March 2, 2021

British Columbia Institute of Technology
1126 Barclay Street
Vancouver, British Columbia, V6E 1H1

Attention: Anne Matheson

Re: Job #276537 – Return to Operations Risk Assessment – Trade Shops – REVISED March 2, 2021
BCIT, 2700 Willingdon Avenue, Burnaby, British Columbia

Pinchin Ltd. (Pinchin) is pleased to provide the attached Return to Operations Risk Assessment – Trade Shops, for the campuses and programs operated by the British Columbia Institute of Technology (BCIT; "Client"). This package is a revised version of that previously provided to the Client, dated September 2, 2020.

The Risk Matrix is a form of qualitative public health risk assessment, which can be used to help identify the building occupants and activities that present the greatest risk of SARS-CoV-2 virus spread, aid the communication of these risks and inform the selection of management measures, during various stages of the return to operations, following a pandemic-induced mandatory shutdown.

The objective of each Risk Matrix is to identify the main sources of risk associated with the transmission of SARS-CoV-2, while engaging in a set of defined activities within the campus environment. The Risk Matrix takes into consideration building occupants, staff and visitors and the activities in which they engage as well as the building or room uses and layouts. Based on the risk rankings, the matrix provides high level recommendations for prioritizing management measures to mitigate spread of SARS-CoV-2 as activities within the building resume. The Risk Matrix is intended as an appendix to the BCIT COVID-19 Go Forward Plan, which Pinchin has provided under separate cover.

I trust this information is satisfactory for your purposes. Should you require additional information, please do not hesitate to contact the undersigned.

Pinchin Ltd.

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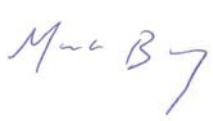

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Characteristics/ Activities	Risk Ranking (LOW-MED-HIGH)	Rationale	Risk Management Strategies
Building Staff Occupants/ Location/ Likelihood of Public Access			
• Possibility for infected asymptomatic spreaders • Transportation methods and likelihood of transmission from unknown sources • Location within Province/Canada and incidence of infection within the Region	HIGH	The Site is any instructional space associated with British Columbia Institute of Technology (BCIT) Trades programs: Carpentry, Electrical, Steel and Welding. These programs may be held on any BCIT campus. The Site is likely located in an urban area with the potential for a medium to high population density. A second wave of COVID-19 cases is currently underway within the province as a whole, particularly within the Lower Mainland region. It is assumed that there is at least one infected person accessing each building, and for remaining rows of this matrix it is assumed there is at least one asymptomatic individual present on-Site. For the purpose of this RA Matrix, it is also assumed that Client is planning on the full re-occupancy of instructional space. Most, if not all, instructional spaces have been closed or open on reduced occupancy. Building occupants include students and faculty staff/instructors (referred to hereafter as either staff or instructors) who are young adults and older. The public/visitors may have access to some areas associated with institutional spaces (e.g. building entrance, hallways, public washrooms etc.); however, it is assumed that there is limited or no public/visitor access to instructional spaces.	✓ Conduct health screening through self-assessment before entry to the building (i.e. BC COVID-19 Self-Assessment Tool). ✓ Add signage describing requirements for entry (no COVID-19 symptoms, etc.). ✓ Instruct building occupants to stay home if they are showing symptoms. ✓ Mandate that all students and staff returning to campus take training on COVID-19 prevention strategies (physical distancing, face coverings, hand washing, etc.). ✓ Provide clear communication to those who are sick or should be in isolation to not come to campus. ✓ Limit public/visitor entry to essential visits only. ✓ Require face masks/coverings for anyone in shared spaces. ✓ Control/limit entry/exit via specific routes to ensure signage is observed and space planning is completed.

