Building Contacts: For PLB and RTSF Danny Schnell (schnelld@msu.edu) and Emily Pawlowski (pawlow41@msu.edu). For PRL, GLBRC-BAF, and Growth Chamber Facility Christoph Benning (benning@msu.edu) and Linda Danhof (danhof@msu.edu)

Preamble
This protocol has been developed by a representative joint PRL/PLB Building Committee including Linda Danhof (lab manager, PRL), Emily Pawlowski (lab manager, PLB), David Kramer (faculty, PRL), Frances Trail (faculty, PLB), Danny Schnell (chair, PLB) and Christoph Benning (director, PRL) to enable a return of personnel to conduct maintenance work, bench work, and work with living plants and microbes safely in the Plant Laboratories Building while there is still a risk of contracting the virus causing COVID-19 from co-workers. This protocol might change or reverse as conditions warrant or require. Activities in all laboratories of the building are limited to those that can only be done on campus—if your work can be done at home, stay at home. Nobody should be compelled to come to work as long as there is risk of contracting the virus causing COVID-19 from co-workers. MSU prohibits coercion of students and other vulnerable groups to report to campus to maintain their assistantship or postdoctoral research associate support. Undergraduate students should not be in the lab unless they are paid employees who are performing a critical function of the research or if they have been granted permission to conduct essential research towards their degree as permitted by the respective undergraduate program. This document does not apply to research field sites on campus, at KBS or at remote locations. Separate guidelines and policies for field sites will need to be developed in coordination with the appropriate administrators of the facilities.

For New and Newly Returning Researchers
Please, complete the following steps to gain access to the Plant Biology Labs building if you are a new or returning researcher.
1. Review the Plant Biology Lab building return to work policies and procedures in this document.
2. Complete the online training from EHS (Environmental Health and Safety) using the link that is included in the building plan.
3. Contact your PI to complete the lab specific training for your PI’s lab group.
4. Once you have completed these three steps, you need to email Danny Schnell (schnelld@msu.edu) for PLB labs or Christoph Benning (benning@msu.edu) for PRL labs and confirm that you understand the requirements and will comply with all the procedures in all three steps.
5. Please, keep in mind that you need to fill out the MSU health screening form each time you enter the PBL building.

The links to all of these documents and forms are available on the PRL or Plant Biology homepage. Once you have completed this process, we will add you as essential research personnel under your PI’s group and we will activate keycard access to the building.

I. The guiding principles of these Policies and Procedures include the following:
1. The building is ready for resumption of work following inspections by IPF and EHS. It is understood that the bathrooms and common areas are cleaned daily by the janitorial staff in addition to measures described below upon return to work.
2. At no time is research with active virus causing COVID-19 conducted in the Plant Laboratories or MPS buildings.
3. The risk of going back to work in the lab with other colleagues includes contracting the virus causing COVID-19 from another contagious person by aerosol or contaminated surfaces. Keep in mind, a contagious person may not have symptoms.

4. Precautions need to be added on top of existing lab safety protocols and the new precautions do not diminish them.

5. Three levels of training - EHS online (https://bit.ly/EHS-4950-SCO), the Building Plan (this document), and the Individual Lab Plan - on new policies and procedures are required for all those returning to work and building access may not be granted until training has been documented. Everyone must acknowledge reading this document. Acknowledgement of this document will be documented for each person by the individual lab. The Lab PI must ensure that training for new lab members is conducted and documented.

6. This protocol will remain binding until the MSU Office of Regulatory Affairs (ORA) or the Office of the Senior Vice President for Research and Innovation (OSVPRI) allow for or require modifications. Changes to this protocol will be widely distributed to all building occupants and their supervisors by email, postings will be made at the entrances of the building, and on the PRL and PLB websites.

II. Building preparation, Access, and Sanitation of Shared Rooms and Common Areas:

1. Building Preparation: The building has been monitored daily by essential workers and technicians and issues during the shutdown have been resolved in collaboration with Infrastructure Planning and Facilities/Facilities Planning (IPF) as they arose. As necessary, the building has been prepared by IPF and Space Management/Environmental Health and Safety (EHS) to ensure the building is clean and functioning appropriately. Water and HVAC systems and fume hoods have been checked, as well as any fume hoods (according to maintenance schedule). Biosafety cabinets and autoclaves have been checked by labs/building managers and will be recertified as needed. The buildings will remain locked and access controlled. A spreadsheet template is available in assisting the ramp up of the building as well as a ramp down should this become necessary.

