

PROJECT: Haida Gwaii Pharmacy Renovation Project

 DATE:
 March 25th, 2025

 KRA project no.:
 2024-025

ADDENDUM NO.1

This addendum is to be read with and constitutes part of the tender document.

Instructions:

1. Amend your copy of the tender/quotation/proposal in accordance with the details below.

Details of the Addendum:

Part 1 GENERAL

1.1 General

- .1 This Addendum varies the Invitation to Tender Documents titled "HAIDA GWAII -HGH Pharmacy NAPRA Upgrade" dated March 5th, 2025.
- .2 This Addendum shall form part of the Contract Documents and is to be read, interpreted and coordinated with all other parts. The cost of all work contained herein shall be included in the Contract sum. The following revisions supersede the information contained in the original specifications and drawings issued for the above-named project.
- .3 This Addendum is eighteen (18) pages in total.

1.2 Virtual Tender Walk-Through

- .1 Attendance List See attached attendance list from virtual tender walk-through held on Tuesday, March 18th, 2025.
- .2 Virtual Meeting Recording The virtual meeting recording can be accessed at the following link: <u>https://www.dropbox.com/scl/fi/k2zpoup7199wg0uszi6kc/Haida-Gwaii-</u> <u>Pharmacy-Virtual-Contractor-Walkthrough-20250318 100205-Meeting-</u> <u>Recording.mp4?rlkey=95t9pgg636248zqzjr2hvk75s&st=ta3zq825&dl=0</u>

1.3 Modifications to the Tender Set – Architectural

<u>Drawings</u>

- .1 Sheet A3.100 Levels 00, 01, 02 and 03 Partial Floor Plans and Details Refer to attached revised drawing sheet.
 - a) **ADD** penetration through lead-lined wall assembly for new ductwork in X-Ray Room #2-202.

Specifications

- .1 Section 00 21 13 Instructions to Bidders Part 2. Pre-Bid Inquiries Refer to attached revised specification section.
 - a) **REVISE** pre-bid inquiries receiver to Bids & Tenders
 - b) **REVISE** tenders inquiries period to 5 working days before the bid closing time.
- .2 Appendix A Biological Safety Cabinet Cut Sheets
 - a) **REVISE** biological safety cabinet cut sheets

Attachments:

- Virtual Tender Walk-Through Attendance List (2025-03-18)
- Architectural drawing sheet A3.100 Levels 00, 01, 02 and 03 Partial Floor Plans and Details (2025-03-21)
- Specifications Section 00 21 13 Instructions to Bidders (2025-03-18)
- Specifications Appendix A Biological Safety Cabinet Cut Sheets



ATTENDANCE LIST

DATE: March 18th, 2025 10:00am – 11:30am PST **PROJECT:** Haida Gwaii Pharmacy Renovation Project **MEETING:** Virtual tender walk-through

Name: Jay Dupas **Company: Northern Health Authority** Email: Jay.Dupras@northernhealth.ca Name: Cameron Zaremba Company: Northern Health Authority Email: Cameron.Zaremba@northernhealth.ca Name: Cairns Ives Company: Northern Health Authority Email: Cairns.lves@northernhealth.ca Name: Renaude Laberge-Boisjoli Company: Kirsten Reite Architecture Email: renaude@krarchitecture.ca Name: Stuart Adamson Company: Rocky Point Engineering Email: stuart.adamson@rpeng.ca Name: Martin Kwok Company: Rocky Point Engineering Email: martin.kwok@rpeng.ca Name: Randa Khalil Company: AtkinsRéalis Email: Randa.Khalil@atkinsrealis.com Name: Ian Coulman **Company: Technicon Industries** Email: ian@technicon-ind.com

Name: Tim Henschel **Company: Technicon Industries** Email: tim@technicon-ind.com Name: Andrew Contumelias **Company: Technicon Industries** Email: andrew@technicon-ind.com Name: Rob Coburn **Company: Technicon Industries** Email: rob@technicon-ind.com Name: George Musterer Company: Eby Construction Group Email: George@ebycon.ca Name: Rob Roy **Company: Northern Health Authority** Email: Jay.Dupras@northernhealth.ca Name: Dan Webster Company: Vector Projects Group Email: dan@vpg.ca Name: Tomm Adams Company: Western Industrial Contractors Ltd. Email: tommadams@wicltd.com

