The government of madritles Ministry of Energy. Water resources and Postal Services Central Water Authority

# THE DETAILED DESIGN ON THE PORT LOUIS WATER SUPPLY PROJECT IN MAURITIUS

FINAL REPORT (2)

## COST ESTIMATE

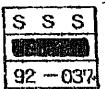
FOR

LOT III : RAW WATER TRANSMISSION PIPELINE AND TREATMENT FACILITIES



**MARCH 1992** 

JAPAN INTERNATIONAL COOPERATION AGENCY



# THE GOVERNMENT OF MAURITIUS MINISTRY OF ENERGY, WATER RESOURCES AND POSTAL SERVICES CENTRAL WATER AUTHORITY

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# PORT LOUIS WATER SUPPLY PROJECT COST ESTIMATE

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#### 1. GENERAL

This report presents the construction cost for the implementation of the Lot III, Raw Water Transmission Pipeline and Treatment Facilities of the Port Louis Water Supply Project.

The construction cost of the Lot III of the Project is estimated at the price level of January 1991 as follows;

Foreign currency Local currency	; ;	US\$ MRs.	8,540 52,800	x 10 <sup>3</sup> x 10 <sup>3</sup>	(68.9 %) (31.1 %)
Total (equivalent to)	:	MRs.	169,800	x 10 <sup>3</sup>	(100 %)

The direct cost of the Lot III Work is estimated on the basis of the Bill of Quantities, Detailed Design Drawings, Specifications and the proposed construction plan and schedule developed in the study of this design stage. In order to make an accurate cost estimate, unit price estimate method is mainly applied for each work. Furthermore, the estimate procedures and the breakdown of the unit cost are applied taking into account a prevailing estimate procedures in Mauritius, a recent international tendering system and a financial source.

The unit prices are estimated and analysed on the basis of local conditions, the proposed construction method, accurate unit rates of labour wages, material and equipment costs, and data referring to the recent tender prices on the similar projects in Mauritius.

The summary of construction cost is shown in Table 1.1.

Table 1.1 Summary of Construction Cost for Lot III Work

Divisi		Foreign	Local	Total Amount
No.	Description	Currency (US\$)	Currency (MRs.)	(MRs.)
A.	General and Preliminary Items	197,200	4,455,900	7,157,540
В.	Raw Water transmission Pipeline	1,378,658	5,288,812	24,176,426
C.	Treatment Facilities Total of Direct Cost	5,227,464 6,803,322	27,289,375 37,034,087	98,905,631 130,239,598
D.	Engineering and Administ- ration Cost	680,300	4,870,000	14,190,000
E.	Physical Contingency	374,160	2,095,000	2,469,160
F.	Price Contingency	682,482	8,800,913	22,901,242
	Total Construction Cost	8,540,000	52,800,000	169,800,000

#### 2. BASIC CONDITIONS

The basic conditions and assumptions applied for the cost estimate are described below:

- The unit prices and rates are based on the current prices for labour, material and equipment as of January 1991.
- The estimated cost is composed of a foreign currency portion in US Dollar (US\$) and a local currency portion of Mauritian Rupee (MRs.). The total amount is converted into MRs as an equivalent price.
- The exchange rates are employed in consideration of the prevailing exchange rate in January 1991. The exchange rates used in this cost estimate are as follows:

US\$ 1.0 = Yen 130 = Rs. 13.7

- The work quantities are calculated from the detailed design drawings and the technical specifications of the tender documents of Lot III Contract as shown in the BILL OF OUANTITIES.
- The construction works will be carried out by a contractor selected through an international competitive tender in accordance with a guidelines of CWA in Mauritius and a financial source. All construction equipment and machinery, Engineer's office and laboratory tests are to be provided by the Lot III contractor.
- Annual price escalation rates are assumed to be 3 per cent for the foreign currency portion and 7 per cent for the local currency portion.
- In principle, the import taxes and duties on construction equipment and materials which are imported for construction of the Project are excluded from this cost estimate.

#### 3. CONSTITUTION OF CONSTRUCTION COST

The construction cost consists of a direct cost (contract cost) and an indirect cost. The direct construction cost is estimated based on the work items and quantities derived from the detailed design. This cost includes the labour wages, material cost, equipment cost and contractor's indirect cost such as overhead and profit. The direct construction cost is estimated in the Priced Bill of Quantities.

Whilst, the indirect cost includes the land compensation, administration expenses of the CWA, engineering services, physical contingency and price contingency as the price escalation.

(1) Direct Construction Cost (Contract Cost)

Lot III: Raw Water Transmission Pipeline and Treatment Facilities

- (2) Indirect Cost
  - Compensation for wayleave of the pipeline

- Administration expenses
- Engineering services
- Physical contingency
- Price contingency

#### 4. DIRECT CONSTRUCTION COST

- 4.1 Construction Works in Lot III (Raw Water Transmission Pipeline and Treatment Facilities)
- (1) General

Lot III Work consists of:

#### A: GENERAL and PRELIMINARY ITEMS

Costs of: - performance bond and advanced payment bond

insurance of Work, third party insurance and insurance against accident to workmen

- contractor's camps, office and other facilities

 office and other required equipment for PMO/Engineer's Representative

providing and maintaining all attendance for the said office

temporary water supply facilities

temporary electrical supply facilities

chemical, equipment, labour for disinfection of filter
 and filtered water pipelines.

#### B: RAW WATER TRANSMISSION PIPELINE

Costs of: - intake

raw water transmission

river crossings

wash-out pipe

tunnel crossing

#### C: TREATMENT FACILITIES

Costs of: - receiving tank

rapid mixing tank

flocculation and sedimentation tank

filter

wastewater and sludge ponds

yard piping

sitework

chemical building

operation building

- chlorination building

- workshop

mechanical facilities

electrical facilities

#### (2) Cost Component of Direct Construction Cost

The direct construction costs of civil engineering works and building works are estimated by adopting the method of unit price multiplied the corresponding work quantity and lump sum prices, based on labour wages and the cost of materials and construction equipment. The contractor's indirect cost consisting of overhead expense and profit is included in the unit price of each work item.

The cost of imported equipment and materials is estimated at CIF price at Port Louis in foreign currency portion. The import tax and duties for the construction equipment and machinery procured and imported from foreign countries are not included in the cost estimate, on the condition that such equipment shall be exported immediately after completion of the Project.

The costs for supply and delivery of imported items, ocean freight and insurance are considered in foreign currency portion. The cost for unloading and other charges at port and inland transportation expenses are estimated in local currency portion.

The main components of the cost are described as follows:

#### a. Labour Wages

All the labours required for the construction are assumed to be local labours and the cost is computed in the local currency portion. However, some foreign technicians such as foreman, mechanics and specialist are considered for the special works. The foreign labour wage is computed in the foreign and local currencies taking into account the annual income, air fare and living allowances, etc.

Daily labour wages are estimated at the average rates between the standard and currently prevailing wages obtained in Mauritius. The labour wages are estimated at the rate of 7 working hours per day and 40 hours per week according to the labour regulation.

The applied labour wages, which include the labour's all fringe benefits such as vacation and sick leaves, charge of insurance, medical care, living allowance and others, are shown in Table 4.1.

Table 4.1 Basic Labour Wages for Cost Estimate

	Description	Unit	F/C (US\$)	L/C (MRs)
1. 2. 3.	Foreign Foreman Foreman Common Labour	m.d. m.d. m.d.	171.23	570 350 170
4. 5. 6.	Skilful Labour Driver for Vehicle	m.d. m.d.	e	240 240
6. 7.	Driver for Dump-truck Operator for Construction Machine	m.d. m.d.		270 300
8. 9. 10.	Assistant Operator Mechanic for repair Welder	m.đ. m.d. m.d.		220 300 240
11. 12.	Plumber Carpenter	m.d. m.d.		240 220
13. 14. 15.	Concrete worker Steel Bar Bender Plasterer	m.d. m.d. m.d.	 	200 220 220
16. 17.	Stonemason Painter	m.d. m.d.	<del></del>	240 270
18.	Electrician	m.d.	-	300

Notes: 1. Exchange rate : US\$1.0 = Rs.13.7 = \$130.0

2. Extra payment for overtime

Normal overtime : 50 %
Night work : 50 %
Holidays and Sundays : 100 %

#### b. Material cost

Several construction materials may be purchased by the contractor in local markets. However, availability of these materials is little in large amount. Therefore, local materials employed in the cost estimate are only sand, gravel, rubble stone, ready mixed concrete, concrete products and timber. Some material prices of the said items were collected in the Port Louis area. These prices are assumed to be purchased price at site including inland transportation expenses from the markets. Here, the local materials are considered to include the indirect foreign cost such as the equipment depreciation cost and imported raw material cost, etc.

