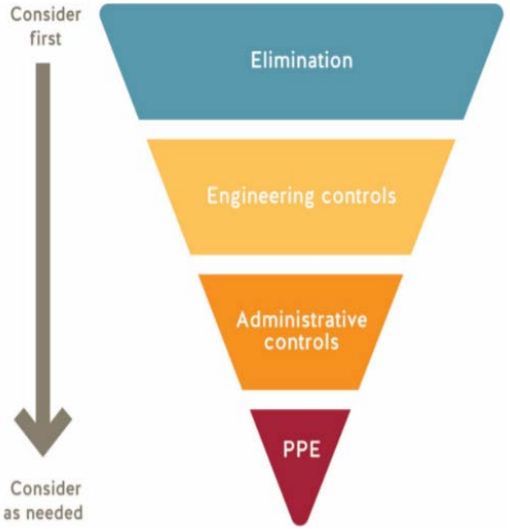
BCIT COVID-19 SAFETY PLAN
ACADEMIC SPACES

The BCIT COVID-19 Go-Forward Plan outlines the risk assessments, control measures, and the organizational process for our safe return to campus. All returning programs/courses must adhere to this process. Please refer to the BCIT COVID-19 Go-Forward Plan for additional information.

CONTACT INFORMATION

Course/Program Name:	**CIVL 2026 Construction Materials** **Civil Engineering Technology Diploma**		
Proportion of program offered on campus:	CIVL 2026 is one of the 31 courses that will be offered in the program in the Winter 2021 term. For this course, there are typically 15 weeks of labs. For the Winter 2021 term, it is planned to conduct only 3 weeks of labs on campus (20% of pre-COIVD), with the remainder being conducted via online videos/data set delivery.		
Start date:	**February 22, 2021**	**End date:**	**May 2, 2021**
Total # of students in program:	Approximately 60 students enrolled in this level of the program	**# of employees:**	2
Anticipated # of students on campus daily when scheduled:	**6**	**Anticipated # of employees on campus daily when scheduled**	**2**
Completed by:	Name Sudip Talukdar	Position Faculty- Instructor	Date November 12, 2020



ROOM INFORMATION

In this section, please identify all of the rooms that will be used by this returning program/course.
NOTE: Common areas are covered by the BCIT COVID-19 Go-Forward Plan.

Campus/ Building	Room Number Floor Plans found here	Type of Space Include washrooms and breakout rooms	Capacity Current capacity due to COVID-19
Burnaby, SW3	1650	Laboratory	9
Burnaby, SW3	1640	Laboratory	1
Burnaby, SW3	1610	Womens Washroom	1
Burnaby, SW3	1620	Mens Washroom	1

RATIONALE FOR ON-CAMPUS ACTIVITY

Please provide a short description explaining the need for students to be on campus. Your narrative should be focused on the practical elements of the program or activity that are critical to achieving learning outcomes, and why on campus components cannot be replicated in an online or alternative environment (e.g. student bringing learning equipment home).

CIVL 2026 Construction Materials is the only course in the program dedicated exclusively to providing student both theoretical knowledge, and practical experience regarding the types of construction materials commonly used in industry. Theory is mainly covered during lectures, but for students to be able to enter industry with a practical knowledge of construction materials, they must successfully complete a lab component which trains them on the common tests they would perform on aggregates, concrete and asphalt when they go into industry.

Generally, there is a total of 15 weeks of lab sessions which cover in general the following topics:

<u>Aggregates</u>

- Grading of Coarse and Fine Aggregates
- Determining Moisture Contents of Coarse and Fine Aggregates
- Determine organics content of aggregates
- Determining Relative Densities of Coarse and Fine Aggregates

<u>Concrete</u>

- Preparing fresh concrete mixes
- Performing slump, air content and density tests on fresh concrete
- Preparing concrete cylinders
- Preparing cylinders for testing by sulphur capping and grinding
- Doing compression tests on concrete cylinders
- Doing UPV, Electrical Resistivity and Rebound Hammer Tests on concrete cylinders
- Preparing and SCC concrete mix

<u>Asphalt</u>

- Preparing and testing Asphalt Briquettes via the Marshall Mix Method
- Preparing and testing Asphalt Briquettes via the Superpave Method

Three sessions have been identified as essential for the students to learn and to demonstrate practical proficiency. This is especially important for those students who plan to graduate with a diploma and continue on in careers in materials testing. The three sessions/topics are:

1) Preparing fresh concrete mixes; Performing slump, air content and density tests on fresh concrete; Making concrete cylinders for testing

2) Doing compression tests on concrete cylinders, including preparing cylinders by sulphur capping and grinding

3) Preparing and testing Asphalt Briquettes via the Superpave Method.

