

Jürgen Radermacher

Dipl.-Ing.

Büro für Verkehrsingenieurbau GmbH



Project:

Slab Track and Floating Slab Track

**Taiwan Taoyuan
int'l Airport Access
MRT Construction
Project**

System Design,
Outline Design,
Detailed Design
and
Final Design
of Slab Track and
and Floating Slab
Track and
Turnouts.

2006 -2008



The **Taiwan Taoyuan International Airport Access MRT System** (台灣桃園國際機場聯外捷運系統) is a metro system planned to connect Taipei City and the Taiwan Taoyuan International Airport, before linking up with an extension of the Taoyuan MRT Blue Line to THSR Taoyuan Station and onwards to Jhongli City, where it terminates at the junction of Chung Feng Road and Huang Bei Road.

The Office J. Radermacher GmbH was charged by the track work contractor to perform the System Design, Outline Design, Detailed Design and Final Design including the manufacturing and installation drawings (formwork and reinforcement drawings) for this track work project in slab track and floating slab track systems.



Taipei Main Station Area

The project consists of 52 km double track line including 94 turnouts on the mainline and 2 Depots with about 15 km track and 90 turnouts in ballasted track. The mainline is constructed in 12 km tunnel and on 40 km viaduct with 21 stations and halts.

Due to the strong environment protection requirements (Hospital, Residential Areas, Airport Building, Airport Tower) concerning noise and vibration, special studies led to the definition of 20 sections to be preserved by floating slab track sections.

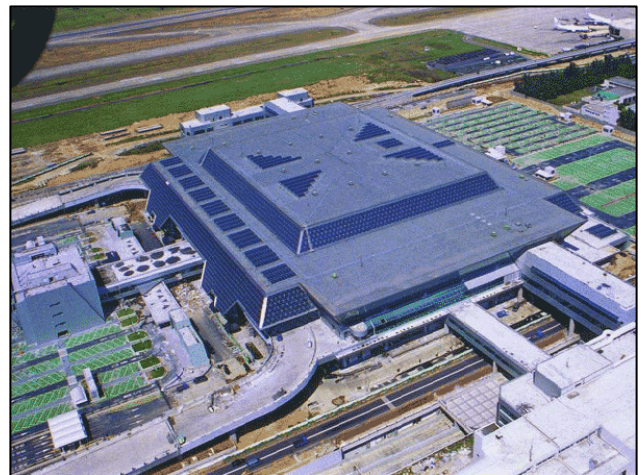


The new system passes underneath the Reception Hall of the Airport.



The new line passes nearby CKS Aerodrome Control Tower. The track design considers vibration reduction for sensible installations and is installed as SMS system.

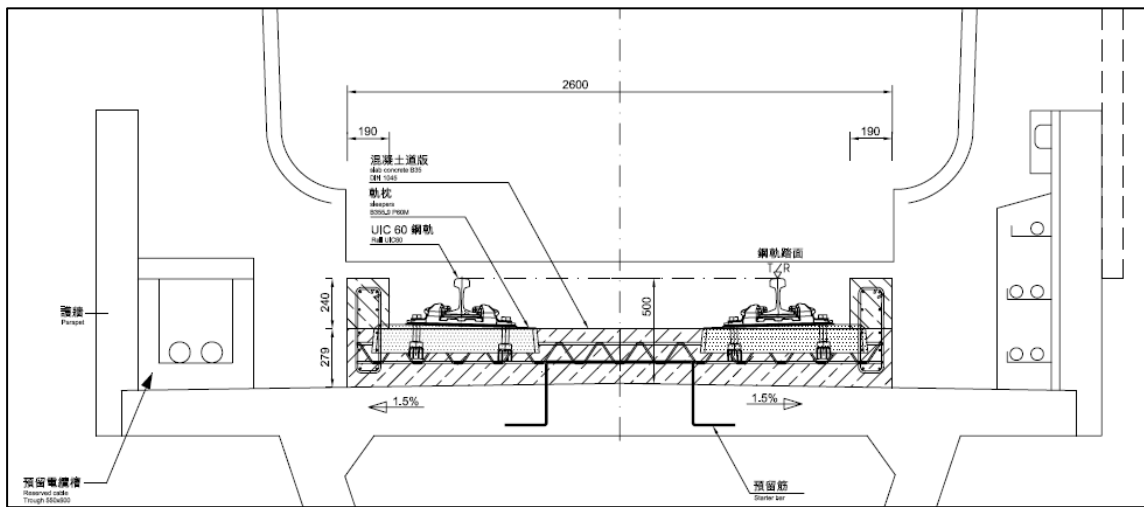
The track design considers these special requirements and led to individual solutions respecting the particular substructure imposed by civil designer as bored tunnel, cut and cover tunnel and viaducts. The results in local ground measurements brought up particular floating slab design.



