

## HEALTH AND SAFETY ADVISORY

# Caissons

A construction worker died after the ground around a 900-mm-diameter caisson collapsed, causing the worker to be buried.



The *Occupational Health and Safety Act and Regulations for Construction Projects* require that employers take every precaution reasonable in the circumstances for the protection of workers and establish safe work practices and procedures to be followed in the event of an emergency. Listed below are best practices that should be followed before undertaking any operations with caissons.

- 1) Thoroughly review the geotechnical soil-testing results and ensure that all workplace parties involved are aware of the soil conditions. Assess the need for steel liners in the auguring operation and ensure compliance with the requirements of Section 247 of the Construction Regulation (Ontario Regulation 213/91). Observe the soil conditions

actually encountered in the course of drilling, and inform the workplace parties about any changes to the expected conditions.

- 2) Appropriate fall protection should be used at all times to prevent workers from falling into the caisson.
- 3) Install sufficient barriers at a predetermined distance to ensure workers do not inadvertently come close to the auguring operation.
- 4) Post a sufficient number of signs at the barriers to warn workers of the potential hazards of moving equipment and falls. This requirement is prescribed by Section 44 of the Construction Regulation.
- 5) When rescuing workers in the event of soil collapse, workers entering the cordoned-off area should be tied to a travel-restricting lifeline and a full body harness attached to an adequate independent fixed support.

Alternatively, an employer may use platforms or other systems that are supported by the caisson liner to protect a worker from being buried in the event of soil collapse. Emergency procedures developed for the site should include measures to be followed for rescuing workers in such circumstances.

- 6) The employer must develop written procedures for rescuing a worker. These written procedures must be in accord with the constructor's written procedures for rescue in the event of an emergency.

**This advisory does not preclude the requirement to comply with all applicable sections of the *Occupational Health and Safety Act and Regulations for Construction Projects*.**

**This advisory was developed by the Construction Safety Association of Ontario in consultation with the Ontario Ministry of Labour.**



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