Most of major material costs could not be collected in Mauritius. Therefore, the costs other than the above-mentioned items are all assumed as the imported materials from abroad, taking into consideration the insufficient supply in Mauritius.

As for the costs of all imported materials, these are estimated on the basis of CIF prices at Port Louis including freight and insurance premium in the foreign currency portion, referring to the prevailing prices in Japanese market. The costs of handling charge at port and inland transportation expenses to the site are estimated in the material prices in the local currency portion.

Material costs used for the cost estimate are listed in Table 4.2.

Table 4.2 Construction Material Cost for Lot III Work

### MATERIAL PRICES AT SITE

As of Jan. 1991

Description					AS 01 Jan. 199
2. Reinforcing Bar 3. Sand (for aggregate, basait sand) 4. Sand (unwashed rocksand) m3 10.42 95.20 5. Gravel (for aggregate) m3 10.12 92.40 6. Gravel (for aggregate) m3 7.53 68.80 7. Rubble stone m3 8.32 76.00 8. Wood (log) m3 294.92 2,693.60 9. Timber, board m3 243.21 13,328.00 10. Timber, plank m3 238.69 13,080.00 11. Plywood (t= 3 mm) m2 10.34 7.09 12. Concrete Block - 150 x 200 x 450 nr - 7.34 - 200 x 200 x 450 nr - 8.35 13. Gasoline lit 0.91 0.62 14. Diesel Oil lit 0.52 0.36 15. Engine Oil kg 0.73 0.50 17. Oxygen Gas (8,100 lit) cyl 22.80 15.45 18. Acetylene (6,075 lit) cyl 22.80 15.45 19. Ready mixed concrete - Type A, 30 N/mm2 m3 85.80 784.00 724.00 - Type B, 25 N/mm2 m3 85.80 784.00 729 - Type C, 20 N/mm2 m3 85.80 784.00 729 - Type D, 15 N/mm2 m3 80.20 732.00 - Type D, 15 N/mm2 m3 80.20 732.00 - Type D, 15 N/mm2 m3 80.20 732.00 - DN 40 mm, t= 3.0 mm m 1.30 0.89 - Type D, 15 N/mm2 m3 80.20 732.00 - DN 40 mm, t= 3.0 mm m 1.80 1.23 - DN 50 mm, t= 4.0 mm m 1.80 1.23 - DN 100 mm, t= 4.0 mm m 1.80 1.23 - DN 100 mm, t= 4.4 mm m 1.80 1.23 - DN 100 mm, t= 4.4 mm m 1.80 1.23 - DN 100 mm, t= 6.5 mm m 26.90 18.43 21. Galvanised steel pipe - DN 63 mm, t= 11.6 mm m 26.90 18.43 22. Shape steel - DN 80 mm m 26.20 17.95 m n 26.20 17.95 n n 26.20 17.95		Description	Applied Unit		
2. Reinforcing Bar 3. Sand (for aggregate, basait sand) 4. Sand (unwashed rocksand) m3 10.42 95.20 5. Gravel (for aggregate) m3 10.12 92.40 6. Gravel (for aggregate) m3 7.53 68.80 7. Rubble stone m3 8.32 76.00 8. Wood (log) m3 294.92 2,693.60 9. Timber, board m3 243.21 13,328.00 10. Timber, plank m3 238.69 13,080.00 11. Plywood (t= 3 mm) m2 10.34 7.09 12. Concrete Block - 150 x 200 x 450 nr - 7.34 - 200 x 200 x 450 nr - 8.35 13. Gasoline lit 0.91 0.62 14. Diesel Oil lit 0.52 0.36 15. Engine Oil kg 0.73 0.50 17. Oxygen Gas (8,100 lit) cyl 22.80 15.45 18. Acetylene (6,075 lit) cyl 22.80 15.45 19. Ready mixed concrete - Type A, 30 N/mm2 m3 85.80 784.00 724.00 - Type B, 25 N/mm2 m3 85.80 784.00 729 - Type C, 20 N/mm2 m3 85.80 784.00 729 - Type D, 15 N/mm2 m3 80.20 732.00 - Type D, 15 N/mm2 m3 80.20 732.00 - Type D, 15 N/mm2 m3 80.20 732.00 - DN 40 mm, t= 3.0 mm m 1.30 0.89 - Type D, 15 N/mm2 m3 80.20 732.00 - DN 40 mm, t= 3.0 mm m 1.80 1.23 - DN 50 mm, t= 4.0 mm m 1.80 1.23 - DN 100 mm, t= 4.0 mm m 1.80 1.23 - DN 100 mm, t= 4.4 mm m 1.80 1.23 - DN 100 mm, t= 4.4 mm m 1.80 1.23 - DN 100 mm, t= 6.5 mm m 26.90 18.43 21. Galvanised steel pipe - DN 63 mm, t= 11.6 mm m 26.90 18.43 22. Shape steel - DN 80 mm m 26.20 17.95 m n 26.20 17.95 n n 26.20 17.95	1.	Portland cement	ton	111.68	76.50
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6. Gravel (Crusher run) m3 7.53 68.80 7 7. Rubble stone m3 8.32 76.00 8 8. Wood (log) m3 294.92 2,693.60 9 9. Timber, board m3 243.21 13,328.00 10. Timber, plank m3 238.69 13,080.00 11. Plywood (t= 3 mm) m2 10.34 7.09 12. Concrete Block - 150 x 200 x 450 nr - 7.34 - 200 x 200 x 450 nr - 8.35 13. Gasoline lit 0.91 0.62 14. Diesel Oil lit 0.91 0.62 0.36 15. Engine Oil lit 0.91 0.62 16. Asphalt kg 0.73 0.50 17. Oxygen Gas (8,100 lit) cyl 22.80 15.45 18. Acetylene (6,075 lit) cyl 47.40 32.45 19. Ready mixed concrete - Type A, 30 N/mm2 m3 88.40 808.00 - Type B, 25 N/mm2 m3 85.80 756.00 - Type B, 25 N/mm2 m3 80.20 732.00 - Type C, 20 N/mm2 m3 80.20 732.00 - Type F, 30 N/mm2 m3 80.20 732.00 - Type F, 30 N/mm2 m3 91.00 832.00 92.00 PVC pipe - DN 40 mm, t= 3.0 mm m 1.30 0.89 - DN 50 mm, t= 4.0 mm m 1.80 1.23 - DN 10 mm, t= 4.0 mm m 1.80 1.23 - DN 110 mm, t= 5.6 mm m 4.40 5.75 - DN 160 mm, t= 6.5 mm m 5.60 3.84 - DN 110 mm, t= 5.6 mm m 6.90 4.73 - DN 100 mm m 1.80 m 12.88 - DN 100 mm m 1.30 7.74 - DN 100 mm m 1.30 7.74 - DN 100 mm m 1.80 12.88 - DN 125 mm m 26.20 17.95 - DN 150 mm m 26.50 18.43 - DN 150 mm m 13.00 7.74 - DN 100 mm m 18.80 12.88 - DN 125 mm m 26.20 17.95 - DN 150 mm m 26.20 17.95 - DN 150 mm m 13.00 7.74 - DN 100 mm m 18.80 12.88 - DN 125 mm m 26.20 17.95 - DN 150 mm m 26.20 17.95 - DN 150 mm m 37.10 25.41 Samp - DN 162 mm m 16.70 17.44 - DN 100 mm m 18.80 12.88 - DN 125 mm m 26.20 17.95 - DN 150 mm m 37.10 25.41 Samp - DN 150		Gravel (for aggregate)			
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9. Timber, board m3 243.21 13,328.00 11. Plywood (t= 3 mm) m2 10.34 7.09 12. Concrete Block	7.	Rubble stone			
10. Timber, plank m3 238.69 13,080.00 11. Plywood (t= 3 mm) m2 10.34 7.09 12. Concrete Block - 150 x 200 x 450 nr - 7.34 - 8.35 13. Gasoline lit 0.91 0.62 14. Diesel Oil lit 0.52 0.36 15. Engine Oil lit 2.41 1.65 16. Asphalt kg 0.73 0.50 17. Oxygen Gas (8,100 lit) cyl 22.80 15.45 18. Acetylene (6,075 lit) cyl 47.40 32.45 19. Ready mixed concrete - Type A, 30 N/mm2 m3 88.40 808.00 734.00 734 19. Ready mixed concrete - Type B, 25 N/mm2 m3 85.80 784.00 739.00 732	8.				
11. Plywood (t= 3 mm) m2 10.34 7.09  12. Concrete Block - 150 x 200 x 450 nr - 7.34 - 200 x 200 x 450 nr - 8.35  13. Gasoline lit 0.91 0.62 14. Diesel Oil lit 0.52 0.36 15. Engine Oil lit 2.41 1.65 16. Asphalt kg 0.73 0.50 17. Oxygen Gas (8,100 lit) cyl 22.80 15.45 18. Acetylene (6,075 lit) cyl 47.40 32.45 19. Ready mixed concrete - Type A, 30 N/mm2 m3 88.40 808.00 - Type B, 25 N/mm2 m3 85.80 784.00 - Type C, 20 N/mm2 m3 82.80 756.00 - Type C, 10 N/mm2 m3 80.20 732.00 - Type F, 30 N/mm2 m3 91.00 832.00  PVC pipe - DN 40 mm, t= 3.0 mm m 1.30 0.89 - DN 50 mm, t= 4.0 mm m 1.80 1.23 - DN 63 mm, t= 3.2 mm m 2.70 1.85 - DN 90 mm, t= 4.7 mm m 5.60 3.84 - DN 110 mm, t= 5.6 mm m 16.70 11.44 - DN 225 mm, t= 11.6 mm m 26.90 18.43  21. Galvanised steel pipe - DN 50 mm m 11.30 7.74 - DN 100 mm m 18.80 12.88 - DN 100 mm m 18.80 12.88 - DN 100 mm m 18.80 12.88 - DN 100 mm m 11.30 7.74 - DN 100 mm m 18.80 12.88 - DN 100 mm m 18.80 12.88 - DN 100 mm m 18.80 12.88 - DN 100 mm m 17.90 11.44 - DN 125 mm m 26.20 17.95 - DN 150 mm m 37.10 25.41  22. Shape steel - H steel ton 619.50 424.36 - I beam ton 739.70 506.69 - Angle ton 582.30 398.90 - Chennel (t= 4.5 mm) ton 1,034.15 708.40	9.				
12. Concrete Block		Timber, plank			
- 150 x 200 x 450	11.	Plywood (t= 3 mm)	m2	10.34	7.09
- 200 x 200 x 450	12.				77.24
13. Gasoline       lit       0.91       0.62         14. Diesel Oil       lit       0.52       0.36         15. Engine Oil       lit       2.41       1.65         16. Asphalt       kg       0.73       0.50         17. Oxygen Gas (8,100 lit)       cyl       22.80       15.45         18. Acetylene (6,075 lit)       cyl       47.40       32.45         19. Ready mixed concrete       -       Type A, 30 N/mm2       m3       88.40       808.00         - Type B, 25 N/mm2       m3       85.80       784.00         - Type D, 15 N/mm2       m3       80.20       732.00         - Type F, 30 N/mm2       m3       80.20       732.00         - Type F, 30 N/mm2       m3       80.20       732.00         - Type F, 30 N/mm2       m3       91.00       832.00         20. PVC pipe       -       -       DN 40 mm, t= 3.0 mm       m       1.30       0.89         - DN 50 mm, t= 4.7 mm       m       1.80       1.23         - DN 63 mm, t= 3.2 mm       m       2.70       1.85         - DN 110 mm, t= 5.6 mm       m       16.70       11.44         - DN 225 mm, t= 11.6 mm       m       26.90       18.43				Name of the Control o	