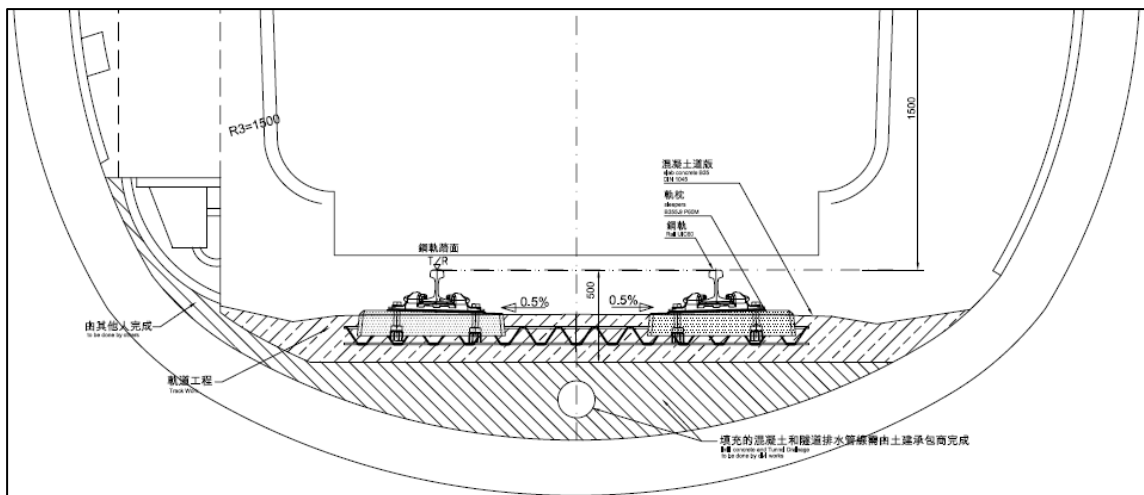
Airport Building Terminal II Taoyuan int'l Airport Access



