

WEBINAR

on

Design and Construction of Underground Structures: Case Studies

Date: 10th July (Saturday) 2021 at 11 AM

Speaker



Dr. Makarand G. Khare
Director - Terranova Consultants, Mumbai

Meeting link:

<https://kaksha.webex.com/kaksha/j.php?MTID=m968d7957ecc393295a3741cfff68bb7>

Meeting number: 184 774 6346

Password: zFURpMuJ245

Abstract

The rapid urbanization has led to a high growth in the number of vehicles leading to traffic congestions, higher air pollution, associated health risks, and higher number of road accidents leading to loss of life. Therefore, it is necessary to plan public urban transport projects in a sustainable way to support the desired economic growth, protect the environment and to improve the quality of life. In the congested urban landscape an underground metro system can provide a safe and comfortable transportation option. However, construction of underground stations and tunnels pose significant design and construction challenges. This presentation will cover case studies involving challenges in design and construction of underground stations in soft saturated ground conditions. The importance of instrumentation and monitoring will also be illustrated with a real-life case.

About the speaker

Dr. Makarand Khare obtained his B.E. (Civil) from College of Engineering, Pune, in 1999, M.S. (Civil) from University of Central Florida, Orlando, USA in 2000, and PhD from IIT Madras in 2008. He earlier worked with AECOM, L&T ECC, ANTILLIAN, and worked in USA and India, before starting Terranova. He has got over 20 years of experience in the field of Geotechnical and Civil Engineering including detailed design, consultancy, project management, construction support and research. He has extensively worked in the following areas:

- Design of deep excavation support structures (such as Diaphragm, Secant, Contiguous Bored and Soldier Piled Walls) for underground metro stations and building basements.
- Detailed design of shallow and pile foundations of high-rise buildings, factories, airports, viaducts, hospitals, commercial and residential buildings.
- Design of high-rise buildings, sensitive structures near/above underground metros and tunnels.
- Instrumentation and Monitoring of tunnels, slopes and deep excavations during construction.
- Forensic analysis, construction claims review and support for complex infrastructure projects.
- Design of ground improvement schemes for depots and ports.

He has handled several key projects, such as Underground Metro Rail, Mumbai-Ahmedabad Highspeed Rail, Elevated and Rapid Metro Rail at Chennai, Mumbai and Meerut, Hyderabad International Airport, Chepauk Cricket Stadium, Chennai, Reclamation work at JNPT, Mumbai, to name a few. He has to his credit 12 International Conference papers and 3 Journal papers based on his research and professional career.

Prof. Dasaka S Murty
(Chairman, IGS Mumbai Chapter)

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