CITY OF HAMILTON - CORPORATE SAFETY GUIDELINE

DEVELOPED BY: HEALTH, SAFETY AND WELLNESS, HUMAN RESOURCES
Guideline # COH-RQ-GD-010

DATE: May 1, 2003
REVISED: March 29, 2010
APPROVED BY: Senior Management Team

SCAFFOLDS

1. PURPOSE

The purpose of this document is to provide guidelines for the safe assembly of scaffolds at City of Hamilton worksites.

2. SCOPE

This guideline applies to all City of Hamilton departments where workers are required to assemble scaffolds.

3. DEFINITIONS

Competent person means a person who,
(a) is qualified because of knowledge, training and experience to organize the work and its performance,
(b) is familiar with this Act and the regulations that apply to the work, and
(c) has knowledge of any potential or actual danger to health or safety in the workplace;

Competent worker in relation to specific work, means a worker who,
(a) is qualified because of knowledge, training and experience to perform the work,
(b) is familiar with the Occupational Health and Safety Act and with the provisions of the regulations that apply to the work, and
(c) has knowledge of all potential or actual danger to health or safety in the work;
4. RESPONSIBILITY

Health, Safety and Wellness Team:

Will provide information and assistance regarding acceptable industry related safety practices to allow line departments to initiate and maintain proper procedures, thereby ensuring worker health and safety and compliance with applicable legislation.

Departments:

Line departments must ensure that this guideline is reviewed with all applicable staff. Departments must also ensure only competent persons are assigned to assemble or supervise the assembly of scaffold including the appropriate fall arrest system, training and instruction.

Managers:

- establish a process for evaluating work operations, to determine where scaffolding systems and training are needed.
- ensure supervisors and workers who may work with scaffolds have adequate knowledge and training.
- ensure general and specific training to workers who work with scaffolds is provided.
- ensure adequate funding for scaffolding equipment is available.
- ensure that work is performed in compliance with the Occupational Health and Safety Act and applicable regulations, City of Hamilton procedures and guidelines, and industry standards.

Supervisors:

- be familiar with the actual and potential hazards associated with scaffold work.
- be aware of sections 125 to 136 of Ontario Regulation 213/91 - Construction Projects “Scaffolds and Work Platforms”.
- ensure that the requirements of this guideline and related elements of the Occupational Health and Safety Act and regulations, and applicable industry standards are applied at all times.
- evaluate and document work operations to determine where scaffolding procedures, devices and training are required in consultation with joint health and safety committees and Health, Safety and Wellness Specialists, as necessary.
- develop written site specific safe work procedures for individual tasks, particularly in unusual or unique situations, in consultation with work crews and Health, Safety and Wellness Specialist, as necessary.
- develop inspection documentation for scaffold systems being used, in consultation with work crews, manufacturer’s instructions and Health, Safety and Wellness Specialist, as necessary.
- ensure that all employees under their supervision who work with scaffolding are competent to do the assigned work and have been provided with instructions and have received training prior to commencing work. Ensure training records are filed for future reference.
- ensure the right scaffold system is chosen to match the job being performed.
- ensure installation, maintenance and repair of scaffolding is done in accordance with standards, regulations, and manufacturer's instructions.
- ensure adequate staff are available to provide on-site assistance in the event of an emergency.
- provide practical training in the use of safety equipment such as; a fall arrest systems, body harnesses, communication systems.
- monitor staff to ensure procedures are followed, and, when violations occur, take appropriate action.
- ensure that all staff use or wear required safety equipment when performing assigned task.
- ensure that all equipment needed for scaffold work is inspected regularly and is maintained in good working condition.
- ensure that any defective equipment is tagged and removed from service immediately.
- take every reasonable precaution to protect worker health and safety.
**Workers Shall:**

- work in accordance with legislative requirements, Health and Safety policy and departmental safe work procedures.
- attend all relevant scaffold training before performing work and apply the knowledge gained in the performance of their work.
- use or wear all equipment required to safely perform their work.
- inspect scaffold equipment and fall arrest systems before each use report any violations, hazards or deficiencies in equipment to their immediate supervisor without delay.
- assist supervisory staff in developing of safe work procedures for specific tasks.
- follow established procedures in the event of an injury, accident or emergency.

5. **REQUIREMENTS**

There are many hazards associated with scaffolds:

- Scaffold collapse- Improper footing(s) and anchorage(s) placement, improper bracing keeping scaffold plumb, overloading or buckling
- Falls from heights
- Falling objects or materials
- Falling onto objects or materials on the ground
- Moving rolling scaffolds in the vicinity of overhead electrical wires
- Unsafe access
- Weather conditions
- Planks sliding off and breaking
- Climbing up and down scaffolds
- Platforms not fully planked

- Proper selection of a scaffold and related components requires knowledge of the site conditions and the type of work to be performed. Below are just some of the considerations when performing an assessment;
  - Weight of workers, materials and equipment to be carried on a scaffold
  - Duration of work
  - Height or heights to which the scaffold may be erected
  - Obstructions
  - Anticipated weather conditions
  - Access: Ladders to and from work platforms
  - Traffic control and pedestrian traffic

There are many basic types of scaffolds used in the construction/maintenance industry. Some common scaffold systems are; *standard tubular frame scaffold, rolling scaffolds, standard walk-through frame scaffold, tube-and clamp scaffold.*

