



COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET

Frankfort, Kentucky 40622
www.transportation.ky.gov/

Matthew G. Bevin
Governor

Greg Thomas
Secretary

OFFICE OF THE SECRETARY 111243
OFFICIAL ORDER

SUBJECT: *Safety and Health Administration Guide*

This manual has been prepared to provide information and guidance to personnel of the Kentucky Transportation Cabinet. Its purpose is to establish uniformity in the interpretation and administration of laws, regulations, policies, and procedures applicable to the operation of the Employee Safety and Health Branch and its relationship with other units of the Cabinet.

The policies and procedures set forth herein are hereby approved and declared effective unless officially changed.

All previous instructions, written and oral, relative to or in conflict with this manual are hereby superseded.

Signed and approved this 22nd day of August, 2018.

Greg Thomas
Secretary

Approved as to Legal Form

Office of Legal Services



*S*AFETY & *H*EALTH *A*DMINISTRATION *G*UIDE



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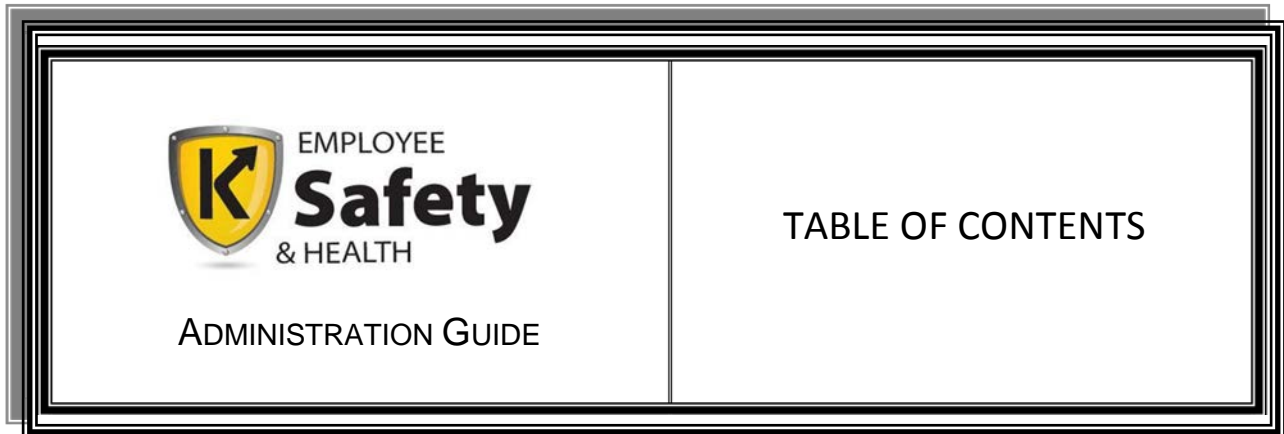
COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET



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01 TABLE OF CONTENTS 08/18

100 INTRODUCTION

101 Design of This Administration Guide 08/18

102 Administration Guide Purpose & Overview 08/18

200 ROLES & RESPONSIBILITIES

201 Employee Safety & Health Branch 08/18

202 Management & Supervisors 08/18

203 Safety Coordinators 08/18

204 Employees 08/18

205 Safety & Health Committees (SHC) 08/18

206 Inspections

206-1 Facilities 08/18

206-2 Jobsites 08/18

206-3 Equipment 08/18

206-4 Fire Extinguishers 08/18

300 TRAINING

301 Overview 08/18

302 New Employee Safety Orientation 08/18

303 Training Management System 08/18

304 Safety & Health Training Matrix 08/18

305 Department of Corrections Inmate Program 08/18

400 WORKPLACE RISK ASSESSMENT & PREVENTION

401 Hierarchy of Controls 08/18

402 Job Safety Analysis 08/18

403 Job Briefing 08/18

404 Personal Protective Equipment (PPE) 08/18

405 Hard Hats 08/18

406 Job Equipment

406-1 Servicing Multi-Piece & Single-Piece Rim Wheels 08/18

406-2 Slope Mower 08/18

400	WORKPLACE RISK ASSESSMENT & PREVENTION (cont.)	
407	Job Environment	
407-1	Respiratory Protection	08/18
407-2	Silica	08/18
407-3	Asbestos	08/18
407-4	Lead	08/18
407-5	Confined Spaces	08/18
407-6	Excavation & Trenching	08/18
407-7	Lockout/Tagout Procedures for Stored or Residual Energy	08/18
408	Electrical Safety	
408-1	General Safeguards	08/18
408-2	Risk Controls for Electrical Hazards	08/18
408-3	Electrical Traffic Control Device Inspections	08/18
408-4	Personal Protective Equipment (PPE)	08/18
408-5	Training	08/18
408-6	De-Energized Parts (Electrical Lockout/Tagout)	08/18
408-7	Specific Work Practices	08/18
408-8	Electrical Hazard Analysis	08/18
408-9	Energized Electrical Work Permit	08/18
408-10	NFPA Article 130	08/18
408-11	Audit Procedures	08/18
408-12	Working Around Power Lines	08/18
409	Fall Protection	
409-1	Overview	08/18
409-2	Ladders & Scaffolds.....	08/18
409-3	The 3-Points of Contact Rule	08/18
410	Hazard Communication	08/18
411	Safety Risk Report.....	08/18
412	Accident Prevention Tag System	08/18
500	PERSONAL PROTECTIVE EQUIPMENT (PPE)	
501	Overview	08/18
502	Head Protection	08/18
503	Welding Helmets.....	08/18
504	Eye Protection.....	08/18
505	Face Protection	08/18
506	Respiratory Protection.....	08/18
507	Life Jackets (Personal Flotation Devices).....	08/18
508	Hand Protection	08/18
509	Worker Safety Apparel.....	08/18
510	Hearing Protection.....	08/18
511	Foot Protection	08/18
512	Rubber Aprons & Boots	08/18

500	PERSONAL PROTECTIVE EQUIPMENT (PPE) (cont.)	
513	Snake-Proof Leggings	08/18
514	Fall Protection Devices	08/18
515	Welding, Cutting, & Brazing	08/18
516	Skin Protection	08/18
517	Chainsaw / Pole Saw	08/18
600	EMERGENCY ACTION PLANS	
601	Overview	08/18
602	Designated Emergency Personnel	08/18
603	Medical Emergency	08/18
604	Fire	08/18
605	Tornado	08/18
606	Earthquake	08/18
607	Bomb Threat	08/18
608	Suspicious Mail	08/18
609	Chemical Spill	08/18
610	Aircraft Emergency	08/18
611	Code Adam	08/18
612	Golden Alert	08/18
613	Armed Intruder	08/18
700	INJURY/ILLNESS RESPONSE & REPORTING	
701	Overview	08/18
702	Medical & First Aid	08/18
703	Bloodborne Pathogens	08/18
704	Automated External Defibrillators (AED)	08/18
705	OSHA Injury & Illness Recordkeeping & Reporting	08/18
800	VEHICLE INCIDENT REPORTING	
801	KSAP Accident Report	08/18
802	Serious Vehicle or Equipment Incident	08/18
900	CUTTING & WELDING OPERATIONS	
901	Storage & Handling of Oxygen & Acetylene Cylinders	08/18
902	Cutting Operations	08/18
903	Electric Welding	08/18
904	Fire Protection	08/18
905	Personal Protective Equipment	08/18
1000	GARAGE & SHOP SAFETY	
1001	Housekeeping	08/18
1002	Hydraulic Lifts & Jacks	08/18
1003	Stationary Air Compressors	08/18

1000	GARAGE & SHOP SAFETY (cont.)	
1004	Fixed Electrical Equipment.....	08/18
1005	Building Wiring.....	08/18
1006	Bench Grinders.....	08/18
1007	Chain Hoists	08/18
1008	Fans	08/18
1009	Battery Charging & Changing.....	08/18
1010	Safety Tire Cages.....	08/18
1011	Machine Guarding.....	08/18
1012	Grease Pits	08/18
1013	Inspection Lights (Drop Cord Lights).....	08/18
1014	Paint Spraying	08/18
1015	Flammable Storage	08/18
1016	Electrical Saws.....	08/18
1017	Mechanical & Natural Ventilation	08/18
1018	Hand Tools	08/18
1019	Lift/Hoisting Equipment.....	08/18
1020	Emergency Shower & Eye Wash.....	08/18
1021	Pressure Washers	08/18
1100	LABORATORY & MATERIALS TESTING	
1101	Hazardous Chemicals.....	08/18
1102	Fire & Explosion Protection	08/18
1200	LIFTING	
1201	Introduction	08/18
1202	Lifting Procedures	08/18
1300	OFFICE SAFETY	
1301	Emergency Plans.....	08/18
1302	Housekeeping	08/18
1303	Proper Use of Office Equipment & Furniture	08/18
1304	Electrical Items.....	08/18
1400	PORTABLE POWER TOOLS	
1401	Overview	08/18
1402	Electrical Tools	08/18
1403	Portable Air Compressors	08/18
1404	Air-Powered Tools.....	08/18
1405	Portable Electric Generators.....	08/18
1406	Weedeaters.....	08/18
1407	Lawn Mowers.....	08/18
1500	TRAFFIC CONTROL	
1501	General Information	08/18
1502	Signs, Cones, & Other Traffic Control Devices.....	08/18

1500	TRAFFIC CONTROL (cont.)	
1503	Hand-Signaling Devices	08/18
1504	Flaggers	08/18
1505	Traffic Control Methods.....	08/18
1506	Highway-Rail Grade Crossings	08/18
1507	Barricades	08/18
1508	Incident Management Areas	08/18
1509	Three-Lane Roadway with Passing Lane.....	08/18
1510	Temporary Traffic Control Plans.....	08/18
1600	TYPICAL KYTC OPERATIONS	
1601	Abnormal Weather Activity Work	08/18
1602	Escort Vehicles (Shadow Vehicles).....	08/18
1603	Pothole Patching.....	08/18
1604	Litter Pickup	08/18
1605	Guardrail Repair	08/18
1606	Cutting Brush	08/18
1607	Shouldering Operations with Motor Graders.....	08/18
1608	Ditching Operations	08/18
1609	Backfilling.....	08/18
1610	Paving Operations.....	08/18
1611	Bridge Construction, Inspection, & Maintenance	08/18
1612	Roadside Operations.....	08/18
1613	Snow & Ice Removal	08/18
1614	Tractor Mowing.....	08/18
1615	Hand Lawn Mowers	08/18
1616	Center-Line Striping	08/18
1617	Thermoplastic-Striping Operations.....	08/18
1618	Traffic Signal Work.....	08/18
1619	Sign Installation Crew	08/18
1620	Survey Crews.....	08/18
1621	Slope Mowing	08/18
1622	Trailers & Towed Equipment	08/18
1623	Working Near Railroads (RR)	08/18
1624	Culvert & Subsurface Structure Entry.....	08/18
1625	Nuclear Density.....	08/18
1626	Load Securement	08/18
1627	Field Data Collection Activities	08/18
1628	Equipment Rodeo	08/18
1700	VEHICLE & EQUIPMENT SAFETY	
1701	General Safety Requirements.....	08/18
1702	Following Distance	08/18
1703	Transport Operations.....	08/18

1700 VEHICLE & EQUIPMENT SAFETY (cont.)

1704 Driver’s Licenses.....08/18

1705 Driver Responsibility08/18

1706 Passenger Cars & Trucks08/18

1707 Trucks08/18

1708 Bulldozers.....08/18

1709 Cranes08/18

1710 Oil Distributors08/18

1711 Forklift Trucks.....08/18

1712 Graders.....08/18

1713 Front-End Loaders, Bantams, Gradalls, & Excavators08/18

1714 Backhoes08/18

1715 Tractors08/18

1716 Rollers08/18

1717 Bucket Trucks (Aerial Lifts, “Cherry Pickers,”
Autocranes, & Ladder Trucks).....08/18

1718 Truck-Mounted Attenuators.....08/18

1719 Arrow Panel.....08/18

1720 Sky Trimmer08/18

1721 Emergency Lighting.....08/18

1722 Portable Changeable Message Signs (PCMS)08/18

1723 Retroreflective Conspicuity Guidelines.....08/18

1724 Parking of Equipment08/18

1725 U-Turns.....08/18

1726 Disabled Vehicles08/18

1727 Aggressive Driving.....08/18

1728 Winter Driving.....08/18

1729 Stockpile Safety.....08/18

1730 Conveyor Safety08/18

1731 Backing Vehicles.....08/18

1732 Scissor Lifts08/18

1800 HEALTH & WELLNESS

1801 Overview08/18


1802 Personal Hygiene08/18

1803 Hearing Conservation08/18

1804 Nuclear Density Gauge Program.....08/18

9000 EXHIBITS



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>INTRODUCTION</p>
	<p><i>Subject</i></p> <p>Design of This Administration Guide</p>

ORGANIZATION & NUMBERING

Chapters—The subject matter in the guide is divided into chapters (100, 200, 300, etc.). The chapter title appears in the upper right corner of the first page of a subject and in the upper left corner of subsequent pages.

Sections—Some chapters are divided into sections. Each section title, instead of chapter title, appears in the upper right corner of the first page of a subject and in the upper left corner of subsequent pages.

Subjects—Chapters and sections are arranged by subjects.

Subject Number—Each subject is assigned a number, which appears in the upper right corner of each page of the subject. For example, Chapter 400 includes Subject 405 followed by Subject 406, which is divided into Sections 406-1 through 406-2.

“SHA” Prefix—Preceding each subject number, this prefix stands for the manual title *Safety and Health Administration Guide*.

Subject Title—The subject title appears in the upper right corner of the first page of a subject and in the upper left corner of subsequent pages.

Date—The latest issuance date of a subject appears at the bottom of each page of the subject. This date agrees with the latest issuance date shown for the subject in the “Table of Contents” ([SHA-01](#)).

Page Numbering—Each subject has its own page numbering, which appears at the bottom of each page.

LOCATING INFORMATION

One index appears at the front of the guide, and one index appears at the back:

Table of Contents (SHA-01)—This index at the front lists the titles of the guide’s chapters and sections and their subjects, as well as other information, in numerical order. It includes the latest issuance dates of all the subjects. As the guide matures, these dates change.

LOCATING


INFORMATION (CONT.) **Table of Exhibits (SHA-9000)**—This index at the back lists the guide’s exhibits, including forms, worksheets, diagrams, etc., by number and title.

CROSS-REFERENCES A boldfaced subject number that appears within the text references the location of more information about the subject.

QUESTIONS For additional copies of this administration guide, contact:

Organizational Management Branch
Office of Human Resource Management
Transportation Cabinet Office Building, 6th Floor West
200 Mero Street
Frankfort, KY 40622



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>INTRODUCTION</p>
	<p><i>Subject</i></p> <p>Administration Guide Purpose & Overview</p>

SCOPE Addressing every possible condition encountered by every class of employees is not within the scope of this manual. Therefore, these rules are intended to outline the fundamental principles which should be observed in carrying out the Cabinet’s work in a safe manner. It must be remembered that the direct supervisor and employees are responsible for making “good judgment” decisions in the application of the information contained in this manual.

For any operation or activity not covered in this manual, refer to [803 KAR 2](#); [29 CFR 1910](#), *General Industry*; [29 CFR 1926](#), *Construction*; [29 CFR 1915](#), [1917](#), [1918](#), *Maritime*; [29 CFR 1928](#), *Agriculture*; National Consensus Standards; American National Standards Institute ([ANSI](#)), *Manual on Uniform Traffic Control Devices (MUTCD)*, KYTC *Standard Drawings*, or manufacturer-applicable rule, regulation, policy, law, or standard.

Within this manual, the term *KYTC safety personnel* refers to safety specialists, safety coordinators, and safety administrators.

AUTHORITY The *Occupational Safety and Health Act of 1970* requires employers to furnish employees a place of employment free from recognized hazards that are causing or are likely to cause death or serious physical harm. The Commonwealth of Kentucky has implemented a statewide OSHA program [Kentucky Occupational Safety and Health (KOSH) Program ([KRS 338](#))] and is responsible for the enforcement of occupational safety and health standards in Kentucky. The KOSH Program incorporates by reference the safety and health standards promulgated in [29 CFR 1910](#), *General Industry*, and [29 CFR 1926](#), *Construction*.

[101 KAR 2:150](#), *State Safety Program*, in compliance with [KRS 18A.110\(7\)\(i\)](#), provides for the development, operation, and enforcement of programs to improve work safety. The Personnel Cabinet’s *Commonwealth of Kentucky Safety and Health Manual* expresses and summarizes the state’s safety and health program.

AUTHORITY (CONT.) In compliance with [101 KAR 2:150](#), the Transportation Cabinet (KYTC) assigns the Employee Safety & Health Branch the responsibility to develop, update, oversee, coordinate, evaluate, and administer the KYTC safety and health program. The KYTC safety and health program policy is established in the KYTC *General Administration and Personnel Manual* ([GAP-700](#)).

The KYTC Cabinet directors, managers, and supervisors have the responsibility of implementing safety and health rules and regulations in their assigned areas.

**EMPLOYEE SAFETY
& HEALTH BRANCH
MISSION**

The Employee Safety and Health (ES&H) Branch mission is to promote and provide timely, expert occupational safety and health assistance, leadership, and guidance to ensure, as far as possible, a safe and healthy work environment for all Transportation Cabinet employees in their endeavor to maintain and improve the Commonwealth's transportation infrastructure.

**EMPLOYEE SAFETY
& HEALTH BRANCH
OBJECTIVES**

The branch's objectives are to develop and implement efficient safety and health management systems that foster productive and cooperative programs, policies, training, and employee development and to ensure that KYTC workplaces are free from recognized hazards and behaviors that cause, or are likely to cause injuries, illnesses, or damage to property.

**EMPLOYEE SAFETY
& HEALTH BRANCH
CORE VALUES**

The branch's core values include a commitment to safety, integrity, and respect by:

- Continually improving our program and putting safety first in everything we do
- Demonstrating a safety-first culture through honest and ethical actions
- Treating everyone in a courteous and professional manner

**KYTC SAFETY &
HEALTH POLICY**

KYTC fully subscribes to the *Occupational Safety and Health Act of 1970* (Act) as it is adopted in [KRS Chapter 338](#) and the Kentucky Administrative Regulations issued pursuant thereto, as well as [101 KAR 2:150](#), *State Safety Program*. KYTC shall assure, so far as possible, every Cabinet employee a safe and healthful workplace free from recognized hazards that are causing or are likely to cause physical harm. The rights and duties of employers and employees as described in the Act shall henceforth become a part of the rules, policy, and procedures of the Cabinet.

**KYTC SAFETY &
HEALTH POLICY
(CONT.)**

KYTC will diligently pursue full compliance with the Act and will commit resources required to fully perform the duties and responsibilities set forth and assigned pursuant to the Act, as well as conduct all operations in a manner conducive to assuring employee safety and health.


Employees are guaranteed the exercise of their rights under the Act without being subjected to any retaliation whatsoever and are afforded the opportunity to participate fully in the KYTC safety and health program.

**PROGRAM
PRINCIPLES**

The guiding principle elements of the KYTC safety and health program are based on OSHA's *1989 Occupational Safety and Health Program Management Guidelines* and are incorporated by reference. The principle elements include, but are not limited to:

- Management leadership and commitment
- Employee involvement and participation
- Workplace analysis
- Hazard prevention and control
- Safety and health training



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>ROLES & RESPONSIBILITIES</p>
	<p><i>Subject</i></p> <p>Employee Safety & Health Branch</p>

RESPONSIBILITIES

[KRS 338.031\(a\)](#) states:

Each employer:

- 1) *Shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees;*
- 2) *Shall comply with occupational safety and health standards promulgated under this chapter.*

To fulfill assigned responsibilities, the Employee Safety and Health (ES&H) Branch:

- Develops, updates, oversees, coordinates, evaluates, and administers the Kentucky Transportation Cabinet (KYTC) safety and health program
- Initiates and maintains hazard prevention programs that include proper control procedures for workplace hazards that cannot be eliminated
- Conducts safety and health inspections to monitor and evaluate KYTC's compliance with safety and health policies and applicable laws and regulations
- Conducts or approves all safety and health training required to maintain compliance with Occupational Safety and Health Administration (OSHA) standards

Note: Upon request, the branch may collaborate and participate in training activities conducted by other KYTC units.

**RESPONSIBILITIES
(CONT.)**

- Develops and monitors safety data for the use and information of KYTC, including:
 - ◆ Statewide accident and injury statistics including, but not limited to, OSHA 300s, incident rates, and lost workdays
 - ◆ Annual safety report providing pertinent information on KYTC's safety and health, as well as an analysis of the year's activities and injury records
 - ◆ Safety training records of KYTC personnel
 - ◆ Monthly and quarterly graphic illustrations of OSHA recordable incident rates and other pertinent statistics to be posted in each district and in Central Office
 - ◆ Accident investigations

**ES&H BRANCH
MANAGER**

The branch manager is responsible for the implementation of KYTC's safety and health program at the statewide level under the direction of the Executive Director of the Office of Human Resource Management.

The branch manager also serves as technical advisor to management and supervisory personnel and as the liaison between KYTC and other state and federal agencies in safety and health matters.

**ES&H SAFETY
ADMINISTRATOR
RESPONSIBILITIES**

Safety administrators are primarily responsible for the implementation of KYTC's Safety and Health Program at the statewide level under the direction of the ES&H Branch Manager.

Safety administrator responsibilities may include:

- Oversee compliance with agency safety and health policies and procedures
- Interpret and apply safety regulations, policies, procedures, and other source materials dealing with safety and health

ES&H SAFETY**ADMINISTRATOR****RESPONSIBILITIES (CONT.)**

- Perform in-depth analysis of district safety program needs, recommend policy and procedural modifications, and communicate program changes to affected district employees, contractors, and other affected parties
- Evaluate jobsite and workplace compliance with occupational safety and health standards
- Review reports of safety violations and safety risk reports, making recommendations as appropriate
- Perform and assist in accident and incident investigations involving employees or equipment and report investigative results to appropriate supervisors and managers
- Collect accident and incident data for trend analysis to identify corrective measures and training, as needed
- Report required information to the ES&H Branch
- Make recommendations for modifying equipment or structures to enhance safety
- Conduct or assist in providing necessary safety and health training
- Respond to programmatic inquiries from district employees, supervisors, and managers
- Conduct job safety analyses and personal protective equipment (PPE) assessments and certify their completion in writing
- Serve as the primary contact to report workplace fatalities, amputations, in-patient hospitalizations, or the loss of an eye to the Kentucky Labor Cabinet, Department of Workplace Standards, Division of Occupational Safety and Health Compliance, at (502) 564-3070 or 1-800-321-OSHA (1-800-321-6742).

ES&H**PROGRAM****COORDINATOR**

Central Office program coordinators are primarily responsible for monitoring and managing the workers' compensation program under the direction of the ES&H Branch Manager.

KYTC WORKERS'**COMPENSATION****COORDINATOR**

The KYTC workers' compensation coordinator responsibilities may include:

- File the IA-1 form with the TPA, along with the *Medical Waiver and Consent*
- Send the *Workers' Compensation Explanation Letter* to the employee in the event of an injury involving lost or restricted workdays
- Forward the *Accumulated Leave Workers' Compensation* form to the designated KYTC payroll administrator in Central Office
- Maintain workers' compensation files
- Monitor program activities and provide executive management with periodic updates of claims activity
- Collaborate with the third party administrator to coordinate the employee's return to work

ES&H SAFETY**COORDINATOR****CENTRAL OFFICE****RESPONSIBILITIES**

Central Office safety coordinators are primarily responsible for the implementation of KYTC's safety and health program at the Central Office level under the direction of the ES&H Branch Manager.


Safety Coordinator responsibilities may include:

- Oversee compliance with agency safety and health policies and procedures
- Interpret and apply safety regulations, policies, procedures, and other source materials dealing with safety and health

ES&H SAFETY COORDINATOR**CENTRAL OFFICE****RESPONSIBILITIES****(CONT.)**

- Conduct in-depth analyses of safety program needs, recommend policy and procedural modifications, and communicate program changes to affected employees, staff, contractors, and other parties
- Perform workplace and jobsite inspections to ensure compliance with Occupational Safety and Health Administration (OSHA) standards
- Review and report safety violations or state risk reports to the appropriate authority for corrective action
- Investigate accidents and incidents involving employees or equipment and report investigative results to appropriate supervisors and managers
- Collect accident and incident data for trend analysis to identify corrective measures and training as needed
- Report required information to the ES&H Branch Manager
- Make recommendations for modifying equipment or structures to enhance safety
- Conduct or assist in providing necessary safety and health training
- Respond to programmatic inquiries from employees, supervisors, and managers
- Provide activity report to the ES&H Branch Manager
- Conduct job safety analyses and personal protective equipment assessments and certify their completion in writing
- Serve as the American Red Cross statewide liaison contact
- Serve as the ES&H Intranet site contact
- Carry out administrator duties related to training management software



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chaper</i></p> <p>ROLES & RESPONSIBILITIES</p>
	<p><i>Subject</i></p> <p>Management & Supervisors</p>

**MANAGEMENT
RESPONSIBILITIES**

KYTC management responsibilities may include:

- Communicate safety and health policies, procedures, goals, and objectives to all employees
- Abide by KYTC's safety and health program
- Follow established policies and procedures by granting appropriate authority and responsibility to effectively manage the safety and health program
- Hold supervisors and employees accountable for their actions and adherence to the safety and health program

**SUPERVISOR
RESPONSIBILITIES**

In accordance with [29 CFR 1926.32\(f\)](#), supervisors are designated as competent persons and, after consulting with safety personnel as needed, are responsible for the assessment, selection, and use of appropriate personnel, equipment, and personal protective equipment.

Supervisor responsibilities may also include:

- Orient and instruct all employees in the Safety and Health Program and safe practices and procedures applicable to their assigned duties
- Adhere to all safety policies and procedures and demonstrate safe actions and behaviors

**SUPERVISOR
RESPONSIBILITIES
(CONT.)**

- Promptly report unsafe acts or conditions and initiate or complete corrective action to prevent or prohibit the reoccurrence of any unsafe act or condition
- Implement the safety and health program within their area of responsibility
- Provide employees with the necessary information and training to safely do their job, and give detailed instructions on safety procedures for the tasks being performed
- Take defective equipment out of service promptly and report such action to the appropriate authority

Note: Equipment is not to be used if it constitutes a hazard to any employee or the public, or when the continued use of the equipment may cause further damage to the equipment itself.

- Analyze and plan work in advance to determine the safest, most economical way to proceed, as well as the physical protection necessary to do the work
- Complete TC 25-156 form, *Job Safety Analysis & PPE Hazard Assessment* (**Exhibit 9001**), and TC 25-163 form, *Job Briefing* (**Exhibit 9002**), prior to the work task

Note: The primary purpose of a job safety analysis is to identify hazards of the particular job or task being performed in order to reduce the risk of injury.


- Select and assign workers trained and qualified to do the job in a manner that will be safe for employees and the public
- Promptly report unsafe conditions through the chain of command and correct them as soon as possible
- Read and comply with the *Employee Safety and Health Manual* and *Safety and Health Administration Guide* to assist supervised employees in understanding and adhering to safety and health requirements

**SUPERVISOR
RESPONSIBILITIES
(CONT.)**

Note: It is recommended that a portion of the office bulletin board be reserved for KYTC, OSHA, KOSH, and related safety and health information. The supervisor is responsible for the prompt and orderly posting of this information, as well as the removal of outdated information.

Supervisors should not ignore, direct, or cause to be directed any activity, task, or operation known to be unsafe



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>ROLES & RESPONSIBILITIES</p>
	<p><i>Subject</i></p> <p>Safety Coordinators</p>

**DISTRICT
SAFETY
COORDINATOR
RESPONSIBILITIES**

Safety coordinators are primarily responsible for the implementation of the Kentucky Transportation Cabinet (KYTC) safety and health program at the district level under the direction of the chief district engineer.

Safety coordinators shall:

- Ensure compliance with KYTC safety and health policies and procedures
- Interpret and apply safety regulations, policies, procedures, and other source materials dealing with safety and health
- Perform in-depth analysis of safety program needs, recommend policy and procedural modifications, and communicate program changes to affected employees, staff, contractors, and others
- Review district injury reports for trends and accuracy
- Perform jobsite and workplace inspections to ensure compliance with occupational safety and health standards
- Review and report safety violations or state risk reports to appropriate authorities for corrective action
- Perform accident and incident investigations involving employees or equipment and report investigative results to appropriate supervisors and managers
- Collect accident and incident data for trend analysis to identify corrective measures and training as needed

DISTRICT


SAFETY

COORDINATOR

RESPONSIBILITIES (CONT.)

- Report required information to the Employee Safety and Health Branch
- Make recommendations for modifying equipment or structures to enhance safety
- Conduct or assist in providing necessary safety and health training
- Respond to programmatic inquiries from employees, supervisors, and managers
- Conduct job safety analyses and personal protective equipment assessments and certify their completion in writing



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>ROLES & RESPONSIBILITIES</p>
	<p><i>Subject</i></p> <p>Employees</p>

RESPONSIBILITIES

It is impractical to include in this manual instructions which cover every detail under all conditions in connection with the work performed by the various classes of employees.

These rules are intended to outline the fundamental principles which should be observed in carrying out KYTC's work in a safe manner. It must be remembered that employees are responsible for making good judgment decisions in the application of the information contained in this manual.

For any operation or activity not covered in this manual, refer to [803 KAR 2](#); [29 CFR 1910](#), *General Industry*; [29 CFR 1926](#), *Construction*; [29 CFR 1915](#), [1917](#), [1918](#), *Maritime*; [29 CFR 1928](#), *Agriculture*; National Consensus Standards; American National Standards Institute ([ANSI](#)), *Manual on Uniform Traffic Control Devices (MUTCD)*, KYTC *Standard Drawings*, or manufacturer-applicable rule, regulation, policy, law, or standard.

[KRS 338.031\(b\)](#) states:

Each employee shall comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to this chapter which are applicable to his own actions and conduct.

Employee responsibilities may include:

- Comply with applicable occupational safety and health standards, policies, procedures, rules, and orders in the performance of their assigned duties
- Promptly report unsafe acts and conditions, incidents, and injuries to the responsible supervisor
- Adopt the recommended safe procedure as the best procedure and have regard at all times for the safety of fellow employees and the public

**RESPONSIBILITIES
(CONT.)**

- Report unsafe equipment and working conditions to the immediate supervisor, safety representative, or both
- Contribute ideas and suggestions for improved safety practices
- Wear required personal protective equipment for the job being performed
- Read and comply with the *Employee Safety and Health Manual* and safety and health policies and procedures applicable to the work being performed
- Promptly report all accidents and injuries to their immediate supervisor
- Attend mandatory safety training

Employees shall **not**:


- Perform any activity, task, or operation known to be unsafe
- Engage in horseplay or any behavior that may result in injury
- Use or be under the influence of drugs or alcohol

**VIOLATION OF
POLICY**

Any employee found in violation of the requirements of the Kentucky Transportation Cabinet (KYTC) safety and health program may be issued a TC 25-105 form, *Notice of Safety Violation*, which may be grounds for disciplinary action (**Exhibit 9003**).

Employees who violate KYTC safety and health program policies and procedures or commit acts that cause or are likely to cause harm to themselves, coworkers, the public, or property shall be subject to disciplinary action, up to and including dismissal.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>ROLES & RESPONSIBILITIES</p>
	<p><i>Subject</i></p> <p>Safety & Health Committees (SHC)</p>

OVERVIEW The safety and health committee (SHC) is an essential tool in the prevention of unsafe workplace practices and conditions, thus reducing the risk of employee injuries.

PURPOSE The SHC shall be established with the following purposes:

- Increase and maintain the interest of employees in health and safety issues
- Participate in awareness and training activities that educate managers, supervisors, and employees of their responsibilities for the prevention of workplace accidents and injuries
- Ensure safety and health activities are an integral part of the organization's operating procedures, culture, and programs
- Provide opportunities for open discussions of safety and health problems, as well as possible solutions
- Educate employees and managers about safety and health requirements and standards
- Eliminate workplace hazards and, subsequently, reduce the risk of workplace injuries, illnesses, and accidents
- Ensure compliance with Kentucky Occupational Safety and Health (OSH) Standards

COMMITTEE STRUCTURE & OFFICER DUTIES The SHC shall be structured with a chairperson, vice-chairperson, secretary, and general members. The primary duties of each are as follows:

- Chairperson
 - ◆ Schedule meetings and set agendas
 - ◆ Coordinate and conduct orderly meetings
 - ◆ Establish deadlines and committee assignments

**COMMITTEE STRUCTURE
& OFFICER DUTIES (CONT.)**

- ◆ Provide appropriate and timely follow-up on recommendations developed by the committee
- ◆ Serve as communication liaison between management and the SHC
- ◆ Display and promote safety and health best practices
- ◆ Be familiar with general principles and concepts of the current safety and health programs and guidelines, as well as applicable Kentucky OSH standards

- Vice-chairperson
 - ◆ Display and promote safety and health best practices
 - ◆ Assume leadership of SHC when chairperson is unavailable
 - ◆ Chair regular and special-called meetings in absence of the chairperson

- Secretary
 - ◆ Maintain, record, and disseminate minutes of each meeting
 - ◆ Display and promote safety and health best practices

- General members
 - ◆ General SHC membership should include individuals from various positions, departments, and organizational levels
 - ◆ Membership eligibility requirements and terms of service should be established in writing with consideration given to staggered terms to ensure continuity

MEETINGS

It is recommended that SHC meetings be held regularly on a fixed day and time. Newer SHCs may consider meeting more frequently until policies and routines are established.

Committee meeting agendas may include discussion of the following:

- Unfinished items from previous meetings or activities
- Visits from the chief district engineer or branch manager
- Safety inspection reports and corrective actions
- Recent accidents and incidents sustained and preventive measures
- Current action plan and training program status

MEETINGS (CONT.)

- Outstanding recommendations from outside compliance inspectors
- Future action plans and training programs
- Special activities, such as health fairs or safety conferences
- Recommendations or findings from the monthly loss control committee
- Current construction or real property improvement projects
- New business, future agenda items, projects, and meeting dates

DUTIES

In order to accomplish these objectives, the SHC shall:

- Develop a written mission statement and define the duties and responsibilities of its members
- Prioritize goals and establish action plans to achieve each goal
- Include representation from all organizational levels
- Meet on a regular basis
- Record and disseminate minutes of each meeting including, but not limited to, the documentation of attendance, safety issues, and any proposed corrective actions
- Emphasize the importance of meeting attendance by allowing for the removal of members who are repeatedly absent
- Endeavor to develop new methods for increasing and maintaining safety awareness that result in reduced injuries
- Organize special quality action teams to address specific issues and activities
- Communicate the committee's purpose, activities, and accomplishments to all employees, including Central Office

FUNCTIONS

The SHC shall be involved with the following functions:

- Review policies and procedures that include construction and maintenance activities
- Review routine safety inspection reports that address:
 - ◆ Workplace hazards and unsafe actions
 - ◆ Work order request or corrective action follow up
 - ◆ Evaluation of current safety and health program effectiveness
 - ◆ Identification of safety and health problems and improvements
- Review and recommend required training and educational safety programs for employees
- Identify trends and problem areas in injury and accident reports
- Identify high-risk job tasks and review written safe-operating procedures
- Review TC 25-156 form, *Job Safety Analysis & PPE Hazard Assessment* ([Exhibit 9001](#))

OPTIONAL ACTIVITIES


In addition, the SHC may also further promote safety and health awareness through the use of one or more of the following activities or programs:

- Safety contests, such as best safety slogan of the month
- Poster programs and contests
- Audio-visual presentations
- Special safety and health events, such as luncheons
- Guest speakers, seminars, and training programs
- Employee suggestion programs
- Injury prevention campaigns, such as safe lifting, slip and fall
- Special safety recognition awards
- Newsletters and promotional material

**OPTIONAL ACTIVITIES
(CONT.)**

- Health and wellness fairs and activities
- Annual Safety Roadeo
- Annual snow and ice inspection participation



 <p>ADMINISTRATION GUIDE</p>	<p><i>Section</i></p> <p>INSPECTIONS</p>
	<p><i>Subject</i></p> <p>Facilities</p>

FACILITY**INSPECTIONS**

Kentucky Transportation Cabinet (KYTC) safety personnel are to perform facility inspections of all facilities within their assigned district operations to:

- Evaluate the workplace
- Identify potential hazards
- Oversee compliance with applicable occupational safety and health standards and KYTC safety policies and procedures

Safety personnel should regularly inspect all facilities within their assigned districts for safety and health hazards and document the inspection by completing TC 25-159 form, *Facility Safety Inspection (Exhibit 9004)*. Comprehensive annual inspections are required for every facility within the district operation. KYTC safety personnel should maintain documentation of these inspections, follow up corrections, and abatement verification.

The supervisor or representative of the facility should accompany safety personnel during inspections and sign the inspection form when completed. The supervisor or responsible person located at the facility should be made aware of any hazards, violations, and program deficiencies and be responsible for the corrections.

It is recommended that the original, signed inspection form be retained by KYTC safety personnel for three years. The KYTC safety specialist or coordinator should provide copies of the original inspection to the following:

- Facility supervisor or representative at time of inspection
- Chief district engineer
- Employee Safety and Health (ES&H) Branch

**INSPECTIONS BY
OTHER AGENCIES**


When safety inspections are conducted by other agencies, Cabinet personnel shall cooperate with and assist inspectors. Cabinet personnel are to refrain from making personal statements to inspectors concerning matters not within their authority. Authorized inspectors acting within the scope of their jurisdiction shall not be denied entry to KYTC facilities.

If the Kentucky Office of Safety and Health (OSH) program opens an inspection of any KYTC unit, the district safety specialist or coordinator and the ES&H Branch should be promptly notified. If available, the district safety specialist or coordinator should proceed promptly to the location of the inspection to assist the inspector as needed. All written communications with the Kentucky OSH program shall be made available to the ES&H Branch.

CITATIONS & FINES

The ES&H Branch must be promptly notified upon receipt of any proposed citation or penalty. Fines, abatement, corrective actions, and all necessary paperwork are the responsibility of the district or division receiving the citation.



 ADMINISTRATION GUIDE	Section INSPECTIONS
	Subject Jobsites

JOBSITE**INSPECTIONS**


KYTC safety personnel should regularly perform jobsite and work zone inspections of all the assigned district field crews to check compliance with applicable occupational safety and health standards, *Manual on Uniform Traffic Control Devices (MUTCD)* requirements, and Kentucky Transportation Cabinet (KYTC) safety policies and procedures.

At the time of each inspection, KYTC safety personnel should complete TC 25-110 form, *Jobsite Setup Inspection (Exhibit 9005)*. The supervisor or responsible person located at the inspection jobsite should accompany KYTC safety personnel during the inspection, except when ongoing operations require the supervisor's presence. The supervisor or responsible person located at the jobsite should be made aware of any hazards, violations, and program deficiencies, and should be responsible for prompt corrections.

It is recommended that the original, signed inspection form be retained by KYTC safety personnel for three years. The KYTC safety specialist or coordinator should provide copies of the original inspection to the following:

- Facility supervisor or representative at time of inspection
- Chief District Engineer
- Employee Safety and Health (ES&H) Branch



 <p>ADMINISTRATION GUIDE</p>	<p><i>Section</i></p> <p>INSPECTIONS</p>
	<p><i>Subject</i></p> <p>Equipment</p>

**OPERATOR
INSPECTIONS**

Vehicle and equipment operators should perform safety inspections of assigned vehicles or equipment before putting into operation each work shift when in use. Items to check include, but are not limited to, glass, horn, mirrors, lights, turn signals, brakes, tires and wheels, exhaust system, steering mechanisms, backup alarms, and warning light systems. Additional checks are necessary for different types of equipment, and operators should refer to the manufacturer's operation manual for inspection criteria.

**SAFETY PERSONNEL
INSPECTIONS**

Safety personnel should conduct routine inspections of vehicles and equipment to ensure they are in safe operational condition and complete a TC 74-11 form, *Operator's Daily Check Sheet* ([Exhibit 9006](#)), or TC 25-168 form, *Aerial Device Bucket Truck Daily Checklist* ([Exhibit 9007](#)), and provide a copy of the form to the supervisor for corrective measures. The supervisor should take the necessary action to have the equipment repaired or tagged DO NOT OPERATE (taken out of service) until repaired.

The purpose of the DO NOT OPERATE tag is to remove faulty or damaged equipment from service, preventing injuries to employees and the public, as well as financial loss to the state.


If the safety inspection reveals the vehicle or equipment is defective and unsafe, the safety inspector should affix a DO NOT OPERATE tag, removing it from service until repaired. The following information should be entered on the tag:

- Vehicle license plate, state inventory or equipment number
- Type of equipment
- Reason for tagging
- Signature of person completing tag
- Date

**SAFETY PERSONNEL
INSPECTIONS (CONT.)**

The supervisor responsible for the equipment should be notified of the equipment tagged out of service and have the equipment repaired, replaced, or maintained out of service until repairs are made by qualified personnel. Do NOT OPERATE tags should only be removed once appropriate repairs have been made and the person placing the tag has inspected the equipment to be placed back into service. Safety personnel placing the tag is the only personnel authorized to remove the tag allowing it to return to service. Safety personnel should sign and date the tag when removed and keep a copy of the tag with the original TC 74-11 form, *Operator's Daily Check Sheet* ([Exhibit 9006](#)), or TC 25-168 form, *Aerial Device Bucket Truck Daily Checklist* ([Exhibit 9007](#)).



 <p>ADMINISTRATION GUIDE</p>	<p><i>Section</i></p> <p>INSPECTIONS</p>
	<p><i>Subject</i></p> <p>Fire Extinguishers</p>

OVERVIEW

Fire extinguishers play an important role in the Kentucky Transportation Cabinet's (KYTC) effort to protect state employees and property, and to minimize loss. This effort requires communication and cooperation among several areas of KYTC, including the district offices, the Office of Support Services, and the Employee Safety and Health (ES&H) Branch.

Fire extinguishers shall be maintained in a fully charged and operable condition and kept in their designated places at all times.

TRAINING

Where portable fire extinguishers are provided for employee use in the workplace, the ES&H Branch shall provide an educational program to familiarize employees with the general principles of fire extinguisher use and the hazards involved with incipient stage firefighting.

SAFETY PERSONNEL

Safety personnel or designee responsibilities may include:

- Routinely inspect all fire extinguishers in their assigned areas (including vehicles) on a monthly basis ([Exhibit 9008](#))
- Oversee annual maintenance checks of portable fire extinguishers

Note: Stored pressure extinguishers do not require an internal examination. Personnel should record the annual maintenance date and retain this record for one year after the last entry or the life of the shell, whichever is less. The record shall be available upon written request.

- Oversee routine maintenance of stored pressure, dry chemical extinguishers that require a 12-year hydrostatic test

SAFETY PERSONNEL (CONT.)

Note: Dry chemical extinguishers having non refillable disposable containers are exempt from this requirement. When recharging or hydrostatic testing is performed, the 6-year requirement begins from that date. Because hydrostatic testing requires special training and equipment, testing and inspections should be performed by an approved extinguisher servicing company.


- Fire extinguishers should be hydrostatically tested whenever they show evidence of corrosion or damage, as well as at set intervals as listed below:

Test Intervals for Fire Extinguishers

Type of extinguishers	Test interval (years)
Soda acid (soldered brass shells) (until 1/1/82)	(1)
Soda acid (stainless steel shell)	5
Cartridge operated water and/or antifreeze	5
Stored pressure water and/or antifreeze	5
Wetting agent	5
Foam (soldered brass shells) (until 1/1/82)	(1)
Foam (stainless steel shell)	5
Aqueous Film Forming foam (AFFF)	5
Loaded stream	5
Dry chemical with stainless steel	5
Carbon Dioxide	5
Dry chemical, stored pressure, with mild steel, brazed brass or aluminum shells	12
Dry chemical, cartridge or cylinder operated, with mild steel shells	12
Halon 1211	12
Halon 1301	12
Dry powder, cartridge or cylinder operated with mild steel shells	12

OSHA Standard 1910.157 Fire Protection



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>TRAINING</p>
	<p><i>Subject</i></p> <p>Overview</p>

PURPOSE Under the *Occupational Safety and Health Act of 1970*, employers are responsible for providing a safe and healthy workplace. Delivering appropriate training to all employees is integral in fulfilling this responsibility. Training in safe work practices is also an investment in fewer injuries and illnesses, better morale, and lower insurance premiums.

MISSION The training mission of the ES&H Branch is to ensure the protection of workers and prevent work-related injuries, illnesses, and deaths by setting and enforcing standards, and by providing training, outreach, education, and assistance.

Occupational Safety and Health Administration (OSHA) standards, which have prevented countless workplace tragedies, often include explicit safety and health training requirements to ensure that workers have the required skills and knowledge to safely do their work.

**CHARACTERISTICS OF
SUCCESSFUL TRAINING
PROGRAMS**

The characteristics of successful training programs are:

- *Accurate.* Training materials should be prepared by qualified individuals, updated as needed, and facilitated by appropriately qualified and experienced individuals employing appropriate training techniques and methods.
- *Credible.* Training facilitators should have a general safety and health background or be a subject matter expert in a health- or safety-related field. They should also have experience training adults or experience working with the target population. Practical experience in the field of safety and health as well as experience in training facilitation contribute to a higher degree of facilitator credibility.
- *Clear.* Training programs must not only be accurate and believable, but they must also be clear and understandable to the participant.

**CHARACTERISTICS OF
SUCCESSFUL TRAINING
PROGRAMS (CONT.)**

If the material is only understandable to someone with a college education or someone who understands the jargon, then the program falls short of meeting workers' needs.

- *Practical.* Training programs should present information, ideas, and skills that participants see as directly useful in their working lives. Successful transfer of learning occurs when the participant can see how information presented in a training session can be applied in the workplace.

**MANAGER &
SUPERVISOR
RESPONSIBILITIES**

Managers and supervisors are directly responsible for the following:

- Ensuring that their employees receive the appropriate safety training
- Providing employees with training on safety policies, procedures, and programs so that employees have a clear understanding of their assigned duties and responsibilities
- Supporting in-service, interagency, and external safety training programs that contribute to the effective use of human and fiscal resources
- Ensuring that employees comply with the provisions of the safety policy and procedures stated herein

**TRAINING
REIMBURSEMENTS**

Safety training deemed necessary by KYTC for employees to perform their assigned job duties is considered mandatory training. KYTC shall reimburse employees for registration and material fees for mandatory training upon receipt of the following:

- An approved training request with justification and all required signatures
- Evidence of attendance

DOCUMENTATION


All safety training will be documented on TC 25-2 form, *Training Report (Exhibit 9009)*. Training will be entered into the official online training record for each employee.

RETENTION

SCHEDULE

KYTC is required to keep a record of all safety and health training. Documentation can also supply an answer to one of the first questions an incident investigator will ask: "Did the employee receive adequate training to do the job?"



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>TRAINING</p>
	<p><i>Subject</i></p> <p>New Employee Safety Orientation</p>

REFERENCES [29 CFR 1910](#), *General Industry*; [29 CFR 1926](#), *Construction*

OVERVIEW The first few weeks at a new job can be overwhelming for an employee. It is during this time that the Employee Safety and Health (ES&H) Branch shall make every effort to address new employees' concerns in order to help them become safe and productive employees.

New employee orientation is conducted in each district office and Central Office on the 1st and 16th of each month (or on the following Monday when either date falls on a weekend). To ensure uniformity, the Employee Safety and Health Branch develops safety training materials, handouts, and checklists, and makes them available to all orientation liaisons. During the orientation, new employees learn about KYTC's safety policies and procedures, as well as environmental, health, and safety programs. The [Employee Safety and Health Manual](#) shall be provided to and reviewed with each new employee on orientation day. A signed TC 12-262 form, *General Policy Acknowledgement*, shall be kept in the employee's personnel file ([Exhibit 9011](#)).

**SAFETY TRAINING
CHECKLIST GUIDE**

The following topics shall be covered during new employee safety orientation, as applicable to the employee's assigned duties:

- American Red Cross First Aid/CPR (including kits)
- Bloodborne pathogen exposure (including kits)
- Confined spaces
- Crane or hoist operation
- Electrical safety
- Emergency response
 - ◆ Emergency action plan
 - ◆ Alarm systems
 - ◆ Fire extinguisher use
 - ◆ Procedures for reporting emergencies
- Eye wash stations


**SAFETY TRAINING
CHECKLIST GUIDE
(CONT.)**

- Fall protection
- Forklifts/powered industrial lifts
- Chainsaw safety
- Hazard communication standard
- Housekeeping
- Injury reporting
- Job safety analysis (JSA)
- Ladder safety
- Lead and asbestos awareness
- Lock out/Tag out (energy control)
- Machine guarding
- Personal protective equipment (PPE)
 - ◆ Respirators
 - ◆ Hearing protection
 - ◆ Eye and face protection
 - ◆ Head protection
 - ◆ Hand protection
 - ◆ Leg and foot protection
 - ◆ High visibility (hi-vis) clothing
- Powered work platforms
- Safety violations
- Trenching and excavation
- Tool use and guarding
- Vehicle operations
- Welding
- Worksite warning signs and labels
- Work zone safety

DOCUMENTATION

All safety training will be documented on TC 25-2 form, *Training Report*. Training will be entered into the official online training record for each employee ([Exhibit 9009](#)).



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>TRAINING</p>
	<p><i>Subject</i></p> <p>Training Management System</p>

PURPOSE

Training documentation shall be maintained in an enterprise-wide software application for the administration, documentation, tracking, reporting, and delivery of employee development opportunities.

The Employee Safety and Health (ES&H) Branch mandates that certain safety training be taught. In order to properly track these training sessions, ES&H has determined that all districts should use the same class titles in the software application. To accomplish this, over 150 class titles have been created. Classes must be recorded on TC 25-2 form, *Training Report*, and in the software application using official class titles ([Exhibit 9009](#)).

All training must be provided by a KYTC safety personnel or a designated authorized individual. Reference the ES&H manual, applicable OSHA standards, and best practices.


ADDITIONAL INFORMATION

Training requirements in OSHA Standards are available at:

<https://www.osha.gov/Publications/osha2254.pdf>

Contact the district safety coordinator or KYTC Safety and Health Branch staff (502-564-6963) if you have questions about training documentation or training requirements.





**EMPLOYEE
Safety
& HEALTH**

ADMINISTRATION GUIDE

Chapter

TRAINING

Subject

Safety & Health Training Matrix

Employee Safety & Health Branch Training Matrix
 Kentucky Transportation Cabinet
 Revised: 1-5-2017

OSHA / ES&H Training Category	Written Programs / Procedures	Training Requirements General Industry 29 CFR 1910	Training Requirements Construction 29 CFR 1926	Medical Surveillance	Monitoring Results	Training Frequency
Air Monitoring –	X	1910 Subpart Z	1926 Subpart D	X	X	Initial, Annual
Bloodborne Pathogens	X	1910.1030 Subpart Z		Case Dependent		Initial, Annual
Compressed Gases		1910.101 Subpart H				Initial
Cranes		Subpart N				Initial, Periodic
Electrical Hazards	X	Subpart S	Subpart K			Initial, Periodic
Emergency Action Plan	X	1910.38 Subpart E	1926.35 Subpart C Subpart P			Initial, Periodic, change in Plan
Excavations and Trenching					Case Dependent	Initial, Periodic
Exhaust and Ventilation		Subpart G				Initial
Fall Protection	X	Subpart F	Subpart M			Initial, Periodic, New Hazard or New Equipment
Fire Extinguishers		Subpart L	Subpart F			Initial, Annual
Fire Prevention Plans	X	Subpart E	Subpart F			Initial, Periodic
Flammable and Combustible Liquids		1910.106 Subpart H	1926.152 Subpart F			Initial
Formaldehyde		1910.1048 Subpart Z				Initial, Annual (if an employee with exposure at or above 0.1 ppm)
General Environmental Controls		Subpart J	Subpart G			Initial
Hand and Portable Power Tools		Subpart P				Initial
Hazard Communication	X	OSHA 1910.1200 Subpart Z				Initial, Periodic, New Hazard

Employee Safety & Health Branch Training Matrix
 Kentucky Transportation Cabinet
 Revised: 1-5-2017

OSHA Training Category	Written Programs / Procedures	Training Requirements General Industry 29 CFR 1910 Subpart H	Training Requirements Construction 29 CFR 1926	Medical Surveillance	Monitoring Results	Training Frequency
Hazardous Materials						Initial, New Hazards
Hazardous Waste and Emergency Response Activities	X			X	X	Initial, (all employees exposed to hazardous chemicals, agents or pesticides - excludes labs
Heat Stress	X				X	Initial
Job Hazard Analysis		1910 Subpart I App B				Initial, New Hazards
Ladders and Stairs		1910.25, 1910.26, 1910.27 Subpart D	1926.1053 Subpart X			Initial, New change in Equipment
Lead Exposure	X	1910.1025 Subpart Z		X	X	Initial, Annual, Change in Assignment
Lock Out / Tag Out Procedures	X	1910.147 Subpart J				Initial, Periodic
Machine and Machine Guarding		Subpart O	Subpart I			Initial, Annual
Material Handling & Storage		Subpart N				Initial
New Employee Safety Orientation	X	Subpart O				Initial
Mechanical Power Presses		Subpart O				Initial, Annual, Periodic
Occupational Noise Exposure	X	1910.95 Subpart G	1926.65 Subpart D	X	X	Initial, Annual

Employee Safety & Health Branch Training Matrix
 Kentucky Transportation Cabinet
 Revised: 1-5-2017

OSHA Training Category	Written Programs / Procedures	Training Requirements General Industry 29 CFR 1910	Training Requirements Construction 29 CFR 1926	Medical Surveillance	Monitoring Results	Training Frequency
Permit Required Confined Space	X	1910.146 Subpart J	1926 Subpart AA		X	Authorized Entrants / Attendants Initial, Periodic. Rescue Personnel, Initial, Annual
Personal Protective Equipment	Exposure Assessment JSA	1910.132 Subpart I	Subpart E			Initial, Change in work, Change in PPE Use
Powered Industrial Trucks		1910.178 Subpart N	1926.602 (D) Subpart O			Initial, Every 3 Years
Process Safety Management	X	1910.119 Subpart H	1926.64 Subpart D			Initial
Recordkeeping Injury and Illness		1904				Affected
Red Cross First Aid		1910.151 Subpart K	1926.50 Subpart D			Every 2 years for responders
Repetitive Motion	X			Case Dependent		Initial, Periodic
Respiratory Protection	X	1910.134 Subpart I	1926.103 Subpart E	X	X	Initial, Annually, New Hazard – Employees wearing a respirator
Scaffolds		1910.28 Subpart D	1926.451 Subpart L			Initial
Serving of Multi - Piece and Single Piece Rim Wheels		1910.177 Subpart N				Initial, Periodic

Employee Safety & Health Branch Training Matrix
 Kentucky Transportation Cabinet
 Revised: 1-5-2017

OSHA Training Category	Written Programs / Procedures	Training Requirements General Industry 29 CFR 1910	Training Requirements Construction 29 CFR 1926	Medical Surveillance	Monitoring Results	Training Frequency
Storing and Handling of LP Gases		1910.110 Subpart H	1926.152 Subpart F			Initial, Periodic
Traffic Control / Flagger Certification		ES&H Safety and Health Manual				Initial, Every 2 years
Trenching			Subpart P			Initial, Periodic
Violence in the Workplace		General Duty Clause				Initial
Welding, Cutting and Brazing		1910.253 Subpart Q	Subpart J			Initial, Periodic




NOTE: Chart is not all-inclusive to all possible exposure hazards an employee could encounter. Occupational risk may occur at any work location. Training needs will increase with higher levels of occupational risk.

Training Requirements in OSHA Standards <https://www.osha.gov/Publications/OSHA2254.pdf>

These listings represent initial revisions of the Safety and Health Training Programs MATRIX. Any changes must be approved by the KYTC Safety and Health Branch Manager.

For additional information, please contact the KYTC Safety and Health Branch, Central Office at 502-564-6963.

 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>TRAINING</p>
	<p><i>Subject</i></p> <p>Department of Corrections Inmate Program</p>

PURPOSE As part of the Memorandum of Agreement (MOA) between the Kentucky Transportation Cabinet (KYTC) and the Department of Corrections (DOC) or local correctional facilities, KYTC shall provide training for inmate workers and their assigned correctional officer(s) on their initial assignment to a KYTC inmate work crew. It may be repeated for other crew members at the discretion of the correctional facility or KYTC.

KYTC PROVISIONS KYTC shall provide the following to inmates and officers, as necessary:

- Safety equipment and personal protective equipment (PPE) that conforms to current standards for working on and along highways
- Tools, plastic trash bags, equipment, signs, cones, and supplies that comply with the *Manual on Uniform Traffic Control Devices* ([MUTCD](#))

**DOC OR LOCAL
CORRECTIONAL FACILITY
PROVISIONS**

The DOC or local correctional facility shall provide the following:

- Inmates to perform work assignments for KYTC
- Correctional officer(s) to monitor inmates at all times, including transportation to and from the worksite

Note: Inmates are not considered employees or agents of KYTC, and shall be under the custody and control of the DOC at all times.

- Inmate clothing that distinguishes them from KYTC employees or general citizenry
- Needed medical care for inmates

Note: The DOC or local correctional facility is considered the primary responder during a medical emergency involving inmates.

**TRAINING TOPICS
& PRESENTATION**

The training subject matter is provided by KYTC to the correctional facility and is to be presented with minimal effort and inconvenience at a place and time that is most appropriate for correctional facility operations.

Training for facilities shall include:

- Work zone and traffic control signing procedures as prescribed by the [MUTCD](#)
- Proper use and care of tools and equipment prior to beginning onsite work
- Safety while working near traffic
- Personal protective equipment (PPE)
- Roadside environmental hazards
- Basic string trimmer and pole saw operator safety
- Safely working in the vicinity of a chainsaw, tree and limb cutting, and brush chipper operations
- First aid and bloodborne pathogens
- Hazard communication

Note: This topic list and corresponding content are intended to cover typical roadside maintenance projects. KYTC has elected to not allow inmates to *operate* chainsaws, but will permit pole saw and string trimmer operation. Inmates are not permitted to operate any vehicles, tools or machinery unless trained and authorized by KYTC.


TRAINING RECORDS

Training Records shall be signed by inmates following training and maintained on file at the correctional facility by the person leading the training.

**ROADSIDE
ENVIRONMENT**

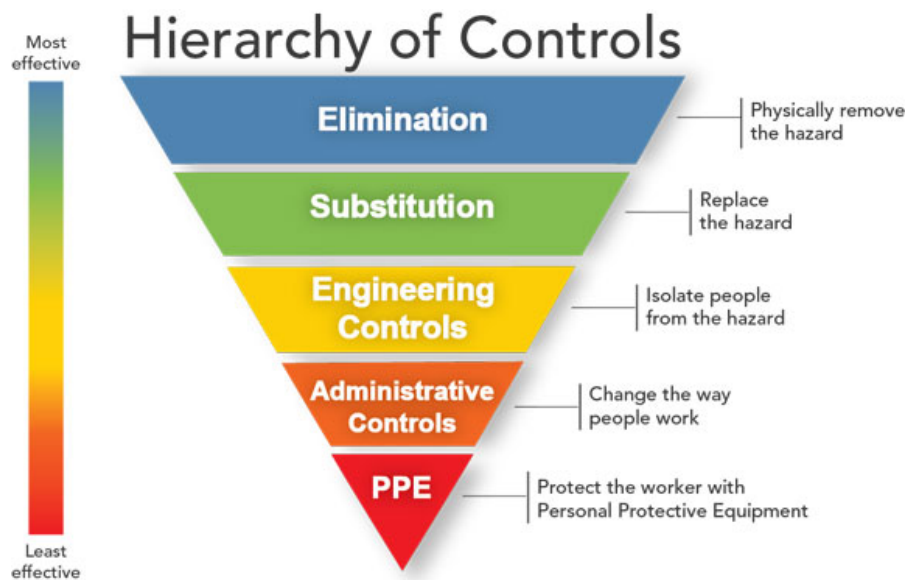
KYTC Roadside Environment coordinates the DOC inmate program. Contact KYTC Roadside Environment or the Roadside Environment district administrator if you have questions or need technical assistance with this program.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>WORKPLACE RISK ASSESSMENT & PREVENTION</p>
	<p><i>Subject</i></p> <p>Hierarchy of Controls</p>

PURPOSE

The Employee Safety and Health (ES&H) Branch strongly promotes the hierarchy of controls model. Effective controls protect workers from workplace hazards; help avoid injuries, illnesses, and incidents; minimize or eliminate safety and health risks; and provide workers with safe and healthful working conditions.



DEFINITIONS

Elimination - The best way to control a hazard is to eliminate it and remove the danger. This can be done by changing a work process in a way that will get rid of a hazard. For example, substituting a non-toxic chemical for a toxic substance; having workers perform tasks at ground level rather than working at heights; and other methods that remove the hazard all together.

Substitution - The second best way to control a hazard is to substitute something else in its place that would be nonhazardous or less hazardous to workers. For example, a non-toxic (or less toxic) chemical could be substituted for a hazardous one.

DEFINITIONS (CONT.)

Engineering controls - If a hazard cannot be eliminated or a safer substitute cannot be found, the next best approach is to use engineering controls to keep the hazard from reaching the worker. Engineering controls are design choices that function automatically, without any action by workers at risk, to reduce frequency or consequences of exposure to a hazard. For example, permanently installed ventilation system to remove fumes can be more effective than depending on workers to wear respirators when entering the area.

Administrative controls - If engineering controls cannot be implemented, or cannot be implemented immediately, administrative controls should be considered. Administrative controls involve changes in workplace policies and procedures. They can include such things as warning alarms, labeling systems, reducing the time workers are exposed to a hazard, and training. Back-up alarms on trucks that are backing up are an example of effective warning systems. However, warning signs used instead of correcting a hazard that can and should be corrected are not acceptable forms of hazard control.


Personal protective equipment (PPE) - Is the least effective method for protecting workers from hazards. PPE should be used only while other more effective controls are being developed or installed, or if there are no other more effective ways to control the hazard.

SELECTION OF CONTROLS

Controls that are the most feasible, effective, and permanent should be selected.

- Eliminate or control all serious hazards (those causing or are likely to cause death or serious physical harm) immediately.
- Use interim controls while developing and implementing longer-term solutions.
- Select controls according to a hierarchy that emphasizes engineering solutions (including elimination or substitution) first, followed by safe work practices, administrative controls, and PPE.
- Avoid selecting controls that may directly or indirectly introduce new hazards. For example: using hearing protection that makes it difficult to hear backup alarms.
- Review and discuss control options with workers to ensure that controls are feasible and effective.
- Use a combination of control options when no single method fully protects workers.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>WORKPLACE RISK ASSESSMENT & PREVENTION</p>
	<p><i>Subject</i></p> <p>Job Safety Analysis</p>

REQUIREMENTS


Pursuant to [29 CFR 1910](#) Subpart I, [29 CFR 1926](#) Subpart C, and 29 CFR 1926 Subpart E and as part of their routine monthly inspections, Kentucky Transportation Cabinet (KYTC) safety personnel shall assess workplace locations to identify potential hazards that may necessitate the use of personal protective equipment (PPE) by using TC 25-156, *Job Safety Analysis & PPE Certification of Hazard Assessment* ([Exhibit 9001](#)).

If such hazards are identified, KYTC safety personnel shall consult [SHA-401](#) to determine if the hazard can be eliminated or substituted, or if engineering or administrative controls can be implemented. If PPE is the only viable alternative, safety personnel shall complete the following:

- Select and recommend the type of PPE that will protect employees from potential hazards
- Communicate to affected employees the PPE required for the work being performed
- Inform supervisors of their assigned responsibility to ensure that employees under their direction obtain and properly utilize the designated PPE
- If necessary, assist supervisors in providing the required training to affected employees
- Certify in writing that the required job safety analysis has been performed and maintain a file copy

When conducting and certifying the job safety analysis, KYTC safety personnel shall utilize the example procedures set forth in 29 CFR 1910 Appendix B of Subpart I – Non-mandatory Compliance Guidelines for Hazard Assessment and Personal Protective Equipment Selection.



 EMPLOYEE Safety & HEALTH ADMINISTRATION GUIDE	<i>Chapter</i> WORKPLACE RISK ASSESSMENT & PREVENTION
	<i>Subject</i> Job Briefing

REFERENCES [29 CFR 1926.952](#); OSHA Best Practice: Job Briefing

PURPOSE A job briefing is a participatory process of creating a safer and healthier work environment by identifying, eliminating, or controlling recognized hazards before commencing a task. Performing a job briefing can significantly contribute to the prevention of accidents and injuries; therefore, all crew members shall participate in documented job briefings.

POLICY STATEMENT In continual pursuit of a safe and healthy workplace, the Cabinet has developed and instituted a job briefing program to be followed by all employees.

Benefits include:

- Essential job safety planning guidelines and key elements
- Enhanced compliance with OSHA regulatory requirements
- Enhanced risk control
- Reduced risk of injury
- Enhanced participation of crew members in the safety planning process
- Focused job safety analysis
- Organized approach to identify possible hazards of unfamiliar tasks
- Required Personal Protective Equipment (PPE) identified
- Training in hazard identification and safety procedures for new employees

ADMINISTRATION The Employee Safety and Health Branch is responsible for the administration of this program. The day-to-day aspects of policy implementation shall be the responsibility of district operations, supervisors, and employees. Personnel participating in the program should contact the Employee Safety & Health Branch or their designated safety personnel if further information is needed.

PROCEDURE

Job briefings should:

- Be held at the start of every work shift since tasks, hazards, and personnel may differ
- Include the components of a job safety analysis
- Be documented by the supervisor on TC 25-163, *Job Briefing (Exhibit 9002)*

SUPERVISOR**RESPONSIBILITIES**

The crew supervisor or foreman responsibilities may include:

- Conduct a job briefing before engaging in work activity
- Explain the hazards associated with each job task to work crew members
- Give work crew members the opportunity to participate in the job briefing

Note: Allowing crew members to assist with development and review of the job briefing is an excellent opportunity for crew supervisors to engage the crew in the participatory process, as well as mentor future crew leaders.