For other topics, videos and data sets will be prepared and presented to students to allow them to complete their learning of all topics.

CONTROL MEASURES

COVID-19 SAFETY PLAN: CONTROL MEASURES CHECKLIST

Directions for completing a Safety Plan:

1. *First step of this process is to review the BCIT COVID-19 Go-Forward Plan as the overall planning document for this process.*
2. *Use this checklist as a tool to assess COVID-19 control measure preparedness for students and employees and the spaces they will be using. Refer to the BCIT COVID-19 Go-Forward Plan for standardized safety guidelines and procedures.*
3. *For each control measure, state the details. If the control measure is a 'No' or 'NA', please provide a brief explanation.*
4. *The manager requests all PPE requirements by submitting this draft Safety Plan to the PPE@bcit.ca.*
5. *Implement all the safety measures in this Safety Plan.*
6. *The manager completes a site visit to ensure all control measures and safety supplies are in place.*
7. *The manager signs the completed Safety Plan and submits it to returntocampus@bcit.ca for approval.*
8. *Once approved, the COVID-19 Safety Plan is posted in all work areas identified within this plan.*

Note: The workspaces cannot be used until all applicable control measures are in place and Safety Plan is approved. For additional resources the Risk Assessment Controls Guidance and Hierarchy of Controls. For assistance email ssemohs@bcit.ca.

#	Control Measure	Yes	No	NA	Details (as per Directions)
ELIMINATION					
1.	Room(s) set up to allow for 2 metres physical distancing during instruction and practice.	☒	☐	☐	*Exceptions allowed as per BCIT COVID-19 Go-Forward Plan, Risk Matrix Summary (explain):*

#	Control Measure	Yes	No	NA	Details (as per Directions)
	Note: Contact returntocampus@bcit.ca for room capacity and layout if needed.				The large lab/room areas allow students to conduct the lab experiments without breaching the 2m distancing. The lab is designed to eliminate student movement throughout the lab. See the attached floor plan.
2.	Demonstration, work and assessment stations are set-up to allow for 2 metres physical distancing.	☒	☐	☐	*Exception allowed as per BCIT COVID-19 Go-Forward Plan, Risk Matrix Summary (explain):* Demonstration stations are already set up such that 2m distance can be maintained.
3.	Identified area(s) where students wait outside of teaching space until allowed inside by instructor.	☒	☐	☐	Students will be allowed into the rooms as soon as they arrive. If they need to wait outside, enough "wait here" spots have been marked off at 2-m spacing in the corridor.
4.	Work has been scheduled to minimize numbers of individuals on campus at one time.	☒	☐	☐	No more than 6 students and 2 instructors will be allowed in the lab at any given point in time. See attached schedule
5.	In shared spaces, safety protocols have been put in place to reduce close contact between users.	☒	☐	☐	Signage, floor markings and flow control are in place. Students' tables and workstations have been located with adequate spacing and remain in place for the entire term.
6.	Movement within the room is identified, such as with directional arrows, for walkways and entrances/exits.	☒	☐	☐	Signs or arrows on the floor identifying directions. Signs identifying exits and entrances.
7.	Water fountains are put out of service, and only touchless water bottle filling station available.	☐	☐	☒	The labs and classrooms are not equipped with water fountains.
8.	Mobile fans have been removed or put out of service.	☐	☐	☒	No mobile fans in lab
7.	Washrooms have been identified.	☒	☐	☐	If yes, Washroom occupancy limit ___1__
8.	Break area(s) for student use have been identified.	☐	☐	☒	No breaks during lab sessions
9.	Break areas for employee use have been identified.	☐	☐	☒	No breaks during lab sessions
10.	Other:	☐	☐	☒	
ENGINEERING CONTROL MEASURES					
11.	Barriers are implemented to separate work areas or walk ways, when physical distancing not practical.	☐	☒	☐	The nature of the hands-on experience may require close contact for a very short periods of time when instruction is impaired by physical distancing. Barriers are not suitable because of the hands-on guidance required when explaining. During these times, both the instructor and the students will be

