



- General Safety Guidelines
 - GRID’s goal is to make every installation accident free. We are all responsible for accomplishing the shared goal that everyone deserves to go home safe at the end of the day. If you see something unsafe, inform the GRID Supervisor or Team Leader immediately!
 - When in doubt, ask!
 - DO NOT rush. Always safety over speed. This is a learning space.
 - Be aware of your surroundings and what other people are doing.
 - Look where you are going. NEVER walk backwards.
 - Maintain a clean and orderly construction site.
 - Lift with your legs, not with your back.
 - “Two people, four hands” when carrying, lifting, or holding a module.
 - Remove rings, watches and other jewelry prior to starting work. These create opportunities for shock or catch hazards. Loose hair must be tied back.
 - Treat the homeowner’s space with care. Be careful of scraping, scuffing, or breaking windows, walls, or other property.

- Personal Protective Equipment (PPE)
 - Hard hats must be worn at all times by everyone including homeowners and guests on site. Hard hats are the first item on as soon as you arrive at the installation and are the very last item to be put away at the end of the work day.
 - Safety glasses are strongly recommended at all times, and **MUST** be worn when using *or working near* power tools such as drills, impact drivers or the band saw. Sunglasses and eyeglasses are not permitted for use as safety glasses unless ANSI Z87.1 rated.
 - Gloves are required whenever handling flashings, shingle, or other sharp or rough objects, lumber, or during a wire or rope pull.
 - Ear protection is required while operating noise-intensive power tools like the band saw for more than a brief period of time. Single-use earplugs or noise suppression headphones are provided <<*state where located*>>.
 - Sanitize and return your PPE at the end of the work day. Wipes are provided to sanitize your hard hats and safety glasses at the end of the day.

- Sunburn/Dehydration
 - Sunburn and dehydration represent our most common and immediate risk.
 - Wear sunscreen and reapply often <<*state where located*>>.
 - Drink plenty of water. Two (2) cups of water per hour is recommended to maintain good hydration. For heavy exertion in hot weather, four (4) cups of water per hour is recommended.
 - Take a break in the shade if you get tired or if you feel like you are overheated. Symptoms of heat exhaustion include clammy, pale skin, headache, dizziness, nausea, and fatigue.

- High Heat Procedure
 - The GRID supervisor or team leader will insure access to shade is provided at all times and advise all volunteers as to location at start of installation.
 - Volunteers and staff are encouraged to take as many breaks as needed in the shade to rehydrate.
 - Volunteers and staff will be paired with a “buddy to watch for signs and symptoms of heat illness and to ensure that emergency procedures are initiated when someone displays possible signs of heat illness.

- The GRID supervisor needs to be aware of volunteers who have not been doing similar work for at least 10 of the past 30 days to make appropriate accommodations. I.e. work half days, assigned to a buddy and/or assigned less physical work.
 - The weather will be monitored daily and the scheduled work day will be cut short to avoid working in the hot parts of the day during heat waves.
 - Anyone showing signs or symptoms of heat illness must not be left alone and the GRID supervisor must be notified to assess the effected workers condition to administer first aid and/or to notify emergency personnel.
- Ladders
 - Be careful of windows and overhead electric lines when erecting or moving ladders. When possible, stay at least 10 feet away from overhead power lines or service mastheads.
 - Proper ladder angle is 4:1 - For every 4 feet of elevation, the ladder base should be set out 1 foot.
 - The ladder must extend at least 3 feet past the eave (three (3) ladder rungs minimum) or safety rail extensions may be used.
 - Make sure ladders are tied down and stable before using. Once ties are removed, ladders must be taken down immediately. An unsecure ladder should never be left unattended.
 - Only one person on the ladder at a time.
 - Do not climb on the rungs at or above the roof level.
 - Do not climb with tools or materials in your hands. Always maintain 3 points of contact while climbing the ladder. Use a rope and bucket or a 3-person hand-off system to move equipment.
 - If performing work on a ladder, never overreach.
 - Never leave tools resting on or near the top of a ladder.
- Roofs
 - Fall protection is *always* required
 - A personal fall arrest system is composed of a properly fitted harness, retractable lifeline (“yo-yo”) or rope and lanyard, and anchor.
 - One lifeline is allowed per anchor point.
 - You must be hooked into a lifeline when transitioning on and off the roof at the top of the ladder.
 - Work slowly and carefully - try not to cross lifelines or knock over tools and materials.
 - If using a guardrail system, stay within the protected work area.
 - If using scaffolding, DO NOT climb on scaffolding. Only access scaffolding platform by means of a tied-down ladder. Do not use improvised steps between the scaffold platform and the working edge of the roof.
 - The GRID Supervisor or Team Leader should be the first workers on the roof. Before going on the roof for the first time, they will give you a quick roof orientation.
 - If you do not feel comfortable on the roof, you do not have to go up or stay there.
 - Minimizing the number of people on the roof will enhance safety for workers and the roof itself.
 - NEVER walk backwards on the roof.
 - Do not walk near edges unless necessary.
 - Do not leave tools near the edges or in any place where they may be prone to fall.
 - If you do drop something, let it go and yell “HEADACHE!” to warn people on the ground.
 - If you are on the ground and hear someone above yell, DO NOT look up! Do cover your neck and shoulders.
 - No cell phone use -including texting- on the roof unless it is used to communicate with other crew members. You are welcome to come down to the ground to use your cell phone.
 - Note: Do not stand or sit on the ridge. Be mindful of pivoting and kneeling on the roof. Use carpet to protect the roof where stable.