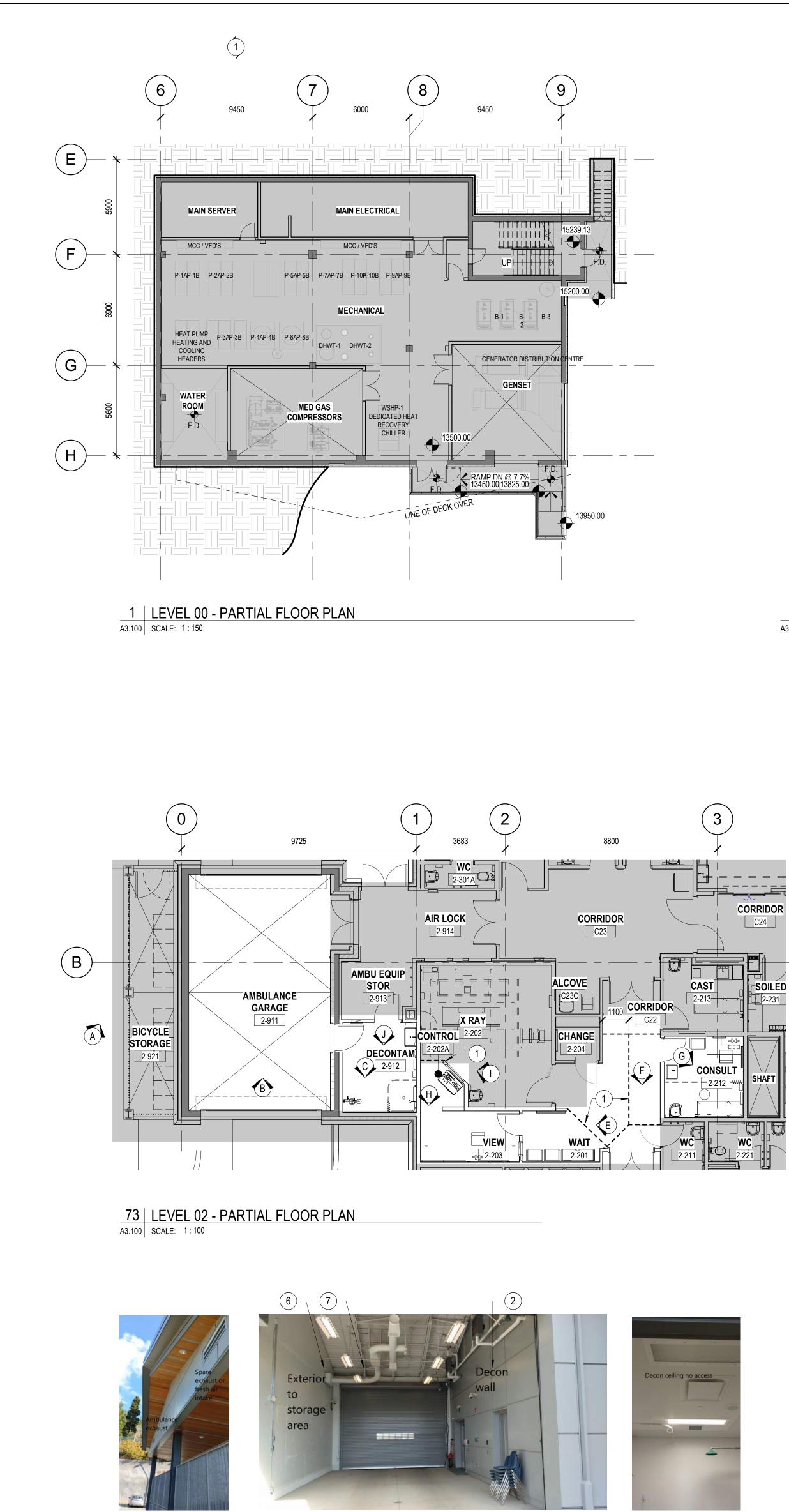
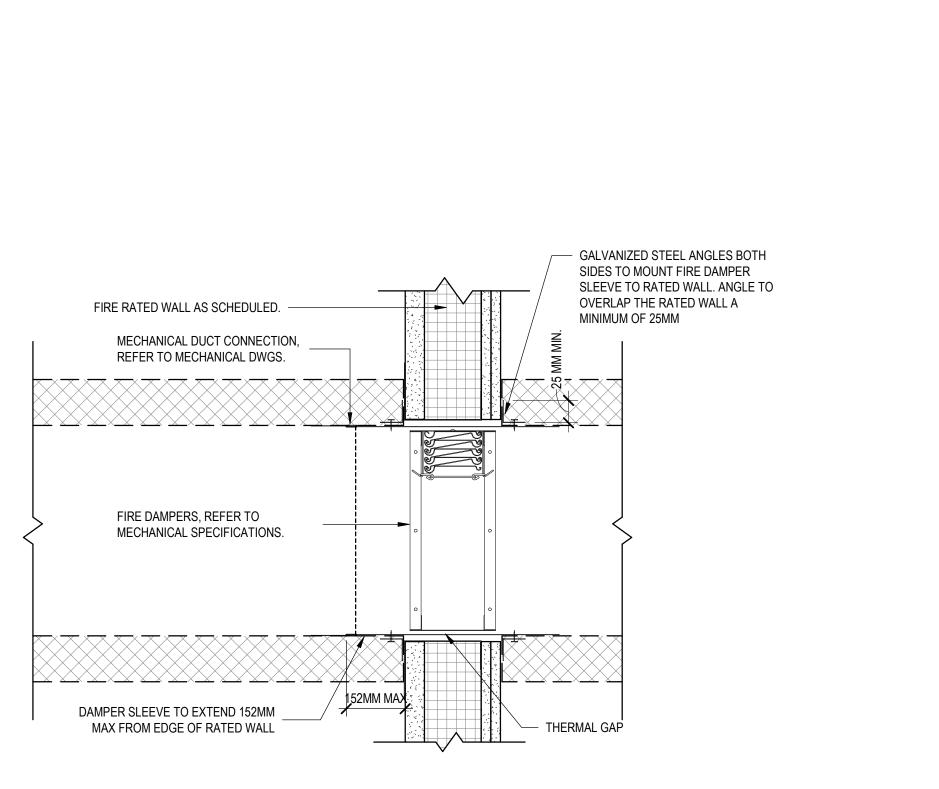
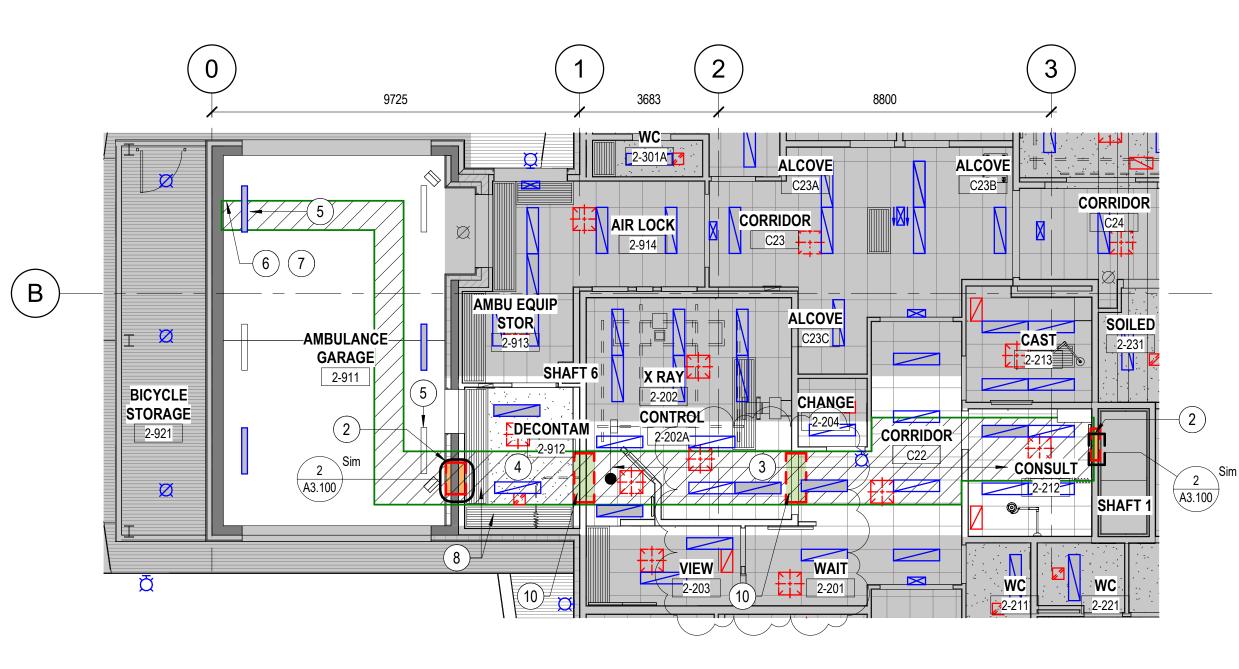


