

SAFETY POLICY

Carleton Lab is an active heavy civil engineering testing lab. This lab is not only subject to the standard safety regulations for chemical labs, as mandated by the FDNY, but also further safety regulations that are common in manufacturing facilities and construction sites.

RULES OF CONDUCT

- Guests must register with lab management. "Browsing" of the lab is dangerous and will not be tolerated.
- No laboratory property may be removed from the premises unless authorized by lab management.
- The entire lab is an active forklift and crane lift area. Persons without rigging training must always yield to cranes and forklift.
- Eating and drinking is prohibited in active lab space.
- Open shoes or loose clothing are prohibited in active lab space. ANSI Z41 steel toe shoes (2500 lb impact rating) must be worn by all persons performing heavy lifting. Uncertified steel toe shoes are a hazard as they may cause serious injury. Do not wear them!
- Lab machinery and equipment may only be approached and/or operated with the express permission of the lab staff.

FLOOR MARKINGS



Traffic Area – main traffic route through lab, stay on these paths unless entering a specific lab area; keep area clear of obstructions; beware of moving vehicles



Safety/Work Area – active laboratory space; enter with care; do not use these spaces as traffic areas.



Physical Hazard Area – this area contains a physical hazard, entry by laboratory staff only (yellow cones are equivalent to yellow lines).



Clean Area – enter area only if authorized by lab staff. Enter only with clean clothes and shoes, and do not bring soiled tools into space.



Fire Safety Area – this area either contains fire equipment or is an egress route for the laboratory, obstructing a fire area in any way is a violation of New York City Fire Code.

AUDIOVISUAL WARNINGS



Amber Strobe – active forklift, yield to this vehicle at all times; never walk directly in front of or behind the forklift.



Green Strobe – test in progress (as described on poster below strobe), enter area only with express permission of lab staff.



Buzzer – signal used to warn persons of active testing

- one blow – prepare for test, clear area
- two blows – area clear, test starting
- three blows – test completed, area safe.



Bell - fire alarm, evacuate building immediately, close all doors on the way out.

Important: The Engineering Terrace building is equipped with a NYC Code Fire Alarm System; this system will only sound two sets of four bell rings. The fact that the system does not continue ringing does not mean that the fire alarm is over. All personnel MUST evacuate the lab once the fire bell sounds.



FORKLIFT SAFETY

- In the lab pedestrians must *yield* to the forklift. Due to the limited line of sight of the forklift operator in many loading and lifting situations, you must assume that the forklift operator cannot see you.
- Never walk directly in front of or behind the forklift when it is in motion.



CRANE SAFETY

The lab is equipped with a number of gantry cranes. Be aware of their presence at all times. The hi-bay area contains three trambeam cranes that can move within the entire hi-bay space.

- Never step under a crane, be it loaded or unloaded.
- Always look up and check for position of cranes before entering the high-bay area.

The lab also contains a number of removable floor panels. Be aware of these when you are walking. Never cross an area that is cordoned off with yellow cones. This is a warning that hazards lie beyond this point. Ask the lab staff for a safe path in case a normal route is obstructed.



MACHINE SAFETY

Active machinery should be approached only with the permission of the operator of the machine. Eye and ear protection must be worn, whenever appropriate (and warning provided on machine).

Only authorized persons are allowed to use the machinery in the laboratory and in the machine shop. Machines may be used only by staff and students who have been properly trained by the lab personnel.

ACCESS & SECURITY POLICY

Access to Carleton Lab is controlled by Columbia University's proximo access system as well as a closed-circuit cameras. It is a violation of policy to swipe in unauthorized persons and may result in disciplinary action and loss of laboratory access.

CEEM FACULTY & STAFF

All Civil Engineering and Engineering Mechanics faculty and staff are granted 24/7 access through all points of entry, including the main door (161 Engineering Terrace), loading dock, and the mezzanine entrance (264 Engineering Terrace). No access application is necessary.

CEEM STUDENTS

All civil engineering students, both graduate, and undergraduate are granted access to the lab's main entrance at 161 Engineering Terrace from 9:00am to 5:00pm. No application is necessary. Students who are working in the Carleton Laboratory on research projects beyond normal business hours will have to apply for access through the Carleton Lab website. All student access permissions are rescinded on 31 May of every year.

SEM RESEARCHERS

Users of the Scanning Electron Microscope in the Carleton Lab must apply for access by contacting MRSEC management.

CERTIFICATE OF FITNESS

All persons working in the Carleton Laboratory outside of normal operating hours must obtain a FDNY C-14 Certificate of Fitness. The C-14 can be acquired through Columbia University Environmental Health and Safety at no cost to the applicant.