

捷運車站出入口與通風井聯合開發大樓深開挖設計案例

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摘 要

捷運工程建設於都會區以地下化施工為主，地下車站需配合設置出入口及通風井，往往都會區用地取得並不順利，需花費許多時間且可能無法達到預期效果。本案例捷運車站採公有地與民間私地主以聯合開發方式順利取得用地，因捷運出入口及通風井緊鄰既有建築物，考量減少連續壁施工時間與降低施工風險，調整連續壁深度配合封底灌漿，採取適當建物保護措施，並輔以現場監測管控開挖期間鄰房之安全。捷運出入口與通風井聯合開發除增加捷運使用便利性，並改善都市景觀，創造雙贏契機。

關鍵字：捷運、聯合開發、深開挖。

MRT Station Entrances and Ventilation Shafts Jointly Developed Building Deep Excavation Design Case

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Abstract

MRT construction in the metropolitan area inevitable involved underground construction. However, land acquisition for the space of the entrances and ventilation shaft of underground station is difficult. This paper presented a case study of MRT station design which the entrance and ventilation shaft were jointly developed with private landowners. Because the MRT entrance and ventilation shaft were close to buildings, the bottom sealed grouting, protection measures, and instrumentations were used to keep the safety of nearby buildings, reduce the time and the risk of construction. The joint development of MRT entrance and ventilation shaft not only increased the convenience using the MRT but also improved the urban landscape. Apparently, this is a win-win benefit strategy.

Key Words : MRT, Joint development, Deep excavation.

一、前 言

本案例為臺北捷運車站出入口與通風井聯合開發大樓深開挖設計，捷運車站平面位置

如圖一。本站為地下四層島式月台車站，地下一層為穿堂層，地下二、四層為兩個疊式路軌之月台層，分別為二線不同向的月台，地下三層為中間層，配置環控機房、隧道通風機組及動力配電室等。地面設施計有通風口、出入口