



Use and Basic Safety Orientation

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TOPICS



-
- **Beaver Works Research Area Description and Overview**
 - **Beaver Works Access Requirements**
 - **Safety Policy and Training**
 - **Information Technology Policy**
 - **Evacuation and Muster Map**
 - **Summary of Your Responsibilities**
 - **Signature Page**



Beaver Works



- **Do-it-yourself approach to projects**
 - All work is Unclassified
 - Convenient, comprehensive and ideal setting designed to facilitate innovation
- **Primary objective**
 - Encourage cross fertilization of ideas and skills
 - Foster innovation, collaboration, and creative problem solving
- **Provide students and staff with access to instruction and equipment**
 - Instruction in basic soldering and assembly
 - Equipment and stations for soldering electronic components
 - Hand tools with Safety Instruction
 - Chemical and PPE Instruction



Beaver Works Classroom/Café Area



- **Beaver Works has classrooms, research, and café areas in both NE45 and Bldg 31**
 - NE45 has more complete prototyping shop
- **Beaver Works classroom area consists of a multi-use space. The classroom can be used as one large room or divided to host two smaller classes.**
 - Each classroom has a projector (or monitors), tables, and chairs
- **The Café area has a sink, microwave, coffee machine and multiple areas for sitting.**



Beaver Works Research Areas



- **Beaver Works is a multi-use space with areas for many different projects**
 - Benches for multiple projects
 - Electronics Area
 - Software Development Area
 - Project Space and Research Testing Area
 - Cyber Bar
- **All projects must be labeled with project name, POC name, email and telephone number for the project**
 - Return the space to the way you found it – others use the space before and after you
 - No experiments in the lobby/café area



Beaver Works Prototyping Workshop



- **Beaver Works Prototyping Workshop (NE45) is an unclassified work space that contains multiple pieces of equipment**

Drill Press	Mill
Band Saw	Powered Hand Tools
Lathe	Brake
Laser Cutter	3D Printer
Fume hood for hazardous chemicals	

- **Do-it-yourself approach to your project**
- **Facility Manager to help/train on equipment**



Research Area Access



- **The Beaver Works Research Area Hours of Accessibility**
 - 24/7 with approved badge access
 - In order to have access, this training is required
 - Training will be given by the Facility Manager during the first class or by requesting a training session directly
 - General rule of General Research Area cleanliness and attire
 - For soldering stations solder instruction must be completed (separate training, see Facility Manager)
 - Users attend training sessions as required to operate equipment or must prove capability (documented training through Mobius app)
 - No access to the Prototyping Workshop until the student has been qualified by the Facility Manager
- **Training must be given and signed off on before access approval is granted**



Prototyping Workshop Access



- **Prototyping Workshop Access Policy**
 - Users must already have Access to General Research Laboratory
 - Users of industrial machining equipment must receive machine-specific training and evaluation by Facility Manager prior to being granted access. This will include going through the “Flashlight Program” if not already qualified in the Prototyping Workshop on machine-specific equipment
 - Approved users will be allowed to access the Prototyping Workshop in groups of 2 or more approved/trained users 24/7 when industrial machining equipment is in use. After hours, an authorized/trained graduate student must be present in the workshop per MIT policy
 - The number allowed in the Prototyping Workshop: Min 2 – Max 10
 - The Facility Manager will grant key access to specific industrial machining equipment when he determines that a user(s) is capable of using that specific equipment while abiding by all the safety policies and procedures. Keys cannot be given to other users without the permission of the Facility Manager
 - The Facility Manager can deny access if the policies and procedures are not followed



Prototyping Workshop Safety Policy



- **See Beaver Works Safety Policy (SP) BW001 for general rules**
- **Prototyping Workshop rules**
 - Personal Protective Equipment (PPE) is required (safety glasses, gloves)
 - Never work alone – the Prototyping Workshop uses the 2-person rule
 - Must sign in and pick up a “Panic” button that is to be worn at all times in the workshop
 - Guarding required to be utilized
 - Keep hearing unobstructed for awareness
 - Safety glasses must be worn at all times
 - Wear ear protection when necessary
 - Long hair must be pulled back
 - No loose jewelry or clothing – including ties or necklaces
 - Badges must be removed and placed in a designated location
 - Must wear appropriate shoes (flat and toes must be covered)
 - Gloves must be worn when necessary (never around equipment with rotating parts)
 - Never leave a machine running unattended
 - Never use a rag near moving machinery
 - Never use damaged machinery or tools – report any issues to the Facility Manager
 - No food or drinks near equipment or fume hood
 - Dial x100 in case of Emergency



