

 <b>CITY OF TUCSON</b>	<b>City of Tucson</b> Central Safety Services Number: S-011 Subject:	Page 1 of 8
		Effective Date: June 26, 2009
	<b>Ladders</b>	Reviewed/ Revised: January 1, 2013

## 1.0 PURPOSE

This procedure has been established to provide employees with a uniform directive for the safe and proper use of ladders in the workplace, including the procedure for performing ladder inspections and documentation.

OSHA Reference:

1910.25 Portable Ladders

1910.27 Fixed Ladders

1926.1053 Ladders (Construction- or Construction-like activities)

## 2.0 SCOPE

This procedure will apply to all employees within the City of Tucson who are required to use fixed and portable ladders. This standard operating procedure covers all types of ladders, including step, extension, and fixed ladders. Ladder users must be able to recognize and avoid ladder hazards and be aware of safe practices in setting up, storing, moving and working from this equipment.

The policies and procedures contained in this section are intended to assist in identifying and complying with OSHA Safety Standards. In all cases where there is a difference between specific OSHA standards and the ladder use policies set forth in this chapter, the stricter of the two shall apply.

## 3.0 DEFINITIONS

**Extension Ladder:** Means a straight ladder with two (2) inter-connected sections, deployed by use of a rope and pulley or by slide rails.

**Fixed Ladder:** Means a ladder that is an integral part of a structure or is affixed to a structure.

### **Ladder Categories:**

- Type IA-300 pounds extra heavy duty
- Type I-250 pounds, heavy duty
- Type II-225 pounds, medium duty
- Type III-200 pounds, light duty

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**Portable Ladder:** Means an A-frame type ladder, secured and locked with a brace consisting of steps on one side of the frame and support brackets on the opposite side of the frame. Some portable A-frame ladders are designed with steps on both sides of the frame.

#### **4.0 RESPONSIBILITIES**

##### **A. Department/Division Managers**

The Department shall ensure that all effected employees that are required to use ladders shall be familiar with the City policy regarding safe operation and pre-use inspection of ladders.

##### **B. Supervisor**

Supervisors shall instruct employees on the safe operation and use of ladders and shall ensure that pre-use ladder inspection is performed and documented by the employees. The Supervisor shall ensure that safety defects identified during the pre-use inspections shall cause the ladder to be immediately removed from service and that repairs are made by the manufacturer or manufacturer's representative or otherwise the ladder is removed from service and disposed.

##### **C. Employees**

Employees shall set-up and use a ladder according to the manufacturer's instructions and shall not overload a ladder past the working capacity. Employees shall perform pre-use inspections of ladders and shall document the results of the inspection in a log.

##### **D. Central Safety Services**

Central Safety Services shall verify ladder inspection logs and shall assist departments in reviewing the condition of ladders during annual facility inspections.

#### **5.0 EDUCATION AND TRAINING**

**A.** All departments/divisions will provide or facilitate training to each employee who is required to utilize a ladder on the following:

- How to inspect the ladder;
- How to position the ladder;
- How to maintain and store the ladder;
- How to identify ladder type and weight capacity.

**B.** Central Safety Services shall provide training on the safe use, operation, deployment and inspection of ladders

**C.** When the supervisor has reason to believe that any effected employee who has already been trained does not have the understanding and skill required to safely use a ladder, the employer shall retrain these employees.

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Circumstances where retraining is required include, but are not limited to, situations where:

1. Changes in the workplace render previous training obsolete.
2. Changes in the types of ladders used render previous training obsolete.
3. An effected employee's knowledge or use of the assigned ladder is unsafe.

## **6.0 GENERAL**

### **A. Ladder Inspection**

1. Before every use, each ladder shall be inspected for:
  - loose locks, brace, rungs or steps;
  - loose screws or bolts;
  - broken, cracked or split braces, rails, rungs or steps ;
  - burrs, jagged edges and splinters;
  - corrosion, grease, non-compliant paint, oil or rust;
  - free of any recognized damage that could cause injury;
  - presence of manufacturer's use, weight, and warning lables;
  - Fiberglass ladders should be inspected for excessively loose fibers (hair) coming loose from the matrix. Special attention should be given to Fiberglass ladders that are severely faded from their original color
2. A ladder inspection checklist may be found in Appendix A.
3. Any ladder found to be damaged beyond repair should be disposed of after complete dismantling or breakage. This will insure that the ladder cannot be used after disposal.

### **B. Safe Ladder Setup**

1. Employees shall ensure the following:
  - a. All ladders must be placed on firm ground;
  - b. Do not set ladders on boxes, blocks or other objects that might move;
  - c. Secure ladders whenever a danger of slippage might occur;
  - d. Do not use ladders in high wind or during inclement weather conditions;
  - e. Never set up ladders in front of or around doors, unless the door is posted or locked;
  - f. Do not sit on ladders;
  - g. Use appropriate safety footwear when climbing a ladder.
2. A definition of the parts of a step ladder is found in Appendix B.