14. Diesel Oil lit 0.52 0.36 15. Engine Oil lit 2.41 1.65 16. Asphalt kg 0.73 0.50 17. Oxygen Gas (8,100 lit) cyl 22.80 15.45 18. Acetylene (6,075 lit) cyl 47.40 32.45 19. Ready mixed concrete  - Type A, 30 N/mm2 m3 88.40 808.00  - Type B, 25 N/mm2 m3 85.80 784.00  - Type C, 20 N/mm2 m3 80.20 732.00  - Type D, 15 N/mm2 m3 80.20 732.00  - Type F, 30 N/mm2 m3 91.00 832.00  20. PVC pipe  - DN 40 mm, t= 3.0 mm m 1.30 0.89  - DN 50 mm, t= 4.0 mm m 1.80 1.23  - DN 63 mm, t= 3.2 mm m 2.70 1.85  - DN 100 mm, t= 6.5 mm m 8.40 5.75  - DN 160 mm, t= 6.5 mm m 16.70 11.44  - DN 225 mm, t= 11.6 mm m 26.90 18.43  21. Galvanised steel pipe  - DN 80 mm m 11.30 7.74  - DN 100 mm m 18.80 12.88  - DN 100 mm m 18.80 12.88  - DN 125 mm m 26.20 17.95  - DN 150 mm m 37.10 25.41  22. Shape steel  - H steel ton 619.50 424.36  - I beam ton 739.70 506.69  - Angle ton 675.30 462.58  - Plate (t= 4.5 mm) ton 7,08.40	1.2		nr 124	0.01	
15. Engine Oil lit 2.41 1.65 16. Asphalt kg 0.73 0.50 17. Oxygen Gas (8,100 lit) cyl 22.80 15.45 18. Acetylene (6,075 lit) cyl 47.40 32.45 19. Ready mixed concrete  - Type A, 30 N/mm2 m3 88.40 808.00  - Type B, 25 N/mm2 m3 85.80 784.00  - Type C, 20 N/mm2 m3 82.80 756.00  - Type C, 20 N/mm2 m3 91.00 832.00  20. PVC pipe  - DN 40 mm, t= 3.0 mm m 1.30 0.89  - DN 50 mm, t= 4.0 mm m 1.80 1.23  - DN 63 mm, t= 3.2 mm m 2.70 1.85  - DN 110 mm, t= 5.6 mm m 8.40 5.75  - DN 110 mm, t= 6.5 mm m 16.70 11.44  - DN 225 mm, t= 11.6 mm m 26.90 18.43  21. Galvanised steel pipe  - DN 80 mm m 11.30 7.74  - DN 100 mm m 18.80 12.88  - DN 125 mm m 26.20 17.95  - DN 150 mm m 37.10 25.41  22. Shape steel  - H steel ton 619.50 424.36  - I beam ton 739.70 506.69  - Angle ton 795.50 544.92  - Checkered plate (t= 4.5 mm) ton 1,034.15 708.40					
16.       Asphalt       kg       0.73       0.50         17.       Oxygen Gas (8,100 lit)       cyl       22.80       15.45         18.       Acetylene (6,075 lit)       cyl       47.40       32.45         19.       Ready mixed concrete       32.45         - Type A, 30 N/mm2       m3       88.40       808.00         - Type B, 25 N/mm2       m3       82.80       756.00         - Type D, 15 N/mm2       m3       80.20       732.00         - Type F, 30 N/mm2       m3       91.00       832.00         20.       PVC pipe       -       -         - DN 40 mm, t= 3.0 mm       m       1.30       0.89         - DN 50 mm, t= 4.0 mm       m       1.80       1.23         - DN 63 mm, t= 3.2 mm       m       2.70       1.85         - DN 90 mm, t= 4.7 mm       m       5.60       3.84         - DN 110 mm, t= 5.6 mm       m       8.40       5.75         - DN 160 mm, t= 6.5 mm       m       16.70       11.44         - DN 225 mm, t= 11.6 mm       m       26.90       18.43         21.       Galvanised steel pipe       -       -       DN 50 mm       m       1.30       7.74 <t< td=""><td></td><td></td><td>111</td><td></td><td>0.30 1.65</td></t<>			111		0.30 1.65
17. Oxygen Gas (8,100 lit) cyl 22.80 15.45 18. Acetylene (6,075 lit) cyl 47.40 32.45 19. Ready mixed concrete - Type A, 30 N/mm2 m3 88.40 808.00 - Type B, 25 N/mm2 m3 82.80 756.00 - Type C, 20 N/mm2 m3 80.20 732.00 - Type F, 30 N/mm2 m3 91.00 832.00  20. PVC pipe - DN 40 mm, t= 3.0 mm m 1.30 0.89 - DN 50 mm, t= 4.0 mm m 1.80 1.23 - DN 63 mm, t= 3.2 mm m 5.60 3.84 - DN 110 mm, t= 5.6 mm m 16.70 11.44 - DN 225 mm, t= 11.6 mm m 26.90 18.43 21. Galvanised steel pipe - DN 50 mm m 11.30 7.74 - DN 100 mm m 12.80 12.88 - DN 125 mm m 26.20 17.95 - DN 150 mm m 37.10 25.41  22. Shape steel - H steel ton 619.50 424.36 - I beam ton 739.70 506.69 - Angle tel 4.5 mm) ton 1,034.15 708.40		Apphalt		2.41 0.73	1.05 0.50
18. Acetylene (6,075 lit) cyl 47.40 32.45  19. Ready mixed concrete  - Type A, 30 N/mm2 m3 88.40 808.00  - Type B, 25 N/mm2 m3 82.80 756.00  - Type C, 20 N/mm2 m3 80.20 732.00  - Type F, 30 N/mm2 m3 91.00 832.00  20. PVC pipe  - DN 40 mm, t= 3.0 mm m 1.30 0.89  - DN 50 mm, t= 4.0 mm m 1.80 1.23  - DN 63 mm, t= 3.2 mm m 2.70 1.85  - DN 110 mm, t= 5.6 mm m 8.40 5.75  - DN 160 mm, t= 6.5 mm m 16.70 11.44  - DN 225 mm, t= 11.6 mm m 26.90 18.43  21. Galvanised steel pipe  - DN 50 mm m 9,40 6.44  - DN 80 mm m 11.30 7.74  - DN 100 mm m 18.80 12.88  - DN 125 mm m 26.20 17.95  - DN 150 mm m 37.10 25.41  22. Shape steel  - H steel ton 619.50 424.36  - I beam ton 739.70 506.69  - Angle ton 675.30 462.58  - Plate (t= 4.5 mm) ton 795.50 544.92  - Checkered plate (t= 4.5 mm) ton 1,034.15 708.40	10.	Asphan Coc (2 100 lit)		22.80	
19. Ready mixed concrete - Type A, 30 N/mm2 m3 88.40 808.00 - Type B, 25 N/mm2 m3 85.80 784.00 - Type C, 20 N/mm2 m3 82.80 756.00 - Type D, 15 N/mm2 m3 80.20 732.00 - Type F, 30 N/mm2 m3 91.00 832.00  20. PVC pipe - DN 40 mm, t= 3.0 mm m 1.30 0.89 - DN 50 mm, t= 4.0 mm m 1.80 1.23 - DN 63 mm, t= 3.2 mm m 2.70 1.85 - DN 90 mm, t= 4.7 mm m 5.60 3.84 - DN 110 mm, t= 5.6 mm m 8.40 5.75 - DN 160 mm, t= 6.5 mm m 16.70 11.44 - DN 225 mm, t= 11.6 mm m 26.90 18.43  21. Galvanised steel pipe - DN 50 mm m 9.40 6.44 - DN 80 mm m 11.30 7.74 - DN 100 mm m 18.80 12.88 - DN 125 mm m 26.20 17.95 - DN 150 mm m 37.10 25.41  22. Shape steel - H steel ton 619.50 424.36 - I beam ton 739.70 506.69 - Angle ton 582.30 398.90 - Channel ton 675.30 462.58 - Plate (t= 4.5 mm) ton 795.50 544.92 - Checkered plate (t= 4.5 mm) ton 1,034.15 708.40	17. 10	Acetylene (6.075 lit)			
- Type A, 30 N/mm2 m3 88.40 808.00 - Type B, 25 N/mm2 m3 85.80 784.00 - Type C, 20 N/mm2 m3 82.80 756.00 - Type D, 15 N/mm2 m3 80.20 732.00 - Type F, 30 N/mm2 m3 91.00 832.00  20. PVC pipe - DN 40 mm, t= 3.0 mm m 1.30 0.89 - DN 50 mm, t= 4.0 mm m 1.80 1.23 - DN 63 mm, t= 3.2 mm m 2.70 1.85 - DN 90 mm, t= 4.7 mm m 5.60 3.84 - DN 110 mm, t= 5.6 mm m 8.40 5.75 - DN 160 mm, t= 6.5 mm m 16.70 11.44 - DN 225 mm, t= 11.6 mm 26.90 18.43  21. Galvanised steel pipe - DN 50 mm m 9.40 6.44 - DN 80 mm m 11.30 7.74 - DN 100 mm m 18.80 12.88 - DN 125 mm m 26.20 17.95 - DN 150 mm m 37.10 25.41  22. Shape steel - H steel ton 619.50 424.36 - I beam ton 739.70 506.69 - Angle ton 582.30 398.90 - Channel ton 675.30 462.58 - Plate (t= 4.5 mm) ton 795.50 544.92 - Checkered plate (t= 4.5 mm) ton 1,034.15 708.40	10.	Ready mixed concrete	Cyr	47.40	32.43
- Type B, 25 N/mm2 m3 85.80 784.00 - Type C, 20 N/mm2 m3 82.80 756.00 - Type D, 15 N/mm2 m3 80.20 732.00 - Type F, 30 N/mm2 m3 91.00 832.00  20. PVC pipe - DN 40 mm, t= 3.0 mm m 1.30 0.89 - DN 50 mm, t= 4.0 mm m 1.80 1.23 - DN 63 mm, t= 3.2 mm m 2.70 1.85 - DN 90 mm, t= 4.7 mm m 5.60 3.84 - DN 110 mm, t= 5.6 mm m 16.70 11.44 - DN 125 mm, t= 11.6 mm m 26.90 18.43  21. Galvanised steel pipe - DN 50 mm m 9.40 6.44 - DN 80 mm m 11.30 7.74 - DN 100 mm m 18.80 12.88 - DN 125 mm m 26.20 17.95 - DN 150 mm m 37.10 25.41  22. Shape steel - H steel ton 619.50 424.36 - I beam ton 739.70 506.69 - Angle ton 582.30 398.90 - Channel ton 675.30 462.58 - Plate (t= 4.5 mm) ton 7,034.15 708.40	17.	- Type A 30 N/mm2	m3	88.40	808 00
- Type C, 20 N/mm2		- Type B 25 N/mm2			
- Type D, 15 N/mm2					