#	Control Measure	Yes	No	NA	Details (as per Directions)
					required to wear a mask. We do not expect this close contact to occur more than once per student per lab.
12.	Barriers are stable and do not introduce other safety hazards, e.g. tripping.	☐	☐	☒	Barriers are not used
13.	The impact on ventilation requirements have been considered if there's been a significant use change for the instructional space.	☒	☐	☐	No changes to original intended use of the lab use. Same lab sessions have been done in the room.
	Other:	☐	☐	☒	
SIGNAGE (ADMINISTRATIVE) *Signage is available @ BCIT online Inventory. Guidelines for posting signs are available on ShareSpace.*					
13.	Posted: Physical distancing (2 m) sign(s) Item 1A	☒	☐	☐	8.5"X11" wall signs, posted in the hallway and rooms
14.	Posted: Hand washing sign(s) Item 29B	☒	☐	☐	Laminated 8.5"X11" wall signs, posted by the sinks.
15.	Posted: Health screen sign(s) Item 3C	☒	☐	☐	11"X17" wall signs, posted at the entrances.
16.	Posted: Hand washing sink location sign(s) Item 14A	☒	☐	☐	8.5"X11" wall signs, posted in the rooms.
17.	Posted: Hand sanitizing station location sign(s) Item 13A	☒	☐	☐	8.5"X11" wall signs, posted in the rooms.
18.	Posted: Protect yourself sign(s) Item 21A	☒	☐	☐	8.5"X11" wall signs, posted in the rooms and the hallway.
19.	Posted: Occupancy limit of this room sign(s) Item 37A	☒	☐	☐	8.5"X11" wall signs, posted at entrances.
20.	Posted: Other signs	☒	☐	☐	*Please list:* Wrong way do not enter, 1a Safe use of mask Don and doff ppe, 33a Entrance only 10b Exit only 11b Stand here 23a
ORIENTATION AND TRAINING (ADMINISTRATIVE)					
21.	Routine safety discussions held to review control measures and safety protocols.	☒	☐	☐	The two instructors will review and monitor weekly, and they will communicate with the Associate Dean regularly.
22.	All students have completed the online COVID-19 Pandemic On-Campus Guidelines training.	☒	☐	☐	A compliance tool will be provided through the Learning Hub. Compliance will be checked in advance of the lab sessions.

#	Control Measure	Yes	No	NA	Details (as per Directions)
23.	COVID-19 safety Site orientation for students has been developed and posted in the Learning Hub.	☒	☐	☐	Site-specific orientation to be developed. Checklist uploaded to Learning Hub.
24.	All employees have completed the online BCIT Pandemic Exposure Control Plan Training.	☒	☐	☐	The two instructors have completed the training.
25.	All employees have completed the online OHS New Employee Orientation module.	☒	☐	☐	The two instructors have completed the training.
26.	Other:	☐	☐	☒	
RULES AND GUIDELINES (ADMINISTRATIVE)					
27.	All unnecessary and self-serve items have been removed from the spaces. *e.g., pens, paper, etc.*	☒	☐	☐	All items and areas and shelves around the perimeter of the rooms have been taped off. Students will not be required to use any materials other than those that are provided at their workstations.
28.	Doors that students are to use to enter and exit have been clearly identified.	☒	☐	☐	Signs used.
29.	Handouts, papers, and items are not physically provided to students.	☒	☐	☐	Course materials are provided digitally. For the labs, sanitized samples and apparatuses are placed at each workstation prior to the start of the sessions. No sharing is allowed nor required.
30.	Students have dedicated tools/equipment, e.g., items are not shared between students.	☒	☐	☐	*Equipment to be used by students will be sterilized by instructors before the session. Each student will make exclusive use, sanitize after use, and return to storage.*
31.	If cleaning common touch points or tools/equipment not practical, then it is identified when hands are washed/sanitized before and after use.	☐	☐	☒	Nothing is shared between students. All student work stations are fully supplied and self sufficient.
32.	Work spaces/stations are dedicated for an individual or group use and not shared with others.	☒	☐	☐	*Workstations are be setup at pre-marked areas before each lab with relevant equipment for individual use only.* ***See attached picture***
33.	Single-use (disposable) products are used where feasible.	☒	☐	☐	*Disposable paper towels are to be used. Plastic molds will be disposed after use.*
34.	Measures are in place to accommodate student sick at home.	☒	☐	☐	*Accommodation plan: Videos will be pre recorded and uploaded to the learning hub before a lab session. If a student is unable to attend a session, the video will be sufficient to ensure a proper theoretical understanding of the lab procedure in lieu of the actual practical hands on experience.*
35.	Procedures in place to screen students on a daily basis.	☒	☐	☐	*The health screen poster is available for reference and is posted on building doors. Students and employees are expected to self assess daily, and the BCCDC self-assessment tool can be used to support this.*