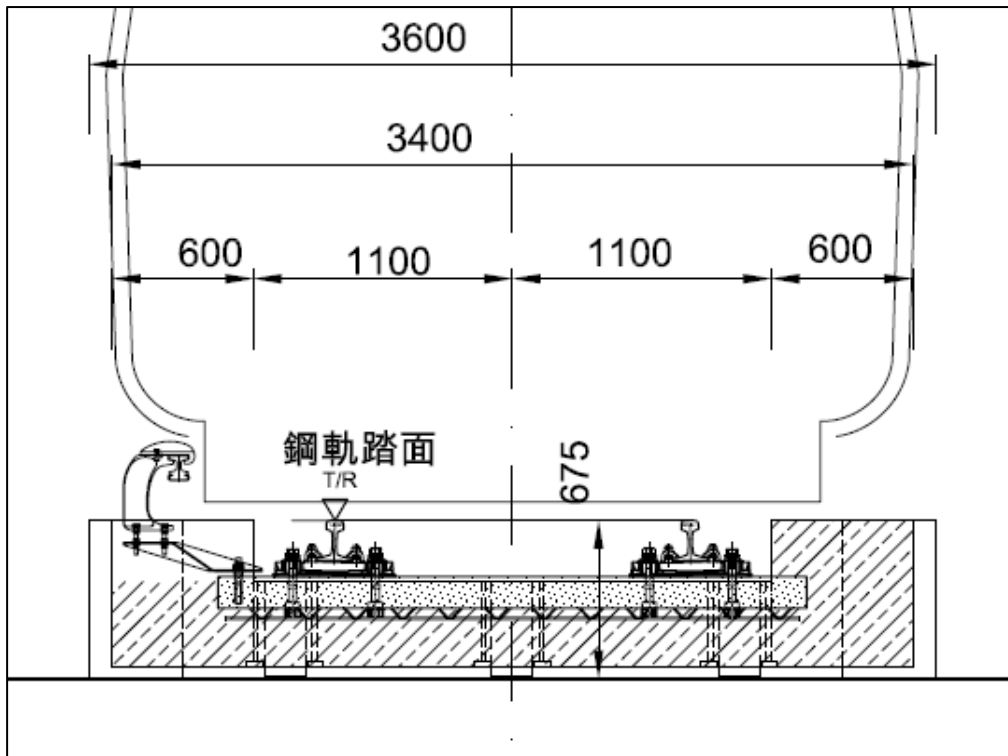
Taoyuan int'l Airport Access MRT System connects Taipei Main Station via Airport with Taoyuan High Speed Line Station



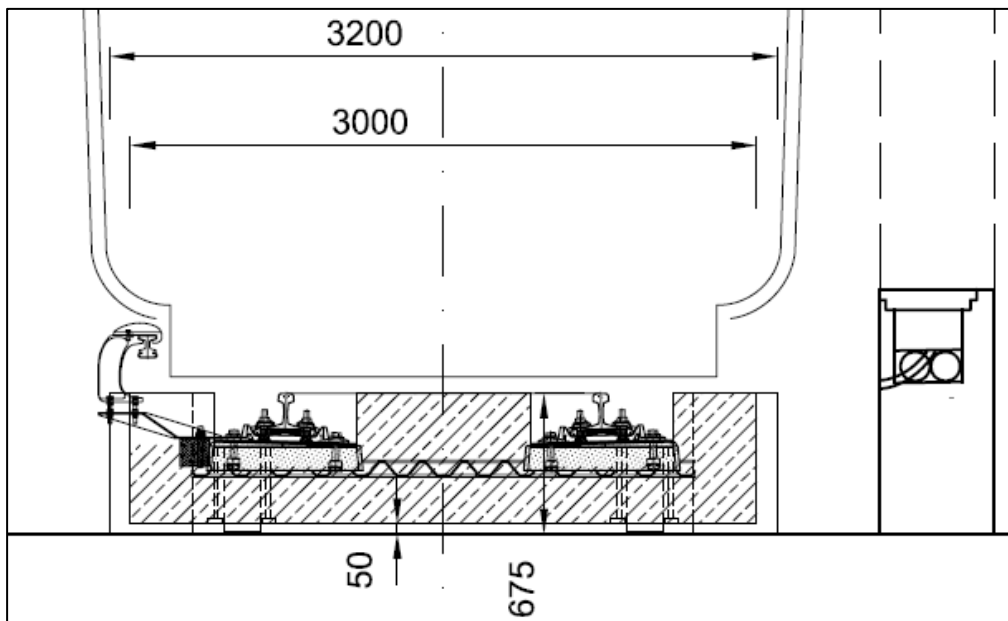
Typical cross section on viaduct including derailment wall



Typical cross section in NATM tunnel profile



Typical cross section in cut and cover tunnel profile with SMS system 'Gerb' including 3rd Rail support



Typical layout of SMS system on viaducts showing the lateral and longitudinal load transfer