2. Building Access: Building entry and exit points will be limited to the west, south wing, and north main entrances on the first floor of the PBL building. Sanitation stations will be available at each of these entrances. Access will be limited to only those faculty, staff and students who have been trained in and acknowledge the policies and procedures in this document. Access and presence in the building will be monitored using the official MSU health screening form. Access may be revoked by the Chair or Director for anyone found in deliberate violation of policies and procedures.

3. Non-resident visitors: Anyone without keycard access to the Plant Laboratories Building that needs to access core facilities within the building (e.g. RTSF, GLBRC, growth chambers) should contact the facility managers in advance to receive a copy of the new policies and procedures and to schedule a time to visit the facilities. The facility staff will arrange for access to the building and facility. All visitors are expected to adhere to the policy and procedures in this document while in the building. Non-essential visiting scholars and undergraduate students cannot enter the building. Undergraduate students newly joining labs and who are essential workers or have been approved by their respective undergraduate program may get approval to enter the building following the procedure outlined at top of this document.

4. Deliveries: Delivery plans will be confirmed with Susan Fennell (fennell@msu.edu) at University Services. Deliveries will be received by assigned personnel from PLB/PRL during business hours and delivered to the appropriate locations and properly stored. Instructions for delivery personnel (MSU, UPS, FedEx etc.) are posted on each door including a phone number under which the assigned personnel for PRL or PLB can be reached to receive shipments.
5. **External Contractors and Vendor Repair Personnel:** External contractors and vendor repair personnel need to follow the building safety plan described in this document. MSU approved outside contractors will be met by PRL/PLB personnel upon appointment by phone or email at a building entrance door, instructed about the basic protocol of hand sanitizing and wearing masks, etc. and provided with a mask, as necessary. PLB/PRL personnel will accompany outside contractors to their designated work area. The work area needs to be cleared of lab personnel to maintain social distancing of 6 feet.

6. **Sanitation Plan for Shared Research Rooms, Common Research Areas not Sanitized by Janitorial Staff:**
   a. The following shared PRL rooms will be under the direct supervision of the PRL director assisted by Linda Danhof (LD) and Melissa Borrusch (MB):
      - Chemical room (rm S132)
      - Gas cylinder room (rm S130A)
      - PRL Stockroom (rm 132)
      - Autoclave room (rm 128)
      - Autoclave room/dishwashing room (rm 228)
      - Autoclave Room (328)
      Common touch areas (inside doorknobs, light switches) will be sanitized three times a day by assigned personnel. Each user will clean equipment in these rooms before and after use including keyboards, touch pads, autoclave buttons, autoclave doors, dish washer buttons, and dish washer doors. Standard Operating Procedures have been posted with the respective equipment and cleaning supplies are provided either inside these rooms or outside for the chemical and gas cylinder rooms.
   
   b. The following shared PLB rooms will be under the direct supervision of the PLB chair assisted by Emily Pawlowski (EP)
      - Mail room/Autoclave room (rm 139)
      - Copy room (rm 142)
      - Autoclave room (rm S144)
      - Autoclave room (rm 264)
      - Autoclave room (rm 364)
      - Autoclave Room (S314)
      Common touch areas (inside doorknobs, light switches) will be sanitized three times a day by assigned personnel. Each user will clean equipment in these rooms before and after use including keyboards, touch pads, autoclave buttons, autoclave doors, copy machine screen. Standard Operating Procedures will be posted with the respective equipment and cleaning supplies will be provided either inside these rooms or outside for the chemical and gas cylinder rooms.

III. **Base Personal Protective Equipment (PPE) and Sanitizing Measures**

Protection of personnel begins at the entrances to the building:

1. Frequent hand washing and avoiding touching one’s face is recommended by the US Center for Disease Control (CDC) to avoid infection and MSU follows these recommendations. All entrances of the building will have a station with hand sanitizer. Hands must be cleaned upon entering the building using this sanitizer and washed first thing when entering the lab space using soap and
water for 20 s. Hands should be washed at regular intervals during the work period to minimize the potential infection.

2. Masks that cover mouth and nose must be worn in the building. (Masks have been obtained and will be provided; you can also bring your own mask).

IV. Training and Sanitation Team:
1. All personnel are required to obtain three levels of training:
   a. Training on Return to Work Policies and Procedures for MSU Plant Laboratories Building post COVID-19. Representatives of the Building Committee will provide training and information on the procedures and changes to this protocol described in this document as described above.
   c. Lab specific training by their supervisor or PI that covers the Laboratory Plan for a Safe Return for their laboratory.

   All three levels of training must be completed prior to approval to return to work. Training of new personnel will be documented by the individual labs and as outlined at the top of the document.