- Address safety concerns raised by work crew members prior to or during the work activity, consulting with higher-level management and safety personnel as necessary
- Complete and sign a TC 25-163 form, *Job Briefing (Exhibit 9002)*, per the guidelines set forth in this section

CREW MEMBER**RESPONSIBILITIES**

Work crew member responsibilities may include:

- Participate in the job briefing by raising questions or safety concerns prior to the work activity
- Certify their participation in and understanding of the job briefing by initialing TC 25-163
- Remain alert to and advise supervisors promptly of any changes in conditions or the development of events that pose a safety concern



 <p>ADMINISTRATION GUIDE</p>	<p><i>Section</i></p> <p>WORKPLACE RISK ASSESSMENT & PREVENTION</p>
	<p><i>Subject</i></p> <p>Personal Protective Equipment (PPE)</p>

REFERENCES [29 CFR 1910](#) Subpart I; [29 CFR 1926](#) Subpart C

PURPOSE & SCOPE The purpose of the Employee Safety and Health (ES&H) Branch’s personal protective equipment (PPE) program is to protect employees of the Kentucky Transportation Cabinet (KYTC) from exposure to workplace hazards and risk of injury through the use of PPE.

This section addresses general PPE requirements, including eye, face, head, foot, leg, hand, arm, and body (torso) protection, as well as protection from drowning. Separate programs exist for respiratory protection ([SHA-407-1](#)) and hearing protection ([SHA-1803](#)).

**HIERARCHY OF
CONTROLS**

PPE will be provided, used, and maintained per manufacturer guidelines when it is required to ensure the safety and health of employees and lessen the likelihood of occupational injury and illness.

PPE is the last line of defense when following the Hierarchy of Controls Model ([SHA-401](#)).

**BRANCH
RESPONSIBILITIES**

The ES&H Branch is responsible for the development, implementation, and administration of KYTC’s PPE program.

This includes, but is not limited to, the following:

- Conducting job safety analyses ([SHA-402](#))
- Selecting and recommending PPE
- Reviewing, updating, and conducting a job safety analysis when:
 - ◆ A job’s task or location changes
 - ◆ New equipment is to be used
 - ◆ An accident has occurred
 - ◆ A supervisor or an employee requests it

BRANCH**RESPONSIBILITIES****(CONT.)**

Note: At a minimum, a job safety analysis shall be conducted once per year.

- Maintaining records on each job safety analysis, job briefing, PPE assignments, and PPE training
- Training, guiding, and assisting management, supervisors, and employees on the proper use, care, and cleaning of approved PPE
- Periodically re-evaluating the suitability of previously selected PPE
- Reviewing, updating, and evaluating the overall effectiveness of PPE use, training, and policies

SUPERVISOR**RESPONSIBILITIES**

In accordance with [29 CFR 1926.32\(f\)](#), supervisors are designated as competent persons and, after consulting with safety personnel as needed, are responsible for the assessment, selection, and use of appropriate personnel, equipment, and personal protective equipment.

Supervisors have the primary responsibility for implementing PPE policies and enforcing PPE use in their work area ([SHA-500](#)).

This includes, but is not limited to, the following:

- Providing appropriate PPE to employees
- Ensuring that employees are trained on the proper use, care, and cleaning of PPE
- Ensuring that PPE training certification and evaluation forms are signed and given to the safety coordinator/administrator for online training documentation and the employee's personnel file
- Ensuring that employees properly use and maintain their PPE, and follow KYTC PPE policies and rules
- Notifying the ES&H Branch and the district safety coordinator when new job hazards are introduced or when job processes are added or changed
- Ensuring that defective or damaged PPE is immediately disposed of and replaced
- Ensuring that all supervised employees understand and adhere to safety and health requirements
- Selecting and assigning sufficiently trained and qualified workers to do their assigned job in a manner safe for employees and the public
- Conducting a written job briefing to determine the safest, most economical way to proceed, as well as the physical protections necessary to do the work

EMPLOYEE**RESPONSIBILITIES**

[KRS 338.031\(2\)](#) states: *Each employee shall comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to this chapter which are applicable to his own actions and conduct.*

The PPE user is responsible for following the requirements of the PPE policies ([SAFE-204](#)).

This includes, but is not limited to, the following:

- Properly wearing PPE as required for the job being performed
- Attending required training sessions and job briefings
- Caring for, cleaning, maintaining, and inspecting PPE as required per manufacturer guidelines
- Informing the supervisor of the need to repair or replace PPE
- Reading and complying with the [Employee Safety and Health Manual](#) on all safety and health policies and procedures applicable to the work being performed.

Employees who repeatedly disregard PPE policies and rules will be subject to disciplinary action up to and including dismissal from the Cabinet.

SELECTION OF PPE

Once workplace hazards have been identified, the ES&H Branch will determine if the hazards can be eliminated or reduced by control methods other than PPE.

If such methods are not adequate or feasible, the ES&H Branch will determine the suitability of the PPE presently available or select new or additional equipment as necessary. Care will be taken to recognize the possibility of multiple and simultaneous exposure to a variety of hazards. Adequate protection against the highest level of each of the hazards will be recommended for purchase.

All personal protective clothing and equipment will be designed for the work to be performed and maintained in a sanitary and reliable condition. Only protective clothing and equipment that meet National Institute for Occupational Safety and Health ([NIOSH](#)) or American National Standards Institute ([ANSI](#)) standards will be procured or accepted for use. Newly purchased PPE must conform to the updated ANSI standards which have been incorporated into the PPE regulations, as follows:

- Eye and Face Protection ANSI Z87.1-1989
- Head Protection ANSI Z89.1-1986
- Foot Protection ANSI Z41.1-1991
- Hand Protection

**SELECTION OF PPE
(CONT.)**

Note: There are no ANSI standards for gloves; however, selection must be based on the performance characteristics of the glove in relation to the tasks to be performed.

Affected employees whose jobs require the use of PPE will be informed of the PPE selection and will be provided PPE by KYTC at no charge. Careful consideration will be given to the comfort and proper fit of PPE in order to ensure that the correct size is selected and will be used.

TRAINING

Any worker required to wear PPE will receive training in the proper use and care of PPE before being allowed to perform work requiring the use of PPE. Periodic retraining will be offered to PPE users as needed.

The training will include, but not be limited to, the following subjects:

- Necessity of PPE
- Types of PPE
- Proper usage of PPE
- Limitations of PPE
- Proper care, maintenance, useful life, and disposal of PPE

Employees shall demonstrate understanding of proper PPE use or shall repeat training.

Training of each employee shall be documented on TC 25-3, *Personal Protective Equipment (PPE) Acknowledgment*, and TC 25-2, *Training Report*, and kept on file ([Exhibit 9012](#) and [Exhibit 9009](#)). Both documents certify that the employee has received and understood the required training on the specific PPE he or she will be using. The supervisor shall maintain these files for the duration of the employee's tenure.

RETRAINING

Retraining is indicated when:

- An employee's work habits or knowledge reflects a lack of understanding, motivation, and skills required to use required PPE
- New equipment is installed
- Previous training is out-of-date
- Supervisor requests for the reasons noted above
- TC 25-105, *Notice of Safety Violation*, or TC 25-164, *Safety Risk Report*, is received by ES&H staff requesting retraining ([Exhibit 9003](#) and [Exhibit 9013](#))

**CLEANING &
MAINTENANCE
OF PPE**

It is important that all PPE be kept clean and properly maintained. Cleaning is particularly important for eye and face protection where dirty or fogged lenses could impair vision. Employees shall inspect, clean, and maintain their PPE according to the manufacturers' instructions before and after each use. Supervisors are responsible for ensuring that users properly maintain their PPE in good condition.

PPE shall be distributed for individual use whenever possible. If PPE sharing is necessary, equipment shall not be used until it has been properly cleaned and sanitized.

Employee-provided PPE shall be evaluated by the ES&H Branch or KYTC safety personnel before being placed into service. Supervisors shall ensure that employee-provided PPE is adequate protection for the identified workplace hazards, and that it is maintained in a clean and reliable condition.

Defective or damaged PPE shall not be used and shall immediately be reported, discarded, and replaced.

Note: Defective PPE can be worse than no PPE at all. Employees are more likely to engage a hazardous situation if they believe they are protected. Doing so with defective equipment puts them at greater risk for injury.

Contaminated PPE that cannot be decontaminated shall be disposed of in a manner that protects employees from exposure to hazards.


SHA-500 provides additional information regarding PPE.

**SAFETY DISCIPLINARY
POLICY**

In order to maintain a safe and healthy workplace, KYTC employees must be cognizant of all state and federal safety and health regulations as they apply to specific job duties required.

Employees who repeatedly disregard PPE policies and rules will be subject to disciplinary action up to and including dismissal from the Cabinet.



 EMPLOYEE Safety & HEALTH ADMINISTRATION GUIDE	<i>Chapter</i> WORKPLACE RISK ASSESSMENT & PREVENTION
	<i>Subject</i> Hard Hats

PURPOSE In continual pursuit of a safe and healthy workplace, the Kentucky Transportation Cabinet (KYTC) has developed a hard hat program to be followed by all employees. The hard hat is one of the most important pieces of equipment worn in the industrial workplace. Many workers have been saved from serious injury or death because they were wearing a hard hat.

All newly hired KYTC employees shall be provided with a new, unused, and unexposed hard hat. Hard hats shall not be reissued. All KYTC employees shall follow the manufacturer recommended guidelines.

ADMINISTRATION The Employee Safety and Health (ES&H) Branch is responsible for the administration of the hard hat program. Daily policy implementation shall be the responsibility of district operations, supervisors, and employees using industrial head protection devices. Personnel participating in the program should contact the ES&H Branch or their designated safety personnel if further information is needed.

**HARD HAT PARTS,
INSPECTION, &
MAINTENANCE**

Given the proper care and normal workplace conditions, a hard hat has a reasonable service life.

However, all hard hats are susceptible to ultraviolet light damage, temperature extremes, and chemical degradation. Thus, users who work in environments with high degrees of exposure to sunlight, heat, cold, or chemicals should replace their hard hats more frequently than workers in other environments.

A conventional hard hat consists of two components – the shell and the suspension – which work together as a system. Both components require periodic inspection and maintenance.

**HARD HAT PARTS,
INSPECTION, &
MAINTENANCE (CONT.)**

- *Hard Hat Shell.* The shell should be inspected daily for dents, cracks, nicks, gouges and any damage due to impact, penetration, abrasions, rough treatment, or wear that might reduce the degree of protection originally provided. Degradation of thermoplastic material may be apparent when the shell becomes stiff, brittle, faded, dull in color, or exhibits a chalky appearance. With further degradation, the shell surface may break, minutely crack, flake, or delaminate.

The shell may be field tested by compressing it inward from the sides about 1" (2.5 cm) with both hands and then releasing the pressure without dropping the shell. The shell should exhibit elasticity by quickly returning to its original shape.

Any hard hat shell that shows signs of worn or damaged parts, lack of elasticity, or cracks due to brittleness shall be removed from service immediately and replaced.

- *Hard Hat Suspension.* The hard hat suspension system is just as important as the shell. Its main purpose is to help absorb the shock of an impact. To do so, it must be in good condition at all times.

Suspensions should be inspected closely for cracks, frayed or cut crown straps, torn headband or size adjustment slots, loss of pliability, and other signs of wear. These conditions can be caused by perspiration, hair oils, or normal wear.

Any suspension that is damaged must be removed from service and replaced immediately according to the manufacturer guidelines regarding suspension system replacement.

Hard hat service life can be extended by cleaning both the shell and the suspension, and should be made a part of the regular inspection and maintenance program.

1. Scrub the shell and suspension with a mild detergent to remove dirt and stains.
2. Rinse thoroughly with clean, warm water, not to exceed 50°C (120°F).
3. After rinsing, wipe dry and once again carefully inspect for any signs of damage.

SPECIAL**PRECAUTIONS**

In addition to adhering to a regular inspection and maintenance schedule, employees should be aware of the following special precautions.

Caution: Failure to observe these warnings could result in death or serious injury.

- If the hard hat has been struck by a forcible blow of any magnitude, the hard hat shall be replaced immediately, even if no damage is visible.
- The hard hat shell or suspension shall not be altered or modified. For example, drilling holes in the shell for ventilation purposes is prohibited.
- Avoid contact of the hard hat with electrical wires.
- Hard hats shall not be carried on the rear window shelf of an automobile or stored in direct sunlight. Exposure to extreme sunlight may lead to degradation of the hat's protective materials.
- Do not intentionally abuse hard hats by dropping, throwing, or sitting on them. Hard hats shall not be used as supports.
- Clearance must be maintained between the shell and head for the hard hat protection system to work properly. Therefore, wearers shall not carry or wear anything inside their hard hat.
- Do not paint a hard hat as some paints and solvents may damage the shell, reducing the degree of protection originally provided.
- Do not apply stickers to the hard hat as this may cover up a damaged area or damage the shell.

REPLACEMENT**PROGRAM****GUIDELINES**

While specific replacement schedules must be based on the work conditions at each job site, ES&H staff generally recommends replacing all employee's hard hats after five years of service, regardless of outward appearance.

If a hard hat has not been placed into service, but is over five years old (note the date stamp on the inside of the hat), the manufacturer shall be contacted immediately to determine if the item should be removed from service. Typically, if a hat has been stored in a cool, dry place away from direct sunlight, it would be suitable to be placed into service. It is KYTC policy to approve a hard hat for use as long as it passes inspection and field tests, and the manufacture does not recommend replacement.

REPLACEMENT


PROGRAM

GUIDELINES (CONT.)

Where user environments are known to include longer exposures to temperature extremes, sunlight, or chemicals, hard hats shall be replaced every two years. In certain rare instances, a hat may require replacement in less than two years.

If an employee's hard hat is defective and a new one is requested, the supervisor shall immediately provide a replacement.



 <p>ADMINISTRATION GUIDE</p>	<p><i>Section</i></p> <p>JOB EQUIPMENT</p>
	<p><i>Subject</i></p> <p>Servicing Multi-Piece & Single-Piece Rim Wheels</p>

REFERENCES

- [29 CFR 1910.177](#) Subpart N, Demounting and Mounting Procedures for Tube-Type Truck and Bus Tires Chart (OSHA 3402)
- Demounting and Mounting Procedures for Tubeless Truck and Bus Tires Chart (OSHA 3401)
- Multi-Piece Rim Matching Chart (OSHA 3403 - 2011)
- Servicing Multi-Piece and Single-Piece Rim Wheels Manual (OSHA 3421)

PURPOSE

The purpose of the servicing multi-piece and single-piece rim wheels program is to minimize the risk of injury when multi-piece and single-piece rim wheels are serviced.

ADMINISTRATION

The Employee Safety and Health (ES&H) Branch is responsible for establishing and implementing the servicing multi-piece and single piece rim wheels program. If additional information regarding the program is needed, participating personnel should contact the ES&H Branch or their designated safety personnel.

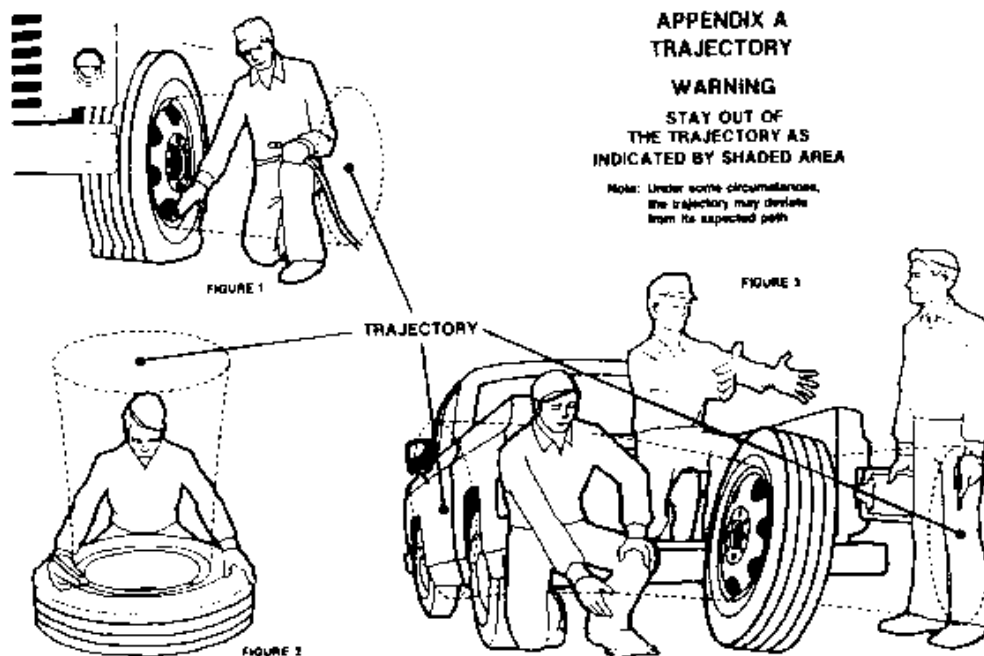
HAZARD DEFINED

The primary difference between accidents involving single-piece rim wheels and those involving multi-piece rim wheels is the effect of the sudden release of the pressurized air contained in a single-piece rim wheel.

- Single-piece rim wheel accidents occur when the pressurized air contained in the tire is suddenly released, either by the bead breaking or by the bead slipping over the rim flange.
 - ◆ The principal hazards involve pressurized air which, once released, can either hurl an employee across the shop if the employee is in close proximity to the rim wheel and within the trajectory, or can propel the rim wheel across the workplace and into a worker.
 - ◆ The “trajectory” of the air or rim wheel is any potential path or route (basically along the axis of the rim wheel) that a rim wheel component may travel during an explosive separation, or the area into which the air blast from a single-piece rim wheel may be released (see diagram on following page.)

HAZARD DEFINED (CONT.)

- In a multi-piece rim wheel accident, the wheel components separate and are released from the rim wheel with violent force. The severity of the hazard is related not only to the air pressure, but also to the air volume.

29 CFR 1910.177 APPENDIX A: TRAJECTORY**RIM WHEELS & TIRES**

A rim wheel is the component assembly of a wheel (either multi-piece or single-piece), tire and tube, plus other components.

A single-piece wheel is the component of the assembly used to hold the tire, form part of the air chamber (with tubeless tires), and provide the means of attachment of the assembly to the vehicle axle.

A multi-piece wheel is a vehicle wheel consisting of two or more parts, one of which is a side or locking ring that holds the tire and other components on the rim wheel by interlocking the components when the tire is inflated.


REQUIREMENTS

A tire safety rack for airing tires with multi-piece rims is available in each facility wherever tires are changed. This rack shall be utilized by all personnel airing safety rim tires. A chain is suggested as an added precaution, but does not substitute for the rack.

A clip-on chuck with sufficient hose length is also required to permit the employee to stand clear of the potential trajectory of rim components.

Employees shall follow all OSHA regulations per 29 CFR 1910.177 for servicing multi-piece and single-piece rim wheels.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Section</i></p> <p>JOB EQUIPMENT</p>
	<p><i>Subject</i></p> <p>Slope Mower</p>

GENERAL**PRECAUTIONS**


All manufacture guidelines for operation, maintenance, and inspection shall be followed. The owner's manual, [SHA-406-2](#), and [FOG-701](#) provide additional information.

SAFETY PLAN

In accordance with [29 CFR 1926.32\(f\)](#), supervisors are designated as competent persons and, after consulting with safety personnel as needed, are responsible for the assessment, selection, and use of appropriate personnel, equipment, and personal protective equipment.

Employees shall follow manufacturer recommendations for equipment servicing and pre-work inspections as recommended in the manufacturer's operation manual, as well as those included in the *Field Operations Guide* ([FOG-701](#)).



 EMPLOYEE Safety & HEALTH ADMINISTRATION GUIDE	Section JOB ENVIRONMENT
	Subject Respiratory Protection

REFERENCES [29 CFR 1910.134](#); [29 CFR 1926.103](#); American National Standards Institute (ANSI), Z88.2-1980; [SHA-506](#)

PURPOSE In continuing pursuit of a safe and healthy workplace, the Cabinet has instituted a respiratory protection program to be followed by all employees required to wear respiratory protection.

**ADMINISTRATIVE
RESPONSIBILITY** The responsibility for the administration of this policy shall lie with the Employee Safety and Health (ES&H) Branch. The day-to-day aspects of the policy are the responsibility of the department supervisors, KYTC safety personnel, and the employees to whom respiratory protection is assigned. Other assistance shall be provided as needed by contacting the ES&H Branch.

**SELECTION OF
RESPIRATORY
PROTECTION** The following criteria are used in the final selection of a suitable respirator.

➤ *Identification of Hazards*

The ES&H Branch safety personnel survey the work environment to classify the hazards into the following definitions or classes:

- ◆ Gas/vapor contaminants
- ◆ Particulate/dust contaminants
- ◆ Fume contaminants
- ◆ Mist contaminants
- ◆ Oxygen deficient atmospheres
- ◆ Atmospheres immediately dangerous to life and health
- ◆ Combination of classes

**SELECTION OF
RESPIRATORY
PROTECTION (CONT.)**

➤ *Evaluations of Hazards*

If necessary, the ES&H Branch will have qualified persons take air samples in the work environment to determine the actual concentration of exposure hazards which may be present. All methods used in hazard evaluation are in compliance with OSHA/NIOSH sampling methodologies. Air samples requiring laboratory analysis are submitted to an AIHA-accredited laboratory.

The resulting concentration shall be compared with current OSHA (PEL) or ACGIH (TLVs), whichever is lower, to assist in determining the level of protection required.

➤ *Appropriate Selection and Purchasing*

- ◆ The ES&H Branch or designee completes this step aided by information provided by outside experts specifically trained in occupational health and industrial hygiene.
- ◆ Selection shall consider facial irregularities (such as scars, dentures, and facial hair) and the workload of the employee in comparison with any possible resistance or stress placed upon the employee's respiratory system by the protective device.
- ◆ Only appropriately sized respirators shall be assigned to individuals.
- ◆ Only NIOSH/OSHA approved respirators will be purchased and used. Typical KYTC respiratory protection can be requisitioned from the Equipment Warehouse.

**MEDICAL
EVALUATION**

To ensure the examining physician can render a qualified opinion regarding the employee's use of respiratory protection, they shall be provided the information contained in the *Respirator Information for Physician* ([Exhibit 9033](#)).

Medical examination and testing shall take place prior to an employee using respiratory protection. A Medical/ Occupational History Questionnaire shall be completed by the employee prior to meeting with the physician ([Exhibit 9031](#)).

MEDICAL**EVALUATION (CONT.)**

The following medical tests shall be completed as set forth in the established service contract:

- Basic physical examination
- Pulmonary function tests
- Respiratory fit test
- Spirometry
- Screening urinalysis
- CBC
- Blood chemistry panel
- Lead test (with ZPP)
- Chest X-ray
- Vision screen
- EKG
- Any other test that the examining physician deems necessary to comply with OSHA standards

Employee medical information shall be treated as confidential information per HIPPA regulation and maintained on file in the ES&H Branch Central Office. Employees may contact the ES&H Branch to obtain medical test results.

Prior to performing work requiring the use of approved respiratory protection, the examining physician must provide the Cabinet with the Physicians Approval for Respirator Assignment ([Exhibit 9032](#)) and a statement of fitness to perform the designated work duties for the employee tested.

All employees required to wear respiratory protection shall be re-examined on an annual basis. Follow-up interim evaluations shall include blood, lead, and ZPP.

**ASSIGNMENT OF
RESPIRATORY
PROTECTION**

All respiratory protective devices will have permanent, durable identification marking(s) attached to them that do not interfere with the performance of the device.

When a respirator is assigned to an employee for his or her exclusive use, records shall be kept indicating the employee and the specific respirator assigned.

ASSIGNMENT OF**RESPIRATORY****PROTECTION (CONT.)**

Temporary emergency assignment shall be made by the ES&H Branch.

- When a respirator is temporarily assigned to an employee, a record shall be kept of the employee's I.D., respirator I.D., description of operation or hazard area, and length of assignment.
- During emergency respirator use, a good faith effort shall be made to collect the above information.
- Employees who are assigned respiratory protection on an emergency or temporary basis shall be required to perform an inspection and fit testing prior to use.

TRAINING &**EDUCATION**

Prior to the assignment of a respiratory protection device, those employees being considered shall receive training that includes the following:

- Explanation of Cabinet's respirator policy
- Responsibility of the ES&H Branch
- Employee's responsibility
- Explanation of respiratory hazards posed by the operations and regulated areas
- Explanation of current administrative and engineering controls used in conjunction with respiratory protection
- Explanation of the selection process
- Functions, capabilities, and limitations of selected respirator
- Demonstrations on the donning, fit testing, and proper wearing of the respirator
- Respiratory maintenance, cleaning, and storage
- Federal and state governments' regulatory requirements
- Emergency situations

As part of the training, the employee shall have the opportunity to handle the selected respirator, have it fitted properly, test the face piece-to-face seal, and wear it in "normal" air.

FIT TESTING

The ES&H Branch shall choose the most appropriate means for fit testing for each employee and type of respiratory protection assigned.

FIT TESTING (CONT.)

- *Qualitative Fit Testing* involves a test subject responding to a chemical challenge outside the respirator face piece. These tests are fast, easily performed, and use inexpensive equipment; however, reproducibility and accuracy may vary given that they are based on the respirator wearer's subjective response to the test chemical.

Three of the most popular methods are:

- ◆ An irritant smoke test
- ◆ An odorous vapor test (isoamyl acetate-banana oil)

Note: Qualitative fit testing using isoamyl acetate for chemical cartridges and irritant smoke for high-efficiency particulate filters shall be conducted at the time of initial fitting and at least annually thereafter.

- ◆ A taste test (saccharin solution)

A negative and positive pressure test must be conducted prior to qualitative fit testing. A qualified person must conduct the qualitative fit testing and appropriately document the method and results.

- *Quantitative Fit Testing* offers more accurate, detailed information than qualitative fit tests on respirator fit. It can involve introducing a harmless aerosol to the wearer while he or she is in a test chamber, measuring ambient particulates in the air, or taking controlled negative-pressure measurements. While the wearer performs exercises that could induce face piece leakage, the air inside and outside the face piece is then measured for the presence of an aerosol, ambient particulates, or pressure change, to determine any leakage into the respirator.

PRESSURE TESTING

A positive and negative pressure test shall be conducted for each negative-pressure, cartridge-type respirator prior to donning.

- *Negative Pressure Check*
 1. Don the respirator per the manufacturer's instructions.
 2. Seat the mask on the face by moving the head from side-to-side and up and down slowly while taking a few slow, deep breaths.

PRESSURE TESTING (CONT.)

3. Cover the inlet opening of the respirator's cartridges or filters with the palm of the hand.
4. Inhale gently and hold breath for at least 10 seconds.
5. If the face piece collapses slightly and no leakage of air into the face piece is detected, it can be reasonably assumed that the respirator has been properly donned and the exhalation valve and face piece are not leaking.

➤ *Positive Pressure Check*

1. After the negative pressure check has been performed, close the exhalation valve.

Note: For some respirators, this requires that the exhalation valve cover be removed first (see the manufacturer's instruction).

2. Exhale gently for at least 10 seconds.
3. The respirator has been properly donned if a slight positive pressure can be built up inside the face piece without the detection of any outward leakage of air between the sealing surface of the face piece and the wearer's face.

**USE OF
RESPIRATORS**

In past years, metal on highway bridges may have been painted with lead paint. Bridge coatings may also contain isocyanates, which are sensitizers. When metal covered with lead paint is cut, sanded, ground, heated, burned, or blasted with abrasives, lead dust gets into the air and on environmental surfaces. Spray painting may also require the use of respirators to protect against solvent vapors in paint.

Anyone near these activities can get lead poisoning. Therefore, respiratory protection is required when an employee enters a containment area where work activities as stated above are being or have recently been conducted.

A respirator shall also be required if air monitoring reveals a Permissible Exposure Limit (PEL) greater than 50 $\mu\text{g}/\text{m}^3$ for lead. Lead awareness information shall be provided to employees prior to possible exposure ([SHA 407-4](#)).

**CARTRIDGE
CHANGE POLICY**

- Solvents (MEK, MDI, HDI)
 - ◆ Cartridge Service Lifetime = 36 hours of use then discard (based on MEK concentration of 50 PPM)
 - ◆ Changed sooner if breakthrough occurs

Note: Pre-filter must be used with cartridges and should be discarded as breathing becomes difficult.

- Lead Dust (no odors, gas, and/or vapors present)
 - ◆ HEPA filters (N-100, R-100, or P-100)
 - ◆ Changed daily or as breathing becomes difficult

**FILTERING FACE
PIECE MASK
(DISPOSABLE
MASK TYPE)**

The Transportation Cabinet has determined that a filtering face mask may be used only for voluntary use in non-hazardous environments. The Cabinet will purchase and provide nuisance dust masks through the equipment garage's stockrooms. Each mask will be distributed with lead awareness information ([Exhibit 9010](#)).

AIR QUALITY

Compressed air or compressed oxygen used for respiration shall be of high quality and at a minimum shall meet the specification for Grade D breathing air.


**CLEANING &
DISINFECTING**

All respirators shall be cleaned and disinfected per the manufacturer requirements as follows:

- Respirators permanently assigned to an employee for his or her exclusive use shall be cleaned and disinfected as needed.
- Respirators assigned on an emergency or temporary basis shall be cleaned and disinfected after each use and prior to each assignment to another employee.

INSPECTION	<p>All respirators used under permanent or temporary assignment shall be inspected prior to each donning by the assigned employee. The employee shall be responsible for inspection of the following points:</p> <ul style="list-style-type: none">◆ Straps◆ Cartridges◆ Face seal◆ Exhaust and inlet valves◆ Air hose connections or blower◆ Batteries◆ Lens <p>Emergency assigned respirators shall be inspected at least monthly. All points required by the manufacturer, as well as those above, shall be included in the emergency respirator inspection process.</p>
REPLACEMENT	<p>Respirators shall be replaced in accordance with the manufacturer's recommendations.</p>
STORAGE	<p>All respirators shall be stored in a clean, contaminant-free environment. The respirator/face piece shall be placed in a plastic bag to ensure the contaminant does not get into or onto the respirator's face piece. Whenever possible, respiratory protection should be stored in a secured area.</p>
PROGRAM EVALUATION	<p>On an annual basis, the ES&H Branch or their designee shall review all points of the program to ensure effectiveness and workability. Furthermore, all program points shall be reviewed in comparison to current state and federal regulations to ensure proper compliance.</p>



 <p>ADMINISTRATION GUIDE</p>	<p><i>Section</i></p> <p>JOB ENVIRONMENT</p>
	<p><i>Subject</i></p> <p>Silica</p>

PURPOSE In our continuing pursuit of a safe and healthy workplace, the Cabinet has instituted a silica exposure control plan to be followed by all employees.

ADMINISTRATION RESPONSIBILITY The responsibility for the administration of this policy shall lie with the Employee Safety and Health (ES&H) Branch. The day-to-day aspects of the policy are the responsibility of safety personnel and employees who are potentially exposed to silica dust. Other assistance shall be provided as needed by contacting the ES&H Branch.

EXAMPLE TASKS Tasks may include, but are not limited to: core drilling, asphalt cutting, concrete cutting, jack hammering, concrete mixing, and sand blasting.

ENGINEERING CONTROL DESCRIPTION Use equipment with:

- The appropriate, commercially available water supply system

(OR)

- The assistance of a co-worker using a hand-held water supply system or a vacuum dust collection system with the following:
 - ◆ Flow rate recommended by the equipment manufacturer
 - ◆ Filter at least 99% efficient
 - ◆ Filter cleaning mechanism

Use a portable fan to exhaust air and prevent the buildup of dust when appropriate.

WORK PRACTICES Safe work practices include the following:

- Ensure that water is being applied at all times when work is in progress.
- Check shrouds and hoses to make sure they are not damaged before starting work.

**WORK PRACTICES
(CONT.)**

- Make sure the hoses do not become kinked or bent while working.
- Use switch on vacuum to activate filter cleaning at the frequency recommended by the manufacturer.
- Replace vacuum bags as needed to prevent overfilling.
- Use the equipment controls according to manufacturer's instructions for reducing the release of visible dust.
- If visible dust increases, check controls and adjust as needed.

**RESPIRATORY
PROTECTION**

Use a respirator with APF of 10 throughout the entire time the task is being performed. ([SHA-407-1](#) and [SHA-506](#) provide information on selection, training, proper use, and fit testing requirements.)

HOUSEKEEPING

Dust containing silica on work surfaces and equipment must be cleaned using wet methods or a HEPA-filtered vacuum. Do not use compressed air or dry sweeping for removing dust and debris containing silica from work surfaces. Dispose of used vacuum bags in a container and keep the container sealed.

**RESTRICTING ACCESS
TO WORK AREAS**

Schedule the work so that only employees who are actively engaged in the task (cutting, drilling, jackhammering) are in the area.

**RESPIRABLE CRYSTALLINE
SILICA**

29 CFR 1926.1153 addresses occupational exposure to silica on construction sites. Table 1 of this standard, *Specified Exposure Control Methods When Working with Materials Containing Crystalline Silica*, matches common construction tasks with dust control methods so managers know exactly how to limit worker exposures to silica.

The dust control measures listed in Table 1 include methods proven to be effective, such as using water to keep dust from getting into the air or using ventilation to capture dust. In some operations, respirators may also be needed. Managers who follow Table 1 correctly are not required to measure worker exposure to silica and are not subject to the PEL.

29 CFR 1926.1153, including Table 1, is available online at:

https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=1270

ALTERNATIVE EXPOSURE**CONTROL METHODS**

Employers who do not use the control methods in OSHA Standard 1926.1153, Table 1, must take the following steps to ensure worker safety:

- Measure the amount of silica that workers are exposed to if it may be at or above an action level of 25 $\mu\text{g}/\text{m}^3$ (micrograms of silica per cubic meter of air), averaged over an eight hour day and recorded on TC 25-167 form, *Air Sampling Report* ([Exhibit 9014](#)).
- Protect workers from respirable crystalline silica exposures above the permissible exposure limit of 50 $\mu\text{g}/\text{m}^3$, averaged over an eight-hour day.
- Use dust controls to protect workers from silica exposures above the PEL.
- Provide respirators to workers when dust controls cannot limit exposures to the PEL.

COMPETENT PERSON**REQUIREMENTS**

A competent person should be designated to frequently and regularly inspect job sites, materials, and equipment to implement the silica exposure control plan.

A competent person is someone who:

- Can identify existing and foreseeable respirable crystalline silica hazards
- Is authorized to promptly eliminate or minimize silica hazards
- Has the knowledge and ability to implement the exposure control plan

KYTC can designate any employee to be a competent person if the employee is qualified, including the employee who does the work on a jobsite. For example, employees who go to jobsites alone can be designated a competent person if they know how to properly implement controls on the tools they use, can recognize if the controls are not working, and can correct the non-working control.

Specifically designed training is not required for an employee to serve as a competent person. KYTC is responsible for determining the training necessary for an employee to implement the silica exposure control plan. Such training will vary depending on the type of work done.

In some cases, successfully completing the training required by the silica standard and OSHA's Hazard Communication standard will be sufficient. In other cases, additional training may be needed.

**COMPETENT PERSON
REQUIREMENTS
(CONT.)**

For example, a competent person at a small asphalt cutting job might only need training on controls for power tools that they do not typically use to do their own tasks. This is so they could help employees who may have questions about or problems with dust controls on those tools. In contrast, a competent person for heavy equipment tasks may require more specialized training in heavy equipment inspection or in recognizing different hazard types to determine if exposures might be a concern.

**STANDARD
REQUIREMENTS**

Regardless of which exposure control method is used, all construction employers covered by the standard are required to:


- Establish and implement a written silica exposure control plan that identifies tasks involving exposure and methods used to protect workers, including procedures to restrict access to work areas where high exposures may occur
- Designate a competent person to implement the silica exposure control plan
- Restrict housekeeping practices that expose workers to silica where alternatives are available
- Offer medical exams, including chest X-rays and lung function tests, every three years for workers who are required by the standard to wear a respirator for 30 or more days per year
- Train employees on work operations that result in silica exposure and ways to limit exposure
- Keep records of workers' silica exposure and medical exams

**ADDITIONAL
INFORMATION**

Additional information on OSHA's silica rule can be found at:

www.osha.gov/silica



 <p>ADMINISTRATION GUIDE</p>	<p><i>Section</i></p> <p>JOB ENVIRONMENT</p>
	<p><i>Subject</i></p> <p>Asbestos</p>

**BACKGROUND
INFORMATION**

Asbestos fibers enter the body through breathing or swallowing and can become lodged in the respiratory or digestive systems. Exposure to asbestos can cause many disabling or fatal diseases that may take years to develop, including asbestosis, a chronic lung disease characterized by scarring and stiffening of the lungs. Asbestos-related diseases are typically associated with abnormal lung function, shortness of breath, increased vulnerability to lung infections, and sometimes death.

Exposure to asbestos has been shown to cause lung cancer, mesothelioma, and cancer of the stomach and colon. Mesothelioma is a rare cancer of the thin membrane lining of the chest and abdomen. Symptoms of mesothelioma include shortness of breath, pain in the walls of the chest, and abdominal pain. The symptoms of these diseases generally do not appear for 20 or more years after initial exposure.

The potential for a product containing asbestos to release breathable fibers depends on its degree of friability. “Friable” means that the material can be crumbled with hand pressure and is therefore likely to emit fibers. The fibrous or fluffy sprayed-on materials used for fireproofing, insulation, or sound proofing are considered to be friable, and they readily release airborne fibers if disturbed. Materials such as vinyl-asbestos floor tile or roofing felts are considered nonfriable and generally do not emit airborne fibers unless subjected to sanding or sawing operations. Asbestos-cement pipe or sheet can emit airborne fibers if the materials are cut, sawed, or broken during demolition operations.

Permissible exposure to airborne asbestos fibers may not exceed 0.2 fibers per cubic centimeter of air (0.1 f/cc) averaged over the 8-hour workday.

**PURPOSE
& SCOPE**

The purpose of the asbestos awareness program is to establish guidelines and procedures in the operations and maintenance of asbestos containing materials at KYTC facilities, and to protect all employees, contractors, visitors, and vendors from potential health hazards of asbestos-related diseases.

**PURPOSE
& SCOPE (CONT.)**

This program applies to all buildings and structures owned by KYTC, employees and subcontractors of KYTC, occupants of KYTC buildings, and external organizations that may come into contact with or disturb asbestos-containing material in KYTC buildings. The program applies to routine work during which an employee may encounter asbestos, as well as work undertaken to repair or remove asbestos-containing material.

This program is intended to address comprehensively the issues of:

- Evaluating and identifying potential sources of asbestos
- Evaluating the associated potential hazards
- Communicating information concerning these hazards
- Establishing appropriate procedures and protective measures for employees

This written program should be communicated to all personnel who are affected by it. It encompasses the total workplace, regardless of the number of workers employed or the number of work shifts. It is designed to establish clear goals and objectives.

RESPONSIBILITY

Effective implementation of this program requires support from all levels of management. The Employee Safety and Health (ES&H) Branch Manager is responsible for the oversight of all facets of this program and has full authority to make necessary decisions to ensure success of the program. The ES&H Branch Manager is authorized to amend this program and shall halt any operation on KYTC property where there is a danger of serious personal injury.

Safety personnel will annually review and revise the asbestos awareness program (as necessary), including consideration of the following:

- Regulatory updates
- Current KYTC procedures
- Facility operations
- Accidents or close-calls

**PRE-CONSTRUCTION
INSPECTION &
SAMPLING**

Prior to construction activities, the KYTC project manager or designee should assure that all presumed asbestos-containing material (PACM) has been fully evaluated and verified. If during construction activity a suspect material is discovered, the area will be cordoned off until sampling has been completed and recorded on a TC 25-167 form, *Air Sampling Report (Exhibit 9014)*.

**PRE-CONSTRUCTION
INSPECTION &
SAMPLING (CONT.)**

If the material is PACM:

- KYTC Office of Support Services and the ES&H Branch shall immediately be notified.
- All employees shall be protected from exposure to asbestos fibers by isolating and controlling access to all affected areas during asbestos removal work.
- All tasks involving the removal or disturbance of asbestos-containing material shall be conducted by a certified asbestos abatement contractor and only after appropriate work controls have been identified and implemented.
- A qualified supervisor shall be available at asbestos controlled work sites during all activities.
- Proper personal protective equipment, vacuums, and HEPA filters shall be used and properly maintained.
- All contractors must provide the appropriate certifications and documentation prior to conducting the work.

**PRESUMED ASBESTOS
CONTAINING MATERIAL
(PACM)**

Certain building materials installed prior to 1980 must be presumed to contain asbestos unless proven to be asbestos-free. This is to prevent over sampling or sampling that might trigger an unnecessary remedial response such as thermal insulation, ceiling, and floor tile. Sampling these items would damage them and trigger their replacement. Typically, sampling is only performed on these items when they will be disturbed or are already damaged.

PACM such as transite/cement board, thermal insulation, and floor/ceiling tiles, or suspected asbestos-containing materials shall not be:

- Drilled
- Hammered
- Cut
- Sawed
- Sanded
- Broken
- Damaged
- Moved
- Disturbed

**PRESUMED ASBESTOS
CONTAINING MATERIAL
(PACM) (CONT.)**

When there is reasonable belief that an asbestos hazard exists, the employee should stop work activities and promptly contact his or her supervisor. The supervisor should contact safety personnel or the ES&H Branch to assess the presence of asbestos.

Should PACM be detected, safety personnel or the ES&H Branch should follow proper procedures to either abate or render safe the area of concern. The employee will be informed when the worksite is determined to be safe and may then proceed with completion of the assignment.

**REPORTING SUSPECTED
ASBESTOS CONTAINING
MATERIAL (ACM)**

The employee should stop work activities and promptly contact his or her supervisor. The supervisor should contact the safety coordinator or the ES&H Branch to assess the presence of asbestos.

Should asbestos be detected, safety personnel or the ES&H Branch shall follow proper procedures to either abate or render safe the area of concern.

If there is reasonable doubt about the composition of a friable material, it will be treated as asbestos until testing demonstrates that asbestos is present at levels below 1%.

**REPAIR &
MAINTENANCE OF
ASBESTOS CONTAINING
MATERIAL (ACM)**

Cleanup and repair of asbestos-containing material shall only be performed by outside contractors who have been properly trained. It is the policy of KYTC that Cabinet employees are not to be involved in any asbestos repairs, maintenance, or removal operations. All employees, visitors, vendors, and contractors will be notified in advance when work involving asbestos is to be carried out in any area of KYTC buildings which they occupy.

There are several KYTC buildings that have floor tiles containing asbestos; however, regular washing, waxing, stripping, and buffing of these tiles will not release dangerous levels of asbestos.

**REPAIR &
MAINTENANCE OF
ASBESTOS CONTAINING
MATERIAL (ACM)
(CONT.)**

In order to prevent inadvertent release of asbestos from these tiles, employees shall take note of the following:

- Floor tiles shall not be sanded.
- When stripping floors, use low abrasion pads at speeds lower than 300 rpm, and use wet methods.
- Burnishing or dry buffing may be done only when the flooring has enough of a finish that the pad cannot contact the asbestos-containing material.
- Broken and damaged asbestos floor tiles must be removed by asbestos abatement workers.

TRAINING

All custodial and housekeeping employees may not carry out work without first being trained. In addition, all maintenance personnel that may perform duties where they would encounter PACM shall receive awareness training.

Awareness training may be repeated annually and may include:

- Health effects of asbestos
- Locations, signs of damage and deterioration of asbestos-containing materials, and presumed asbestos-containing materials
- Proper response to fiber release episodes
- Types, properties, and uses of asbestos
- Hazards of asbestos fiber inhalation and ingestion
- Types of activities that could release asbestos fibers

**ASBESTOS EXPOSURE
EMERGENCY FIRST
AID PROCEDURES**

For emergency medical assistance, contact the local emergency number (911). Report all work related incidents to safety personnel or ES&H Branch.

- *Eye Exposure:* Wash eye(s) immediately with large amounts of water for at least 15 minutes while occasionally lifting the lower and upper lids. Get medical attention as soon as possible.
- *Skin Exposure:* Immediately flush with copious amounts of water. Remove any contaminated clothing and flush exposed skin areas. Get medical attention as soon as possible.

ASBESTOS EXPOSURE

EMERGENCY FIRST

AID PROCEDURES

(CONT.)


- *Swallowing Exposure:* If asbestos has been swallowed, call 911 immediately.
- *Respiratory Exposure:* Get the victim to open, fresh air immediately. Keep the victim warm and at rest. Get medical attention as soon as possible.

**ADDITIONAL
INFORMATION**

Additional information regarding asbestos may be found online at:

<https://www.osha.gov/SLTC/asbestos/>



 <p>ADMINISTRATION GUIDE</p>	<p><i>Section</i></p> <p>JOB ENVIRONMENT</p>
	<p><i>Subject</i></p> <p>Lead</p>

REFERENCES [29 CFR 1910.1025](#), *General Industry*; [29 CFR 1926.62](#), *Construction*

OSHA safety and health information regarding lead can be found online at:
<https://www.osha.gov/SLTC/lead/>

**PURPOSE
& SCOPE**

This program applies to potential hazardous exposures employees may encounter within the scope of their job duties as inspectors on bridge painting projects. It addresses the levels of exposure and the methods that will be used to minimize employees' exposure to the identified hazards associated with the removal and application of lead-containing coatings on steel bridges and structures in accordance with 29 CFR 1910.1025.

LEAD EXPOSURE

Maintenance painting projects require the disturbance of existing lead-based paints on the structure. Identified operations which disturb or remove lead-based paint include water washing, hand and power tool cleaning, and abrasive blasting.

DEFINITIONS

Action level: Employee exposure, without regard to the use of a respirator, to an airborne concentration of lead of 30 micrograms per cubic meter of air (30 µg/m³) averaged over an 8-hour period.

Permissible exposure limit (PEL): Employee exposure, without regard to the use of a respirator, to an airborne concentration of lead of 50 micrograms per cubic meter of air (50 µg/m³) averaged over an 8-hour period. The Kentucky Transportation Cabinet (KYTC) is required to ensure that no employee is exposed to lead at concentrations greater than the PEL.

**INITIAL EXPOSURE
DETERMINATION**

The Employee Safety and Health (ES&H) Branch shall determine if any employee may be exposed to lead at or above the action level. This initial determination will be made based upon a representative sample of the exposed employees who KYTC reasonably believes may be exposed to the greatest airborne concentrations of lead. Air samples shall be recorded on a TC 25-167 form, *Air Sampling Report* ([Exhibit 9014](#)).

**INITIAL EXPOSURE
DETERMINATION
(CONT.)**

Initial determinations shall be made for each of the operations producing exposures to lead (for example, water washing, hand and power tool cleaning, and abrasive blasting). Acceptable sampling and analysis methods with an accuracy (to a confidence level of 95%) of not less than plus or minus 20% for airborne concentrations of lead equal to or greater than 30 µg/m³ shall be used.

During the initial determination, employees shall use respiratory protection if there is a suspected exposure risk in accordance with the KYTC respiratory protection program and applicable OSHA standards.

If an initial determination shows the possibility of employee exposure to lead at or above the action level, KYTC shall conduct monitoring that is representative of the exposure for each employee in the work area. If an initial determination shows that no employee is exposed to airborne concentrations of lead at or above the action level, no further action is required.

The ES&H Branch is required to keep all records of exposure monitoring for airborne lead. These records shall include the name and job classification of employees measured, details of the sampling and analytic techniques, the results of this sampling, and the type of respiratory protection being worn by the person sampled. Air samples shall be recorded on a TC 25-167 form, *Air Sampling Report* ([Exhibit 9014](#)).

ES&H is also required to keep all records of biological monitoring and medical examination results. These shall include the names of the employees, the physician's written opinion, and a copy of the results of the examination. All of the above records must be kept for 40 years, or for at least 20 years after termination of employment, whichever is longer.

Recordkeeping is also required for employees temporarily removed from their job under the medical removal protection program. This record shall include the employee's name and social security number, date of removal and return, how the removal was or is being accomplished, and if the reason for the removal was an elevated blood lead level. The employer is required to keep each medical removal record for the duration of an employee's employment. Medical records shall be deemed confidential information.

MONITORING**FREQUENCY**

If the initial monitoring reveals employee exposure to be below the action level, measurements will be repeated if:

- There is a production, process, control, or personnel change that may result in new or additional exposures to lead
- The employer has reason to suspect a change that may result in new or additional exposures to lead

If the initial determinations or subsequent monitoring reveals employee exposure to be at or above the action level but below the PEL, KYTC should:

- Repeat monitoring at least every 6 months
- Continue monitoring at this frequency until at least two consecutive measurements, taken at least 7 days apart, are below the action level

Note: At that time, KYTC shall discontinue monitoring for that employee except as noted above.

If the initial determination or subsequent monitoring reveals employee exposure to be at or above the PEL, KYTC should:

- Repeat monitoring every 3 months
- Continue monitoring at this frequency until at least two consecutive measurements, taken at least 7 days apart, are below the PEL but at or above the action level.

Note: At that time, KYTC shall repeat monitoring for that employee at least every 6 months for the duration of the employee's placement in that job.

EMPLOYEE**NOTIFICATION**

KYTC should notify employees within 5 working days after the receipt of the monitoring results. Each employee shall be notified in writing of the results which represents that employee's exposure. If the results indicate that the representative employee exposure, without regard to respirators, exceeds the PEL, KYTC should include in the written notice a statement that the PEL was exceeded and a description of the corrective action taken or to be taken to reduce exposure to or below the PEL.

ENGINEERING & WORK**PRACTICE CONTROLS**

If an employee is exposed to lead above the PEL for more than 30 days per year, KYTC shall implement engineering and work practice controls (including administrative controls) to reduce and maintain employee exposure to lead below the PEL.

ENGINEERING & WORK**PRACTICE CONTROLS****(CONT.)**

If the instituted engineering and work practice controls which are not sufficient to reduce employee exposure to or below the PEL, KYTC shall:

- Reduce exposures to the lowest feasible level
- Supplement those reductions with the use of respiratory protection that complies with KYTC's respiratory protection program

ENGINEERING**CONTROLS**

Contractors using abrasive blasting for removal of lead-based coatings shall:

- Provide appropriate containment ventilation
- Monitor air movement within the containment
- Verify that negative pressure within the containment is achieved and maintained
- Document air velocities to effectively control worker exposure
- Provide records of monitoring procedures and quarterly or more frequent test data to the Cabinet's representative when requested
- Monitor the system's effectiveness in controlling exposure within 5 days of any change in production, process, or controls that might result in a change in employee lead exposure

Note: If the vacuum or air flow provided does not adequately remove the airborne particulate from the containment (for example, downdraft and cross draft velocities do not produce negative pressure within the containment), the contractor shall cease abrasive blasting operations until appropriate corrective measures are taken, and the containment exhaust system is working properly.

Contractors using hand and power tools to remove lead-based coatings shall clean all surfaces using vacuums fitted with appropriate HEPA filters after completion of work and prior to inspection.

Contractors using water washing to remove lead-based coatings shall clean all debris from containment using vacuums fitted with appropriate HEPA filters to prevent an increase in respirable airborne particulate after the debris has dried. Initial air monitoring data for KYTC inspectors shall be used to determine if additional engineering or administrative controls are necessary for this operation.

**ADMINISTRATIVE
CONTROLS**

Contractors shall:

- Establish a clearly marked, regulated area on all lead paint projects to limit access to areas of lead exposure high enough to require the use of a respirator and other protective measures
- Furnish appropriate area monitoring and documentation of lead levels used to establish the boundaries of the designated regulated area

All KYTC employees working as inspectors or having direct responsibility for specific operations on the project shall be provided with the appropriate annual training and personal protective equipment for entering regulated areas.

It is responsibility of the KYTC inspector to maintain and replace as needed all PPE in accordance with applicable OSHA standards.

KYTC employees shall not enter a regulated area:

- Unless properly trained and made aware of the lead-related hazards
- While an abrasive blast operation, hand or power tool removal of rust and existing coatings, or water washing is ongoing
- For inspection until cited operations have ceased, the area has been appropriately vacuumed, and the contractor's quality control representative has inspected the cleaned surfaces

If all feasible engineering controls are in place and working properly, a job rotation schedule shall be established for any KYTC employee exposed to lead concentrations at or above the PEL.

**RESPIRATORY
PROTECTION**

KYTC shall supply the appropriate respirators and fit-testing for all employees required by this section to wear respiratory protection.

KYTC employees shall be required to wear respiratory protection during:

- Periods necessary to install or implement engineering and work practice controls
- Operations for which engineering and work practice controls are not sufficient to reduce employee exposures to or below the PEL
- Periods when an employee requests a respirator

Respirator selection, use, maintenance, and training will be performed in accordance with the KYTC Respiratory Protection Program ([SHA 407-1](#)).

**PROTECTIVE
WORK CLOTHING
& EQUIPMENT**

If an employee is exposed to lead above the PEL (without regard to the use of respirators) or where the possibility of skin or eye irritation exists, KYTC shall provide at no cost to the employee and assure that the employee uses appropriate protective work clothing and equipment.

Protective work clothing and equipment includes, but is not limited to, coveralls or similar full-body work clothing, gloves, hats, disposable shoe coverlets (where feasible), and safety glasses or other appropriate protective equipment which complies with 29 CFR 1910.133 and 29 CFR 1926 Subpart E.

Employees refusing to wear required protective clothing or equipment will be subject to disciplinary action up to and including dismissal from the Cabinet.

In accordance with 29 CFR 1910.1025(g), if an employee is exposed to lead above the PEL, without regard to the use of respirators or where the possibility of skin or eye irritation exists, KYTC shall provide at no cost to the employee and assure that the employee uses appropriate protective work clothing and equipment such as, but not limited to:

- Coveralls or similar full-body work clothing
- Gloves, hats, and shoes or disposable shoe coverlets
- Face shields, vented goggles, or other appropriate protective equipment which complies with 29 CFR 1910.133

KYTC shall:

- Provide the protective clothing required in 29 CFR 1910.1025(g)(1) in a clean and dry condition at least weekly, and daily to employees whose exposure levels without regard to a respirator are over 200ug/m³ of lead as an 8-hour TWA.
- Provide for the cleaning, laundering, or disposal of protective clothing and equipment.
- Repair or replace required protective clothing and equipment as needed to maintain their effectiveness.
- Assure that all protective clothing is removed at the completion of a work shift only in change rooms provided for that purpose.

**PROTECTIVE
WORK CLOTHING
& EQUIPMENT (CONT.)**

- Assure that contaminated protective clothing which is to be cleaned, laundered, or disposed of, is placed in a closed container in the change-room which prevents dispersion of lead outside the container and shall not be worn off site under any circumstance.
- Inform in writing any person who cleans or launders protective clothing or equipment of the potentially harmful effects of exposure to lead.
- Ensure that labels of bags or containers of contaminated protective clothing and equipment include the following information:

DANGER: CLOTHING AND EQUIPMENT CONTAMINATION WITH LEAD. MAY DAMAGE FERTILITY OR THE UNBORN CHILD. CAUSES DAMAGE TO THE CENTRAL NERVOUS SYSTEM. DO NOT EAT, DRINK, OR SMOKE WHEN HANDLING. DO NOT REMOVE DUST BY BLOWING OR SHAKING. DISPOSE OF LEAD CONTAMINATED WASH WATER IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, OR FEDERAL REGULATIONS.
- Prohibit the removal of lead from protective clothing or equipment by blowing, shaking, or any other means which disperses lead into the air

**HYGIENE FACILITIES
& PRACTICES**

Food, beverages, tobacco products, and cosmetics shall not be present or used in areas where employees are exposed to lead above the PEL (without regard to the use of respirators), except in the following locations:

- *Change Rooms.* KYTC employees shall be permitted to use clean change rooms provided by the contractors for their employees on the jobsite. Change rooms shall be equipped with separate storage facilities for protective work clothing and equipment and for street clothing to prevent cross contamination. When working in areas where they are exposed to lead above the PEL, employees shall remove all contaminated protective work clothing at the end of the work shift and change to street clothing prior to leaving the jobsite. All contaminated protective work clothing shall be placed in the specified closed container in the change room to prevent dispersion of lead outside the container. This container shall be labeled as follows:

CAUTION: CLOTHING CONTAMINATED WITH LEAD. DO NOT REMOVE DUST BY BLOWING OR SHAKING. DISPOSE OF LEAD CONTAMINATED WASH WATER IN ACCORDANCE WITH LOCAL, STATE, OR FEDERAL REGULATIONS.

**HYGIENE FACILITIES
& PRACTICES (CONT.)**

Contaminated work clothing shall be contained, laundered, and/or disposed of with other abatement waste in accordance with the provisions of 29 CFR 1910.1025(g).

- *Showers.* KYTC employees shall be permitted the use of the showers provided by the contractors for their employees on the jobsite. When working in areas where they are exposed to lead above the PEL, KYTC employees should shower at the end of the work shift prior to leaving the jobsite. These employees should not leave the jobsite wearing any clothing or equipment worn during the work shift.
- *Lavatories (Hand Wash Stations).* KYTC employees shall be permitted the use of the hand wash stations provided by the contractors for their employees on the jobsite. When exiting a lead-exposed work area, employees should wash their face and hands prior to eating, drinking, using tobacco products, or applying cosmetics.
- *Lunchrooms.* KYTC employees shall be permitted the use of lunchroom areas provided by the contractors for their employees on the jobsite. When exiting a lead-exposed work area, employees should wash their face and hands prior to eating, drinking, using tobacco products, or applying cosmetics. Employees should not enter the lunchroom facilities with protective work clothing or equipment unless surface lead dust has been removed by vacuuming or other appropriate cleaning method.

**MEDICAL SURVEILLANCE
& BIOLOGICAL
MONITORING**

KYTC shall institute a medical surveillance and biological monitoring program for all employees who are or may be exposed to lead above the action level for more than 30 days per year.

All medical examinations and procedures shall be performed by or under the supervision of a licensed physician. KYTC will provide the required medical surveillance (including multiple physician review) without cost to employees and at a reasonable time and place.

The ES&H Branch shall coordinate the scheduling of physicals, fit-tests, and blood leads when notified by the Division of Construction of employees needing this service.

**MEDICAL SURVEILLANCE
& BIOLOGICAL
MONITORING
(CONT.)**

All medical surveillance and biological monitoring shall be performed under the current contract and meet all applicable OSHA requirements. In addition, the ES&H Branch shall maintain all medical surveillance, biological monitoring, and air monitoring records for employees of the Division of Construction covered by this program.

**MEDICAL REMOVAL
PROTECTION**

KYTC shall remove an employee from work having an exposure to lead at or above the action level on each occasion as follows:

- Periodic and follow-up blood sampling tests indicate the employee's blood lead level is at or above 50 µg/ 100 g of whole blood.
- Final medical determination results in a medical finding, determination, or opinion that the employee has a detected medical condition placing him or her at increased risk of health impairment from lead exposure.

**RETURN FROM
MEDICAL REMOVAL
PROTECTION**

KYTC shall return an employee removed due to a blood lead level at or above 50 µg/ 100 g to former job status when two consecutive blood sampling tests indicate that the employee's blood lead level is at or below 40 µg/ 100 g of whole blood.

KYTC shall return an employee removed due to a final medical determination to former job status when a subsequent final medical determination results in a medical finding, determination, or opinion that the employee no longer has a detected medical condition which places the employee at increased risk of health impairment from lead exposure.

KYTC may return the employee to former job status, end any special protective measures provided to the employee, and remove any limitations placed upon the employee consistent with the medical findings, determinations, or recommendations of any of the physicians who have reviewed the employee's health status with the following two exceptions:

- Initial removal, special protection, or limitation of the employee resulted from a final medical determination which differed from the findings, determinations, or recommendations of the initial physician

**RETURN FROM
MEDICAL REMOVAL
PROTECTION (CONT.)**

- Employee has been on removal status for the preceding 18 months due to an elevated blood lead level

If either of these two exceptions applies, then KYTC shall await a final medical determination to identify the appropriate course of action.

**EMPLOYEE
INFORMATION
& TRAINING**

KYTC shall:

- Provide medical removal protection benefits as defined in 29 CFR 1910.1025
- Inform all employees who could be exposed to airborne lead at any level of the content of Appendices A and B of 29 CFR 1910.1025
- Institute a training program for and assure the participation of all employees who are subject to exposure to lead at or above the action level or for whom the possibility of skin or eye irritation exists
- Provide initial training prior to the time of initial job assignment and repeat the training at least annually thereafter for each employee covered by this standard

The training program shall include at least the following information:

- Content of 29 CFR 1910.1025, including appendices
- Specific nature of the operations which could result in exposure to lead above the action level
- Purpose, proper selection, fitting, use, and limitations of respirators
- Purpose and a description of the medical surveillance program and the medical removal program, including information concerning the adverse health effects associated with excessive exposure to lead (with particular attention to the adverse reproductive effects on both males and females)
- Engineering controls and work practices associated with the employee's job assignment
- Contents of any compliance plan in effect
- Instructions to employees that chelating agents should not routinely be used to remove lead from their bodies and should not be used at all except under the direction of a licensed physician

SIGNS

KYTC shall make a good faith effort to ensure that the painting contractor posts the following warning signs as required by 29 CFR 1910.1025(m)(2)(i) in each work area where the PEL is exceeded:

DANGER


LEAD MAY DAMAGE FERTILITY OR THE UNBORN CHILD. CAUSES DAMAGE TO THE CENTRAL NERVOUS SYSTEM. DO NOT EAT, DRINK, OR SMOKE IN THIS AREA.

These signs shall be illuminated and cleaned as necessary so that the legend is readily visible. The employer may use additional signage as required by other statutes, regulations, or ordinances.

RECORDKEEPING

The ES&H Branch shall maintain exposure monitoring, medical surveillance, and medical removal records for all employees covered by this standard for at least 40 years or for the duration of employment plus 20 years, whichever is longer [29 CFR 1910.1025(n)].



 <p>ADMINISTRATION GUIDE</p>	<p><i>Section</i></p> <p>JOB ENVIRONMENT</p>
	<p><i>Subject</i></p> <p>Confined Spaces</p>

REFERENCES [29 CFR 1910.146](#); [29 CFR 1926 Subpart AA](#); [803 KAR 2:200](#); [KRS 338.015](#)

**PURPOSE &
SCOPE**

This policy provides procedures for the safe entry and work practices in confined spaces. The policy applies to all employees who enter confined spaces.

Confined spaces are dangerous work environments and should always be treated with extreme caution. This policy attempts to provide safe procedures for entry and work in confined spaces; however, there are some confined spaces that are more dangerous and may not be appropriate for any entry. The Employee Safety and Health (ES&H) Branch Manager shall be notified before any confined space is accessed.

**HAZARDS OF
CONFINED SPACES**

According to OSHA 29 CFR 1910.146(b), confined spaces can be hazardous for several reasons:

- Hazardous atmospheres - The nature of many confined spaces can cause them to have poor atmospheres such as a lack of oxygen, flammable gases, toxic gases, etc.
- Engulfment or entrapment - Confined spaces oftentimes have the potential for employees to be trapped or buried.
- Restricted entry – Confined spaces are not made for continuous occupancy by humans and may have limited entry and exit.
- Occupational hazards - Occupational hazards are amplified in confined spaces. For example, noises are louder because they cannot escape into the atmosphere. Heat builds up quickly, as well, and can lead to heat exhaustion.

CONFINED SPACE**DEFINITION**

According to OSHA 29 CFR 1910.146(b), a confined space is defined as follows:

- Large enough and so configured that an employee can enter and perform assigned work
- Has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits)
- Not designed for continuous employee occupancy

TYPES OF**CONFINED SPACE**

There are two types of confined spaces:

- Non Permit-Required Confined Space - Meets the definition of a confined space but does not contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm
- Permit-Required Confined Space - Meets the definition of a confined space but has one or more of the following characteristics:
 - ◆ Contains or has the potential to contain a hazardous atmosphere
 - ◆ Contains a material that has the potential for engulfing an entrant
 - ◆ Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section
 - ◆ Contains any other recognized serious safety or health hazard

EXAMPLES OF**CONFINED SPACES**

The following areas and or tasks may require a confined spaces permit prior to entry:

Note: This list is not comprehensive and employees may discover additional confined spaces. It should also be noted that non permit-required spaces may become permit-required spaces according to the type of work being performed. For example, welding in a non permit-required confined space can create a hazardous atmosphere, thus making it a permit-required confined space.

- Drainage culvert /manhole inspections
- Bridge inspections with enclosed cable ways and access compartments
- Lift pump station inspections
- Ferry boat/vessel compartment maintenance and inspections

**EXAMPLES OF
CONFINED SPACES
(CONT.)**

- Ventilation system maintenance and inspections
- Tank or storage bin maintenance with limited means for entry and exit

Note: Any bids for contracts must specify that the bidder will furnish a copy of their Confined Space Program and documentation that the individuals working in the area have received the proper training. A copy of this information should be forwarded to the ES&H Branch for record retention.

ENTRY DEFINITION

"Entry" means the action by which a person passes through an opening into a permit-required confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space.

**PRIOR TO ENTERING
A CONFINED SPACE**

All employees who may enter, attend, or supervise employees entering confined spaces must have attended a confined space training program or refresher course within the past year, and hold current First Aid and CPR certification [OSHA 29 CFR Part 1910.146(G) and 29 CFR 1910(K)(2)(iii)]. New employees that will participate in confined space entry shall be trained prior to entering a confined space. Rescue and recovery training shall be completed annually.

The (ES&H) Branch Manager shall be notified at 502-564-6963 before entry. Questions or concerns regarding the confined space, assigned employees, or the project shall be brought to the branch manager's attention at this time, as well.

Any employee who feels unsafe or uncomfortable entering a confined space cannot be forced to enter the space and perform the work. Some employees are claustrophobic and have a fear of confined spaces, or the employee may fear the spaces for other reasons.

**NON PERMIT-REQUIRED
CONFINED SPACES**

Unless the confined space is clearly marked as a non permit-required confined space, it shall be treated as a permit-required confined space until designated otherwise by a competent person.

Employees must receive approval from their designated safety coordinator prior to entering a non permit-required confined space unless it is clearly marked.

**PERMIT-REQUIRED
CONFINED SPACES**

"Entry permit" or "permit" is defined as the written or printed document provided by the employer to control entry into a confined space and that contains the information specified in paragraph 1910.146(f) of the OSHA Regulation Standard.