- Type F, 30 N/mm2 m3 91.00 832.00  PVC pipe - DN 40 mm, t= 3.0 mm m 1.30 0.89 - DN 50 mm, t= 4.0 mm m 1.80 1.23 - DN 63 mm, t= 3.2 mm m 2.70 1.85 - DN 90 mm, t= 4.7 mm m 5.60 3.84 - DN 110 mm, t= 5.6 mm m 16.70 11.44 - DN 125 mm, t= 11.6 mm m 26.90 18.43  21. Galvanised steel pipe - DN 50 mm m 9.40 6.44 - DN 80 mm m 9.40 6.44 - DN 80 mm m 11.30 7.74 - DN 100 mm m 11.30 7.74 - DN 100 mm m 18.80 12.88 - DN 125 mm m 26.20 17.95 - DN 150 mm m 37.10 25.41  22. Shape steel - H steel ton 619.50 424.36 - I beam ton 739.70 506.69 - Angle ton 582.30 398.90 - Channel ton 675.30 462.58 - Plate (t= 4.5 mm) ton 795.50 544.92 - Checkered plate (t= 4.5 mm) ton 1,034.15 708.40		- Type D. 15 N/mm2			
20. PVC pipe  - DN 40 mm, t= 3.0 mm		- Type F. 30 N/mm2			
- DN 40 mm, t= 3.0 mm m 1.30 0.89 - DN 50 mm, t= 4.0 mm m 1.80 1.23 - DN 63 mm, t= 3.2 mm m 2.70 1.85 - DN 90 mm, t= 4.7 mm m 5.60 3.84 - DN 110 mm, t= 5.6 mm m 8.40 5.75 - DN 160 mm, t= 6.5 mm m 16.70 11.44 - DN 225 mm, t= 11.6 mm m 26.90 18.43  21. Galvanised steel pipe - DN 50 mm m 6.90 4.73 - DN 65 mm m 9.40 6.44 - DN 80 mm m 11.30 7.74 - DN 100 mm m 18.80 12.88 - DN 125 mm m 26.20 17.95 - DN 150 mm m 37.10 25.41  22. Shape steel - H steel ton 619.50 424.36 - I beam ton 739.70 506.69 - Angle ton 582.30 398.90 - Channel ton 675.30 462.58 - Plate (t= 4.5 mm) ton 795.50 544.92 - Checkered plate (t= 4.5 mm) ton 1,034.15 708.40	20.	PVC pipe			
- DN 50 mm, t= 4.0 mm m 1.80 1.23 - DN 63 mm, t= 3.2 mm m 2.70 1.85 - DN 90 mm, t= 4.7 mm m 5.60 3.84 - DN 110 mm, t= 5.6 mm m 8.40 5.75 - DN 160 mm, t= 6.5 mm m 16.70 11.44 - DN 225 mm, t= 11.6 mm m 26.90 18.43  21. Galvanised steel pipe - DN 50 mm m 6.90 4.73 - DN 65 mm m 9.40 6.44 - DN 80 mm m 11.30 7.74 - DN 100 mm m 18.80 12.88 - DN 125 mm m 26.20 17.95 - DN 150 mm m 37.10 25.41  22. Shape steel - H steel ton 619.50 424.36 - I beam ton 739.70 506.69 - Angle ton 582.30 398.90 - Channel ton 675.30 462.58 - Plate (t= 4.5 mm) ton 795.50 544.92 - Checkered plate (t= 4.5 mm) ton 1,034.15 708.40		-DN 40  mm, t= 3.0  mm	m	1.30	0.89
- DN 63 mm, t= 3.2 mm m 5.60 3.84 - DN 90 mm, t= 4.7 mm m 5.60 3.84 - DN 110 mm, t= 5.6 mm m 8.40 5.75 - DN 160 mm, t= 6.5 mm m 16.70 11.44 - DN 225 mm, t= 11.6 mm m 26.90 18.43  21. Galvanised steel pipe - DN 50 mm m 6.90 4.73 - DN 65 mm m 9.40 6.44 - DN 80 mm m 11.30 7.74 - DN 100 mm m 18.80 12.88 - DN 125 mm m 26.20 17.95 - DN 150 mm m 37.10 25.41  22. Shape steel - H steel ton 619.50 424.36 - I beam ton 739.70 506.69 - Angle ton 582.30 398.90 - Channel ton 675.30 462.58 - Plate (t= 4.5 mm) ton 795.50 544.92 - Checkered plate (t= 4.5 mm) ton 1,034.15 708.40		- DN 50 mm, $t = 4.0$ mm			
- DN 90 mm, t= 4.7 mm m			m	2.70	1.85
- DN 110 mm, t= 5.6 mm m 8.40 5.75 - DN 160 mm, t= 6.5 mm m 16.70 11.44 - DN 225 mm, t= 11.6 mm m 26.90 18.43  21. Galvanised steel pipe - DN 50 mm m 9.40 6.44 - DN 80 mm m 11.30 7.74 - DN 100 mm m 18.80 12.88 - DN 125 mm m 26.20 17.95 - DN 150 mm m 37.10 25.41  22. Shape steel - H steel ton 619.50 424.36 - I beam ton 739.70 506.69 - Angle ton 582.30 398.90 - Channel ton 675.30 462.58 - Plate (t= 4.5 mm) ton 795.50 544.92 - Checkered plate (t= 4.5 mm) ton 1,034.15 708.40			m	5.60	
- DN 225 mm, t= 11.6 mm m 26.90 18.43  21. Galvanised steel pipe - DN 50 mm m 6.90 4.73 - DN 65 mm m 9.40 6.44 - DN 80 mm m 11.30 7.74 - DN 100 mm m 18.80 12.88 - DN 125 mm m 26.20 17.95 - DN 150 mm m 37.10 25.41  22. Shape steel - H steel ton 619.50 424.36 - I beam ton 739.70 506.69 - Angle ton 582.30 398.90 - Channel ton 675.30 462.58 - Plate (t= 4.5 mm) ton 795.50 544.92 - Checkered plate (t= 4.5 mm) ton 1,034.15 708.40			m		
- DN 225 mm, t= 11.6 mm m 26.90 18.43  21. Galvanised steel pipe - DN 50 mm m 6.90 4.73 - DN 65 mm m 9.40 6.44 - DN 80 mm m 11.30 7.74 - DN 100 mm m 18.80 12.88 - DN 125 mm m 26.20 17.95 - DN 150 mm m 37.10 25.41  22. Shape steel - H steel ton 619.50 424.36 - I beam ton 739.70 506.69 - Angle ton 582.30 398.90 - Channel ton 675.30 462.58 - Plate (t= 4.5 mm) ton 795.50 544.92 - Checkered plate (t= 4.5 mm) ton 1,034.15 708.40		– DN 160 mm, t= 6.5 mm	m		
- DN 50 mm m 6.90 4.73 - DN 65 mm m 9.40 6.44 - DN 80 mm m 11.30 7.74 - DN 100 mm m 18.80 12.88 - DN 125 mm m 26.20 17.95 - DN 150 mm m 37.10 25.41  22. Shape steel - H steel ton 619.50 424.36 - I beam ton 739.70 506.69 - Angle ton 582.30 398.90 - Channel ton 675.30 462.58 - Plate (t= 4.5 mm) ton 795.50 544.92 - Checkered plate (t= 4.5 mm) ton 1,034.15 708.40		- DN 225 mm, t= 11.6 mm	m	26.90	18.43
- DN 65 mm m 9.40 6.44 - DN 80 mm m 11.30 7.74 - DN 100 mm m 18.80 12.88 - DN 125 mm m 26.20 17.95 - DN 150 mm m 37.10 25.41  22. Shape steel - H steel ton 619.50 424.36 - I beam ton 739.70 506.69 - Angle ton 582.30 398.90 - Channel ton 675.30 462.58 - Plate (t= 4.5 mm) ton 795.50 544.92 - Checkered plate (t= 4.5 mm) ton 1,034.15 708.40	21.	Galvanised steel pipe			
- DN 80 mm m 11.30 7.74 - DN 100 mm m 18.80 12.88 - DN 125 mm m 26.20 17.95 - DN 150 mm m 37.10 25.41  22. Shape steel - H steel ton 619.50 424.36 - I beam ton 739.70 506.69 - Angle ton 582.30 398.90 - Channel ton 675.30 462.58 - Plate (t= 4.5 mm) ton 795.50 544.92 - Checkered plate (t= 4.5 mm) ton 1,034.15 708.40		– DN 50 mm	m		
- DN 100 mm m 18.80 12.88 - DN 125 mm m 26.20 17.95 - DN 150 mm m 37.10 25.41  22. Shape steel - H steel ton 619.50 424.36 - I beam ton 739.70 506.69 - Angle ton 582.30 398.90 - Channel ton 675.30 462.58 - Plate (t= 4.5 mm) ton 795.50 544.92 - Checkered plate (t= 4.5 mm) ton 1,034.15 708.40			$\mathbf{m}$		
- DN 125 mm m 26.20 17.95 - DN 150 mm m 37.10 25.41  22. Shape steel - H steel ton 619.50 424.36 - I beam ton 739.70 506.69 - Angle ton 582.30 398.90 - Channel ton 675.30 462.58 - Plate (t= 4.5 mm) ton 795.50 544.92 - Checkered plate (t= 4.5 mm) ton 1,034.15 708.40			m		
- DN 150 mm m 37.10 25.41  22. Shape steel - H steel ton 619.50 424.36 - I beam ton 739.70 506.69 - Angle ton 582.30 398.90 - Channel ton 675.30 462.58 - Plate (t= 4.5 mm) ton 795.50 544.92 - Checkered plate (t= 4.5 mm) ton 1,034.15 708.40			m		
22.       Shape steel         - H steel       ton       619.50       424.36         - I beam       ton       739.70       506.69         - Angle       ton       582.30       398.90         - Channel       ton       675.30       462.58         - Plate (t= 4.5 mm)       ton       795.50       544.92         - Checkered plate (t= 4.5 mm)       ton       1,034.15       708.40					
- H steel       ton       619.50       424.36         - I beam       ton       739.70       506.69         - Angle       ton       582.30       398.90         - Channel       ton       675.30       462.58         - Plate (t= 4.5 mm)       ton       795.50       544.92         - Checkered plate (t= 4.5 mm)       ton       1,034.15       708.40	00		m	37.10	25.41
- I beam       ton       739.70       506.69         - Angle       ton       582.30       398.90         - Channel       ton       675.30       462.58         - Plate (t= 4.5 mm)       ton       795.50       544.92         - Checkered plate (t= 4.5 mm)       ton       1,034.15       708.40	22.			(10.50	404.26
- Angle ton 582.30 398.90 - Channel ton 675.30 462.58 - Plate (t= 4.5 mm) ton 795.50 544.92 - Checkered plate (t= 4.5 mm) ton 1,034.15 708.40					
- Channel ton 675.30 462.58 - Plate (t= 4.5 mm) ton 795.50 544.92 - Checkered plate (t= 4.5 mm) ton 1,034.15 708.40					
- Plate (t= 4.5 mm) ton 795.50 544.92 - Checkered plate (t= 4.5 mm) ton 1,034.15 708.40		- Angle			
- Checkered plate (t= 4.5 mm) ton 1,034.15 708.40					
mu					
- riai var ton 021.90 420.00					
		- Plat Dal	1011	021.90	420.00

