



## Safety First: Formwork

Formwork is constructed on a construction site to create a temporary or permanent mold for concrete or similar material to be poured into. There are three main stages of formwork operations: assembly and erection, concrete placement, and stripping and dismantling. All large formwork installations in Ontario must be designed by a professional engineer. But there are always small smaller jobs of moderate height or depth - footings, stairs - that may include formwork designed and constructed on the site.

The following are some hazards to watch for when constructing formwork:

- 1) **Falls** - cramped work areas, inadequate access, failure to install guardrails, failure to use fall arrest systems, tools or material left underfoot and surfaces slippery from form oil can all lead to falls.
- 2) **Materials Handling** - improper or excessive materials handling can result in sprains, strains, and overexertion in shoulders, arms and back, as well as bruises, abrasions and crushed fingers. This is the activity most frequently connected with injury.
- 3) **Struck against** - common because formworkwork operations are constantly changing and involve the movement of heavy, awkward and pointed components.
- 4) **Stuck by** - rebar, formwork, panels, concrete buckets, and other material hoisted overhead can strike workers.
- 5) **Electrical Contact** - power tools, extension cords, and temporary supply and wiring systems used under less than idea conditions - mud, ground water, wet excavations, fresh concrete - can lead to ground faults, short circuits and shock hazards.
- 6) **Collapses** - even with proper precautions in place there is always the risk that formwork, slab-forms, wall forms and other large components can come loose, slip out of place, or fall over.
- 7) **Health Hazards** - the spraying of form oils and curing compounds can irritate the lungs and skin.
- 8) **Environmental Conditions** - ice, snow and rain can cause slippery conditions. Wind can also create dangerous conditions - extra bracing may be required.
- 9) **Dust and Concrete** - blowing dust and flying concrete particles during the chipping or cleaning of formwork can injure unprotected eyes.
- 10) **Access Equipment** - ladders not tied off, workers carrying materials while climbing, ladders obstructed at top or bottom, scaffolds not completely decked in, and scaffolds erected or dismantled without fall protection.



Formwork that was constructed for a concrete base for specialized equipment.

Planning is the first and most important step in reducing hazards and preventing injuries. It's a must for fall protection, work platforms, material staging areas, housekeeping and material handling and movement. Planning should take place at every level from project manager through supervisor through worker.

*-Courtesy of Construction Health and Safety Manual*



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with Chevron Construction Services Ltd.

## Industrial Construction



Second expansion at Dica Electronics.



Loading dock at 3M.



Mezzanine in new 1000 Islands Rentals building.



Concrete pad for specialized equipment at plant.

Construction in industrial environments require highly specialized expertise in planning, design and construction. Whether you are growing, moving, or converting your facilities, it's important to choose the right contractor. The industry is very unique and special attention is necessary.

The most important goal for most industrial clients is that the construction is performed as efficiently as possible. Highly competitive industrial manufacturing and process environments makes operational efficiency essential. Chevron Construction understands that clients depend on expert scheduling, quality control, risk management, and established health and safety programs. It is also important that the construction is performed on time, within budget and safely.

Check out the photos to the left to see some different types of industrial construction.



Scan this barcode with your smartphone to visit our website!



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## Why Tube and Clamp Scaffolding?

**Versatility.** Tube and clamp scaffolding allows you to scaffold areas where other frames and systems may not fit. It's frequently used where obstructions or non-rectangular structures are encountered. The scaffolds are infinitely adjustable in height and width. They can also be used for irregular and circular vertical configurations. The tubing members are joined together with both right angle and swivel clamps to build up a scaffold to go over the most uneven ground and unusual or complex shapes.



### Do you need Tube and Clamp Scaffolding?

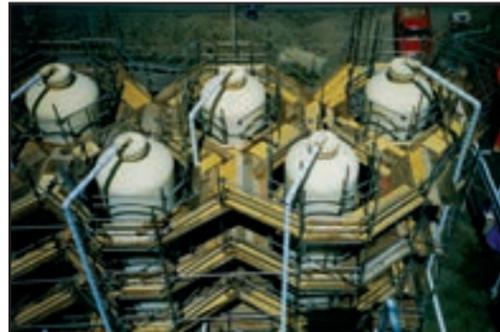


1. Do you have areas in your facility that are eight feet or more above the floor in a congested area?
2. Do these areas require any maintenance or periodic inspection?
3. Do these areas place your employees in a hazardous position?
4. Do you require work for installation of platforms, new process equipment, mechanical or electrical alterations?
5. Do your employees use ladders in an unsafe manner, or are unable to get a ladder to the location required?

*If you answered YES to any of these questions you require the unique capabilities of tube and clamp scaffolding!*

### Why choose Chevron Construction for your next scaffolding project?

- We provide a fully trained and certified crew.
- We stock a large quantity of scaffolding for faster service.
- We provide all of the engineering designs for our installations.
- We can do any type of scaffolding, from single 4x8 scaffolding to multi-storied towers.
- We provide a wide range of experience.



Chevron Construction is a proud member of the Scaffold Industry Association of Canada. The association is dedicated to ensuring the most professional practices are provided to all members within the Scaffold and Access Industry throughout Canada.



To see more organizations that Chevron is associated with please visit our website.

## Test your "smarts"

- 1) The freshmaker!
  - a) Doublemint gum
  - b) York Peppermint Patties
  - c) Mentos
  - d) Altoids
- 2) Where's the beef?
  - a) Burger King
  - b) McDonalds
  - c) Wendy's
  - d) Taco Bell
- 3) Finger lickin' good.
  - a) KFC
  - b) Dunkin' Donuts
  - c) Baskin-Robbins
  - d) Red Lobster
- 4) It's everywhere you want to be.
  - a) American Express
  - b) Mastercard
  - c) Visa
  - d) Discover
- 5) Plop, plop, fizz, fizz, oh what a relief it is!
  - a) Alka-Seltzer
  - b) Calgon
  - c) Budweiser
  - d) Tums
- 6) All the news that's fit to print.
  - a) The Onion
  - b) The New York Times
  - c) The Washington Post
  - d) The Recorder & Times

For the answers please visit:  
[www.chevronconstruction.com](http://www.chevronconstruction.com)

## Keep Calm and Carry On

Rediscovered in 2000 by bookstore owners in Britain, the 1939 "Keep Calm and Carry On" poster has enjoyed a popular revival in Britain and beyond. Posters, T-shirts, coffee mugs and tote bags now sport this slogan worldwide.

This popular slogan was one of three posters designed to bolster public morale at the start of the Second World War. The other posters read "Freedom Is in Peril. Defend it With All Your Might," and "Your Courage, Your Cheerfulness, Your Resolution Will Bring Us Victory." Each poster carried an image of the crown to remind citizens of their duty. None of the posters were ever released to the public.

-Courtesy of HR Professional



## What's so funny?



## What's been said?

"When you think about quitting: think about why you started."