IMAGE A: BICYCLE STORAGE **IMAGE B:** AMBULANCE GARAGE

IMAGE C: DECON-TAMINATION ROOM



2 FIRE DAMPER THROUGH RATED WALL A3.100 SCALE: 1:5



4 LEVEL 02 - PARTIAL DEMOLITION REFLECTED CEILING PLAN A3.100 SCALE: 1:100



IMAGE D: PENTHOUSE WEST



IMAGE E: C22 CORRIDOR



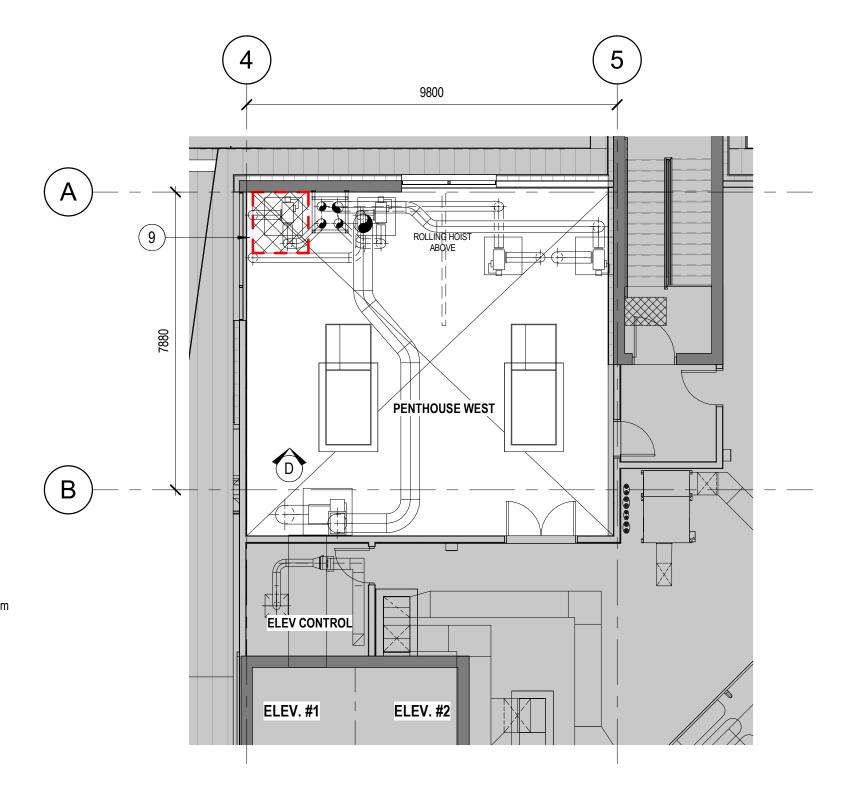
IMAGE F: C22 CORRIDOR



IMAGE G: CONSULT ROOM



KEYNOTES		PLAN LEGEND	PHASING NOTES
	IOARDING TO CORRIDORS TO SEPARATE CTION AREA FROM PUBLIC AREA AND ING AREAS TO NON FUNCTIONING AREAS.	DENOTES AREA OF WORK	1. PHASING PLANS ARE PROVIDED FOR GUIDANCE AND REFERENCE ONLY. THE ARCHITECT OR OWNER MAY REVISE THE PHASING PLAN AT ANY TIME DURING CONSTRUCTION TO MEET SITE CONDITIONS OR DUE TO IMPACT TO ADJACENT AREAS.
TO PUBLIC	SURE 1100MM MINIMUM WIDTH IS ACHIEVED SIDE OF CORRIDOR. GC TO CONFIRM PLAN WITH OWNER PRIOR TO TON.	DENOTES UNDISTURBED AREAS EXISTING WALL / STRUCTURE / COLUMNS TO B	 2. REVIEW PHASING AND HOARDING PLAN WITH OWNER AND INFECTION CONTRIDEPARTMENT PRIOR TO COMMENCEMENT OF CONSTRUCTION. 3. THE PHASING NUMBERING IS SHOWN TO INDICATE THE NUMBER OF PHASES A
SUIT EXHA	PENING THROUGH EXIST. FIRE-RATED WALL TO UST DUCTWORK. PROVIDE FIRE DAMPER AND DD EXISTING ASSEMBLIES. REFER TO CODE	RETAINED SHADED LINE DENOTES EXISTING TO REMAIN	ACCOMMODATE CHANGES IN SEQUENCING WHEN AND IF REQUIRED BY THE FACILITY. 4. THE CONTRACTOR IS REQUIRED TO WORK WITH THE FACILITY AND THEIR REPRESENTATIVES TO REVIEW THE SCHEDULING OF THE START AND FINISH O
CEILING A	CE PLANS AND MECHANICAL SPECIFICATIONS. SSEMBLIES INCL. CEILING-MOUNTED FIXTURES SSORIES TO BE REMOVED TO SUIT DUCTWORK	DASHED LINE DENOTES EXISTING TO BE DEMO	LISHED EACH PHASE, AS THE FACILITY WILL BE COORDINATING THE SERVICES OF HOUSEKEEPING AND MOVING SERVICES AT EACH PHASE.
(3) SCOPE. RE TILES AND	FER TO MECHANICAL AND ELECTRICAL. SET FIXTURES ASIDE FOR REINSTALLATION. ANY DAMAGED TILES & GRIDS.	 PROPOSED HOARDING EXTENT. CONFIRM HOA REQUIREMENTS WITH NHA AHEAD OF CONSTR START. ENSURE 1100 mm CLEARANCE IS MAINT IN CORRIDOR 	CONTROL GUIDELINES AND REQUIREMENTS. MAINTAIN 1100MM MINIMUM CLEARANCE IN CORRIDORS AT ALL TIMES. 6. PROTECT ALL ADJACENT AREAS DURING CONSTRUCTION TO PREVENT DAMA 7. REFER TO ELECTRICAL, MECHANICAL, AND STRUCTURAL FOR ADDITIONAL SC
	GWB CEILING TO BE DEMOLISHED TO SUIT RK SCOPE. SET ASIDE ALL EXISTING FIXTURES STALLATION. REFER TO MECHANICAL AND CAL.	DENOTES EXTENT OF EXISITING CEILING TILES CEILING FIXTURES TO BE DEMOLISHED AND REINSTATED TO SUIT NEW DUCTWORK INSTAL	OUTSIDE THE RENOVATION AREA. REFER TO MECHANICAL AND ELECTRICAL
(5) BE REMO	LIGHTING FIXTURE & SEISMIC RESTRAINT TO VED TO SUIT DUCTWORK SCOPE. SET ASIDE STALLATION. REFER TO ELECTRICAL.	EXISTING DOOR TO REMAIN	 HOARDING ACCESS DOOR LOCKSET TO BE KEYED AND COORDINATED WITH FACILITY MASTER KEY. PROVIDE HOARDING IN ALL CORRIDORS. PROVIDE SOLID HOARDING TO UNDERSIDE OF EXISTING CEILING AND POLY F
