

## 3.2 REPORT PREPARATION

### 3.2.1 Principles for report preparation

The report should be prepared in such a manner that on the study of report, one can get an idea about the complete work.

The report should be given at the beginning of the estimate followed by calculation, design, general and detailed specifications.

### 3.2.2 Report On Estimate Of Residential Building

Report On Estimates for the Construction of Residential Building.

The detailed estimate for construction of a residential building for the Executive Engineer at Udaynagar has been prepared in compliance of S.E.'s letter no...  
.....dated.....

There is no building for the residence of the Executive Engineer at Udaynagar and he has to live in a rented building with meager accommodation at a very high rent. It has, therefore, been proposed to construct a residential building for the Executive Engineer. The head of the accounts will be 50 civil original works, building.

The estimate provides for the following accommodation:-

One drawing room, one dining room, three bed rooms, one guest room, and the necessary store kitchen, baths, front and back verandahs and motor garage per plan enclosed.

A site has already been selected having a land of 60 m - 30 m (200 - 100') for the construction of the building having good soil and proper drainage and this much of land has to be acquired. The building shall be oriented to face north direction.

The building shall have lime concrete foundation and first class brick masonry with lime mortar up to plinth level and the superstructure shall be of first class brick work in cement mortar, 1 : 6. Lintels shall be of R.B. work and roof shall

be / R.C.C with lime concrete terrace finishing. The drawing and dining rooms shall have mosaic floor and other rooms 2.5 cm (1') c.c. floor over 7.5 cm (3') lime concrete. Inside and outside walls shall be 12 mm (1/2 ") cement line plastered 1:1:6, and ceiling shall be 6 mm (1/2 ") cement plastered 1:3. Inside of drawing and dining rooms shall be colour washed and inside of remaining rooms shall be white washed and outside wall be colour washed. Doors and windows shall be 4.5cm 1 3 4" thick teak wood with chaukhat or sal wood and enamel painted. All work shall be strictly as per detailed P.W.D. Specification.

The estimate has been prepared at P.W.D Schedule of rates, and for non-schedule items on analysis of rates. The foundation has been designed for a safe load of 9 tone per sq m (8 ton per sq ft) and the R.C.C roof has been designed for a safe load of 150 kg per sq m (30 lbs per sq ft) with 1400 kg per sq cm (20000 lbs per sq in) as safe tensile stress of steel and 50 kg sq cm (750 lbs per sq in) as safe compressive stress of concrete. All designs and calculations have been included in the estimate. Plans and drawings and site plans are also enclosed with the estimate.

Provision has been made for electrification and sanitary and water supply works and 20% of the estimated cost of the building works has been included for these works. As there is no sewer line in the area a septic tank shall have to be constructed for which lump sum provision of Rs.700,00 has been made in the estimate.

Provision for compound with a gate in the front and barbed wire fencing on the sides and back, and approach road have also been made in the estimate.

A statement of important materials as cement, steel, coal, etc., which shall have to be arranged by the department is also enclosed with the estimate. A rent statement is also enclosed.

The work shall be carried on contract by inviting tenders. The work shall be completed within six months from the date of start.

### 3.2.3 Report On Estimate Of Culvert

The estimate has been prepared for the construction of an arch culvert of 3m span in 15 km-300 m on Lucknow –Daulatpur road. The road at this point is flooded almost every year during the rainy season, causing flood and damages in the area. During the last inspection the Executive Engineer has asked to prepare an estimate and this estimate has been prepared in compliance of E.E's letter no .....dated ..... the cost of construction will be met from 50 civil work special repairs.

The culvert has been designed for I.R.A Class a loading. The catchment area has been determined from the 2.5 cm (1') map of the area, which comes to 1200 acres, and the water way has been calculated by the Talbot formula  $a = CA^{3/4}$ , where a = waterway in sq. ft, CA = Catchment area in acres, and c= constant and has been taken as 0.2. All calculation and design have been enclosed with the estimate.

The soil has been tested and has been found to be good, and ordinary spread foundation will be sufficient. The foundation shall be of cement concrete 1:4:8 and abutments, wing walls and parapets shall be of brick masonry in 1:5 cement mortar, the arch work shall be of brick masonry in 1:3 cement mortar. Exposed surfaces shall be cement pointed 1:2. all works shall be as per detailed P.W.D Specifications.

The estimate has been prepared at P.W.D Schedule of Rates. A statement of materials, cement, bricks, coal, etc., required for the construction, has been enclosed with the estimate. The work shall be executed on contract by inviting tenders and the work shall be started after the rainy season and shall be completed within four month's time.

### 3.2.4 Report On Estimate Of Roads

The estimate for the construction of Hindnagar – kaliganj road of 25 km – 500 m length has been prepared for linking Kaliganj with the District Headquarters in compliance with S.E.'s letter no.....dated.....

Kaliganj is an important market place for agricultural products and there are some cottage industries in the area, and there having no road the area is not being developed. The proposed road will also serve many villages on either side. The people of the locality have also represented and demanded separately for the construction of this road. It is therefore essential to construct this road. The proposal has been included in the Fourth Five year Plan and the cost will be met from the Road Development Fund.

Alignment of the road follows an existing card road with straightening when necessary and avoiding congested areas as far as possible. Flat curves have been provided with a minimum radius of 150 m. In selecting the alignment principles of shortest route, serving maximum population, minimum drainage crossing easy gradient economy of construction, etc., have been followed. The road passes mostly through uncultivated area in plane land, and mostly in banking of 60 cm to 90 cm high excepting a few places where the road passes in low where high banking will be required.

Planet table survey has been made for the whole length of the road for 60 m width on each side of the centre line and L-section has been prepared by taking levels at every 30 m and cross levels have been taken at every 90 meter. Formation line has been fixed to have easy gradient and ruling gradient of 1 in 40 has not reached anywhere. Highest flood level has been kept in view and formation line has been kept above normal flood level.

A number of culverts will be required along the length of the road and ridge of about 30 m span will be required across the stream in km 12. A list of

bridges and culverts of different span has been enclosed and provisions have been made on the basis of running meter of span at the rate of Rs. 5,000.00 per r m of span for culverts and Rs. 6,000.00 per r m of span for bridges.

Bridges shall have to be designed on I.R.C class A Loading and their detailed estimate shall have to be prepared separately.

A present land of 30 m width shall be required and has been provided in the estimate. Temporary land for borrowpits shall be required for one year for taking earth for embankment and provision has been made accordingly.

The road shall be metalled with soling coat of brick on edge with over burnt bricks

and two coats of metalling, inter coat and top coat, each of 8 cm compacted layer with stone ballast. The two wearing coats shall be of one coat of bituminous painting. Provisions for metalling and painting have been made in the estimate accordingly. Brick shall be burnt by contract by the side of road distributed along the road in three brick kilns. Coal shall have to be supplied to contractors for burning bricks and a statement of coal requirement is enclosed. Stone metal shall be hard granite type and shall be collected from the approved quarry.

The whole work of construction shall be spread in five years, earth work one year, rest for settlement one year, metal ling two years and painting one year.

Second coat bituminous painting shall be done after one year of 1st coat of painting and cost of painting shall be met from maintenance grant.

All works shall be done strictly as per detailed P.W.D Specifications. The estimate has been prepared at P.W.D Schedule of rates and local current rates and analysis of rates have been given forenoon-schedule items. The work shall be done by contract by inviting tenders.

Survey Plan, L-sections and Cross-sections of the proposed road are enclosed with the estimate. An index plan showing the alignment has also been enclosed.

The estimate amounting to Rs. 25,00,000.00 has been submitted for sanction and allotment of fund.

