

# TRADE SAFETY GUIDE

## ***Acknowledgements***

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## ***CSAM***

The Construction Safety Association of Manitoba is an organization fully funded by its member companies in the Manitoba construction industry. The program's goal is to assist its member companies in safety-related matters.

The Trade Safety Guide is designated to complement CSAM's existing and future training programs. CSAM's prime objective through this resource is to provide quality information and generalized practices to construction employers and employees, in order to reduce both human and financial costs in the construction industry.

## ***Disclaimer***

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# TRADES GUIDELINES – FOUNDATIONS, DAMPPROOFING, AND WEEPING TILE

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It must be pointed out that every company or sub-contractor on the residential site is classified as an “employer” under the WSH Act – and have the same legal duties and responsibilities. In a nutshell, employers must ensure the safety and health of their workers and ensure that their actions (or lack of action) do not cause anyone else harm.

By law, each employer must abide by the WSH Act, Regulations. Systems should be in place to:

- Share required information necessary to Identify; Communicate and Control hazards.
- Ensure workers are supervised by a competent person (knowledge, training or experience)
- Ensure workers are competent to perform the tasks assigned (instruction and training)
- Ensure tools and equipment are maintained properly
- Ensure PPE is provided and worn

Further, each Employer is responsible to ensure plans are in place and their workers are aware of the following minimum emergency procedures:

- Providing first aid to the injured
- Providing transportation to medical aid for the injured
- Conducting initial attack fire fighting; and
- Promptly contacting outside agencies for assistance

You should ensure Site Orientations are conducted and information is posted on site to cover the above, along with any other site specific hazards and controls – PPE Requirements; Communication Device; Emergency Phone Numbers; Muster Point; First Aid Kit; MSDS Sheets; Safe Work Practices.

*Before doing any digging, ensure all utilities have been notified and the accurate location of all underground facilities have been determined – including gas, oil, steam, water, sewer, communication and electrical.*

*Manitoba Legislation requires all excavation or trenching activity to be conducted by a “Registered Excavator”. Notification to excavate must be done **48 hours prior** if:*

- Trench excavation exceeding **1.8 metres** (1.5 metres in Fall 2006)
- Any other excavation exceeding **2.4 metres** (1.5 metres in Fall 2006)

***MAIN HAZARDS: The main hazards associated with Forming of Foundations, Concrete Placement and Damp-proofing: Falls; Trips; Struck by Objects and Equipment; Lime Burns; Noise; Over Exertion; and Electrical Contact***

## FORMING/STRIPPING FOUNDATIONS – SAFE WORK PRACTICES

- Workers must be wearing the proper Personal Protective Equipment (PPE) such as a hardhat, safety footwear, safety eyewear, hearing protection, and fall protection as required.
- Stay away from trucks and operating equipment. Never stand and talk near vehicle paths or moving equipment. Always make eye contact with the operator before you approach.
- Keep all equipment at least 10 feet from power lines.
- Excavated area should leave enough space for workers (installing forms, weeping tile, water proofing etc).
- If reusing lumber or forms, watch for nails sticking out - good practice to always remove nails before stacking.
- Use lightweight lumber when forming foundations. Be sure you can handle material safely.
- Coat all forms with a release agent to help make stripping easier.
- Brace all forms – prevents collapse or blowouts when concrete is poured and prevents wind from blowing down.
- Ensure proper access to work area. Make sure your path is clear – remove tripping hazards before you start forming or stripping. Access ramps into excavation should have a slope no greater than 1:3
- Clean up and pick up after yourself as you go; good housekeeping practices on the job site must be maintained.
- If bins are supplied – use them. If no bins, have piles designated for waste.
- Store materials neatly in a clean, level and easily accessible area away from overhead power lines
- Do not modify or alter tools and do not use a tool for anything other than its intended purpose.
- Use proper tools – use pry bars to break forms loose (not hammers or shovels)
- Do not jump on or pull the pry bar toward your face.
- Ensure tools are in safe working order. Attach a “do not use” tag to damaged tools and notify your foreman.
- Workers must receive WHMIS training and MSDS (Materials Safety Data Sheet) must be on site.

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## CONCRETE PLACEMENT – SAFE WORK PRACTICES

- Workers must be wearing the proper Personal Protective Equipment (PPE) such as a hardhat, safety footwear, safety eyewear, hearing protection, and fall protection as required.
- Concrete pumps are the quickest and safest means of pouring foundations.
- Make sure the concrete pump is on a firm road – away from the excavation area
- The pump operator and concrete placer must be competent in the operation of their equipment.
  