	CONNECTION TO EXISTING EXHAUST LOUVER.) MECHANICAL.		CEILING TO UNDERSIDE OF STRUCTURE ABOVE THE CEILING SPACE. PROVIDE ANTE ROOMS, STICKY MATS AND USE AIR SCRUBBERS, UNLESS OTHERWISE REQUIRED BY INFECTION CONTROL PRACTITIONER AND APPROVED BY NHA.
(7) PROVIDES	JNIT WITHIN OPEN WEB STEEL JOISTS. SEISMIC RESTRAINTS PAINTED TO MATCH EXPOSED SLAB. REFER TO MECHANICAL.	# PHOTO LOCATION REFERENCE	GENERAL ACCESS NOTES
EXISTING F	RADIANT PANEL TO BE REMOVED TO SUIT & SCOPE. SET ASIDE FOR REINSTALLATION TALL. REFER TO MECHANICAL.		 HOSPITAL WASHROOMS ARE NOT AVAILABLE FOR TRADES USE DURING CONSTRUCTION UNLESS AUTHORIZED BY NHA. TRADES MUST ADHERE TO INFECTION CONTROL PRACTICES SET BY HEALTH AUTHORITY; MUST BE CLEAN (NOT DIRTY/DUSTY) WHEN MOVING THROUGH SP OUTSIDE OF PROJECT SCOPE. REFER TO SPECIFICATIONS.
	FAN ON EXISTING HOUSEKEEPING PAD. MECHANICAL.		 3. HOURS OF WORK: MOST WORKS CAN BE CARRIED OUT DURING NORMAL HOURS (07:00 – 16:00, ALL AFTER-HOURS WORK IS TO BE COORDINATED AND APPROVED BY SITE FACILITIES MANAGEMENT STAFF AND THE NHA PROJECT MANAGER.
(10) EXHAUST MECHANI	DPENING THROUGH LED-LINED WALL TO SUIT DUCTWORK. SEAL AND/OR WRAP SERVICES, CAL PENETRATION AND INSULATION WITH LEAD REQUIRED TO MAINTAIN SAFETY STANDARDS.		 ALL NOISY WORK AND/OR WORKS CREATING VIBRATION TO BE COORDINATE ADVANCE WITH THE OWNER. CONTRACTOR SHALL PROVIDE MINIMUM 4 WEEKS NOTIFICATION PRIOR TO MECHANICAL / ELECTRICAL SHUTDOWNS. SHUTDOWN REQUEST FORMS ARE BE SUBMITTED TO THE NHA PROJECT MANAGER AT THIS TIME TO ALLOW FO ADEQUATE COORDINATION. FINAL DATES FOR SHUTDOWNS ARE AT THE DISCRETION OF FM STAFF AND MAY BE ADJUSTED DEPENDING ON STAFFING AVAILABILITY/WORKLOAD.



5 LEVEL 03 - MECHANICAL PENTHOUSE PARTIAL FLOOR PLAN A3.100 SCALE: 1:100

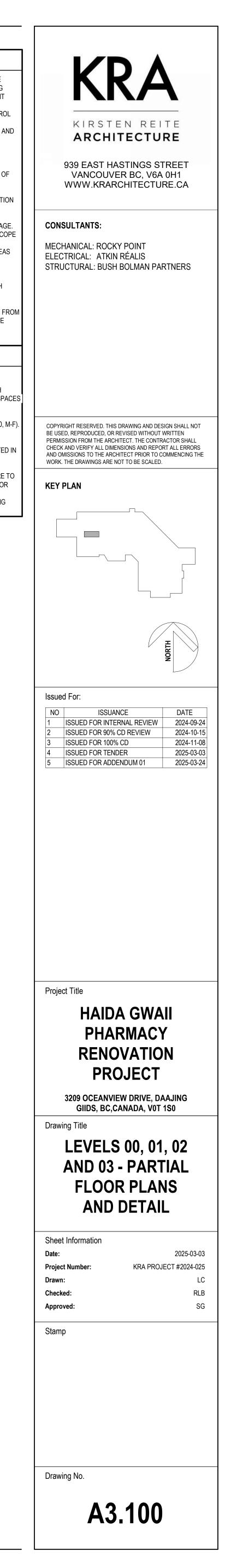
IMAGE H: CONTROL ROOM



IMAGE I: CONTROL ROOM



IMAGE J: DECONTAMINATION ROOM





00 21 13 INSTRUCTIONS TO BIDDERS

1. DOCUMENTS

1.1 DOCUMENTS

- .1 Carefully examine the following information. Failure to follow these instructions may result in bid disgualification.
- .2 Project information:

.1	Project / Contract Name:	
.2	Project / Contract No.:	
.3	Owner:	
.4	Project Address:	

.3 Examine the Bid Documents and promptly notify the person designated to receive inquiries of any perceived errors, omissions, conflicts or discrepancies in the Bid Documents.

1.2 BID DOCUMENTS

- (a) BCDC 2 2022, Part 1.1 Division 00 11 13 Advertisement for Bids;
- (b) BCDC 2 2022, Part 1.1 Division 00 21 13 Instructions to Bidders; 00 73 16 Insurance Requirements; 00 73 63 Contract Security Requirements;
- (c) BCDC 2 2022, Part 1.1 Division 00 41 13 Bid Form and Appendices;
- (d) CCDC 2 2020, Articles of Agreement;
- (e) CCDC 2 2020, General Conditions;
- (f) BCDC 2 2022, Part 1.2 Supplementary Conditions;
- (g) BCDC 2 2022, Part 1.3 Project Specific Amendments, if any;
- (h) General Requirements;
- (i) Drawings and Specifications;
- (j) Appendices, if any;
- (k) Addenda.