2. The two lab managers on the Building Committee will lead the sanitation efforts for common equipment areas. They will be also responsible for resupplying the stations at the entrances of the building.
   a. Disinfection will use an EPA-approved disinfectant that is effective against COVID-19 and will follow disinfectant contact times, also listed on the EPA-approved list.
   b. Personnel will wear appropriate PPE when using cleaning/disinfectant products, including safety glasses and chemical-compatible impervious gloves as required.
   c. Disinfection will occur at the beginning and end of each shift (8 am, 1 pm and 6 pm).
   d. All common touch surfaces in equipment rooms will be disinfected, including doorknobs and light switches.

V. Preparation for lab work:
1. To prevent new virus infections, awareness is key
   a. Always maintain physical distances of 6 ft or more between co-workers
   b. Maintain physical distances between all people coming to and from work
   c. Monitor your health (temperature, etc.)
   d. Wear masks at all times unless you are in a single occupancy office with the door shut. Masks have to be worn as an additional person enters the room.
   e. Each person must enter the building using their own key card. They also must fill in the MSU health screening form. This provides a daily record of people in the building so that it can be used for contact tracing for you and others if necessary.

2. Minimize the transport of items between work and home
3. Leave most personal items at home (including headphones, ear buds etc.)—transport only essential items between work and home (e.g., water, food items, key card, wallet, phone). Make sure you have all your belongings in a bag that you can wear over your shoulder (i.e. so that you don’t have to carry anything in your hands since you will need to sanitize your hands upon entering the building).

VI. General Practices
1. Eating is allowed in the building in designated areas using the rules laid out below. Drinking is allowed in designated areas (see below) and outside the laboratories using water that you bring with you from home. Drinking fountains are closed including the refill stations.
2. Stay at home if you have an elevated temperature or other COVID-19 symptoms as described in the health screening form and fill in the form if you were normally going to work that day.
3. Should someone in your research/building group have symptoms or test positive for COVID-19 immediately notify your Chair/Unit Administrator, University Physician and EHS. The University Physician’s office will determine the further course of action.
4. Wearing a mask is now mandatory outdoors and indoors on campus except for single office users with the door closed. Upon entrance into the building, sanitize your hands. Wash them with soap and water for 20 s upon entering the laboratory space.
5. Wear gloves only at times you would usually wear gloves in the lab to protect your experiment (e.g. RNA work), or yourself during work with isotopes or with hazardous chemicals. Dispose of these gloves in the lab as soon as you are done. As recommended by the CDC, wearing gloves in common spaces may increase the risk of spreading the virus. It is best to follow for frequent hand washing for 20 s with soap and warm water and avoiding touching one’s face as recommended by the CDC.
6. Wash your hands with soap and warm water for 20 s before leaving the bathroom. Use a paper towel or the newly installed foot catch to open the door to exit the bathroom.
7. Each lab should also designate a person to clean common touch surfaces in the lab at the beginning of each shift, including doorknobs, light switches, faucets, general use equipment.
8. At the end of the workday, trash bags should be tied off and placed in the hallway for easy removal by custodial staff.

VII. Laboratory Practices (each PI must submit a plan to the Chair/Director and EHS)
1. Minimize time in the building
   a. Anything that can be done at home, you should do at home.
   b. Only go to the building if you are doing work that MUST be done at the laboratory.
   c. If you finish your tasks before the end of the shift—go home.
   d. If your task for the day is minor, ask a colleague who needs to go to the building to complete the task for you (be reasonable).
   e. Be good teammates and help each other out by completing simple tasks for others so they don’t have to come in.
   f. Have a clear plan for the day and write up protocols for the day’s work before coming to the building—only be in the building to execute the task.
   g. If you bring notes, protocols or other paper items from home leave them in the lab if possible—minimize what you bring to and from the lab.
   h. As much as you can, store all data in the cloud for accessing later at home.
   i. Do not spend time socializing in the building.
2. Time shifts and Teams
   a. Social distancing requires that we limit the number of people working in individual laboratories and common spaces until social distancing is no longer required.
   b. Each PI is responsible for setting up a weekly on-line schedule for each lab, team or group where people sign up to work in specific lab spaces during specific days or shifts. The web based general attendance log for the building will also serve as an attendance log for the lab. The number of people per space should be determined by each lab PI and should be capped at a small number per laboratory space (following distancing guidelines using a minimum distance of 6 feet to estimate space required, e.g. one person per bench bay, offsetting bench work stations across benches, one person per office).
c. If you work by yourself, you must follow the MSU Work Alone Policy. Make sure somebody knows when you arrive and leave. Use a buddy system to inform someone that you are working alone and check in with them periodically while you are at work.
d. Minimize travel within the building—try to stay in your lab space as much as possible.
e. Have a designated person clean common touch surfaces in the lab at the beginning of each shift, including doorknobs, light switches, faucets, general use equipment. Cleaning and disinfection must occur a minimum of two times per shift for laboratories and shared spaces.
f. Common surfaces outside of individual laboratories will be disinfected by assigned personnel at regular 5-hour schedules, 8 am; 1 pm; 6 pm.

