

CHAPTER - XII

CIVIL CONSTRUCTION

12.1 Introduction

The life of Amrapali Opencast Project with a rated capacity of 12.0MTY has been estimated as 28 years and so permanent type of construction has been proposed for residential and service buildings. The cost estimate for civil construction has been worked out based on the cost index of 1408 with respect to 100 base at Delhi as on 1.10.1976. Three variants namely, coal outsourcing option, coal & OB departmental option & coal & OB both outsourcing option have been prepared in the DPR. The details have been given in respective Appendix-A.2.3.

12.2 Buildings

12.2.1 Residential Buildings

The manpower requirement for this project is estimated at 55% housing satisfaction. The details are given in Appendix-A.2.1.

12.2.2 Service Buildings

Provision has been made in this report for the construction of a GM/P.O. Office, Store, Electrical Sub-station, Magazine and Excavation Workshop suitable for the repair and maintenance of 170T/85T Dumper and other HEMMs deployed in this Project. Other welfare buildings like first aid centre, rest shelter, dispensary, Primary, school, officers' club bank building, post office, shopping centre etc. have also been provided. Details of service buildings have been given in Appendix-A.2.2.

12.3 Roads & Culverts

12.3.1 Approach Road to Project

A 4.0 Km. Long approach road has been proposed from Tandwa-Chatra road to the Amrapali project. The estimated capital expenditure for this road and details has been furnished in Appendix-A.8.2.1.

12.3.2 Colony Road

The length of the colony road inside the township and estimated capital investment for colony roads along with culverts have been furnished in Appendix-A.8.2.2.

12.3.3 Haul Road

The total estimated capital expenditure on haul road and details have been given in Appendix-A.8.2.3.

12.3.4 Approach Road to Magazine

The estimated capital investment for 3.0 KM long approach road to Magazine is furnished in Appendix-A.8.2.4.

12.3.5 Approach Road to Colony

The estimated capital investment for approach road to colony has been estimated and the details have been given in Appendix-A.8.2.5.

12.3.6 Strengthening and Widening of Piparwar-Tandwa Road

The existing PWD road connecting Piparwar to Tandwa needs strengthening and widening. A lump sum amount has been provided for this. Half of this amount has been charged to Magadh OCP and remaining half has been charged to Amrapali OCP. The details have been given in Appendix-A.8.2.

12.3.7 Bridges

A lump sum amount has been provided for the construction of bridges over river as shown in Appendix-A.8.2.

7.15.1.4 External P&T Telephone Communication System

Twenty-five telephone lines with a EPABX interface have been provided for P&T communication and access to public communication grid. These telephones sets would be located in the residence and office of key personnel of the project, sub- station, railway siding, CHP, workshop, magazine, stores, hospital and water supply etc.

7.15.1.5 Fax Facility

FAX facility alongwith EMAIL is provided for this project having connection from Piparwar P&T Exchange.

7.15.1.6 Fire Alarm and Signalling System

Various structures and buildings of industrial site would be equipped with fire-alarm signaling facilities. Hand operated fire alarm warning signaling boxes would be installed on the walls of buildings and structures at all strategic places.

7.15.1.7 Automatic Truck Despatching & Allocation System

(Common for Coal out sourcing option and Fully departmental option)

The main feature of the system shall be as follows:

- i) Real time continuous monitoring of activities and operational status of HEMMs viz. spotting, loading, dumping, breakdown etc.
- ii) Real time monitoring of production and performance of HEMMs.
- iii) Display of production status (Coal & OB), equipment, and equipment status, shovel dumper assignment, individual and average cycletime etc.
- iv) Automatic dumper despatching; optimum shovel dumper assignment.
- v) Management information generation and reporting comprising production reports, stand still report availability report, utilization report detailed operational analysis reports etc.
- vi) Bi-directional voice and data communication between different operational locations.

The above TMMS system shall be based on global positioning system (GPS). A radio trunking system is envisaged to accomplish the voice communication part of the truck despatching system.