- A scaffold shall be provided for workers where work cannot be done on or from the ground or from a building or other permanent structure without hazard to the workers.
- Before erecting/using scaffolding, divert vehicular traffic and people, when necessary, by means of signs, barricades, and appropriate traffic control measures.
- No scaffold shall be loaded in excess of the load that it is designed and constructed to bear.
Every scaffold shall be designed and constructed to support or resist, two times the maximum load or force to which it is likely to be subjected; and four times the maximum load or force to which it is likely to be subjected without overturning. *(Refer to section 126 in regulations for construction projects)*

A scaffold with structural components whose capacity can only be determined by testing shall be designed and constructed to support or resist three times the maximum load or force to which it is likely to be subjected without causing the failure of any component. *(Refer to section 126 in regulations for construction projects)*

A professional engineer shall verify and certify the results of a test and the corresponding rated load of the scaffold. A copy of the certification by the professional engineer shall kept and be available upon a request from a Ministry of Labour inspector. *(Refer to section 127 in regulations for construction projects)*

Every scaffold shall;

- Have uprights braced diagonally in the horizontal and vertical planes to prevent lateral movement;
- Have horizontal members that are adequately secured to prevent lateral movement and that do not have splices between the points of support;
- Have footings, sills or supports that are sound, rigid and capable of supporting at least two times the maximum load to which the scaffold may be subjected without settlement or deformation that may affect the stability of the scaffold;
- Have all fittings and gear, including base plates or wheels, installed in accordance with the manufacturer’s instructions;
- Have connecting devices between frames that provide positive engagement in tension and compression;
- Have safety catches on all hooks; and
- Shall be adequately secured at vertical intervals not exceeding three times the least lateral dimension of the scaffold, measured at the base, to prevent lateral movement.
- A scaffold mounted on pneumatic tires shall not be supported by the pneumatic tires while the scaffold is being erected, used or dismantled.
- A scaffold mounted on castors or wheels, shall be equipped with a suitable braking device on each castor or wheel; and shall have the brakes applied when a worker is on the scaffold.
- A scaffold mounted on castors or wheels shall be equipped with guy wires or outriggers to prevent its overturning if the height of the scaffold platform exceeds three times the least lateral dimension of the scaffold, measured at the base of the scaffold; or if outriggers are used, measured between the outriggers.
- No scaffold mounted on castors or wheels that has a scaffold platform more than 2.4 metres (8 feet) above the base shall be moved when a worker is on it unless, the worker is wearing a full body harness as part of a fall arrest system attached to a fixed support; and the scaffold is being moved on a firm level surface. *(Refer to section 128 & 129 in the regulations for construction projects)*
Large Scaffolds;

- A scaffold shall be designed by a professional engineer and shall be erected in accordance with the design if the scaffold exceeds fifteen metres in height above its base support; or ten metres in height above its base support if the scaffold is constructed of a tube and clamp system and, design drawings for a scaffold shall set out erection instructions and the rated loads for the scaffold.

- A professional engineer or a competent worker designated by the supervisor of the project shall inspect the scaffold before it is used to ensure that it is erected in accordance with the design drawings.

- The person carrying out an inspection shall state in writing whether the scaffold is erected in accordance with the design drawings. The constructor shall keep at a project the design drawings and the written statement for a scaffold while the scaffold is erected.

- Only a competent worker shall supervise the erection, alteration and dismantling of a scaffold.

- No scaffold platform or other work platform shall be loaded in excess of the load that it is designed and constructed to bear.

- A scaffold platform or other work platform, shall be at least 460 millimetres (18 inches) wide; if it is 2.4 metres (8 feet) or more above a floor, roof or other surface, consist of planks laid tightly side by side for the full width of the scaffold; shall be provided with a guardrail shall be provided with a means of access by stairs, runway, ramp or ladder; shall not have any unguarded openings; and shall have each component secured against slipping from its supports. If a worker has access to the perimeter or open sides of a scaffold and the worker is exposed to a fall of 2.4 meters (8 feet) or more, the scaffold must have a proper guardrail installed, as per section 26.3 of the Regulations for Construction Projects.

- A scaffold platform or other work platform made of sawn lumber planks shall have planks of number 1 grade spruce that do not have any defect affecting their load-carrying capacity and, that bear a legible grade identification stamp or are permanently identified as being number 1 grade spruce; that are at least 48 millimetres thick by 248 millimetres wide (2 x 10); that are arranged so that their span does not exceed 2.1 metres (7 feet); that overhang their supports by not less than 150 millimetres (6 inches) and not more than 300 millimetres (12 inches); and that are cleated or otherwise secured against slipping.

- Cubes of masonry units on a scaffold platform shall be placed directly over the scaffold frame. If this is not practicable, the masonry units shall be placed on the scaffold platform in a manner that conforms with the load capability provisions of the scaffold platform. (Refer to section 136 in the regulations for construction projects)

6. ASSOCIATED DOCUMENTS

- Occupational Health and Safety Act and Regulations for Construction Projects

NOTE:

This procedure does not replace or supersede the Occupational Health and Safety Act or its Regulations. Any questions contact your supervisor or Health, Safety and Wellness Specialist.

Workers and their supervisors shall be held accountable for violations of health and safety rules, regulations, and procedures. Disciplinary action, where necessary, will be dictated by the City of Hamilton disciplinary procedure and will be based on the merits of the specific case.

Prior to disciplinary measures being taken, management is advised to consult with Labour Relations.