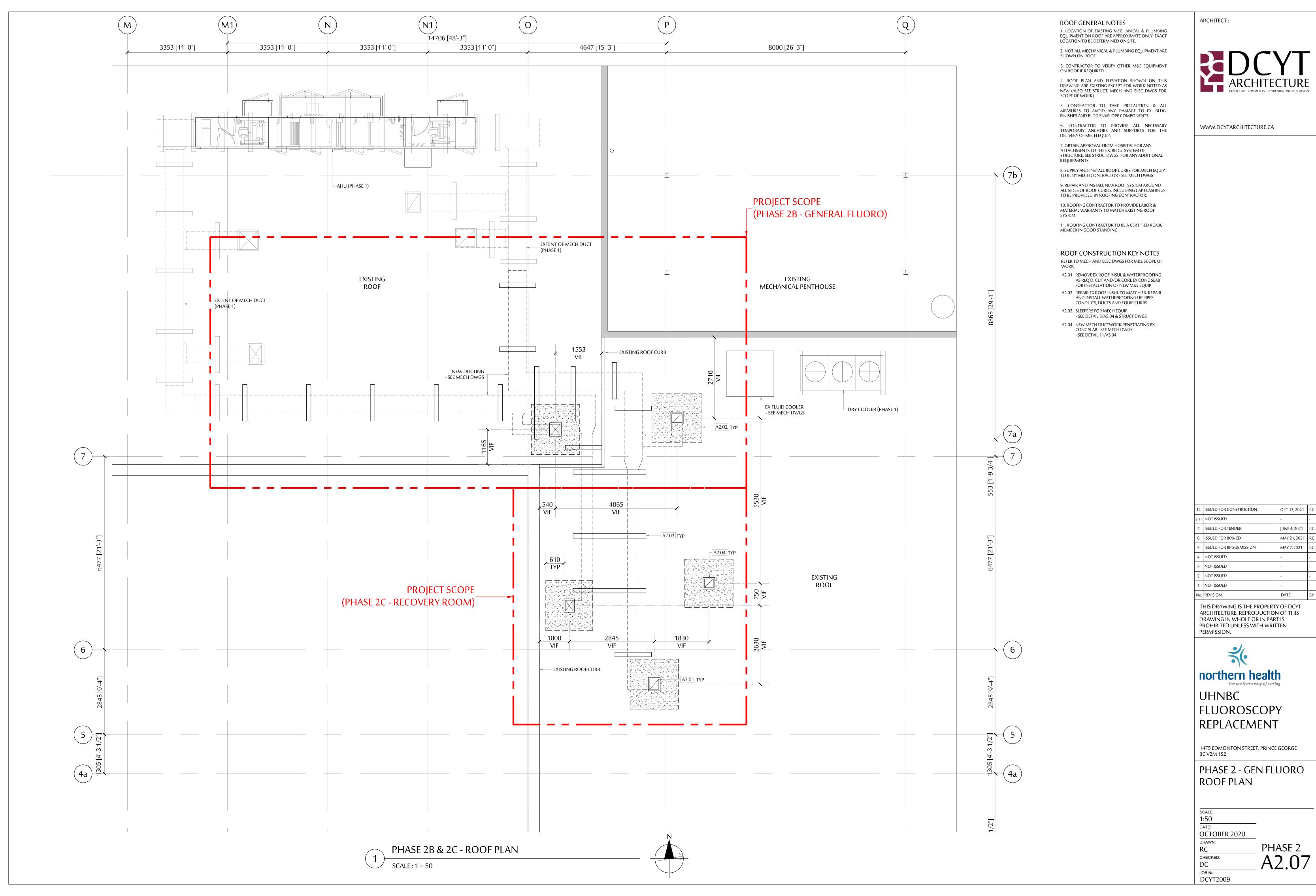


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2	NOT ISSUED	-
1	NOT ISSUED	-
No.	REVISION	DATE

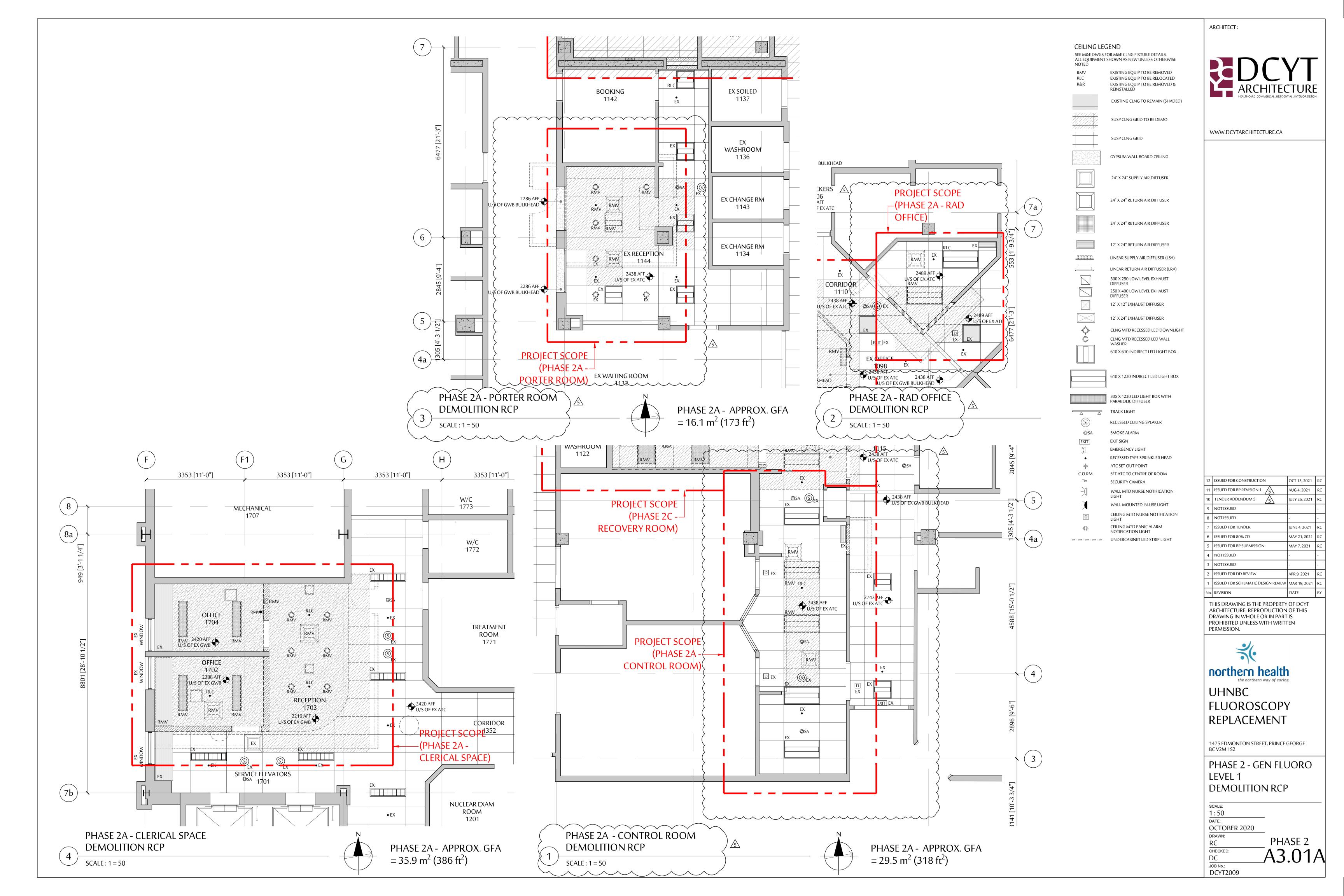


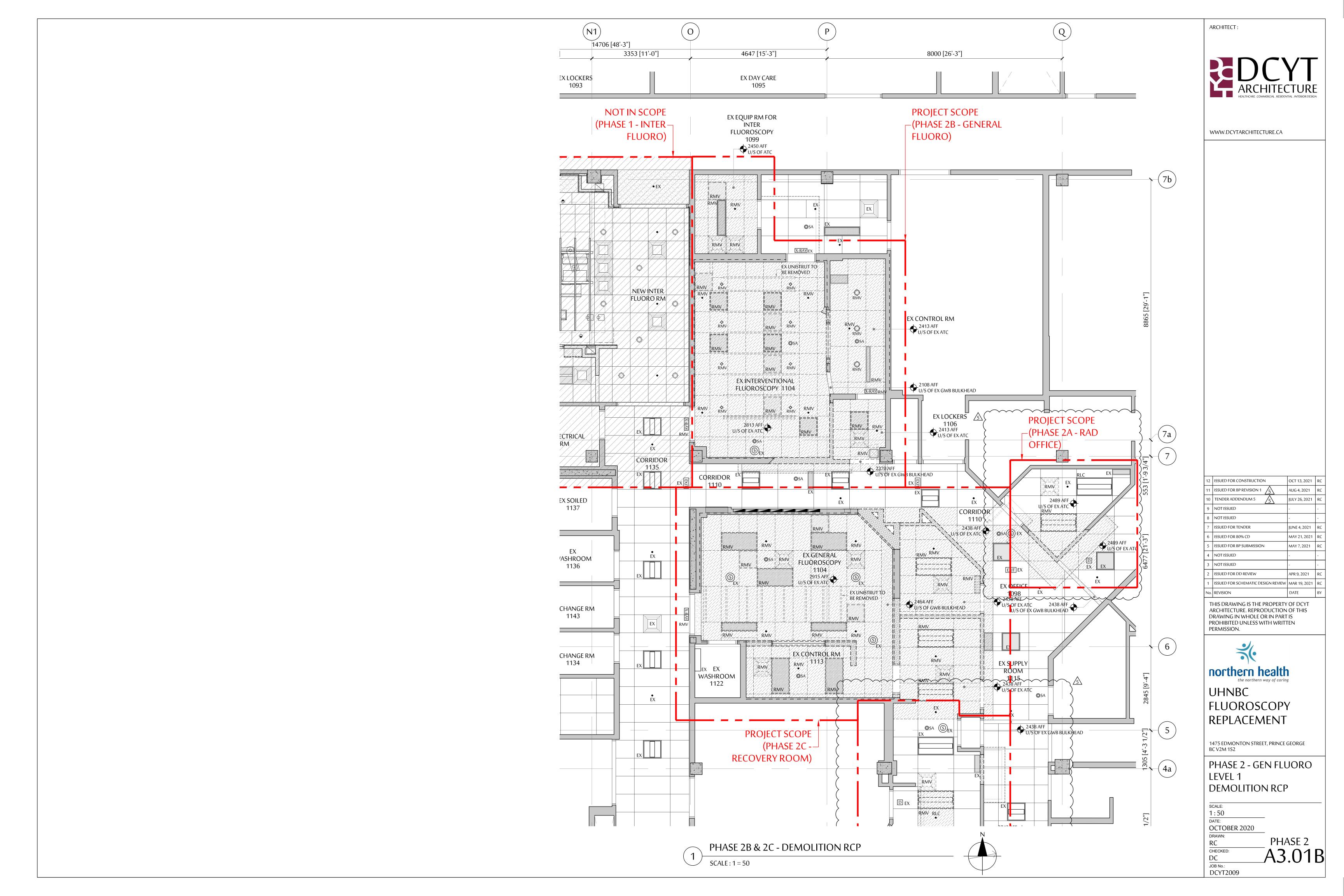


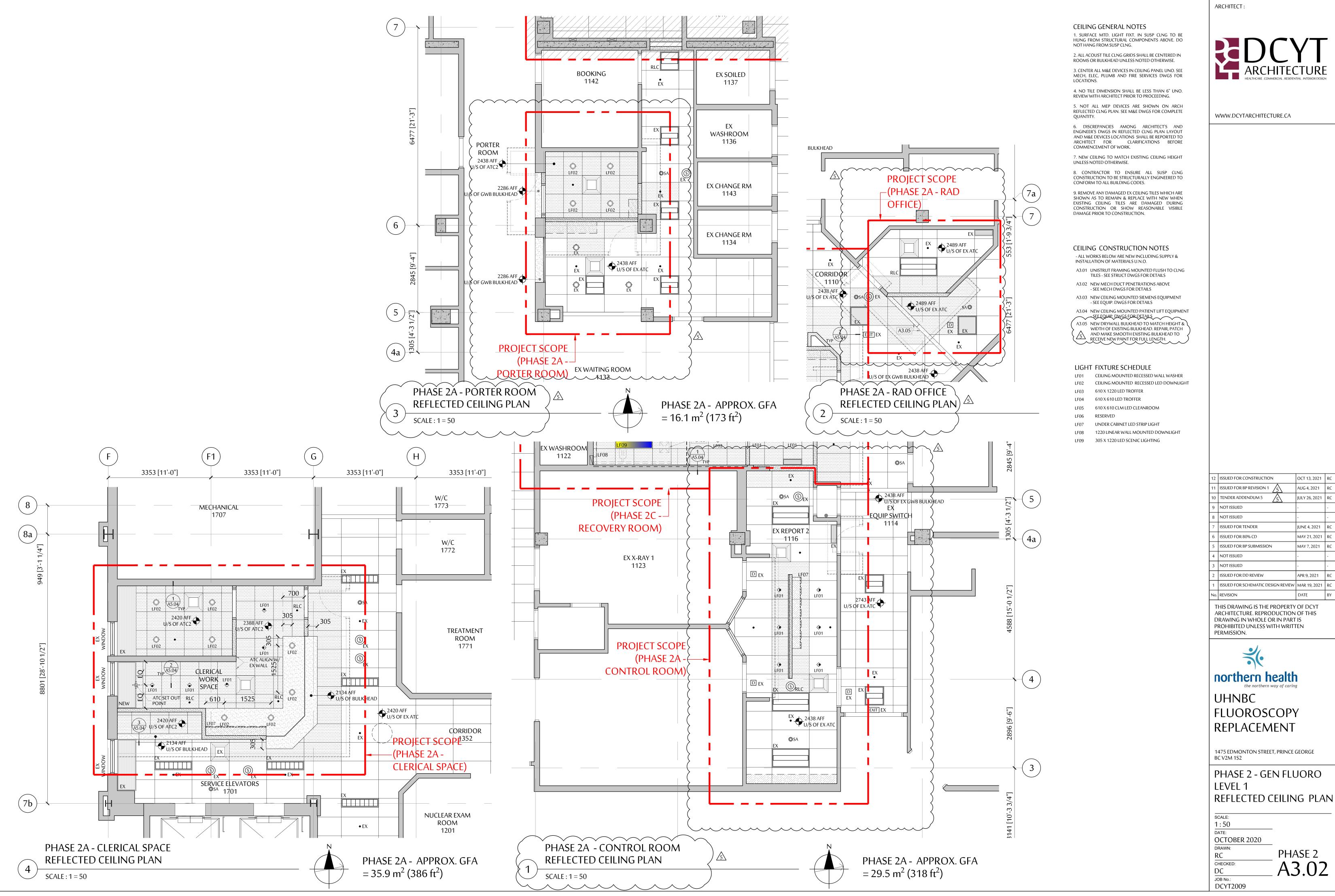
OCT 13, 2021 RC JUNE 4, 2021 RC

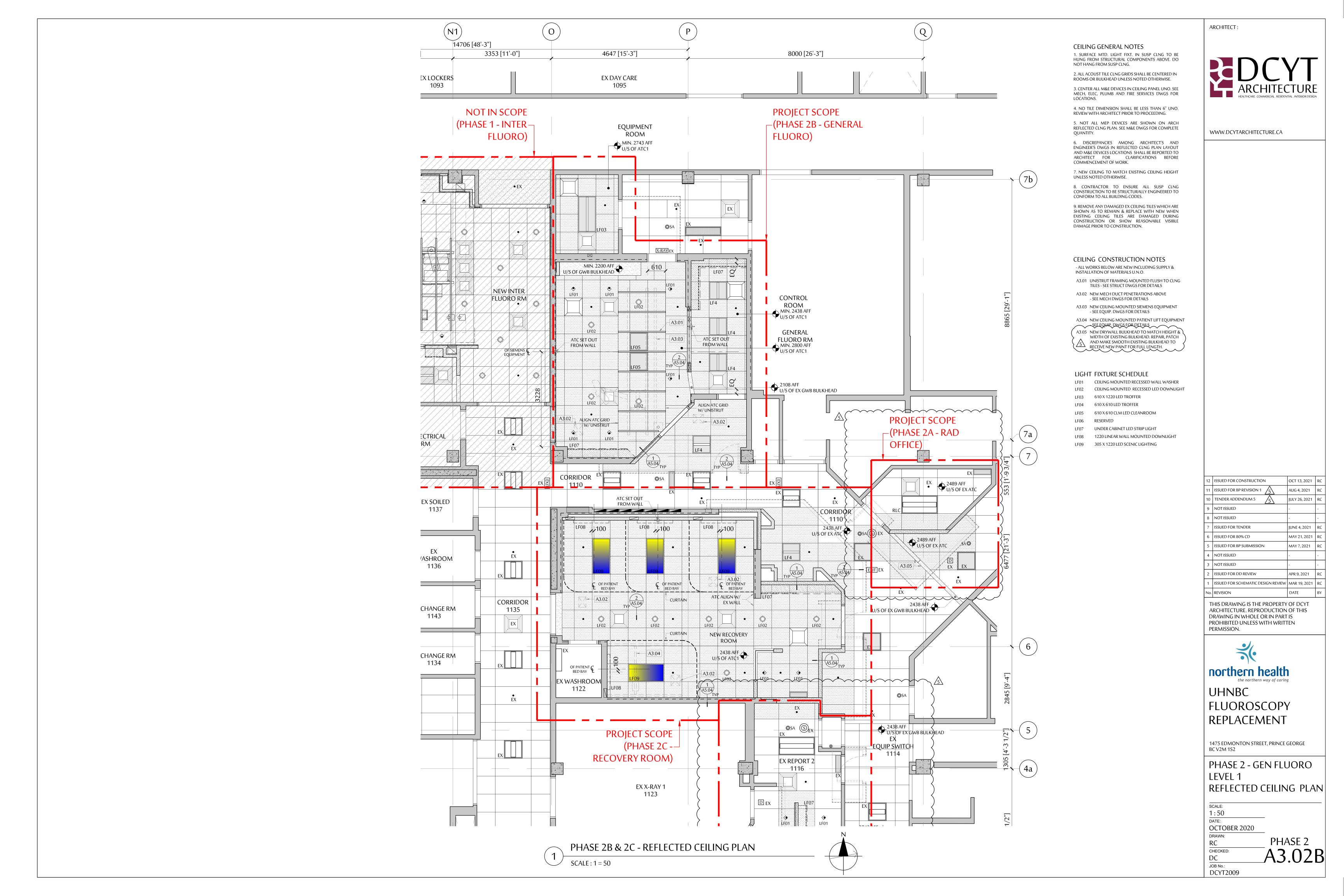


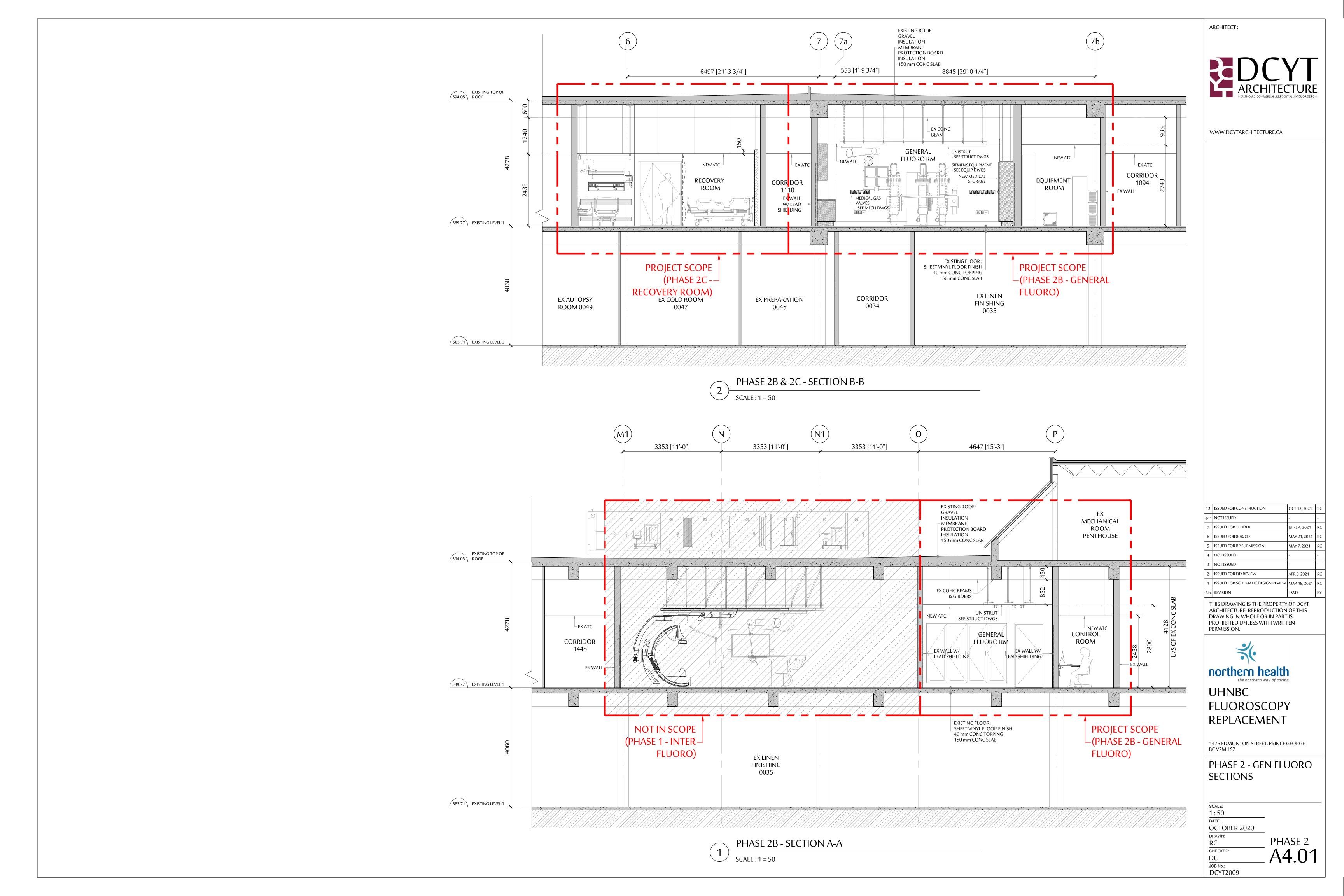


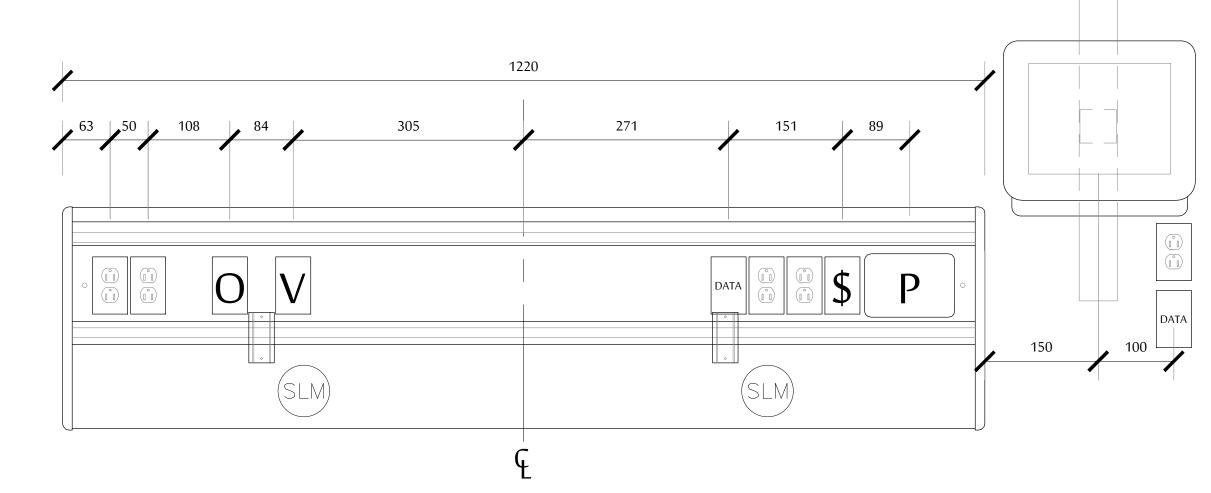












PHASE 2C - RECOVERY ROOM - HEADWALL SYSTEM & PATIENT MONITOR

SCALE: 1 = 5

— HOOK (AH1) – HANGER (ARHC-H) - LEAD APRON & VEST

PHASE 2B - GEN FLUORO CONTROL RM - EAST ELEVATION

PHASE 2B - GEN FLUORO - EAST ELEVATION (1E)

 \subset PT1 $^{\sim}$

EX RELOCATED

72"L X 36"H

55"H (CG1a)

LEADED WINDOW

CORNER GUARD

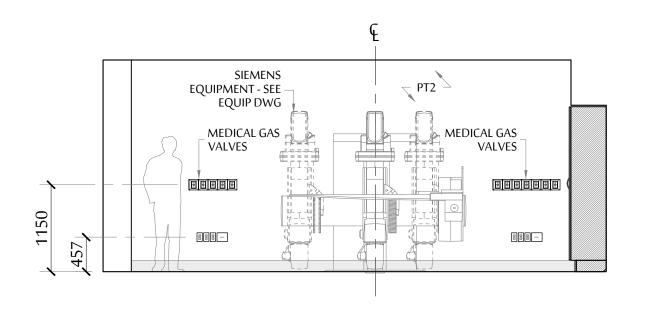
— CRASH RAIL (CR3) WALL PROTECTION

─ (WP3) — CRASH RAIL (CR3)

SCALE: 1 = 50

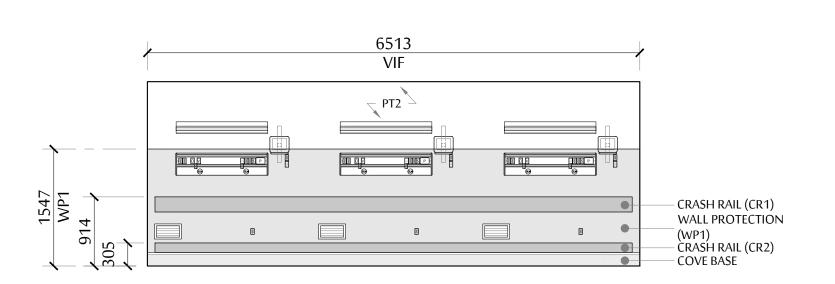
ROLLBOARD WALL MOUNT HOOK (RH1)

ROLLBOARD -



PHASE 2B - GEN FLUORO - WEST ELEVATION

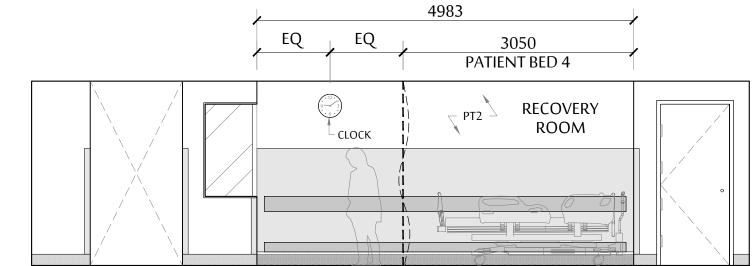
SCALE: 1 = 50



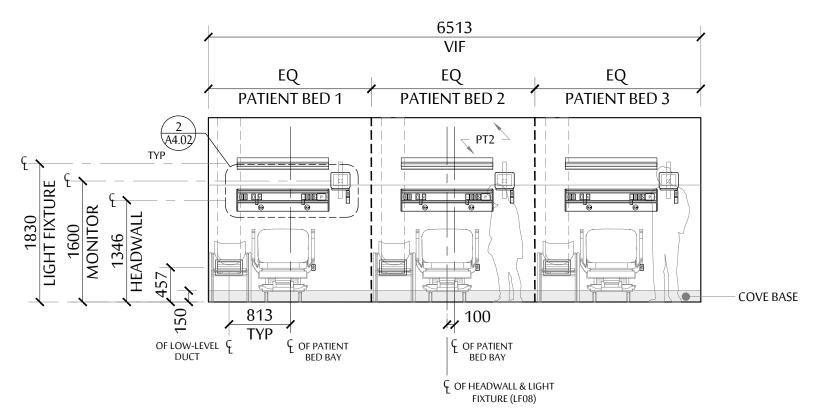
PHASE 2C - RECOVERY ROOM - NORTH ELEVATION WALL PROTECTION

SCALE: 1 = 50

SCALE: 1 = 50 4983



PHASE 2C - RECOVERY ROOM - SOUTH ELEVATION SCALE: 1 = 50



PHASE 2C - RECOVERY ROOM - NORTH ELEVATION

EQUIPMENT SCALE: 1 = 50

ISSUED FOR CONSTRUCTION	OCT 13, 2021	RO
NOT ISSUED	-	-
TENDER ADDENDUM 2	JUNE 16, 2021	RO
NOT ISSUED	-	-
ISSUED FOR TENDER	JUNE 4, 2021	RO
NOT ISSUED	-	-
REVISION	DATE	ВУ
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FLUOROSCOPY REPLACEMENT

1475 EDMONTON STREET, PRINCE GEORGE BC V2M 1S2

PHASE 2 - GEN FLUORO **INTERIOR ELEVATIONS**

SCALE: 1:50 DATE: OCTOBER 2020 DRAWN:
RC
CHECKED:
DC
JOB No.: PHASE 2 A4.02

DCYT2009

- CRASH RAIL (CR3) WALL PROTECTIÓN (WP3) - CRASH RAIL (CR3)

PHASE 2A - CLERICAL SPACE - NORTH ELEVATION

PHASE 2A - CLERICAL SPACE - WEST ELEVATION WALL PROTECTION

SCALE: 1 = 50

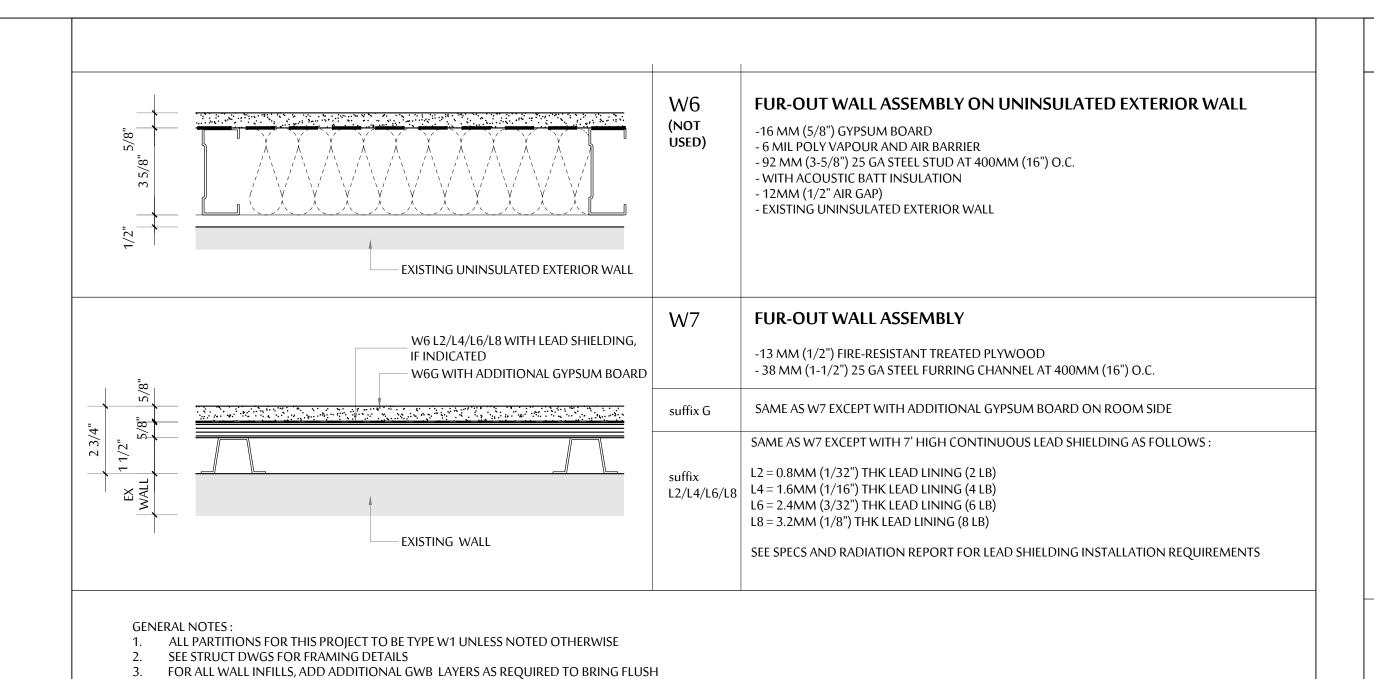
PT8

WALL PROTECTION

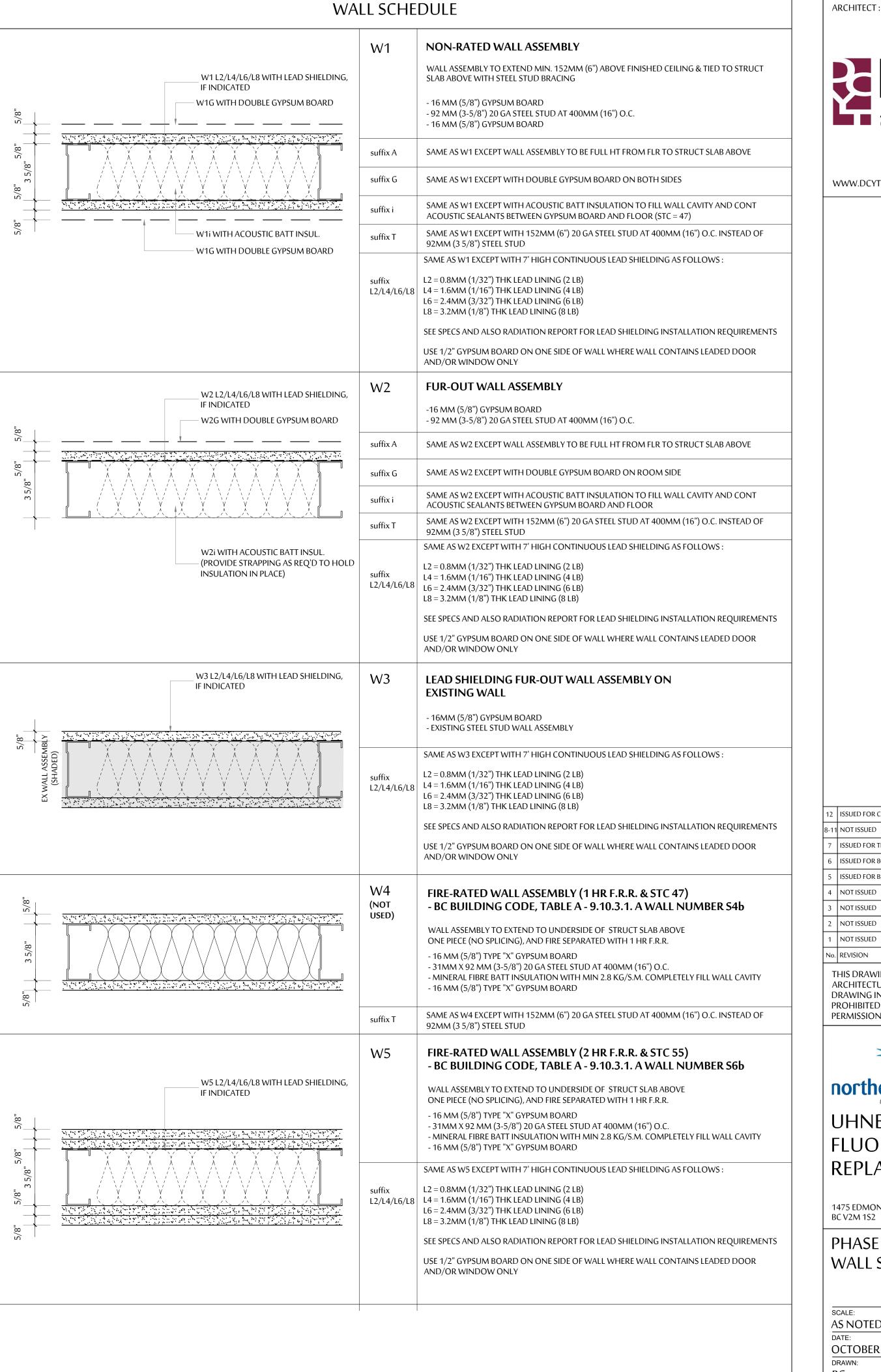
SCALE: 1 = 50

CRASH RAIL (CR3) -WALL PROTECTION

CRASH RAIL (CR3)



WITH ADJACENT WALLS



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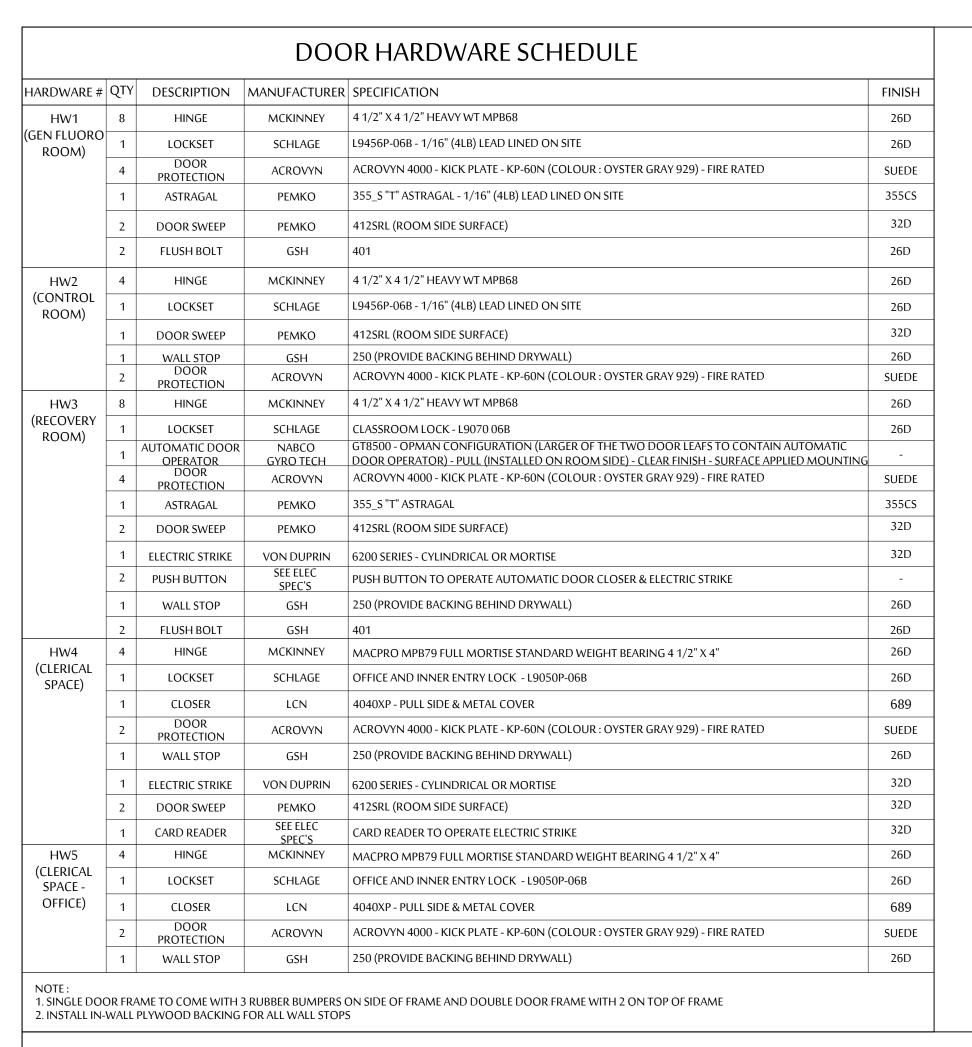
UHNBC **FLUOROSCOPY REPLACEMENT**

1475 EDMONTON STREET, PRINCE GEORGE

PHASE 2 - GEN FLUORO WALL SCHEDULE

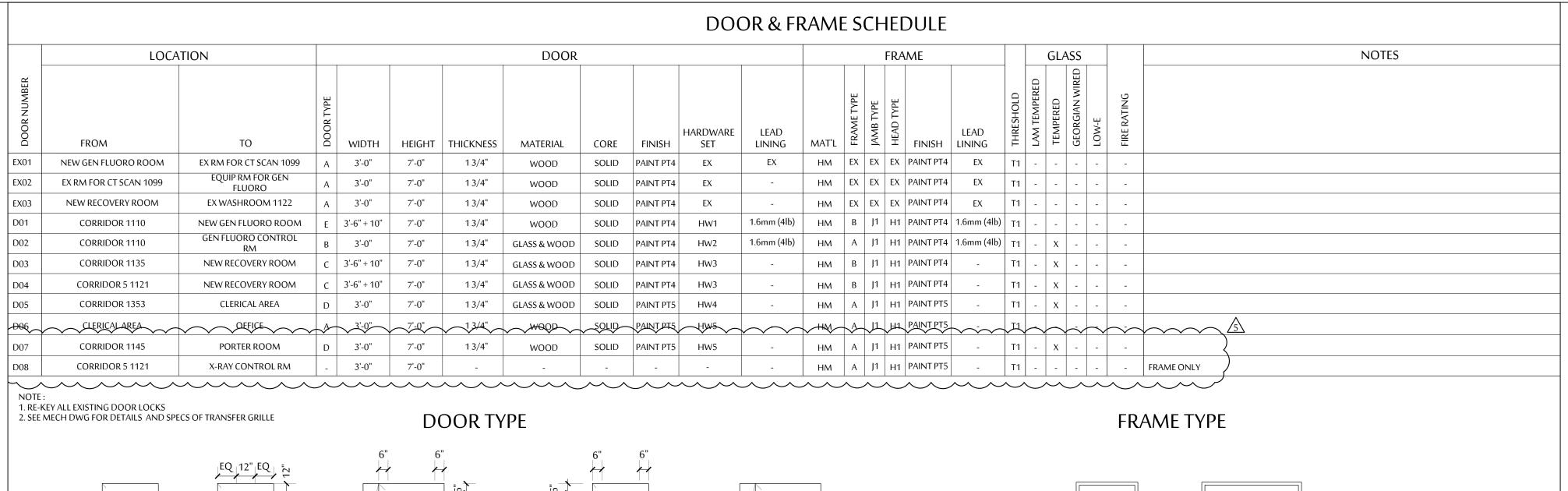
AS NOTED OCTOBER 2020 PHASE 2 RC CHECKED:

DC JOB No.: DCYT2009



U-CHANNEL WINDOW SILL DETAIL 1

WS2 SCALE: 3" = 1'-0"

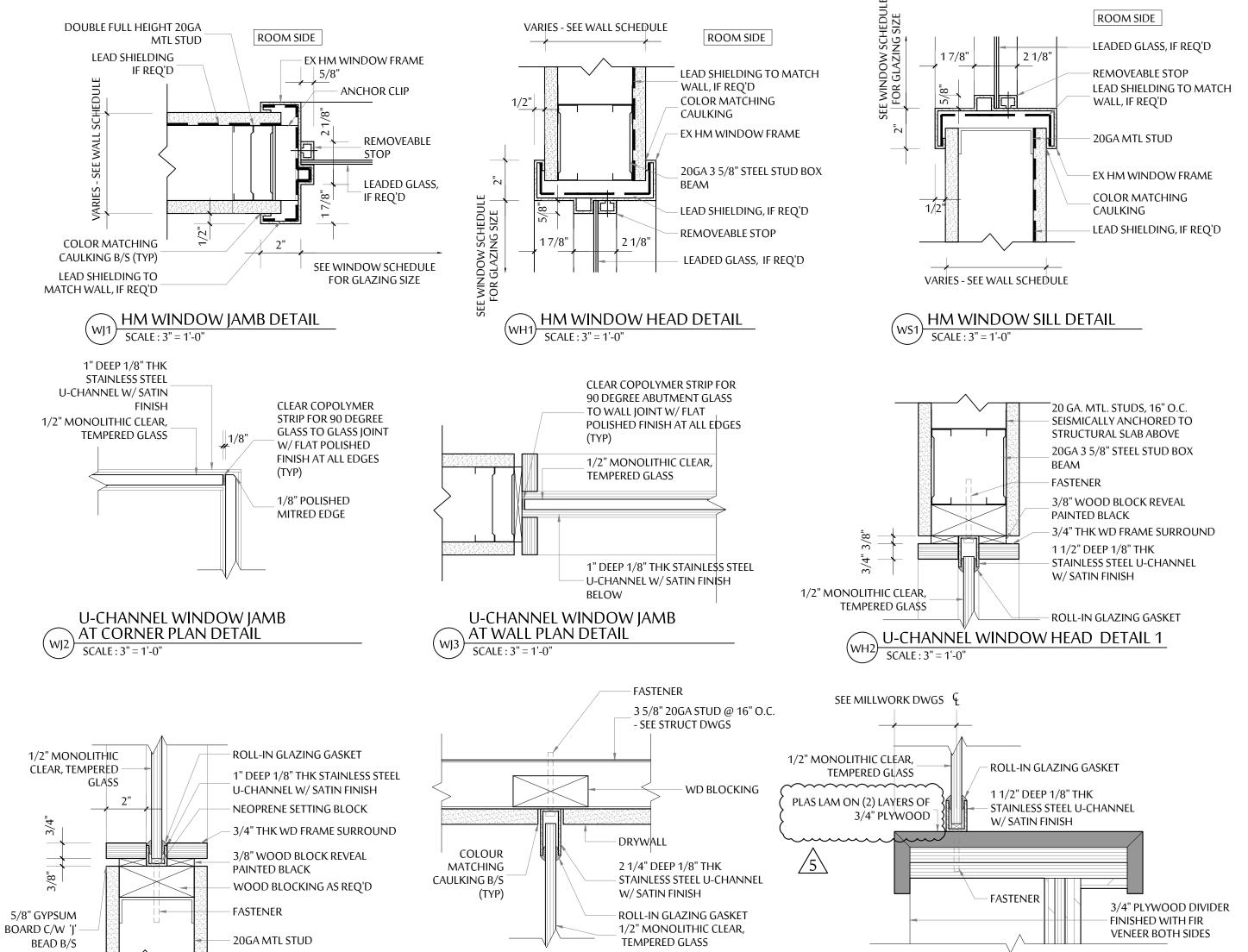


DOOR TYPE E

(DOUBLE DOOR)

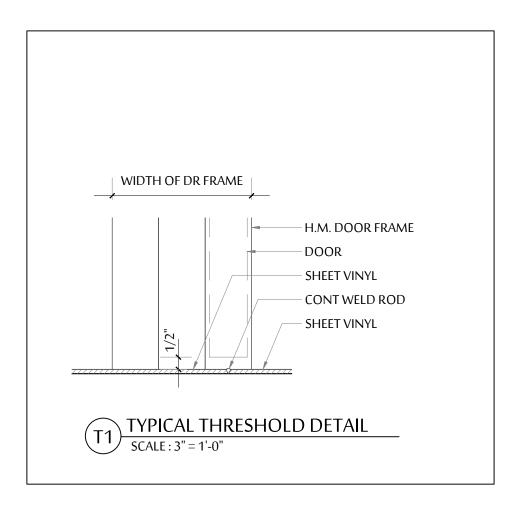
DOOR

PROTECTION



U-CHANNEL WINDOW HEAD DETAIL 2

WH3) SCALE: 3" = 1'-0"



DOOR TYPE D

(WITH VISION

PANEL)

_DOOR PROTECTION

DOOR TYPE C

(DOUBLE DOOR W/

VISION PANEL)

DOOR TYPE B

(SINGLE DOOR

W/VISION PANEL)

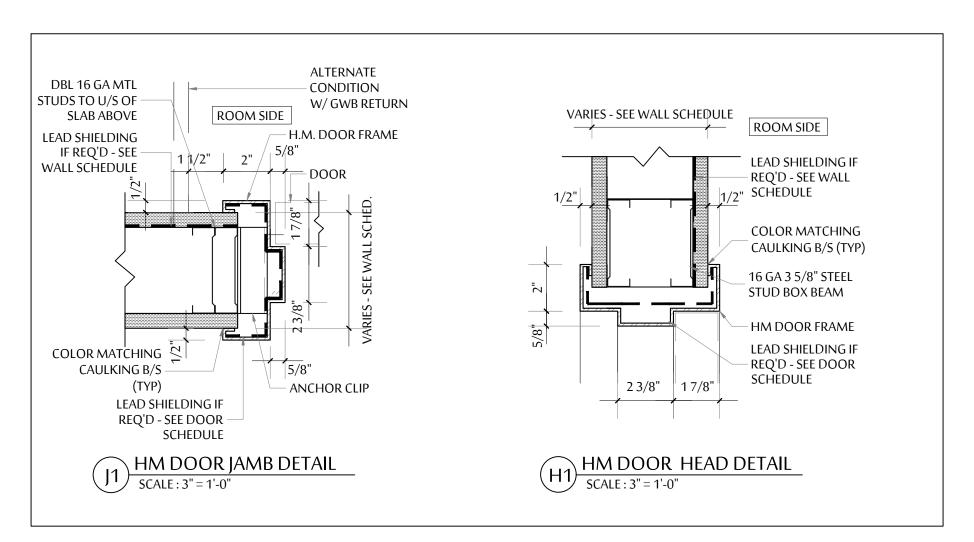
DOOR TYPE A

(SINGLE DOOR)

U-CHANNEL WINDOW

WS3 SILL DETAIL 2

SCALE: 3'' = 1'-0''

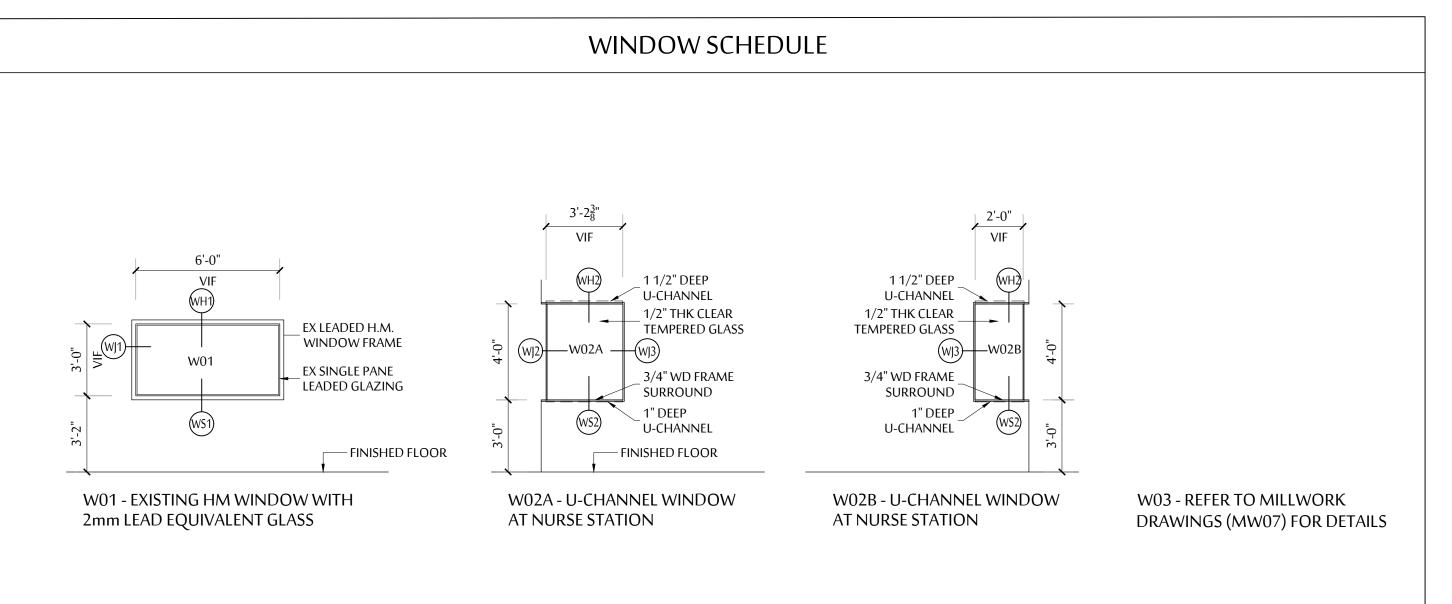


FRAME TYPE B

(DOUBLE DOOR)

FRAME TYPE A

(SINGLE DOOR)





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UHNBC FLUOROSCOPY REPLACEMENT

1475 EDMONTON STREET, PRINCE GEORGE BC V2M 1S2

PHASE 2 - GEN FLUORO DOOR & WINDOW SCHEDULES

SCALE:

AS NOTED

DATE:

OCTOBER 2020

DRAWN:

RC

CHECKED:

DC

JOB No.:

DCYT2009

LOCATION			W	ALL (SEE NOT	E 2 & 3)	FLOOR	BASE	CEILING	NOTES
	ROOM NAME / RM#	NORTH	EAST	SOUTH	WEST	(SEE NOTE 1)			
	GENERAL FLUORO ROOM	PAINT PT1	PAINT PT1	PAINT PT1	PAINT PT2	SHEET VINYL SV1	INTEGRAL COVE BASE SV1	SUSP CEILING ATC1	SEE DWG A2.03 FOR ACCENT WALL EXTENT
	CONTROL ROOM	PAINT PT1	PAINT PT2	PAINT 1	PAINT PT1	SHEET VINYL SV1	INTEGRAL COVE BASE SV1	SUSP CEILING ATC1	SEE DWG A2.03 FOR ACCENT WALL EXTENT
	EQUIPMENT ROOM	PAINT PT1	PAINT PT1	PAINT PT1	PAINT PT1	SHEET VINYL SV1	INTEGRAL COVE BASE SV1	SUSP CEILING ATC1	
	CORRIDOR 1110	PAINT PT8	PAINT PT8	PAINT PT8	PAINT PT8	SHEET VINYL SV2	INTEGRAL COVE BASE SV2	MATCH EXISTING	
	RECOVERY ROOM	PAINT PT2	PAINT PT1	PAINT PT2	PAINT PT1	SHEET VINYL SV1	INTEGRAL COVE BASE SV1	SUSP CEILING ATC1	SEE DWG A2.03 FOR ACCENT WALL EXTENT
	CLERICAL SPACE	PAINT PT1	PAINT PT1	PAINT PT1	PAINT PT1	SHEET VINYL SV4	INTEGRAL COVE BASE SV4	SUSP CEILING ATC2	-
	CLERICAL OFFICE	PAINT PT1	PAINT PT1	PAINT PT1	PAINT PT1	SHEET VINYL SV4	INTEGRAL COVE BASE SV4	SUSP CEILING ATC2	
	CORRIDOR & SERVICE ELEVATOR	PAINT PT8	PAINT PT8	PAINT PT8	PAINT PT8	SHEET VINYL SV5	INTEGRAL COVE BASE SV5	MATCH EXISTING	
	SUPPLY STORAGE ROOM	PAINT PT1	PAINT PT1	PAINT PT1	PAINT PT1	SHEET VINYL SV1	INTEGRAL COVE BASE SV1	MATCH EXISTING	
	CONTROL ROOM	PAINT PT1	PAINT PT2	PAINT PT1	PAINT PT1	SHEET VINYL SV1	INTEGRAL COVE BASE SV1	MATCH EXISTING	SEE DWG A2.03 FOR ACCENT WALL EXTENT
	RAD OFFICE	PAINT PT1	PAINT PT1	PAINT PT1	PAINT PT1	SHEET VINYL SV1	INTEGRAL COVE BASE SV1	MATCH EXISTING	
	PORTER ROOM	PAINT PT2	PAINT PT1	PAINT PT1	PAINT PT1	SHEET VINYL SV1	INTEGRAL COVE BASE SV1	MATCH EXISTING	SEE DWG A2.03 FOR ACCENT WALL EXTENT

1. PATCH & SKIM COAT TO LEVEL EX FLOOR BEFORE INSTALLING SHEET VINYL FLOOR
2. ALLOW 1 ACCENT WALL PAINT COLOR - FINAL LOCATIONS TO BE DETERMINED ON SITE
3. PATCH & MAKE GOOD EX WALLS BEFORE PROVIDING NEW PAINT FINISH
4. SEE DWG 4/A5.04 FOR INTEGRAL SHEET VINYL WALL BASE DETAIL

FINISHES & FIXTURES SCHEDULE

OR ON SITE FOR FINAL DECISION OR ON SITE FOR FINAL DECISION FING HEIGHT FING HEIGHT
OR ON SITE FOR FINAL DECISION FING HEIGHT FING HEIGHT
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LKING AT BUTT JOINT & WAINSCOT TRI
LKING AT BUTT JOINT & WAINSCOT TRI
G HEIGHT
/ VENDOR.
VENDOR.
CATION
& ELEVATIONS FOR TOTAL NUMBER
MUNICATOR
SYSTEM - SINGLE TIER - NO CHASE ION HEIGHT AND DESIGN IDED BY MANUFACTURER

ARCHITECT:



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5	NOT ISSUED	-	-
4	NOT ISSUED	-	-
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2	NOT ISSUED	-	-
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UHNBC FLUOROSCOPY REPLACEMENT

1475 EDMONTON STREET, PRINCE GEORGE BC V2M 1S2

PHASE 2 - GEN FLUORO ROOM, FINISHES & FIXTURES SCHEDULES

SCALE:

AS NOTED

DATE:

OCTOBER 2020

DRAWN:

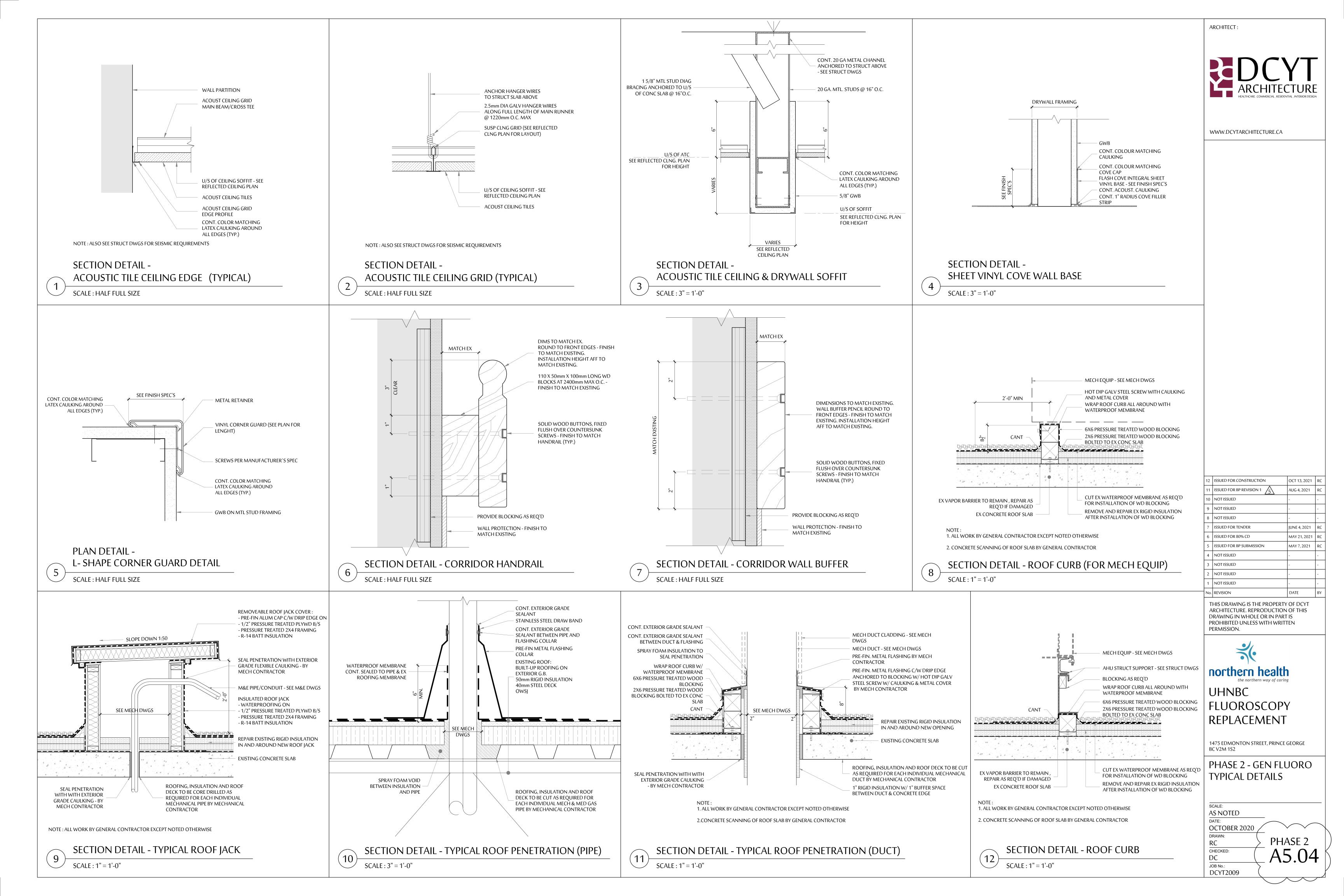
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		NE	W F	URNITU	RE & EQUIPI	MENT SCHI	EDULE	
ROOM	CODE	UNIT	#	NEW OR EXISTING	ACTION	PERSON RESPONSIBLE TO COORDINATE	PERSON RESPONSIBLE FOR INSTALLATION (IF REQ'D)	NOTES
GENERAL	IR-EQ01 (PH1)	CONTRAST WARMER	1	EXISTING	RELOCATED	ROMA	N/A	-
FLUOROSCOPY ROOM	GFR-EQ01	HAND SANITIZER	1	NEW/EXISTING	RELOCATED/PURCHASE	ROMA	CONTRACTOR	CONTRACTOR TO PROVIDE WOOD BACKING IF REQ'D
	GFR-EQ02	SOAP DISPENSER	1	NEW/EXISTING	RELOCATED/PURCHASE	ROMA	CONTRACTOR	CONTRACTOR TO PROVIDE WOOD BACKING IF REQ'D
	GFR-EQ03	PAPER TOWEL DISPENSER	1	NEW/EXISTING	RELOCATED/PURCHASE	ROMA	CONTRACTOR	CONTRACTOR TO PROVIDE WOOD BACKING IF REQ'D
	GFR-EQ04	ACRYLIC GLOVE DISPENSER	3	NEW/EXISTING	RELOCATED/PURCHASE	ROMA	CONTRACTOR	CONTRACTOR TO PROVIDE WOOD BACKING IF REQ'D
	GFR-EQ05	MEDICAL STORAGE CABINET	4	NEW	PURCHASE	CONTRACTOR	CONTRACTOR	PURCHASE ORDER TO BE PROVIDED TO CONTRACTOR
	GFR-EQ06	ROLLBOARD	1	NEW	PURCHASE	ROMA	N/A	-
	GF-F02	MOBILE S/S CART	1	EXISTING	RELOCATED	ROMA	N/A	-
CONTROL ROOM	CR2-EQ04	SCANNER	1	EXISTING	RELOCATED	ROMA	N/A	-
	CR2-F01	TASK CHAIR	2	EXISTING	RELOCATED	ROMA	N/A	-
	CR3-EQ01	HAND SANITIZER	1	NEW/EXISTING	RELOCATED/PURCHASE	ROMA	CONTRACTOR	CONTRACTOR TO PROVIDE WOOD BACKING IF REQ'D
X CORRIDOR	CO-EQ02	LOCKERS	4	EXISTING	RELOCATED	ROMA	CONTRACTOR	CONTRACTOR TO PROVIDE WOOD BACKING IF REQ'D
I110	LK-EQ02	LOCKERS	4	EXISTING	RELOCATED	ROMA	CONTRACTOR	CONTRACTOR TO PROVIDE WOOD BACKING IF REQ'D
RECOVERY ROOM	R-EQ01 (PH1)	STRETCHER	3	EXISTING	RELOCATED	ROMA	N/A	-
	R-EQ02 (PH1)	OVERBED TABLE	4	EXISTING	RELOCATED	ROMA	N/A	-
	R-EQ03 (PH1)	IV STAND	4	EXISTING	RELOCATED	ROMA	N/A	-
	R-EQ04 (PH1)	PATIENT MONITOR	3	EXISTING	RELOCATED	ROMA	CONTRACTOR	CONTRACTOR TO PROVIDE WOOD BACKING IF REQ'D
	R-EQ06 (PH1)	MINI FRIDGE	1	EXISTING	RELOCATED	ROMA	N/A	-
	R-EQ10 (PH1)	MOBILE CART	1	EXISTING	RELOCATED	ROMA	N/A	-
	R-EQ16 (PH1)	COMPUTER	2	EXISTING	RELOCATED	ROMA	N/A	-
	RR-EQ01	NARCOTICS SAFE	1	EXISTING	RELOCATED	ROMA	CONTRACTOR	CONTRACTOR TO PROVIDE WOOD BACKING IF REQ'D
	RR-EQ02	PATIENT MONITOR	1	NEW	PURCHASE	ROMA	CONTRACTOR	CONTRACTOR TO PROVIDE WOOD BACKING IF REQ'D
	RR-EQ03	STRETCHER	1	NEW	PURCHASE	ROMA	CONTRACTOR	CONTRACTOR TO PROVIDE WOOD BACKING IF REQ'D
	RR-EQ04	HEADWALL SYSTEM	4	NEW	PURCHASE	CONTRACTOR	CONTRACTOR	CONTRACTOR TO PROVIDE WOOD BACKING IF REQ'D
	RR-EQ05	HAND SANITIZER	1	NEW/EXISTING	RELOCATED/PURCHASE	ROMA	CONTRACTOR	CONTRACTOR TO PROVIDE WOOD BACKING IF REQ'D
	RR-EQ06	SOAP DISPENSER	1	NEW/EXISTING	RELOCATED/PURCHASE	ROMA	CONTRACTOR	CONTRACTOR TO PROVIDE WOOD BACKING IF REQ'D
	RR-EQ07	PAPER TOWEL DISPENSER	1	NEW/EXISTING	RELOCATED/PURCHASE	ROMA	CONTRACTOR	CONTRACTOR TO PROVIDE WOOD BACKING IF REQ'D
	RR-EQ08	ACRYLIC GLOVE DISPENSER	3	NEW/EXISTING	RELOCATED/PURCHASE	ROMA	CONTRACTOR	CONTRACTOR TO PROVIDE WOOD BACKING IF REQ'D
	R-F01 (PH1)	DESK	1	EXISTING	RELOCATED	ROMA	N/A	-
	R-F02 (PH1)	TASK CHAIR	1	EXISTING	RELOCATED	ROMA	N/A	-
	R-F03 (PH1)	SIDE CHAIR	4	EXISTING	RELOCATED	ROMA	N/A	-
CLERICAL AREA	RC-EQ01	PRINTER	1	EXISTING	RELOCATED	ROMA	N/A	-
	CA-EQ01	COMPUTERS	4	EXISTING	RELOCATED	ROMA	N/A	-
	CA-EQ02	FILE CABINET	3	NEW/EXISTING	RELOCATED/PURCHASE	ROMA	N/A	-
	CA-F01	TASK CHAIR	2	EXISTING	RELOCATED	ROMA	N/A	-
CLERICAL AREA -	CO-EQ01	COMPUTER	1	EXISTING	RELOCATED	ROMA	N/A	-
OFFICE	CO-EQ02	BULLETIN BOARD	1	EXISTING	RELOCATED	ROMA	CONTRACTOR	CONTRACTOR TO PROVIDE WOOD BACKING IF REQ'D
	CO-EQ03	FILE CABINET	2	EXISTING	RELOCATED	ROMA	N/A	-
	CO-F01	TASK CHAIR	1	EXISTING	RELOCATED	ROMA	N/A	-
	CO-F02	DESK	1	EXISTING	RELOCATED	ROMA	N/A	-

NOTES:

1. EQUIPMENT & FURNITURE TO BE SUPPLIED, DELIVERED & ASSEMBLED BY OWNER U.N.O. CONTRACTOR TO COORDINATE WORK AND PROVIDE INSTALLATION AS INDICATED IN THE LIST ABOVE.

ROOM	CODE	UNIT	#	ACTION	PERSON RESPONSIBLE TO MAKE ARRANGEMENT	PERSON RESPONSIBLE FOR REMOVAL (IF REQ'D)	NOTES
ex inter	IR-EQ01	CONTRAST WARMER	1	RELOCATE	ROMA	N/A	-
FLUOROSCOPY 1104	IR-EQ02	MEDICAL STORAGE CABINET	2	STORAGE	ROMA	N/A	-
	IR-EQ03	HAND SANITIZER	1	RELOCATE	ROMA	CONTRACTOR	WD BACKING TO BE REMOVED
	IR-EQ04	SOAP DISPENSER	1	RELOCATE	ROMA	CONTRACTOR	WD BACKING TO BE REMOVED
	IR-EQ05	PAPER TOWEL DISPENSER	1	RELOCATE	ROMA	CONTRACTOR	WD BACKING TO BE REMOVED
	IR-EQ06	ACRYLIC GLOVE DISPENSER	3	RELOCATE	ROMA	CONTRACTOR	WD BACKING TO BE REMOVED
EX CONTROL	CR1-EQ01	HAND SANITIZER	1	RELOCATE	ROMA	CONTRACTOR	WD BACKING TO BE REMOVED
ROOM 1105	CR1-EQ02	CURTAIN & ROD	1	REMOVE	CONTRACTOR	CONTRACTOR	-
	CR1-EQ03	WINDOW BLINDS	1	REMOVE	CONTRACTOR	CONTRACTOR	-
	CR1-EQ04	BULLETIN BOARD	1	RELOCATE	ROMA	CONTRACTOR	-
	CR1-EQ05	U/C MOBILE FILE CABINET	1	RELOCATE	ROMA	N/A	-
	CR1-EQ06	COMPUTERS	3	RELOCATE	ROMA	N/A	-
	CR1-F01	TASK CHAIR	2	RELOCATE	ROMA	N/A	-
EX LOCKERS 1106	LK-EQ01	BLANKET WARMER	1	RELOCATE	ROMA	N/A	-
	LK-EQ02	LOCKERS	4	RELOCATE	ROMA	CONTRACTOR	WD BACKING TO BE REMOVED
EX CORRIDOR	CO-EQ01	BULLETIN BOARD	2	RELOCATE	ROMA	CONTRACTOR	WD BACKING TO BE REMOVED
1110	CO-EQ02	LOCKERS	4	RELOCATE	ROMA	CONTRACTOR	WD BACKING TO BE REMOVED
EX CLINICAL	RN-EQ01	BULLETIN BOARD	1	RELOCATE	ROMA	CONTRACTOR	WD BACKING TO BE REMOVED
RESOURCE NURSE OFFICE	RN-EQ02	COMPUTERS	4	RELOCATE	ROMA	N/A	-
1098	RN-F01	TASK CHAIR	2	RELOCATE	ROMA	N/A	-
	RN-F02	FILE CABINET	1	RELOCATE	ROMA	N/A	-
	RN-F03	U/C MOBILE FILE CABINET	2	RELOCATE	ROMA	N/A	-
EX SUPPLY ROOM	SR-EQ01	WIRE METAL SHELVING	7	RELOCATE	ROMA	CONTRACTOR	WD BACKING TO BE REMOVED
1115	SR-EQ02	CATHETER FOLLY	6	RELOCATE	ROMA	CONTRACTOR	WD BACKING TO BE REMOVED
	SR-EQ03	MOBILE CRASH CART	1	RELOCATE	ROMA	N/A	-
EX GENERAL	GF-EQ01	HAND SANITIZER	1	RELOCATE	ROMA	CONTRACTOR	WD BACKING TO BE REMOVED
FLUOROSCOPY 1104	GF-EQ02	HOOKS	2	RELOCATE	ROMA	CONTRACTOR	WD BACKING TO BE REMOVED
	GF-EQ03	SOAP DISPENSER	1	RELOCATE	ROMA	CONTRACTOR	WD BACKING TO BE REMOVED
	GF-EQ04	PAPER TOWEL DISPENSER	1	RELOCATE	ROMA	CONTRACTOR	WD BACKING TO BE REMOVED
	GF-F01	FILE CABINET	1	RELOCATE	ROMA	N/A	-
	GF-F02	MOBILE S/S CART	1	RELOCATE	ROMA	N/A	
EX CONTROL ROOM 1113	CR2-EQ01	ACRYLIC GLOVE DISPENSER	1	RELOCATE	ROMA	CONTRACTOR	WD BACKING TO BE REMOVED
ROOM 1113	CR2-EQ02	BULLETIN BOARD	1	RELOCATE	ROMA	CONTRACTOR	-
	CR2-EQ03	COMPUTERS	3	RELOCATE	ROMA	N/A	-
	CR2-EQ04	SCANNER	1	RELOCATE	ROMA	N/A	-
	CR2-F01	TASK CHAIR	2	RELOCATE	ROMA	N/A	-
	CR2-F02	SHELVING UNIT	1	RELOCATE	ROMA	N/A	-
EX WASHROOM 1122	WR-EQ01	GRAB BAR	1	REMAIN	N/A	N/A	-
1144	WR-EQ02	SOAP DISPENSER	1	REMAIN	N/A	N/A	-
	WR-EQ03	PAPER TOWEL DISPENSER	1	REMAIN	N/A	N/A	-
EX RECEPTION 1703	RC-EQ01	PRINTER	1	RELOCATE	ROMA	N/A	-
1703	RC-EQ02	COMPUTER	1	RELOCATE	ROMA	N/A	-
	RC-F01	TASK CHAIR	1	RELOCATE	ROMA	N/A	-
EX OFFICE 1704	O1-EQ01	BULLETIN BOARD	1	RELOCATE	ROMA	CONTRACTOR	WD BACKING TO BE REMOVED
	O1-EQ02	TELEVISION	1	RELOCATE	ROMA	CONTRACTOR	WD BACKING TO BE REMOVED
	O1-F01	DESK	1	RELOCATE	ROMA	N/A	-
	O1-F02	TASK CHAIR	1	RELOCATE	ROMA	N/A	-
	O1-F03	FILE CABINET	1	RELOCATE	ROMA	N/A	-
	O1-F04	SIDE TABLE	1	RELOCATE	ROMA	N/A	-
EX OFFICE 1702	O2-EQ01	BULLETIN BOARD	1	RELOCATE	ROMA	CONTRACTOR	WD BACKING TO BE REMOVED
	O2-EQ02	MINI FRIDGE	1	RELOCATE	ROMA	N/A	-
	O2-EQ03	COMPUTER	3	RELOCATE	ROMA	N/A	-
	O2-F01	DESK	1	RELOCATE	ROMA	N/A	-
	O2-F02	TASK CHAIR	1	RELOCATE	ROMA	N/A	

1. LISTED FURNITURE AND EQUIPMENT MAY NOT BE COMPLETE. CONTRACTOR IS RESPONSIBLE TO COORDINATE THE ARRANGEMENT AND REMOVAL (IF REQ'D) OF ALL FURNITURE AND EQUIPMENT NOT LISTED ABOVE.

