

ISBN	978-93-88122-14-6
Website	www.veltech.edu.in
Received	12-May-2020
Article ID	NISDCE214

VOL	01
eMail	nisdce@veltech.edu.in
Accepted	27-May-2020
eAID	2020.nisdce.214

OUTLINE OF PLANNING AND CONSTRUCTION OF UNDERGROUND METRO STATION

Muthu Alias Vasukidevi P¹ Sivaraj J²

^{1 & 2} Assistant Engineering Manager, Civil Engineering, L&T Construction, Tamil Nadu.

ABSTRACT: Evidently, India has been developing their infrastructure in various field which includes Power, dams, Roads and Metro Rail system. Rapid growth of Metropolis Cities has been requiring a transport system like Metros for scatter the traffic accumulation in a well-organized Pattern with stipulated time and travel. Since most of the surface land has been utilized for roads, Sub urban railway track, there is a compulsion to use the below surface for extending the Rail network as Underground Station, Tunnels and Subways. Execution of the Metro Projects in the City plays a vital role in the Country's Economy; hence it is mandatory to Ensure the Structural stability of the Metro line Effectively without compromising the Quality & Aesthetics. The main objective of the paper is to explain about Various aspects of the Underground station Construction and Methodology which have been implemented to make a safe and Cost- Effective transport. Also, it gives an Overall view of an Underground Metro Station and the relevant data interpretation which are being used for the Construction of the station building in the present projects. Systematic planning and selecting the Appropriate methodology dealing with the interface Contractors enhances the Project progress in a right way. The selection of the Top-down or Bottom -Up Methodology being done based on the Station location, Soil profile in and around the site, the availability of the resources where the depth of the station is shallow even 15- 20m from the surface then Cut-cover methodology has been used and other hand. Extremely the working space is restricted and Complex Rocky strata presence in the track line, it leads to implement the NATM (New Australian Tunnel method) or sequential Excavation method during Construction stage.

Keywords: *Underground station, Top-down, Bottom-Up Methodology, Permanent & Temporary Structures*

This paper is prepared exclusively for International E-Conference on Novel Innovations and Sustainable Development in Civil Engineering 2020 which is published by ASDF International, registered in London, United Kingdom under the directions of the Editor-in-Chief Dr E B Perumal Pillai and Editors Dr. M Vinod Kumar and Mr. R. Saravana Kumar. Permission to make digital or hard copies of part or all of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage, and that copies bear this notice and the full citation on the first page. Copyrights for third-party components of this work must be honored. For all other uses, contact the owner/author(s). Copyright Holder can be reached at copy@asdf.international for distribution.

2020 © Reserved by Association of Scientists, Developers and Faculties [www.ASDF.international]