

## HYDERABAD METRO RAIL PROJECT : An Engineering and Financial Innovation

A people-friendly green city is first and foremost necessity today, where commuter friendly mobility will be accessible to all denizens. Many cities today are plagued by traffic congestion and Hyderabad is not an exception to it. Hence having a dynamic Mass Rapid Transit System in Hyderabad has become extremely important. And conceiving and constructing such project not only required out of the box solution, but also innovative approach that will usher a paradigm shift in the country's infrastructure development and will catapult Hyderabad into a higher orbit of global cities.

Hyderabad Metro Rail project is one such unconventional path breaking attempt to provide world class infrastructure in an Indian city, with several financial and engineering innovations. It is the world's largest Metro project being built in **Public Private Partnership (PPP)** mode. There are several engineering innovations and out of box solutions adopted in Hyderabad Metro Rail project. Global coordinates and DGPS were used to plan the alignment and execution of work meticulously. 85% of the project activities are converted to a pre-cast mode thus reducing inconvenience to the road users. The innovation of constructing Metro stations in pre-cast format and erecting them on central piers as balanced cantilever structure has set a new bench mark. Pier width confined to about 2 m at road level enabled accommodating 2 rail tracks on the viaduct with each track equivalent to 7 bus lanes or 24 car lanes. Together with the state-of-art systems & technologies, advanced braking system is being used in the project that will enable 35% power generation not only to feed back the rolling stock for utilization in the system but also for further reduction of carbon footprint thus making Hyderabad an eco-friendly city.

Hyderabad Metro is not being built as a simple mass transit system but is being viewed as an **urban redesign opportunity** to transform an Indian city into a people friendly and green global city. Based on the philosophy that cities are not meant for cars but are to be built for people,

especially children, women, elderly and differently abled people, Hyderabad Metro project attempts to cater to their special needs by providing 'seamless travel' facility in the city. Skywalks below elevated viaduct to give direct landing into schools, colleges, hospitals, offices and other public & private buildings to provide safety & security; safe FoBs for junction crossing are designed and being built to make Hyderabad an efficient city. 'Merry-go-round' dedicated feeder buses, bicycles and other non polluting facilities are planned at Metro stations to provide last mile connectivity. Pedestrian facilities, aesthetic Metro station surroundings with lot of greenery, street furniture, public art, etc., will be the project's contribution in making Hyderabad a global city.





