

WESTCONNEX M5 VENT SHAFT VS04



Project Synopsis

- Construction of vent-shaft (VS04)
- 32m(L) x 13.5m(W) x 28.5m(D)
- Interface with Tunnel and Civil workcrews
- Excavation and disposal of 12,310BCM in 6no benches
- Installation of 549no rockbolts from between 6-9m, totalling 3970m
- Installation of strip drains
- Application of shotcrete (190m³)
- Dewatering

Client: SU Tunnel & Civil / CPB Dragados Samsung JV

Location: Sydney, NSW

Year: 2018

Value: \$1M

As part of the construction of the St Peters Interchange for the new M5 section of WestConnex, there was a requirement to construct shaft VS04 as an inlet/outlet shaft for Ventilation Supply Tunnel MT9A and Ventilation Extraction Tunnel MT9D. SU Tunnel & Civil were awarded the contract to construct the shaft by CPB Dragados Samsung JV.

Novel Group was engaged to project manage the construction of the VS04 shaft.

The shaft was 32m(L) x 13.5m(W) x 18.5m (D)

The scope of work included:

- excavation of the shaft in Ashfield shale (GT-A-4) using excavators, eccentric rippers and hammers
- spoil management hauling from top of shaft and tunnel
- drilling and installation of rock bolts and temporary GRP bolts
- installation of strip drains and flushing points
- application of SFR shotcrete
- installation of access stairs as excavation progressed
- Dewatering managed during the excavation