1.3 CONTRACT DOCUMENTS

.1 Upon award of contract the Contract Documents consist only of (b) to (k) above. The Owner will prepare two copies of the Contract.



2. PRE-BID INQUIRIES



.2 Submit inquiries as early as possible in the bid period and not less than Working Days before the bid closing time. Inquiries received after this time may not receive a response.

3. PRE-BID SITE VISIT

- **1** .1 There will not be a pre bid site visit for the Project.
- **I** .2 There will be pre-bid site visit for the Project.
 - **2.1 Mandatory Site Visit**

Failure of a Bidder's representative to attend and sign the attendance sheet will cause the Bid to be rejected as non-compliant.

2.2 Optional Site Visit

A pre-bid site visit has been scheduled for local time on , 20 . Attendees will meet at

Bidders will be required to sign an attendance sheet during the meeting. Names of Bidders attending will be issued by addendum.

Issues arising from the pre-bid site visit will be addressed as required in an addendum to the Bid Documents. No meeting minutes will be issued. Bidders may not rely upon any information given verbally or otherwise at the pre-bid site visit and that is not confirmed by addendum.

Bidders visiting the Place of the Work must be accompanied at all times by a representative of the *Owner*.

Bidders visiting the Place of the Work must provide their own personal protective equipment.

1 2.3 *Owner* Requirements of Site Visit



4. PARTICULARS AFFECTING BID PRICE

4.1 MATERIALS

- .1 Establish the Bid Price based on the use of materials specified in Drawings and Specifications.
- .2 Proposed substitutions to materials specified will be considered during the bidding period only if full descriptive data are submitted in writing to the *Consultant/Owner* at least Working Days before the bid closing date.
- .3 Approved substitutions will be incorporated in the Drawings and Specifications by issuance of an Addendum.

4.2 CONDITIONS RELATED TO THE WORK

- .1 Become familiar with the site and existing conditions prior to submitting a bid and make allowances for conditions related to the Work.
- .2 Claims for an increase in Contract Price or Contract Time arising from observable conditions will be rejected by the *Owner*.

4.3 TAXES

.1 Include in bid price all taxes and customs duties in effect at the time of the bid closing, except for Value Added Taxes as defined in the CCDC standard form of contract.

5. ADDENDA

- .1 Addenda may be issued to modify the Bid Documents in response to Bidder inquiries or as may be considered necessary.
- .2 All addenda issued during the bid period will become part of the Bid Documents.
- .3 No addenda will be issued later than 3 Working Days before the bid closing time, unless absolutely necessary.
- .4 Each Bidder must ascertain before bid submission that it has received all addenda issued during the bid period and must indicate the addendum number(s) of all addenda received with their bid submission.

6. INTERPRETATION AND MODIFICATION OF BID DOCUMENTS

- 1. If an inquiry requires an interpretation or modification of the Bid Documents, the response to that inquiry will be issued in the form of a written Addendum only, to ensure that all Bidders base their bids on the same information.
- 2. Replies to inquiries or interpretations or modifications of the Bid Documents made by e-mail, verbally, or in any manner other than a written Addendum, will not form part of the Bid Documents and will not be binding.



7. BID DEPOSITORY

- **1** .1 This Project will <u>not</u> use BidCentral Online Bidding for Subcontractors ("BOBS"), a bid depository system.
- **I**.2 This Project will use BidCentral Online Bidding for Subcontractors ("BOBS"), a bid depository system.
 - **2**a. The following subcontractors must submit their bid through BOBS and provide bonding per the Rules of Procedure ("Rules"):

1 2b. The following subcontractors must submit their bid through BOBS and do not require bonding:

- .1 The date and time for the BOBS closing will be not less than two (2) working days prior to General-Contractor bid closing and up to 3:00 PM on the date specified, subject to the Rules.
- .2 The Rules of Procedure for BOBS, in force at the bid closing time, will apply.
- -.3 Subcontractors listed must submit their bids through BOBS via the specified method as defined in-BidCentral (https://www.bidcentral.ca/online-bidding-for-subcontractors/).
- -.4 Where stipulated in section 2a, BOBS requirements in the Project Documents, and as required under the Rules, the subcontractor must provide a bond. Such bond must conform to the requirements of the Rules.
- .5 General Contractors must confirm their Intention to Bid no later than two (2) Working Days (to the hour) prior to the BOBS closing date and time as per the requirements in the Rules for BOBS.
- .6 Notwithstanding the requirements for exclusion of work contained in the Rules, ensure all Work described in the Bid Documents is included in the Bid Price.
- .7 Where required by 2a and when requested to do so the Bidder agrees to provide the *Owner* with proof of Subcontractor bonds within ten (10) Working Days of Contract award.
- -8 Only General Contractor Bids which list Trade Contractor Bids submitted in accordance with the Rules of Procedure for BOBS for those sections or divisions specified, will be subject to a recommendation of acceptance from the Bid Calling Authority to the *Owner* and any others will be rejected.



Bid Submission: ONLINE BIDDING SYSTEM SUBMISSIONS

8E. COMPLETION OF BID FORM

- .1 All Bidders should familiarize themselves regarding online bidding requirements relating to system failure, functionality of the online system, Exclusion of Liability, Terms and Conditions for Online Bidding and Privacy Policy.
- .2 Bidders must complete the bid on the Bid Form included in the Online Bidding System and execute in accordance with provisions of Clause 9E of the Instructions to Bidders EXECUTION OF THE BID.
- .3 If required, state the number of weeks within which the Bidder will achieve *Ready-for-Takeover*.
- .4 If required, indicate receipt of Addenda.

9E. EXECUTION OF THE BID

.1 Execute the Bid Form by the method of the Bidder's identification and authentication as designated in the On-line Bidding System.

10E. DELIVERY OF THE BID

- .1 All Bids must be submitted through the On-line Bidding System not later than the date and time specified for the On-line Bidding System closing. Bids submitted after On-line Bidding System closing time will not be allowed by the On-line Bidding System.
- .2 The time as indicated on the On-line Bidding System will be the official time for the On-line Bidding System closing.
- .3 The *Owner* is neither liable nor responsible for costs incurred by Bidders in the preparation, submission or presentation of the bid. Bidders will be required to accept on-line the Terms and Conditions of the On-line Bidding System in Clause 13.2 Terms and Conditions.
- .4 Bid documents become the property of the Owner.