	Description	Applied Unit	Unit Price F/C (US\$)	Unit Price L/C (MRs)
23.	<ul><li>Round bar</li><li>Sheet pile</li><li>Concrete pipe (socket joint for</li></ul>	ton ton	583.70 1,020.00	399.83 698.70
	external load) - 300 mm - 450 mm - 600 mm	m m m	 - 	368.26 696.23 1,166.62
24.	Water Stop (PVC, corrugate type) - 200B x 5t	m	10.10	6.92
25.	- 220B x 6t - 300B x 7t Concrete joint sealant	m m	12.52 19.74	8.57 13.52
26. 27. 28.	(Asphalt) 20 x 20 x 500 mm Concrete joint filler t= 20 mm Iron Step, 300L x 22 dia Grating, for floor (galvanised,	m m2 nr	3.85 22.00 15.30	5.27 30.14 20.96
29.	closed-end type) - 25H x 3t, flat-bar (34.2 kg/m2)	m2	78.10	53.50
29.	Manhole cover (grey iron)  - 600 mm dia, water-proof type	nr	269.40	369.08
	<ul> <li> do - , resisting water pressure type</li> </ul>	nr	781.20	1,070.24
Pipes,	Fittings, Valves and Headstocks			
30. 31.	Ductile iron pipe Fittings (DIP)	kg	1.50	2.10
32.	- 75 mm - 150 mm - 200 mm - 900 mm Mechanical joint, ND 800 mm - do - ND 600 mm - do - ND 300 mm - do - ND 200 mm - do - ND 125 mm Steel pipe	kg nr nr nr nr nr	4.90 3.80 221.80 120.90 55.50 27.38 23.46	6.70 4.50 303.87 165.63 76.04 37.51 32.14
34.	more than DN 350 mm less than DN 200 mm Fittings (SP)	kg kg	2.03 2.70	2.78 3.70
	more than DN 350 mm less than DN 200 mm	kg kg	12.10 19.70	16.58 26.99
35.	Butterfly valve, short type DN 800 mm	nr	20,880.00	28,600.00
	- do - DN 700 mm	nr	15,170.00	20,780.00
	- do DN 600 mm	nr	11,300.00	15,480.00
	– do – DN 350 mm	n <b>r</b>	7,240.00	9,920.00
36.	- do - DN 200 mm Sluice valve, DN 300 mm - do - DN 200 mm - do - DN 150 mm	nr nr nr nr	4,370.00 2,420.00 1,240.00 840.00	5,990.00 3,320.00 1,700.00 1,150.00