### **C. Climbing and Standing on Ladders Safely**

1. Employees shall ensure the following:

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- a. Always face a ladder when climbing up or down;
- b. Do not move the hips out from between the center rails or over reach while standing on ladders;
- c. Avoid carrying materials or tools when climbing a ladder. Climb the ladder first then pull up the materials with a rope;
- d. Rungs and steps should be clear of grease, oil, wet paint, and moisture;
- e. Do not climb onto a ladder from the side or from the rear;
- f. Do not slide down a ladder;
- g. Do not stand on the top rung or step of a ladder.

#### **D. Proper Use and Care of Ladders**

1. Employees shall ensure the following:
  - a. Never use metal ladders near exposed electrical wires;
  - b. Place warning signs or setup barriers around a ladder before use;
  - c. Do not move a ladder while someone is on it;
  - d. Never use a ladder when under the influence of alcohol or prescription narcotic medications;
  - e. Do not leave tools or materials on top of ladders;
  - f. Only one person should be on a ladder at a time;
  - g. Do not use a ladder on a scaffold;
  - h. Do not try to rock a ladder to move it;
  - i. Store wood ladders where they will not be exposed to the elements;
  - j. Make sure ladders are properly secured when transported;
  - k. Do not paint any ladder. Painting could hide potentially dangerous defects;
  - l. Remove defective ladders from service.

#### **E. Step Ladder Safety**

1. Employees shall ensure the following:
  - a. Never use a stepladder over 20 feet in length;
  - b. Always open a stepladder completely and make sure the spreader is locked before use;
  - c. Do not stand higher than the second step from the top of a step ladder;
  - d. Do not straddle a stepladder.

#### **F. Extension Ladder Safety**

- a. The sections of an extension ladder should overlap enough to retain the strength of the ladder; \* see table 1A;
- b. Never splice or tie two short ladders together;
- c. When using a ladder for access to a landing, it must extend three (3) rungs or three (3) feet above the landing;
- d. The top of an extension ladder should rest against a flat, firm surface;
- e. Elevate and extend these extension ladders only from the ground;
- f. When practical, secure extension ladders at both the base and the top.

<b>Table A</b>	
<b>Length of the Ladder</b>	<b>Required Overlap</b>
<b>Up to 36'</b>	<b>3 Feet</b>
<b>Over 36' to 48'</b>	<b>4 Feet</b>
<b>Over 48' to 60'</b>	<b>5 Feet</b>

**G. Extension Ladder Setup**

1. Employees shall:
  - a. Lay the ladder on the ground when it is collapsed;
  - b. Pick up the ladder and walk it to an upright position, making sure it will not be contacted by trees or electrical wires;
  - c. Slide the bottom of the ladder outwards to the proper angle (4:1) and set the feet correctly;
  - d. Then extend the ladder by pulling the extension line;
  - e. Make sure the rungs on the upper half of the ladder are properly secured by the locking mechanism;
  - f. If possible, tie the ladder off or have someone steady the ladder as you climb it.
  
2. Summary - The proper technique for deploying an extension ladder:
  - a. Tie off;
  - b. Overlap;
  - c. 4:1 Angle.

**H. Fixed Ladder Safety**

1. A Fixed ladder shall:
  - a. Be secured to an object or building;
  - b. Have a safety chain that shall be secured across the rails and shall be in use when the employee is on the roof, unless the roof has a parapet that extends high enough to prevent a fall;
  - c. Have a safety cage surrounding a ladder when over beginning at the 20' mark in height;
  - d. Have a 15" clearance to all points from the center;
  - e. Have all defects repaired as soon as possible;
  - f. Be replaced when a defect is not repairable.

**7.0 ADVICE AND COUNSEL**

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Central Safety Services shall provide advice and counsel on this procedure by referencing OSHA 29CFR 1910.25 and 1910.27 – Portable and Fixed Ladders, as well as 1926.1053 Ladders – Construction and shall review the procedure and appendix on an annual basis.

## Appendix A



Ladder Inspection Checklist	
<b>Department</b>	
<b>Division</b>	
<b>Employee Name</b>	
<b>Employee ID</b>	
<b>Ladder ID</b>	

General	Needs repair	OK	Date repaired
Loose steps or rungs (considered loose if they can be moved at all with the hand)?			
Loose nails, screws, bolts, or other metal parts?			
Cracked, spilt, or broken uprights, braces, or rungs?			
Slivers on uprights, rungs, or steps?			
Damaged or worn non-slip bases?			
Step ladders			
Wobbly (from side strain)?			
Loose or bent hinge spreaders?			
Stop on hinge spreaders broken?			
Loose hinges?			
Broken, split, or worn steps?			
Extension ladders			
Loose, broken, or missing extension locks?			
Defective locks that do not seat properly while extended?			
Worn or rotted rope?			
<b>Any deficiency shall cause a ladder to be removed from service until repair or disposal</b>			

### Appendix B