Safety Policy and Training



- **Fire extinguisher locations (NE45)**
 - **Main Entrance: straight back to the windows center**
 - **Research Area: next to eye wash station**
 - **Small Classroom: inside door on the wall side**
 - **Prototyping Workshop: Chemical work room in the back of the area**
- **Emergencies**
 - **If there is an emergency in the building dial 100**
 - **If you need police dial 911**
 - **After an emergency, must contact Lincoln or MIT Security/Medical Department to fill out any required paperwork**



Beaver Works IT Resources (NE45)



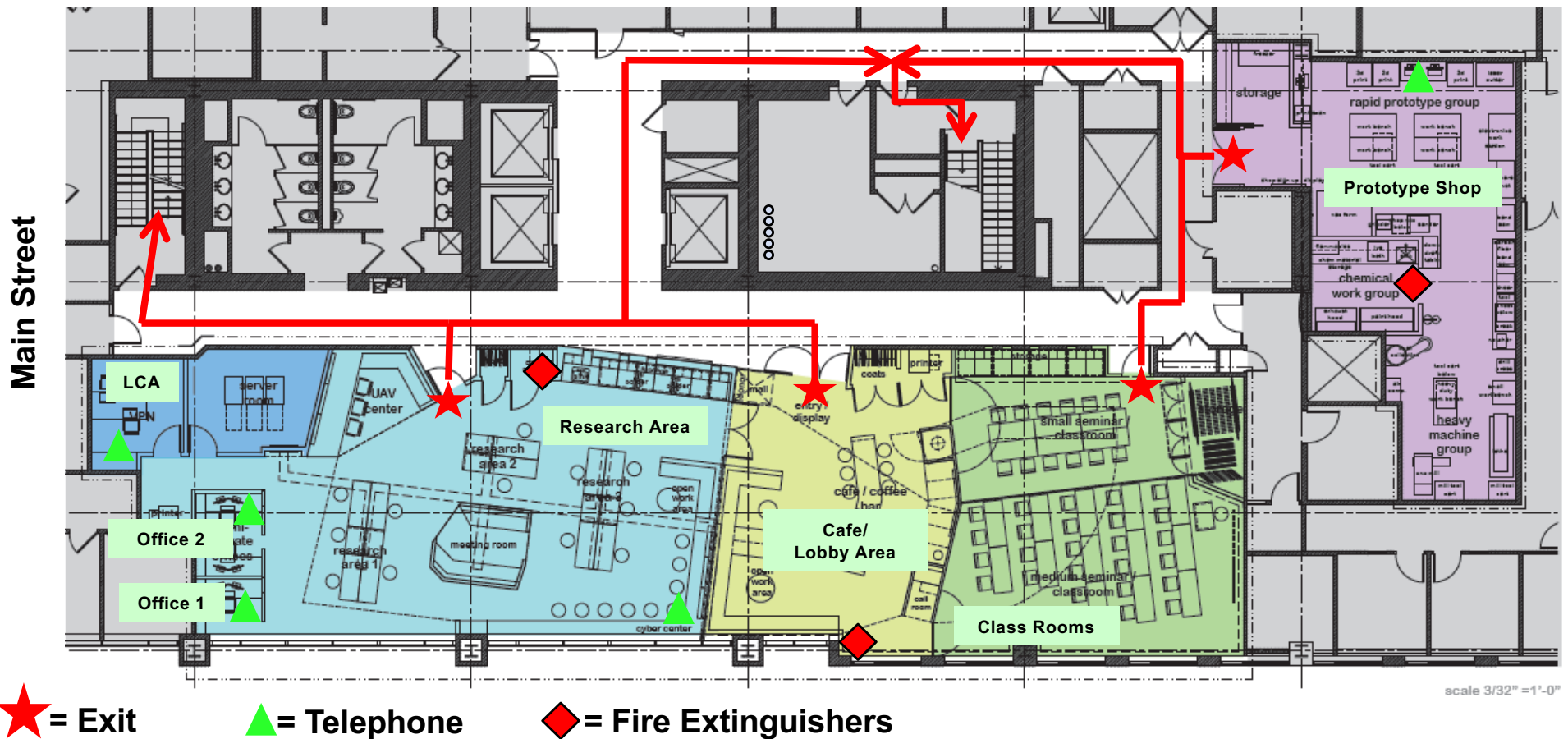
- **Approved use of BW IT resources located in the NE45 Research Area and Prototyping Workshop**
- **Users of the Beaver Works Center are obligated to use the IT resources in accordance with applicable laws, MIT and Lincoln Laboratory Policy**
- **IT use:**
 - **Must follow policy against harassment, and its standards of honesty and personal conduct**
 - **Must be responsible, ethical and professional**
 - **Must be limited to Beaver Works business and incidental personal use**
 - **Must Not be used for the benefit of personal businesses or other organizations unless permitted by policy or otherwise authorized**



