

Metro rail to use precast girders to avoid traffic jams

Over 80% Of Construction Time Likely To Be Saved

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Precast in a yard, girders will be hoisted on to the top of pillars by gantry cranes and assembled there. This will prevent any sort of disruption in traffic movement on the ground

were 20 metres-25 metres apart," the official said.

In phase-1 lines, CMRL used box girders, which had many small precast segments, each about 2.5 metres long. They were assembled together between two pillars and hence took more time for construction.

Unlike the box girders that are easier to transport and can be assembled on the pillars on even a narrow road, U-girders require longer trailers to transport and broad roads to place them. However, hoisting and placing U-girders on the pillars using cranes can be done in comparatively less time.

CMRL will also use I-girders, which will stand on a single row of columns, in case of cantilever corridors where the concourse and platform levels will be supported by an I-girder.

Chennai: Some of metro rail's elevated lines including those above flyovers in phase-2 will be built quicker without disruption to the traffic below by using long precast 'U' shaped girders. They will be hoisted and fixed en bloc on top of the pillars.

Attempted in phase-1 extension, this is expected to save more than 80% of construction time as it needs very little onsite work and prevents prolonged traffic diversions.

A Chennai Metro Rail Ltd (CMRL) official said each U-girder, around 25 metres long, will span an entire viaduct between two consecutive pillars. Precast in a yard, it will be hoisted on to the top of pillars by gantry cranes and assembled there. This will prevent any sort of disruption in traffic movement on the ground.

In phase-2, elevated lines are planned to rise above at least six flyovers in the city including the existing elevated lines at the Kathipara

junction in Guindy and along elevated highways on Outer Ring Road and Chennai Bypass. Of the 118.9 km to be built in phase-2, 76.3 km will be elevated and two U-shaped girders, each for up-line and downline, will rest on a pier cap on most parts of the elevated lines.

"These U-girders can be assembled in a day between two pillars compared to the box girders used in phase-1 which took four to five days to assemble between two consecutive pillars that