Prior to entering a confined space, TC 25-161 form, *Confined Space Entry Permit* ([Exhibit 9015](#)), shall be completed that includes checks for the following:

- Equipment operating in the confined space should be shut down and locked out/tagged out according to the KYTC lockout/tagout program ([SHA-407-7](#) and [SHA-408-7](#)).
- Any standing water or liquid shall be removed to a depth of less than 2 feet. Preferred removal should be accomplished by an intrinsically safe method.
- Air will be tested using a calibrated direct reading gas monitor to ensure that the atmosphere is within OSHA limits for human occupancy. Test results will be logged on a TC 25-167 form, *Air Sampling Report* ([Exhibit 9014](#)). Personnel conducting atmospheric testing shall be certified or have demonstrated knowledge and proficiency in the type of meter being used. Further review of the procedures shall be conducted by a certified industrial hygienist or registered safety engineer based on the evaluation of the hazard.
- To be considered safe for entry, the following samples must be taken in the following order and reveal results within acceptable ranges:
 1. Oxygen - Level must be between 19.5% through 23.5%. "Oxygen deficient atmosphere" means an atmosphere containing less than 19.5% oxygen by volume. "Oxygen enriched atmosphere" means an atmosphere containing more than 23.5% oxygen by volume.
 2. Lower Flammable Level - Flammable gases, vapors, or mists must be below 10% of the lower flammable limit (LFL).
 3. Toxic Gases - No presence of toxic gases is allowed. If any of these conditions exist, **do not** enter the confined space. Mechanical ventilation may be used to correct most hazardous atmospheres. <10 PPM Hydrogen Sulfide based on an 8 hour time weighted average must be achieved, as well as < 25 PPM Carbon Monoxide.

**PERMIT-REQUIRED
CONFINED SPACES
(CONT.)**

- Entrapment/Engulfment - If an entrapment or engulfment hazard exists, proper blocking procedures must be used to isolate the hazard.
- Rescue equipment shall be staged on site and ready to be employed if needed. A non-entry rescue by means of a mechanical tri-pod, winch, or cable and harness is preferred.
- An Escape Self-Contained Breathing (ESCB) apparatus with at least a 10-minute air supply, or other NIOSH-approved self-rescuer device, shall be available.
- Emergency communication equipment shall be available at the site and shall be no less than a two-way radio.
- First aid and bloodborne pathogen kits shall be easily accessible.
- A trained attendant shall be:
 - ◆ Proximal to the confined work space and ready to assist entrants as needed
 - ◆ Able to see and communicate with the employees the entire time they are in the confined space
 - ◆ Authorized to order the employees out of the space if he or she loses sight of them, loses communication, or has reason to believe the employees are in danger
 - ◆ Included by name on the entry permit
- All entrants must be trained in the work to be completed. Entrants' names must be included on the entry permit.
- Supervisor must review, sign, and approve of the entry to the permit-required confined space prior to employee entry.
- The completed and signed confined space permit must be posted at the entrance of the confined space.
- Employees who enter the confined space have a right to review and observe all checks on the confined space prior to entering the space.

**ENTERING THE
CONFINED SPACE**

Once the confined space permit is fully executed, the authorized entrants may enter the confined space.

The attendant should retest the air periodically while the employees are in the confined space to ensure that atmospheric conditions are acceptable. If air tests are not acceptable, the attendant is authorized to order entrants to exit the confined space.

The authorized entrants must stay in touch with the attendant by communication throughout the duration of the work. If any condition inhibits this communication, the attendant is authorized to order the entrants to exit the confined space.

Entrants shall be trained in the use of and be equipped with atmospheric monitoring equipment which sounds an audible alarm in addition to its visual readout.

**EXITING THE
CONFINED SPACE**


Whenever employees exit the space, including for breaks or lunch, the permit shall be canceled and a new permit completed for re-entry. The air will be tested each time before re-entry and the permit completed.

**FOLLOWING WORK
COMPLETION**

After work in the confined space is completed, the supervisor shall:

- Ensure that all workers and all equipment are out of the confined space
- Remove any ventilation devices
- Close the access cover to the confined space
- Remove locks and tags from devices locked out
- Reenergize equipment
- Return all canceled permits to the corresponding district safety personnel and forward a copy to the ES&H Branch



 <p>ADMINISTRATION GUIDE</p>	<p><i>Section</i></p> <p>JOB ENVIRONMENT</p>
	<p><i>Subject</i></p> <p>Excavation & Trenching</p>

REFERENCES [29 CFR 1926](#) Support P; [29 CFR 1910.120\(b\)\(1\)\(iii\)](#); [KAR Title 803](#); OSHA 2226 Publication Revised

POLICY STATEMENT In our continuing pursuit of a safe and healthy workplace, the Cabinet has instituted an excavation and trenching program to be followed by all employees exposed to excavation and trenching operations.

PURPOSE The purpose of the excavation and trenching program is to establish minimum guidelines to protect all employees engaged in outdoor or indoor work activities that expose them to potential hazards from excavation and trenching operations.

DEFINITIONS An *excavation* is any man-made cut, cavity, trench, or depression in an earth surface formed by earth removal.

A *trench* (trench excavation) means a narrow (in relation to its length) excavation made below the surface of the ground. In general, the depth of a trench is greater than the width, but the width of a trench as measured at the bottom is not greater than 15 feet (4.6 meters).

A *competent person* is an individual who is capable of identifying existing and predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

Additional information on competent persons may be found online at:

<https://www.osha.gov/SLTC/competentperson/>

ADMINISTRATION The Employee Safety and Health (ES&H) Branch is responsible for the administration of this program. The day-to-day aspects of policy implementation shall be the responsibility of district operations, the competent person, supervisors, and employees engaged in this type of work. Personnel in the program shall contact the ES&H Branch or their designated safety coordinator if further information is needed.

TRENCH &**EXCAVATION SAFETY**

Any excavation greater than 4 feet deep shall be:

- Provided with an adequate exit every 25 feet if employees are expected to enter the excavated area
- Tested for hazardous gases or oxygen deficiency if such conditions are likely to exist
- Inspected prior to and during the work shift by a competent person

Note: If a trench is less than 5 feet deep, a competent person may determine that a protective system is not required.

Any excavation greater than 5 feet deep shall:

- Meet the conditions for an excavation greater than 4 feet deep (see above)
- Have an adequate means of protection
- Be inspected prior to and during the work shift by a competent person
- Require a protective system unless the excavation is made entirely in stable rock

Trenches 20 feet (6.1 meters) deep or greater require a protective system that is either of the following:

- Designed by a registered professional engineer
- Based on tabulated data prepared or approved by a registered professional engineer [29 CFR 1926.652(b) and (c)]

Additional information on required protective systems may be located online at:

[https://www.osha.gov/pls/oshaweb/owadisp.show_document?
p_table=STANDARDS&p_id=10776](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10776)

Only someone receiving special training, having experience in the field with the ability to recognize potential hazards, and having the authority to correct hazards or abate operations shall be qualified as a competent person.

**TRENCH &
EXCAVATION****HAZARDS**

OSHA requires that workers in trenches and excavations be protected, and that safety and health programs address the variety of hazards they face.

The following hazards cause the most trenching and excavation injuries:

- No protective system
- Failure to inspect trench and protective systems
- Unsafe spoil-pile placement
- Unsafe access or egress

All excavations are hazardous because they are inherently unstable. If the excavation is also a restricted space, it carries the additional risks of oxygen depletion, toxic fumes, and water accumulation. If protective systems or equipment are not being used in trenches or excavations, employees are in danger of suffocating, inhaling toxic materials, fire, drowning, or being crushed by a cave-in.

Pre-job planning is vital to accident-free trenching and excavation; safety cannot be improvised as work progresses. The competent person shall:

- Evaluate soil conditions and select appropriate protective systems (29 CFR 1926 Subpart P Appendix A and 29 CFR 1926 Subpart P Appendix F)
- Construct protective systems in accordance with the standard requirements (29 CFR 1926.652)
- Contact utility companies, as well as “Call 811,” to locate underground gas, electric, or water lines
- Plan for traffic control, if necessary
- Determine proximity to structures that could affect the choice of protective system
- Test for low oxygen, hazardous fumes, and toxic gases (especially when gasoline engine-driven equipment is running or the dirt has been contaminated by leaking lines or storage tanks)
- Ensure adequate ventilation or respiratory protection, if necessary
- Provide safe access into and out of the excavation
- Provide appropriate protections if water accumulation is a problem
- Inspect the site at the start of each shift, following a rainstorm, or after any other hazard-increasing event
- Keep excavations open the minimum amount of time needed to complete operations

TRENCH & EXCAVATION**INSPECTIONS**

If trenches and excavations are not inspected daily for evidence of possible cave-ins, hazardous atmospheres, failure of protective systems, or other unsafe conditions, employees will be in danger.

Therefore, trenches and excavations shall be inspected by a competent person using TC 25-158, *Excavation & Trench Inspection* (**Exhibit 9016**), at the following times as required by 29 CFR 1926.652:

- Before construction begins
- Daily before each shift
- As needed throughout the shift
- Following rainstorms or other hazard-increasing events (such as a vehicle or other equipment approaching the edge of an excavation)

Per 29 CFR 1926.650, inspections shall be conducted by a competent person who is capable of identifying existing and predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

SPOIL-PILE**PLACEMENT**

Excavated material (spoils) can be hazardous if set too close to the edge of a trench or excavation. The weight of the spoils can cause a cave-in, or spoils and equipment can fall back on top of workers, causing serious injury or death.

Set spoils and equipment at least 2 feet back from the edge of the trench or excavation. Where the site does not permit a 2-foot set back, spoils may need to be temporarily hauled to another location. Use retaining devices, such as a trench box that extends above the top of the trench, to prevent equipment and spoils from falling backwards.

ACCESS & EGRESS

To avoid fall injuries during normal entry and exit of a trench or excavation, ladders, stairways, or ramps are required.

For any trench 4 feet deep or more a safe means of egress shall be provided and maintained within 25 lateral feet of any worker.

When two or more components form a ramp or runway, they must be connected to prevent displacement and be of uniform thickness. Cleats or other means of connecting runway components must be attached in a way that would not cause tripping.

ACCESS & EGRESS**(CONT.)**

Structural ramps used in place of steps must have a non-slip surface. Structural ramps used for access or egress of equipment must be designed by a competent person qualified in structural design [29 CFR 1926.651(c)(1)(i)].

Earthen ramps may be used as a means of egress only if a worker can walk them in an upright position, and only if they have been evaluated by a competent person.

**PROTECTIVE SYSTEMS
OR EQUIPMENT**

Protective systems or equipment that may be used include the following:

- Monitoring water removal equipment and operations [29 CFR 1926.651(h)(2)]
- Inspecting excavations subject to runoff from heavy rains to determine need for diversion ditches, dikes, or other suitable protection [29 CFR 1926.651(h)(3)]
- Determining cave-in potential to assess need for shoring or other protective system [29 CFR 1926.652(a)(1)]
- Examining damaged material or equipment used for protective systems to determine its suitability for continued use [29 CFR 1926.652(d)(3)]
- Classifying soil and rock deposits, by both visual analysis and by testing, to determine appropriate protection and re-classifying, if necessary, based on changing conditions [29 CFR 1926 Subpart P Appendix A]
- Determining the appropriate slope of an excavation to prevent collapse due to surcharge loads from stored material or equipment, operating equipment, adjacent structures, or traffic, and assuring that such slope is achieved (29 CFR 1926 Subpart P Appendix B)

There are different types of protective systems:

- *Benching* is a method of protecting workers from cave-ins by excavating the sides of an excavation to form one or a series of horizontal levels or steps, usually with vertical or near vertical surfaces between levels.

Note: Benching cannot be done in Type C soil. Most soils in Kentucky are classified as "C".

**PROTECTIVE SYSTEMS
OR EQUIPMENT
(CONT.)**


- *Sloping* involves cutting back the trench wall at an angle inclined away from the excavation. Sloping shall be implemented as follows:
 - ◆ Type A soil, ¾ to 1 (53-degree angle)
 - ◆ Type B soil, 1 to 1 (45-degree angle)
 - ◆ Type C soil, 1½ to 1 (34-degree angle)

- *Shoring* requires installing aluminum, hydraulic, or other types of supports to prevent soil movement and cave-ins.

- *Shielding* protects workers by using trench boxes or other types of supports to prevent soil cave-ins.

Protective systems must be designed in light of the following: soil classification, depth of cut, water content of soil, changes caused by weather or climate, surcharge loads (such as spoil or other materials to be used in the trench), and other operations in the vicinity.



 <p>ADMINISTRATION GUIDE</p>	<p><i>Section</i></p> <p>JOB ENVIRONMENT</p>
	<p><i>Subject</i></p> <p>Lockout/Tagout Procedures for Stored or Residual Energy</p>

REFERENCE [29 CFR 1910.147](#) and [29 CFR 1926.417](#)

PURPOSE This procedure establishes the minimum requirements for the lock out of energy-isolating devices whenever maintenance or servicing is done on machines or equipment. It shall be used to ensure that the machine or equipment is stopped, isolated from all potentially hazardous energy sources, and locked out before employees perform any servicing or maintenance where the unexpected energization or start-up of the machine or equipment or the release of stored energy could cause injury. [SHA-408-7](#) provides additional information.

COMPLIANCE All employees are required to comply with the restrictions and limitations imposed upon them during the use of lock out. The authorized employees are required to perform the lock out in accordance with this procedure. All employees, upon observing a machine or piece of equipment that is locked out to perform servicing or maintenance, shall not attempt to start, energize, or use that machine or equipment.

Disciplinary action, in accordance with personnel rules and regulations, will be taken against any employee found to be in violation of this program.

SEQUENCE OF LOCKOUT The following sequence of steps shall be followed when locking out energized devices:

1. The supervisor shall notify all affected employees that servicing or maintenance is required on a machine or equipment and that the machine or equipment must be shut down and locked out to perform the servicing or maintenance.
2. The authorized employee shall:
 - a. Refer to the company procedure to identify the type and magnitude of the energy that the machine or equipment utilizes
 - b. Understand the hazards of the energy
 - c. Know the methods to control the energy

**SEQUENCE OF
LOCKOUT (CONT.)**

3. If the machine or equipment is operating, shut it down by the normal stopping procedure (depress stop button, open switch, close valve, etc.).
4. De-activate the energy-isolating devices so that the machine or equipment is isolated from the energy sources. Locate all energy sources that power the piece of equipment to be maintained. Always look for hidden energy sources. Some machines may have more than one source of power.
5. Lock out the energy-isolating devices with assigned individual locks. Make absolutely sure the power cannot be supplied without the authorized employee knowing about it. If several people are needed to work on a piece of equipment, each one must apply his or her own lock. This prevents any accidental start-ups while another employee may still be working on the machinery. In this case, a multiple lockout device shall be used that can accommodate several locks at once.

Employees shall not use another employee's lock or lend their own lock to someone else.

6. Stored or residual energy (such as that in capacitors, springs, elevated machine members, rotating flywheels, hydraulic systems, and air, gas, steam, or water pressure, etc.) must be dissipated or restrained by methods such as grounding, repositioning, blocking, bleeding down, etc. Equipment must be at "zero energy state" before servicing or maintenance work can begin.

Employees shall ensure that equipment is disconnected from the energy sources by verifying that personnel are not exposed, and that equipment is isolated and will not operate.

Caution: Return operating controls to neutral or "off" position after verifying the isolation of the equipment.

7. The machine or equipment is now locked out.

**RESTORING
EQUIPMENT
TO SERVICE**

When the servicing or maintenance has been completed, and the machine or equipment is ready to return to normal operating condition, the following steps shall be taken:

**RESTORING
EQUIPMENT
TO SERVICE (CONT.)**


- Check the machine or equipment, as well as the immediate area around the machine or equipment, to ensure that nonessential items have been removed and that the machine or equipment components (including machine guards) are operationally intact.
- Check the work area to ensure that all employees have been safely positioned or removed from the area.
- Verify that the controls are in neutral.
- Remove the lockout devices and reenergize the machine or equipment.

Note: The removal of some forms of blocking may require re-energization of the machine before safe removal.

Notify affected employees that the servicing or maintenance is completed and the machine or equipment is ready for use.

EXAMPLE OF A LOCKOUT TAG



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Section</i></p> <p>ELECTRICAL SAFETY</p>
	<p><i>Subject</i></p> <p>Overview</p>

REFERENCES [29 CFR 1910\(S\), Electrical](#); [29 CFR 1926\(K\), Electrical](#); [803 KAR 2:318](#); [NFPA 70: National Electrical Code](#); [NFPA 70E: Standard for Electrical Safety in the Workplace – 2018](#); [NFPA Article 130, Work Involving Electrical Hazards](#); [NFPA Table 130.7\(C\)\(14\), Standards on Protective Equipment](#)

PURPOSE Electrocutions are the fourth leading cause of traumatic occupational fatalities in the workplace. The following practices and procedures are intended to address and enhance the electrical safety requirements that are necessary for the practical safeguarding of KYTC employees in their workplaces.

Electrical safety in the workplace is a priority to persons exposed to electrical hazards and it is their responsibility to comply with all applicable safety standards including KOSHA, NFPA, OSHA, and other appropriate governmental and industry-accepted guidelines, codes, and standards. These practices cover the installation and maintenance of electrical systems, premise wiring, traffic signals, and street lighting. Electrical safety is ultimately the responsibility of the electrical employee.

DEFINITIONS A *qualified person* is an employee who has demonstrated skills and knowledge related to the construction and operation of electrical equipment and installations and has received safety training to identify the hazards and reduce the associated risk. This person is referred to as a qualified electrical worker (QEW).

An *unqualified person* is a person who is not a qualified person as defined above.

QUALIFIED PERSON A qualified person is responsible for:

- Keeping unqualified persons away from areas where electrical work is being performed

**QUALIFIED PERSON
(CONT.)**

- Following the applicable TC 25-156 form, *Job Safety Analysis & PPE Certification of Hazard Assessment*, and safety rules ([Exhibit 9001](#))
- Knowing the appropriate personal protection equipment (PPE) and tools for each assigned task and how to inspect them before beginning work
- Remaining knowledgeable and current on the applicable safety procedures and rules applying to their job

UNQUALIFIED PERSON

An unqualified person shall:

- Always be aware of possible electrical hazards, even when their tasks do not involve electrical work (such as, the operation of mobile equipment, use of ladders, or handling materials)
- Remain outside the limited approach boundary as defined by OSHA Standards unless escorted by a qualified person

Unqualified employees shall **not**:

- Conduct any electrical repairs
- Operate equipment in the presence of an electrical hazard
- Allow electrical equipment or components to contact water
- Use cords or plugs missing the “ground” prong
- Overload electrical receptacles

Even low-voltage electricity can be physically harmful. Employees shall report all electrical hazards to a supervisor.

**GENERAL EMPLOYEE
RESPONSIBILITIES**

Employees are responsible for the immediate reporting of electrical safety hazards, acquiring proper training and authorization prior to working on electrical equipment, and inspecting equipment prior to using it.

Before starting each job, the employee in charge shall complete TC 25-163 form, *Job Briefing*, and TC 25-156 form, *Job Safety Analysis & PPE Certification of Hazard Assessment* ([Exhibits 9002](#) and [9001](#)).

**GENERAL EMPLOYEE
RESPONSIBILITIES
(CONT.)**


Only qualified persons may work on energized electrical circuit parts or equipment. Such persons shall be capable of working safely on energized circuits and shall be familiar with the proper use of special precautionary techniques, personal protective equipment, insulating and shielding materials, and insulated tools.

**ELECTRICAL SAFETY
RULES**

The following electrical safety rules apply to both qualified and unqualified electrical workers:

- Report all electrical hazards to the supervisor before attempting any electrical repairs.
- Do not operate equipment if an electrical hazard is or may be present.
- Do not allow electrical equipment or components to contact water.
- Remember that even low-voltage electricity can be physically harmful.
- Do not use cords or plugs that are missing the ground prong.
- Do not overload electrical receptacles.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Section</i></p> <p>ELECTRICAL SAFETY</p>
	<p><i>Subject</i></p> <p>Risk Controls for Electrical Hazards</p>

OVERVIEW Employees shall identify electrical hazards specific to the task being performed. Risks associated with the hazards shall be assessed and risk control methods shall be adopted in accordance with those listed below. Human factors shall be considered.

ENGINEERING CONTROLS The following engineering risk control methods, in conjunction with the National Electric Code, shall be used to prevent occurrence of electricity-related incidents:

- All electrical distribution panels, breakers, disconnects, switches, and junction boxes shall be completely enclosed.
- Water-tight enclosures shall be used if electrical components could possibly be exposed to moisture.
- Structural barriers shall be used to prevent accidental damage to electrical components.
- Conduits shall be supported for their entire length; non-electrical attachments to conduits are prohibited.
- Non-rigid electrical cords shall have strain relief wherever necessary.

ADMINISTRATIVE CONTROLS The following administrative risk control methods shall be used to prevent occurrence of electricity-related incidents:

- Only trained and authorized quality electrical workers (QEWs) may repair or service electrical equipment.
- Contractors shall be licensed to perform electrical work.

**ADMINISTRATIVE
CONTROLS (CONT.)**

- Physical barriers shall be used to prevent unauthorized persons from entering areas where electrical work or operations (such as, new installation or repair of electrical components or equipment) are being performed.
- Only trained and authorized QEWs may enter electrical distribution rooms.
- All electrical control devices shall be labeled properly.
- Senior facility management shall pre-authorize work on energized electrical circuits through an energized electrical work permit ([Exhibit 9017](#)) or safe operating procedure.

**WORK PRACTICE
CONTROLS**

The following work practice risk control methods shall be used to prevent occurrence of electricity-related incidents:

- Employees covered under this policy shall wear electrically-rated safety shoes.
- Only tools that are properly insulated shall be used.
- Non-conductive gloves shall be made available for use during work on electrical equipment.
- Electrically-rated matting shall be placed in front of all electricity distribution panels.

**HIGH VOLTAGE
WORK CONTROLS**

The following high voltage work risk control methods shall be used to prevent occurrence of electricity-related incidents:


- For high voltage (above 600 volts) all electrical work and operations will be performed by a qualified high voltage electrical contractor.
- All employees shall maintain at least 10 feet from high voltage circuits and overheads up to 50kV. For voltages above 50kV, add 4 inches for every 10kV.

**HIGH VOLTAGE
WORK CONTROLS
(CONT.)**

- The electric utility shall be contacted if workers have not confirmed the voltage of the overhead power line.

Any exception to this policy requires an energized electrical work permit ([Exhibit 9017](#)) approved by the location manager.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Section</i></p> <p>ELECTRICAL SAFETY</p>
	<p><i>Subject</i></p> <p>Electrical Traffic Control Device Inspections</p>

**PREVENTATIVE
MAINTENANCE**

Preventative maintenance should be performed by qualified electrical workers (QEWs) yearly and include the following:

- Clean the interior of the cabinet and replace the air filter.
- Seal the cabinet and conduits to prevent animals and insects from entering.
- Inspect the service and verify the installation of warning stickers.
- Replace the conflict monitor and verify the program.
- Visually inspect detection systems and verify the operation of pedestrian detection.
- Test the fan and thermostat.
- Visually inspect the support structures and span attachments.
- Visually inspect overhead equipment.
- Inspect the grounding and bonding.
- Verify that red-fail cable, if used, is properly installed.

**GENERAL
PRECAUTIONS**

Doors and hinged panels shall be secured to prevent them from swinging into an employee and causing that employee to contact exposed energized parts.

Metal measuring tapes or steel scales shall not be used near exposed energized parts.


GENERAL**PRECAUTIONS****(CONT.)**

Only qualified employees may perform testing work on electric circuits or equipment. Test instruments and equipment and all associated test leads, cables, power cords, probes, and connectors shall be visually inspected for external defects and damage before the equipment is used.

If there is a defect or evidence of damage that might expose an employee to injury, the defective or damaged item shall be removed from service and no employee shall use it until it has been repaired, tested, and found to be safe ([SHA-412](#)).

Test instruments, equipment, and their accessories shall be rated for the circuits and equipment to which they will be connected and shall be designed for the environment in which they will be used.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Section</i></p> <p>ELECTRICAL SAFETY</p>
	<p><i>Subject</i></p> <p>Personal Protective Equipment (PPE)</p>

PURPOSE & SCOPE Personal protective equipment (PPE) provides the last line of defense against inadvertent contact with energized parts or burns resulting from electrical arcs. The purpose of this section is to ensure personnel have an adequate understanding of potential electrical hazards and the knowledge to select and wear the proper PPE based on the hazards. KYTC shall provide PPE for use by employees working in areas where they could be exposed to electrical hazards.

**GENERAL PROCEDURES
FOR ELECTRICAL PPE**

PPE requirements apply to all persons exposed to potential electrical shock or arc flash hazards. Employees are required to observe the following procedures:

- Use only PPE designed for the work being performed.
- Inspect and test all PPE prior to use.
- Conductive articles of jewelry and clothing (such as watch bands, bracelets, rings, key chains, necklaces, metalized aprons, cloth with conductive thread, or metal headgear) shall not be worn near exposed energized parts unless they are rendered nonconductive by covering, wrapping, or other insulating means.
- Where energized work is being performed that has the potential to expose employees to an arc flash, employees shall wear arc-rated (AR), flame-resistant (FR) clothing and AR PPE based on the incident energy exposure associated with the specific task.
- At a minimum, all persons exposed to potential electrical shock or arc flash hazards shall wear an untreated, long sleeve, natural fiber shirt, long pants, hardhat, and safety glasses with side shields and electrical hazard (EH)-rated shoes.

**GENERAL PROCEDURES
FOR ELECTRICAL PPE
(CONT.)**

- Employees shall wear protective clothing buttoned in the front and at the sleeves with shirts tucked to avoid heat and flames from entering under the clothing. When work covered by [NFPA 70E](#) is performed, garments shall conform to the NFPA 70E requirements.
- For the purposes of labeling, it is preferred that an arc flash hazard assessment be completed using an engineering calculation method. However, the NFPA 70E task tables and related guidelines are acceptable.
- Use a protective outer cover if the work being performed might damage the PPE's insulation.
- Wear non-conductive headgear if there is a danger of electrical burns or shock from contact with exposed, energized equipment.
- Wear eye and face protection if there is a danger of flying objects, flashes, or electrical arcs produced by an electrical explosion.

In addition to the basic requirements for electrical personnel, PPE may include:

- Arc-rated face shields
- Rubber insulating gloves used with leather over-protectors
- Rated insulated tools to prevent inadvertent electrical contact and minimize the arc hazard risk if a tool is dropped
- Class E (20 kV) rated hard hats
- Safety glasses equipped with side shields and non-metallic frames
- Leather work shoes with EH-rated soles

Before starting work, PPE shall be carefully inspected to make sure it is in good working condition.

**GENERAL PROCEDURES
FOR ELECTRICAL PPE
(CONT.)**

Shock protection shall also include using:


- Insulated tools or equipment when working on exposed energized conductors or circuit parts
- Insulated fuse-handling equipment when removing or installing fuses as fuse terminals are energized
- Non-conductive ropes and hand lines when near exposed energized parts
- Protective shields, barriers, or insulating materials as protection from shock, burns, or other electrically-related injury while working near exposed energized parts

**MAINTENANCE
& STORAGE**

When not in use, protective equipment shall be maintained in a safe, reliable condition and shall be periodically inspected or tested.

- Electrical rubber gloves shall be:
 - ◆ Visually inspected and air tested prior to first use each day
 - ◆ Dielectrically tested at a test laboratory according to the appropriate ASTM guides every six months from first use
- Unopened electrical rubber gloves may be stored for a maximum of twelve months under climate controlled conditions.
- Other rubber electrically insulated products (such as mats and sleeves) shall be tested every twelve months and inspected before each use.
- Rated insulated tools (1000V AC) shall be visually inspected prior to each use. All portable electrical test meters (such as voltmeters, multi-meters, clamp-on ammeters) shall comply with UL-IEC 61010 Category III or IV classification.
- It is preferred that employees use dual-substrate insulating tools that indicate dielectric wear or damage.
- The soles of EH shoes shall be free of notable wear and debris.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Section</i></p> <p>ELECTRICAL SAFETY</p>
	<p><i>Subject</i></p> <p>Training</p>

OVERVIEW At a minimum, qualified electrical workers (QEWs) shall receive training in safe electrical work practices when hired and refresher training every 3 years, as required by [NFPA 70E](#). All other personnel shall receive electrical hazard awareness training when hired and refresher training every 3 years.

QEW TRAINING Training for QEWs shall include:

- NFPA 70E, Article 105, *Application of Safety-Related Work Practices*
- KOSH Standard 29 CFR 1910.331 to 1910.339
- Overview of construction and operation of equipment, including specific work methods
- Recognition and avoidance of electrical hazards inherent to such equipment and work methods

QEWs shall also be familiar with the proper use of special precautionary techniques and personal protective equipment (such as arc-flash, insulating and shielding materials, and insulated tools and test equipment). A person can be considered qualified with respect to certain equipment and methods, but still be unqualified for others.

Persons permitted to work within the limited approach boundary of exposed energized electrical conductors and circuit parts operating at 50 volts or more shall, at a minimum, be additionally trained in the following:

- Skills and techniques necessary to distinguish exposed energized electrical conductors and circuit parts from other parts of electrical equipment
- Skills and techniques necessary to determine the nominal voltage of exposed energized electrical conductors and circuit parts
- Approach distances and the corresponding voltages to which the qualified person will be exposed
- Necessary decision-making process used to determine the degree and extent of the hazard, as well as the PPE and job planning necessary to perform the task safely

**QEW TRAINING
(CONT.)**

Employees who are undergoing on-the-job training and who are under the direct supervision of a QEW, shall themselves be considered QEWs, if during the course of training they have demonstrated an ability to perform duties safely at their level of training.

QEWs who perform tasks less than once per year shall be required to have retraining before performing those tasks again.

QEWs shall:

- Be trained to select an appropriate voltage detector
- Demonstrate verification of the absence of voltage using a detector
- Interpret indications provided by the detector
- Express understanding of the limitations of the specific voltage detector used

**UNQUALIFIED ELECTRICAL
WORKER TRAINING**

At a minimum, unqualified electrical workers who are exposed to electrical hazards and are at risk of injury from electric shock or arc flash shall receive general electrical safety training when first hired and refresher training every 3 years.

Unqualified electrical workers who are required to do specific electrical tasks shall be trained according to the NFPA 70E requirements for that specific task and shall be certified as "Task Qualified."

Unqualified electrical workers who are unauthorized to perform work on electrical equipment and components will be trained in general electrical safety precautions and hazard awareness.

**ADDITIONAL EMPLOYEE
TRAINING &
RETRAINING**

Employees working on or near exposed energized electrical conductors or circuit parts shall be trained in methods of releasing victims from contact with exposed energized conductors or circuit parts.

An employee shall receive additional training (or retraining) under any of the following conditions:

- Supervision or annual inspections indicate the employee is not complying with safety-related work practices
- New technology, equipment, or changes in procedures necessitate the use of safety-related work practices different from those normally used

**ADDITIONAL EMPLOYEE
TRAINING &
RETRAINING (CONT.)**

- Assigned tasks have been performed less than once per year
- Safety-related work practices are not those normally used during regular job duties
- Job duties change

NFPA 70E

TRAINING


Training that is required by NFPA 70E, Article 110.2(A), shall be classroom, on-the-job, or a combination of the two. The type and extent of the training provided shall be determined by the risk to the employee.

TRAINING

DOCUMENTATION

Training documentation shall be maintained reflecting each employee's name and training dates, including when the employee demonstrated the work practice. Training documentation shall be maintained for the duration of the employee's tenure. Employment records indicating an employee has received the required training are acceptable means of meeting this requirement.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Section</i></p> <p>ELECTRICAL SAFETY</p>
	<p><i>Subject</i></p> <p>De-Energized Parts (Electrical Logout/Tagout)</p>

OVERVIEW

Live electrical parts shall be de-energized before the employee works on or near them unless the supervisor can demonstrate that de-energizing introduces additional or increased hazards or is unfeasible due to equipment design or operational limitations ([Exhibit 9017](#)).

It is not required that live parts operating at less than 50 volts to ground be de-energized if there will be no increased exposure to electrical burns or to explosion due to electrical arcs. When working below 50V, workers shall remain vigilant of possible contact with surrounding energized parts operating at > 50V. Examples of increased or additional hazards include interruption of life support equipment, deactivation of emergency alarm systems, shutdown of hazardous location ventilation equipment, or removal of illumination for an area.

Examples of work that may be performed on or near energized circuit parts because of unfeasibility due to equipment design or operational limitations include testing of electric circuits that can only be performed with the circuit energized and work on circuits that form an integral part of a continuous industrial process in a chemical plant that would otherwise need to be completely shut down in order to permit work on one circuit or piece of equipment.

See [SHA-407-7](#) for additional information regarding lockout/tagout procedures.

GENERAL PROCEDURES

The circuits and equipment to be worked on shall be disconnected from all electric energy sources according to the following sequence.

Note: Control circuit devices (such as push buttons, selector switches, and interlocks) may not be used as the sole means for de-energizing circuits or equipment.

**GENERAL
PROCEDURES (CONT.)**

1. Stored electric energy that might endanger personnel shall be released, capacitors shall be discharged, and high capacitance elements shall be short-circuited and grounded. If the capacitors or associated equipment are handled in meeting this requirement, they shall be treated as energized.
2. Stored non-electrical energy in devices that might re-energize electric circuit parts shall be blocked or relieved to the extent that the circuit parts cannot be accidentally energized by the device.
3. A lock and a tag shall be placed on each disconnecting means that is used to de-energize circuits and equipment. The lock is attached to prevent persons from easily operating the disconnecting means. Each tag shall contain a statement prohibiting unauthorized operation of the disconnecting means and removal of the tag.

Note: A tag may be used without a lock if a lock cannot be applied, or if the supervisor can demonstrate that tagging procedures will provide a level of safety equivalent to that obtained by the use of a lock.

4. A qualified person shall use test equipment to test the circuit elements and electrical parts of the equipment that employees will be exposed to and shall verify that the circuit elements and equipment parts are de-energized. The test shall also determine if any energized condition exists as a result of inadvertently induced voltage or unrelated voltage back-feed even though specific parts of the circuit have been de-energized and presumed to be safe.

Note: When test instruments are used to confirm the absence of voltage on conductors or circuit parts operating at 50 volts or more, the operation of the test instrument shall be verified before and after the absence-of-voltage test is performed.

**REENERGING
DEVICES**

Before re-energizing a device, a qualified person shall conduct tests and visual inspections necessary to verify that all tools, electrical jumpers, shorts, grounds, and other such devices have been removed and that the circuits and equipment can be safely re-energized. Employees exposed to hazards associated with re-energizing the circuit or equipment shall be warned to stay clear of the circuits and equipment.

**REENERGIZING
DEVICES (CONT.)**

Each lock and tag shall be removed by the employee who applied it or under his or her direct supervision. If the employee is absent from the workplace, the lock or tag may be removed by a qualified person who has been designated to perform this task.

The following conditions must be met before the lock or tag may be removed by the designated qualified person:


- The supervisor has confirmed that the employee who applied the lock or tag is not available in the workplace at the time of removal
- The supervisor has ensured that the employee who applied the lock or tag has been advised of the lock or tag removal before he or she resumes work
- A visual determination has been made that all employees are clear of the circuits and equipment

**WORKING ON
LIVE PARTS**

Qualified employees shall take the following control measures when working on live parts:

- Ensure that all precautions as outlined above have been followed
- Carefully complete work in a slow, considered manner
- Follow all safe working procedures
- Assume that all exposed conductors or equipment are live
- Use work practices suitable for the condition under which the work is to be performed and the voltage level of the live parts or equipment
- Keep a safe working distance



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Section</i></p> <p>ELECTRICAL SAFETY</p>
	<p><i>Subject</i></p> <p>Specific Work Practices</p>

**ALERTING
TECHNIQUES**

When working in open areas where energized equipment must be exposed, appropriate alerting techniques shall be established. Signs, barricades, symbols, or accident prevention tags shall be used as a warning of electrical hazards. Such alerting techniques shall be placed at the greater of either the limited approach boundary or arc flash protection boundary.

Barricades shall be used in conjunction with safety signs where necessary to prevent or limit access to work areas exposing people to uninsulated energized conductors or circuit parts. Conductive barricades may not be used where they might cause an electrical contact hazard.

If signs and barricades do not provide sufficient warning of electrical hazards, an attendant shall be stationed to warn and protect persons from the potential hazard.

**ELECTRICAL
PANEL LABELING
NOMENCLATURE**

All electrical equipment installations shall include permanent labels as described below:

- Label all disconnecting means, panel boards, and control panels to indicate what they disconnect, the voltage, arc flash boundary, arc flash incident energy at a working distance or personal protective equipment (PPE) category, and where they originate (the next upstream disconnect).
- Label circuit breakers located in panels ($\leq 240V$) with what they control. This can be on a circuit directory located on the face or inside panel door.
- Provide arc flash hazard information for circuit breaker panels on one label on the enclosure.

**ELECTRICAL
PANEL LABELING
NOMENCLATURE
(CONT.)**

- Include a permanent label indicating the minimum working space for all electrical equipment operating at 600 volts nominal or less and likely to require examination, adjustment, servicing, or maintenance while energized. The floor shall also be taped or painted to indicate the working area required.
- Place labels on electrical equipment that are suitable for the environment, with consideration to chemicals and sunlight.

**OCCASIONAL USE
OF FLAMMABLE
OR IGNITABLE
MATERIALS**

Electric equipment capable of igniting flammable materials (such as gases, vapors, liquids, dust, fibers, or filings) shall not be used where those materials are present unless measures are taken to prevent hazardous conditions from developing.

**HOUSEKEEPING
DUTIES**

Employees may not perform housekeeping duties in proximity to areas where live parts present an electrical contact hazard unless adequate safeguards such as insulating equipment or barriers are provided.

Electrically conductive cleaning materials (including conductive solids, such as steel wool, metalized cloth, and silicon carbide, as well as conductive liquid solutions) may not be used in proximity to energized parts unless procedures are followed that will prevent electrical contact.

**PORTABLE
EQUIPMENT**

The following precautions shall be taken when working with portable equipment:

- Portable AC electrical power tools shall be double-insulated construction or grounded. In addition, all 120-volt AC power tools used for construction and maintenance must be used with ground fault circuit interruption (GFCI) protection originating at the wall receptacle. Permanent GFCI receptacles or portable GFCIs are acceptable.


**PORTABLE
EQUIPMENT (CONT.)**

- Portable, plug-connected tools and extension cords shall be visually inspected before each use by the user. Damaged tools, plugs, or cords shall not be used and shall be removed from service. Visual inspection shall be performed to check for external defects (such as loose parts, deformed and missing pins, or damage to outer jacket or insulation) and evidence of possible internal damage (such as pinched or crushed outer jacket).
- Cord- and plug-connected equipment, as well as extension cords that remain connected once they are put in place and are not exposed to damage, shall be visually inspected before relocating them. If inspection reveals a defect or evidence of damage that might expose an employee to injury, the equipment or extension cord must be removed from service, and no person may use it until it has been repaired, tested, and found to be safe.
- Appliances used at the location shall have a manufacturers' nameplate and shall be listed by an appropriate product safety testing and certification organization. If the appliance has exposed metal parts only a 3-wire cord with a grounded plug is allowed. There should be no exposed electrical hazards.
- All extension cords must be used with GFCI protection at all times. Extension cords shall not be used as a substitute for permanent wiring.
- Portable electric power strips are permitted in compliance with the manufacturer's instructions.
- A flexible cord used with grounding type equipment shall contain an equipment grounding conductor.
- Attachment plugs and receptacles may not be connected or altered in a manner that would prevent proper continuity of the equipment grounding conductor where plugs are attached to receptacles. Additionally, those devices may not be altered to allow the grounding pole of a plug to be inserted into slots intended for connection to the current-carrying conductors.
- Adaptors that interrupt the continuity of the equipment grounding connection may not be used.

**PORTABLE
EQUIPMENT (CONT.)**

- Portable equipment shall be handled in a manner that will not cause damage.
- Flexible electric cords attached to equipment may not be used to raise or lower the equipment and may not be fastened with staples or otherwise hung in such a way that could cause damage to the outer jacket or insulation.
- Employees' hands may not be wet when plugging or unplugging flexible cords and cord- and plug-connected equipment.
- Electrically-rated insulating protective equipment such as gloves must be used if handling a plug or receptacle that could provide a conducting path to the employee's hand (for example, a cord connector that is wet from being immersed in water).
- Locking type connectors shall be properly secured after connection.



 <p>ADMINISTRATION GUIDE</p>	<p><i>Section</i></p> <p>ELECTRICAL SAFETY</p>
	<p><i>Subject</i></p> <p>Electrical Hazard Analysis</p>


OVERVIEW Appropriate safety-related work practices shall be determined by an electrical hazard analysis before any person approaches exposed live parts operating at 50 volts or more that are within the limited approach boundary and are not de-energized or locked out ([SHA-407-7](#) and [SHA 408-7](#)). Such work practices shall protect each employee from arc flash and direct or indirect bodily contact with live parts.

DEFINITIONS A *shock hazard analysis* shall determine the voltage to which personnel will be exposed, boundary requirements, and the personal protective equipment necessary in order to minimize the possibility of electrical shock to personnel.

A *flash hazard analysis* shall determine the flash protection boundary and the personal protective equipment required to be used within the boundary.

PROTECTION BOUNDARY Shields, barriers, or insulating materials shall be used to protect employees from shock, burns, or other electrically related injuries while working near exposed energized parts that might be accidentally contacted or where dangerous electric heating or arcing might occur. Normally enclosed live parts that are exposed for maintenance or repair shall be guarded to protect unqualified persons from contact with the live parts.



 <p>ADMINISTRATION GUIDE</p>	<p><i>Section</i></p> <p>ELECTRICAL SAFETY</p>
	<p><i>Subject</i></p> <p>Energized Electrical Work Permit (EEWP)</p>

EEWP REQUIRED An energized electrical work permit (EEWP) ([Exhibit 9017](#)) shall be required when work is permitted in accordance with [NFPA 70E](#), Article 130.2(A), and takes place under either of the following conditions:

- Within a restricted approach boundary
- Conductors or circuit parts are not exposed, but an increased likelihood of injury from an arc flash hazard exists

EEWP CONTENTS The work permit shall include, but not be limited to, the following:


- Description and location of the circuit and equipment
- Work to be performed
- Justification for performing the work in an energized condition
- Safe work practices to be employed
- Results of the shock assessment
 - ◆ Voltage to which personnel will be exposed
 - ◆ Limited approach boundary
 - ◆ Restricted approach boundary
 - ◆ Personal protective equipment (PPE) and other protective equipment required by the standard to protect against shock hazard
- Results of the arc flash risk assessment
 - ◆ Available incident energy at working distance or arc flash PPE category
 - ◆ PPE and other protective equipment required by the standard to protect against arc flash hazard
- Means employed to restrict the access of unqualified persons from the work area
- Evidence of a job briefing, including discussion of job-specific hazards
- Energized work approval with signatures ([Exhibit 9017](#))

EEWP EXCEPTIONS

According to NFPA 70E, electrical work shall be permitted without an EEWP if a qualified person is provided with and uses appropriate safety work practices and PPE during any one of the following activities or conditions:

- Testing, troubleshooting, or voltage measuring
- Thermography, ultrasound, or visual inspections and the restricted approach boundary is not crossed
- General housekeeping or miscellaneous non-electrical tasks and the restricted approach boundary is not crossed



 <p>ADMINISTRATION GUIDE</p>	<p><i>Section</i></p> <p>ELECTRICAL SAFETY</p>
	<p><i>Subject</i></p> <p>NFPA Article 130 – Work Involving Electrical Hazards</p>

REFERENCES

NFPA 70E Article 130 Tables: Table 130.7(C)(15)(a), *Hazard/Category Classifications and Use of Rubber Insulating Gloves and Insulated and Hand Tools-Alternating Current Equipment*; Table 130.7(C)(15)(b), *Hazard / Category Classifications and Use of Rubber Insulating Gloves and Insulated and Hand Tools-Direct Current Equipment*; Table 130.7(C)(16), *Hazard/Risk Category, Protective Clothing and Personal Protective Equipment* (Refer to the most recent edition of the NFPA 70E.)


ABBREVIATIONS FOR TABLE 130.7(C)(16)

AN - as needed (optional); AR - as required; SR - selection required

NOTES FOR TABLE 130.7(C)(16)

- Arc rating for a garment or system of garments is expressed in cal/cm².
- If rubber insulating gloves with leather protectors are required, additional leather or arc-rated gloves are not required. The combination of rubber insulating gloves with leather protectors satisfies the arc flash protection requirement.
- The FR shirt and pants used for Hazard/ Risk Category 1 shall have a minimum arc rating of 4.
- FR coveralls (minimum arc rating of 4) is an alternate to FR shirt and FR pants.
- FR shirt and FR pants used for Hazard/Risk Category 2 shall have a minimum arc rating of 8.
- FR coveralls (minimum arc rating of 8) is an alternate to FR shirt and FR pants.
- A face shield with a minimum arc rating of 4 for Hazard/Risk Category 1 or 8 for Hazard/Risk Category 2, with wrap-around guarding to protect not only the face, but also the forehead, ears, and neck (or, alternatively, an arc-rated arc flash suit hood), is required.
- An alternative is to use a total FR clothing system and hood with a minimum arc rating of 25 for Hazard/Risk Category 3.




 ADMINISTRATION GUIDE	<i>Section</i> ELECTRICAL SAFETY
	<i>Subject</i> Audit Requirements

LOCKOUT/TAGOUT An audit shall be conducted at least annually by a qualified person as directed by safety personnel and shall cover at least one lockout/tagout in progress and the procedure details. The audit shall be representative of the types of devices and energy sources that employees are exposed to in routine and non-routine work. The audit shall be designed to correct deficiencies in the procedure or in employee understanding ([SHA-407-7](#)).

LOW VOLTAGE ELECTRICAL DISTRIBUTION Randomized audits of low voltage electrical distribution (50-600 volts) should be conducted annually as directed by the supervisor or safety personnel. This audit may be performed internally or by using a qualified consultant. The audit shall monitor compliance of all personnel and procedures to this program, applicable OSHA standards, and the [NFPA 70E](#). On completion of the audit, corrective actions shall be developed to correct or repair any code deficiencies and provide retraining as required on these rules and [NFPA 70E](#).

PROGRAM REVIEW A review of this electrical safety program shall be conducted every three years with appropriate revisions made to ensure the program is current. The documented reports shall be audited to ensure that remedial actions are in line with root causes and actions are effectively implemented.



 <p>ADMINISTRATION GUIDE</p>	<p><i>Section</i></p> <p>ELECTRICAL SAFETY</p>
	<p><i>Subject</i></p> <p>Working Around Power Lines</p>

**GENERAL
PRECAUTIONS**

Employees shall survey the area for overhead and underground lines before work begins (“Call 811,” [KRS 367](#)). The supervisor shall contact the power company to have the lines disconnected, de-energized, or properly protected prior to work beginning when lines are too close to work safely or the exact location of underground lines is unknown.

- Employees shall use the following table to determine minimum clearance distances while working near distribution lines:

Normal Voltage (Phase to Phase)	Minimum Required Clearance
up to 50,000 volts	10 feet
Over 50,000 to 200,000 volts	15 feet
Over 200,000 to 350,000 volts	20 feet
Over 350,000 to 500,000 volts	25 feet
Over 500,000 to 750,000 volts	35 feet
Over 750,000 to 1,000,000 volts	45 feet
Over 1,000,000 volts	*


**As established by the utility owner/operator or registered professional engineer who is a qualified person with respect to electrical power transmission and distribution.*

- Under the right conditions, electrical current can arc through the air to an equipment boom or other ground. Never work near live distribution lines or electrical circuits. The power company shall be notified and shall do one of the following prior to work commencing:
 - ◆ Disconnect or remove the distribution line
 - ◆ De-energize the distribution line
 - ◆ Guard the distribution line with insulation sleeves
- Cabinet employees **shall not** remove any objects contacting live distribution lines.

**GENERAL PRECAUTIONS
(CONT.)**

- When performing tree trimming operations, employees shall:
 - ◆ Observe the ten foot rule
 - ◆ Not attempt to work on trees that are within 10 feet of any kind of overhead wires
 - ◆ Follow all OSHA 29 CFR 1910 standards and [ANSI](#) recommendations for tree care work



 <p>ADMINISTRATION GUIDE</p>	<p><i>Section</i></p> <p>FALL PROTECTION</p>
	<p><i>Subject</i></p> <p>Overview</p>

REFERENCES [29 CFR 1926 \(M\)](#) and [29 CFR 1910.140](#)

**PURPOSE
& SCOPE**

The purpose and scope of the fall protection program is to establish guidelines to protect all employees engaged in outdoor or indoor work activities that expose them to potential falls.

POLICY

In the Kentucky Transportation Cabinet’s (KYTC) continuing pursuit of a safe and healthy workplace, the Cabinet has developed a fall protection program to be followed by all employees.

The Employee Safety and Health (ES&H) Branch is responsible for the administration of this policy. The day-to-day aspects of policy implementation shall be the responsibility of district operations, supervisors, and employees assigned a personal fall arrest system (PFAS). Districts and divisions shall designate a fall protection coordinator to assist with program implementation and compliance.

KEY ELEMENTS

The KYTC fall protection program shall include the following:

- General Requirements
- Personal Fall Arrest Systems (PFAS)
 - ◆ Selection, use, maintenance, and storage
 - ◆ Training
 - ◆ Inspection
 - ◆ Site-specific fall protection plans
- Accident and Incident Investigations
- Enforcement and Discipline
- Decent and Rescue

**GENERAL
REQUIREMENTS**

Pursuant to 29 CFR 1926.500-503, all employees shall be protected when engaged in work or inspection of work at heights greater than 4 feet on elevated work surfaces, platforms, lofts, decks, floor holes, stairs, tanks, bridges, leading edges, pick boards, one- and two-point suspension scaffolds, scaffold towers, fixed ladders in excess of 20 feet (not applicable to work performed on portable, extension, or step ladders), crane booms, excavations, trenches, aerial lifts, ramps, bucket trucks, snoopers, man baskets, radio or microwave towers, roofs, cliffs, rock ledges of roadway cuts, or any other areas where there is moving machinery or other hazards below the work area.

29 CFR 1926.500-503 is available online at:

https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10922

Guardrail systems shall be used as the primary engineering controls to protect employees from fall hazards. Employees shall be aware of work areas requiring fall protection and check for appropriate guardrail systems before beginning work.

A guardrail system shall be constructed of wood, metal, or wire rope and shall include the following:

- Top rails of 42 inches, +/- 3 inches above the working level, and shall withstand a force of 200 pounds downward and outward
- Mid-rails located halfway between the working level and top rail
- Toe boards 3 ½-4 inches in vertical height from the working level
- Support posts spaced at intervals not to exceed 8 feet

**PERSONAL FALL ARREST
SYSTEMS (PFAS)**

While working at heights greater than 4 feet, employees shall utilize PFAS if guardrail systems are not in place. PFAS shall only be used for the purpose intended and in accordance with the manufacturer's guidelines.

Note: PFAS shall be utilized when working from any height on lift platforms, buckets, or other lift devices that may have standard railing.

The components of a PFAS shall include:

- Anchorage – a secure point of attachment for the fall arrest system
- Body Support – a full body harness with connection points for the fall arrest system
- Connectors – devices used to connect the body support to the anchorage system (shock absorbing lanyards, self-retracting life lines, etc.)

**SELECTION,
ASSIGNMENT,
& STORAGE**

All PFAS shall be evaluated and approved by the district's or division's fall protection coordinator in conjunction with the ES&H Branch.

The following criteria are used in the final selection of fall protection equipment:

➤ Identification of Hazards

The supervisor, employee, or safety personnel shall survey the work environment to identify the potential fall hazards based on the tasks to be performed.

➤ Appropriate Selection and Purchasing

- ◆ The supervisor or designee completes this step aided by information provided by a competent person.
- ◆ Selection shall consider the fall hazards that have been identified and the protective devices necessary to protect employees from these hazards.
- ◆ Employees who are to utilize PFAS shall be provided systems that are appropriately sized and rated for them.
- ◆ Fall protection equipment shall have permanent, durable identification markings attached to them that do not interfere with the performance of the device.
- ◆ Only KYTC-approved harnesses shall be purchased and used.

➤ Assignment of Fall Protection Equipment

- ◆ Whenever possible, fall protection equipment shall be assigned to an individual for his or her exclusive use.
- ◆ When fall protection equipment is assigned to an employee for his or her exclusive use, the designated fall protection coordinator shall maintain a record of the employee and the specific equipment assigned.
- ◆ Temporary emergency assignment of fall protection equipment shall be made by the supervisor.

➤ Storage

- ◆ Never store PFAS with other tools, in storage containers not specifically meant for PFAS, directly on the ground, or where it will be exposed to outside elements.

**SELECTION,
ASSIGNMENT,
& STORAGE (CONT.)**

- ◆ Hang equipment in a cool, dry location in a manner that will ensure it retains its shape.
- ◆ Follow manufacturer's recommendations for equipment storage.

**TRAINING &
EDUCATION**

Training shall be conducted by a competent person and documented on TC 25-2, *Training Report* (**Exhibit 9009**). A permanent record shall be maintained by the designated fall protection coordinator. Employees shall receive training on the following topics prior to the assignment of fall protection equipment:

- Safe use of PFAS and the role of the employees involved in the fall protection plan
- Application limits
- Proper anchoring and tie off techniques
- Estimation of free fall distance, including determination of decelerations distance
- Total fall distance to prevent striking lower level
- Methods of use to include storage and inspection
- Opportunity to handle selected harnesses
- PFAS proper fit and instructions on donning and doffing
- Proper maintenance, use, limitations, and storage.

INSPECTIONS

Prior to use, PFAS shall be inspected by the employee in consultation with the *Inspection Checklist Guide* (**Exhibit 9018**) for damage, wear, and other deterioration, recorded on a TC 25-157 form, *Fall Protection Equipment Inspection Log*, and maintained on file (**Exhibit 9019**).

Annual inspections shall be completed by a competent person in accordance with 29 CFR 1926.503(a)(2), found online at:

https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=standards&p_id=10759

Defective components shall be removed from service. Components involved in a fall shall be removed from service immediately.

SITE REVIEW

Fall protection plans are to be developed prior to any work being performed. (Contractors may use existing, compliant plans when inspections are being performed on contract projects.)

**SITE REVIEW
(CONT.)**

PFAS shall be determined by the task or job to be completed. PFAS components shall be selected by a competent person and based on the hazard analysis of the work being performed.

**ACCIDENT &
INCIDENT REVIEW**

All worker accidents and injuries shall be reported and investigated, regardless of their nature. A review of the fall protection plan shall determine if additional practices, procedures, or training are required. Equipment involved in a fall incident shall be removed from service immediately.


**ENFORCEMENT &
DISCIPLINE**

Employees who do not conform to the fall protection program policies and procedures may be subject to disciplinary action. The supervisor is the designated individual responsible for the proper use of all personal protective equipment (PPE), including PFAS.

**DECENT &
RESCUE**

Prior to beginning work, the fall protection plan shall be reviewed and evaluated for procedures related to the prompt rescue of employees in the event of an accident, the availability of rescue equipment and personnel, and alternate rescue plans in place with local emergency services.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Section</i></p> <p>FALL PROTECTION</p>
	<p><i>Subject</i></p> <p>Ladders & Scaffolds</p>

REFERENCES [29 CFR 1910.23, 1910.27](#); and [29 CFR 1926.1053, 1926](#) (Subpart L)

LADDERS Employees should review the following general precautions before using a ladder:

- Ladders shall be well-constructed, with the rungs inset in the side rails ([Exhibit 9021](#)). The bottom of the ladder shall have rubber safety feet. Ladders shall be used in accordance with manufacturer's recommendations.
- When ladders are positioned, they shall not be too straight or at too great an angle. The best angle is when distance from the wall to base of the ladder is approximately one-fourth the length of the ladder.
- Ladders should always have firm footing and should be properly tied off with a rope or heavy string to prevent shifting.
- Only fiberglass ladders shall be used for repairs to electrical equipment or energized lines.
- Ladders shall be stored away from traffic areas where damage or injury could occur.
- All ladders used to access overhead storage areas or roofs must extend at least 3 feet above the point of support.
- Ladders shall not be used in a horizontal position as platforms, runways, or scaffolds.
- Employees should not utilize a ladder without first being trained on the proper use, care, maintenance, and transport of a ladder ([Exhibit 9020](#)).


SCAFFOLDS Employees should review the following general precautions before using a scaffold:

- Scaffolds shall be erected, moved, dismantled, or altered only under the supervision of the competent person.

SCAFFOLDS (CONT.)

- Scaffolds shall be constructed to support four times the maximum intended load.
- Scaffold platforms shall be at least 18 inches wide.
- Scaffolds shall be plumb and level.
- Working platforms shall be solidly planked.
- Planking shall be scaffold-grade lumber.
- Free-standing scaffolds shall be anchored to the structure every 26 feet vertically and every 30 feet horizontally.
- Safe and convenient access shall be provided to the platform level by ladder, stair, or other recognized method.
- Scaffold suspension rope shall be free of splices and be capable of supporting six times the intended load.
- Catenary (picks), one-point or two-point suspension, and boatswain chair scaffolds that require fall protection shall be independent of the scaffold or scaffold supports.
- Persons working from scaffolds shall utilize a Personal Fall Arrest System (PFAS) and comply with the written Fall Protection Program.
- Employees must attend required safety briefings by a competent persons prior to entering scaffolds.
- Scaffolds must be designed by a qualified person and must be constructed, loaded, and inspected daily by a competent person in accordance with that design before use.
- Scaffolds shall be erected, moved, dismantled, or altered only under the supervision and direction of a competent person.
- Scaffolds must be plumb and level.
- Adequate sills for scaffold posts and base plates must be used.
- Open sides and ends of scaffolds more than 6 feet (1.8 meters) above the ground must have the following:
 - ◆ A top rail approximately 42 inches (1075 millimeters) high and capable of withstanding a 100 pounds (45 kg) downward force
 - ◆ A mid rail
 - ◆ A toe board



 <p>ADMINISTRATION GUIDE</p>	<p><i>Section</i></p> <p>FALL PROTECTION</p>
	<p><i>Subject</i></p> <p>The 3-Points of Contact Rule</p>

OVERVIEW The recommend safe practice for entering and exiting a vehicle or piece of equipment is the 3-points of contact rule. This means always having at least three points of contact with the equipment: two hands and one foot, or one hand and two feet. Following the 3-point rule will provide workers with the most stability, and therefore reduce the risk of slips and falls.

GENERAL PRECAUTIONS Employees should periodically review the following precautions for entering or exiting a vehicle or piece of equipment:


- Do not mount and dismount when equipment is in motion.
- Never jump off equipment.
- Face towards the machine when entering or exiting, unless the manufacturer notes otherwise.
- Do not break the three points of contact until the destination (ground, vehicle cab, platform) is reached.
- Keep movements slow and steady when entering and exiting the vehicle or equipment.
- Be extra cautious in wet, muddy, snowy, or icy conditions.
- Wear appropriate footwear with adequate support, traction, and slip resistance for the weather conditions and the equipment surfaces.
- Avoid loose or bulky clothing as it could get caught in the equipment or interfere with contact points.
- Do not step on tires or wheel hubs.
- Do not use the door frame or edge as a handhold.

**GENERAL PRECAUTIONS
(CONT.)**

- Look for obstacles on the ground before exiting the vehicle.

3-Points of Contact



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>WORKPLACE RISK ASSESSMENT & PREVENTION</p>
	<p><i>Subject</i></p> <p>Hazard Communication</p>

PURPOSE Safety and health policies, procedures, goals, and objectives should be communicated to employees.

KYTC management is committed to complying with all applicable federal and state health and safety rules. Under this program, employees are informed of the contents of the OSHA Hazard Communications Standard, the hazardous properties of chemicals with which they work, safe handling procedures, and measures to protect themselves from hazardous chemicals.

**IDENTIFYING
HAZARDOUS
CHEMICALS**

A list of hazardous chemicals used by KYTC employees is available online:

<https://intranet.kytc.ky.gov/org/OHRM/em/Pages/Safety-Data-Sheets-and-Labels.aspx>

**LABELING CONTAINERS
OF HAZARDOUS
CHEMICALS**

The labeling system used by KYTC shall follow the requirements set out in the OSHA Hazardous Communication Standard (Rev. 2012) and consistent with the United Nations Globally Harmonized System (GHS) of Classification of Labeling of Chemicals.

The label on the chemical is intended to convey information about the hazards posed by the chemical through the standardization label elements, including symbols, signal words, and hazard statements.

The supervisor of each KYTC facility shall ensure that all hazardous chemical containers have the original manufacturer's label that includes a product identifier, an appropriate signal word, hazard statements, pictograms, and precautionary statements, as well as the name, address, and telephone number of the chemical manufacturer, importer, or other responsible party.

**LABELING CONTAINERS
OF HAZARDOUS
CHEMICALS (CONT.)**

Workplace labeling (legible and in English) shall include the product identifier and words, pictures, symbols, or combination that provides at least general information regarding the hazards of the chemicals.

Small quantities of hazardous chemicals that are intended for immediate use may be placed in a temporary container without a manufacturer's label, provided:

- The employee using the chemical keeps it in his or her possession at all times
- The product is depleted during the work shift or properly disposed of at the end of the work day
- The temporary container shall be marked with its contents

**KEEPING SAFETY
DATA SHEETS**

When any hazardous chemical is purchased locally, the supervisor shall ensure that a safety data sheet (SDS) containing specific, detailed information about the chemical's hazard is obtained from the distributor or supplier at the time of purchase.

SDSs shall be made readily available to all employees during their work shifts. Employees can review SDSs for all hazardous chemicals used at each location.

SDSs can be viewed electronically at:

<https://intranet.kytc.ky.gov/org/OHRM/em/Pages/Safety-Data-Sheets-and-Labels.aspx>

For facilities with employees who do not have access to electronic safety data sheets, supervisors shall print SDSs for each chemical used at that facility and place them in an SDS file.

The SDSs shall be updated and managed by the facility supervisor. SDSs and chemical inventory shall be reviewed annually for accuracy. If an SDS is not immediately available for a hazardous chemical, employees can obtain a copy by contacting the district safety coordinator.

**TRAINING EMPLOYEES
ABOUT CHEMICAL
HAZARDS**

Employees should not be around hazardous chemicals in their work area at the time of their initial assignment or when a new chemical hazard is introduced into the work area, until they receive the information and training including, but not limited to, categories of hazards (such as flammability, carcinogenicity, etc.) or specific chemicals. Chemical-specific information shall be available through labels and SDSs.

TRAINING EMPLOYEES**ABOUT CHEMICAL****HAZARDS (CONT.)**

Employees shall attend a hazard communication training that covers the following topics:

- An overview of the requirements in OSHA's Hazard Communication Standard
- Hazardous chemicals present in the employee's workplace
- A review of operations in the employee's workplace where hazardous chemicals are used
- The location of the written hazard communication plan and where it may be reviewed
- How to understand and use the information on labels and SDSs
- Physical and health hazards of chemicals in the employee's work area
- Methods used to detect the presence or release of hazardous chemicals in the employee's work area
- Steps that have been taken to prevent or reduce the employee's exposure to hazardous chemicals
- How employees can protect themselves from exposure to hazardous chemicals through the use of engineering controls, work practices, and personal protective equipment
- An explanation of any special labeling present in the workplace, such as pictograms, signal words, hazard statements, and precautionary statements
- Emergency procedures to follow if an employee is exposed to hazardous chemicals

The Employee Safety and Health (ES&H) Branch is responsible for managing the training program and the district safety coordinator is responsible for delivering the training to ensure that each employee is aware of the hazard communication program. After attending the training, employees will sign a TC 25-2, *Training Report*, verifying that they understand the training topics and how the topics are related to KYTC's hazard communication program ([Exhibit 9009](#)).

INFORMING EMPLOYEES**WHO DO SPECIAL****TASKS**

Before employees perform non-routine tasks that may expose them to hazardous chemicals, their supervisors shall advise them of the chemicals' hazards. Supervisors shall also inform them about exposure control and emergency procedures. The supervisor will evaluate the hazards of these tasks and provide appropriate controls, including personal protective equipment and additional training as required.










**INFORMING CONTRACTORS
& OTHER EMPLOYEES
ABOUT HAZARDOUS
CHEMICALS**

If an employee of an employer other than KYTC may possibly be exposed to hazardous chemicals at a KYTC workplace (for example, contract employees of janitorial staff at rest areas), the district safety coordinator – once notified – shall provide those employees and their employers with the following information:


- The identity of the chemicals
- How to review the SDSs
- Explanation of the container labeling system
- Safe work practices to prevent exposure

Facility supervisors will also obtain an SDS for any hazardous chemical a contractor brings into the work area.

HCS PICTOGRAMS & HAZARDS

<p style="text-align: center;">Health Hazard</p>  <ul style="list-style-type: none"> • Carcinogen • Mutagenicity • Reproductive Toxicity • Respiratory Sensitizer • Target Organ Toxicity • Aspiration Toxicity 	<p style="text-align: center;">Flame</p>  <ul style="list-style-type: none"> • Flammables • Pyrophorics • Self-Heating • Emits Flammable Gas • Self-Reactives • Organic Peroxides 	<p style="text-align: center;">Exclamation Mark</p>  <ul style="list-style-type: none"> • Irritant (skin and eye) • Skin Sensitizer • Acute Toxicity (harmful) • Narcotic Effects • Respiratory Tract Irritant • Hazardous to Ozone Layer (Non Mandatory)
<p style="text-align: center;">Gas Cylinder</p>  <ul style="list-style-type: none"> • Gases under pressure 	<p style="text-align: center;">Corrosion</p>  <ul style="list-style-type: none"> • Skin Corrosion/ burns • Eye Damage • Corrosive to Metals 	<p style="text-align: center;">Exploding Bomb</p>  <ul style="list-style-type: none"> • Explosives • Self-Reactives • Organic Peroxides
<p style="text-align: center;">Flame over Circle</p>  <ul style="list-style-type: none"> • Oxidizers 	<p style="text-align: center;">Environment (Non-mandatory)</p>  <ul style="list-style-type: none"> • Aquatic Toxicity 	<p style="text-align: center;">Skull & Crossbones</p>  <ul style="list-style-type: none"> • Acute Toxicity (fatal or toxic)



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>WORKPLACE RISK ASSESSMENT & PREVENTION</p>
	<p><i>Subject</i></p> <p>Safety Risk Report</p>

PURPOSE The Safety Risk Report establishes a process for employees to report close calls/near misses, hazards, and other safety and health concerns ([Exhibit 9013](#)). Included is an option for anonymous reporting to reduce fear of reprisal. The report allows the Employee Safety and Health (ES&H) Branch to respond promptly to risk reports.

A Safety Risk Report is a participatory process of creating a safer and healthier work environment. Completing a Safety Risk Report can significantly contribute to the prevention of future accidents and injuries.