11E. BID MODIFICATION AND WITHDRAWAL

.1 Bidders must comply with procedures for electronic bid modification and withdrawal established by the online bidding system.

12E. BID SECURITY REQUIREMENTS

- .1 Digitally Verified Bid Bonds must be submitted through the online bidding system. Digitally verified Bid Bonds must be provided by the Bidder's Surety representative through one of the ebond providers assessed by the Surety Association of Canada. Bid Bonds must include a clearly legible signature and seal. The attachment by the Bidder of the Bid Bond with the on-line creates the lawful act of validating the bond by the Bidder.
- .2 Ensure the Bid Form is accompanied by a bid bond in the amount of ten percent (10%) of the Bid Price, Certified cheques and guaranteed letters of credit will **not** be accepted.
- .3 Ensure the bid bond is issued on a CCDC 220 Bid Bond form or other form approved by the Surety Association of Canada and issued by a Surety acceptable to the *Owner*.



- .4 If a successful Bidder declines to enter a Contract within the period set out in the Bid Form, or a further agreed period of time, the principal and surety will be required to pay to the *Owner* a sum equivalent to the difference between the principal's bid and the accepted bid or ten percent (10%) of the principal's bid, whichever is the lesser.
- .5 The bid bond must name the *Owner* as specified in the bid document as the oblige and must be signed, sealed, and dated by both Bidder and surety.

00 21 13 (con't) INSTRUCTION TO BIDDERS

13. BID ACCEPTANCE

- .1 The lowest or any bid will not necessarily be accepted.
- .2 The *Owner*, at its sole discretion, may accept or reject any or all of the Alternative Prices submitted in the Bid Documents. Alternative Prices will not be considered in determining the successful Bidder.
- .3 Alternative Prices listed in the Bid Documents will remain open for acceptance by the *Owner* for the period stated in the Bid Documents, from the time and date specified for closing of bids.
- .4 Bids which contain qualifying conditions or otherwise fail to conform to these Instructions to Bidders may, at the sole discretion of the *Owner*, be disqualified or rejected.
- .5 The *Owner* retains the separate right to waive minor irregularities in the Bid Form if such irregularities have not provided the Bidder with a competitive advantage.
- .6 In the event a single bid is received, the *Owner* may open the bid privately without reference to the Bidder. If the bid is opened and it is in excess of the *Owner*'s budget, the *Owner* reserves the right to re-issue the Bid Documents for new public re-bid without revisions being made to the Bid Documents and without disclosing the single Bid Price. The *Owner* reserves the right to accept or reject a single bid.
- .7 The *Owner* has the right to enter into over-budget negotiations with the lowest compliant Bidder or a single Bidder, without cancellation of all bids or consideration to other Bidders, and to require that Bidder to negotiate with Subcontractors named on their Bid Form.

14. BID ACCEPTANCE PERIOD

- .1 Bids will remain open to acceptance by the *Owner* and will be irrevocable until another Bidder enters into a contract with the *Owner* for performance of the Work or until expiry of the bid acceptance period stated in the Bid Form, whichever occurs first.
- .2 After bid closing and before expiry of the bid acceptance period stated in the Bid Form, the *Owner* may request all Bidders to agree to an extension of the originally specified bid acceptance period. In such case the bid acceptance period will be extended subject to the Bidder, whose bid the *Owner* wishes to accept, having agreed in writing to the extension.
- .3 Where the bidding for procurement of construction services for this project has a method where unofficial bid results are made available publicly after the bid closing time, and before expiry of the bid acceptance period stated in the Bid Form, the *Owner* may request all Bidders to agree to an extension of the originally specified bid acceptance period. In such case, the bid acceptance period will be extended, subject to the lowest compliant Bidder having agreed in writing to the extension.



15. WORKSAFE BC LETTER

.1 After bid closing, upon request, the lowest compliant Bidder agrees to provide a WORKSAFE BC Letter of Good Standing within forty-eight (48) hours.

END OF SECTION



Environments For Science™

PRODUCT SPECIFICATIONS

BioChemGARD[®] e³

MODELS BCG401, BCG601 BCG401-INT, BCG601-INT



SPECIFICATIONS	BCC	5 401	BCG 601	
Exterior Dimensions	•			
Nominal Size	4' [1.	20 m]	6' [1.	80 m]
		x 33 5/8"		x 33 5/8"
Foot Print (w x f-b)	[1,369 mm	x 854 mm]	[1,978 mm x 854 mm]	
	86" to	94 1/2"	86" to 94 1/2"	
Height Range	[2,184 mm :	x 2,400 mm]	[2,184 mm x 2,400 mm]	
Weights				
Cabinet Weight	720 lbs	[327 Kg]	850 lbs [386 Kg]	
Shipping Weight	850 lbs	[386 Kg]	1,020 lbs [463 Kg]	
Low Statio Processo Vit (Option)	Add 20 lb	os [9.1 Kg]	Add 50 lbs [22.7 Kg]	
Low Static Pressure Kit (Option)	to cabin	et weight	to cabin	et weight
Interior Dimensions				
Interior Dimensions (marsh mh)	46" x 22 7/8" x 27 5/8"		70" x 22 7/8" x 27 5/8"	
Interior Dimensions (w x f-b x h)	[1,168 mm x 58	51 mm x 701 mm]	[1,778 mm x 581 mm x 701 mm	
Useable Workspace (w x f-b x h)	44 5/8" x 1	8" x 27 5/8"	68 5/8" x 17	5/8" x 27 5/8"
-		7 mm x 701 mm]	[1,742 mm x 443	8 mm x 701 mm
Exhaust and Static Pressure Requirement	ts ^{1 & 2}			
8" [203 mm] working access opening				
Concurrent Balance Value	664	CFM	993 CFM	
@ 40 fpm [0.2 m/s] downflow	[313	3 1/s]	[469 l/s]	
Erchaust Dust Statia Drassure	Cton doud	Low Static	Cton doud	Low Static
Exhaust Duct Static Pressure	Standard	Option	Standard	Option
8" Exhaust Duct Diameter	-1.9 "W.G.	-1.7 "W.G.	-2.3 "W.G.	-2.0 "W.G.
8 Exhaust Duct Diameter	[-473 Pa]	[-423 Pa]	[-573 Pa]	[-498 Pa]
10" Exhaust Duct Diameter	-1.7 "W.G.	-1.5 "W.G.	-1.8 "W.G.	-1.6 "W.G.
10 Exhaust Duct Diameter	[-423 Pa]	[-374 Pa]	[-448 Pa]	[-399 Pa]
12" Exhaust Duct Diameter	-1.6 "W.G.	-1.4 "W.G.	-1.7 "W.G.	-1.5 "W.G.
	[-399 Pa]	[-349Pa]	[-423 Pa]	[-374 Pa]
10" [254 mm] working access opening				
Concurrent Balance Value		CFM	1,158 CFM	
@ 40 fpm [0.2 m/s] downflow	[362	2 1/s]	[547 l/s]	
Exhaust Duct Static Pressure	Standard	Low Static	Standard	Low Static
		Option		Option
8" Exhaust Duct Diameter	-2.0 "W.G.	TBD	-2.3 "W.G.	TBD
	[-498 Pa]		[-573 Pa]	
10" Exhaust Duct Diameter	-1.8 "W.G.	TBD	-2.0 "W.G.	TBD
	[-448 Pa]		[-498 Pa]	
12" Exhaust Duct Diameter	-1.7 "W.G. [-423 Pa]	TBD	-2.5 "W.G. [-623 Pa]	TBD
12" [205]			[-025 Fa]	
12" [305 mm] working access opening Concurrent Balance Value	<u> </u>	CEM	1 420	CEM
@ 50 fpm[0.25 m/s] downflow	850 CFM [401 l/s]		1,430 CFM [675 1/s]	
	[40.	Low Static	[07.	Low Static
Exhaust Duct Static Pressure	Standard	Option	Standard	Option
	-2.8 "W.G.	· · ·		•
8" Exhaust Duct Diameter	-2.8 W.G. [-697 Pa]	TBD	TBD	TBD
	-2.5 "W.G.		-2.7 "W.G.	
10" Exhaust Duct Diameter	[-623 Pa]	TBD	-2.7 w.G. [-673 Pa]	TBD
	-2.4 "W.G.		-2.5 "W.G.	
12" Exhaust Duct Diameter	2.7 W.U.	TBD	2.J 11.U.	TBD