- Work materials and equipment must be at least two meters back from the edge of an excavation.
- If pouring directly, no vehicles should be within a distance equal to the depth of the excavation or endanger the stability of walls.
- Ensure adequate ramps and access ways that can fully support a fully loaded concrete truck.
- Do not add job-built chutes to a truck's chute.
- Reduce manual handling of concrete as much as possible.
- Concrete tends to splatter during pouring and vibrating – Always use eye protection. Gloves and waterproof boots will help protect against lime burns and dermatitis.
- No personnel should be working below the discharge hose.
- Workers must receive WHMIS training and MSDS (Materials Safety Data Sheet) must be on site.

## Damp-Proofing and Weeping Tiles – Safe Work Practices

- Workers must be wearing the proper Personal Protective Equipment (PPE) such as a hardhat, safety footwear, safety eyewear, hearing protection and fall protection as required.
- Confined Space is often a hazard when damp-proofing – often compounded by bituminous materials or heat.
- Be certain the excavation is stable and loose dirt or material is secure. Ensure respiratory protection is appropriate to the chemicals used – refer to MSDS sheets.
- Make sure there is enough space for air to move or use fans if necessary.
- Use gloves and protective eyewear.
- Other possible hazards to be aware of and control include nails, other sharp edges of the damp-proofing material or foundation wall.
- When using air-nailers, ensure equipment is working properly, PPE is used and workers are adequately trained.
- Rolls of weeping tile are awkward to handle and are surprisingly heavy. Seek help from co-workers when handling awkward or heavy loads
- Workers must receive WHMIS training and MSDS (Materials Safety Data Sheet) must be on site.

## GENERAL SAFETY INFORMATION

### 1. PPE (Personal Protective Equipment)

PPE may be used as a method to help reduce identified hazards – as a “last line of defence”. Every effort to eliminate or reduce the hazard should follow this order:

- At the Source (Elimination or Substitution)
- Along the Path to the Worker (Modifications to Work or Process)
- At the Worker (PPE)

The Workplace Safety and Health Regulation states that **Safety Headwear and Safety Footwear** must be made “immediately available” for all personnel on a construction site (including new construction; renovations and any alterations or modifications to a structure, building or street). They must be worn if a danger to an injury is present.

***Safety Headwear and Safety Footwear are mandatory PPE that must be “immediately available” or worn by any person on a construction site***

Required PPE to be worn or made “readily available” at residential construction sites include:

**Head Protection:** Where a danger of injury to a worker's head exists or may exist. E.g. where overhead work is being done or where material is being hoisted overhead.

**Foot Protection:** Where danger of injury to a worker's foot exists or may exist. E.g. where housekeeping is poor, material delivery, uneven terrain.

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**Fall Protection:** If working at heights over 8 feet, or less, if a worker may fall onto a hazard, fall protection is required. Generally your options will be guardrails; travel restraint or fall arrest systems.

Other PPE that may be required include:

**Eye Protection:** Where danger of injury or irritation to a worker's eye exists. E.g. during use of power or pneumatic tools (air-nailers, sawing, etc.).

**Respiratory Protective Equipment:** When working with or around airborne contaminants that may be an inhalation hazard or if the airborne contaminant exceeds applicable Occupational Exposure Limits, respiratory protection is required. E.g. dusts or chemicals; spray painting, sanding etc.

**Hearing Protection:** When noise levels in exceed 80 dBA, a hearing conservation program must be implemented. Ear muffs or Ear plugs should be worn when working with or around loud tools or equipment. E.g. skill saws, air-nailers, pneumatic tools.

**Limb and Body Protection:** Where danger of injury to a worker's hands, arms or legs, or trunk of the body exists suitable clothing and equipment must be worn – E.g. dust, material handling, kneeling, sun etc.

## 2. Lifting

Caution and appropriate controls must be used during any lifting activity – to protect the load and the workers. Lifting on work sites is done either mechanically or manually. Whenever possible, lift and place heavy or awkward items using mechanical lifting devices.

**Mechanical Lifting:** Equipment or machinery must be of sufficient size to safely lift anticipated loads. Equipment or machinery must be properly maintained. Workers must be competent in the operation of the equipment, including certification if cranes or forklifts are used.

**Manual Lifting:** Proper lifting techniques should be employed (i.e. keep objects as close to the body as possible, lift with legs, not back). Know your limits, and ask a co-worker to help lift objects too heavy or awkward for one person, do not be afraid to ask for help. Eliminate potential tripping or slipping hazards before beginning to lift.

