As an employer in the construction industry, you should be concerned with the safety and health of your employees. Yet, according to the latest citation statistics, many employers are failing to implement even the most basic requirements to ensure their employees’ safety. You may not be a recipient of one of the 2,900 citations the inspections must be made by a competent person designated by the employer.

- It is the employer’s responsibility to instruct each employee in the recognition and avoidance of unsafe conditions, and the rules applicable to his work environment to control or eliminate any hazards or other exposure to illness or injury.

### Figure 1 - Top Ten Violated Standards Fiscal Year 1994-95

<table>
<thead>
<tr>
<th>Standard</th>
<th>Standard Description</th>
<th>Total Violations</th>
<th>Initial $ Penalty</th>
</tr>
</thead>
<tbody>
<tr>
<td>1926.451</td>
<td>Scaffolding</td>
<td>3,990</td>
<td>$4,669,731</td>
</tr>
<tr>
<td>1926.059</td>
<td>Hazard Communication</td>
<td>3,250</td>
<td>621,636</td>
</tr>
<tr>
<td>1926.501</td>
<td>Duty to Have Fall Protection</td>
<td>1,873</td>
<td>8,667,006</td>
</tr>
<tr>
<td>1926.404</td>
<td>Wiring Design &amp; Protection</td>
<td>1,493</td>
<td>919,653</td>
</tr>
<tr>
<td>1926.405</td>
<td>Wiring Methods, Components &amp; Equipment</td>
<td>1,285</td>
<td>586,114</td>
</tr>
<tr>
<td>1926.651</td>
<td>Excavations-General Requirements</td>
<td>1,225</td>
<td>2,308,177</td>
</tr>
<tr>
<td>1926.500</td>
<td>Fall Protection (old rule)</td>
<td>1,133</td>
<td>2,197,021</td>
</tr>
<tr>
<td>1926.020</td>
<td>General Safety &amp; Health Provisions</td>
<td>1,104</td>
<td>1,083,040</td>
</tr>
<tr>
<td>1926.1053</td>
<td>Ladders</td>
<td>1,045</td>
<td>877,429</td>
</tr>
<tr>
<td>1926.062</td>
<td>Lead</td>
<td>1,035</td>
<td>3,307,870</td>
</tr>
</tbody>
</table>

Occupational Safety and Health Administration issued for fundamental program rules violations, but you may need to review your safety program to ensure you are meeting OSHA requirements. The three foundational rules receiving the most citations for fiscal year 1994-1995 were these:

- It is the employer’s responsibility to initiate and maintain such programs as may be necessary to comply with 29 CFR Part 1926.
- The programs must provide for frequent and regular inspections of job-sites, materials and equipment. The inspections must be made by a competent person designated by the employer.
- It is the employer’s responsibility to instruct each employee in the recognition and avoidance of unsafe conditions, and the rules applicable to his work environment to control or eliminate any hazards or other exposure to illness or injury.

Some OSHA rules call for written procedures and training for specific areas of construction safety. Others do not require a specific procedure, but prudent employers will go beyond the basics. They will implement an overall program and then develop written procedures for the most important safety issues.

### Scaffolding

The scaffolding rule had the distinction of generating the most citations. Improperly erected scaffolds with missing planks, top rails, mid-rails and toeboards continue to be prevalent throughout the industry. Falls and being struck by falling objects are the result of improperly erected scaffolds or scaffolds with missing equipment. The following scaffolding rules were the ones employers failed to follow when erecting and using scaffolds.

#### General requirements.

- The footing or anchorage for scaffolds shall be sound, rigid and capable of carrying the maximum intended load without settling or movement. Unstable objects such as barrels, boxes, loose brick or concrete blocks, shall not be used to support scaffolds or planks.
- No scaffold shall be erected, moved, dismantled or altered except under the supervision of a competent person.
- Guardrails and toeboards must be...
installed on all open sides and ends of platform more than 10 feet high. Scaffolds 4 to 10 feet high, with a minimum horizontal dimension in either direction of less than 45 inches, must have standard guardrails installed on all open sides and ends.

• An access ladder or equivalent safe access must be provided.

**Tubular welded frame scaffolds.**

• Scaffolds shall be properly braced by cross bracing or diagonal braces, or both, for securing vertical members together laterally, and the cross braces shall be of such lengths as will automatically square and align vertical members so that the erected scaffold is always plumb, square and rigid. All brace connections shall be made secure.