To be effective, any safety and health program needs the meaningful participation of employees and their representatives. Participation means that employees are involved in establishing, operating, evaluating, and improving the safety and health program. Employees have much to gain from a successful program and the most to lose if the program fails. They also often know the most about potential hazards associated with their jobs. Successful programs tap into this knowledge base.

Employees are often best positioned to identify safety and health concerns and program shortcomings, such as emerging workplace hazards, unsafe conditions, close calls or near misses, and actual incidents. By encouraging reporting and following up promptly on all reports, KYTC can address issues before someone gets hurt or becomes ill. It is key to involve employees in finding solutions to reported issues.

ADMINISTRATION The ES&H Branch is responsible for the administration of this program. Personnel may contact the ES&H Branch or the designated safety coordinator if further information is needed.

PROCEDURE KYTC employees shall complete TC 25-164, *Safety Risk Report*, to report an observed safety risk within their assigned work area that could potentially result in an injury or that has resulted in a near miss to themselves or a co-worker ([Exhibit 9013](#)).

PROCEDURE (CONT.)

Completed forms shall be forwarded to the district safety coordinator or regional safety administrator. The district safety coordinator shall share the risk report with their immediate supervisor. Forms may also be mailed to the KYTC Employee Safety and Health Branch, 200 Mero Street, 6th Floor West, Frankfort, KY, 40601, or faxed to (502) 564-6683. ES&H Branch staff will evaluate the safety risk and determine if safety enhancements are needed.


Forms may be submitted anonymously, if preferred; however, employees are advised that it is illegal for employers to take any action against employees in reprisal for exercising their rights to report safety issues.

**ADDITIONAL
INFORMATION**

OSHA Recommended Practices for Safety and Health Programs may be found online at:

<https://www.osha.gov/shpguidelines/>



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>WORKPLACE RISK ASSESSMENT & PREVENTION</p>
	<p><i>Subject</i></p> <p>Accident Prevention Tag System</p>

PURPOSE Pursuant to Kentucky Occupational Safety and Health regulations, the Cabinet must have an accident prevention tag system (red tag system).

The purpose of the red tag system is to remove faulty or damaged equipment from service, preventing injuries to both state employees and the public as well as financial loss to the state.

PROCEDURE The following information shall be entered on any tag affixed to state equipment:


- State inventory/equipment number
- Type of equipment
- Reason for tagging
- Signature of person completing tag
- Date



The supervisor responsible for the equipment shall be notified of the equipment tagged out of service and have the equipment repaired, replaced, or maintained out of service until repairs are made by qualified personnel.

Tags shall only be removed once appropriate repairs have been made and the person placing the tag has inspected the equipment to be placed back into service. The authorized inspector placing the tag is the only person authorized to remove the tag allowing it to return to service.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>PERSONAL PROTECTIVE EQUIPMENT (PPE)</p>
	<p><i>Subject</i></p> <p>Overview</p>

PURPOSE

The Employee Safety and Health (ES&H) Branch shall approve the purchase of all personal protective equipment (PPE) to ensure items meet Occupational Safety and Health Administration (OSHA) requirements, work requirements, and Kentucky Transportation Cabinet (KYTC) specifications.

In accordance with [29 CFR 1926.32\(f\)](#), supervisors are designated as competent persons and, after consulting with safety personnel as needed, are responsible for the assessment, selection, and use of appropriate personnel, equipment, and personal protective equipment.

KYTC safety personnel shall conduct job hazard analyses to determine the appropriate PPE and shall certify the assessment in writing. When working with hazardous chemicals, PPE identified on the Safety Data Sheet shall be utilized.

All personnel shall follow the KYTC’s policy requiring the proper use of all safety equipment, including PPE. Any deviation from the policy may result in disciplinary action ([GAP-801](#)).

Employee-owned PPE shall be evaluated and approved by KYTC safety personnel prior to use in the workplace.


For additional information, see [SHA-404](#).

PURCHASES

Questions concerning uniform or PPE availability shall be directed to the district or division purchasing point of contact. Supervisors and employees may also consult the Office of Budget and Fiscal Management, Division of Purchases found online at:

<https://transportation.ky.gov/BudgetFiscalManagement/Pages/Purchases.aspx>



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>PERSONAL PROTECTIVE EQUIPMENT (PPE)</p>
	<p><i>Subject</i></p> <p>Head Protection</p>

REFERENCES [29 CFR 1910.135](#) and [29 CFR 1926.100](#)

HARD HATS Regardless of their positions or work locations (outdoors or indoors), KYTC employees engaged in work where there is a possible danger of head injury as the result of impact, falling or flying objects, or electrical shock or burns, shall wear hard hats at all times that meet applicable ANSI standards for the type of work being performed ([SHA-405](#)).

Work areas include maintenance and construction projects such as the following:

- Culvert and bridge construction projects where overhead operations are in progress
- Direct contact with rock crushers and screening plants
- Direct contact with hot mix asphalt plants, tree, and debris removal projects
- Official contractor designated hard hat areas

HI-VIS HEADWEAR Other high visibility (hi-vis) headwear, such as caps and hats, shall meet the full requirements of ANSI/ISEA standard 107-2004, or equivalent revisions, and may be utilized in outdoor or indoor work where the hazard of head injuries does **not** exist.

This safety headwear is specifically designed to provide employees high visibility in areas where they are potentially exposed to the risk of moving vehicles, equipment, and traffic.

Hi-vis headwear shall **not** be utilized as a replacement for hard hats where required. Hi-vis headwear shall be worn by all employees working in traffic-control flagging operations, within the right-of-way limits, or in other areas where they are potentially exposed to the risk of moving vehicles, equipment, or roadway traffic.


EMPLOYEE

RESPONSIBILITY

It is ultimately the responsibility of each employee to wear a hard hat or other headwear in applicable areas in compliance with this policy.

Employees who repeatedly disregard PPE policies and rules will be subject to disciplinary action up to and including dismissal from the Cabinet.




 ADMINISTRATION GUIDE	<i>Chapter</i> PERSONAL PROTECTIVE EQUIPMENT (PPE)
	<i>Subject</i> Welding Helmets

REFERENCES [29 CFR 1926.102](#) and [29 CFR 1910.252](#)

REQUIREMENTS Helmets are required while welding or inspecting welding on construction sites. Filter lenses and plates shall be chosen in accordance with the welding operation. A guide to the proper shade numbers follows:

WELDING OPERATION	SHADE #
Shielded metal- arc welding: 1/16", 3/32", 1/8", 5/32" electrodes	10
Gas- shielded arc welding (nonferrous): 1/16", 3/32", 1/8", 5/32" electrodes	11
Gas- shielded arc welding (ferrous): 1/16", 3/32", 1/8", 5/32" electrodes	12
Shielded metal- arc welding: 3/16", 7/32", 1/4" electrodes	12
Shielded metal- arc welding: 5/16", 3/8" electrodes	14
Atomic hydrogen welding	10-14
Carbon arc welding	14
Soldering	2
Torch brazing	3 or 4
Light cutting, up to 1"	3 or 4
Medium cutting, 1" to 6"	4 or 5
Heavy cutting, 6" and over	5 or 6
Gas welding (light) up to 1/8"	4 or 5
Gas welding (medium) 1/8" to 1/2"	5 or 6
Gas welding (heavy) 1/2" and over	7 or 8



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>PERSONAL PROTECTIVE EQUIPMENT (PPE)</p>
	<p><i>Subject</i></p> <p>Eye Protection</p>

REFERENCE [29 CFR 1910.133](#) and [29 CFR 1926.102](#)

REQUIREMENT Appropriate eye protection shall be used by employees exposed to eye hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation.

**SAFETY SPECTACLES
(ANSI Z-87)**

Safety spectacles protect against straight-on impact. Employees shall wear safety spectacles when engaged in grinding, machining, woodworking, chipping, chiseling, post driving, jackhammering, concrete cutting, cutoff sawing, chain sawing, drilling, or any other tasks where there is a potential hazard from flying objects or particles. Safety spectacles are not appropriate protection for nuisance dust, rust particles, light, radiation, or other particulates.

- Regular scratch-resistant prescription spectacles do not provide impact resistance.
- Side-shield protection is required.
- Over-the-Glasses (OTGs) glasses are available for workers who wear prescription eyewear and need impact eye protection.


GOGGLES

Appropriate goggles shall be worn when hazards include nuisance dust, rust particles, light radiation, sand, glass beads, sprays and mists, chemicals, or other particulates.

Four basic goggle types are:

- *Impact goggles* have perforated holes in the side with direct ventilation.
- *Chemical goggles* have passive vents with indirect ventilation.
- *Ventless goggles* eliminate entry of contaminants.
- *Cutting goggles* protect against harmful light and radiation.




 ADMINISTRATION GUIDE	<i>Chapter</i> PERSONAL PROTECTIVE EQUIPMENT (PPE)
	<i>Subject</i> Face Protection

REFERENCES [29 CFR 1910.133](#) and [29 CFR 1926.102](#)

REQUIREMENTS Face shields are required when employees are using a battery charger, handling corrosives, pouring chemicals, or performing any other activities that necessitate use of full-face protection.

Face shields protect the face, however they do not provide eye protection from impact. Therefore, eye protection shall be worn under the face shield. Chain saw operators shall wear a mesh face shield, along with eye protection ([SHA-504](#)).



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>PERSONAL PROTECTIVE EQUIPMENT (PPE)</p>
	<p><i>Subject</i></p> <p>Respiratory Protection</p>

REQUIREMENTS

KYTC will provide respirators, including disposable types, to employees who are exposed to air contaminated with harmful dusts, fogs, mists, fumes, gases, smokes, sprays, or vapors. The selection of the appropriate respirator shall be made based upon the hazard encountered, and in accordance with applicable OSHA standards and the KYTC's respiratory protection program ([SHA-407-1](#)).


Where respirator use is required, all applicable provisions of the KYTC respiratory protection program shall be met. These provisions include, but are not limited to, selection, medical evaluation, fit testing, use, cleaning, storage, and training.

Supervisors shall contact the designated respirator program coordinator with questions regarding respiratory protection. All of the provisions above shall be met **before** an employee is permitted to wear a respirator.

OPTIONAL WEAR

Where disposable respirators are used but not required, respirator users shall be provided information from 29 CFR 1910.134, Appendix D, *Information for Employees Using Respirators When Not Required Under the Standard*.




 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>PERSONAL PROTECTIVE EQUIPMENT (PPE)</p>
	<p><i>Subject</i></p> <p>Life Jackets (Personal Flotation Devices)</p>

REQUIREMENTS

Life jackets shall be worn by employees working in close proximity to water when the danger of drowning exists, except when a fall-arrest system incorporates a 100 percent tie-off rule. Life jackets shall be U.S. Coast Guard-approved ([SHA-1611](#)).



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>PERSONAL PROTECTIVE EQUIPMENT (PPE)</p>
	<p><i>Subject</i></p> <p>Hand Protection</p>

REFERENCE [29 CFR 1910.138](#) and [29 CFR 1926.95](#)

REQUIREMENTS Employees shall wear gloves to protect their hands from solvents, acids, abrasion, lacerations, heat, and punctures. A TC 25-156 form, *Job Safety Analysis & PPE Certification of Hazard Assessment*, shall be completed for each task to determine the type of glove and degree of protection needed ([Exhibit 9001](#)).

Electrical gloves must be electrically tested before being issued for such use. They must also be visually inspected and air tested for any possible defects (cuts, holes, tears, embedded objects, changes in texture) before each day's use and whenever there is a reason to believe they may have been damaged. Best practice is to inspect and air test gloves before each use ([SHA-408-1](#)).

**TYPE OF GLOVES
& USES**

Employees should review the following list when determining the type of gloves needed for a particular job:

- *Rubber gloves* shall be provided for handling certain types of chemicals and acids.
- *Other types of chemical-resistant gloves* shall be purchased for handling pesticides and other chemicals as required by their specific safety data sheets or product labels. For further questions, contact the employee safety and health representative.
- *Welder's gloves* shall be worn by employees who are cutting, welding, or conducting other such operations.
- *Impermeable gloves* shall be worn by employees while working with certain types of solvents. Since these are not a stocked item, they must be purchased locally.


**TYPE OF GLOVES
& USES (CONT.)**

- *Disposable vinyl/nitrile gloves* shall be worn when providing first aid, cleaning rest rooms, picking up litter or dead animals, or performing other activities where direct contact is undesirable.

- *Electrical rated gloves* shall be worn by employees working with electricity unless the power can be turned off and lock out/tag out procedures are followed.

Gloves must be electrically tested at regular intervals of not more than 6 months. ([SHA-408-1](#); ASTM F496, *Standard Specification for In-Service Care of Insulating Gloves and Sleeves for appropriate test methods*)



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>PERSONAL PROTECTIVE EQUIPMENT (PPE)</p>
	<p><i>Subject</i></p> <p>Worker Safety Apparel</p>

PURPOSE KYTC promotes safety, hygiene, and a positive environment for employees and the general public. All employees shall be aware of the appearance they present in terms of work attire, personal hygiene, and grooming and shall wear the proper apparel to avoid job-related injuries ([SHA-1504](#) and [SHA-1802](#)).

Appropriate clothing and attire shall be worn to provide protection from sunburn, burns, insects, poisonous plants, and measured protection from injuries. This shall include, but is not limited to, long pants and shirts or blouses covering the shoulders and midriff.

**GARMENT
REQUIREMENTS**

Footwear shall be conducive to and appropriate for the employees' work environment and anticipated duties.

Retroreflective vests or other approved high-visibility (hi-vis) safety apparel shall be worn by all employees working in traffic-control flagging operations, within the right-of-way limits, or in other areas where they are potentially exposed to the risk of moving vehicles, equipment, or roadway traffic.

Hi-vis safety apparel must meet the requirements of ANSI/ISEA *American National Standard for High-Visibility Safety Apparel* (or equivalent revisions) and labeled ANSI 107-2004 (or equivalent revisions) standard performance for Class 2 or 3 risk exposure.

Class 3 apparel shall be worn during nighttime flagging.

For safety reasons, field personnel shall not wear:

- Dresses or skirts
- Shorts or Capri pants
- Tank tops or sleeveless shirts

**SUPERVISOR
RESPONSIBILITIES**

Supervisors are designated as the competent person responsible for worker safety within the activity area of any job site and are responsible for the assessment, selection, and use of appropriate safety apparel.

GARMENT**REPLACEMENT**

Per ANSI 107-2015, Section 12.2(g), the label in a compliant garment must indicate the maximum number of washes for the garment. This indicates the end of life based on the wash durability of the garment. This is so the end user wearing the garment will have an idea of how long this garment will last. This does not take into consideration soil, abrasion, or other damage the shirt comes in contact with when being worn.

The United States Federal Highway Administration (FHWA) has issued a statement regarding the expected lifetime of high-visibility PPE garments, which is also quoted in Appendix F in ANSI 107-2015:

...The useful life of garments that are worn on a daily basis is approximately six months. Garments that are not worn on a daily basis are expected to have a useful service life of up to three years....

Actual lifetimes can vary in the field depending on exposure and care conditions.


Per ANSI 107-2015, section 13.2:

High visibility garments should be repaired or replaced such as when they are torn, noticeably faded, soiled, cracked, burned, heavily abraded or damaged.

ADDITIONAL**INFORMATION**

Refer to [GAP-806](#) for more information on Kentucky Personnel Cabinet and KYTC employee dress policies.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>PERSONAL PROTECTIVE EQUIPMENT (PPE)</p>
	<p><i>Subject</i></p> <p>Hearing Protection</p>


REFERENCE [29 CFR 1910.95](#); [29 CFR 1926.52](#) and [1926.101](#)

PURPOSE Long-term exposure to loud noise will cause hearing loss; therefore, employees should take preventative measures to protect their hearing. All employees shall be included in the hearing conservation program which includes training on the hazards of noise exposure, requirements for wearing hearing protection, selection and proper use of hearing protection, avoiding overexposure to loud noise when away from work, and annual audiometric testing.

REQUIREMENTS Appropriate hearing protection shall be worn in accordance with OSHA standards. Hearing protection is required when operating chain saws, mowers, weed eaters, chippers, jack hammers, cut-off saws or other hand tools, and equipment where noise levels exceed 85 dba (decibels).

The best noise attenuator is distance if administrative and engineering controls are unable to lower noise to acceptable levels ([SHA-401](#) and [SHA-1803](#)).




 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>PERSONAL PROTECTIVE EQUIPMENT (PPE)</p>
	<p><i>Subject</i></p> <p>Foot Protection</p>

REFERENCE [29 CFR 1910.136](#); [29 CFR 1926.96](#); ASTM F2413-17

PURPOSE Protective footwear is required for maintenance, equipment, traffic, and construction personnel as they are regularly exposed to one or more hazards as a part of their routine field tasks.

REQUIREMENTS All employees engaged in field activities shall, at a minimum, wear leather-upper work shoes. When working in areas or performing tasks where there is a danger of foot injury due to falling or rolling objects, objects piercing the sole, or exposure to electrical hazards, employees shall utilize protective footwear that complies with ASTM F2413 (formerly Z41) requirements.




 EMPLOYEE Safety & HEALTH ADMINISTRATION GUIDE	<i>Chapter</i> PERSONAL PROTECTIVE EQUIPMENT (PPE)
	<i>Subject</i> Rubber Aprons & Boots

REQUIREMENTS

Rubber aprons shall be available for use with corrosive chemicals including, but not limited to, solvents and acids.


Rubber boots shall be worn as required by the safety data sheet when employees are mixing and applying pesticides.



 ADMINISTRATION GUIDE	<i>Chapter</i> PERSONAL PROTECTIVE EQUIPMENT (PPE)
	<i>Subject</i> Snake-Proof Leggings

REQUIREMENTS Leggings or other protective equipment for the prevention of snakebites shall be provided to employees as needed.



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>PERSONAL PROTECTIVE EQUIPMENT (PPE)</p>
	<p><i>Subject</i></p> <p>Fall Protection Devices</p>

REQUIREMENTS

All employees exposed to a potential fall, either to the ground or a lower level of 4 feet or more, shall be protected by OSHA-standard guardrails, safety nets, or personal fall-arrest systems.


Harnesses, lanyards, and similar devices shall meet ANSI criteria and testing. Lanyards shall be equipped with shock absorbers when being utilized as part of a fall-arrest system.

[SHA-409](#) details the fall-protection policy.

TRAINING

All employees who might be exposed to fall hazards shall receive training and refresher training as required. This training shall be conducted by qualified personnel.




 EMPLOYEE Safety & HEALTH ADMINISTRATION GUIDE	<i>Chapter</i> PERSONAL PROTECTIVE EQUIPMENT (PPE)
	<i>Subject</i> Welding, Cutting, & Brazing

REQUIREMENTS

All employees exposed to hazards created by welding, cutting, and brazing shall be protected by appropriate welding attire (such as tinted welding helmets, welding gloves, smocks, aprons, etc.) to ensure protection for face, eyes, hands, and torso.




 ADMINISTRATION GUIDE	<i>Chapter</i> PERSONAL PROTECTIVE EQUIPMENT (PPE)
	<i>Subject</i> Skin Protection

PURPOSE

Frequent exposure of unprotected skin to ultraviolet (UV) radiation increases an individual's risk of skin cancer. The main source of UV radiation is sunlight; therefore, employees working outdoors during daylight hours are to wear protective sunscreen or clothing at all times.



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>PERSONAL PROTECTIVE EQUIPMENT (PPE)</p>
	<p><i>Subject</i></p> <p>Chainsaw / Pole Saw</p>

REQUIRED PPE The following chart details PPE requirements for chainsaw and pole saw operations.

CHAINSAW	POLE SAW
<ul style="list-style-type: none"> ◆ Eye protection/mesh face shield ◆ Gloves ◆ Hard hat ◆ Chaps ◆ Hearing protection ◆ Steel closed toe boots 	<ul style="list-style-type: none"> ◆ Eye protection/mesh face shield ◆ Gloves ◆ Hard hat ◆ Chaps (optional, but recommended) ◆ Hearing protection ◆ Steel closed toe boots

SAW OPERATIONS Chainsaws and pole saws shall be operated only by trained, authorized employees. Chainsaw/pole saw operators shall:

- Know how to operate the saw before use
- Follow all manufacturer use and maintenance guidelines
- Keep the saw in good condition and easy to start
- Keep the chain sharp and tight
- Keep the chain oil tank full
- Be aware of their surroundings
- Utilize firm footing at all times
- Never start a saw while standing in a tree, on a ladder, or in any other unstable position
- Watch for kickback (an upward jump or jerk of the saw)
- Shut off chainsaws/pole saws before making any adjustments
- Never leave unattended chainsaws/pole saws while running
- Not smoke while operating chainsaws/pole saws


Chainsaws shall be removed from operation if the constant pressure switch, when released, allows the saw to continue to operate. Operators shall report this and any other malfunctions to their supervisors ([SHA-412](#)).

**STORAGE &
TRANSPORTING**

Employees shall:

- Follow all manufacturer storage guidelines
- Store saws properly, taking care to set level with gas cap up
- Keep the chainsaw/pole saw blade covered with a loose-fitting sleeve when not in use or while transporting
- Store fuel (gas mixture) in labeled, approved safety cans
- Not transport a saw in the passenger space of a vehicle



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>EMERGENCY ACTION PLANS</p>
	<p><i>Subject</i></p> <p>Overview</p>

REQUIREMENTS

Pursuant to [29 CFR 1910.38](#), each KYTC facility shall have a written emergency action plan that is readily available for each employee's review.

The person in charge of the facility shall:

- Designate an employee to oversee implementation of the emergency action plan
- Advise employees of the contact person available to provide information about the plan and explain duties under the plan

REQUIRED PLAN ELEMENTS

The minimum required elements of the emergency action plan shall include:

- Procedures for reporting a fire or other emergency
- Posting of emergency phone numbers
- Procedures for emergency evacuation, including type of evacuation (fire, severe weather shelter, bomb threats) and emergency routes
- Procedures to account for all employees upon evacuation
- Training and procedures for employees who may be responsible for rendering first aid during an emergency
- Procedures for employees who remain in a building following evacuation in order to maintain critical plant operations
- Name and emergency information for employees who may be contacted about the plan or an explanation of individual employees' duties under the plan

TRAINING

The person in charge of the facility shall designate an employee to train other employees on the content of the emergency action plan and to assist in the safe and orderly evacuation of employees in the event of an emergency.


ALARM & NOTIFICATION

SYSTEMS Each facility shall have an alarm or notification system in place to notify employees of an emergency or evacuation. These systems shall be tested at least annually as overseen by safety personnel.

PLAN REVIEW The emergency action plan shall be reviewed and evaluated annually by each facility's safety personnel. All applicable employees shall be notified of plan updates, as well as changes to employee duties or responsibilities.

ADDITIONAL INFORMATION See 29 CFR 1926.35 for information regarding construction emergency action plans.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Section</i></p> <p>EMERGENCY ACTION PLANS</p>
	<p><i>Subject</i></p> <p>Designated Emergency Personnel</p>

**ASSISTANCE IN
EVACUATIONS**

Designated employees shall provide assistance to building inhabitants in the event of an emergency that requires evacuation.

**FLOOR CAPTAINS
& ALTERNATES**

Floor captains and alternates shall:

- Remain calm and encourage others to remain calm
- Urge employees to adhere to proper safety procedures
- Direct persons with limited mobility to assigned elevators as needed
- Follow-up with all floor and exit monitors to ascertain the status of their assigned areas
- Check assigned areas to ensure that only emergency personnel remain
- Proceed to designated safe area and report status
- Refer all media questions to the Office of Public Affairs at 502-564-3419

Floor captains shall maintain an up-to-date list of personnel (name, telephone number, location) needing special assistance when evacuating the building.

**FLOOR MONITORS
& ALTERNATES**

Floor monitors and alternates shall:

- Remain calm and encourage others to remain calm
- Urge employees to adhere to proper safety procedures
- Assist persons with limited mobility to assigned elevators as needed
- Check assigned work areas
- Check restrooms and other enclosed areas
- Report the status of assigned areas to the floor captain
- Proceed to designated safe areas
- Refer all media questions to the KYTC Office of Public Affairs at 502-564-3419

**EXIT MONITORS
& ALTERNATES**

Exit monitors and alternates shall:

- Remain calm and encourage others to remain calm
- Urge employees to adhere to proper safety procedures
- Report to assigned exits to provide assistance
- Assist persons with limited mobility to assigned elevators as needed
- Remain at assigned elevators and assist persons with limited mobility with exiting the building
- Report the status of assigned exits to the floor captain
- Proceed to designated safe areas
- Refer all media questions to the KYTC Office of Public Affairs at 502-564-3419

**SUPERVISOR
RESPONSIBILITIES**

Supervisors shall:

- Remain calm and urge staff to remain calm
- Ensure that all personnel adhere to proper safety procedures
- Instruct staff to report to designated safe areas
- Ensure persons with limited mobility are provided assistance
- Take the daily sign-in sheet to the designated safe area to account for all staff members, and report to a safe area rally captain the name of any employee who is not at the designated safe area
- Refer all media questions to the KYTC Office of Public Affairs at 502-564-3419

**MAINTENANCE &
BUILDING
PERSONNEL**


The building superintendent and crew shall:

- Follow the established emergency action plan
- Inform employees of the situation and actions to be taken
- Assist employees with limited mobility
- Report any problems to the senior member of the crisis management team

**CRISIS
MANAGEMENT
TEAM**

The designated crisis management team shall serve as the site incident command team and shall meet at predetermined locations to oversee, organize, and make executive decisions as needed, depending on the situation. The crisis management team shall relinquish command to appropriate emergency response personnel.




 ADMINISTRATION GUIDE	<i>Chapter</i> EMERGENCY ACTION PLANS
	<i>Subject</i> Medical Emergency

PROCEDURES

If illness or injury occurs:

1. Check the scene and the victim. Do not move the victim unless life-threatening conditions exist.
2. Call 911. State the problem as specifically as possible and give the exact location of the person needing assistance. Stay on the telephone if requested.
3. Call for the first-aid trained responder in the immediate area.
4. Contact the district safety coordinator or regional safety administrator to report the illness or injury.
5. Ask the employee or supervisor to complete the IA-I Form. (See [GAP-303](#) for complete instructions, as well as [SHA-700](#).)



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>EMERGENCY ACTION PLANS</p>
	<p><i>Subject</i></p> <p>Fire</p>

PROCEDURES

In case of fire:

- Pull the fire alarm if the building is equipped. Otherwise, verbally alert all personnel in the immediate area to the presence of fire and the need for evacuation.
- Upon activation of the fire alarm or verbally alerting personnel, use an outside line to call 911. Remain on the phone if requested.
- Unless a life-threatening situation is present, lock computer workstation and close all doors.
- Evacuate the building immediately, as described below.

BUILDING**EVACUATION**

The procedure for evacuating the building during a fire shall be as follows:

1. Exit by the nearest safe stairwell or door. Elevators shall be reserved for employees with limited mobility and emergency personnel only.

Note: If smoke or fire prevents the use of the nearest stairwell or exit door, move to the next closest safe stairwell or exit door to evacuate the building and continue to the designated safe area.
2. Enter stairwells or proceed directly toward an outside exit, moving along the outside wall. If in a stairwell, gradually merge to the inside while descending to allow persons at the next level down to enter.
3. Do not try to ascend the stairwell or enter any other area of the building.

Note: In multi-floor buildings, persons with limited mobility are to report to elevators. If elevators are not functioning, evacuation chairs are available for employees who need assistance. Persons with limited mobility are to exit the building and report to the designated safe areas.

**BUILDING
EVACUATION (CONT.)**

4. Once evacuated, employees are to gather at the designated rally point and remain there until given the ALL CLEAR announcement from the fire department or scene commander.


Note: Designated rally points shall be located a minimum of 500 feet away from the building. Employees shall maintain this distance until advised otherwise by emergency personnel.

5. The senior person in charge for each office shall account for all employees upon reaching the designated rally point and shall report the employee status to the rally captain.
6. Evacuees shall not sit in vehicles in parking garages or lots.
7. Remain calm and orderly in the safe areas. Do not leave safe areas until authorized.
8. Be alert for emergency vehicles.
9. Report any injuries to the rally captain.

**ADDITIONAL
INFORMATION**

For information regarding fire extinguishers, see [SHA-206-4](#).



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>EMERGENCY ACTION PLANS</p>
	<p><i>Subject</i></p> <p>Tornado</p>

DEFINITIONS

A *tornado watch* indicates that conditions are favorable for a tornado to develop. Upon issuance of a tornado watch, be alert for changes in the weather, and be prepared to act quickly.

A *tornado warning* indicates a tornado has been sighted.

PROCEDURES

If a tornado warning alarm sounds, remain calm and follow these directions:

1. Go to the nearest safe area or stairwell. In multi-level buildings, proceed to the areas of the ground floor designated as tornado shelter areas.


Note: Employees of the Transportation Operations Center (TOC) on the first floor are to shelter in place in designated areas.

2. Assist others as needed.
3. Stay away from windows as much as possible.
4. In multi-level buildings, elevators shall be reserved for employees with limited mobility and emergency personnel only.

Note: In the Transportation Cabinet Office Building (TCOB), persons with limited mobility shall report to the central elevator on each floor. If elevators are not functioning, evacuation chairs may be used to evacuate employees with limited mobility. Evacuation chairs are located in the center stairwell on the second floor, as well as the center, east, and west stairwells on the fourth and sixth floors.

5. If unable to reach the tornado shelter areas, seek shelter under sturdy furniture and grasp it securely. If that is not an option, lie in the lowest area available. Clasp both hands behind the back of the head to reduce the risk of neck injury.
6. Use telephones for emergency calls only.
7. Do not leave the tornado shelter area until given the ALL CLEAR announcement is given




 ADMINISTRATION GUIDE	<i>Chapter</i> EMERGENCY ACTION PLANS
	<i>Subject</i> Earthquake

PROCEDURES

In case of an earthquake:

- Keep calm. Do not run or panic.
- If indoors, stay near the center of the building and away from windows or outside doors.
- Seek shelter under sturdy furniture, or sit or stand against an inside wall or inside doorway.
- Do not attempt to leave the building unless instructed to do so.
- Cover head with hands and arms.
- If outside, stay in an open area away from buildings and utility wires.
- Do not use candles, matches, or other open flames.
- If in a moving car, stop the vehicle and stay inside.
- Do not enter damaged buildings.
- Use the telephone for emergency calls only.



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>EMERGENCY ACTION PLANS</p>
	<p><i>Subject</i></p> <p>Bomb Threat</p>

CAUTION: Do not use radios and other electronic devices, including cellular telephones, during a bomb threat. Use of these devices could cause detonation. Landline telephone coordination (calling 911) is best.

PROCEDURES

Upon receipt of a bomb threat by telephone:

- Do not panic. Try to obtain the maximum information from the caller and keep the caller on the line as long as possible.
- Keep bomb threat procedures and checklist by the telephone at all times, and refer to it as you speak to the caller (**Exhibit 9022**).

The bomb threat procedures and checklist is also available online at:

https://emilms.fema.gov/is906/assets/ocso-bomb_threat_samepage-brochure.pdf

Upon discovery of an unidentified suspicious object:

1. Do not touch or move the object, nor allow anyone else to touch or move it.
2. Immediately notify management personnel, who in turn shall notify security if available.
3. If no management personnel are immediately available, notify security if available.
4. If an evacuation is ordered, exit by the nearest stairwell or door. Elevators shall be reserved for employees with limited mobility and emergency personnel only.

Note: In the Transportation Cabinet Office Building (TCOB), persons with limited mobility shall report to the central elevator on each floor. If elevators are not functioning, evacuation chairs may be used to evacuate employees with limited mobility.

PROCEDURES (CONT.)

Evacuation chairs are located in the center stairwell on the second floor, as well as the center, east, and west stairwells on the fourth and sixth floors.

5. Once evacuated, employees are to gather at the designated rally point and remain there until given the ALL CLEAR announcement from the scene commander.

Note: TCOB employees are to assemble in one of two areas based on east and west wing work addresses.

6. The senior person in charge for each office shall account for all employees upon reaching the designated rally point and shall report the employee status to the rally captain.
7. Evacuees shall not sit in vehicles in parking garages or lots.
8. Supervisors shall follow instructions given by emergency agencies (police, fire, explosive ordnance disposal, etc.) and shall report the information through the chain of command as soon as possible.
9. Remain calm and orderly in the safe areas. Do not leave safe areas unless authorized.
10. Be alert for emergency vehicles.
11. Supervisors shall provide necessary assistance to investigating agencies.
12. Report any injuries to the rally captain.


REPORTING

As soon as practical after the receipt or discovery of a bomb threat, the supervisory chain of command shall:

- Notify the Cabinet's Office of Public Affairs at 502-564-3419
- Report the incident immediately to the:
 - ◆ Chief District Engineer, if applicable
 - ◆ OHRM Executive Director
 - ◆ Employee Safety and Health Branch Manager

Note: Refer all public inquiries (such as, press, radio, and TV) to the Office of Public Affairs for a response.

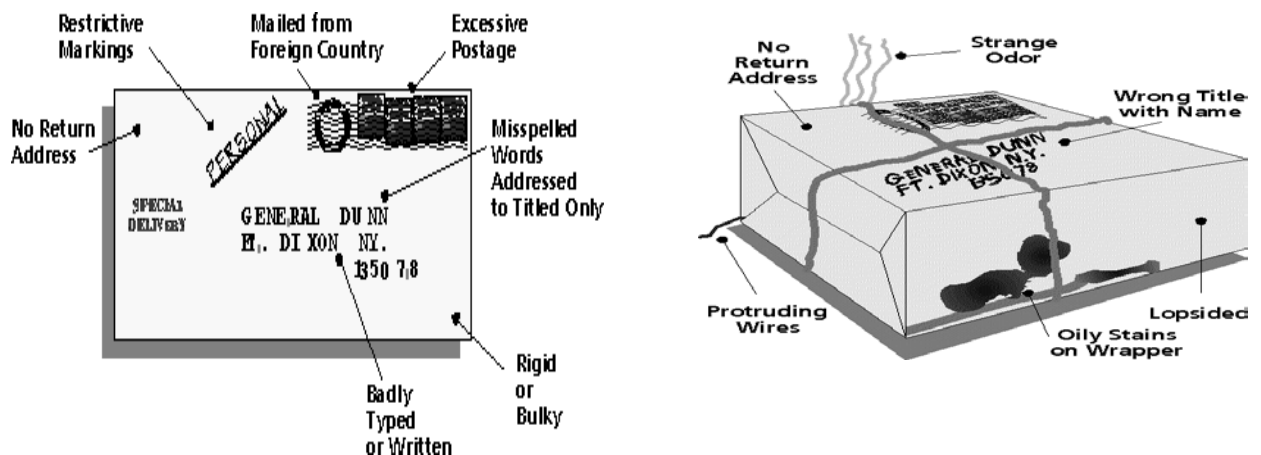


 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>EMERGENCY ACTION PLANS</p>
	<p><i>Subject</i></p> <p>Suspicious Mail</p>

**COMMON
CHARACTERISTICS**

- *Type of Mail:* Foreign, Priority, Special Delivery
- *Restrictive Endorsements:* Confidential, Personal, To Be Opened by Addressee Only
- *Visual Distractions:* Fragile, Rush, Handle with Care
- *Excessive Postage:* Usually postage stamps

Examples of Suspicious Mail



1. Upon spotting a suspicious delivery, do not touch it or allow anyone else to touch it.
2. If holding a suspicious delivery, handle it very gently. Do not turn it over or unbalance it. Carefully set it on a flat surface as soon as possible.
3. Do not carry it outside.
4. Do not place it in water.
5. Evacuate the room and surrounding areas.
6. Notify management personnel.
7. If management personnel are not readily available, immediately call 911 or contact the Kentucky State Police.

**ANTHRAX OR OTHER
BIOLOGICAL AGENTS**

Upon receipt of an unopened letter or package believed to contain anthrax or other biological agent:

1. Do not panic.

Note: Anthrax organisms must be rubbed into broken skin, swallowed, or inhaled as a fine, aerosolized mist to cause infection. It cannot be aerosolized out of an envelope or package containing powder. The same facts and conditions are generally true for other bacteria likely to be considered biological weapons.

2. Place the unopened envelope or package in a plastic bag or clear envelope, and seal it with tape.
3. Wash hands with soap and water.
4. Notify immediate supervisor.
5. If management personnel are not readily available, immediately call 911 or contact the Kentucky State Police.

Upon opening an envelope or package containing suspicious powder:

1. Wash hands with soap and water.
2. Notify immediate supervisor.
3. If management personnel are not readily available, immediately call 911 or contact the Kentucky State Police.
4. If clothing is heavily contaminated, do not brush it off. Remove the clothing when possible, and place it in a plastic bag.
5. Shower with soap and water as soon as possible. Do not use bleach or detergent.
6. Put on fresh clothing.
7. Make a list of all people who had actual contact with the powder, and give the list to the immediate supervisor and public health authorities. Instruct contacts to watch for fever or other symptoms over the next several days.

Upon receipt of a package marked with a threatening message such as ANTHRAX:


1. Do not open the package.
2. Leave it, and evacuate the room.
3. Keep others from entering.
4. Notify immediate supervisor.
5. If management personnel are not readily available, immediately call 911 or contact the Kentucky State Police.

REPORTING

As soon as practical after the suspicious-mail threat, the supervisory chain of command shall notify the KYTC Office of Public Affairs at 502-564-3419.

All public inquiries (press, radio, TV, etc.) shall be referred to the Office of Public Affairs.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>EMERGENCY ACTION PLAN</p>
	<p><i>Subject</i></p> <p>Chemical Spill</p>

CAUTION: Employees who are not trained or properly equipped shall not be expected to become involved in hazardous material until the material is identified and the hazards and safety precautions are understood.

**OUTSIDE THE
BUILDING**

If a chemical spill occurs outside the building:

1. Follow directions from the local emergency management system.
2. Secure all windows and doors exposed to the outdoors.
3. Seal gaps at the bottom of doorways.
4. Move to the center of the building; in multi-level buildings, it is not necessary or advised to change floors.
5. Assist others as needed.
6. Supervisors shall use sign-in sheets to account for all employees in their work areas.
7. Do not leave the building until given the ALL CLEAR announcement.

**INSIDE THE
BUILDING**


If a chemical spill occurs inside the building:

1. Move away from the spill area immediately.
2. Notify management personnel.
3. If management personnel are not readily available, immediately call 911 or contact the Kentucky State Police

Note: If the chemical identity is known, the safety data sheet shall be made available to emergency personnel.

4. Wait for instructions from management or emergency personnel.
5. If exposed to a chemical spill resulting in inhalation or skin contact, seek medical attention immediately and follow injury reporting procedures ([SHA-700](#)).




 EMPLOYEE Safety & HEALTH ADMINISTRATION GUIDE	<i>Chapter</i> EMERGENCY ACTION PLANS
	<i>Subject</i> Aircraft Emergency

PROCEDURES

If an aircraft crashes in or adjacent to any Kentucky Transportation Cabinet building:

1. Follow local emergency action plan.
2. Call 911 or the Kentucky State Police.
3. Follow directions from emergency management personnel.



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>EMERGENCY ACTION PLANS</p>
	<p><i>Subject</i></p> <p>“Code Adam”</p>

PROCEDURES

Pursuant to [KRS 199.015](#), the CODE ADAM safety protocol is hereby established and shall be implemented by all administrators in state buildings in the following manner:

- When a parent, tutor, or guardian notifies any employee of a state building that his or her child is lost or missing, the employee shall obtain from the parent, tutor, or guardian a detailed description of the minor, including but not limited to the name, age, color of eyes, height, weight, clothing, and shoes the child was wearing before becoming lost or missing.
- From the closest telephone available, the same employee shall alert the state building administrator or the person designated in the state building's CODE ADAM plan, who shall then notify the occupants of the state building through the loudspeaker system or any other fast and effective means of communication that CODE ADAM has been activated.
- The employee shall escort the parent, tutor, or guardian to the main door of the state building to help in identifying the child.
- Persons designated by the administrator shall monitor all state building exits to ascertain that the minor does not leave the state building without the parent, tutor, or guardian. In addition, two or more employees, as necessary, shall be assigned to search the parking areas of the state building. This process shall not entail the closing or locking of any door of the state building.
- Any child, or person with a child, leaving the state building shall be asked to go through the main exit previously designated by the administrator. The child or person with the child shall be allowed to leave only after it has been determined that the minor who is leaving is not the child being searched for and that the person with the minor is the parent, tutor, or guardian of the child, and the person presents a government-issued photo identification.

**PROCEDURES
(CONT.)**

- After CODE ADAM has been announced through the state building's loudspeaker system or any other fast and effective means of communication, the employees shall search the entire building. At least two employees shall be assigned to each floor to certify that the minor is not present. Employees who are directly serving a member of the public at that time and employees who have been previously excluded by the administrator shall not be compelled to participate in the search.
- If the minor is found unharmed and appears to have been simply lost or missing in the state building, the child shall be immediately taken to the parent, tutor, or guardian.
- If the minor is found in the company of any person other than the child's parent, tutor, or guardian, reasonable means shall be taken to delay the exit of the child and the person from the state building until:
 - ◆ A peace officer arrives
 - ◆ The child and the person with whom the child is found both are properly identified
 - ◆ The circumstances of the situation are determined
- If the minor is not found within a ten-minute period, the state building administrator shall notify a state or local law enforcement agency that a child is lost or missing and provide the information then known about the lost or missing child. The law enforcement agency shall respond to the scene and shall take control of the incident. The law enforcement agency may request that the local search and rescue coordinator provide additional resources to search for the lost or missing child. The law enforcement agency and the local dispatch center shall take the actions required by [KRS 17.450](#), [17.460](#), and [39F.180](#).
- Upon the location of the lost or missing child or the arrival of a peace officer from the law enforcement agency which was notified of the lost or missing child, whichever occurs first, the state building administrator shall cause an announcement of the ending of the CODE ADAM by the state building loudspeaker or other fast and effective means of communication.

**PROCEDURES
(CONT.)**

- Upon the ending of the CODE ADAM, the state building administrator shall prepare three copies of a report of the incident, which shall be:
 - ◆ Sent within three working days to the Secretary of the Finance and Administration Cabinet and the Commissioner of the Department of Kentucky State Police
 - ◆ Kept in the administrative files of the state building for a period of three years from the date of the incident

**IMPLEMENTATION
RESPONSIBILITY**

The Secretary of the Finance and Administration Cabinet, in consultation with the Justice and Public Safety Cabinet through the Department of Kentucky State Police, shall:

- Be responsible for coordinating implementation of the CODE ADAM program throughout the Commonwealth
- Provide training to administrators of state buildings and employees designated by those administrators in the implementation of the CODE ADAM program
- Provide training in procedures for the search of state buildings and grounds for lost and missing children
- Print and distribute signs to each public agency for use in each state building relating to the CODE ADAM program and how to initiate a CODE ADAM. The signs shall be not less than twelve inches square and have white letters and a purple background containing the information specified by the cabinet by administrative regulation
- Conduct a CODE ADAM drill annually at each facility covered by the provisions of [KRS 199.013](#) to [199.019](#)
- Provide for the collection of statistics from each facility covered by the provisions of [KRS 199.013](#) to [199.019](#) on each CODE ADAM within the state building


EXEMPTION

The Secretary of the Finance and Administration Cabinet, in consultation with the Justice and Public Safety Cabinet through the Department of Kentucky State Police, may exempt any agency or state building which, due to the nature of the services provided by that agency or state building, is not visited by children.

**EXPIRATION OF
EXEMPTION**

The agency or state building shall immediately report to the Secretary of the Finance and Administration Cabinet when the agency or state building is likely to be visited by children on a frequent or continuing basis. Upon receipt of the notification from the state building administrator or agency that the state building is being visited by children, the exemption from compliance with the provisions of [KRS 199.013](#) to [199.019](#) shall expire.




 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>EMERGENCY ACTION PLANS</p>
	<p><i>Subject</i></p> <p>Golden Alert</p>

DEFINITION A *Golden Alert* provides a means to begin an immediate search for a missing, lost, or overdue impaired adult.

An *impaired adult* means a person age 18 years of age or older who has a verified mental or cognitive impairment and whose disappearance poses a credible threat to the health and safety of the person, as determined by a local law enforcement agency [[KRS 39F.010\(3\)\(a\)](#), [KRS 39F.010\(3\)\(b\)](#), [KRS 39F.180](#)].

PROCEDURE Upon notification to any Kentucky Transportation Cabinet (KYTC) employee of a missing impaired adult at any KYTC facility, the employee shall notify the facility manager and immediately call 911 or the Kentucky State Police.



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>EMERGENCY ACTION PLANS</p>
	<p><i>Subject</i></p> <p>Armed Intruder</p>

PROCEDURE In the event of an armed intruder, call 911 and alert others around you if possible. The Kentucky Transportation Cabinet (KYTC) then recommends that employees utilize a *Run, Hide, Fight* response in reaction to any armed intruder event.

RUN

- Leave the building as quickly as possible.
- Leave your belongings behind.
- Make certain the exit is safe before passing through it.
- Help those around you, although it may be necessary to leave them in order to ensure your own safety.
- When law enforcement are encountered while evacuating, keep hands up, visible, open, and free of any foreign objects. Follow police instructions.
- Get as far away as possible from the building and await further instructions.


HIDE

- If evacuating the building is not possible, find a room in which to hide. Block the door with heavy objects or jam the door.
- Search out a hiding spot where you are out of view, such as under or behind furniture. If possible, make certain that the hiding spot does not restrict your movement or trap you.
- Turn off your cell phone.
- Remain quiet.

FIGHT

- As a last resort, and as a personal defense, use aggressive force against the armed intruder.
- Use any available resources to defend yourself from the intruder's attack.
- Look for items that can be used as weapons, such as fire extinguishers, chairs, hot liquids, etc., and use them to defend yourself, if necessary.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>INJURY / ILLNESS RESPONSE & REPORTING</p>
	<p><i>Subject</i></p> <p>Overview</p>

**PURPOSE
& SCOPE**

The Workers’ Compensation Law ([KRS 342](#)) is designed to compensate employees for loss of earnings due to work-related injuries or a disease arising out of and in the course of their employment. This coverage includes medical, temporary total disability, permanent partial disability, permanent total disability, rehabilitation services, and death and burial benefits.


The Kentucky Transportation Cabinet (KYTC) encourages statewide efforts to provide a safe work environment and to lower the costs of workers’ compensation claims. KYTC continues to stress a team approach in resolving workers’ compensation issues.

PROCEDURE

KYTC is self-insured and processes claims along with a TPA. The employee reports the injury to his or her supervisor by completing *IA-1, First Report of Injury or Illness* ([Exhibit 9023](#)). All workers’ compensation records shall be retained by KYTC for 5 years.

The *General Administration & Personnel Manual* details the administrative procedures for reporting injuries and the workers’ compensation policies and procedures ([GAP-303](#)).



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>INJURY / ILLNESS RESPONSE & REPORTING</p>
	<p><i>Subject</i></p> <p>Medical & First Aid</p>

REFERENCES [29 CFR 1910\(K\)](#), [29 CFR 1926\(C\)](#) and (D), [803 KAR 2:310](#)

PURPOSE The Employee Safety and Health (ES&H) Branch is dedicated to the protection of its employees from on-the-job injuries and illnesses. All occupational health concerns receive the highest priority. Therefore, it is essential that personnel respond quickly and effectively to injuries requiring first-aid, as well as all other occupational health problems. The health and wellness of each employee is integral to the overall safety environment.

ADMINISTRATION The ES&H Branch is responsible for establishing and implementing the Medical and First Aid Program. Personnel participating in the program should contact the ES&H Branch or their designated safety personnel if further information is needed.

DEFINITION *First aid* refers to medical attention that is usually administered on location immediately after an injury has occurred. It often consists of one-time, short-term treatment and requires little technology or training to administer.

Examples of first aid include cleaning minor cuts, scrapes, or scratches; treating a minor burn; applying bandages and dressings; providing non-prescription medicine; draining blisters; removing debris from the eyes; massaging cramped muscles; and, encouraging fluid intake to relieve heat stress.

RESPONDER LIABILITY The Commonwealth of Kentucky has a Good Samaritan statute in place to protect citizens who aid in emergency situations. [KRS 311.668](#) provides that when citizens respond to an emergency and act as an ordinary, reasonably prudent person, they shall be immune from civil liability for any personal injury as a result of the care or treatment they render.

FIRST AID KITS

In the absence of an infirmary, clinic, or hospital in proximity to the workplace, a fully stocked first-aid kit and a person adequately trained to render first aid shall be present at every jobsite for the duration of the job (29 CFR 1910.151, 1926.50). First aid supplies shall be readily available and shall, at a minimum, include contents as described in American National Standard (ANSI) Z308.1-1998, *Minimum Requirements for Workplace First-aid Kits*. The contents of the kit listed in the ANSI standard should be adequate for small worksites.

When larger operations or multiple operations are being conducted at the same location, employers shall determine the need for additional first-aid kits at the worksite, additional types of first-aid equipment and supplies, and additional quantities and types of supplies in the first-aid kits. Employers should also assess the specific needs of their worksite periodically and augment the first-aid kit appropriately. Refill supplies and replacement first-aid and bloodborne pathogen kits may be requisitioned at equipment garages. Supervisors and employees are required to maintain an up-to-date inventory, replacing used or outdated items as necessary.

Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use.

If it is reasonably anticipated that employees will be exposed to blood or other potentially infectious materials while using first-aid supplies, employers shall provide appropriate personal protective equipment (PPE) in compliance with 29 CFR 1910.1030 (d)(3), and 29 CFR 1926.50, Appendix A, which includes gloves, gowns, face shields, masks, and eye protection.

TRAINING

To qualify to render first aid, employees shall complete a training program in accordance with the American Red Cross training guidelines and policies as provided by a certified American Red Cross instructor. The ES&H Branch or district safety personnel shall make this training available to all KYTC employees.

Trained employees shall be retrained in accordance with established agency and American Red Cross timelines to keep their knowledge and skills current. Timelines may be found online at:

<https://www.redcross.org/take-a-class/cpr/cpr-for-schools>

<https://www.redcross.org/take-a-class/learn-about-our-programs>

INJURY REPORTING Every work-related personal injury or illness shall be reported to the supervisor as soon as possible, if not immediately.

Refer to [GAP-303-1](#) for reporting procedures, timelines, and responsibilities.

Note: Due to the presence of confidential information, all forms shall be hand-delivered or emailed using encryption technology.

BASIC FIRST AID The following sections describe the signals for and treatment of basic injuries and illnesses that could occur in the workplace and is provided as refresher information to trained personnel and awareness information to other employees. Every work location shall have persons adequately trained to render first aid, as well as trained in KYTC's bloodborne pathogens exposure control plan. Facilities shall conspicuously post the names of those persons trained and maintain documentation of their training records.

Additional information regarding the bloodborne pathogens exposure control plan may be obtained from the Employee Safety and Health (ES&H) Branch and [SHA-703](#).

Life-threatening conditions must be treated first. Any person severely injured may develop shock; therefore, treatment must start immediately without waiting for symptoms to develop.

GENERAL

INSTRUCTIONS

Follow these general instructions when responding to an injured person:

- Check the victim and the scene.
- Call 911.
- Obtain consent for treatment.

Note: If the victim is unconscious, consent is implied.

- Evaluate the victim and situation according to SAMPLE.
 - S = Signs and symptoms
 - A = Allergies
 - M = Medications
 - P = Past medical history
 - L = Last oral intake
 - E = Events leading up to the illness or injury
- Check the victim for bleeding, skin color, medical ID necklaces or bracelets, and observable signals of pain.
- Begin appropriate treatment.
- Do not move the victim unless the scene becomes unsafe.

BLEEDING (EXTERNAL) Follow these steps when attempting to control bleeding:

- Place a sterile dressing over the wound and apply pressure.
- Cover dressing with bandage.
- If possible, elevate the wound above heart level.
- If bleeding continues, apply additional dressings or bandages and continue applying direct pressure.
- Seek medical assistance by calling 911.
- Take steps to minimize shock.
- Tourniquets shall be used only as a last resort in cases of delayed care, situations where response from EMS personnel is delayed, when direct pressure does not stop the bleeding, or direct pressure cannot be applied. If used, the tourniquet should be applied and kept in place continuously until more advanced medical personnel take over or the person reaches a medical facility.
- For open wounds not located on an extremity, standard guidelines suggest use of a hemostatic dressing coated with a special agent to enhance clotting when correctly applied and combined with direct pressure.

BURNS

A burn is an injury that results from heat, electricity, chemicals, or radiation. A burn may vary in depth, size, and severity. If electrical, make sure the power is turned off. If it is a dry chemical burn, brush off and rinse with water for 10 minutes. If it is a wet chemical, rinse the affected area for 10 minutes.

- Classification
 - ◆ *First degree*—superficial burn; skin is red, dry, and usually painful; the area may swell
 - ◆ *Second degree*—partial thickness; skin is red and has blisters that may open and weep clear fluid, making the skin appear wet; may appear mottled and often swells
 - ◆ *Third degree*—full thickness; skin may be brown or black (charred), with the tissue underneath appearing white
- Treatment
 - ◆ Stop the burning.
 - ◆ Cool the burned areas.
 - ◆ Cover burned areas with dry, sterile, loose dressings, or clean cloth.
 - ◆ If severe, call 911.

BURNS (CONT.)**DO NOT**

- ◆ Apply ice or ice water except on a small, superficial burn and then for no more than 10 minutes. Ice can damage delicate tissue.
- ◆ Touch a burn with anything except a clean covering.
- ◆ Remove any piece of clothing that is sticking to the burned area.
- ◆ Try to clean a severe burn.
- ◆ Break blisters.
- ◆ Use any kind of ointment on a severe burn.

CHOKING (CONSCIOUS VICTIM ONLY)

Follow these steps when assisting a **conscious** choking victim:

- From behind, place thumb side of fist against middle of abdomen above navel. Grasp fist with other hand.
- Give five abdominal thrusts.
- Give five back blows and five abdominal thrusts.
- Repeat until object is dislodged.
- If the person becomes **unconscious**, begin rescue breathing techniques.

FRACTURES, DISLOCATIONS, & SPRAINS

Follow these steps when assessing a suspected fracture, dislocation, or sprain:

:

- Support injured area above and below injury site.
- Check for feeling, warmth, and color.
- Immobilize body part above and below injured area by splinting.
- Recheck for feeling, warmth, and color.
- Apply cold compresses to reduce swelling and pain.
- For general care for muscle, bone, or joint injuries remember R.I.C.E.:
 - ◆ Rest
 - ◆ Immobilize
 - ◆ Cold
 - ◆ Elevation

FROSTBITE

Frostbite occurs when body tissue freezes following exposure to a cold environment and typically affects extremities (fingers, hands, nose, feet, and toes).

- Signals
 - ◆ Loss of feeling and sensation in the affected area
 - ◆ Skin appears waxy, cold to the touch, or discolored (flushed, white, yellow, or blue)

FROSTBITE (CONT.)

➤ Treatment

- ◆ Get the victim out of the cold.
- ◆ Handle the frostbitten area gently.
- ◆ Warm the skin gently by soaking the affected area in warm water (100-105 degrees F) until normal color returns and the area feels warm.
- ◆ Loosely bandage the area with dry, sterile dressings.
- ◆ If the person's fingers or toes are frostbitten, place dry, sterile gauze between them to keep them separated.
- ◆ Take precautions to prevent hypothermia.
- ◆ Call 911 to seek emergency medical care as soon as possible.

DO NOT

- ◆ Attempt to rewarm the frostbitten area if there is a chance that it might refreeze or if you are close to a medical facility
- ◆ Rub the area
- ◆ Apply direct heat from stove or heat lamp
- ◆ Break the blisters
- ◆ Apply ointments

HEAT EMERGENCIES

Heat Cramps are painful muscle spasms, usually in the legs and the abdomen.

Heat Exhaustion (early state) is an early indicator that the body's cooling system is becoming overwhelmed.

➤ Signals

- ◆ Cool, moist, pale, flushed, or ashen skin
- ◆ Headache, nausea, dizziness
- ◆ Weakness, exhaustion
- ◆ Heavy sweating

Heat Stroke (late stage) is when the body's systems are overwhelmed by heat and stop functioning. Heat stroke is a life-threatening condition.

➤ Signals

- ◆ Change in the level of consciousness
- ◆ High body temperature
- ◆ Red, hot skin that can be either dry or moist
- ◆ Rapid or weak pulse
- ◆ Rapid or shallow breathing
- ◆ Vomiting

**HEAT EMERGENCIES
(CONT.)**

- Treatment for any heat-related emergency
 - ◆ Move the person to a cool place.
 - ◆ Loosen tight clothing.
 - ◆ Remove perspiration-soaked clothing.
 - ◆ Apply cool, wet towels to the skin.
 - ◆ Fan the person.
 - ◆ If the person is conscious, give small amounts of cool water to drink.
 - ◆ If the person refuses water, vomits, or starts to lose consciousness:
 - Send someone to call 911 or the local emergency number.
 - Place the person on his or her side.
 - Continue to cool the person by using ice or cold packs on their wrists, ankles, groin, and neck and in the armpits.
 - Continue to check for movement and breathing.

HYPOTHERMIA

Hypothermia is a life-threatening condition that occurs when the entire body cools because its ability to keep warm fails. The person will die if not given care.

- Signals
 - ◆ Shivering
 - ◆ Slow, irregular pulse
 - ◆ Numbness
 - ◆ Glassy stare
 - ◆ Weakness
 - ◆ Apathy or impaired judgment
 - ◆ Loss of muscle control, no shivering, or loss of consciousness (late stages of hypothermia)
- Treatment
 - ◆ Call 911.
 - ◆ Gently move the victim to a warm place.
 - ◆ Monitor airway, breathing, and circulation.
 - ◆ Warm the victim by wrapping him or her in blankets or by putting dry clothing on the person.
 - ◆ If the victim is alert, give him or her warm liquids to drink that do not contain alcohol or caffeine.
 - ◆ Monitor for signs of shock.

INSECT STINGS

Follow these steps when treating an insect sting:

- Remove stinger by gentle scraping, not pulling or squeezing.
- Find out from the victim as quickly as possible if they are allergic and if they have an epinephrine auto-injector.
- Wash the site with soap and water.
- Cover the site and keep it clean.
- Apply a cold pack to the area to reduce pain and swelling.
- Watch the person for signals of an allergic reaction.
- Call 911, or transport the victim to a doctor or hospital if allergic reactions such as breathing difficulty, facial swelling, hives, nausea, or abdominal cramps occur.

POISON IVY

Some of the most common and severe allergic reactions result from contact with plants of the poison ivy group. Ordinarily, the rash begins within a few hours after exposure, however it may be delayed for 24 to 48 hours.

- Signals
 - ◆ Itching
 - ◆ Redness
 - ◆ Rash
 - ◆ Possible headache and fever
- Treatment
 - ◆ Remove contaminated clothing.
 - ◆ Wash all exposed areas thoroughly with soap and water.
 - ◆ Use poison ivy cleaner.
 - ◆ Apply calamine or other soothing skin lotion if rash is mild.
 - ◆ Get medical advice if a severe reaction occurs or if there is a known history of previous sensitivity.

POISONING

If a person shows signs of poisoning, treat it as a life threatening condition. Call 911, then call Poison Control at 1-800-722-5725.

SHOCK (TRAUMATIC)

Shock is a life-threatening condition of low blood perfusion to body tissues that results in cellular injury or inadequate tissue function.

- Signals
 - ◆ Restlessness or irritability
 - ◆ Nausea and vomiting
 - ◆ Altered level of consciousness
 - ◆ Pale or ashen, cool, moist skin
 - ◆ Blue tinge to lips and nail beds
 - ◆ Rapid breathing and rapid pulse
 - ◆ Excessive thirst

**SHOCK (TRAUMATIC)
(CONT.)**

- Treatment
 - ◆ Call 911.
 - ◆ Control any external bleeding.
 - ◆ Keep the victim from getting chilled or overheated.
 - ◆ Elevate the legs 8-12 inches if you do not suspect a head, neck, or back injury, or broken bones in the hips or legs.
 - ◆ Comfort and reassure the victim until advanced medical personnel arrive and take over.
 - ◆ Do not give food or drink to the victim.

SNAKE BITES

The bite of a poisonous snake is extremely painful and is characterized by rapid swelling of the affected part.

- Call 911 or the local emergency number.
- Wash the wound.
- Keep the injured area still and lower than the heart.

TICK BITES


There are two ticks common to the Commonwealth of Kentucky: the American dog tick and the lone star (deer) tick. Both ticks are known to carry diseases harmful to humans. The American dog tick transmits Rocky Mountain spotted fever, while the lone star tick transmits Lyme disease.

- To avoid tick bites
 - ◆ Wear light-colored clothing, hat, long-sleeved shirt, and long pants.
 - ◆ Tuck shirttail into pants, and tuck pant legs into socks.
 - ◆ Use insect repellents.
 - ◆ Check yourself for ticks after each outing.
- Treatment
 - ◆ With a gloved hand, grasp the tick with fine-tipped, pointed, non-etched, non-rasped tweezers as close to the skin as possible and pull slowly.
 - ◆ If possible, save tick in tight container for identification.
 - ◆ Wash the bite area with soap and water.

DO NOT:

- ◆ Attempt to suffocate or cover the tick with butter, petroleum jelly, fingernail polish, ointment, gasoline, kerosene, or similar substance
- ◆ Burn with lighted cigarette or match



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>INJURY / ILLNESS RESPONSE & REPORTING</p>
	<p><i>Subject</i></p> <p>Bloodborne Pathogens</p>

REFERENCES [29 CFR 1910.1030](#), 29 CFR 1910.1030 (Appendix A)

EXPOSURE EXAMPLES Examples of occupational exposure:

- Bridge painting inspectors perform the initial evaluation of bridge paint condition prior to bidding a job. This includes inspecting the underside of the bridge where, in many instances, homeless people, drug addicts, etc., live or shelter. The inspectors must climb the embankments through excrement, waste, and unknown materials to evaluate the bridge. It is reasonable to expect contaminated sharps such as needles or broken glass and, due to the general poor health of many of these people, possible exposure to blood or other potentially infectious materials. Maintenance employees performing similar duties (for example, bridge crew inspectors) are also included as having occupational exposure on a case-by-case, site-specific basis.
- Rest area personnel clean restrooms and empty the garbage for the entire facility. Due to the high volume of individuals using these facilities, it is reasonable to expect possible exposure to blood or other potentially infectious materials (OPIM).

Examples of occupational exposure resulting from collateral duty incidents (such as, administering first aid):

- A number of Kentucky Transportation Cabinet (KYTC) employees of varying job classifications are trained in Red Cross standard first aid to provide emergency care for co-workers in the absence of immediate medical facilities. This is not their primary job assignment, but rather a collateral duty.
- Potential occupational exposure could occur during a medical event requiring first aid. Additional persons included in the plan as having collateral duty are identified on a case-by-case, site specific basis.

GENERAL**PRECAUTIONS**

All employees shall follow universal precautions to prevent contact with blood or OPIM. All blood, vomit, or body fluids shall be considered infectious.

Engineering and work practice controls shall be utilized to eliminate possible exposures. Where occupational exposure remains after institution of these controls, personal protective equipment (PPE) shall also be used.

- Following bodily contact with blood or OPIM, employees shall wash the affected area with soap and water, or flush with water as soon as feasible. If hand washing facilities are not available (for example, on highway work operations), antiseptic hand cleansers or towelettes shall be used, and hands washed with soap and running water as soon as feasible. Alcohol prep pads with 70% isopropyl alcohol can be used as towelettes.
- Employees shall wash hands as soon as feasible after removal of gloves or other PPE.
- Disposable latex gloves and alcohol prep pads shall be included in all first-aid kits. The supervisor or foreman shall ensure that all first-aid kits are fully stocked at all times.
- Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are prohibited in work areas where there is a reasonable likelihood of occupational exposure to bloodborne pathogens or OPIM.
- A bloodborne pathogens cleanup kit shall be available from the Division of Equipment and shall contain the following PPE and cleanup items:
 - ◆ Absorbent powder
 - ◆ Protective latex gloves
 - ◆ Protective eye wear
 - ◆ Shoe covers
 - ◆ Apron
 - ◆ Isolation mask
 - ◆ MSDS sheets
 - ◆ Scoops/scrapers
 - ◆ Disposable towel
 - ◆ Antiseptic towel
 - ◆ Red biohazard bags with ties
 - ◆ Disinfectant wipe - HIV and Tuberculocidal Kill Claim
 - ◆ Instruction sheet

GENERAL**PRECAUTIONS (CONT.)**

When any of the cleanup items or PPE is used, a new kit shall be obtained. There are no refills.

To ensure that contaminated areas and cleanup tools are completely decontaminated, appropriate EPA-registered tuberculocidal disinfectants shall be obtained and used.

- Rest area personnel shall be alert to the possibility of contaminated sharps in can or barrel trash receptacles. For this reason, hand tamping of contents is prohibited. Extreme caution shall be exercised in carrying and disposing of litterbags to protect against protruding sharps.

Housekeeping methods of compliance include the following:

- Possible contaminated sharps shall not be directly touched. Rather, they shall be moved using mechanical means, such as a brush and dust pan, tongs, or forceps.
- Blood or OPIM shall be cleaned as soon as possible after contamination occurs. The contaminated areas and cleaning tools shall be decontaminated with appropriate EPA-registered, tuberculocidal disinfectants.
 - ◆ Tuberculocidal aerosol sprays are appropriate to disinfect nonporous hard surfaces such as tile, glass, or plastic.
 - ◆ A flooding bulk disinfectant should be used to decontaminate porous materials such as rugs, concrete, mops, or brooms.

PPE

PPE is provided at no cost to KYTC employees. The supervisor or foreman should include PPE in first-aid kits.

- Disposable gloves shall be worn whenever providing first aid.
- Eye protection shall be worn when providing care to bleeding victims.
- Contaminated materials shall be placed in BIOHAZARD bags for proper disposal. Contaminated disposable PPE shall be placed in infectious waste bags. Disposable PPE shall not be decontaminated and reused.

**EXPOSURE
PROTOCOL**

Immediate Responses to Exposure to Blood or OPIM include:

- Skin: Immediately wash the area of exposure with soap and running water. Seek medical assistance within 24 hours.

Note: If wearing any type of personal protective equipment, remove it carefully and wash the underlying skin with soap and running water.

**EXPOSURE PROTOCOL
(cont.)**

- Mucous Membranes (mouth, eyes, etc.): Immediately flush with flowing water or saline solution. Seek medical attention within 24 hours.
- Parenteral (piercing mucous membranes or skin by needle sticks, cuts, abrasions, or human bites): Immediately wash wound with soap and running water. Seek medical attention within 24 hours.