Characteristics/ Activities	Risk Ranking (LOW-MED-HIGH)	Rationale	Risk Management Strategies
		Students and staff may visit other campus facilities located in the Greater Vancouver Area to attend and/or instruct classes. Building occupants may include individuals who have been exposed to SARS-CoV-2 from outside sources such as family members, users of public transit, and medical or long-term care professionals. Exposure frequency and duration, to infected individuals would vary depending on workspace size and location. However, risks were considered medium to high due to the likelihood of viral transmission by a symptomatic person.	
General Building Layout / Indoor Environment			
• Post-secondary school trades programs • Access routes (building entry and exit)	MEDIUM	Entrance/exit may result in individuals crossing paths at pinch points. Exposure frequencies and durations could be high if arrival and departure times coincide for large numbers of students and staff arriving together according to class schedules. Although a high-risk ranking might apply to this type of building and the activities within, the medium risk ranking is based on activities during entry and exit, and moving through the hallways. The primary mode of viral transfer is direct contact with droplets, and it is anticipated that potential exposures are of short duration until such time as students/staff enter specific rooms, lab or other	✓ Control/limit entry/exit via specific routes to ensure signage is observed and space planning is completed. ✓ Stagger on-campus class schedules. ✓ Queue entry outside building and rooms. ✓ Prepare enhanced cleaning/ sanitizing plans. ✓ Remove furniture from entry/exit points; alternatively, re-position or appropriately label for physical distancing. ✓ Adopt doorknob contact mitigation measures such as: • Providing tissues;

Characteristics/ Activities	Risk Ranking (LOW-MED-HIGH)	Rationale	Risk Management Strategies
		shared spaces. In addition to transfer via droplets, there is potential for contact with high touch surfaces during building entry/egress.	• Providing hand sanitizer; or • Leaving doors open.
• Hallways / Public Corridors	HIGH	Narrow hallways that may be frequented by staff and students and could result in exposure if people linger to converse. Exposure frequency and duration may be high considering individuals tend to congregate in groups for prolonged discussions in larger hallways/public corridors/open areas, and queue outside rooms waiting to enter. However, risks are low where congregating does not occur, and the duration of exposure is short.	✓ Implement traffic patterns where possible. ✓ Restrict gatherings in hallways\discourage loitering. ✓ Require face coverings in hallways and traffic areas. ✓ Remove furniture or re-position for physical distancing. ✓ Use physical distancing floor decals throughout corridors.
• Washrooms	MEDIUM	Physical distancing in shared washrooms might be difficult, however, overall exposure duration is shortened, and stalls provide barriers. There is a high number of high-frequency touch surfaces (high touch surfaces); however, soap and water are readily available. In some instances, washrooms accessible to students and staff may be in common spaces and not directly located within institutional spaces. In these cases, the washrooms may be the responsibility of building operators or external bodies.	✓ Set washroom capacity limits. ✓ Require face coverings in washrooms. ✓ Take measures to encourage distancing while using urinals and sinks or install barriers. ✓ Encourage/ remind hygienic practices using signage. ✓ Adopt doorknob contact mitigation measures. ✓ Prepare enhanced cleaning/ sanitizing plans for all washroom surfaces. ✓ Work with building operator/external bodies to establish management strategies.

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• Deliveries	MEDIUM	Deliveries may be received either at loading docks or through other entryways associated with the Trades instructional spaces. Evidence of viral transmission via packaging has been limited; anticipated viral dose from packaging is assumed to be low. However, risk to reception is medium if interaction with delivery staff is required, due to high transmissivity of the virus and potentially high frequency of interactions, but low durations.	✓ Implement process for deliveries to prevent direct contact with others, including designated delivery entrances, if possible. ✓ Provide training for package handling and implement frequent hand washing. ✓ Require face coverings for all visitors and staff when visitors arrive. ✓ Develop delivery/mail reception plan for shared items (e.g. pens, paperwork etc.).
Building Conditions			
• Humidity (%) • HVAC system for building (fresh air intake) • Exhaust vents in washrooms	LOW	Air/ventilation is not believed to be a primary means of viral spread and humidity is believed to play a role in viral transmission. Exhaust ventilation is present in all washrooms.	✓ Manage humidity (40-60%). ✓ Optimize ventilation rates. ✓ Regular HVAC maintenance/ filter changes. ✓ Consider particulate or air quality monitoring to determine air quality.
Classroom Type and Associated Trades			
• Shop classes: carpentry, electrical, steel, welding	HIGH	Students attend shop classes and may work in close proximity to each other and staff/instructors for prolonged periods of time or in repeat events of shorter duration. The shop classes involve the use of tools, equipment, building materials, surfaces and/or other items/areas, some of which are shared or may require the participation of multiple individuals at once. In addition, there are certain tasks that are unsafe or impossible to perform while physical distancing. Some shop classes involve rotational	✓ Redesign shop to space equipment apart allowing for physical distancing for students and instructors/staff. ✓ Require face coverings when in classrooms, shops and other learning spaces. ✓ Reduce class sizes if physical distancing is not possible. ✓ Prepare enhanced cleaning/ sanitizing plans. ✓ Implement traffic patterns where possible.