ReadySafe Mode Exhaust and Static			1	
Concurrent Balance Value	300 CFM [142 L/Sec]			CFM L/Sec]
	[142]	Low Static	[142]	L/Secj Low Static
Exhaust Duct Static Pressure ³	Standard	Option	Standard	Option
8" Exhaust Duct Diameter	-0.35 "W.G. [-87 Pa]	-0.16 "W.G. [-40 Pa]	-0.18 "W.G. [-45 Pa]	-0.16 "W.G. [-40 Pa]
10" Exhaust Duct Diameter	-0.30 "W.G. [-75 Pa]	-0.15 "W.G. [-37 Pa]	-0.16 "W.G. [-40 Pa]	-0.15 "W.G. [-37 Pa]
12" Exhaust Duct Diameter	-0.29 "W.G. [-72 Pa]	-0.14 "W.G. [-35 Pa]	-0.16 "W.G. [-40 Pa]	-0.14 "W.G. [-35 Pa]
Performance	[-721a]	[-55 I d]	[-401 a]	[-55 I d]
Working Access Opening				
Area	25	6 ft^2	3.89 ft ²	
Height		03 mm]		03 mm]
Maximum Access Opening Height	0 [2		0 [2	0.5 mmj
Area	63	9 ft^2	0.7	2 ft^2
Height	20" [50			
Cabinet Air Recirculation/Exhaust	20 [5		20" [508 mm]	
Noise per NSF ANSI			e B2 Compliant	
with exhaust running	59 0	lBA	60 dBA	
Average Intake Airflow Velocity		105 FD	/[[0.5 m/s]	
Average Down Flow Velocity	105 FPM [0.5 m/s]			
	40 FPM [0.2 m/s] Minimum 100 foot candles [1,076 lux] average at work surface		work antess	
Lighting			J70 lux] average at	work surface
Typical Motor/Blower Reserve				0
100 V		0%	-	0%
115 V	420%			0%
220 V	100% 100%		0%	
Plumbing Service	- 1			
	3/8" OD Tube f	0	Plumbing service is 7 kPa]	rated for 30 psi
Electrical				
Service Requirements				
100 V	100 V AC, 2	0 A, 50/60 Hz, 1Ø	, 16 A maximum u	seable current
115 V	115 V AC,	20 A, 60 Hz, 1Ø,	16 A maximum use	able current
220 V	220 V AC, 1	6 A, 50/60 Hz, 1Ø	, 13 A maximum u	seable current
Circuit Protection				
100/115 V	Internal	ly protected with a	250 V, 20 A circui	t breaker
220 V	Internal	ly protected with a	250 V, 16 A circui	t breaker
Power Cord		<u> </u>		
100/115 V	One 14' [4.27	m] power cord wit	h 20-amp plug, typ	e NEMA 5-20P
220 V	One 4 m power cord with listed plug for the destination country			
Outlets				
100 V	Two NEMA 5-15 duplex outlets. The outlets on this circuit are protected by a self-resetting circuit breaker. This breaker allows a total of 7 A on all outlets.			
115 V	Two NEMA 5/15 GFCI duplex outlets. The outlets on this circuit are protected by a self-resetting circuit breaker. This breaker allows a total of 7 A on all outlets.			
220 V	Two 220 V AC, outlets listed for use in the destination country. The outlets on this circuit are protected by self-resetting circuit breakers. The			

	breakers allow a total of 7 A on all outlets.		
Typical Electrical Operation			
Motor Current			
100 V	0.7 A	0.9 A	
115 V	0.6 A	0.8 A	
220 V	0.3 A	0.4 A	
Operating Current			
100 V	1.1 A	1.5 A	
115 V	1.0 A	1.4 A	
220 V	0.5 A	0.7 A	
Power Consumption			
100 V	110 W	150 W	
115 V	115 W	161 W	
220 V	110 W	154 W	
Heat Generation (calculated)			
100 V	375 Btu/Hr	512 Btu/Hr	
115 V	392 Btu/Hr	549 Btu/Hr	
220 V	375 Btu/Hr	526 Btu/Hr	
ReadySAFE TM Current			
100 V	0.2 A	0.2 A	
115 V	0.3 A	0.3 A	
220 V	0.1 A	0.1 A	
ReadySAFE TM Power			
Consumption			
100 V	20.0 W	20.0 W	
115 V	34.5 W	34.5 W	
220 V	22.0 W	22.0 W	
ReadySAFE TM Heat Generation			
100 V	68 Btu/Hr	68 Btu/Hr	
115 V	118 Btu/Hr	118 Btu/Hr	
220 V	75 Btu/Hr	75 Btu/Hr	
Environmental Conditions			
Use	Indoors		
Altitude	Up to 6,561' [2,000 meters]		
Temperature Range	From 41°F [5°C] to 104°F [40°C]		
Relative Humidity	Maximum 80% for temperatures up to 50% at 104°F [40°C]	to 88°F [31°C] decreasing linearly	
Voltage	Main supply voltage $\pm 10\%$ V AC		
	Over voltage according to Installation Category (OVERVOLTAGE		
Transient	CATEGORIES) II per UL 61010-1, 2 nd Edition		
Pollution Degree	2		
Ergonomics			
View Screen	Sloped 10° for worker comfort		
Height	Adjustable stand for work surface elevations: minimum of $29^{5}/_{8}$ " [752 mm] to $32^{1}/_{8}$ " [816 mm] and maximum of $35^{5}/_{8}$ " [905 mm] to $38^{1}/_{8}$ " [968 mm]		
Armrest	Padded with EPDM sponge pad		
Knee Room	$13^{5}/_{8}$ " [346 mm] in sitting position		
Cabinet Controls	Within easy reach sitting or standing		
Materials of Construction			
Down Flow Diffuser	18 gauge, 304 Stainless Steel		
Work Chamber Weldment	16 gauge, 304 Stainless Steel		