3. Work in the lab and office space
   a. Frequently wash your hands with soap and warm water for 20 s. Avoid touching your face.
   b. Always wear a mask and glasses in labs, shared open offices, and public areas of the building such as hallways, staircases, elevators, growth chambers—label the mask with your name and take it home with you.
   c. Leave your mask on when using all equipment including microscopes.
   d. Wash your hands for 20 s with soap and warm water after restroom use. Remember to open the door using a paper towel.
   e. Avoid in person meetings and use Zoom or Teams. Conference rooms will be closed except for those temporarily designated as lunchrooms.
   f. Avoid the use of the elevators unless necessary (e.g. to transport items between floors, if physically necessary). Do not share elevators to maintain the 6 feet distancing rule.

4. Laboratory equipment
   a. Disinfect all equipment including shared computers before and after use with an EPA-approved disinfectant solution (wipe down with a 70% alcohol solution). Disinfection will be logged on a sheet for each device, noting date and time of cleaning and responsible individual.
   b. Disinfect all handheld devices, if they are shared (e.g. pipettors) before and after use with an EPA—approved disinfectant solution (e.g. wipe down with 70% alcohol solution). Remove all shared pencils and pens from use.

VIII. Compliance and Compliance Monitoring:
1. Questions about this document can be directed to the PLB Chair (Danny Schnell, schnelld@msu.edu) or PRL Director (Christoph Benning, benning@msu.edu) or any other member of the building committee.
2. The Chair/Director and the PIs are responsible for compliance with the rules in this document. However, we are all in this together and need to work together. If you see non-compliance, say something to the person. If you cannot resolve the issue or the situation is unclear, talk to your supervisor, or someone on the building committee to get assistance. Developing and maintaining a Safety Culture is everyone's responsibility. If you see unsafe work practices, please say something. You can report unsafe work practices to any of the following:
   • the advisor or laboratory PI
   • the chairpersons/directors and graduate associate chairpersons in departments and schools,  
   • the deans and associate deans in the colleges,
   • the Office of Regulatory Affairs (517-432-4500)
   • the Office of Research & Innovation (517-355-0306 during office hours, or 517-285-5646 any time), and
• the MSU Misconduct Hotline at 1-800-763-0764, where anonymous reports will be immediately directed to MSU Environmental Health and Safety. (Explanation, and information on anonymous reports, may be found at https://msu.edu/unit/intaudit/hotline.html.)

IX. Food and Drink Policy

Based on the changing Executive Orders and needs of the MSU community, food consumption is now allowed in campus buildings in posted designated areas. We will work with employees who need food available for medical reasons. However, keep in mind that this may pose an increased risk because it requires mask removal. Therefore, it is important to observe social distancing, follow disinfecting protocols, and spend minimal time in the room. The following rules will apply to the Plant Biology Laboratories Building to implement this Drink and Food Policy:

1. It is always preferable to eat outside of the building when possible, either in the gardens or in your car.

2. The following lunchrooms and conference rooms and their occupancy at any given time have been designated as lunch areas:
   a. Anton Lang Conference room (PBL103, occupancy 2)
   b. First floor lunchroom (PBL132, occupancy 3)
   c. Second floor lunchroom and internal conference room (PBL232, occupancy 5)
   d. Third floor lunchroom (PBL323, occupancy 4)
   e. PBL168 (right half, occupancy 4)
   f. PBL148 (occupancy 3)
   g. PBL242 Break room (occupancy 3)
   h. Third floor east vestibule (occupancy 1)
   i. Basement east vestibule (occupancy 1)

   Spacing and eating areas in these rooms are marked and the rooms’ spacings are indicated in the attached floor plans. These areas can only be used under these rules. Breaks and meals cannot be social events.

3. The doors to the lunchrooms/conference rooms should remain closed when occupied by anyone eating or drinking with their masks removed and the window shades should be kept open where available.

4. You can also eat when alone in your personal offices with the door shut.

5. Time in the shared spaces for breaks and lunch must be scheduled in advance using a digital scheduling system set up by Ryan Mosley. Time slots will be 20 min which includes the time for microwaving. The name of the individual and in/out time will be recorded, and such records kept and stored electronically.