HEPATITIS B VACCINE

The Hepatitis B vaccine will be provided as follows:

- Employees with Occupational Exposure (such as bridge painting inspectors, rest area attendants, and rest area foremen)
 - ◆ The Hepatitis B vaccine is offered to these employees at no cost after receiving required training.
 - ◆ Any employee declining or not completing the series of Hepatitis B vaccinations shall sign a waiver (**Exhibit 9034**). The waiver may be accessed online at:

<https://intranet.kytc.ky.gov/org/OHRM/em/Documents/HEP%20B%20WAIVER.pdf>
 - ◆ The Hepatitis B vaccine will be provided at no cost to any employee who initially declines the vaccine but later wishes to receive it.
- Employees with Occupational Exposure Resulting from Collateral Duty Incidents (such as those administering first aid)
 - ◆ Pre-Hepatitis B vaccine is not offered; however, employees shall receive the required training.
 - ◆ Post-exposure care shall be provided.

**POST-EXPOSURE
EVALUATION &
FOLLOW-UP**

The Hepatitis B vaccine shall be offered as soon as possible and at no cost to all unvaccinated employees who render assistance in the presence of blood or OPIM, but no later than 24 hours after the exposure.

Exposed employees shall seek medical attention at the local hospital emergency room (ER) within 24 hours of exposure. The ER physician should follow the hospital protocol for possible bloodborne pathogen (BBP) exposure, including a blood draw and baseline blood test consisting of a normal panel, HEP B, HEP C, and HIV screening, as well as the administration of a tetanus vaccine.

**POST-EXPOSURE
EVALUATION &
FOLLOW-UP (CONT.)**

The ER physician should also provide results to the patient or patient's primary physician for purposes of follow-up blood testing and medical surveillance as required by the hospital's BBP exposure protocol. HEP B post-exposure vaccination is at the discretion of the treating physician.

**INTERACTION WITH
HEALTH CARE
PROFESSIONALS**

A written opinion shall be obtained when an employee is sent for the Hepatitis B vaccine or following an exposure incident.

- The healthcare professional's written opinion for Hepatitis B should be limited to the following information:
 - ◆ Whether the Hepatitis B vaccination is indicated for an employee
 - ◆ If the employee received the Hepatitis B vaccination
- The healthcare professional's written opinion for post-exposure evaluation and follow-up should be limited to the following information:
 - ◆ The employee has been informed of the results of the evaluation.
 - ◆ The employee has been told about any medical conditions resulting from exposure to blood or OPIM that require further evaluation or treatment.

SHARPS INJURY LOG

The Employee Safety & Health (ES&H) Branch shall establish and maintain a sharps injury log for the recording of percutaneous injuries from contaminated sharps as required by 29 CFR 1904. The information in the sharps injury log shall be recorded and maintained in such a manner as to protect the confidentiality of the injured employee. The sharps injury log shall contain, at a minimum:

- Type and brand of device involved in the incident
- Department or work area where the exposure incident occurred
- Explanation of how the incident occurred

The sharps injury log shall be maintained for the period required by 29 CFR 1904.33.

TRAINING

All employees shall receive training at the time of initial employment; employees with potential exposure to bloodborne pathogens shall also receive training annually thereafter. The training shall be conducted by Employee Safety and Health (ES&H) Branch personnel.

RECORDKEEPING Employees shall report exposure to BBPs or OPIM by completing an IA-1 ([Exhibit 9023](#)).

[SHA-702](#) provides additional information on injury reporting.


All medical records required by the OSHA standard shall be maintained by the KYTC Division of Personnel Management. These records shall be maintained for 30 years after employment ends.

All training sessions shall be documented and records of the training shall be maintained on site for a minimum of three years. Copies shall be filed with the district office, as well as the ES&H Branch.

Training records shall include the following information:

- Dates of training sessions
- Summary of training sessions
- Names and qualifications of training leaders
- Names and job titles of all training attendees



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>INJURY / ILLNESS RESPONSE & REPORTING</p>
	<p><i>Subject</i></p> <p>Automated External Defibrillators (AED)</p>

REFERENCES [KRS 311.667](#) and [KRS 311.668](#)

PURPOSE The Kentucky Transportation Cabinet (KYTC) has concluded that the threat of a sudden cardiac arrest is an office hazard that can be minimized at a reasonable monetary cost. Therefore, automated external defibrillators (AED) have been placed in central locations in facilities throughout the state.

EQUIPMENT Any AED unit installed or replaced is to be in conformity with the unit being replaced. If the electrodes or batteries of a particular unit have met their expiration date, they shall be replaced. For additional help in purchasing or securing replacement devices, contact the ES&H Branch.

AEDs shall be located close to first-aid stations, if possible. Guidelines suggest an optimal response time of three minutes or less. Things to consider in AED placement may include the building layout, the likelihood of more physical activity taking place in a particular area, and areas with high visitor activity.

Each AED unit shall have one set of defibrillation electrodes located in the case. One resuscitation kit shall be placed in proximity to the AED. This kit shall contain two pair latex-free gloves, one razor, one set of trauma shears, and one facemask barrier device.

MAINTENANCE All equipment and accessories necessary for support of medical emergency response shall be maintained in a state of readiness.

Specific maintenance requirements include:

- Monthly equipment maintenance check reports shall be kept on file for three years and made available upon request ([Exhibit 9024](#))

MAINTENANCE (CONT.)

- ES&H Branch shall be informed of changes in availability of emergency medical response equipment and the withdrawal of equipment from service.
- ES&H Branch shall inform trained personnel, or security personnel of changes in availability of emergency medical equipment.

TRAINING

A list of employees trained and certified to use AEDs shall be kept next to the AEDs. KYTC employees who would like to be CPR, first aid, and AED certified should contact the district safety coordinators or ES&H Branch. [803 KAR 2:310](#) requires at least one person to be first aid trained for all places of employment with more than eight employees.

Approved training courses for CPR, first aid, and AED are available through the American Red Cross.

Training records shall be retained for two years and made available upon request.

**RESPONDER
LIABILITY**

The Commonwealth of Kentucky has a Good Samaritan statute in place to protect citizens who aid in emergency situations. [KRS 311.668](#) provides that when citizens respond to an emergency and act as an ordinary, reasonably prudent person, they shall be immune from civil liability for any personal injury as a result of the care or treatment they render.


REPORTING

The person responding to an incident shall document the event using TC 25-169, *Automated External Defibrillator (AED) Post-Event Review* ([Exhibit 9025](#)).

A copy of the AED Post-Event Review Report shall be sent within one business day to the ES&H Branch who will forward it to the AED medical oversight physician.

Following the use of the emergency response equipment, all equipment shall be cleaned, decontaminated, disinfected, and properly disposed per manufacture guidelines. The AED shall be taken out of service, and the district safety personnel or ES&H Branch shall be notified to obtain replacement defibrillation pads and battery.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>INJURY / ILLNESS RESPONSE & REPORTING</p>
	<p><i>Subject</i></p> <p>OSHA Injury & Illness Recordkeeping & Reporting</p>

PURPOSE The Kentucky Transportation Cabinet (KYTC) is required to record serious work-related injuries and illnesses on the OSHA 300 Log.

Note: Do not record minor injuries requiring first aid only. Such injuries shall be documented on the IA-1 form ([Exhibit 9023](#)) and electronically reported to the third party administrator.

Examples of OSHA-recordable injury or illness:

- Work-related fatality
- Work-related injury or illness that results in loss of consciousness, days away from work, restricted work, or transfer to another job
- Work-related injury or illness requiring medical treatment beyond first aid
- Diagnosed, work-related cancer, chronic irreversible diseases, fractured or cracked bones or teeth, and punctured eardrums

All work-related needlestick injuries and cuts from sharp objects that are contaminated with another person's blood or other potentially infectious material (as defined by 29 CFR 1910.1030) must be recorded and entered on the *OSHA 300 Log* as an injury. To protect the employee's privacy, do not enter the employee's name on the *OSHA 300 Log*. [See requirements for privacy cases in paragraphs 29 CFR 1904.29(b)(6) through 1904.29(b)(10).]

**MAINTAINING &
POSTING RECORDS**

Injury and illness records must be maintained at the facility for at least five years. Each February through April, senior management or their designee must post in an area readily available to employees a summary of the injuries and illnesses recorded the previous year. Copies of injury and illness records must be provided to current and former employees or their representatives, upon request.

ELECTRONIC SUBMISSION**OF RECORDS**

KYTC is required by OSHA to electronically submit injury and illness data recorded on OSHA injury and illness forms. Analysis of this data will enable OSHA to use its enforcement and compliance resources more efficiently. The Employee Safety and Health (ES&H) Branch shall satisfy this requirement through KYTC's third party administrator.

SEVERE INJURY**REPORTING**

Death, hospitalization, amputation, loss of an eye, or other serious injury of a Cabinet employee shall be immediately reported to the district safety coordinator and the ES&H Branch at (502) 564-4610. The information provided shall include:

- Caller's name and position classification
- Affected employee's name, position classification, and current work address
- Details surrounding the incident, including location and any witnesses

DO NOT delay reporting even if all the information is not readily available.

REPORTING**REQUIREMENTS**

Within 8 hours of the incident being reported to KYTC, the ES&H Branch shall orally report to the Kentucky Labor Cabinet, Department of Workplace Standards, Division of Occupational Safety and Health Compliance, at (502) 564-3070, any work-related incident which results in the following:

- Death of any employee
- Hospitalization of three or more employees


If ES&H Branch personnel cannot reach the Frankfort office, they shall report the incident using the OSHA toll-free, central telephone number, 1-800-321-OSHA (1-800-321-6742).

Within 72 hours from when the incident is reported, the ES&H Branch shall orally report to the Kentucky Labor Cabinet, Department of Workplace Standards, Division of Occupational Safety and Health Compliance, at (502) 564-3070, any work-related incident which results in the following:

- Amputation suffered by an employee
- Hospitalization of fewer than three employees
- Loss of an eye suffered by an employee

District safety personnel shall initiate an investigation of the incident and report their findings to the ES&H Branch.



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>VEHICLE INCIDENT REPORTING</p>
	<p><i>Subject</i></p> <p>KSAP Accident Report</p>

PROCEDURES

Employees shall report all incidents involving Cabinet vehicles or equipment (including leased vehicles and equipment) on an SRC-12, *KY Self-Insured Auto Program (KSAP) Accident Report* ([Exhibit 9026](#)).


This form shall contain a detailed outline of the incident written by the person involved. If that person cannot give a written statement, the supervisor shall complete the form in the involved person’s own wording. The completed form shall be forwarded to the district equipment supervisor or appropriate district contact, who will forward a copy to the Office of Legal Services. A copy also shall be given to the safety personnel.

FALSE REPORTS

[KRS 304.47-030](#) states:

Any person who knowingly and with intent to defraud any insurance company or other person files a statement of claim containing any materially false information or conceals, for the purpose of misleading, information concerning any fact material thereto commits a fraudulent insurance act, which is a crime.




 ADMINISTRATION GUIDE	<i>Chapter</i> VEHICLE INCIDENT REPORTING
	<i>Subject</i> Serious Vehicle or Equipment Incident

PROCEDURES

The responsible district, office, or division shall immediately notify the Employee Safety and Health (ES&H) Branch when a Cabinet employee is involved in an incident while operating state equipment or a state vehicle that results in serious injury, property damage, or fatality to another party. In the case of district employees, safety personnel shall also be notified.

Safety personnel will promptly investigate the incident and report the findings to their manager and the individual's chain of command.




 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>CUTTING & WELDING OPERATIONS</p>
	<p><i>Subject</i></p> <p>Storage & Handling of Oxygen & Acetylene Cylinders</p>

GENERAL PRECAUTIONS Employees shall take the following precautions when storing and handling oxygen and acetylene cylinders:

- Full oxygen and acetylene cylinders shall be separated by a minimum distance of 20 feet unless a fire-retardant wall separates the cylinders.
- Empty oxygen and acetylene cylinders shall have valves closed. Oxygen-cylinder valves shall never be allowed to come into contact with grease or oil.
- When used in shop operations, oxygen and acetylene cylinders shall be secured to hand trucks with a chain. Additional cylinders not secured on hand trucks shall be secured against a wall.
- When used on service trucks for field repairs, oxygen and acetylene cylinders shall be secured to prevent upsetting. Cylinders shall not be transported or operated in a horizontal position.
- Valve caps or approved cylinder safety caps shall be in place when the cylinders are transported. This also applies to cylinders secured on hand trucks and service trucks.
- Cylinders shall be stored far enough from the cutting and welding operation to prevent contact with hot slag, sparks, or flame.
- Acetylene cylinders shall have the valve wrench kept in place on the valve spindle.
- Leaking cylinders shall be moved to an open area with good ventilation. Warning signs must warn personnel against using spark- or flame-producing items.
- Cylinders containing oxygen and acetylene shall not be taken into confined spaces.
- Cylinders shall be handled with care at all times.




 EMPLOYEE Safety & HEALTH ADMINISTRATION GUIDE	<i>Chapter</i> CUTTING & WELDING OPERATIONS
	<i>Subject</i> Cutting Operations

GENERAL**PRECAUTIONS**

Employees shall take the following precautions during cutting operations:

- Torches shall be lit by friction lighters or other similar sources, but not by matches or cigarette lighters.
- Acetylene and oxygen cylinders shall have operable pressure regulators.
- Operators shall frequently inspect hoses. Broken hoses shall be replaced. Tape shall not be used to repair hoses.
- Cylinder valves shall be closed upon work completion. Pressure shall be bled from oxygen and acetylene torches.
- Lukewarm water shall be used to loosen acetylene cylinders that have frozen to the ground. An open flame shall not be used.
- Hose for cutting operations shall be positioned so as not to create a tripping hazard.
- Cutting-torch operators shall immediately mark material worked upon as “hot” if other personnel may come in contact with the work.
- Acetylene torches shall not be operated with more than 15 psi.



 ADMINISTRATION GUIDE	<i>Chapter</i> CUTTING & WELDING OPERATIONS
	<i>Subject</i> Electric Welding

GENERAL PRECAUTIONS Employees shall take the following precautions during electric welding operations:


- Only electrode holders capable of safely handling the maximum-rated current required by the electrodes shall be used.
- Any current-carrying parts passing through the portion of the holder that the arc welder grips in his or her hand and the outer surfaces of jaws of the holder shall be fully insulated against the maximum voltage encountered to ground.
- Splices and breaks in electrode cables within 10 feet of the electrode holder shall not be permitted.
- Welding cables shall be kept dry and free from grease and oil.
- The frames of all arc-welding machines shall be grounded either through a third wire in the cable containing the circuit conductor or through a separate wire that is grounded at source of the current.
- The welding machine shall have overcurrent protection provided by a circuit breaker that is in view of the operator.
- Electrodes shall be removed from the holder when electrode cables are left unattended or when the job is completed.
- Hot electrodes shall not be dipped into water.
- Exhaust from welding power sources driven by internal combustion engines shall be vented outside to prevent a carbon monoxide hazard.
- Mechanical ventilation hoods shall be provided to remove toxic fumes and contaminants to the outside of the building.

GENERAL PRECAUTIONS

(CONT.)

- A portable welding screen is required on electric welding jobs to shield harmful rays from other employees working nearby. This requirement applies to all garages and shops and, whenever practical, in the field.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>CUTTING & WELDING OPERATIONS</p>
	<p><i>Subject</i></p> <p>Fire Protection</p>

GENERAL**PRECAUTIONS**


Employees shall comply with the following fire safety precautions:

- Service trucks shall be equipped with a dry-chemical fire extinguisher with at least a 20-pound Class ABC rating.
- Welding operators in shops and garages shall have a dry-chemical (Class ABC) fire extinguisher immediately available.
- Cutting torches and welders shall not be used on old drums, barrels, tanks, or other containers until they have been thoroughly cleaned and no traces of flammable, explosive, or toxic substances remain.
- No drum, container, or hollow structure shall be cut or welded unless a pressure vent or opening is provided.

ADDITIONAL**INFORMATION**

[SHA-206-4](#) (Fire Extinguishers) and [SHA-604](#) (General Fire Safety Guidelines)



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>CUTTING & WELDING OPERATIONS</p>
	<p><i>Subject</i></p> <p>Personal Protective Equipment</p>


PPE REQUIREMENTS Employee's involved in cutting and welding operations shall comply with the following PPE requirements:

- Welder's gloves shall be worn by employees while cutting, welding, or conducting other such operations.
- Welding helmets and cutting goggles shall be worn as described in [SHA-503](#) and [SHA-504](#).
- Respirators shall be required and used in accordance with the Cabinet's respiratory protection program while cutting or welding under certain conditions ([SHA-407-1](#)).
- Employees shall wear filter-type respirators when cutting, welding, or heating the following in an open area:
 - ◆ Metals containing or coated with lead-bearing materials
 - ◆ Cadmium-bearing or cadmium-coated base metals
 - ◆ Metals covered with mercury-bearing metals
 - ◆ Zinc-bearing base or filler metals
 - ◆ Lead base metals
 - ◆ Cadmium-bearing filler material
 - ◆ Metals coated with chromium-bearing materials

Note: When working on a beryllium-containing base, employees shall wear an air-line respirator.

- Other employees exposed to the same atmosphere as the welders or cutters shall be protected in the same manner as the welders or cutters.
- When it is impossible to provide mechanical or local exhaust ventilation, air-line respirators shall be worn. When in doubt, supervisors shall contact the Employee Safety and Health Branch for information on the proper respirator to use.



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>GARAGE & SHOP SAFETY</p>
	<p><i>Subject</i></p> <p>Housekeeping</p>

GENERAL**PRECAUTIONS**

Good housekeeping is essential to maintaining a safe and efficient workplace. A garage or shop “good-housekeeping checklist” shall include, but not be limited to:

- Established procedure for cleaning
- Floor drains clean and covers in place
- Exits clear at all times
- Steps and stairs clear of objects
- Aisles clear of stored materials
- Floors clear of unused tools and materials
- Tools and equipment in proper storage areas when not in use
- Adequate provision for disposal of waste

Note: Lids or covers are required on waste receptacles containing flammable waste, including oily or greasy rags.

- Approved dry compound or absorbent for oil and grease spills
- Floor covers in place for hoist controls
- Unobstructed access to fire extinguishers, water control valves, and circuit breaker boxes

Note: Circuit breakers shall be clearly marked as to what they control, and breaker box panel doors latched securely.


- Restrooms clean, orderly, and stocked with an adequate supply of toilet paper, soap, and at least lukewarm water
- Windows and lights clean
- Adequate lighting provided and all lights working properly
- Clean facilities provided for storing clothing, eating lunches, and taking breaks
- Materials securely stacked to prevent falling
- Grounds, driveways, and parking areas clean and orderly
- Adequate heating and ventilation in all parts of the building

GENERAL PRECAUTIONS

(CONT.)

- Sufficient room between machines for safe operation
- Spill kits used as required for in-house spills
- No gasoline or flammables used for cleaning equipment, floors, and other items
- Used oil containers maintained in a clean manner and all spills cleaned immediately



 ADMINISTRATION GUIDE	<i>Chapter</i> GARAGE & SHOP SAFETY
	<i>Subject</i> Hydraulic Lifts & Jacks

GENERAL**PRECAUTIONS**

The district equipment supervisor should follow the manufacturer recommendations for inspections of hydraulic lifts for leaks and other deficiencies and provide maintenance as required.


Capacity of jacks shall be posted legibly and shall not be exceeded.

Jacks shall be placed on a firm base.

Employees shall:

- Use safety stands and dump bed locks when working beneath raised equipment, including dump beds
- Use wheel chocks when working beneath raised equipment, including dump beds
- Follow all manufacturer guidelines




 ADMINISTRATION GUIDE	<i>Chapter</i> GARAGE & SHOP SAFETY
	<i>Subject</i> Stationary Air Compressors

GENERAL**PRECAUTIONS**

Employees are to comply with the following safety precautions when working with stationary air compressors:

- Belt pulleys shall be guarded.
- The compressor shall have an operative pressure gauge and safety pop-off valve that engages when no more than 10 percent of the compressor's maximum working pressure is exceeded.
- Air compressors shall be secured to the floor to prevent free movement.
- Employees shall follow all manufacturer guidelines.



 ADMINISTRATION GUIDE	<i>Chapter</i> GARAGE & SHOP SAFETY
	<i>Subject</i> Fixed Electrical Equipment

GENERAL


PRECAUTIONS

Water fountains, ice machines, and soft drink machines, as well as grinders, drill presses, electrical saws, and all electrical equipment shall be grounded according to the National Electric Code.

Spliced wires or cords shall not be used on any electrical equipment.

[SHA-408](#) provides additional information on electrical safety.




 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<i>Chapter</i> GARAGE & SHOP SAFETY
	<i>Subject</i> Building Wiring

REQUIREMENT All permanent building wiring shall be in accordance with the current National Electric Code.

Any installation or modification of electrical wiring shall be completed by a licensed electrician.

[SHA-408](#) provides additional information on electrical safety.



 EMPLOYEE Safety & HEALTH ADMINISTRATION GUIDE	Chapter GARAGE & SHOP SAFETY
	Subject Bench Grinders


GENERAL**PRECAUTIONS**

Operators shall review the *Bench Grinder Safety Checklist* prior to beginning operations ([Exhibit 9027](#)), available online at:

<https://intranet.kytc.ky.gov/org/OHRM/em/Documents/Bench%20Grinder%20Safety%20Checklist.pdf>

The spindle speed of the machine shall be checked before mounting of the wheel to be certain that it does not exceed the maximum operating speed marked on the wheel. Wheels should be tapped gently with a light nonmetallic implement, such as the handle of a screwdriver for light wheels, or a wooden mallet for heavier wheels. If they sound cracked (dead), they shall not be used. This is known as the Ring Test, which shall be conducted on all wheels prior to their mounting to make sure they have not been damaged in transit, storage, or otherwise.




 ADMINISTRATION GUIDE	<i>Chapter</i> GARAGE & SHOP SAFETY
	<i>Subject</i> Chain Hoists

GENERAL

PRECAUTIONS

Chain hoist capacity shall be posted legibly and shall not be exceeded. Hoist hooks shall have an operational safety latch or keeper. Employees shall follow all manufacturer guidelines.




 ADMINISTRATION GUIDE	<i>Chapter</i> GARAGE & SHOP SAFETY
	<i>Subject</i> Fans

GENERAL**PRECAUTIONS**

All floor and office fans shall have blades guarded by a 1/2-inch guard or other suitable means. Employees shall follow all manufacturer guidelines.

Spliced wiring and cords shall not be used on fans.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>GARAGE & SHOP SAFETY</p>
	<p><i>Subject</i></p> <p>Battery Charging & Changing</p>


GENERAL**PRECAUTIONS**

Battery-charging and changing areas shall be separated from the areas of other operations. A sign—CAUTION, BATTERY-CHARGING AREA—shall be posted. The portable battery charger shall be stored in the designated area when not in use.

Face shields, safety goggles, rubber gloves, and rubber aprons shall be worn by personnel engaged in battery charging operations. A No SMOKING sign shall be posted at the charging station ([SHA-500](#)).

Personnel handling battery acid (sulfuric acid) shall wear face shields, safety goggles, rubber gloves, and rubber aprons. These items shall be provided at the battery-charging site. During mixing, acid shall be poured into water and not vice versa. Sulfuric acid shall be stored only in equipment repair garages. Facilities shall be provided for flushing electrolytes from the eyes and skin with water when changing or charging storage batteries. A water supply capable of providing a 15-minute flush shall be within 25 feet of the work area.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>GARAGE & SHOP SAFETY</p>
	<p><i>Subject</i></p> <p>Safety Tire Cages</p>

GENERAL**PRECAUTIONS**

When tires that are installed on split rims with locking rings are filled with air, the tires shall be placed in an approved safety tire cage or rack. A clip or chuck and in-line gauge shall be used when airing tires with multi-piece rims. Airing tires shall not be left unattended.


Field personnel who must fill such tires with air shall securely chain the rim and tire or otherwise positively secure the rim from disengaging. Tires shall be aired with lock ring facing the ground. A multi-piece rim poster for compliance with [29 CFR 1910.177](#) shall be posted in the immediate vicinity of the tire cage. Tires with multi-piece rims shall be changed only by trained personnel in facilities with approved tools and equipment.

Ether shall not be used while airing tires.

Employees engaged in servicing truck and equipment tires shall be trained in proper safety procedures in accordance with the manufactures guidelines.

Employees shall follow all OSHA Regulations per 29 CFR 1910.177 for Servicing Multi-Piece and Single-Piece Rim Wheels ([SHA-406-1](#)).




 ADMINISTRATION GUIDE	<i>Chapter</i> GARAGE & SHOP SAFETY
	<i>Subject</i> Machine Guarding

REQUIREMENTS

All open or exposed belts, pulleys, sprockets, shafts, couplings, flywheels, drive chains, etc., located within 7 feet of floor or ground shall be guarded.




 EMPLOYEE Safety & HEALTH ADMINISTRATION GUIDE	<i>Chapter</i> GARAGE & SHOP SAFETY
	<i>Subject</i> Grease Pits

REQUIREMENTS

Grease pits shall have a protective cover or removable type of 42-inch guardrail and 21-inch mid-rail. A positive means for stopping travel of vehicles shall be provided.

[SHA-409](#) details fall protection procedures and guidelines.




 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>GARAGE & SHOP SAFETY</p>
	<p><i>Subject</i></p> <p>Inspection Lights (Drop Cord Lights)</p>

GENERAL PRECAUTIONS Employees shall comply with the following safety precautions when work with inspection lights (drop cord lights):

- Extension cords shall be:
 - ◆ Heavy duty, three-wire type design-rated for hard or extra-hard usage (such as, types S, ST, and SO).
 - ◆ Protected by GFCI's
 - ◆ Approved by Underwriter Laboratories
- Cord plug ends shall not have the ground prong removed and shall be tightly closed.
- Temporary cords shall not be used as permanent wiring.
- Worn, spliced, repaired, or frayed cords shall not be used.
- Only trained, qualified, and authorized persons shall repair electric equipment.
- Workspaces and walkways shall be kept clear of cords.
- Droplights shall be of the approved grounded type that does not have means to attach an electrical tool.
- Extension cords and droplight cords shall not be fastened with staples, hung from nails, or suspended by wire.
- Flexible cords shall not go through wall holes.
- Only listed, labeled, or certified equipment shall be installed and used in accordance with manufacturers' instructions.



 ADMINISTRATION GUIDE	<i>Chapter</i> GARAGE & SHOP SAFETY
	<i>Subject</i> Paint Spraying


GENERAL**PRECAUTIONS**

Employees involved in paint spraying operations shall abide by the following safety precautions:

- Most paints can be worked with safely when proper procedures are followed during the painting, cutting, heating, or welding of materials coated with paint ([SHA-407-1](#)).
- Employees that have a potential for exposure and/or overexposure must be protected by engineering controls, proper work practices, or appropriate personal protective equipment ([SHA-500](#) and [SHA-401](#)).
- Adequate ventilation shall be provided for employees exposed to various paints, including polyurethane, epoxy, waterborne and alkyd based coatings, including deck sealers and sidewalk sealers, to minimize fume/vapor exposure.

Employees not assigned to paint/coating operations shall take appropriate measures to avoid these areas.



 EMPLOYEE Safety & HEALTH ADMINISTRATION GUIDE	<i>Chapter</i> GARAGE & SHOP SAFETY
	<i>Subject</i> Flammable Storage

STORAGE

All storage of flammable liquids and gases should be in accordance with local, state and federal laws. All sources of ignition are prohibited in areas where flammables are stored, handled or processed. Storage warning and “No SMOKING” signs must be prominently posted.

Storage tanks should be equipped with proper relief vents. Vents should not be located close to open flame, heating apparatus, or any source of ignition. Flammable liquids or lubricating oils in drums, cans, or other containers stored inside are to be guarded against any ignition source and segregated in a fireproof room or separate building which is well vented whenever possible.

Note: Gasoline shall never be stored in vehicle trunk compartments.

Flammables and combustibles unnecessary for operations shall not be stored inside buildings or in proximity to spark-producing operations.

Quantities of flammables in excess of 25 gallons shall be stored in an approved metal cabinet posted with, “FLAMMABLE—NO SMOKING WITHIN 25 FEET.”

**TRANSPORTING
FLAMMABLE
LIQUIDS**

Flammable liquids shall not be transported in any open vessel. Only approved, sealed containers are to be used. Barrels, cans or vessels containing flammable liquids shall be secured and chocked in any vehicle before moving. Open lights (such as lanterns) are not to be used on equipment transporting any flammable liquid. Extra or emergency gasoline or other flammable liquids must be carried in approved safety cans with a capacity of not more than 5 gallons. These should be painted red and plainly marked.

GENERAL**PRECAUTIONS**

Safe handling and use of flammable liquids and gases include:

- Refueling of any type of equipment, trucks or passenger cars while motor is running is strictly prohibited.
- All tanks, hoses and containers are to be in metallic contact while flammable liquids are being poured.
- "Buck-eye" safety nozzles, or their equivalent, must be used for dispensing gasoline on hand or power-driven pumps.
- Flashlights and portable lamps used in connection with the handling of flammables should be flash-proof, insulated, and approved.
- All rooms, buildings, and enclosures where flammables are handled should be well ventilated.
- Approved fire extinguishers should be provided and conspicuously placed and marked in any area where flammables are stored, handled, or used.
- Flammables should never be used as cleaning agents.
- A tank to be filled should always be gauged to avoid the danger of an overflow. Welding, cutting, riveting, or other work involving ignition should not be performed on any storage tank which has contained flammables until such tank has been completely filled to the top with water.
- Accumulations of rust or scale on a tank which contains or has contained flammable liquids should be removed with no sparking tools such as wooden mallets.
- Any spills of flammables should be cleaned up immediately, particularly in the vicinity of permanent gas and fuel pumps.
- Flammable liquids must never be placed in glass or plastic containers.
- Quantities of flammables one gallon or less shall be dispensed from the original container or an approved metal safety can. *Safety can* shall mean "an approved closed container, of not more than 5 gallons capacity, having a flash arresting screen, spring-closing lid and spout cover and so designed that it will safely relieve internal pressure when subjected to fire exposure." [29 CFR 1926.155(l)]

Note: All safety cans shall be labeled in accordance with requirements in [SHA-410](#).


- Quantities of flammables in excess of one gallon shall be dispensed from approved safety cans unless the flammable is extremely hard to pour, in which case the original shipping container may be used.
- Rags used in cleanup can be very susceptible to spontaneous combustion and should be stored in approved safety cans or a safe location.

GENERAL

PRECAUTIONS (CONT.)

Note: Most biodegradable solvents have a relatively low flash/burn temperature (140 to 200 degrees Fahrenheit). Use caution if around open flames.



 EMPLOYEE Safety & HEALTH ADMINISTRATION GUIDE	<i>Chapter</i> GARAGE & SHOP SAFETY
	<i>Subject</i> Electrical Saws

GENERAL**PRECAUTIONS**

All exposed belt pulleys and other parts with in-running nip points shall be adequately guarded when located within 7 feet of the floor. All electrical saws shall be grounded and have the “on-off” power source located within easy reach of operator.

No adjustments shall be made to power saws while they are operating. Exhaust systems shall be provided where tests have indicated the need.

Housekeeping around power saws is of utmost importance. Loose sawdust shall be swept as often as necessary.

Follow all manufacturer guidelines.

HAND-FED CROSSCUT**TABLE SAWS**

Saw blades shall be guarded by a hood that will ride the stock as it is being cut. A spreader shall be provided behind the saw blade to prevent the stock from kicking back. Anti-kickback fingers shall be mounted on the hood guard and not on the spreader.


SWING CUTOFF SAWS

Saw shall be fitted with a hood or guard that completely encloses the upper half of the saw, arbor end, and point of operation at all positions of the saw. The guard shall drop on top of and remain in contact with the material being cut. Limit chains or other equally effective means shall be provided to prevent the saw from swinging beyond the front or back edges of table. A counterweight or other device shall be provided that will automatically return the saw to the rear of the table.

BAND SAWS

The saw blade shall be guarded as closely to the point of operation as possible. The guard shall encase wheels and all unused parts of the blade.




 EMPLOYEE Safety & HEALTH ADMINISTRATION GUIDE	<i>Chapter</i> GARAGE & SHOP SAFETY
	<i>Subject</i> Mechanical & Natural Ventilation

GENERAL

PRECAUTIONS

Facilities equipped with mechanical ventilation shall use the exhaust attached to equipment for carbon monoxide removal. Facilities using natural ventilation (open doors or windows) shall be evaluated upon request from the Employee Safety and Health Branch.




 ADMINISTRATION GUIDE	<i>Chapter</i> GARAGE & SHOP SAFETY
	<i>Subject</i> Hand Tools

GENERAL**PRECAUTIONS**

Employees shall abide by the following safety precautions when working with hand tools:

- Only tools that are in good condition shall be used. Defective tools shall not be issued or kept in storage with usable tools ([SHA-412](#)).
- Cracked and split handles shall be replaced and not taped.
- A dedicated storage space shall be provided on the job, in the yard, or inside buildings for proper storage of tools.
- Tools shall be put in proper storage when not in use so as not to constitute a hazard.
- Tools should be used in accordance with manufacturers' guidelines.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>GARAGE & SHOP SAFETY</p>
	<p><i>Subject</i></p> <p>Lift / Hoisting Equipment</p>

REFERENCE [29 CFR 1926.753](#) and [29 CFR 1926.1431](#)

DEFINITION *Lift / hoisting equipment* is defined as equipment with a maximum lifting capacity exceeding one ton that is capable of raising an item more than 15 feet (5 meters) high and has the ability to swing or rotate a boom. This includes a large excavator with a boom, as well as a crane, derrick, gin poles, and gantry hoist systems.


GENERAL

PRECAUTIONS

Employees shall not stand in the area immediately around lift equipment or under the object being lifted. Proper safety warning devices (gating, cones, fencing, blocking signs, etc.) shall be used to alert personnel to possible falling objects, swinging or rotating arc paths, and cable breakage.

In addition to manufacturer-installed safety supports, employees shall use dump locks and jack stands when working under raised truck beds. Employees shall never work beneath unsupported suspended loads.



 EMPLOYEE Safety & HEALTH ADMINISTRATION GUIDE	<i>Chapter</i> GARAGE & SHOP SAFETY
	<i>Subject</i> Emergency Shower & Eye Wash


REFERENCES [29 CFR 1910.151](#) and [19 CFR 1926.50](#)

GENERAL

PRECAUTIONS

Each emergency shower and eye wash station shall be kept clean and free from clutter which will allow for clear access. Monthly inspections shall be conducted, documented, and maintained by safety personnel.



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>GARAGE & SHOP SAFETY</p>
	<p><i>Subject</i></p> <p>Pressure Washers</p>

GENERAL**PRECAUTIONS**

Pressure washers are used to clean equipment, materials, and work areas on the job. They must be used with extreme caution as the water is under high pressure and moves with enough force to damage eyes and abrade skin.


Prior to beginning work, identify the unit's safety stickers, read the operator's manual, and follow the manufacturer's instructions for safe use, maintenance, and storage.

The ES&H pressure washer safety checklist is another resource that may be used ([Exhibit 9035](#)).

The checklist may be found online at:

<https://intranet.kytc.ky.gov/org/OHRM/em/Documents/Pressure%20Washer%20Checklist.pdf>




 ADMINISTRATION GUIDE	<i>Chapter</i> LABORATORY & MATERIALS TESTING
	<i>Subject</i> Hazardous Chemicals

GENERAL PRECAUTIONS Employees shall observe the following when working with hazardous chemicals:

- A written chemical hygiene plan shall be developed and implemented in accordance with OSHA standard [29 CFR 1910.1450](#) for each applicable laboratory facility.
- A written hazard communication plan shall be developed and implemented for each laboratory facility.
- Safety Data Sheets (SDS) for chemicals being handled shall be available at each facility. Supervisors shall review SDS with all affected employees ([SHA-410](#)).
- A person certified in first aid shall be on site in every laboratory.
- Fully stocked first-aid kits shall be readily available for all laboratory employees.
- All chemical containers shall be labeled as to their content.
- Proper ventilation shall be provided at all times.
- Personal protective equipment identified in the SDS shall be worn as required.
- Eye wash stations and/or showers shall be located in work areas where corrosive chemicals are utilized.
- Eye wash stations and/or showers shall be inspected monthly and maintained in good working order ([SHA-1021](#)).



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>LABORATORY & MATERIALS TESTING</p>
	<p><i>Subject</i></p> <p>Fire & Explosion Protection</p>


STORAGE Chemicals that are incompatible with one another shall be stored separately. The supervisor shall provide all employees with adequate knowledge and training concerning storage compatibility and safe handling practices ([SHA-410](#) and [SHA-1015](#)).

GENERAL PRECAUTIONS Flammables with low flash points shall be handled with extreme care. The vapor shall not be allowed to come into contact with a source of ignition.

Non-sparking tools shall be used to open drums and other containers of flammable materials ([SHA-1015](#)).

ABC fire extinguishers shall be available and compliant with [SHA-206-4](#).




 ADMINISTRATION GUIDE	<i>Chapter</i> LIFTING
	<i>Subject</i> Introduction

GENERAL**PRECAUTIONS**

Lifting heavy items is one of the leading causes of injury in the workplace. Overexertion and cumulative trauma are the biggest factors in lifting-related injuries. For example, lifting a 25-pound box from the floor requires about 700 pounds of back muscle force, even when you bend your knees. Below are some tips that can help protect your back when you need to lift heavy objects:

- Design and construct work and storage surfaces at the appropriate level to encourage proper work posture and to avoid stooping, bending, stretching, turning, and reaching.
- Avoid storing heavy materials overhead when at all possible. Storage structures shall be secured and properly loaded to avoid tipping over or falling.
- Before lifting, take a moment to think about the task.
- Examine the load's weight and check for sharp corners, slippery spots, or other potential hazards.
- Be aware of personal lifting weight limits and do not exceed them. When a load cannot be safely handled by one person because of its excessive weight, bulk, or awkward shape:
 - ◆ Ask for help
 - ◆ If possible, divide the load to make it lighter or more manageable to carry
- Utilize assistance or mechanical devices when lifting loads greater than 20 pounds. Handling of heavy loads should involve the use of mechanical aids such as hand trucks, dollies, hoists, conveyors, carts, powered industrial trucks, and other mechanical devices.
- Know the load's destination and make sure that it and the path of travel are both free of obstructions.
- Never carry a load that cannot be seen over or around.
- Do not twist your body or spine when carrying a load.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>LIFTING</p>
	<p><i>Subject</i></p> <p>Lifting Procedures</p>

PROCEDURES

Employees are to use the following procedure when lifting heavy objects:

BEND YOUR KNEES



- The employee should stand close to the load with his or her feet spread apart about shoulder width, one foot slightly in front of the other for balance.

- Squat down, bending at the knees (not the waist) while keeping your back straight. A straight back keeps spine, back muscles, and internal organs of the body in correct alignment. Straight does not necessarily mean vertical or straight up and down.

HUG THE LOAD



- The load should be drawn close to the body. Arms and elbows should be tucked into the side of the body. Grip object firmly with whole hand, not just fingertips.

- Tuck chin so neck and head continue the straight line of the back.

- Begin lifting slowly with the legs (not the back) by straightening them. Never twist your body during this step.

AVOID TWISTING




- Once the lift is complete, keep the load as close to the body as possible. As a load's center of gravity moves away from the body, stress to the lumbar region of the back dramatically increases.

- If it is necessary to turn while carrying the load, the employee shall turn his or her entire body by using the feet—not the torso.

- To place the load below waist level, follow the same procedures in reverse order. Remember to keep your back as vertical as possible and bend at the knees.




 ADMINISTRATION GUIDE	<i>Chapter</i> OFFICE SAFETY
	<i>Subject</i> Emergency Plans

REQUIREMENTS

Each facility shall have a written emergency action plan. Supervisors shall make employees aware of the content of the plan and related procedures ([SHA-600](#)).




 ADMINISTRATION GUIDE	<i>Chapter</i> OFFICE SAFETY
	<i>Subject</i> Housekeeping

GENERAL**PRECAUTIONS**

Employees shall observe the following safe housekeeping precautions:

- Keep work areas clean and orderly. Aisles, corridors, and stairways must remain clear at all times.
- Always stack material in a manner so that it cannot fall or easily be knocked over. Windowsills, ledges, and tops of cabinets shall be kept free of heavy objects.
- Spilled liquids shall be cleaned up immediately.
- Tripping hazards, exposed nails, loose flooring, raised edgings, splinters, faulty treads or mats, and cords in walkways shall be corrected immediately or reported to the appropriate personnel for repair.




 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<i>Chapter</i> OFFICE SAFETY
	<i>Subject</i> Proper Use of Office Equipment & Furniture

GENERAL**PRECAUTIONS**

Employees shall observe the following safety precautions when using office equipment & furniture:

- Equipment shall only be utilized for its intended purpose.
- Bottom drawers of file cabinets should carry the heaviest loads. Open and close file drawers by using handles. Only one file drawer at a time should be opened. All desk and file drawers shall be closed when not in use.
- Chairs, desks, tables, and cabinets shall not be used for climbing or reaching overhead objects.
- Keep fingers away from point of operation of tools such as staplers, punches, and paper cutters.
- Keep all machine safety guards in locked position when not in use.
- Sharp objects shall be kept in the front part of desk drawers where they are readily visible.



 ADMINISTRATION GUIDE	<i>Chapter</i> OFFICE SAFETY
	<i>Subject</i> Electrical Items

GENERAL**PRECAUTIONS**


Employees shall observe the following safety precautions when working with electrical items:

- Machines with belts, gears, pulleys, or rotating parts shall be properly guarded.

Do not clean machinery while operating.

- Electrical cords shall be kept in good repair. Cords with frayed insulation or broken ground prongs shall be replaced. Plugs shall be totally enclosed to prevent shock. Extension cords shall be used only in accordance with the rating on the plug.
- Only trained and authorized personnel shall attempt to repair or adjust electrical equipment.
- [SHA-408](#) provides additional information on electrical safety.




 ADMINISTRATION GUIDE	<i>Chapter</i> PORTABLE POWER TOOLS
	<i>Subject</i> Overview

GENERAL**PRECAUTIONS**

Employees shall observe the following safety precautions when working with portable power tools:

- All portable power tools shall be used in accordance with the manufacturer's recommended operating procedures. Only KYTC-owned tools shall be used.
- No portable electric tool shall be used if the operator must stand or be located near water.
- When using any portable power tool, operators shall wear all required personal protective equipment.
- All guards shall be used.
- Any portable power tool shall be removed from service and red-tagged if any part or safety feature is found not working or missing ([SHA-412](#)).



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>PORTABLE POWER TOOLS</p>
	<p><i>Subject</i></p> <p>Electrical Tools</p>

GROUNDING All hand-held portable electrical tools shall be grounded. The tool is grounded when **one** of the four following criteria is met:

- The tool has an approved, double-insulated system.
- The tool has a three-wire and three-prong system.
- The wall receptacle has wiring in conduit, or the wiring is bonded to a grounded structure.
- The adapter has the grounding pigtail wire affixed to the wall receptacle faceplate screw.

ELECTRICAL CORDS Employees shall observe the following safety precautions related to electrical cords:

- Cords shall be replaced when insulation is worn or frayed.
- Cords shall not be left in walkways so as to create a tripping hazard.
- Cords shall be protected from grease and oil spills.
- Extension cords (drop cords) shall have wiring equal to the wiring of the tool being used with it and shall be of the grounded type when used with portable electrical tools.
- Wiring on plugs shall be covered with approved insulated discs.
- Extension cords shall be protected by GFCIs.
- Extension cords shall be the heavy duty, three-wire type and must be design-rated for hard or extra-hard usage (such as types S, ST, and SO).
- Extension cords must be approved by Underwriter Laboratories.

ELECTRICAL DRILLS Employees shall observe the following safety precautions related to electrical drills:

- Electrical drills shall have a constant pressure switch (on-off switch) and may have a lock-on control that can be turned off with the same finger or fingers that turned it on.
- When drilling loose pieces of material, the work shall be clamped in a vice or otherwise secured to prevent work from spinning.

ELECTRICAL CIRCULAR**SAWS**

Employees shall observe the following safety precautions related to electrical circular saws:

- Each saw shall be provided a constant pressure switch that shuts off power when pressure is released.
- Circular saws shall be equipped with guards above and below the base plate or shoe. The bottom guard will move freely as the stock is being cut. This guard shall automatically and instantly return to the covering position when the saw is withdrawn from the work. Operators shall not remove or block this guard in open position.

GRINDERS & DISC**SANDERS**

Employees shall observe the following safety precautions related to grinders and disc sanders:

- Grinders with abrasive wheels that exceed 2 inches in diameter shall have a protective hood or guard that will cover at least the top half of the abrasive wheel (180-degree coverage).
- Switches for grinders and disc sanders shall be of the “on-off” type only when diameters of abrasive wheels and discs are less than 2 inches.
- Grinders and disc sanders with abrasive wheels and discs 2 inches or greater in diameter shall be equipped with a momentary contact “on-off” switch. The switch may be locked in the “on” position if the same finger or fingers can be used to turn it off.

PORTABLE, ABRASIVE**CUT-OFF SAWS**


Employees shall observe the following safety precautions related to portable, abrasive cut-off saws:

- Operators shall be aware of surroundings and keep all other personnel away from operation.
- All necessary personal protective equipment shall be worn by operators.
- Shields covering cutting blade shall not be removed.
- Extra fuel shall be stored only in labeled, approved safety cans.

ADDITIONAL**INFORMATION**

SHA-408 provides additional information on electrical safety. Employees shall always follow all manufacturer guidelines.




 ADMINISTRATION GUIDE	<i>Chapter</i> PORTABLE POWER TOOLS
	<i>Subject</i> Portable Air Compressors

GENERAL**PRECAUTIONS**

Employees shall observe the following safety precautions regarding portable air compressors:

- Follow all manufacturer guidelines.
- Portable air compressors shall have safety chains affixed to the tongue hitch for use with the vehicle towing the compressor.
- All compressed air-line couplings shall have a safety wire secured through the matching holes from one coupling to another to prevent separation of hose sections while under pressure.
- Personnel using compressed air for jackhammering, pavement breaking, etc., shall wear approved protective eye shields and shall follow the silica exposure control plan ([SHA-407-2](#)).
- Ear protection is required on personnel operating jackhammers and other persons within 25 feet of the air compressor or as indicated by sound meter readings ([SHA-500](#)).



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>PORTABLE POWER TOOLS</p>
	<p><i>Subject</i></p> <p>Air-Powered Tools</p>

GENERAL

PRECAUTIONS Follow all manufacturer guidelines.

CLEANING WITH AIR Employees shall observe the following precautions when cleaning with compressed air:

- Compressed air pressure shall be reduced to 30 psi when used for cleaning purposes.
- Approved eye protection and face shield shall be worn by all employees exposed to flying particles ([SHA-500](#)).
- Compressed air shall not be used for cleaning clothes and parts of body.

AIR HOSES All sections of air hoses used with air compressors shall have couplings secured by a safety wire affixed in provided holes and inspected prior to each use.

AIR –POWERED


PORTABLE GRINDERS Air-powered portable grinders shall have the same guarding as electrical portable grinders ([SHA-1006](#)).

JACKHAMMERS &

PAVEMENT BREAKERS Safety clips or retainers shall be provided to prevent attachments (bits, etc.) from being accidentally withdrawn or expelled. Personnel using these tools shall exercise particular care in the positioning of feet. Approved ear and eye protection is required during operation ([SHA-500](#)).

SANDBLASTERS Only authorized and trained personnel shall operate sandblasters.



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>PORTABLE POWER TOOLS</p>
	<p><i>Subject</i></p> <p>Portable Electric Generators</p>

OVERVIEW

The primary safety concerns when using a generator are accidental carbon monoxide poisoning from engine exhaust, electric shock, and fire.

Although carbon monoxide cannot be seen and has no detectible scent, it can rapidly lead to full incapacitation or death. Therefore, even if no scent is detected, employees may still be exposed to dangerous levels of carbon monoxide. Employees who report feeling sick, dizzy, or weak while using a generator should move to fresh air immediately. Do not delay.

GENERAL**PRECAUTIONS**


Employees shall observe the following safety precautions when using portable electric generators:

- Manufacturer guidelines shall be followed.
- The motor shall be bonded to the stand so that a good ground is evident.
- A heavy-duty copper wire shall be attached to the generator stand and attached to an appropriately-sized ground rod driven into the ground.
- All portable electric tools (unless double-insulated) shall be the grounded type when used with portable electric generator.
- Generators shall not be plugged into a wall outlet. Known as “backfeeding,” this practice puts utility workers and others at risk of electrocution.
- All portable electric generators shall be:
 - ◆ Equipped with ground fault circuit interrupters
 - ◆ Used in well-ventilated areas

**ADDITIONAL
INFORMATION**

[SHA-408](#) provides information on electrical safety.




 ADMINISTRATION GUIDE	<i>Chapter</i> PORTABLE POWER TOOLS
	<i>Subject</i> Weedeaters

GENERAL**PRECAUTIONS**

Employees shall observe the following safety precautions when using weedeaters:

- All manufacturer guidelines for operation, maintenance, and inspection shall be followed. Consult the owner's manual for more information.
- Shields covering the cutting blade shall not be removed.
- Operators shall be aware of surroundings and keep all other personnel away from operation.
- Extra fuel shall be stored only in labeled, approved safety cans.
- All necessary personal protective equipment shall be worn by operators.




 ADMINISTRATION GUIDE	<i>Chapter</i> PORTABLE POWER TOOLS
	<i>Subject</i> Lawn Mowers

GENERAL**PRECAUTIONS**

Employees shall observe the following safety precautions when using lawn mowers:

- All manufacturer guidelines for operation, maintenance, and inspection shall be followed. Consult the owner's manual for more information.
- Mower safety bar shall not be removed or lowered while the mower is in operation.
- All necessary personal protective equipment shall be worn per the manufacturer's guidelines ([SHA-500](#)).



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>TRAFFIC CONTROL</p>
	<p><i>Subject</i></p> <p>General Information</p>

PURPOSE & SCOPE Traffic control is one of the most important functions the Transportation Cabinet can provide to its employees and the traveling public. Reasonable precautions shall be taken to prevent accidents caused by construction, preconstruction, or maintenance operations ([TO-803](#)).

It is impossible to describe in this manual the traffic control methods for all jobs performed by the Cabinet. Therefore, all traffic control methods shall comply with the *Manual on Uniform Traffic Control Devices (MUTCD)*, approved Kentucky Transportation Cabinet (KYTC) flagging training courses, or KYTC *Standard Drawings*.

**SUPERVISOR
RESPONSIBILITIES**

It is the supervisor's responsibility to oversee correct jobsite and traffic control procedures as outlined in the *Employee Safety and Health Manual*, *MUTCD*, and an approved KYTC statewide flagger training course.

Except in emergency situations, supervisors should complete TC 25-163, *Job Briefing*, prior to setting up traffic control ([Exhibit 9002](#)). However, even in an emergency situation, a temporary traffic control plan shall be developed in accordance with *MUTCD* 6A.01, 6B.01, 6C.01, 6C.02, 6C.03, and KYTC specific-policies.

KYTC *Standard Drawings* may be utilized if they exceed the minimum requirements of the *MUTCD* and are more detailed than the minimum drawings of the *MUTCD*. In addition, a temporary traffic control plan shall be developed in accordance with the *MUTCD* for all job sites according to the nature, location, and duration of work; type of roadway and speed of traffic; and potential hazards.

In hazardous situations, state or local law enforcement assistance may be requested. As soon as work is completed and traffic control devices are no longer needed, they shall be removed.

**SUPERVISOR
RESPONSIBILITIES
(CONT.)**

On jobs requiring channelizing devices, the following sequence for set-up shall be followed:


1. Signs
2. Flaggers/Arrow Panels
3. Cones/Other Channelizing Devices
4. Crew and Equipment

Remove the devices in the opposite order of installation by starting with the devices closest to the work area and continue away from the area. Keep all warning signs and arrow panels in place during pickup. Use flashing arrow panels, high-level warning devices, flaggers, or flashing emergency lights to protect the workers who are removing the devices.

**FIRST AID
REQUIREMENT**

A fully stocked first-aid kit and a person adequately trained to render first aid shall be present on all jobsites for the duration of the job ([29 CFR 1910.151](#), [1926.50](#); [SHA-702](#)).



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>TRAFFIC CONTROL</p>
	<p><i>Subject</i></p> <p>Signs, Cones, & Other Traffic Control Devices</p>

GENERAL**PRECAUTIONS**

All signs, cones, drums, and other traffic control devices shall conform to the *Manual on Uniform Traffic Control Devices (MUTCD)* and other applicable standard requirements for size, shape, color, planned use, and retro-reflectiveness.

All warning signs shall have black lettering on an orange background. Warning signs used on four-lane roads and in urban areas shall be 48-inch orange, diamond-shaped sign; otherwise, a 36-inch orange, diamond-shaped sign shall be used unless lack of adequate shouldering would cause the sign to be located partially in the roadway. Signs should be properly maintained for cleanliness, visibility, and correct positioning. Signs that have lost significant legibility should be promptly replaced.

The lead sign on each end of all jobsites shall have either a traffic cone placed next to the sign or a red flag attached to the sign. The bottom portion of all warning signs shall be a minimum of 12 inches from the ground.

Cones shall be orange and made of a material that can be struck without causing damage to the impacting vehicle. For daytime, low-speed roadways, freeways, other high-speed highways, or at night on all highways, cones shall be a minimum of 28 inches in height.

For nighttime use, cones shall be retroreflectorized or equipped with lighting devices for maximum visibility. Retroreflectorization of cones that are 28 to 36 inches in height shall be provided by a 6-inch wide, white band located 3 to 4 inches from the top of the cone and an additional 4-inch wide, white band located approximately 2 inches below the 6-inch band.

Retroreflectorization of cones that are more than 36 inches in height shall be provided by horizontal, circumferential, alternating, orange and white retroreflective stripes that are 4 to 6 inches wide. Each cone shall have a minimum of two orange and two white stripes with the top stripe being orange. Any non-retroreflective spaces between the orange and white stripes shall not exceed 3 inches in width.

GENERAL

PRECAUTIONS (CONT.) Cones and drums shall be kept clean and bright for maximum target value. The first cone or drum shall be placed 840 feet from the actual jobsite and on the shoulder. The cones or drums shall taper from the shoulder gradually to the roadway center-line mark, up to and including the last piece of equipment or the last employee.

To determine taper lengths (L):


- For posted speeds (S) of **40 mph or less**, use: $L = \frac{WS^2}{60}$
- For posted speeds of **45 mph or more**, use: $L = WS$

Note: In the above equations, W = lane width.

For example, a road with a speed limit of 35 mph and a lane width of 12 feet would require a taper length of 245 feet, and a road with a speed limit of 65 mph with a lane width of 12 feet would require a taper length of 780 feet.

There shall be a traffic cone positioned every 40 feet on the taper and center line of the tangent when posted speed limits are 55 mph or less. On multi-lane operations where the posted speed limit is greater than 55 mph, cones or other channeling devices in the tangent may be placed at 80-foot intervals or less (**not tapers**) on the center line for these higher-speed lane closures.




 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>TRAFFIC CONTROL</p>
	<p><i>Subject</i></p> <p>Hand-Signaling Devices</p>

PURPOSE

A number of hand-signaling devices such as STOP/SLOW paddles, lights, and red flags are used in controlling traffic through work zones. The sign paddle bearing the clear message STOP/SLOW provides motorists with more positive guidance than flags and shall be the primary hand-signaling device. Flag use shall be limited to emergency situations and middle flagger operations. If a flag is used in an emergency situation, it should be replaced with a STOP/SLOW paddle as soon as feasibly possible.

All hand-signaling devices shall be kept in good condition, clean, and legible. Any hand-signaling device found in poor condition shall be immediately replaced by the designated competent person.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>TRAFFIC CONTROL</p>
	<p><i>Subject</i></p> <p>Flaggers</p>

PURPOSE Flaggers are provided at jobsites to stop traffic intermittently as necessitated by work progress and to maintain continuous traffic flow past the jobsite at reduced speeds to protect the work crew. Flaggers are responsible for human safety and the prevention of equipment and property damage.

QUALIFICATIONS A flagger should possess the following qualifications: adequate physical condition, courteous but firm manner, neat appearance, and sense of responsibility for the safety of the public and working crew.

Before KYTC employees are allowed to engage in flagging procedures, they must successfully pass the KYTC course on *Traffic Control/Flagger Certification* (provided by KYTC employee safety personnel) and receive a valid KYTC Flagger Certification card. Employees should participate in refresher training every two years thereafter or if it is determined that retraining is necessary due to observed, non-compliant flagger procedures.

It is strongly recommended that new employees have 30 days of documented maintenance or highway work experience before supervisors assign flagging duties.

POSITIONING Flaggers should be positioned on the shoulder of the road at a minimum 50 feet away from all work vehicles and equipment. In addition, an escape route shall be planned, and color contrast between the flagger's protective garment and background shall be maintained. The flagger should be clearly visible at all times to approaching traffic for a distance of at least 500 feet to permit proper response by motorists to the flagging instructions.

EQUIPMENT The optimum method of displaying a STOP or SLOW message is to place the STOP/SLOW paddle on a rigid staff that is tall enough that when the end of the staff is resting on the ground, the message is high enough to be seen by approaching or stopped traffic.

EQUIPMENT (CONT.)

When engaged in flagging operations, employees should use an approved rigid staff with a regulation STOP/SLOW paddle. The only exception would be when an employee is engaged in middle flagging operations or when an emergency exists, at which time a regulation red flag may be used ([SHA-1503](#)).

Required flagger equipment consists of [ANSI 107-2004](#) Class II-approved high-visibility apparel, including cap or hard hat; STOP/SLOW paddle, and certification card.

For nighttime operations, a flashlight with red cone shall be used and high-visibility apparel shall be minimum Class III. Unless an emergency situation is present, illumination of nighttime flagger stations should not result in glare to the traveling public.

Only KYTC-issued communication equipment shall be allowed. Flaggers shall not use personal cell phones, stereo headphones, video games, or other distracting electronic devices while flagging.

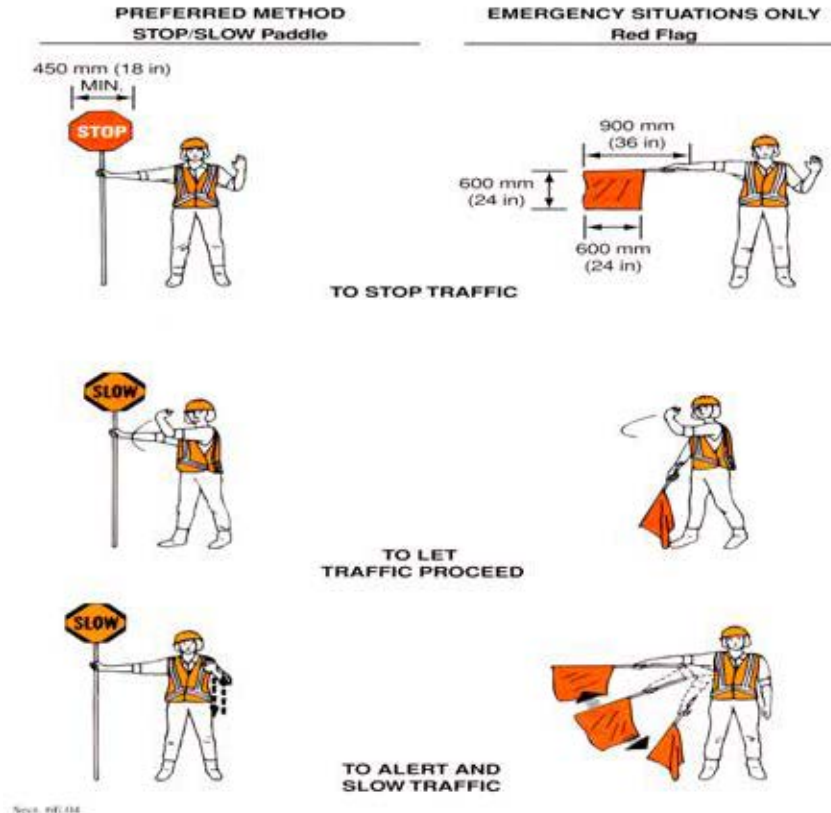
Flags used for signaling purposes in emergency situations, in middle flagging operations, or at spot locations shall be a minimum of 24 inches x 24 inches, made of a good grade of red material, and securely fastened to a staff approximately 3 feet in length. The free edge should be weighted to ensure that the flags will hang vertically, even in high winds. When utilized in nighttime operations, flags shall be retroreflectorized.

Sign paddles shall be at least 18 inches wide with letters at least 6 inches high. A rigid handle shall be provided. This combination sign may be fabricated from sheet metal or other semi-rigid material.

The background of the STOP face shall be red with white letters and border. The background of the SLOW face shall be orange with black letters and border. When read at night, the STOP face shall be reflectorized red with white reflectorized letters and border, and the SLOW face shall be reflectorized orange with black letters and border.

PROPER FLAGGING PROCEDURES

The following figure details proper flagging procedures to be utilized with both paddle and flag.



MIDDLE FLAGGER

A middle flagger should be used when two end flaggers cannot maintain line of sight or radio communications. In addition, middle flaggers might be considered when traffic may enter work zones between flagger stations. The middle flagger, when used, will be in charge and in control of traffic flow through the jobsite. When more than one middle flagger is used, one shall be designated as the leader. A middle flagger should be used anytime carriage-type heavy equipment swings into an open travel lane or the path of motorists or pedestrians. Typically cranes, drotts, bantams, etc., have a tail swing that can intrude into paths used by the public or workers.

The tail swing radius shall be protected by barricades, cones, or a middle flagger. The carriage equipment operator shall not use two-way radios to eliminate use of a middle flagger. A middle flagger provides instant communication, coordinates traffic flow, recognizes an impending hazard, and responds to prevent the hazard.

MIDDLE FLAGGER**SIGNALS**

To stop traffic on the left, the middle flagger shall hold the paddle or flag in the left hand and raise and point it in the direction of the end flagger on the left. The middle flagger shall maintain the paddle or flag in the left hand and use the right hand to motion traffic on the right through the jobsite.

To stop traffic on the right, the middle flagger shall follow the same procedure described above except the end flagger on the right will be signaled. The paddle or flag shall be in the right hand, and the left hand will be used to motion traffic on the left through the jobsite.

HI-VISIBILITY**SAFETY APPAREL**

Retroreflective vests or other approved high-visibility (hi-vis) safety apparel (meeting the requirements of ISEA's "American National Standard for High-Visibility Safety Apparel," or equivalent revisions, and labeled ANSI 107-1999, or equivalent revisions; standard performance for Class 2, or 3 risk exposure) shall be worn by all employees working in traffic control flagging operations, within the right-of-way limits, on construction projects, or in any other area where they are potentially exposed to the risk of moving roadway traffic or equipment.

In accordance with [29 CFR 1926.32\(f\)](#), supervisors are designated as competent persons and, after consulting with safety personnel as needed, are responsible for the assessment, selection, and use of appropriate personnel, equipment, and personal protective equipment. ([SHA-509](#)).

INTERSECTIONS


When flagging in the vicinity of signalized intersections, special consideration shall be given to traffic movements. The signal must either be turned off or set to all-red "flash" mode.

For KYTC-related operations, traffic should not be flagged while a signal is in full operation. Law enforcement or emergency personnel should be used to direct traffic in emergency situations.

MOBILE OPERATIONS

In a mobile operation when the flagger is moving with the operation, all signs associated with the flagger shall be moved ahead whenever work advances to more than 2 miles from the first advance warning signs. The FLAGGER AHEAD sign must be within 1,000 feet of the flagger, and the flagger station must be visible from the sign.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>TRAFFIC CONTROL</p>
	<p><i>Subject</i></p> <p>Traffic Control Methods</p>

TWO-WAY RADIOS Using KYTC-approved, two-way radios is the preferred method of communication between flaggers. The system shall be powerful enough for flaggers to clearly communicate without interference or fadeout and should be tested prior to use. FCC standards and proper radio etiquette shall be complied with at all times.

PILOT TRUCK The pilot truck method provides for smooth traffic flow when the end flaggers cannot observe each other. This method may be used in light or moderate traffic flow situations. A pickup truck or a vehicle equipped with appropriate warning lights and a tailgate-mounted sign reading PILOT TRUCK—FOLLOW ME is required.

The sign shall not obscure vehicle taillights. The pilot truck will guide the traffic the first flagger has stopped to the second flagger at the other end. Once a flagger's traffic has left with the pilot truck, all other oncoming vehicles shall be stopped.

After delivering traffic to the other flagger, the pilot truck shall then guide this flagger's traffic back to the other flagger.

Equipment utilized on this type of jobsite shall, as much as possible, remain out of the open traffic lane.


PILOT CAR Pilot car operations as part of a flagging operation are appropriate for long distance alternating traffic needs to maintain driver speeds and to help guide traffic through the work site. Pilot car operators should be certified flaggers. Determine who the pilot driver will be when conducting the job briefing, and discuss any special instructions at that time to ensure everyone understands expectations.

PASS-THE-FLAG This method provides for adequate traffic control in moderate and heavy traffic flow situations. A red cloth or other designated object is passed from the flagger whose traffic has been stopped to the last motorist in line, who is instructed by the flagger to give the red cloth or object to the flagger at the other end of the jobsite.

**PASS-THE-FLAG
(CONT.)**

After the last motorist has left the flagging station, all other oncoming traffic shall be stopped. The flagger at the other end of the jobsite, upon receiving the red cloth or other object, shall then proceed in the same manner described previously. If a flagger has not received the cloth or object within a reasonable amount of time, the flagger shall make an effort to determine the problem.



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>TRAFFIC CONTROL</p>
	<p><i>Subject</i></p> <p>Highway-Rail Grade Crossings</p>

REFERENCES *Manual on Uniform Traffic Control Devices (MUTCD)*, Section 6G.18; Figure 6H-46; Chapter 8A.08

GENERAL

PRECAUTIONS


When grade crossings exist either within or in the vicinity of a temporary traffic control (TTC) zone, lane restrictions, flagging, or other operations shall not create conditions where vehicles can be queued across the tracks. If the queuing of vehicles across the tracks cannot be avoided, a uniformed law enforcement officer or flagger shall be provided at the crossing to prevent vehicles from stopping on the tracks, even if automatic warning devices are in place.

KYTC flaggers shall be certified.

Early coordination with the railroad company or light rail transit agency should occur before work starts.