• Guardrails made of not less than 2-inch-by-4-inch lumber (or other material providing equivalent protection), approximately 42 inches high, with a midrail, of 1-inch-by-6-inch inch lumber (or other material . . . ), and toeboards, shall be installed at all open sides and ends on scaffolds more than 10 feet high. Toeboards shall be a minimum of 4 inches high.

**Electrical Hazards**

Electricity is a serious workplace hazard, especially at a construction site where temporary wiring, extension cords and portable tools are used. At construction sites, the most common electrical hazard is the ground fault electrical shock. Therefore, OSHA demands either ground fault circuit interrupters or an assured equipment grounding conductor program. The number of citations for electrical hazards is proof that some employers need to improve electrical safety.

• The employer must use either ground fault circuit interrupters or an assured equipment grounding conductor program.

• Violations of §1926.405(a)(2)—Temporary wiring.

• The path to ground from circuits, equipment and enclosures shall be permanent and continuous.

**Fall Protection**

In situations where your workers are exposed to falls from 6 feet or more to a lower elevation, you must provide fall protection. This would include falls to a lower level from unprotected sides and edges, leading edges, hoist areas and through holes including skylights, to name a few. The rules presented here are the ones receiving the most citations.

• Employees on steep or low-slope roofs with unprotected
sides and edges 6 feet or more above lower levels must be protected from falling. The fall protection methods available for each type of roof are different.

- Employees on walking/working surfaces more than 6 feet above lower levels must be protected from falling through holes (including skylights).
- Each employee engaged in residential construction activities 6 feet or more above lower levels shall be protected from falling.

In each of the above rules, a fall-protection system such as personal fall arrest, safety net or guardrail must be used.

**Ladder Safety**

Ladders, if used properly and in accordance with the OSHA rules, are safe walking and working surfaces. They do not fall under the new Subpart M, the fall protection rule. If not properly used, ladders are unsafe and can be deadly. You should train employees to use ladders correctly at work and at home. The top ladder violations are these:

- When portable ladders are used for access to upper landing surfaces, the side rails must extend at least 3 feet above the upper surface. If the ladder is not long enough, then it must be secured at its top to a rigid support that will not deflect, and a grasping device, such as a grabrail, shall be provided to help employees get on and off the ladder. The extension cannot be such that ladder deflection under a load would, by itself, cause the ladder to slip off its support.
- A stairway or ladder must be provided at all points of access where there is a break in elevation of 19 inches or more, and where no ramp, runway, sloped embankment or personnel hoist is provided.
- Portable ladders with defects, such as, but not limited to, broken or missing rungs, cleats, or steps, broken or split rails, or corroded components, cannot be used until repaired.

**Lead**

Lead exposure is hazardous, and the lead standard is complicated. This combination poses problems for employers whose employees work with lead. Those who may be occupationally exposed to lead must strictly adhere to the regulations. This includes all
Although the numbers of citations given by OSHA for violations of §1926.62 were few compared to other areas, the average citation was for $3,200. This gave it top billing for the most expensive. The following citations were those that received the most attention by OSHA inspectors:

• Procedures for protection of employees during assessment of exposure. Where lead is present, until the employer performs an exposure assessment as required and documents that employees performing any of the listed tasks are not exposed above the PEL, the employer shall treat employees as if they were exposed above the PEL, and not in excess of 10 times the PEL, and shall implement protective measures prescribed.

• Each employer who has a workplace or option covered by this standard shall initially determine if any employee may be exposed to lead at or above the action level.

• Prior to commencement of the job, each employer shall establish and implement a written compliance program to achieve compliance with the permissible exposure limit.

Although you wouldn’t want to build your safety and health program around the OSHA citation statistics, it certainly is a good idea to know the areas where the OSHA inspectors are looking. Through the new “Focused Inspection Initiative,” OSHA is zeroing in on the four hazard areas that injure or kill the most people in the construction industry: falls, electrical hazards, being struck/hit by objects and caught-in-between hazards. Take the time today to review your safety and health program to make sure you are focused on providing a safe and healthful environment for your most valuable asset—your employees.

About the Author
Gerald Woodson is an associate editor for J. J. Keller & Associates, Inc., Neenah, Wis.