#	Control Measure	Yes	No	NA	Details (as per Directions)
36.	There is a procedure in place if a student or employee becomes ill on campus.	☒	☐	☐	*Refer to the COVID-19 Pandemic Scenario Response Plan for more information. If the person is reporting symptoms, ask them to avoid others and return home. If they require immediate medical attention, call First Aid and 911.*
37.	There are procedures in place if a student or employee travels before coming to campus, or has been in close contact with someone who has tested positive for COVID-19.	☒	☐	☐	*Refer to the COVID-19 Pandemic Scenario Response Plan for more information. Confirm if the person is aware of self-isolation requirements and protocols.*
38.	Provisions made for students to maintain same lab/class cohort throughout the Term.	☒	☐	☐	*Upon finalizing the class list, students will be assigned to a cohort, and will maintain that cohort throughout the year.*
39.	Other:	☐	☐	☒	
PERSONAL PROTECTIVE EQUIPMENT (PPE).	**Refer to the PPE Flowchart to determine what PPE is required for COVID-19 purposes.**				
40.	Appropriate PPE for the hazards of employee and student tasks are available to be provided (non-COVID-19 related ppe).	☒	☐	☐	Before COVID, students were required to have protection for these activities. Therefore, students are expected to bring their own PPE to the lab, ie safety boots, safety glasses, and lab appropriate clothing. Students to also wear a mask as recommended by the Instructors. COVID-related PPE including disposable masks and face shields will be made available.
41.	Training is provided for the above PPE to students and employees.	☒	☐	☐	PPE requirements will be communicated to students beforehand during lecture, and in the course outline.
42.	Appropriate PPE for COVID-19 is available to be provided to students and employees. Supply requests emailed to ppe@bcit.ca.	☒	☐	☐	Disposable Face Masks (50s): 12 Units Hand Sanitizer (473mL): 3 Units Oxivir Disinfectant Spray (946mL): 6 Units Paper Towels Nitrile Gloves (100s): 6 Units
43.	PPE safe donning, doffing, disposal, and disinfecting instructional materials are available for students and employees.	☒	☐	☐	*Post applicable signs in a visible location if ppe required.* *Use the Student Orientation checklist to assist orientation/training by instructors.* *Use the OHS Employee Orientation checklist to assist orientation/training by their supervisors.*
44.	Other:	☐	☐	☒	
CLEANING					
45.	Facilities is aware of the cleaning needs for the area. Facilities work requests have been submitted.	☒	☐	☐	Facilities request **WR1456169** has been submitted.

