REPORT ON INDUSTRIAL VISIT TO UNDER CONSTRUCTION FLY-OVER IN VIJAYAWADA NEAR PRAKASAM BARRIAGE (VIJ-HYD HIGH WAY)

Name of the place: VIJAYAWADA

Name of the work: CONSTRUCTION OF VIJ-HYD FLY-OVER BESIDE DURGA TEMPLE

Date of visit: 29-09-2016

List of the faculty accompanied:1) Dr. P.POLU RAJU

:2) Mr. S.SHAHABAS

:3) Miss . AFSHAIN SHEIKH

No of students visited:70

All the M. Tech. CTM and structural engineering First year students of Department of Civil Engineering have visited the under constructing fly over near Sri Durga temple in Vijayawada on the bank of Krishna river. With the help of one of the SOMA construction design engineer Mr. Krishna Kanth all the students observed and learned many aspects like foundation details ,reinforcement details, material they are using, equipment what they procured, new technique while constructing. first all the students visited the pre-cast plant of SOMA constructions later they visited the site to visit the live construction process.

Name of the work: CONSTRUCTION OF FLY OVER AND EXTENSION ROAD TO NH-9 BESIDE INDRAKEELAGRI HILL IN VIJAYAWADA.

Duration of project: 1YEAR

Name of the contractor: SOMA CONSTRUCTIONS

Technique used in construction: PRE CAST CONSTRUCTION AND FOR THE CARRIAGE WAY SPINE AND WING METHOD.

Type of soil: BLACK COTTON SILTY SOIL

Type of foundation: PILE FOUNDATION

Vijayawada is the one of the largest cities in Andhra Pradesh. It is the central business center for many years. And NH-9 (VIJ-HYD highway) is the one of the busiest road in our A.P, that to in Vijayawada near Durga temple the place is very narrow so due to that problem traffic is increasing. To decrease the traffic problems our Govt. Initiated the construction of extension road to existing road and construction of fly over on the bank of Krishna river.

The contract is given to SOMA constructions. Due to traffic problems the duration to complete the project is only one year. So they adopted pre cast construction and using high quality of machines and materials.

Machines they procured:

5t crane-1no
20t crane-2no
50t cranes-1no
75t cranes-1no

} pre-cast plant

150t cranes-2no (erecting of pre cast girders)
180t bore drilling equipment-2no
75t bore drilling equipment-5no

} on the site

Total construction of fly over for carriage way is divides into 3 phases.

1)Foundation work

2)Pre-cast slab work

3)Bitumen road laying

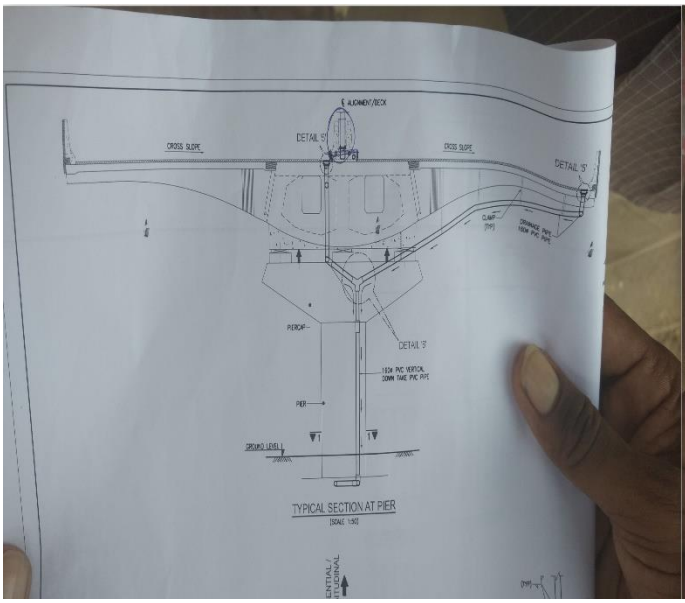
For the pre-cast slab construction they choose **spine and wing** method. In this method the components are divided into three parts. One part is in middle simply placing on the column. and a wing like structure is joined to the middle portion. All the three parts are pre-cast models. The span of each slab is 40m and width of each slab is 24m. The time is limited so they keep the mile stones for each and every 3 months. Total carriage way consist of 6 lanes. It is express way so they chose high strength crash barriers at the end of each slab.

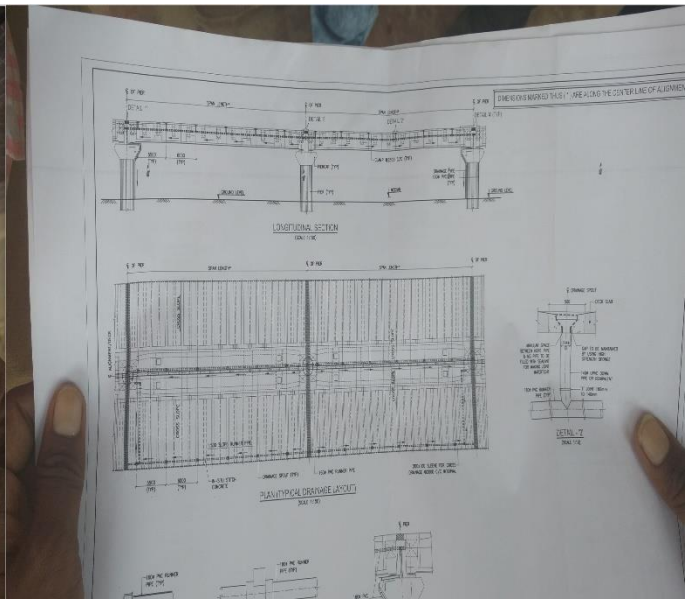
The concrete using for the construction of each pier is M35 and M50 and for the construction of pre-cast construction they choose M60 grade concrete. They are

using stick type concrete. After placing of wings to the central portion they are going for post tensioning to give more strength.

Type of soil on the site is black cotton silty soil so they gone through pile foundation. The depth of each pile is 40ft and 30f. Some of the piles or in side the river Krishna. The company preferred three shifts of work.

On the process of site visiting all the students first went to pre-cast plant. They all watch various parts of pre-cast process and saw various equipment like cranes, automatic bar bending machines, scaffolding work and curing techniques. Later they went to construction site and saw the process of erecting of precast girders, Piling work, reinforcement work and placing of baby wheels in reinforcement to maintain covering depth.





PLAN AND CROSS SECTION OF FLYOVER

HIGH CAPACITY CRANES ON THE PRE-CAST PLANT

AUTOMATIC BAR BENDING MACHINE

ERECTION OF PRE-CAST GUDDERS

REINFORCEMENT FOR PILES AND PRE-CAST GUDDERS