

Author:	Ferry – Landis McCulloch	Revision #:	New
Approved by:	Jed Dixon	Date Issued:	September 2023

## SAFE OPERATING PROCEDURES

### Personal Protective Equipment - Ferry

### SOP 10-27

#### **Hazard Review**

*The following are guidelines/requirements for the use of personal protective equipment (PPE). A hazard assessment at each work site will determine what PPE is required for hazards identified, so it shall be the Supervisor's responsibility to conduct the hazard assessment with the crew to determine if additional protective equipment is necessary and to ensure that the appropriate equipment is worn. The failure to wear appropriate PPE could result in disciplinary action.*

#### **Hard Hats shall be worn:**

1. On job sites where employees may be exposed to equipment with swinging components being operated such as backhoes, excavators, cranes, etc.
2. When working in areas where there is a potential for injury to the head by falling objects.
3. When exposed (or reasonably expected to be exposed) to flying material (e.g., brush chipper)
4. When exposed to overhead electrical conductors where shock hazard exists, Class E hard hats shall be worn.
5. At the direction of the supervisor.
6. Shelf life of hard hat begins when first issued from stock, not the manufactured date code indicated on the hard hat. It is recommended that the date issued from stock be marked on inside of the hard hat w/ waterproof marker. Hard hats should be replaced 5 years from the date it was put into service.
7. During winter weather, hoodies should not be worn under hard hats. Winter liners made for hard hat use during winter weather should be worn instead.

#### **ANSI 107 Class 2 Safety Vest or High Visibility Apparel shall be worn:**

1. When exposed to moving traffic or equipment.
2. When working within the right-of-way.
3. When determined by the supervisor.
4. ANSI Class 3 safety vests or High Visibility Apparel are recommended for nighttime operations.

#### **Safety Glasses with side protection shall be worn:**

1. Whenever there is risk of injury to the eye injury from impact hazards such as flying fragments, objects, large chips, and particles.
2. When operating various power tools or machines (e.g., weed eaters, woodworking tools, power or concrete saws, chippers, jackhammers, brush chippers, lathes, mills, grinders, sanders, needle gun, shears, hydraulic ironworker, etc.) which may throw particles.
3. When determined by the supervisor.
4. By any person in a shop area outside of designated aisles or marked areas.
5. When jump-starting a battery.
6. Reader Safety Glasses are available through Central Inventory.

7. Provision for prescription safety glasses purchased through Correction Enterprises are available. Check with your supervisor for details.

**Safety Goggles shall be worn:**

1. When their use is more appropriate than that of safety glasses (as determined by the supervisor).
2. Whenever there is a need to protect the eye from dust, sawdust, and mist (e.g., during sandblasting, sawing, or pressure washing) which can enter or blow into an employee’s eye although they are wearing safety glasses.
3. Whenever there is a danger of a foreign object entering through the side of the glasses.
4. When working with chemicals that may be acidic, caustic, or pose eye hazard based on SDS.

**Face Shields shall be worn:**

1. When there is danger of splashing chemicals or other substances that may cause injury to the face or neck area (pressure washing, grinding, drilling, etc.).
2. Whenever, in the judgement of the supervisor, their use is more appropriate than other eye protection.
3. When removing or installing a battery.
4. When working with chain saws, strings trimmers, brush cutters, grinders, and woodchippers.
5. Safety glasses must be worn under face shield to protect against impact hazards that may exist.

**Appropriate Gloves for Hazard shall be worn:**

During any operation where there is a risk of abrasion, laceration, burns, blisters or puncture to the hands. Special impermeable gloves shall be worn when solving cleaning, working with hazardous chemicals or as directed by the Safety Data Sheets.