	Description	Applied Unit	Unit Price F/C (US\$)	Unit Price L/C (MRs)
37	Sluice gate, rising stem type DN 800 mm - do -	nr	28,390.00	38,900.00
	500 x 500 mm	nr	6,980.00	9,560.00
	– do – 400 x 400 mm	nr	5,790.00	7,930.00
	– do – 350 x 350 mm	nr	4,860.00	6,660.00
	- do - 300 x 300 mm	nr	4,100.00	5,620.00
38. 39.	Headstock, (type-A) handwheel type, DN 100 to DN 300 mm - do - (type-B)	nr	1,600.00	2,190.00
	bevel gear type, DN 200 to DN 800 mm	nr	2,720.00	3,730.00
40.	- do - (type-C) bevel gear type, for gates rights atom	nr	2,830.00	3,880.00
41.	for gates, rising stem Air-release valve, quick exhaust type, DN 80 mm	. nr	870.00	1,190.00
42.	Angle valve with hose coupling, DN 65 mm - do - DN 50 mm	nr nr	117.00 96.60	160.30 132.30

Note: Exchange rate

US\$1.0 = Rs.13.7 = \$130.0

#### c. Equipment Cost

All construction equipment and machinery in the cost estimate are assumed to be provided by the contractors. The prices of construction equipment and machinery are prevailing prices in international market especially in Japan in January 1991. The equipment cost is estimated based on the CIF price at Port Louis including freight and insurance premium, handling charge, inland transportation expenses and other incidental charges. The import duties of the equipment is excluded in the cost estimate.

Rates of the hourly equipment cost are established based on the CIF price at Port Louis and calculated in consideration of Japanese standards for lifetime, salvage value, depreciation rate, maintenance and repair rates, and management expenses rate.

The equipment cost is divided into foreign and local currency portion as follows:

#### i) Foreign currency portion

- Depreciation rate (calculated based on salvage value of 10 percent)
- Maintenance and repair rates and management expenses rate
   (70 percent of the CIF price)

#### ii) Local currency portion

- Maintenance and repair rates and management expenses rate mainly labour cost (30 percent of the CIF price)
- Other local incidentals.

The equipment cost is listed in Table 4.3.

