

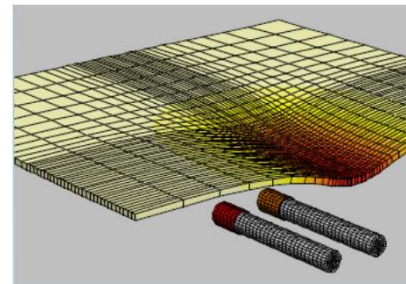
Jaipur, India Metro tunnels

Tender Predesigns & Detailed Designs of two (2) TBM Metro Tunnels on East-West Corridor of Jaipur Metro Project (Stage 1B) at Jaipur

Rajasthan, India



Chandpole Gate



Surface settlements due to TBMs excavation

Project

Tender Predesigns & Detailed Design of two (2) TBM Tunnels between Chandpole and Badi Chouper of the Jaipur Metro project on East-West Corridor of Jaipur Metro (Stage 1B) at Jaipur, Rajasthan, India.

Construction Cost

Total cost: ~50,000,000 US \$

Project Schedule

Design - Construction: 2013 ~ 2017

Project Description

Two (2) single track TBM tunnels

Length: ~ 2 x 2.17km

Cross section: 35m² Effect. cross section: 26m²

Construction Method

Two (2) single track TBM tunnels:

Mechanical excavation with EPB - TBM (Earth Pressure Balance – Tunnel Boring Machine)

Final Lining

- Concrete M50 for TBM tunnels' segments
- Reinforcement Fe500D

Geology

Sand, Silty Sand & Silty Sand with Gravels
Overburden for TBM: 6~12m.

Our Services

- Preliminary Design Submissions
- Geotechnical Interpretation Report for the whole project
- Definitive Tunnel Segment Design
- Definitive Design of Sump Pit & Tunnel Drainage, design of temporary works including reaction frame
- Definitive Design of connection details with launching & retrieval shaft
- Starting-up frame design & TBM break through methodology
- Assessment and protection of Existing Building and Utilities
- Ground settlement contours within the influence zone of the tunnelling and stations' works
- Instrumentation systems for monitoring settlements of the ground and adjacent structures
- Calculation of TBM required support pressure
- Risk Assessment of buildings, structures and utilities due to tunnelling works
- The designs were provided in common with INDUS CONSULTRANS Pvt. Ltd. India

Client

CEC INT'L CORP INDIA PVT. LTD.

Metro Stations

Tender Predesigns & Detailed Designs of two (2) UG Metro Stations, Two (2) C&Cs and Two (2) Shafts on East-West Corridor of Jaipur Metro Project (Stage 1B) at Jaipur

Rajasthan, India

Project

Tender Predesigns & Detailed Design of two (2) Underground Metro Stations, Choti Chouper and Badi Chouper, by Top Down Method, two (2) C&Cs and two (2) shafts for the Jaipur Metro project on East-West Corridor of Jaipur Metro (Stage 1B) at Jaipur, Rajasthan, India.

Construction Cost

Total cost: ~50,000,000 US \$

Project Schedule

Design - Construction: 2013 ~ 2017

Project Description

Choti Chouper underground station

Length: ~ 233m, Width: 23.3m ~ 64.3m, Depth: ~18.4m

Five (5) final levels: Foundation level / Platform level / Concourse level / TV shaft level / Roof level

Badi Chouper Station

Length: ~ 233m, Width: 23.3m ~ 64.3m, Depth: ~20.3m

Five (5) final levels: Foundation level / Platform level / Concourse level / TV shaft level / Roof level

C&Cs

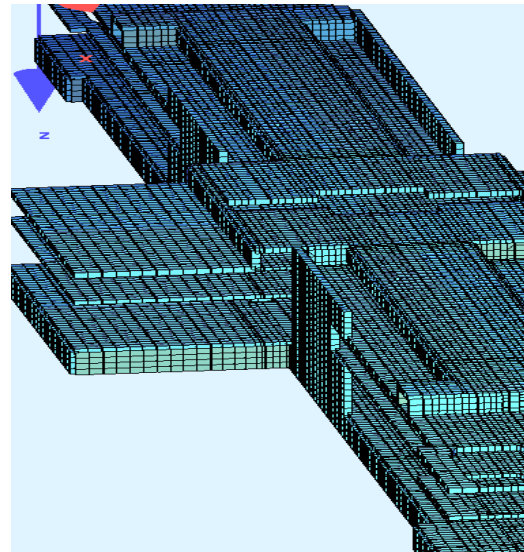
Length: ~ 269m, Width: 12.6m, Depth:~18.00m

Length: ~ 110m, Width: 12.6 ~23.6m, Depth:~18.00m

Shafts

Length: ~ 25.6m, Width: 22.m, Depth:~14.30m

Length: ~ 25.6m, Width: 22.2m, Depth:~14.30m



Choti Chouper UG Station 3D model

Construction Method

- Choti & Badi Chouper Stations: Construction by Top Down method with Diaphragm Walls
- C&C and shafts with cut & cover method (piles and struts)

Final Lining

Concrete M35 for the structures, Reinforcement Fe500D

Geology

Sand, Silty Sand & Silty Sand with Gravels

Our Services

- Preliminary Design Submissions
- Geotechnical Interpretation Report for the whole project
- Definitive Design of Cut and Covers, Shafts, design of temporary works
- Ground settlement contours within the influence zone of the stations' works
- Design of Secondary Structures i.e. track plinth and track concrete, emergency walkway
- Structural Design of the Stations with 3D analysis model
- Structural design of entry & exit structures, tunnel ventilation shafts, supply & exhaust vent shafts and C&C
- Formworks (plan views and cross sections) and reinforcement drawings for the stations, the entrances, the C&C and the shafts
- Details for waterproofing of various structural elements
- The designs were provided in common with INDUS CONSULTRANS Pvt. Ltd. India

Client

CEC INT'L CORP INDIA PVT. LTD.

Badi Chouper UG Station 3D model