#	Control Measure	Yes	No	NA	Details (as per Directions)
					The cleaning instructions will follow the same as for Go Forward Safety Plan 88, because the high touch areas in these labs are identical.
46.	Training will be provided to faculty and students performing cleaning duties and cleaning materials have been provided.	☒	☐	☐	*Cleaning Standard Operating Procedures have been located here.* Lab 2 (Cylinder testing) will require sanitizing the particular equipment after use. In a day, a maximum of 6 students and 2 instructors are expected to operate the equipment. The equipment will be sanitized by the operator immediately after use using an alcohol-based vaporizer spray.
47.	Assessment of sufficient number of hand wash stations conducted, and an appropriate number of handwashing stations are available	☒	☐	☐	*A student to hand wash station ratio of no more then 6:1 will be maintained.*
48.	Handwashing station(s), stocked, easily accessed, and have been identified to students and employees.	☒	☐	☐	*Sink Location:_ In SW3-1650 by Entry Door_____* *Signage has been put up.* *Stocked with soap Y ☒ N ☐ paper towel Y ☒ N ☐*
49.	Hand sanitizing station(s), stocked, and have been identified to students and employees.	☒	☐	☐	***ABHS** (Alcohol-Based Hand Sanitizer): Location(s)__In SW3-1650 by Entry door and in SW3-1640 by exit door____* *Signage has put up* *Will hand sanitizer be refilled by department: Y ☒ N ☐* *If No, describe:*
50.	All Safety Data Sheets (SDS) and cleaning procedures used are found here.	☒	☐	☐	*If not, describe:*
51.	The area(s) have been decluttered so that cleaning is simplified.	☒	☐	☐	
52.	Barrier cleaning process has been arranged if the barrier(s) could become contaminated.	☐	☐	☒	*No barriers to be cleaned.*
53.	Common touch points and tools/equipment that must be shared are identified and cleaned between students and classes.	☒	☐	☐	Common touch points include student work benches, and individual equipment used for the lab. Students to clean work benches and equipment immediately after use. Benches will be cleaned by facilities after students leave every day.
54.	Storage space for personal articles have been identified and are cleaned regularly.	☐	☐	☒	Students will be told not to bring personal articles where storage is required.
55.	Other:	☐	☐	☒	

#	Control Measure	Yes	No	NA	Details (as per Directions)
AUDIT AND CONTINUOUS IMPROVEMENT					
56.	There is a plan to conduct regular inspections of all control measures and safety protocols to ensure they are in place.	☒	☐	☐	Instructors will perform these inspections on a daily basis. Only subject to days where sessions will be held. The instructors will review with the Associate Dean weekly.
57.	Audits of inspections are planned to ensure that control measures continue to be effective.	☒	☐	☐	*An instructor not associated with the course will audit the measures on a regular basis.*