## 3. Access to the Work Area

Proper access to the work area must be available at all times – this may ladders; ramps or stairs during foundation and damp-proofing activities.

**Ladders:** Ladders should be used for short-term work only. Never lean out while on a ladder – move the ladder. Ladders used to access work areas should be grade 1. They must be secured from movement (normally tied off) and extend a minimum three feet above work level. The ladder should be positioned to maintain a 4:1 slope. Always maintain three-points of contact when climbing or descending a ladder.

**Ramps:** Ramps should be constructed of at least two – 2 x 10 planks. They must be secured from movement and have a slope no greater than one vertical to three horizontal. Cross cleats must be provided at regular intervals to exceeding 1 ½ feet – and must be keep clear of snow, ice and mud accumulations.

**Stairs:** Temporary stairs should be constructed to support any likely loads. They must be secured from movement; be uniform in width, length and height; with a slope not exceeding 50 degrees from horizontal. Open sides must have a handrail equivalent in strength to the top rail of a guardrail.

## 4. Trucking Operations and Mobile Equipment

Trucking operations and mobile equipment are used to haul material or equipment to and from work sites. During homebuilding, the site can get very busy with backhoes, loaders, dump trucks, cement trucks and delivery vehicles. Protection of workers and/or the public is required in the working area. Traffic Control techniques should be implemented. Other general precautions should include:

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- Minimize the need for equipment backing up. If required, ensure vehicles and equipment have back-up alarms and workers wear high visibility vests. Ensure standard signalling procedures are known and followed by everyone involved (including drivers of delivery vehicles and spotter).
- Be aware of the operators 'blind spots' – always maintain eye contact with the operator if you must approach equipment.
- Never stand under a suspended load or raised forks, buckets or blades.
- When receiving a load, use taglines to keep a safe distance between you and the load.

Truck drivers should be competent in the operation of the truck and or any other equipment associated with the truck (i.e. conveyors, hoists) as well as any techniques used to load and unload materials. All equipment must be capable of performing the task for which it is to be used and must be properly maintained.

## 5. General

Housekeeping is a major cause of residential incidents – scrap shingles and asphalt pebbles are often a cause of slips, trips and falls. It's very important to keep your job site clean – clean up as you go. Use a bin or create dedicated scrap piles as soon as possible. From a safety standpoint, cables and cords should be kept clear of workspaces to prevent tripping hazards.

It's recommended for fire extinguishers to be readily available for trades working with open flames.

There must be adequate lighting when performing work at all times.

Prior to beginning work, a toolbox talk can be very beneficial. When safety discussions are held, the chances are higher that a safe job will result.



To assist the general public in "awareness" of the potential and actual hazards – the first and simplest method is to Post a Sign and if the hazards warrant, you may need secure the site (ie: fencing and warning tape) or the actual hazard (ie: floor openings or access ramps / ladders).

## ACKNOWLEDGEMENT

With respect to the objects and purposes of ensuring, so far as reasonably practicable, that all construction and maintenance work undertaken by contracted parties of the builder or renovator will be undertaken in a safe manner, the following declaration must be signed and submitted.

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## CONTRACTOR COMPLIANCE DECLARATION

With respect to the objects and purposes of ensuring, so far as reasonably practicable, that all construction and maintenance work undertaken by contracted parties of the builder or renovator will be undertaken in a safe manner, the following declaration must be signed and submitted.

Submitted To: \_\_\_\_\_

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

### CSAM Safety Program Information

COR Certification # \_\_\_\_\_ Safety Program Registration # \_\_\_\_\_

### DECLARATION

I have read the information provided to me by the Builder or Renovator respecting Foundations, Damp proofing and Weeping Tiles, which I am advised was taken from the Manitoba Residential Construction Safety Guide, prepared by the Construction Safety Association of Manitoba. Its information relates to my trade or occupation to help ensure a safer job site.

- As required by all employers in the province of Manitoba, I have obtained current copies of the Workplace Safety and Health Act (W210) and the Construction Industry Regulation.
- As required by all employers in the province of Manitoba, I will ensure workers are supervised by a competent supervisor, familiar with the WSH Act and Regulations.
- As required by all persons in the province of Manitoba, I will share required information with the prime contractor, and those affected, necessary to identify and control existing and potential hazards.
- To the best of my knowledge, I and my company employees meet the minimum safety training requirements as outlined in Manitoba's Workplace Safety and Health Legislation.

Print Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Print Company: \_\_\_\_\_

Date: \_\_\_\_\_



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