12	ISSUED FOR CONSTRUCTION	OCT 13, 2021	RC
9-11	NOT ISSUED	1	-
8	TENDER ADDENDUM 1	JUNE 10, 2021	RC
7	ISSUED FOR TENDER	JUNE 4, 2021	RC
6	NOT ISSUED	1	-
5	NOT ISSUED	1	1
4	NOT ISSUED	1	-
3	NOT ISSUED	1	-
2	NOT ISSUED	-	-
1	NOT ISSUED	-	-
No.	REVISION	DATE	BY

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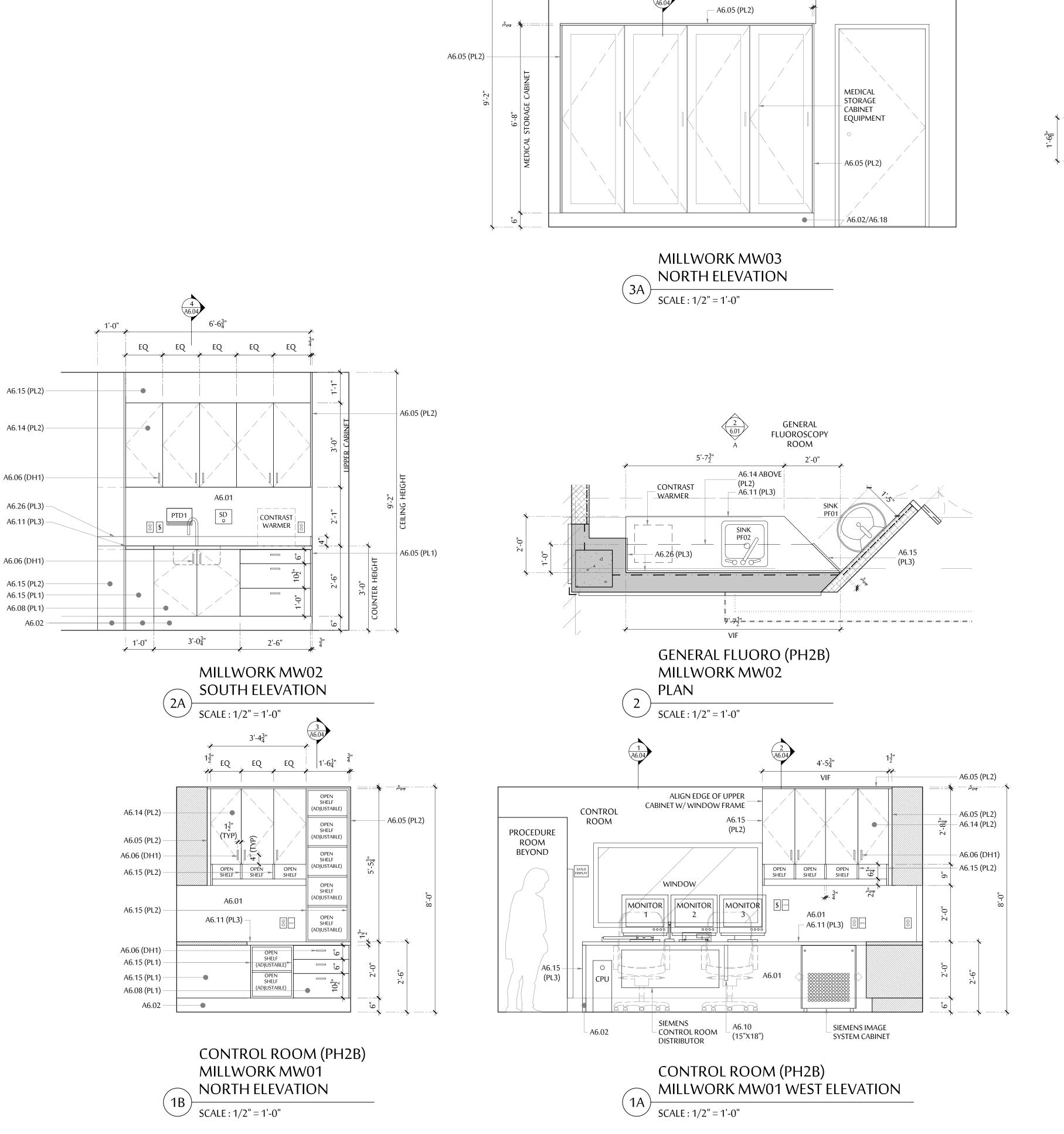
UHNBC FLUOROSCOPY REPLACEMENT

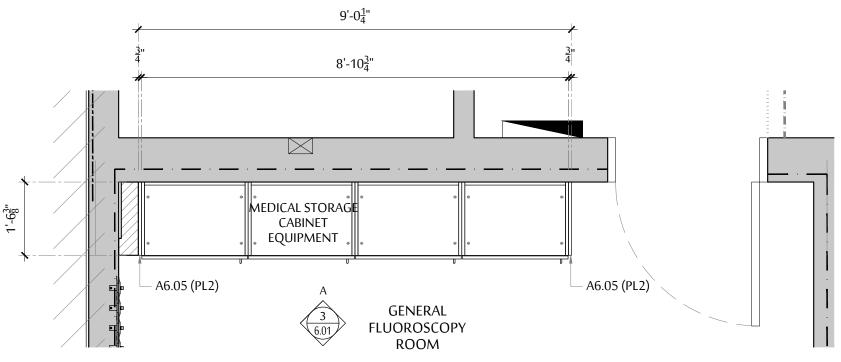
1475 EDMONTON STREET, PRINCE GEORGE BC V2M 1S2

PHASE 2 - GEN FLUORO FURNITURE & EQUIP. SCHEDULES

SCALE:
AS NOTED
DATE:
OCTOBER 2020 DRAWN:
RC
CHECKED:
DC
JOB No.:
DCYT2009

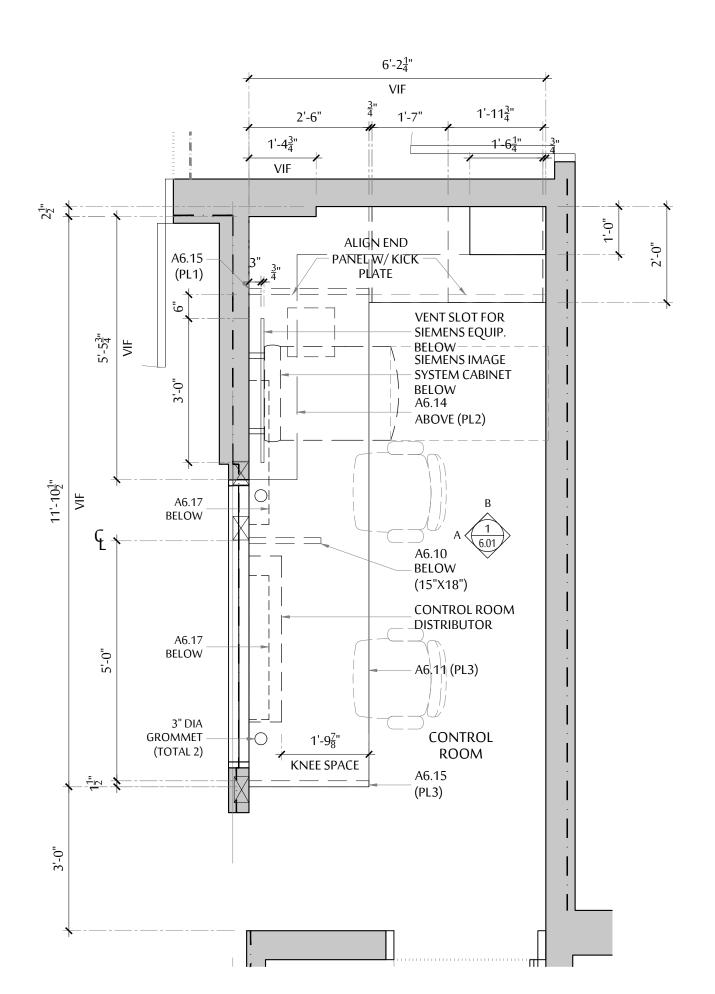
PHASE 2 **A5.05**





GENERAL FLUORO (PH2B) MILLWORK MW03 PLAN

3 SCALE: 1/2" = 1'-0"



CONTROL ROOM (PH2B)
MILLWORK MW01 PLAN

) SCALE: 1/2" = 1'-0"

INTERIOR KEY NOTES

1. ALL WORKS BELOW ARE NEW INCLUDING SUPPLY & INSTALLATION OF MATERIALS U.N.O.
2. SEE DWG A5.03 FOR FINISHES.
3. ALL WOOD GRAIN FINISHES TO BE ORIENTED VERTICALLY WITH CLEAR LACQUERED FINISH & TO BE BOOK-MATCHED U.N.O.
4. ALL CABINETRY DOOR HINGES AND DRAWER SLIDES TO BE SOFT-CLOSING U.N.O.
5. CASEWORK BACKS NOTED AS 'DOWEL CONSTRUCTION' MUST BE SCREWED TO CASE BODY & NAILED OR STAPLED TO DIVISIONS & FIXED SHELVES.
6. ALL GAPS BETWEEN DOORS OR BETWEEN DOORS

ARCHITECT:

A6.01 PAINTED DRYWALL

AND FIXED PANEL TO BE 1/16" WIDE.

A6.02 INTEGRAL SHEET VINYL BASE WITH TOP CAP A6.03 WALL PROTECTION

A6.04 COVER PLATE FOR PLUMB VALVE - SEE PLUMB DWGS

A6.05 FILLER PANEL WITH MATCHING FINISH

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A6.06 CABINET DOOR OR DRAWER HANDLE
A6.07 1 1/2" THK COUNTERTOP WITH PLASTIC

LAMINATE FINISH & PVC ACCENT EDGING

A6.08 BASE CABINET WITH DOORS, DRAWERS OR
SHELVING

A6.09 1 PIECE CONT 3/4" X 3" SUPPORTING STEEL SECTION UNDER COUNTERTOP

A6.10 BLACK SPEEDBRACE METAL BRACKET

A6.11 1 1/2" THK DESKTOP WITH PLAS LAM FINISH &
C/W MATCHING PLAS LAM EDGE BAND

A6.12 ADJUSTABLE 3/4" THK PLYWOOD SHELF WITH

PLAS LAM FINISH AND 3MM THK RIGID PVC

ACCENT EDGE
A6.13 1/16" ROUTED SEAM TO BE PAINTED BLACK

A6.14 UPPER CABINET WITH DOORS

A6.15 FINISHED END, SIDE OR TOP PANEL

A6.16 FULL HEIGHT CABINET WITH ADJUSTABLE SHELVING
A6.17 36"W WIRE POWDER COATED STEEL BASKET

A6.18 6"H MEDICAL STORAGE CABINET BASE PER
MANUFACTURER'S RECOMMENDATIONS AND

MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS

A6.19 KEY LOCK

A6.20 1/2" MONOLITHIC CLEAR, TEMPERED GLASS
- SEE WINDOW SCHEDULE A5.02

A6.21 RESERVED

A6.22 THRU-GLASS TWO-WAY ELECTRONIC COMMUNICATOR (ST1)

A6.23 3/4" THICK PLYWOOD PANEL

A6.24 0.75"W X 0.43"H WHITE PVC PLASTIC CABLE RACEWAY "KABLE KONTROL ECONOMICAL CABLE RACEWAY"

A6.25 TRANSLUCENT FILM (TF1) INSTALLED ON CORRIDOR SIDE

A6.26 4" H X 3/4" THK PLYWOOD BACK SPLASH

12	ISSUED FOR CONSTRUCTION	OCT 13, 2021	
10-11	NOT ISSUED	-	
9	TENDER ADDENDUM 2	JUNE 16, 2021	Ī
8	NOT ISSUED	-	
7	ISSUED FOR TENDER	JUNE 4, 2021	
6	ISSUED FOR 80% CD	MAY 21, 2021	
5	NOT ISSUED	-	
4	NOT ISSUED	-	
3	NOT ISSUED	-	
2	NOT ISSUED	-	
1	NOT ISSUED	-	
No.	REVISION	DATE	Ī

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UHNBC FLUOROSCOPY REPLACEMENT

1475 EDMONTON STREET, PRINCE GEORGE

PHASE 2 - GEN FLUORO MILLWORK PLANS & ELEVATIONS

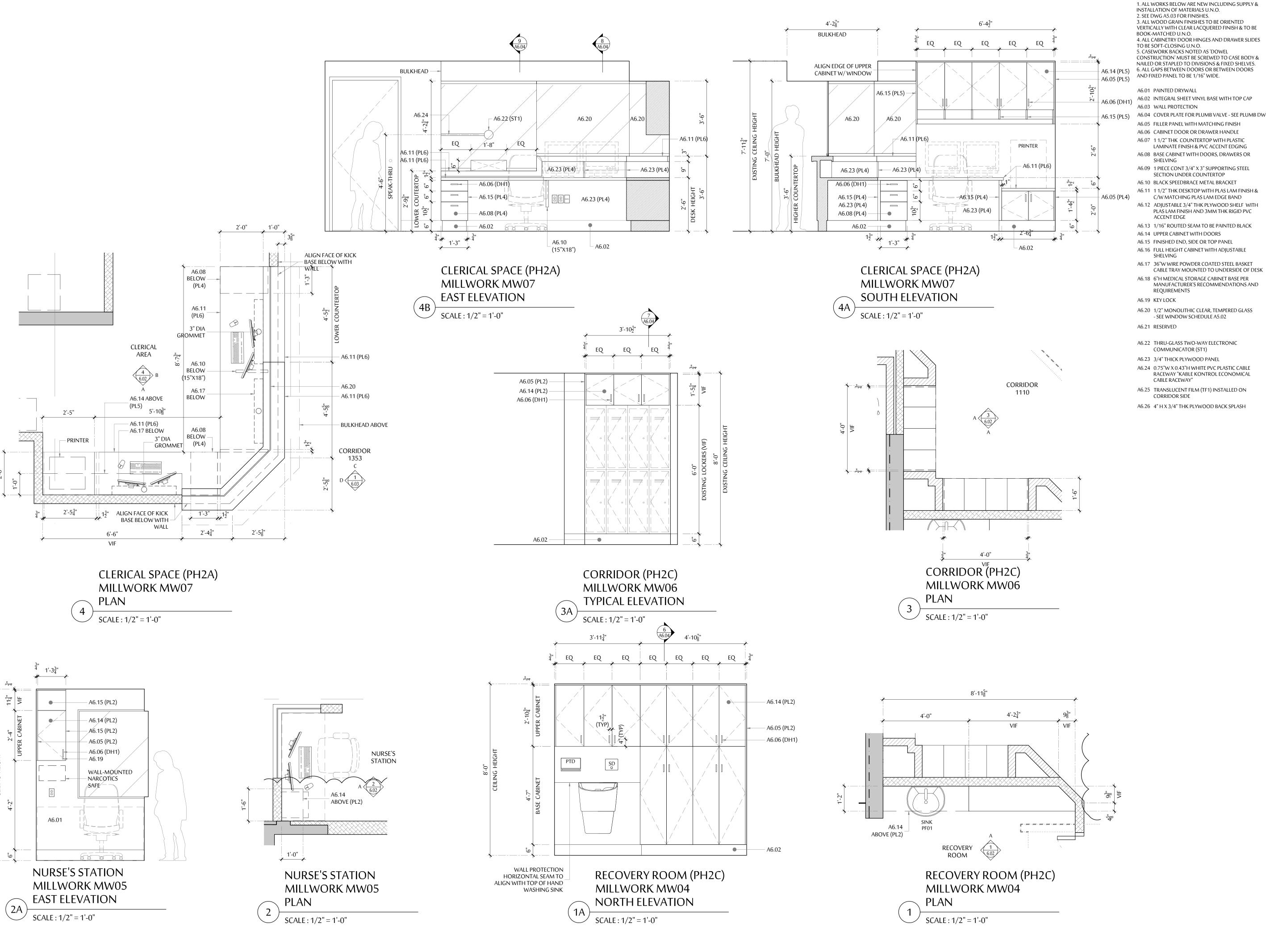
SCALE:
AS NOTED

DATE:
OCTOBER 2020
DRAWN:
RC
CHECKED:
DC

PHASE 2

A6.01

JOB No.: DCYT2009



INTERIOR KEY NOTES

1. ALL WORKS BELOW ARE NEW INCLUDING SUPPLY & INSTALLATION OF MATERIALS U.N.O. 2. SEE DWG A5.03 FOR FINISHES. 3. ALL WOOD GRAIN FINISHES TO BE ORIENTED VERTICALLY WITH CLEAR LACQUERED FINISH & TO BE 4. ALL CABINETRY DOOR HINGES AND DRAWER SLIDES 5. CASEWORK BACKS NOTED AS 'DOWEL CONSTRUCTION' MUST BE SCREWED TO CASE BODY & NAILED OR STAPLED TO DIVISIONS & FIXED SHELVES.

A6.04 COVER PLATE FOR PLUMB VALVE - SEE PLUMB DWGS WWW.DCYTARCHITECTURE.CA

ARCHITECT:

A6.07 11/2" THK COUNTERTOP WITH PLASTIC

LAMINATE FINISH & PVC ACCENT EDGING A6.08 BASE CABINET WITH DOORS, DRAWERS OR

A6.09 1 PIECE CONT 3/4" X 3" SUPPORTING STEEL

A6.10 BLACK SPEEDBRACE METAL BRACKET

C/W MATCHING PLAS LAM EDGE BAND A6.12 ADJUSTABLE 3/4" THK PLYWOOD SHELF WITH

A6.13 1/16" ROUTED SEAM TO BE PAINTED BLACK

A6.14 UPPER CABINET WITH DOORS

A6.18 6"H MEDICAL STORAGE CABINET BASE PER MANUFACTURER'S RECOMMENDATIONS AND

A6.20 1/2" MONOLITHIC CLEAR, TEMPERED GLASS - SEE WINDOW SCHEDULE A5.02

A6.22 THRU-GLASS TWO-WAY ELECTRONIC

A6.23 3/4" THICK PLYWOOD PANEL

RACEWAY "KABLE KONTROL ECONOMICAL

A6.26 4" H X 3/4" THK PLYWOOD BACK SPLASH

12 ISSUED FOR CONSTRUCTION OCT 13, 2021 RC 10-11 NOT ISSUED TENDER ADDENDUM 2 JUNE 16, 2021 RC NOT ISSUED ISSUED FOR TENDER JUNE 4, 2021 RC ISSUED FOR 80% CD MAY 21, 2021 RC NOTISSUED 4 NOT ISSUED 3 NOT ISSUED NOT ISSUED 1 NOT ISSUED

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No. REVISION

UHNBC **FLUOROSCOPY REPLACEMENT**

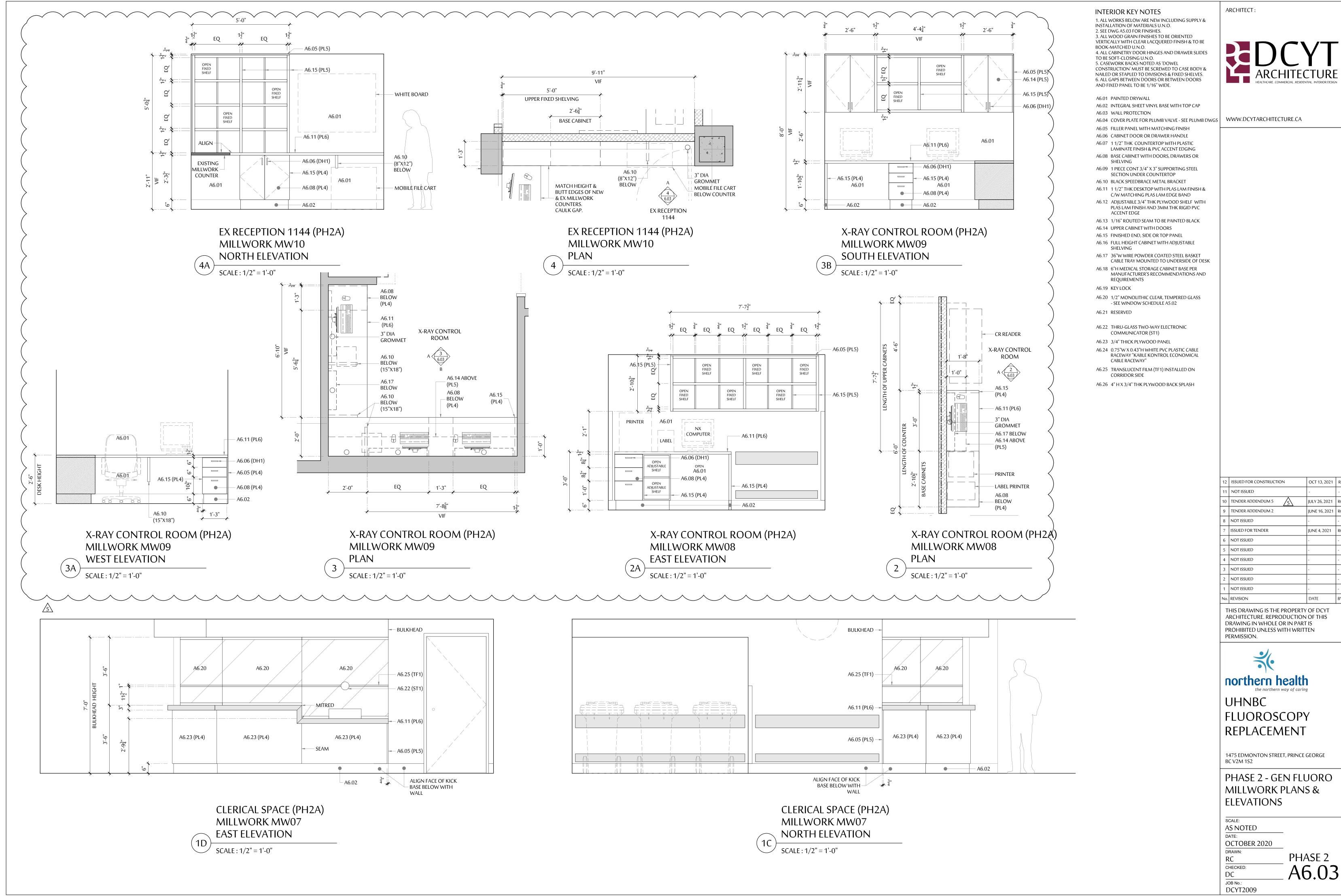
1475 EDMONTON STREET, PRINCE GEORGE BC V2M 1S2

PHASE 2 - GEN FLUORO MILLWORK PLANS & **ELEVATIONS**

AS NOTED OCTOBER 2020 DRAWN RC

JOB No.: DCYT2009

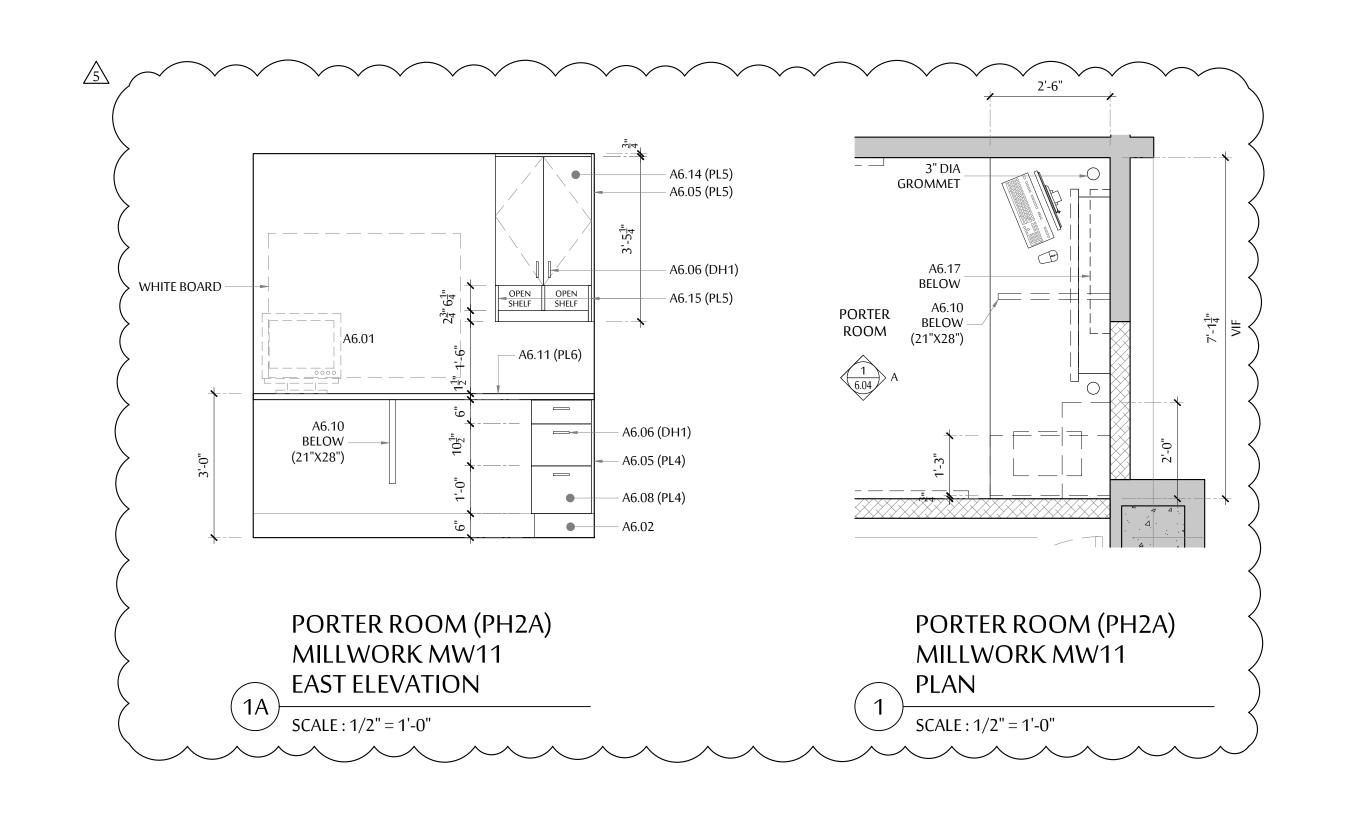
PHASE 2 CHECKED: A6.02



OCT 13, 2021 RC JULY 26, 2021 RC JUNE 16, 2021 RC JUNE 4, 2021 RC

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PHASE 2 - GEN FLUORO



INTERIOR KEY NOTES

1. ALL WORKS BELOW ARE NEW INCLUDING SUPPLY & INSTALLATION OF MATERIALS U.N.O. 2. SEE DWG A5.03 FOR FINISHES. 3. ALL WOOD GRAIN FINISHES TO BE ORIENTED VERTICALLY WITH CLEAR LACQUERED FINISH & TO BE BOOK-MATCHED U.N.O. 4. ALL CABINETRY DOOR HINGES AND DRAWER SLIDES TO BE SOFT-CLOSING U.N.O. 5. CASEWORK BACKS NOTED AS 'DOWEL CONSTRUCTION' MUST BE SCREWED TO CASE BODY & NAILED OR STAPLED TO DIVISIONS & FIXED SHELVES.

A6.01 PAINTED DRYWALL

AND FIXED PANEL TO BE 1/16" WIDE.

A6.02 INTEGRAL SHEET VINYL BASE WITH TOP CAP A6.03 WALL PROTECTION

A6.04 COVER PLATE FOR PLUMB VALVE - SEE PLUMB DWGS WWW.DCYTARCHITECTURE.CA A6.05 FILLER PANEL WITH MATCHING FINISH

6. ALL GAPS BETWEEN DOORS OR BETWEEN DOORS

A6.06 CABINET DOOR OR DRAWER HANDLE A6.07 1 1/2" THK COUNTERTOP WITH PLASTIC LAMINATE FINISH & PVC ACCENT EDGING

A6.08 BASE CABINET WITH DOORS, DRAWERS OR SHELVING

A6.09 1 PIECE CONT 3/4" X 3" SUPPORTING STEEL SECTION UNDER COUNTERTOP

A6.10 BLACK SPEEDBRACE METAL BRACKET A6.11 1 1/2" THK DESKTOP WITH PLAS LAM FINISH & C/W MATCHING PLAS LAM EDGE BAND A6.12 ADJUSTABLE 3/4" THK PLYWOOD SHELF WITH

PLAS LAM FINISH AND 3MM THK RIGID PVC ACCENT EDGE A6.13 1/16" ROUTED SEAM TO BE PAINTED BLACK

A6.14 UPPER CABINET WITH DOORS

A6.15 FINISHED END, SIDE OR TOP PANEL

A6.16 FULL HEIGHT CABINET WITH ADJUSTABLE SHELVING

A6.17 36"W WIRE POWDER COATED STEEL BASKET CABLE TRAY MOUNTED TO UNDERSIDE OF DESK A6.18 6"H MEDICAL STORAGE CABINET BASE PER

MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS

A6.19 KEY LOCK

A6.20 1/2" MONOLITHIC CLEAR, TEMPERED GLASS - SEE WINDOW SCHEDULE A5.02

A6.21 RESERVED

A6.22 THRU-GLASS TWO-WAY ELECTRONIC COMMUNICATOR (ST1)

A6.23 3/4" THICK PLYWOOD PANEL

A6.24 0.75"W X 0.43"H WHITE PVC PLASTIC CABLE RACEWAY "KABLE KONTROL ECONOMICAL CABLE RACEWAY"

A6.25 TRANSLUCENT FILM (TF1) INSTALLED ON CORRIDOR SIDE

A6.26 4" H X 3/4" THK PLYWOOD BACK SPLASH

ARCHITECT:



12	ISSUED FOR CONSTRUCTION	OCT 13, 2021	RC
11	NOT ISSUED	-	-
10	TENDER ADDENDUM 5	JULY 26, 2021	RC
9	TENDER ADDENDUM 2	JUNE 16, 2021	RC
8	NOT ISSUED	-	-
7	ISSUED FOR TENDER	JUNE 4, 2021	RC
6	NOT ISSUED	-	-
5	NOT ISSUED	-	-
4	NOT ISSUED	-	-
3	NOT ISSUED	-	-
2	NOT ISSUED	-	-
1	NOT ISSUED	-	-
No.	REVISION	DATE	BY

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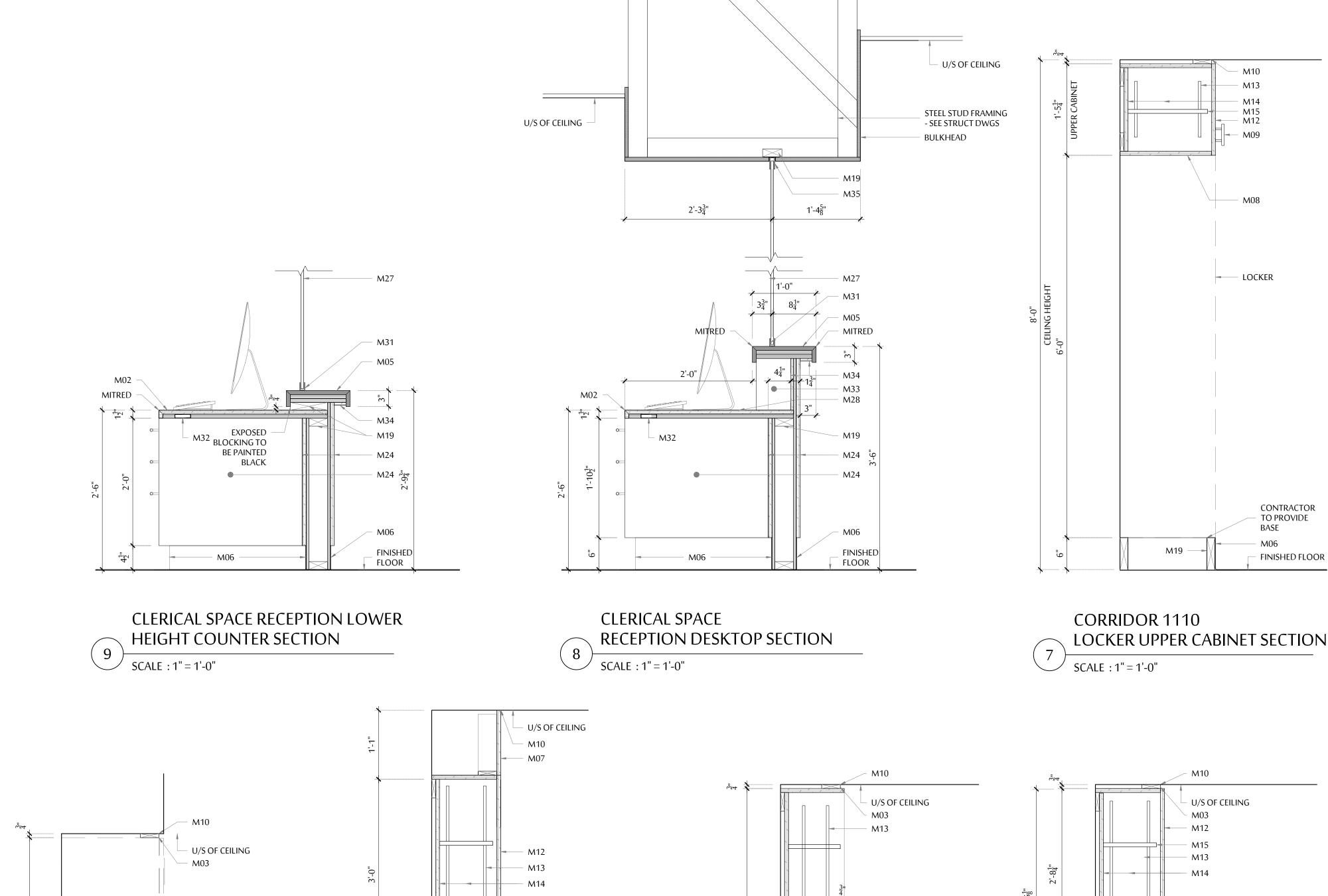
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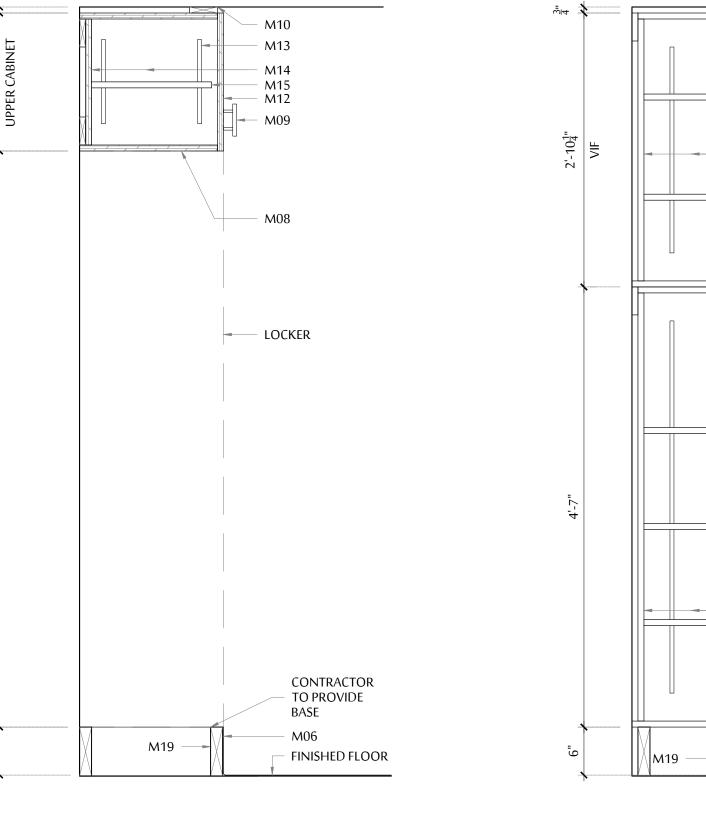
1475 EDMONTON STREET, PRINCE GEORGE BC V2M 1S2

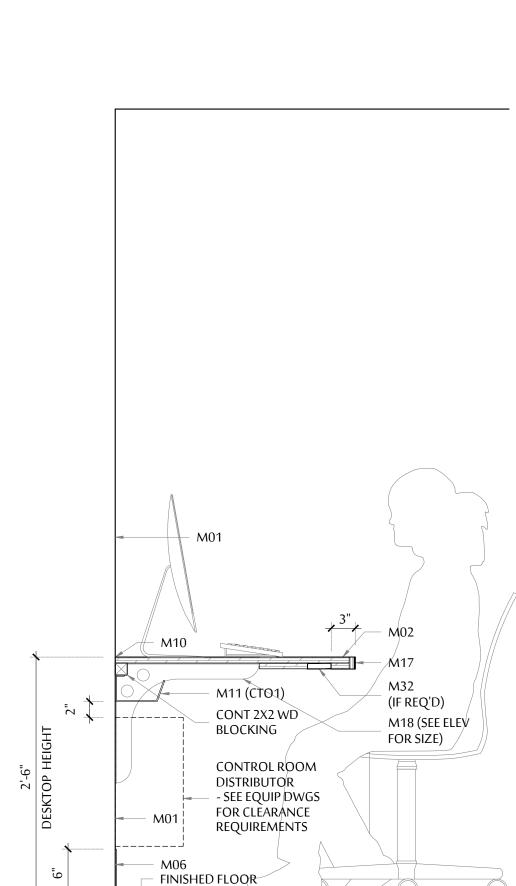
PHASE 2 - GEN FLUORO MILLWORK PLANS & ELEVATIONS

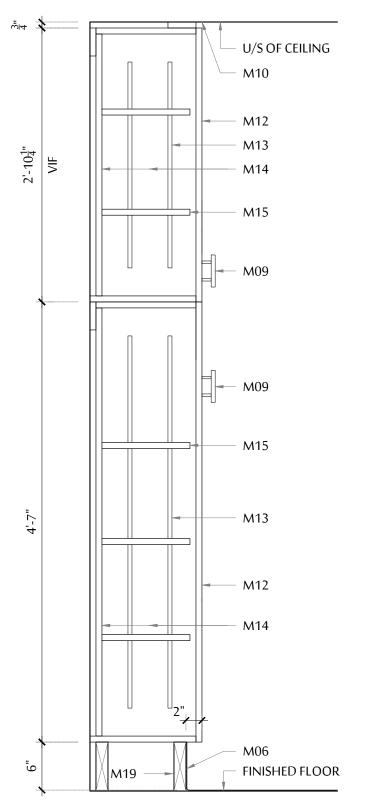
SCALE: AS NOTED OCTOBER 2020 DRAWN:
RC
CHECKED:
DC
JOB No.: PHASE 2 A6.04

DCYT2009



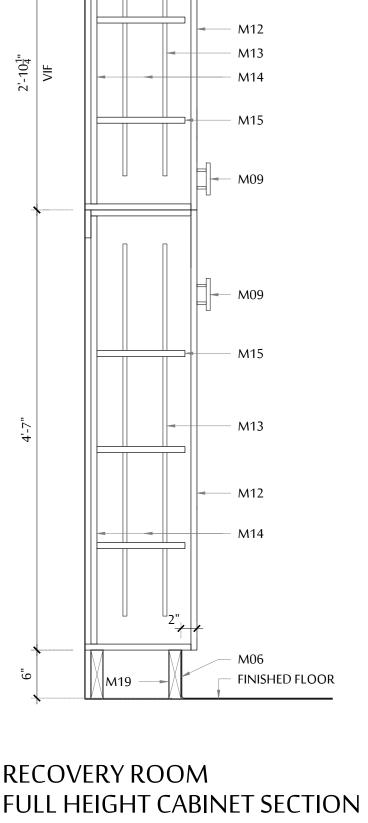






RECOVERY ROOM FULL HEIGHT CABINET SECTION

M29 RESERVED M30 RESERVED M31 1 1/2" DEEP 1/8" THK STAINLESS STEEL 2 ISSUED FOR CONSTRUCTION OCT 13, 2021 RC U-CHANNEL W/ SATIN FINISH ANCHORED TO NOT ISSUED **RECEPTION DESK - SEE WINDOW SCHEDULE** A5.02 FOR DETAILS TENDER ADDENDUM 5 JULY 26, 2021 RC M32 1 PIECE CONT 3/4" X 3" SUPPORTING STEEL **TENDER ADDENDUM 2** JUNE 16, 2021 RC SECTION UNDER COUNTERTOP M33 3/4" PLYWOOD DIVIDER FINISHED AS SPEC'D NOT ISSUED **BOTH SIDES** ISSUED FOR TENDER JUNE 4, 2021 RC M34 1/2" THK PLAS LAM PANEL NOT ISSUED M35 2 1/4" DEEP 1/8" THK STAINLESS STEEL U-CHANNEL W/ SATIN FINISH - SEE WINDOW NOT ISSUED SCHEDULE A5.02 FOR DETAILS NOT ISSUED M36 WALL PROTECTION - SEE FINISH SCHEDULE NOT ISSUED M37 4" H X 3/4" THK PLYWOOD BACK SPLASH NOT ISSUED 1 NOT ISSUED No. REVISION THIS DRAWING IS THE PROPERTY OF DCYT ARCHITECTURE. REPRODUCTION OF THIS DRAWING IN WHOLE OR IN PART IS PROHIBITED UNLESS WITH WRITTEN PERMISSION.

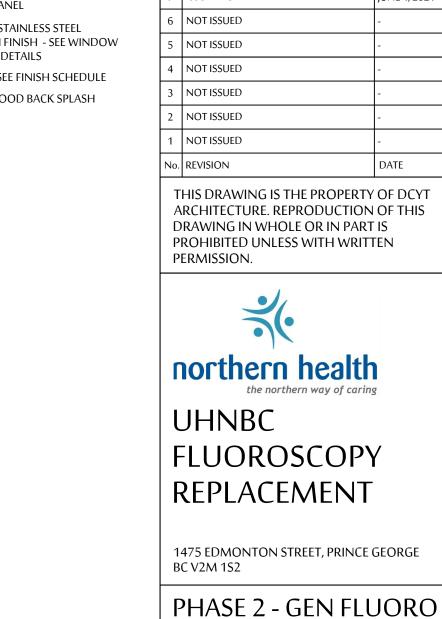


SCALE = 1" = 1'-0"

M28 RESERVED

M23 RESERVED

M26 RESERVED



ARCHITECT:

WWW.DCYTARCHITECTURE.CA

INTERIOR KEY NOTES

BOOK-MATCHED U.N.O.

TO BE SOFT-CLOSING U.N.O.

M01 PAINTED DRYWALL

M09 CABINET DOOR PULL

M04 RESERVED

INSTALLATION OF MATERIALS U.N.O. 2. SEE DWG A5.03 FOR FINISHES.

5. CASEWORK BACKS NOTED AS 'DOWEL

AND FIXED PANEL TO BE 1/16" WIDE.

1. ALL WORKS BELOW ARE NEW INCLUDING SUPPLY &

4. ALL CABINETRY DOOR HINGES AND DRAWER SLIDES

CONSTRUCTION' MUST BE SCREWED TO CASE BODY &

NAILED OR STAPLED TO DIVISIONS & FIXED SHELVES.

6. ALL GAPS BETWEEN DOORS OR BETWEEN DOORS

M02 DESKTOP WITH 3/4" THK PLYWOOD WITH PLAS LAM FINISH & MATCHING EDGE BAND

M05 COUNTERTOP WITH 3/4" THK PLYWOOD WITH PLAS LAM FINISH & MATCHING EDGE BAND M06 FLOOR BASE - SEE MILLWORK ELEVATIONS M07 3/4" THK TOP PANEL WITH PLAS LAM. FINISH

M08 3/4" THK END PANEL WITH PLAS LAM FINISH

M10 CONT COLOR MATCHING CAULKING WHERE MILLWORK MEETS WALL AND FLOOR AND

M12 3/4" THK MDF CABINET DOOR OR DRAWER FRONT WITH PLAS LAM FINISH & MATCHING

M14 3/4" PLYWOOD BUILT CABINETRY WITH PLAS LAM FINISH - ALL EXPOSED FASTENERS TO BE

COUNTERSUNK WITH MATCHING SCREW

PLAS LAM FINISH W/ MATCHING EDGE BAND

M15 ADJUSTABLE 3/4" THK PLYWOOD SHELF WITH

M16 LED STRIP LIGHTING WHERE INDICATED ON

M17 EDGE BAND TO MATCH COUNTERTOP FINISH

M20 1 1/2" THK END OR SIDE PANEL WITH PLAS LAM

M21 3/4" PLYWOOD BUILT DRAWER CABINET WITH

M22 FIXED 3/4" THK PLYWOOD SHELF WITH PLAS LAM FINISH W/ MATCH EDGE BAND

M25 3/4" THK SOLID SURFACE ON (2) 3/4" THK

M27 1/2" MONOLITHIC CLEAR, TEMPERED GLASS

- SEE WINDOW SCHEDULE A5.02 FOR DETAILS

PLAS LAM FINISH - ALL EXPOSED FASTENERS TO BE COUNTERSUNK WITH MATCHING SCREW

M18 BLACK SPEEDBRACE METAL BRACKET

M19 WOOD BLOCK FRAMING

M24 3/4" THK PLAS LAM PANEL

PLYWOOD (NOT USED)

CABLE TRAY MOUNTED TO UNDERSIDE OF DESK

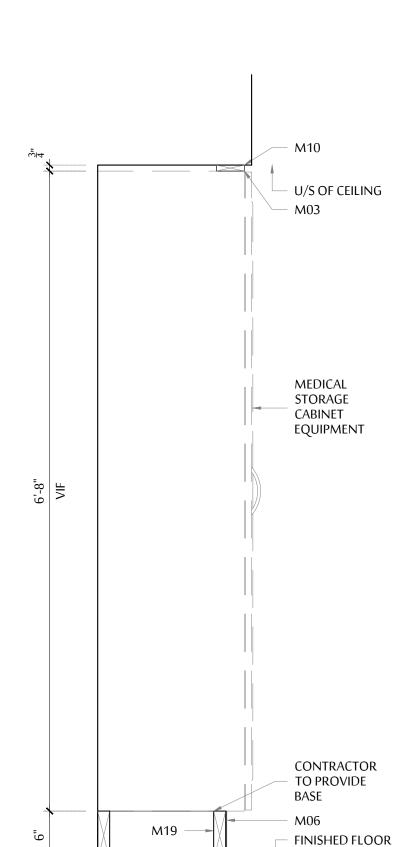
SUSPENDED ACOUSTIC CEILING M11 36"W WIRE POWDER COATED STEEL BASKET

M13 ADJUSTABLE RECESSED METAL SHELF

STANDARDS (TYP)

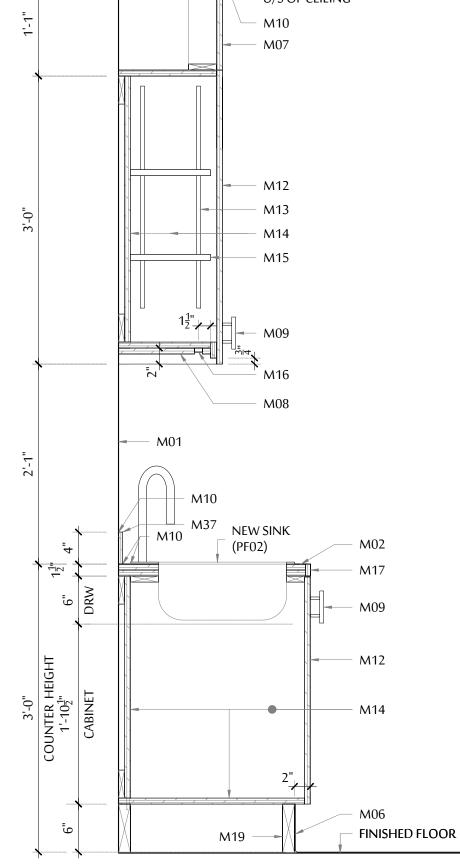
M03 FILLER PANEL WITH MATCHING FINISH

3. ALL WOOD GRAIN FINISHES TO BE ORIENTED VERTICALLY WITH CLEAR LACQUERED FINISH & TO BE



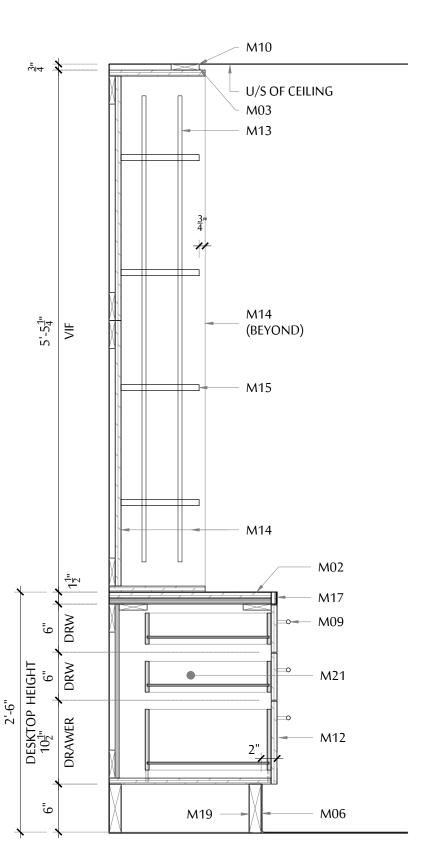
GENERAL FLUOROSCOPY ROOM MEDICAL STORAGE CABINET BASE & FILLER PANEL SECTION

SCALE : 1'' = 1'-0''



GENERAL FLUOROSCOPY ROOM **UPPER & LOWER CABINET** SECTION

SCALE : 1" = 1'-0"



CONTROL ROOM DESKTOP UPPER & LOWER CABINET SECTION

SCALE : 1'' = 1'-0''

FINISHED FLOOR CONTROL ROOM DESKTOP UPPER **CABINET SECTION** SCALE : 1'' = 1'-0''

VENT SLOT W/

INSIDE

MATCHING EDGE BAND

CONT 2X2 WD

BLOCKING

SURROUND ON THE $\frac{3}{2}$

M32

SIEMENS IMAGE

SYSTEM CABINET

(IF REQ¦D)

U/S OF CEILING

M13

CONTROL ROOM DESKTOP SECTION

SCALE : 1" = 1'-0"

MILLWORK SECTIONS AS NOTED OCTOBER 2020 PHASE 2 RC CHECKED: A6.05 DC JOB No.: DCYT2009

1. Construction Documents, Pricing and Contract 1.1. All enquiries related to these documents, including any requests for

information and clarification and to note any discrepancies, omissions or incompleteness, are to be directed by email to the Architect 1.2. Proposed alternatives to the specified materials, along with a full description and justification for the alternative, may be submitted in writing

to the Architect for approval. 1.3. At time of pricing, Contractor is responsible to visit and carefully examine the site, the access thereto, all existing conditions, utilities and services which may have to be protected, removed, or relocated, and all limitations and difficulties which may be encountered. No after claim will be allowed or entertained for any work or material that may be required for the proper execution and completion of the work that should be uncovered during the site examination

1.4. Form of Contract: Canadian Construction Documents Committee CCDC2/2008 Stipulated Price Contract and Supplementary Conditions as listed on this documents

2.Owner's Rules and Regulations: 2.1. Contractor shall conform to CSA Z317.13-17 "Infection control during construction, renovation, and maintenance of health care facilities".

3. Site Conditions 3.1. Site will be occupied and remain in use throughout the duration of 3.2. All work required to be out of normal hours shall be coordinated with

and shall have prior approval of the owner. 3.3. The Contractor shall not disrupt existing building(s) or site service(s) or cause inconvenience to the Owner or to patients, residents or staff without the Owner's prior written approval.

4.1. The Contractor and Subcontractors in performing the work shall comply with any Workplace Health & Safety Programs in place as required by the **Owner** 4.2. The Contractor is responsible for ensuring that work is performed in a

safe manner per Worksafe BC Occupational Health & Safety Regulations

5.Labor Rules: It is the responsibility of the Contractor and his Subcontractors to ascertain the labour conditions existing on the site(s), with particular reference to union or non-union labour, and to comply with these conditions. The cost of doing so shall be included in the bid price.

Codes, Permits & Inspections :

6.1. A building permit will be obtained by **Owner or Architect**. 6.2. The Contractor shall obtain all other permits and pay all fees relating to the Work to all authorities having jurisdiction. 6.3. Specific Hospital's rules & regulations as required by the hospital shall be adhered to by the Contractor.

7. Parking: Unless noted otherwise, no on-site parking will be allowed. Contractor and sub-contractors are to arrange parking arrangement at no cost to the Owner.

8. Material and Equipment Transportation:

8.1. Elevators may not be available to Contractor for movement of construction materials or demolition debris. Contractor shall coordinate and obtain approval from **Owner** if elevators are required. 8.2. Where material or equipment is being transported within the existing building(s) on carts or pallets, such carts or pallets shall have non-marking

Garbage Removal: The Contractor shall be responsible for the removal of all rubbish and waste on a daily basis at a time approved by the Owner and shall permit no accumulation of rubbish and/or waste at any time.

10. Salvage Materials: 10.1. Salvaged material and equipment, specified to accrue to the Owner, shall be protected from dust, moisture and other damage, and delivered to

the **Owner** at a time and place agreed by the **Owner**. 10.2. Salvaged material and equipment specified for reinstallation shall be protected and refurbished to the Owner's satisfaction. 10.3. All other salvageable material and equipment shall become the property of the Contractor and shall be removed from the site immediately.

11. Existing Services Connections and Disruptions : 11.1. The Contractor is responsible for verifying the location of all existing services before performing work in any area. 11.2. Contractor to coordinate shutdown of existing services with the

Owner and obtain approval from Owner seven (7) Working Days prior to 11.3. If, because of the **Owner's** operation, it is required that the work be done outside of normal working hours, the cost of such overtime incurred by the Contractor will be the Contractor's responsibility.

12. Final Clean Up: 12.1. The Contractor shall examine and clean all fixtures and installations to produce intended appearance and use: remove all paint spots, stains, rubbish, debris, tools and equipment from all areas, and leave in first class

12.2. The Contractor shall wash down and dry all floors, stairs and wall surfaces; brush off, dust and polish all ledges, stairs, steps, etc.; clean and polish all glass, mirrors, and remove all paint, putty and dirt.

13. Site Meetings: 13.1. The Contractor shall convene regularly scheduled construction meetings to expedite the Work with representative of the Contractor, Mechanical Subcontractor, Electrical Subcontractor, Owner's

representative(s) and all Consultant(s) present. 13.2. Minutes shall be taken by the Contractor and issued to each of the above-mentioned persons, no later than three (3) Working Days after

14. Fire Regulations: 14.1. Contractor and its Subcontractors shall promote fire prevention in their Work and comply with the fire regulations. Hoarding and site must match the fire dept regulations of the authority having jurisdiction. 14.2. The Contractor will provide fire extinguishers as required during construction per local codes and the provisions of WSBC OHSR in order to

provide a safe workplace. 14.3. Contractor shall post a construction fire safety plan consisting of fire response procedures, fire prevention procedures and evacuation route maps. Plans must be approved by the local Authority Having Jurisdiction. 14.4. Any "hot work" shall be performed in accordance with Owner's Hot Work Program. The Contractor will request a Hot Work Permit from the Owner whenever hot work is to be conducted.

15. Noise and Vibrations:

15.1. Excessively noisy construction activities that could affect the normal operation of the Hospital or patients shall be scheduled in advance with the 15.2. The Contractor shall at all times comply with Part 7 of WSBC OHSR and local municipality or jurisdictions' requirements for noise abatement

16. Hazardous Materials 16.1. Contractors must comply with WSBC OHSR and Workplace Hazardous Materials Information System (WHMIS) for all Hazardous Materials used at the worksite. 16.2. All hazardous products must be labeled in accordance to WHMIS

regulations. 16.3. 72-hour advance notice must be provided if temporary relocation of 16.4. Adequate ventilation must be provided for the type and quantity of

controlled product used 17. Asbestos:

17.1. Asbestos Containing Materials (ACM) may be encountered at 17.2. If ACM is suspected at the project area, Contractor must stop work, report to **Consultant** and request for instruction.

requirements, must be followed for all work conducted in areas where asbestos may be contacted or disturbed. 17.4. A qualified asbestos abatement contractor must do the removal, encapsulation and enclosure of ACM.

17.3. Safe work procedures, in accordance to WSBC and Owner

18. Occupational First Aid 18.1. The Contractor shall arrange for the provision of occupational first aid at the worksite as per the requirements of WSBC OHSR.

1.1.1. CAN/CSA Z317.13-17: "Infection control during construction, renovation, and maintenance of health care facilities". 1.2. American Society of Heating Refrigeration and Air-Conditioning Engineers (ASHRAE):

1.2.1. 52.2-2007: "Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size". 1.2.2. ASHRAE 62.1-2007: "Ventilation for Acceptable Indoor Air Quality".

2. Occupancy & Construction Schedule 2.1. Apply special procedures specified under this section to suit Owner's occupancy and construction schedule. 2.2. Adiacent Owner Occupied Areas:

2.2.1. All **Hospital** building areas will remain occupied & functional during the Work. 2.3. Maintain special procedures in effect to protect occupied areas: 2.3.1. During construction and clean-up operations 2.3.2. Until substantial completion of the Work.

Co-ordination and Co-operation with the Owner's Infection Control. 3.1. Co-operate with the Owner's Infection Control Practitioner and Team to co-ordinate the special procedures work with the Hospital's Infection 3.2. Immediately modify special Procedures Operations as necessary to

ensure compliance with the requirements of this section. 3.3. Owner's designated infection control specialist has the authority to close down the site due to non-compliance with the requirements of this

4. Infection Control Plan, if applicable 4.1. Within seven (7) Working Days of award and prior to commencement of the Work, submit to the Consultant for review and acceptance by the Owner, the Contractor's Site specific Infection Control Plan, outlining in detail, the methods, operations and controls which shall be

Section. 4.2. Acceptance by the **Owner**, of the contractor's infection control plan, indicates only that the Contractor has indicated an understanding and knows the requirements of these special procedures specified for infection control during the Work.

used during the construction to meet the requirements specified under this

4.3. Testing: the Owner reserves the right to test efficiency of the infection control measures. 4.4. A copy of the site specific infection control plan shall be kept on the site at all times and made available to Hospital staff upon request. The Contractor shall provide a location for daily infection control review log to be maintained at the entrance to the construction zone.

4.5. No work will be permitted to progress on the site until such time as

the infection control plan has been reviewed and accepted by the **Owner**.

5. Project Conditions, if applicable

5.1. Class IV preventive measure (includes classes I, II, and III) are required in accordance with CAN/CSA Z317.13-17 and as indicated: 5.1.1. Where conflict between this Section and the referenced CSA standard occurs, this Section will prevail. 5.2. Provide air movement from adjacent areas into the Work area that

exceeds 10m/min. 5.3. Provide negative pressure differential between Work area and adjacent areas of no less than 7.5 Pa. 5.4. Provide continuous digital pressure gauge monitor with printout capabilities.

5.5. Total particulate and fungal spore concentration measure in the Work area after construction and in occupied areas during or after construction are not to exceed preconstruction concentrations or an adjacent control sample as deemed appropriate by the **Owner**.

6. Existing Conditions

6.1. Should material resembling mould, or other type of fungi, be encountered in the course of Work, notify the Consultant immediately. The Contractor shall not disturb any existing mould or fungi until approval has been received from the **Consultant**.

7. Environmental - Biological Air Sampling Air sampling to be performed and paid for in accordance with Section 01 00 00 - General Requirements.

7.2. Coordinate collection of initial and clearance air sampling with the Consultant. 7.3. Initial air sampling to establish baseline of existing airborne contaminants for comparison during construction sampling and clearance sampling. Initial air sampling shall include outdoor samples for comparative analysis.

Worker and Visitor Protection

8.1. Provide disposable type protective clothing to workers and authorized visitors in use of protective clothing. 8.2. Instruct workers and authorized visitors in use of protective clothing. 8.3. Instruct workers and authorized visitors in proper procedures to be

followed in entering into and exiting from the Work area. 8.4. Provide posted notice at all entrances to the construction area indicating proper procedure and requirements for specialized protective equipment.

Control Procedures for Ventilation 9.1. It is expected that the Work of this Contract will generate more than

normal dust particles into the atmosphere around the Hospital. 9.2. The Contractor will monitor the building ventilation system and replace filters in the main building ventilation intakes to suit. The Contracor will, in addition, adjust the building systems to provide positive air pressure in rooms deemed sensitive for infection control.

10. Work Required in Existing Hospital Building, if applicable 10.1. Ensure that construction workers wear protective clothing that is

removed each time they leave the construction site before going into the Hospital. 10.2. Construct Ante-Room at the entrance(s) to work areas designated for use by the Contractor in accordance with CAN/CSA Z317.13-17. 10.3. No access will be permitted directly between the Work area and the Hospital building except by permission of the Hospital, and after decontamination as recommended by the referenced standard.

10.4. Provide booties, germicidal spray and Walk-off Mats. 10.5. Use designated entrance(s) (only) as indicated on drawings for access to existing building. 10.6. Contractor's staff shall minimize access to common areas of the project site. Where access is required, the Contractor shall ensure that

appropriate cleaning procedures are followed. Unrestricted access is acceptable for emergency health care purposes only.

11.1. Provide construction materials and assemblies to meet requirements of this Section.

12. Equipment

12.1. Air scrubber: provide portable air filtration and isolation control equipment with minimum peak airflow of 1800 cfm and multi-stage filtration 12.2. First stage - coarse particulate pre-filter

Second stage - pleated pre-filter 12.3. Third stage - carbon filter for odors 12.5. Final stage - 99.97% at 0.3um level HEPA filter

12.6. Acceptable Equipment: Hepa-Aire PA2000 HC as manufactured by "Abatement Technologies Inc.", (800-827-6443) or approved equivalent. 12.7. Provide fans, filters and ductwork to provide air movement and

maintain negative pressure as indicated. 12.8. Equipment to be certified within past 12 months. Submit documentation to Hospital prior to construction.

13. Preparation 13.1. Verify established travel patterns for construction workers with the Consultant and Owner.

14. Dust and Particulate Control 14.1. Execute the Work by methods to minimize raising dust from construction operations.

14.2. Use drop sheets to control dust. 14.3. Control dust by water-misting surface while cutting. 14.4. Ensure that windows, doors, plumbing penetrations, electrical outlets and intake and exhaust vents are properly sealed with plastic and duct

taped within the Work area. 14.5. For exterior work adjacent to windows in an existing facility, test window openings for air tightness and seal windows that leak. 14.6. Verify that all window-mounted air conditioning units facing construction operations are shut down. 14.7. Place walk-off mats outside entrance(s) to the Work area. Vacuum

daily or when visibly soiled using a HEPA filter-equipped vacuum cleaner. 14.8. Erect an impermeable dust barrier from true ceiling (includes area above false ceilings) to floor consisting of a minimum of 2 layers of 0.15mm polyethylene. 14.9. Dust barriers to be maintained and remain in place until the Work is

completed and removal has been approved by the Consultant and the Hospital's Infection Control Practitioner. 14.10. Verify that workers wear protective clothing. Workers are to remove protective clothing each time they leave the Work area before going into

the Hospital. 14.11. Construct an Anteroom at access points to the Work area if access is from within the health care facility. 14.12. Place a walk-off mat outside the Anteroom in the Hospital and inside the Anteroom to trap dust from worker's shoes and from equipment and

debris that leaves the Work area 14.13. During periods of heavy demolition, the construction workers shall utilize two pairs of footwear. One pair of footwear shall be used for access outside of the Work area and in the antercom. The second pair of footwear shall be for areas inside the Work area and in the antercom. Construction workers shall change footwear when traveling from inside the Work area to outside the Work area.

4.Shop Drawings & Product Data

15.1. Coordinate shutdown of ventilation systems in the Work area with the

15.3. Maintain negative pressure between the Work area and adjacent

15.4. Ventilation equipment to be equipped with pressure gauges and

15.5. Verify that air is exhausted directly outside and away from intake

15.7. The main building's air handling system shall be disconnected form

use in areas of renovation work. This will require cutting and capping of

15.8. Upon disconnection of the main building air handling system, the

16.1. Do not use collection tanks or long pipes that allow water to

16.2. Maintain a dry work environment. Report water leaks to the

16.3. Where plumbing work exceeds planned shutdown time, notify the

16.4. Hyper chlorinate or superheat stagnant domestic water. Water lines

in the Work area and adjacent patient care areas to be flushed before

reuse anytime bacterial growth is deemed possible or if the water system is

Working Days prior to any shutdown of the plumbing system. Minimize

16.5. Contractor to coordinate with and notify the Owner seven (3)

17.3. Place supplies and equipment in covered containers when

transporting through the healthcare facility. Transport debris through

facility only when alternate routes are not available and with prior written

17.4. Clean the Work area with HEPA filter-equipped vacuums and wet

18.1. Barriers to be vacuumed with HEPA-filter equipped vacuum cleaners

and wiped down with disinfectant before removal. Remove dust barriers

carefully to minimize spreading dust and other debris particles associated

18.2. Clean the Work area with HEPA-filter equipped vacuums and wet

18.3. Before the Work area is occupied coordinate clearance sampling

18.4. Where clearance sampling fails to meet baseline sampling, maintain

ventilation and air cleaning equipment until acceptable levels are achieved.

18.5. Ensure ventilation system is functioning properly and is cleaned if

1.1. Prepare and submit to the Consultant within ten (10) Working Days

Work will be performed in conformance with the Contract Time;

of the contract award, a horizontal bar chart construction schedule

indicating the timing of all major activities of the Work, to demonstrate the

1.2. Monitor the progress of the Work relative to the construction

1.3. Promptly advise the Consultant of any revisions required to the

1.4. provide a report to define problem areas, anticipated delays, the

impact on the schedule, corrective action recommended and its effect

1.1. Submit to Consultant submittals listed for review. Submit with

reasonable promptness and in an orderly sequence so as to not cause

delay in Work. Work affected by submittals will not proceed until review is

1.2. Review submittals prior to submission to Consultant. Review

represents that necessary requirement have been determined and verified.

or will be, and that each submittal has been checked and coordinated with

the requirements of Work and Contract Documents. Submittals no

1.4. Contractor's responsibility for errors and omissions in submission is

1.5. Contractor's responsibility for deviations in submission from

2.1. Submit within **five (5) Working Days** of execution of Agreement:

2.2.1. Performance Bond and Labour-and Material Payment Bond.

requirements of Contract Documents is not relieved by Consultants review.

2.2.4. Name of site superintendent and list of site and management

2.3.1. Requirements in accordance with GC 5.1, APPLICATION FOR

2.4. Submit with each and every application for payment subsequent to

2.4.1. Statutory Declaration CCDC 9A from the Contractor, Statutory

2.5.2. Copies of test reports, other than those prepared or obtained by

2.5.4. Copies of permits, licenses, certificates and receipts for fees paid.

2.6. Submit at Substantial Performance of Work as condition thereof: The

Contractor may make application for a Certificate of Substantial

Performance when the Work is ready for use by the Owner for the purpose

intended and when the following items have been provided (where

2.6.1. All required manufacturers' inspections, certifications, guarantees,

2.6.2. All maintenance manuals, operating instructions, maintenance and

2.6.3. All required "as-built" or "as-installed" drawings in the form specified in

2.6.4. Certification by all testing, cleaning, or Inspection Authorities or

2.6.5. Certification by all permit issuing authorities indicating approval of all

2.6.6. Certification by WorkSafe BC that the contractor and all

2.6.7. Statement indicating reconciliation of all Change Orders, cash

2.6.9. A list of major items to be completed or corrected, including the time

2.7. Submit direct to the Owner, 55 Days from the date of Substantial

2.7.2. State of Title Certificate dated the day after expiry of the lien period

2.7.4. Statutory Declaration CCDC 9A - 2001 from the Contractor: Statutory

Declaration, CCDC 9B - 2001 from the each of the Subcontractors; in

Maintain complete and accurate daily records of progress of Work.

3.2. Include in reports weather conditions, commencement, progress and

required to perform the work and a value thereof as well as the proposed

replacement material as specified in the contract Documents;

operating tools, replacement parts or materials, reserve maintenance

stamped, signed, dated and identified as to specific project will be returned

schedule and update the schedule on a monthly basis for Consultant review

shutdowns of the water systems in the existing **building**.

17.1. Exposure of occupants to debris is to be minimized.

mop, or both, at the end of each work shift and as necessary.

contaminated by soil or dust after the Work is complete.

at time of submission for application for payment

schedule as a result of extensions of the Contract Time

without being examined and will be considered rejected.

1.6. Keep one reviewed copy of each submission on site.

2.2. Submit within ten (10) Working Days of Contract award:

not relieved by Consultants review of submittals.

2.1.1. Evidence of required insurance coverages.

2.2.2. Evidence of compliance with WorkSafe BC.

2.3. Submit prior to making 1st application for payment:

Declaration CCDC 9B from each of the Subcontractors

2.5.3. Copies of inspection reports issued by authorities.

warranties as specified in the Contract Documents:

Associations as specified in the Contract Documents;

Allowances and/or other claims to the Contract;

2.7.1. Application for release of lien holdback monies.

stating that no liens have been filed against the project.

2.8. Submit with all billings forwarded to the Payment Certifier:

2.8.2. Associated documentation as described and required.

2.6.8. Occupancy Permit from the Local Authority;

personnel to be employed on Project.

2.2.5. Executed Articles of Agreement.

2.5. Submit during progress of Contract:

Owner appointed testing agencies

2.5.5. Revised construction schedule.

applicable) to the Consultant:

the Contract Documents;

permitted installations;

completion date.

Performance of Work:

3.Daily Work Records

subcontractors are in good standing;

2.7.3. WorkSafe BC Clearance Letter.

accordance with GC 5.5.

2.8.1. Application for payment.

2.5.1. Samples and shop drawings.

I.3. Verify field measurements and affected adjacen

Consultant immediately. Do not re-pressurize water systems until

Contractor shall verify critical pressure relationships of remaining rooms

vents, or filtered through a HEPA filter before being recirculated.

15.6. Maintain equipment filters to manufacturer's specifications.

existing duct work on both the supply and return air systems.

alarm. Alternatively, provide monitoring equipment for duration of project.

15.2. Seal duct openings in the Work area until completed.

Consultant and Owner

stagnate.

17. Progress Cleaning

with the Work.

1. The Contractor shall:

complete.

coordinated.

2.Submittals Checklist

PAYMENT.

2.2.3. Construction Schedule.

2.3.2. Schedule of values

with the Managing

01 32 16 CONSTRUCTION SCHEDULE

01 33 00 SUBMITTAL PROCEDURES

approval from the Hospital.

Consultant immediately.

existing areas by using air scrubbers.

serviced by the impact of this disconnection.

instruction is received from the Consultant.

17.2. Remove debris at the end of each shift.

out of service in excess of one hour.

4.1. Refer to **GC 3.10, SHOP DRAWINGS**, for governing requirements. 4.2. Shop drawings showing details of secondary structural systems and/or provision for seismic restraint of architectural systems and finishes, and mechanical, plumbing and electrical equipment and associated installations, shall include the approximate weight of the item to be restrained. The shop drawings shall be sealed by a qualified Professional Engineer registered to practice in the Province of British Columbia. The Professional Engineer shall be responsible for reviewing the method of seismic restraint and attachment to the structure with the Consultant prior

to installation. 4.3. The Engineer responsible for sealing engineered shop drawings shall submit to the Consultant, British Columbia Code Schedule B-1 Assurance of Professional Design and Commitment for Field Review and B-2 Summary of Design and Field Review Requirements with the shop

4.4. The Engineer shall provide field review of the installation and submit to the Consultant, BC Building Code Schedule C-B Assurance of Professional Field Review and Compliance upon completion of the Work. 4.5. The contractor shall submit seismic restraint calculations upon

request for review by the Consultant. 4.6. Where shop drawings are required to be sealed by a Professional Engineer, a certification of field review letter shall be submitted, sealed, signed and dated by the Professional Engineer, and submitted to the Consultant, prior to Substantial Performance.

4.7. All shop drawings to be submitted in electronic PDF (portable document format). If requested by architect, additional two (2) paper copies of architectural, and three (3) paper copies of M&E shop drawings, product data sheets or brochures need to be submitted. 4.8. Submit shop drawings, product data sheets and brochures in **metric** units. Convert into metric units where information is not produced in

4.9. Refer to Divisions 22, 23 and 26 for additional requirements particular to mechanical and electrical trades.

5. Samples and Color Charts Submit samples and color charts in duplicate 5.2. Samples to be actual production items identical to those intended of

use in Work. Color charts to be complete and representative of product manufacturer's complete range of standard colors. 5.3. Deliver prepaid to Consultant's business address. 5.4. Notify Consultant in writing, at time of submission of deviations in

samples and color charts from requirements of Contract Documents. 5.5. Adjustments made on samples and color charts by Consultant are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Consultant prior to proceeding with Work. 5.6. Make changes in samples and color charts which Consultant may require, consistent with Contract Documents.

6.Operating and Maintenance Manuals 6.1. Refer to Section 01 10 00 General Requirements and 01 77 00 Closeout Procedures for Operating & Maintenance Manuals.

01 35 16 ALTERATION PROCEDURES

1.Protection 1.1. Take precautions to prevent damage to existing items being reused. 1.2. Seal heating and ventilating grilles in rooms where dust will develop during alteration. Take precautions to prevent dust from entering building duct systems.

2.Entrances and exits

2.1. Access to existing building is limited to areas immediately adjacent 2.2. Keep other existing entrances/exits free from obstruction throughout alteration work, in particular provide owner continuous access to emergency exits as required by authorities having jurisdiction.

2.3. Provide alternative and additional exits where required by authorities having jurisdiction. 2.4. Post temporary "exit" directional signs as required where alternative exits have been provided or where existing signs have been removed.

2.5. Verify and implement requirements of local fire and building inspection authorities with regards to "fire safety plan" 2.6. Maintain access to the existing building as required by emergency and firefighting authorities.

3. Fire and intruder alarms 3.1. Protect and maintain existing fire detection devices and intruder detection devices at all times.

3.2. Provide and maintain additional temporary fire detection devices and intruder detection devices throughout new construction areas. Connect into existing building fire and intruder detection system network.

4.1. Refer to owner's general requirements.

Perform cutting, drilling and hammering operations with least amount of noise and disturbance to owner and operation of premises. 4.3. Locate high level noise machinery away from portions of building occupied and used by owner. 4.4. Keep extremely noisy construction operations to a minimum or

arrange at time with owner 5.Disruption of services

Refer to owner's general requirements. 5.2. Do not disrupt or limit existing services without prior agreement where existing portions of project remain occupied and in use by owner 5.3. Where work requires breaking into or connection with such active

services perform work at time arranged and agreed with owner in writing 7 working days before commencement of such portion of work. 5.4. Where work cannot be arranged during normal trade hours perform work outside of normal trade hours at no additional cost to owner.

6.Matching to existing work 6.1. Make new work in new areas, new work in existing areas, and all

alteration work match in every respect similar items in existing building. 6.2. Use new materials, fixtures and equipment to match existing items. Where perfect matches cannot be made as to quality, texture, color, or pattern, remove existing materials and replace with new materials of comparable quality selected by consultant. 6.3. Execute work carefully wherever existing work is being reused. Make

repairs to such reused items after reinstallation to properly restore them. Where proper restoration is impractical, such items will be rejected and replaced. 6.4. After removal of reusable items, carefully patch and repair original location.

6.5. Wherever existing work is being altered to make way for new work, perform such cutting and patching neatly and make finished installations equal to quality and appearance. 6.6. Where new work is a continuation or an extension of existing work, take care to meld the two with complete regard to appearance. Where

possible make joints in concealed or "less obvious" places. 6.7. Wherever part of a wall is altered or affected by the work, paint entire wall at completion of work. Wherever two or more walls are affected, paint

.Making good 7.1. Include cost of making good all work disturbed by removal of existing work, fixtures, fittings, or by installation of new or removal of old mechanical and electrical services. 7.2. Make good surfaces to match adjacent existing surfaces, unless

01 40 00 QUALITY CONTROL

otherwise indicated.

1.Inspection and testing 1.1. Inspection and testing is required and described under various sections. Refer to G.C.2.3, REVIEW AND INSPECTION OF THE WORK, for governing requirements and any additional testing requirements. 1.2. Owner will pay costs for all inspection and testing, unless noted 1.3. Provide minimum 48 hours notice.

Cooperate to provide reasonable facilities for access required under G.C. 2.3.1

3.1. Provide samples and materials required by inspection/testing agency for testing purposes. Submit with reasonable promptness and in orderly sequence so as not to delay work. 3.2. Provide labour and facilities to obtain and handle samples and

materials on site. Provide sufficient space to store and cure test samples.

4.Defective work 4.1. Refer to **G.C. 2.4, DEFECTIVE WORK** for procedures.

5.1. Refer to G.C. 2.3.3 for procedures.

01 50 00 TEMPORARY FACILITIES AND CONTROLS

bottom track of the same size and gauge.

1.Installation /removal

1.1. Provide construction facilities and temporary controls in order to execute Work expeditiously. 1.2. Remove from site all such work after use.

2.1. Provide hoarding in accordance with Appendix B - Infection Control and Dust Containment Guidelines:

2.2. Exhaust air in the construction zone directly outside 2.3. Maintain and relocate protection until such work is complete. 2.4. Temporary metal stud wall (per Appendix B - Infection Control and

Dust Containment Requirements).: 2.4.1. Provide temporary metal stud wall around construction area per 2.4.2. Provide 0.88mm (20 ga) C-shape metal stud wall 92mm wide with 32mm flange at 400mm min o.c. complete with corresponding top and

2.4.3. Provide 5/8" drywall on outside of metal stud. Drywall to be installed on the outside of construction area. Tape all joints between drywalls. 2.4.4. Provide 6mil poly on inside of the metal stud. Tape all edges (top, bottom, sides and overlaps) of poly to form one continuous surface. 2.4.5. Temporary metal stud wall to conform to Section 0922 16 Non Structural Metal Framing.

2.4.6. Provide temporary wood door per drawings with metal frame and door hardware as required. 2.5. Temporary Poly Enclosure: 2.5.1. Provide temporary poly enclosure around construction area per

2.5.2. Set up poly and tape all joints between drywalls. 2.5.3. Provide minimum 7' high zipper opening per drawings

3.Guard rails and barricades

3.1. Provide secure, rigid guard railings and barricades as required by governing authorities for protection of workers.

4. Site storage/loading 4.1. Refer to **GC 3.11, USE OF THE WORK**, for conditions. 4.2. Confine storage to area enclosed by hoarding.

5.Sanitary facilities 5.1. Provide sufficient sanitary facilities for workers in accordance with local health authorities. Do not use building facilities. 5.2. Maintain in clean condition. Place within area enclosed by hoarding,

performance of Work required by insurance companies having jurisdiction

in location acceptable to Owner. 6.Fire protection 6.1. Provide and maintain temporary fire protection equipment during

and governing codes, regulations and bylaws 6.2. Provide 1 fire spotter for each person performing welding or torch cutting operations. Have fire spotters dedicated full time during welding/torch cutting operations to monitor/observe immediate area of such operations for sparks, embers, smoldering material and damaged electrical

6.3. Open fires and burning of rubbish not permitted on site.

7.Protection of building finishes

7.1. Provide necessary screens, covers, hoardings as required to protect finished and partially finished building finishes and equipment during performance of Work.

8.Security

8.1. The Contractor and Subcontractors shall be responsible for security of the Work at all times 8.2. Neither the Consultant nor the Owner will be responsible for any loss or damage to the building, to materials, equipment or other property of the Contractor or Subcontractors.

gates, barricades, perimeter guard rails, warning signs and lights as necessary for the protection of all people and property on and adjacent to work areas, as required by WorksafeBC 8.4. Contractor and subcontractors are not allowed in any part of the hospital except within the project area as shown on drawings, unless prior

8.3. Provide, maintain and relocate as required temporary hoarding.

9.1. Provide and maintain in clean condition during progress of Work, adequately lighted, heated and ventilated temporary office and Contractor's space for filing and layout of Contract Documents and contractor's normal site office staff. 9.2. Locate within area enclosed by hoarding or in location acceptable to

Owner. 9.3. Provide adequate first aid facilities.

approval has been received from the hospital.

10. Equipment/tool/materials storage

10.1. Provide and maintain, in clean and orderly condition, lockable weatherproof sheds for storage of tools, equipment and materials. 10.2. Store non-enclosed materials on site in manner to cause least interference with Work activities. Locate within hoarding.