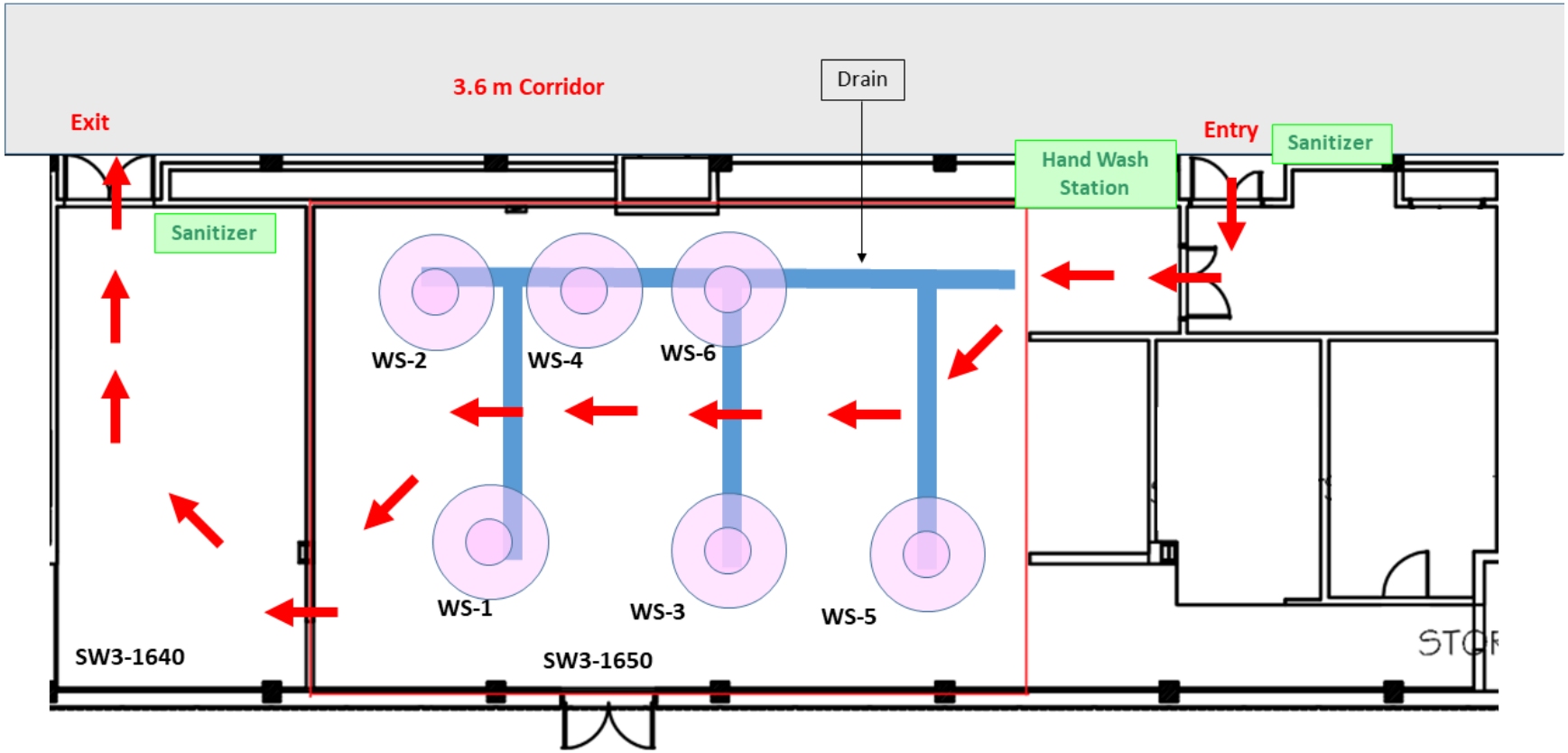
APPROVAL

All COVID-19 risk control measures for this campus activity are in place.			
Manager	Name Steven Kuan	Position Associate Dean in SOCE	Date November 12, 2020
EOC	Name *Glen Magel*	Position EOC Director	Date November 21, 2020

REVISION APPROVAL *(if applicable)*

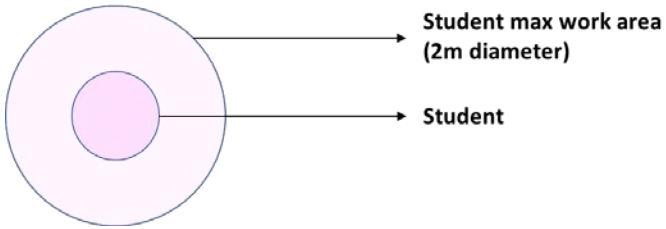
All COVID-19 risk control measures for this campus activity are in place.			
Manager	Name	Position	Date
EOC	Name	Position	Date

