St Clair River Rail Tunnel, Sarnia Design and Construction of a Shaft for the TBM Cutterhead Retrieval

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Abstract
The planning, design and construction of the new St Clair River Tunnel has been described in several previous papers with some mention of the unplanned Retrieval Shaft which was necessary to remove and service the Cutterhead of the Tunnel Boring Machine before it passed under the St. Clair River. This paper describes the design and construction of the shaft and touches on the difficulties and risks involved with crash-programme rescue operations.

Keywords: shaft design; settlement and TBM entry; correction of alignment; cutterhead removal; soil strengths and in-situ strengths.

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