6. Signs will be posted indicating that masks must be worn in the room when not eating.

7. The individual eating space must be cleaned and disinfected by the user before and after use, and the disinfection should follow EPA approved guidelines (70% alcohol for 5 min; Sani-wipes for 3 min). Disinfectants and wipes will be present in the room.

8. The use of refrigerators and select microwaves, water boilers and single cup coffee makers will be allowed. Currently present toasters, communal coffee pots, etc. will have to be removed by their owners. Nobody should be waiting in line to use these items. Their use is part of your scheduled time in the room. Each of these items needs to be disinfected before and after use with 70% ethanol (5 min exposure time) by individual users just like any other shared equipment in labs. Standard Operating procedures will be posted.

9. Only one person should use the sink at any time. Shared brushes and sponges will be removed.
10. Everyone should bring and take home all personal utensils and a plate or bowl for eating each day. All dish racks will be removed. Plates, bowls, and utensils should not be shared. Personal items like cups or mugs must be kept in a labeled drawer or tub NOT on the countertop. The use of disposable cups, plates, bowls and utensils at this time is highly recommended.

11. No common knives, spatulas, spoons can openers or serving utensils are permitted.

12. Food should be prepared and ready to heat and eat each day. Food should be in a labeled lunch bag in your designated refrigerator or inside your labeled drawer or tub. No bulk food in the refrigerator or freezer is permitted at this time. Bring only what you plan to eat that day. This minimizes touching items in the refrigerator. Take your bag home each evening.

13. Food should be prepared at home and only reheated and eaten in the lunchroom. No leftover food storage in refrigerators or freezers is permitted beyond the end of the day.

14. No common salt, pepper, sugar or other condiments will be permitted.

15. No books, magazines, newspapers, notebooks, games or computers are allowed in lunchrooms. Rooms are for eating only.

16. Snacks and community food to share should not be brought to work during this pandemic period.
Checklist for Return to Work Post COVID-19 for the Plant Biology Laboratories

Prior to returning to work:

☐ Complete the mandatory training for Return to Work Post COVID-19.
☐ Obtain a mask(s) that covers your mouth and nose. Masks will be provided or you can also bring your own mask. Contact Emily Pawlowski (pawlow41@msu.edu) or Linda Danhof (danhof@msu.edu) to obtain a reusable, washable mask.
☐ File the daily health report before going to the building. If you have any symptoms or are feeling ill, stay at home.
☐ Minimize the transport of personal items between home and work.

Upon entering the building:

☐ Each person must enter the building using their own key card.
☐ Always maintain physical distances of 6 ft or more between co-workers.
☐ Maintain minimal physical distances between all people coming to and from work.
☐ Wear a mask that covers your mouth and nose in labs, shared open offices, and public areas of the building such as hallways, staircases, elevators, growth chambers.
☐ Sanitize your hands with the sanitizer upon entering the building.
☐ Wash your hands upon entering your laboratory and avoiding touching your face. Wash your hands frequently while you are in the building.
☐ Place all personal items in an office area where they will not be exposed to other workers.
☐ Disinfect common areas and shared equipment in your laboratory (consult your laboratory protocol).

Bathrooms:

☐ Check occupancy of the bathroom before entering to maintain social distancing.
☐ Wash your hands upon entering and leaving the bathroom.
☐ Open the door of the bathroom with a clean paper towel and dispose of it immediately after entering or leaving the bathroom.

At the end of your shift

☐ Disinfect the work surface of your area.
☐ Disinfect your computer.
☐ Disinfect common or shared equipment in your laboratory (consult your laboratory protocol).
☐ Sanitize your hands at the exit and leave the building.
For PIs:

- Determine the number of people that can safely occupy the laboratory or office following distancing guidelines. Use a minimum area of a 6-foot radius to estimate number of people allowed in each space (e.g., one person per bench bay, offsetting bench workstations across benches, one person per office).

- All employees authorized to resume work must be given written permission to do so.

- Setup a weekly on-line schedule for each lab, team or group where people sign up to work in specific lab spaces during specific days or shifts to comply with safe occupancy levels established in the previous calculation.

- Establish a system for disinfecting common work areas and equipment.

- Establish protocols for situations specific to your group. For example, include procedures for providing access to essential maintenance personnel or researchers from other laboratories that need to access shared equipment in your laboratory.

- Create a timely plan to address any overdue preventive maintenance, waste disposal, safety re-training, software updates, etc., resulting from the switch to essential operations.

- Ensure that your group continues to comply with procedures described in this document and your own laboratory procedures.