[SHA-1623](#) provides additional information on working near railroads.



 ADMINISTRATION GUIDE	<i>Chapter</i> TRAFFIC CONTROL
	<i>Subject</i> Barricades


USAGE

Barricades may be used to:

- Protect spot hazards
- Close roadways and sidewalks
- Provide additional protection to work areas

Manual on Uniform Traffic Control Devices (MUTCD), Section 6F.63 and Figure 6F-7 provide additional information on barricade usage.



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>TRAFFIC CONTROL</p>
	<p><i>Subject</i></p> <p>Incident Management Areas</p>

REFERENCES *Manual on Uniform Traffic Control Devices (MUTCD)*, Chapter 6I; Figure 6I-1; Part 6

DEFINITIONS A *traffic incident* is an emergency road user occurrence, a natural disaster, or other unplanned event that affects or impedes the normal flow of traffic. Examples include a stalled vehicle blocking a lane, a traffic crash blocking the traveled way, a hazardous material spill along a highway, and natural disasters such as floods and severe storm damage.

Traffic incidents can be divided into three general classes of duration, each of which has unique traffic control characteristics and needs.

These classes are:

- Major—Expected duration of more than 2 hours
- Intermediate—expected duration of 30 minutes to 2 hours
- Minor—expected duration under 30 minutes

A *traffic incident management area* is an area of a highway where temporary traffic controls (TTC) are installed, as authorized by a public authority or the official having jurisdiction of the roadway, in response to a road user incident, natural disaster, hazardous material spill, or other unplanned incident. It is a type of TTC zone and extends from the first warning device (such as a sign, light, or cone) to the last TTC device or to a point where vehicles return to the original lane alignment and are clear of the incident.

**PURPOSE OF TTC
IN TRAFFIC INCIDENT
MANAGEMENT AREA**

The primary functions of TTC at a traffic incident management area are to inform road users of the incident and to provide guidance information on the path to follow through the incident area.


**PURPOSE OF TTC
IN TRAFFIC INCIDENT
MANAGEMENT AREA
(CONT.)**

Alerting road users and establishing a well-defined path to guide road users through the incident area will protect those working at the incident scene and will aid in moving road users expeditiously past or around the traffic incident.

The TTC will reduce the likelihood of secondary traffic crashes and will preclude unnecessary use of the surrounding local road system.

KYTC flaggers shall be certified.



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>TRAFFIC CONTROL</p>
	<p><i>Subject</i></p> <p>Three-Lane Roadway with Passing Lane</p>


PURPOSE There are times during maintenance activities when flagging traffic on a three-lane roadway may be necessary. All traffic control shall be based on good engineering judgment.

PROCEDURE When two lanes of traffic are travelling in the same direction, the certified flagger shall not flag traffic by standing in the roadway or on the shoulder.

If flagging is necessary, the flagger shall:

- Stand at the beginning of the passing lane start. This will allow the flagger to flag motorists from one lane before traffic can go into the passing lane. Consult the *Manual on Uniform Traffic Control Devices (MUTCD)*, Figure 6H-10, Lane Closure on a Two-Lane Road Using Flaggers (TA-10). A middle flagger may be used near the equipment or work location in addition to the two end flaggers.
- If flagging from the beginning of the passing lane start is not feasible, place channeling devices (such as traffic cones or drums) every 40 feet from the start of the passing lane up to 100 feet past the work area. This prohibits traffic from driving in the slow lane. This temporary traffic control plan allows traffic to channel through the passing lane. Cones and barrels shall follow the standards set forth in the MUTCD, Sections 6F.64 and 6F-67.
- If using flaggers or channeling devices are not feasible, follow the guidelines set forth in MUTCD, Figure 6H-33, Station Lane closure on a Divided Highway (TA-33).




 ADMINISTRATION GUIDE	<i>Chapter</i> TRAFFIC CONTROL
	<i>Subject</i> Temporary Traffic Control Plans

REFERENCES

The following provide information on temporary traffic control plans: *Manual on Uniform Traffic Control Devices (MUTCD)* 6A.01, 6B.01, 6C.01, 6C.02, 6C.03; [SHA-402](#); [SHA-403](#); [SHA-1500](#).



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>TYPICAL KYTC OPERATIONS</p>
	<p><i>Subject</i></p> <p>Abnormal Weather Activity Work</p>

REFERENCES *Manual on Uniform Traffic Control Devices (MUTCD) 6A.01, 6D.03*

OVERVIEW In the event that any employee must work in abnormal weather conditions (wind, rain, cold, heat, snow, ice), supervisors shall make arrangements to provide the employee with regularly-scheduled breaks, in addition to as-needed breaks. This includes flagging operations.

All employees shall be furnished with appropriate personal protective equipment (PPE). Employees' safety, health, and wellbeing shall be of the utmost importance. All work activity performed outdoors in the elements shall be based on good engineering judgment.

FLOOD CONDITIONS The following are important points to remember when walking and driving during flood conditions:

- Five inches of fast-moving floodwater can knock over an adult.
- Six inches of water will reach the bottom of most passenger cars causing loss of control and possible stalling.
- One foot of water will float many vehicles.
- Two feet of rushing water can carry away most vehicles, including sport utility vehicles (SUVs) and pick-ups.




KYTC employees shall not enter flood waters.

ADDITIONAL INFORMATION

[SHA-402](#), "Job Safety Analysis"; [SHA-403](#), "Job Briefing"; [SHA-500](#), "Personal Protective Equipment"; [SHA-702](#), "Medical & First Aid"; [SHA-1500](#), "Traffic Control"



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>TYPICAL KYTC OPERATIONS</p>
	<p><i>Subject</i></p> <p>Escort Vehicles (Shadow Vehicles)</p>

PURPOSE & SCOPE Front or rear escort vehicles are used to maximize safety for work crews and the traveling public. Generally, flaggers and stationary signing are impractical for moving jobs. A typical moving work site may include, but not be limited to, traffic-lane striping, roadside spraying, vac-all sweeping, shoulder operations with a grader, following wide loads, and certain mowing operations. Escorts provide advance warning to the traveling public and protection to the work vehicles. Where hills or curves eliminate the motorist's sight distance to the work vehicle, an escort vehicle shall be used.

GENERAL PROCEDURES The escort shall follow the moving work site at a safe distance, usually 500 feet. However, the distance will vary according to type of road, speed of traffic, volume of traffic, speed of work vehicles, etc.

Escort drivers shall constantly remain aware of their vehicles' positioning and of the motorists' vehicles and shall vary their speeds and hold back on curves and hillcrests to give more warning to motorists. Escort drivers may have to speed up to regain the proper distance from work vehicles.

Truck-mounted attenuators used on escort vehicles shall comply with [SHA-1718](#).

The escort and work vehicles shall have two-way radio contact.

Escort vehicles shall not be used to transport flammable materials or liquids.


SIGNAGE All escort vehicles shall have appropriate rear-mounted warning signs to properly advise motorists of hazards ahead and be equipped with appropriate safety devices including, but not limited to, truck-mounted attenuators, arrow boards, and lighting packages, in accordance with the *Manual on Uniform Traffic Control Devices* ([MUTCD](#)) 6D.0309 A.

SIGNAGE (CONT.)

Arrow panels used on multilane highways shall, as a minimum, be Type B (5 feet x 2 1/2 feet). The Cabinet, however, recommends that arrow panels Type C (4 feet x 8 feet) be used whenever possible. Arrow panels shall be in caution mode when operating from the shoulder or emergency strip. Arrow panels **shall not** be utilized on two-lane roads.

Arrow panels, their use, size, legibility distance, and other specifications shall conform to Section 6F.56 and Figure 6F-6 of the MUTCD.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>TYPICAL KYTC OPERATIONS</p>
	<p><i>Subject</i></p> <p>Pothole Patching</p>

OVERVIEW

The supervisor shall, as a part of the temporary traffic control plan, consider work location, degree of work involved, sight distance, traffic volume, traffic speed, and road character and shall determine what traffic control operation will be necessary in each county/district.

Forewarning and sight distance shall be properly maintained on either stationary or moving pothole-patching work operations. Both operations may require additional signage, channelizing devices, attenuators, escorts, arrow panels, high-intensity lights, and/or police participation to maintain a safe work zone. Each worker shall have a planned escape route.

STATIONARY OPERATIONS

Work operations performed in dangerous locations (bridges, cuts, high-accident areas, high-speed/high-volume highways) or where heavy workload activities are expected shall utilize a full lane closure (stationary signage, coned closed lane, and flaggers) for maximum protection.

Typically, work on Kentucky highways does not involve low-volume/low-speed traffic, and adequate sight distance is difficult to maintain. Such work operations are considered stationary work zones.


MOBILE OPERATIONS

Brief, frequently moving work operations performed where flaggers can move along with the work shall utilize stationary warning signs. Work-zone limits are recommended to be a 1-mile safe distance and shall not exceed 2 miles.

Moving work operations of a fast-moving nature where stationary signage is not feasible shall utilize rear vehicle-mounted signage. All moving operations shall utilize escort vehicles to provide adequate sight distance and notification to motorists of the work activity ([SHA-1602](#)).

A traffic observer or lookout shall be positioned to continually watch traffic and warn workers whenever trouble is anticipated.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>TYPICAL KYTC OPERATIONS</p>
	<p><i>Subject</i></p> <p>Litter Pickup</p>


GENERAL**PROCEDURES**

The employees picking up trash shall work toward the truck. These employees shall wear hi-visibility apparel. The vehicle utilized in this operation shall have, at minimum, level 1 lighting package and appropriate rear-mounted signage in conjunction with appropriate stationary signage.

WORK VEHICLES

As it is not practical to use flaggers during litter pickup operations, it is mandatory that work vehicles remain off the roadway whenever possible. If there is not enough shoulder to allow for this, the driver shall park at the nearest off-the-roadway location.




 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>TYPICAL KYTC OPERATIONS</p>
	<p><i>Subject</i></p> <p>Guardrail Repair</p>

REFERENCE *Manual on Uniform Traffic Control Devices (MUTCD) Part 6 Notes for Figure 6H-10—Typical Application 10-Lane Closure on a Two-Lane Road Using Flaggers*

TRAFFIC CONTROL When a lane of travel is impeded during guardrail repair, there shall be a standard lane closure with flaggers used for traffic control. All standard warning or traffic control devices shall be a part of the temporary traffic control plan.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>TYPICAL KYTC OPERATIONS</p>
	<p><i>Subject</i></p> <p>Cutting Brush</p>

REFERENCES

Manual on Uniform Traffic Control Devices (MUTCD) Part 6 Notes for Figure 6H-3—Typical Application 3 Work on the Shoulders; MUTCD Part 6 Notes for Figure 6H-4—Typical Application 4 Short Duration or Mobile Operation on a Shoulder; MUTCD Part 6 Notes for Figure 6H-10—Typical Application 10 Lane Closure on a Two-Lane Road Using Flaggers; MUTCD Part 6 Notes for Figure 6H-17—Typical Application 17 Mobile Operations on a Two-Lane Road

**WORK VEHICLES
& SIGNAGE**

Vehicles used in cutting brush shall be parked off the roadway whenever possible. If the vehicle cannot be parked completely off the traveled portion of the roadway, normal traffic control procedures (including warning signs, flaggers, and channelizing devices) shall be used. If the truck can be parked off the traveled portion of the roadway, an appropriate sign may be displayed with a red cone near it.

When loading brush on vehicles, a red flag shall be affixed to the rearmost portion of the brush that extends beyond the tailgate section. The load of brush shall be secured so that it does not pose a hazard to the traveling public.


Employees shall maintain a safe distance from one another so as not to create a hazard.

**PERSONAL PROTECTIVE
EQUIPMENT**

Employees shall wear required PPE during brush-cutting operations. The supervisor shall assess PPE needs and ensure the use of required PPE. Loose clothing shall not be worn in proximity to machinery or equipment where entanglement can occur. Refer also to [SHA-500](#).

The feeding operator and all personnel working within 20 feet of brush-chipping equipment shall wear approved head, eye, hand, foot, and hearing protection.




 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>TYPICAL KYTC OPERATIONS</p>
	<p><i>Subject</i></p> <p>Shouldering Operations with Motor Graders</p>

TRAFFIC CONTROL If operations are slow-moving, normal warning signs and flagging procedures shall be utilized.

If the shouldering operations are fast-moving, normal flagging procedures are not practical. In this case, an appropriate warning sign shall be placed on each end of the work area with a red flag affixed to or red cone placed near it.


When flaggers cannot be used, there shall be a rear escort vehicle with at least a level 1 lighting package and a tailgate-mounted sign. This vehicle shall remain approximately 500 feet behind the shouldering operation. When the grader is operated over a hill or in a curve, the driver of the escort vehicle shall remain in a location visible to traffic to provide warning. The escort vehicle shall be in compliance with [SHA-1602](#).



 ADMINISTRATION GUIDE	<i>Chapter</i> TYPICAL KYTC OPERATIONS
	<i>Subject</i> Ditching Operations


TRAFFIC CONTROL Normal flagging and warning-sign procedures shall be used. A ground guide should be used to safely direct dump trucks to and from the vicinity of the operation ([SHA-1503](#) and [SHA-1504](#)).



 ADMINISTRATION GUIDE	<i>Chapter</i> TYPICAL KYTC OPERATIONS
	<i>Subject</i> Backfilling

TRAFFIC CONTROL During the dumping of material along the side of the road, the operation shall be properly signed, and flaggers shall be used ([SHA-1503](#) and [SHA-1504](#)).



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>TYPICAL KYTC OPERATIONS</p>
	<p><i>Subject</i></p> <p>Paving Operations</p>


GENERAL**PROCEDURES**

Paving operations are slow-moving and shall utilize normal warning signs and flagger traffic-control procedures ([SHA 1503](#) and [SHA-1504](#)).

An ABC fire extinguisher shall be available on motorized paving machines ([SHA-206-4](#)).

Employees shall exercise extreme caution when working on or near the center line.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>TYPICAL KYTC OPERATIONS</p>
	<p><i>Subject</i></p> <p>Bridge Construction, Inspection, & Maintenance</p>

REFERENCE [29 CFR 1926.106](#)


FALL PRECAUTIONS When working on structures where an employee could fall into a waterway, employees shall wear U.S. Coast Guard-approved life jackets ([SHA-507](#)). Life jackets are not necessary if a fall-arrest system that incorporates 100 percent tie-off is used. When a fall of 4 feet or more is possible, an ANSI-approved harness and lanyard shall be used ([SHA-409](#)).

At least one readily available lifesaving skiff with a buoy and 90 feet of line shall be immediately available at locations where employees are working over or adjacent to water where a drowning hazard may exist.

**RESPIRATORY
PRECAUTIONS**

Employees engaged in sandblasting operations shall be required to be medically evaluated in accordance with the KYTC respiratory protection program ([SHA-407-1](#)). Employees shall observe general safety rules for personal protective equipment as stated in [SHA-500](#).



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>TYPICAL KYTC OPERATIONS</p>
	<p><i>Subject</i></p> <p>Roadside Operations</p>

GENERAL**PRECAUTIONS**

The slow-moving nature of these jobs creates a hazard to both the crew and public and requires several safeguards:

- All persons who handle, load, mix, or apply pesticides shall be licensed and certified by the Kentucky Department of Agriculture.
- The applicator shall comply with the PPE requirements shown on the pesticide label and the SDS. The minimum PPE required for all pesticide applications is long pants, long-sleeved shirts, shoes, and socks.
- When spraying or fertilizing on a two-lane highway, the sprayer unit shall have at minimum a level 2 lighting package and a tailgate-mounted sign approximating CAUTION—SPRAYING OPERATIONS. A rear escort vehicle should also be considered for use.
- When working from a travel lane on a multilane highway, the hydro seeder or spray truck shall be equipped with appropriate warning signs and lighting package. An escort vehicle equipped with a truck-mounted attenuator with arrow panel shall be used and comply with [SHA-1602](#).
- The operator shall frequently check the arrow panel to ensure the bulbs are operative.
- Sprayer and hydro seeder units, other than those mounted on pickup trucks, shall be provided an adequate means of communication between the driver and the operator in rear.
- Face shields or goggles approved for these types of operations, chemical-resistant gloves, aprons, or coveralls shall be used by employees while mixing pesticides.
- Spraying operations shall not be conducted on extremely windy days. The supervisor shall determine if weather conditions will permit the spraying operation to be conducted safely.
- If spray solution comes in contact with eyes, the employee shall immediately wash his or her eyes with clean water or eyewash solution.
- Crews shall frequently inspect nozzles and hoses for leakage and deterioration.

GENERAL**PRECAUTIONS (CONT.)**


- Spraying operations shall be conducted within guidelines prescribed by the Division of Maintenance (**MAIN-700**).
- Standard guardrail systems shall be provided on units if employees are exposed to falling hazards.
- The operation and maintenance of the spray power equipment is the responsibility of an employee who is well-versed in its operational functions.
- Surfaces on the spray tank and truck should be kept reasonably free from accumulation of spray material by washing frequently.
- Safety Data Sheets (SDS) should be readily available when spraying (**SHA-410**).
- Follow the manufacturer's directions and precautions printed on the container of all sprays and chemicals.

- **DO NOT:**
 - ◆ Use pesticides and chemical sprays near open flame
 - ◆ Smoke during use
 - ◆ Mix weed killers such as Roundup in a galvanized container, as a combustible mixture can result

**ADDITIONAL
INFORMATION**

FOG-608 and **MAIN-700** provide additional information on noxious weed control. The *Pesticide Guidance Manual* also provides information on vegetation management, pesticide use safety, and noxious weed identification.



 ADMINISTRATION GUIDE	<i>Chapter</i> TYPICAL KYTC OPERATIONS
	<i>Subject</i> Snow & Ice Removal

GENERAL

PRECAUTIONS


Vehicles equipped with salt spreaders shall have appropriate warning lights.

All operators shall have a valid CDL and shall undergo annual “Snow & Ice Training.”

Front-mounted snowplows shall have a reflective guide bar attached to each corner of plow. Headlights and warning lights shall be used for both daytime and nighttime operations.

FOG-1000 and **MAIN-1000** provide additional information on snow and ice removal.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>TYPICAL KYTC OPERATIONS</p>
	<p><i>Subject</i></p> <p>Tractor Mowing</p>

SIGNAGE

Mowers shall be equipped with two red flags on 6-foot staffs, a triangular SLOW-MOVING VEHICLE sign, and appropriate warning lights.

Mower operations shall be conducted between appropriate signage. The END MOWING ZONE sign shall not be placed more than 2 miles from the BEGIN MOWING ZONE or MOWING ZONE sign. Additional MOWING ZONE signs may be placed every 2 miles to extend the mowing zone up to a maximum of 4 miles.

EQUIPMENT

All tractors used on highway-mowing operations shall have a rearview mirror mounted on the left side.

The mower arm shall not be permitted to reach over the roadway at any time while mowing the center island or median.

Sickle blades shall be adjusted to allow the blade to swing back when striking a stationary object.

All mowers shall have compliant machine guarding. If the mower is equipped with a bush hog, it shall be equipped with protective chains or guard to prevent throwing objects. A steel mesh screen shall be mounted on the tractor between the operator and the bush hog.

**OPERATOR SAFETY
PRECAUTIONS**

Mower operators shall:

- Take extra precautions when operating near crests of hills, excavations, or other areas where the machine may tip or drop off
- Make proper observations before backing or turning around equipment


**OPERATOR SAFETY
PRECAUTIONS (CONT.)**

- Shut off the mower engine, place the lever activating the knife blades in the neutral position, and block the wheels of the machine to keep it from rolling, if necessary, before attempting to make repairs to the cutting blade or knife sections or before cleaning the blade

- Follow all manufacturer guidelines

Other mowers operating behind a bush hog shall stay at least 300 feet behind, or the distance recommended by the manufacturer.




 ADMINISTRATION GUIDE	<i>Chapter</i> TYPICAL KYTC OPERATIONS
	<i>Subject</i> Hand Lawn Mowers

GENERAL**PRECAUTIONS**

Employees operating hand lawn mowers shall:

- Ensure the motor has sufficiently cooled before refueling
- Shut off the engine and disconnect the spark plug wire when changing or sharpening the blade or doing any repair work under the mower
- Ensure grass discharge is not blown toward other personnel
- Install and use all guards when the equipment is in operation
- Follow all manufacturer guidelines for operation, maintenance, and inspection as detailed in the owner's manual



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>TYPICAL KYTC OPERATIONS</p>
	<p><i>Subject</i></p> <p>Center-Line Striping</p>

**ESCORT VEHICLES,
LIGHTING, & SIGNAGE**

The center-line striping operation on two-lane highways shall be protected with a rear escort vehicle. A front escort vehicle is optional. All escort vehicles shall comply with [SHA-1602](#).

The rear escort vehicle shall have at least a level 2 lighting package and a tailgate-mounted warning sign with the message SLOW VEHICLE AHEAD. The rear escort vehicle shall remain approximately 500 feet behind the striping operation at all times.


On highways of four lanes or greater, a truck-mounted attenuator with a rear-mounted flashing arrow shall be used as a rear escort vehicle. Truck-mounted attenuators shall be used in accordance with [SHA-1718](#).

If used, the front escort vehicle shall have minimum-level lighting and a sign approximating PASS WITH CAUTION. The driver of the front escort vehicle shall always be positioned to offer maximum warning for oncoming motorists.

OTHER VEHICLES

The paint-mixing truck shall park at a predetermined location and not be part of the moving striping operation. Two 20-ABC fire extinguishers shall be provided on vehicles used for mixing paint or paint striping ([SHA-206-4](#)).



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>TYPICAL KYTC OPERATIONS</p>
	<p><i>Subject</i></p> <p>Thermoplastic-Striping Operations</p>


GENERAL**PRECAUTIONS**

Since this is a stationary job, the work area shall be protected by a series of channelizing devices. If the equipment must be located in the traveled portion of the roadway, a temporary traffic control plan shall be employed that includes the required warning lights, signage, and number of flaggers ([SHA-1500](#)).

Employees engaged in mixture operations involving glass beads shall wear ANSI-approved eye protection ([SHA-504](#)).

All waste products from this operation, such as leftover paint or flushed line residue, shall be collected and disposed of in accordance with the KYTC Division of Environmental Analysis hazardous waste program ([EA-1000](#)).



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>TYPICAL KYTC OPERATIONS</p>
	<p><i>Subject</i></p> <p>Traffic Signal Work</p>

GENERAL**PRECAUTIONS**


The work vehicle shall be protected by a series of channelizing devices on all stationary jobs.

If the equipment must be in the traveled portion of the roadway, adequate warning lights (appropriately illuminated at night), signage, and number of flaggers shall be used. The use of law enforcement is suggested where signals are mounted diagonally across an intersection. If law enforcement is unavailable and conditions warrant, place the traffic signal on all-red flash and/or place stop signs on all approaches ([SHA-1500](#)).

Two or more individuals should be on the scene during bucket-truck operations. Bucket-truck work shall comply with [SHA-1717](#) and [FOG-1500](#). Overhead work from the bucket shall be performed within the coned work area only. No portion of an aerial lift platform or supporting structure shall extend over an open lane of traffic, regardless of the working height. A truck-mounted attenuator and arrow panel may be used in affected lanes on roads with five or more lanes and posted speeds of 45 mph or greater.

Platforms on aerial lifts (such as, autocranes or levelator trucks) shall not be operated in excess of the posted capacity of the platform. Adequate guard railing and fall protection shall be provided if employees are working at heights above 4 feet. Operators shall utilize full fall protection ([SHA-409](#)).



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>TYPICAL KYTC OPERATIONS</p>
	<p><i>Subject</i></p> <p>Sign Installation Crew</p>

GENERAL**PRECAUTIONS**

The work vehicle shall be protected by a series of channelizing devices on all stationary jobs.

If crews and equipment are performing work on the right of way (ROW) or in the traveled portion of the roadway, one of the jobsite setup options listed below shall be followed:


- *Manual on Uniform Traffic Control Devices, (MUTCD) Part 6 Notes for Figure 6H-3—Typical Application 3 Work on the Shoulders*
- *MUTCD Part 6 Notes for Figure 6H-4—Typical Application 4 Short Duration or Mobile Operation on a Shoulder*
- *MUTCD Part 6 Notes for Figure 6H-10—Typical Application 10 Lane Closure on a Two-Lane Road Using Flaggers*
- *MUTCD Part 6 Notes for Figure 6H-17—Typical Application 17 Mobile Operations on a Two-Lane Road*

In all setups, adequate warning lights, signage, channeling devices and flaggers shall be used.

A traffic observer or lookout shall be positioned to continually watch traffic and warn workers whenever trouble is anticipated.

Personnel driving sign posts shall utilize appropriate eye, foot, hand, head, and hearing protection ([SHA-500](#)).



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>TYPICAL KYTC OPERATIONS</p>
	<p><i>Subject</i></p> <p>Survey Crews</p>


GENERAL**PRECAUTIONS**

If crews and equipment are performing work on the right of way or in the traveled portion of the roadway, one of following jobsite setup options shall be followed:

- *Manual on Uniform Traffic Control Devices, (MUTCD) Part 6 Notes for Figure 6H-3—Typical Application 3 Work on the Shoulders*
- *MUTCD Part 6 Notes for Figure 6H-4—Typical Application 4 Short Duration or Mobile Operation on a Shoulder*
- *MUTCD Part 6 Notes for Figure 6H-10—Typical Application 10 Lane Closure on a Two-Lane Road Using Flaggers*
- *MUTCD Part 6 Notes for Figure 6H-17—Typical Application 17 Mobile Operations on a Two-Lane Road*

In all setups, adequate warning lights, signage, channeling devices, and flaggers shall be used. A SURVEY CREW sign may also be used.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>TYPICAL KYTC OPERATIONS</p>
	<p><i>Subject</i></p> <p>Slope Mowing</p>

GENERAL**PRECAUTIONS**

All manufacturer guidelines for operation, maintenance, and inspection shall be followed. See the owner's manual, [SHA-406-2](#), and [FOG-701](#) for additional information.

**SITE SELECTION
& PREPARATION**

Supervisors and slope mower operators should observe the following safety precautions:


- Mowing operations shall not be performed on slopes greater than 3/1 (33 degree slope).
- No brush cutting with equipment will be done within 300 feet of a dwelling, business, residence, or pedestrian area.
- Before daily mowing operations begin, the area to be mowed should be physically walked and inspected by the county superintendent, crew leader, or slope mower equipment operator for potentially dangerous, foreign objects (such as old wire, old guardrail, sign posts, etc.).
- Objects with the potential to be thrown from a mower should be removed from the site.
- Potentially dangerous objects that cannot be removed from the mowing site should be flagged or painted for visibility.

TRAFFIC FLOW

Slope mowing operations shall utilize appropriate traffic control. All employees and flaggers shall wear hardhats and eye protection when they are within 300 feet from the equipment when it is in operation.

- Flaggers shall be equipped with radio equipment to maintain contact with brush cutting equipment operators regarding traffic flow.
- Traffic shall be stopped when brush cutting equipment is in operation, however no longer than 20 minutes.
- Traffic control shall be conducted as set forth in the latest version of the *Manual on Uniform Traffic Control Devices (MUTCD)* and *KYTC Standard Drawings*.



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>TYPICAL KYTC OPERATIONS</p>
	<p><i>Subject</i></p> <p>Trailers & Towed Equipment</p>

SUPERVISOR**RESPONSIBILITIES**

Supervisors should verify that operators are capable and qualified before allowing equipment to be operated unsupervised. Both supervisors and operators should follow all Federal Motor Carrier Safety Administration Guidelines for trailers and towed equipment.

OPERATOR**RESPONSIBILITIES**

Operators responsibilities may include the following:

- Perform a preoperational check of their equipment
- Familiarize themselves with the operator's manual
- Report needed repairs promptly
- Perform a visual and manual check of the pintle hooks to confirm they are secure prior to using the truck and attachment
- Make sure cargo is properly loaded and secured using only approved chain and load binders
- Use and secure the proper strength safety chains on any attachment in tow with no more than 10% load weight on the trailer tongue

Note: [SHA-1703](#) and [SHA-1626](#) provide additional information.

- Be aware of height and width of load
- Plan ahead to minimize the need for backing

Note: Backing equipment should be done slowly, with the operator frequently checking the mirrors. Backup alarms should be working properly; additionally, an observer should be used when available.

- Make sure trailer bed and ramps are clear of any debris


**OPERATOR
RESPONSIBILITIES
(CONT.)**

- Make sure trailer bed and ramps are clear of any debris
- Make sure tilt-beds or ramps are secure before putting trailer in use
- Hook, unhook, load, and unload on stable ground with trailer secure
- Be sure taillights and turn signals are in view when towing any attachment that does not have taillight hookup

Operators should not:

- Use any equipment deemed unsafe
- Load a trailer beyond its recommended capacity
- Allow anyone between the truck and trailer when backing to hook-up the trailer



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>TYPICAL KYTC OPERATIONS</p>
	<p><i>Subject</i></p> <p>Working Near Railroads (RR)</p>

REFERENCES Federal Railroad Administration (FRA); [KRS 277](#)

**GENERAL
PRECAUTIONS**

- Always look in both directions prior to crossing RR tracks.
- Do not cross within 50 feet (15 meters) in front or behind a nonmoving train unless instructed by emergency or railroad personnel.
- Do not crawl under stopped cars or cross tracks between standing train cars.
- Do not block or disrupt access roads to and across tracks.
- Do not park a vehicle or equipment within 20 feet (6 meters) of the tracks.
- Materials, tools, or equipment shall not be stored on railroad right of way.

**EMERGENCY
NOTIFICATION
SYSTEMS (ENS) AT
HIGHWAY-RAIL
GRADE CROSSINGS**

For emergency incidents occurring on or near railroad crossings, call 911 and use the ENS sign located at each crossing.

Sample ENS Sign




**EMERGENCY
NOTIFICATION
SYSTEMS (ENS) AT
HIGHWAY-RAIL
GRADE CROSSINGS
(CONT.)**

The purpose of the ENS sign is to provide the public with critical emergency contact information at every highway-rail grade crossing. The information contained on the ENS sign enables the public to reach the railroad responsible for the crossing and to identify the specific crossing in the event of an emergency.

**ADDITIONAL
INFORMATION**

[SHA-1506](#) provides additional information on highway-rail grade crossings.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>TYPICAL KYTC OPERATIONS</p>
	<p><i>Subject</i></p> <p>Culvert & Subsurface Structure Entry</p>

GENERAL**PRECAUTIONS**


Employees may inspect culverts and other subsurface structures after receiving appropriate training. However, no employee (trained or untrained) shall enter culverts or structures that have:

- A diameter or opening of 48 inches (900 millimeters) or less
- Debris snares or other obstructions
- Water depth above boot tops
- Water current or incline that presents a hindrance to stable footing

Prior to entry, air quality shall be checked for oxygen deficiency or the presence of harmful contaminants. Available as-built or other plans should be reviewed as well. A helmet lamp or flashlight may be used to improve illumination.

[SHA-407-5](#) provides additional information on working in confined spaces.




 EMPLOYEE Safety & HEALTH ADMINISTRATION GUIDE	Chapter TYPICAL KYTC OPERATIONS
	Subject Nuclear Density

DEFINITIONS *A nuclear gauge (density meter) is a soil testing device that uses two different types of radioactive material to measure the moisture of soils and rock, as well as the density or compaction of such.*

GENERAL PRECAUTIONS Because nuclear gauges use small amounts of radioactive material, certain laws and standards must be met to ensure the safe operation of such. KYTC is licensed to possess and use these devices by the Kentucky Cabinet for Families and Children. Operators of nuclear density gauges shall keep them in their possession or properly secured at all times.

ADDITIONAL INFORMATION **CST-800** and **SHA-1804** provide additional information regarding nuclear density gauges.



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>TYPICAL KYTC OPERATIONS</p>
	<p><i>Subject</i></p> <p>Load Securement</p>

CARGO

Cargo such as corrugated pipe, concrete pipe, and signs shall be secured with adjustable tie downs such as ratchets or binders. Each tie-down shall be attached and secured in a manner that prevents it from becoming loose, unfastening, opening, or releasing while the vehicle is in transit.

The total working load limit of the tie-downs must be at least one-half times the weight of the equipment being transported.

Example: 3/8 chain grade 43 = 5,400 lbs. – 1/2 chain grade 43 = 9,200 lbs.

Example: If a load weighs 5,000 lbs., at least 2,500 lbs. of tie-downs are needed.

A minimum of two tie-downs are to be used if the cargo is less than ten feet in length. One additional tie down is required for every fraction beyond the first ten feet of length.

For example: one piece of corrugated pipe with a length of twenty feet, six inches (20' 6"), will need to be secured with a minimum of three tie-downs *if a header board is in place and the cargo is positioned to prevent forward movement*. If a header board is *not* in place and the cargo is *not* positioned to prevent forward movement, an additional tie-down is required.

All tie-downs, cargo securement systems, parts, and components used to secure cargo shall be in proper working order with no damaged or weakened components (cracked, twisted, bent, knotted, stretched, or broken).

**CARGO PLACEMENT
& RESTRAINT**

Cargo that is likely to roll, such as concrete or corrugated steel pipe, must be restrained by blocks, wedges, a cradle, or other means to prevent rolling and that is not capable of unfastening or loosening while the vehicle is in transit.

Cargo placed beside each other must be in direct contact with each other or otherwise secured to prevent the load from shifting.

MOTORIZED EQUIPMENT**GREATER THAN****10,000 POUNDS**

All heavy vehicles and equipment, such as backhoes, excavators, and loaders, must be secured as close as possible to the front and rear of the equipment by a minimum of four tie-downs.


Accessory equipment, such as hydraulic shovels, buckets, and blades, shall be completely lowered and secured to the trailer. Articulated vehicles must be secured in a manner that prevents movement while in transit. For example, a loader with locking pins that are not engaged needs a tie-down.

The total working load limit of the tie-downs must be at least one-half times the weight of the equipment being transported.

Example: 3/8 chain grade 43 = 5,400 lbs. – 1/2 chain grade 43 = 9,200 lbs.

Example: If a load weighs 30,000 lbs., at least 15,000 lbs. of tie-downs are needed.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>TYPICAL KYTC OPERATIONS</p>
	<p><i>Subject</i></p> <p>Field Data Collection Activities</p>

DATA COLLECTION

WHILE TRAVELLING

Employees engaged in data collection while traveling at reduced speed shall drive as far to the right of the traveled roadway as the nature of the work permits. Employees shall park on the shoulder or as far as possible to the right of the traveled roadway when brief stops are necessary.

Vehicles used in data collection activities shall be equipped with the necessary safety devices such as flashing lights, warning signs, and beacons. Extreme caution shall be exercised when it is necessary to make measurements or conduct other activities on the roadway surface. Placement of an observer to detect oncoming traffic is advisable. Worker safety apparel shall be worn ([SHA-509](#) and [SHA-1504](#)).

Employees shall use reasonable care and safety equipment to forewarn the motoring public when placing, adjusting, or removing a recorder.


DATA COLLECTION

BY OBSERVATION

Employees collecting data by observation shall, when possible, park in places that are out of the way of other traffic such as driveways, parks, parking areas, or on extra-wide shoulders. Additionally, the vehicle shall be parked off the roadway and in such a manner so that it will not block the sight distance of approaching traffic.

If warning signs are needed, a sufficient number in accordance with the *Manual on Uniform Traffic Control Devices (MUTCD)* standards shall be located in advance of the work location to inform the public ([SHA-1501](#)).




 ADMINISTRATION GUIDE	<i>Chapter</i> TYPICAL KYTC OPERATIONS
	<i>Subject</i> Equipment Roadeo

OVERVIEW

The Equipment Roadeo event shall adhere to all safety policies as noted in the *Employee Safety and Health Manual* (SAFE) and the *Safety and Health Administration Guide* (SHA). They include, but are not limited to, the following: foot protection, eye protection, vehicle and equipment safety, high visibility apparel, head protection, and hand protection ([SHA-500](#)).

Designated first-aid stations and responders shall be noted in the event job briefing prior to the event ([SHA-700](#)).



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>VEHICLE & EQUIPMENT SAFETY</p>
	<p><i>Subject</i></p> <p>General Safety Requirements</p>

DEFINITIONS *Fully controlled access highway* means a highway which gives preference to through traffic, which shall have access only at selected public roads or streets, and which shall have no highway grade crossing or intersection ([603 KAR 5:025](#)).

LIMITATIONS ON USE OF FULLY CONTROLLED ACCESS HIGHWAYS

Use of toll roads, interstate highways, and other fully controlled access highways by the following is prohibited at all times (603 KAR 5:025):

- Bicycles or motor scooters
- Vehicles drawn by animals
- Animals led, ridden, or driven on hoof
- Vehicles with improperly secured loads or loaded with animals not properly confined
- Vehicles with metal treads and vehicles with caterpillar treads
- Farm implements which are not being transported on a straight truck or truck trailer combination or a semitrailer
- Construction equipment other than motor trucks, except by special permit
- Moped, as defined in [KRS 186.010\(5\)](#)

SUPERVISOR & EMPLOYEE RESPONSIBILITIES

KYTC supervisors and employees shall observe the following vehicle safety precautions:

- Seat belts shall be used by all operators and occupants of state-owned or state-leased vehicles and equipment.
- The driver or operator of a state-owned or state-leased vehicle shall ensure that all passengers buckle their seat belts before operation of vehicle and/or equipment.

**SUPERVISOR &
EMPLOYEE
RESPONSIBILITIES
(CONT.)**

- The operator shall report through chain of command any safety hazard concerning an assigned vehicle or equipment. It will then be that supervisor's responsibility to report the deficiency to the proper authority ([SHA-412](#)).
- Employees shall not use cell phones or other electronic devices while operating state-owned or state-leased vehicles or equipment.
- Employees shall not use cell phones or other electronic devices while working around or in close proximity to vehicles or equipment while they are in use.
- Vehicle operators shall perform safety inspections and walk-arounds of assigned vehicles each morning before putting vehicles into operation. Items to check include, but are not limited to, glass, horn, mirrors, lights, turn signals, brakes, tires and wheels, exhaust system, steering mechanisms, wheel bearings, backup alarms, and warning light systems.
- Smoking is not permitted in a KYTC-owned or leased vehicle ([GAP-1104-2](#)).
- Emergency brakes shall be set on all unattended equipment. Vehicles with automatic transmissions shall be left in "park." Vehicles with standard transmissions shall be left in "reverse" gear when facing downhill and "low" gear when facing uphill.
- Chocking or blocking of wheels is required when jacks are used for changing tires or the vehicle is parked on an incline.
- All vehicles and equipment shall have engines turned off while refueling. Cell phones and other electronic devices shall be turned off while refueling.
- For backing all equipment, a backup alarm that meets federal standards is required. Backup alarms shall be maintained in an operable condition. A backup guide is recommended when rear vision is restricted. If no backup guide is available, the operator shall walk around the vehicle before backing.

**SUPERVISOR &
EMPLOYEE
RESPONSIBILITIES
(CONT.)**

- Personnel shall not ride on the sides or top of equipment. Both the operator and the person riding shall be held accountable.
- Employees shall have unobstructed hearing, while working or while operating motor vehicles, and shall not use any type of earphone device in one or both ears. This prohibition does not apply to hearing aids, personal protective equipment, or use of earphone-type, two-way radio systems, or cell phones required for safety.
- Supervisors shall verify that operators are capable and qualified before allowing the equipment to be operated unsupervised.
- Employees working on foot must always communicate their presence and position to equipment operators.


**EQUIPMENT SAFETY
PRECAUTIONS**

- Equipment that does not require a license plate shall be inspected in the same manner as licensed vehicles.
- All licensed-vehicle tires shall be properly inflated and shall never have less than 1/16 inch of tire tread, except trucks, which shall have at least 1/8 inch of tread on front tires. Non-licensed equipment shall not have bald tires or tires with exposed cord.
- All equipment designed to operate under 25 mph shall have a slow-moving vehicle emblem mounted on the rear in a readily visible location, preferably to left center of equipment. Slow-moving equipment (graders, loaders, snow and ice removal equipment) and other equipment producing traffic hazards to motorists shall have operable warning lights.
- Equipment being towed shall have two safety chains properly connected to the towing vehicle.
- All cracked glass on vehicles and equipment shall be replaced if the operator's vision is restricted or distorted.
- Off-road equipment traveling a roadway shall utilize an escort vehicle. Escort vehicles shall comply with [SHA-1602](#).

EQUIPMENT SAFETY**PRECAUTIONS (CONT.)**

- Manufacturer operator and maintenance manuals shall be the standard to follow in the absence of regulatory standards.
- Most earthmoving equipment requires a sight distance of 1,000 feet to safely turn around. Flag persons shall be positioned when this sight distance is not available.
- When airing loose tires mounted on rims with split lock rings, employees shall follow procedures outlined in [SHA-406-1](#).
- All steps and running boards shall be kept clean and in good repair.
- Cabs of vehicles shall be kept free of loose chains, bottles, etc. All required equipment, such as first-aid kits, fire extinguishers, and tools, shall be secured.
- An operable horn is required on all vehicles and equipment.




 ADMINISTRATION GUIDE	<i>Chapter</i> VEHICLE & EQUIPMENT SAFETY
	<i>Subject</i> Following Distance

GENERAL PRECAUTIONS

- Vehicles in convoy or maintenance operations shall have at least 300 feet between vehicles.
- Use the "three-second rule" to determine safe following distance. When the vehicle in front of you passes an obstacle, count "1-one thousand, 2-one thousand, 3-one thousand." If the vehicle has not passed that obstacle, it is at a safe following distance.




 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>VEHICLE & EQUIPMENT SAFETY</p>
	<p><i>Subject</i></p> <p>Transport Operations</p>

GENERAL PRECAUTIONS Employees participating in transport operations shall take the following general safety precautions:

- On two-lane highways, an escort vehicle shall be provided anytime equipment is transported on “lowboys” and a wide-load situation exists. The vehicle shall have an adequate warning light system and be positioned to offer maximum protection to oncoming motorists in curves, over hills, etc. ([SHA-1602](#)).
- All loads over 10 1/2 feet in width or 75 feet in length (depending on road alignment) shall have an escort vehicle provided. An escort vehicle shall also be provided whenever the blade or bucket on equipment extends over the lowboy.
- The supervisor in charge of the equipment being moved shall provide traffic control measures (flag persons, signs, etc.) when necessary.
- A trailer shall not be loaded beyond its rated capacity.
- Trailer taillights and turn signals shall be visible and in working condition.
- Cargo shall be secured by appropriately rated transport chain or web-strap bindings ([SHA-1627](#)).
- Two-vehicle maximum towing load shall not be exceeded.
- Vehicle tongue weight capacity shall not be exceeded.

[SHA-1701](#) and [SHA-1705](#) detail general safety policies.




 ADMINISTRATION GUIDE	<i>Chapter</i> VEHICLE & EQUIPMENT SAFETY
	<i>Subject</i> Driver's Licenses

LICENSE REQUIRED

In accordance with Cabinet policy and state law, all employees operating state vehicles and road equipment must have a valid driver's license with the appropriate endorsements as outlined in the Classification Specifications.



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>VEHICLE & EQUIPMENT SAFETY</p>
	<p><i>Subject</i></p> <p>Driver Responsibility</p>

REFERENCE [GAP-1104-2](#)

EXPECTATIONS An operator of a KYTC vehicle is considered by the public to be a representative of the Cabinet and is expected to abide by all traffic laws and Cabinet policies as an example for others. The driver is responsible for the safe operation of the vehicle.


Any non-driving activity conducted while driving is a potential distraction and increases the risk of crash or injury. Therefore, employees shall refrain from driving or operating any vehicle or piece of equipment while distracted. This includes any activity that diverts the operator's attention, including talking on the phone, texting, eating, drinking, talking to others in the vehicle, and adjusting entertainment or navigation systems.

Sending or reading a text takes the operator's eyes away from the road an average of five seconds. At 55 mph, that equates to driving the length of a football field with your eyes closed.

Operators shall promptly report vehicle defects or unusual conditions to the supervisor.

LIABILITY Operating a Cabinet vehicle does not grant the operator immunity from the law. In case of an accident or violation of the law, the operator shall be held to the same degree of responsibility as if operating a privately-owned vehicle. The operator may also be subject to disciplinary action by the Cabinet.



 ADMINISTRATION GUIDE	<i>Chapter</i> VEHICLE & EQUIPMENT SAFETY
	<i>Subject</i> Passenger Cars & Trucks


**LIMITATIONS ON
USAGE**

The Secretary of the Transportation Cabinet, division head, or chief district engineer may prohibit any employee from operating Cabinet-owned equipment or passenger vehicle when such restriction is in the best interest of the employee, the Cabinet, or the general public.

The director of the Division of Equipment may recommend that an employee be restricted from operating equipment.

Immediate supervisors shall have the authority to determine who will operate a department vehicle among their personnel.



 ADMINISTRATION GUIDE	<i>Chapter</i> VEHICLE & EQUIPMENT SAFETY
	<i>Subject</i> Trucks


GENERAL**PRECAUTIONS**

Operators of trucks shall observe the following general safety precautions:

- All trucks shall be checked prior to and after each use to ensure operating systems are functioning properly.
- Employees riding in trucks with seat belts shall wear belts whenever truck is in operation.
- The truck cab compartment shall contain no more passengers than the number of available seat belts.
- When driving too slowly for traffic conditions, employees shall pull safely off roadway to let traffic pass.
- Dump trucks shall be equipped with mud flaps.
- All loads containing materials subject to shifting or dislodging shall be covered with a tarp.

[SHA-206-3](#), as well as [SHA-1701](#) detail general safety policies.



 EMPLOYEE Safety & HEALTH ADMINISTRATION GUIDE	Chapters VEHICLE & EQUIPMENT SAFETY
	Subject Bulldozers

GENERAL**PRECAUTIONS**

Bulldozers shall be equipped with an overhead and rear canopy guard when used in site-cleaning operations. The overhead guard shall be 1/8-inch steel plate or 1/4-inch woven wire mesh with openings 1 inch or smaller. The rear guard shall be 1/4-inch woven wire mesh with openings 1 inch or smaller.


When descending a slope, the operator shall doze two or three blades full of dirt to the edge of the slope. The operator shall ride down the slope with the edge of dirt in front of the blade. The blade shall not be lowered in an attempt to regain lost dirt because this could overturn the bulldozer.

Extreme care shall be used when working near cuts or fills.

Prior to leaving a bulldozer unattended, the operator shall completely lower the blade.

[SHA-1701](#) details general safety policies.




 ADMINISTRATION GUIDE	<i>Chapter</i> VEHICLE & EQUIPMENT SAFETY
	<i>Subject</i> Cranes

GENERAL**PRECAUTIONS**

Operators shall be qualified and certified per OSHA Standard, [CFR 1926.1427](#), and all operations of cranes shall be in accordance with OSHA Standard, [29 CFR 1926.1427](#).

[SHA-1701](#) details general safety policies, and [SHA-408-2](#) provides information on working around power lines.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>VEHICLE & EQUIPMENT SAFETY</p>
	<p><i>Subject</i></p> <p>Oil Distributors</p>

GENERAL**PRECAUTIONS**

Oil distributor operators shall observe the following general safety precautions:

- Two dry-chemical fire extinguishers (having at least a 20-pound ABC rating) shall be mounted on the front or side. Extinguishers shall be placed approximately 20 feet to rear of distributor while oil is being heated.
- Exposed shaft couplings and pulley belts shall be shielded.
- Oil shall never be heated when oil level is below flues.
- The burners shall not be operating while distributor is being driven.
- Whenever possible, oil distributor burners shall be lit in a segregated area away from vehicles and other structures. Burners shall not be lit within 50 feet of gasoline, diesel, or kerosene storage.
- The hand spray bar and other lines shall be cleaned after each day's use. Waste materials shall be sprayed into a container and collected as part of the hazardous waste program found online at:

<http://waste.ky.gov/hwb/pages/default.aspx>

- Gasoline shall not be used for cleaning purposes. Employees shall not transport open containers of gasoline on the oil distributor.
- Extreme care shall be used on windy days to prevent oil from being blown onto private cars and other property. Employees shall work so that the wind will carry oil vapor away from truck exhaust or burners. This type of operation requires maintaining steps and platforms in a non-slippery condition. Personnel shall be provided a grab bar or railing when operating from rear of distributor.


**GENERAL PRECAUTIONS
(CONT.)**

- Special care shall be given to keep taillights clean and free of oil.

- LP gas shall be limited to one container per vehicle, with a capacity of not more than 100 pounds when stored within buildings. All containers' valves shall be closed.

SHA-1701 details general safety policies and **SHA-500** provides information regarding personal protective equipment.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>VEHICLE & EQUIPMENT SAFETY</p>
	<p><i>Subject</i></p> <p>Forklift Trucks</p>

GENERAL**PRECAUTIONS**

Employees shall observe the following safety precautions when operating or working in the vicinity of forklift trucks:

- Only properly trained and authorized personnel shall be permitted to operate forklifts. The immediate supervisor is responsible for ensuring operators receive proper training.

Note: Forklift operators are certified for up to 3 years.


- Forklift trucks shall be inspected prior to use according to either TC 25-165, *Internal Combustion Engine Industrial Truck Operation Checklist*, or TC 25-166, *Electric Industrial Truck Daily Operation Checklist* ([Exhibit 9028](#) and [Exhibit 9029](#)).
- An overhead guard shall be provided.
- Forklifts shall have a 5-pound ABC or all-purpose fire extinguisher.
- Forklifts shall have an audible horn.
- Loads shall be lowered to lowest position possible when moving from one location to another.
- Prior to leaving a forklift unattended, the forks shall be fully lowered, controls positioned in neutral, emergency brake engaged, and power shut off.
- Wheels shall be chocked when parked on an incline.
- Passengers shall not ride on forklifts.
- Personnel shall not be lifted unless an approved safety platform is provided. The platform shall have toe boards, handrails, and mid-rails.

**GENERAL PRECAUTIONS
(CONT.)**

- The operator shall not permit personnel to be positioned beneath any raised portion of the forklift.
- Arms and legs shall not be placed between uprights of mast or outside running lines of truck.
- Employees shall not use cell phones or any other electronic devices including ear buds, tablets, kindles, or like devices while operating state-owned or state-leased forklifts.
- No one under the age of 18 shall operate a forklift

[SHA-1701](#) details general safety policies.



 ADMINISTRATION GUIDE	<i>Chapter</i> VEHICLE & EQUIPMENT SAFETY
	<i>Subject</i> Graders


GENERAL**PRECAUTIONS**

Employees shall observe the following safety precautions when operating or working in the vicinity of graders:

- All graders shall have operable warning lights, a working backup alarm, and a SLOW-MOVING VEHICLE sign mounted in the rear, preferably to left center.
- Riders shall not be permitted at any location other than seated in grader cab.
- The blade shall be lowered to the ground when grader is left unattended.
- Graders that are used for snow and ice removal shall have a reflective guide bar attached to the blade corner nearest the traffic side.

[SHA-1701](#) details general safety policies.



 ADMINISTRATION GUIDE	<i>Chapter</i> VEHICLE & EQUIPMENT SAFETY
	<i>Subject</i> Front-End Loaders, Bantams, Gradalls, & Excavators


GENERAL**PRECAUTIONS**

Employees shall observe the following safety precautions when operating or working in the vicinity of front-end loaders, bantams, gradalls, and excavators:

- All above-mentioned equipment shall have operable warning lights and a SLOW-MOVING VEHICLE sign mounted in rear, preferably to left center, as well as a working backup alarm.
- Operators shall wear seat belts.
- Operators shall lower bucket to the ground and engage parking brake upon shutting down or leaving equipment.
- Operators shall never operate equipment with personnel working directly beneath bucket.
- Operators, when traveling forward, shall carry the bucket as close to the ground as possible for best machine stability and visibility.
- It is best, whenever possible, to back the loader down steep inclines rather than travel forward with bucket loaded. Wheels shall be properly chocked when parked on incline.
- Personnel shall not be elevated or transported in the materials bucket.

[SHA-1701](#) details general safety policies.



 ADMINISTRATION GUIDE	<i>Chapter</i> VEHICLE & EQUIPMENT SAFETY
	<i>Subject</i> Backhoes


GENERAL**PRECAUTIONS**

Employees shall observe the following safety precautions when operating or working in the vicinity of backhoes:

- Backhoes shall be equipped with roll bars, and operators shall wear seat belts.
- All backhoes shall have warning lights.
- Backhoes shall have outriggers extended and be on solid footing before work begins.
- All backhoes shall have a working backup alarm.
- The boom shall not be swung over or toward employees.
- The bucket, boom, and outriggers shall be lowered when not in use.

[SHA-1701](#) details general safety policies.



 ADMINISTRATION GUIDE	<i>Chapter</i> VEHICLE & EQUIPMENT SAFETY
	<i>Subject</i> Tractors


GENERAL**PRECAUTIONS**

Employees shall observe the following safety precautions when operating or working in the vicinity of tractors:

- Seat belts shall be worn by operators at all times.
- Tractor shall have a SLOW-MOVING VEHICLE sign mounted in left rear and in a location that can be readily seen. Signs shall be mounted in a position that will not block rear view of the operator.
- Riders are never allowed on tractor or attached equipment.
- The power takeoff shall have a protective shield in place.
- Tractors shall not be operated on slopes greater than 3:1.
- Operators shall be especially watchful for culverts and other fixtures that may be hidden by grass or weeds.

[SHA-1701](#) details general safety policies.



 ADMINISTRATION GUIDE	<i>Chapter</i> VEHICLE & EQUIPMENT SAFETY
	<i>Subject</i> Rollers


GENERAL**PRECAUTIONS**

Employees shall observe the following safety precautions when operating or working in the vicinity of rollers:

- All rollers shall be equipped with warning lights. Lights shall be in operation during periods of maintenance operations and whenever roller is being towed.
- Extreme care shall be exercised by the roller operator on shouldering operations, especially near embankments.
- Emergency brakes shall be operational.
- Steel-wheeled rollers shall not be used to roll shoulders less than 18 inches in width.
- Roller drums shall be chained to frame while being towed.
- Operators shall wear seat belts.

[SHA-1701](#) details general safety policies.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>VEHICLE & EQUIPMENT SAFETY</p>
	<p><i>Subject</i></p> <p>Bucket Trucks (Aerial Lifts, “Cherry Pickers,” Autocranes, & Ladder Trucks)</p>

GENERAL**PRECAUTIONS**

Employees shall observe the following safety precautions when operating or working in the vicinity of bucket trucks (aerial lifts, “cherry pickers,” autocranes, and ladder trucks):


- Bucket trucks shall not be field modified without written permission from the manufacturer.
- Bucket trucks used around energized equipment shall have an insulated platform.
- Prior to transit, the boom and bucket shall be cradled and locked down, either hydraulically or manually.
- Only trained and authorized personnel are permitted to operate a bucket truck.
- The supervisor shall maintain a record of written monthly inspections of the bucket truck and boom equipment on TC 25-168 ([Exhibit 9030](#)).
- Annual dielectric testing shall be performed to ensure insulation values.
- Only nonconductive hydraulic fluids shall be used. Adding the incorrect fluid will require purging of the entire system and a new dielectric test.
- Load limits of a bucket, boom, or jib crane shall not be exceeded.
- The boom shall not be used to lift or move materials.
- Wheel chocks shall be in place prior to work beginning.
- Outriggers (stabilizers) shall be properly utilized and positioned prior to work beginning.

**GENERAL PRECAUTIONS
(CONT.)**

- Overhead clearances shall be checked prior to passage.
- The bucket shall not be modified in any manner.
- Booms shall be kept clean—free of dirt, oil, and road grime.
- Truck beds shall be kept orderly and clean.
- Bucket operators shall tie off to the designated anchor by utilizing a lanyard and ANSI-approved harness.
- Employees shall wear a safety harness with the lanyard attached to the manufacture designated anchor point while stationed in the bucket or on the platform of an aerial lift. Lanyards shall not be attached to an adjacent pole, structure, or equipment.
- Always stand firmly on the floor of the basket. Do not sit or climb on the edge of the basket, or use planks, ladders, or other devices to extend the work area.
- Only devices designed and approved for lifting personnel and that are operated by a competent person may be used as aerial lifts. Boom and basket load limits specified by the manufacturer must not be exceeded. The lift or platform must not extend over active traffic lanes. An aerial lift must maintain at least 10 feet (3 meters) minimum clearance between electrical lines and any part of the equipment.
- Traffic-signal work shall also comply with [SHA-500](#) and [SHA-1500](#).

[SHA-408-12](#) provides information on working around power lines, and [SHA-1701](#) details general safety policies.



 ADMINISTRATION GUIDE	<i>Chapter</i> VEHICLE & EQUIPMENT SAFETY
	<i>Subject</i> Truck-Mounted Attenuators


GENERAL**PRECAUTIONS**

Employees shall observe the following safety precautions when working with truck-mounted attenuators:

- Truck-mounted attenuators shall be mounted on well-maintained and reliable vehicles.
- Dump trucks with truck-mounted attenuators shall follow manufacturer's guidelines for ballast.
- Flashing-arrow panels shall be mounted on vehicle. A 4-foot x 8-foot arrow panel is the appropriate size for high-speed, high-volume highways.
- Truck-mounted attenuators may be utilized on moving or stationary work sites. On moving jobsites, appropriate rear-mounted warning signs shall be displayed to provide advance warning.
- All safety devices and lighting shall be kept clean and in proper working order.

[SHA-1701](#) details general safety policies.



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>VEHICLE & EQUIPMENT SAFETY</p>
	<p><i>Subject</i></p> <p>Arrow Panel</p>


GENERAL**PRECAUTIONS**

Employees shall observe the following safety precautions when working with arrow panels:

- Arrow panels are key to work-zone safety and shall be maintained in accordance with the manufacturer's recommended guidelines.
- Truck-mounted or trailer-mounted arrow-panel vehicles shall be maintained in reliable condition.
- Minimum distance for arrow legibility shall be met as follows:
 - ◆ Type A (48 inches x 24 inches) 12 lamps = 1/2 mile minimum legibility distance
 - ◆ Type B (60 inches x 30 inches) 13 lamps = 3/4 mile minimum legibility distance
 - ◆ Type C (96 inches x 48 inches) 15 lamps = 1 mile minimum legibility distance
- An arrow panel with burnt-out lamp elements or inoperative parts shall be repaired immediately.
- Only the manufacturer's listed and approved parts shall be used in maintaining and repairing equipment.
- Arrow panels shall meet the minimum size, visibility, legibility distance, number of elements, and other specifications as shown in the *Manual on Uniform Traffic Control Devices*, (MUTCD) Section 6F.61 and Figure 6F-6.
- Except when the arrow trailer is actually being moved, it shall be detached from the towing vehicle. Towing trailer devices with the display active as a mobile operation is prohibited.

SHA-1701 details general safety policies.




 ADMINISTRATION GUIDE	<i>Chapter</i> VEHICLE & EQUIPMENT SAFETY
	<i>Subject</i> Sky Trimmer

GENERAL**PRECAUTIONS**

All manufacturer guidelines for operation, maintenance, and inspection shall be followed as detailed in the owner's manual.

[SHA-1701](#) details general safety policies.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>VEHICLE & EQUIPMENT SAFETY</p>
	<p><i>Subject</i></p> <p>Emergency Lighting</p>

REFERENCES *Manual on Uniform Traffic Control Devices (MUTCD)*, 2009 Edition, Chapter 6H, Typical Applications; [KRS 189.232](#), Definition of "highway work zone"; [KRS 189.910](#), Definitions for KRS 189.020 to 189.950; [KRS 189.920](#), Flashing lights; [KRS 189.940](#), Exemptions from traffic regulations

PURPOSE Emergency lighting shall be used to increase the visibility of KYTC vehicles by establishing an adequate minimum level of warning lighting on such vehicles, to increase the safety of KYTC employees as well as the traveling public, and to improve overall consistency statewide.

GUIDELINES Warning light guidelines for KYTC vehicles are outlined in the following chart. The intent of these guidelines is for every KYTC vehicle to have a minimum level of emergency lighting.

Recommended Minimum Lighting Levels

Exposure	Vehicle Type Examples	Lighting
Low-Medium - Periodically stopped in roadway and/or periodically operates at slow speeds on roadway	Sedans	Level 1 – One flashing LED roof-mounted 15" (min) Mini-Bar w/360 visibility Use colors Amber/White (front) Amber/White (rear).
High - Frequently stopped in roadway and/or operates at slow speeds on roadway	Sedans, Pickups & SUVs	Level 2 – Two front-facing mounted LED strobes; use color Amber or White and Two rear-facing LED strobes mounted rear of vehicle. Use color Amber/White One flashing LED roof-mounted 22" (min) Mini-Bar w/360 visibility. Use colors Amber/White (front) Amber/White (rear).

GUIDELINES (CONT.)

All fleet vehicles purchased after March 17, 2017 shall comply with these guidelines. Vehicles requiring fleet lighting repairs will be upgraded to comply with these guidelines depending on remaining life of the vehicle.

Lighting purchases outside of these levels shall have management approval (chief district engineer/division head or his/her designee) and should be based on engineering judgement.


All lighting shall meet SAE J595 or SAE J845 Class 1 standard, and SAE J578 for colors as verified by an AMECA (Automotive Manufacturers Equipment Compliance Agency) certified lab.

It is recommended that the predominant light pattern be flashing. A pattern which alternates from one side of the vehicle to the other is preferable to one in which lights on both sides of the vehicle are flashing at the same time. It is also recommended that a slower flash frequency be used, since this will give a higher response to the longer light pattern than a short flash. A flash pattern such as a double flash or a pattern similar to a rotating beacon will provide an appearance that enables vehicle identification and should improve response.

Since most maintenance vehicles are used both in the day and at night, a system that automatically dims the top-mounted light strobes should be considered based on engineering judgment.

Note: Using too many lights or lights with too high an effective intensity may impede the ability of other drivers to detect a pedestrian.




 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>VEHICLE & EQUIPMENT SAFETY</p>
	<p><i>Subject</i></p> <p>Portable Changeable Message Signs (PCMS)</p>

GENERAL**PRECAUTIONS**

Employees shall observe the following safety precautions when working with portable changeable message signs (PCMS)

- PCMS shall meet the minimum visibility and legibility standards established in the *Manual on Uniform Traffic Control Devices*, (MUTCD) 6F.60.
- PCMS shall be placed off the shoulder of the roadway and behind a traffic barrier (guardrail), if practical.
- If a traffic barrier is not available to shield the PCMS, it shall be placed off the shoulder and outside of the clear zone.
- If there is no alternative other than placing a PCMS on the shoulder of the roadway or within the clear zone, it shall be delineated with retroreflective temporary traffic control devices.
- A taper of at least four channeling devices shall be placed in advance of the PCMS, with drums or cones as appropriate.
- Vehicles shall not be parked within gore areas.
- PCMS should not be placed within the natural path of a driver (such as, the outside of a curve).
- PCMS is a supplement to the static sign; it is not a substitute.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>VEHICLE & EQUIPMENT SAFETY</p>
	<p><i>Subject</i></p> <p>Retroreflective Conspicuity Guidelines</p>


REFERENCES

NCHRP 13-02, Guidelines for the Selection and Application of Warning Lights on Roadway Operations Equipment, March 31, 2008
 SAE J845 (Warning Devices for Authorized Emergency, Maintenance, and Service Vehicles) Current Edition, Class 1, Class 2, Class 3
 SAE J595 (Warning Devices for Authorized Emergency, Maintenance, and Service Vehicles) Current Edition, Class 1, Class 2, Class 3
 SAE J578 (Color Specification for Electric Signal Lighting Devices) Current Edition

PURPOSE

Retroreflective conspicuity chevron tape should be considered based on engineering judgement for “High Exposure” vehicles for additional visibility.




 ADMINISTRATION GUIDE	<i>Chapter</i> VEHICLE & EQUIPMENT SAFETY
	<i>Subject</i> Parking of Equipment

GENERAL

PRECAUTIONS

All equipment shall be parked as far as possible off the roadway surface and on the same side of the highway. If both sides of the highway must be used for equipment parking, employees shall use utmost caution in crossing open lanes of traffic.



 ADMINISTRATION GUIDE	<i>Chapter</i> VEHICLE & EQUIPMENT SAFETY
	<i>Subject</i> U-Turns


GENERAL

PRECAUTIONS

Vehicle operators shall avoid U-turns on limited access, high speed facilities by using adjacent interchanges whenever possible.

Operators shall use reasonable judgment in proceeding to a location (ramp interchange, etc.) where a safe U-turn can be executed.



 ADMINISTRATION GUIDE	<i>Chapter</i> VEHICLE & EQUIPMENT SAFETY
	<i>Subject</i> Disabled Vehicles


GENERAL**PRECAUTIONS**

Disabled vehicles shall be moved as far off the pavement as possible, with emergency lighting (including flashers) activated.

If available, cones or other emergency/reflective warning devices shall be placed in the following locations to warn oncoming traffic:

- At least 100 feet (30 meters) to the rear of the disabled vehicle
- Where sight distance is limited, up to 300 feet (100 meters) to the rear of the disabled vehicle



 ADMINISTRATION GUIDE	<i>Chapter</i> VEHICLE & EQUIPMENT SAFETY
	<i>Subject</i> Aggressive Driving


GENERAL

PRECAUTIONS

Employees shall refrain from aggressive driving. It is a dangerous and illegal behavior that will not be tolerated while on KYTC business.

If an employee encounters an aggressive or otherwise dangerous driver, the employee shall pull over at the first safe opportunity, let the vehicle pass, and dial 911 to report the incident. The employee shall not attempt to block the aggressive driver's path, and shall not speed up or respond aggressively.



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>VEHICLE & EQUIPMENT SAFETY</p>
	<p><i>Subject</i></p> <p>Winter Driving</p>

GENERAL**PRECAUTIONS**

Employees shall adhere to the following safety tips when driving during winter weather:


- Recognize that conditions change constantly.
- Remove accumulated snow, ice, and salt from vehicle windows, mirrors, and lights before driving. Salty residue can diminish the effectiveness of lights by fifty percent.

Note: In Kentucky, it is illegal to drive a vehicle with only a small “peep hole” scraped clear on an otherwise frost or snow-covered windshield.

- Scrape, brush, defrost, or wipe off inside fog.
- Check that windshield wipers are in good condition.
- Gently accelerate, brake, and turn when initially assessing road conditions. Driving at too high of a speed on slippery roads is a common hazard.
- Allow extra stopping distances between vehicles, especially on ice.
- Refer to [SHA-1701](#) for general safety policies.

Note: Depending on air and surface temperatures, braking distance on ice can be 4 to 10 times greater than that of dry pavement.