- Electricity
 - Assume all wires are hot, live, and energized.
 - DO NOT terminate any wires or plug in any connectors unless the GRID Supervisor says it's OK.
 - DO NOT remove any locks or lock boxes off final homerun connections or breakers. Only the GRID Supervisor does this. Lockout/tagout kits are required to lock off all hazardous DC (homerun connections) and AC (main service panel/breaker) energy sources during wiring and until system testing. Electrical tape is not an acceptable method of "locking out" homerun connectors.
 - The GRID Supervisor or a GRID-authorized licensed electrician are the only individuals permitted to work in the main service panel. The cover of the main service panel should only be off while the GRID Supervisor or authorized electrician is working in it.
 - Do not crowd or distract people working on wiring, especially in the main service panel. Stay at least four feet (4') away when observing work in the main service panel or any energized work such as testing or troubleshooting.
 - Volunteers authorized to assist the GRID Supervisor or electrician with testing, troubleshooting or other energized work, must wear full Arc Flash apparel including, sock hood, safety glasses, face shield, and insulated gloves with leather protectors and must use insulated tools.
 - If someone is being shocked, DO NOT touch them since you may be shocked as well. Use a non-conductive (wood or plastic) object to disconnect them from the electricity source.

- Power Tools
 - If you do not know how to use a tool, have GRID staff or a Team Leader show you.
 - Use safety glasses if you are in the vicinity of a power tool, even if you are not using the tool.
 - Use ear protection as necessary (the band saw can be loud/shrill).
 - Operate power tools using both hands.
 - Be careful when tightening bolts or screws with the impact driver as this may apply excessive torque and cause stripping or broken bolts.
 - Be careful when tightening bolts or screws with the drill. Be sure to use the appropriate torque settings so that it "breaks" before causing potential wrist injuries.
 - Do not bind the blade of the band saw. The tool's own weight provides the most efficient downward cutting pressure. Ensure that the material being cut is securely clamped or held down and is held against the work stop of the band saw.
 - Unplug the corded band saw when not in use.
 - Defective power and hand tools should not be used and reported to the GRID Supervisor.

- Emergency Response Plan
 - Know where the first aid kit is located <<state where located>> and use it for minor injuries, e.g. cut or scrape. Know where the fire extinguisher is located <<state where located>>.
 - Inform GRID staff immediately of any serious injuries, e.g. knock on head, back injury, sprained or broken body part, etc.
 - If someone has a head, back, or neck injury, DO NOT move them!
 - In the unlikely event of an emergency:
 - 1. Call 911
 - 2. Stop work immediately
 - 3. Notify the GRID Supervisor
 - In the case of an emergency in which the GRID Supervisor is incapacitated, carry out the Emergency Response Plan. Once the Supervisor is stabilized, call down the phone tree until one of these individuals is reached to inform them of the situation:
 1. Regional Director:
 2. Human Resources: Katie Kerr (215-858-0756) OR David Calhoun (916-432-9222)
 3. Founders:

- The Emergency Response Plan is located <<state where located>>. The Emergency Response Plan outlines what to do in the case of a serious injury, a fall, a natural disaster, etc. There are also hospital directions and Material Safety Data Sheets (MSDSs provide all chemical info).
 - Fall Rescue Plan - In the unlikely event that a fall arrest occurs, use a ladder to immediately rescue a conscious, hanging worker <<state location of rescue ladder>>. Call 911 immediately and follow emergency procedures if it appears the worker is unconscious or has suffered head, back, or neck injuries. Use a ladder to help support the worker and allow blood flow to the legs. All workers involved in a fall arrest or fall will be sent immediately for medical evaluation to determine the extent of injuries, if any.
- Site-specific Hazard Assessment
 - What do you see that could be a safety hazard?
 - Any health conditions we should know about?
 - Let a GRID Alternatives staff person know.
 - Bathrooms will be provided by the homeowner or a porta potty will be available on site.