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Reconstruction of Lahti station area, demands of the new fast speed railroad between Helsinki and Lahti.

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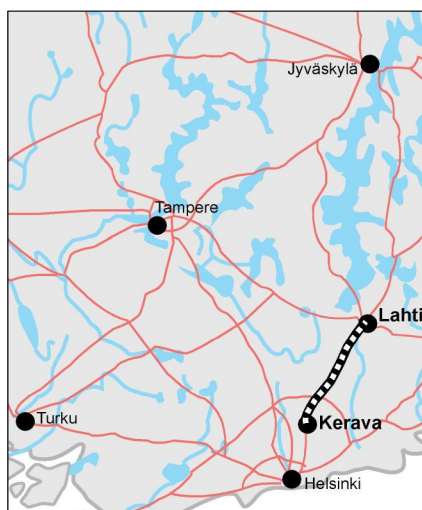
Summary

In this paper, a rehabilitation project of Lahti railroad station is described. The aim of this project was to improve the structure of Lahti rail-yard to meet the challenges of the new fast speed railroad between Kerava and Lahti. Tracks locations were changed and the rail-yard had to widen south 17 meters. These Changes demanded to demolish old pedestrian bridge, rebuild the piers, elevators, stairs and platform-roofs too. All works had to make so, that rail traffic was able to use at least three parallel tracks whole time on Lahti station.

Keywords: Bridges; steel piles; drilled steel piles; slabs; walls; steel roofs.

1. Introduction

Railroad connection to Lahti and wider to eastern part of Finland and St. Petersburg in Russia was complex and slow. Trains must run via Riihimäki in stead of going straight to Lahti. Planning a new railroad connection started year 2000 with a master plan. At the same time Railroad authorities in Finland hired Lemcon Ltd to act as Construction consultant to guide the planning and later all Construction work too.



Construction work started soon after and the whole project finished with the opening ceremonies 9th September 2006.

The concept of the tracks on Lahti station area was totally changed, which was the reason to make large renovations in rails, platforms, electricity structures and automatic safety systems. At the same time old structures like roofs, elevators and stairs had to rebuild. The whole bridge had to widen 17 meters and to build a new connection for pedestrians as well under the tracks as parallel the tracks over the road going under the rail yard to improve serviceability in new position.

Construction work of structures was detailed in four separate parts. Started with widening of the bridge and build the south platform and all concrete structures relevant to these changes.