 EMPLOYEE Safety & HEALTH ADMINISTRATION GUIDE	<i>Chapter</i> VEHICLE & EQUIPMENT SAFETY
	<i>Subject</i> Stockpile Safety

GENERAL**PRECAUTIONS**

Employees shall observe the following stockpile safety precautions:

- Care shall be taken when sampling or working near stockpiles.
- Sampling from steep sloped stockpiles shall be performed by machine.
- The safety personnel or supervisor shall be consulted for safe stacking slopes.
- Stockpiles are stable when sloped or benched at the angle of repose (approximately 1 vertical to 1 ½ horizontal).
- Steep sloped stockpiles may fall to the angle of repose without warning.



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>VEHICLE & EQUIPMENT SAFETY</p>
	<p><i>Subject</i></p> <p>Conveyor Safety</p>

WARNING

Serious injuries and death have resulted from clothing and other items getting caught by a conveyor and pulling an employee into the pinch point between the roller and the belt.

Any loose item can become caught, including the following:

- Loose-fitting clothing
- Long hair (including beards)
- Jewelry, such as chains and watches
- Shoe strings

Therefore, employees should avoid wearing clothes such as shirts or jackets with hoods; band the ends of sleeves and pant legs; tuck in or pin up long hair; and remove jewelry.

GENERAL**PRECAUTIONS**


Employees shall:

- Ensure conveyor belts are stopped prior to sampling material
- Never use tools near a moving conveyor

Note: Virtually any tool can be grabbed and pulled when it comes into contact with a conveyor.

- Refer to [SHA-1701](#) for general safety policies
- Follow all manufacturer guidelines



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>VEHICLE & EQUIPMENT SAFETY</p>
	<p><i>Subject</i></p> <p>Backing Vehicles</p>

GENERAL**PRECAUTIONS**

Avoid backing equipment whenever possible. If backing is the only option, sound the horn as warning, then check all rear-view mirrors and unobstructed windows before beginning to back the vehicle.

Avoid backing into intersections, over pedestrian crosswalks, or around corners. Backing into traffic requires additional precautions; a flagger or spotter may be needed, and in some cases work zone protection may be required.

Before backing a vehicle, the driver or passenger shall walk around the vehicle to determine that there is sufficient area to complete the backing maneuver. The driver should back the vehicle slowly and cautiously, looking to the rear while backing.

Note: The fact that an area was clear when the vehicle started backing is no reason to assume that it will remain clear while backing. A car may pull up or an employee or pedestrian may walk behind the vehicle. For this reason, it is necessary not only to determine clearance before getting in the vehicle, but also to continue with caution while backing.

If possible, a fellow employee should give guidance while the driver is backing the vehicle. The employee giving directions should stand in full view of the driver, as well as all vehicle and pedestrian traffic, and have an unobstructed view of the backing path. If these conditions cannot be met, additional signal persons should be used.

Note: The driver is legally responsible for accidents that occur while backing a vehicle, even if another employee is giving guidance.

SPECIAL PRECAUTIONS**WHEN PARKING**

Always park in designated parking areas. When parallel parking at a curb, try to allow sufficient clearance in front of the vehicle to pull out without backing.


SPECIAL PRECAUTIONS

WHEN PARKING

(CONT.)

When parking in a designated lot, choose a space that allows for the driver to pull forward when exiting the space. When necessary, back the vehicle into the space in order to be positioned to pull forward when exiting. Likewise, when parallel parking, try to leave enough room in front of the vehicle to avoid backing when leaving.



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>VEHICLE & EQUIPMENT SAFETY</p>
	<p><i>Subject</i></p> <p>Scissor Lifts</p>

DEFINITIONS *Scissor lifts* are work platforms used to safely move workers vertically and to different locations in a variety of industries including construction. Scissor lifts are different from aerial lifts because the lifting mechanism moves the work platform straight up and down using crossed beams functioning in a scissor-like fashion.

HAZARDS Although scissor lifts present hazards similar to scaffolding when extended and stationary, using scissor lifts safely depends on considering equipment capabilities, limitations, and safe practice. When not used properly, scissor lifts can present a serious hazard to workers.

OSHA's investigations have found that most injuries and fatalities involving scissor lifts occur with:

- Fall protection
- Stabilization
- Positioning

Only trained workers shall be allowed to operate scissor lifts. All scissor lift manufacturer guidelines and instructions shall be followed.

FALL PROTECTION Scissor lifts shall have guardrails installed to prevent workers from falling.

STABILIZATION Employees shall observe the following precautions for stabilization of scissor lifts:

- Follow the manufacturer's instructions for safe movement. This usually rules out moving the lift in an elevated position.
- Isolate the scissor lift or implement traffic control measures to ensure that other equipment cannot contact the scissor lift.
- Select work locations with firm, level surfaces away from hazards that can cause instability (such as, drop-offs, holes, slopes, bumps, ground obstructions, or debris).
- Use the scissor lift outside only when weather conditions are good. All scissor lifts have a wind rating for outdoor use. Operators shall always operate the scissor lift below this rating.

COLLAPSE PREVENTION Employees shall observe the following safety precautions to prevent collapse of scissor lifts:

- Ensure that safety systems designed to stop a collapse are maintained and not bypassed.
- Never allow the weight on the work platform to exceed the manufacturer's load rating.
- Never allow equipment other than the scissor mechanism to be used to raise the work platform (such as, using a forklift to lift the work platform).
- Keep the lift from being struck by other moving equipment on the worksite by isolating the scissor lift or implementing traffic control measures.

POSITIONING Positioning the scissor lift to avoid crushing or electrocution hazards is important for safe use.

Electrocution Hazards - Positioning the scissor lift to avoid electrocution, arc flash, and thermal burns is important for safely using scissor lifts near energized power lines. Since electricity can arc (jump) from the power line to the scissor lift or worker, electrocution can occur even if neither the scissor lift nor the worker touches the power line ([SHA-408-12](#)).

Crushing Hazards - Crushing hazards are present in workplaces using scissor lifts and may expose workers nearby, even those not working on the scissor lift.

**GENERAL
PRECAUTIONS**

The following work practices will ensure that scissor lifts are safely positioned:

- Implement traffic control measures around the scissor lift to prevent other workers or vehicles from getting too close.
- Use ground guides when operating or moving the scissor lift around the workplace.
- Select work locations that do not approach electrical power sources (such as, power lines, transformers) by at least 10 feet and that do not pose other overhead hazards (such as, other utilities, branches, overhangs).
- If the job task requires work near an electrical source, ensure that the worker is qualified and has received the required electrical training.
- Follow all manufacturer guidelines.

MAINTAINING**SCISSOR LIFTS**

Scissor lifts shall be maintained in accordance with manufacturer guidelines to ensure safe use.

Manufacturer's maintenance and inspection instructions will generally include instructions for completion of the following tasks:

- Test and inspect controls and components before each use.
- Ensure that guardrail systems are in good working condition.
- Verify that brakes, once set, will hold the scissor lift in position.
- Verify tires are in good condition and inspected daily.
- Ensure batteries are properly charged and maintained.

OSHA STANDARDS

Employers must comply with the following OSHA standards to protect workers from hazards associated with scissor lifts.


General Industry

- [29 CFR 1910.23](#), *Guarding Floor and Wall Openings and Holes*
- 29 CFR 1910.28, *Safety Requirements for Scaffolding*
- 29 CFR 1910.29, *Manually Propelled Mobile Ladder Stands and Scaffolds (Towers)*
- 29 CFR 1910.333, *Selection and Use of Work Practices*

Construction

- [29 CFR 1926.21](#), *Safety Training and Education*
- 29 CFR 1926.451, *General Requirements*
- 29 CFR 1926.452, *Additional Requirements to Specific Types of Scaffolds*
- 29 CFR 1926.454, *Training Requirements*
- 29 CFR 1926 Subpart V



 EMPLOYEE Safety & HEALTH ADMINISTRATION GUIDE	<i>Chapter</i> HEALTH & WELLNESS
	<i>Subject</i> Overview

PURPOSE

The Executive Safety Advisory Committee was created by Executive Order in June 2005 to further develop and promote a workplace safety program designed to reduce the number of work-related accidents and illnesses. One or more representatives from each major cabinet or agency of state government meet monthly to promote safety among state employees.

**ROLE OF WELLNESS
IN SAFETY**

Research suggests healthy employees are safe employees. In an effort to ensure a safe and healthy work environment and to comply with [101 KAR 2:150](#), the Kentucky Transportation Cabinet (KYTC) has assigned the Employee Safety and Health (ES&H) Branch with the responsibility to develop, update, oversee, coordinate, evaluate, and administer the KYTC Safety and Health Program.

There are a number of resources and tools available to assist members of the Kentucky Employees' Health Plan (KEHP) and state employees who waive health insurance with KEHP who are trying to create a healthy workplace.

Request a Go365 representative to speak to employees at a worksite or schedule a biometric screening day online at:

<https://livingwell.ky.gov/pages/worksite-wellness.aspx>

Contact the ES&H Branch or visit the ES&H intranet site for health and wellness information:


<https://intranet.kytc.ky.gov/org/OHRM/em/Pages/Employee-Safety-Health.aspx>

**ES&H BRANCH
RESPONSIBILITIES**

The ES&H Branch shall:

- Sponsor the annual KYTC Health Fair and screenings for employees at the Transportation Cabinet Office Building (TCOB)
- Assist individual districts in holding local employee health fairs
- Post updated health and wellness information to the ES&H intranet site
- Support ongoing state government health and wellness initiatives



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>HEALTH & WELLNESS</p>
	<p><i>Subject</i></p> <p>Personal Hygiene</p>

PURPOSE


With the various types of work at field locations, in labs, and at plants, it is important to practice good basic personal hygiene. Germs are transmitted and sickness often results through hand-to-mouth contact. Chemicals and bacteria enter the body most easily through the eyes, ears, nose, and mouth.

GENERAL**PRECAUTIONS**

Wash hands and face before breaks, lunch, and immediately after work to prevent direct exposure to germs and to lessen the potential for the development of ill-health effects.

Personal protective equipment such as eye and ear protection, respirators, and gloves, shall be provided to eliminate or minimize exposures and prevent direct contact ([SHA-500](#)).



 <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>HEALTH & WELLNESS</p>
	<p><i>Subject</i></p> <p>Hearing Conservation</p>

REFERENCES [29 CFR 1910.95\(G\)](#), *Occupational Noise Exposure*; 29 CFR 1926.52(D), *Occupational Noise Exposure*; 29 CFR 1926.101(E), *Hearing Protection*; 29 CFR 1904.10(C), *Recordkeeping Forms and Recording Criteria*; [Kentucky Administrative Regulations Title 803](#)

PURPOSE The purpose of the hearing conservation program is to minimize occupational hearing loss by providing hearing protection, training, and referral for annual hearing tests to all persons working in areas or with equipment that have noise levels equal to or exceeding an eight-hour time-weighted average (TWA) sound limit of 85 dBA.

ADMINISTRATION The Employee Safety and Health (ES&H) Branch is responsible for establishing and implementing the hearing conservation program. Personnel participating in the program should contact the ES&H Branch or their designated safety coordinator if further information is needed.

DEFINITION Noise (unwanted sound) is one of the most pervasive occupational health problems. It is a by-product of many industrial processes. Sound consists of pressure changes caused by vibration or turbulence. These pressure changes produce waves emanating away from the turbulent or vibrating source. Exposure to high levels of noise causes hearing loss and may cause other harmful health effects as well. The extent of damage depends primarily on the intensity of the noise and the duration of the exposure. Noise-induced hearing loss can be temporary or permanent. Temporary hearing loss results from short-term exposures to noise, with normal hearing returning after period of rest. Generally, prolonged exposure to high noise levels over a period of time gradually causes permanent damage.

**PERMISSIBLE NOISE
EXPOSURE – GENERAL
INDUSTRY**

When employees are subjected to sound exceeding those listed in the following table, feasible administrative or engineering controls shall be utilized. If such controls fail to reduce sound levels within the ranges noted, personal protective equipment (PPE) shall be provided and used to reduce sound levels to within the acceptable range.

PERMISSIBLE NOISE**EXPOSURE – GENERAL****INDUSTRY (CONT.)**

If the variations in noise level involve maxima at intervals of 1 second or less, it is to be considered continuous. Protection against the effects of noise exposure shall be provided when the sound levels exceed those shown in the following table when measured on the A-scale of a standard sound level meter at slow response.

When noise levels are determined by octave band analysis, the equivalent A-weighted sound level may be determined as follows:

PERMISSIBLE NOISE EXPOSURES

Duration per day, hours	Sound level dBA slow response
8	90
6	92
4	95
3	97
2	100
1 1/2	102
1	105
1/2	110
1/4 or less	115

PERMISSIBLE NOISE**EXPOSURE –****CONSTRUCTION**


Protection against the effects of noise exposure shall be provided when the sound levels exceed those shown in the table above when measured on the A-scale of a standard sound level meter at slow response. If the variations in noise level involve maxima at intervals of 1 second or less, it is to be considered continuous.

When employees are subjected to sound levels exceeding those listed in the table above, feasible administrative or engineering controls shall be utilized. If such controls fail to reduce sound levels within the levels of the table, PPE shall be provided and used to reduce sound levels within the levels of the table. In all cases where the sound levels exceed the values shown herein, a continuing, effective hearing conservation program shall be administered ([SHA-401](#)).

INJURY REPORTING

Every work-related personal injury or illness shall be reported immediately to the supervisor or as soon as the employee is physically able to do so ([SHA-700](#)).



 <p>EMPLOYEE Safety & HEALTH</p> <p>ADMINISTRATION GUIDE</p>	<p><i>Chapter</i></p> <p>HEALTH & WELLNESS</p>
	<p><i>Subject</i></p> <p>Nuclear Density Gauge Program</p>

REFERENCES [KRS 211.842](#), [KRS 211.848](#), [902 KAR 100](#), and [CST 800](#).

SCOPE Cabinet personnel involved in construction operations should be knowledgeable of and able to fulfill their responsibilities with respect to the care and handling of nuclear density gauges. The safety and welfare of the operator and the general public are paramount and shall take precedence over all other considerations.

**TRAINING &
RECORDS**

Potential operators should be given proper safety and Haz-Mat training prior to issuance of their TLD badges. Training records should be available 5 years after the employees' last use of a gauge.

Employees should be trained on how to understand the TLD analysis reports every three years or when a change in reporting method occurs.

Operators should receive the following:

- Training in emergency procedures and recommended procedures for use
- Haz-Mat training (as required by Subpart H of 49 CFR) that shall be current within 3 years if qualifying for vehicular transport of the gauges
- Training in biological effects and radiological health requirements prior to usage

The initial safety training received shall be, at a minimum, a radiation safety training class presented by one of the density gauge manufacturers. KYTC shall not conduct the initial safety training, but can provide Haz-Mat training.

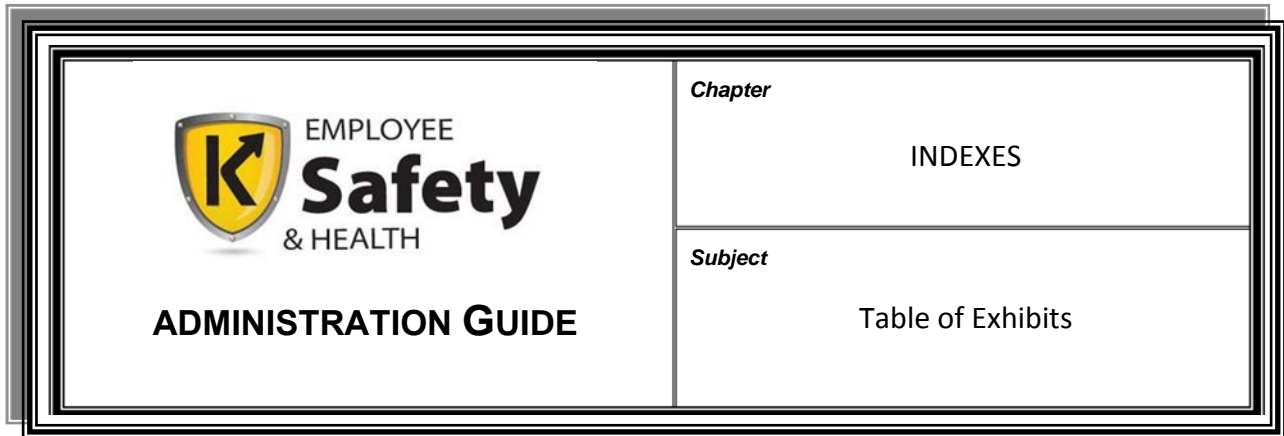
RESPONSIBILITIES

The Central Office, Division of Construction, is licensed under the provisions of 902 KAR 100 to possess and use nuclear density gauges. The oversight responsibilities, by license, fall under the designated radiation safety officer (RSO) named by the Director of the Division of Construction. All gauges are assigned and issued by the Division of Construction under the authority of this license ([CST-802](#) through [CST-805](#)).

REPORTING

All incidents, accidents, and personnel exposure to radiation in excess of ALARA or [902 KAR 100:019](#) limits shall be investigated and reported to the Cabinet and other authorities, as appropriate, within required time limits. The district radiation safety officer (RSO) is responsible for reporting ([SHA-1625](#)).








<u>EXHIBIT NUMBER</u>	<u>EXHIBIT TITLE & FORM NUMBER</u>	<u>MANUAL REFERENCE</u>
9001	Job Safety Analysis & PPE Hazard Assessment, TC 25-156 (Sample)	102, 202, 205, 402, 408-1, 508
9002	Job Briefing, TC 25-163 (Sample)	202, 403, 408-1, 1501
9003	Notice of Safety Violation, TC 25-105 (Sample).....	204, 404
9004	Facility Safety Inspection, TC 25-159 (Sample).....	206-1
9005	Jobsite Setup Inspection, TC 25-110 (Sample).....	206-2
9006	Operator’s Daily Check Sheet, TC 74-11 (Sample).....	206-3
9007	Aerial Device Bucket Truck Daily Checklist, TC 25-168 (Sample).....	206-3
9008	Monthly Fire Extinguisher Inspection Checklist (Sample)	206-4
9009	Training Report, TC 25-2 (Sample).....	301, 302, 303, 404, 409-1, 410
9010	Substance Data Sheet for Occupational Exposure to Lead	407-1
9011	General Policy Acknowledgment, TC 12-262 (Sample)	302
9012	Personal Protective Equipment (PPE) Acknowledgment, TC 25-3 (Sample)	404
9013	Safety Risk Report, TC 25-164 (Sample)	404, 411
9014	Air Sampling Report, TC 25-167 (Sample).....	407-2, 407-3, 407-4, 407-5
9015	Confined Space Entry Permit, TC 25-161 (Sample).....	407-5
9016	Excavation & Trench Inspection, TC 25-158 (Sample)	407-6


9017	Energized Electrical Work Permit, TC 25-160 (Sample).....	408-1, 408-6, 408-9
9018	Inspection Checklist Guide.....	409-1
9019	Fall Protection Equipment Inspection Log, TC 25-157 (Sample)	409-1
9020	Ladder Safety Checklist Guide (Sample)	409-2
9021	Ladder Inspection Checklist (Sample).....	409-2
9022	Bomb Threat Checklist (Sample).....	607
9023	IA-1 First Report of Injury or Illness (Sample).....	701, 702
9024	Automated External Defibrillator (AED) Maintenance Checklist, TC 25-170 (Sample).....	704
9025	Automated External Defibrillator (AED) Post-Event Review, TC 25-169 (Sample)	704
9026	KSAP Accident Report Form, SRC-12 (Sample)	801
9027	Bench Grinder Safety Checklist (Sample)	1006
9028	Internal Combustion Engine Industrial Truck Operation Checklist, TC 25-165 (Sample).....	1711
9029	Electric Industrial Truck Daily Operation Checklist, TC 25-166 (Sample)	1711
9030	Aerial Device Bucket Truck Daily Checklist, TC 25-168 (Sample).....	1717
9031	Medical/Occupational History Questionnaire (Sample).....	407-1
9032	Physician Approval for Respirator Assignment (Sample)	407-1
9033	Respirator Information for Physician (Sample)	407-1
9034	Hepatitis B Vaccine Declination Voucher (Sample)	703
9035	Pressure Washer Safety Checklist (Sample)	1022






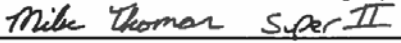
 <p>KENTUCKY TRANSPORTATION CABINET Office of Human Resource Management EMPLOYEE SAFETY & HEALTH</p>		TC 25-156 Rev. 5/2014 Page 1 of 1
Job/Task: Chain Sawing		Location: _____ Sheet _____ of _____
Date: _____	Reference Location(s): E000-ES&H-500-1500-1506	Department or District: _____
Submitted by: _____ Name of person conducting assessment: _____ Date: _____ Reviewed by: _____ Name of person reviewing: _____ Date: _____		
Forward signed copies to: Employee Safety & Health Branch Supervisor/Facility Manager District Safety Coordinator		
Required and/or Recommended Personal Protective Equipment: Safety glasses, safety shoes, face shield, Hi Viz shirt, hard hat, gloves, chaps, hearing protection		
EXPLANATION OF JOB	HAZARDS	
	TYPE	SOURCE
Chain Saw General Use on right of way	Impact Penetration Compression Rollover	Traffic Flying or falling debris Sharp objects Rotating machinery
	BODY PART	SAFE JOB PROCEDURES, CONTROLS, & TRAINING
	Torso Hands Arms Feet Head	Review traffic control plan for specific jobsite. Inspect tools and equipment before use. Tag out any defective equipment. Maintain a safe distance from fellow workers.
	Arms Feet Hands Ears Eyes Legs Torso	Do not lift or move any object over 30 lbs without assistance. Use mesh screen in tandem with primary safety glasses.
Note: Engineering, work practice, and/or administrative hazard controls such as guarding must be used, if feasible, before requiring employees to use personal protective equipment.		
Equipment Procedures/Requirements <ul style="list-style-type: none"> Operate equipment in strict accordance with manufacturer's instructions. Report any observed defect or safety hazard to your supervisor immediately. Only authorized users may operate equipment. 		


	KENTUCKY TRANSPORTATION CABINET Office of Human Resource Management EMPLOYEE SAFETY & HEALTH BRANCH JOB BRIEFING	TC 25-163 Rev. 06/2017 Page 1 of 1		
INSTRUCTIONS: This form shall be completed by the Supervisor, Superintendent, or Crew Leader in charge of the work/job site and kept on file for two months.				
SECTION 1: BRIEFING INFORMATION				
Reason for the job briefing: <input checked="" type="checkbox"/> Start of Job <input type="checkbox"/> Change in Job <input type="checkbox"/> Restart of Job				
CREW NAME David County Maintenance	CREW NUMBER 999999	DATE 1-2-17		
		TIME 9		
		<input checked="" type="checkbox"/> AM <input type="checkbox"/> PM		
SECTION 2: JOB DESCRIPTION (text limited for accurate printing)				
Setting new stop sign and stop sign posts.				
SECTION 3: TOPICS REVIEWED				
		YES	N/A	COMMENTS
1	Hazards associated with the job (Job Safety Analysis)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Buried lines and traffic
2	Work procedures involved	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Dig two holes, set poles and signs.
3	Special precautions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Called 811 to mark lines
4	Energy source controls	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
5	Personal Protective Equipment (PPE) requirements	<input checked="" type="checkbox"/>	<input type="checkbox"/>	High Viz, Eyes
6	Temporary traffic control plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Two Flagger one lane closer
7	Weather conditions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sunny, dry's, mid 60's
8	Identification of the employee who is First Aid/CPR certified	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Jerry Safety
In the space below, note any additional safety hazards identified during the job briefing and how they were addressed. (text limited for accurate printing)				
Will set signs behind guardrail due to limited space between the roadway edge and guardrail. Set signs at orange marks.				
SECTION 4: CERTIFICATION				
Each crew member shall initial one of the boxes below to certify that he or she has participated in and understands the job briefing as described above. The Supervisor, Superintendent, or Crew Leader who conducted the briefing shall sign below.				
CREW MEMBERS				JOB BRIEFING CONDUCTED BY (print name and title)
GA	JL	MI	BAC	NT
				Jerry Highway
				SIGNATURE
				DATE
				1-2-17

	KENTUCKY TRANSPORTATION CABINET Office of Human Resource Management EMPLOYEE SAFETY & HEALTH	TC 25-105 Rev. 06/2017 Page 1 of 1
NOTICE OF SAFETY VIOLATION		
SECTION 1: EMPLOYEE INFORMATION		
FIRST NAME Jerry	LAST NAME Highway	JOB TITLE Highway Technician 2
COUNTY David	CREW 1500	DATE 1-6-2017
		TIME 1 pm
		DIVISION/DISTRICT 15
SECTION 2: VIOLATION DETAILS		
<input type="checkbox"/> First Offense		
<input checked="" type="checkbox"/> Repeat Violation		
<input checked="" type="checkbox"/> Second Offense		
<input checked="" type="checkbox"/> Hazardous Violation		
<input type="checkbox"/> Third Offense		
<input checked="" type="checkbox"/> Photos Taken		
SPECIFIC LOCATION OF VIOLATION:		
ADDITIONAL NOTES <i>(text limited for accurate printing)</i>		
Flagging with no PPE or orange TTC signs.		
SECTION 3: NATURE OF VIOLATION		
<input checked="" type="checkbox"/> Unsafe Act		
<input checked="" type="checkbox"/> PPE Violation		
<input type="checkbox"/> Safety Policy Violation		
<input type="checkbox"/> Unsafe Act with Injury		
<input type="checkbox"/> Repeat PPE Violation		
<input type="checkbox"/> Other		
ADDITIONAL NOTES <i>(text limited for accurate printing)</i>		
This is the second occurrence in three weeks.		
SECTION 4: RECOMMENDATIONS		
<input type="checkbox"/> None		
<input checked="" type="checkbox"/> Counseling/Retraining		
<input type="checkbox"/> Verbal Reprimand		
<input type="checkbox"/> Written Reprimand		
<input checked="" type="checkbox"/> Meeting with Supervisor and/or Next-Line Supervisor		
<input checked="" type="checkbox"/> Forward Violation to District Loss Control/Safety Committee		
<input type="checkbox"/> Forward Violation to OHRM Employee Compliance Branch		
<input type="checkbox"/> Other		
ADDITIONAL NOTES <i>(text limited for accurate printing)</i>		
SECTION 5: SIGNATURE		
SAFETY REPRESENTATIVE TITLE Safety Coordinator	SIGNATURE <i>Jerry Roodaway</i>	DATE 1-7-2017

		KENTUCKY TRANSPORTATION CABINET Office of Human Resource Management EMPLOYEE SAFETY & HEALTH BRANCH FACILITY SAFETY INSPECTION			TC 25-159 Rev. 05/2017 Page 1 of 3	
SECTION 1: FACILITY INFORMATION						
DATE	TIME	COUNTY/LOCATION		TYPE OF INSPECTION		
1-2-17	11 AM	David Maintenance		<input checked="" type="checkbox"/> Monthly <input type="checkbox"/> Annual <input type="checkbox"/> Follow-up Date of original inspection:		
TYPE OF FACILITY		INSPECTED BY				
Maintenance		Jerry Highway				
SECTION 2: INSPECTION (O = OK/Satisfactory, X = Requires Correction, H = Immediate Hazard, N/A = Not Applicable)						
GENERAL		O	X	H	N/A	CORRECTIVE ACTION
General Housekeeping (trip hazards, storage, grease/oil, etc)		✓				
Chemical containers properly labeled/identified		✓				
Extension cords, hoses not in walkway		✓				
Eyewash Stations working, stocked, and unobstructed		✓				
Fire Extinguishers unobstructed			X			Move boxes from 'FE' in Crew room
Fire Extinguishers mounted, marked, and properly charged		✓				
Annual Fire Drill conducted		✓				
Exits marked, unobstructed, and unlocked		✓				
Doors not for exit properly marked		✓				
Lighted exit signs and/or emergency lights operational			X			One bulb is out. Please WO. Mens restroom
Exit signs mounted (if lighted exit signs are not installed)		✓				
First aid kit(s) stocked and available		✓				
Bloodborne Pathogen cleanup kit stocked and available		✓				
Sharps containment		✓				
Break/Crew Room clean (food area, ice machine, refrigerator)		✓				
Restroom(s) clean		✓				
Gas furnace/water heater burners, vents, and air inlets intact and unobstructed		✓				
Gas shutoff for building unobstructed		✓				
Rolling stairs/ladders in good condition		✓				
Battery charging area - PPE, eyewash station present			X			
Warning signage		✓				Need new gloves on site
Other						
FLAMMABLE/COMPRESSED GAS		O	X	H	N/A	CORRECTIVE ACTION
All compressed gas cylinders secured (full or empty)		✓				
Oxygen and fuel gas cylinders stored separately		✓				
No more than 25 gallons of gasoline stored in enclosed, heated building		✓				
Safety gas cans with self-closing lid and spark arrestor		✓				
Oily/greasy rags properly disposed			X			Found some rags in regular trash can.
Storage away from open flame/spark producing operation		✓				
Waste oil		✓				
Container labeling		✓				
No LPG cylinders stored in enclosed area unless connected to appliance		✓				
Other						

		KENTUCKY TRANSPORTATION CABINET Office of Human Resource Management EMPLOYEE SAFETY & HEALTH BRANCH FACILITY SAFETY INSPECTION				TC 25-159 Rev. 05/2017 Page 2 of 3
		SECTION 2: INSPECTION (cont.) (O = OK/Satisfactory, X = Requires Correction, H = Immediate Hazard, N/A = Not Applicable)				
ELECTRICAL		O	X	H	N/A	CORRECTIVE ACTION
Circuit breaker boxes covered, closed, and labeled		✓				
Electrical disconnects labeled and unobstructed		✓				
Electrical - no open holes, boxes, or damaged/missing faceplates		✓				
Appliances - cords in good condition, ground pin in place		✓				
Power tools - cords in good condition, double insulated, or ground pin in place				X		Dewalt drill found with damaged cord
Extension cords - good condition; no frays, cuts, splices, ground pin is intact		✓				
No extension cords used as permanent wiring		✓				
Electric outlets subject to weather/water splash covered or protected		✓				
Electric outlets near sinks or wet locations GFCI protected		✓				
Pressure washer GFCI protected		✓				
Droplights - cords in good condition, ground pin intact, bulb cage intact, socket good		✓				
Other						
WORKBENCH/WELDING AREAS		O	X	H	N/A	CORRECTIVE ACTION
Bench grinder - tool rests 1/8", eye shields intact, wheel rpm rating > machine rpm		✓				
Angle grinder disc guards in place					✓	
Welding leads in good condition, stick electrode removed		✓				
Welder screen in good condition and ready for use			X			Needs replaced, poor condition
Oxygen and fuel gas cylinder valves "off" if not in use		✓				
Oxygen and fuel gas hoses in good condition (no cuts, fraying, or abrasions)		✓				
Proper PPE available (gloves, eye protection, etc.)		✓				
Guarding in place on any mechanical, rotating, or entanglement hazards under 7 ft.					✓	
Overhead hoist - capacity marked and not exceeded, chain/cable/hook in good condition					✓	
Other						
POSTINGS/SAFETY DOCUMENTS/BULLETIN BOARDS		O	X	H	N/A	CORRECTIVE ACTION
Emergency numbers listed		✓				
OSHA 300A Summary (Jan-Apr posted, last 5 years on file)		✓				
Labor/Wage Law Poster		✓				
Other Posting Requirements		✓				
SDS Book, accessible and up-to-date		✓				
Safety meeting records		✓				
Daily safety inspection records for each vehicle and equipment		✓				
Other						

		KENTUCKY TRANSPORTATION CABINET Office of Human Resource Management EMPLOYEE SAFETY & HEALTH BRANCH FACILITY SAFETY INSPECTION				TC 25-159 Rev. 05/2017 Page 3 of 3
SECTION 2: INSPECTION (cont.) (O = OK/Satisfactory, X = Requires Correction, H = Immediate Hazard, N/A = Not Applicable)						
STORAGE		O	X	H	N/A	CORRECTIVE ACTION
Heavy materials stored low to floor or ground		✓				
Racks/shelf units secured to floor, wall, or each other to prevent tipping		✓				
Racks/shelf units not overloaded, damaged, or inappropriate for use		✓				
No storage near heating elements, gas water heater/furnace		✓				
No unstable stacks, piles, or other storage		✓				
Overhead storage		✓				
Hazardous chemicals		✓				
Chemicals/pesticide/herbicide storage marked, secured, no leaks/damage		✓				
Container labeling		✓				
Other						
WRITTEN PROGRAMS		O	X	H	N/A	CORRECTIVE ACTION
Emergency Action Plan		✓				
BBP		✓				
Fall Protection		✓				
HAZ COM		✓				
Respiratory Protection		✓				
Lockout/Tagout		✓				
Confined Space		✓				
Excavations and Trenching			X			Could not locate, Need new copy
Electrical		✓				
PPE and JHA		✓				
Other						
OUTSIDE FACILITY		O	X	H	N/A	CORRECTIVE ACTION
Building exterior		✓				
Outside lot - fence and storing sheds sound			X			Fence is down on north end. Place WD
Equipment storage		✓				
Other		✓				
OTHER		O	X	H	N/A	CORRECTIVE ACTION
Twopole security lights not working			X			Contact utility company. Place WD
SECTION 3: COMMENTS						
Overall good condition. Supervisor and crew do a good job.						
SECTION 4: SIGNATURES						
I have discussed and reviewed follow-up inspections and any required corrective actions with the building supervisor.						
 Employee Safety & Health Branch Representative			 Facility Representative & Title			

	KENTUCKY TRANSPORTATION CABINET Office of Human Resource Management EMPLOYEE SAFETY & HEALTH	TC 25-110 Rev. 06/2017 Page 1 of 2
JOBSITE SETUP INSPECTION		

SECTION 1: JOBSITE & CREW INFORMATION (M=Maintenance; C=Construction; Mb=Mobile)

DATE	TIME	CREW	COUNTY	<input checked="" type="checkbox"/> M	<input type="checkbox"/> C	ROAD/HIGHWAY
2-6-17	2 PM	90997	Oavi.d	<input checked="" type="checkbox"/> Mb		KY100012B
SUPERVISOR		KYTC INSPECTOR		JOB TYPE		
Jerry Highway		N/A		Mowing		

SECTION 2: SIGN & LANE CLOSURE INFORMATION

SIGNS			LANE CLOSURE		
Lead Signs Flags/Cones	Signs Number, Size, & Condition	Sign Placement & Distance	Channelization Device	Flashing Arrow	Pilot Truck/Escort
<input checked="" type="checkbox"/> Satisfactory	<input checked="" type="checkbox"/> Satisfactory	<input checked="" type="checkbox"/> Satisfactory	<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Satisfactory	<input checked="" type="checkbox"/> Satisfactory
<input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Unsatisfactory

COMMENTS/ADDITIONAL DETAILS

Vary good setup

SECTION 3: FLAGPERSON INFORMATION

CRITERIA	BEGINNING FLAGPERSON	MIDDLE FLAGPERSON	END FLAGPERSON
Certified	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Head Protection	<input type="checkbox"/> Hard Hat <input type="checkbox"/> Required <input checked="" type="checkbox"/> Hi-Vis Cap	<input checked="" type="checkbox"/> Hard Hat <input checked="" type="checkbox"/> Required <input type="checkbox"/> Hi-Vis Cap	<input checked="" type="checkbox"/> Hard Hat <input type="checkbox"/> Required <input type="checkbox"/> Hi-Vis Cap
Safety Vest/Hi-Vis	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Paddle Flag	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Positioning	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Spacing From Crew	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Flagging Procedures	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Communications Equip.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



COMMENTS/ADDITIONAL DETAILS

SECTION 4: EQUIPMENT REQUIREMENTS

EQUIPMENT REQUIREMENTS	CORRECTIVE ACTIONS REQUIRED
Safety Devices/Attenuator	<input checked="" type="checkbox"/>
Tool Condition	<input checked="" type="checkbox"/>
Seat Belts	<input checked="" type="checkbox"/>
Lighting Package & Use	<input checked="" type="checkbox"/>
Backup Alarms	<input checked="" type="checkbox"/>
Equipment Condition	<input checked="" type="checkbox"/>
Cones/Barrels Condition	<input checked="" type="checkbox"/>
Other Walkgrounds	<input checked="" type="checkbox"/> All completed

COMMENTS/ADDITIONAL DETAILS

Equipment in good condition

	KENTUCKY TRANSPORTATION CABINET Office of Human Resource Management EMPLOYEE SAFETY & HEALTH	TC 25-110 Rev. 06/2017 Page 2 of 2
JOBSITE SETUP INSPECTION		
SECTION 5: OTHER REQUIREMENTS		
OTHER REQUIREMENTS	CORRECTIVE ACTIONS REQUIRED	
Job Briefing Completed	<input checked="" type="checkbox"/>	
Job Safety Analysis Completed	<input type="checkbox"/>	
Temporary Traffic Control Plan Completed	<input checked="" type="checkbox"/>	
First-Aid Certified Crew Member On Site	<input checked="" type="checkbox"/>	
PPE Utilized by Crew	<input checked="" type="checkbox"/>	
First-Aid Kit On Site	<input checked="" type="checkbox"/>	FA Kit need restocked
Fire Extinguisher On Site	<input checked="" type="checkbox"/>	Expired, need to replace
Written Programs Followed	<input checked="" type="checkbox"/>	
Other:	<input type="checkbox"/>	
COMMENTS/ADDITIONAL DETAILS		
SECTION 6: INSPECTION SUMMARY		
Overall good setup and procedures. Spoke with supervisor regarding issues.		
SECTION 7: SIGNATURE		
SIGNATURE (Safety Coordinator/Administrator)	DATE	
	2-6-2017	

TC 74-11
Rev. 05/2015
Page 1 of 1

KENTUCKY TRANSPORTATION CABINET
Department of Highways
DIVISION OF EQUIPMENT

OPERATOR'S DAILY CHECK SHEET


EQUIPMENT (number) 9999-999	ADMINISTRATIVE UNIT/CREW # 8888 4444	BEGINNING MILES/DATE 25110 1-15-17	ENDING MILES/DATE 26787 1-15-17
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DATE	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Steering			OK				
Brakes			OK				
Emergency Brake			OK				
Windshield/Wipers			OK				
Lights			OK				
Horn			X				
Mirrors			OK				
Tires			OK				
Wheels/Rims			OK				
Fluids (all)			OK				
Hitches (if applicable)			OK				
Safety Equipment			OK				


Remarks
Steering horn not working.

Operator _____
Signature **Jean Highway**

NOTE: Upon completion, this worksheet shall be submitted to your immediate supervisor. During the daily inspection, if items are found that make the unit unsafe for operations, the form shall be submitted immediately to the supervisor. Any additional items found not specifically mentioned regarding safety must be noted in the remarks section of this form.


		KENTUCKY TRANSPORTATION CABINET Office of Human Resource Management EMPLOYEE SAFETY & HEALTH BRANCH	TC 25-168 Rev. 01/2018 Page 1 of 3
AERIAL DEVICE BUCKET TRUCK DAILY CHECKLIST			
SECTION 1: VEHICLE CHECKS			✓
	Complete TC 74-11, <i>Operator's Daily Check Sheet</i> .		✓
SECTION 2: AERIAL DEVICE CHECKS			
1	Manual - Must be present and remain on the unit.		✓
2	Prepare the unit for inspection.		
	a.	Position the unit on a level surface.	✓
	b.	Engage the hydraulic system with the transmission in neutral or park without applying the parking brake. If the hydraulic system engages, the parking brake interlock is not operating properly.	✓
	c.	Apply the parking brake, and chock the wheels.	✓
	d.	Turn off the engine.	✓
3	Make sure the vehicle tires are in good condition and properly inflated to the pressure posted on the driver's side door. Rust behind the lug nuts can indicate tightening is required.		✓
4	With the boom stowed, check the oil level in the hydraulic reservoir. The oil level should be to the indicated mark on the dipstick or at the top of the sight gauge. If necessary, add oil as described in the maintenance manual. The need to add oil regularly indicates a leak in the hydraulic system that should be corrected. (Only nonconductive oil shall be used.)		✓
5	Visually inspect the unit for hydraulic leaks. Continue to look for hydraulic leaks while performing inspection.		✓
6	Throughout the inspection, pay particular attention to the following components, looking for proper operation and any damage, cracks or corrosion, missing or loose fasteners, cracked or broken inspection marks, and excessive wear: lower boom pivot pin, lower boom cylinder mounting pins, upper boom cylinder mounting pins, platform mounting shaft, platform door latch, rotation bearing bolts, pedestal mounting bolts, platform mounting fasteners, lanyard attachment pin.		✓
7	Inspect all covers to make sure they are in place, secure, and in good condition.		✓
8	Check visual and audible safety devices for proper operation. Check operational and instructional placards. Replace missing and illegible placards.		✓
9	Start the engine and engage the hydraulic system.		✓
10	If the temperature outside is below 32°F (0°C), warm the hydraulic oil before operating the unit. The procedure for warming the oil is described in the owner's manual under Cold Weather Start-Up. Do not operate the pump or engine at more than a fast idle until the hydraulic oil has warmed up.		✓
11	Throughout the preoperational test of all unit controls, confirm the following:		
	a.	When controls are released, they must return to neutral without sticking and all motion for that function should stop. If movement continues, a control valve may not be functioning properly.	✓
	b.	While cylinders are extended and under load, no movement should occur while controls are in neutral. Any movement indicates a cylinder or holding valve malfunction.	✓
12	Test the lower controls emergency stop:		
	a.	Engage the emergency stop.	✓
	b.	Operate each control and observe for movement. If movement occurs, the emergency stop is not functioning properly.	✓
13	Test the start/stop and secondary stowage DC pump controls from the lower controls:		
	a.	Move the control selector to the Lower Controls position.	✓
	b.	Turn off the engine with the start/stop control.	✓
	c.	Press and hold the secondary stowage control or combined function start/stop control until the DC pump begins to operate.	✓
<i>Continued on page 2</i>			

		KENTUCKY TRANSPORTATION CABINET Office of Human Resource Management EMPLOYEE SAFETY & HEALTH BRANCH		TC 25-168 Rev. 01/2018 Page 2 of 3
		AERIAL DEVICE BUCKET TRUCK DAILY CHECKLIST		
SECTION 2: AERIAL DEVICE CHECKS (cont.)				✓
13	Test the start/stop and secondary stowage DC pump controls from the lower controls (cont.):			
	d.	While holding the control with the DC pump operating, raise and lower the upper boom a small amount (movement will be slow). If no boom movement occurs, the secondary stowage system may not be functioning properly.		✓
	e.	Release the control and start the engine using the start/stop control to complete the test.		✓
14	Test the lower controls:			
	a.	Without pressing the master button, operate each boom and rotation control. If movement occurs, the master button is not operating properly.		✓
	b.	Move the control selector to the Lower Controls position. Press the master button and operate all boom and rotation controls throughout their full range of motion. Observe for proper operation.		✓
	c.	Verify proper operation of the auxiliary winch controls.		✓
15	Test the interlock blocking valve:			
	a.	With the control selector in the Lower Controls position, verify all upper controls do not function. If movement occurs, the interlock system is not functioning properly.		✓
	b.	Place the control selector in the Upper Controls position. Operate the boom raise function from the lower controls. If boom movement occurs, the interlock system is not functioning properly.		✓
16	Test the upper controls emergency stop:			
	a.	Engage the emergency stop.		✓
	b.	Operate each control. If movement occurs, the emergency stop is not functioning properly.		✓
	c.	Disengage the emergency stop.		✓
17	Test the operation of the upper controls. At the lower controls, move the control selector to the Upper Controls position.			
	a.	Operate each control without engaging the interlock. If boom movement occurs, the interlock system is not functioning properly.		✓
	b.	Operate each function. While the unit is operating, look for oil leaks from the hydraulic lines and components.		✓
18	Test the override system at the lower control station. When the station selector is in the Lower Control position, the upper controls should not function. When the station selector is in the Upper Control position, the upper controls should function. The lower controls must override the upper controls.			✓
19	Test the platform start/stop and secondary stowage DC pump controls:			
	a.	Turn off the engine with the start/stop control, and continue holding the control down until the secondary stowage pump begins to operate.		✓
	b.	While holding the control down with the DC pump operating, raise and lower the lower boom a small amount (movement will be slow). If no boom movement occurs, the secondary stowage system may not be functioning properly.		✓
	c.	Release the control. Start the engine by pressing the control down to complete the test.		✓
20	Stow the booms, disengage the hydraulic system, and turn off the engine.			✓
21	Boom electrical inspection test has been completed within the last 12 months.			✓
<p>WARNING</p> <p>Take immediate corrective action on any problem areas identified during the inspection process before operating the unit further. Red tag the equipment if needed.</p>				

		KENTUCKY TRANSPORTATION CABINET Office of Human Resource Management EMPLOYEE SAFETY & HEALTH BRANCH	TC 25-168 Rev. 01/2018 Page 3 of 3
AERIAL DEVICE BUCKET TRUCK DAILY CHECKLIST			
SECTION 3: ACKNOWLEDGMENTS			
<i>I, the Aerial Device Bucket Truck Operator, understand the following (check each):</i>			✓
1	Non-material handlers (personnel units) know that they are not to be used for handling material. Tying ropes to lanyard attachment point to lift material is absolutely forbidden.		✓
2	Never lay conductors on platforms to lift them into position. Do not drag conductors across the boom. Contact with lines or obstructions may cause gouges in the boom.		✓
3	Side loading of booms is prohibited. Side loading can cause instability, structural problems, or both.		✓
4	When operating from the platform, all components at the boom tip, including the controls, must be considered to be electrically connected. If an energized conductor or object touches any part of the boom tip, treat the entire boom tip as energized. Similarly, if any grounded conductor or object touches any part of the boom tip, consider the entire boom tip to be grounded.		✓
5	The insulating portion of the boom can only isolate the operator from grounding through the boom and vehicle. The pole, cross arm, and other hardware must be considered by the operator as grounded. The unit can't protect a person from current between an energized conductor and any other conductor, ground, or grounded equipment on or in contact with the pole, including the neutral wire.		✓
6	Always inspect door latches, winches, hitches, guards, and chains.		✓
7	For proper operation, the unit cannot exceed the degree stamped on the slope indicator placard or serial number placard. Exceeding platform or jib capacity, or operation on greater slopes, can result in instability, structural damage, or both. Locate and understand load chart information.		✓
8	Electrical Safety, Fall Protection, and Other PPE Equipment have been inspected and are in good working condition.		✓
9	Know the clearance height of the equipment you are operating.		✓
10	Operating this unit without proper training will result in death or serious injury to yourself and others. Do not operate this equipment unless you have been qualified/certified by your employer or work. OSHA 29 CFR 1926.32(m) states: "Qualified" means one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training and experience, has successfully demonstrated his ability to solve or resolve problems relating to the subject matter, the work, or the project.		✓
SECTION 4: SIGNATURE			
<i>I have been trained, evaluated, and qualified/certified on aerial device bucket trucks I operate, including the vehicle I have inspected above. A vehicle found in need of repair, defective, or in any way unsafe, shall be immediately taken out of service and red tagged. Problems noted above have been recorded on the appropriate documents and reported to a supervisor.</i>			
PRINT NAME	SIGNATURE	DATE	
Jerry Highway	<i>Jerry Highway</i>	1-1-2017	

KYTC EMPLOYEE SAFETY AND HEALTH BRANCH MONTHLY FIRE EXTINGUISHER INSPECTION CHECKLIST		Rev. 07/2017	
<p>IMPORTANT: Check the following items for <i>each</i> fire extinguisher per CFR 1910.157(e), (e)(1), (e)(2), and (e)(3). When an inspection reveals a deficiency in any one of the conditions listed below, immediate corrective action should be taken. The facility supervisor shall contact the district safety coordinator or the Employee Safety and Health Branch for more information.</p>			
		YES	NO
1	Is the fire extinguisher visible, unobstructed, and readily accessible?	✓	
2	Is it hung on a bracket?	✓	
3	Is it at the proper mounting height? <i>(see note below)</i>	✓	
4	Is it mounted in a designated location?	✓	
5	Are the operating instructions on the nameplate legible and facing outward?	✓	
6	Is the nozzle (hose) intact?	✓	
7	Is the nozzle (hose) free and clear of debris?	✓	
8	Is the pin intact?	✓	
9	Is the anti-tamper (plastic) seal intact?	✓	
10	Does the gauge show in the green (fully charged)?	✓	
11	Does the extinguisher show obvious physical damage, corrosion, or leakage?	✓	
12	Have the dry powder extinguishers been gently rocked top to bottom to make sure the powder is not packing?	✓	
13	Does the service company tag show that the extinguisher is being inspected, signed, and dated monthly?	✓	
14	Is the service company tag attached, signed, and dated (annually)?		X
15	If applicable, is the extinguisher cover jacket in good condition?	✓	
<p>NOTE: Fire extinguishers having a gross weight not exceeding 40 lbs shall be installed so that the top of the fire extinguisher is not more than 5 ft above the floor. Fire extinguishers having a gross weight greater than 40 lbs (except wheeled types) shall be installed so that the top of the fire extinguisher is not more than 3½ ft above the floor. In no case shall the clearance between the bottom of the fire extinguisher be less than 4 inches above the floor.</p>			

Substance data sheet for occupational exposure to lead - 1910.1025 App A

 [Regulations \(Standards - 29 CFR\) - Table of Contents](#)

● Part Number:	1910
● Part Title:	Occupational Safety and Health Standards
● Subpart:	Z
● Subpart Title:	Toxic and Hazardous Substances
● Standard Number:	<u>1910.1025 App A</u>
● Title:	Substance data sheet for occupational exposure to lead

I. SUBSTANCE IDENTIFICATION

A. Substance: Pure lead (Pb) is a heavy metal at room temperature and pressure and is a basic chemical element. It can combine with various other substances to form numerous lead compounds.

B. Compounds Covered by the Standard: The word "lead" when used in this standard means elemental lead, all inorganic lead compounds and a class of organic lead compounds called lead soaps. This standard does not apply to other organic lead compounds.

C. Uses: Exposure to lead occurs in at least 120 different occupations, including primary and secondary lead smelting, lead storage battery manufacturing, lead pigment manufacturing and use, solder manufacturing and use, shipbuilding and ship repairing, auto manufacturing, and printing.

D. Permissible Exposure: The Permissible Exposure Limit (PEL) set by the standard is 50 micrograms of lead per cubic meter of air (50 ug/m (3)), averaged over an 8-hour workday.

E. Action Level: The standard establishes an action level of 30 micrograms per cubic meter of air (30 ug/m (3)), time weighted average, based on an 8-hour work-day. The action level initiates several requirements of the standard, such as exposure monitoring, medical surveillance, and training and education.

II. HEALTH HAZARD DATA

A. Ways in which lead enters your body. When absorbed into your body in certain doses lead is a toxic substance. The object of the lead standard is to prevent absorption of harmful quantities of lead. The standard is intended to protect you not only from the immediate toxic effects of lead, but also from the serious toxic effects that may not become apparent until years of exposure have passed.

Lead can be absorbed into your body by inhalation (breathing) and ingestion (eating). Lead (except for certain organic lead compounds not covered by the standard, such as tetraethyl lead) is not absorbed through your skin. When lead is scattered in the air as a dust, fume or

mist it can be inhaled and absorbed through your lungs and upper respiratory tract. Inhalation of airborne lead is generally the most important source of occupational lead absorption. You can also absorb lead through your digestive system if lead gets into your mouth and is swallowed. If you handle food, cigarettes, chewing tobacco, or make-up which have lead on them or handle them with hands contaminated with lead, this will contribute to ingestion.

A significant portion of the lead that you inhale or ingest gets into your blood stream. Once in your blood stream, lead is circulated throughout your body and stored in various organs and body tissues. Some of this lead is quickly filtered out of your body and excreted, but some remains in the blood and other tissues. As exposure to lead continues, the amount stored in your body will increase if you are absorbing more lead than your body is excreting. Even though you may not be aware of any immediate symptoms of disease, this lead stored in your tissues can be slowly causing irreversible damage, first to individual cells, then to your organs and whole body systems.

B. Effects of overexposure to lead - (1) Short term (acute) overexposure. Lead is a potent, systemic poison that serves no known useful function once absorbed by your body. Taken in large enough doses, lead can kill you in a matter of days. A condition affecting the brain called acute encephalopathy may arise which develops quickly to seizures, coma, and death from cardiorespiratory arrest. A short term dose of lead can lead to acute encephalopathy. Short term occupational exposures of this magnitude are highly unusual, but not impossible. Similar forms of encephalopathy may, however, arise from extended, chronic exposure to lower doses of lead. There is no sharp dividing line between rapidly developing acute effects of lead, and chronic effects which take longer to acquire. Lead adversely affects numerous body systems, and causes forms of health impairment and disease which arise after periods of exposure as short as days or as long as several years.

(2) Long-term (chronic) overexposure. Chronic overexposure to lead may result in severe damage to your blood-forming, nervous, urinary and reproductive systems. Some common symptoms of chronic overexposure include loss of appetite, metallic taste in the mouth, anxiety, constipation, nausea, pallor, excessive tiredness, weakness, insomnia, headache, nervous irritability, muscle and joint pain or soreness, fine tremors, numbness, dizziness, hyperactivity and colic. In lead colic there may be severe abdominal pain.

Damage to the central nervous system in general and the brain (encephalopathy) in particular is one of the most severe forms of lead poisoning. The most severe, often fatal, form of encephalopathy may be preceded by vomiting, a feeling of dullness progressing to drowsiness and stupor, poor memory, restlessness, irritability, tremor, and convulsions. It may arise suddenly with the onset of seizures, followed by coma, and death. There is a tendency for muscular weakness to develop at the same time. This weakness may progress to paralysis often observed as a characteristic "wrist drop" or "foot drop" and is a manifestation of a disease to the nervous system called peripheral neuropathy.

Chronic overexposure to lead also results in kidney disease with few, if any, symptoms appearing until extensive and most likely permanent kidney damage has occurred. Routine laboratory tests reveal the presence of this kidney disease only after about two-thirds of

kidney function is lost. When overt symptoms of urinary dysfunction arise, it is often too late to correct or prevent worsening conditions, and progression to kidney dialysis or death is possible.

Chronic overexposure to lead impairs the reproductive systems of both men and women. Overexposure to lead may result in decreased sex drive, impotence and sterility in men. Lead can alter the structure of sperm cells raising the risk of birth defects. There is evidence of miscarriage and stillbirth in women whose husbands were exposed to lead or who were exposed to lead themselves. Lead exposure also may result in decreased fertility, and abnormal menstrual cycles in women. The course of pregnancy may be adversely affected by exposure to lead since lead crosses the placental barrier and poses risks to developing fetuses. Children born of parents either one of whom were exposed to excess lead levels are more likely to have birth defects, mental retardation, behavioral disorders or die during the first year of childhood.

Overexposure to lead also disrupts the blood-forming system resulting in decreased hemoglobin (the substance in the blood that carries oxygen to the cells) and ultimately anemia. Anemia is characterized by weakness, pallor and fatigability as a result of decreased oxygen carrying capacity in the blood.

(3) Health protection goals of the standard. Prevention of adverse health effects for most workers from exposure to lead throughout a working lifetime requires that worker blood lead (PbB) levels be maintained at or below forty micrograms per one hundred grams of whole blood (40 ug/100g). The blood lead levels of workers (both male and female workers) who intend to have children should be maintained below 30 ug/100g to minimize adverse reproductive health effects to the parents and to the developing fetus.

The measurement of your blood lead level is the most useful indicator of the amount of lead being absorbed by your body. Blood lead levels (PbB) are most often reported in units of milligrams (mg) or micrograms (ug) of lead (1 mg=1000 ug) per 100 grams (100g), 100 milliliters (100 ml) or deciliter (dl) of blood. These three units are essentially the same. Sometime PbB's are expressed in the form of mg% or ug%. This is a shorthand notation for 100g, 100 ml, or dl.

PbB measurements show the amount of lead circulating in your blood stream, but do not give any information about the amount of lead stored in your various tissues. PbB measurements merely show current absorption of lead, not the effect that lead is having on your body or the effects that past lead exposure may have already caused. Past research into lead-related diseases, however, has focused heavily on associations between PbBs and various diseases. As a result, your PbB is an important indicator of the likelihood that you will gradually acquire a lead-related health impairment or disease.

Once your blood lead level climbs above 40 ug/100g, your risk of disease increases. There is a wide variability of individual response to lead, thus it is difficult to say that a particular PbB in a given person will cause a particular effect. Studies have associated fatal encephalopathy with PbBs as low as 150 ug/100g. Other studies have shown other forms of

diseases in some workers with PbBs well below 80 ug/100g. Your PbB is a crucial indicator of the risks to your health, but one other factor is also extremely important. This factor is the length of time you have had elevated PbBs. The longer you have an elevated PbB, the greater the risk that large quantities of lead are being gradually stored in your organs and tissues (body burden). The greater your overall body burden, the greater the chances of substantial permanent damage.

The best way to prevent all forms of lead-related impairments and diseases-both short term and long term- is to maintain your PbB below 40 ug/100g. The provisions of the standard are designed with this end in mind. Your employer has prime responsibility to assure that the provisions of the standard are complied with both by the company and by individual workers. You as a worker, however, also have a responsibility to assist your employer in complying with the standard. You can play a key role in protecting your own health by learning about the lead hazards and their control, learning what the standard requires, following the standard where it governs your own actions, and seeing that your employer complies with provisions governing his actions.


(4) Reporting signs and symptoms of health problems. You should immediately notify your employer if you develop signs or symptoms associated with lead poisoning or if you desire medical advice concerning the effects of current or past exposure to lead on your ability to have a healthy child. You should also notify your employer if you have difficulty breathing during a respirator fit test or while wearing a respirator. In each of these cases your employer must make available to you appropriate medical examinations or consultations. These must be provided at no cost to you and at a reasonable time and place.

The standard contains a procedure whereby you can obtain a second opinion by a physician of your choice if the employer selected the initial physician

REFERENCE

Title 29, Code for Federal Regulations, 1910.1025 App A

https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10031

	KENTUCKY TRANSPORTATION CABINET Office of Human Resource Management EMPLOYEE SAFETY & HEALTH	TC 25-3 Rev.05/2017 Page 1 of 1
PERSONAL PROTECTIVE EQUIPMENT (PPE) ACKNOWLEDGMENT		

SECTION 1: ACKNOWLEDGMENT STATEMENT

This is to certify that I have received the personal protective equipment identified below and have had made available to me a copy of the Cabinet's safety and health policy regarding the appropriate use of this equipment. I further certify that I have read and understand this policy.

I further acknowledge that I have received training on the proper use of this equipment and agree to utilize it in a manner consistent with the intended use and in accordance with 29 CFR 1910.132.

SECTION 2: PPE ISSUED

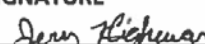
ITEM	ISSUED	COMMENTS
Hard Hat	<input checked="" type="checkbox"/>	One High Viz
Hi-Viz Cap	<input checked="" type="checkbox"/>	One Summer Style
Boonie Hat	<input type="checkbox"/>	
Sock Hat	<input type="checkbox"/>	
Retro-Reflective Vest	<input checked="" type="checkbox"/>	One Large
Shirt – Short-sleeve Polo	<input type="checkbox"/>	
Shirt – Short-sleeve Tee	<input type="checkbox"/>	
Shirt – Long-sleeve Tee	<input type="checkbox"/>	
Foot Protection	<input type="checkbox"/>	
Jacket	<input type="checkbox"/>	
Hearing Protection	<input checked="" type="checkbox"/>	
Eye Protection	<input checked="" type="checkbox"/>	Two pair. Clear and tinted glasses
Face/Welder Shield	<input type="checkbox"/>	
Chainsaw Protection	<input checked="" type="checkbox"/>	One Chap and One Helmet
Gloves	<input checked="" type="checkbox"/>	Two pair. Leather
Personal Fall Arrest System (PFAS):		
• Harness	<input type="checkbox"/>	
• Lanyard	<input type="checkbox"/>	
Respirator (if applicable*)	<input type="checkbox"/>	
Other	<input checked="" type="checkbox"/>	Timberland Boots, style # TRF123, 9 EE
Other	<input type="checkbox"/>	

* Appendix D of 29 CFR 1910.134 as it relates to voluntary usage of "dust mask" respiratory protection.

SECTION 3: SIGNATURE

I have received the items listed and understand their proper use for my personal protection on the job.

I have received a copy of the Employee Safety & Health Manual.

NAME	DATE	CREW	EMPLOYEE ID
Jerry Highway	1-6-2017	999999	XXX12345
SAFETY COORDINATOR/ADMINISTRATOR	DISTRICT	SIGNATURE	
Danny Safety	15		

	KENTUCKY TRANSPORTATION CABINET Office of Human Resource Management EMPLOYEE SAFETY & HEALTH BRANCH	TC 25-164 Rev. 07/2017 Page 1 of 1
SAFETY RISK REPORT		

Instructions: KYTC employees are to use this form to report an observed safety risk within their assigned work area that could result in an injury or has resulted in a near miss to themselves or a co-worker. The Employee Safety & Health Branch staff will evaluate the safety risk and determine if safety enhancements are needed. Forward completed forms to the District Safety Coordinator or Safety Administrator. You may also mail forms to the KYTC Employee Safety & Health Branch, 200 Mero Street, 6th Floor, Frankfort, KY, 40601, or send by fax to (502)564-6683. Forms may be submitted anonymously, if preferred. However, employees are advised that it is illegal for employers to take any action against employees in reprisal for exercising their rights to report safety issues.

SECTION 1: EMPLOYEE INFORMATION

LAST NAME Highway	FIRST NAME Jerry	MI Z	JOB TITLE Design Tech 7
PHONE 111-111-1111	EMAIL jerry.highway@kyy.govv	DEPARTMENT Design Maintenance	
DISTRICT 15	DIVISION/FACILITY/LOCATION Maintenance / David County		

SECTION 2: SAFETY RISK/NEAR MISS DESCRIPTION *(Be specific. Include date, time, and location.)*


I observed a KYTC inspector and contractor personnel in a trench at least 20 feet deep. Trench was 3 feet wide and no trench box was being used. This was on US 9999 mile marker 2 close to the US post office.


Has this matter been reported to your supervisor? Yes No


SECTION 3: SUGGESTED SAFETY IMPROVEMENTS *(Describe how you believe this safety risk/near miss could be eliminated.)*

Inspector and contractor need to be contacted and advised proper procedures for trench work.

FOR KYTC USE ONLY		
DATE RECEIVED	COMMENTS	DATE CLOSED
<input type="checkbox"/> Safety Risk <input type="checkbox"/> Near Miss		Corrective Action <input type="checkbox"/> Yes <input type="checkbox"/> No

	KENTUCKY TRANSPORTATION CABINET Office of Human Resource Management EMPLOYEE SAFETY & HEALTH BRANCH AIR SAMPLING REPORT	TC 25-167 Rev. 03/2018 Page 1 of 1	
Important: An Air Sampling Report is to be completed for each day or shift that sampling is conducted.			
SECTION 1: SAMPLING INFORMATION			
SAMPLING DATE	SAMPLE TAKEN BY <i>(Print name.)</i>	TYPE OF SAMPLE	WEATHER CONDITIONS
		<input type="checkbox"/> Personal Monitoring <input type="checkbox"/> Area Monitoring <input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor	<input type="checkbox"/> AM <input type="checkbox"/> PM
DISTRICT	EMPLOYEE MONITORED <i>(Print name.)</i>		
COUNTY	PCN #	SAMPLING METHOD (OSHA)	
PPE WORN:			
SECTION 2: JOB INFORMATION <i>(job description, operation, work location(s), ventilation, and controls; text limited for accurate printing)</i>			
SECTION 3: SAMPLING DATA			
PUMP #			
SAMPLE NUMBER			
CARTRIDGE NUMBER			
CARTRIDGE TYPE			
TIME	ON OFF	ON OFF	ON OFF
TOTAL TIME (MINUTES)			
FLOW RATE (ML/MIN)			
TOTAL VOLUME (LITERS)			
ANALYZE SAMPLES FOR			
PUMP ADJUSTMENTS, CHECKS, WEATHER <i>(text limited for accurate printing)</i>			
SECTION 4: CALIBRATION DATA			
CALIBRATOR MODEL		SERIAL #	DATE
PRE-SAMPLING CALIBRATION RECORDS			
PUMP MFG. AND SERIAL #	FLOW RATE CALCULATIONS (AVG OF 10)		
	RUN 1	RUN 4	RUN 7
	RUN 2	RUN 5	RUN 8
	RUN 3	RUN 6	RUN 9
			RUN 10
POST-SAMPLING CALIBRATION RECORDS			
	FLOW RATE CALCULATIONS (AVG OF 10)		
	RUN 1	RUN 4	RUN 7
	RUN 2	RUN 5	RUN 8
	RUN 3	RUN 6	RUN 9
			RUN 10

		KENTUCKY TRANSPORTATION CABINET Office of Human Resource Management EMPLOYEE SAFETY & HEALTH BRANCH	TC 25-158 Rev. 05/2017 Page 1 of 1				
EXCAVATION & TRENCH INSPECTION							
IMPORTANT: A Competent Person is required to inspect trenches and protective systems daily prior to worker entry and whenever weather/work conditions change, and is authorized to remove workers from the excavation site immediately [OSHA 1926.32(f)]. A Competent Person is an individual trained in the identification of existing and predictable hazards; working conditions that are hazardous, unsanitary, or dangerous to workers; soil types; and protective systems required.							
SECTION 1: SITE INFORMATION (Indicate N/A if not applicable.)							
PROJECT DESCRIPTION Pipe Replacement		PROJECT NUMBER 9999AAAA1111					
CONTRACTOR NAME Trench Pro Experts	KYTC CREW N/A	PROJECT DATE 1/2/2017					
CURRENT WEATHER CONDITIONS Cloudy, Dry mid 70's		TYPE OF PROTECTIVE SYSTEM Sloping Type C soil, 1½ to 1 (34-degree angle)					
DIMENSIONS: Depth 4ft Width 15ft Length 10ft		SOIL TYPE: Type C					
SECTION 2: INSPECTION							
YES	NO	N/A	EXCAVATION/TRENCH	YES	NO	N/A	HAZARDOUS ATMOSPHERE
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Surface encumbrances supported/removed	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Atmosphere tested when the possibility of oxygen deficiency or build-up of hazardous gases is present
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Employees protected from loose rock/soil	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Oxygen content between 19.5 percent and 21 percent
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hard hats worn by all employees	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ventilation provided to prevent flammable gas build-up to 20% of lower explosive limit of the gas
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spoils, materials, and equipment set back a minimum of 2' from excavation edge	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Conduct testing to ensure safe atmosphere
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Barriers provided at all remote excavations (wells, pits, shafts, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Emergency response equipment readily available where a hazardous atmosphere could or does exist
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Walkways and bridges over excavations 6' deep or more equipped with guardrails	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Employees trained in the use of Personal Protective and Emergency Response Equipment
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Warning vests/highly visible PPE provided to and worn by all employees exposed to vehicular traffic	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Safety harness and life line individually attended when employees enter deep confined excavation
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Employees prohibited from working or walking under suspended loads	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Employees prohibited from working on faces of sloped or benched excavations above other employees	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Warning system established/used when mobile equipment is operating near excavation edge	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
YES	NO	N/A	UTILITIES	YES	NO	N/A	WET CONDITIONS
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Utility companies contacted and/or utilities located	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Precautions taken to protect employees from accumulation of water
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Exact location of utilities marked when near excavation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Water removal equipment monitored by Competent Person
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Underground installations protected, supported, or removed when excavation is open.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Surface water controlled or diverted
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Inspection made after each rainstorm
SECTION 3: SIGNATURE							
Competent Person Signature		<i>Jerry Higgins</i>		Title		PE	
				Date		1-4-17	

	KENTUCKY TRANSPORTATION CABINET Office of Human Resource Management EMPLOYEE SAFETY & HEALTH BRANCH	TC 25-160 Rev. 05/2017 Page 1 of 1
ENERGIZED ELECTRICAL WORK PERMIT		
IMPORTANT: <i>If exposed live parts are not de-energized, other safety-related work practices shall be used to protect employees who may be exposed to electrical hazards. Such work practices shall protect employees against direct contact of energized circuit parts with any part of their body, as well as indirect contact through some other conductive object. Work practices used shall be suitable for the conditions under which the work is performed and for the voltage level of exposed electric conductors or circuit parts [OSHA 1910.33(S)].</i>		
SECTION 1: JOB INFORMATION <i>(To be completed by the Requester)</i>		
JOB/WORK ORDER # AAA9999	DESCRIPTION OF CIRCUIT/EQUIPMENT/JOB LOCATION David County Crew Room Breaker Box	
DESCRIPTION OF WORK TO BE COMPLETED		
Replace 20 amp breaker		
JUSTIFICATION <i>(Explain why circuit/equipment cannot be de-energized or work deferred until next scheduled outage.)</i>		
WO placed. Breaker is overheating causing it to trip		
SECTION 2: PRE-JOB SAFETY CHECKLIST <i>(Must be completed and signed by an Electrically Qualified Person)</i>		
		COMPLETE
Procedure to be used in performing work described in Section 1:		<input checked="" type="checkbox"/>
Safe work practices to be employed:		<input checked="" type="checkbox"/>
Results of shock hazard analysis:		<input checked="" type="checkbox"/>
Determination of shock protection boundaries:		<input checked="" type="checkbox"/>
Results of arc flash hazard analysis:		<input checked="" type="checkbox"/>
Determination of arc flash protection boundary:		<input checked="" type="checkbox"/>
Required Personal Protective Equipment (PPE):		<input checked="" type="checkbox"/>
Methods employed to restrict access of unqualified persons from the work area:		<input checked="" type="checkbox"/>
Evidence of job briefing, including discussion of job-related hazards:		<input checked="" type="checkbox"/>
SECTION 3: CERTIFICATION		
I certify that the work described above can be done safely. <i>(If not, return unsigned form to requester.)</i>		
_____ Electrically Qualified Person		_____ Date
SECTION 4: SUPERVISOR APPROVAL		
I approve completion of the work described above.		
_____ Supervisor		_____ Date
NOTE: <i>After work is completed, forward this form to the KYTC Employee Safety & Health Branch.</i>		

INSPECTION CHECKLIST GUIDE**TC 25-157**

HARNESSES

General Factors

- 1.) Hardware: (Includes D-rings, buckles, keepers and back pads). Inspect for damage, distortion, sharp edges, burrs, cracks and corrosion.
- 2.) Webbing: Inspect for cuts, burns, tears, abrasion, frays, excessive soiling and discoloration.
- 3.) Stitching: Inspect for pulled or cut stitches.
- 4.) Labels: Inspect, make certain all labels are securely held in place and legible.