11. Project cleanliness

11.1. Maintain Work in tidy condition, free from accumulation of waste products and debris. 11.2. Remove waste material and debris from site and deposit in waste container at end of each working day. All waste materials shall be contained within the site hoarding 11.3. Selling of surplus materials and erection of signs for same is not

11.4. Provide and pay for sufficient quantity of hinged lid steel industrial waste containers to accommodate waste products and debris. Arrange for removal of full containers and receipt of empty containers during Work. 11.5. Locate containers within hoarding or in location acceptable to Owner. 11.6. Clean interior areas prior to start of finish work, maintain areas free of

61 60 00 PRODUCT REQUIREMENTS

1.1. Conform to the standards referenced with the specifications, in whole or in part, as specifically requested. 1.2. Conform to latest date of issue of reference standards effect on date of submission of bids except where a specific date or issue is specifically

2.Products and materials Quality:

2.1.1. Refer to **GC 3.8, LABOUR AND PRODUCTS**. 2.1.2. Storage, handling and protection:

dust and other contaminants during finishing operations.

2.1.2.1. Handle and store products in a manner to prevent damage adulteration, deterioration and soiling and in accordance with manufacturer's instructions when applicable. 2.1.2.2. Store packaged or bundled Products in original and undamaged condition with manufacturer's seals and labels intact, Do not remove from packaging or bundling until required in Work. 2.1.2.3. Store and mix paints in a heated and ventilated room. Remove

precaution necessary to prevent spontaneous combustion.

2.1.2.4. Pay costs of transportation of Products required in performance

oily rags and other combustible debris from site daily. Take every

3. Manufacturers' instructions 3.1. Unless indicated otherwise in specifications, install or erect Products in accordance with manufacturers' instructions. Do not rely on labels or enclosures provided with Products. Obtain written instructions directly from manufacturers.

of Work.

5. Toxic or hazardous substances and materials

General: Refer to GC 3.8, LABOUR AND PRODUCTS Refer to GC 3.12, CUTTING AND REMEDIAL WORK. 4.3. Protection of work in progress and completed work: Refer to **GC 9.1**, PROTECTION OF PERSONS AND PROPERTY.

5.1. Products and materials incorporated in the work shall be free as

possible of noxious or toxic volatile emissions or emissions of irritating or

toxic particles, so that the interior air of completed building shall be as

pollution-free as possible. (For example, products emitting benzene,

mercury, lead or other known toxic compounds are not acceptable). **6.**WHMIS program

> that the employees wear the appropriate personal protective equipment where necessary.

1 77 00 CLOSEOUT PROCEDURES

1.As-Built Drawings: 1.1. Contractor shall provide mark-up drawings to the Architect

upon the substantial completion of the Project.

2.Operating and Maintenance Manual 2.1. Submit to the Consultant in electronic PDF (portable document format) and one (1) paper copy of architectural, mechanical, and electrical maintenance, operating and instruction manuals.

2.2. Separately bound manuals are to be prepared for the following trade 2.2.1. Building: Architectural elements, fixtures, finishes, casework,

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hardware, specialties, etc. 2.2.2. Mechanical: Heating ventilating, air conditioning, etc. 2.2.3. Plumbing: Plumbing, fire sprinklers, etc. 2.2.4. Electrical: Power, lighting, fire alarm system, data, communications,

security, etc. 2.3. Provide maintenance manuals in hard and electronic format as specified hereafter, giving full operating and maintenance instructions for each system and major piece of equipment, as well as, maintenance instructions for building elements, fixtures and finishes. 2.4. Manuals are to contain pertinent maintenance operational and installation instruction information on equipment, materials cleaning and

lubrication schedules, filters, overhaul, replacement, adjustment schedules,

and emergency procedures as applicable. Instructions in manuals shall be

in simple language so as to guide the Owner in the proper operation and

maintenance of building material, components, equipment and systems. 2.5. Include all items covered by Change Orders. 2.6. Update the manuals periodically during the installation and commissioning phase of the Work so that the manuals are final by the scheduled turnover date. 2.7. Include equipment supplied by the Owner and pre-tendered

equipment. 2.8. Binders: 2.8.1. Binders shall be ACCO Canadian Co. Ltd. or approved substitution as

2.8.2. ACCO Inview D-Ring Binders - color Black a. 1 inch - 41805-0

b. 2 inch - 41807

3. Electronic Copies of Manuals

a. 3 to 5.5 inches - 05426-0 2.8.4. Pages: 2.8.4.1. Descriptions and lists are to be neatly typed or printed on lettersize heavy bond paper. Duplicate pages shall be made by

manual to identify each information "Section".

2.8.3. ACCO expanding bar-lock catalogue binder - color Black

electrostatic dry copier. 2.8.4.2. The maximum paper size for schedules and diagrams is 11" x 2.8.4.3. Alphabetical index tab separators are to be used in each

2.8.5. Manual contents shall be organized into applicable categories of Work, parallel to specifications divisions and sections. 2.9. Architectural manuals shall include in general, but shall not necessarily be limited to, the following: 2.9.1. List of all Subcontractors, manufacturers, suppliers, complete with addresses and telephone and facsimile numbers. 2.9.2. Copy of hardware schedule and paint schedules, complete with the

2.9.3. All manufacturer's equipment, materials, products, data, details, identification, list, schedules of maintenance, operational and installation instruction information as required in accordance with the various sections of the specification. 2.9.4. All extended guarantees, warranties, maintenance bonds, certificates, letters of guarantees, registration cards, as called for in the

various sections of the specification, with the following information:

actual manufacturer, supplier and identification names and numbers.

Name and address of subject. a. Name and address of subject. b. Commencement date (Substantial Performance of the Work) of guarantees and warranties.

required in accordance with various sections of the specification has

c. Duration and expiry date of guarantees and warranties. d. Signature and seal of the Contractor, Installer, manufacturer and/or supplier as applicable.

e. Complete set of all final reviewed shop drawings. 2.9.5. Certificated of Inspection. 2.9.6. Test reports and certificates as applicable. 2.9.7. Confirmation letters of all extra, reserve, replacement materials as

been properly handed over and received by the Owner in good order. 2.9.8. Confirmation letters of all portable units, equipment, materials such as fire extinguishers, special tools, keys for all equipment and/or panels. elevator pads/accessories, keys to millwork, casework, has been properly handed over and received by the Owner in good order.

3.1. In addition to the printed copies, submit electronic copies of all operating and maintenance data as specified under clause 1.4. 3.2. Submit data on "read only" CDs. Provide one (1) copy of each CD for the Owner and 1 copy to the Consultan 3.3. Do not provide separate CDs for each major section. Use more than one CD only if the volume of data exceeds the capacity of a single CD.

Owner, project and CD title. 3.4. Organize electronic data using directories and sub-directories as generally described in clause 1.4. Prior to assembling the electronic data, submit to the Consultant a detailed list of the proposed directory/sub-directory structure including proposed files names. File names to be easily recognizable without the need to open the document to know what information the file contains. Directory structure and file naming

3.5. Provide information in Portable Document Format (PDF). Break down

large files into sections and use bookmark structure for easy navigation.

is subject to the approval of the Consultant.

Professionally label each CD and CD jewel case, including the name of the

ISSUED FOR CONSTRUCTION OCT 13, 2021 RC NOT ISSUED TENDER ADDENDUM 1 JUNE 10, 2021 RC **NOT ISSUED** NOT ISSUED NOT ISSUED 4 NOT ISSUED NOTISSUED NOTISSUED I NOT ISSUED No. REVISION DATE

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REPLACEMENT

PHASE 2 - GEN FLUORO **SPECIFICATIONS -**GENERAL CONDITIONS

AS NOTED OCTOBER 2020 RC

SCALE:

PHASE 2 CHECKED: DC JOB No.: DCYT2009

01 15 10 INFECTION CONTROL 1.1. Canadian Standards Association (CSA).

> completion of various portions of Work, dates of meetings, inspection visits, 6.1. The Contractor shall maintain Workplace Hazardous Materials records of workforce, material receipts and material supply problems, information and clarification requests, information, clarification and direction ${m \eta}$ Information System (WHMIS) Program which will include: 6.1.1. Maintaining all Material Safety Data Sheets (MSDS) on site for received and actions and events causing delays. 6.1. Submit adjustment and balancing reports for mechanical and 14.14. Verify that workers leave the Work area through the anteroom so 3.3. Make daily work records available to Owner and Consultant upon hazardous products. electrical systems. Refer to mechanical and electrical divisions for specific 6.1.2. Providing the Consultant with copies of Material Safety Data Sheets they can remove protective clothing and be vacuumed with a HEPA filter-equipped vacuum cleaner before leaving. 6.1.3. Educate and train its employees on the WHMIS Program and ensure 14.15. Repair any holes in walls within 8 hours.

Canadian Construction Safety Code. 3. Provide one (1) person on site who is responsible for maintaining the safety barriers and protection of the workers and the public. Provide the name of this person to the Owner. Any changes in personnel must also be reported to the Owner.

all demolition work as required. 5.The Contractor shall visit the site at his own expense prior to the submission of tenders and take whatever time is required to ascertain existing site conditions and surrounding features related to the proposed demolition and new construction work, and ensure himself that conditions are suitable for execution of the work.

4. The Contractor shall accept the site as it exists and will be responsible for

6. Arrange for a site visit together with Consultant, to examine existing exterior and interior site conditions adjacent to demolition and new construction work. Take pictures of any existing damage and record same in writing to avoid any disputes at a later date. Photograph all rooms where partial demolition is to occur before work commences in order to provide & record of existing conditions.

7. Provide temporary enclosures for securing off of work and the maintenance of any services necessary to the proper and efficient operation of the project. 8. Conduct construction operations with minimum interference to existing

buildings operations, adjacent buildings, adjacent public or private roadways,

parking lots, sidewalks and access facilities in general. Keep such areas free

of material debris and equipment at all times. 9. The Contractor shall provide any hoardings, barricades, warning signs and lights, as necessary, for the protection of all people and property on and adjacent to the site as specified herein or by the Worker's Compensation Board of British Columbia. The Contractor shall alter, adapt, maintain, relocate and remove these additional barricades, etc., as necessary due to the work. The Owner and Consultant shall be saved harmless from any loss.

damage, death or injury occurring through neglect, carelessness of incompetence of the Contractor, or the handling or condition of his equipment. 10. Where existing items are removed, "make good" to existing surfaces if they are to remain exposed. "Making Good" shall be defined as preparing new surfaces which are identical to adjacent surfaces (with similar backing

materials), and finished off in such a manner that there are no visible traces (at a distance of 2 feet), between existing work and the work of new patching. **11.** Submit to the Consultant

11.1. Proposed dust-control measures. 11.2. Dates for shutoff, capping, and continuation of utility services.

11.3. Phasing and dates for sectional shutoff of sprinkler system serving existing buildings which are to remain

11.4. Inventory of items to be removed and salvaged 11.5. Photos or video, sufficiently detailed, of existing conditions of adjoining construction and site improvements that might be misconstrued as

damage caused by demolition operations. 11.6. Landfill records indicating receipt and acceptance of hazardous wastes by a landfill or other facility authorized to accept hazardous wastes. 12. Stop work around an area where existing previously unidentified hazardous

material is discovered, including materials suspected of containing asbestos, and immediately contact the Project Manager for direction before continuing with the work affected. **13.** No temporary stockpiling of demolished materials permitted on site. All demolition materials from excavations must be removed from site daily.

Dispose of materials in a legal manner. 14. Contractor to keep the premises clean and free from rubbish, debris, surplus materials and equipment. At the end of each day's work, leave work in safe condition so that no parts are in danger of toppling or falling.

96 40 00 ARCHITECTURAL WOODWORK

1.Reference: Architectural Woodwork Manufacturers Association of Canada (AWMAC) and Architectural Woodwork Institute (AWI) 2. Submit shop drawings and hardware cut sheets in accordance with

Section 013300. Indicate locations of all typical and special installation conditions; all connections, attachments, anchorage and locations of exposed fastenings. **3.**Submit full range HPDL colour charts for Consultant's colour selection use. 4. The Trade Contractor shall furnish a two (2) year maintenance bond, to the

full value of the architectural woodwork subcontract, certifying that the architectural woodwork has been manufactured and/or installed in accordance with the standards incorporated in the AWMAC Manual. Sulf the Trade Contractor is an AWMAC member in good standing, a two (2) year AWMAC Guarantee Certificate will be issued instead of the maintenance

6.The maintenance bond/guarantee certificate shall cover replacing, reworking and/or refinishing to make good any defects in architectural woodwork due to faulty workmanship or defective materials supplied by the Trade Contractor that appear during a two (2) year period following to Substantial Completion of the architectural woodwork contract.

7. Casework: HPDL

7.1. AWS quality grade : Custom 7.2. Core: formaldehyde free minimum 769 kg/m3 density MDF to ANSI

A208.2 and AWMAC requirements.

7.3. Finish: See Finishes Schedule on Dwg A5.03

7.3.1. Countertops: Horizontal General Purpose Standard Grade (HGS) 7.3.2. Vertical surfaces: Vertical General Purpose Standard Grade (VGS)

7.3.3. Semi-exposed parts: Face Veneer: Cabinet Liner Standard Grade

7.3.4. Backing Sheet Grade (BK)

7.4. Approved product : **See Finishes Schedule on Dwg A5.03**

67 84 00 FIRE AND SMOKE SEALS

1. Fire stopping and smoke seal systems: in accordance with CAN/ULC-S115

"Fire Tests of Firestop Systems". 1.1. Use materials free of asbestos and ceramic fibres. Use systems capable of maintaining effective barrier against flame, smoke and gases in compliance with requirements of CAN/ULC-S115 and not to exceed opening sizes for which they are intended.

1.2. Fire stop system rating: to respective wall or floor rating. 2. Service penetration assemblies: certified by ULC in accordance with CAN/ULC-S115 and listed in ULC Guide No. 40 U19.

3. Fire stop components: certified by ULC in accordance with CAN/ULC-S115 and listed in ULC Guide No. 40 U19.13 and ULC Guide No. 40 U19.15 under Label Service of ULC.

4. Fire-resistance rating of installed fire stopping assembly not less than fire-resistance rating of surrounding floor and wall assembly. **5.** Fire stopping and smoke seals at openings around penetrations for pipes. ductwork and other mechanical items requiring sound and vibration control:

elastomeric seal; do not use cementitious or rigid seal at such locations. **6.**Firestopping and smoke seals at building expansion and seismic control joints: pre-formed, semi-rigid non-combustible mineral wool material.

6.1. Approved product: A/D Firebarrier by A/D Fire Protection. **7.**Sealant: to CAN4-S115-M, primerless single component silicone sealant.

7.1. Approved product: A/D Firebarrier Silicone by A/D Fire Protection. **8.**Primers: to manufacturers' recommendation for specific material, substrate and end use.

9. Water (if applicable): potable, clean and free from injurious amounts of deleterious substances 10. Damming and back-up materials, supports and anchoring devices: to

manufacturers' recommendations and in accordance with tested assembly being installed as acceptable to authorities having jurisdiction. **11.** Sealants for vertical joints: non-sagging.

12. Installations of fire and smoke protection shall be by experienced installers familiar with ULC systems and approved by the manufacturer.

13. Examine sizes and conditions of voids to be filled to establish correct thicknesses and installation of materials. Ensure that substrates and surfaces are clean, dry and frost free.

14. Prepare surfaces in contact with fire stopping materials and smoke seals to manufacturers' instructions. 15. Install fire stopping and smoke seal material and components in

accordance with ULC certification and manufacturers' instructions. **16.** Seal holes and voids made through penetrations, poke-through

termination devices and unpenetrated openings and joints to ensure continuity and integrity of fire separation are maintained. 17. Listing and Test Reports: Submit copies of current ULC listed Firestop

System for each system and certified copies of test reports verifying that air seal/firestop and smoke seals meet or exceed specified requirements. 18. Post service penetrations and future use openings/sleeves with permanent

18.1. identifying locations as firestops/smoke seals,

18.2. listing material installed including local distributor,

18.3. detailing procedures for proper re-sealing of disturbed material and 18.4. warning against painting of installed material.

19. Notify Owner when ready for inspection and prior to concealing or enclosing fire stopping materials and service penetration assemblies. 20. Arrange for inspections by the Owner's independent inspection and testing

agency, appointed and paid for by the Owner. 21. Following field inspections provide all repairs as required to comply with the Contract Documents.

67 92 00 JOINT SEALANTS

1. Section includes: joint sealants, joint backer materials and accessories needed to ensure a complete and durable weather and/or tight seal at all

locations indicated. 2.Perform work in accord with ASTM C 1193 guidelines except where more stringent requirements are indicated or specified. 3. Provide joints properly dimensioned to receive the approved sealant

4. Provide joint surfaces that are clean, dry, sound and free of voids. deformations, protrusions and contaminants which may inhibit application of performance of the joint sealant.

5.Deliver to the Architect signed copies of the following written warranties against leakage, cracking, crumbling, melting, shrinkage, loss of adhesion and/or staining of adjacent surfaces for a period of 3 years from date of 5.1. Manufacturer's standard warranty covering sealant materials;

5.2. Applicator's standard warranty covering workmanship. 6. Provide colors selected by Architect from manufacturer's standard color

7. Primers: Type to be recommended by sealant manufacturer

8.For concealed partition sealant: CAN/CGSB 19.21 M87 Single-component, non-hardening synthetic rubber sealant - Tremco Acoustical Sealant or approved alternative. 9. For general purpose interior and exterior caulking on vinyl, aluminum and

wood siding as well as on bathroom and kitchen fixtures: CAN/CGSB 19-GP-17M Acrylic latex sealant - Tremco Tremflex 834 or approved alternative **10.** For interior watertight seal to glass, metal, porcelain, ceramic and painted

surfaces: CAN/CGSB-19.13-M87 Single component silicone - Tremco Tremsil 200 or approved alternative **11.** Joint cleaner: Non-corrosive type recommended by sealant manufacturer

compatible with joint forming materials 12. Bond breaker: Polyethylene tape or other adhesive faced tape as recommended by sealant manufacturer to prevent sealant contact where it

would be detrimental to sealant performance. 13. Joint backer: Closed cell or soft rod Polyethylene foam rod or other compatible non-waxing, non-extruding, non-staining resilient material in dimension 25 percent to 50 percent wider than joint width as recommended

by sealant manufacturer for conditions and exposures indicated. 14. Masking tape: Non-staining, non-absorbent tape product compatible with joint sealants and adjacent joint surfaces that is suitable for masking. 15. Remove all traces of previous sealant and joint backer by mechanical

methods, such as by cutting, grinding and wire brushing, in manner not damaging to surrounding surfaces. 16. Remove paints from joint surfaces except for permanent, protective

coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer. 17. Remove wax, oil, grease, dirt film residues, temporary protective coatings and other residues by wiping with cleaner recommended for that purpose,

Use clean, white, lint-free cloths and change cloths frequently. 18. Provide joint backer material uniformly to depth required by sealant manufacturer for proper joint design using a blunt instrument. **19.** Provide bond-breaker where indicated or recommended by sealant

manufacturer, adhering strictly to the manufacturers installation requirements. **20.** Prime joint substrates where required. 21. Use masking tape where required to prevent sealant or primer contact with adjoining surfaces that would be permanently stained or otherwise

damaged by such contact or the cleaning methods required for removal. 22. Install sealants to fill joints completely from the back, without voids or entrapped air, using proven techniques, proper nozzles and sufficient force that result in sealants directly contacting and fully wetting joint surfaces. 23. Install sealants to uniform cross-sectional shapes with depths relative to

recommended by sealant manufacture 24. Tool sealants in manner that forces sealant against back of joint, ensures firm, full contact at joint interfaces and leaves a finish that is smooth, uniform and free of ridges, wrinkles, sags, air pockets and embedded impurities. 25. Remove sealant from adjacent surfaces in accord with sealant and

substrate manufacturer recommendations as work progresses.

joint widths that allow optimum sealant movement capability as

98 10 00 HOLLOW METAL DOORS AND FRAMES

1. Reference Documents: Specifications for Commercial Steel Doors and Frames and Canadian Fire Labelling Guide by the Canadian Steel Door and Frame Manufacturers Association (CSDFMA).

2.NFPA 80. Standard for Fire Doors and Fire Windows. **3.**Fire rated doors and frames: labelled and listed by an organizatio**n** accredited by Standards Council of Canada in conformance with ULC CAN4-S104M and CAN4-S105M for ratings indicated.

4.Steel: Commercial grade steel to ASTM A568-81, Class 1, hot dipped galvanized to ASTMA527-80, coating designation to ASTM A525-81, ZF75 4.1. Thickness for steel components shall be in accordance with the CSDFMA specification 'Table 1 - Thickness of Steel for Component Parts' unless

otherwise specified. 4.2. Door frames: 16 ga.

4.3. Door stiles and rails: 16 ga 4.4. Door panel: 18 ga

5.Door bumpers: Black rubber/neoprene single stud 6. Fabricate frames as detailed, in accordance with Canadian Steel Door and

Frame Manufacturers' Association, "Specifications for Commercial Steel Doors 7. Mortise, reinforce, drill and tap frames for mortised hardware. Reinforce frames for surface mounted hardware.

8. Welding shall conform to CSA W59. Cut miters and joints accurately and weld continuously on inside of frame profile. S.Grind welded corners and joints to flat plane, fill with metallic paste filler

and sand to uniform smooth finish. Weld in two temporary jamb spreaders per frame to maintain proper alignment.

10. Shop prime after fabrication **11.** Touch-up primer: to CGSB 1-GP-181 zinc rich. **12.** Install in accordance with NFPA 80.

98 14 00 WOOD DOORS

1. Supply of rated and non-rated flush solid core wood doors per drawings

2.1. ANSI A135.4 - Basic Hardboard. 2.2. Architectural Woodwork Manufacturers Association of Canada (AWMAC) and Architectural Woodwork Institute (AWI)

3.1. Product Data: indicate door core materials and construction; veneer species, type and characteristics. 3.2. Shop Drawings: Illustrate door opening criteria, elevations, sizes, types,

swings, undercuts required, special blocking for hardware, identify cutouts for glazing and louvers.

3.3. Samples: Prepare and submit a set of two (2) samples of door with finish 150 x 150 minimum **4.**Perform work in accordance with AWMAC, Premium Grade.

5. Finish doors in accordance with AWMAC, Custom Grade. **8.**Provide protective wrapping for pre-finished doors during transit and 7.Store all doors in a dry place; free from extremes of temperature; properly

stacked and protected. 8. Wood doors shall carry manufacturers' Lifetime Guarantee provided from

date of Substantial Performance against deformation, bow, cup, warp in surfaces. Interior solid core wood doors : 9.1. Solid core: CANICSA-0132.2.1: Agrifibre core, no added urea formaldehyde veneer (green screen). Flush or flat panel.

9.2. .Face: Beech (Rotary Cut) Vertical Grain Veneer 9.3. .Edge: to match Face. 9.4. Thickness: 45mm thick door thickness

9.5. Frame: Pressed Steel, shop primed, painted - See Section 08 10 00 Hollow Metal Doors and Frames 9.6. Blocking: Minimum 125 mm x 460 mm solid wood with lock blocking at both stiles. 9.7. Adhesive: Low VOC, Type I PVA waterproof adhesive

10. Finishes: See Door Schedule **11.** Machine cut for hardware. 12. Coordinate installation of doors with installation of frames specified in Section 08 10 00 Hollow Metal Doors and Frames and hardware specified in

13. Install door plumb and level. **14.** Adjust door for smooth and balanced door movement. **15.** Adjust closer for full closure.

Section 08 71 00 Door Hardware.

08 51 13 ALUMINUM WINDOWS (NOT APPLICABLE)

1.1. Exterior aluminum windows, thermally broken. 1.2. Aluminum flashing sill and closure plate as detailed. **1.3.** Related deflection header components. **1.4.** All necessary reinforcing members, anchors, screws, bolts, etc. for installation.

2.Conform to the following: 2.1. DAF 45 (2003), Designation System For Aluminum Finishes 2.2. AAMA-2603-(2002), Voluntary Specification, Performance Requirements

and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels 2.3. AAMA-2604-(2005), Voluntary Specification, Performance Requirements

and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels 2.4. AAMA-2605-(2005), Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on

Aluminum Extrusions and Panels 2.5. AAMA CW-10-(2004), Care and Healing of Architectural Aluminum from Shop to Site 2.6. ASTM B209-(07), Specification for Aluminum and Aluminum-Alloy Sheet

2.7. ASTM B221-(08), Specification for Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes

2.8. ASTM D2240-(05), Standard Test Method for Rubber Property-Durometer Hardness 2.9. CAN/CGSB-12.8-(97), Insulating Glass Units

2.10. CAN/CGSB-12.20-(M89), Structural Design of Glass for Buildings

2.11. CAN/CGSB-19.13-(M87), Sealing Compound, One-Component, Elastomeric, Chemical Curing **2.12.** CAN/CSA-S157-(2005), Strength Design in Aluminum 2.13. CAN/CSA W59.2-(M1991, R2003), Welded Aluminum Construction

2.15. CCD-45-(1995), Sealants and Caulking Compounds 2.16. CAN/ULC-S710.1 (2005), Standard for Thermal Insulation -Bead-Applied One Component Polyurethane Air Sealant Foam, Part 1: Materials Standard for Thermal Insulating - Bead - Applied One Component Polyurethane Air Sealant Foam, Part 1: Materials

2.14. NAFS-AAMA/WDMA/CSA 101/I.S.2/A440-08

3.Make Submittals in accordance with Submittal Procedures 01 33 00 4. Submit product data including manufacturer's literature for aluminum window frames, glazing, components and accessories, indicating compliance with specified requirements and material characteristics.

components and accessories to be incorporated into work. **4.2.** Include product names, types and series numbers. **4.3.** Include contact information for manufacturer and their representative for this project.

4.1. Submit list on window manufacturer's letterhead of materials,

5.Shop Drawings: Submit drawings stamped and signed by Professional Engineer registered or licensed in British Columbia, Canada. 5.1. Indicate materials and details in full size scale for head, iamb and sill profiles of components, interior and exterior trim, junction between combination units, elevation unit, anchorage details, description of related components and exposed finishes, fasteners, and caulking. 5.2. Indicate location of manufacturer's nameplates

6.Samples: **6.1.** Submit duplicate 300 x 300mm sample sections showing prefinished aluminum surface, finish, colour and texture, and including frame corner

6.2. Submit duplicate 300 x 300mm sample sections of insulating glass unit showing glazing materials and edge and corner details. 7. Thermal Performance: Submit verification that Insulating Glass Units used to meet (USI) centre of glass values specified.

8.1. Submit test reports showing compliance with specified performance characteristics and physical properties including air and water infiltration. 8.2. Field Reports: Submit manufacturer's field reports within 3 days of

manufacturer representative's site visit and inspection.

Installer Qualifications:

9.1. Submit letter verifying installer's experience with work similar to work of this Section. 10. Closeout Submittals:

10.1. Operation and Maintenance Data: Supply maintenance data for windows for incorporation into manual specified in Section 01 77 00 -Closeout Procedures. 10.2. Record Documentation: In accordance with Section 01 77 00 -

Closeout Procedures: 10.2.1.List materials used in windows work. 10.2.2. Warranty: Submit warranty documents specified.

11. Delivery, Storage and Handling: **11.1.** Deliver, store and handle products in accordance with manufacturer's printed instructions and AAMA CW-10.

11.2. Protection: Apply temporary protective coating to finished surfaces. Remove coating after installation. Do not use coatings that will become hard to remove or leave residue. **12.** Warranty:

12.1. Manufacturer's standard form in which manufacturer agrees: To repair or replace systems that fail in materials, workmanship, or installation, within (2) years from date of Substantial Performance. Failure includes, but is not limited to the following:

12.1.1. Structural failures including, but not limited to, excessive deflection. **12.1.2.** Adhesive or cohesive sealant failures. 12.1.3. Deterioration of metals, metal finishes, and other materials beyond

12.1.4. Failure of operating components to function normally. **12.1.5.** Water leakage through fixed glazing and frame areas. 12.1.6. Mist on inside sealed units

normal weathering.

13. Product: Thermally broken, rain screened, aluminum framed, windows with double glazed insulating glass units and flush front design. 13.1. Acceptable Products:

a. Alumicor: Rainblade 1900 (Fixed) and Univent 1350 (Operable - Project-Out) b. US Aluminum: 7200 Series (Fixed and Operable -Project-Out) c. Kawneer: 516 Thermal Window (Fixed) and 526 Thermal Window (Operable - Project-Out)

14. Design Criteria: **14.1.** Design aluminum components to CAN/CSA S157. **14.2.** Window Classification: To NAFS - AAMA/WDMA/CSA

101/I.S.2/A440-08 14.2.1. Air tightness: FW-CW - Canadian Level: Fixed 14.2.2. Water tightness: FW-CW100 - Canadian Level: B7

14.2.3. Wind load resistance: FW-CW70 - Canadian Level: C4 14.2.4. Forced entry resistance test: Grade 10 **15.** Window Materials: **15.1.** Main Frame and glass stops: Extruded aluminum: To ASTM B221,

6063 allow with T5 or T6 temper. **15.1.1.** Main frame depth: **108mm** 15.1.2. Interior colour: Clear anodized **15.1.3.** Exterior colour: Clear anodized

15.1.4.Insulating glass units: In accordance with Section 08 80 50 - Glazing **16.** Window fabrication: **16.1.** Fabricate windows to CAN/CSA a440/A440.1 and manufacturer's instructions.

16.1.1. Do glazing in accordance with Section 08 80 00 - Glass and Glazing. Ensure proper installation of prime seal gasket whether shop or field **16.2.** Fabricate aluminum assemblies of extruded sections to sizes and profiles indicated.

16.2.1. Ensure vertical and horizontal members are tubular extrusions designed for shear block and/or screw spline corner construction. **16.2.2.** Provide drainage path from glazing cavity in accordance with rainscreen practices and manufacturer's instructions to permit drainage of extraneous water to the exterior. **16.3.** Construct units square, plumb and free from distortion, waves,

twists, buckles or other defects detrimental to performance or appearance. **16.3.1.** Brace frames to maintain squareness and rigidity during installation. **16.4.** Fabricate units square and true with tolerance of plus or minus 1.5mm maximum for units with diagonal measurement of 1800mm maximum and plus or minus 3mm maximum for units with diagonal

measurement greater than 1800mm. **16.5.** Accurately fit and secure joints and corners. **16.5.1.** Ensure joints are flush, hairline, and weatherproof. **16.5.2.** Seal joints and corners in accordance with manufacturer's

instructions.

16.6. Face dimensions detailed are maximum permissible sizes.

16.7. Use only concealed tamperproof fasteners. **16.7.1.** Where fasteners cannot be concealed, countersunk screws finished to match adjacent material may be used upon receipt of written approval from Consultant.

16.8. Visible manufacturer's labels are not permitted. 17. Finishes:

17.1. Exterior exposed aluminum surfaces: To AA DAF-45-M10C21A41 Architectural Class I, clear anodized 0.0007 inches minimum thickness 17.1.1. Acceptable Material: Class I Anodic Finish

17.2. Interior exposed aluminum surfaces: To AA DAF-45-M10C21A41, Architectural Class I, clear anodized 0.0007 inches minimum thickness 17.2.1. Acceptable Material: Class I Anodic Finish **18.** Air Barrier and Vapour Retarder:

18.1. Equip Window frames with site installed air barrier and vapour retarder material for sealing to building air barrier and vapour retarder as **18.1.1.** Material: identical to, or comparable with, building air barrier and

vapour retarder materials to provide required air tightness and vapour

Acceptable products: Tremco ProGlaze ETA or equivalent. 19. Accessories: **19.1.** Provide the required accessories per manufacturer's written

instructions.

21. Window Installation

are not permitted

diffusion control throughout exterior envelope assembly

19.2. Gasketing: To [CCD-45] Black EPDM gaskets 19.3. Setting Blocks: To [CCD-45] and [ASTM D2240], EPDM, 90 Shore A Durometer hardness. Manufacturer's standard, notched to permit water drainage through the glazing cavity.

19.4. Spacers: To [CCD-45] and [ASTM D2240], EPDM 60 Shore A Durometer hardness. 19.5. Sealant: To [CAN/CGSB-19.13], Class 40, one-component, cold-applied, non-sagging silicone.

19.5.1. Acceptable material: Dow Corning 795.

19.6. Sealant Bond Breaker: Open cell foam backer rod sized to suit project requirements. 19.7. Liquid Foam Insulation: Single component, moisture cure, low expansion rate spray-in-place polyurethane liquid foam insulation to

ULC-S710.1 and in accordance with manufacturer's written recommendations. **19.8.** Fasteners: Tamperproof, cadmium plated stainless steel 400 series to meet window requirements and as recommended by manufacturer. **19.9.** Flashings: Minimum 18 gauge (0.04mm) think aluminum sheet (thicker if required by the window manufacturer), ASTM B209/B209M,

prefinished to match window frames. 19.10. Joint Sealants and Materials: Provide joint sealants, primers and packing materials which comply with requirements of Section 07 92 00 Joint Sealants and meet manufacturer's written instructions and recommendations. **20.** Examination:

Correct unsatisfactory work. Start of work indicates acceptance of conditions as suitable for a satisfactory installation. **20.2.** Check and agree to sizes of openings prior to manufacturer. Confirm window rough openings by site measurements prior to fabrication.

20.1. Examine areas to receive windows and doors with Installer present.

21.1. Install windows in accordance with manufacturer's written instructions, to CAN/CSA A440/A440.1, referenced Codes and standards, and reviewed Shop Drawings for installation of aluminum windows. 21.2. Provide and fix fastening strips, steel anchor brackets, anchor bolts, clips or other fastenings required to fix windows to structure.

21.3. Set windows in their correct location as indicated, level, square, plumb and at proper elevations and in alignment with other work. Fasten in place using manufacturer's recommended anchors, anchor bolts and fasteners required. **21.4.** Install perimeter prime seal gasket in accordance with

manufacturer's instructions, seal corners, Continuous wet seal heel beads

21.5. Coordinate attachment and seal of perimeter vapour retarder and 22. Sill and Threshold Installation: **22.1.** Install prefinished aluminum sills and thresholds to exterior, level in

22.2. Back paint sills and thresholds with cut-back type bituminous paint. When in contact with dissimilar materials. **22.3.** Secure sills and thresholds in place with anchoring devices located at ends and evenly spaced 609.6mm on centre.

length, straight in alignment with plumb upstands and faces.

22.4. Fasten expansion joint cover plates and drip deflectors with

seit-tapping stainiess steel screws.

23. Sealant: **23.1.** Seal joints between windows surrounding construction. **23.2.** Seal joints between frame members and other non-operating components with sealant to provide weathertight seal at outside outside and air, vapour seal inside.

23.4. Install joint filler and sealant in accordance with manufacturer's

23.3. Seal joints between windows and window sill with sealant. Bed sill expansion joint cover plates and drip deflectors in bedding compound. Caulk between sill upstand and window-frame. Caulk butt joints in continuous sills.

directions and Section 07 92 00 Joint - Joint Sealants. Conceal sealant within aluminum work 24. Adjusting and Cleaning: 24.1. Adjust operating hardware to function properly, without binding, and to provide tight fit at contact points and weather stripping.

24.2. Clean completed system, inside and out, promptly after erection and installation of glass and sealants. Remove excess glazing and sealant compounds, dirt and other substances from aluminum surfaces. **24.3.** Protect installed windows and components from damage during

©8 71 00 FINISH HARDWARE

Stamp all keys "Do Not Copy"

68 80 00 GLASS AND GLAZING

1. Conform to materials specified, in brand and quality, unless otherwise approved in writing by Consultant. Hardware supplier shall be an established contract builder hardware firm.

2.Inspect all hardware on site for compliance to specifications before 3.Stored hardware in original sealed packages in a locked, secure place until 4. Supply hardware complete with required screws, bolts and fastenings

necessary for proper installation. **5.**Wrapped hardware in paper and packed in the same package as 6.All finish hardware, except door closers shall be guaranteed by the hardware manufacturer, by written certification, for a period of one (1) year from certified date of Substantial Performance against any defects in the design, materials, finish, function and workmanship and that any defects shall

be made good by the manufacturer at no additional cost to the owner. 7.A similar guarantee for a ten (10) year period shall be provided for door closers by the manufacturer. 8. Obtain final keying requirements from Owner before ordering. Key new locks into existing grand master key (GMK) system. Key to existing master key (MK) for building. Key alike (KA) and key different (KD) locks as directed by Owner.

11. Provide square corner box strike for all latchbolt. Finish to match lockset 12. Mount hardware in accordance with the recommended locations as per standard locations for builders hardware locations (metric) as listed in Canadian Metric Conversion Guide for Steel Doors and Frames prepared by the Canadian Steel Door and Frame Manufacturers Association and B.C. Code for the Physically and Visually Handicapped. 13. Install hardware in accordance with reference standard and regulatory

10. Keys: provide four (4) per lock or KA group; balance of keys as blanks.

requirements. **14.** Set units level, plumb and true to line and location. 15. Adjust and reinforce the attachment substrate as necessary for proper installation and operation. 16. Adjust and check each operating item of hardware and each door to ensure proper operation of function of every unit. 17. Replace all hardware which cannot be adjusted and lubricated to operate

18. Correct or replace, if directed, all hardware that is incorrectly located.

malfunctioning or improperly installed at no additional cost to the Owner.

19. Prepare door and coordinate electrified hardware with electrical work to ensure proper operation of function **20.** Door Hardware Schedule : **See Drawing A5.02**

freely and smoothly as intended for the application made.

1.Meet CGSB standards for float, tempered and laminated units. Type, thickness to conform to B.C. Building Code most current edition. 2. Glazing Standards: FGMA Glazing Manual and Sealant Manual

3. Submit two (2) samples, each 150mm x 150mm, of the following to the

3.1. each type of glass **4.**Deliver and store materials undamaged and where applicable in their original wrappings or containers with manufacturer's labels and seals intact,

Store materials on a dry floor in a weatherproof enclosure. 5.1. Thickness of Glass: Conform to BC Building Code wind load

requirements where applicable and according to maximum glass sizes but no less than 6mm thick. 5.2. For sizes and locations of all lights, refer to the drawings and schedules.

Thicknesses indicated and specified are minimum only, thicker glass

may be required to meet structural requirements. 5.3. Glass shall be one of the following types, as designated on the drawings

or as further described: 5.3.1. Leaded Glass - See Section 13 09 00 Radiation Protection **6.**Sealant Compounds: CAN/CGSB-19.13-M87 Single component silicone -See Section 07 92 00 Joint Sealants

7. Fabricate glazing to sizes and locations as shown on the drawings in accordance with reviewed shop drawings. 8. Take site measurements prior to shop fabrication . Material for protection markings on glass, such as adhesives for the

manufacturer's labels, shall be either neutral or slightly acidic. In no case shall such materials be alkaline. Any staining of glass or other surfaces by such alkaline materials will be cause for rejection. 10. Leave no manufacturer's labels or grade marks on glass except as

1. Work of this section shall conform to the Association of Wall and Ceiling

2. Corner and casing beads shall be shipped in rigid containers and protected

3. Store wallboard flat, off the floor, protected from damage by dampness,

weather or construction activities. Cementitious materials shall be kept dry

and away from damp surfaces. Distribute as required to avoid exceeding live

5. Refer to drawings and wall schedule for extent of each type of gypsum board

6. Gypsum board products, materials and accessories shall conform to AWCC

7.1. Gypsum Wallboard: Conforming to CAN/CSA-A82.27-M1977

7.2. Fire-Rated Gypsum Wallboard: Conforming to CAN/CSA-A82.27-M91,

7.3. Moisture Resistant Gypsum Wallboard: Conforming to

8. Gypsum Board Screws: Conforming to ASTM C646, self-drilling,

furring, drywall screws shall have a minimum penetration of 12.7 mm (1/2").

11. Corner Beads: Min. 0.45mm (26 ga.) galvanized sheet steel; square bead

13. Install gypsum wallboard and accessories in accordance with AWCC

15. Do not locate joints on same stud on opposite sides of partitions. Stagger

16. Allow deflection spaces between drywall partitions and building structural

17. Box-in electrical, telephone and TV outlets in fire-rated and party walls with

18. Increase if necessary, depth and width of all furring, bulkheads, chases,

etc. to contain and conceal electrical and heating risers, rainwater leaders,

plumbing waste, hot and cold water supplies and provide gypsum board

concealment to all pipes in visually exposed heated spaces. Check

19. Finish gypsum wallboard in accordance with AWCC Specifications

2. Work of this section shall conform to the Association of Wall & Ceiling

Contractors of B.C. (AWCC) Specifications Standards Manual (latest Edition).

3.1. All steel stud partitions to be designed to accommodate building

3.3. Submit confirmation signed and sealed by a structural engineer

3.4. The structural engineer responsible for the design shall provide letters of

5. All components used in fire rated assemblies shall be in accordance with

6. Refer to drawings and wall schedule for size and type of metal framing

flanges or legs, and knock-out pass through holes in web.

Anchor studes to structural floor and to structural ceiling above.

A525-86, roll formed from ASTM A446/A446M-85, Grade A steel.

7. Interior Non-Load Bearing Steel Stud, Track, and Furring:

8.1. Tie Wire to be 1.62mm (16 ga) galvanized steel

overall width x 22.2mm deep x 0.53mm thick

the applicable ULC, Warnock Hersey, or BC Building Code referenced

7.2. Gauge to be minimum 0.88 mm (20 ga.) 'C' shape with knurled faces on

7.3. Provide 16 ga double studs on both sides of door and window jambs.

7.4. Hot dipped galvanized steel studs with Z180 (G60) zinc coating to ASTM

7.5. The minimum stud spacing at all locations should in no case more than

7.6. Provide stud width per wall schedule. Flange depth to be minimum

8.2. Hangers to be 3.6mm (9 ga) galvanized soft annealed steel wire (up to

8.3. Main carrying channels to be minimum 38mm x 12.7 mm x 1.37mm cold

8.4. Cross furring to be hot dipped galvanized steel hat section, 68.2mm

. Metal Backing Plates to be 0.91mm (20 ga) thick hot dipped

10. Fasteners and accessories to be of type, material, size, corrosion

requirements that are in accordance with manufacturer's recommendations.

11. Screws: Lengths as required to suit applications, self tapping corrosion

12. Acoustic Gasket or Tape: Self-adhesive foam tape 6 mm x 25 mm closed

13. Acoustic Caulking: Synthetic rubber acoustic sealant meeting CAN/CGSB

14. Unless noted otherwise all partitions shall be full height from floor to

15. Install floor and ceiling track seated on two continuous beads of acoustic

16. Provide minimum 2 studs from floor to structural slab above on each side

sealant. Ensure continuity for entire perimeter of acoustically-rated wall

assemblies. Fasten securely to concrete at maximum 600 mm o.c. using

resistance, holding power, and other properties required to fasten steel

members to substrates, to suit structural conditions, and to fixing

1.15 sq.m.) or 4.8 mm diameter zinc coated or cadmium plated steel rod

(up to 1.48 sq. m) secured to structural slab with corrosion-resistant

formed channels with hot dip galvanized zinc coating spaced as required.

400mm o.c. or as otherwise required by sheathing board manufacturer

32mm. Use extended leg for top track, if required, to accommodate

structure deflection of 1/360 and seismic restraints to meet all applicable

registered in British Columbia that all of the above requirements have

mechanical, plumbing and electrical drawings for extent of piping and

framing components to allow for movement of framing components.

recommended by manufacturer of gypsum board products.

type recommended by manufacturer of gypsum board.

14. Provide ventilation to dry gypsum drywall fillers properly.

end joints occurring on same side of partitions.

69 22 16 NON STRUCTURAL METAL FRAMING

assurance Schedule B and C-B.

4. Submit Shop Drawings as required.

7.1. Conform to CAN/CGSB-7.1-M86.

1.1. Metal support systems for wall, furring and ceiling.

1.2. Concealed backing for wall hung millwork and equipment.

3.2. Provide seismic restraints for all suspended ceiling framing.

self-threading case hardened screws with Phillips type head (bugle head)

(stainless steel screws to be utilized for fixing wet area). On steel stude and

noncombustible gypsum core with dimensions 1219mm x max. practical

Type "X" having ULC label for fire-resistance rating; dimensions 1219mm

Contractors of BC (AWCC) Specifications Standards Manual.

4. Providing blocking as required for all attached fixtures and millwork.

x max. practical length to minimize joints.

69 20 00 GYPSUM SHEATHING BOARD

from damage and dampness

load capacity of the floor.

resistance rating.

wallboard application.

drywall, typical.

conduits.

Standards Manual.

3. Design responsibility

been met.

deflection.

aalvanized steel

19.21-M87.

resistant drywall screws.

underside of structure above.

approved concrete fasteners.

of door and window opening.

cell neoprene and/or polyvinyl chloride.

7.7. No splicing allowed.

8. Ceiling Framing Materials

Thickness to suit avosum board.

Specifications Standards Manual.

product and thickness.

Section 9.6, Part 2

7. Products:

Requiring Seismic Restraint. required by code for safety glass identification. 1.4. CAN/ULCS102, Surface Burning Characteristics of Building Materials **11.** Adjust and Clean 2. Design seismic anchorage connections in accordance with BCBC (Section All materials shall be protected during and after installation

4.1.9 including Table 4.1.9.1.D - Architectural Parts and Portions of Buildings). Maximum deflection: 1/360th of span to ASTM C635 deflection test. 2.1. Provide seismic restraints for all suspended ceiling. 2.2. Submit confirmation signed and sealed by a structural engineer

registered in British Columbia that all of the above requirements have been met. 2.3. The structural engineer responsible for the design shall provide letters of assurance Schedule B and C-B.

17. Install channel stiffener above door heads. Stiffener to run to closest stud

18. Install continuous channel stiffener at mid-point of all stud partitions not

19. Install all backing for electrical, all rough openings for building in washroom

accessories, mirrors, vanities, light cover reflectors, and access panels

supplied and installed by others, or supplied and installed under this section,

Coordinate with other Sections to provide for washroom accessories,

Blocking to be 1.2 mm (18 ga.) sheet metal strips 300 mm (12 inches) wide

and positioned to allow for sufficient installation tolerance of accessories.

99 51 00 ACOUSTIC CEILING PANELS AND SUSPENSION SYSTEM

Suspension Systems for Acoustical Tile and Lav-in Panels

20. Promptly as work proceeds and at completion, clean up and remove from

premises all rubbish and surplus materials resulting from work of this section.

1.1. ASTM C635-04 Standard Specification for the Manufacture

1.2. ASTM C636-04 Standard Practice for Installation of Metal Ceiling

1.3. ASTM E580-02e1 Standard Practice for Application of Ceiling

Performance, and Testing of Metal Suspension Systems for Acoustical

Suspension Systems for Acoustical Tole and Lay-in Panels in Areas

exceeding 3.60 meters in height and at third (1/3) points for all partitions

3. Store materials in work area 48 hours prior to installation. 4. Provide 5% additional acoustical panels of each type for project maintenance

Tile and Lay-in Panel Ceilings

5. Submit samples in accordance with 01 33 00. 6. Suspension System

adjacent to boxed jamb studs

exceeding 3.6 meters in height.

1. Conform to the following

6.2. Intermediate duty system to ASTM C635 6.3. Basic materials for suspension system : commercial quality cold rolled steel zinc coated, except for MRI Exam Room, use a non-ferrout suspension system only

6.4. Hangers: 2.5mm dia galvanized, 760 degree C melting temperature soft annealed wire, except for MRI Exam Room, use stainless steel wire of the same size only. 6.5. Hanger inserts: purpose-made to provide positive hanger retention and support of suspension system.

6.6. Exposed suspension system: 2-directional exposed tee bar grid

components shop painted, die cut components, double web main tee

with rectangular bulb and 15/16" width rolled cap to exposed face,

General - 24" x 24", 7/8" thk (See plan)

See Finish Specification on Dwg A5.03

CAN/CSA-A82.27-M91; specially formulated core to resist moisture cross tee lower flance offset to provide flush intersection with main tee penetration covered with multi-layer face and back papers chemically lower flange. Typical suspension colour: White treated to resist moisture penetration. Dimensions 1219mm x max, 6.7. Accessories: splices, wire ties required to complement respective practical length for min. joints. Type "X" having a ULC label for fire suspension system and as recommended by system manufacturer.

> 6.8. Angle mould: 7/8" x 7/8" angle mould profile, finish to match suspension 6.9. Approved product: See Finishes Specification on Dwg A5.03

7.1. Type: lay-in exposed grid 9. Gypsum Board Tape to be 50 mm (2") paper joint tape, of a type 7.2. Material non-combustible mineral fibre 7.3. Surface Finish: 10. Gypsum Board Jointing Compound: Casein, vinyl or latex base; slow factory vinyl latex paint setting; low shrinkage, noncombustible bedding and finishing compounds of 7.4. Color: 7.5. Light Reflectance: LR-0.86

7. Acoustical Panels (General):

7.6. Size:

8.4. Color:

Approved Product :

with perforated flanges. Use extended leg bead at external corners at double 7.7. Edges: Square 7.8. NRC Rating General - 0.80 12. Casing Beads: Min. 0.45mm (26 ga.) galvanized sheet steel; square bead 7.9. CAC Rating : General - 35 with perforated flanges. Only fillable type J or L beads are acceptable, 7.10. Fire Hazard

> 7.11. Approved Product: See Finish Specification on Dwg A5.03 **8.** Acoustical Panels (MRI): (NOT APPLICABLE) 8.1. Type: lay-in exposed grid 8.2. Material: non-combustible mineral fibre 8.3. Surface Finish factory vinyl latex paint

8.5. Light Reflectance: LR-0.90 24" x 24" x 1 1/2" thick 8.6. Size: 8.7. Edges: square-cut lay-in 8.8. NRC Rating : 1.00 8.9. AC Rating:

10. Install suspension assemblies in accordance with system manufacturer's directions, unless state otherwise. 11. Provide seismic restraint of suspension system in accordance with ASTM E580, 4. Areas Subject to Moderate to Severe Seismic Disturbance. 12. Support light fixtures and diffusers independent of suspension system

factory white finish

0-25 ASTM E84 test

using dedicated hangers or chains secured to overhead structure. Locate supports within 150mm of each corner and at maximum 600mm around perimeter of each fixture and diffuser. This is in addition to slack restraints specified in Division 15 & 16 13. Frame openings for light fixtures, air diffusers, and at changes in ceiling

14. Make finished ceiling systems square to adjoining walls and level tolerance 15. For MRI Room, suspended ceiling must be statically suspended with no moveable clamps or springs or other similar mechanism. Corrugated rods

must be guaranteed or by using wire jumper between rods.

Products by the Heat Weld Method.

69 65 00 RESILIENT FLOORING 1.References

1.1. ASTM F710, Standard Practice for Preparing Concrete Floors and other

1.4. ASTM F1869. Standard Test Method for Measuring Moisture Vapor

must be fastened securely and galvanic contact between corrugated rods

Monolithic Floors to Receive Resilient Flooring. 1.2. ASTM F1913, Standard Specification for Sheet Vinyl Floor Covering Without Backing. 1.3. ASTM F1516, Standard Practice for Sealing Seams of Resilient Flooring

Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride 2.Comply with NFCA "Floor Covering Reference Manual" for all product and installation requirements. 3. Submit samples in accordance with Section 01 33 00.

manual described in Section 01 33 00. **5.**Subfloor filler for patching, filling and levelling: pre-mixed filler with Portland cement and polymeric modifiers with minimum compressive strength of 20 MPa at 28 days, type as recommended by flooring manufacturer. Primers and sealers: as recommended by flooring manufacturer. Adhesives: solvent-free, low VOC, waterproof type as recommended by flooring manufacturer

4. Provide flooring maintenance data for incorporation into maintenance

flooring manufacturer, solid color and/or patterned rods as selected by the Consultant from manufacturer's standard range to match/compliment sheet flooring type used. 7. Protective Edging and Reducer Strips: heavy duty tapered pebbled vinvl/rubber or smooth metal type to protect resilient floor edges at unlike floor finish transitions and to suit condition as recommended by resilient flooring manufacturer with type, style, finish and color to match existing where

6.Heat Welding Rods for Sheet Flooring: as recommended and supplied by

applicable as selected by the Consultant from manufacturer's standard range. **8.**Sheet vinyl: 8.1. Composition: Minimum 50% vinyl compound binder consisting of & blended composition of pigments stabilized against heat and light deterioration. Design, color and pattern shall extend through the full

8.3. Intended use: Institutional 8.4. Thickness: 2 mm. 8.5. Color: One (1) color (field) to be selected by Consultant from manufacturer's complete range.

8.2. Standards: ASTM F 1913 Vinyl Sheet Floor Covering Without Backing.

8.6. Approved product: See Finish Specification on Dwg A5.03 •Resilient Integral Base 9.1. Composition: sheet vinyl flooring flash coved up walls complete with pre-approved heat welded joint seams and interior and exterior corner

details and continuous cap as specified. Refer to Finish Schedule for

9.2. Height: See drawings for heights and locations 9.3. Base Supports: as recommended by flooring manufacturer, minimum 19mm radius

colour from manufacture's standard range, to compliment flooring material and as selected by Consultant. 10. Maintenance Materials: At project completion, provide 10% of extra sheet vinyl and resilient base of each type and color for Owner's future maintenance

9.4. Base Cap: continuous cap as recommended by flooring manufacturer,

11. Ensure that paint, varnish, oils, release agents, waxes, sealers and curing and hardening compounds not compatible with adhesives employed have been removed

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JOB No.:

DCYT2009

PHASE 2 - GEN FLUORO **SPECIFICATIONS -**MATERIALS & FINISHES

SCALE: AS NOTED OCTOBER 2020 PHASE 2 RCCHECKED:

12. Test existing exposed concrete for moisture using ASTM F 1869, Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride test method and provide written results. Moisture emission not to exceed 1 kg/70 m2 in 24 hours. 13. Test existing exposed concrete for alkalinity and neutralize if required in

accordance with NFPA recommendations without using acid. 14. Install flooring in accordance with manufacturers' installation instructions. 15. Install edging strips wherever resilient flooring terminates at unlike floor surface, using longest practical lengths at each location.

17. Remove excess adhesive from floor, base and wall surfaces without

16. Install wall base in lengths as long as practicable without gaps at seams and with tops of adjacent pieces aligned.

damage.

99 65 13 13 RESILIENT WALL BASE (NOT APPLICABLE)

1.1. ASTM F1861, Standard Specification for Resilient Wall Base.

2. Submit samples under provisions of Section 01 30 00 3. Product Data: Manufacturer's data sheets on each product to be used, includina:

3.1. Preparation instructions and recommendations.

3.2. Storage and handling requirements and recommendations 3.3. Installation methods.

3.4. Verification Samples: For each finish product specified, two samples, representing actual product and finish. **4.** Product shall be delivered to site in manufacturer's original packaging. **5.** Product shall be handled and stored to prevent damage to materials. 6. Maintain environmental conditions (temperature, humidity, and ventilation)

Within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended

7. Install resilient products after other finishing operations, including painting, have been completed

8. Resilient Wall Base:

8.1 Intended use: Office 8.2 Thickness: 3.2 mm

8.3 Color: 1 color to be selected by Consultant from manufacturer's

complete range. 8.4 Approved Product: See Finish Specification on Dwg A5.03 8.5 Height: See drawings for heights and locations

8.6 Base Supports: as recommended by flooring manufacturer, minimum 19mm radius 9. Do not begin installation until substrates have been properly prepared per

manufacturer's instructions. **10.** If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding. **11.** All adhesives, solvent based materials and other contaminants should be removed and encapsulated prior to application of adhesive and installation of

12. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

13. Vacuum clean substrates to be covered by resilient products immediately before installation. 14. Install in accordance with manufacturer's instructions and in proper relationship with adjacent construction. Test for proper operation and adjust until

satisfactory results are obtained. 15. Install wall base in lengths as long as practicable without gaps at seams and with tops of adjacent pieces aligned.

16. Perform the following operations immediately after completing resilient product installation: 16.1. Remove adhesive and other blemishes from exposed surfaces.

16.2. Damp-mop surfaces to remove marks and soil. 17. Protect installed products until completion of project. **18.** Touch-up, repair or replace damaged products before Substantial

Completion. **19.** Maintenance Materials: At project completion, provide 10% of extra Resilient Wall Base of each type and color for Owner's future maintenance use.

69 68 13 CARPET TILE (NOT APPLICABLE)

1. References:

1.1 Carpet and Rug Institute's Carpet Installation Standard. 1.2 ASTM F2170 - 19, Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes

2. Submit samples under provisions of Section 01 33 00 3. Product Data: Manufacturer's data sheets on each product to be used,

3.1. Preparation instructions and recommendations.

3.2. Storage and handling requirements and recommendations. 3.3. Installation methods

3.4. Verification Samples: For each finish product specified, two samples,

representing actual product and finish. **4.** Product shall be delivered to site in manufacturer's original packaging. **5.** Product shall be handled and stored to prevent damage to materials.

6. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended 7. Carpet Tile:

7.1 Intended use: Office 7.2 Thickness: 3.2 mm

7.3 Color: Allow three (3) colours to be selected by Consultant from

manufacturer's complete range. 7.4 Tile Size: **50cm x 50cm & 25cm x 100cm**

7.5 Tile Pattern Installation: See Finish Specification on Dwg A5.03 7.6 Approved Product: See Finish Specification on Dwg A5.03

8. Do not begin installation until substrates have been properly prepared per manufacturer's instructions.

9. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding. 10. All adhesives, solvent based materials and other contaminants should be

removed and encapsulated prior to application of adhesive and installation of **11.** Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

12. All concrete floors must comply with moisture and alkalinity requirements per manufacturer's instructions prior to proceeding with installation. The required pre-installation moisture and alkalinity tests should be performed to ASTM **13.** Install in accordance with manufacturer's instructions and in proper

relationship with adjacent construction. Test for proper operation and adjust until satisfactory results are obtained. 14. Protect installed products until completion of project.

15. Touch-up, repair or replace damaged products before Substantial Completion. 16. Maintenance Materials: At project completion, provide 10% of extra Carpet

Tile for Owner's future maintenance use. **17.** Provide flooring maintenance data for incorporation into maintenance manual described in Section 01 33 00.

99 90 00 PAINTING

1. Conform to the standards contained in the Master Painters Institute Architectural Painting Specification Manual, latest edition (hereafter referred to as MPI Painting Specification Manual) for all painting products including preparation and application of materials.

2. Only materials (primers, paints, coatings, varnishes, stains, lacquers, fillers, etc.) listed in the latest edition of the MPI Approved Product List (APL) are acceptable for use on this project.

3. All paint to be premium grade unless otherwise noted.

4. All colors to be selected by Consultant. 5. Allow one (1) interior field colors and two (2) interior accent colors for **6.** Allow **one** (1) color for interior ceilings including access hatches, trims

7. Allow one (1) color for interior doors and one (1) for frames

Submit color samples .Prepare 1000mm x 1000mm mock-ups for each color on site for final approval as instructed by architect. **10.** For interior gypsum board surfaces:

10.1. Surfaces must be clean, screws and nails countersunk and holes filled. Sand joints, then dust clean. 10.2. Apply latex primer before painting new surfaces. 10.3. For previously painted latex surfaces, no primer required.

10.4. Product: 10.4.1. Paint : Dulux - Lifemaster

Primer: As recommended by Manufacturer 10.4.2. 10.4.3. Sheen: See Finish Specification on Dwg A5.03

11. For interior galvanized metal : 11.1. Clean with metal conditioner to assure better adhesion of the paints.

7. Fabric: Install straight and flat without buckling or distortion. 11.2. Unless new metal surface comes with a primer, apply a coat of latex

8. Protect installed products until completion of project. primer for all new metal surfaces. **9.**Touch-up, repair or replace damaged products before Substantial 11.3. If rust is present, it should be removed with rust remover, and the affected areas covered with anti-rust primer

11.4. For previously painted latex or alkyd surfaces, no primer required.

Primer: As recommended by Manufacturer

12. Maintenance Materials: At project completion, provide 1 can of 4 litres (1

13. All materials and paints shall be lead and mercury free and shall have low

14. Where required, paints and coatings shall meet flame spread and smoke

15. Perform no painting work when the ambient air and substrate

19. Where painting is around existing mechanical and electrical fixtures and

1. Provide factory fabricated pre-piped and pre-wired patient bed service wall

2. Submit product data and samples in accordance with SECTION 01 33 00

3.1. Refer to manufacturer's instructions and recommendations for required

4.1. Refer to manufacturer's instructions and recommendations for required

6.1. Refer to manufacturer's instructions and recommendations for required

7.1. Product : Amico - Majestic Series or approved equivalent

7.4. Enclosure: extruded anodized aluminum alloy sections. Provide 16

7.5. Fascia: Aluminum strips with plastic laminate panels as specified

out locations for each individual power source and medical gas

7.6.1. Top and bottom cover panels: manufactured from powder coated

7.6.2. End caps: manufactured from injection molded ABS fire retardant

7.7. Integrated Accessory Rails: Design rail system with no sharp edges to

7.7.1. Single-tier headwall system : Provide **two (2)** accessory channels

7.7.3. Plastic Laminate: Colours and Finishes to be selected by

8.1. Ensure components specified in this Section are factory installed and

8.2. Provide components recessed into gypsum board assemblies properly

8.3. Medical Gas Piping and Medical Gas Outlets: Location, style and type

8.4. Provide cover plates and trim plates for all provisions unless indicated

including, but not limited to, nurse call equipment, monitoring

10.1. Steel: Hot-dip galvanized after fabrication, ASTM A123 or ASTM A653

11. Comply with manufacturer's written recommendations, including product

12. Verify actual site dimensions and location of adjacent materials prior to

13. Install headwall units in accordance with manufacturer's instructions and

14. Anchor all fixed components securely, square, level, and plumb at heights

15. Arrange and Provide a demonstration of the systems in a series of tests for

16. Clean all surfaces to remove all marks, soil, and foreign matter immediately

17. Recheck all components and perform any necessary additional cleaning

18. Protect installed headwall from damage during remaining construction

1. Submit product data and samples in accordance with SECTION 01 33 00

2.1. Corner Guards: L- shape with 3" flange - see drawings for heights

2.2. Wall Protection: High impact rigid sheet supplied in 4' x 8' or 10' (1.22m x

Approved Product : See Finish Specification on Dwg A5.03

Approved Product : See Finish Specification on Dwg A5.03

3. Colours : Allow three (3) colour See Finish Specification on Dwg A5.03

4. Install in accordance with manufacturer's recommendations. Fix

6. Touch-up, repair or replace damaged products before Substantial

1. Submit product data and samples in accordance with Section 01 33 00

2. Submit manufacturer's shop drawings, including plans, elevations,

4. Product shall be delivered to site in manufacturer's original packaging.

6.2. Height: See drawings for height, lengths and location.

6.5. Approved Product: See Finish Specification on Dwg A5.03

6. Install in accordance with manufacturer's instructions. Install support

brackets and with clearance sufficient to permit unencumbered operation of

6.3. Color: One (1) color to be selected by Consultant from

shade and hardware as recommended by manufacturer.

5. Product shall be handled and stored to prevent damage to materials.

sections, product details, installation details, operational clearances, wiring diagrams, assembly and mounting details, typical installation details and

recommendations and fit-up to adjacent work, finishes, options and

mechanically through wall finishes into framing. Heights in accordance with

2.44m or 3.05m) sheet sizes in suede texture.

2.3. Crash Rails: See Finish Specification on Dwg A5.03

Protect installed products until completion of project.

12 20 00 WINDOW TREATMENT (NOT APPLICABLE)

technical bulletins, handling, storage and installation instructions, and

commencing work. Notify Consultant in writing of any conditions which

10.2. Aluminum: Class I, clear anodic finish; complying with AAMA 611

8.5. Ensure patient bed service walls can accommodate provisions

equipment, data jacks, phone jacks, lighting, etc.

as recommended by manufacturer. Ensure each outlet, piping and

manifold are factory tested to pass a 24 hour standing pressure test.

meet infection prevention and control requirements and to provide

integrated into aluminum extrusion assembly with no mechanical

gauge full-length galvanized steel backing plate, complete with knock

SUBMITTAL PROCEDURES and per manufacturer's instructions and

equipment, coordinate with other trades to remove face plates and/or $\mbox{trim} \boldsymbol{s}$

developed ratings designated by local Code requirements and/or authorities

temperatures are below 50 degrees F (10 degrees C), relative humidity is

above 85% or dew point is less than 5 degrees F (3 degrees C) for both

gallon) of extra paint, unopened, for each paint type and color, properly

11.5.3. Sheen: See Finish Specification on Dwg A5.03

11.5. Product:

having jurisdiction.

consistency.

before painting.

recommendations.

certifications.

submittals.

6. Closeout Submittals :

7. Description:

submittals.

termination

7.1. Configuration : Single-tier

7.2. Mounting : Surface mounted

7.3. Sizes: As indicated on Drawings

7.6. Covers and End caps (as applicable):

7.6.3. Service Chase: Not applicable

access for cleaning purposes.

Consultant.

8. Components:

Accessories :

recommendations.

indicated on drawings.

10 26 00 CORNER GUARDS

SUBMITTAL PROCEDURES

6.1. Intended use: Office

manufacturer's complete range.

6.4. System: Manual

accessories.

Roller Shades :

2. Description

SUBMITTAL PROCEDURES

10. Finishes:

screws used to affix rail headwall.

7.7.2. Finish: clear etched anodized finish.

sealed to maintain acoustic ratings.

9.1. Provide accessories indicated on Drawings.

would be detrimental to the installation

the Owner's and Consultant's verification.

iust prior to substantial completion.

after installation and adjustment are complete.

interior and exterior work.

18. Sand and dust between each coat.

10 25 13 PATIENT BED SERVICE WALLS

4. Regulatory Requirements Submittals:

units including but not limited to following:

1.1. surface mounted horizontal headwall units

5.1. Plastic laminates minimum 300mm (12") square.

11.5.2.

11.5.1. Paint : Dulux - Lifemaster

labeled, for Owner's future maintenance use.

VOC content where possible.

13 09 00 RADIATION PROTECTION

1. Section Includes Lead sheets

Lead-lined hollow metal door frames with lead-lined wood doors Lead-lined hollow metal view window frames with radiation shielding leaded glass 2. References:

Physicist report prepared by Owner's radiation physicist Specifications for Commercial Steel Doors and Frames and Canadian Fire Labelling Guide by the Canadian Steel Door and Frame Manufacturers Association (CSDFMA).

2.3. Architectural Woodwork Manufacturers Association of Canada (AWMAC) and Architectural Woodwork Institute (AWI) Health Canada Safety Code 35 - Radiation Protection in Radiology

16. Previously painted surfaces must be clean, dry, and free from dust, oil, 2.5. Guideline and Checklist for installation of Lead Shielding in a grease, rust, soap, wax, loose paint or other contaminants. Scrape loose paint Diagnostic X-ray Facility from the Centre for Disease Control of BC and and sand edges smooth. Clean very well and prime bare spots with NCRP Report 147 (2006) recommended primer for original surface type. 17. All surfaces to be painted to receive minimum 3 coats of paint. For deep

2.6. Canadian Nuclear Safety Commission Regulations and Guidelines R129 Rev 1(2004) and RD52(2010) or bright accent colors, paint more than 3 coats to achieve satisfactory 3. Submittals:

3.1. Product Data: Manufacturer's data sheets on each product to be 3.2. Shop Drawings: Indicate dimensions, description of materials and finishes, general construction, layout of radiation-protected areas, lead thickness or lead equivalencies of components

3.3. Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and

4. System Requirements: 4.1. Materials, thicknesses, and configurations indicated on drawings are based on radiation protection design prepared by Owner's radiation health physicist. Provide radiation protection consistent with materials specified in thicknesses and locations indicated.

4.2. Provide materials and workmanship, including joints and fasteners, that maintain continuity of radiation protection at all points and directions equivalent to materials specified in thicknesses and locations indicated. 4.3. Lead-Lined Assemblies: Provide lead thickness in doors, door frames, window frames, and other items located in lead-lined assemblies, not less than that indicated for assemblies in which they are installed unless indicated otherwise.

for assembly in which glazing is installed unless indicated otherwise. Lead Sheets: 99.9 percent pure unpierced virgin lead, free from dross, oxide inclusions, scale, laminations, blisters, and cracks. Lead must be "rolled" lead, not acoustic or sound proofing lead. Thickness: As shown on drawings and no less than 1/32 inch

4.4. Lead Glazing: Provide lead equivalence not less than that indicated

(0.7 mm) if not indicated 5.4. Variation in sheet thickness shall not exceed 3 percent.

6. Manufactured Units: Lead-Lined Wood Doors:

6.1.1. Construction: Refer to Section 80 14 00 Wood doors

6.1.2. Flush veneered construction using single continuous layer of sheet lead in center of door. Laminate wood cores under hydraulic pressure on each side of lead. 6.1.3. Extend sheet lead lining to door edges providing X-Ray absorption

equal to partition in which door 6.1.4. Edge Strips: Minimum thickness of 2 inches (51 mm) each edges of

6.1.5. Shield cutouts for locksets with lead sheet of same thickness used in door. Lap lining of cutouts with door lining 1 inch (25

6.1.6. Provide lead-lined astragals for pairs of doors.

6.2. Lead-Lined Hollow Metal Door Frames: 6.2.1. 16 gage (1.5 mm) welded steel frames with 4-7/8 inches (124 mm) throat and 2 inches (51 mm) face. Provide angle iron spot welded at 6 inches (152 mm) on center, and anchor bolts to secure frame if lead thickness is 1/8 inch (3 mm) or greater

6.2.2. Door Frame Supports: Double 16ga metal studs both sides anchored to structural slab above - see SECTION 09 22 16 NON STRUCTURAL METAL FRAMING for metal stud requirements 6.3. Radiation Shielding Leaded Glass: 6.3.1. Clear leaded glass containing 48 percent lead oxide (by weight) and

15 percent barium. Thickness as required to provide radiation protection equivalent to that provided by sheet lead in partition in which lead glass is installed. Equivalencies based on 150 kVp unless indicated 6.4. Lead-Lined Hollow Metal View Window Frames:

6.4.1. 16 gage (1.5 mm) welded steel frames adjustable from 4-1/4 inches 108 mm) to 6 inches (152 mm) wall thickness. Design window trames to accept any thickness of radiation shielding leaded glass, radiation shielding X-Ray safety glass, or radiation shielding leaded acrylic. 6.4.2. Protection: Provide radiation protection equivalent to that provided by sheet lead in partition in which view window is installed. 6.4.3. Stops: Provide 1/2 inch (13 mm) removable stops.

7. Installation of doors and frames Install lead-lined steel door frames per SECTION 08 10 00 HOLLOW METAL DOORS AND FRAMES

7.1.1. Lap lead lining of frames over lining in walls at least 1 inch (25 mm). 7.1.2. Lead Lining of Frames: Line inside of frames with lead of thickness not less than that required in doors and walls in which frames are used. Form lead to match frame contour, continuous in each jamb and across head, lapping stops. Form lead shields around areas prepared to receive hardware. Lap lining over lining in walls at least 1 inch (25 mm). 7.2. Install lead-lined wood doors per SECTION 08 14 00 WOOD

7.3. Line covers, escutcheons, and plates to provide shielding at cutouts and penetrations of frames and doors 8. Installation of window frames and glazing to maintain continuity of radiation protection and with radiation resistant glazing in frame.

Installation of lead sheet 9.1. Screwed lead sheet directly on steel stud. All seams must be on studs and seams must overlap by a minimum of 2". 9.2. If there are solid structural column, lead sheet needs only to overlap column by 4" (100mm)

9.3. At any penetrations of lead linings, provide lead shields to maintain continuity of protection. 9.4. Outlet Boxes and Conduit: Cover or line with lead sheet lapped over adjacent lead lining at least 1 inch (25 mm). Wrap conduit with lead sheet

for 10 inches (250 mm) from box.

requirements.

lead sheet for distance from partition/ceiling equal to 3 times the largest opening dimension. Lap lead sheet with adjacent lead lining at least 1 inch 9.6. Piping: Wrap piping with lead sheet for 10 inches (250 mm) from

9.5. Duct Openings: Unless otherwise indicated, line or wrap ducts with

9.7. Secure shields at penetrations using adhesive or wire ties, but not penetrating fasteners 10. Field Quality Control 10.1. Field Inspection: Lead installation must be examined, tested

and approved by qualified independent testing agency and/or radiation health physicist hired by Owner before installation of drywall. 10.2. Correct deficiencies and remove and replace radiation protection that inspection reports indicate does not comply with specified

11. Protection 11.1. Lock radiation-protected rooms once doors hardware is installed, Limit access to only those persons performing Work in radiation-protected rooms or as directed by Owner.

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PHASE 2 - GEN FLUORO **SPECIFICATIONS -**MATERIALS & FINISHES

> OCTOBER 2020 RC CHECKED: DC JOB No.:

AS NOTED

PHASE 2 DCYT2009

GENERAL NOTES

- 1. The tenant improvements to this building have been designed in accordance with the British Columbia Building Code of Canada 2018 (BCBC).
- 2. Read structural drawings together with architectural, mechanical and other drawings for detail dimensions, locations of door and window openings, duct work, recesses, inserts and other items. In the event of discrepancies between drawings, the more stringent requirements shall be followed.
- 3. Verify all dimensions and examine site conditions prior to fabrication of all items to ensure correct fit.
- 4. For conditions not explicitly shown, contractor shall immediately request clarifications from the structural engineer.
- 5. All connection details to the existing building shown on these drawings are subject to verification of existing conditions on site. Field conditions may require modified or alternate details to be issued by the structural engineer. For conditions not explicitly shown, details to be similar to those shown on the drawings
- 6. Provide adequate shoring or bracing during construction to resist all forces including forces such as wind, seismic and unbalanced forces due to construction sequence.
- 7. Observe and enforce all construction safety measures required by the BCBC, Part 8 and the Worker's Compensation Board of British Columbia. Employ a qualified professional specialty Engineer registered in British Columbia for the design of all falsework and temporary support of all structural elements. It is the sole responsibility of the Contractor to ensure that no part of the work is subjected to a load which will endanger the safety of the building or workers. Use temporary bracing where necessary to support all loads to which structure may be subjected, including erection equipment and construction operations.
- 8. Field Review
 - Provide a minimum of 24 hours notice to the Engineer for routine field reviews of: steel studs, prior to application of sheathing
 - unistrut framing, prior to concealment
 - The Contractor is responsible for pre-inspecting the work and confirm completeness prior to field review by the Engineer.

9. Design Live Loads

Seismic Factors: Sa(0.2)= 0.113 PGA=0.049 le= 1.5 Assumed Site Class= D F(0.2)=1.15

Basic wind pressure(1:50) 0.37 kPa

Minimum lateral loads on interior wall studs 5psf or seismic load

10. Structural Steel Studs

- Design and fabrication of steel studs to conform to CSA S136 for load bearing use.
- Stud sizes used for this project: 92x20Ga
 Studs, track and components of cold-formed steel to ASTM A446: minimum yield strength 33 ksi
 All materials galvanized with a coating not less than G60.
- Fabricate and install components in accordance with manufacturer's written recommendations and
- as shown on drawings.

 Attach components together with self-tapping metal screws, minimum 2-#8 screws per connection,
- u.n.o. Wire tying or crimping is not permitted.

 Bridging requirements:
- Stud walls use internal "U" channel bridging at 1220 o.c. maximum.

 Ceiling joists use 92 deep studs on flat to top flange of joists at 1220 o.c. maxim
- Ceiling joists use 92 deep studs on flat to top flange of joists at 1220 o.c. maximum.
- 11. Structural Steel
- Structural steel to conform to CAN/CSA G40.21-04 u.n.o. HSS grade 350W, class C
- Plates: grade 300W
- Anchor bolts, bolts, nuts and washer: ASTM A307 uno
 Pipe sections: to ASTM A53 grade B, min. yield strength 35 ksi
- Bolts, nuts and washers: to ASTM A325, minimum size 3/4"
- Anchor bolts, nuts and washers: to ASTM A307 u.n.o.

Substitution of members shown on drawings may be permitted with the prior approval of the Engineer, provided the substituted member has equal or higher strength and rigidity. Cost for any substitutions to be included in the contract price.

Structural steel fabricator to be certified by the Canadian Welding Bureau to CSA W47.1-09, Division 1 or Division 2.

Submit shop drawings of structural steel for review prior to fabrication. The Contractor shall be

responsible for the supervision of the fabrication of the structural steel.

- 12. Welding
 Welding design and practice to CSA W59-03.
- All welding to be performed by Canadian Welding Bureau approved welders in accordance with CSA W47.1-09. Minimum welds, except where shown or required by connection design: Minimum leg size of welds to be 5mm
- 13. Anchors to Existing Concrete
- Before installing anchors, contractor shall review existing conditions and confirm depth of anchor penetration into existing concrete will not interfere with existing embedded conduit. Prior to drilling holes for anchors, locate existing steel reinforcing using a non-destructive test method and adjust anchors as required to miss existing conduit.
- Any deteriorated, spalling or defective concrete encountered must be brought to the immediate attention of the structural engineer for evaluation prior to continuing with the installation of the anchors
- 14. Saw cutting and coring:
- All work to be done by qualified workers. Prior to cutting or coring of any concrete, Contractor must scan the area for reinforcement and utility services. Mark results from scan and proposed locations of cuts and cores for review by the engineer prior to cutting. Do not over-cut corners or edges of openings. At corners, core hole tangent to corner and saw cut remainder of cut. Use small tools as necessary to complete work. Cut material into pieces that can be transported to their disposal outside the building without overloading the floor structures. Where reinforcing steel bars are cut, touch up ends of bars with zinc-rich paint. See plans for additional notes for coring and cutting.
- 15. Metal Framing System
- Use Unistrut Metal Framing System members with designation as shown in strict accordance with manufacturers instructions where shown and required. No substitutions permitted without prior written consent of Engineer.
- Bolts, nuts and washers: to ASTM A307, minimum size $\frac{1}{2}$ "
- 16. Equipment Installation
 - Handle and install equipment in accordance with all applicable instructions by equipment manufacturer.

