Metro rail to cut land use by half for phase-2 work

The lessons learned while building phase-1 will help Chennai Metro build phase-2 faster and cheaper, Chennai Metro Rail Limited Managing Director Pankaj Kumar Bansal tells U Tejonmavayam

How did Metro Rail cut the cost of phase-2 from around Rs65,000 crore to Rs46,000 crore?

Without compromising on passenger comfort, we have changed several features. In phasing to reduce cost. One is changing certain stretches from underground to elevated, which can be built faster and cheaper. For instance, the stretch from Adina Nagar West to Sholinganallur, which was earlier underground, has now become completely elevated. Stations like CMD, Kalliamman Kolli Street, Perur Kathipara, Madipakkam and Sholinganallur will be elevated. There was not going to be the wait if we don’t have road space. Also, the charm of the city would be lost if we go elevated in arterial Anna Salai, Central or high court. However, several portions of other parts of the city already have flyovers. So, considering all these factors, from Madipakkam, Medavakkam, Perumbur Railway station, Ayampettah, Purasaiwalkam, KMC, Nungambakkam High Road, Harding Road junction, Hardas Road, Kodambakkam High Road, Light House, Braseneiah High Road, RadhaKrishna Salai, Laila, Adyar depot, Thiruvanmiyur, we are going underground as it is core city from Tidal Park, it is elevated. In corridor, Light House to Meenakshi College is underground, Meenakshi College to Purasaiwalkam is elevated. In Purasaiwalkam, where traders protested, we have reduced 80% of land requirement by reducing the size of the stations. Now only three or four stops are getting affected and definitely not the small stops. Government land is our priority in acquisition and that comes vacant private land.

The construction of phase-1 was delayed due to several reasons. What steps are you taking to prevent delays in phase-2?

When we started, Delhi metro rail was our consultant. We have learnt a lot and have gained experience. In phase-2, though the project is not sanctioned by Government of India, we have already started land acquisition, soil investigations and detailed design. This process otherwise happens only after approval. We are also preparing construction tender documents. So, with all this, we now have a three-year advantage. In phase-1 extension, the project was approved in 2016 and in less than three years we have completed 75% of the work. That was not the case when we started phase-1. After the project approval in 2010, it took around 3 years to award contracts.

What are the other changes you are introducing in phase-2 to cut cost and time of construction?

We are doing a lot of reengineering in the system and have reduced overall construction cost by 7% to 8% and land requirement by 36%. Stations will be compact. We have brought down the length of underground stations from 500m to 149m-125m and width from 15m to 11m. By doing this, we are saving 20-30% of the construction cost. With experience from phase-1, we now know where to re-engineer or combine systems without compromising on capacity and reliability. Raised stations will reduce land requirement. We are acquiring land only for parking and station entry-exit.

Apart from the project cost, how will you manage operation and maintenance (O&M) cost?

In phase-2, we are bringing down O&M cost by 50% (for 33km, O&M cost is Rs130 cr a year) by using three-car trains. Platforms will, however, be designed for six coaches. In phase-1, we are operating four coaches. In phase-2, we will operate only three coaches. So, the AC and lighting will be only for 50% of the area. The rest of the platform will be covered. It will be extended in the future, which may happen 20 to 30 years later.

When will construction begin for phase-2?

We have issued notices for land acquisition in the 53km and 18km corridor and have also received objections from the owners. We are negotiating directly with the people. The state has given the nod for the 53km priority corridor, so tenders for construction from Madipakkam to Sholinganallur and Madhavaram to CMR will be floated in June. Construction will begin before the end of this year. Simultaneously, we will also begin work for the remaining 6km. Priority corridor will be ready by 2025-26.

JICA has recently approved loan for the 53km priority corridor. Could you explain the cost breakup? Are you procuring systems from Japan in return?

From around Rs65,000 crore, we brought down the project cost to Rs46,000 crore. In that 40% will be loan and the rest will be shared equally by the state and the Centre. JICA has sanctioned nearly Rs46,000 crore for the 53km priority corridor. Yes, it will be a loan, where material worth around 30% of the loan will be purchased from Japan. We will be procuring rolling stock (trains), signal systems, UPS etc. Our cost will go up by 15% due to the procurement. For the rest of the 66km, we have approached ADB, NDB, AIIB and World Bank. As we proceed with the project, we will continue to pursue with the Centre for approval. If Centre gives only half of its share, the state is open to bearing the rest.

With the 53km phase-1 operational, when are you likely to reach your projected ridership?

We will soon touch one lakh ridership. Soon phase-1 extension will also be complete. That’s the line that is going to give real connectivity to North Chennai. The interiors of that side of the city will connect to Central, Egmore, CMRT and the airport. People could eventually travel to the heart of the city like Azhik Oman Road without any hassle. As the network expands, growth will also take place. In about four to five years, we should reach 2.5 lakh ridership.