LANYARD

General Factors

- 1.) Hardware: (Includes snap hooks, carabiners, adjusters, keepers, thimbles and D-rings). Inspect for damage, distortion, sharp edges, burrs, cracks, corrosion and proper operation.
- 2.) Webbing: Inspect for cuts, burns, tears, abrasion, frays, excessive soiling and discoloration.
- 3.) Stitching: Inspect for pulled or cut stitches.
- 4.) Synthetic Rope: Inspect for pulled or cut yarns, burns, abrasion, knots, excessive soiling and discoloration.
- 5.) Wire Rope: Inspect for broken wires, corrosion, kinks and separation of strands.
- 6.) Energy Absorbing Component: Inspect for elongation, tears and excessive soiling.
- 7.) Labels: Make certain all labels are securely held in place and legible.

ANCHORAGE PLATE

General Factors

- 1.) Physical Damage: Inspect for cracks, sharp edges, burrs and deformities.
- 2.) Excessive Corrosion: Inspect for corrosion which effects the operation and/or strength.
- 3.) Fasteners: Inspect for corrosion, tightness, damage and distortion. If welded, inspect weld for corrosion, cracks and damage.
- 4.) Markings: Inspect, make sure certain marking(s) are legible.

HOOK/CARABINER

General Factors

- 1.) Physical Damage: Inspect for cracks, sharp edges, burrs, deformities and locking operation.
- 2.) Excessive Corrosion: Inspect for corrosion which effects the operation and/or strength.
- 3.) Markings: Inspect, make sure certain marking(s) are legible.

TIE-OFF ADAPTOR

General Factors

- 1.) Hardware: (Includes D-rings) Inspect for damage, distortion, sharp edges, burrs, cracks and corrosion.
- 2.) Webbing: Inspect for cuts, burns, tears, abrasion, frays, excessive soiling and discoloration.
- 3.) Stitching: Inspect for pulled or cut stitches.
- 4.) Labels: Inspect, make certain all labels are securely held in place and legible.

INSPECTION CHECKLIST GUIDE (cont.)

TC 25-157

SELF-RETRACTING LIFELINE

General Factors

- 1.) Impact Indicator: Inspect indicator for activation (rupture of red stitching, elongated indicator, etc.)
- 2.) Screws / Fasteners: Inspect for damage and make certain all screws and fasteners are tight.
- 3.) Housing: Inspect for distortion, cracks and other damage. Inspect anchoring loop for distortion and damage.
- 4.) Lifeline: Inspect for cuts, burns, tears, abrasion, frays, excessive soiling and discoloration, broken wires (see impact indicator section).
- 5.) Locking Action: Inspect for proper lock-up of brake mechanism.
- 6.) Retraction/Extension: Inspect spring tension by pulling lifeline out fully and allowing it to retract fully (no slack).
- 7.) Hooks/Carabiners: Inspect for physical damage, corrosion, proper operation and markings (see separate checklist/log for hooks and carabiners).
- 8.) Reserve Lifeline: Inspect reserve lifeline retention systems for deployment.
- 9.) Labels: Inspect, make certain all labels are securely held in place and legible.

ADDITIONAL INFORMATION

KYTC ES&H Fall Protection Written Program

<https://intranet.kytc.ky.gov/org/OHRM/em/Pages/Employee-Safety-Health.aspx>

KY Labor Cabinet 803 KAR 2:412. Fall protection

<http://www.lrc.ky.gov/kar/803/002/412.htm>

DBI SALA Safety Resources

<http://www.capitalsafety.com/en-us/Pages/Home.aspx>

OSHA Fall Protection

<https://www.osha.gov/SLTC/fallprotection/><https://www.osha.gov/Publications/OSHA3146.pdf>

TC 25-157
Rev. 04/2017
Page 1 of 3

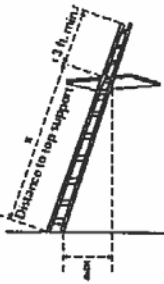
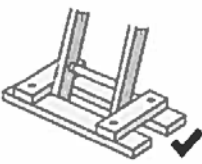

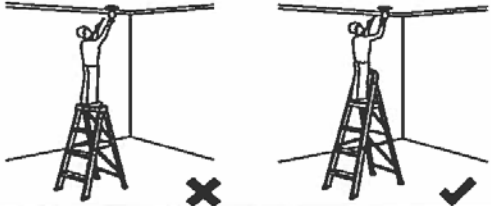
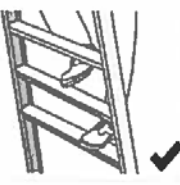

KENTUCKY TRANSPORTATION CABINET
Office of Human Resource Management
EMPLOYEE SAFETY & HEALTH BRANCH

FALL PROTECTION EQUIPMENT INSPECTION LOG

Instructions: Form is to be completed by the District Safety Coordinator and submitted to the Regional Safety Administrator no later than May of each year. Consult the Inspection Checklist Guide for a list of specific equipment and safety considerations.

BRAND	SERIAL #	DATE OF MFG	MODEL #	DESCRIPTION	INSPECTION DATE	PASS	FAIL	INSPECTED BY	COMMENTS
A1	909123455	12-12-2014	Pro D	Harness	1-1-2017	X		JH	No Issues
DD Go	23ED67Y8JU0	9-25-2011	Highlight	Harness	1-2-2017		X	JH	Manufacturer notes replacing after 5 years
B2	ER456789LU	2-6-2016	Up High Guard	Self Retracting Lifeline	1-2-2017	X		JH	No Issues

KYTC EMPLOYEE SAFETY AND HEALTH BRANCH LADDER SAFETY CHECKLIST GUIDE		Rev. 09/2017 Page 1 of 2
<p>IMPORTANT: <i>Check. Maintain. Store.</i> Before using a ladder, <i>check</i> it carefully to ensure there are no visible defects and that it is in good working condition. <i>Check</i> the ladder according to the manufacturer's instructions. <i>Maintain</i> and <i>store</i> the ladder according to the manufacturer's instructions. Falls from portable ladders (step, straight, combination, and extension) are one of the leading causes of occupational fatalities and injuries. OSHA Standards 29 CFR 1926.1053 and 1910.23.</p>		
		YES NO
1	Read and follow all labels/markings on the ladder.	✓
2	Avoid electrical hazards! Look for overhead power lines before handling a ladder. Avoid using a metal ladder near power lines or exposed energized electrical equipment.	✓
3	Always inspect the ladder prior to using it. If the ladder is damaged, it must be removed from service and tagged until repaired or discarded.	✓
4	Always maintain a 3-point (2 hands and 1 foot, or 2 feet and 1 hand) contact on the ladder when climbing. Keep your body near the middle of the step and always face the ladder while climbing. (See illustration 4A.)	✓
5	Do not lean away from the ladder to carry out your task. Always keep your weight centered between the side rails. (See illustrations 5A and 5B.)	✓
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>4A.</p> </div> <div style="text-align: center;"> <p>5A.</p> </div> <div style="text-align: center;"> <p>5B.</p> </div> <div style="text-align: center;"> <p>9A.</p> </div> </div>		
6	Do not carry any tools or materials in your hands when climbing a ladder. (See illustrations 5A and 5B.)	✓
7	Only use ladders and appropriate accessories (ladder levelers, jacks or hooks) for their designed purposes.	✓
8	Ladders must be free of any slippery materials such as oil, grease, or mud on the rungs, steps, or feet.	✓
9	Do not use a self-supporting ladder (e.g., step ladder) as a single ladder or in a partially closed position. (See illustration 9A.)	✓
10	Do not use the top step/rung of a ladder as a step/rung unless it was designed for that purpose. (See illustration 23A.)	✓
11	Use a ladder only on a stable and level surface, unless it has been secured (top and bottom) to prevent displacement. (See illustration 11A.)	✓
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>11A.</p> </div> <div style="text-align: center;"> <p>14A.</p> </div> <div style="text-align: center;"> <p>15A.</p> </div> <div style="text-align: center;"> <p>16A.</p> </div> </div>		

KYTC EMPLOYEE SAFETY AND HEALTH BRANCH LADDER SAFETY CHECKLIST GUIDE		Rev. 09/2017 Page 2 of 2	
		YES	NO
12	Do not place a ladder on boxes, barrels, or other unstable bases to obtain additional height. (See illustration 11A.)	✓	
13	Do not move or shift a ladder while a person or equipment is on the ladder.	✓	
14	Do not use the ladder if it is bent. (See illustration 14A.)	✓	
18A.			
19A.			
20A.			
15	Do not use the ladder if it is missing a step. (See illustration 15A.)	✓	
16	Do not use the ladder if the spreader bars do not have a locking device or mechanism. (See illustration 16A.)		X
17	An extension or straight ladder used to access an elevated surface must extend at least 3 feet above the point of support. Do not stand on the three top rungs of a straight, single, or extension ladder. (See illustration 18A.)	✓	
18	The proper angle for setting up a ladder is to place its base a quarter of the working length of the ladder from the wall or other vertical surface. (See illustration 18A.)	✓	
19	A ladder placed in any location where it can be displaced by other work activities must be secured to prevent displacement or a barricade must be erected to keep traffic away from the ladder. (See illustration 19A.)	✓	
20	Prevent passersby from walking under or near ladders in use by using barriers (e.g., cones) or getting your coworker to act as a lookout. (See illustration 20A.)	✓	
21	Be sure that all locks on an extension ladder are properly engaged. Ensure that the ladder is fully extended before starting work. (See illustration 9A.)	✓	
22	Do not exceed the maximum load rating of a ladder. Be aware of the ladder's load rating and of the weight it is supporting, including the weight of any tools or equipment.	✓	
23	Use the right ladder for the job. For example, ensure the ladder is high enough for you to reach your work area without having to stand on the top rung. (See illustration 23A.)	✓	
24	Wear proper footwear (e.g., non-slip flat shoes). (See illustration 24A.)	✓	
25	Do not use ladders near doorways. If you need to use a ladder near a doorway, make sure that the door is locked. (See illustration 25A.)	✓	
23A.			
24A.			
25A.			

EMPLOYEE SAFETY AND HEALTH BRANCH LADDER INSPECTION CHECKLISTS											
Rev. 09/2017 Page 1 of 2											
STEPLADDER			ROLLING LADDER			EXTENSION LADDER					
FEET	TYPE OF MATERIAL		FEET	TYPE OF MATERIAL		FEET	TYPE OF MATERIAL		YES	NO	
	<input type="checkbox"/> Fiberglass	<input type="checkbox"/> Aluminum <input type="checkbox"/> Wood		<input type="checkbox"/> Fiberglass	<input type="checkbox"/> Aluminum <input checked="" type="checkbox"/> Steel		<input type="checkbox"/> Fiberglass	<input type="checkbox"/> Aluminum			
LADDER REFERENCE #			LADDER REFERENCE #			LADDER REFERENCE #				DEPARTMENT	
			9999-888A							Design Maintenance	
										YES	NO
Steps - loose, cracked, bent, or missing			<input type="checkbox"/>			Steps - loose, cracked, bent, or missing				<input type="checkbox"/>	<input type="checkbox"/>
Rails - cracked, bent, split, or frayed			<input type="checkbox"/>			Rails - cracked, bent, split, or frayed				<input type="checkbox"/>	<input type="checkbox"/>
Labels - missing or not readable			<input type="checkbox"/>			Labels - missing or not readable				<input type="checkbox"/>	<input type="checkbox"/>
Pail Shelf - loose, bent, missing, or broken			<input type="checkbox"/>			Pail Shelf - loose, bent, missing, or broken				<input type="checkbox"/>	<input type="checkbox"/>
Top - cracked, loose, or missing			<input type="checkbox"/>			Top - cracked, loose, or missing				<input type="checkbox"/>	<input type="checkbox"/>
Spreader - loose, bent, or broken			<input type="checkbox"/>			Spreader - loose, bent, or broken				<input type="checkbox"/>	<input type="checkbox"/>
General - rust, corrosion, dirty, oily, greasy, or loose			<input type="checkbox"/>			General - rust, corrosion, dirty, oily, greasy, or loose				<input type="checkbox"/>	<input type="checkbox"/>
Other - bracing, shoes, rivets			<input type="checkbox"/>			Other - bracing, shoes, rivets				<input type="checkbox"/>	<input type="checkbox"/>
ACTION TAKEN			ACTION TAKEN			ACTION TAKEN					
<input type="checkbox"/> Ladder tagged as damaged and immediately removed from use.			<input type="checkbox"/>			Ladder tagged as damaged and immediately removed from use.				<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Ladder is in good condition and remains in use.			<input checked="" type="checkbox"/>			Ladder is in good condition and remains in use.				<input type="checkbox"/>	<input type="checkbox"/>
INSPECTOR NAME (PRINTED)			INSPECTOR NAME (PRINTED)			INSPECTOR NAME (PRINTED)				INSPECTOR NAME (PRINTED)	
			Jerry Highway								
INSPECTOR SIGNATURE			INSPECTOR SIGNATURE			INSPECTOR SIGNATURE				INSPECTOR SIGNATURE	
			Jerry Highway								
DATE			DATE			DATE				DATE	
			1-4-17								

EMPLOYEE SAFETY AND HEALTH BRANCH LADDER INSPECTION CHECKLISTS		Rev. 09/2017 Page 2 of 2
SPECIALTY LADDER		
TYPE OF MATERIAL	MODEL #	LADDER REFERENCE #
<input checked="" type="checkbox"/> Fiberglass <input type="checkbox"/> Aluminum <input type="checkbox"/> Wood	989898 ABC	1234 ABCD
20	YES	NO
Steps/Rungs - loose, cracked, bent, or missing	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Rails - cracked, bent, split, or frayed	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Labels - missing or not readable	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Hardware - missing, loose, or broken	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Fasteners - rust, corrosion, loose, or missing	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Top - cracked, loose, or missing	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Spreader - loose, bent, or broken	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Outriggers - missing, rust, corrosion, or loose (for scaffolding)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
General - rust, corrosion, or loose	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ACTION TAKEN		
INSPECTOR NAME (PRINTED)		
Jerry Highway		
INSPECTOR SIGNATURE		DATE
<input checked="" type="checkbox"/> Ladder tagged as damaged and immediately removed from use. <input type="checkbox"/> Ladder is in good condition and remains in use.		1-4-17

BOMB THREAT CALL PROCEDURES

Most bomb threats are received by phone. Bomb threats are serious until proven otherwise. Act quickly, but remain calm and obtain information with the checklist on the reverse of this card.

If a bomb threat is received by phone:

1. Remain calm. Keep the caller on the line for as long as possible. DO NOT HANG UP, even if the caller does.
2. Listen carefully. Be polite and show interest.
3. Try to keep the caller talking to learn more information.
4. If possible, write a note to a colleague to call the authorities or, as soon as the caller hangs up, immediately notify them yourself.
5. If your phone has a display, copy the number and/or letters on the window display.
6. Complete the Bomb Threat Checklist (reverse side) immediately. Write down as much detail as you can remember. Try to get exact words.
7. Immediately upon termination of the call, do not hang up, but from a different phone, contact FPS immediately with information and await instructions.

If a bomb threat is received by handwritten note:

- Call 911
- Handle note as minimally as possible.

If a bomb threat is received by email:

- Call 911
- Do not delete the message.

Signs of a suspicious package:

- No return address
- Excessive postage
- Stains
- Strange odor
- Strange sounds
- Unexpected delivery
- Poorly handwritten
- Misspelled words
- Incorrect titles
- Foreign postage
- Restrictive notes

DO NOT:

- Use two-way radios or cellular phone; radio signals have the potential to detonate a bomb.
- Evacuate the building until police arrive and evaluate the threat.
- Activate the fire alarm.
- Touch or move a suspicious package.

WHO TO CONTACT (select one)

- Follow your local guidelines
- Federal Protective Service (FPS) Police
1-877-4-FPS-411 (1-877-437-7411)
- 911

BOMB THREAT CHECKLIST

Date: 1-10-17 Time: 11:15 AM
 Time Caller Hung Up: 11:16 AM Phone Number Where Call Received: 502-111-1111

Ask Caller:

- Where is the bomb located? (Building, Floor, Room, etc.) 1st Floor
- When will it go off? 20 minutes
- What does it look like? would not answer
- What kind of bomb is it? kind that kills
- What will make it explode? would not answer
- Did you place the bomb? (Yes) No
- Why? You all deserve it
- What is your name? Hung up

Exact Words of Threat:

You all will be bombed in 20 minutes.

Information About Caller:

- Where is the caller located? (Background and level of noise) N/A
- Estimated age: Older male
- Is voice familiar? If so, who does it sound like? No
- Other points: Call was full of static


Caller's Voice	Background Sounds:	Threat Language:
<input type="checkbox"/> Accent	<input type="checkbox"/> Animal Noises	<input type="checkbox"/> Incoherent
<input type="checkbox"/> Angry	<input type="checkbox"/> House Noises	<input type="checkbox"/> Message read
<input type="checkbox"/> Calm	<input type="checkbox"/> Kitchen Noises	<input type="checkbox"/> Taped
<input type="checkbox"/> Clearing throat	<input type="checkbox"/> Street Noises	<input type="checkbox"/> Irrational
<input type="checkbox"/> Coughing	<input type="checkbox"/> Booth	<input type="checkbox"/> Profane
<input type="checkbox"/> Cracking voice	<input type="checkbox"/> PA system	<input checked="" type="checkbox"/> Well-spoken
<input type="checkbox"/> Crying	<input type="checkbox"/> Conversation	
<input type="checkbox"/> Deep	<input type="checkbox"/> Music	
<input type="checkbox"/> Deep breathing	<input type="checkbox"/> Motor	
<input type="checkbox"/> Disguised	<input type="checkbox"/> Clear	
<input type="checkbox"/> Distinct	<input checked="" type="checkbox"/> Static	
<input checked="" type="checkbox"/> Excited	<input type="checkbox"/> Office machinery	
<input type="checkbox"/> Female	<input type="checkbox"/> Factory machinery	
<input type="checkbox"/> Laughter	<input type="checkbox"/> Local	
<input type="checkbox"/> Lisp	<input type="checkbox"/> Long distance	
<input checked="" type="checkbox"/> Loud		
<input checked="" type="checkbox"/> Male		
<input type="checkbox"/> Nasal		
<input type="checkbox"/> Normal		
<input type="checkbox"/> Ragged		
<input type="checkbox"/> Rapid		
<input type="checkbox"/> Raspy		
<input type="checkbox"/> Slow		
<input type="checkbox"/> Slurred		
<input type="checkbox"/> Soft		
<input type="checkbox"/> Stutter		


Other Information: _____



WORKERS COMPENSATION – FIRST REPORT OF INJURY OR ILLNESS

EMPLOYER (NAME & ADDRESS INCL ZIP) Kentucky Transportation Cabinet Department of Highways, District		CARRIER/ADMINISTRATOR CLAIM NUMBER n/a	OSHA LOG NUMBER OSHA #	REPORT PURPOSE CODE n/a
		JURISDICTION n/a	JURISDICTION CLAIM NUMBER	
		INSURED REPORT NUMBER		
		EMPLOYER'S LOCATION ADDRESS (IF DIFFERENT) Kentucky Transportation Cabinet-Division of Workers' Compensation 200 Mero Street Frankfort, KY 40622		DISTRICT/CREW#
INDUSTRY CODE 1661	EMPLOYER FEIN 61-0600439			PHONE # (502) 564-6963
CARRIER/CLAIMS ADMINISTRATOR				
CARRIER (NAME, ADDRESS, & PHONE #) Risk Management Services Company P.O. Box 22989 Louisville, KY 40252 Phone: (800) 372-5402		POLICY PERIOD TO	CLAIMS ADMINISTRATOR (NAME, ADDRESS & PHONE NO) Risk Management Services Company P.O. Box 22989 Louisville, KY 40252 Phone: (800) 372-5402	
		CHECK IF APPROPRIATE <input checked="" type="checkbox"/> SELF INSURANCE		
CARRIER FEIN n/a	POLICY/SELF-INSURED NUMBER n/a	ADMINISTRATOR FEIN 45-2712519		
AGENT NAME & CODE NUMBER n/a				
EMPLOYEE/WAGE				
NAME (LAST, FIRST, MIDDLE)		DATE OF BIRTH	SOCIAL SECURITY NUMBER	DATE HIRED
ADDRESS (INCL ZIP)		SEX <input type="checkbox"/> MALE <input type="checkbox"/> FEMALE <input type="checkbox"/> UNKNOWN	MARITAL STATUS <input type="checkbox"/> UNMARRIED <input type="checkbox"/> SINGLE/DIVORCED <input type="checkbox"/> MARRIED <input type="checkbox"/> SEPARATED <input type="checkbox"/> UNKNOWN	OCCUPATION/JOB TITLE
PHONE		# OF DEPENDENTS	EMPLOYMENT STATUS	
				NCCI CLASS CODE n/a
RATE PER.	<input type="checkbox"/> DAY <input type="checkbox"/> WEEK <input type="checkbox"/> MONTH <input type="checkbox"/> OTHER	DAYS WORKED/WEEK	FULL PAY FOR DAY OF INJURY? DID SALARY CONTINUE?	<input type="checkbox"/> YES <input type="checkbox"/> NO
OCCURRENCE/TREATMENT				
TIME EMPLOYEE BEGAN WORK <input type="checkbox"/> AM <input type="checkbox"/> PM	DATE OF INJURY/ILLNESS	TIME OF OCCURRENCE () CANNOT BE DETERMINED <input type="checkbox"/> AM <input type="checkbox"/> PM	LAST WORK DATE	DATE EMPLOYER NOTIFIED
CONTACT NAME/PHONE NUMBER		TYPE OF INJURY/ILLNESS	PART OF BODY AFFECTED	
DID INJURY/ILLNESS/EXPOSURE OCCUR ON EMPLOYER'S PREMISES? <input type="checkbox"/> YES <input type="checkbox"/> NO		TYPE OF INJURY/ILLNESS CODE	PART OF BODY AFFECTED CODE	
DEPARTMENT OR LOCATION WHERE ACCIDENT OR ILLNESS EXPOSURE OCCURRED		ALL EQUIPMENT, MATERIALS, OR CHEMICALS EMPLOYEE WAS USING WHEN ACCIDENT OR ILLNESS EXPOSURE OCCURRED		
SPECIFIC ACTIVITY THE EMPLOYEE WAS ENGAGED IN WHEN THE ACCIDENT OR ILLNESS EXPOSURE OCCURRED		WORK PROCESS THE EMPLOYEE WAS ENGAGED IN WHEN ACCIDENT OR ILLNESS EXPOSURE OCCURRED		
HOW INJURY OR ILLNESS/ABNORMAL HEALTH CONDITION OCCURRED. DESCRIBE THE SEQUENCE OF EVENTS AND INCLUDE ANY OBJECTS OR SUBSTANCES THAT DIRECTLY INJURED THE EMPLOYEE OR MADE THE EMPLOYEE ILL				
				CAUSE OF INJURY CODE n/a
DATE RETURN(ED) TO WORK	IF FATAL, GIVE DATE OF DEATH	WERE SAFEGUARDS OR SAFETY EQUIPMENT PROVIDED? WERE THEY USED?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> NO	
PHYSICIAN/HEALTH CARE PROVIDER (NAME & ADDRESS)		HOSPITAL OR OFF SITE TREATMENT (NAME & ADDRESS)		INITIAL TREATMENT <input type="checkbox"/> NO MEDICAL TREATMENT <input type="checkbox"/> MINOR. BY EMPLOYER <input type="checkbox"/> MINOR CLINIC/HOSP <input type="checkbox"/> EMERGENCY CARE <input type="checkbox"/> HOSPITALIZED > 24 HOURS <input type="checkbox"/> FUTURE MAJOR MEDICAL/ LOST TIME ANTICIPATED
OTHER KYTC Equipment <input type="checkbox"/> Auto to 3/4 Ton <input type="checkbox"/> 1 Ton or Greater <input type="checkbox"/> Equipment <input type="checkbox"/> None				
WITNESSES (NAME & PHONE #)				
DATE ADMINISTRATOR NOTIFIED	DATE PREPARED	PREPARER'S NAME & TITLE	PHONE NUMBER	

	KENTUCKY TRANSPORTATION CABINET Office of Human Resource Management EMPLOYEE SAFETY & HEALTH BRANCH	TC 25-170 Rev. 1/2018 Page 1 of 1	
AUTOMATED EXTERNAL DEFIBRILLATOR (AED) MAINTENANCE CHECKLIST			
<p>IMPORTANT: Each AED unit shall be inspected monthly. If any FAIL boxes are checked, the issue must be corrected immediately or the unit shall be removed from service. (Refer to the product manual for additional information.) If an AED has been activated and used in an emergency situation, the district safety coordinator or the Employee Safety & Health (ES&H) Branch shall be notified immediately.</p>			
SECTION 1: OBSERVATIONS			
		PASS	FAIL
1	Is the unit clean?	✓	
	<p>Cleaning Instructions:</p> <ul style="list-style-type: none"> • After each use, clean and disinfect the AED Plus with a soft, damp cloth using 90% isopropyl alcohol, soap and water, or chlorine bleach and water mixture (30 ml/liter water). • Do not immerse any part of the AED Plus in water. • Do not use ketones (such as MEK or acetone) to clean the AED Plus. • Avoid using abrasives (such as a paper towel) on the display window or IrDa port. • Do not sterilize the AED plus. 		
2	Are all signs of wear reasonable and not excessive?	✓	
3	Are the front panel and housing undamaged and free of cracks?	✓	
4	Are input connectors clean and undamaged?	✓	
5	Are the electrodes pre-connected to the AED and sealed in their package?	✓	
6	Are the electrodes within the expiration date shown on the package? (Replace if expired.)	✓	
7	Are all cables free from damage, cracks, cuts, exposed, or broken wires?	✓	
8	Are the pads sealed within the packaging?	✓	
9	Open battery door and verify that the batteries have no signs of visible damage.	✓	
10	Are the batteries within the expiration date? (Replace all batteries every 5 years or if the unit prompts.)	✓	
11	Initiate manual self-test. Audible unit okay is noted. Green arrow is visible on the front of the unit. If a red "X" is visible in the status indicator window when the unit is on, power cycle the unit. If a red "X" is still visible in the status indicator window, remove the unit from service and refer to the product manual.	✓	
12	Verify that supplies are available for use (razor, gloves, and breathing barrier).	✓	
SECTION 2: COMMENTS			
Need to replace batteries in two months. They will be expired.			
SECTION 3: SIGNATURE			
PRINT NAME	SIGNATURE	DATE	
Jerry Safety	<i>Jerry Safety</i>	1-1-17	

		KENTUCKY TRANSPORTATION CABINET Office of Human Resource Management EMPLOYEE SAFETY & HEALTH BRANCH		TC 25-169 Rev. 12/2017 Page 1 of 1		
AUTOMATED EXTERNAL DEFIBRILLATOR (AED) POST-EVENT REVIEW						
SECTION 1: PATIENT INFORMATION						
LAST NAME		FIRST NAME		MI	JOB TITLE	
Safety		Jerry		Z	Design Technician 8	
DATE OF BIRTH	DISTRICT	DEPARTMENT		DIVISION/FACILITY/WORK LOCATION		
2/1/1950	15	Design Maintenance		999999 / David County		
SECTION 2: EVENT INFORMATION						
LOCATION OF EVENT			TIME OF EVENT	TIME OF AED ARRIVAL		
David County Crew Room			11:00 AM	11:10 AM		
MINUTES BETWEEN EVENT AND AED ARRIVAL	POSITION PATIENT WAS FOUND (lying, sitting...)	PATIENT SKIN COLOR UPON ARRIVAL (pale, blue...)	POLICE REPORT # (NA if not applicable)			
10	Lying in floor	Blue	N/A			
					YES	NO
AED responder witnessed the patient's cardiac arrest.						x
Emesis (vomit) was present.					x	
Visible signs of trauma were present. (If "yes," briefly describe.)						x
Bystander(s) administered CPR. (If "yes," list name(s) and contact information.) Danny Road, DeShaun Highway					x	
Shockable rhythm present? (If "yes," indicate total number of shocks delivered.) 4					x	
IA-1 has been completed.					x	
SECTION 3: TRANSFER OF PATIENT CARE						
					YES	NO
Patient care was transferred following AED. (If "yes," indicate to whom and the approximate time.) Miller EMS Service, 11:45 am					x	
A verbal report was provided upon transfer of patient care. (If "yes," indicate by and to whom.) Danny Road					x	
Patient received follow-up care by emergency medical services (EMS).					x	
Patient received follow-up care at a hospital.					x	
SECTION 4: SIGNATURES (Print name under each title prior to signing.)						
PERSON COMPLETING REPORT		SIGNATURE		DATE		
Danny Road		<i>Danny Road</i>		1/1/2017		
KYTC EMPLOYEE SAFETY & HEALTH BRANCH MNGR		SIGNATURE		DATE		
Mike Highway		<i>Mike Highway</i>		1/2/2017		
AED COMMONWEALTH PROGRAM COORDINATOR		SIGNATURE		DATE		
AED MEDICAL OVERSIGHT PHYSICIAN		SIGNATURE		DATE		
Once all signatures have been obtained, return this form to:		AED Commonwealth Program Coordinator Office of Legal Services, Kentucky Personnel Cabinet State Office Building, 501 High Street, Frankfort KY 40601				

COMMONWEALTH OF KENTUCKY - STATE RISK & INSURANCE SERVICES DIVISION

KSAP Accident Report Form
IF YOU HAVE AN ACCIDENT

Do the following:

- 1 Call 911 immediately if damage or injuries are involved; request an officer to file a report and request medical assistance if needed.
 - 2 Call your Supervisor.
 - 3 Call your Agency Claim contact.
 - 4 Obtain the other driver's license number, insurance information from their insurance verification card and a description of the vehicle from their registration card.
 - 5 Give the other driver your name, address, and license number and show him / her the Commonwealth's Insurance ID Card located in the vehicles glove compartment.
 - 6 For your protection, if safe, take photos of all four sides of all vehicles, license plates, skid marks, all angles of the roadway approach and persons in the vehicles involved in accident.
- DO NOT admit fault. Circumstances & Contract Claims Adjusters will make that determination.
 - DO NOT make any statements about the accident to anyone other than Police Officer, your Supervisor, your Agency Risk Management Officer, KSAP Claims Adjuster or Commonwealth Legal Counsel.

Remember you are an Employee of the Commonwealth, thus representative of the Commonwealth. Please act professionally at all times.

Vehicle Driver shall complete all applicable sections of this form. In case of driver injury, passenger / supervisor shall complete this form.

Submit this form to your Supervisor the same day but no later than the next business day after the accident.

Supervisors / Managers shall complete an initial investigation, review this form for accuracy & completeness, and submit it to your Agency Risk Manager within 24 hours of receipt of this form.

KRS 304.47-030 "Any person who knowingly and with intent to defraud any insurance company or other person files a statement of claim containing any materially false information or conceals, for the purpose of misleading, information concerning any fact material thereto commits a fraudulent insurance act, which is a crime."

Describe in your own words how the accident occurred:

With a green light I pulled into the intersection to make a right turn and was struck by another vehicle as it ran the stop light. I called 911 and then my supervisor. Someone else called for an ambulance but no one went to the hospital. Police report was completed. Tow truck was called for my vehicle. Other vehicle was driven away from the scene by another party.

Police Officer	<u>Mark Roads</u>	Report #	<u>123C</u>	Badge #	<u>456</u>
Department	<u>Patrolville PD</u>	City	<u>David</u>	<u>Attach Police Report</u>	
Injured Persons:		WAS AMBULANCE CALLED? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
1) Name	<u>N/A</u>	2) Name	_____		
Address	_____	Address	_____		
City / State	_____	City / State	_____		
Phone #	_____	Phone #	_____		
3) Name	_____	4) Name	_____		
Address	_____	Address	_____		
City / State	_____	City / State	_____		
Phone #	_____	Phone #	_____		

COMMONWEALTH OF KENTUCKY - STATE RISK & INSURANCE SERVICES DIVISION
KSAP Accident Report Form (page 2)

Date of Collision 1/2/2017 Time 9 AM PM County David
(mm/dd/yyyy)

This collision occurred in Highwayville
(City or Town)

or _____ Miles N S E W of _____
(City or Town)

Street Name & # / Intersection US 9999999 / KY 1111111

DRIVER INFORMATION (Vehicle 1)	OTHER DRIVER / PEDESTRIAN (Vehicle 2)
Driver <u>Jerry Line Highway</u> <small>First Middle Last</small>	Driver <u>See Police Report</u> <small>First Middle Last</small>
Driver's email <u>jerry.highway@kyy.govv</u>	Address _____
Address <u>123 Blue Highway Road</u> <u>David, Kentucky 111111</u>	Dr License #/State _____
Employee ID # <u>AAA-9999</u>	Date of Birth _____
Dr License #/State <u>Hxx-xxx-xxx</u>	Phone # _____
Date of Birth <u>12/12/1950</u>	Owner of Vehicle _____ <small>(if different) First Middle Last</small>
Phone # <u>857-111-1111</u>	Address (if different) _____
CAB/DEP/DIV <u>David County Maint</u> <u>Crew # 44444</u>	Vehicle Make,Model,Yr _____
Vehicle Make,Model,Yr <u>Ford, 150, XL, 2015</u>	Reg Plate # & State _____
Reg Plate # & VIN # <u>BBB-1111, 111AAA111A</u>	Insurance Co _____
Damage to Vehicle (attach photos if available) <u>Front Right Fender</u>	Address _____
Where is vehicle now? Driveable? <u>Fleet Garage Frankfort</u>	Damage to Vehicle <u>Front Bumper and Hood</u>
Damage to Property - Other than Vehicle <small>(attach photos if available)</small>	
Owner's Name <u>N/A</u>	
Address _____	


Additional notes:
Fleet vehicle has no headlight or turn signal working on the passenger side.



Claim reviewed by Supervisor (name) <u>Danny Safety</u>	Date <u>1/2/2017</u>
Supervisor Phone # <u>xxx-xxx-xxxx</u>	Supervisor eMail <u>danny.safety@kyy.govv</u>
Claim reviewed by Agency Claims contact (name) <u>DeShaun Roadway</u>	Date <u>1/4/2017</u>
Agency Claim contact Phone # <u>xxx-xxx-xxxx</u>	Claim contact eMail <u>DeShaun.Roadway@kyy.govv</u>


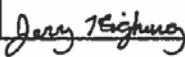
USPS MAIL: State Risk & Insurance Services Division
209 Saint Clair, 5th Floor
Frankfort, Ky. 40601 **ATTN: CLAIMS**


eMAIL: Evelyn.Smith@ky.gov 502 782-5433
FAX # 502 564 2693


KYTC EMPLOYEE SAFETY AND HEALTH BRANCH BENCH GRINDER CHECKLIST GUIDE		Rev. 02/2018 Page 1 of 1																																																
<p>CAUTION: Follow all manufacturer guidelines for safe operation and maintenance. Mounted eye shields do not replace required eye and face protection.</p>																																																		
		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;"></th> <th style="width: 75%;">YES</th> <th style="width: 20%;">NO</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td colspan="2">Is the work rest used and kept adjusted to within 1/8 in. (0.3175 cm.) of the wheel?</td> </tr> <tr> <td style="text-align: center;">2</td> <td colspan="2">Is the adjustable tongue on the top side of the grinder used and kept adjusted to within 1/4 in. (0.6350 cm.) of the wheel?</td> </tr> <tr> <td style="text-align: center;">3</td> <td colspan="2">Do side guards cover the spindle, nut, flange, and 75% of the wheel diameter?</td> </tr> <tr> <td style="text-align: center;">4</td> <td colspan="2">Are bench and pedestal grinders permanently mounted to prevent tipping or other movement that could result in personal injury?</td> </tr> <tr> <td style="text-align: center;">5</td> <td colspan="2">Is the maximum revolutions per minute (rpm) rating of each abrasive wheel compatible with the rpm rating of the grinder motor?</td> </tr> <tr> <td style="text-align: center;">6</td> <td colspan="2">Does each grinder have an individual operable on and off control switch?</td> </tr> <tr> <td style="text-align: center;">7</td> <td colspan="2">Is each electrically operated grinder effectively grounded?</td> </tr> <tr> <td style="text-align: center;">8</td> <td colspan="2">Is the electrical cord in good condition?</td> </tr> <tr> <td style="text-align: center;">9</td> <td colspan="2">Are new abrasive wheels visually inspected and ring tested before they are mounted?</td> </tr> <tr> <td style="text-align: center;">10</td> <td colspan="2">Are dust collectors and powered exhausts provided on grinders used in operations that produce large amounts of dust?</td> </tr> <tr> <td style="text-align: center;">11</td> <td colspan="2">Are splash guards mounted on grinders that use coolant to prevent the coolant from reaching employees?</td> </tr> <tr> <td style="text-align: center;">12</td> <td colspan="2">Is cleanliness maintained around grinders?</td> </tr> <tr> <td style="text-align: center;">13</td> <td colspan="2">Is sufficient clearance provided around and between machines to allow for safe operations, set up and servicing, material handling, and waste removal?</td> </tr> <tr> <td style="text-align: center;">14</td> <td colspan="2">Are the eye shields attached?</td> </tr> <tr> <td style="text-align: center;">15</td> <td colspan="2">Is the manufacturer handbook accessible?</td> </tr> </tbody> </table>		YES	NO	1	Is the work rest used and kept adjusted to within 1/8 in. (0.3175 cm.) of the wheel?		2	Is the adjustable tongue on the top side of the grinder used and kept adjusted to within 1/4 in. (0.6350 cm.) of the wheel?		3	Do side guards cover the spindle, nut, flange, and 75% of the wheel diameter?		4	Are bench and pedestal grinders permanently mounted to prevent tipping or other movement that could result in personal injury?		5	Is the maximum revolutions per minute (rpm) rating of each abrasive wheel compatible with the rpm rating of the grinder motor?		6	Does each grinder have an individual operable on and off control switch?		7	Is each electrically operated grinder effectively grounded?		8	Is the electrical cord in good condition?		9	Are new abrasive wheels visually inspected and ring tested before they are mounted?		10	Are dust collectors and powered exhausts provided on grinders used in operations that produce large amounts of dust?		11	Are splash guards mounted on grinders that use coolant to prevent the coolant from reaching employees?		12	Is cleanliness maintained around grinders?		13	Is sufficient clearance provided around and between machines to allow for safe operations, set up and servicing, material handling, and waste removal?		14	Are the eye shields attached?		15	Is the manufacturer handbook accessible?	
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		KENTUCKY TRANSPORTATION CABINET Office of Human Resource Management EMPLOYEE SAFETY AND HEALTH BRANCH		TC 25-165 Rev. 07/2017 Page 1 of 2
		INTERNAL COMBUSTION ENGINE INDUSTRIAL TRUCK OPERATION CHECKLIST		
IMPORTANT: Always consult the operator's manual for any additional information on maintenance or safety requirements.				
SECTION 1: OPERATOR & EQUIPMENT INFORMATION				
DATE 1-2-17	OPERATOR Jerry Highway	DEPARTMENT Equipment Intake	SHIFT 2nd	
MODEL # 9999 AAAA	EQUIPMENT # 99990-1111	HOURS 50	FUEL TYPE Propane	
MAXIMUM LIFT CAPACITY 11/2 Ton	OPERATOR CERTIFIED Yes	OTHER	OTHER	
SECTION 2: SAFETY & OPERATIONAL CHECKS (Checks are to be completed daily and prior to each shift, as required by OSHA standards 1910.178 and 1926.602. Have a qualified mechanic correct all problems.)				
ENGINE OFF CHECKS		OK	MAINTENANCE REQUIRED	
Leaks - fuel, hydraulic oil, engine oil, or radiator coolant		✓		
Battery - check water, clean/electrolyte level and charge		✓		
All Engine Belts - check visually		✓		
Radiator Coolant - check level		✓		
Engine Oil Level - dipstick		X	Low 1 quart. Need to add	
Transmission Fluid Level - dipstick		✓		
Engine Air Cleaner - squeeze rubber dirt trap or check the restriction alarm (if equipped)		✓		
Hydraulic Fluid Level - check level		✓		
Brake Fluid - check level		✓		
Hood Latch - adjusted and securely fastened		✓		
Tires - condition and pressure		✓		
Forks, Top Clip Retaining Pin and Heel - check condition		✓		
Load Backrest - securely attached		✓		
Hydraulic Hoses, Mast Chains, Cables, and Stops - check visually		✓		
Overhead Guard - attached, check visually		✓		
Finger Guards and Fan Guards - attached, check visually		✓		
Propane Tank (LP Gas Truck) - rust corrosion, damage, dents, cracks, restraint brackets		✓		
Safety Warnings - attached (refer to parts manual for location)		✓		
Fuel Sedimentor (Diesel)		✓		
Operator's Manual - in container		✓		
Nameplate - attached and information matches model, serial number, and attachments		✓		
Seat Belt - functioning smoothly		✓		
Fire Extinguisher - date current		X	Expired, Need to replace	
3-Point Mounting & Dismounting handles/bars - attached, check visually		✓		
Other				
Other				
(See page 2 for Engine On Checks.)				

	KENTUCKY TRANSPORTATION CABINET Office of Human Resource Management EMPLOYEE SAFETY AND HEALTH BRANCH	TC 25-165 Rev. 07/2017 Page 2 of 2
POWERED INDUSTRIAL TRUCK DAILY OPERATION CHECKLIST		
SECTION 2: SAFETY & OPERATIONAL CHECKS (cont.)		
ENGINE ON CHECKS	OK	MAINTENANCE REQUIRED
Accelerator or Direction Control Pedal - functioning smoothly	✓	
Service Brake - functioning smoothly	✓	
Parking Brake - functioning smoothly	✓	
Steering Operation - functioning smoothly	✓	
Drive Control - forward/reverse - functioning smoothly	✓	
Tilt Control - forward & back - functioning smoothly	✓	
Hoist & Lowering Control - functioning smoothly	✓	
Attachment Control - operation	✓	
Horns (including backup) & Lights - functioning	✓	
Cab (if equipped) - heater, defroster, wipers - functioning	✓	
Guages: ammeter, engine oil pressure, hour meter, fuel level, temperature, instrument monitors - functioning	✓	
Seat Belt Buzzer (if applicable)	N/A	
Other		
SECTION 3: SIGNATURE		
<p><i>I have been trained, evaluated, and certified on the types of powered industrial trucks and attachments I operate, including the vehicle I have inspected above. A vehicle found in need of repair, defective, or in any way unsafe, shall be immediately taken out of service and red tagged. Problems noted above have been recorded on the appropriate documents and reported to a supervisor.</i></p>		
PRINT NAME Jerry Highway	SIGNATURE 	DATE 1-2-2017

	KENTUCKY TRANSPORTATION CABINET Office of Human Resource Management EMPLOYEE SAFETY AND HEALTH BRANCH	TC 25-166 Rev. 07/2017 Page 2 of 2
ELECTRIC INDUSTRIAL TRUCK DAILY OPERATION CHECKLIST		
SECTION 2: SAFETY & OPERATIONAL CHECKS (cont.)		
MOTOR ON CHECKS	OK	MAINTENANCE REQUIRED
Accelerator Linkage - functioning smoothly	✓	
Service Brake - functioning smoothly	✓	
Parking Brake - functioning smoothly	✓	
Steering Operation - functioning smoothly	✓	
Drive Control - forward/reverse - functioning smoothly	✓	
Tilt Control - forward & back - functioning smoothly	✓	
Hoist & Lowering Control - functioning smoothly	✓	
Attachment Control - operation	✓	
Horns (including backup) - functioning	✓	
Lights & Alarms (where present) - functioning	✓	
Hour Meter - functioning	✓	
Battery Discharge Indicator - functioning	✓	
Instrument Monitors - functioning	✓	
Seat Belt Buzzer (if applicable)	✓	
Other		
SECTION 3: SIGNATURE		
<p><i>I have been trained, evaluated, and certified on the types of electric industrial trucks and attachments I operate, including the vehicle I have inspected above. A vehicle found in need of repair, defective, or in any way unsafe, shall be immediately taken out of service and red tagged. Problems noted above have been recorded on the appropriate documents and reported to a supervisor.</i></p>		
PRINT NAME Jerry Highway	SIGNATURE 	DATE 1-4-2017

		KENTUCKY TRANSPORTATION CABINET Office of Human Resource Management EMPLOYEE SAFETY & HEALTH BRANCH	TC 25-168 Rev. 01/2018 Page 1 of 3
AERIAL DEVICE BUCKET TRUCK DAILY CHECKLIST			
SECTION 1: VEHICLE CHECKS			✓
	Complete TC 74-11, <i>Operator's Daily Check Sheet</i> .		✓
SECTION 2: AERIAL DEVICE CHECKS			
1	Manual - Must be present and remain on the unit.		✓
2	Prepare the unit for inspection.		
	a.	Position the unit on a level surface.	✓
	b.	Engage the hydraulic system with the transmission in neutral or park without applying the parking brake. If the hydraulic system engages, the parking brake interlock is not operating properly.	✓
	c.	Apply the parking brake, and chock the wheels.	✓
	d.	Turn off the engine.	✓
3	Make sure the vehicle tires are in good condition and properly inflated to the pressure posted on the driver's side door. Rust behind the lug nuts can indicate tightening is required.		✓
4	With the boom stowed, check the oil level in the hydraulic reservoir. The oil level should be to the indicated mark on the dipstick or at the top of the sight gauge. If necessary, add oil as described in the maintenance manual. The need to add oil regularly indicates a leak in the hydraulic system that should be corrected. (Only nonconductive oil shall be used.)		✓
5	Visually inspect the unit for hydraulic leaks. Continue to look for hydraulic leaks while performing inspection.		✓
6	Throughout the inspection, pay particular attention to the following components, looking for proper operation and any damage, cracks or corrosion, missing or loose fasteners, cracked or broken inspection marks, and excessive wear: lower boom pivot pin, lower boom cylinder mounting pins, upper boom cylinder mounting pins, platform mounting shaft, platform door latch, rotation bearing bolts, pedestal mounting bolts, platform mounting fasteners, lanyard attachment pin.		✓
7	Inspect all covers to make sure they are in place, secure, and in good condition.		✓
8	Check visual and audible safety devices for proper operation. Check operational and instructional placards. Replace missing and illegible placards.		✓
9	Start the engine and engage the hydraulic system.		✓
10	If the temperature outside is below 32°F (0°C), warm the hydraulic oil before operating the unit. The procedure for warming the oil is described in the owner's manual under Cold Weather Start-Up. Do not operate the pump or engine at more than a fast idle until the hydraulic oil has warmed up.		✓
11	Throughout the preoperational test of all unit controls, confirm the following:		
	a.	When controls are released, they must return to neutral without sticking and all motion for that function should stop. If movement continues, a control valve may not be functioning properly.	✓
	b.	While cylinders are extended and under load, no movement should occur while controls are in neutral. Any movement indicates a cylinder or holding valve malfunction.	✓
12	Test the lower controls emergency stop:		
	a.	Engage the emergency stop.	✓
	b.	Operate each control and observe for movement. If movement occurs, the emergency stop is not functioning properly.	✓
13	Test the start/stop and secondary stowage DC pump controls from the lower controls:		
	a.	Move the control selector to the Lower Controls position.	✓
	b.	Turn off the engine with the start/stop control.	✓
	c.	Press and hold the secondary stowage control or combined function start/stop control until the DC pump begins to operate.	✓
<i>Continued on page 2</i>			

		KENTUCKY TRANSPORTATION CABINET Office of Human Resource Management EMPLOYEE SAFETY & HEALTH BRANCH		TC 25-168 Rev. 01/2018 Page 2 of 3
		AERIAL DEVICE BUCKET TRUCK DAILY CHECKLIST		
SECTION 2: AERIAL DEVICE CHECKS (cont.)				✓
13	Test the start/stop and secondary stowage DC pump controls from the lower controls (cont.):			
	d.	While holding the control with the DC pump operating, raise and lower the upper boom a small amount (movement will be slow). If no boom movement occurs, the secondary stowage system may not be functioning properly.		✓
	e.	Release the control and start the engine using the start/stop control to complete the test.		✓
14	Test the lower controls:			
	a.	Without pressing the master button, operate each boom and rotation control. If movement occurs, the master button is not operating properly.		✓
	b.	Move the control selector to the Lower Controls position. Press the master button and operate all boom and rotation controls throughout their full range of motion. Observe for proper operation.		✓
	c.	Verify proper operation of the auxiliary winch controls.		✓
15	Test the interlock blocking valve:			
	a.	With the control selector in the Lower Controls position, verify all upper controls do not function. If movement occurs, the interlock system is not functioning properly.		✓
	b.	Place the control selector in the Upper Controls position. Operate the boom raise function from the lower controls. If boom movement occurs, the interlock system is not functioning properly.		✓
16	Test the upper controls emergency stop:			
	a.	Engage the emergency stop.		✓
	b.	Operate each control. If movement occurs, the emergency stop is not functioning properly.		✓
	c.	Disengage the emergency stop.		✓
17	Test the operation of the upper controls. At the lower controls, move the control selector to the Upper Controls position.			
	a.	Operate each control without engaging the interlock. If boom movement occurs, the interlock system is not functioning properly.		✓
	b.	Operate each function. While the unit is operating, look for oil leaks from the hydraulic lines and components.		✓
18	Test the override system at the lower control station. When the station selector is in the Lower Control position, the upper controls should not function. When the station selector is in the Upper Control position, the upper controls should function. The lower controls must override the upper controls.			✓
19	Test the platform start/stop and secondary stowage DC pump controls:			
	a.	Turn off the engine with the start/stop control, and continue holding the control down until the secondary stowage pump begins to operate.		✓
	b.	While holding the control down with the DC pump operating, raise and lower the lower boom a small amount (movement will be slow). If no boom movement occurs, the secondary stowage system may not be functioning properly.		✓
	c.	Release the control. Start the engine by pressing the control down to complete the test.		✓
20	Stow the booms, disengage the hydraulic system, and turn off the engine.			✓
21	Boom electrical inspection test has been completed within the last 12 months.			✓
<p>WARNING</p> Take immediate corrective action on any problem areas identified during the inspection process before operating the unit further. Red tag the equipment if needed.				

	KENTUCKY TRANSPORTATION CABINET Office of Human Resource Management EMPLOYEE SAFETY & HEALTH BRANCH	TC 25-168 Rev. 01/2018 Page 3 of 3
AERIAL DEVICE BUCKET TRUCK DAILY CHECKLIST		
SECTION 3: ACKNOWLEDGMENTS		
<i>I, the Aerial Device Bucket Truck Operator, understand the following (check each):</i>		✓
1	Non-material handlers (personnel units) know that they are not to be used for handling material. Tying ropes to lanyard attachment point to lift material is absolutely forbidden.	✓
2	Never lay conductors on platforms to lift them into position. Do not drag conductors across the boom. Contact with lines or obstructions may cause gouges in the boom.	✓
3	Side loading of booms is prohibited. Side loading can cause instability, structural problems, or both.	✓
4	When operating from the platform, all components at the boom tip, including the controls, must be considered to be electrically connected. If an energized conductor or object touches any part of the boom tip, treat the entire boom tip as energized. Similarly, if any grounded conductor or object touches any part of the boom tip, consider the entire boom tip to be grounded.	✓
5	The insulating portion of the boom can only isolate the operator from grounding through the boom and vehicle. The pole, cross arm, and other hardware must be considered by the operator as grounded. The unit can't protect a person from current between an energized conductor and any other conductor, ground, or grounded equipment on or in contact with the pole, including the neutral wire.	✓
6	Always inspect door latches, winches, hitches, guards, and chains.	✓
7	For proper operation, the unit cannot exceed the degree stamped on the slope indicator placard or serial number placard. Exceeding platform or jib capacity, or operation on greater slopes, can result in instability, structural damage, or both. Locate and understand load chart information.	✓
8	Electrical Safety, Fall Protection, and Other PPE Equipment have been inspected and are in good working condition.	✓
9	Know the clearance height of the equipment you are operating.	✓
10	Operating this unit without proper training will result in death or serious injury to yourself and others. Do not operate this equipment unless you have been qualified/certified by your employer or work. OSHA 29 CFR 1926.32(m) states: "Qualified" means one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training and experience, has successfully demonstrated his ability to solve or resolve problems relating to the subject matter, the work, or the project.	✓
SECTION 4: SIGNATURE		
<i>I have been trained, evaluated, and qualified/certified on aerial device bucket trucks I operate, including the vehicle I have inspected above. A vehicle found in need of repair, defective, or in any way unsafe, shall be immediately taken out of service and red tagged. Problems noted above have been recorded on the appropriate documents and reported to a supervisor.</i>		
PRINT NAME	SIGNATURE	DATE
Jerry Highway	<i>Jerry Highway</i>	1-1-2017

MEDICAL/OCCUPATIONAL HISTORY QUESTIONNAIRE

Employee Name: _____ Date: _____

SSN: _____ Birth Date: _____ Age: _____

Sex: ___ Height: _____ Weight: _____

Employer: _____

Department/Division: _____

Job Title Description: _____

Dates at this Job Title: From _____ to _____

MEDICAL HISTORY

1. List all hospitalizations and surgeries _____

2. List current medicines (including nonprescription drugs) _____

3. Allergies (drugs, food, chemicals) _____

4. Are you currently under a physician's care? YES ___ NO ___

If yes, please explain _____

5. Have you ever been told that you have asthma, hay fever, or sinusitis?

YES ___ NO ___

6. Have you ever been told that you have emphysema, bronchitis, or any other respiratory problem? YES ___ NO ___

7. Have you ever been told that you had cancer? YES ___ NO ___

8. Have you ever been told that you had high blood pressure?

YES ___ NO ___

9. Have you ever had a heart attack or heart trouble? YES ___ NO ___

10. Do you ever have any shortness of breath? YES ___ NO ___

If yes, do you have to rest after climbing several flights of stairs?

YES ___ NO ___

If yes, do you walk on a level that is slower than other people your own age?

YES ___ NO ___

If yes you do walk slower than a normal pace, do you have to limit the distance that you walk? YES ___ NO ___

If yes, do you have to stop and rest while bathing or dressing?

YES ___ NO ___

11. Do you cough as much as three months out of the year? YES ___
NO ___
If yes, have you had this cough for more than two years? YES ___
NO ___
If yes, do you ever cough anything up from the chest? YES ___
NO ___
12. Do you ever have a feeling of smothering, unable to take a deep breath or tightness in your chest? YES ___ NO ___
If yes, do you notice this on any particular day of the week? YES ___
NO ___
If yes, what day of the week? _____
If yes, do you notice this occurs at any particular place? YES ___
NO ___
If yes, do you notice that this is worse after you have returned to work after being off for several days? YES ___ NO ___
13. Have you ever noticed any wheezing in your chest? YES ___
NO ___
If yes, is this only with colds or other infections? YES ___ NO ___
Is this caused by exposure to any kind of dust or other material?
YES ___ NO ___
If yes, what kind? _____
14. Have you noticed any burning, tearing, or redness of your eyes when you are at work? YES ___ NO ___
If so, explain circumstances: _____

15. Have you noticed any sore or burning throat or itchy or burning nose when you are at work? YES ___ NO ___
If so, explain circumstances: _____

16. Have you noticed any stuffiness or dryness of your nose? YES ___ NO ___
17. Do you ever have swelling of the eyelids or face? YES ___ NO ___
18. Do you have frequent headaches that are not relieved by aspirin or Tylenol? YES ___ NO ___
If yes, do they occur at any particular time of the day or week?
YES ___ NO ___
If yes, when do they occur? _____

19. Do you tend to have trouble concentrating or remembering? YES ___ NO ___
20. Do you ever feel dizzy, light-headed, excessively drowsy, or like you have been drugged? YES ___ NO ___
21. Does your vision ever become blurred? YES ___ NO ___
22. Do you have numbness or tingling of the hands or feet or other parts of your body? YES ___ NO ___
23. Have you ever had chronic weakness or fatigue? YES ___ NO ___
24. Do you ever have itching, dryness, or peeling and scaling of the hands? YES ___ NO ___

FAMILY SOCIAL HISTORY

25. Mother – Age: ____ Medical History: _____

26. Father – Age: ____ Medical History: _____

27. Brothers – How Many: ____ Medical History: _____

28. Sisters – How Many: ____ Medical History: _____

29. Other: _____

30. Married: ____ Single: ____ Widowed: ____ Children: ____
31. Cigarettes: ____ packs a day; how many years? ____
32. Alcohol: How much? _____
33. Coffee: ____ cups a day. Decaf? ____
34. Other recreational drugs? _____
35. Do you wear contact lenses? YES ____ NO ____
36. Do you exercise regularly? YES ____ NO ____
If yes, explain: _____

37. Do you have any hobbies or side jobs that require you to be exposed to hazardous compounds, (such as furniture stripping, pottery, woodworking, ceramics, sand blasting, insulation, auto repair, or body work)? YES ____ NO ____
If yes, explain: _____

38. Years at present employer: _____
39. Other jobs held with this employer (include title/description, dates assigned, chemicals or fumes exposed to): _____

40. Any type of skin rash? YES ___ NO ___
41. Do any chemicals, fumes, or smoke make you
Cough? YES ___ NO ___
Wheeze? YES ___ NO ___
Become short of breath? YES ___ NO ___
If yes, explain: _____

42. Shift you normally work: _____ to _____
43. In other jobs, have you ever been exposed to:
Wood dust? (Type _____) YES ___ NO ___
Nickel? YES ___ NO ___
Chromium (stainless steel)? YES ___ NO ___
Silica (foundry, sand blasting)? YES ___ NO ___
Asbestos? YES ___ NO ___
Organic solvents (i.e., trichloroethylene)? YES ___ NO ___
Formaldehyde? YES ___ NO ___
Coal Dust? YES ___ NO ___
Ammonia? YES ___ NO ___
Welding Fumes? YES ___ NO ___

PHYSICIAN’S APPROVAL FOR RESPIRATOR ASSIGNMENT

Employee Name: _____ SSN: _____

Employer: _____ Date: _____

I have reviewed and/or completed the following:

- 1. Medical/Occupational History Questionnaire YES __ NO __
- 2. Respirator Information for Physician YES __ NO __
- 3. Pulmonary Function Test Result YES __ NO __
- 4. Physical Examination YES __ NO __

Based on the information provided in the above stated forms, tests, and exam, it is my opinion that this individual is physically and emotionally fit to wear a respirator due to his/her occupational environment.

YES __

NO __

COMMENTS: _____

Physician’s Signature: _____ M.D., D.O.

PRINT THE FOLLOWING

Physician’s Name: _____

Address: _____

Telephone: (____) ____ - _____

RESPIRATOR INFORMATION FOR PHYSICIAN

Employee Name: _____ SSN: _____

Employer: _____ DATE: _____

Department/Division: _____

Job Title/Description: _____

Dates at this Job Title: _____ to _____

Primary Hazardous Compounds for this Job Title: _____

Type of Respirator to be assigned: _____

FOR ADDITIONAL INFORMATION, PLEASE CONTACT: _____

_____ AT _____

Completed by: _____

Title: _____



Kentucky Transportation Cabinet

Hepatitis B Vaccine Declination Voucher

(MANDATORY)

I understand that due to my occupational exposure to blood or other potentially infectious materials I may be at risk of acquiring hepatitis B virus (HBV) infection.

I have been given the opportunity to be vaccinated with hepatitis B vaccine, at no charge to myself.

However, I decline hepatitis B vaccination at this time.

I understand that by declining this vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease.

If in the future I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me.

Employee's Signature

Crew Number

Date

Reference

Title 29, Code of Federal Regulations, Part 1910.1030 App A

KYTC EMPLOYEE SAFETY AND HEALTH BRANCH PRESSURE WASHER SAFETY CHECKLIST		Rev. 09/2017
<p>IMPORTANT: Pressure washers are used to clean equipment, materials, and work areas on the job. They must be used with extreme caution as the water is under high pressure and moves with enough force to damage eyes and abrade skin. <i>Prior to beginning work</i>, read over this safety checklist, as well as the operator's manual, and follow the manufacturer's instructions for safe use, maintenance, and storage. Additional information on pressure washer safety is available at https://www.cdc.gov/disasters/pressurewashersafety.html</p>		
		✓
1	Read all the safety stickers on the pressure washer prior to use.	✓
2	Check the pump and engine oil level prior to each use.	✓
3	Turn on the water supply <i>before</i> turning on the pressure washer to avoid damage.	✓
4	Make sure the washer is on a flat and level surface during operation.	✓
5	Wait for the engine and/or burner to cool down prior to refueling. Do not refuel while hot.	✓
6	Purchase a new high pressure hose if there are signs of damage. Do not attempt self repair.	✓
7	PPE ALERT: Always wear long pants and gloves. Keep hands, feet, and body out of contact with the high pressure water stream.	✓
	Always wear safety goggles/glasses and closed-toe leather or rubber boots. Never wear open-toed sandals or flip-flops when operating a pressure washer.	✓
	Always wear hearing protection. The engine/motor is not enclosed; therefore, the decibels generated by the motor and pump may damage your hearing.	✓
8	Hold onto the spray wand firmly with both hands to ensure control of the water stream.	✓
9	Always engage the safety latch before setting the spray wand down. Never leave a pressure washer unattended while running.	✓
10	Never point the sprayer at another person whether the pressure washer is operating or not, as it could discharge unexpectedly and cause serious injury.	✓
11	Do not use a pressure washer while standing on a ladder or from other unstable positions where you are not in full control of your balance. Do not reach so far that you lose your balance.	✓
12	Do not operate a gas pressure washer indoors or in other enclosed structure to avoid buildup of invisible, poisonous carbon monoxide gas. Vent pressure washer, if required. If you experience dizziness, fatigue, headache, nausea, or irregular breathing, turn off the pressure washer, get fresh air, and seek medical attention.	✓
13	Do not use a pressure washer in an area where the water could contact electrical equipment.	✓
14	Always plug an electric pressure washer into a properly grounded GFCI outlet.	✓
15	Never cut or splice the pressure washer's power cord or extension cords.	✓
16	Always have a qualified electrician check the pressure washer for electrical problems after it has tripped a circuit breaker.	✓
17	Never remove the grounding prong from the pressure washer's power cord plug or extension cord.	✓
18	After turning off the pressure washer, always release any residual pressure by squeezing the trigger before disconnecting the hoses and nozzles.	✓
19	Allow the pressure washer to cool down before moving or storing. The combustible engine, electric motor, and burner can get extremely hot following extended use. Use caution!	✓
20	If the pressure washer is found to be defective, immediately remove it from service, red tag the machine, and report the issue to your next line supervisor.	✓