ABBREVIATIONS

HORIZONTAL ALTERNATE(LY) HORIZ **APPROX** APPROXIMATE(LY) INTERIOR ARCH ARCHITECT(URAL) LG LONG B, BOT BOTTOM LV LENGTH VARIES в то в BACK TO BACK MAX MAXIMUM BTWN MECH BETWEEN **MECHANICAL** BLDG BUILDING MFR MANUFACTURER MIN MINIMUM BUILT UP N/S CENTRELINE NEAR SIDE COMPLETE WITH NTS C/W NOT TO SCALE CENTRE TO CENTRE OC, O/C ON CENTRE COL COLUMN OD **OUTSIDE DIAMETER** CONC CONCRETE OPNG OPENING CONST CONSTRUCTION OPP OPPOSITE CONT PERP CONTINUOUS PERPENDICULAR CTR CENTRE PLATE PL PΤ DIAG DIAGONAL PRESSURE TREATED DN DOWN RADIUS DO DITTO REQ'D REQUIRED DEEP REV **REVISION** DTS **DEPTH TO SUIT** SECT SECTION SIM DWGS DRAWINGS SIMILAR SK EACH SKETCH EACH FACE SOG SLAB ON GRADE EL, ELEV ELEVATION SP SPACE(D)(S)(ING) SS EQ SP EQUAL(LY) SPACES(D) STAINLESS STEEL EXIST, EX SST EXISTING SIMPSON STRONG-TIE **EXTERIOR** STD EXT STANDARD STIFF FD FLOOR STIFFENER FDN FOUNDATION STIR STIRRUP FINISHED, FINAL GRADE STL STEEL FIN GR TOP FF, FIN FL FINISHED FLOOR FAR SIDE TOP AND BOTTOM F/S FRT FIRE RETARDANT TREATED THICK(NESS) FTG FOOTING TOS TOP OF STEEL GA, ga GAUGE TYPICAL UNLESS NOTED OTHERWISE GALV GALVANIZED (HOT DIPPED) UNO GRIDLINE, BAYLINE U/S UNDERSIDE **GENERAL NOTES** VERT VERTICAL GND GROUND WIDE

SYMBOLS

GRD



GRADE

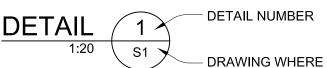
HIGH

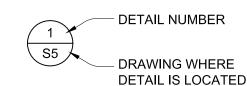
- SECTION NUMBER - DRAWING WHERE

SECTION TAKEN FROM

DETAIL TAKEN FROM

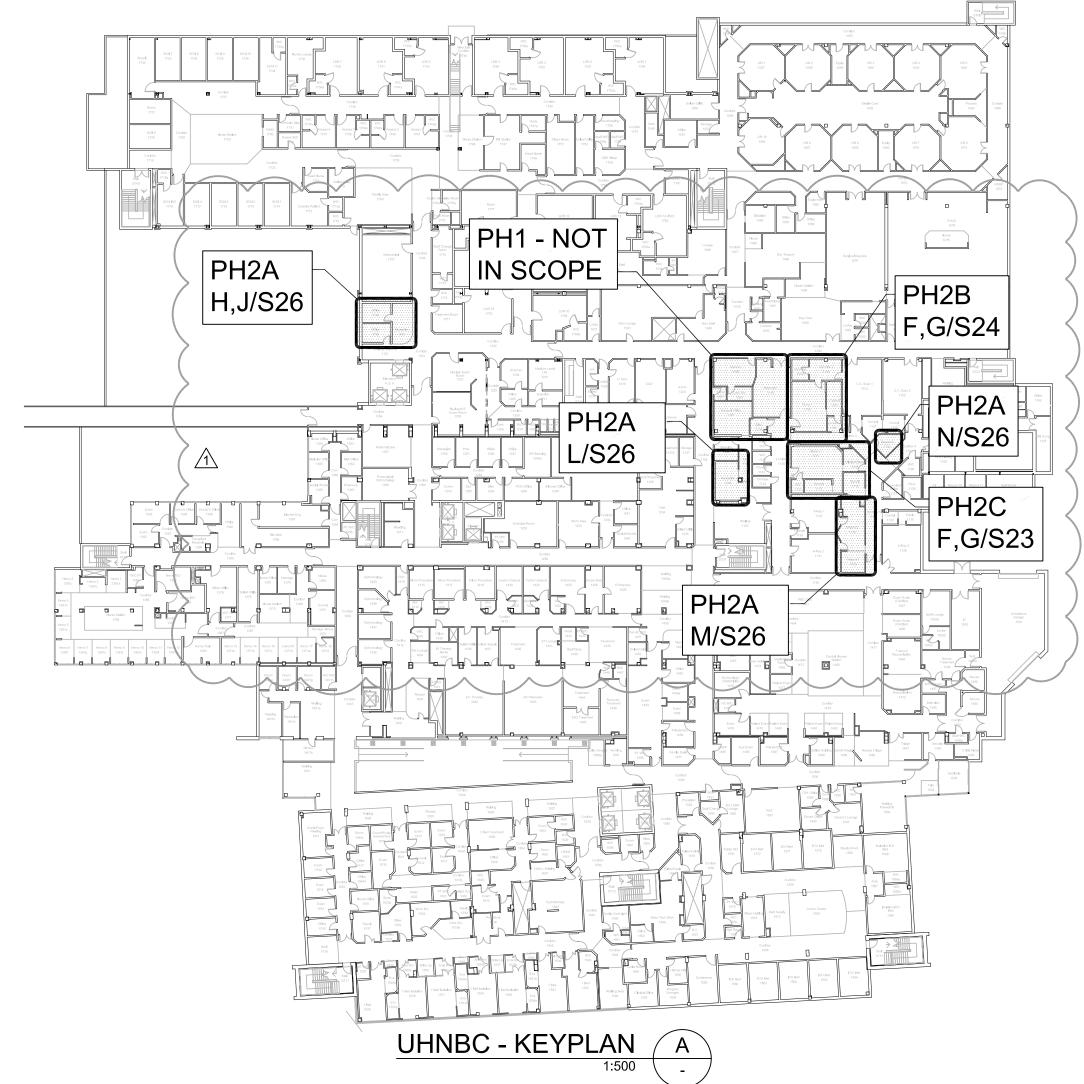






WORK POINT, REFERENCE POINT

SECTION NUMBER





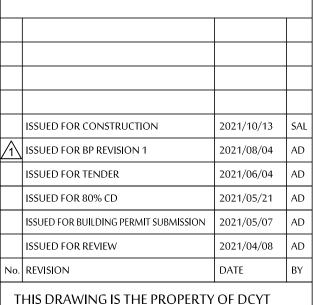
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PHASE 2 - GEN FLUORO GENERAL NOTES & KEY PLAN

AS NOTED
DATE:
APRIL 2021

DATE:
APRIL 2021
DRAWN:
SAL
CHECKED:
KM

PHASE 2
S21

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Lambda 11815

DRAWING LIST:

S22 TYPICAL DETAILS

S21 GENERAL NOTES & KEY PLAN

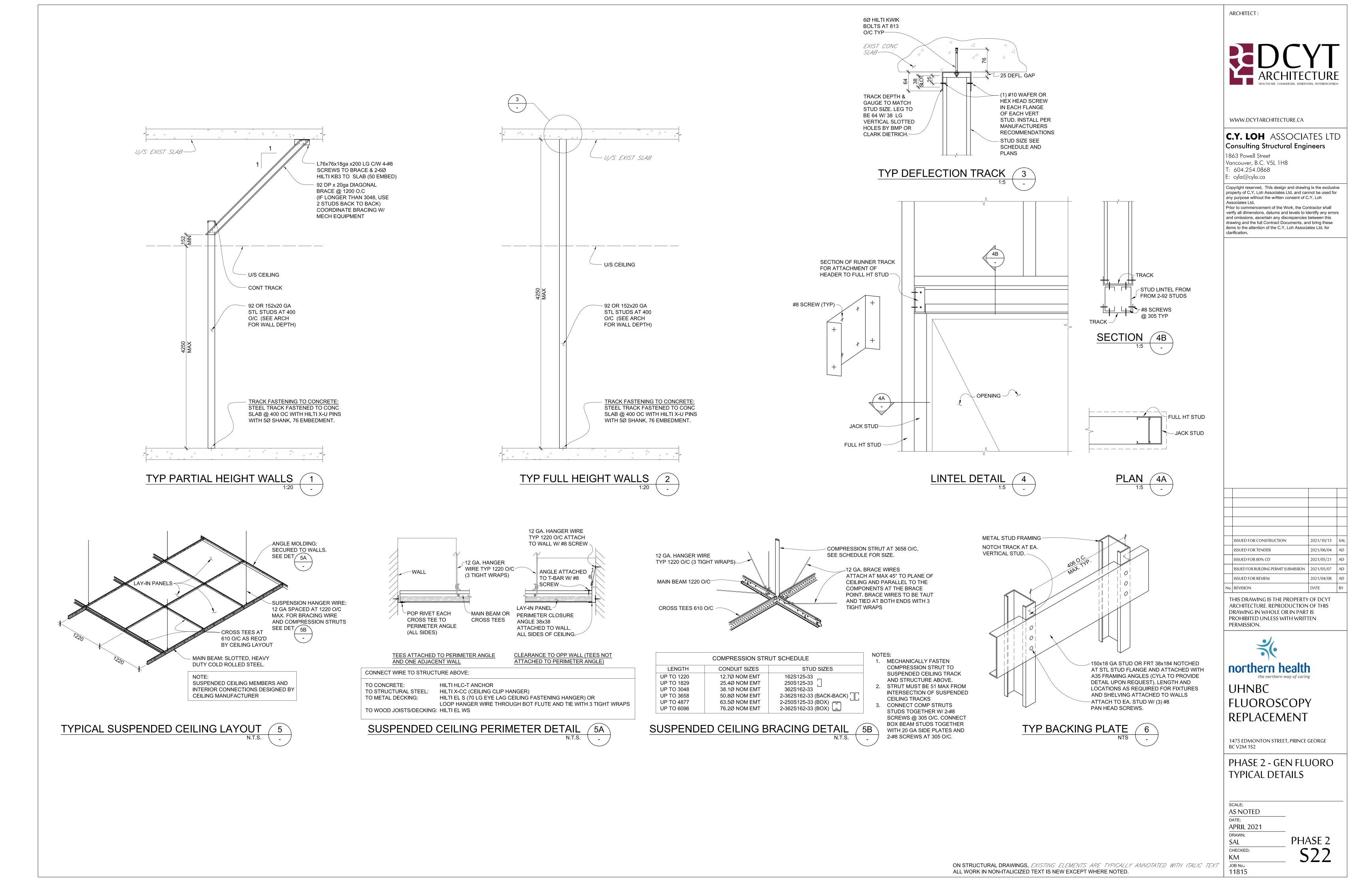
S23 LEVEL 1 AND RCP GEN FLUORO AND RECOVERY ROOM

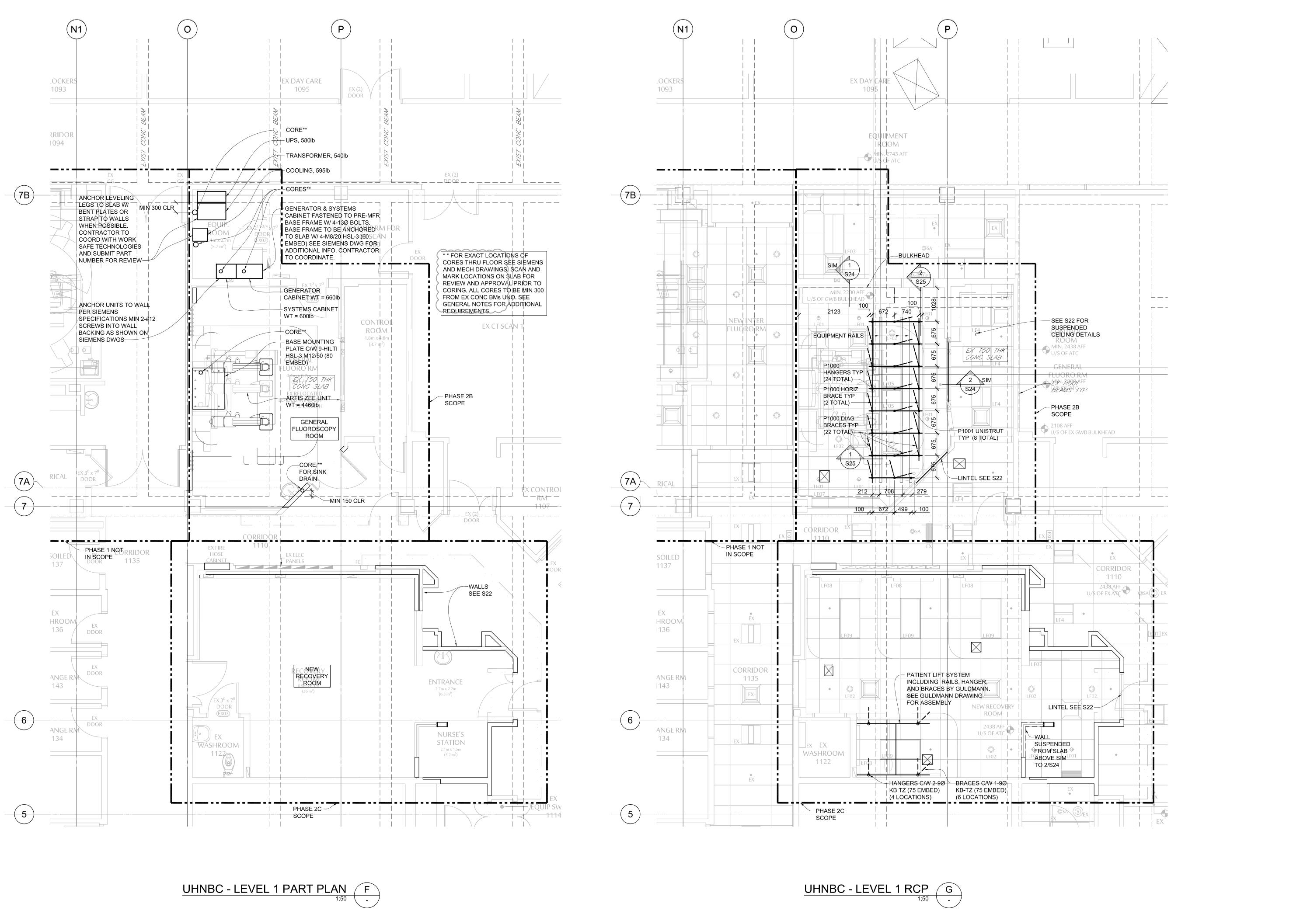
WORK SPACE AND ROOF PLAN

OFFICE AND PORTER ROOM

S24 LEVEL 1 AND RCP CLERICAL

/1\ | S26 LEVEL 1 CONTROL ROOM, RAD





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	ISSUED FOR CONSTRUCTION	2021/10/13	SA
	ISSUED FOR TENDER	2021/06/04	Al
	ISSUED FOR 80% CD	2021/05/21	Al
	ISSUED FOR BUILDING PERMIT SUBMISSION	2021/05/07	Al
	ISSUED FOR REVIEW	2021/04/08	Α
).	REVISION	DATE	В

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PHASE 2- GEN FLUORO LEVEL 1 & RCP GEN FLUORO AND RECOVERY ROOM

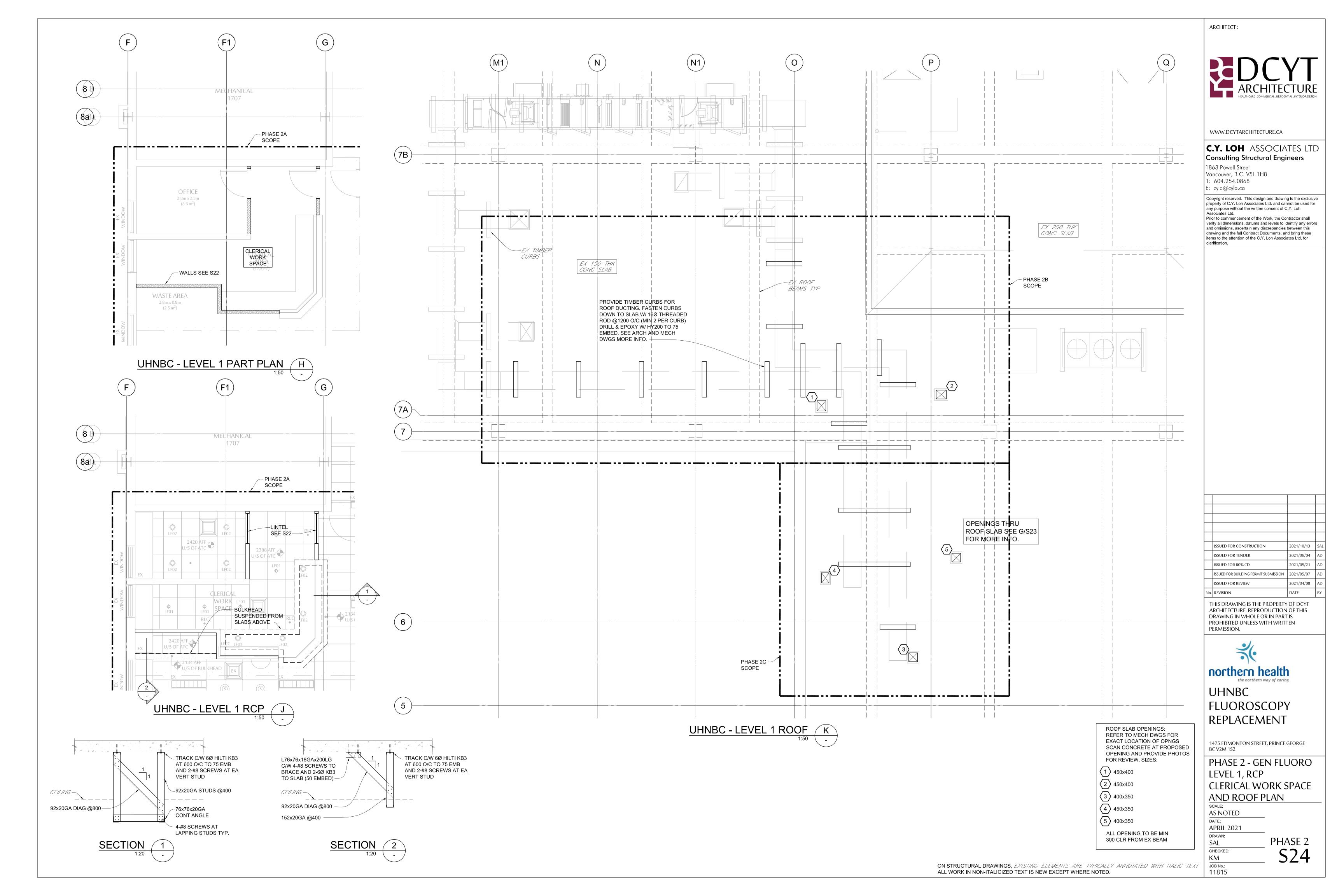
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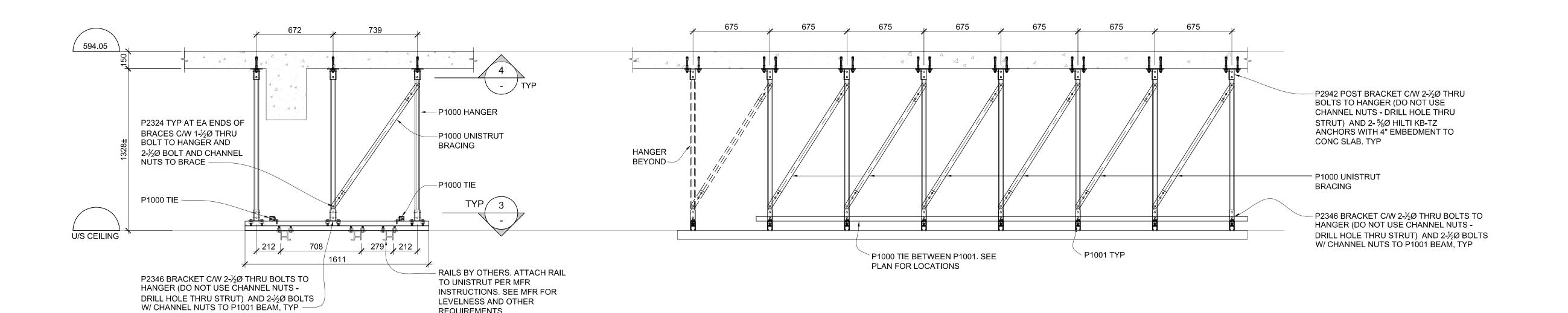
DATE:
APRIL 2021

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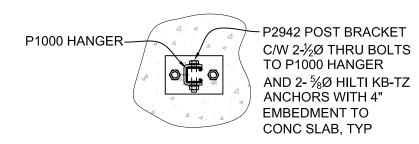
PHASE 2

S23





- P2346 BRACKET C/W P1000 HANGER < 2-1/2Ø THRU BOLTS TO P1000 HANGER AND 2-1/2Ø BOLTS WITH CHANNEL NUTS TO P1001 BEAM ``P1001 BEAM



REQUIREMENTS



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	ISSUED FOR CONSTRUCTION	2021/10/13	SAL
	ISSUED FOR TENDER	2021/06/04	AD
	ISSUED FOR 80% CD	2021/05/21	AD
No.	REVISION	DATE	BY

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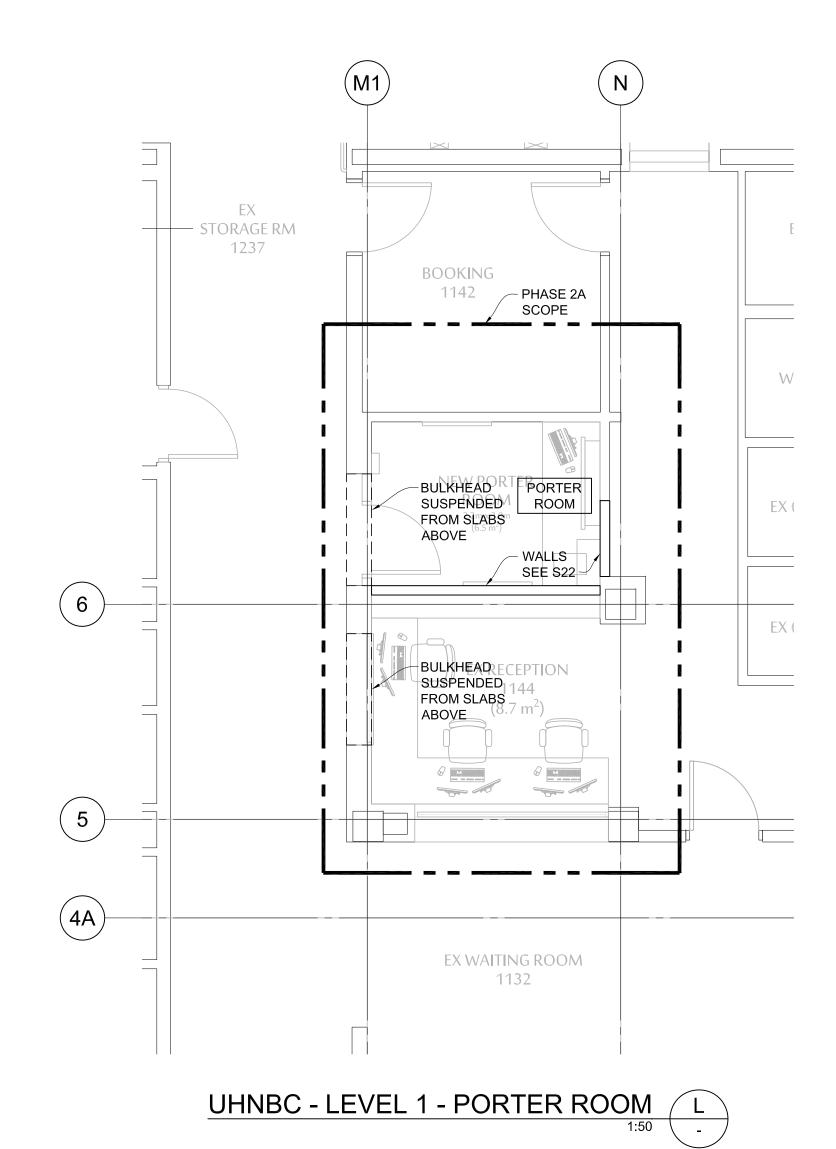


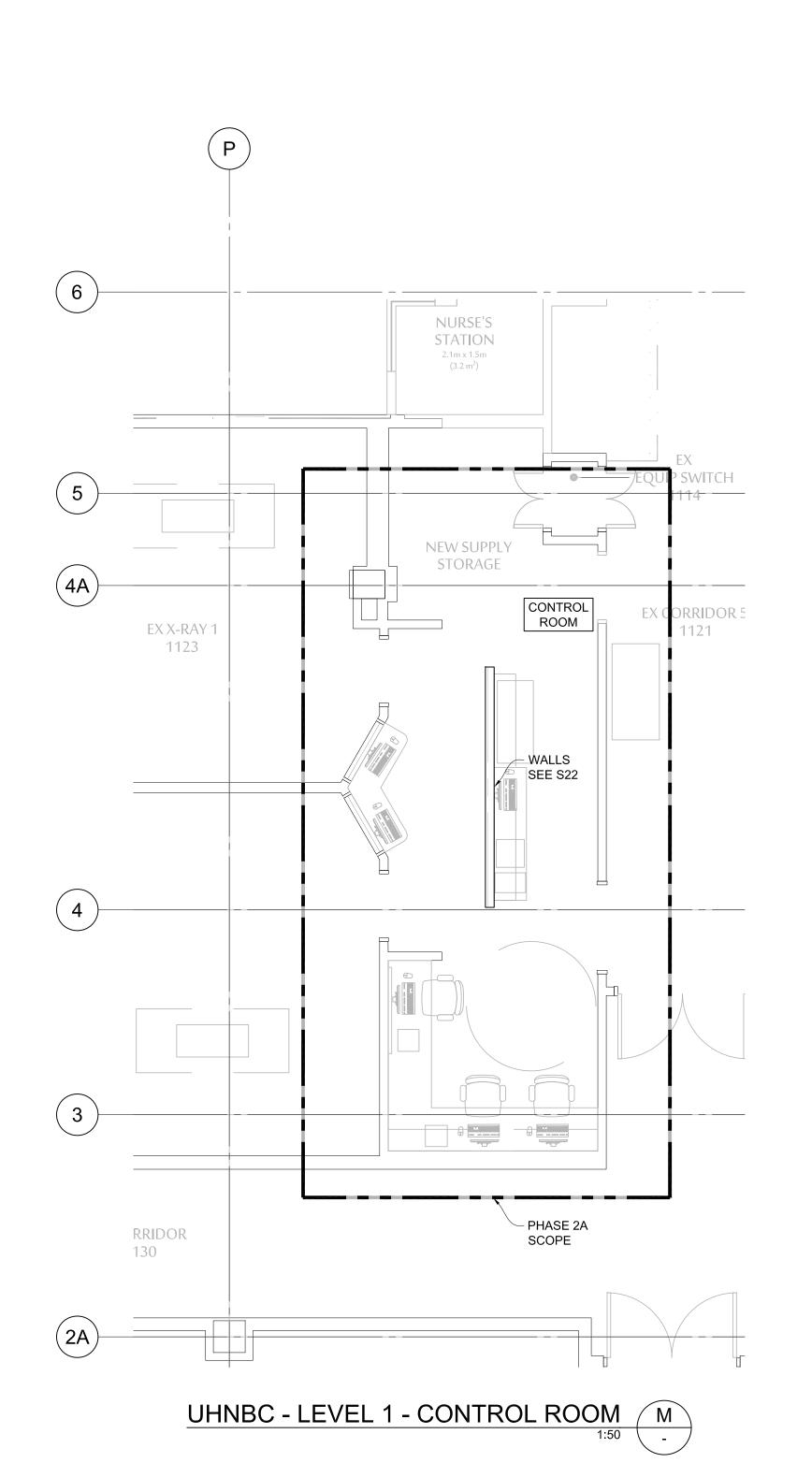
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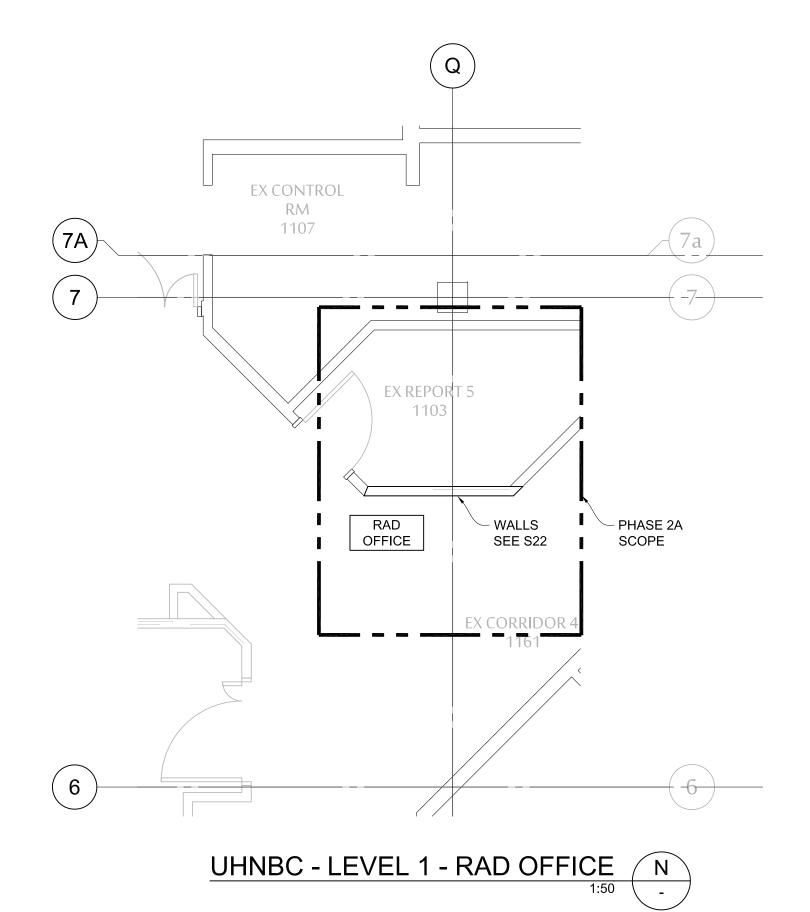
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PHASE 2 - GEN FLUORO SECTIONS AND DETAILS

AS NOTED APRIL 2021 PHASE 2 SAL CHECKED:







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	ISSUED FOR CONSTRUCTION	2021/10/13	SAL
	ISSUED FOR BP REVISION 1	2021/08/04	AD
$\overline{\Lambda}$	ISSUED FOR ADDENDUM #1	2021/07/26	AD
No.	REVISION	DATE	BY
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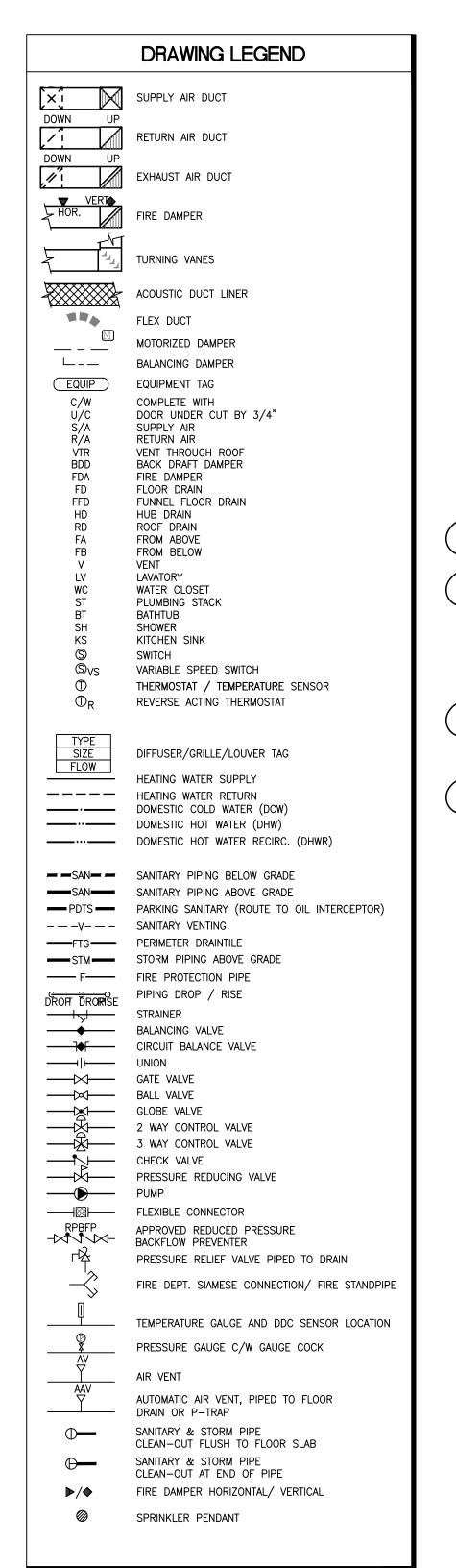
PHASE 2 - GEN FLUORO CONTROL ROOM, RAD OFFICE AND PORTER ROOM

S26[△]

AS NOTED APRIL 2021 DRAWN:
SAL
CHECKED:
KM PHASE 2

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UHNBC FLUOROSCOPY REPLACEMENT PHASE 2 - GENERAL FLUORO



BUILDING CODE BC BUILDING CODE 2018

FIRE PROTECTION

BUILDING IS SPRINKLERED TO THE REQUIREMENTS OF NFPA 13-2013

CIVIC ADDRESS

1475 EDMONTON STREET, PRINCE GEORGE, BC V2M 1S2

		DRAWING LIST	
	DWG NO.	DRAWING NAME	SCALE
	мо.000	COVERPAGE	NTS
	M1.100	LEVEL O EXISTING SANITARY DEMO PLAN	1 : 50
	M1.101	LEVEL 1 EXISTING PLUMBING DEMO PLAN	1 : 50
	M1.102	LEVEL 1 EXISTING MEDICAL GAS DEMO PLAN	1 : 50
_	M1.200	LEVEL 1 EXISTING MECHANICAL DEMO PLAN	1:50
	M1.201	LEVEL 1 EXISTING MECHANICAL DEMO PLAN -PORTER/RAD/CONTROL ROOM	1 : 50
\succeq	M1-300	LEVEL 1 FIRE SUPPRESSION DEMO PLAN	1;50
	M1.301	ĽEVEL Í FIRE SUPPRĚSSION DEMO PLAN -PORTER/RAD/CONTROL ROOM	1 : 50
	M2.100	LEVEL O SANITARY PLAN	1:50
	M2.101	LEVEL 1 PLUMBING PLAN	1 : 50
	M2.102	LEVEL 1 MEDICAL GAS PLAN	1 : 50
_	M2.200	LEVEL 1 MECHANICAL PLAN	1 : 50
	M2.201	LEVEL 1 MECHANICAL PLAN -PORTER/RAD/CONTROL ROOM	1:50
	M2:202	ROOF-MECHANICAL PLAN	1:50
_	M2.300	LEVEL 1 FIRE SUPPRESSION PLAN	1 : 50
	M2.301	LEVEL 1 FIRE SUPPRESSION PLAN -PORTER/RAD/CONTROL ROOM	1 : 50
	M4.200	DETAILS	MIS
	M4.201	DETAILS	NTS
	M5.100	SCHEDULES	NTS
	M5.201	SPECIFICATIONS	NTS
	M5.202	SPECIFICATIONS	NTS
	M5.203	SPECIFICATIONS	NTS

GENERAL NOTES

- THE MECHANICAL SYSTEM SHALL CONSIST OF ALL THE WORK SHOWN ON DRAWINGS, SCHEMATICS, AND AS DESCRIBED IN SPECIFICATIONS.
- INSTALL ALL MECHANICAL WORK AS HIGH AS POSSIBLE, TIGHT TO STRUCTURE ABOVE, EXCEPT WHERE CONFLICT OCCURS WITH REQUIREMENTS LISTED UNDER SPECIFICATION
- THE MECHANICAL PLANS ARE DIAGRAMMATIC IN NATURE AND DO NOT ATTEMPT TO SHOW ALL REQUIRED OFFSETS. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR CONSTRUCTION DETAILS.
- ITEMS NOTED "TYPICAL" OR "TYP" ON ANY SHEET APPLY TO THAT PARTICULAR SHEET.
- COORDINATE WITH SPECIFICATION. IN CASE OF CONFLICT BETWEEN SPECIFICATIONS AND DRAWINGS THE MORE STRINGENT SHALL APPLY.

PROVIDE ELECTRICAL CODE MINIMUM HORIZONTAL AND

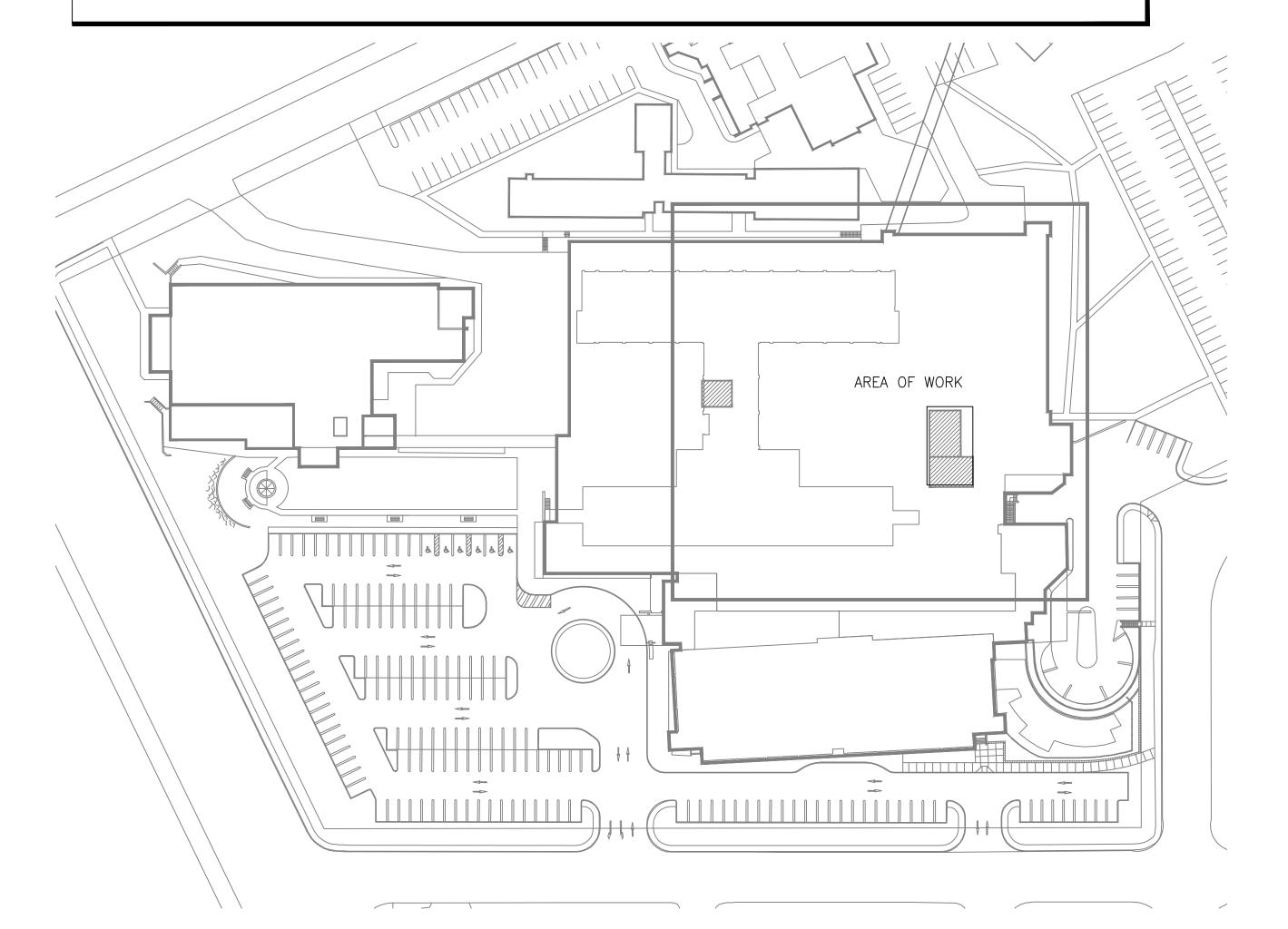
- VERTICAL WORKING CLEARANCE FOR ALL ELECTRICAL PANELS AND EQUIPMENT. OFFSET MECHANICAL AS COORDINATE ALL MECHANICAL WORK WITH THAT OF OTHER
- TRADES TO ENSURE PROPER AND ADEQUATE INTERFACE OF THEIR WORK WITH THE WORK OF THIS CONTRACTOR. PROVIDE COORDINATED SHOP DRAWINGS PRIOR TO FABRICATION AND INSTALLATION.
- MECHANICAL EQUIPMENT SHALL NOT BE USED FOR TEMPORARY HEAT DURING CONSTRUCTION.
- ALL DUCTWORK SIZES SHOWN ARE INSIDE CLEAR DIMENSIONS. ADD APPROPRIATE DIMENSION FOR INSULATION OR DUCT LINER TO OBTAIN "TOTAL" DUCT
-). INSTALL DYNAMIC FIRE DAMPERS AT ALL LOCATIONS WHERE DUCTS PENETRATE FIRE RATED WALLS OR OCCUPANCY SEPARATION WALLS. DAMPER FIRE RATING SHALL BE 1-1/2 HOUR UNLESS NOTED OTHERWISE.

- COORDINATE DAMPER ACCESS WITH ARCHITECT.
- 11. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS AND ELEVATIONS FOR EXACT LOCATION OF ALL DIFFUSERS AND
- 12. CONTRACTOR TO PROVIDE A SIMILAR TYPE DUCT CONSTRUCTION FOR ALL EXPOSED APPLICATIONS (I.E. NO LONGITUDINAL SEAM AND SPIRAL SEAM IN EXPOSED APPLICATIONS). FLANGE TYPE DUCT CONNECTIONS FOR EXPOSED AREAS IS PROHIBITED UNLESS OTHERWISE NOTED. CONTRACTOR TO REFER TO SPECIFICATIONS FOR TYPE OF DUCT CONSTRUCTION ALLOWED.
- 13. PROVIDE CONCEALED DAMPER REGULATORS FOR ALL VOLUME DAMPERS OVER INACCESSIBLE CEILINGS AND SOFFITS. REFER TO ARCHITECTURAL DRAWINGS FOR
- 14. PROVIDE TRANSITIONS AND FLEXIBLE CONNECTORS AS REQUIRED TO CONNECT DUCTWORK TO FANS AND OTHER MECHANICAL EQUIPMENT.
- 15. PROVIDE DIFFUSER AND GRILLE FRAMES COMPATIBLE WITH ARCHITECTURAL CEILING TYPE. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR CEILING TYPE. COORDINATE DIFFUSER AND GRILLE EXACT LOCATION WITH ARCHITECT
- 16. COORDINATE EXACT LOCATIONS OF ALL ROOM THERMOSTATS AND/OR ROOM TEMPERATURE SENSORS WITH ARCHITECT PRIOR TO INSTALLATION.
- 17. PROVIDE VOLUME DAMPER FOR EACH SUPPLY, RETURN AND EXHAUST OPENING. PROVIDE BALANCING DAMPER IN BRANCHES WHERE THREE OR MORE OPENINGS ARE ASSOCIATED WITH THE BRANCH AND ELSEWHERE AS NOTED ON THE DRAWINGS AND SPECIFICATIONS.
- 18. PROVIDE 1" THICK FIBRE FREE DUCT LINER IN ALL TRANSFER DUCTWORK UNLESS NOTED OTHERWISE.
- 19. COORDINATE EXACT LOCATION AND MOUNTING HEIGHTS OF ALL PLUMBING FIXTURES WITH CASEWORK AND

ARCHITECTURAL DRAWINGS.

DUCT AND EQUIPMENT.

- 20. TRAP PRIMERS ARE REQUIRED ON ALL FLOOR DRAIN TRAPS UNLESS OTHERWISE NOTED. NOTE THAT THE PIPING AND TRAP PRIMERS ARE NOT SHOWN ON DRAWINGS AND ARE TO BE FIELD ROUTED ONSITE BY MECHANICAL
- 21. INSULATE DUCT PLENUMS FOR OUTSIDE AIR, RETURN AIR AND EXHAUST AIR. FOR ALL OTHER DUCTWORK INSULATION REFER TO SPECIFICATIONS.
- 22. REFER TO MECHANICAL DETAILS FOR ADDITIONAL ACOUSTICAL AND THERMAL INSULATION REQUIREMENTS FOR
- 23. SEISMIC RESTRAINTS FOR ALL EQUIPMENT AND PIPING SHALL BE COVERED BY MECHANICAL CONTRACTOR.
- 24. SEISMIC ENGINEER SHALL BE RETAINED UNDER THE MECHANICAL CONTRACTOR'S SCOPE OF WORK TO ENSURE SEISMIC INSTALLATIONS ARE INSTALLED IN ACCORDANCE WITH CODE. SEISMIC INSTALLATION SHALL BE APPROVED BY A CERTIFIED SEISMIC ENGINEER AND PROVIDE SIGNED SEALED SHOP DRAWINGS TO THAT EFFECT.
- 25. WHEREVER POSSIBLE, ALL PIPING TO BE RUN AS HIGH AS POSSIBLE TO PROVIDE SUFFICIENT CLEARANCE FOR
- 26. UNLESS NOTED OTHERWISE, ALL SANITARY AND STORM DRAINS OF SIZES 3 INCHES (75 MM) AND SMALL SHALL BE SLOPED TO 2%, AND DRAINS OF SIZES 4 INCHES (100MM) AND LARGER TO BE SLOPED AT 1%.
- 27. PROVIDE CONDENSATE DRAIN LINE FOR ALL COOLING EQUIPMENT TO NEAREST DRAIN.





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MECHANICAL CONSULTANT:



Vancouver, BC, V6A 2T2 (604) 200-9087

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	6	ISSUED FOR CONSTRUCTION	2021.10.15	JL
_	<i>λ</i> 6	48SÛED-FÔR-TEKÎDER	2021.06.04	¥
	4	ISSUED FOR 80% CD	2021.05.20	JL
	3	ISSUED FOR BP	2021.05.06	JL
	2	ISSUED FOR BP REVIEW	2021.04.28	JL
	1	ISSUED FOR DD	2021.04.09	JL
	No.	REVISION	DATE	B١

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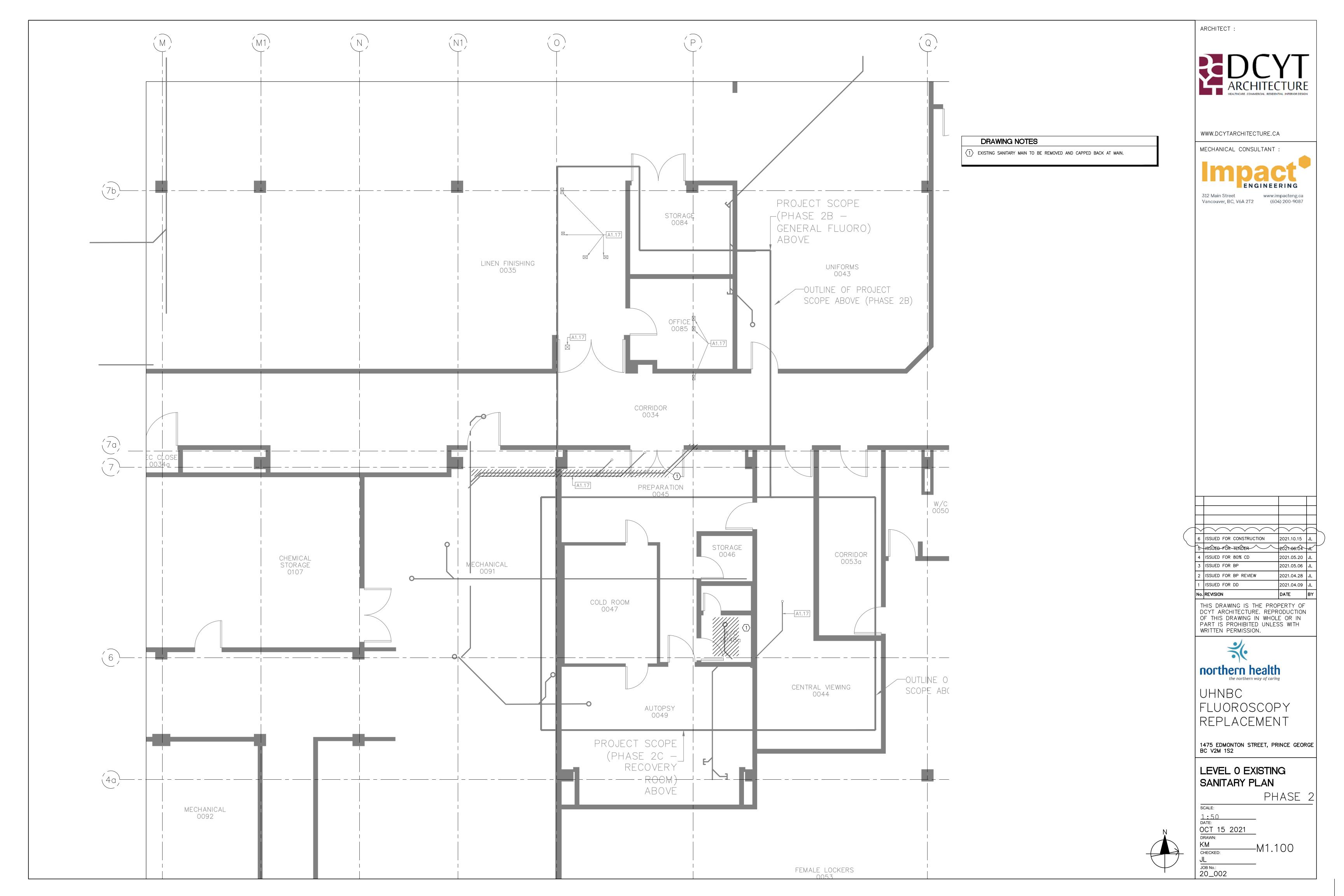
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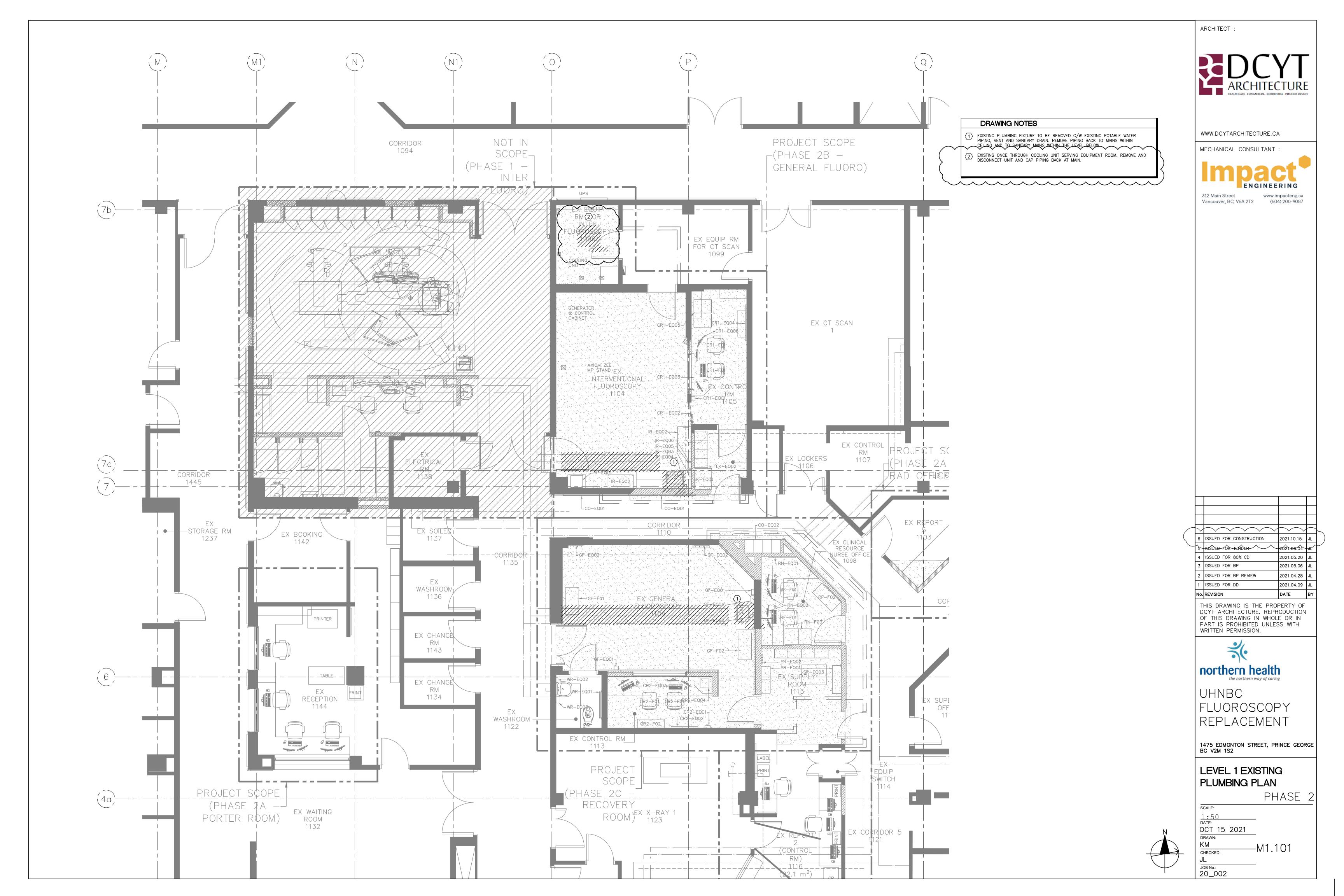
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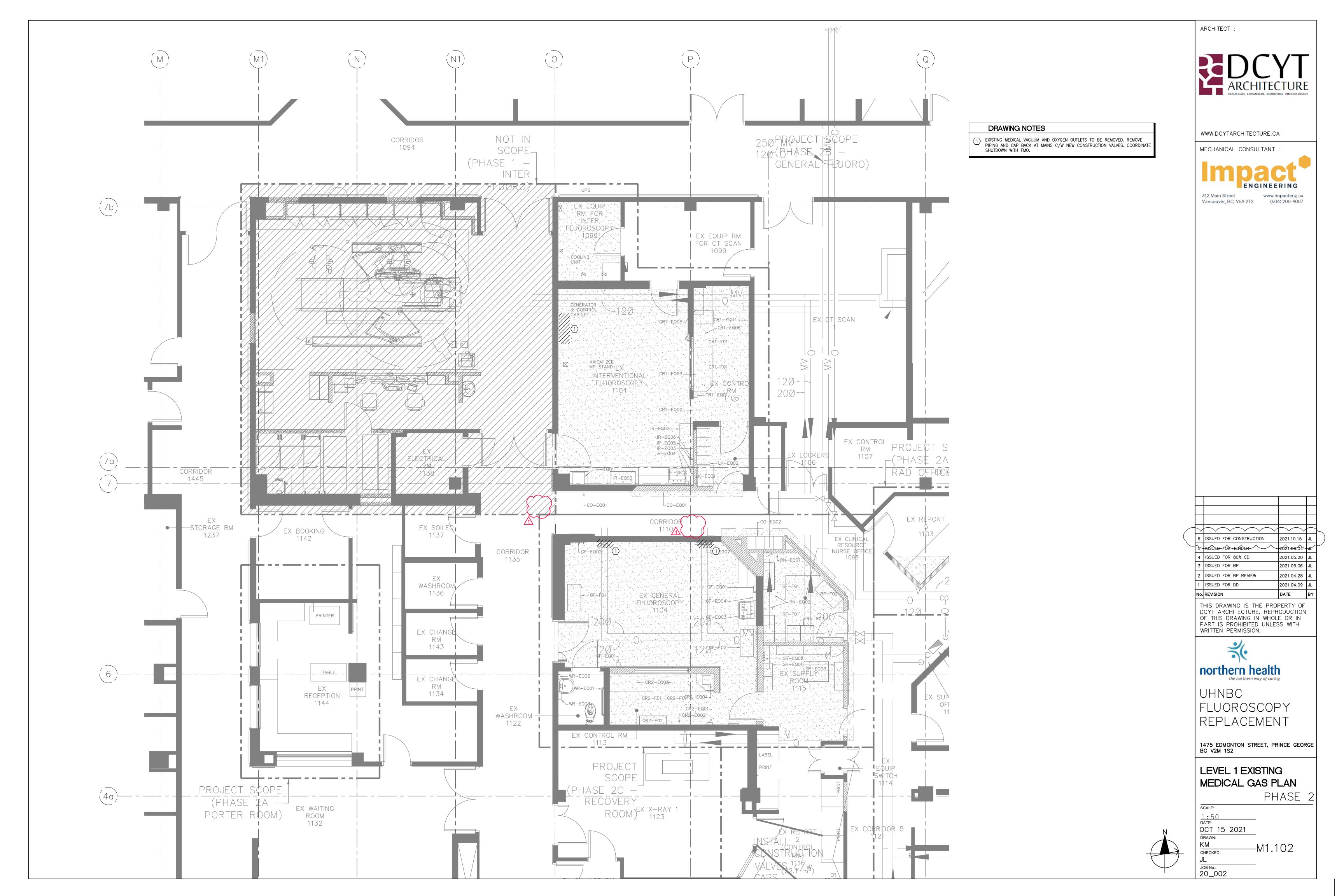
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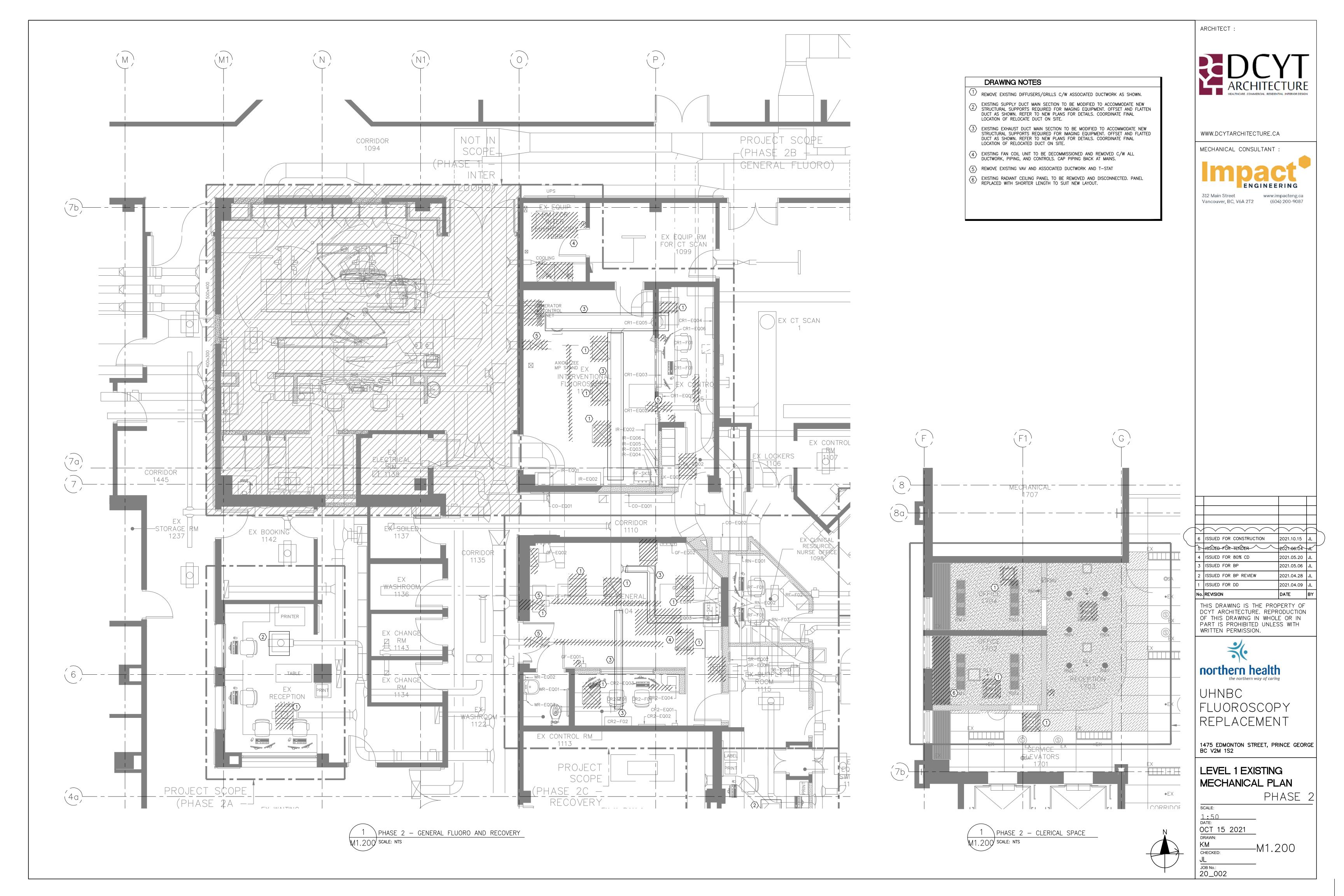


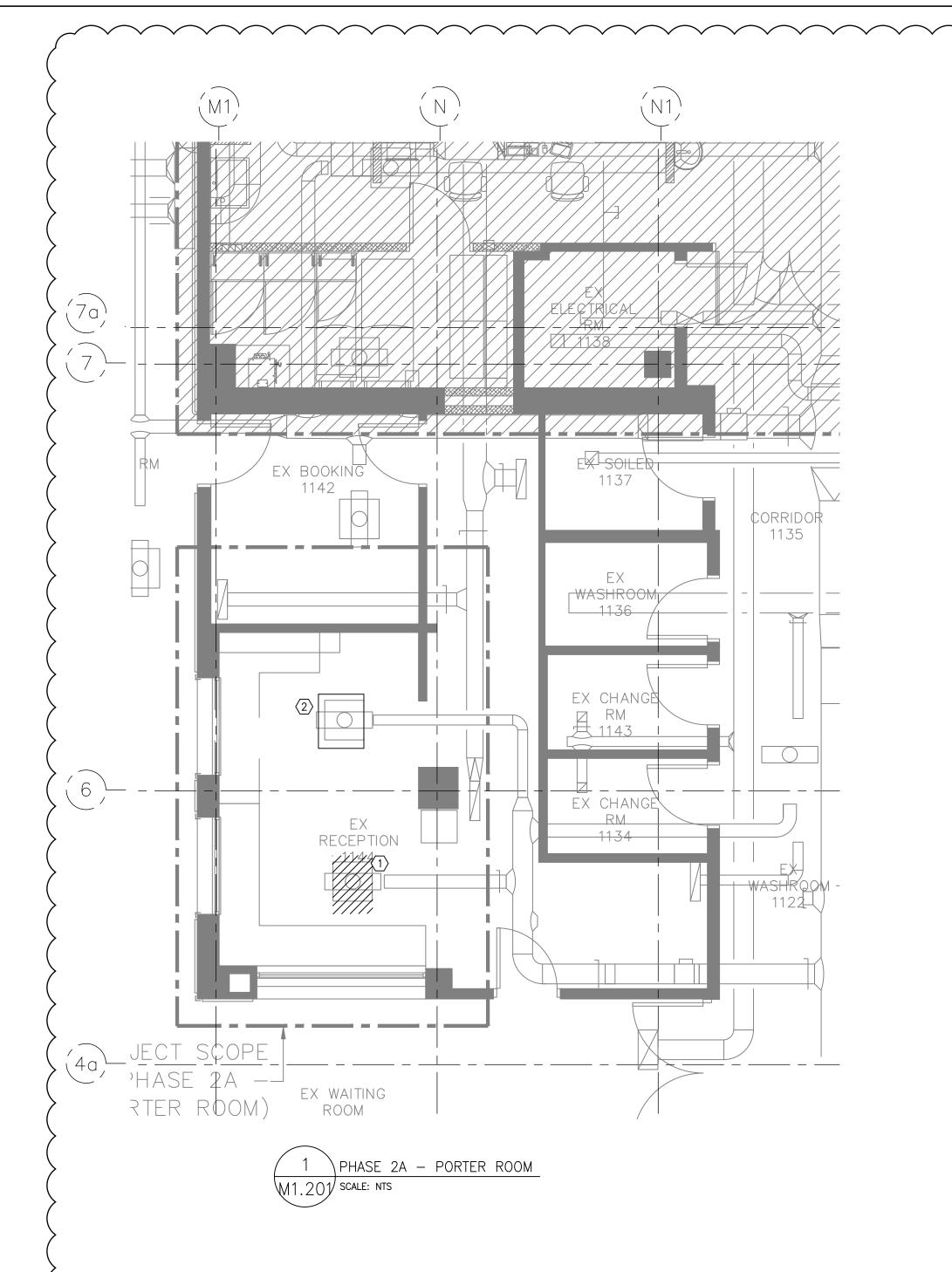
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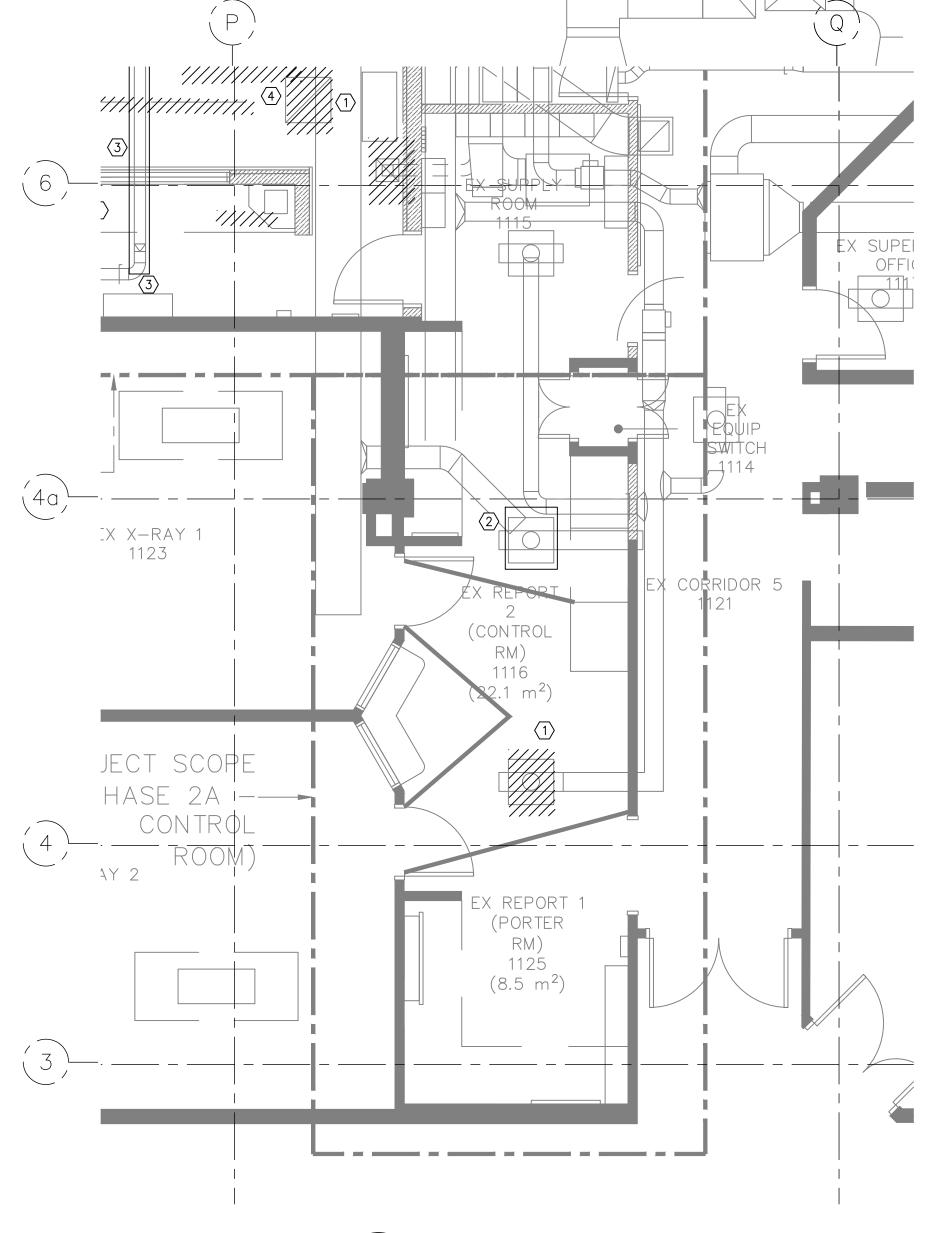












PHASE 2A - RAD OFFICE

M1.201 SCALE: NTS

DRAWING NOTES

- EXISTING DIFFUSER TO BE RELOCATED AND REPLACED WITH NEW.
- (2) EXISTING DIFFUSER TO BE REPLACED WITH NEW
- 3 EXISTING DUCT BRANCH TO BE UPSIZED. REFER TO NEW PLANS

ARCHITECTURE
HEALTHCARE, COMMERCIAL, RESIDENTIAL, INTERIOR DESIGN

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EX CONTROL
PROJE SCOPE

SEX LOCKERS

HIGH
PROJE SCOPE

PHASE 2A

RAD OF EXCONTROL RM

1129

EX QUALISAL
RESOURCE
NURSE DEFOCE
1098

CORRLING
REFED
RIVERSE
REFED
RIVERSE
RIVER

PHASE 2A - CONTROL ROOM

M1.201 SCALE: NTS

PHASE

scale:
1:50

1:50 DATE: OCT 15 2021 DRAWN:

ISSUED FOR CONSTRUCTION

HSSUED FOR TENDER

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FLUOROSCOPY

REPLACEMENT

LEVEL 1 EXISTING

MECHANICAL PLAN

1475 EDMONTON STREET, PRINCE GEORGE BC V2M 1S2

UHNBC

ISSUED FOR 80% CD

ISSUED FOR BP REVIEW

ISSUED FOR BP

ISSUED FOR DD

No. REVISION

2021.10.15 JL

2021.05.20 JL 2021.05.06 JL

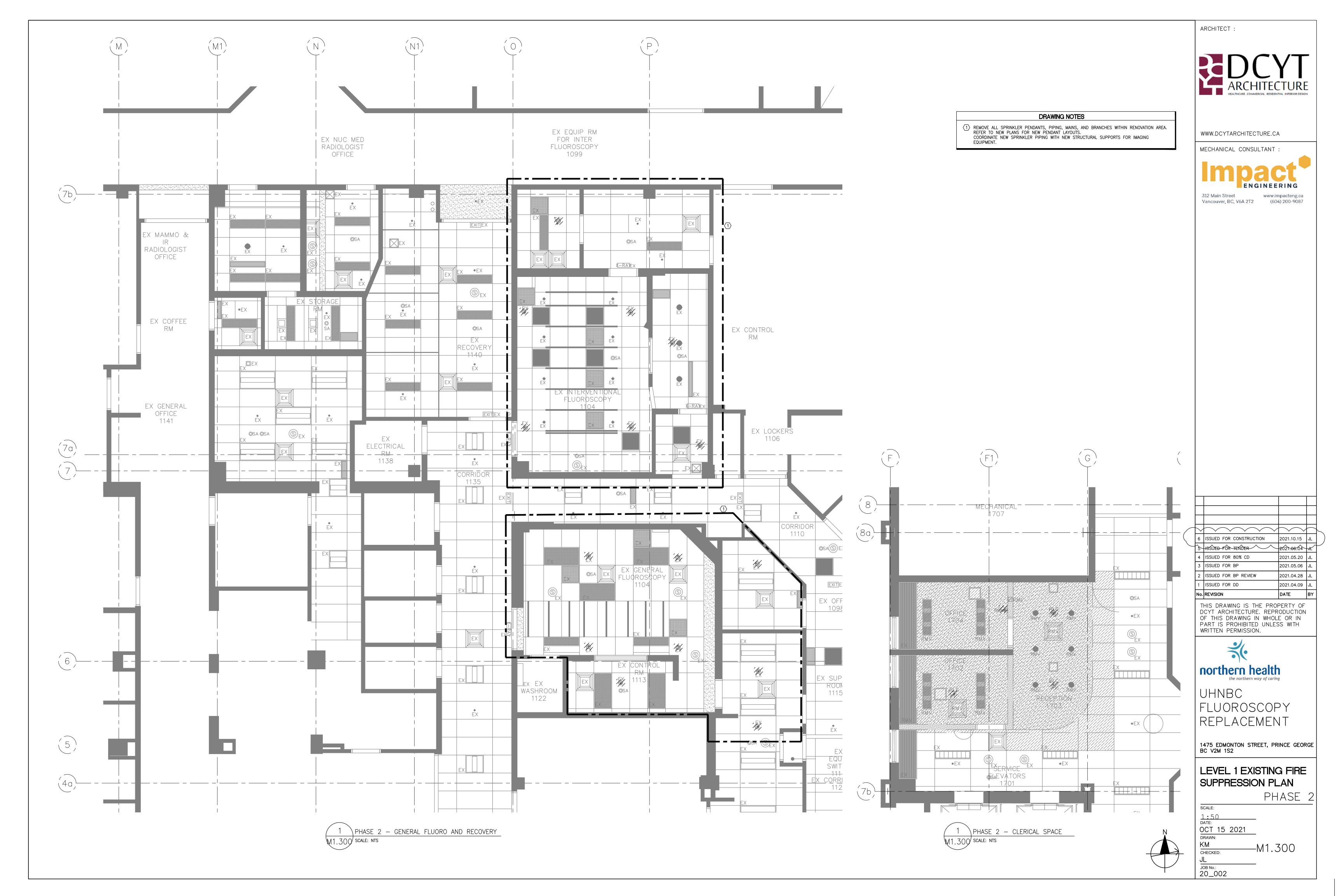
2021.04.28 JL

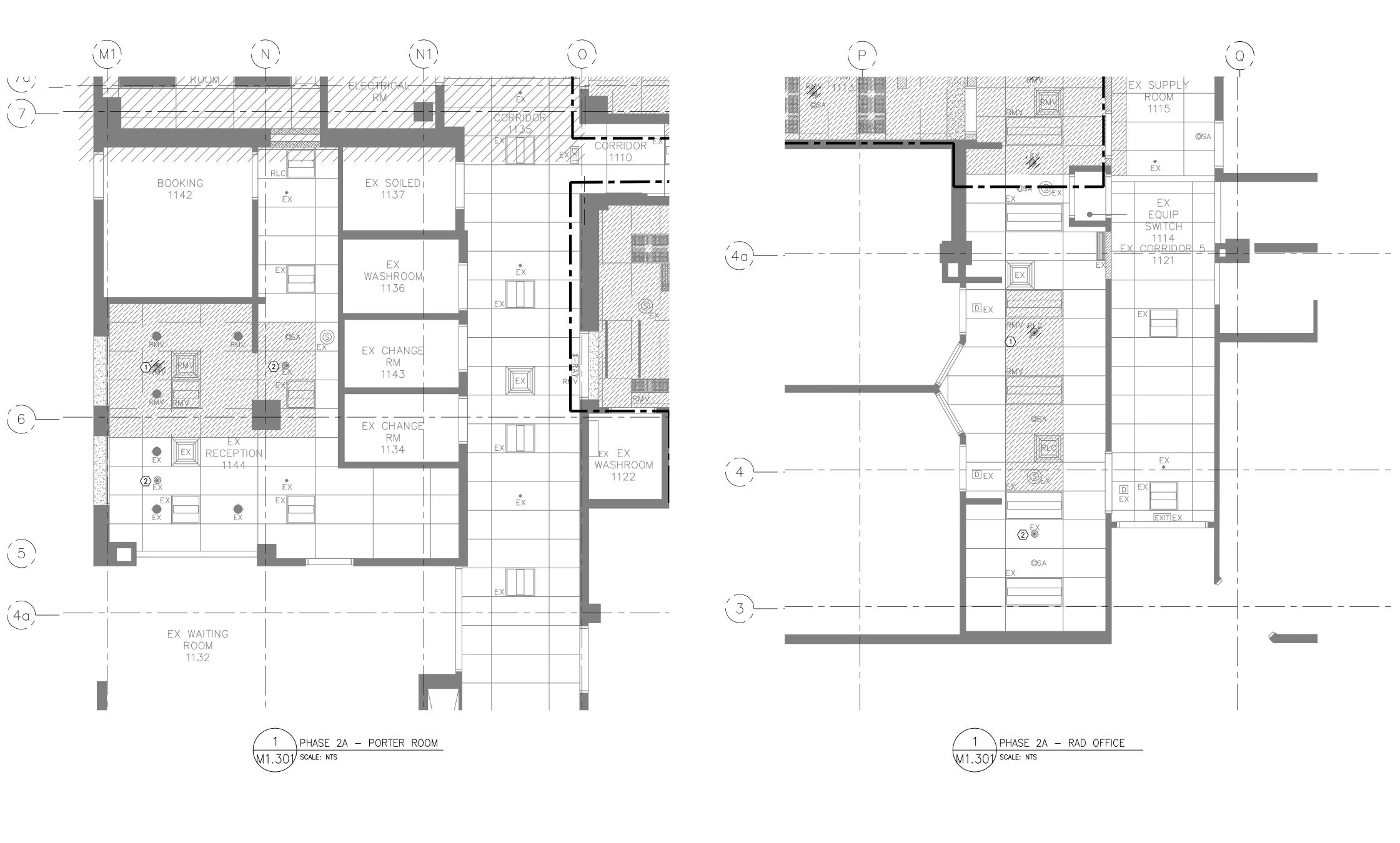
2021.04.09 JL

DATE

KM CHECKED: JL JOB No.: 20_002

N





DRAWING NOTES

EXISTING PENDANT TO BE REMOVED.
 EXISTING SPRINKLER PENDANT TO REMAIN

ARCHITECTURE

HEALTHCARE COMMERCIAL RESIDENTIAL INTERIOR DESIGN

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1 PHASE 2A - CONTROL ROOM M1.301 SCALE: NTS