NE45: Evacuation Plan / Telephone Locations



- Evacuation Routes/Muster Location
 - Refer to map below (a map is posted on the Main Entrance as well)
 - In case of evacuation please muster in the Quad Area outside





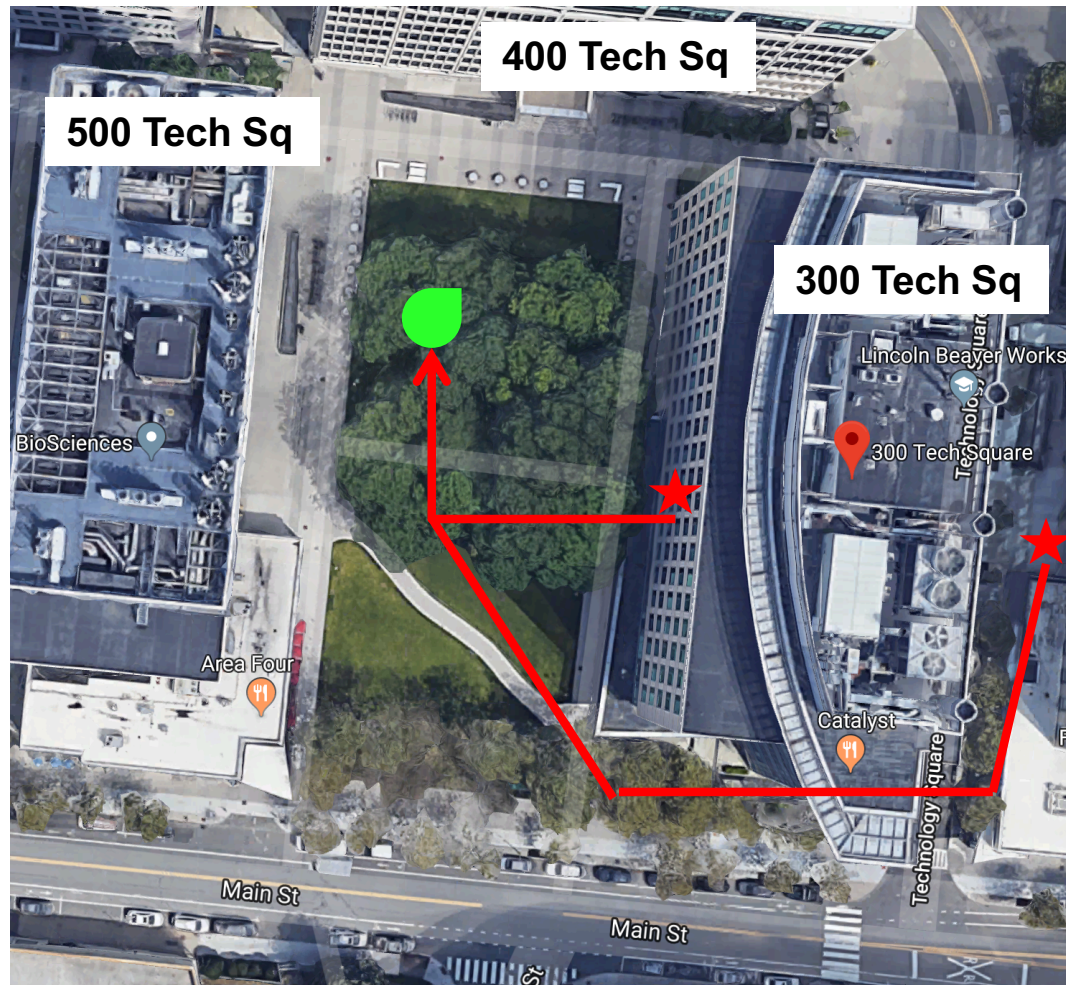
NE45: Muster Location



- **Muster Location**
 - In case of evacuation please muster in the Quad Area outside at indicated