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		workstations, resulting in multiple individuals using a single workspace in a session. Instructors demonstrate proper use of equipment/tools, perform assessment of students' work and aid students where necessary. Instructors are often required to physically touch student work in order to grade/assess them. Depending on the program, students use a tool crib, which often means moving in close proximity to one another and the tool crib attendant. Students are required to wait in line for the tool crib. In addition, steel trades students have access to small tool/equipment sheds. In addition to working in close quarters, the high-risk ranking is based on there being a number of high touch surfaces to be touched by a large number of people, which may lead to increased viral transmission.	✓ If possible, assign tools, equipment and/or workspaces to students for duration of class and clean before and after use. ✓ Do not distribute handouts. ✓ Develop protocol for instructors to demonstration tasks, assess/grade work, distribute consumable items and assist students to maintain physical distancing Use signage/floor decals to maintain physical distancing while waiting in line. ✓ Provide handwashing/sanitization stations and signage to encourage frequent and proper handwashing/hygiene. ✓ Install barrier partitions and/or require the use of PPE where physical distancing is not possible. ✓ Provide training and signage for procedures when physical distancing is not possible. ✓ Re-consider tasks that can not be performed while physical distancing. ✓ Set occupancy limits for small spaces such as tool sheds.
• Laboratories and classrooms: electrical, steel	HIGH	Students use laboratory and classroom space to work on projects and interact with instructors, which may include workspaces that are in close proximity. Students may visit several workspaces in a single session. Instructors provide handouts and are required to check students' work.	✓ Redesign workspaces to allowing for physical distancing for students and instructors. ✓ Require face coverings when in classrooms, labs and other learning spaces. ✓ Reduce class sizes if physical distancing is not possible.

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		In addition to working in close quarters, the high-risk ranking is based on there being a number of high touch surfaces to be touched by a large number of people, which may lead to increased viral transmission.	✓ Prepare enhanced cleaning/ sanitizing plans. ✓ Implement traffic patterns where possible. ✓ Assign students to permanent workspaces, if possible. ✓ Do not distribute handouts. ✓ Develop protocol for instructors to check student work. ✓ Provide handwashing/sanitization stations and signage to encourage frequent and proper handwashing/hygiene. ✓ Install plexiglass partitions and/or require the use of PPE where physical distancing is not possible. ✓ Provide training and signage for procedures when physical distancing is not possible. ✓ Re-consider tasks that can not be performed while physical distancing.
Other Shared Spaces			
• Lockers • Changerooms	HIGH	Some students have access to lockers and/or changerooms where they may store their personal items. Lockers are likely close together and there is possibility for crowding and loitering in these areas.	✓ Develop plans for changeroom use to maintain physical distancing (e.g. set occupancy limits, disallow use of lockers). ✓ Limit locker usage to maintain physical distancing between lockers and traffic corridors. ✓ Restrict use of seating/benches with signage and/or coverings. ✓ Stagger start and end times, where possible.