Table 4.3 Construction Equipment Cost for Lot III Work

					Price	
Equipment	CIF Price (US\$)	Capacity	Unit	Foreign Currency (US\$)	Local Currency (Rs.)	Fuel (lit.)
Bulldozer, w/Ripper Bulldozer Bulldozer Backhoe Wheel loader Tractor shovel Dump truck Dump truck Truck Truck Truck crane Truck crane Leg hammer Pick hammer Concrete bucket Concrete vibrator,	212,850 189,750 97,350 126,225 42,488 57,750 65,175 46,200 31,763 28,716 160,000 65,385 1,906 264 2,748	21 t 21 t 11 t 0.6 m3 0.6 m3 0.6 m3 11 t 8 t 6 t 6 t 4.9 t 30 kg 7.5 kg 0.5 m3	hr.	32.7 27.9 14.3 15.2 7.6 7.6 8.0 6.3 5.0 4.2 15.4 8.6 5.2 0.5 5.6	112.0 95.4 49.1 52.0 25.9 25.9 27.4 21.4 17.0 11.4 42.2 23.6 12.8 2.0 19.3	29.0 26.0 13.0 15.0 5.4 7.6 12.0 9.4 6.6 6.3 7.8 5.4
flexible Concrete mixer Concrete spray gun Steel bender Portable belt conveyor, engine Asphalt sprayer, drum Air compressor (P) Air compressor (P) Diesel generator Submersible pump	1,139 15,675 28,215 - 2,121 1,873 43,148 18,000 6,864 1,345	φ45 mm 0.5 m3 4-6 m3/hr - 7 m 200 lit, 10.5 m3/min 5 m3/min 10 kVA φ50 mm	hr.	1.8 21.6 4.8 4.1 6.7 3.2 12.5 5.8 5.7 2.5	6.2 74.0 16.3 13.8 22.7 10.9 35.6 19.9 19.4 8.6	G1.2 G0.53 15.0 7.1 2.1

Note:

Exchange rate:

US\$1.0 = Rs.13.7 = \$130.0

#### d. Contractor's Indirect Cost

Contractor's indirect cost is to be overhead expenses and profit for the contractor. The overhead expenses comprise general administrative expenses, field expenses and field administration cost. The general administrative expenses are salaries and allowances for the contractor's personnel, legal welfare expenses, international travelling and communication expenses, depreciation, insurance and so on in his head office. The field expenses and field administration cost are for labour transportation, preparation on topographic survey, leading frame, safety, technical expense for concrete test etc, and the contractor's personnel, camp operation, labour control expenses, inland travelling expenses, security, insurance and bond, stationary and communication expenses and so on, in the field.

The overhead expenses and profit are distributed to the price or lump sum of each work item. These expenses are estimated at 20 percent of direct unit cost comprising labour wages, material costs and equipment cost. The breakdown is as follows:

Common field expense : 4 %
Field administration cost : 8.5 %
General administration cost : 7.5 %

#### e. Direct Construction Cost

The unit prices for various work items in the Bill of Quantities are estimated in accordance with the above conditions. The breakdowns required for work item in the Bill of Quantities are attached in APPENDIX A and the unit cost for Lot III Work are as shown in APPENDIX B.

The direct construction cost for Lot III is estimated at about MRs 130 million equivalent in total, comprising US\$ 6.8 million in foreign currency (71.6 %) and MRs.37.0 million in local currency portion (28.4 %).

#### 5. INDIRECT COST

#### 5.1 Administration Expenses and Engineering Services

The cost of CWA's administration expenses for running cost of office, stationary, consumables, etc. is estimated at 3.5 percent of the local currency potion of the direct construction cost. On the other hand, cost for the engineering services is also estimated at 10 percent of the foreign currency portion of the direct cost based on the necessary construction supervision required for all over the Project, including the pre-construction and construction stages, assuming that these services are made by the expatriate consultant.

The administration expenses and the engineering services are estimated at about MRs 14.2 million, comprising US\$ 0.68 million in foreign currency (65.5 %) and MRs.4.9 million in local currency (34.5 %).

#### 5.2 Physical Contingency

The physical contingency is provided at 5 % for a summation of direct construction cost and administration cost in Foreign and Local portions taking into consideration some design changes during the construction period.

#### 5.3 Price Contingency

The price contingency is provided to cope with price escalation due to inflation. Price contingency is assumed that the escalation rate will be 3 % per annum for the foreign currency portion and 7 % per annum for the local currency portion.

#### 6. ANNUAL DISBURSEMENT SCHEDULE

Fiscal year of the disbursement schedule is assumed to start in July and end in June next year considering Mauritian Fiscal Year. According to the construction time schedule, the construction cost for the Project are assumed to be disbursed as shown in Table 6.1.

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DICRIPORTANT SCHEDILL R	į
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(Unit: MRs. 1,000)

	TOTAL COST	COST	IST	YEAR	2ND YEAR	YEAR	3RD)	YEAR
WORK ITEM	F/C	D/T	F/C	T/C	F/C	T/C	F/C	T/C
A. GENERAL AND PRELIMINARY ITEMS	2,701	4,456	2,701	3,936		520	1	
C. RAW WATER TRANSMISSION PIPELINE								
B1. Intake	899	288	668	288	,	1	1	Ī
B2. Raw Water Transmission Pipeline	17,248	4,354	5,749	1,451	11,499	2,903	<del></del>	<del>-</del>
B3. River Crossing	604	550	T.		302	275	302	275
B4. Wash-out Pipe B5. Tunnel Crossing	58	33	i i	<b>-</b>	- 22	- 3	58	33
Subtotal	18,887	5,289	6,648	1,739	11,879	3,242	360	308
C. TREATMENT FACILITIES								
CI. Recieving Tank	1,725	422	1,725	422	· 1		,	-
C2. Rapid Mixing Tank	903	344	903	344	,		<del></del>	ī
C3. Flocculation & Sedimentation Tank	7,053	5,188	7,053	5,188	•	í	1	,
C4. Filter	17,959	5,429	10,775	3,257	7,184	2,172	<del></del>	ī
C5. Wastewater and Sludge Ponds	4,170	2,704	ſ		4,170	2,704	1	1
C6. Yard Piping	4,897	1,997	•	•	1,469	599	3,428	1,398
C7. Site Work	2,240	2,017	ſ	1	ı		2,240	2,017
C8. Chemical Building	2,615	1,892	784	267	1,831	1,325	I	•
C9. Operation Building	4,871	2,610	4,871	2,610	ı	7	,	1
C10. Chlorination Building	595	363	Î	1	595	363	<del></del>	1
C11. Workshop	2,910	1,757	r		2,910	1,757	,	•
C12. Mechanical Equipment	9,137	1,148		ı	5,482	889	3,655	460
C13. Electrical Equipment	12,541	1,418	ſ	ī	6,270	449	6,271	696
Subtotal	71,616	27,289	26,111	12,388	29,911	10,057	15,594	4,844
Total of A+B+C	93,204	37,034	35,460	18,063	41,790	13,819	15,954	5,152
Engineering Cost	9,320	3,700	2,796	1,110	5,033	1,998	1,491	592
Administration Cost	ı	1,170	í	351	,	632	•	187
Physical Contingency	5,126	2,095	1,912	926	2,341	822	873	297
Price Contingency	9,350	8,801	2,432	2,900	4,536	3,929	2,382	1,972
Grand Total	117,000	52,800	42,600	23,400	53,700	21,200	20,700	8,200

# 7. PRICED BILL OF QUANTITIES

#### SUMMARY OF BILL OF QUANTITY

Division No.	Description	Foreign Currency Portion (US\$)	Local Currency Portion (Rs.)	Total Equivalent Price (Rs.)
A. GEN	ERAL AND PRELIMINARY ITEMS			
A1.	Preliminary Item	108,600	3,017,500	4,505,320
A2.	General Item	88,600	1,438,400	2,652,220
	TOTAL OF DIVISION A	197,200	4,455,900	7,157,540
B. RAW	WATER TRANSMISSION PIPELINE			
B1.	Intake	65,605	288,159	1,186,947
B2.	Raw Water Transmission Pipeline	1,258,950	4,354,043	21,601,658
В3.	River Crossing	44,098	550,205	1,154,347
B4.	Wash-out Pipe	4,288	32,357	91,102
B5.	Tunnel Crossing	5,717	64,048	142,370
	TOTAL OF DIVISION B	1,378,658	5,288,812	24,176,426
C. TREA	TMENT FACILITIES			
C1.	Receiving Tank	125,936	421,914	2,147,237
C2.	Rapid Mixing Tank	65,907	344,124	1,247,049
C3.	Flocculation and Sedimentation Tank	514,790	5,188,403	12,241,026
C4.	Filter	1,310,841	5,429,161	23,387,682
C5.	Wastewater and Sludge Ponds	304,367	2,703,739	6,873,566
C6.	Yard Piping	357,454	1,996,559	6,893,678
C7.	Sitework	163,512	2,017,328	4,257,442
C8.	Chemical Building	190,885	1,891,671	4,506,795
C9.	Operation Building	355,564	2,609,648	7,480,874
C10.	Chlorination Building	43,474	362,741	958,334
C11.	Workshop	212,394	1,757,047	4,666,844
C12.	Mechanical Facilities	666,940	1,148,440	10,285,518
C13.	Electrical Facilties	915,400	1,418,600	13,959,580
	TOTAL OF DIVISION C	5,227,464	27,289,375	98,905,631
	TOTAL	6,803,322	37,034,087	130,239,598

