

Hyperscale Data Centre (100MW approximately)

South India

CLIENT	: One of the top 10 companies in Fortune Global 500 list (2019), and one of the top 10 Digital Companies by Forbes
SCOPE	: Master planning and Preliminary Conceptual Design
PROGRAM	: Hyperscale Data Centre of 100MW approximately
PLOT AREA	: 34 acres
BUILT-UP AREA	: ,75,000 Sq. Ft.
STATUS	: Completed

The vision here was to accommodate the maximum number and size of Data Centre modules within a constrained and irregular plot profile.

Locating rectangular Data Centre modules within an irregular plot profile meant careful placement of blocks and smart utilisation of irregular pockets of plot for catering to the space required to be left as per codes, such as towards parking, mandatory open spaces, trees, etc. To add to this, the phased development in this constrained plot which had an external access road only along one side of the plot, meant that the internal road and site infrastructure network had to be done carefully without really duplicating the same.



This image is for representation purpose only. The NDA with the client prevents us from sharing the actual design.

The facility required a space of almost 5 acres to accommodate the sub station to cater to the power requirement of the Data Centre facility, which also required a direct access from the external access road. This added to the complexity. The site being contoured meant that the proposed Data Centre blocks had to be placed at different heights, which meant that there was a need for CFD analysis to be done to ensure that the hot air extracted by the Generator banks of the Block on a higher elevation did not mix with the intake of the Mechanical system of the block placed lower. This process led to assessing various placement options finally leading to the most efficient one. To maximise the development potential, careful study of the various codes had to be done and a recommendation placed forth the Authorities to consider the development under a typology that would be beneficial to the client.