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No.	REVISION	DATE	BY	
1	ISSUED FOR DD	2021.04.09	ĸ	_
2	ISSUED FOR BP REVIEW	2021.04.28	JL)	
3	ISSUED FOR BP	2021.05.06	'n	
4	ISSUED FOR 80% CD	2021.05.20	JL	
ζh	48SDED-FOR-TENDER	2021.06.04	*	
6	ISSUED FOR CONSTRUCTION	2021.10.15	\forall	
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LEVEL 1 EXISTING FIRE SUPPRESSION PLAN

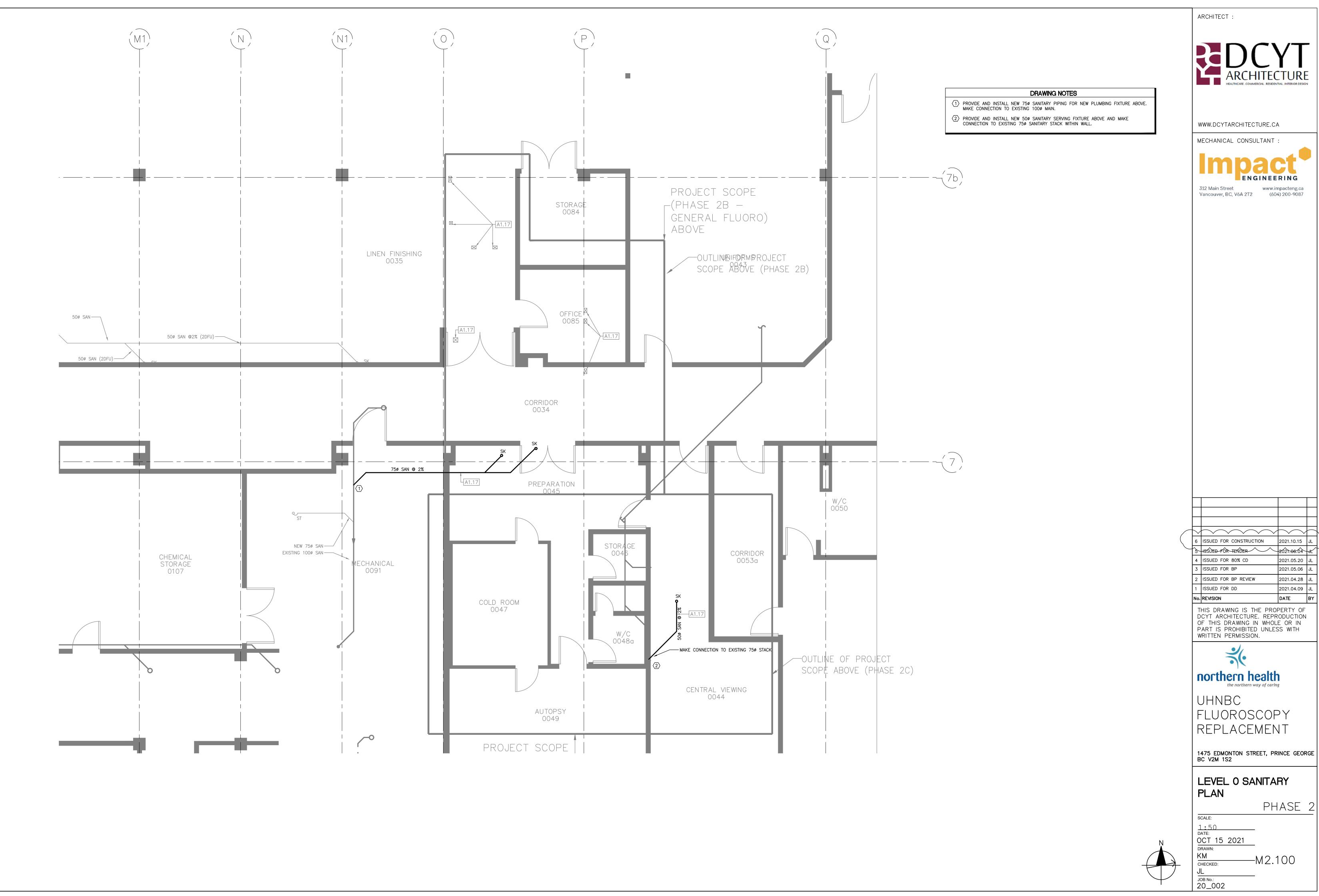
PHASE

1:50 DATE: OCT 15 2021 DRAWN: KM

CHECKED: M1.301

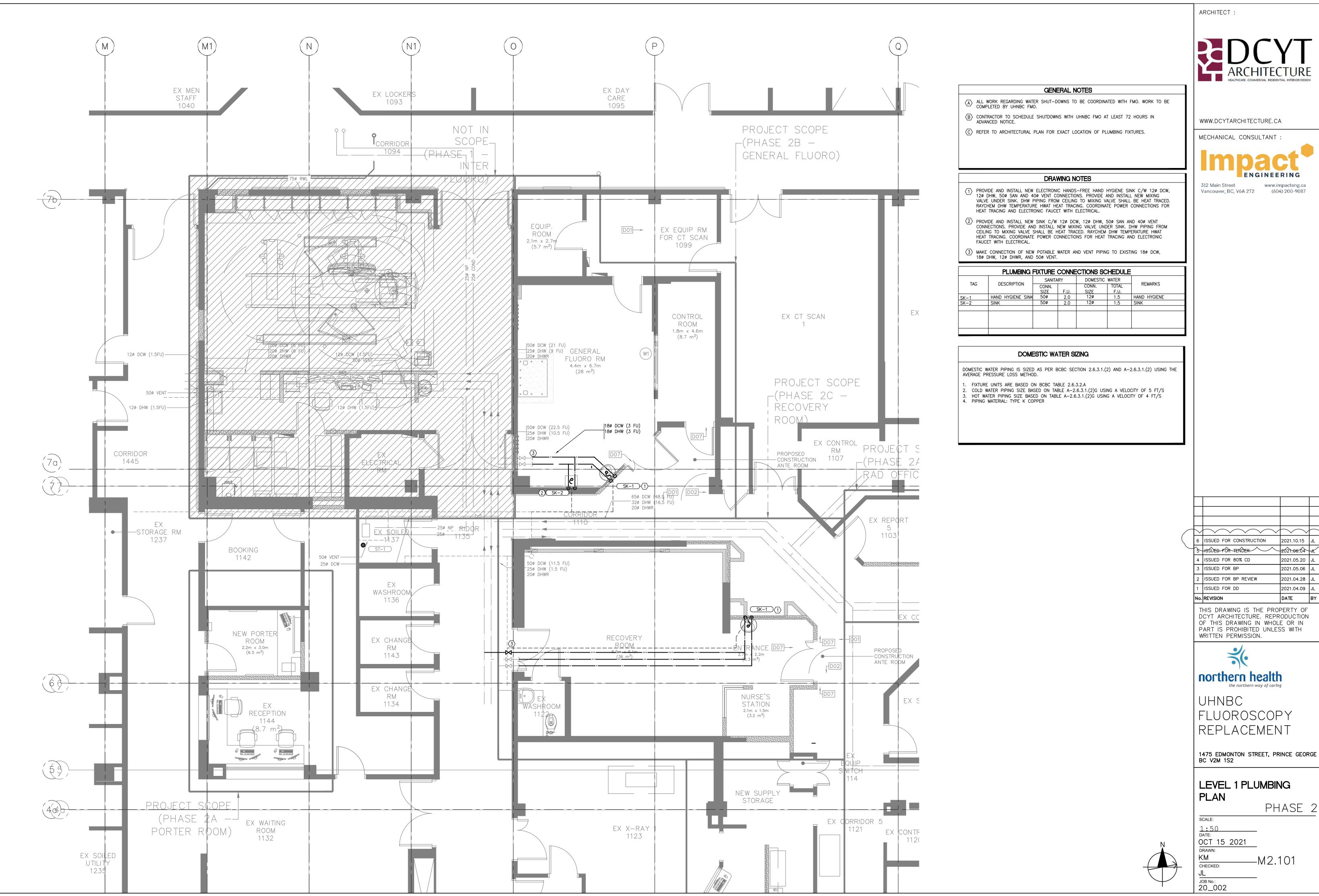
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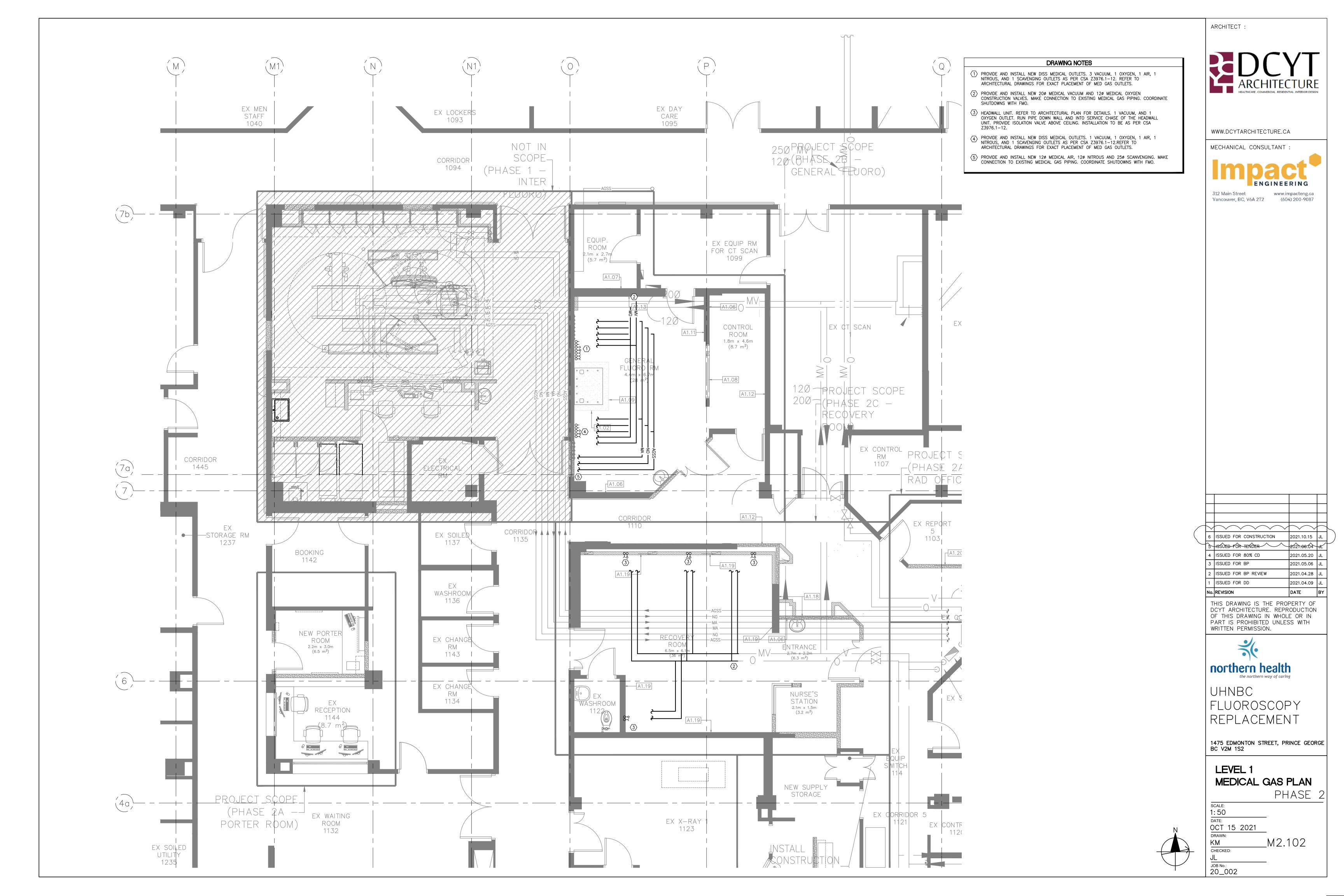


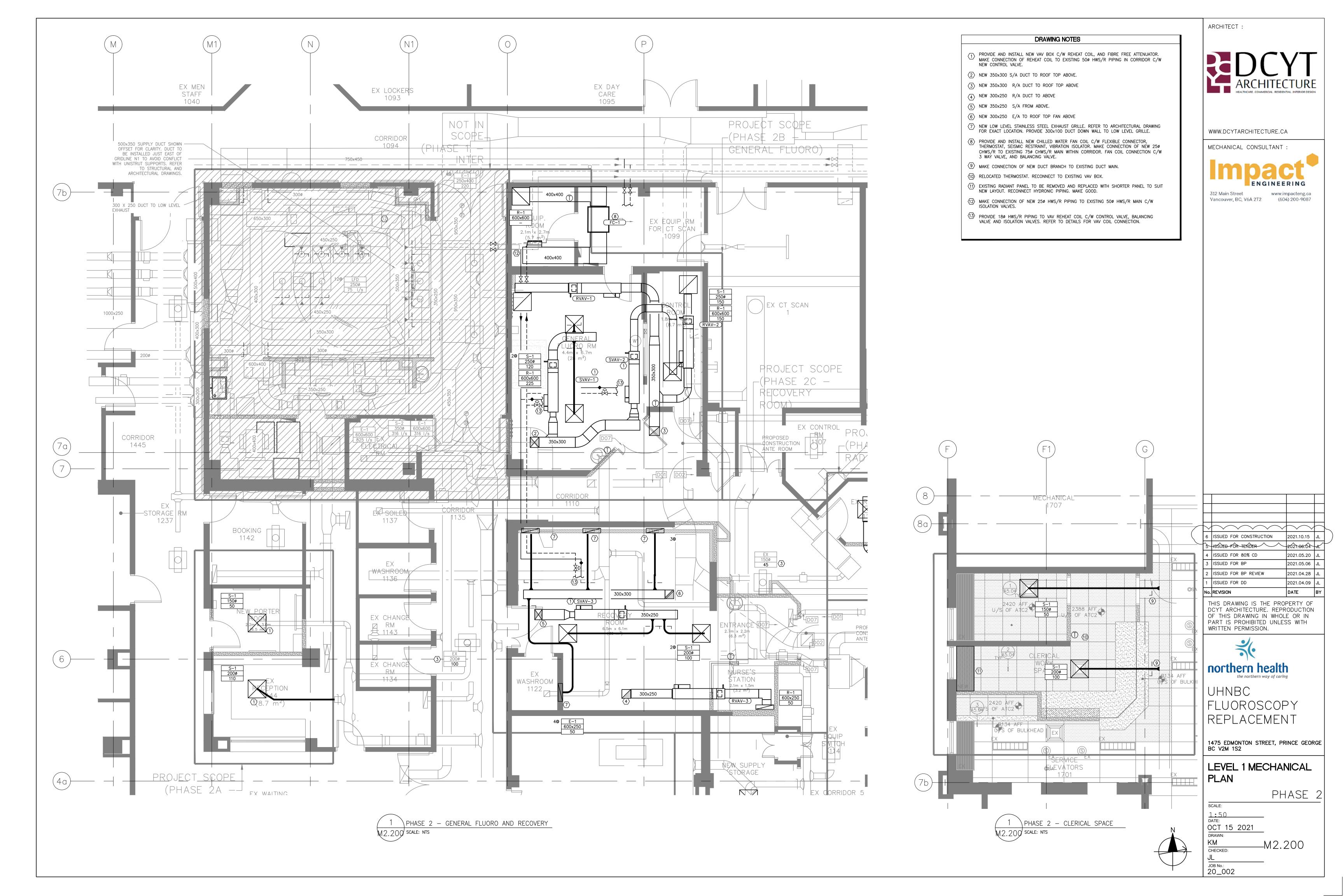
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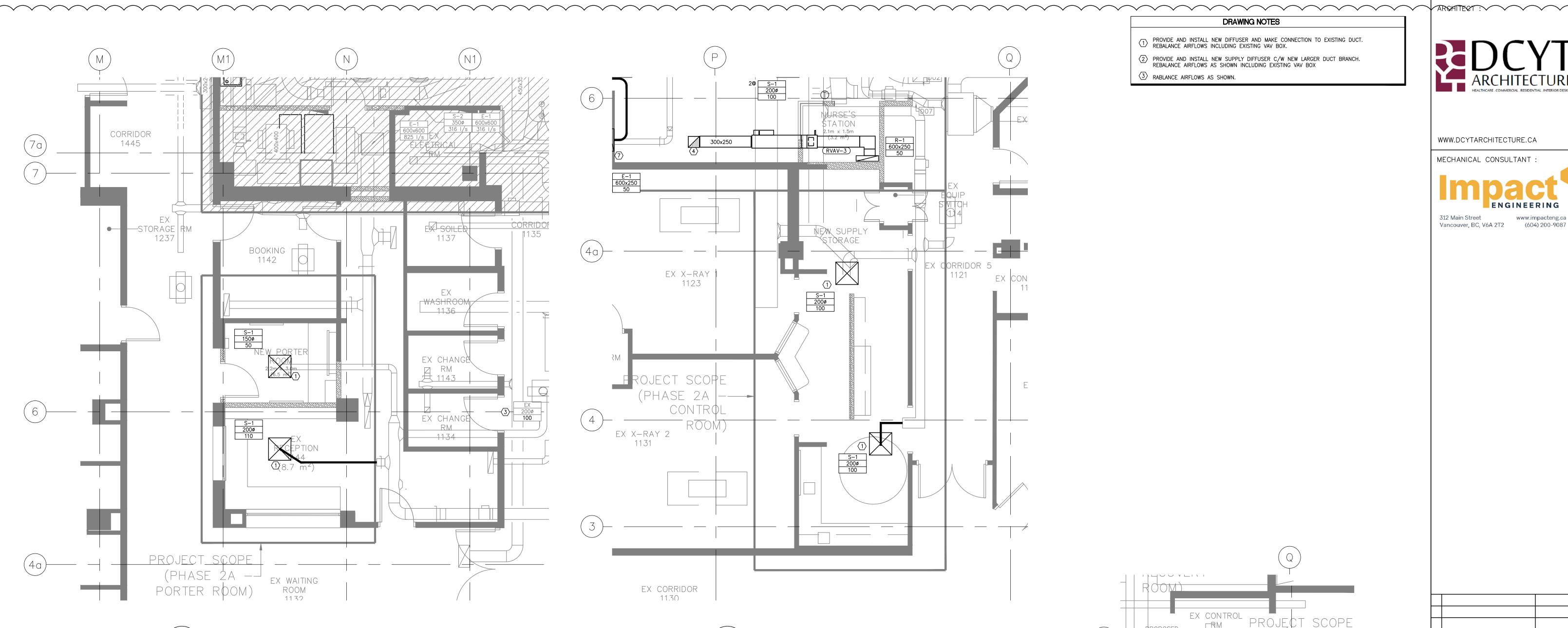


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1	ISSUED FOR DD	2021.04.09	JL
2	ISSUED FOR BP REVIEW	2021.04.28	JL
3	ISSUED FOR BP	2021.05.06	JL
4	ISSUED FOR 80% CD	2021.05.20	JL
<i>√</i> 6	18SÛED-FÔR-TENDER	2021.06.04	¥
6	ISSUED FOR CONSTRUCTION	2021.10.15	JL
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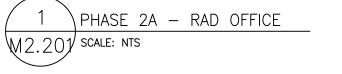






1 \PHASE 2A - PORTER ROOM

M2.201 SCALE: NTS



DRAWING NOTES

- PROVIDE AND INSTALL NEW DIFFUSER AND MAKE CONNECTION TO EXISTING DUCT. REBALANCE AIRFLOWS INCLUDING EXISTING VAV BOX.
- PROVIDE AND INSTALL NEW SUPPLY DIFFUSER C/W NEW LARGER DUCT BRANCH. REBALANCE AIRFLOWS AS SHOWN INCLUDING EXISTING VAV BOX
- 3 RABLANCE AIRFLOWS AS SHOWN.

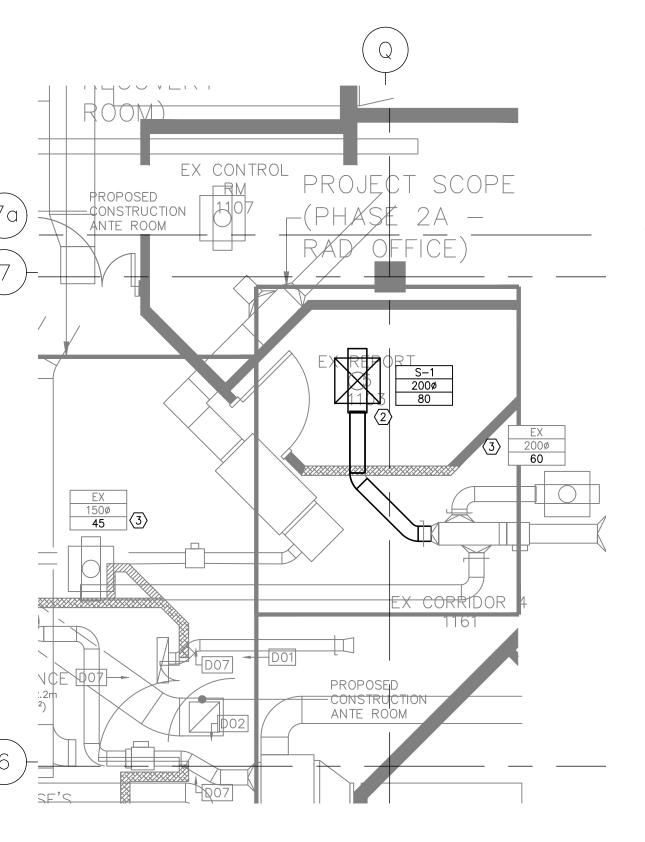


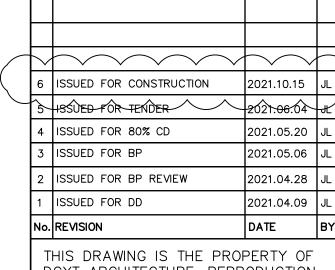
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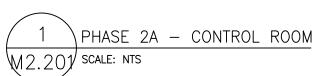
LEVEL 1 MECHANICAL PLAN

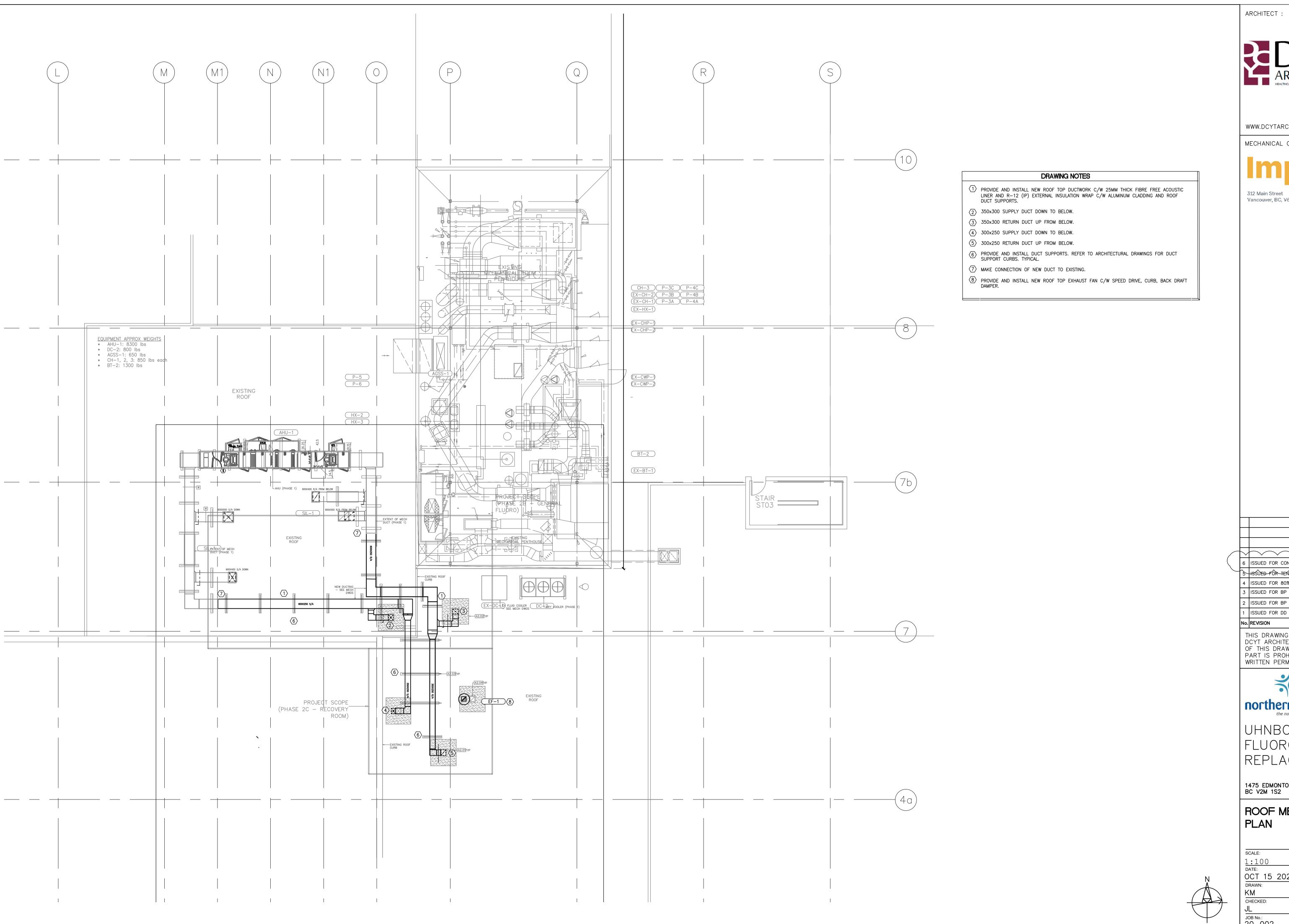
PHASE

SCALE: KM

OCT 15 2021 DRAWN: _M2.201 CHECKED:

JOB No.: 20_002





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6 ISSUED FOR CONSTRUCTION 2021.10.15 JL 5 1850ED FOR TEMDER 2021.06.04 4 ISSUED FOR 80% CD 2021.05.20 3 ISSUED FOR BP 2021.05.06 JL 2 ISSUED FOR BP REVIEW 2021.04.28 JL ISSUED FOR DD 2021.04.09

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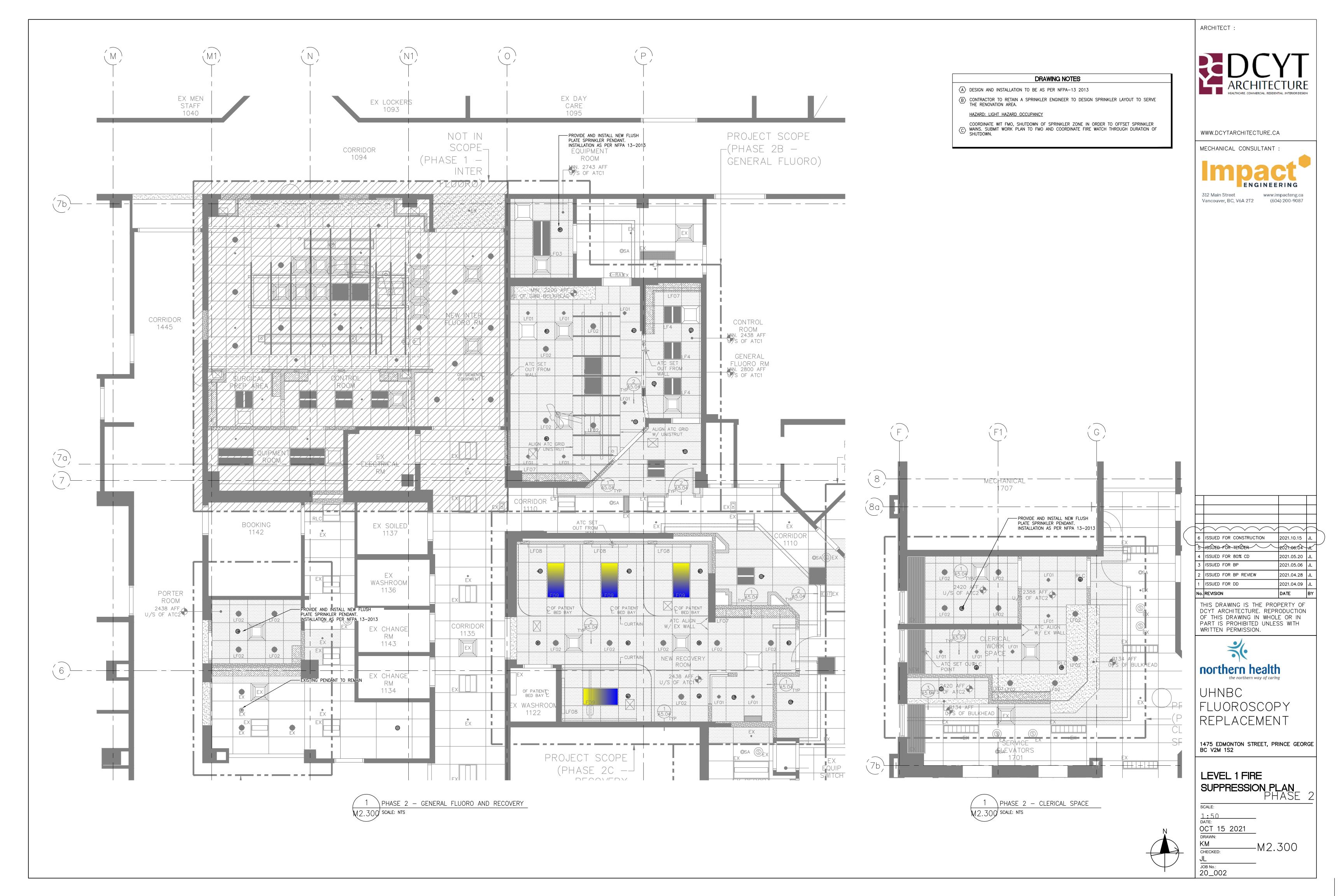
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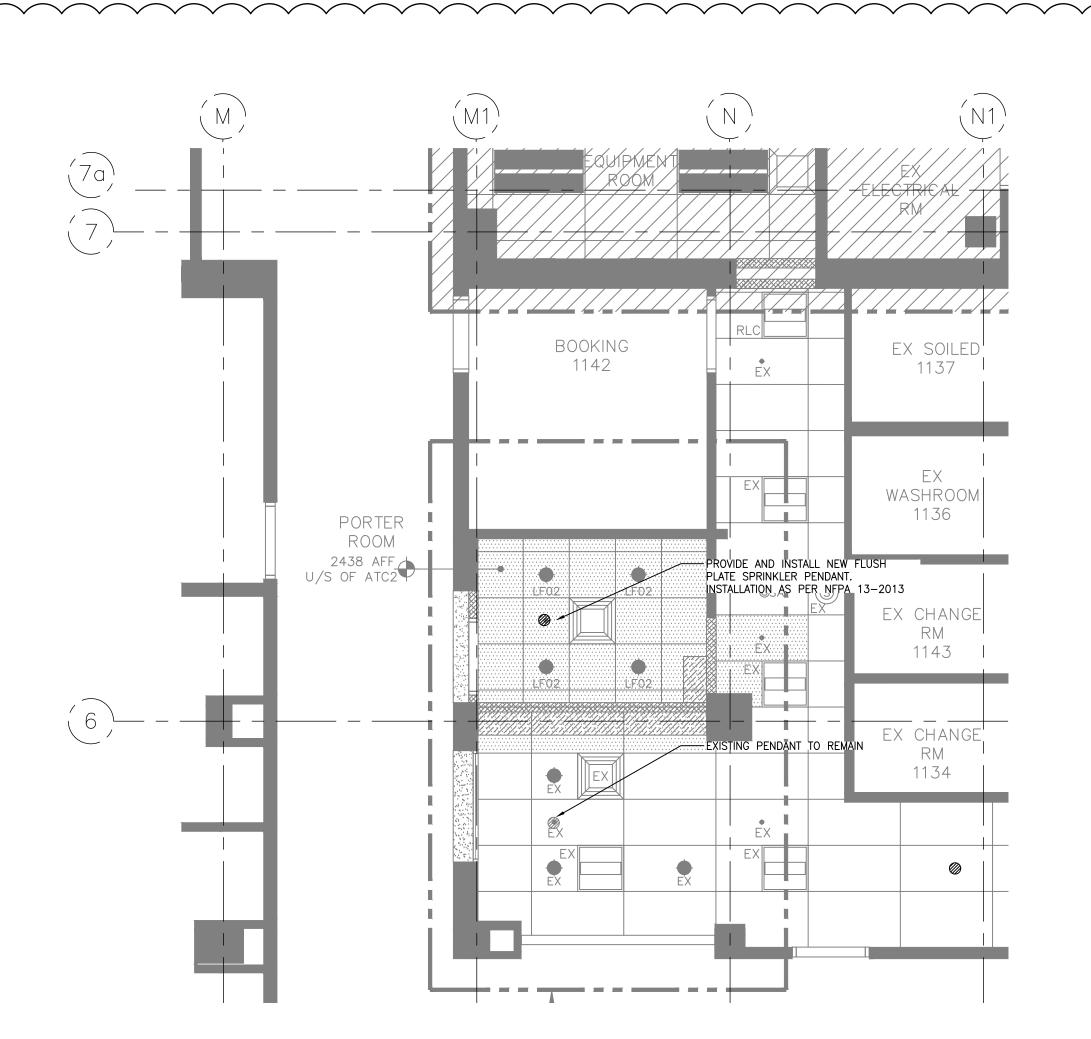
ROOF MECHANICAL PLAN

PHASE 2

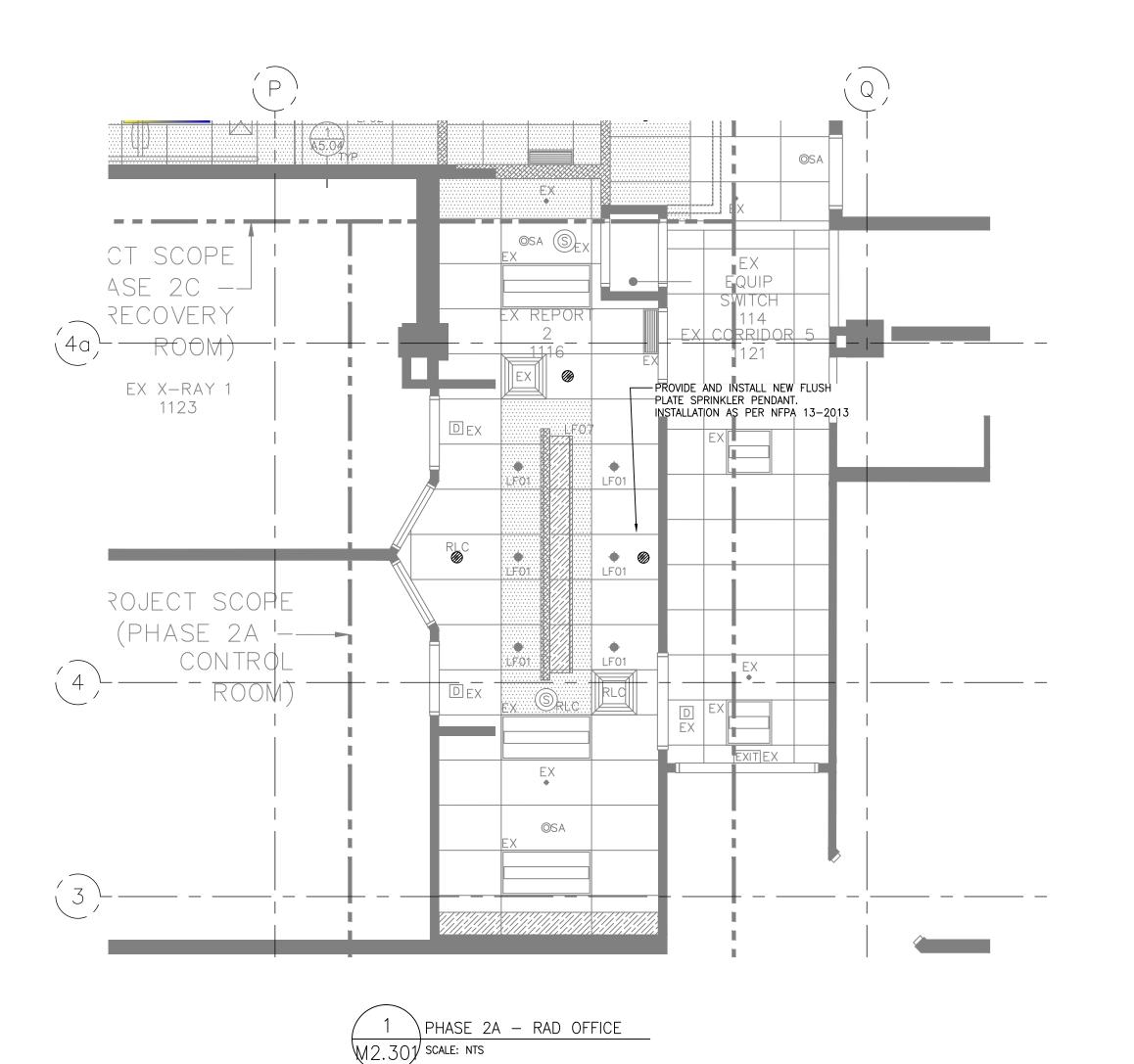
OCT 15 2021 DRAWN: _M2.202

JOB No.: 20_002









DRAWING NOTES

(A) DESIGN AND INSTALLATION TO BE AS PER NFPA-13 2013

(B) CONTRACTOR TO RETAIN A SPRINKLER ENGINEER TO DESIGN SPRINKLER LAYOUT TO SERVE THE RENOVATION AREA.

HAZARD: LIGHT HAZARD OCCUPANCY

COORDINATE WIT FMO, SHUTDOWN OF SPRINKLER ZONE IN ORDER TO OFFSET SPRINKLER MAINS. SUBMIT WORK PLAN TO FMO AND COORDINATE FIRE WATCH THROUGH DURATION OF SHUTDOWN.

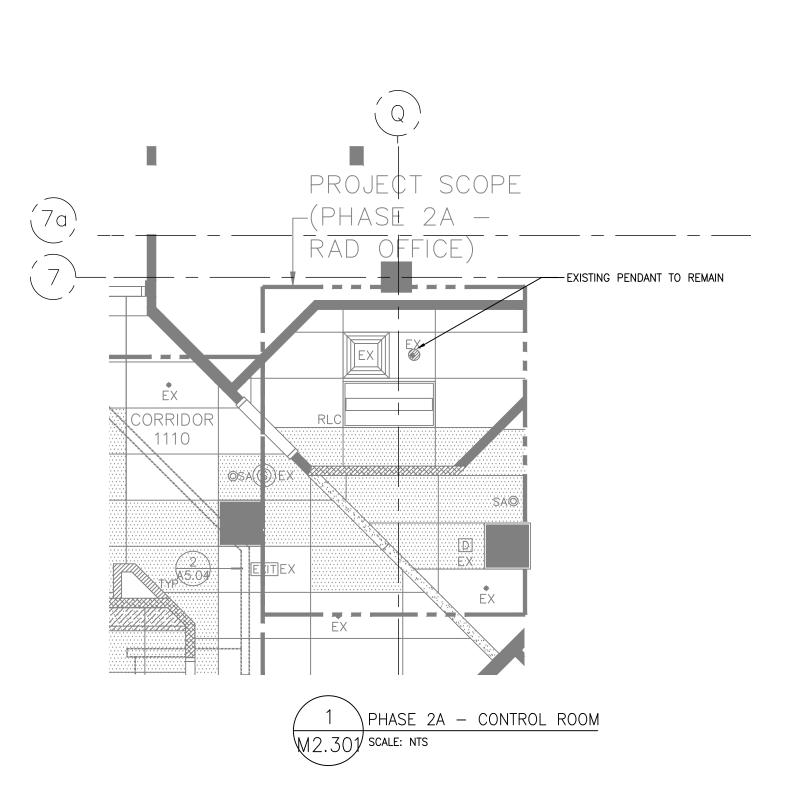
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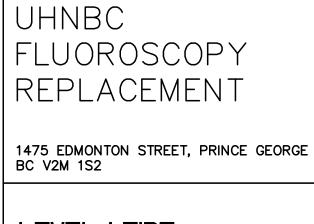
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ISSUED FOR 80% CD

ISSUED FOR BP REVIEW

WRITTEN PERMISSION.

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ISSUED FOR DD

No. REVISION

1350ED FOR TENDER 2021.06.04 JL

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2021.10.15 JL

2021.05.20 JL 2021.05.06 JL

2021.04.28 JL

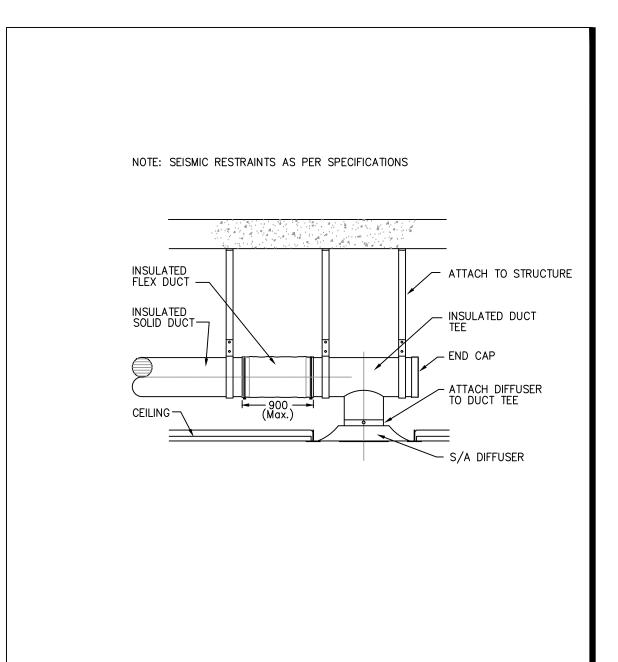
2021.04.09 JL

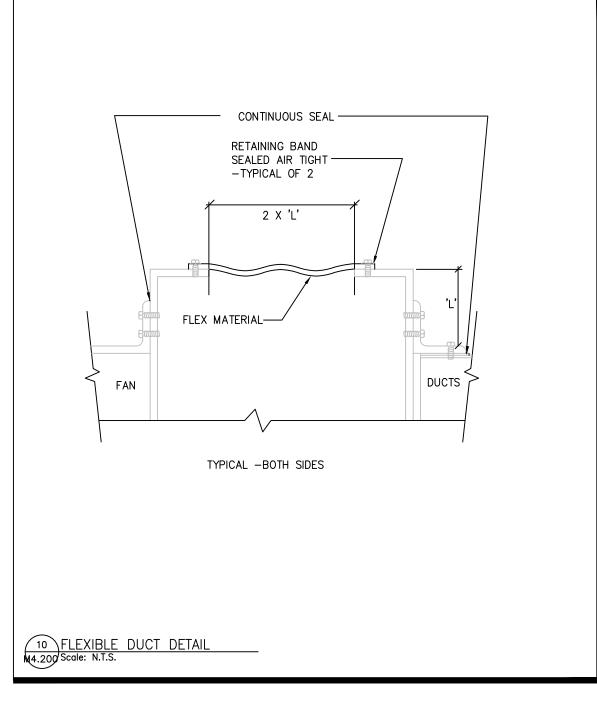
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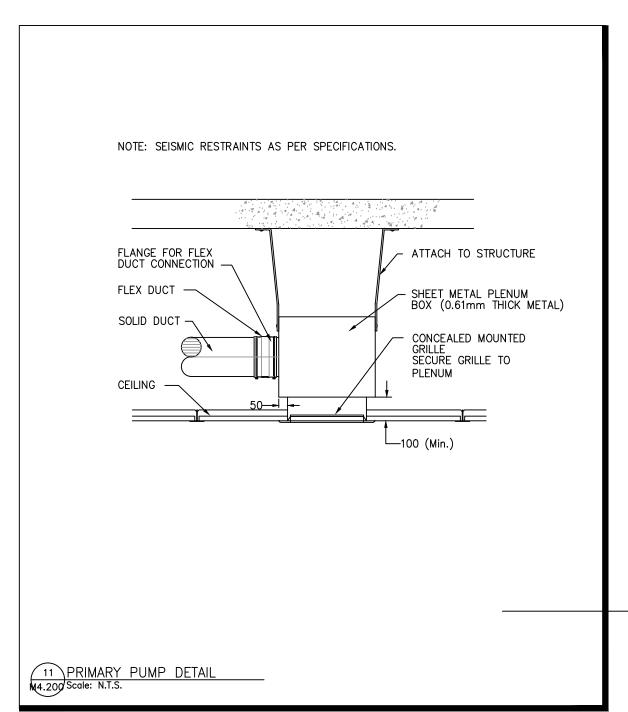
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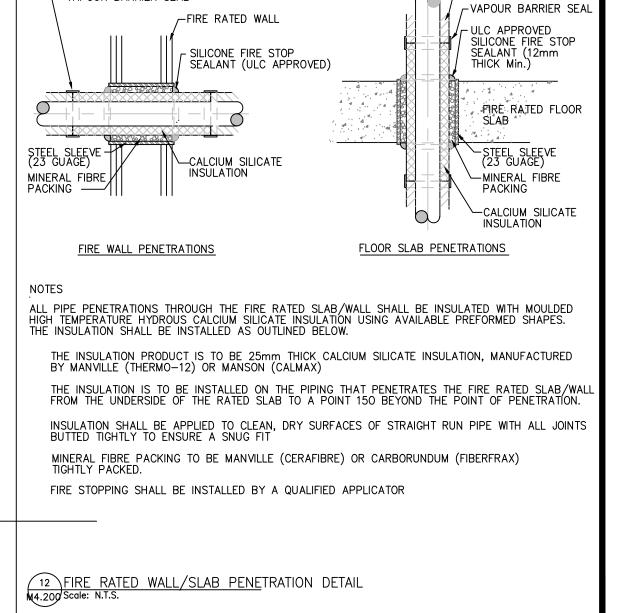
KM -M2.301CHECKED:

JL JOB No.: 20_002



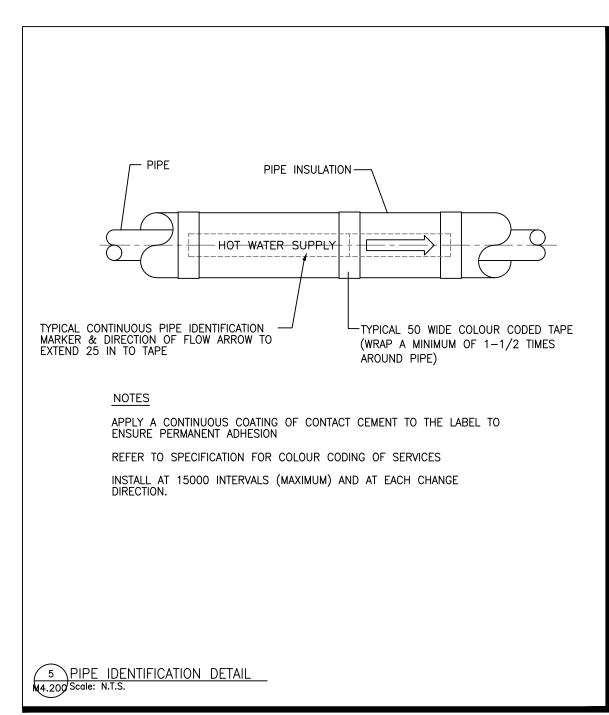


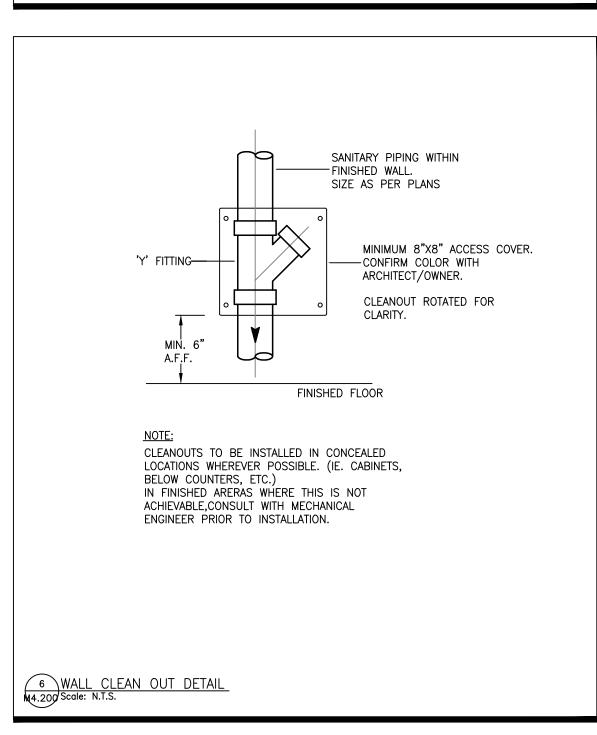


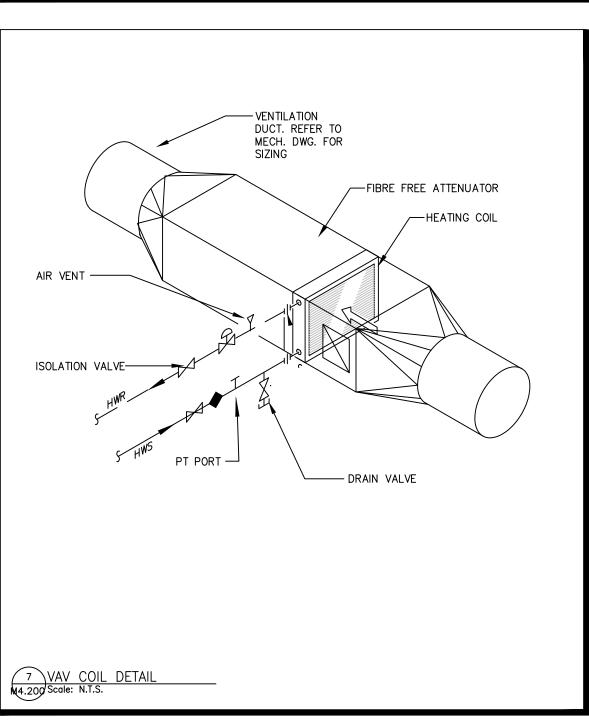


- VAPOUR BARRIER SEAL

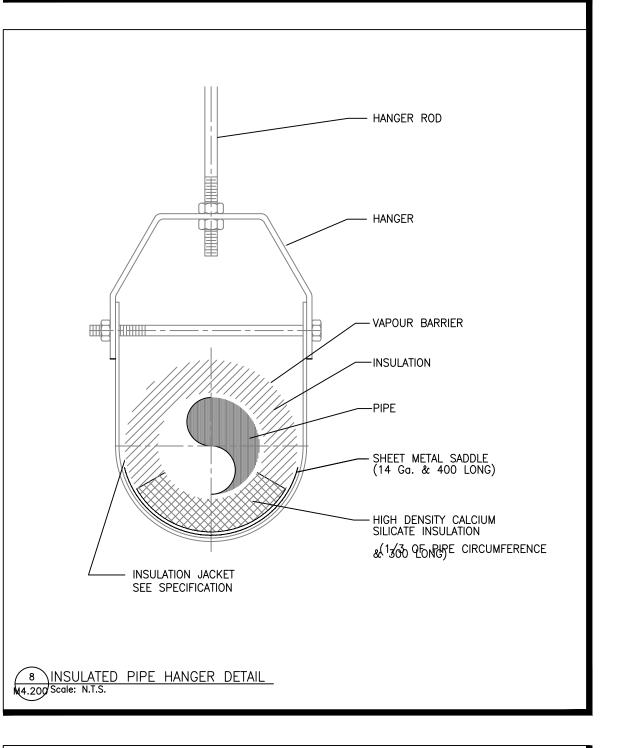
- FIBREGLASS PIPE INSULATION

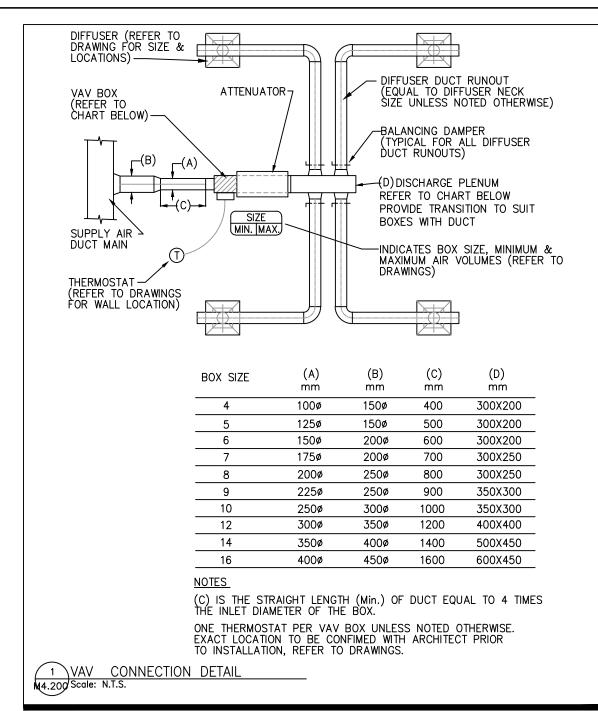


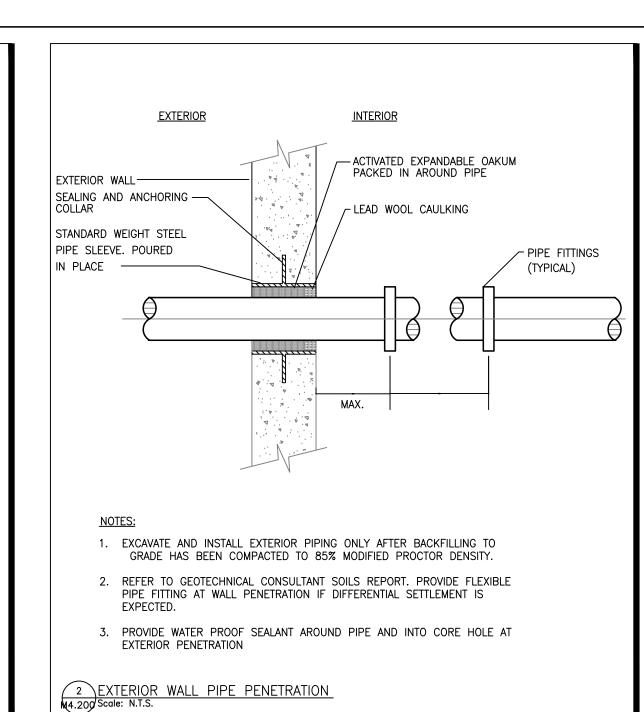


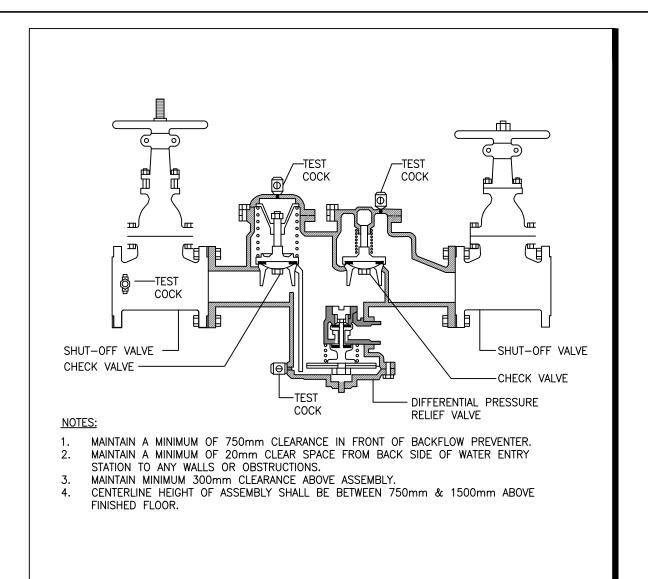


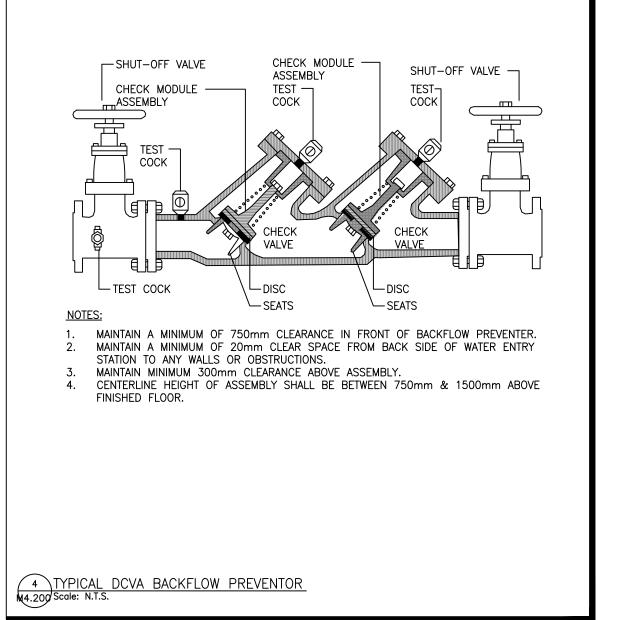
3 TYPICAL RP BACKFLOW PREVENTOR M4.200 Scale: N.T.S.













JOB No.: 20_002

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<i>λ</i> 6	18SDED-FOR TENDER	2021.06.04	*		
4	ISSUED FOR 80% CD	2021.05.20	JL		
3	ISSUED FOR BP	2021.05.06	JL		
2	ISSUED FOR BP REVIEW	2021.04.28	JL		
1	ISSUED FOR DD	2021.04.09	JL		
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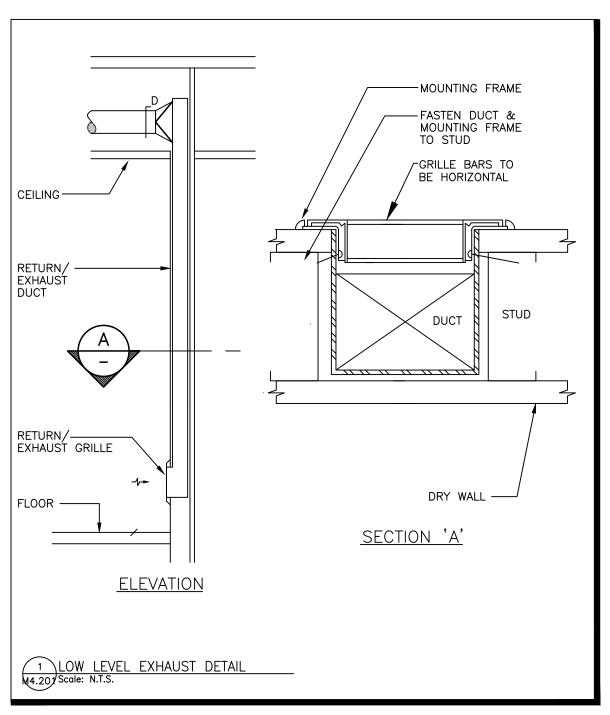
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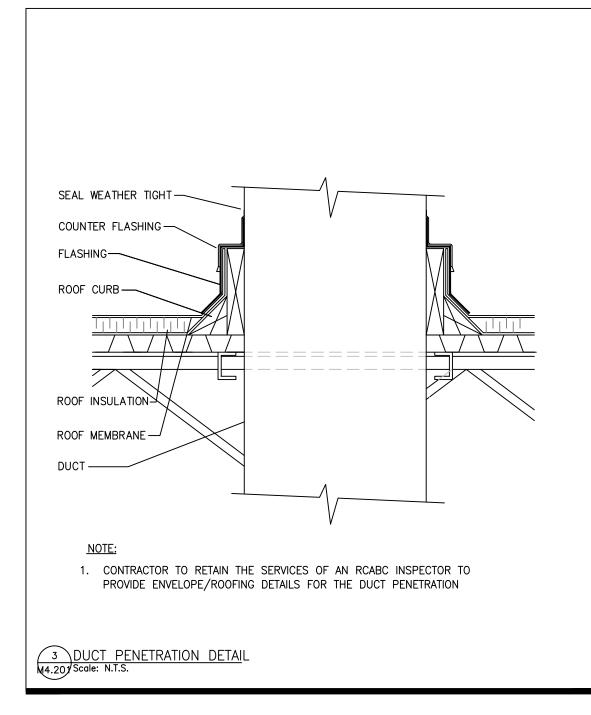
MECHANICAL CONSULTANT:

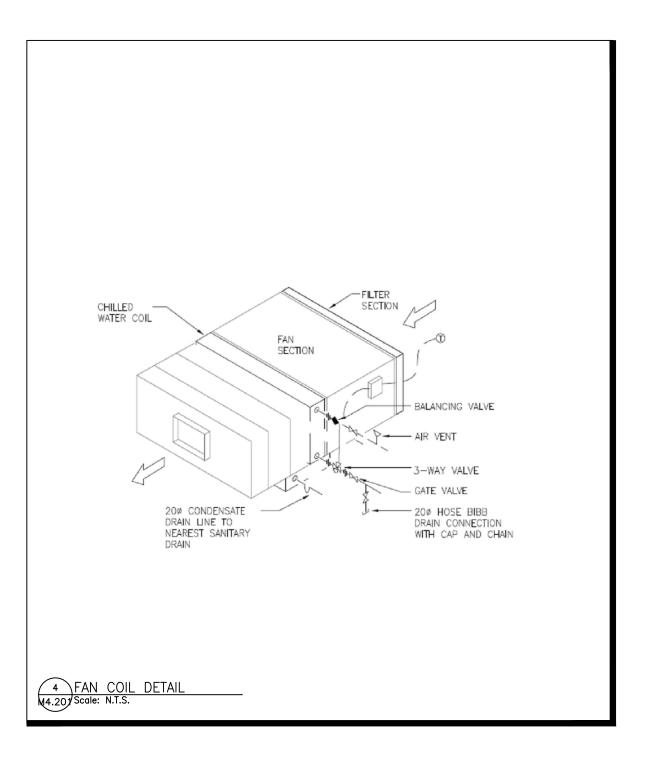




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Zh	48SÛED-FÔR-TEKÎDER	2021.06.04	*
4	ISSUED FOR 80% CD	2021.05.20	JL
3	ISSUED FOR BP	2021.05.06	JL
2	ISSUED FOR BP REVIEW	2021.04.28	JL
1	ISSUED FOR DD	2021.04.09	JL
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DETAILS

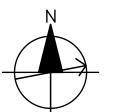
PHASE 2

NTS
DATE:
OCT 15 2021
DRAWN:

DRAWN:

KM
CHECKED:

JL
JOB No.:
20_002



		MECHANICAL		
UHN General Fluoro	EQ	UIPMENT SCHEDULE	S	Page 1 of 1
1475 Edmonton Stree	et, Prince George DII	FFUSERS AND GRILL	ES	
EQUIPMENT DATA				
UNIT NO.	S-2	E-1	R-1	
TYPE	SQUARE PLAQUE	STAINLESS	RETURN	
SERVICE	SUPPLY	GRILLE	GRILLE	
LOCATION	REFER TO	REFER TO	REFER TO	
	DRAWINGS	DRAWINGS	DRAWINGS	
MANUFACTURER	EH PRICE	EH PRICE	EH PRICE	
MODEL	SPD	730H	635.0	
SIZE (W x H)	600x600	REFER TO DRAWINS	REFER TO DRAWINS	
INLET SIZE	REFER TO DRAWINGS	EFER TO DRAWING	REFER TO DRAWINGS	
MOUNTING FRAME	T-BAR	REFER TO DRAWINGS	REFER TO DRAWINGS	
FINISH	STANDARD	STANDARD	STANDARD	
NOTES	1		1.0	
NOTE (1) VOLU	ME DAMPER			

		MECHANICAL	
UHN General Fl	uoro EQU	IPMENT SCHEDULES	
1475 Edmonton Street, Prince George		FANS	Page 1 of 1
EQUIPMENT D	\A T A		
UNIT NO.	MIA	EF-1	
SERVICE		RECOVERY	
OLIVIOL		ROOM	
LOCATION		ROOF	
MANUFACTURE	ER	GREENHECK	
MODEL		CUE-090 VG	
FAN DATA			
AIR FLOW	(L/s)	189	
	(CFM)	400	
FAN SP	(Pa)	175	
	(Inches)	0.7	
FAN TYPE		INLINE	
IMPELLER	(Inches)		
DRIVE TYPE	, ,	DIRECT	
FAN RPM		1645	
MOTOR HP		0.17	
ELECTRICAL S	ERVICE	120/1/60	
NOISE LEVEL	(Lwa)	74	
NOTES		1,2,3	

NOTES					
NOTE (1)	0-10v VARIO	REEN CONTR	OLS C/W 0-10 \	/DC signal for D	DC control
NOTE (2)	PROVIDE M	MANUFACTURE	R SUPPLIED EL	ECTRICAL DIS	CONNECT
NOTE (3)	CURB AND	BACKDRAFT D	AMPER		

			MECHANICAL		
UHN General Fluoro			MENT SCHEDU	JLES	
1475 Edmonton Str	eet, Prince	George	VAV BOXES		Page 1 c
EQUIPMENT DATA	A				
UNIT NO.		S-VAV-1	S-VAV-2	S-VAV-3	
SERVICE		GENERAL	CONTROL	RECOVERY	
		FLUORO	ROOM	ROOM	
MANUFACTURER		EH PRICE	EHPRICE	EH PRICE	
MODEL SERIES		SDV-5000	SDV-5000	SDV-5000	
AIDEL OW DATA					
AIRFLOW DATA				•	
SIZE	4.60	8	6	8	
DESIGN	(L/s)	236	151	194	
AIR FLOW	(CFM)	500	320	410	
MINIMUM AIRFLOW	. ,	236	151	194	
ALLOWABLE	(CFM)	500	320	410 36"	
ATTENUATOR	L	36"	36"	36	
HADBONIC BENE	AT COIL F	\ATA			
HYDRONIC REHE			0.54	0.70	
CAPACITY	(kW)	0.85	0.54	0.70	
MATER ELOVA	(MBH)	13.5	8.6	11.1	
WATER FLOW	(L/s)	0.09	0.05	0.07	
ENT WATER	(USGPM)	1.35 82.2	0.86 82.2	1.11 82.2	
LINI WAIEK	(Deg C)	180	180	180	
LEAV WATER	(Deg F) (Deg C)	71.1	71.1	71.1	
LLAV WAIEK	(Deg C)	160	160	160	
ENT AIR	(Deg F)	12.8	12.8	12.8	
LINI AIIX	(Deg C)	55	55	55	
LEAVING AIR	(Deg C)	26.7	26.7	26.7	
	(Deg C)	80	80	80	
	(DC91)		50	50	
NOTES		2,3,4	2,3,4	2,3,4	
NOTE (1)	2 ROW C		2,0,4	2,0,4	
NOTE (2)	1 ROW C				
NOTE (3)		EE ATTENUA	TOR		
NOTE (4)		SENSOR			
11012(1)	, ui ti Lo II	<u> </u>			
EQUIPMENT DATA	A				
UNIT NO.		R-VAV-1	R-VAV-2	R-VAV-3	
SERVICE		GENERAL	CONTROL	RECOVERY	
		FLUORO	ROOM	ROOM	
MANUFACTURER		EH PRICE	EH PRICE	EH PRICE	
MODEL SERIES		SDV-5000	SDV-5000	SDV-5000	
AIRFLOW DATA					
SIZE		8	6	8	
DESIGN	(L/s)	236	151	194	
AIR FLOW	(CFM)	500	320	410	
MINIMUM AIRFLOW		236	151	194	
ALLOWABLE	(CFM)	500	320	410	
ATTENUATOR	L	36"	36"	36"	
HYDRONIC REHE	AT COIL	ATA			
CAPACITY	(kW)				
-	(MBH)				
WATER FLOW	(L/s)				
	(USGPM)				
ENT WATER	(Deg C)				
	(Deg F)				
LEAV WATER	(Deg C)				
	(Deg F)				
ENT AIR	(Deg C)				
	(Deg F)				
LEAVING AIR	(Deg C)				
	(Deg F)				
	,				
NOTES		3,4	3,4	3,4	
NOTE (1)	2 ROW C	,			
NOTE (2)	1 ROW C				
11012 (2)					
NOTE (3)	FIBRE FR	EE ATTENUAT	TOR		

UHN General Flu		MECHANICAL	
University Hospit	al of Northern BC	EQUIPMENT SCHEDULES	
		FAN COIL	Page 1 of
POSITION OF THE PROPERTY OF TH			
SYSTEM DATA			
SYSTEM		EQUIPMENT	
		ROOM	
MANUFACTURE	R	TRANE	
MODEL			
CAPACITY	(MBH)	24.0	
INDOOR SECT	ION EQUIPMENT	DATA	
UNIT NO.	ON EQUI MENT	FC-1	
LOCATION		Equip Room	
MODEL		BCHD024	
AIR FLOW	(L/s)	378	
74111 2011	(CFM)	800	
ESP	(IN H20)	0.5	
WIDTH	(Inches)	28	
HEIGHT	(Inches)	18	
DEPTH	(Inches)	33	
WEIGHT	(LBS)		
BACKUP HEAT	(kW)		
ELECTRICAL SI		208/1/60	
ELECTRICAL	HP	0.5	
DATA			
COIL DATA			
TOTAL CAPACI		24	
EWT	(F)	45	
LWT	(F)	55	
FLOW RATE	(GPM)	4.5	
WPD	(FT H20)	2.7	
NOTES			
NOTE (1)		C.W CONDENSATE PUMPS, AND	
NOTE (2)		RNAL DRAIN PAN UNDER INDOO	R UNIT.
NOTE (3)	BACnet interface		

		MECHANICAL
UHN Gene	eral Fluoro	EQUIPMENT SCHEDULES
1475 Edm	onton Street, Prince George	PLUMBING FIXTURES Page 1 of
TAG	Туре	DESCRIPTION
IAO	Турс	American Standard ICU Basin #9118.111.020, Center hole only, 509 mm x
SK-1	HAND HYGIENE SINK	with EverClean antimicrobial surface which inhibits the growth of stain and odor causing bacteria mold and mildew, White Finish, 65 mm (2-9/16") dia Faucet perch, back of sink 93 mm (3-11/16") higher than faucet perch, Offs grid drain included, integrated mounting brackets, P-trap with Saniguard coating provided. American Standard Selectronic I.C. #605B.193.002 Electronic Faucet, Polished Chrome finish, Center hole only, Vandal resista brass construction, 1.5 GPM (5.7 LPM) pressure compensating laminar flor device in spout base with plain spout end, Rigid gooseneck spout, 127 mm (5") projection reach, Self-adjusting sensor, AC Powered (Hard Wired). American Standard #PK00.HAC, Hardwired Hardwired Ac - Power Kit, includes 10' long extension cable. American Standard PK00.BBU Battery Ba Up Includes standard CR-P2 lithium battery for back-up power, Allows Selectronic AC faucets and flush valces to continue operating during a power failure and maintains fail-safe operation, Installs between Selectronic product and AC Power Supply (Plug-In or Hard-Wired), 4- amstd, Selectronic Batter Back-Up. Lawler #TMM-1070, Below Deck Mechanical Water Mixing Valve Bronze body, temperature adjusting dial, 10 mm (3/8") inlets and outlet compression fittings, high temperature thermostatic limit stop, shut-off with automatic reset when temperature exceeds 120 °F (48.8 °C), Integral check offer temperature range from full cold through 46 °C (114.8 °F). Provide tee adaptors and flex. copper tubing to suit installation. McGuire #LFH165LKN3Faucet Supplies, Chrome plated finish polished brass, heavy duty angle stop 10 mm (3/8") I.P.S. Inlet x 76 mm (3") long rigid horizontal nipples, V.P. Loos keys, Escutcheon and flexible copper risers. Watts #CA-311 Fixture Carrie mounted on concrete floor, steel hanger plate, heavy gauge epoxy coated steel offset uprights with welded feet supports. For one unit: 102 mm (4") for the product of the pro
SK-2	COUNTERMOUNTED	two to six units in a row: 152 mm (6") finished metal stud wall to back of pip COUNTERTOP MOUNT SINK - TWO HANDLES FAUCET - BELOW DEC MECHANICAL WATER MIXING VALVE Franke Commercial #ALBS4606P-1/3 Single Bowl Countertop Mount Sink, holes, 8" (203 mm) center, 460 mm (18-1/8") wide x 478 mm (18-13/16") lor x 152 mm (6") high deep, Counter mounted, backledge, Grade 18-10 18 GA (1.2 mm) type 304 stainless steel, self-rimming, Satin finish rim and bowls Mounting kit provided, Fully undercoated to reduce condensation and resonance, factory applied rim seal, 3-1/2" (89 mm) crumb cup waste assembly with 1-1/2" (38 mm) tailpiece. Chicago Faucets 1100 Series #1100-GN2FC317ABCP Two handles Fauce throme plated finish, ECAST construction lead free (equal or less than 0.25' Cast brass body, Quaturn compression operating cartridge, 5.7 LPM (1.5 GPM) laminar flow control rigid/swing gooseneck spout, 102 mm (4") metavandal proof wristblade sixteen point tapered broach handle with blue and reindex buttons. Lawler #TMM-1070, Below Deck Mechanical Water Mixing Valve, Bronze body, temperature adjusting dial, 10 mm (3/8") inlets and out compression fittings, high temperature thermostatic limit stop, shut-off with automatic reset when temperature exceeds 120 °F (48.8 °C), Integral check offer temperature range from full cold through 46 °C (114.8 °F). Provide teadaptors and flex. copper tubing to suit installation. Provide tempered water hot side of faucet. McGuire #LFH165LKN3 Faucet Supplies, Chrome plated finish polished brass, heavy duty angle stops, 10 mm (3/8") I.P.S. Inlet x 76 nm (3") long rigid horizontal nipples, V.P. Loose keys, Escutcheon and flexil copper risers. McGuire #8903C P-Trap, heavy cast brass adjustable body with slip nut, 38 mm (1-1/2") inlet / 51 mm (2") outlet, Shallow wall flange an

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5~	48SDED-FOR TENDER	2021.06.04	¥
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SCHEDULES

PHASE 2

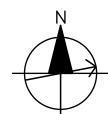
OCT 15 2021

DRAWN:

KM
CHECKED:

M5.100

JL JOB No.: 20_002



MECHANICAL WORK SPECIFICATION

- .1 THE GENERAL CONDITIONS OF THE CONTRACT, THE SUPPLEMENTARY CONDITIONS, AND ALL SECTIONS OF DIVISION 01 APPLY TO AND ARE A PART OF THIS SECTION OF THE SPECIFICATION.
- .1 PRIOR TO SUPPLYING PRODUCTS TO THE SITE, SUBMIT FOR REVIEW, 8 COPIES OF SHOP DRAWINGS AND/OR PRODUCT DATA SHEETS INDICATING IN DETAIL THE DESIGN, CONSTRUCTION & PERFORMANCE OF MECHANICAL EQUIPMENT. & ALL MECHANICAL PRODUCTS EXCEPT PIPE & FITTINGS. SLEEVES, ESCUTCHEON PLATES. DUCTWORK, & SIMILAR ITEMS. ENDORSE SHOP DRAWINGS & PRODUCT DATA SHEETS WITH "CERTIFIED TO BE IN ACCORDANCE WITH ALL REQUIREMENTS".
- .2 READ THE FOLLOWING IN CONJUNCTION WITH THE WORDING ON THE CONSULTANT'S REVIEW STAMP APPLIED TO SHOP DRAWINGS FOR PRODUCT DATA SHEETS SUBMITTED
- 1. "THIS REVIEW IS FOR THE SOLE PURPOSE OF ASCERTAINING CONFORMANCE WITH THE GENERAL DESIGN CONCEPT. THIS REVIEW DOES NOT APPROVE THE DETAIL DESIGN INHERENT IN THE SHOP DRAWINGS, RESPONSIBILITY FOR WHICH REMAINS WITH THE CONTRACTOR & SUCH REVIEW DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR ERRORS OR OMISSIONS IN THE SHOP DRAWINGS OR OF HIS RESPONSIBILITY FOR MEETING ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS. BE RESPONSIBLE FOR DIMENSIONS TO BE CONFIRMED & CORRELATED AT THE JOB SITE, FOR INFORMATION THAT PERTAINS SOLELY TO FABRICATION PROCESS OR TO TECHNIQUES OF CONSTRUCTION & INSTALLATION, AND FOR COORDINATION OF THE WORK OF ALL SUB-TRADES.
- .3 SUBMIT THE FOLLOWING TO THE CONSULTANT:
- .1 PROJECT CLOSE-OUT DOCUMENTATION: O & M MANUALS, RECORD AS-BUILT DRAWINGS, AND ALL
- .2 PROGRESS PAYMENT BREAKDOWN: A DETAILED BREAKDOWN OF THE MECHANICAL WORK COST SUITABLE FOR EVALUATION OF PROGRESS PAYMENTS
- .3 EXTENDED WARRANTIES: COPIES OF ALL EXTENDED WARRANTIES
- .1 THE FOLLOWING ARE DEFINITIONS OF WORDS FOUND IN THIS MECHANICAL WORK SPECIFICATION AND ON ASSOCIATED DRAWINGS:
- .1 "PROVIDE" (AND TENSES OF PROVIDE) MEANS SUPPLY AND INSTALL COMPLETE
- .2 "INSTALL" (AND TENSES OF INSTALL) MEANS INSTALL AND CONNECT COMPLETE
- .3 "SUPPLY" MEANS SUPPLY ONLY
- .4 "CONSULTANT" MEANS THE ARCHITECT OR CONSULTING ENGINEER WHO HAS PREPARED THE CONTRACT DOCUMENTS ON BEHALF OF THE OWNER
- .5 "EQUAL TO"- MEANS THAT A PRODUCT PROPOSED FOR INSTALLATION, OTHER THAN THE SPECIFIED PRODUCT, MUST BE EQUAL TO THE SPECIFIED PRODUCT IN SIZE, MATERIALS OF CONSTRUCTION, PERFORMANCE, DURABILITY, & WARRANTY REQUIREMENTS, & THE FINAL DECISION IN THIS MATTER RESTS WITH THE
- 1.4 CODES, REGULATIONS, AND STANDARDS
- .1 ABIDE BY THE LATEST EDITION ALL CODES, REGULATIONS, AND STANDARDS REFERRED TO AND/OR APPLIED BY GOVERNING AUTHORITIES.
- .2 INSTALL TO THE REQUIREMENTS OF THE BC BUILDING CODE 2018, CSA HEALTHCARE STANDARDS AND THE RECOMMENDED PROCEDURES OF SMACNA AND ALL EQUIPMENT MANUFACTURERS AND SUPPLIERS
- .1 PRIOR TO SUBMITTING A BID, VISIT THE SITE & REVIEW & INCLUDE FOR EXISTING SITE CONDITIONS.
- .1 MECHANICAL DRAWINGS ARE PERFORMANCE DRAWINGS, DIAGRAMMATIC, SHOW APPROXIMATE LOCATIONS OF EQUIPMENT & SERVICES, ARE INTENDED TO CONVEY SCOPE OF WORK, & DO NOT SHOW ARCHITECTURAL AND STRUCTURAL DETAILS. PROVIDE OFFSETS, FITTINGS, TRANSFORMATIONS, & SIMILAR PRODUCTS REQUIRED AS A RESULT OF OBSTRUCTIONS & OTHER ARCHITECTURAL & STRUCTURAL DETAILS BUT NOT SHOWN ON DRAWINGS.
- .1 PROPERLY PLAN, COORDINATE, & ESTABLISH LOCATIONS & ROUTING OF SERVICES WITH SUBCONTRACTORS SUCH THAT SERVICES WILL CLEAR EACH OTHER AS WELL AS ANY OBSTRUCTIONS.
- .2 CONCEAL WORK IN PARTIALLY FINISHED OR UNFINISHED AREAS TO THE EXTENT MADE POSSIBLE BY AREA CONSTRUCTION. INSTALL PIPING, TO EACH OTHER.
- 1.8 GENERAL RE: INSTALLATION OF EQUIPMENT
- .1 UNLESS OTHERWISE SPECIFIED INSTALL EQUIPMENT IN ACCORDANCE WITH EQUIPMENT MANUFACTURERS' RECOMMENDATIONS & INSTRUCTIONS. GOVERNING CODES, STANDARDS, & REGULATIONS TAKE PRECEDENCE OVER MANUFACTURER'S INSTRUCTIONS.
- 1.9 PERMITS, FEES, AND CERTIFICATES
- .1 UNLESS OTHERWISE SPECIFIED, APPLY FOR, OBTAIN & PAY FOR ALL PERMITS REQUIRED TO COMPLETE THE
- MECHANICAL WORK. 1.10 WORKPLACE SAFETY
- .1 COMPLY WITH REQUIREMENTS OF THE WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS). SUBMIT WHMIS MSDS (MATERIAL SAFETY DATA SHEETS) FOR PRODUCTS WHERE REQUIRED, & MAINTAIN 1 COPY
- .2 COMPLY WITH REQUIREMENTS OF OCCUPATIONAL HEALTH & SAFETY REGULATIONS & ALL OTHER REGULATIONS PERTAINING TO HEALTH AND SAFETY, INCLUDING WORKER'S COMPENSATION / INSURANCE BOARD & FALL
- PROTECTION REGULATIONS. .3 IF, DURING THE COURSE OF WORK, ASBESTOS CONTAINING MATERIALS, BLACK MOULD, LEAD PAINT, OR ANY OTHER SUCH MATERIALS ARE ENCOUNTERED OR SUSPECTED, IMMEDIATELY REPORT THE DISCOVERY TO THE CONSULTANT & CEASE ALL WORK IN THE AREA IN QUESTION. DO NOT RESUME WORK IN AFFECTED AREAS
- UNTIL THE SITUATION HAS BEEN PROPERLY CORRECTED & WITHOUT WRITTEN APPROVAL FROM THE OWNER. 1.11 LIABILITY .1 THE MECHANICAL CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR LAYOUT OUR THE WORK OF DIVISION
- 15 AND FOR ANY DAMAGE CAUSED BY IMPROPER LOCATION OR PERFORMANCE OF WORK
- .2 PROTECT WORK AND BUILDING SURFACES FROM DAMAGE DUE TO THE CONTRACTOR'S PERFORMANCE OF WORK. PAY PARTICULAR ATTENTION TO THE PROTECTION OF BUILDING VAPOUR BARRIERS AND WATER PROOF MEMBRANES, COVER FLOORS AND OTHER FINISHED SURFACE TO AVOID DAMAGE, DURING PERIODS OF FREFZING WEATHER, ENSURE ALL PIPING IS PROTECTION FROM POTENTIAL FREEZE-UP AND ANY MECHANICAL OPENINGS IN THE BUILDING ENVELOPE ARE WEATHER AND TEMPERATURE PROTECTED.
- .3 MAINTAIN THE SITE IN A CLEAN AND ORDERLY CONDITION AT ALL TIMES. .4 AT THE COMPLETION OF THE WORK, REMOVE TOOLS, WASTE AND SURPLUS EQUIPMENT AND MATERIALS FROM
- .5 MAINTAIN INSURANCE THAT WILL FULLY PROTECT THE OWNER, THE GENERAL CONTRACTOR, THE MECHANICAL CONTRACTOR AND THE MECHANICAL CONTRACTOR'S SUB-TRADES FROM ALL CLAIMS WHICH MAY ARISE FROM
- 1.12 SCAFFOLDING, RIGGING, AND HOISTING .1 ERECT AND OPERATE SCAFFOLDING, RIGGING, HOISTING EQUIPMENT & ASSOCIATED HARDWARE REQUIRED FOR
- YOUR WORK. 1.13 CLOSEOUT SUBMITTALS
- .1 PRIOR TO APPLICATION FOR SUBSTANTIAL PERFORMANCE, SUBMIT ALL REQUIRED ITEMS & DOCUMENTATION SPECIFIED, INCLUDING OPERATING & MAINTENANCE MANUALS, AS-BUILT RECORD DRAWINGS, EXTENDED WARRANTIES, TEST CERTIFICATES, FINAL COMMISSIONING REPORT, & TAB REPORT.
- .2 OPERATING AND MAINTENANCE MANUALS: SUBMIT 3 HARD COPIES OF OPERATING & MAINTENANCE MANUALS IN HARDCOVER 3 "D" RING BINDERS, & IDENTIFIED WITH PROJECT NAME, & "MECHANICAL OPERATING AND MAINTENANCE MANUAL" WORDING. MANUALS ARE TO INCLUDE:
- .1 NAME OF ENGINEER AND MECHANICAL CONTRACTOR AND PHONE NUMBER .2 DESCRIPTION OF SYSTEM AND SCOPE OF WORK

THE MECHANICAL CONTRACTOR'S PERFORMANCE OF WORK.