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			✓ Prepare enhanced cleaning/sanitizing plans. ✓ Require face coverings in locker and changerooms. ✓ Provide handwashing/sanitization stations and signage to encourage frequent and proper handwashing/hygiene after locker use.
• Instructor workspaces: hoteling/ shared desks vs. private offices and cubicles • Proximity/ density of cubicles	HIGH	In cubicles and/or hotelling/shared desks where staff may work in close proximity, risk of viral transmission is higher. However, there may also be private offices for individual use, where exposure is less likely, and risks are low. In general, risks were ranked high because of the potential for staff to be working in close proximity for long durations (i.e., a workday) under the assumed scenario where 100% of staff return to work within each office.	✓ Stagger work schedules, if possible. ✓ Assign workspaces. ✓ Reposition workspaces for physical distancing. ✓ Install plexiglass partitions between cubicles. ✓ Prohibit sharing of office equipment (computers etc.) where appropriate cleaning protocols are not in place. ✓ Require face coverings when not seated. ✓ Require face coverings when seated if physical distancing and/or partitions are not feasible. ✓ Prepare enhanced cleaning/sanitizing plans.
• Shared breakroom/lunchrooms	HIGH	Shared breakrooms/lunchrooms may be available for select students and staff that may include refrigerators, microwaves and dining areas, which entail frequent touching. The main avenue for viral spread is direct contact with saliva/droplets, therefore exposure via shared dishes is considered to be a high risk.	✓ Stagger or eliminate (where possible) break/lunch schedules. ✓ Set room occupancy limits. ✓ Eliminate shared dishes/utensils, if any. ✓ Develop alternate dining protocol for physical distancing (e.g. outside, at workstations etc.). ✓ Implement traffic patterns where possible.

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			✓ Require face coverings when not seated. ✓ Prepare enhanced cleaning/ sanitizing plans. ✓ Provide handwashing/sanitization stations and signage to encourage frequent and proper handwashing. ✓ Adopt doorknob contact mitigation measures. ✓ Mitigate contact with other high touch surfaces by: • Providing tissues; or • Provide hand washing station or hand sanitizer.
Non-Regular Activities			
• Fire drills • Fire • Fire doors	MEDIUM	Emergency drills or actual events could result in disorderly conduct and crowding. First aid emergencies may require close proximity with the injured. Risk level is considered medium due to the short duration of building egress during drills and availability of fresh air during mustering outdoors.	✓ Prepare emergency plan for non-scheduled maintenance, illness or fire. ✓ Consider alternate methods for doing drills.
Other Building Access Routes			
• Elevators • Stairs • Other high touch surfaces • Outdoor spaces	MEDIUM	Students and staff may require the use of stairwells and elevators to access certain workspaces. There is potential for crowding in elevators and stairwells, however exposure is likely to be infrequent and duration is likely to be low so long as people don't linger.	✓ Mitigate risks from contact with doorknobs by: • Providing tissues; • Providing hand sanitizer; or • Leaving doors open.

Characteristics/ Activities	Risk Ranking (LOW-MED-HIGH)	Rationale	Risk Management Strategies
		High frequency touch areas include entry doors, stairway handrails, and waste receptacles. There may be outdoor spaces where students and staff may gather (i.e. picnic tables, benches, smoking areas). In some instances, elevators and stairwells accessible to students and staff may be in common spaces and not directly located within institutional spaces. In these cases, the elevators and stairwells may be the responsibility of building operators or external bodies.	✓ Limit entry/exit through certain doors and establish on-way traffic in stairwells. ✓ Implement elevator protocols and occupancy limit per elevator and require face coverings. ✓ Prepare enhanced cleaning/ sanitizing plans. ✓ Provide signage regarding touching buttons/ stair handrails. ✓ Discourage loitering. ✓ Provide sanitizing stations. ✓ Maintain physical distancing in outdoor spaces or limit occupancy. ✓ Rearrange outdoor seating or use decals on outdoor benches/picnic tables to promote physical distancing. ✓ Work with building operators/external bodies to establish management strategies.
• Parking (indoor/outdoor/car park)	LOW	Students and staff may have access to vehicle parking within the vicinity of the Site. Parking areas are conducive to low exposure duration and frequency and are likely to have better ventilation than indoor environments. Parking kiosks are considered high touch surfaces.	✓ Encourage physical distancing measures through signage. ✓ Promote contactless payment. ✓ Prepare enhanced cleaning/ sanitizing plans.

Characteristics/ Activities	Risk Ranking (LOW-MED-HIGH)	Rationale	Risk Management Strategies
Extended Vacancy Issues			
• Legionella/water quality • Mould • HVAC routine maintenance • Floor drains	LOW	All buildings have been under continued (limited) occupancy during the pandemic/ were never completely shut down. Water quality, mould and HVAC maintenance issues are not anticipated.	✓ Water system flush. ✓ Change HVAC filters.