

# Metro Phase 1 extension tunnelling nears completion

Stretch from Thyagaraya College to Korukkupet is finished nearly five months ahead of deadline; 30% of work on stations is complete

STAFF REPORTER  
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With a compact network and smaller stations, the Chennai Metro Rail Phase I extension project, inaugurated by former Chief Minister Jayalithaa last July, is proceeding towards completion in mid-2019.

In a first milestone for the project, a tunnel boring machine (TBM) drilled through the earth from Thyagaraya College to Korukkupet on Sunday covering a distance of 1 km. The second TBM will reach this location in an-

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METRO RAIL OFFICIAL

other two weeks. Tunnelling work, considered to be one of the most difficult parts of Metro Rail construction, was done at a record speed of 11 metres a day and hence, it was finished five months ahead of its deadline of February 2018. Usually, tunnelling is carried out at a speed of 6-8 metres a day.

According to officials of

the Chennai Metro Rail Limited (CMRL), the favourable soil conditions – the stretch is largely clayey – enabled the completion of work quickly. “Intensive instrumentation and monitoring was done to ensure the structural integrity of buildings. Only minor cracks and such issues came up but they were resolved immediately. We will now focus on laying tracks and ancillary work. Nearly 30% of the station construction work is complete,” an official said.

The length of stations on

this 9-km stretch has been reduced from the standard 280 metres so as to enable efficient use of space. “We want to acquire the minimum amount of land and hence, this design. But the stations being smaller doesn’t mean we have cut down on passenger facilities. We have cut down space in the non-passenger area, where machines, including the chiller plant and ventilation systems, are located and designed it in such a way as to be accommodated within this length,” he added.

## The anatomy of a tunnel

The completion of tunnelling on a stretch is the first major milestone for the extension project. Tunnelling was completed at a rate of 11 m a day even as care was taken to ensure the structural integrity of the buildings above

Phase I extension project:

Washermanpet to Wimco Nagar

Total project length: 9 km

Underground stretch:

Washermanpet to Korukkupet

Elevated stretch: Tondiarpet to Wimco Nagar

Length of underground stretch: 1.8 km | Number of stations: 3  
Tunnelling started in: July 2016

Completion of tunnelling

TBM 1: September 2017  
TBM 2: October 2017

Original target: February 2018

Cost of underground construction: ₹411 crore

Number of buildings tunnelled under: 480

Number of borewells closed: 310

Average speed of tunnelling: 11 metres a day

Length of stations:

Phase I extension 230 metres | Phase I extension 180 metres

The length of stations in the Phase I extension project was reduced to save space

Chennai Metro Rail Phase I project

Total length: 45 km | Currently operational: 26 km

Stretches that will be operationalised next:

1 Saidapet to AG-DMS  
Length: 3.6 km  
Estimated date of completion: December 2017

2 Nehru Park to Chennai Central  
Length: 3 km  
Estimated date of completion: December 2017

3 Washermanpet to Chennai Central  
Length: 8 km  
Estimated date of completion: Mid-2018

4 Government Estate to AG-DMS  
Length: 5 km  
Estimated date of completion: December 2018



Fruits of labour: Workers celebrate after completing a tunnel as part of the Metro's Phase I extension. ■ B. JOTHI RAMALINGAM

## Two key stretches to open by year-end

Another route will be operationalised by mid-2018

SUNITHA SEKAR  
CHENNAI

By the end of this year, the most important stretch of Chennai Metro linking Nehru Park and Chennai Central, and another stretch from Saidapet to AG-DMS are likely to be thrown open for the public. According to officials of the Chennai Metro Rail Limited (CMRL), trial runs have started on the stretch between Saidapet to AG-DMS and the track

work is nearing completion between Nehru Park and Chennai Central. “Other works, such as electrification and signalling, are also in progress on both these stretches,” an official said. Chennai Central Metro Rail station, the largest underground station in the city, will connect two stretches – on the upper level, trains from Nehru Park will arrive and the lower will see trains coming in from Washerman-

pet. While the Nehru Park-Chennai Central stretch will become operational by the year-end, the Washermanpet-Chennai Central will be open only by mid-2018. The last stretch to be completed, from Government Estate to AG-DMS, will be opened for operations by December next year, he added. “The tunnelling may be over in another two months and after that, there is quite a lot of ancillary work,” he said.