- .3 SHOP DRAWING OF ALL EQUIPMENT
- .4 LIST OF TAGGED VALVES .5 EXTENDED WARRANTIES
- .6 MAINTENANCE AND OPERATION INSTRUCTIONS
- .7 LIST OF MANUFACTURERS SOURCE AND TRADE NAMES
- .8 BALANCE REPORT OF AIR & WATER SYSTEMS
- .9 COPY OF RECORD DRAWING .10 LIST OF INSPECTION AND TEST CERTIFICATES
- .3 RECORD "AS-BUILT" DRAWINGS: AS WORK PROGRESSES, CLEARLY MARK ON WHITE PRINTS OF THE CONTRACT DRAWINGS. SIGNIFICANT CHANGES FROM THE ROUTING OF SERVICES & LOCATIONS OF EQUIPMENT SHOWN ON THE CONTRACT DRAWINGS. KEEP THE SET UP-TO-DATE AT ALL TIMES. & AVAILABLE FOR PERIODIC REVIEW. WHEN WORK IS COMPLETE, TRANSFER AS-BUILT INFORMATION FROM AS-BUILT DRAWINGS TO A RECORDABLE AND IDENTIFIED CAD DISC WITH CAD WORK OF EQUAL QUALITY TO THE CONTRACT DRAWINGS. CAD DISCS WILL BE SUPPLIED FREE OF CHARGE BY THE CONSULTANT.
- 1.14 PHASING OF THE WORK

- .1 PHASING OF THE WORK IS REQUIRED TO MAINTAIN THE EXISTING BUILDING IN OPERATION. INCLUDE ALL COSTS FOR PHASING INCLUDING "OFF HOURS" PREMIUM TIME LABOUR COSTS.
- 1.15 EQUIPMENT AND SYSTEM MANUFACTURER'S CERTIFICATION
- .1 PRIOR TO EQUIPMENT & SYSTEM START-UP PROCEDURES, PAY FOR EQUIPMENT/SYSTEM MANUFACTURERS' AUTHORIZED REPRESENTATIVES TO EXAMINE THE INSTALLATION, & WHEN ANY REQUIRED CORRECTIVE MEASURES HAVE BEEN MADE, TO CERTIFY IN WRITING TO THE CONSULTANT THAT THE EQUIPMENT/SYSTEM INSTALLATION IS COMPLETE & IN ACCORDANCE WITH THE EQUIPMENT/SYSTEM MANUFACTURER'S INSTRUCTIONS. 1.16 EQUIPMENT AND SYSTEM START-UP
- .1 PRIOR TO COMMISSIONING, & UNDER SUPERVISION OF EQUIPMENT/SYSTEM MANUFACTURERS' REPRESENTATIVES, START-UP EQUIPMENT/SYSTEMS, MAKE REQUIRED ADJUSTMENTS, DOCUMENT PROCEDURES, LEAVE EQUIPMENT/SYSTEMS IN PROPER OPERATING CONDITION, & SUBMIT START-UP DOCUMENTATION SHEETS SIGNED
- BY THE MANUFACTURER/SUPPLIER & THE CONTRACTOR 1.17 EQUIPMENT AND SYSTEM COMMISSIONING
- .1 AFTER SUCCESSFUL START-UP AND PRIOR TO SUBSTANTIAL PERFORMANCE, COMMISSION THE MECHANICAL WORK IN ACCORDANCE WITH REQUIREMENTS OF CSA Z320, BUILDING COMMISSIONING. USE COMMISSIONING SHEETS INCLUDED WITH THE CSA STANDARD, & ANY SUPPLEMENTAL COMMISSIONING SHEETS REQUIRED.
- 1.18 O & M DEMONSTRATION & TRAINING
- .1 TRAIN THE OWNER'S DESIGNATED PERSONNEL IN ALL ASPECTS OF OPERATION & MAINTENANCE OF EQUIPMENT & SYSTEMS USING TECHNICIANS EMPLOYED BY THE EQUIPMENT/SYSTEM MANUFACTURER/SUPPLIER. THE NUMBER OF HOURS OF TRAINING ARE TO BE SUFFICIENT FOR THE OWNER'S PERSONNEL TO COMPLETELY UNDERSTAND OPERATION & MAINTENANCE OF THE EQUIPMENT/SYSTEM.
- 1.19 INSTALLATION OF PIPE SLEEVES
- .1 WHERE PIPES PENETRATE NEW CONCRETE AND/OR MASONRY SURFACES PROVIDE PIPE SLEEVES, MINIMUM #16 GAUGE FLANGED GALVANIZED STEEL OR, WHERE PERMITTED, FACTORY FABRICATED PLASTIC SLEEVES IN POURED CONCRETE CONSTRUCTION, & SCHEDULE 40 GALVANIZED STEEL PIPE OR CLASS 3000 CAST IRON PIPE IN CONCRETE OR MASONRY WALLS. SLEEVES IN WATERPROOFED SLABS OR WALLS ARE TO BE C/W A WATER
- .2 SIZE SLEEVES TO LEAVE 12 MM (1/2") CLEARANCE AROUND THE PIPES, OR WHERE THE PIPE IS INSULATED, A 12 MM (12") CLEARANCE AROUND PIPE INSULATION. PACK & SEAL THE VOID BETWEEN PIPE SLEEVES & THE PIPE OR PIPE INSULATION IN INTERIOR NON-FIRE RATED CONSTRUCTION FOR THE LENGTH OF THE SLEEVES WITH MINERAL WOOL & SEAL BOTH ENDS OF THE SLEEVE WITH SILICONE BASE CAULKING. PACK SEALS IN FIRE RATED CONSTRUCTION AS ABOVE BUT USE ROCK WOOL & LEAVE SPACE AT SLEEVE ENDS FOR FIREPROOFING. SEAL SLEEVES IN EXTERIOR WALLS BELOW GRADE (& ANY OTHER WALL WHERE WATER LEAKAGE MAY BE A PROBLEM) WITH THUNDERLINE CORP. (POWER PLANT SUPPLY CO.) "LINK SEAL" MODEL S-316 OR EQUAL MECHANICAL SEALS. REFER TO FIRESTOPPING SECTION FOR PENETRATIONS THROUGH FIRE RATED ASSEMBLIES.
- .3 TERMINATE SLEEVES FOR EXPOSED SO THAT THE SLEEVE IS FLUSH AT BOTH ENDS WITH THE BUILDING SURFACE CONCERNED & PROVIDE CHROME PLATED BRASS OR BRUSHED STAINLESS STEEL ESCUTCHEON PLATES TIGHT AGAINST THE BUILDING SURFACE TO COMPLETELY COVER BOTH ENDS.
- .1 DUCT OPENINGS, AIR INLET AND OUTLET OPENINGS, FIRE DAMPER & SIMILAR OPENINGS WILL BE PROVIDED IN NEW POURED CONCRETE WORK, MASONRY, DRYWALL & OTHER BUILDING SURFACES BY THE TRADE RESPONSIBLE FOR THE PARTICULAR CONSTRUCTION IN WHICH THE OPENING IS REQUIRED.
- 1.21 FIRESTOPPING AND SMOKE SEALS .1 UNLESS OTHERWISE SPECIFIED, WHERE MECHANICAL WORK PENETRATES FIRE RATED CONSTRUCTION, PROVIDE ULC LISTED & LABELLED FIRESTOPPING & SMOKE SEAL MATERIALS INSTALLED IN ACCORDANCE WITH REQUIREMENTS OF CAN4-S115 (RATINGS F, FT, FH, & FTH AS REQUIRED), CAN/ULC-S101, BC BUILDING CODE SECTION 3.1.7 & OTHER GOVERNING AUTHORITIES TO SEAL THE PENETRATIONS.
- .2 ACCEPTABLE PRODUCTS .1 3M BRAND FIRE BARRIER PENETRATION SEALING SYSTEM
- .2 JOHN MANVILLE FIRE TEMP PRODUCTS
- INSTALL IN STRICT ACCORDANCE WITH MANUFACTURERS PRINTED SPECIFICATIONS, INCLUDING FIELD QUALITY CONTROL AFTER INSTALLATION
- .4 ONLY APPROVED SPECIALIST FIRM, EMPLOYING SKILLED TRADESMAN EXPERIENCED IN FIRESTOPPING AND SMOKE SEALS APPLICATION SHALL CARRY OUT THE WORK OF THIS SECTION
- .5 CONTRACTOR SHALL SUBMIT TO THE CONSULTANT, SUITABLE DOCUMENT SIGNED BY THE MANUFACTURER OR HIS REPRESENTATIVE STATING THE CONTRACTOR HAS RECEIVED SUFFICIENT INSTALLATION INSTRUCTION FROM
- THE MANUFACTURER OR REPRESENTATIVE .6 THE CONTRACTOR SHALL REMOVE UP TO FOUR (4) FIRESTOPPING ASSEMBLIES FOR RANDOM INSPECTION IF
- REQUESTED BY THE CONSULTANT AND REPLACE AT NO COST TO THE OWNER. .7 SUBMIT SHOP DRAWINGS AND PRODUCT DATA IN ACCORDANCE WITH THE SHOP DRAWINGS SECTION
- .8 INSTALL FIRE STOPPING AND SMOKE SEAL MATERIAL AND COMPONENTS THAT HAVE BEEN TESTED BY CERTIFIED TESTING AGENCIES (ULC. CUL OR INTERTEK) AND MANUFACTURER'S INSTRUCTIONS TO PROVIDE A FLAME RATED SEAL NOT LESS THAT THE FIRE RESISTANCE RATED OF THE SURROUNDING WALL OR FLOOR
- 1.22 PIPE HANGERS AND SUPPORTS
- PROVIDE PIPE HANGERS AND SUPPORTS. PROVIDE ADDITIONAL STRUCTURAL STEEL CHANNELS, ANGLES, INSERTS, BEAM CHAMPS & SIMILAR ACCESSORIES REQUIRED FOR HANGING OR SUPPORTING PIPE. ALL FERROUS HANGER & SUPPORT PRODUCTS ARE TO BE GALVANIZED.
- .2 FOR INSULATED PIPE: SIZE THE HANGER OR SUPPORT TO SUIT THE DIA. OF THE INSULATED PIPE & INSTALL THE HANGER OR SUPPORT ON THE OUTSIDE OF THE INSULATION & INSULATION FINISH.
- 3 HORIZONTAL ABOVE GROUND PIPING: HANGERS FOR SUSPENDED PIPE TO & INCLUDING 25 MM (1") DIA. ARE TO BE CLEVIS TYPE OR ADJUSTABLE RING TYPE, & HANGERS FOR SUSPENDED PIPE 40 MM (11/2") DIAMETER & LARGER ARE TO BE ADJUSTABLE CLEVIS TYPE. SPACE HANGERS & SUPPORTS IN ACCORDANCE WITH CODE REQUIREMENTS
- .4 VERTICAL PIPING: SUPPORT VERTICAL PIPING BY MEANS OF STEEL OFFSET PIPE CLAMPS OR HEAVY-DUTY STEEL BRACKETS OR SOIL PIPE BRACKETS SPACED AT MAXIMUM 3 M (10') INTERVALS OR AT LEAST ONCE FOR PIPING LESS THAN 3 M (10') IN HEIGHT.
- .5 PIPING ON THE ROOF: SUPPORT PIPING ON THE ROOF AS FOLLOWS: .1 ON EXISTING ROOF - PROVIDE PORTABLE PIPE HANGERS (CANADA) INC. "PP" SERIES SUPPORT SYSTEM COMPONENTS TO SUIT THE PIPE, INCLUDING BASES, GALVANIZED STRUCTURAL STEEL FRAMES, & GALVANIZED STEEL PIPE HANGERS AND/OR SUPPORTS CONFORMING TO MSS SP-58, & CAREFULLY SCRAPE AWAY THE ROOFING GRAVEL, BED THE SUPPORT IN A HEAVY COVERING OF ROOFING MASTIC, THEN SCRAPE THE GRAVEL
- BACK UP AROUND THE SUPPORT .2 ON NEW ROOF - SUPPLY LEXCOR "FLASH-TITE" OR THALER ROOFING SPECIALTIES PRODUCTS INC. "MERS" SERIES INSULATED ALUMINUM SUPPORT RISERS TO SUIT THE APPLICATION, ALL REQUIRED ACCESSORIES, CHANNEL TYPE ALUMINUM CROSS MEMBERS, & GALVANIZED STEEL PIPE HANGERS AND/OR SUPPORTS CONFORMING TO MSS TYPE SP-58, & HAND TO THE ROOFING TRADE FOR INSTALLATION AT REQUIRED
- .6 FIRE PROTECTION PIPING GENERALLY AS ABOVE BUT ULC LISTED AND/OR FM APPROVED, & IN ACCORDANCE WITH CHAPTER REQUIREMENTS OF THE NFPA STANDARD APPLICABLE TO THE PIPING SYSTEM
- .7 ISOLATION FOR BARE COPPER TUBING: ISOLATE HANGERS, SUPPORT OR SECUREMENTS FOR HORIZONTAL COPPER TUBING FROM THE PIPE BY MEANS OF STRIPS OF FLEXIBLE RUBBER INSERTS
- .8 INSULATION PROTECTION SHIELDS: FOR INSULATED HORIZONTAL PIPING TO & INCLUDING 40 MM (1½") DIA., PROVIDE GALVANIZED STEEL INSULATION PROTECTION SHIELDS BETWEEN THE INSULATION & THE HANGER OR SUPPORT. INSTALL SHIELDS IMMEDIATELY AFTER THE PIPE IS INSULATED.
- .9 PIPE SUPPORT FROM STEEL DECK: DO NOT SUPPORT PIPING FROM STEEL DECK WITHOUT WRITTEN CONSENT FROM THE CONSULTANT. .10 HANGER RODS: ELECTRO-GALVANIZED CARBON STEEL (UNLESS OTHERWISE SPECIFIED), ROUND, THREADED,
- COMPLETE WITH CAPTIVE MACHINE NUTS WITH WASHERS AT HANGERS, SIZED TO SUIT THE LOADING IN ACCORDANCE WITH TABLE 3 IN MSS SP-58. 1.23 SUPPLY OF ACCESS DOORS
- .1 SUPPLY PRIME COATED STEEL ACCESS DOORS FOR MECHANICAL WORK WHICH MAY NEED MAINTENANCE OR REPAIR BUT WHICH IS CONCEALED IN INACCESSIBLE CONSTRUCTION. ACCESS DOORS ARE TO BE C/W MOUNTING & FINISHING FEATURES TO SUIT THE CONSTRUCTION IN WHICH THEY ARE TO BE INSTALLED. & SIZES ARE TO SUIT THE CONCEALED WORK. ACCESS DOORS IN FIRE RATED CONSTRUCTION ARE TO BE ULC LISTED AND LABELLED AND OF A RATING TO MAINTAIN THE FIRE SEPARATION INTEGRITY. RECESSED DOOR TYPE ACCESS DOORS LOCATED IN SURFACES WHERE SPECIAL FINISHES ARE REQUIRED ARE TO BE CONSTRUCTED OF STAINLESS STEEL WITH A #4 FINISH.
- .1 MOTORS ARE TO CONFORM TO EEMAC STANDARD MG1. APPLICABLE IEEE STANDARDS. & APPLICABLE CSA C22.2 STANDARDS, & MEET NEMA STANDARDS FOR MAXIMUM SOUND LEVEL RATINGS UNDER FULL LOAD. THE EFFICIENCY OF 1 PHASE AC MOTORS TO 1 HP IS TO BE IN ACCORDANCE WITH CAN/CSA C747. THE EFFICIENCY OF 3 PHASE MOTORS 1 HP & LARGER IS TO BE IN ACCORDANCE WITH CAN/CSA C390 OR IEEE
- 1.25 ELECTRICAL POWER & CONTROL WIRING

1.24 ELECTRIC MOTORS

- .1 LINE AND LOAD SIDE POWER WIRING FOR MECHANICAL WORK WILL BE DONE AS PART OF THE ELECTRICAL
- .2 DO ALL REQUIRED CONTROL WIRING SHOWN AND SPECIFIED. 1.26 MECHANICAL WORK IDENTIFICATION
- .1 IDENTIFY ALL NEW/RELOCATED MECHANICAL WORK IN ACCORDANCE WITH EXISTING IDENTIFICATION STANDARDS AT THE SITE, OR, IF ALL NEW WORK OR NO EXISTING SITE STANDARD, IDENTIFY NEW EXPOSED PIPING & DUCTWORK SUCH THAT IT CAN BE EASILY SEEN.
- .2 PIPING: PAINT GAS PIPING WITH PRIMER & 2 COATS OF YELLOW PAINT IN ACCORDANCE WITH CODE

- REQUIREMENTS. FOR ELECTRICALLY TRACED MECHANICAL WORK INCLUDE "ELECTRICALLY TRACED". PIPE IDENTIFICATION IS TO BE EQUAL TO SMS LTD. OR BRADY VINYL PLASTIC WITH INDOOR/OUTDOOR TYPE VINYL INK LETTERING & DIRECTIONAL ARROWS. FOR PIPE TO AND INCLUDING 150 MM (6") DIA., USE COILED TYPE SNAP-ON MARKERS. FOR PIPE LARGER THAN 150 MM (6") DIA., USE SADDLE TYPE STRAP-ON MARKERS WITH 2 OPPOSITE IDENTIFICATION LOCATIONS & C/W NYLON CABLE TIES. IDENTIFICATION WORDING & COLOURS, UNLESS OTHERWISE INDICATED, IS TO BE IN ACCORDANCE WITH CAN/CGSB-24.3.
- DUCTWORK: CUSTOM MADE MYLAR STENCILS WITH 50 MM (2") HIGH LETTERING TO ACCURATELY DESCRIBE THE DUCT SERVICE, I.E. "AHU-1 SUPPLY", C/W A DIRECTIONAL ARROW, & COLOURED INK WITH INK PADS & ROLLER APPLICATORS. INK COLOUR IS GENERALLY TO BE BLACK BUT MUST CONTRAST WITH THE LETTERING
- EXPOSED PIPING AND DUCTWORK: IDENTIFY AT EVERY END, ADJACENT TO VALVES, STRAINERS, DAMPER & SIMILAR ACCESSORY, AT CONNECTING EQUIPMENT, ON BOTH SIDES OF PIPES & DUCTS PENETRATING FLOORS, WALLS, OR PARTITIONS, AT 6 M (20') INTERVALS ON RUNS EXCEEDING 6 M (20') IN LENGTH, AT LEAST ONCE
- IN EACH ROOM, & AT LEAST ONCE ON RUNS LESS THAN 6 M (20'). .5 CONCEALED PIPING & DUCTWORK: IDENTIFY AT POINTS WHERE PIPES OR DUCTS ENTER & LEAVE ROOMS, SHAFTS, PIPE CHASES, FURRED SPACES, & SIMILAR AREAS, AT MAXIMUM 6 M (20') INTERVALS ABOVE SUSPENDED ACCESSIBLE CEILINGS, AT LEAST ONCE IN EACH ROOM, AT EACH ACCESS DOOR LOCATION, & AT
- EACH PIECE EQUIPMENT, AUTOMATIC VALVE, ETC. .6 EQUIPMENT: PROVIDE AN IDENTIFICATION NAMEPLATE FOR PIECE OF EQUIPMENT, INCLUDING CONTROL VALVES, MOTORIZED DAMPERS, INSTRUMENTS, & SIMILAR PRODUCTS. NAMEPLATES ARE TO BE 2-PLY LAMINATED BLACK/WHITE PLASTIC, MINIMUM 12 MM X 50 MM (1/2" X 2") FOR SMALLER ITEMS, MINIMUM 25 MM X 65 MM (1" X 21/2") FOR EQUIPMENT, & MINIMUM 50 MM X 100 MM (2" X 4") FOR CONTROL PANELS & SIMILAR ITEMS. SECURE NAMEPLATES WITH STAINLESS STEEL SCREWS UNLESS PROHIBITIVE, IN WHICH CASE USE EPOXY
- CEMENT. EQUIPMENT IDENTIFICATION TERMINOLOGY IS TO BE AS PER DRAWING IDENTIFICATION. .7 VALVE TAGS & CHART: ATTACH A TAG TO EACH NEW VALVE, EXCEPT VALVES LOCATED AT THE EQUIPMENT THEY CONTROL. TAGS ARE TO BE COLOURED, 40 MM (1½") SQUARE, 2-PLY LAMINATED PLASTIC WITH BEVELLED EDGES, RED-WHITE, GREEN-WHITE, YELLOW-BLACK, ETC., TO MATCH THE PIPING IDENTIFICATION COLOUR, C/W A 3.2 MM (1/8") DIA. BY 100 MM (4") LONG BRASS PLATED STEEL BEAD CHAIN, AND 4 LINES OF ENGRAVED IDENTIFICATION WORDING TO INDICATE THE VALVE NUMBER, SIZE, SERVICE, & NO OR NC. PREPARE A COMPUTER PRINTED CHART TO LIST TAGGED VALVES. IF AN EXISTING CHART IS AVAILABLE. VALVE TAG NUMBERING IS TO BE AN EXTENSION OF EXISTING NUMBERING & THE NEW VALVE TAG CHART IS TO INCORPORATE THE EXISTING CHART. FRAME & GLAZE 1 COPY OF THE CHART & AFFIX TO A WALL IN EACH MAIN MECHANICAL AND/OR EQUIPMENT ROOM
- PROVIDE FASTENING & SECURING HARDWARE TO MAINTAIN INSTALLATIONS ATTACHED TO THE STRUCTURE OR TO FINISHED FLOORS, WALLS & CEILINGS IN A SECURE & RIGID MANNER CAPABLE OF WITHSTANDING THE DEAD LOADS, LIVE LOADS, SUPERIMPOSED DEAD LOADS, & ANY VIBRATION OF THE INSTALLED PRODUCTS. WHERE CONSTRUCTION IS NOT SUITABLE TO SUPPORT THE LOADS, PROVIDE ADDITIONAL FRAMING OR SPECIAL FASTENERS TO ENSURE PROPER SECUREMENT TO THE STRUCTURE. DO NOT ATTACH FASTENERS TO STEEL DECK WITHOUT WRITTEN CONSENT FROM THE CONSULTANT.
- 1.28 GENERAL RE: INSTALLATION OF VALVES .1 GENERALLY, VALVE LOCATIONS ARE INDICATED OR SPECIFIED, HOWEVER, REGARDLESS OF LOCATIONS SHOWN,
- PROVIDE SHUT-OFF VALVES TO ISOLATE ALL SYSTEMS, AT THE BASE OF VERTICAL RISERS, IN BRANCH TAKE-OFFS AT MAINS & RISERS, TO ISOLATE EQUIPMENT, TO PERMIT WORK PHASING AS REQUIRED, & WHEREVER ELSE REQUIRED FOR PROPER SYSTEM OPERATION & MAINTENANCE.
- 1.29 PIPE LEAKAGE TESTING
- .1 BEFORE NEW PIPING HAS BEEN INSULATED OR CONCEALED, & BEFORE EQUIPMENT, FIXTURES AND FITTINGS HAVE BEEN CONNECTED, PRESSURE TEST PIPING FOR LEAKAGE IN ACCORDANCE WITH REQUIREMENTS OF APPLICABLE CODES AND STANDARDS. HAVE COMPLETED TEST REPORT SHEETS DATED & SIGNED BY THOSE PRESENT TO CONFIRM PROPER TEST RESULTS. ENSURE THAT PIPING HAS BEEN PROPERLY FLUSHED, CLEANED & IS CLEAR OF FOREIGN MATTER PRIOR TO PRESSURE TESTING.
- 1.30 CONCRETE WORK FOR MECHANICAL EQUIPMENT BASES/PADS
- .1 UNLESS OTHERWISE SPECIFIED, PROVIDE ALL POURED CONCRETE WORK, INCLUDING REINFORCING & FORMWORK REQUIRED FOR MECHANICAL WORK. CONCRETE IS TO BE MINIMUM 20,700 KPA READY-MIX CONCRETE IN ACCORDANCE WITH CAN/CSA-A23.1 & THE BUILDING CODE.
- 1.31 EXCAVATION AND BACKFILL WORK
- .1 UNLESS OTHERWISE SPECIFIED, DO EXCAVATION, BACKFILL & RELATED WORK REQUIRED FOR YOUR WORK GRADE TRENCH EXCAVATIONS AS REQUIRED. UNLESS OTHERWISE SPECIFIED, BACKFILL TRENCHES WITHIN THE BUILDING WITH CLEAN SHARP SAND IN INDIVIDUAL LAYERS OF MAXIMUM 150 MM (6") THICKNESS COMPACTED TO A DENSITY OF 100% STANDARD PROCTOR. HAND COMPACT THE FIRST LAYERS UP TO A COMPACTED LEVEL OF MINIMUM 300 MM (12") ABOVE THE TOP OF THE PIPE. HAND OR MACHINE COMPACT THE BALANCE UP TO GRADE. DEPTH OF EXTERIOR TRENCHES OR THOSE IN UNHEATED INTERIOR AREAS MUST PREVENT PIPES FROM
- .2 UNLESS OTHERWISE SPECIFIED, BACKFILL TRENCHES OUTSIDE THE BUILDING (NOT UNDER ROADS, PARKING LOTS OR TRAFFIC AREAS), UP TO A COMPACTED LEVEL OF 450 MM (18") THICK ABOVE THE PIPE, HAND COMPACTED TO A DENSITY OF 95% STANDARD PROCTOR, USING GRANULAR "A" GRAVEL. BACKFILL THE BALANCE IN 150 MM (6") LAYERS WITH APPROVED EXCAVATED MATERIAL, COMPACTED TO 95% STANDARD PROCTOR DENSITY.
- PRIOR TO EXCAVATION, CAREFULLY CHECK INVERTS AND LOCATIONS OF EXISTING SERVICES AND REPORT ANY SERIOUS DISCREPANCY. CONTACT UTILITIES TO ACCURATELY LOCATE THEIR SERVICES. 1.32 CUTTING, DRILLING, AND PATCHING FOR MECHANICAL WORK
- CONFIRM EXACT LOCATIONS PRIOR TO CUTTING AND/OR DRILLING WORK, PATCH SURFACES, WHERE REQUIRED. TO EXACTLY MATCH EXISTING FINISHES USING TRADESMEN SKILLED IN THE PARTICULAR TRADE OR APPLICATION .2 WHERE NEW PIPES PASS THROUGH EXISTING CONSTRUCTION, CORE DRILL AN OPENING SIZED TO LEAVE 12 MM

.1 DO ALL CUTTING, DRILLING AND PATCHING OF THE EXISTING BUILDING FOR THE INSTALLATION OF YOUR WORK.

- (1/2") CLEARANCE AROUND PIPES OR PIPE INSULATION. IN POURED CONCRETE CONSTRUCTION, DETERMINE THE LOCATION, IF ANY, OF EXISTING CONCEALED SERVICES. .3 PACK AND SEAL THE VOID BETWEEN PIPE OPENINGS AND THE PIPE OR PIPE INSULATION FOR THE LENGTH OF THE OPENING IN INTERIOR CONSTRUCTION WITH ROCK WOOL & SEAL BOTH ENDS OF THE OPENING WITH
- NON-HARDENING SILICONE BASE CAULKING. SEAL SLEEVES IN EXTERIOR WALLS BELOW GRADE (& ANY OTHER WALL WHERE WATER LEAKAGE MAY BE A PROBLEM) WITH LINK TYPE MECHANICAL SEALS. 1.33 ROOFING WORK
- .1 DO FLASHING WORK, INCLUDING COUNTER-FLASHING, FOR MECHANICAL WORK PENETRATING AND/OR SET IN
- WHERE ROOF REVISIONS AND/OR REPLACEMENTS ARE PART OF THE PROJECT, INCLUDE FOR DISCONNECTING. LIFTING, OR TEMPORARILY REMOVING MECHANICAL EQUIPMENT ON THE ROOF AS REQUIRED TO PERMIT COMPLETION OF THE ROOFING WORK, & FOR RE-INSTALLING THE EQUIPMENT WHEN THE ROOFING WORK IS
- 1.34 WASTE MANAGEMENT AND DISPOSAL

PRACTICE FOR SAFETY IN DEMOLITION OF STRUCTURES.

- SEPARATE AND RECYCLE WASTE MATERIALS IN ACCORDANCE WITH REQUIREMENTS OF CANADIAN CONSTRUCTION ASSOCIATION STANDARD DOCUMENT CCA 81, A BEST PRACTICES GUIDE TO SOLID WASTE REDUCTION. DO NOT LET WASTE MATERIALS ACCUMULATE AT THE SITE.
- 1.35 DEMOLITION WORK WHERE INDICATED ON THE DRAWINGS. DISCONNECT & REMOVE MECHANICAL WORK, INCLUDING HANGERS. SUPPORTS, INSULATION, & SIMILAR ITEMS. CUT BACK OBSOLETE PIPING BEHIND FINISHES, IDENTIFY, & CAP WATER-TIGHT. ESTIMATE THE EXTENT & COST OF THE WORK AT THE SITE DURING BIDDING PERIOD SCHEDULED SITE VISIT(S). PERFORM DEMOLITION WORK IN ACCORDANCE WITH REQUIREMENTS OF CAN/CSA-S350, CODE OF
- .2 IF EXISTING ISOLATION VALVES ARE NOT AVAILABLE TO ISOLATE SECTIONS OF PIPING TO BE REMOVED, PROVIDE SUCH VALVES.
- .3 UNLESS OTHERWISE SPECIFIED, REMOVE & DISPOSE OF DEMOLISHED MATERIALS WHICH ARE NOT TO BE RELOCATED OR REUSED. .4 REFRIGERATION EQUIPMENT: REMOVE & RECLAIM REFRIGERANT FROM EQUIPMENT TO BE DECOMMISSIONED, REMOVED AND/OR ALTERED IN ACCORDANCE WITH REFRIGERANT MANAGEMENT CANADA GUIDELINES. &
- GOVERNING CODES AND REGULATIONS. DO NOT UNDER ANY CIRCUMSTANCES VENT REFRIGERANT FROM EXISTING EQUIPMENT TO ATMOSPHERE. DISPOSE OF RECLAIMED REFRIGERANT BY ENGAGING THE SERVICES OF A LICENSED FIRM SPECIALIZING IN RECYCLING OF RECLAIMED REFRIGERANT. SUBMIT DOCUMENTATION TO CONFIRM THAT THE REFRIGERANT HAS BEEN PROPERLY REMOVED FROM THE SITE & RECYCLED OR DISPOSED OF. 1.36 TESTING, ADJUSTING & BALANCING (TAB)
- .2 PERFORM TAB OF MECHANICAL SYSTEMS WHICH INCLUDE, AS APPLICABLE, DOMESTIC HOT & TEMPERED WATER SYSTEMS, & HVAC & CONTROL SYSTEMS IN ACCORDANCE WITH EITHER THE NATIONAL STANDARDS FOR A TOTAL SYSTEM BALANCE PUBLISHED BY THE ASSOCIATED AIR BALANCE COLINCIL OR THE PROCEDURAL STANDARDS FOR TESTING, ADJUSTING & BALANCING OF ENVIRONMENTAL SYSTEMS PUBLISHED BY THE NATIONAL ENVIRONMENTAL BALANCING BUREAU. EMPLOY AN AGENCY CERTIFIED BY EITHER THE ASSOCIATED AIR BALANCE COUNCIL OR THE NATIONAL ENVIRONMENTAL BALANCING BUREAU.
- 3 SUBMIT ELECTRONIC COPIES OF DRAFT REPORTS. UPON APPROVAL OF DRAFT REPORTS, SUBMIT 2 COPIES OF FINAL REPORTS WITH SCHEMATIC SYSTEM DIAGRAMS & OTHER DATA IN IDENTIFIED 3-RING BINDERS.
- .4 SPOT CHECK FINAL REPORT RESULTS WITH THE CONSULTANT, &, IF RESULTS DO NOT, ON A CONSISTENT BASIS, AGREE WITH THE FINAL REPORT, REBALANCE THE SYSTEMS INVOLVED, RESUBMIT THE FINAL REPORT, & AGAIN PERFORM SPOT CHECKS WITH THE CONSULTANT.
- .5 BALANCE AIR DISTRIBUTION SYSTEMS INCLUDING, BUT NOT LIMITED TO: .1 ALL NEW DUCT DISTRIBUTION SYSTEMS INCLUDING TERMINAL VAV BOXES
- .2 EXISTING EXHAUST SYSTEM EF-309 AND EXISTING SUPPLY SYSTEM SF-309
- ANY EXISTING DIFFUSERS/GRILLES ON THE SYSTEM. .4 POSITIVE PRESSURE ROOMS, INCLUDING PRESSURE DIFFERENTIAL TESTING

- .2 HEATING OR CHILLED WATER SUPPLY AND RETURN AND ALL ASSOCIATED PIPES
- .1 DOMESTIC HOT WATER RECIRCULATION SYSTEM DOMESTIC HOT WATER RECIRCULATION SYSTEM
- .7 PROVIDE PUMP IMPELLER TRIMMING AS REQUIRED. DO NOT TRIM PUMPS WITH VARIABLE SPEED DRIVES.

1.37 CLEANING AND START UP OF PIPING SYSTEMS

- RETAIN QUALIFIED WATER TREATMENT SPECIALIST TO PERFORM SYSTEM CLEANING. INSTALL INSTRUMENTATION SUCH AS FLOW METERS, ORIFICE PLATES, PITOT TUBES, FLOW METERING VALVES ONLY AFTER CLEANING IS CERTIFIED AS COMPLETE BY WATER TREATMENT SPECIALIST. FOR GLYCOL SYSTEMS, TEST TO PROVE CONCENTRATION WILL PREVENT FREEZING TO MINUS 40 DEGREES C. TEST INHIBITOR STRENGTH AND INCLUDE IN PROCEDURAL REPORT. REFER TO ASTM E202
- 2. AFTER CLEANING IS COMPLETED AND SYSTEM IS FILLED, ENSURE AIR IS REMOVED AND SYSTEM IS FREE OF

- CHECK AIR VENTS, AND LOW POINT DRAINS
- 1.38 HEALTH CARE FACILITY INFECTION CONTROL AND STANDARDS
- .1 THE FOLLOWING CAN/CSA STANDARDS APPLY TO THE WORK OF THIS PROJECT AND ARE TO BE ADHERED TO:
- HEALTH CARE FACILITIES: PREPARE A LIST OF ALL AREAS OF THE WORK WHERE THE INFECTION CONTROL PROCEDURES ARE TO BE IN FORCE AND REVIEW THE LIST AND PROCEDURES WITH THE HOSPITAL'S INFECTION CONTROL OFFICER OR A DESIGNATED HOSPITAL REPRESENTATIVE PRIOR TO ANY WORK IN THE AREAS COMMENCING, AND AS WORK PROCEEDS ENSURE THAT ALL INFECTION CONTROL
- SYSTEM IN HEALTHCARE FACILITIES.
- .4 CAN/CSA-Z317.10, HANDLING OF WASTE MATERIALS IN HEALTH CARE FACILITIES.
- .5 CAN/CSA-Z318.0, COMMISSIONING OF HEALTH CARE FACILITIES.
- .6 CAN/CSA-Z7396.1, MEDICAL GAS SYSTEMS .7 IN ACCORDANCE WITH CAN/CSA-Z317.1, PREPARE A SEPARATE SET OF "AS-BUILT" WHITE PRINTS IN A DAY-TO-DAY BASIS FOR MEDICAL GAS PIPING SYSTEM WORK ONLY.

- 1. PROVIDE NEOPRENE GROMMETS ON ALL EQUIPMENT WITH MOTORS ½ HP AND SMALLER. PROVIDE SPRING ISOLATORS ON ALL EQUIPMENT WITH MOTORS 1/2HP AND GREATER.
- 2. PROVIDE SEISMIC RESTRAINTS ON ALL CEILING HUNG EQUIPMENT (FANS, DUCTS, DIFFUSERS ETC), ISOLATED EQUIPMENT, PIPING AND DUCTWORK IN ACCORDANCE WITH THE NATIONAL BUILDING CODE OF CANADA, BC BUILDING CODE, NFPA AND SMACNA GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS AND PLUMBING PIPING SYSTEMS
- 3. CONTRACTOR SHALL RETAIN A PROFESSIONAL ENGINEER, REGISTERED IN THE PROVINCE OF BC, AND SPECIALIZING IN THE DESIGN OF SEISMIC RESTRAINT SYSTEMS AND STRUCTURAL ENGINEERING TO ASCERTAIN
- CONTRACTOR, MECHANICAL CONTRACTOR, STRUCTURAL CONSULTANTS AND OTHER APPROPRIATE PARTIES. AT THAT MEETING, THE CONTRACTOR SHALL PRESENT IN GENERAL THE APPROACHES/DETAILS USED TO PROVIDE SEISMIC BRACING FOR EQUIPMENT, DUCTWORK AND PIPING HIGHLIGHTING ATTACHMENTS TO STRUCTURE AND TRADE COORDINATION.
- 1. PROVIDE AND INSTALL ALL REQUIRED MECHANICAL WORK INSULATION. INSULATION SYSTEM MATERIALS INSIDE THE BUILDING MUST HAVE A FIRE HAZARD RATING OF NOT MORE THAN 25 FOR FLAME SPREAD & 50 FOR SMOKE DEVELOPED WHEN TESTED IN ACCORDANCE WITH CAN /ULC-S102 THERMAL PERFORMANCE I CONDUCTIVITY, OF INSULATION IS TO MEET OR EXCEED THE VALUES GIVEN IN THE NATIONAL ENERGY CODE OF CANADA FOR BUILDINGS, ASHRAE/IES STANDARD 90.1 AND AS DEFINED BY THE BCICA QUALITY STANDARDS
- 2. SUBMIT PRODUCT DATA SHEETS FOR INSULATION PRODUCTS.
- BEEN SUCCESSFULLY TESTED PRIOR TO THE APPLICATION OF INSULATION, & ENSURE THAT THE CABLE IS NOT DAMAGED OR DISPLACED DURING THE APPLICATION OF INSULATION.
- 6. PROVIDE VAPOUR BARRIER FOR ALL COLD PIPES WITH ALL JOINS TAPED.
- 8. PROVIDE AND INSTALL MINERAL FIBRE THERMAL INSULATION C/W VAPOUR BARRIER ON ALL DOMESTIC HOT, COLD AND RECIRCULATION. ALL INSULATION TO BE TYPE A-2 AS DEFINED BY BCICA SPECIFICATIONS 1501-H
- 10. INSULATION FOR PIPING HANGERS & SUPPORTS: AT EACH HANGER & SUPPORT LOCATION FOR PIPING 50 MM (2") DIA. & LARGER & SCHEDULED TO BE INSULATED, SUPPLY A FACTORY FABRICATED SECTION OF PHENOLIC FOAM PIPE INSULATION WITH INTEGRAL VAPOUR BARRIER JACKET AND CAPTIVE GALVANIZED STEEL
- THE BUILDING & ABOVE GROUND TO THE THICKNESS INDICATED WITH RIGID, SECTIONAL, SLEEVE TYPE INSULATION TO THE BCICA QUALITY STANDARDS MANUAL FOR MECHANICAL INSULATION ASTM STANDARD 547, WITH A FACTORY APPLIED VAPOUR BARRIER JACKET, & BLANKET TYPE ROLL INSULATION TO ASTM C553,
- 24 KG/M³ (1½ LB./FT.³) DENSITY, WITH A FACTORY APPLIED VAPOUR BARRIER FACING:
- 2. DOMESTIC HOT WATER AND RECIRCULATION PIPING:
- ii. 40 MM (1 ½ ") DIA. 40 MM (1.5") THICK
- 3. TEMPERED DOMESTIC WATER PIPING i. TO 30 MM (1 $\frac{1}{4}$ ") DIA. - 25 MM (1") THICK
- iii. PIPING LARGER THAN 40 MM (1½") DIA. 50 MM (2") THICK 4.STORM DRAINAGE PIPING FROM ROOF DRAINS TO THE POINT WHERE MAIN VERTICAL RISERS EXTEND STRAIGHT
- i. 25 MM (1") THICK
- 6. CHILLED WATER PIPING, SUPPLY & RETURN:

.6 BALANCE WATER DISTRIBUTION SYSTEMS INCLUDING, BUT NOT LIMITED TO:

- .3 CHILLER AND ASSOCIATED PIPING SYSTEMS, FAN COILS, PUMPS, DRY COOLER.

- CLEAN OUT STRAINERS CHECK WATER LEVELS AND SYSTEM PRESSURE
- BRING SYSTEM UP TO TEMPERATURE SLOWLY OVER 48HR PERIOD 4. CHECK EXPANSION JOINTS, LOOPS
- CHECK PUMP ALIGNMENT
- .1 CAN/CSA-Z317.13, INFECTION CONTROL DURING CONSTRUCTION. RENOVATION, AND MAINTENANCE OF PROCEDURES ARE BEING MAINTAINED.
- CAN/CSA-Z317.2, SPECIAL REQUIREMENTS FOR HEATING, VENTILATION, AND AIR-CONDITIONING (HVAC)
- CAN/CSA-Z317.1, SPECIAL REQUIREMENTS FOR PLUMBING INSTALLATIONS IN HEALTH CARE FACILITIES.
- VIBRATION AND SEISMIC CONTROL
- THAT ALL MECHANICAL EQUIPMENT INSTALLED UNDER THIS CONTRACTOR ARE ADEQUATELY SEISMICALLY RESTRAINED. PROVIDE THE REQUIRED LETTERS OF ASSURANCE (SCHEDULE B AND C) FOR ALL MECHANICAL AND PLUMBING SEISMIC WORK FOR ISSUANCE TO THE CITY. 4. PRIOR TO CONSTRUCTION COMMENCEMENT, CONTRACTOR SHALL ORGANIZE A MEETING WITH THE GENERAL
- 5. THE INSTALLATION OF SEISMIC RESTRAINS SHALL NOT COMPROMISE VIBRATION ISOLATION CAPABILITIES

6. CONTRACTOR TO PROVIDE CERTIFICATION BY SEISMIC PROFESSIONAL ENGINEER PRIOR TO OCCUPANCY

- FOR MECHANICAL INSULATION.
- 3. INSTALL INSULATION DIRECTLY OVER PIPES & DUCTS AND NOT OVER HANGERS & SUPPORTS. INSTALL PIPING INSULATION & JACKET CONTINUOUS THROUGH PIPE OPENINGS & SLEEVES. INSTALL DUCT INSULATION CONTINUOUS THROUGH WALLS, PARTITIONS, & SIMILAR SURFACES EXCEPT AT FIRE DAMPERS. 4. WHERE PIPING AND/OR EQUIPMENT IS TRACED WITH ELECTRIC HEATING CABLE, ENSURE THAT CABLE HAS
- 5. WHERE EXISTING INSULATION WORK IS DAMAGED AS A RESULT OF A NEW MECHANICAL WORK, REPAIR THE DAMAGED INSULATION WORK TO NEW WORK STANDARDS.
- 7. ALL EXPOSED PIPING TO BE COMPLETE WITH PF-3 ECONOMY FINISH. NO FINISH REQUIRED ON CONCEALED
- AND 1501-C 9. INSULATE ALL EXPOSED TRAPS UNDER ACCESSIBLE SINKS WITH FACTORY INSTALLATION KIT
- SHIELD EQUAL TO BELFORM INSULATION LTD. "KOOLPHEN K-BLOCK" INSULATED PIPE SUPPORT INSERTS. SUPPLY THE INSULATION SECTIONS TO THE PIPING INSTALLERS FOR INSTALLATION AS THE PIPE IS ERECTED 11. PIPING INSULATION-MINERAL FIBRE: UNLESS OTHERWISE SPECIFIED, INSULATE THE FOLLOWING PIPE INSIDE
- 1. DOMESTIC COLD WATER PIPING:
- i. 25 MM (1") THICK
- i. TO 30 MM (1 ¼ ") DIA. 25 MM (1") THICK
- iii. PIPING LARGER THAN 40 MM (1½") DIA. 50 MM (2") THICK
- ii. 40 MM (1 ½ ") DIA. 40 MM (1.5") THICK
- 5. CONDENSATE DRAINAGE PIPING FROM AIR CONDITIONING SYSTEM/UNIT DRAIN PANS TO MAIN VERTICAL DRAIN RISERS OR TO INDIRECT DRAINAGE POINT:

i. 25 MM (1") THICK

i. TO & INCLUDING 100 MM (4") DIA. - 25 MM (1") THICK,

DOWN, WITHOUT OFFSETS, & CONNECT TO HORIZONTAL UNDERGROUND MAINS:

ARCHITECT

WWW.DCYTARCHITECTURE.CA

MECHANICAL CONSULTANT:

Vancouver, BC, V6A 2T2 (604) 200-9087

ISSUED FOR CONSTRUCTION 021.10.15 LISSUFD FOR TEXIDER 12021.06.04 ISSUED FOR 80% CD 21.05.20 ISSUED FOR BP 2021.05.06 ISSUED FOR BP REVIEW 2021.04.28

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PHASE

SPECIFICATIONS

SCALE: OCT 15 2021

20_002

KM CHECKED JOB No.

ii. PIPING, LARGER THAN 100 MM (4") DIA. - 40 MM (11/2") THICK

7. HOT WATER HEATING PIPING, SUPPLY & RETURN:

i. TO 30 MM (1 $\frac{1}{4}$ ") DIA. - 40 MM (1 $\frac{1}{2}$ ") THICK

ii. 40 MM (1 ½ ") DIA. - 40 MM (1.5") THICK

iii. LARGER THAN 40 MM (1%) DIA. - 40 MM (1%) THICK

8. GLYCOL SOLUTION HEATING OR HEAT RECLAIM PIPING, SUPPLY & RETURN

iij. TO 30 MM (1 ¼ ") DIA. - 25 MM (1") THICK ii. 40 MM (1 ½ ") DIA. - 40 MM (1.5") THICK

iii. LARGER THAN 40 MM (1½") DIA. - 50 MM (2") THICK

9. PIPING AS ABOVE LOCATED INSIDE THE BUILDING IN UNHEATED AREAS OR OUTSIDE THE BUILDING & INDICATED TO BE TRACED WITH ELECTRIC HEATING CABLE:

i. 50 MM (2") THICK

10. "WET" TYPE FIRE PROTECTION PIPING IN UNHEATED AREAS & INDICATED TO BE TRACED WITH ELECTRIC HEATING CABLE:

i. 50 MM (2") THICK

11. REFRIGERANT PIPING INSIDE BUILDING:

i. 25 MM (1") THICK 12. STEAM PIPING

i. TO 100MM (4'') - 65 MM (2''') THICK

ii. LARGER THAN 100 MM (4") DIA. - 75 MM (3") THICK

13. CONDENSATE

i. TO & INCLUDING 50 MM (2") DIA. - 40 MM (1 χ ") THICK

ii. 65 MM (2 ½ ") DIA AND ABOVE - 50 MM (2") THICK

12. PIPING INSULATION-NON-COMBUSTIBLE INSULATION: WHERE PIPE (INSIDE THE BUILDING & ABOVE GROUND) WHICH IS TO BE INSULATED AS SPECIFIED ABOVE PENETRATES FIRE RATED CONSTRUCTION, PROVIDE NON-COMBUSTIBLE, RIGID, SECTIONAL, LONGITUDINALLY SPLIT MINERAL FIBRE PIPE INSULATION WITH A REINFORCED VAPOUR BARRIER JACKET IN ACCORDANCE WITH REQUIREMENTS OF CAN/ULC-S114 & COMPATIBLE WITH FIRESTOPPING AS PER CAN/ULC-S101

13. PIPING INSULATION-FLEXIBLE ELASTOMERIC INSULATION: INSULATE REFRIGERANT PIPING OUTSIDE THE BUILDING WITH 25 MM (1") THICK CLOSED CELL, SLEEVE TYPE, LONGITUDINALLY SPLIT, SELF-SEAL, FOAMED PLASTIC PIPE INSULATION IN ACCORDANCE WITH REQUIREMENTS OF ASTM C534 & EQUAL TO ARMACELL AP/ARMAFLEX SS & INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED INSTRUCTION TO PRODUCE A WATER-TIGHT INSTALLATION

14. BARRIER-FREE LAVATORY INSULATION KITS: PROVIDE REMOVABLE, FLEXIBLE, REUSABLE, WHITE MOULDED PLASTIC INSULATION KITS EQUAL TO ZESTON "SNAP-TRAP" FOR BARRIER-FREE LAVATORY DRAIN PIPING & WATER SUPPLIES EXPOSED UNDER BARRIER-FREE LAVATORIES

15. EQUIPMENT INSULATION-BLANKET MINERAL FIBRE: INSULATE EQUIPMENT LISTED BELOW WITH ROLL FORM MINERAL FIBRE BLANKET TYPE INSULATION EQUAL TO JOHNS MANVILLE INC. TYPE 150 "MICROLITE" TO ASTM STANDARD C553, 24 KG/M³ (1½ LB./FT.³) DENSITY, WITH A FACTORY APPLIED VAPOUR BARRIER FACING:

1. CHILLED WATER AND/OR DOMESTIC COLD WATER PUMP CASINGS - 40 MM (1½") THICK

2. ROOF DRAIN SUMPS WHERE INSIDE THE BUILDING - 25 MM (1") THICK

3. WATER METER(S) - 40 MM (1½") THICK

16. EQUIPMENT INSULATION-SEMI-RIGID MINERAL FIBRE INSULATION: INSULATE THE EQUIPMENT LISTED BELOW WITH ROLL FORM SEMI-RIGID MINERAL FIBRE BOARD INSULATION WITH A FACTORY APPLIED VAPOUR BARRIER FACING CONSISTING OF LAMINATED ALUMINUM FOIL & KRAFT PAPER, EQUAL TO JOHNS MANVILLE INC. PIPE AND TANK INSULATION TO ASTM STANDARD C1393:

1. UNINSULATED DOMESTIC HOT WATER STORAGE TANK(S) - 50 MM (2") THICK

2. SHELL & TUBE TYPE HEAT EXCHANGERS - 50 MM (2") THICK

3. HEATING MAIN AIR SEPARATOR - 50 MM (2") THICK

4. CHILLED WATER EXPANSION TANK - 40 MM (11/2") THICK 17. EQUIPMENT INSULATION-REMOVABLE & REUSABLE TYPE: INSULATE THE EQUIPMENT LISTED BELOW WITH CUSTOM DESIGNED & MANUFACTURED REMOVABLE & REUSABLE INSULATION COVERS EQUAL TO CROSSBY DEWAR INC, MINIMUM 95 KG/M3 (6 LB./FT.3) DENSITY CERAMIC FIBRE INSULATION SEWN BETWEEN MINIMUM 542.5 G/M² (1.8 OZ./FT.²) WEIGHT SILICONE IMPREGNATED FIBREGLASS FABRIC IN A QUILTED PATTERN USING DOUBLE STITCHES MADE WITH KELVAR OR TEFLON COATED FIBREGLASS THREAD. OVERLAP FLAPS ARE TO BE SECURED USING LACES, SNAPS, OR VELCRO DOUBLE STITCHED IN PLACE:

1. PLATE TYPE HEAT EXCHANGER(S)

2.150 MM (6") DIAMETER & LARGER PIPING STRAINERS, BACKFLOW PREVENTERS, ETC. 3. PROVIDE "WRAP TYPE" REMOVABLE AND REUSABLE INSULATION COVERS EQUAL TO INSUFAB SYSTEMS INC. COVERS FOR "COLD" CIRCUIT BALANCING VALVES, BACKFLOW PREVENTERS, & SIMILAR ITEMS IN PIPING LESS THAN 150 MM (6") DIA

18. MINERAL FIBRE INSULATION-DUCTWORK INSIDE BUILDING: INSULATE THE FOLLOWING DUCTWORK SYSTEMS INSIDE THE BUILDING WITH MINERAL FIBRE INSULATION OF THE THICKNESS INDICATED BELOW. INSULATION TO BE TYPE B-2 AS DEFINED BY BCICA STANDARD SPECIFICATION 1502:

1. FRESH AIR INTAKE DUCTWORK, CASINGS & PLENUMS TO & INCLUDING MIXING PLENUMS OR SECTIONS, OR, IF MIXING PLENUMS OR SECTIONS ARE NOT PROVIDED, TO THE 1ST HEATING COIL, OR IF BOTH MIXING PLENUMS OR SECTIONS & HEATING COIL SECTIONS ARE NOT PROVIDED, & THE FRESH AIR IS NOT TEMPERED, THEN THE FRESH AIR DUCTWORK SYSTEM COMPLETE

i. 40 MM (1½") THICK

2. MIXED SUPPLY AIR OR PREHEATED SUPPLY AIR CASINGS, PLENUMS & SECTIONS TO & INCLUDING THE FAN SECTION WHERE NOT FACTORY INSULATED:

3. SUPPLY AND RETURN AIR DUCTWORK, EXCEPT FOR DUCTWORK EXPOSED IN THE AREA IT SERVES:

i. 25 MM (1") THICK RIGID BOARD OR 40 MM (11/2") THICK FLEXIBLE BLANKET

4.EXHAUST DISCHARGE DUCTWORK FOR A DISTANCE OF 3 M (10') DOWNSTREAM (BACK) FROM EXHAUST OPENINGS TO ATMOSPHERE, INCLUDING EXHAUST PLENUMS WITHIN THE 3 M (10') DISTANCE:

i. 25 MM (1") THICK RIGID BOARD OR 40 MM (11/2") THICK FLEXIBLE BLANKET 5. ANY OTHER DUCTWORK, CASINGS, PLENUMS OR SECTIONS SPECIFIED OR DETAILED ON THE DRAWINGS TO BE

INSULATED - THICKNESS AS SPECIFIED. 6. ACCEPTABLE MATERIALS: i. EQUAL TO JOHNS MANVILLE INC. TYPE 814 "SPIN-GLAS" PREFORMED BOARD TYPE INSULATION TO

ASTM C612, WITH A FACTORY APPLIED REINFORCED ALUMINUM FOIL & KRAFT PAPER FACING FOR EXPOSED RECTANGULAR DUCTWORK,

ii. ROLL FORM SEMI-RIGID INSULATION EQUAL TO MULTI-GLASS INSULATION LTD. "MULTI-FLEX MKF" TO ASTM C1393 WITH A FACTORY APPLIED VAPOUR BARRIER FACING FOR EXPOSED ROUND & OVAL

iii. BLANKET TYPE ROLL FORM INSULATION EQUAL TO JOHNS MANVILLE INC. DUCT WRAP TYPE 150 "MICROLITE" TO ASTM STANDARD C553, 24 KG/M3 (1½ LB./FT.3) DENSITY, 40 MM (1½") THICK WITH A FACTORY APPLIED VAPOUR BARRIER FACING FOR CONCEALED RECTANGULAR, ROUND & OVAL

19. FLEXIBLE ELASTOMERIC INSULATION-DUCTWORK OUTSIDE BUILDING: INSULATE ALL EXPOSED EXTERIOR DUCTWORK (EXCEPT FRESH AIR INTAKE DUCTWORK) & ASSOCIATED PLENUMS AND/OR CASINGS WITH 50 MM (2") THICK FLEXIBLE ELASTOMERIC SHEET INSULATION EQUAL TO ARMACELL "AP/ARMAFLEX SA" CLOSED CELL, SELF-ADHERING ELASTOMERIC EDPM RUBBER INSULATION IN ACCORDANCE WITH ASTM C534. APPLIED IN TWO 25 MM (1") THICK LAYERS WITH STAGGERED TIGHTLY BUTTED JOINTS TO PRODUCE A WEATHER-TIGHT INSTALLATION.

20. INSULATION COATINGS, FINISHES & JACKETS: PROVIDE COATINGS, FINISHES OR JACKETS AS FOLLOWS

1. CANVAS: ULC LISTED AND LABELLED, 25/50 RATED, ROLL FORM, MINIMUM 170 G (6 OZ.) CANVAS JACKET MATERIAL SECURED IN PLACE WITH A FULL 100% COVERING COAT OF LAGGING ADHESIVE FOR, UNLESS OTHERWISE SHOWN AND/OR SPECIFIED, EXPOSED MINERAL FIBRE INSULATION INSIDE THE BUILDING

2. WHITE PVC: ROLL FORM SHEET & FITTING COVERS EQUAL TO JOHNS MANVILLE INC. "ZESTON" 300. 25/50 RATED, FOR EXPOSED MINERAL FIBRE PIPE INSULATION IN WET OR WASH-DOWN AREAS

3. RIGID ALUMINIUM: EQUAL TO CHILDERS METALS (ITW INSULATION SYSTEMS CANADA) "LOCK-ON EMBOSSED

ALUMINUM JACKET MATERIAL TO ASTM B209, FACTORY CUT TO SIZE & C/W MOISTURE BARRIER & CONTINUOUS MODIFIED PITTSBURGH Z-LOCK, "FABSTRAPS" & BUTT STRAPS TO COVER END TO END JOINTS, & 2-PIECE EPOXY COATED PRESSED ALUMINUM WITH WEATHER LOCKING EDGES FOR EXPOSED MINERAL FIBRE PIPE INSULATION OUTSIDE THE BUILDING OR IN "WET" AREAS.

4. PROTECTIVE COATING - FLEXIBLE FOAM ELASTOMERIC INSULATION: EQUAL TO ARMACELL "WB ARMAFLEX" WEATHERPROOF, WATER-BASED LATEX ENAMEL FINISH. APPLY 1 COAT FOR INTERIOR INSULATION & 2 COATS (WITH 24 HOURS BETWEEN COATS) FOR INSULATION OUTSIDE THE BUILDING.

21. INSULATION APPLICATION REQUIREMENTS: UNLESS OTHERWISE SPECIFIED APPLY INSULATION MATERIALS IN ACCORDANCE WITH REQUIREMENTS OF THE CURRENT EDITION OF THE THERMAL INSULATION ASSOCIATION OF CANADA NATIONAL INSTALLATION STANDARD.

FIRE PROTECTION

.1 PROVIDE FIRE PROTECTION WORK AS SHOWN & SPECIFIED.

.2 SYSTEM DESIGNER: FIRE PROTECTION WORK IS TO BE DESIGNED BY A FULLY QUALIFIED MECHANICAL P. ENG. REGISTERED & LICENSED IN THE JURISDICTION OF THE PROJECT. THE CONTRACTOR SHALL RETAIN A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF BC TO PERFORM DETAILED SPRINKLER DESIGN AND HYDRAULIC LOADS. THE DRAWINGS SHALL BE SIGNED AND SEALED C/W LETTERS OF ASSURANCE.

.3 STANDPIPE SYSTEM DESIGN CRITERIA: FIRE PROTECTION STANDPIPE WORK IS TO BE DESIGNED IN ACCORDANCE WITH NFPA 14 AND PROVINCIAL STANDARDS, &, WHERE REQUIRED, LOCAL BUILDING & FIRE DEPARTMENT REQUIREMENTS & THE STANDARDS OF THE OWNER'S INSURER.

.4 SPRINKLER SYSTEM DESIGN CRITERIA: FIRE PROTECTION SPRINKLER WORK IS TO BE DESIGNED IN ACCORDANCE WITH NFPA 13 & PROVINCIAL STANDARDS, &, WHERE REQUIRED, LOCAL BUILDING & FIRE DEPARTMENT

REQUIREMENTS & THE STANDARDS OF THE OWNER'S INSURER .5 SUBMITTALS: SUBMIT AS SHOP DRAWINGS, CAD WHITE PRINT LAYOUT DRAWINGS INDICATING SOURCE OF WATER SUPPLY, WITH PIPE SIZE & TEST FLOW & PRESSURE, "HEAD-END" EQUIPMENT PIPING SCHEMATIC, PIPE ROUTING & SIZING, & RISERS, ALL SIGNED & SEALED BY THE DESIGN P. ENG., AS WELL AS CALCULATIONS & A LIST OF DESIGN DATA USED IN PREPARING THE CALCULATIONS, SYSTEM LAYOUT & SIZING.

.6 EXISTING SYSTEM: VERIFY THE WORKING CONDITION OF EXISTING FIRE PROTECTION SYSTEM EQUIPMENT WHICH HAS DIRECT INTERFACE WITH THE NEW WORK & IS TO REMAIN. REPLACE WITH NEW EQUIPMENT WHERE NECESSARY. WHERE SHUTDOWN OF A ZONE IS REQUIRED TO PERFORM THE WORK, THE CONTRACTOR IS TO COORDINATE A FIRE WATCH FOR THE DURATION OF THE SHUTDOWN

.7 PIPING: DO PIPING WORK IN ACCORDANCE WITH "REVIEWED" SHOP DRAWINGS & NFPA REQUIREMENTS. "WET" ZONE STEEL PIPING, FITTINGS, UNIONS, COUPLINGS & FLANGES FOR FIRE PROTECTION WORK EXPOSED TO WEATHER EITHER INSIDE OR OUTSIDE THE BUILDING (INCLUDING PARKING GARAGES), ARE TO BE GALVANIZED. FERROUS PIPE HANGERS, SUPPORTS, & SIMILAR HARDWARE USED FOR GALVANIZED STEEL PIPING ARE TO BE ELECTRO-GALVANIZED

.1 PIPE SIZES, PIPE ROUTING, EQUIPMENT QUANTITIES & LOCATIONS, & LAYOUT OF WORK SHOWN ON THE DRAWINGS ARE TO ASSIST YOU DURING THE TENDERING PERIOD. ENSURE ADEQUATE FIRE PROTECTION SYSTEM COVERAGE. DO NOT REDUCE THE SIZE OF THE FIRE PROTECTION SYSTEM MAIN OR RE-ROUTE THE MAIN UNLESS APPROVED.

.2 SLOPE HORIZONTAL PIPING SO THAT IT MAY BE COMPLETELY DRAINED. PROVIDE CAPPED DRAIN POINTS. .3 PROVIDE A PRESSURE GAUGE AT THE HIGHEST OUTLET IN EACH STANDPIPE RISER. WHERE POSSIBLE, LOCATE GAUGES IN FIRE HOSE CABINETS.

.4 WHEN FIRE PROTECTION WORK IS COMPLETE, TEST THE SYSTEM COMPONENTS & THE OVERALL SYSTEM(S) & SUBMIT COMPLETED NFPA MATERIAL & TEST CERTIFICATE(S), & ANY OTHER DOCUMENTATION

.5 PROVIDE SHUT-OFF & CHECK VALVES WHERE SHOWN & WHEREVER ELSE REQUIRED. .6 SCHEDULE 40 MILD BLACK CARBON STEEL, ASTM A53, GRADE B, C/W FITTINGS & COUPLINGS EQUAL TO VICTAULIC "FIRELOCK" FITTINGS & VICTAULIC STYLE 005 RIGID COUPLING JOINTS, OR, SCHEDULE 40 MILD BLACK CARBON STEEL, ASTM A53, GRADE B, C/W CLASS 125 CAST IRON SCREWED FITTINGS TO

.8 DOUBLE DETECTOR CHECK VALVE PROVIDE A DOUBLE DETECTOR CHECK VALVE DETECTOR ASSEMBLY WITH IN THE FIRE PROTECTION MAIN. EQUIP THE ASSEMBLY WITH INLET & OUTLET SHUT-OFF VALVES. SUPPORT EACH END FROM THE FLOOR BY MEANS OF FLANGED PIPE SUPPORTS WITH SADDLES.

.9 VALVE SUPERVISORY SWITCHES: EQUIP EACH SHUT-OFF VALVE WITH A SUPERVISORY SWITCH & IDENTIFY WITH A 150 MM (6") SQUARE, ENGRAVED, LAMINATED RED-WHITE PLASTIC TAG TO CORRESPOND WITH SUPERVISED VALVE NUMBERING SPECIFIED AND/OR SHOWN AS PART OF THE ELECTRICAL WORK FIRE ALARM SYSTEM .10 FIRE DEPARTMENT CONNECTION: PROVIDE A FIRE DEPARTMENT CONNECTION(S) WHERE SHOWN, CONFIRM EXACT LOCATION(S) PRIOR TO ROUGH-IN. CONFIRM FINISH PRIOR TO ORDERING. EQUIP EACH CHECK VALVE WITH A BALL DRIP TO DRAIN PIPING BETWEEN THE FIRE DEPARTMENT CONNECTION & THE CHECK VALVE, & EXTEND

DRAINAGE PIPING FROM THE OUTLET OF THE BALL DRIP TO THE NEAREST SUITABLE FLOOR DRAIN. .11 LOSS OF PRESSURE SENSOR: SUPPLY & MOUNT A PRESSURE SENSOR IN THE FIRE PROTECTION PIPING MAIN TO ACTIVATE A "LOSS OF PRESSURE" TROUBLE ALARM SHOULD MUNICIPAL WATER SERVICE PRESSURE FALL BELOW THE ACCEPTABLE LEVEL. SET THE ALARM PRESSURE TO SUIT SITE CONDITIONS. CONFIRM THE SETTING ON SITE. IDENTIFY THE PRESSURE SENSOR & ITS NORMAL SETTING WITH A 150 MM (6") SQUARE RED-WHITE LAMINATED PLASTIC TAG ENGRAVED TO READ, I.E. "LOSS OF WATER PRESSURE SENSOR - NORMAL SETTING 210 KPA. CONFIRM WORDING PRIOR TO ENGRAVING.

.14 FLOW ALARM SWITCHES: PROVIDE WATER FLOW ALARM SWITCHES IN ZONE PIPING WHERE SHOWN, ADJUST TO SUIT SITE WATER PRESSURE CONDITIONS. CHECK & TEST OPERATION. IDENTIFY WITH A 150 MM (6") SQUARE RED-WHITE LAMINATED ENGRAVED PLASTIC TAG. CONFIRM WORDING PRIOR TO ENGRAVING.

.15 ALARM CHECK VALVES: PROVIDE ALARM CHECK VALVES, C/W TRIM. FOR WET ZONE FIRE PROTECTION SPRINKLER PIPING WHERE SHOWN, CHECK AND TEST OPERATION & ADJUST TO SUIT SITE WATER PRESSURE CONDITIONS. IDENTIFY WITH A 150 MM (6") SQUARE RED-WHITE LAMINATED ENGRAVED PLASTIC TAG. CONFIRM WORDING PRIOR TO ENGRAVING

.16 SPRINKLER HEADS: PROVIDE SPRINKLER HEADS OF THE TYPES IN ACCORDANCE WITH THE DRAWING SCHEDULE. CAREFULLY COORDINATE HEAD LOCATIONS WITH ALL DRAWINGS, INCLUDING ARCHITECTURAL REFLECTED CEILING PLAN DRAWINGS, &, WHERE APPLICABLE, ELECTRICAL DRAWINGS. CONFIRM LOCATIONS PRIOR TO ROUGHING-IN. MAINTAIN MAXIMUM HEADROOM IN AREAS WITH NO CEILINGS. PROVIDE GUARDS FOR HEADS WHERE THEY ARE SUBJECT TO DAMAGE. PROVIDE HIGH TEMPERATURE HEADS IN EQUIPMENT ROOMS & SIMILAR AREAS OVER HEAT PRODUCING OR GENERATING EQUIPMENT, SUPPLY A FULL COMPLEMENT (TO FILL CABINET) OF SPARE SPRINKLER HEADS OF THE TYPES USED (MINIMUM 4 OF EACH TYPE) & PLACE IN A WALL MOUNTED STORAGE CABINET LOCATED ADJACENT TO THE SPRINKLER SYSTEM "HEAD END" EQUIPMENT.

.17 FIRE HOSE CABINETS: PROVIDE FIRE HOSE CABINETS WHERE SHOWN BUT CONFIRM EXACT CABINET LOCATIONS PRIOR TO ROUGHING-IN. WHERE LOCATED IN PARKING GARAGE AREAS INSTALL ON FLOOR TO CEILING PRIME COAT PAINTED STRUCTURAL STEEL FRAMEWORKS LOCATED SO AS NOT TO BE DAMAGED BY VEHICLES. .18 FIRE EXTINGUISHER: STORED PRESSURE, RECHARGEABLE, DRY CHEMICAL TYPE IN ACCORDANCE WITH NFPA 10

& CAN/ULC-S508, 3A10B; C RATED UNLESS OTHERWISE SPECIFIED/SHOWN, C/W PRESSURE GAUGE & WALL MOUNTING BRACKET. PROVIDE WHERE SHOWN. IF INDICATED ADJACENT TO A DOOR, INSTALL AT THE STRIKE SIDE OF THE DOOR. PROVIDE CABINETS WHERE INDICATED. .19 DRAINS: SYSTEM DRAINS SHALL BE PIPED TO FLOOR DRAINS. PROVIDE INSPECTOR TEST VALVES ON EACH

FLOOR OF EACH SYSTEM. PROVIDE MAIN DRAINS AT ALL SYSTEM AND FLOOR CONTROL VALVES. DISCHARGE INTO A DRAIN RISER. PROVIDE A FLOOR DRAIN AT THE BASE OF EACH RISER.

DOMESTIC WATER SYSTEMS

.1 THE INSTALLATION SHALL CONFORM TO THE BC PLUMBING CODE 2018

.2 PROVIDE DOMESTIC WATER PIPING SYSTEMS. ALL PRODUCTS IN CONTACT WITH DOMESTIC WATER ARE TO BE NSF/ANSI 61 CERTIFIED LEAD FREE.