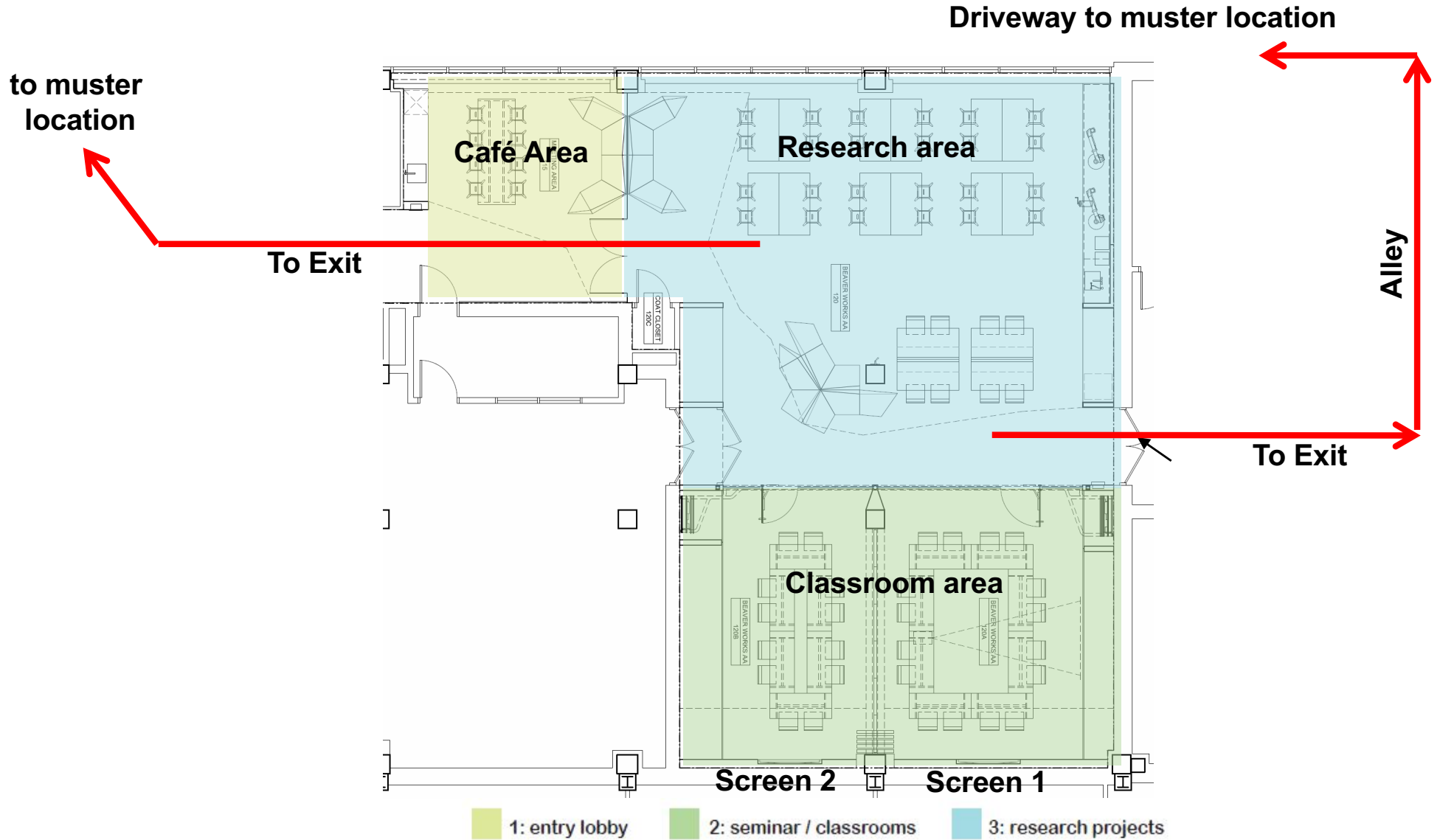
 = Beaver Works Muster Location

 = Exit





Bldg 31: Evacuation Plan





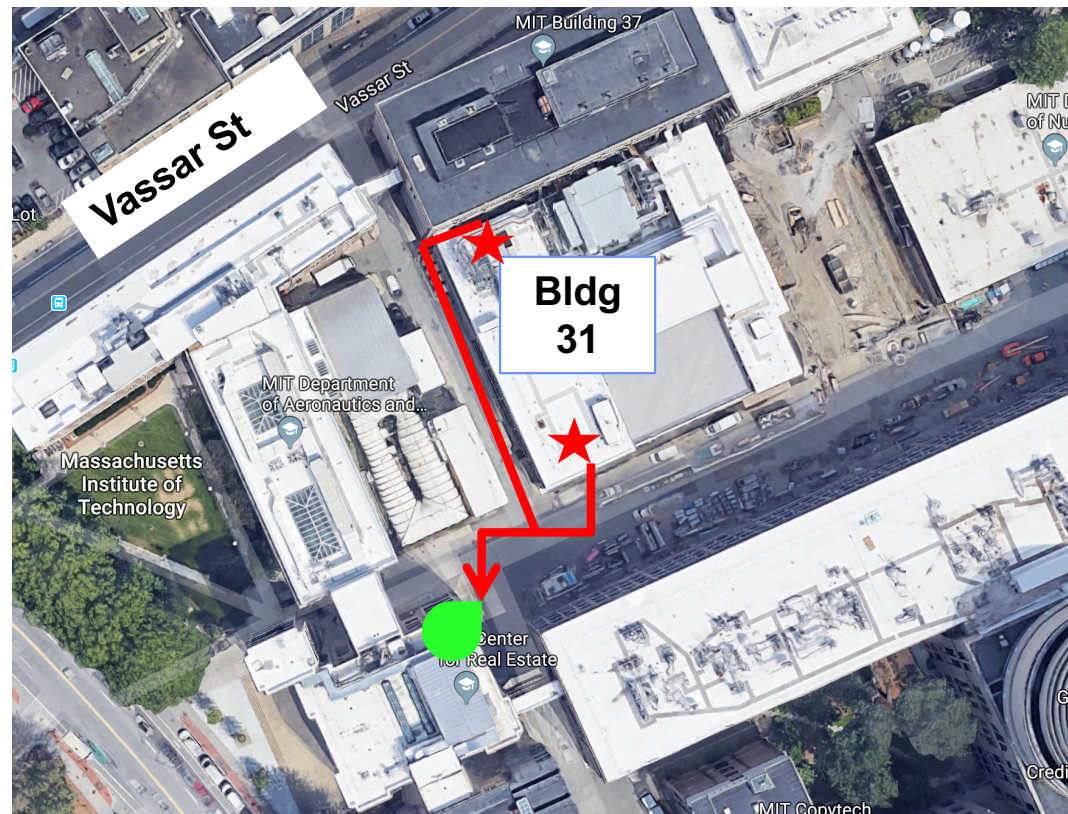
Bldg 31: Muster Location



- **Muster Location**
 - In case of evacuation please muster outside at indicated location

 = Beaver Works Muster Location

 = Exit





Your Role and Responsibilities



- **Users**
 - **Complete general and work area-specific training**
 - **Be familiar with hazards of chemicals you are using, and with signs and symptoms of overexposure**
 - **Promptly report chemical exposures, accidents, incidents, and near misses to the Facility Manager**
 - **Seek help at MIT Medical Department if injured at Beaver Works**
 - **Clean up facility after each use**
 - **Minimize food or drink in the Research Area**
 - **Know where to find the first aid kits, fire extinguishers and telephones**



Conclusion



- **Safety is the #1 priority and will be incorporated into all aspects of training and usage**
- **Students and staff will have access to instruction, equipment and tools not commonly available**
- **Primary Objectives**
 - **Be safe**
 - **Encourage cross fertilization of ideas and skills**
 - **Foster innovation, collaboration, and creative problem solving**
- **With this training you have access to Research, Café and Classroom areas but not access to the Prototype Shop.**
- **This training does not grant you access to use hand tools, chemicals, soldering stations or machine shop tools.**
 - **For access to these individual sections of the Facility you must complete specific training for each**
 - **Contact the Facility Manager or Business Manager with questions on how to access to specific training needs**



Form



https://mit-bwsi.formstack.com/forms/beaver_works_training

