



Afcons Infrastructure completed First Twin Tunnel Breakthrough for Delhi Metro Phase 4

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New Delhi, India (Metro Rail Today): In a significant advancement for urban transportation in Delhi, the Afcons Infrastructure Ltd has successfully completed its first twin tunnel breakthrough as part of the Delhi Metro Phase-IV underground metro construction. The momentous occasion took place today at the Pulbangash Metro Station, where two tunnel boring machines (TBMs), named Bhoomi and Srishti, emerged simultaneously. This achievement marks a pivotal step in the ongoing expansion of the Janakpuri West to R K Ashram corridor (Magenta Line Extension), covering an impressive distance of approximately 3 kilometers.

The dual emergence of TBMs Bhoomi and Srishti is a remarkable feat in tunneling engineering, showcasing the precision and expertise required to manage two machines boring parallel tunnels. DMRC's Chief Secretary of Delhi, Sh. Dharmendra, and MD, Dr. Vikas Kumar, were present to commemorate this historic event, which is one of the few instances where twin TBMs have completed their runs concurrently.

The construction of these tunnels was executed over a period of just 14 months, with both machines successfully traversing a total length of approximately 2,997 meters. This translates to an average excavation rate of 8.2 meters per tunnel per day, making it the longest tunneling drive within DMRC's Phase-IV works.

The tunnels were constructed at depths ranging from 14 to 15 meters beneath the densely populated regions of Rana Pratap Bagh and Punjabi Basti Colony. Notably, the TBMs had to navigate beneath the Najafgarh drain, a sensitive section due to its uncertain structural integrity. Despite the challenges, including submerged water conditions, the Afcons Infrastructure team ensured that no existing structures were damaged during the boring process. Retrieving the TBMs at the under-construction Ghanta Ghar station was also deemed infeasible, further complicating the project.

The finished tunnels feature an internal diameter of 5.8 meters and will include six cross passages to enhance passenger safety during transit. M/s Afcons was awarded the civil package for this critical component of the metro expansion.

This recent achievement at Pulbangash follows another significant milestone reached on August 21, 2024, when DMRC completed a TBM breakthrough at the Chhatarpur

Mandir site on the Delhi Aerocity-Tughlakabad corridor. These successful tunneling operations reflect DMRC's commitment to enhancing Delhi's metro network, thereby providing more efficient public transportation options to the city's residents.

The tunneling work on the Janakpuri West to R K Ashram corridor commenced with the deployment of TBM Bhoomi on June 18, 2023, followed by TBM Srishti on August 19, 2023. As DMRC continues to progress on its Phase-IV expansion, this breakthrough marks a significant milestone in the city's ongoing development of sustainable and efficient transportation infrastructure.

With the completion of these twin tunnels, Delhi Metro Rail Corporation (DMRC) is not just expanding its metro network but is also contributing to the overall improvement of urban mobility in Delhi, ensuring that more citizens can benefit from reliable and efficient public transport.