.3 DOMESTIC WATER SERVICE: MAKE ARRANGEMENTS WITH THE MUNICIPALITY FOR INSTALLATION OF DOMESTIC WATER SERVICE FROM THE MUNICIPAL MAIN TO THE PROPERTY LINE. PAY CHARGES LEVIED BY THE MUNICIPALITY FOR THE SERVICE CONNECTION WORK

.4 PIPING INSTALLATION: CONFORM TO THE FOLLOWING REQUIREMENTS: .1 DO NOT CONCEAL ANY PLUMBING INSTALLATION, WHETHER BURIED OR WITHIN WALLS PRIOR TO REVIEW BY THE CONSULTANT OR LOCAL AUTHORITY. ENSURE 72 HOURS WRITTEN NOTICE IS PROVIDED TO EACH PARTY PRIOR TO REQUIREMENT FOR INSPECTION OF THE WORK

.2 FIRE STOP ALL PENETRATIONS THROUGH RATED SEPARATIONS. PROVIDE NECESSARY THERMAL INSULATION AND VAPOUR BARRIER AT PENETRATIONS. CONTRACTOR TO PROVIDE PROFESSIONAL CERTIFICATION FROM SPECIALIST FIRE-STOPPING TRADE PRIOR TO REPORT FOR COMPLETION OR OCCUPANCY INSPECTION, WHICHEVER IS THE EARLIER

.3 IF AND WHERE REQUIRED, BRACE & SECURE U/G WATER SERVICE PIPE ENTERING THE BUILDING IN ACCORDANCE WITH MUNICIPAL STANDARDS & DETAILS & PAINT METALLIC RESTRAINT DEVICES WITH 2

COATS OF CORROSION RESISTANT BLACK ASPHALT BASE COATING PRIOR TO BACKFILLING .4 PROVIDE PROPER DIELECTRIC UNIONS IN CONNECTIONS BETWEEN COPPER PIPE & FERROUS PIPE OR EQUIPMENT .5 SECURE TRAP SEAL PRIMER TUBING EMBEDDED IN CONCRETE TO REINFORCING STEEL & BE PRESENT DURING

THE CONCRETE POUR TO ENSURE THAT THE TUBING IS NOT DAMAGED OR DISLODGED .6 PROVIDE BALANCING VALVES IN DOMESTIC HOT WATER RECIRCULATION PIPING WHERE SHOWN OR REQUIRED .7 PROVIDE WATER METER C/W REMOTE READ-OUT AS PER THE REQUIREMENTS OF THE LOCAL AUTHORITY

HAVING JURISDICTION. .8 PROVIDE UNIONS TO ALL EQUIPMENT AND VALVE CONNECTIONS FOR PIPE SIZES 65MM (2½") AND BELOW. FLANGED CONNECTIONS FOR PIPE SIZES 75MM (3") AND OVER

.9 PROVIDE NECESSARY THRUST BLOCK, ANCHOR, ETC. TO UNDERGROUND WATER PIPING 100MM (4") AND LARGER AT ALL CHANGE OF DIRECTION, ALL TEES AND AT THE END OF ALL MAINS AND BRANCHES

.10 ALL COMBUSTIBLE MATERIALS MUST MEET THE FLAME AND SMOKE RATING FOR THE BUILDING. .11 FLUSH NEW AND/OR REWORKED DOMESTIC WATER PIPING AFTER LEAKAGE TESTING IS COMPLETE, & WHEN FLUSHING IS COMPLETE, DISINFECT THE PIPING WITH A SOLUTION OF SODIUM HYPOCHLORITE TO AWWA B-300 IN ACCORDANCE WITH REQUIREMENTS OF THE MINISTRY OF ENVIRONMENT DOCUMENT ENTITLED PROCEDURE FOR DISINFECTION OF DRINKING WATER IN BC, UNDER SUPERVISION OF A P. ENG. AUTHORIZED BY THE PROFESSIONAL ENGINEERS OF BC TO PERFORM SUCH WORK, & WHEN DISINFECTING IS COMPLETE, SUBMIT WATER SAMPLES TO A CERTIFIED LABORATORY FOR PURITY TESTING &, WHEN TESTING INDICATES PURE WATER IN ACCORDANCE WITH GOVERNING STANDARDS, SUBMIT A COPY OF THE TEST RESULTS & FILL THE SYSTEMS

12 ABOVE GROUND DOMESTIC WATER PIPING .1 COLD AND HOT: TYPE "K" HARD DRAWN SEAMLESS COPPER TO ASTM B88, C/W COPPER SOLDER TYPE FITTINGS TO ASME/ANSI B16.18 & SOLDERED JOINTS USING NSF/ANSI 61 CERTIFIED SILVER ALLOY .8 MEDICAL GAS OUTLETS

.2 RECIRCULATION: TYPE "K" HARD DRAWN SEAMLESS COPPER TO ASTM B88, C/W COPPER SOLDER TYPE FITTINGS TO ASME/ANSI B16.18 & SOLDERED JOINTS USING NSF/ANSI 61 CERTIFIED SILVER ALLOY LEAD-FREE

SOLDER. .13 BELOW GROUND DOMESTIC WATER PIPING:

.1 TYPE "K" SOFT COPPER TO ASTM B88. SUPPLIED IN A CONTINUOUS COIL WITH NO JOINTS IF POSSIBLE, &9 PRESSURE REGULATORS C/W, IF JOINTS ARE REQUIRED, COMPRESSION TYPE FLARED JOINT COUPLINGS.

.2 ULC LISTED, RIGID, CLASS 150, DR18 PRESSURE RATED BELL & SPIGOT PATTERN PVC PIPE TO CAN/CSA-B137.3, & CSA CERTIFIED FITTINGS TO CAN/CSA B137.2, & AWWA C900, C/W GASKET JOINTS, & RESTRAINT HARDWARE AS REQUIRED

.3 CEMENT LINED DUCTILE IRON WITH GROOVED MECHANICAL JOINTS PIPE TO CAN/CSA-B151 AWWA A21.51 C/W GASKET JOINTS, & RESTRAINT HARDWARE AS REQUIRED

DRAINAGE & VENT SYSTEMS

.1 THE INSTALLATION SHALL CONFORM TO THE BC PLUMBING CODE 2018.

.3 DRAINAGE SERVICE: MAKE ARRANGEMENTS WITH THE MUNICIPALITY FOR INSTALLATION OF DRAINAGE SERVICE FROM THE MUNICIPAL MAIN(S) TO THE PROPERTY LINE. PAY CHARGES LEVIED BY THE MUNICIPALITY FOR THE

SERVICE CONNECTION WORK. .4 PIPING INSTALLATION: CONFORM TO THE FOLLOWING REQUIREMENTS:

.2 PROVIDE DRAINAGE & VENT PIPING SYSTEMS

.1 SLOPE HORIZONTAL DRAINAGE PIPING ABOVE GROUND AS PER CODE .2 INSTALL & SLOPE U/G DRAINAGE PIPING TO INVERTS OR SLOPES INDICATED TO FACILITATE STRAIGHT & TRUE GRADIENTS BETWEEN THE POINTS SHOWN, & VERIFY AVAILABLE SLOPES BEFORE INSTALLING THE PIPES. .3 SLOPE HORIZONTAL BRANCHES OF VENT PIPING DOWN TO THE FIXTURE OR PIPE TO WHICH THEY CONNECT WITH

A MINIMUM PITCH OF 25 MM (1") IN 1.2 M (4'). .4 EXTEND VENT STACKS UP THROUGH THE ROOF GENERALLY WHERE SHOWN BUT WITH EXACT LOCATIONS TO SUIT SITE CONDITIONS & IN ANY CASE A MINIMUM OF 3 M (10') FROM FRESH AIR INTAKES. TERMINATE VENT STACKS A MINIMUM OF 330 MM (13") ABOVE THE ROOF (INCLUDING ROOF PARAPETS) IN VENT STACK COVERS. .5 PROVIDE PROPER DIELECTRIC UNIONS AT CONNECTIONS BETWEEN COPPER PIPE AND FERROUS PIPE OR

.6 BED BURIED LINES WITH A MINIMUM 150MM BEDDING SAND ABOVE AND BELOW PIPE. .7 INSTALL NEOPRENE PADS UNDER ALL CLAMPS AT VERTICAL WASTE PIPING WHICH RESTS ON STUDY FLOOR

.5 ABOVE GROUND SANITARY AND STORM DRAINAGE PIPING:

.1 TYPE DWV COPPER TO ASTM B306, WITH FORGED COPPER SOLDER TYPE DRAINAGE FITTINGS 95/5 SOLDER

.2 CAST IRON TO CAN/CSA B-70-M WITH MECHANICAL JOINTS WITH SS BANS AND CLAMPS .6 UNDERGROUND SANITARY AND STORM DRAINAGE PIPING:

.1 CAST IRON TO CAN/CSA B-70-M WITH MECHANICAL JOINTS WITH SS BANS AND CLAMPS

.2 FOR PIPING EMBEDDED IN CONCRETE, RIGID SOLVENT WELD IPS PVC DRAIN, WASTE AND VENT PIPE .7 DOMESTIC COLD WATER SHUT-OFF VALVES: CLASS 600, 4140 KPA (600 PSI) WOG RATED FULL PORT BALL TYPE VALVES, EACH EQUIPPED WITH AN IDENTIFYING TAG, AND C/W A FORGED BRASS BODY WITH SOLDER ENDS, FORGED BRASS CAP, & BLOWOUT-PROOF STEM, SOLID FORGED BRASS CHROME PLATED BALL, "TEFLON" OR "PTFE" SEAT, & A REMOVABLE LEVER HANDLE. VALVES IN INSULATED PIPING ARE TO BE COMPLETE WITH

.8 TRAP SEAL PRIMER: FOR PRIMING 1 OR 2 FLOOR DRAINS, PRECISION PLUMBING PRODUCTS INC. MODEL P2-500 TRAP PRIMER VALVE C/W "O" RING SEALS, 12 MM (1/2") DIA. THREADED INLET & OUTLET CONNECTIONS, &, FOR PRIMING 2 TRAPS FROM THE SAME PRIMER, A DU-2 DUAL OUTLET DISTRIBUTION UNIT. FOR PRIMING FROM 3 TO 6 FLOOR DRAINS, PRECISION PLUMBING PRODUCTS INC. MODEL P1-500 TRAP PRIMER VALVE C/W A MODEL DU-3 OR DU-4, 3 OR 4 OUTLET DISTRIBUTION UNIT FOR PRIMING 3 OR 4 TRAPS, & A MODEL "YS-8" SUPPLY TUBE WITH COMBINATIONS OF MODEL DU-3 & DU-4 DISTRIBUTION UNITS FOR PRIMING FROM 5 TO 6

.9 BACKFLOW PREVENTER: LEAD FREE REDUCED PRESSURE ZONE DUAL CHECK VALVE DESIGN BACKFLOW PREVENTER IN ACCORDANCE WITH CAN/CSA B64, BRONZE OR EPOXY COATED CAST IRON BRONZE FITTED CONSTRUCTION DEPENDING ON SIZE. & C/W INLET STRAINER, INLET & OUTLET SHUT-OFF VALVES. AN INTERMEDIATE RELIEF VALVE, BALL VALVE TYPE TEST COCKS, & A PROPER AIR GAP FITTING

PLUMBING FIXTURES & FITTINGS

PROVIDE DRAINAGE & VENT PIPING SYSTEMS .2 PROVIDE PLUMBING FIXTURES & FITTINGS AS SHOWN & SCHEDULED ON THE DRAWINGS. WATER SUPPLY

FITTINGS ARE TO BE LEAD-FREE IN ACCORDANCE WITH NSF/ANSI 61 REQUIREMENTS .3 UNLESS OTHERWISE SPECIFIED, VITREOUS CHINA, PORCELAIN ENAMELLED, & ACRYLIC FINISHED FIXTURES ARE TO BE WHITE. UNLESS OTHERWISE SPECIFIED. FITTINGS & PIPING EXPOSED TO VIEW ARE TO BE CHROME PLATED & POLISHED. FITTINGS LOCATED IN AREAS OTHER THAN PRIVATE WASHROOMS ARE TO BE

.4 PROVIDE AND INSTALL THERMOSTATIC MIXING VALVES AT ALL END FIXTURES FOR ANTI-SCALDING PROTECTION. SET HOT WATER TEMPERATURE LIMITS TO NOT EXCEED 49C (120F) .5 FOR HEALTHCARE APPLICATIONS, PROVIDE AND INSTALL CLEANOUTS BELOW AND ABOVE THE FLOOD LEVEL RIM

.6 FIXTURE EXPOSED TRAPS: EXPOSED TRAPS FOR FIXTURES NOT EQUIPPED WITH INTEGRAL TRAPS, SUCH AS LAVATORIES, ARE TO BE ADJUSTABLE CHROME PLATED CAST BRASS "P" TRAPS WITH CLEANOUTS, MINIMUM

#17 GAUGE CHROME PLATED TUBULAR EXTENSIONS, & CHROME PLATED ESCUTCHEONS. .7 FIXTURE CONCEALED TRAPS: CONCEALED TRAPS FOR FIXTURES NOT EQUIPPED WITH INTEGRAL TRAPS, SUCH AS COUNTER SINKS, ARE TO ADJUSTABLE CAST BRASS WITH CLEANOUT PLUGS. .8 FIXTURE EXPOSED SUPPLIES: EXPOSED SUPPLIES FOR FIXTURES WHICH DO NOT HAVE SUPPLY TRIM/FITTINGS

WITH INTEGRAL STOPS, I.E. LAVATORIES, ARE TO BE SOLID CHROME PLATED BRASS ANGLE VALES WITH SCREWDRIVER STOPS FOR PUBLIC AREAS, WHEEL HANDLE STOPS FOR PRIVATE AREAS, FLEXIBLE STAINLESS STEEL RISERS, & STAINLESS STEEL OR CHROME PLATED STEEL ESCUTCHEONS. DAHL BROTHERS CANADA LTD, NSF/ANSI 61 CERTIFIED CHROME PLATED "MINI-BALL" VALVE ASSEMBLIES WILL BE ACCEPTABLE

.9 FIXTURE CONCEALED SUPPLIES: WATER PIPING AS SPECIFIED. C/W BALL TYPE SHUT-OFF VALVES AS SPECIFIED WITH THE WATER PIPING OR NST/ANSI 61 CERTIFIED DAHL BROS. CANADA LTD. 1/4 TURN "MINI BALL" VALVES. .10 BARRIER-FREE FIXTURES: COMPLY WITH MOUNTING HEIGHT & OTHER REQUIREMENTS OF THE GOVERNING

.11 CAULKING: CAULK AROUND PLUMBING FIXTURES & FITTINGS WHERE THEY CONTACT WALLS, FLOORS, & ANY OTHER BUILDING SURFACE USING GUN APPLIED CAULKING FOUAL TO GENERAL FLECTRIC SERIES SCS-1200 SILICONE CONSTRUCTION SEALANT OR DOW CORNING 780 SILICONE RUBBER SEALANT WITH PRIMERS AS RECOMMENDED BY THE SEALANT MANUFACTURER. CAULKING COLOUR OTHER THAN WHITE, IF ANY, WILL BE

SELECTED BY THE CONSULTANT. .12 TRAP SEAL PRIMER: FOR PRIMING 1 OR 2 FLOOR DRAINS, PRECISION PLUMBING PRODUCTS INC. MODEL P2-500 TRAP PRIMER VALVE C/W "O" RING SEALS, 12 MM (1/2") DIA. THREADED INLET & OUTLET CONNECTIONS, &, FOR PRIMING 2 TRAPS FROM THE SAME PRIMER, A DU-2 DUAL OUTLET DISTRIBUTION UNIT. FOR PRIMING FROM 3 TO 6 FLOOR DRAINS, PRECISION PLUMBING PRODUCTS INC. MODEL P1-500 TRAP PRIMER VALVE C/W A MODEL DU-3 OR DU-4, 3 OR 4 OUTLET DISTRIBUTION UNIT FOR PRIMING 3 OR 4 TRAPS, & A MODEL "YS-8" SUPPLY TUBE WITH COMBINATIONS OF MODEL DU-3 & DU-4 DISTRIBUTION UNITS FOR PRIMING FROM 5 TO 6 TRAPS

.13 TESTING & ADJUSTING: WHEN INSTALLATION IS COMPLETE, CHECK & TEST THE OPERATION OF EACH FIXTURE & FITTING. ADJUST OR REPAIR AS REQUIRED.

FULL CLOSED

MEDICAL GASES .1 INSTALLATION OF COMPLETE, OPERATIONAL, TESTED AND CERTIFIED MEDICAL GAS SYSTEMS, INSTALLED IN ACCORDANCE WITH CSA STANDARD Z7396.1-12, "MEDICAL GAS PIPELINE SYSTEMS - PART 1 PIPELINES FOR

MEDICAL GASES AND VACUUM" AND ASTM B813 FOR COPPER FLUX ! MEDICAL GAS SYSTEMS WORK MUST BE PERFORMED BY A CONTRACTOR COMPLETELY FAMILIAR WITH THE REQUIREMENTS OF CAN/CSA-Z7396.1, AND WHO ARE QUALIFIED AND CERTIFIED (WITH JURISDICTIONAL AUTHORITY ISSUED CERTIFICATE) FOR SILVER BRAZING WITH NITROGEN BACKING WITHOUT USING FLUX IN ACCORDANCE WITH CLAUSE 4.5 OF CSA-B51, BOILER, PRESSURE VESSEL AND PRESSURE PIPING CODE. THE JURISDICTIONAL AUTHORITY IS THE AUTHORITY DESIGNATED BY THE PROVINCE OF THE WORK TO PERFORM

OVERSIGHT FUNCTIONS CITED IN CLAUSE 4.5 OF CSA-B51 .3 ALL PIPING USED FOR MEDICAL GAS INSTALLATIONS SHALL BE TYPE L SEAMLESS HARD COPPER TUBING, CLEANED, DEGREASED, SEALED AT THE FACTORY AND STAMPED FOR MEDICAL USE. ALL FITTINGS AND

CONNECTIONS SHALL BE MANUFACTURED OF WROUGHT COPPER AND NITROGEN PURGED SILVER BRAZING .4 SUPPORT PIPING BY MEANS OF SUPPORT MATERIALS SPECIFIED IN THE MECHANICAL WORK SECTION ENTITLED BASIC MECHANICAL MATERIALS AND METHODS, IN ACCORDANCE WITH REQUIREMENTS OF SECTION 11.3 OF CAN/CSA-Z7396.1 AND WITH SUPPORT SPACING IN ACCORDANCE WITH TABLE 9 IN CAN/CSA-Z7396.1.

.5 DROPS OR RISERS SHALL BE SUPPORTED NOT MORE THAN 250 MM FROM OUTLETS .6 ALL MEDICAL VACUUM LINES SHALL BE 18 MM MINIMUM SIZE .7 ALL VALVES IN THE MEDICAL GAS PIPING SYSTEM SHALL BE MEDICAL QUALITY BALL TYPE VALVES WHICH OPERATE WITH NOT MORE THAN ONE-QUARTER TURN OF THE OPERATING HANDLE BETWEEN FULL OPEN AND

.1 INSTALL WHERE INDICATED ON THE DRAWINGS

.2 EACH STATION OUTLET FOR MEDICAL GAS SHALL BE EQUIPPED WITH AN AUTOMATIC SHUT-OFF VALVE AND BE DESIGNED TO PREVENT ERRORS IN CROSS-FITTING

.3 PIPING SHALL HAVE FIXED, COLOUR-CODED LABELS INDICATING THE TYPE OF GAS IN EACH LINE. .4 ALL MEDICAL GAS OUTLET PLATES SHALL BE GROUNDED

.1 PRESSURE REGULATORS SHALL BE PROVIDED FOR EACH MEDICAL GAS SYSTEMS TO INDICATE HIGH OR LOW PRESSURE

.10 LINE MONITORING GAUGES .1 SUPPLY AND INSTALL LINE MONITORING PRESSURE GAUGES, WIRED TO ALARM PANELS

.2 ALL PRESSURE GAUGES FOR MEDICAL GAS SYSTEMS SHALL SHOW PRESSURE IN KPA .11 AREA/ZONE VALVES INSTALLED 1150 MM ABOVE FLOOR TO BOTTOM OF VALVE BOX. AREA ALARM PANELS INSTALLED 1650 MM ABOVE FLOOR TO TOP OF BOX

.12 MEDICAL GAS MASTER ALARM PANELS INSTALLED 1150 MM ABOVE FLOOR TO BOTTOM OF PANEL OR 150 MM ABOVE WORK BENCHES TO BOTTOM OF PANEL

.13 PIPE SHALL BE FACTORY CLEANED AND STAMPED FOR USE IN MEDICAL GAS INSTALLATIONS .14 MAINTAIN ALL PIPE FREE OF CONTAMINATION, DURING ON OR OFF-SITE STORAGE AND DURING INSTALLATION BY CAPPING ALL EXPOSED PIPE ENDS

.15 ALL MANUALLY OPERATED VALVES AND QUICK COUPLING DEVICES SHALL BE EQUIPPED WITH NON-INTERCHANGEABLE CONNECTIONS COMPLYING WITH THE CSA DIAMETER INDEX SAFETY SYSTEM (DISS). PIPING SHALL HAVE FIXED, COLOUR-CODED LABELS INDICATING THE TYPE OF GAS IN EACH LINE .16 THE SYSTEMS WILL BE CERTIFIED BY AN INDEPENDENT MEDICAL GAS-TESTING AGENCY RETAINED BY THE

.17 PROVIDE AND INSTALL CONSTRUCTION VALVES WHEN CONNECTING TO EXISTING MEDICAL GAS MAINS .18 PROVIDE AND INSTALL ISOLATION VALVES UPSTREAM OF ZONE VALVE BOXES AND AT RISERS.

> .1 AFTER INSTALLATION OF THE PIPING AND VALVES, BUT BEFORE INSTALLATION OF THE SERVICE OUTLETS, ALARM ACTUATING SWITCHES AND GAUGES, THE LINE SHALL BE BLOWN CLEAR BY MEANS OF NITROGEN

.2 AFTER INSTALLATION OF THE ROUGH-IN PORTION OF SERVICE OUTLETS AND AREA LINE PRESSURE ALARMS. BUT BEFORE CLOSING OF THE WALLS. EACH SECTION OF PIPING SYSTEM SHALL BE SUBJECTED TO A TEST PRESSURE OF ONE AND ONE-HALF (11/2) TIMES THE MAXIMUM WORKING PRESSURE, BUT NOT LESS THAN 1030 KPA WITH NITROGEN. THIS TEST PRESSURE SHALL BE MAINTAINED UNTIL EACH JOINT HAS BEEN EXAMINED FOR LEAKAGE BY MEANS OF SOAPY WATER OR OTHER EFFECTIVE MEANS OF LEAK DETECTION SAFE FOR USE WITH OXYGEN

.3 ALL LEAKS SHALL BE REPAIRED AND THE SECTION RETESTED .4 AFTER COMPLETING THE TESTING OF EACH INDIVIDUAL PIPING SYSTEM, ALL OF THE MEDICAL GAS SYSTEMS SHALL BE SUBJECTED TO A 24-HOUR STANDING PRESSURE TEST AT ONE AND ONE-HALF (1½) TIMES THE MAXIMUM WORKING PRESSURE, BUT NOT LESS THAN 1030 KPA. THE TEST GAS SHALL BE NITROGEN. THE MAIN LINE SHUT-OFF VALVE SHALL BE CLOSED DURING THE TEST

.5 AFTER COMPLETION OF THE ABOVE TEST PROCEDURES, THE FINISHING ASSEMBLIES OF STATION OUTLETS, ALARMS, AND ALL COMPONENTS (E.G., PRESSURE SWITCHES, GAUGES, RELIEF VALVES, ETC.) SHALL BE INSTALLED AND ALL MEDICAL GAS PIPING SYSTEMS SHALL BE SUBJECTED TO A 24-HOUR STANDING PRESSURE TEST AT 20% ABOVE THE NORMAL OPERATING LINE PRESSURE. THE MAIN LINE SHUT-OFF VALVE SHALL BE CLOSED DURING THIS TEST

.6 LEAKS, IF ANY, SHALL BE LOCATED, REPAIRED, AND THE SYSTEM RETESTED. .7 PROVIDE PURGING VALVES FOR THIS PURPOSE

.8 USE TEMPORARY CYLINDERS FOR THIS PURPOSE .9 PERFORM PRESSURE TEST AND CROSS CONNECTION TEST AS PER CODE REQUIREMENTS. REFER TO CSA STANDARD Z-7396.1, LATEST EDITION

THE FINAL TESTING, CROSS CONNECTION TESTING AND CERTIFICATION OF THE MEDICAL GAS SYSTEMS SHALL BE DONE BY AN INDEPENDENT, CERTIFIED, TESTING AGENCY THAT MEETS THE REQUIREMENTS OF CSA STANDARD Z.7396.1, AND THE TESTING AGENCY SHALL BE EMPLOYED DIRECTLY BY OWNER

MEDICAL-GAS SYSTEM SHALL BE TESTED IN ACCORDANCE WITH NFPA 99, LATEST EDITION. THE ALARM SYSTEM SHALL BE TESTED PER NFPA 99 AND CSA Z7396.1 IN ADDITION TO CROSS-CONNECTION TESTING, THIS SPECIFICATION SHALL REQUIRE THE EQUIPMENT MANUFACTURER TO TEST EACH INDIVIDUAL PIPELINE-SYSTEMS COMPONENT FOR PERFORMANCE TO DESIGN

SPECIFICATIONS AND MAKE ANY NECESSARY ADJUSTMENTS TO ENSURE A COMPLETE AND WORKING SYSTEM

CERTIFICATION AGENCY SHALL CERTIFY THAT THE SYSTEMS ARE COMPLETE IN ALL RESPECT, THAT ZONE VALVES ARE INSTALLED, ALARM SYSTEMS ARE FUNCTIONAL AND THAT ALL TESTS WERE CONDUCTED IN ACCORDANCE WITH CSA STANDARD Z7396.1, LATEST EDITION

THE MEDICAL GAS PIPING SYSTEM SHALL NOT BE USED UNTIL THE ABOVE DOCUMENTATION HAS BEEN

CERTIFIED COMPLETE AND A COPY HAS BEEN ACCEPTED .21 CERTIFICATION

.1 THE CERTIFICATION AGENCY WILL VERIFY:

.1 THAT PIPING MATERIALS ARE CERTIFIED FOR MEDICAL GAS USE .2 THAT ALL BRAZING IS PERFORMED WITH NITROGEN PURGING

.3 THAT ALL VALVES ARE INSTALLED AND OPERATIONAL .4 THAT PRESSURE TESTS HAVE BEEN COMPLETED AS REQUIRED

.5 THAT ALL REQUIRED ALARM SYSTEMS ARE OPERATIONAL AND PROPERLY MONITORED .6 THAT ALL PIPING IS CORRECTLY IDENTIFIED .7 THAT THE INSTALLED SYSTEMS PASS CROSS-CONNECTION, CONCENTRATION AND PURITY TESTS

HYDRONIC SYSTEMS

.1 PROVIDE HYDRONIC SYSTEM PIPING & EQUIPMENT. SLOPE HORIZONTAL PIPING MAINS TO PROVIDE A MINIMUM CONTINUOUS UP-GRADE OF 25 MM (1") IN 6 M (20") TO HIGH POINTS. SLOPE BRANCH SUPPLY & RETURN PIPING CONNECTIONS TO EQUIPMENT A MINIMUM OF 25 MM (1") IN 1.2 M (4"). LEAVE SUFFICIENT ROOM AT HIGH POINTS FOR INSTALLATION & MAINTENANCE OF AIR VENTS. CONFORM TO THE FOLLOWING REQUIREMENTS .1 REFER TO DRAWING CONTROL DIAGRAMS & DETAILS & INSTALL AUTOMATIC CONTROL VALVES, PIPING

.8 THAT ALL EQUIPMENT IS FUNCTIONING PROPERLY AND THAT ALL SYSTEMS ARE COMPLETE AND

WELLS & SIMILAR PIPING AND/OR EQUIPMENT MOUNTED CONTROL COMPONENTS REQUIRED FOR AUTOMATIC CONTROL SYSTEMS SUPPLIED AS PART OF THE CONTROL SYSTEMS WORK .2 PROVIDE SCREWED UNIONS, REMOVABLE MECHANICAL JOINT COUPLINGS, OR WELD-ON OR SOLDER-ON FLANGES IN PIPING AT CONNECTIONS TO VALVES, STRAINERS & SIMILAR PIPING SYSTEM COMPONENTS, AT EQUIPMENT CONNECTIONS, IN RUNS OF PIPING EXCEEDING 9 M (30') AT 4.5 M (15') REGULAR INTERVALS TO PERMIT

REMOVAL OF SECTIONS OF PIPING, & WHEREVER ELSE INDICATED ON THE DRAWINGS

.4 PROVIDE CIRCUIT BALANCING VALVES IN PIPING GENERALLY WHERE SHOWN BUT WITH EXACT LOCATIONS IN

ACCORDANCE WITH INSTRUCTIONS OF PERSONNEL DOING SYSTEM FLOW BALANCING WORK .5 INSTALL LOW POINT DRAINS AT LOW POINTS IN THE SYSTEM. INSTALL AUTOMATIC AIR VENTS AT ALL HIGH POINTS IN THE SYSTEM. .6 PIPE THE DISCHARGE FROM ALL LIQUID RELIEF VALVES, LIQUID SAFETY VALVES, HIGH CAPACITY AIR VENTS, STEAM DRIP PAN ELBOWS, EQUIPMENT BLOWDOWNS, WATER COLUMNS, OVERFLOWS AND PIPING SYSTEM DRAINS

TO THE NEAREST BUILDING DRAIN. INSTALL A BRASS, BRONZE OR COPPER RECEIVING FUNNEL ON THE DRAIN

.7 INSTALL ALL PIPING SYSTEMS WITH PROVISIONS FOR EXPANSION OR CONTRACTION. INSTALL AT LEAST 3 ELBOWS IN ALL BRANCH CONNECTIONS. .8 FLUSH & CHEMICALLY CLEAN NEW PIPING AFTER PRESSURE TESTING IS COMPLETE IN ACCORDANCE WITH INSTRUCTIONS OF PERSONNEL DOING HYDRONIC SYSTEM WATER TREATMENT WORK. CONTRACTOR TO RETAIN

THE SERVICES OF A CHEMICAL TREATMENT SPECIALIST. .9 PERFORM HYDROSTATIC TEST TO 150% OF WORKING PRESSURE, BUT NOT LESS THAN 125PSI FOR 1 WORKING DAY. NOTIFY CONSULTING 72HRS PRIOR TO PERFORMING TEST

.10 WHEN WORK IS COMPLETE & EQUIPMENT IS OPERATING AS INTENDED, TEST, ADJUST & BALANCE WATER FLOWS

IN ACCORDANCE WITH REQUIREMENTS SPECIFIED .11 HYDRONIC (WATER & GLYCOL SOLUTION) PIPING:

.1 MILD BLACK CARBON STEEL, GRADE B, ERW, ASTM A53

.1 UP TO 50MM (2") PIPE - CLASS 125 CAST IRON THREADED FITTINGS TO ANSI/ASME B16.4, & .2 LARGER THAN 65MM (2 1/2") PIPE - WELDING FITTINGS AND FLANGES TO CSA W47.1.

B16.22, 95/5 ANTIMONY SOLDER JOINTS .3 GRADE B, ERW, ASTM A53, FACTORY OR SITE ROLL GROOVED, C/W VICTAULIC CO. CAST DUCTILE IRON GROOVED END FITTINGS, INCLUDING FULL FLOW ELBOWS, & VICTAULIC STYLE 07 "ZERO-FLEX" RIGID COUPLINGS FOR PIPING IN THE MECHANICAL ROOMS & FOR PIPING RISERS, STYLE 77 STANDARD FLEXIBLE

.2 TYPE "L" HARD DRAWN SEAMLESS COPPER TO ASTM B88, C/W WROUGHT COPPER FITTINGS TO ANSI

COUPLINGS FOR ALL OTHER PIPING .1 ACCEPTABLE FOR CHILLED WATER, CONDENSER WATER, GLYCOL HEAT RECOVERY AND HEAT PUMP WATER SYSTEMS. GASKET GRADE "EPDM" GASKET FOR TEMPERATURE RANGE -34 C $[-30^{\circ}F]$ TO 110°C [230°F]

.12 PRODUCTS

.1 PIPING STRAINER: Y SHAPED, BRONZE WITH SWEAT TYPE OR FLANGED CONNECTIONS IN COPPER PIPING, CAST IRON WITH SCREWED, FLANGED, OR GROOVED END CONNECTIONS IN STEEL PIPING, MINIMUM 1725 KPA (250 PSI) RATED & C/W REMOVABLE PERFORATED TYPE 304 STAINLESS STEEL 20 MESH SCREEN, &, FOR

ARCHITECT

WWW.DCYTARCHITECTURE.CA

MECHANICAL CONSULTANT :



Vancouver, BC, V6A 2T2 (604) 200-9087

ISSUED FOR CONSTRUCTION 021.10.15 HISSUED FOR TEXIDER 12021.06.04 ISSUED FOR 80% CD 21.05.20 ISSUED FOR BP 2021.05.06 ISSUED FOR BP REVIEW 2021.04.28 ISSUED FOR DD 2021.04.09 No. REVISION DATE THIS DRAWING IS THE PROPERTY OF DCYT ARCHITECTURE. REPRODUCTION

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1475 EDMONTON STREET, PRINCE GEORGE

SPECIFICATIONS

BC V2M 1S2

JOB No. 20_002

SCALE: OCT 15 2021

DRAWN: KM CHECKED:

PHASE

- STRAINERS 40 MM (12") DIA. & LARGER, A BLOW DOWN PIPE CONNECTION TAPPING. PROVIDE WHERE
- .2 PIPING DRAIN VALVE: MINIMUM 2070 KPA (300 PSI) WATER RATED, 20 MM (3") DIA. STRAIGHT PATTERN FULL PORT BRONZE BALL VALVE C/W A LEVER HANDLE, THREADED OUTLET SUITABLE FOR COUPLING CONNECTION OF 20 MM (1/2") DIA. HOSE, & A CAP & CHAIN. PROVIDE AT THE BOTTOM OF PIPING RISERS, AT OTHER PIPING LOW POINTS, & WHEREVER ELSE SHOWN OR SPECIFIED
- .3 PRESSURE GAUGE: EQUAL TO H. O. TRERICE 690 SERIES WITH PSI/KPA SCALE RANGE SUCH THAT THE SYSTEM WORKING PRESSURE IS AT THE APPROXIMATE MID-POINT OF THE SCALE, C/W BRONZE BALL TYPE SHUT-OFF VALVE, FOR PIPING & EQUIPMENT WITH NORMAL EVERYDAY FLOW, A BRASS PRESSURE SNUBBER, &, FOR GAUGES IN DOMESTIC WATER PIPING, ANSI/NSF 61 LEAD FREE CERTIFICATION. PROVIDE IN VALVED TUBING ACROSS THE SUCTION, SUCTION STRAINER (IF APPLICABLE), AND DISCHARGE PIPING OF EACH CIRCULATING PUMP, IN SUPPLY AND RETURN PIPING CONNECTIONS TO MAIN MECHANICAL PLANT EQUIPMENT, IN EXPANSION TANK(S) OR PIPING IMMEDIATELY AT EXPANSION TANK(S), IN SEPARATE DOMESTIC HOT WATER STORAGE TANK(S), IN PIPING AT EACH SIDE OF A PRESSURE REDUCING VALVE, & WHEREVER ELSE SHOWN AND/OR SPECIFIED ON THE DRAWINGS
- .4 THERMOMETER: EQUAL TO H. O. TRERICE #80030 C/W C & F SCALE DIAL & A RANGE SUCH THAT THE SYSTEM OPERATING TEMPERATURE IS THE APPROXIMATE MID-POINT OF THE SCALE, A SUITABLE THERMOWELL, &, FOR THERMOMETERS IN DOMESTIC WATER PIPING, ANSI/NSF 61 LEAD FREE CERTIFICATION. PROVIDE IN SUPPLY & RETURN PIPING CONNECTIONS TO MAIN MECHANICAL PLANT EQUIPMENT, IN WATER PIPING CONNECTIONS TO HOT WATER HEATERS, IN THE DOWNSTREAM SIDE OF MIXING VALVES, & WHEREVER ELSE SHOWN AND/OR SPECIFIED. FOR INSTALLATION OF THERMOMETERS IN PIPING WELLS, PROVIDE A COAT OF METALLIC BASE HEAT TRANSFER PASTE OR GREASE IN THE PIPING WELL
- .5 FLEXIBLE PIPE CONNECTION: DOUBLE WALL STAINLESS STEEL FLEXIBLE CONNECTORS FOR PIPING CONNECTIONS SELECTED BY THE MANUFACTURER TO SUIT THE APPLICATION. SHOP DRAWINGS OR PRODUCT DATA SHEETS MUST INDICATE CONSTRUCTION AND PERFORMANCE REQUIREMENTS THAT SUIT THE APPLICATION. PROVIDE FLEXIBLE CONNECTORS FOR PIPING CONNECTIONS TO VIBRATION ISOLATED EQUIPMENT
- .6 HYDRONIC PIPING SHUT-OFF VALVE: CLASS 600, 4140 KPA (600 PSI) WOG RATED FULL PORT BALL VALVES. EACH C/W A FORGED BRASS OR BRONZE BODY & CAP, BLOWOUT-PROOF STEM, SOLID FORGED BRASS CHROME PLATED BALL, "TEFLON" OR "PTFE" SEAT, THREADED ENDS, & REMOVABLE LEVER HANDLEV .7 HYDRONIC PIPING CHECK VALVE: CLASS 125, 1380 KPA (200 PSI) WOG RATED HORIZONTAL SWING CHECK VALVES, EACH C/W A "Y" PATTERN BRONZE BODY, HINGED BRASS DISC, EASY ACCESS SCREW-IN CAP, & SCREWED ENDS, OR, VICTAULIC CO. OF CANADA LTD. SERIES 716 "VIC-CHECK" GROOVED END CARBON STEEL
- CHECK VALVES SUITABLE FOR MOUNTING HORIZONTALLY OR VERTICALLY 8 HYDRONIC PIPING BALANCING VALVE: SCREWED GLOBE STYLE NON-FERROLIS CIRCUIT BALANCING VALVE DESIGNED TO FACILITATE PRECISE FLOW MEASUREMENT, PRECISION FLOW BALANCING, & POSITIVE SHUT-OFF, C/W CAPPED & VALVED DRAIN CONNECTION, & VALVED PORTS FOR CONNECTION TO A DIFFERENTIAL PRESSURE METER
- .9 AUTOMATIC AIR VENT: STANDARD FLOAT VENT: BRASS BODY AND NPS 1/8 CONNECTION AND RATED AT 690 KPA WORKING PRESSURE. INSTALL AT HIGH POINTS OF SYSTEMS. INSTALL GATE VALVE ON AUTOMATIC AIR VENT INLET. RUN COPPER VENT TUBING DISCHARGE TO NEAREST DRAIN .10 AIR SEPARATOR - INLINE: _WORKING PRESSURE: 860]KPA, SIZE NPS 4
- .11 PIPE STRAINERS: NPS 1/2 TO 2: BRONZE BODY TO ASTM B62, SCREWED CONNECTIONS, Y PATTERN. NPS 2 1/2 TO 12: CAST IRON BODY TO ASTM A278/A278M, CLASS 30 FLANGED CONNECTIONS. WORKING PRESSURE: 860KPA.
 - .1 INSTALL AHEAD OF EACH PUMP AND AHEAD OF EACH AUTOMATIC CONTROL VALVE LARGER THAN NPS 1AND AS INDICATED
- .1 SUPPORT AT INLET AND OUTLET FLANGES OR UNIONS. ENSURE THAT PUMP BODY DOES NOT SUPPORT PIPING OR EQUIPMENT.
- .2 PIPE DRAIN TAPPING TO FLOOR DRAIN. INSTALL PRESSURE GAUGE TEST COCKS .3 PROVIDE LINE SIZED GATE VALVE AND STRAINER ON SUCTION AND LINE SIZED SOFT SEATED CHECK VALVE AND MEMORY STOP BALANCING VALVE ON DISCHARGE. DECREASE FROM LINE SIZE, WITH LONG RADIUS REDUCING ELBOWS OR REDUCERS. SUPPORT PIPING ADJACENT TO PUMP SUCH THAT NO WEIGHT IS CARRIED ON PUMP CASINGS. PROVIDE SUPPORT UNDER ELBOWS ON PUMP SUCTION AND DISCHARGE LINE SIZES 100 MM AND OVER

AIR HANDLING UNIT

.1 UNIT AND MAJOR COMPONENTS SHALL BE PRODUCT OF THE SAME MANUFACTURERS REGULARLY ENGAGED IN

AND ARI CERTIFIED. FAN SHALL BE RUN AND TESTED TO PERFORMANCE. TEST RESULTS SHALL BE SUBMITTED

- PRODUCTION OF SUCH UNITS WHO ISSUES COMPLETE CATALOGUE DATA ON SUCH PRODUCTS .2 UNIT SHALL BE FACTORY BUILT, AND CARRY ALL NECESSARY APPROVALS. COILS SHALL BE WATER TESTED
- FOR VIBRATION SOUND AND AIRFLOW PERFORMANCE. .3 MANUFACTURERS SHALL PROVIDE CONSTRUCTION METHODS TO ACHIEVE SOUND DATA AS SPECIFIED AND PROVIDE DATA OBTAINED BY EITHER:

.1 AMCA LAB SIMULATION .2 TEST_DATA OF ACTUAL UNIT

.4 PROVIDE SEISMIC RESTRAINTS FOR PUMPS

- .3 ALL SOUND DATA SHALL BE MEASURED AND PROVIDED IN ACCORDANCE WITH ARI STANDARD 260P .4 MOTORS POWERED BY VARIABLE SPEED DRIVE CONTROLLERS SHALL BE EEMAC CLASS B WITH TYPE F INSULATION, SHALL HAVE A 1.15 SERVICE FACTOR AND SHALL BE SUITABLE TO BE DRIVEN BY PWM VARIABLE SPEED DRIVE CONTROLLERS. THE MOTOR MANUFACTURER SHALL SUBMIT IN WRITING CONFIRMATION THAT THE MOTORS ARE DESIGNED TO WITHSTAND VOLTAGE PEAKS OF 1400 VOLTS AND A VOLTAGE RATE OF RISE OF
- 2000 VOLTS / MICROSECOND AT A FREQUENCY OF 20 KHZ · FACTORY FABRICATED AND ASSEMBLED MODULAR COMPONENTS AS INDICATED. FIELD FABRICATION OF THE UNITS WILL NOT BE ACCEPTED. FIELD ASSEMBLY OF UNIT SECTIONS IS ACCEPTABLE IF THE UNIT CANNOT BE INSTALLED AS A SINGLE UNIT. INCLUDE FOR COST OF ANY FIELD ASSEMBLY
- .6 OVERALL DIMENSIONS AND CONFIGURATIONS ARE TO BE AS SHOWN ON THE PLANS. HOWEVER, SUCH A CONSTRAINT. AS THIS MAY IMPOSE, DOES NOT ABSOLVE THE MANUFACTURER FROM RESPONSIBILITY FOR THE ENGINEERING, OPERATIONAL INTEGRITY AND PERFORMANCE OF THE UNIT PROVIDED .7 UNIT SHALL CARRY ALL NECESSARY APPROVALS.
- .8 PIPE FROM CONDENSATE DRAINS TO ROOF DRAIN COMPLETE WITH TRAP. INSTALL UNIT SO THAT THE CURB / HOUSEKEEPING PAD HEIGHT IS SUFFICIENT TO ACCOMMODATE DEPTH OF 'P' TRAP. .9 SEISMICALLY SECURE FLOOR/ROOF MOUNTED AHU'S TO CURBS OR HOUSE KEEPING PADS BY EITHER BOLTING
- .10 SUBMIT A SITE INSPECTION AND START-UP REPORT FROM THE MANUFACTURER'S REPRESENTATIVE. SUBMIT WITH DELIVERY OF EACH UNIT A COPY OF THE FACTORY TEST AND INSPECTION REPORT
- .11 ELECTRICAL .1 WIRING SHALL BE FACTORY CSA APPROVED. COMPLETE FACTORY POWER WIRING IN EMT CONDUIT FROM MOTORS AND LIGHTS TO POINT POWER CONNECTIONS. PROVIDE POWER CONNECTIONS FROM EACH FAN MOTOR TO JUNCTION BOXES ON THE OUTSIDE OF THE UNIT CASING

OR WELDING TO EMBEDDED STEEL PLATES. ENSURE CURBS/HOUSEKEEPING PADS ARE SECURELY ATTACHED

- .2 PROVIDE ONE 120VOLT/1PHASE CONNECTION TO A JUNCTION BOX FOR MARINE LIGHTS .12 CONSTRUCTION
 - OF ENTIRE UNIT WITHOUT DEFLECTION. STEEL BASE SHALL BE SUITABLE FOR SEISMICALLY BOLTING UNIT TO ROOF CURBS OR HOUSE KEEPING PADS OR WELDING UNIT TO EMBEDDED STEEL PLATES IN CONCRETE ROOF CURBS OR HOUSE KEEPING PADS/CURBS. PROVIDE INTEGRAL LIFTING LUGS FOR HOISTING

.1 CASINGS SHALL BE SUPPORTED ON WELDED STRUCTURAL CHANNEL SUPPORTS DESIGNED FOR SUPPORT

- .2 UNIT SHALL BE MOUNTED ON METAL SEISMIC ROOF CURB(S) PROVIDED WITH THE UNIT(S). ROOF CURBS SHALL BE SEISMICALLY SECURED TO THE ROOF. WHEN FLASHED TO THE MOUNTING CURB IT SHALL PROVIDE A WEATHERPROOF WHOLE
- .3 UNIT(SHALL MATE TO THE CONCRETE MOUNTING CURB. WHEN FLASHED TO THE MOUNTING CURB IT SHALL PROVIDE A WEATHERPROOF WHOLE
- .4 PLENUM FLOORS SHALL BE RIGID OF WELDED CONSTRUCTION USING, AS A MINIMUM, STRUCTURALLY REINFORCED 2.52 MM [12 GA] M.S. CHECKER PLATES; BE FREE FROM DISHING AND BE FORMED AS A DRAIN PAN WITH A STANDING UPTURNED ANGLE. ALL SEAMS AND CORNERS SHALL BE CONTINUOUSLY WELDED. FLOOR SHALL BE COMPLETELY FLOODED AFTER ASSEMBLY AND WRITTEN CERTIFICATION SUBMITTED BY THE MANUFACTURER INDICATING THAT THERE ARE NO LEAKS
- .5 FLOOR SHALL BE FINISHED WITH TWO-COMPONENT EPOXY POLYAMIDE NON-SKID PAINT .6 ALL PIPE/DUCT PENETRATIONS THROUGH THE FLOOR SHALL HAVE MINIMUM 40 MM [1½"] SLEEVE
- .7 REMOVABLE OPEN GRATINGS SHALL BE PROVIDED OVER ALL FLOOR OPENINGS

AT EXTERIOR OF UNIT FOR DRY COILS

- .8 THE UNDERSIDE OF THE BASE SHALL BE INSULATED WITH 50MM [2"] THICK 64 KG/CU.M $[4 \text{ LB/FT}^3]$ DENSITY GLASS FIBRE ACOUSTIC INSULATION
- .9 COIL DRAIN PANS OF 1.47 MM [16 GA] MINIMUM STAINLESS STEEL SHALL BE RECESSED INTO THE FLOOR AND SHALL BE AN INTEGRAL PART OF THE FLOOR PANELING, A MINIMUM OF 150 MM [6"] AND 50 MM [2"] DEEP RESPECTIVELY WITH WELDED CORNERS. DRAIN PANS UNDER EACH "WET" COIL MUST EXTEND UPSTREAM AND DOWNSTREAM AS REQUIRED TO ENSURE NO CARRYOVER. DRAIN PANS SHALL ALSO EXTEND UNDER COLD COIL HEADERS AND RETURN BENDS. THE DRAIN PAN SHALL BE SLOPED TO OUTLET AND OUTLET PIPE BOTTOM INVERT SHALL BE BELOW BOTTOM OF PAN. THE DRAIN PAN SHALL BE PROVIDED WITH AN INTERIOR 32 MM [1-1/4"] COPPER PIPE DRAIN PIPED TO THE OUTSIDE OF THE UNIT.

PROVIDE DRAIN PANS UNDER ALL COIL BANKS TO ALLOW FOR CLEANING. CAP ALL DRAIN CONNECTIONS

- .10 UNIT CASING SHALL BE OF MINIMUM 1.47 MM [16 GA] GALVANIZED SHEET METAL. FINISH COAT SHALL BE AIR-DRY ENAMEL, TO ALL EXPOSED SURFACES.
- .11 OUTDOOR UNITS ARE TO BE INSULATED WIT 100 MM (4") THICK INSULATION, AND ARE TO BE COMPLETELY WEATHERPROOF WITH ROOF AREAS SLOPED DOWN IN TWO DIRECTIONS WHERE GREATER THAN 3.6 M (12') WIDE, AND SLOPED DOWN IN ONE DIRECTION IF LESS THAN 3.6 M (12') WIDE, WITH DRIP SHIELDS LOCATED OVER ALL ACCESS DOORS
- .12INSULATE ALL INTERIOR WALLS WITH 50 MM [2"] THICK, 48 KG/CU.M [3 LBS/CU. FT.] MIN. DENSITY GLASS FIBRE NEOPRENE COATED ACOUSTIC INSULATION. ALL EDGES OF INSULATION SHALL BE COVERED WITH METAL Z BARS. ALL INSULATION PINS SHALL BE SECURE AND ENDS TRIMMED AND COVERED WITH

- NEOPRENE CAP. PROVIDE 0.76 MM [22 GA] GALVANIZED SHEET METAL COVERING ON ACOUSTICALLY LINED PLENUM WALLS FOR A DISTANCE OF 1.2 M [4 FT] DOWNSTREAM FROM COOLING AND HEAT EXTRACT
- .13 UNITS SHALL BE TESTED TO 3% LEAKAGE AT 1.5 TIMES OPERATING PRESSURE
 - .1 FAN SECTIONS SHALL BE EQUIPPED WITH A STRUCTURAL STEEL CHANNELS LOCATED UNDER THE ISOLATOR LOADS TO ADD RIGIDITY, ELIMINATE FLOOR DEFLECTION, AND DISTRIBUTE LOADS TO THE PERIMETER STRUCTURAL CHANNEL
 - .2 ALL FANS AND FAN ASSEMBLIES SHALL BE DYNAMICALLY BALANCED DURING FACTORY TEST
 - .3 FAN SHAFTS SHALL BE SELECTED FOR STABLE OPERATION AT LEAST 25% BELOW THE FIRST .4 BEARINGS: HEAVY-DUTY PILLOW-BLOCK GREASE LUBRICATED BALL OR ROLLER SELF-ALIGNING TYPE. BEARINGS SHALL HAVE AN AVERAGE LIFE OF 200,000 HOURS AT DESIGN OPERATING CONDITIONS IN ACCORDANCE WITH AMSI B3.15. INBOARD BEARING LUBE LINE SHALL BE EXTENDED TO THE OUTBOARD BEARING
 - .5 BEARING SUPPORT SHALL BE FROM A RIGID STRUCTURAL STEEL BASE FRAME. THIS FRAME SHALL BE INTERNALLY ISOLATED AND SEISMICALLY RESTRAINED FROM THE FAN CABINET STRUCTURAL FRAME
 - .6 DRIVES SHALL BE ADJUSTABLE ON FANS WITH MOTORS 5 H.P. OR SMALLER. ON FANS WITH MOTORS ABOVE 5 H.P. FIXED DRIVE SHALL BE PROVIDED. INCLUDE FOR ONE SHEAVE CHANGE PER FAN, DURING THE AIR BALANCE PROCEDURE. DRIVES SHALL BE SELECTED FOR 150% OF MOTOR NAMEPLATE HORSEPOWER AND INCLUDING 2 BELTS MINIMUM
 - .7 PLENUM FAN ASSEMBLIES FULLY ENCLOSED WITH EXPANDED MESH SCREEN, APPROVED TO WCB STANDARDS

.15 CONTROL DAMPERS TO BE T.A. MORRISON - (1000) AIRFOIL OR RUSKIN CD-50

.1 DRAINABLE COILS DESIGNED AND CONSTRUCTED TO MEET REQUIREMENTS OF THE ASME CODE CATEGORY "H" AS A REGISTERED FITTING, AND COMPLETE WITH A TSBC CRN. COIL DATA, PERFORMANCE AND SPECIFIC FEATURES NOT SPECIFIED BELOW ARE TO BE IN ACCORDANCE WITH THE DRAWING DETAIL. EACH COIL IS TO BE COMPLETE WITH A SLIDE IN-SLIDE OUT GALVANIZED STEEL MOUNTING FRAMEWORK, 16 MM (5/8") O.D. SEAMLESS COPPER TUBES MECHANICALLY EXPANDED INTO AND BONDED TO ALUMINIUM PLATE TYPE OR CONFIGURATED FINS, WELDED SCHEDULE 40 ASTM A106 SEAMLESS STEEL PIPE HEADERS WITH SAME END SUPPLY AND RETURN CONNECTIONS, AND 9.5 MM (%") TAPPINGS FOR AN AIR VENT AND A DRAIN VALVE, A FLANGED #14 GAUGE TYPE 304 STAINLESS STEEL CASING DESIGNED TO DRAIN OFF STANDING WATER, AND STAINLESS STEEL INTERMEDIATE TUBE SUPPORT SHEETS AS REQUIRED

- .1 FILTER MEDIA SHALL BE ULC LISTED, CLASS I OR CLASS II
 - .2 FILTERS: SUITABLE FOR AIR AT 100% RH AND AIR TEMPERATURES BETWEEN $3^{
 m C}$ C [$37^{
 m C}$ F] AND
- .3 REPRESENTATIVE FILTERS SHALL HAVE BEEN TESTED BY AN INDEPENDENT TEST LABORATORY AND TEST RESULTS SHALL BE MADE AVAILABLE ON REQUEST
- .4 PROVIDE TWO (2) SETS OF FILTER MEDIA (FOR EACH FILTER) -ONE FOR INSTALLATION AND ONE FOR HANDOVER TO THE OWNER AS A SPARE.
- .5 PROVIDE FILTER GAUGES ACROSS EACH FILTER BANK. UNLESS OTHERWISE SPECIFIED, DWYER INSTRUMENTS INC. SERIES 605 "MAGNEHELIC", 24 VOLT DC DIFFERENTIAL PRESSURE GAUGES, ONE FOR EACH PRE-FILTER BANK, ONE FOR EACH FINAL FILTER BANK, EACH WITH ± 3% ACCURACY WITH A RANGE TO SUIT THE APPLICATION, AN INDICATING TRANSMITTER WITH 4-20 MA OUTPUT SUITABLE FOR CONNECTION TO THE BUILDING AUTOMATION SYSTEM, AND A MOUNTING BRACKET

.13 SUBMITTALS:

- 1 PRODUCT DATA SHALL INCLUDE DIMENSIONS, WEIGHTS, CAPACITIES, CERTIFICATIONS, CASING CONSTRUCTION DETAILS, GAUGES AND FINISHES OF MATERIAL. SUBMIT FAN CURVE DETAILS, SHOWING OPERATING POINTS AT CLEAN FILTER, DIRTY FILTER AND MID-POINT LOADED FILTER WITH THE PARAMETERS SPECIFIED. SELECT FANS AT MAXIMUM EFFICIENCY FOR SPECIFIED DUTY
- .2 SUBMIT SOUND POWER LEVELS FOR AIR HANDLING UNIT INLET AND OUTLET AND CASING RADIATION AT RATED CAPACITY IN ACCORDANCE WITH AMCA .3 SUBMIT MANUFACTURER'S RECOMMENDED INSTALLATION INSTRUCTIONS

- .1 PROVIDE ALL REQUIRED GALVANIZED STEEL DUCTWORK, RECTANGULAR AND/OR ROUND AND/OR FLAT OVAL AS SHOWN. NOTE THAT WHERE RECTANGULAR DUCTWORK IS SHOWN, ROUND OR FLAT OVAL DUCTWORK OF EQUIVALENT CROSS-SECTIONAL AREA IS ACCEPTABLE
- .2 DUCT ROUTING AND DIMENSIONS: CONFIRM THE ROUTING OF DUCTWORK AT THE SITE & SITE MEASURE DUCTWORK PRIOR TO FABRICATION. DUCT DIMENSIONS MAY BE REVISED TO SUIT SITE ROUTING & BUILDING ELEMENT REQUIREMENTS. IF DIMENSION REVISIONS ARE REVIEWED WITH & APPROVED BY THE CONSULTANT. DUCT ROUTING AND/OR DIMENSION REVISIONS TO SUIT CONDITIONS AT THE SITE ARE NOT GROUNDS FOR A CLAIM FOR AN EXTRA COST.
- .3 AUTOMATIC CONTROL COMPONENTS: INSTALL (BUT DO NOT CONNECT) DUCT SYSTEM MOUNTED AUTOMATIC CONTROL COMPONENTS SUPPLIED AS PART OF THE AUTOMATIC CONTROL WORK.
- .4 HEAT TRANSFER EQUIPMENT CONNECTIONS: WHERE INDICATED, PROVIDE DUCT CONNECTIONS TO FAN POWERED HEAT TRANSFER EQUIPMENT WITH INTEGRAL COILS.
- .5 ROUND & FLAT OVAL DUCT SUPPORT INSIDE BUILDING: SUPPORT ROUND & FLAT OVAL DUCTS INSIDE THE BUILDING IN ACCORDANCE WITH ANSI/SMACNA HVAC DUCT CONSTRUCTION STANDARDS METAL & FLEXIBLE. RILT LINESS OTHERWISE SPECIFIED FOR BOTH LININSULATED AND INSULATED DUCTS EXPOSED IN FINISHED AREAS. USE BANDS & SECURE AT THE TOP OF THE DUCT TO A HANGER ROD. ALL SIMILAR TO DUCTMATE CANADA LTD. TYPE "BA". IF THE DUCT IS INSULATED, SIZE THE STRAP TO SUIT THE DIAMETER OF THE
- .6 SUPPORT OF ROOF MOUNTED DUCTS: SUPPORT ROOF MOUNTED DUCT ON FACTORY FABRICATED ALUMINIUM SUPPORT ASSEMBLIES TO SUIT ROOF CONSTRUCTION, SIZED & ARRANGED TO SUIT THE DUCT, & PROPERLY
- .7 WATERTIGHT DUCTWORK: WHERE WATERTIGHT HORIZONTAL DUCTWORK IS REQUIRED, CONSTRUCT WITHOUT BOTTOM LONGITUDINAL SEAMS. SOLDER OR WELD THE JOINTS OF BOTTOM AND SIDE SHEETS. SEAL ALL OTHER JOINTS WITH DUCT SEALER. SLOPE HORIZONTAL DUCT TO HOODS, RISERS, OR DRAIN POINTS. PROVIDE DUCT DRAIN FITTINGS AT DRAIN POINTS. PROVIDE WATERTIGHT DUCTWORK FOR, AS APPLICABLE ALL GALVANIZED STEEL DUCTWORK OUTSIDE THE BUILDING OR OTHERWISE EXPOSED TO THE ELEMENTS, FRESH AIR INTAKES, & WHEREVER ELSE SHOWN
- .8 FLEXIBLE DUCTWORK: PROVIDE MAXIMUM 3 M (10') LONG LENGTHS OF FLEXIBLE DUCTWORK FOR CONNECTIONS BETWEEN GALVANIZED STEEL DUCTS & NECKS OF CEILING GRILLES & DIFFUSERS. DO NOT INSTALL FLEXIBLE DUCTWORK THROUGH WALLS, EVEN IF SHOWN ON THE DRAWINGS. AT RECTANGULAR GALVANIZED STEEL DUCT, ACCURATELY CUT HOLES & PROVIDE FLANGED OR "SPIN-IN" ROUND FLEXIBLE DUCT CONNECTION COLLARS. SEAL JOINTS WITH DUCT SEALER, INSTALL FLEXIBLE DUCTS AS STRAIGHT AS POSSIBLE & SECURE AT EACH END WITH NYLON OR STAINLESS STEEL GEAR TYPE CLAMPS, & SEAL JOINTS. PROVIDE LONG RADIUS DUCT BENDS WHERE THEY ARE REQUIRED.
- .9 SHEET METAL DUCTWORK: UNLESS OTHERWISE SPECIFIED, CONSTRUCT & INSTALL DUCTWORK IN ACCORDANCE WITH ANSI/SMACNA HVAC DUCT CONSTRUCTION STANDARDS METAL & FLEXIBLE TO SUIT THE DUCT PRESSURE CLASS DESIGNATION OF MINIMUM 500 PA (2" W.C.) POSITIVE OR NEGATIVE AS APPLICABLE, A MINIMUM VELOCITY OF 10 M/S (2000 FPM), & SO THAT THE DUCTWORK DOES NOT "DRUM". ALL FLAT SURFACES OF RECTANGULAR DUCTWORK ARE TO BE CROSS-BROKEN. DUCT SYSTEM SEALING IS TO MEET ANSI/SMACNA SEAL CLASS A REQUIREMENTS.
- .10 DUCT FIRE DAMPER: CURTAIN BLADE TYPE, DYNAMIC, GALVANIZED STEEL FUSIBLE LINK DAMPER, ULC CLASSIFIED TO CAN/ULC-S112 & AS PER NFPA 90A REQUIREMENTS. 11/2 OR 3 HOUR RATED AS REQUIRED, &, UNLESS OTHERWISE INDICATED. C/W A 74° C (165° F) FUSIBLE LINK, PROVIDE WHERE SHOWN, INSTALL IN ACCORDANCE WITH CODE REQUIREMENTS, INCLUDING EXPANSION CLEARANCE BETWEEN DAMPER SLEEVE
- .11 DUCT ACCESS DOOR: CONSTRUCT & INSTALL AS PER ANSI/SMACNA HVAC DUCT CONSTRUCTION STANDARDS METAL & FLEXIBLE, & SIZE TO SUIT THE APPLICATION. PROVIDE FOR DUCT COMPONENTS REQUIRING MAINTENANCE AND/OR REPAIR, WHERE DUCTS/PLENUMS/CASINGS CONNECT TO FANS, & WHEREVER ELSE SHOWN. IDENTIFY WITH "FLD" MARKER TYPE RED LETTERING
- .12 BACKDRAFT DAMPER: EQUAL TO T. A. MORISON & CO. INC. "TAMCO" COUNTERBALANCED BACKDRAFT DAMPERS, SERIES 7000 WT FOR VERTICAL MOUNTING, SERIES 7000 CW FOR HORIZONTAL MOUNTING. PROVIDE WHFRE SHOWN .13 BALANCING DAMPER: PROVIDE BALANCING DAMPERS AT ALL TAKE-OFFS AND BRANCH DUCTWORK AND WHERE
- SHOWN ON THE DRAWINGS. .14 ACOUSTIC LINING: PROVIDE ACOUSTIC LINING IN DUCTWORK IN LOCATIONS AS FOLLOWS WHEREVER SHOWN AND/OR SPECIFIED ON THE DRAWINGS, IN DUCTWORK DOWNSTREAM OF AIR TERMINAL BOXES FOR A DISTANCE OF 2.4 M (8') MEASURED ALONG THE DUCT & OUTWARD FROM THE BOX IN ALL DIRECTIONS, & FOR ALL TRANSFER AIR DUCTS. INSTALL LINING IN ACCORDANCE WITH REQUIREMENTS OF ANSI/SMACNA HVAC DUCT CONSTRUCTION STANDARDS METAL & FLEXIBLE, HOWEVER, REGARDLESS OF VELOCITY. AT LEADING & TRAILING EDGES OF DUCT LINER SECTIONS, PROVIDE GALVANIZED STEEL NOSING CHANNEL AS PER THE DETAIL ENTITLED

FLEXIBLE DUCT LINER INSTALLATION FOUND IN THE ANSI/SMACNA MANUAL REFERRED TO ABOVE. FOR ALL

HEALTHCARE APPLICATIONS, ACOUSTIC LINER SHALL BE FIBRE FREE. .15 TESTING, ADJUSTING & BALANCING: INCLUDE FOR A SITE WALK-THROUGH WITH TESTING & BALANCING PERSONNEL FOLLOWING THE ROUTE OF DUCT SYSTEMS TO BE TESTED, ADJUSTED & BALANCED FOR THE PURPOSE OF CONFIRMING THE PROPER POSITION & ATTITUDE OF DAMPERS. THE LOCATION OF PITOT TUBE OPENINGS, & ANY OTHER WORK AFFECTING THE TESTING & BALANCING PROCEDURES. PERFORM CORRECTIVE

WORK REQUIRED AS A RESULT OF THIS WALK-THROUGH.

AUTOMATIC CONTROL SYSTEMS

- .1 THE CONTROLS SCOPE SHALL BE COMPLETED BY THE BASE BUILDING CONTROLS CONTRACTOR, HOULE
- .2 PROVIDE COMPLETE SYSTEMS OF CONTROL & INSTRUMENTATION TO CONTROL & SUPERVISE BUILDING EQUIPMENT & SYSTEMS. THE CONTROL SYSTEMS ARE TO GENERALLY BE AS INDICATED ON DRAWING CONTROL DIAGRAMS & ARE TO HAVE ALL THE ELEMENTS THEREIN INDICATED OR IMPLIED. THE CONTROL DIAGRAMS SHOW ONLY THE PRINCIPAL COMPONENTS CONTROLLING THE EQUIPMENT & SYSTEMS. SUPPLEMENT EACH CONTROL SYSTEM WITH RELAYS, TRANSFORMERS, SENSORS, ETC., REQUIRED TO ENABLE EACH SYSTEM TO PERFORM AS SPECIFIED & TO PERMIT PROPER OPERATION & SUPERVISION
- .3 SHOP DRAWINGS/PRODUCT DATA: SHOP DRAWINGS/PRODUCT DATA SHEETS ARE TO INCLUDE ALL CONTROL SYSTEM COMPONENTS, IDENTIFIED SCHEMATIC CONTROL DIAGRAMS WITH COMPONENT IDENTIFICATION, CATALOGUE NUMBERS, & SEQUENCE OF OPERATION FOR ALL SYSTEMS, & CERTIFIED WIRING DIAGRAMS FOR ALL SYSTEMS.
- .4 INSTALLATION REQUIREMENTS: THE CONTROL SYSTEMS ARE TO BE INSTALLED BY THE CONTROL COMPONENT MANUFACTURER OR BY LICENSED PERSONNEL AUTHORIZED BY THE CONTROL COMPONENT MANUFACTURER. THE CONTROL SYSTEM INSTALLATION COMPANY IS TO HAVE LOCAL PARTS & SERVICE AVAILABILITY ON A 24/7 BASIS. CONTROL WIRING WORK IS TO BE PERFORMED BY LICENSED JOURNEYMAN ELECTRICIANS, OR UNDER DIRECT DAILY SUPERVISION OF JOURNEYMAN ELECTRICIANS.
- .5 AUTOMATIC CONTROL VALVES: SUPPLY ALL REQUIRED AUTOMATIC CONTROL VALVES, HAND THE VALVES TO THE APPROPRIATE PIPING TRADES AT THE SITE IN THE LOCATIONS THEY ARE REQUIRED FOR INSTALLATION AS PART OF THE PIPING WORK. ENSURE THAT EACH VALVE IS PROPERLY LOCATED & INSTALLED. ALL VALVES ARE TO HAVE POSITION INDICATORS. HEATING VALVES ARE TO BE NORMALLY OPEN UNLESS OTHERWISE SPECIFIED. COOLING VALVES ARE TO BE NORMALLY CLOSED UNLESS OTHERWISE SPECIFIED. EACH CONTROL VALVE MUST BE SUITABLE IN ALL RESPECTS FOR THE APPLICATION, INCLUDING SYSTEM PRESSURE, & MUST HAVE DESIGN OUTPUT & FLOW RATES WITH MAXIMUM PRESSURE DROPS AS FOLLOWS:
- .1 CHILLED WATER VALVES FOR COILS: 28 KPA (4 PSI)

ENVIRONMENT IN WHICH THEY ARE LOCATED.

- .2 HEATING WATER/GLYCOL SOLUTION VALVES FOR COILS: 17.5 KPA (2.5 PSI) .6 AUTOMATIC CONTROL DAMPERS: DAMPERS FOR MODULATING & MIXING APPLICATIONS ARE TO BE PARALLEL BLADE TYPE. DAMPERS FOR OPEN-SHUT SERVICE ARE TO BE OPPOSED BLADE TYPE. MAXIMUM BLADE LENGTH IS TO BE 1 M (4'). DAMPERS GREATER THAN 2 SECTIONS WIDE ARE TO BE C/W A JACKSHAFT. DAMPER MOTORS ARE TO BE SIZED TO CONTROL THE DAMPER AGAINST MAXIMUM PRESSURE OR DYNAMIC CLOSING PRESSURE, WHICHEVER IS GREATER, TO SUIT THE SIZES OF DAMPERS INVOLVED, & TO PROVIDE SUFFICIENT FORCE TO MAINTAIN THE DAMPER RATED LEAKAGE CHARACTERISTICS. OPERATORS FOR DAMPERS TO BE CONNECTED TO THE BUILDING FIRE ALARM SYSTEM OR TO FREEZE PROTECTION DEVICES ARE TO BE EQUIPPED WITH ADDITIONAL RELAYS TO PERMIT THE DAMPERS TO RESPOND AND GO TO THE REQUIRED POSITION IN LESS THAN 15 SECONDS UPON RECEIPT OF A SIGNAL. OPERATOR ENCLOSURES ARE TO BE SUITABLE FOR THE
- .7 MOTORIZED DAMPER: EQUAL TO T. A. MORRISON & CO. INC. "TAMCO" SERIES 1000 (SERIES 9000 FOR FRESH & EXHAUST AIR APPLICATIONS) ALUMINIUM DAMPERS, PARALLEL BLADE TYPE FOR MODULATING & MIXING APPLICATIONS, OPPOSED BLADE TYPE FOR OPEN-SHUT SERVICE. DAMPER MOTORS ARE TO BE EQUAL TO BELIMO EF SERIES, SPRING RETURN, FAIL-SAFE, 24 OR 120 VAC AS REQUIRED, MODULATING OR 2-POSITION AS REQUIRED, OVERLOAD PROTECTED & C/W ENCLOSURE TO SUIT MOUNTING LOCATION. PROVIDE WHERE SHOWN. CONNECT WITH CONTROL WIRING IN CONDUIT AS SHOWN/SPECIFIED
- .8 THERMOSTAT: WALL MOUNTING, 24V UNLESS OTHERWISE SPECIFIED, 7-DAY PROGRAMMABLE HEAT-COOL DIGITAL THERMOSTAT FOR Fº OR Cº INDICATION, C/W BACKLIT DISPLAY, THERMOMETER, REAL TIME CLOCK, & MOMENTARY OVERRIDE FOR AFTER-HOURS OCCUPATION
- .9 CONTROL SYSTEM COMPONENTS: PROVIDE ALL REQUIRED CONTROL SYSTEM COMPONENTS & RELATED HARDWARE. REFER TO DRAWING CONTROL DIAGRAMS, POINTS LISTS, & SEQUENCES. WHERE COMPONENTS ARE PIPE, DUCT, OR EQUIPMENT MOUNTED SUPPLY THE COMPONENTS AT THE PROPER TIME, COORDINATE INSTALLATION WITH THE APPROPRIATE TRADE, & ENSURE THAT THE COMPONENTS ARE PROPERLY LOCATED &
- .10 CONTROL WIRING: DO ALL REQUIRED CONTROL WIRING FROM 15A-1P CIRCUITS TERMINATED AS PART OF THE ELECTRICAL WORK IN JUNCTION BOXES IN EQUIPMENT ROOMS/AREAS. COORDINATE EXACT JUNCTION BOX LOCATIONS AT THE SITE WITH THE ELECTRICAL TRADE. EXCEPT AS SPECIFIED BELOW, INSTALL WIRING IN CONDUIT. UNLESS OTHERWISE SPECIFIED THE FINAL 600 MM (2') CONNECTIONS TO SENSORS & TRANSMITTERS, & WHEREVER CONDUIT EXTENDS ACROSS FLEXIBLE DUCT CONNECTIONS IS TO BE LIQUID-TIGHT FLEXIBLE CONDUIT. CONTROL WIRING IN CEILING SPACES & WALL CAVITIES MAY BE PLENUM RATED CABLE INSTALLED WITHOUT CONDUIT BUT NEATLY HARNESSED, SECURED, & IDENTIFIED.
- .11 TESTING, ADJUSTING & COMMISSIONING: WHEN CONTROL WORK IS COMPLETE, CHECK THE INSTALLATION OF COMPONENTS & ALL WIRING CONNECTIONS, MAKE ANY REQUIRED ADJUSTMENTS, COORDINATE ADJUSTMENTS WITH PERSONNEL DOING HVAC TESTING, ADJUSTING & BALANCING WORK. & COMMISSION THE CONTROL
- .12 DEMONSTRATION & TRAINING: INCLUDE FOR A FULL DAY OF ON-SITE OPERATION DEMONSTRATION & TRAINING SESSIONS FOR 2 GROUPS OF 6 PEOPLE.

ARCHITECT



WWW.DCYTARCHITECTURE.CA

MECHANICAL CONSULTANT :



312 Main Street Vancouver, BC, V6A 2T2 (604) 200-9087

ISSUED FOR CONSTRUCTION 2021.10.15 HISSUED FOR TENDER 12021.06.04 J ISSUED FOR 80% CD 021.05.20 3 ISSUED FOR BP |2021.05.06 | J ISSUED FOR BP REVIEW 2021.04.28 J ISSUED FOR DD 2021.04.09 No. REVISION DATE

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UHNBC FLUOROSCOPY REPLACEMENT

1475 EDMONTON STREET, PRINCE GEORGE BC V2M 1S2

SPECIFICATIONS

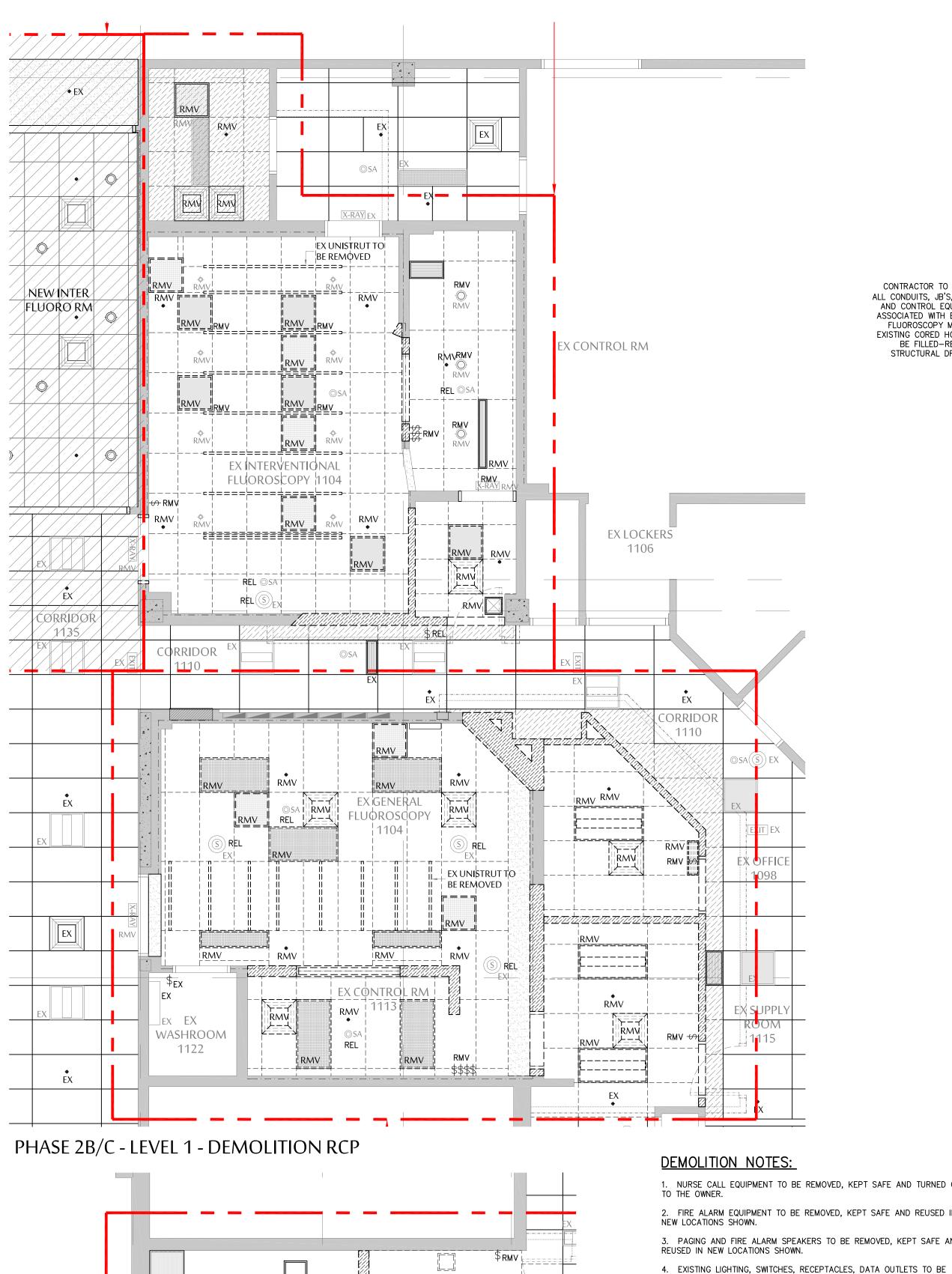
SCALE: OCT 15 2021

DRAWN: CHECKED:

PHASE

JOB No. 20_002

KM



i∷RMVi∷i

RECEPTION

1703

2216 AFF U/S OF EX GWB

I. NURSE CALL EQUIPMENT TO BE REMOVED, KEPT SAFE AND TURNED OVER 2. FIRE ALARM EQUIPMENT TO BE REMOVED, KEPT SAFE AND REUSED IN

3. PAGING AND FIRE ALARM SPEAKERS TO BE REMOVED, KEPT SAFE AND

REMOVED AND DISPOSED/RECYCLED OFF SITE BY CONTRACTOR. 5. LINE VOLTAGE WIRING TO BE REMOVED BACK TO NEAREST JUNCTION BOX. WHERE ALL ITEMS ON A CIRCUIT ARE REMOVED, TURN OFF THE BREAKER AND LABEL AS 'SPARE'.