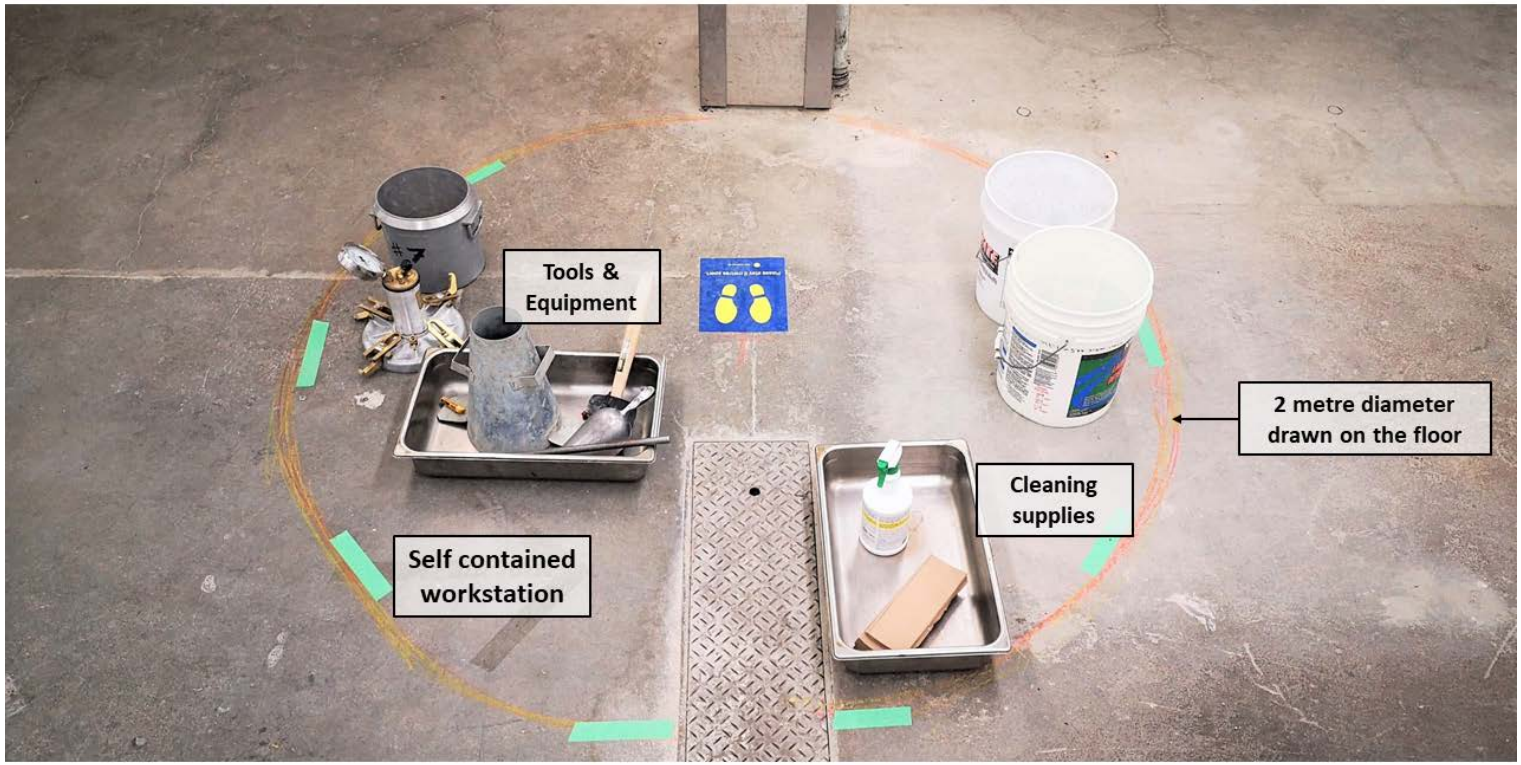
CIVL 2026, SW3-1650 Floor Plan



- Workstations are labelled WS-1 to WS-6. The students will have a pre-designated workstation and will be invited into the room in order.
- The workstations are all situated along the drain and each workstation will have 2 buckets of water. This allows for easy washing and cleaning of the tools and equipment.
- All tools, materials and sanitizing items will be provided within the workstation.
- The sanitizing stations and hand wash station have been identified and signage put up in the lab.

- As shown in the red box, the lab (Sw3-1655) is 10 m x 16 m of open space, which allows for ample physical distancing between occupants.





CIVL 2026: Proposed Schedule

			Student In-person Sessions									For Instructors		
			Set A (Thursday)		Set B (Wednesday)		Set C (Friday)			Set D (Tuesday)				
	Week	Week of	10:30	11:30	12:30	13:30	10:30	11:30	12:30	9:30	10:30	Pre-Lab	Post-Lab	Others
	1	04-Jan-21												
	2	11-Jan-21											Lab Safety Video	
	3	18-Jan-21											Fine Aggregate Videos	
	4	25-Jan-21											Coarse Aggregate Videos	
	5	01-Feb-21												
	6	08-Feb-21											Covid Safety and Lab Safety Quiz	
	7	15-Feb-21											Batching aggregates x 24 batches (2 mixes/session)	
Lab 1 - Concrete Casting	8	22-Feb-21	6		6		6			6		Concrete mixing	Cleanup	
	9	01-Mar-21	6		6		6			6		Concrete mixing	Cleanup	
	10	08-Mar-21	6		6		6			6		Concrete mixing	Cleanup	
	11	15-Mar-21	Spring Break										Demold and Discard Waste Concrete	
Lab 2 - Cylinders testing	12	22-Mar-21	3	3	3	3	3	3	3	3	3			
	13	29-Mar-21	3	3	3	3	Good Friday			3	3			
	14	05-Apr-21	3	3	3	3	3	3	3	3	3			
	15	12-Apr-21											Batching aggregates x 12 batches (1mix/session)	
Lab 3 - Asphalt Superpave	16	19-Apr-21	6		6		6			6		Asphalt heating	Cleanup	Will need to waive off fume hood requirement for students to prevent overcrowding High instructor exposure to asphalt, solvents
	17	26-Apr-21	6		6		6			6		Asphalt heating	Cleanup	
	18	03-May-21	6		6		6			6		Asphalt heating	Cleanup	
Final Exam	19	10-May-21												
	20	17-May-21												
	21	24-May-21												