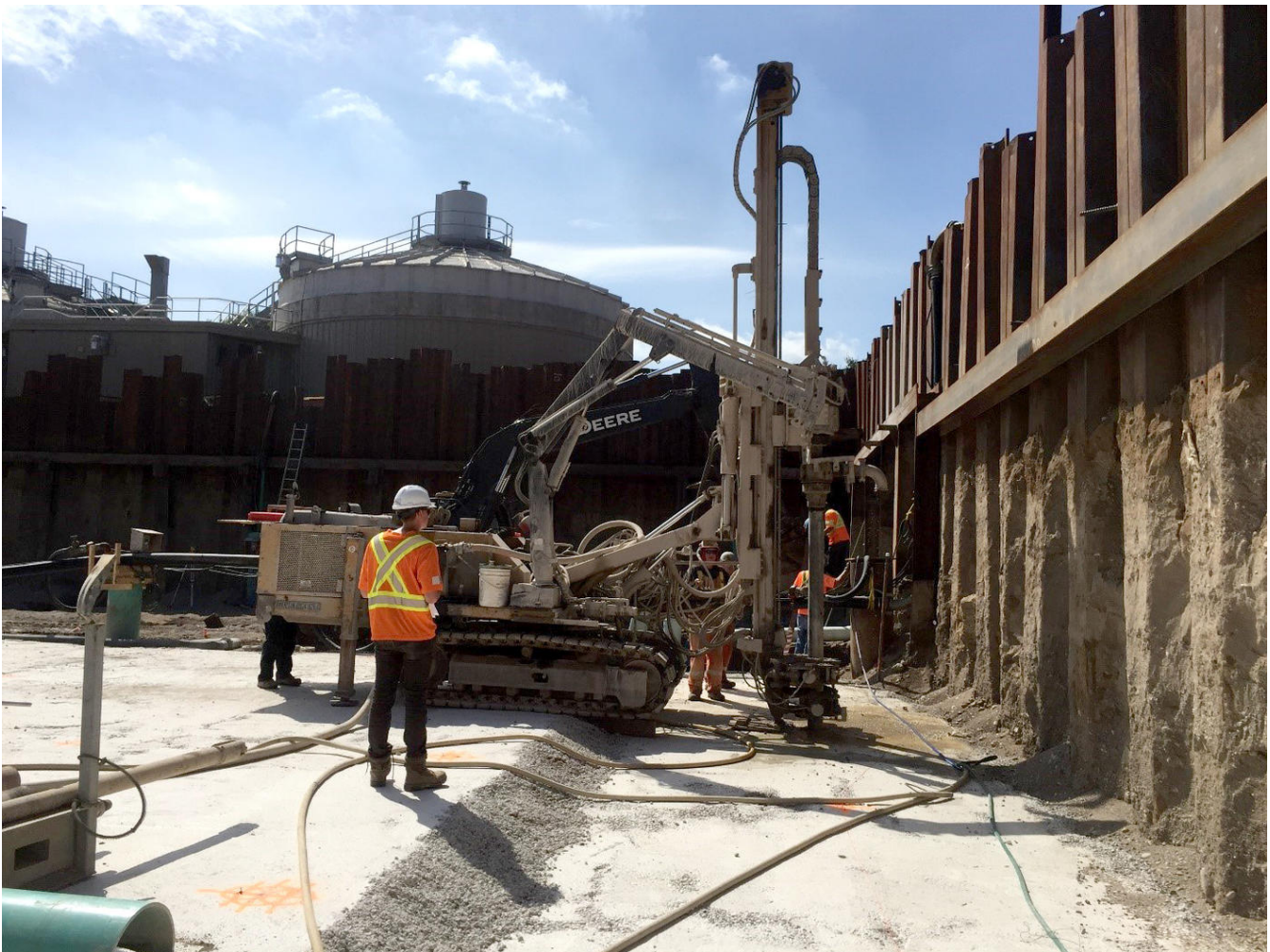


Ingersoll Plant Expansion

Ingersoll, Ontario, Canada

Keller's design-build solution of tie-down anchors helped with the expansion of The Oxford County Waste Water Treatment Plant (WWTP).



The project

Planned capacity increase at the Oxford County Waste Water Treatment Plant (WWTP) in Ingersoll, ON, included an 8 m deep, sheeted excavation to rock to accommodate new wastewater handling and treatment components.

The challenge

Working within the confines of an active and congested WWTP environment required heightened attention to safety at all times. Given the high groundwater table, a significant concern was potential buoyancy and uplift of the slab-on-grade that was designed to be placed directly on the rock.

The solution

Keller's design-build solution to counteract uplift potential involved the installation of a grid of 239 passive slab tie-down anchors drilled 3 m into the underlying rock. Ahead of production work, two sacrificial anchors were tested to 200% of working capacity to verify design assumptions. Each installed production element was encircled by a protective collar prior to placement of reinforcing mesh and pouring of the concrete slab by the general contractor. Anchor bearing plates were then installed to tie the anchors into the slab. During production work, 10% of anchors were proof tested in accordance with the project specifications.

Project facts

Owner(s)

The County of Oxford

Keller business unit(s)

Keller

Main contractor(s)

Hira Construction

Engineer(s)

R.V. Anderson Associates Ltd.

Solutions

Ground improvement

Markets

Infrastructure
Water, sewage and waste disposal

Techniques

Anchors

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