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SAFE OPERATING PROCEDURES

Personal Protective Equipment - DOH

SOP 10-16

Hazard Review

The following are guidelines/requirements for the use of personal protective equipment (PPE) based on hazard assessment. The Supervisor's is responsible for conducting a hazard assessment with the crew at each worksite 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. If employees wish to use their own PPE, it must be approved by their Safety Staff prior to use.

Note: Hazard assessment has determined that the use of ear buds or other listening devices used to listen to music while performing work related tasks is prohibited. This action is a distraction which may affect the safety of the employee wearing them and other workers in the immediate area. Listening to music must be done during breaks, lunch, and before or after work hours. Supervisors must enforce this requirement to ensure the safety of all workers.

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.

Orange Caps shall be worn when flagging traffic except in hard hat areas. For hard hat areas, Orange hard hat or orange hard hat cover shall be worn.

ANSI 107 Class 2 Safety Vest or ANSI 107 Class 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. When operating equipment within the right-of-way and without an enclosed cab.
5. ANSI Class 3 safety vests or other ANSI Class 3 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, rock drills, chippers, jackhammers, brush chippers, 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.
 - NCDOT will cover 100% of the cost for prescription safety glasses except those employees who wear prescription glasses must pay for the cost of the examination. NOTE: All prescription safety glasses require side shields.
 - If yearly eye exam shows prescription has changed, employee is eligible for new prescription safety glasses.
 - 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 and wood chippers.
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 picking up dead animals, working with hazardous chemicals or as directed by the Safety Data Sheets.

Typical Applications:

Hot mix paving or patching	Fence and guardrail repair	Sign repair
Sharpening tools	Welding and grinding	Using shovels, picks, etc.
Tree trimming and related activities	Loading or unloading tanker or distributor	Operating chain saws, string trimmers, or other gas-powered tools
Handling lumber		

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).

Current safety toe shoes or boots allowance for DOT:

1. \$150 each year
2. \$225.00 every two years
3. If employees are requesting reimbursement, the request must be submitted within 30 days or purchase.

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. The Unit or Division is responsible to cover cost for their employee in this case. 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 exposed to hot materials while hot mix patching or paving, crack sealing or placing thermoplastic markings.

Rubber boots shall be worn:

1. When required by the Safety Data Sheets.
2. When mixing and applying pesticides.

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

While working on unguarded work platforms or surfaces where the fall would be six 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. It is recommended that a self-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 are exposed to harmful dusts, fogs, smoke, mists, fumes, gases, vapors, or sprays that may be present in the work environment.
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 mixing and applying certain herbicides.
5. When welding or cutting on galvanized metals.
6. When sandblasting
7. When working with bridge steel containing lead-based paint
8. When spray painting.
9. When determined by the supervisor
10. Employees shall complete an OSHA respirator medical questionnaire and be cleared by a Licensed Health Care Professional to wear the correct respirator. The employee then shall be fit tested and complete respirator training prior to use.

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	Jackhammers	Concrete Saws
Pile Drivers	Chain Saws	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