**Typical Operations include:**

Sharpening tools	Welding, grinding, torching, cutting	Sign repair
Handling wire ropes and cables	Sandblasting, chipping	Using shovels, picks, etc.
Tree trimming and related activities	Loading or unloading tanker or distributor	Operating chain saws, weed eaters or other gas- powered tools
Handling lumber	Filling propane tanks	Working on hot or oily engines
Replacing rudder bushings or Voith parts with liquid nitrogen		

**Foot protection shall be worn:**

By all employees when working in areas where there is a danger of foot injuries due to falling or rolling objects, or objects piercing the sole, or when the use of protective footwear will protect the affected employee from an electrical hazard, such as a static-discharge or electric-shock hazard, that remains after the employer takes other necessary protective measures except those who do not have regular exposure to hazardous conditions (e.g., office personnel).

Foot protection includes safety shoes or work boots, toe caps, or special orthopedic shoes and must meet ASTM F2412-05 and ASTM F2413-05. If an employee, due to health reasons or physical abnormalities, cannot wear safety shoes then toe caps shall be worn. If an employee, due to health reasons or physical conditions cannot wear toe caps, then special orthopedic safety shoes or boots

constructed under the supervision of a physician shall be worn. If an employee, due to health reasons or physical conditions, cannot wear special orthopedic safety shoes or boots, efforts will be made to move the employee to a position with no exposure to foot hazards.

### **Coveralls or long-sleeved shirts should be worn:**

1. When welding or cutting.
2. When exposed to poison oak, ivy or sumac.
3. When installing installation

### **Rubber boots shall be worn:**

1. When required by the Safety Data Sheets.
2. When water blasting, using UHP machine.
3. When cleaning out transfer pit

### **Fall Protection Devices (Full Body Harness and Lanyard) shall be worn:**

While working on unguarded work platforms or surfaces where the fall would be 5 feet or more. Only shock absorbing lanyards shall be used to limit the fall arresting force from the fall. It is recommended that a 4 or 6 ft. shock absorbing lanyard be used for this purpose after determining fall clearance distant to prevent contacting the ground in event of a fall. Self-retractable lanyards may also be used in place of shock absorbing lanyards and are recommended if fall clearance distance is not sufficient for safe use of 4 or 6 ft. shock absorbing lanyard. Self-retractable lanyards limit fall distance to 2 ft.

### **Fall Restraint Devices (Full Body Harness and Restraint) shall be worn:**

When in the bucket for Aerial Truck Operations, MEWP such as, JLGs. It is recommended that a retractable lanyard or short restraint lanyard which limits the fall to 2' to be used for this application. The intent is to prevent the employee from being ejected from the bucket for any unexpected movements or malfunctions with the Aerial Truck operation.

### **Respirator Protection shall be worn:**

1. When employees must work in environments where harmful dusts, fogs, smoke, mists, fumes, gases, vapors, or sprays are present.
2. Where toxic substances are present in the workplace and engineering controls are inadequate to eliminate or reduce them below the OSHA Permissible Exposure Limits.
3. When required by the product label or the Safety Data Sheets.
4. When welding or cutting on galvanized metals.
5. When sandblasting
6. When working with ferry steel containing lead-based paint
7. When spray painting.
8. When determined by the supervisor

**Hearing Protection shall be worn:**

Whenever the noise levels in the work environment exceed 85 dbA. (The noise level can be determined by your Safety Engineer.

**Examples include:**

Sandblasting	Water blasting	Jackhammers
Grinding/cutting/torching	Chipping, sanding, needle gunning	Concrete Saws
Ferry Engineers and Marine Maintenance – While in engine rooms	Chain Saws and Weed Eaters	

*All types of heavy equipment (dozers, loaders, graders, mixers, etc.) may require hearing protection. This equipment is included in the ongoing testing by the Safety and Risk Management and employees will be advised on individual basis.*

**Life Jackets shall be worn:**

When working over or near water, where the danger of drowning exists.

1. All life jackets shall be U.S. Coast Guard approved.
2. All life jackets shall be inspected for defects that would alter the strength of buoyancy.
3. Defective life jackets shall not be used.

**Chain Saw Chaps shall be worn:**

1. When using chain saws.
2. When determined by the supervisor
3. Chain saw chaps should be wrap-around type offering 360-degree leg protection.

**Clothing NOT appropriate for NCDOT use:**

1. Shorts
2. Tank tops that expose bare shoulders
3. Sandals or canvas shoes