6. WHERE ELECTRICAL OUTLETS ARE TO REMAIN, REPLACE EXISTING RECEPTACLE WITH NEW DEVICE AND NEW STAINLESS COVERPLATE. ". COMMUNICATION WIRING TO BE REMOVED BACK TO DATA/TEL CLOSET. COORDINATE WITH UHNBC IT DEPARTMENT TO REMOVE WIRING FROM DATA

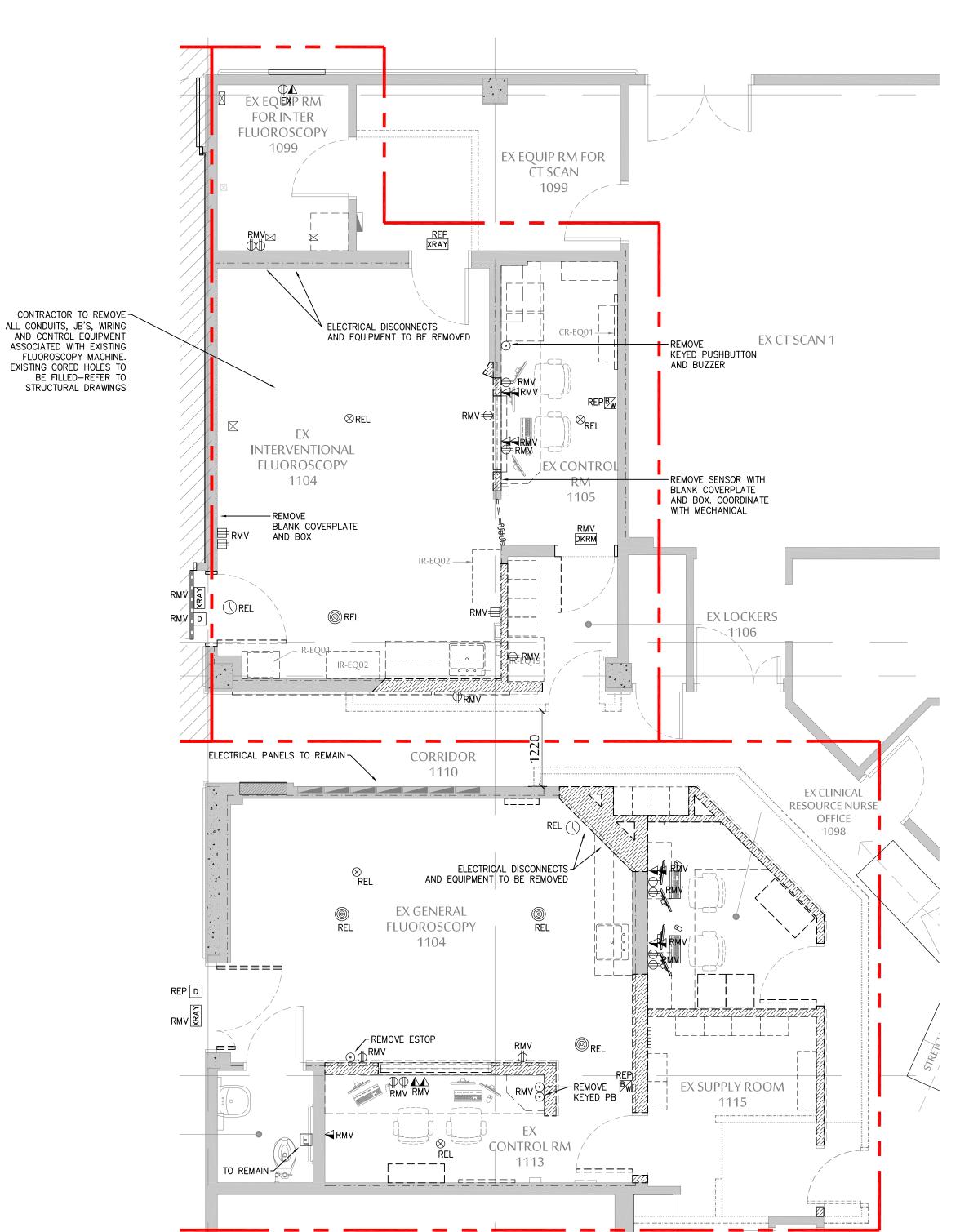
8. NOT ALL EXISTING ELECTRICAL EQUIPMENT MAY BE SHOWN — CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED ELECTRICAL DEMOLITION AND REMOVALS REQUIRED.

9. CONTRACTOR TO REMOVE ALL ELECTRICAL WIRING AND EQUIPMENT ASSOCIATED WITH MECHANICAL DEMOLITION - REFER TO MECHANICAL DRAWINGS FOR DETAILS.

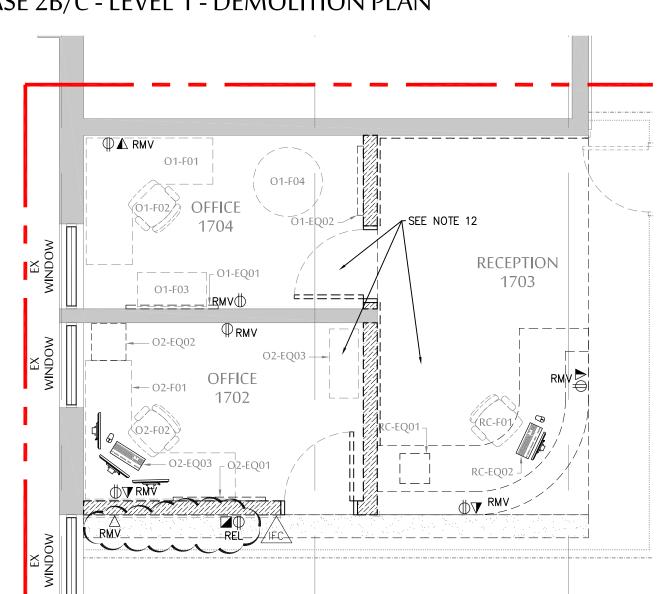
10. EXISTING ELECTRICAL CABLES ABOVE T-BAR CEILING TO BE RAISED TO CLEAR NEW CEILING HEIGHTS. ABANDONED AND OBSOLETE WIRING TO BE

11. EXISTING ELECTRICAL EQUIPMENT TO BE REMOVED/RELOCATED AS REQUIRED TO CLEAR NEW CEILING HEIGHTS, AND NEW MEDICAL OR MECHANICAL EQUIPMENT. CEILING AREAS TO EXAMINED DURING THE TENDER SITE MEETING TO DETERMINE EXTENT OF WORK REQUIRED IN ALL ROOMS. 12. EXISTING POWER, DATA OUTLETS AND SWITCHES TO BE REMOVED. CONTRACTOR TO CONFIRM EXISTING LOCATIONS AND QUANTITIES. EXISTING CIRCUITS TO BE REUSED FOR NEW OFFICE LAYOUTS. DATA WIRING TO BE REMOVED. EXISTING DATA CABLES MAY BE REUSED IF CAT 6 AND CAN BE

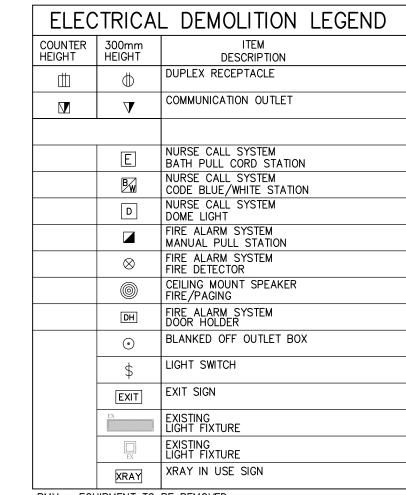
RELOCATED WITHOUT SPLICING.



PHASE 2B/C - LEVEL 1 - DEMOLITION PLAN



PHASE 2A - LEVEL 1 - DEMOLITION PLAN



RMV = EQUIPMENT TO BE REMOVED REL = EXISTING EQUIPMENT TO BE REMOVED AND RELOCATED EX = EXISTING EQUIPMENT TO REMAIN IN CURRENT LOCATION REP = EXISTING EQUIPMENT TO BE REPLACED WITH NEW

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ARCHITECT:

1	ISSUED FOR CONSTRUCTION	OCT 13, 2021	SY
-	ISSUED FOR TENDER	JUNE 4, 2021	SY
1	ISSUED FOR 80% CD	MAY 21, 2021	SY
-	ISSUED FOR BP SUBMISSION	MAY 7, 2021	SY
-	ISSUED FOR DESIGN DEVELOPMENT	APR 8, 2021	SY
1	ISSUED FOR SCHEMATIC DESIGN REVIEW	MAR 19, 2021	RC
No.	REVISION	DATE	BY
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UHNBC **FLUOROSCOPY REPLACEMENT**

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PHASE 2 - GEN FLUORO **ELECTRICAL DEMOLITION**

SCALE:	
1:50	
DATE:	
APRIL 2021	
DRAWN:	— — DIIA
SY	PHAS
CHECKED:	Г 1
DC	_
JOB No.:	

NRS2674

A:\2600\2674 - UHNBC - Fluoroscopy Redevelopment\Dwgs\N2674-UHN General Fluoro.dwg, 2021-10-12 10:32:37 AM, Adobe PDF

PHASE 2A - LEVEL 1 - DEMOLITION RCP

OFFICE

1704

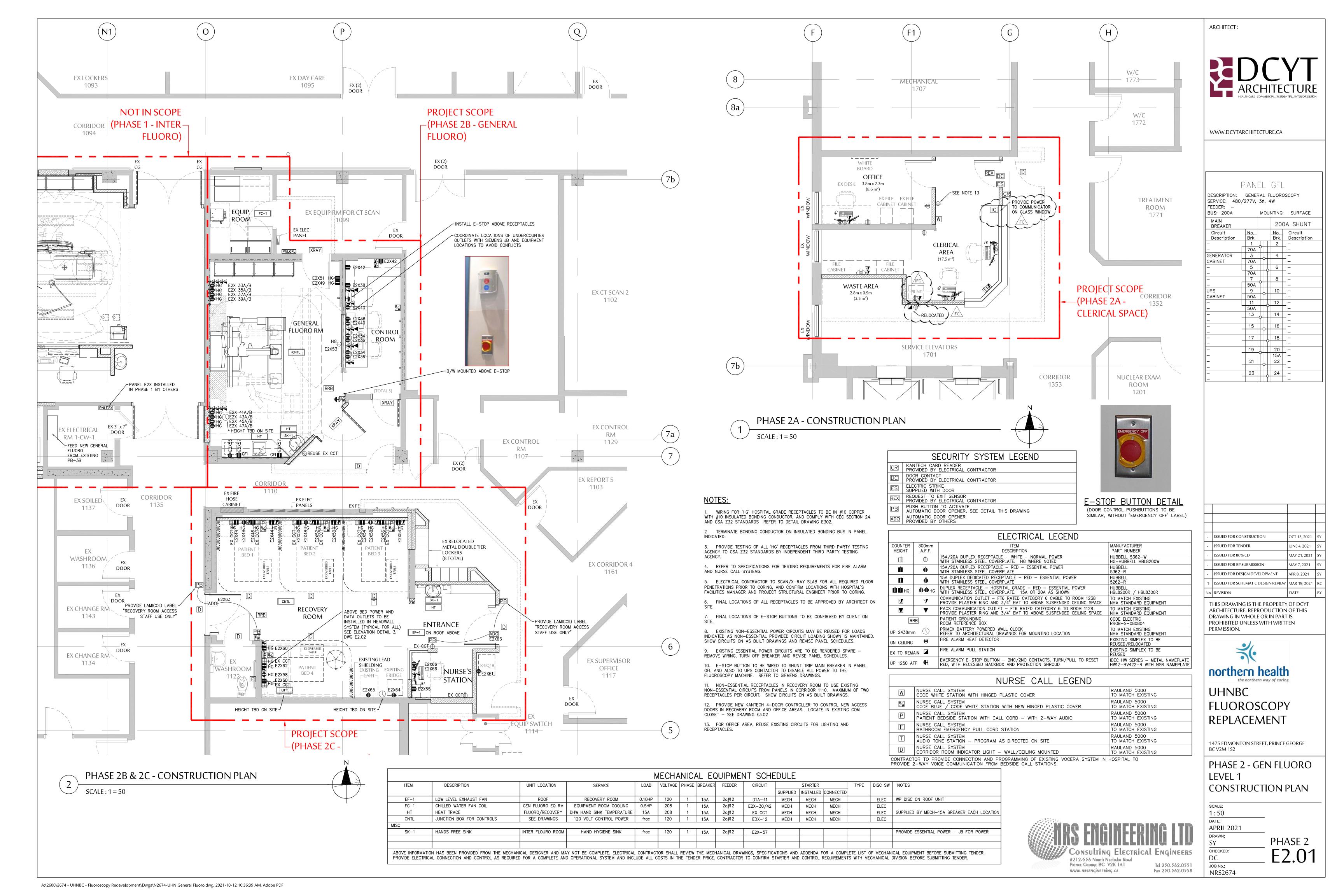
OFFICE

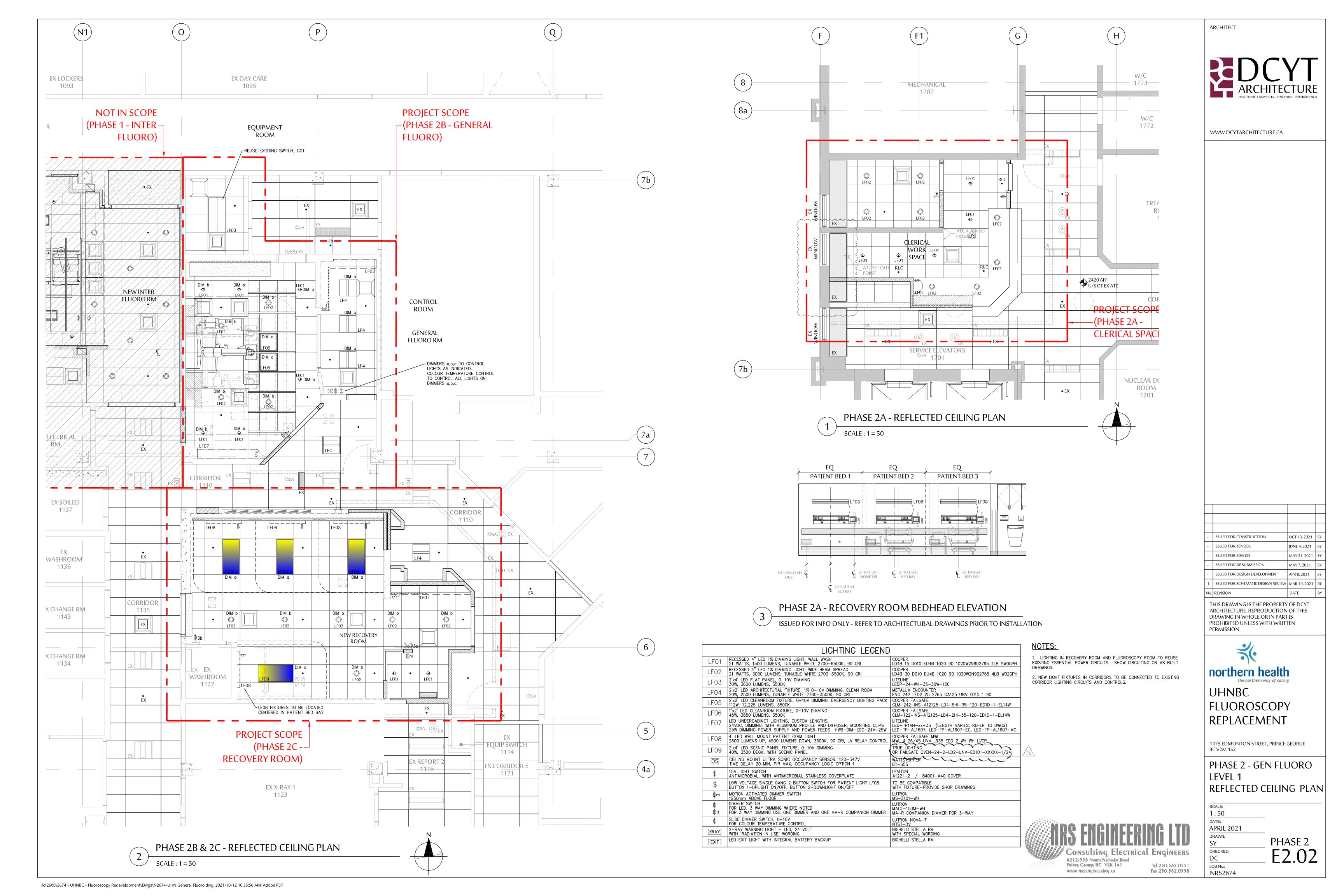
2388 AFF U/S OF EX GWB

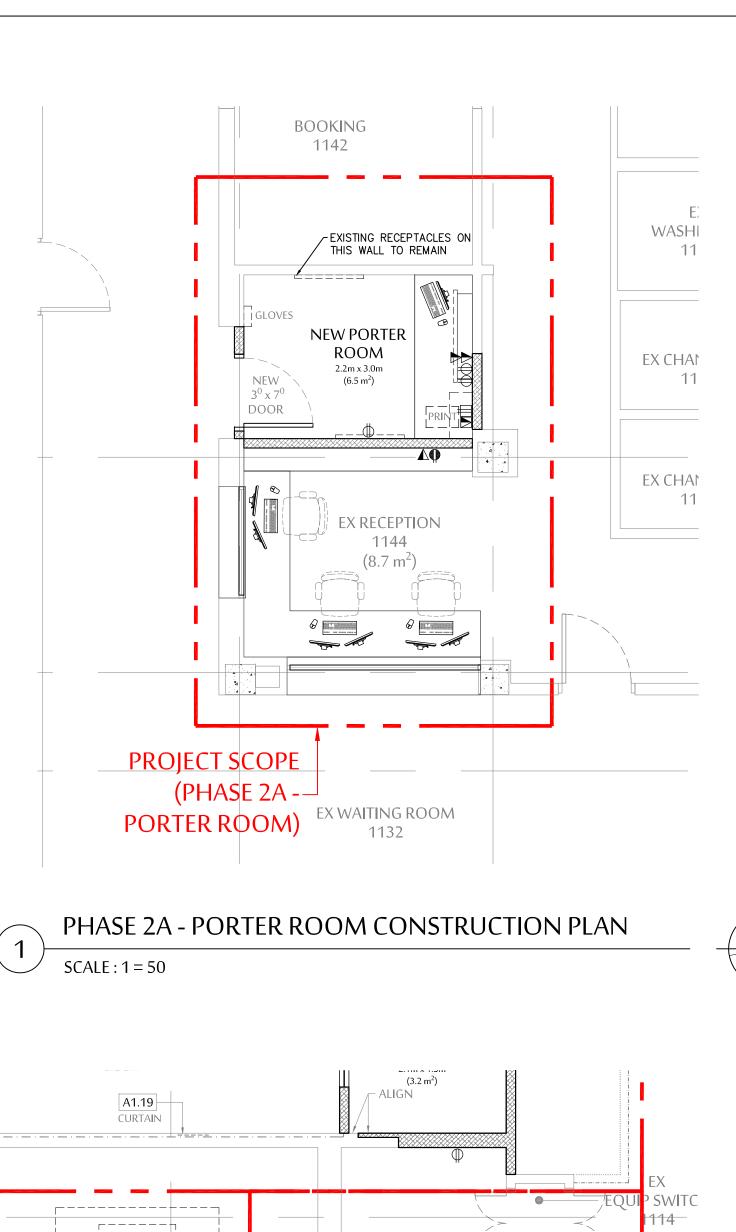
i RMV

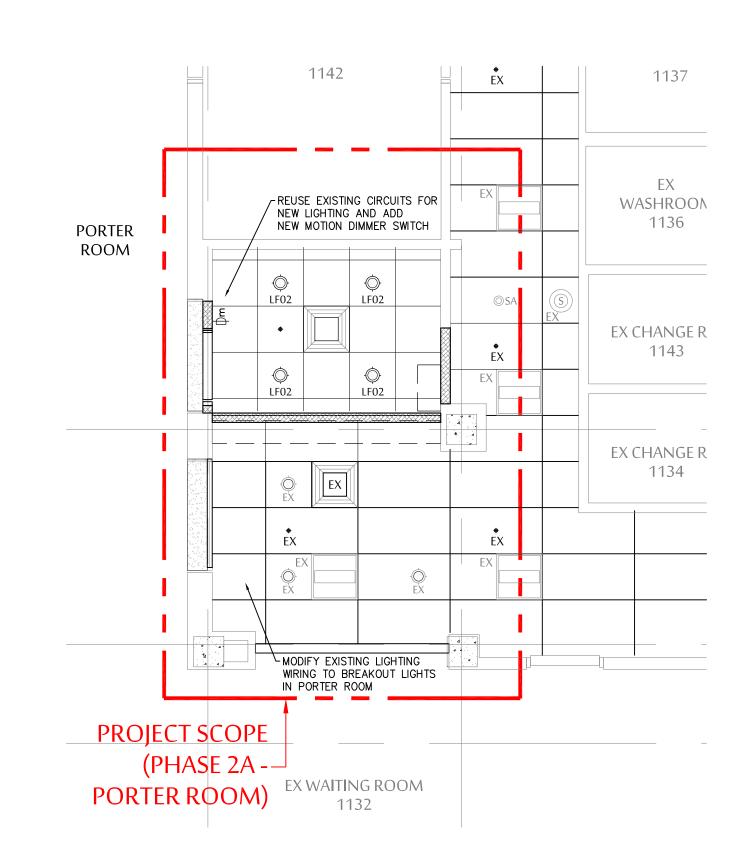
 RMV

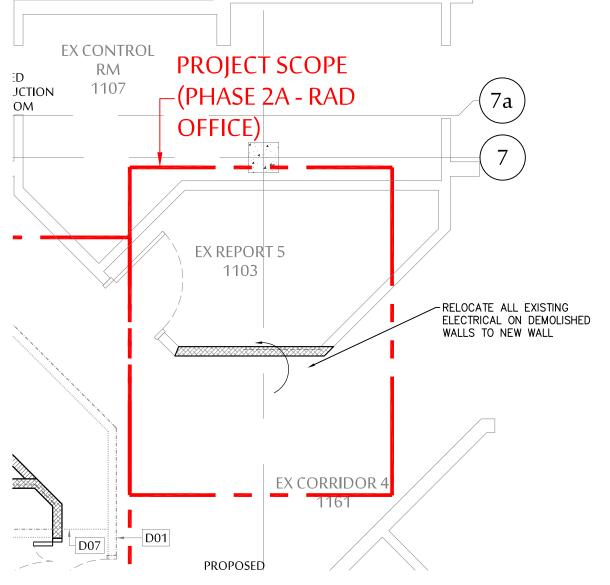
RMV 2420 AFF U/S OF EX GWB



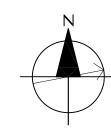




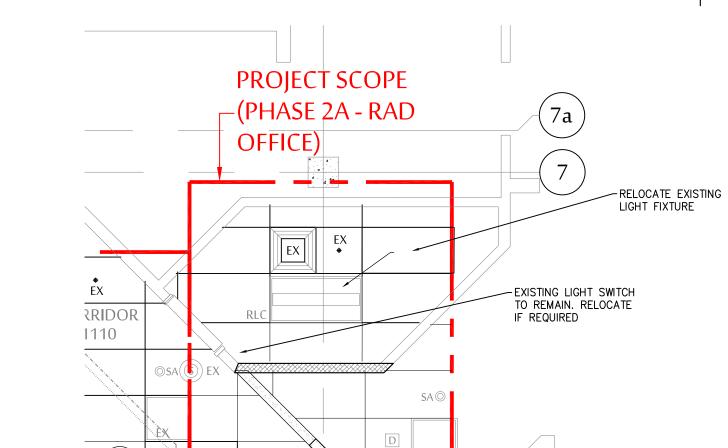




PHASE 2A - RAD OFFICE CONSTRUCTION PLAN SCALE: 1 = 50



PHASE 2A - PORTER ROOM REFLECTED CEILING PLAN SCALE: 1 = 50



PHASE 2A - RAD OFFICE REFLECTED CEILING PLAN SCALE: 1 = 50

1. REFER TO ARCHITECTURAL DRAWINGS FOR DEMOLITION PLANS AND

LOCATIONS OF WORK AREAS. REMOVE ALL EXISTING ELECTRICAL

EQUIPMENT ON WALLS AND CEILINGS BEING REMOVED OR MODIFIED.

2. EXISTING CIRCUITS MAY BE REUSED FOR NEW RECEPTACLES AND EQUIPMENT — SHOW CIRCUITS USED ON AS BUILT DRAWINGS. REMOVE ALL UNUSED BRANCH WIRING BACK TO NEAREST JUNCTION BOX.

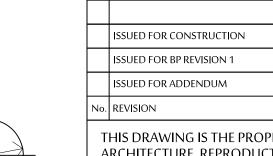
LABEL ANY UNUSED CIRCUITS AS 'SPARE' ON PANEL DIRECTORY AND

3. EXISTING DATA WIRING MAY BE REUSED IF IT IS CATEGORY 6, OTHERWISE INSTALL NEW DATA WIRING. REMOVE ALL UNUSED DATA

NOTES:

TURN BREAKERS OFF.

WIRING BACK TO RACK.



ARCHITECT:

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OCT 13, 2021 SY

JULY 26, 2021 SY

AUG 4, 2021

DATE



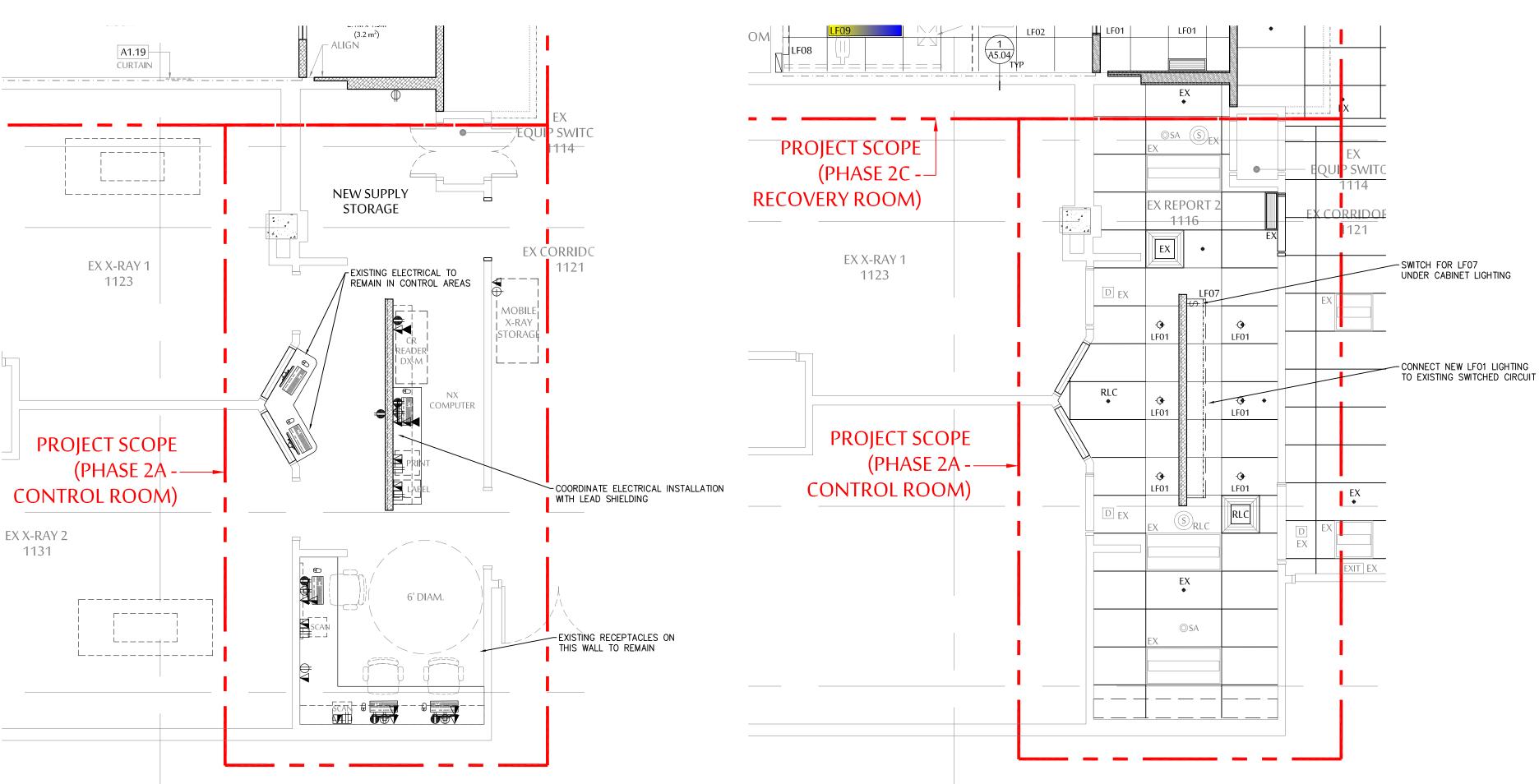
UHNBC **FLUOROSCOPY REPLACEMENT**

1475 EDMONTON STREET, PRINCE GEORGE BC V2M 1S2

PHASE 2 - GEN FLUORO LEVEL 1 **ADDITIONAL SCOPE**

SCALE: 1:50 DATE: APRIL 2021

PHASE 2 SY CHECKED: DC JOB No.: NRS2674



NEW DRAWING ISSUED FOR BP REVISION 1

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PHASE 2A - CONTROL ROOM REFLECTED CEILING PLAN SCALE: 1 = 50

PHASE 2A - CONTROL ROOM CONSTRUCTION PLAN

FLUOROSCOPY MACHINE INSTALL NOTES: 1. CONTRACTOR TO REFER TO SIEMENS IFC DRAWINGS FOR ALL INSTALLATION REQUIREMENTS REQUIRED. CONTRACTOR IS RESPONSIBLE FOR ALL CONDUIT, WIRING AND LABOUR REQUIRED TO PERFORM ALL WORK SHOWN ON SIEMENS DRAWINGS. 2. GENERALLY, WORK REQUIRED BY ELECTRICAL CONTRACTOR INCLUDES: CONDUITS, FEEDER, PANELBOARD AND BREAKERS FEEDERS TO GENERATOR CABINET AND UPS INTERCONNECTING WIRING OF UPS AND FEEDERS FROM UPS TO SYSTEM CABINET GROUNDING FROM POWER SUPPLIES TO CONNECTION POINTS AT CABINETS & UPS EMERGENCY STOP BUTTONS AND WIRING XRAY IN USE SIGNS AND WIRING CONNECTION AND RELAYS FOR LIGHTING CIRCUITS TO FLUOROSCOPY CONTROL 3. INFORMATION SHOWN ON ELECTRICAL DRAWINGS IS FOR GENERAL REFERENCE ONLY AND DOES NOT SHOW ALL WORK REQUIRED. CONTRACTOR TO REVIEW SIEMENS IFC DRAWINGS BEFORE SUBMITTING TENDER. 4. ELECTRICAL CONTRACTOR RESPONSIBLE FOR COMPLETE INSTALLATION OF UPS FOR SIEMENS EQUIPMENT -REFER TO EQUIPMENT DRAWINGS.

RACEWAY SCHEDULE

	RUN				DE	SIC	3NA	ΑΤΙ	ON							N	ИO	UN	TIN	G					SIZE
	\Diamond	FROM POINT / RUN(R)	TO POINT / RUN(R)	DUCT(CABLE WIREWAY)	CONDUIT	TRENCH DUCT(FLOOR FLUSH)	CABLE TRAY	VERTICAL DUCT(V)	CONTAINS POWER SUPPLY CABLES	REMOVEABLE ACCESSIBLE COVER	# OF EQUAL COMPARTMENTS	SUPER-FLEX CONDUCTORS ONLY	FLUSH FLOOR(F) ACCESS FL(A)	FLUSH WALL(W) CEILING(C)	CEILING SPACE ABOVE	CEILING SPACE BELOW	ACCESS FLOOR SPACE	ABOVE FINISHED FLOOR &	SURFACE FL(F) ACCESS FL(A)	SURFACE CEILING(C) WALL(W)	EXISTING	AS SHOWN	WALL SPACE	TO SUIT (BY CONTRACTOR)	SIZE REQUIRED (CLEAR OPENING)
*6	1a	OD	PU1		•				•							•							•	•	SEE ELECTRICAL NOTE 14 &16
*6	1b	X5	sc		•				•							•							•	•	SEE ELECTRICAL NOTE 14 &16
*6	1c	OD	X5		•				•							•							•	•	SEE ELECTRICAL NOTE 14 &16
*1	2	CR	ЕМ		•				•						•								•	•	
	3	ХЗ	RI		•										•	•							•		1"Ø
	4	D1	ıs		•										•								•		3"Ø
	5	D1	SC2		•										•								•		2-1/2"Ø
	6	хз	X4		•											•									2"Ø
	7	CR1	Х3		•											•									2"Ø + 3"Ø
	8	X2	Х3		•											•									2 @ 3"Ø
	9	X1	X2		•											•									2 @ 3"Ø + 2"Ø
	10	X2	X4		•											•									2-1/2"Ø
	11	IS	Х3		•											•									3"Ø
	12a	CR1	SPK		•										•								•		1½" Ø
	12b	_	MC		•										•								•		1½" Ø
	13		M1		•										•								•		1" Ø
	14a	EX1	EX3		•											•							•		2"Ø
	14b	EX2	EX3		•											•							•		2"Ø

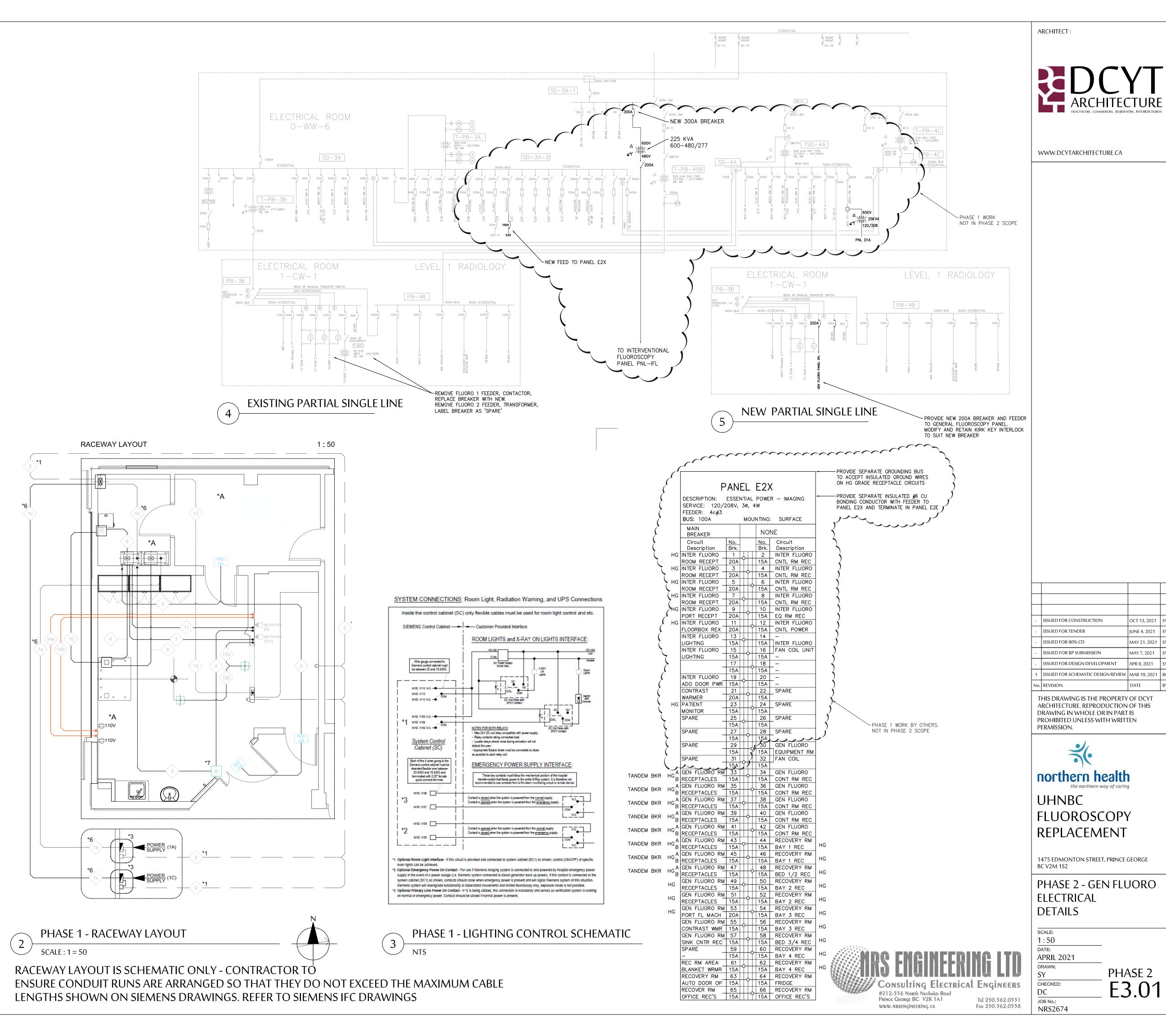
CONNECTION POINT SCHEDULE

	POINT		ı		С	ES	IGI	۱A۱	ΠΟΙ	N			ı	MOUNTING										SIZE				
		ON/OFF DISCONNECT	CONTACTOR	EMERGENCY SHUNT TRIP	PULL BOX	ACCESS FLOOR OPENING	SLEEVE TERMINATION	DUCT TERMINATION	CONDUIT TERMINATION	REMOVEABLE COVER	SPLIT REMOVEABLE COVER	DUCT COVER PLATE OPENING	GROMMETED HOLE DIAMETER	FLUSH FLOOR(F) ACCESS FL(A)	FLUSH WALL(W) CEILING(C)	CEILING SPACE ABOVE	CEILING SPACE BELOW	ACCESS FLOOR SPACE	ABOVE FINISHED FLOOR &	SURFACE FL(F) ACCESS FL(A)	SURFACE CEILING(C) WALL(W)	BELOW FINISHED CEILING €	X THRU COVER WIDTH	TO SUIT (BY CONTRACTOR)	6" MIN. DEPTH	SIZE REQUIRED (INTERNAL SIZE)		
	CR		•												W				5'							ХX		
	CR1,CU1						•							F												4"x4"		
٠7	D1				•						•		3"		С	•								•	•			
*1	EM			•											w				5'									
	EX1, EX2				•					•					w				24"					•	•			
	IS, EX3				•					•					w				16"					•	•			
8'	МС				•						•				С									•	•	_		
3	OD	•													w				5'									
	P1						•							F												6"x6"		
	PU						•							F												4"x8"		
	PU1								•					F										•				
'2	RI	"F	 AD 	IATI	ON (' ON" '	IND	ICA	TOF	SIC	Ι GN, Ι	ABC	DVE	EXI	ΓER	IOR	DO	OR			W							
	SC								•					F										•				
	SC1						•							F										•		4"x8"		
	SC2				•					•					W				4"					•	•			
8*	SPK				•						•				С									•	•	_		
	X1-X5				•					•							•							•	•			
	МС				•						•				С									•	•			
*4	UPS						•							F												4"x6"		

- *1 Emergency Shunt Trip (EST) is at the customer's discretion (optional), unless required by local electrical code. To ensure that the EST does not become disabled unintentionally, the shunt trip is to be supplied with continuous power (e.g. emergency/critical hospital power) or from the main system power supply. All EST devices to be equipped with a hinged plastic clear cover to protect against accidental activations (by others).
- *2 Siemens provides low voltage control switch. *3 The ON/OFF disconnect should be located in the control room or near the generator cabinet (supplied and installed by contractor).
- *4 In case of an emergency, the UPS must be switched OFF and held, until mechical/electrical reset, via an on-site EPO/EM switch.
- *5 See Schematic Diagram for pull box height.
- *6 Conduit and power supply cables supplied by contractor.
- *7 Customer to confirm and provide information for any additional raceways (size and number of conduits required) and connection points (location and termination type/size) for external connections to the
- *8 The final location of MC and SPK to be coordinated with the customer







DIVISION 16 - ELECTRICAL SPECIFICATION:

16.1 GENERAL

- THE CONTRACTOR SHALL PROVIDE ALL LABOUR, MATERIALS, TOOLS AND EQUIPMENT REQUIRED FOR THE WORK, TO PROVIDE A COMPLETE AND OPERATIONAL INSTALLATION.
- 2. IT IS THE INTENT OF THE DRAWINGS AND NOTES TO PROVIDE A COMPLETE AND WORKABLE INSTALLATION. ANY WORK, FITTING AND/OR NECESSARY MATERIAL NOT SPECIFICALLY MENTIONED OR SHOWN ON THE PLANS, BUT OBVIOUSLY NECESSARY TO COMPLETE THE INSTALLATION, SHALL BE FURNISHED BY THE CONTRACTOR AS IF SPECIFICALLY MENTIONED HEREIN AND DETAILED.
- EXAMINE THE SITE OF WORK AND BECOME FAMILIAR WITH ALL FEATURES AND CHARACTERISTICS AFFECTING THIS WORK BEFORE SUBMITTING TENDER, NO ADDITIONAL COMPENSATION WILL BE GIVEN FOR EXTRA WORK DUE TO EXISTING CONDITIONS WHICH SUCH EXAMINATION SHOULD HAVE
- 4. IF DISCREPANCIES OR OMISSIONS IN THE DRAWINGS ARE FOUND, OR IF INTENT OR MEANING IS NOT CLEAR, ADVISE THE ENGINEER FOR CLARIFICATION BEFORE SUBMITTING TENDER.
- 5. MAINTAIN A MARKED UP SET OF "AS BUILT" DRAWINGS ON THE SITE AND SUBMIT TO THE ENGINEER AT COMPLETION OF THE PROJECT.
- ALL EQUIPMENT AND INSTALLATION SHALL COMPLY WITH THE CANADIAN ELECTRICAL CODE C22.1, CURRENT EDITION AS MODIFIED FOR USE IN BRITISH COLUMBIA, TOGETHER WITH ALL DIRECTIVES, BULLETINS AND AMENDMENTS BY AUTHORITIES HAVING JURISDICTION OVER THE WORK AND ANY LOCAL BYLAWS.
- REQUESTS FOR APPROVAL OF ALTERNATE MATERIALS MUST BE SUBMITTED AS FOLLOWS: FOUR COPIES OF DRAWING AND SPECIFICATION ARE TO BE SUBMITTED, CLEARLY INDICATING WHICH MAKE, MODEL AND/OR CATALOGUE NUMBER IS PROPOSED AND TO WHICH PRODUCT IT IS SUBMITTED AS
- IMMEDIATELY AFTER NOTIFICATION OF AWARD OF CONTRACT, SUBMIT A LIST OF PROPOSED PRODUCTS. AFTER RECEIVING APPROVAL OF LIST OF PRODUCTS AND PRIOR TO DELIVERY OF ANY PRODUCTS TO JOB SITE, SUBMIT SHOP DRAWINGS TO ENGINEER FOR REVIEW.
- 9. SHOP DRAWINGS TO BE SUBMITTED VIA EMAIL IN PDF FORMAT FOR ALL ELECTRICAL EQUIPMENT TO BE USED ON THE PROJECT. FIRST PROGRESS PAYMENT WILL NOT BE APPROVED UNTIL ALL SHOP DRAWINGS HAVE BEEN SUBMITTED AND APPROVED.
- 10. ALL PRODUCTS PROVIDED SHALL BE APPROVED BY CSA, OR OTHER B.C. ACCREDITED TESTING AND CERTIFICATION ORGANIZATION. OR CARRY AN EQUIVALENT APPROVAL ACCEPTABLE TO THE BC INSPECTION AUTHORITY AND SHALL BE NEW, UNLESS OTHERWISE SPECIFIED.
- 11. UNLESS OTHERWISE SPECIFICALLY CALLED FOR IN THE DRAWINGS, UNIFORMITY OF MANUFACTURER SHALL BE MAINTAINED FOR SIMILAR PRODUCTS THROUGHOUT THE WORK.
- 12. EXAMINE THE DRAWINGS AND SPECIFICATIONS OF ALL DIVISIONS OF THE PROJECT. BEFORE COMMENCING WORK, OBTAIN A RULING FROM THE ENGINEER IF ANY CONFLICT EXISTS; OTHERWISE NO ADDITIONAL COMPENSATION WILL BE MADE FOR ANY NECESSARY ADJUSTMENTS.
- 13. MAINTAIN SEPARATION BETWEEN ELECTRICAL WIRING SYSTEM AND BUILDING PIPING, DUCT WORK, ETC., SO THAT WIRING SYSTEM IS ISOLATED (EXCEPT AT APPROVED CONNECTIONS TO SUCH SYSTEMS) TO PREVENT GALVANIC CORROSION OR OTHER ADVERSE CONDITIONS. DO NOT USE TY-WRAPS TO SUPPORT WIRING FROM PIPING, BUILDING OR OTHER SYSTEMS.
- 14. BEFORE ENERGIZING THE SYSTEM, CHECK ALL CONNECTIONS AND SET AND CALIBRATE ALL CIRCUIT BREAKERS, RELAYS AND INSTRUMENTS FOR PROPER OPERATION. OBTAIN NECESSARY CLEARANCES, APPROVAL AND INSTRUCTIONS FROM SUPPLY AUTHORITY.
- 15. ARRANGE FOR AND PAY ALL COSTS ASSOCIATED WITH ALL CUTTING AND PATCHING REQUIRED AS A RESULT OF WORK PERFORMED BY THIS DIVISION. REPAIR ANY DAMAGED SURFACES TO THE CONDITION OF SURROUNDING SURFACES AT NO COST TO THE OWNER.
- 16. ALL EQUIPMENT REMOVED AND MADE SURPLUS BY THE PROJECT SHALL BE REVIEWED WITH THE OWNER TO DETERMINE IF THEY WISH TO RETAIN IT. ALL EQUIPMENT NOT IDENTIFIED AS BEING RETAINED BY THE OWNER SHALL BE DISPOSED OF BY THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR ALL TRASH REMOVAL AND DISPOSAL COSTS. ALL EQUIPMENT IDENTIFIED AS BEING RETAINED BY THE OWNER SHALL BE CAREFULLY REMOVED AND TRANSPORTED BY THE CONTRACTOR TO A LOCATION ON SITE DETERMINED BY THE OWNER. WHERE EVER POSSIBLE, ALL EQUIPMENT REMOVED SHALL BE SENT FOR RECYCLING OR SALVAGE. ANY SALVAGE VALUE MAY BE RETAINED
- 17. PROVIDE A WRITTEN GUARANTEE AGAINST ALL DEFECTIVE MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF SUBSTANTIAL COMPLETION.
- 18. PROVIDE ALL PERMITS AND LICENSES

16.2 WIRE

- CONDUCTORS ARE TO BE COPPER WITH 600V MIN. INSULATION OF CHEMICALLY CROSS-LINK THERMOSETTING POLYETHYLENE MATERIAL. NO WIRE SMALLER THAN #12 AWG SOLID FOR BRANCH CIRCUITS. CONTROL WIRING SHALL BE #14 AWG OR #12 AWG STRANDED, OR AS INDICATED ON THE
- 2. ALL BUILDING WIRE SHALL BE AWG/MCM GAUGE, 98% CONDUCTIVITY COPPER WITH MINIMUM 600V INSULATION AND BEAR CSA APPROVAL LABEL. ALARM AND COMMUNICATION CABLES ARE TO BE TYPES APPROVED FOR THE AREA OF INSTALLATION AND AS RECOMMENDED BY THE MANUFACTURER OF THE SPECIFIC EQUIPMENT.
- 3. SOLDERLESS, SELF-INSULATED CONNECTORS FOR HAND TWIST JOINTS FOR LIGHTING, SMALL POWER, HEATING AND ASSOCIATED CONTROL DEVICES, ARE TO BE IDEAL "WING-NUT", OR ENGINEER APPROVED EQUAL.
- TERMINATE CONDUCTORS #8AWG AND LARGER WITH THOMAS & BETTS COLOUR-KEYED COMPRESSION CONNECTORS SERIES 54000 OR ON LUGS PROVIDED WITH EQUIPMENT. PROVIDE THOMAS & BETTS "KOPR-SHIELD" COMPOUND SERIES CP8 ON ALL TERMINATIONS FOR COMPRESSION CONNECTORS.
- 5. INSTALL AND RATE WIRE IN ACCORDANCE WITH THE CANADIAN ELECTRICAL CODE REQUIREMENTS, AS AMENDED FOR USE IN BRITISH COLUMBIA AND IN ACCORDANCE WITH THE DRAWINGS. UNLESS OTHERWISE NOTED ON SINGLE LINE PANEL FEEDERS AND SERVICES TO MECHANICAL EQUIPMENT 10 AMPS OR LARGER MAY BE IN ALUMINUM, PROVIDED THE AMPACITY IS EQUAL TO OR GREATER THAN THE SPECIFIED COPPER FEEDER. CONDUCTOR AMPACITY TO BE RATED IN ACCORDANCE WITH THE TEMPERATURE RATING OF THE EQUIPMENT BEING SERVED.
- EXPOSED WIRING, OR WIRING SUBJECT TO MECHANICAL DAMAGE, IS TO BE IN CONDUIT. WIRING RUN EXPOSED ABOVE T-BAR CEILINGS SHALL BE IN EMT CONDUIT, WITH AC90 DROPS TO FIXTURES AND SWITCHES.
- 7. NO HORIZONTAL WIRING PERMITTED IN INTERIOR REMOVABLE PARTITION WALLS. VERTICAL DROPS FROM JUNCTION BOXES ONLY TO FACILITATE FUTURE CHANGES.

16.3 CONDUIT & JUNCTION BOXES

- 1. ALL WIRING IS TO BE IN EMT CONDUIT EXCEPT WHERE OTHERWISE INDICATED.
- 2. ALL EMPTY CONDUIT IS TO BE LEFT WITH 4mm NYLON PULLCORD INSTALLED.
- 3. ALL CONDUIT IS TO BE SUPPORTED BY CSA APPROVED METALLIC TWO-HOLE CONDUIT STRAPS, BY CANSTRUT AND CONDUIT CLAMPS. SECURE CONDUIT WITH APPROVED SUPPORTS WITHIN 3 FEET OF EVERY JUNCTION BOX OR PANEL. TY-WRAPS ARE NOT ACCEPTABLE FOR ANY SUPPORT ON THIS
- 4. WHERE NOT OTHERWISE INDICATED, CONDUIT SHALL BE SIZED TO THE NUMBER AND TYPE OF CONDUCTORS USED. CONDUIT FILL SHALL NOT EXCEED THE MAXIMUM CONDUIT FILL ALLOWED UNDER THE CANADIAN ELECTRICAL CODE, RULE 12-1014.
- 5. SURFACE RUNS OF CONDUIT WILL BE NEAT IN APPEARANCE, INSTALLED IN STRAIGHT RUNS FOLLOWING LINES OF THE BUILDING.
- 6. BENDS WILL NOT BE MADE OVER SHARP OBJECTS. IMPROPERLY FORMED BENDS WILL NOT BE ACCEPTED. CONDUITS ARE TO BE LAID OUT TO AVOID INTERFERENCE WITH OTHER WORK AND TO AVOID POCKETS IN WHICH WATER CAN COLLECT.
- 7. EXPANSION JOINTS SHALL BE INSTALLED IN ALL STRAIGHT CONDUIT RUNS EXCEEDING 100 METERS AND ALL TRANSITIONS FROM BELOW TO ABOVE GRADE CONDUIT UNLESS EXPLICITLY STATED OTHERWISE
- 8. BEFORE PULLING WIRE, ENSURE CONDUIT IS DRY AND CLEAN. IF MOISTURE IS PRESENT, THOROUGHLY DRY OUT CONDUITS, VACUUM IF NECESSARY. EMPLOY SUITABLE TECHNIQUES TO PREVENT DAMAGE TO WIRE AND INSULATION DURING PULLING, CONDUITS SHALL BE CAPPED AT INSTALLATION TO PREVENT ENTRY OF FOREIGN MATERIAL.
- GALVANIZED RIGID CONDUIT IS TO BE USED ABOVE GROUND AND RIGID PVC CONDUIT BELOW GROUND, SIZED AS INDICATED ON THE DRAWINGS. EXPOSED CONDUITS ARE TO BE COMPLETELY PAINTED AFTER INSTALLATION TO MATCH SURROUNDING SURFACES.
- 10. NOTWITHSTANDING PREVIOUS PARAGRAPH INDOOR RUNS OF CONDUIT NOT SUBJECT TO MECHANICAL DAMAGE MAY BE OF EMT USING STEEL BODIED SET-SCREW COUPLINGS AND CONNECTORS. CONNECTORS WILL HAVE INSULATED THROATS.
- 11. CONCEAL RACEWAYS WITHIN ATTIC SPACES, CRAWL SPACES AND WITHIN WALLS. SURFACE RACEWAYS WILL BE PERMITTED IN ELECTRICAL AND MECHANICAL ROOMS ONLY. SURFACE RACEWAYS IN PUBLIC AREAS SHALL ONLY BE ACCEPTABLE WHEN APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. SURFACE RACEWAYS IN PUBLIC AREAS SHALL BE WIREMOLD. WITH ALL CONNECTORS. BOXES AND HARDWARE. COLOUR TO MATCH SURROUNDING SURFACES.

16.4 GROUNDING & BONDING

- 1. INSTALL A COMPLETE, PERMANENT GROUNDING AND BONDING SYSTEM. ENSURE UNIFORMITY OF GROUNDING PRACTICES THROUGHOUT INSTALLATION.
- 2. GROUNDING EQUIPMENT AND BONDING CONDUCTORS ARE TO BE BARE, STRANDED, SOFT ANNEALED COPPER, UNLESS THEY ARE PART OF A MULTI-CONDUCTOR CABLE CONSTRUCTION OR REQUIRED TO BE INSULATED BY CEC RULE 10-806(5).
- 3. PROVIDE A GROUND BUS IN THE ELECTRICAL ROOM TO CONNECT ALL GROUNDING COMPONENTS, INCLUDING MAIN SERVICE GROUNDS, MAIN CDP/SWITCHBOARD, TRANSFORMERS, WATER LINES, BUILDING STEEL, GAS LINES AND SIMILAR EQUIPMENT. LABEL EACH CONNECTING GROUND WIRE.

16.5 IDENTIFICATION

MARKERS WILL BE ACCEPTABLE.

- 1. PROVIDE A COMPLETE SYSTEM OF LAMICOID LABELS, WIRE LABELS AND OTHER ITEMS TO COMPLETELY IDENTIFY ALL ELECTRICAL SYSTEMS. LABELS ARE TO BE 3 PLY LAMICOID. OUTER PLIES WHITE, CENTER PLY BLACK. TEXT IS TO BE 6mm HIGH, CENTERED ON LABEL. LABELS ARE TO BE PROVIDED FOR ALL ELECTRICAL EQUIPMENT INCLUDING THE MAIN SWITCH, SPLITTER, DISCONNECT SWITCHES, DISTRIBUTION PANELBOARDS AND RECEPTACLES. CONFIRM EXACT WORDING WITH ENGINEER PRIOR TO MANUFACTURING LABELS.
- 2. LABELS FOR OUTLETS AND JUNCTION BOXES MAY BE OF A TYPE SIMILAR TO BROTHER P-TOUCH, CLEAR LABEL WITH BLACK LETTERING. ALL LABELS MUST BE CLEAN AND INSTALLED TO THE SATISFACTION OF THE ENGINEER, EXCEPT THAT LABELS FOR ALL 'HG' OUTLETS ARE TO BE LAMICOID, INDICATING CIRCUIT NUMBER.
- 3. FOR ALL WIRE CONTAINED IN CONTROL PANELS PROVIDED BY THIS DIVISION, PROVIDE PERMANENT HEAT SHRINK OR GRAFOPLAST WIRE MARKERS AT BOTH ENDS OF EACH WIRE. NO WRAP-ON

16.6 MECHANICAL EQUIPMENT CONTROL & POWER WIRING

- 1. LINE VOLTAGE AND LOW VOLTAGE CONTROL WIRING WILL BE BY DIVISION 15. POWER SUPPLY TO MECHANICAL EQUIPMENT IS BY DIVISION 16. MOTOR STARTERS, CONTACTORS, RELAYS AND DISCONNECT SWITCHES ARE TO BE PROVIDED BY DIVISION 16.
- 2. ELECTRICAL CONTRACTOR TO COORDINATE WITH MECHANICAL CONTRACTOR OR CONTROLS CONTRACTOR TO DETERMINE LINE VOLTAGE WIRING REQUIREMENTS, CONTROL WIRING REQUIREMENTS AND TYPE OF STARTERS REQUIRED.
- 3. FINAL CONNECTIONS TO MOTORS, CONTROL DEVICES, PRESSURE SWITCHES AND SIMILAR EQUIPMENT SHALL BE IN FLEXIBLE LIQUID-TIGHT CONDUIT, PROPERLY SUPPORTED WHERE REQUIRED, WITH SUPPORTS CONSTRUCTED FROM CANSTRUT OR SIMILAR MATERIAL. MAXIMUM LENGTH OF 600MM.

16.7 LIGHTING

- 1. FIXTURES ARE TO BE LOCATED TO SCALE FROM DRAWINGS. EXACT LOCATION IS TO BE DETERMINED BY SITE CONDITIONS.
- 2. ALL LIGHT FIXTURES WILL BE CLEANED AFTER INSTALLATION AND LEFT FREE OF DIRT, GREASE, CHIPS, DENTS AND DEFECTS.
- 3. REFER TO LIGHTING LEGEND FOR DESCRIPTION OF ALL LIGHT FIXTURES.
- 4. RECESSED FIXTURES SHALL BE REMOVABLE. THEY ARE TO BE CONNECTED TO JUNCTION BOX USING AT LEAST 3000mm OF 12mm FLEXIBLE CONDUIT AND APPROVED FIXTURE WIRE OR AC90 CABLE. JUNCTION BOX MUST BE ACCESSIBLE AND LOOPING BETWEEN FIXTURES WILL NOT BE ACCEPTED.
- 5. PROVIDE TWO AIR CRAFT CABLE HANGER WIRES, INDEPENDENT OF THE T-BAR CEILING, FOR ALL NEW RECESSED FIXTURES. HANGER WIRES TO BE ON OPPOSITE CORNERS OF THE FIXTURE.

16.9 PANELBOARDS & SWITCHGEAR

- PROVIDE AND INSTALL DISTRIBUTION PANELS AND SERVICE SWITCHGEAR TO ACCOMMODATE 600/347 VOLT AND 120/208V, 3 PHASE, 4 WIRE SYSTEMS AS INDICATED ON THE DRAWINGS.
- PANELBOARDS ARE TO BE 42 CIRCUIT, 225 AMP UNLESS OTHERWISE INDICATED. BREAKERS ARE TO BE BOLT ON STYLE, 10,000 AMP INTERRUPTING CAPACITY BREAKERS AS REQUIRED FOR SUPPLY OF
- THE IDENTIFIED LOADS, PLUS SPARE 15A SINGLE POLE BREAKERS AS INDICATED. 3. PROVIDE TYPEWRITTEN PANEL DIRECTORIES FOR ALL PANELBOARDS.
- 4. PRE-APPROVED MANUFACTURERS ARE: EATON, SIEMENS AND SQUARE-D.

16.10 WIRING DEVICES

- 1. ALL WIRING DEVICES ARE TO BE "SPECIFICATION GRADE" UNLESS OTHERWISE INDICATED. PRE-APPROVED MANUFACTURERS ARE: ARROW-HART, BRYANT, HUBBELL, LEVITON AND PASS-SEYMOUR. DEVICES IN FLUOROSCOPY ROOM TO BE HOSPITAL GRADE WHERE NOTED 'HG' AND WIRING TO BE IN ACCORDANCE WITH CEC SECTION 24.
- RECEPTACLES ARE TO SPECIFICATION GRADE, HAVE IMPACT RESISTANT NYLON FACE, FOUR SIDE WIRING SCREWS, TRIPLE WIPE POWER CONTACTS AND RIVETED GROUNDING CONTACTS. CSA TYPE
- 3. LIGHT SWITCHES ARE TO HAVE HEAVY DUTY MOUNTING STRAP, SIDE WIRING SCREWS, ONE PIECE NYLON TOGGLE AND BE 15A, 125V RATED.
- PROVIDE BRUSHED STAINLESS STEEL COVERPLATES FOR ALL WIRING DEVICES. USE SHEET STEEL UTILITY BOX COVER FOR ALL WIRING DEVICES INSTALLED IN SURFACE MOUNTED UTILITY BOXES.
- ALL OUTLET BOXES INSTALLED IN STEEL STUD WALLS ARE TO HAVE AN OUTLET BOX SUPPORT INSTALLED ON THE NON-STUD SIDE OF THE BOX.
- WHEREVER POSSIBLE, MOUNT EQUIPMENT IN A STRAIGHT LINE AT A UNIFORM HEIGHT, COORDINATED WITH OTHER EQUIPMENT AND MATERIALS. RECEPTACLES: 450mm ABOVE FLOOR OR AS INDICATED
- SWITCHES: 1150mm ABOVE FLOOR OR AS INDICATED.

16.12 COMMUNICATION WIRING

- CONFIRM ALL COMMUNICATION WIRING REQUIREMENTS WITH THE OWNER PRIOR TO INSTALLATION. REQUIREMENTS SHOWN BELOW ARE FOR TENDER PURPOSES ONLY. ALL WIRING TO COMPLY WITH NORTHERN HEALTH IT STANDARDS, AVAILABLE FROM THE ENGINEER.
- 2. FOR DATA, INSTALL FOUR TWISTED PAIR, 24 GAUGE, FT6 RATED IN PLENUM AREAS, SOLID COPPER WIRE, CATEGORY 6 INSULATED & UNSHIELDED, FROM THE RACK MOUNTED PATCH PANEL TO THE MODULAR JACK AT EACH OUTLET. CABLE IS TO BE BLUE JACKETED.
- THE MODULAR JACK AT EACH OUTLET. CABLE IS TO BE WHITE JACKETED. 4. ALL DATA AND TELEPHONE CABLES ARE TO TERMINATE IN RESPECTIVE PATCH PANELS. PATCH

FOR TELEPHONE, INSTALL FOUR TWISTED PAIR, 24 GAUGE, FT6 RATED IN PLENUM AREAS, SOLID

COPPER WIRE, CATEGORY 6 INSULATED & UNSHIELDED, FROM THE RACK MOUNTED PATCH PANEL TO

- PANELS ARE TO BE FACTORY ASSEMBLED 24 PORT, 19" WIDE WITH, 110 STYLE IDC CONNECTORS. PROVIDE PATCH PANELS TO ACCOMMODATE ALL COMMUNICATION OUTLETS WITH 10% SPARE
- 5. ALL DATA CABLES ARE TO BE TESTED FOR CONTINUITY, CROSSTALK AND ATTENUATION AND BE WITHIN LIMITS SPECIFIED IN EIA/TIA BULLETIN TSB67. SUBMIT TEST RESULTS TO ENGINEER FOR RFVIFW.

HORIZONTAL RUNS OF COMMUNICATION CABLE ARE TO BE SUPPORTED USING CAT-5 J HOOKS

ENGINEER PRIOR TO INSTALLATION. REFER TO NHA IT STANDARDS WHEN CONFIRMING LABELING

- CONNECTED TO THE BUILDING STRUCTURE OR T-BAR CEILING SYSTEM. CADDY CABLE-CAT OR APPROVED EQUAL. USE VELCRO TY-RAPS TO NEATLY BUNDLE CABLES. PROVIDE LABELING OF OUTLETS, CABLING AND PATCH PANELS. CONFIRM METHODS WITH THE
- PROVIDE 1 METER SPARE CABLE AT WORKSTATION OUTLET AND 3 METERS SPARE CABLE AT
- COMMUNICATION BACKBOARD, FOR ALL CABLES. WHERE OUTLETS ARE INSTALLED BELOW T-BAR CEILINGS, PROVIDE 1" EMT CONDUIT FROM OUTLET LOCATION TO 6" ABOVE T-BAR CEILING.

16.13 MAINTENANCE MANUALS & GUARANTEES

- 1. PREPARE MANUALS COVERING THE OPERATING AND MAINTENANCE OF ALL ELECTRICAL EQUIPMENT INSTALLED UNDER THIS CONTRACT.
- 2. PROVIDE A DRAFT COPY TO THE ENGINEER FOR APPROVAL AT LEAST 15 DAYS BEFORE FINAL INSPECTION, PROVIDE 1 FINAL APPROVED COPY IN SUITABLY LABELED, COLOUR CODED, TAB INDEXED, 3-RING, LOOSE LEAF HARD COVERED BINDER, AND ELECTRONIC COPY IN SINGLE PDF FILE FORMAT.
- 3. THE MANUALS ARE TO CONTAIN THE FOLLOWING INFORMATION, ORGANIZED FOR EASY
- INTERPRETATION AND REFERENCE BY OPERATING PERSONNEL GENERAL DESCRIPTION OF EACH SYSTEM STATING FUNCTION OF EQUIPMENT. COPIES OF APPROVED SHOP DRAWINGS AND AS-BUILT DRAWINGS
- MANUFACTURERS MAINTENANCE BROCHURES FOR EACH ITEM, INCLUDING WIRING DIAGRAMS AND PARTS LISTS. CLEARLY INDICATE THE SPECIFIC MODEL, OPTIONS, FEATURES AND MODE OF CONTROL ON ALL
- NORMAL MAINTENANCE SCHEDULE AND TROUBLE SHOOTING INFORMATION. COPIES OF THE ULC FIRE STOPPING INSTALLATION SHEETS FOR EACH DIFFERENT METHOD USED. - DESCRIPTION OF AUTOMATIC CONTROL SYSTEMS, INSTRUCTIONS COVERING THE OPERATION AND MAINTENANCE OF SYSTEMS AND SCHEMATIC DIAGRAMS INDICATING FINAL CONTROL
- LETTER FROM CONTRACTOR STATING THAT ALL LABOUR AND EQUIPMENT INSTALLED UNDER THE CONTRACT WILL BE WARRANTIED FOR ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION. ANY EQUIPMENT THAT FAILS DURING THIS TIME WILL BE REPAIRED/ REPLACED AT NO COST TO THE OWNER.

- INCLUDE CONTRACTOR'S NAME, ADDRESS, AND TELEPHONE NUMBER.

16.15 FIRE ALARM SYSTEM

- 1. PROVIDE ALL MATERIALS AND LABOUR TO FURNISH A COMPLETE AND FULLY OPERATIONAL FIRE ALARM SYSTEM TO CARRY OUT ALL FUNCTIONS AS DESCRIBED BELOW AND ELSEWHERE IN THE DRAWINGS AND SPECIFICATIONS.
- PROVIDE AND VERIFY CHANGES AND NEW DEVICES FOR THE FIRE ALARM SYSTEM IN ACCORDANCE WITH CAN/ULC S537. AN INDEPENDENT THIRD PARTY VERIFICATION AGENT OR FACTORY TECHNICIAN
- 3. PROVIDE A COMPLETE WIRING SYSTEM FOR ALL DEVICES SHOWN.
- INSTALL AND WIRE ALL EQUIPMENT AND ACCESSORIES AS DESCRIBED HEREIN AND MUST COMPLY WITH CAN/ULC S524, BC BUILDING CODE AND CANADIAN ELECTRICAL CODE.
- 5. ALL WIRING IS TO BE 18 AWG FAS CABLE, 105°C, RED JACKET IN EMT CONDUIT, OR ARMOURED CABLE, CABLE TO BE RED JACKETED SECUREX FIRE ALARM CABLE.
- PROVIDE THE SERVICES OF AN AUTHORIZED SIMPLEX FIRE ALARM TECHNICIAN TO PROGRAM AND VERIFY THE NEW OR RELOCATED DEVICES. FIRE ALARM TECHNICIAN TO REPROGRAM SYSTEM WITH NEW ROOM DESCRIPTIONS AND VOICE MESSAGES, AND UPDATE THE GRAPHICS IN THE FIRE ALARM COMPUTER SYSTEM. AUTOCAD FLOOR PLANS WILL BE PROVIDED BY THE ENGINEER IF REQUIRED.
- 7. FIRE ALARM TECHNICIAN TO REPROGRAM VOICE MESSAGES FOR THE NURSE CALL CODE BLUE AND CODE WHITE CALLS.
- 8. PROVIDE COMPLETE VERIFICATION REPORT, INCLUDING SCREEN SHOTS OF UPDATED GRAPHICS.

16.16 NURSE CALL SYSTEM

- PROVIDE ALL MATERIALS AND LABOUR TO FURNISH A COMPLETE AND FULLY OPERATIONAL NURSE CALL SYSTEM TO CARRY OUT ALL FUNCTIONS AS DESCRIBED BELOW AND ELSEWHERE IN THE DRAWINGS AND SPECIFICATIONS.
- 2. PROVIDE A COMPLETE WIRING SYSTEM FOR ALL DEVICES SHOWN.
- 3. ALL WIRING IS TO BE CAT5E CABLE, JACKET COLOUR TO MATCH EXISTING.
- PROVIDE THE SERVICES OF AN AUTHORIZED RAULAND NURSE CALL TECHNICIAN TO PROGRAM AND VERIFY THE NEW OR RELOCATED DEVICES. RAULAND TECHNICIAN TO REPROGRAM SYSTEM WITH NEW ROOM DESCRIPTIONS AND COORDINATE WITH FIRE ALARM TECHNICIAN FOR UPDATED VOICE MESSAGES FOR CODE BLUE AND CODE WHITE CALLS.
- 5. PROVIDE COMPLETE VERIFICATION REPORT.

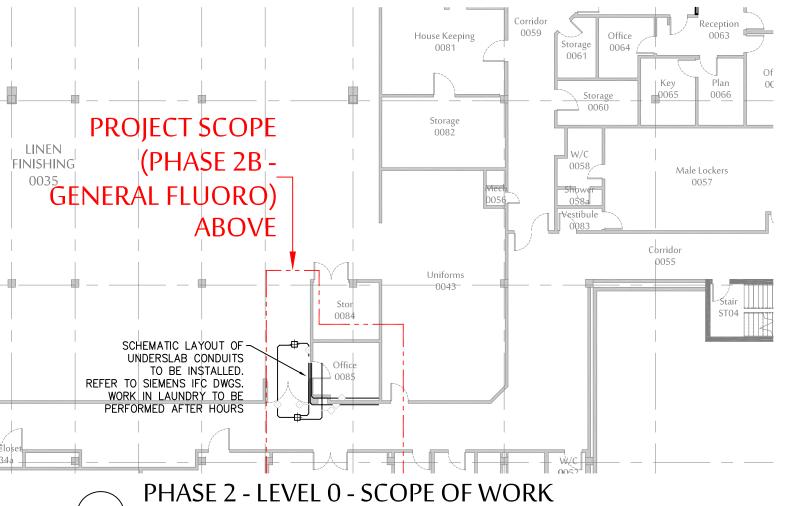
16.16 MOUNTING OF ELECTRICAL EQUIPMENT

- THE CONTRACTOR SHALL PROVIDE ALL REQUIRED MOUNTING HARDWARE, SUPPORTS, BRACKETS AND SIMILAR EQUIPMENT REQUIRED TO FIRMLY ATTACH ALL EQUIPMENT PROVIDED TO THE LOCATIONS SHOWN ON THE DRAWINGS. THE USE OF TY-WRAPS IS NOT ACCEPTABLE.
- WHEREVER POSSIBLE THE CONTRACTOR SHALL UTILIZE MANUFACTURER APPROVED AND SUPPLIED MOUNTING HARDWARE. WHERE CUSTOM FABRICATED HARDWARE IS PROVIDED BY THE CONTRACTOR. HE SHALL REVIEW THE PROPOSED INSTALLATION METHOD WITH THE ARCHITECT OR HIS REPRESENTATIVE PRIOR TO INSTALLATION, AND SHALL PROVIDE SHOP DRAWINGS WHERE REQUIRED.
- ALL MOUNTING HARDWARE SHALL SEISMICALLY RESTRAIN THE ELECTRICAL EQUIPMENT AND PREVENT INJURY TO PERSONS IN AND AROUND THE BUILDING DURING AN EARTHQUAKE.
- 4. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION, UPON REQUEST, FROM THE MANUFACTURER OR A REGISTERED PROFESSIONAL ENGINEER INDICATING THAT THE PROPOSED SEISMIC RESTRAINTS COMPLY FULLY WITH THE BC BUILDING CODE, ACCEPTED PRACTICE AND SOUND ENGINEERING

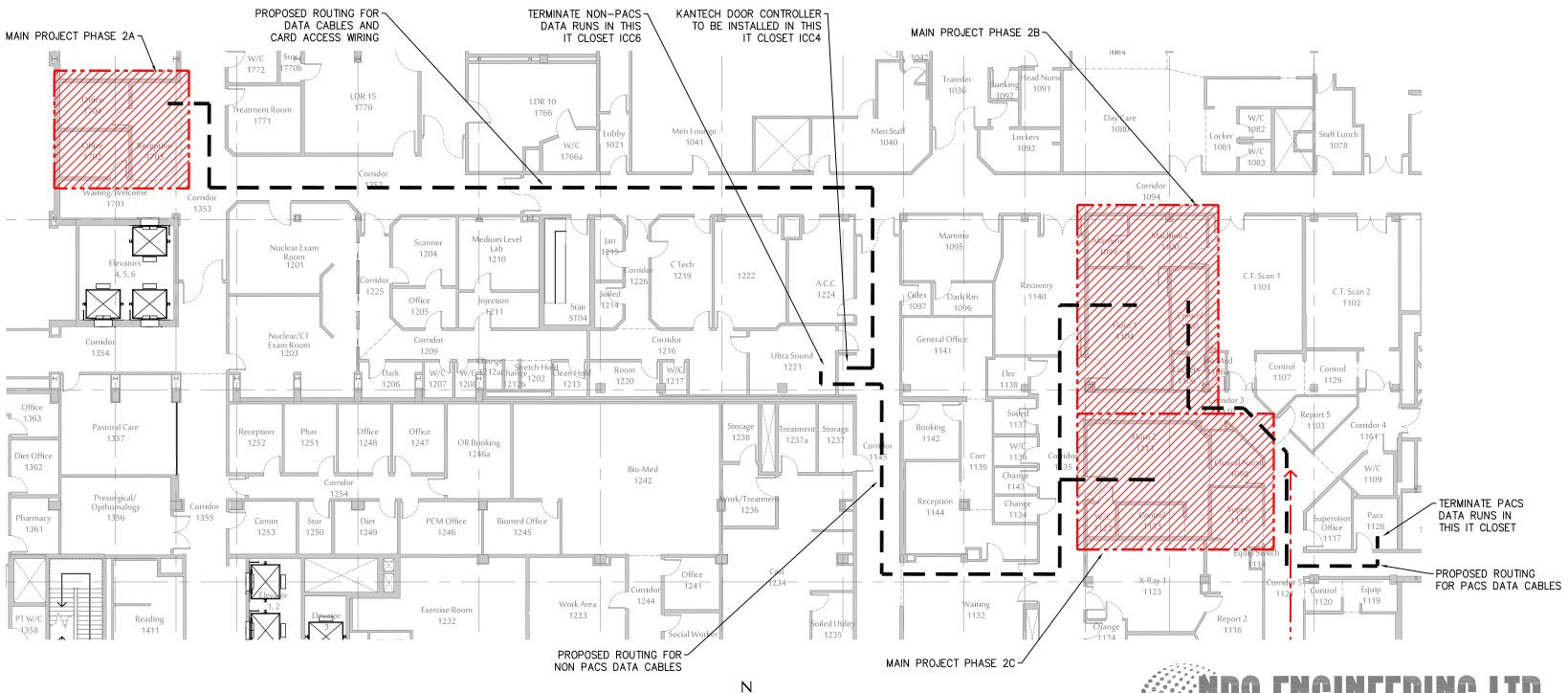
#10's+G TO #10's+G TO FMFRGFNCY NORMAL POWER PANEL POWER PANEL RRB ENCLOSURE BONDING GROUND BUS FOOD TOOOD TOOOD #10 ISO-BX WITH INDIVIDUAL INSULATED GROUND CONDUCTOR -TO EACH RECEPTACLE, LIGHT SWITCH, OR OTHER PIECE OF EQUIPMENT CONNECTED WITH BRACH CIRCUIT WIRING IN PATIENT CARE AREAS. REFER ALSO TO CEC SECTION 24 INDIVIDUAL INSULATED GROUND CONDUCTOR TO EACH MEDICAL GAS PIPE, TV OUTLET, NURSE CALL DEVICE, AND ALL OTHER METAL OBJECTS IN PATIENT CARE AREA. REFER ALSO TO CEC SECTION 24

FLUOROSCOPY/RECOVERY ROOM REFERENCE GROUND DETAILS

- 1. ALL GROUND WIRES TO BE GREEN INSULATED #10 RW90, INSTALLED IN CONDUIT WITH BRANCH CIRCUIT WIRING, OR RUN WITHIN 10/3 ISO-BX. ALL ISO-BX TO BE #10 AWG, WITH #10 AWG INSULATED GREEN GROUND CONDUCTOR. NEXANS ISO-BX XLPE OR EQUAL. ROOM REFERENCE BOXES TO BE BONDED TOGETHER WITH GREEN #6 COPPER BOND, WITH HOME RUN BACK TO PANEL.
- 2. CONNECT ALL EQUIPMENT PATIENT CARE AREA TO REFERENCE GROUND BOXES. PATIENT CARE AREA DEFINED UNDER CEC RULE AS A ZONE WITHIN 1.5 M OF THE BED WITHIN 2.3 M OF THE FLOOR. PROVIDE ONE REFERENCE GROUND BOX IN GENERAL FLUOROSCOPY ROOM AND ONE IN THE RECOVERY
- 3. ALL CIRCUITS SHALL HAVE DEDICATED NEUTRAL. NO 3-WIRE CIRCUITS PERMITTED.
- 4. A GREEN INSULATED BONDING CONDUCTOR (MINIMUM #10 AWG) TO BE INSTALLED IN EACH CONDUIT OR ISO-BX CABLE.
- 5. ALL PATIENT ROOM REFERENCE BOXES TO BE BONDED TOGETHER WITH #6 AWG COPPER BONDING CONDUCTOR, WITH HOME RUN BACK TO PANEL.
- 6. ALL PATIENT AREA RECEPTACLES TO BE TESTED TO CSA Z32 STANDARDS. PROVIDE REPORT TO ENGINEER.



SCALE: 1 = 200



PHASE 2 - LEVEL 1 - SCOPE OF WORK



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ARCHITECT:

ISSUED FOR CONSTRUCTION OCT 13, 2021 ISSUED FOR TENDER MAY 21, 2021 | S ISSUED FOR BP SUBMISSION MAY 7, 2021 ISSUED FOR DESIGN DEVELOPMENT APR 8, 2021 ISSUED FOR SCHEMATIC DESIGN REVIEW MAR 19, 2021 | I

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REPLACEMENT

PHASE 2 - GEN FLUORO **ELECTRICAL** SPEC'S - KEY PLANS

> SCALE: 1:50 DATE: APRIL 2021 PHASE 2 SY CHECKED: DC JOB No.:

NRS2674