

Chapter 10

Construction Programme, Manpower And Plant Planning

10.1 Construction Programme

The construction work of Cauvery – Vaigai - Gundar link project is proposed to be completed in 6 years. It is proposed to complete all the preliminary works such as additional survey, design studies, laboratory tests, construction of approach roads etc. in the first 2 years. The process of land acquisition and thereafter rehabilitation and resettlement, procurement of machinery and T&P are proposed to be taken-up from the first year itself and can be completed by the end of second year. Construction of colonies and approach roads for the same and laying of electric lines shall also be commenced from first year onwards. The construction of barrage, head regulator is to start with excavation from the third year and would be completed by the end of fifth year. The excavation of canals is to commence from second year and completed by the end of that year. The construction of the cross drainage and cross masonry (CD and CM) works are proposed to be taken up during second year and completed by the end of sixth year. The lining work of the entire length of canal will be started in third year and the same will be completed by the end of sixth year. The distributory system as well as drainage including command area development are programmed to be taken-up simultaneously in the second year and can be completed by sixth year. The unit wise construction programme is given in the following paras:

Unit I - Head Works

All the preliminary works are proposed to commence in the first year and to be completed by the end of second year including designs and field tests. The construction works of barrage and head regulator shall be taken-up from third year and completed by the end of fifth year. Other miscellaneous works are also slated to be taken-up and completed simultaneously.

Unit II - Conveyance System

The preliminary works shall be started from first year and to be finished by second year including land acquisition, rehabilitation and

resettlements. Construction of camp colonies is also proposed to be started in the first year itself and completed by the end of second year. The excavation for main canal, branch canals, construction works of CD & CM structures are to be started from second year and completed by the end of sixth year. The procurement of special tools and plants is to be taken-up in first year and completed in the second year. Construction of distributaries, minors and water courses, are also to be simultaneously started in the second year and completed by sixth year. Plantation can be taken-up in the fifth year and to be completed by sixth year.

10.2 Material Planning

The works broadly comprise of the following items

- (i) Construction of barrage and head regulator
- (ii) Construction of link canal, branch canals, distributaries and field channels and allied works.

All the construction materials like soil for embankments, sand and coarse aggregates are available within a maximum lead of about 70 km from the proposed alignment of the link canal. Nearest stone and sand quarries have been identified during the surveys and investigations, throughout the length of the link canal. Cement and steel required, can be procured from places identified for the purpose, which are well connected by roads and railways. These aspects are dealt in Chapter on "Surveys and Investigations".

10.3 Plant and Machinery Planning

The special tools and plants required for construction of the link project are shown in Table 10.1.

Table 10.1
Requirement of Special Tools and Plants for Construction of Link Canal

Sl.No.	Item	No.
I.	"Q" Special tools and plants (Machinery)	
1	Hydraulic Excavator 3.8 m ³	5
2	Hydraulic Excavator 2.84 m ³	1
3	Rear dumper 35T	33
4	Wagon drills	3
5	Air compressors 40 cft	3
6	Concrete mixer 1077 cft	1
7	Concrete mixer 1 m ³ with weight batcher	3
8	Dozer 320 HP	1
9	Water tanker 7500 Lts.	5
10	Water pump 10 HP	2
11	Vibrator rollers	1
12	Trucks 8-10T	10
13	Motorised water tanker 7500 Lts.	15
14	Trailors 25T	1
15	Trailors 40T	1
16	Pneumatic tractor 50 HP	9
17	Trailors 7.5T	9
18	Crane 10 T	1
19	Generator 75 kVA	1
20	Water pump	3
21	Workshop equipment	27
22	Dewatering equipment	3
23	Explosive van	1
II.	Inspection and transportation vehicles	
24	Jeeps	37
25	Cars	2
26	Ambulances	1
27	Buses	1
28	Station wagons	9
29	Jeep trailors	6

10.4 Manpower Planning

It is proposed to have, in all, four Circle offices including a Design Circle under one Chief Engineer's office to be located at Madurai. Each of

these Circles in turn will have four Divisions located at various places along the canal alignment for effective execution of works. In addition to these, three Circle offices will have one Mechanical Division each. It is also proposed to have two Pay and Accounts Offices to facilitate the financial transactions in respect of the works and other payments like Salaries, T.A & D.A etc. to the personnel working in the project offices. Two Special Deputy Collector offices are proposed to be set up for the land acquisition and other related works. Suitable places along the link alignment for locating all these offices have been tentatively identified to facilitate effective monitoring and control over the execution of various works.

10.5 Programme of year-wise expenditure

The total cost of the Cauvery – Vaigai - Gundar link project is estimated to be Rs. 267259 lakh at 2003-04 price level. Table 10.2 shows the tentative distribution of the year-wise expenditure for construction of the link project, so as to complete the same within the proposed period of construction of 6 years.

Table 10.2
Year-wise Expenditure for the Construction of the Link Canal

Year	Expenditure (Rs. in lakh)		
	Unit I	Unit II	Total
1 st	1175	36295	37470
2 nd	157	49970	50127
3 rd	1560	43926	45486
4 th	1560	45153	46713
5 th	1418	58873	60291
6 th	97	27075	27172
Total	5967	261292	267259

If financial allocations are made in accordance with the above proposed year-wise distribution, duly increasing the same in relation to the possible inflation and planning of men and material is properly done, the construction of the project can be completed within the proposed period of 6 years.