Work Surface (Including Supports)	16 gauge, 304 Stainless Steel		
All Exterior Panels	18 and 16 gauge, Carbon Steel		
Positive Pressure Supply Plenum	18 and 16 gauge, Carbon Steel		
Exhaust Plenum/Transition	18 and 16 gauge, Carbon Steel		
Stand Frame and Supports	12 gauge, Carbon Steel		
Armrest	16 gauge, 304 Stainless Steel with EPDM sponge that is resistant to UV light and most chemicals		
View Screen	$\frac{1}{4}$ [6.35 mm] thick safety plate glass with Stainless Steel edge trims		
Filters	HEPA filter media with aluminum frame		
Standard Features	·		
Armrest	Padded with EPDM sponge pad		
Auxiliary Outlets	Located on the left and right sidewalls, 7A total all outlets		
Cabinet Side-Walls	Under negative pressure		
Cable Port	Located on the right side of unit, provides easy cable access		
Down Flow Diffuser	Located below supply filter providing unidirectional air flow and a higher down flow air velocity behind the view screen		
Drain Pan	With drain valve featuring secure-able handle.		
Exhaust Alarm	Airflow monitor (AFM) provides audible and visual alarm of unsafe exhaust airflow conditions. The supply blower is interlocked to turn off during this alarm condition in both normal and ReadySafe TM modes.		
Exhaust Collar	12" [305 mm] diameter		
Filters			
Exhaust	Front loading HEPA 99.99% filtration at 0.3 microns		
Supply	Front loading HEPA 99.99% filtration at 0.3 microns		
High Velocity Return Air Slots	Located at the top of view screen and each end of access opening providing additional product and personnel protection		
Lighting	T5 fluorescent The UV light and fluorescent light are interlocked to prevent simultaneous operation		
Maintenance Access	Electrical components, lamp, blower, and supply filter easily accessible from the front of the cabinet		
Membrane Switch Control Pad	Low voltage push button control of lights, blower, UV and outlets		
Motor Speed Control	StediFLOW TM		
Plumbing	One petcock and one plug located on the right side		
ReadySafe TM Mode	Reduces the total airflow and energy consumption when the cabinet is not in use. The view screen is closed and the lights are off during this mode. External output connection provided for customer interface		
Sash Position Alarm	Audible and visual alarm warning of unsafe view screen opening above and below marked working access height		
Supply Plenum	Provides uniform airflow to supply filter		
Telescoping Air Plenum	Applies clamping force to full perimeter of supply and exhaust filter		
Timers	15 minute and 1 hour increment programming for fluorescent lights, UV lights, and outlets		
View Screen	Counter balanced vertically sliding, opens to 20" for moving large items in and out prior to working in the cabinet		
Work Surface	One-piece stainless steel work surface		
Optional Features ⁴			
Auxiliary Wiring	Cabinet Monitor Wiring Package to monitor additional conditions in the unit		

Cable Ports	Cable Ports Available on either side of unit, provides easy cable access		
Enhanced Electrical System	Digital display touch pad control panel		
Floor and Wall Anchors	Non-PE approved		
Fume Hood Package	UL 1805 compliant. No UV light and outlets external to work area. Externally operated petcocks. Application needs to be approved by		
	customers facility safety personnel		
IV Bar	Fixed location inside work area		
Low Exhaust Static Pressure Duct	Reduces the facility exhaust static pressure		
Plastic Storage Bins	Add up to maximum quantity of 5		
Plumbing			
Alternate Configuration	Plumbing connections can be made out of the back or to the top of either side panel		
Additional Fixtures	Specify label and location(s)		
Alternate Fixtures	Needle valves and greaseless needle valves Stainless steel ball valves and needle valves		
Material			
Black Iron	Not NSF or UL Listed		
Stainless Steel	CE mark		
Pressure Monitoring	Digital Pressure Monitor with integrated alarm function		
Stand with Casters	5" Diameter Casters With Locks		
ULPA filters	Filtration effectivity of 99.999% for removal of most penetrating particle size (mpps) 0.1 to 0.2 microns in size.		
UV Light	Operational only when viewscreen is closed. The UV light and fluorescent light are interlocked to prevent simultaneous operation.		
100V, 50/60Hz	Not NSF and UL Listed		
220V, 50/60 Hz	CE mark		
10" [254 mm] and 12" [305 mm] working access opening	Not NSF listed		
Standards and Codes			
NSF/ANSI 49 for Class II,			
Type B2 cabinet			
UL 61010-1, 2 nd Edition			
CAN/CSA-C22.2 No. 61010-1, 2 nd			
Edition			
UL 1805 (U.S. Only)	Listing for Fume Hood package		
ANSI/ASHRAE 110	Listing for Fume Hood package		
CE Compliance	To be done		
ISO Class 5 Work Area Cleanliness			
Cleanability			
Interior Surfaces	Coved corners adjoin the work area to the rear and side walls for smooth interior surfaces		
Exterior Surfaces	PermaWhite TM powder coated finish		
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¹Exhaust flow rate is concurrence balance volume as defined in NSF/ANSI 49. ²Listed pressures include 0.7" W.C. [174 Pa] for filter loading over time per NSF/ANSI 49. ³Based on clean filters. ⁴NSF and UL Listed unless otherwise noted.

