

23 bore machines to work in tandem

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At least 23 tunnel boring machines (TBM) will be working together at a time in various parts of the city for faster construction of underground passages in phase-2.

In phase-1, 13 TBMs were being operated during the peak of construction activity at a time to build a 24km underground stretch, and the machines were used for tunneling longer stretches, which led to a delay.

An official explained that a single TBM will drill tunnels only between two stations in phase-2, before being removed for deployment elsewhere, regardless of the progress in the construction of underground stations.

At a time, there will be 15 boring machines digging tunnels in corridor 3 (which has a longer underground stretch), and four TBMs each in corridors 4 and 5.

"Even if the stations are not ready, we can start other work like laying of tracks and cable work in the tunnels, once they are completed," the official said.

One of the reasons for the plan to operate many TBMs at the same time was lessons learned in phase-1, where a delay in the completion of

underground stations interrupted tunnelling work and threw deadlines off tracks.

A TBM drilling under Anna Salai in phase-1 was stuck near Government Estate station for more than five months because the station was not ready. "We do not want such problems to arise in this phase," the official said. Delays were also due to awarding longer stretches to a single contractor.

“EACH TBM (WHICH COSTS ₹100 CRORE) WILL REQUIRE A SET OF STAFF WHO HAVE TO BE EMPLOYED... BUILDING AN UNDERGROUND LINE IS EXPENSIVE

R Ramanathan | EX DIRECTOR, CMRL

Experts said CMRL may end up spending more money by using multiple TBMs at the same time. "One TBM costs ₹100 crore. So if a contractor has to bring more of them, the capital cost would go up," said R Ramanathan, former CMRL director.

Average cost of constructing 1 km of underground section is more than ₹650crore compared to ₹250crore for an elevated section.