Item No Description	Unit Quantity	Foreign Currency (US\$) Unit Price Amount	Local Currency (Rs) Unit Price Amount	Total Ref. Clause Equivalent (Rs) or Sub-clause
A. GENERAL AND PRELIMINARY ITEMS				
AI PRELIMINARY ITEM				
Note: Preliminary items are to provide for compliance with the Condition of Contract and Specifications. the total amount permitted in				
ten (10) per cent of the Tender Price.				
/01 Allow for provision of Performance Bond in accordance with Clause 10 of Part II of the Conditions of Contract	ms	ı	247,200	0
/02 Allow for provision of Insurance of Work in accordance with Clause 21 of Part I of the Conditions of Contract	uns	90,100		1
/03 Allow for provision of Third Party Insurance in accordance with Clause 23 of Part I of the Conditions of Contract	mns	18,100		ı
/04 Allow for provision of Insurance in accordance with Clause 24 of Part I of the Conditions of Contract	mns		165,500	00
/05 Allow for provision of Advance Payment Bond in accordance with Clause 10 of Part II of the Conditions of Contract	uns	i	123,600	00
Conditions of Contract				

A2 A	Item No.	Description	Unit Qua	Unit Quantity Foreign Currency (US\$ Unit Price Amount		Local Currency (Rs) Unit Price Amou	ınt	Total Ref. Clause Equivalent (Rs) or Sub-clause
on competion, including all temporary access and land required during the construction  OT Provide and erect two signboards at the site sum directed by PMO/Engineer  Subtotal of Item A1  A2 GENERAL ITEM  O1 Allow for provision of office furnished, water supply, electrical supply, telephone sum and other facilities for PMO/Engineer's Representative, all as specified and maintain all attendance month 26  A2 GENERAL ITEM  O1 Allow for provision of office furnished, provisional of or the above office of the specification for the above office  A2 GENERAL ITEM  A301  A2 GENERAL ITEM  A301  A21 GENERAL ITEM  A31 Allow for provision of office furnished, provisional of sepecification for the above office  A31 Allow for provision of supply, installation, sum as specified in the General Specification of temporary water supply facility operation and subsequent removal of temporary electrical supply operation and susception and susception and suspequent removal of temporary electrical supply of temporary electrical supply distinction of filter and filtered water pipelines described by the conducting of the supplement, labour, etc. for conducting distinction of filter and filtered water pipelines	/06 Allow for office ar demobil	or the erection of Contractor's camps, and other facilities and other ization and movement off the work site	sum		1		2,472,000	801 to 809 901 to 908
Subtotal of Item A1  GENERAL ITEM  (01 Allow for provision of office furnished, water supply, electrical supply, telephone and other facilities for PMO/Engineer's Representative, all as specified and maintain all attendance as specified in the General Specification for the above office  (02 Provide and maintain all attendance as specified in the General Specification for the above office  (03 Allow for provision of supply, installation, sum and subsequent removal of temporary water supply facility  (04 Allow for provision of supply, installation, sum and susception and susception and susception and susception of all water, chemical, sum cequipment, labour, etc. for conducting disinfection of filtered water pipelines	on compand land and land hory Provide	I required during all temporary access I required during the construction and erect two signboards at the site	uns		400		9,200	
A2 GENERAL ITEM  (01 Allow for provision of office furnished, water supply, electrical supply, telephone surn and other facilities for PMO/Engineer's Representative, all as specified  (02 Provide and maintain all attendance month 26 - 10,900 28 as specified in the General Specification for the above office  (03 Allow for provision of supply, installation, surn operation and subsequent removal of temporary water supply facility  (04 Allow for provision of supply, installation, surn operation and susception and susception and susception and susception of supply  (05 Allow for provision of supply)  (05 Allow for provision of all water, chemical, surn equipment, labour, etc. for conducting distinction of filter and filtered water pipelines		oy rivic/Eugineer  Subtotal of Item A1		1	08,600	l	3,017,500	
Water supply, electrical supply, telephone sun and other facilities for PMO/Engineer's Representative, all as specified  //O2 Provide and maintain all attendance month 26 - 10,900 28 as specified in the General Specification for the above office  //O3 Allow for provision of supply, installation, sun sun operation and subsequent removal of temporary water supply facility  //O4 Allow for provision of all water, chemical, sun operation and sussequent removal of temporary electrical supply  //O5 Allow for provision of all water, chemical, sun equipment, labour, etc. for conducting disinfection of filter and filtered water pipelines	A2	RAL ITEM						
sum         26         -         10,900         28           llation,         sum         1,200         17           f         23,100         8           smical,         sum         -         8           er pipelines         rer pipelines         -         -	/01	or provision of office furnished, upply, electrical supply, telephone rafacilities for PMO/Engineer's ntative, all as specified	Provisional sum		54,300		377,700	1001 to 1005
sum       1,200       17         sum       23,100       8         sum       -       8         lines       -       8	/02 Provide as speci for the a	and maintain all attendance fied in the General Specification bove office	month	26	i	10,900	283,400	1001
sum 23,100 8 sum -	/03 Allow for operation tempora	or provision of supply, installation, on and subsequent removal of or water supply facility	mns		1,200		171,000	803
sum -	/04 Allow f operatio tempora	or provision of supply, installation, in and susequent removal of ary electrical supply	sum		23,100		84,000	804
as per specifications	/05 Allow f equipme disinfect as per spers	Allow for provision of all water, chemical, equipment, labour, etc. for conducting disinfection of filter and filtered water pipelines as per specifications					2,300	10600

Total Ref. Clause Equivalent (Rs) or Sub-clause				
Local Currency (Rs) T Unit Price Amount Equiva	520,000		1,438,400	4,455,900
Ouantity Foreign Currency (US\$) Lo			88,600	197,200
Unit Quantity	provisional sum	gs ns ns may s of ter a direct arge of kpenses		
Description	/06 Allocation fee for power receiving	and price other works, obligations or things which may be referred to in the Conditions of Contract or Specification or which he may consider have been omitted from the Bills of Quantities and for which he desires to enter a separate charge (the charge to be carried direct to the amount column). If no separate charge is made hereunder, the rates in the Bills of Quantities shall be held as covering all expenses for such works, obligations or things.	Subtotal of Item A2	TOTAL OF ITEM A
Item No	/06 AJ			

Item No	Description	Unit Qua	untity Forei	Unit Quantity Foreign Currency (US\$ Unit Price Amount	y (US\$) Amount	Local Currency (Rs) Unit Price Amou	y (Rs) Amount	Total Equivalent (Rs)	Ref. Clause or Sub-clause
B. RAW W	B. RAW WATER TRANSMISSION PIPELINE	PELINE							
B.1 INTAKE									
B1.1 Temporary Work	ry Work								
/01 Temporary cofferdam	cofferdam	sum			6,146		40,756		10508
/02 Temporary raw wate works for existing pi and DN 600 x 9.8 m	/02 Temporary raw water intake pipelaying works for existing pipes, DN 450 x 18.1 m and DN 600 x 9.8 m	шns			4,952		45,614		10507
as per DW(	as per DWG No. P-044						• .		
- 19	Subtotal of Item BL1	•			11,098		86,370		
BI.2 Earthwork	ķ								
/01 Open-cut e	/01 Open-cut excavation, rock	m3	137	4.22	578	25.15	3,445		10202.2
	Subtotal of Item B1.2				578		3,445		
B1.3 Concrete Work The concrete work demolition of exis	Concrete Work  The concrete work comprises partial demolition of existing structure and restoration	ation							
as per DW	as per DWG. Nos. P-041 to P-043								
/01 Demolition of concrete	of concrete	m3	54	4.22	227	25.15	1,358		10301
/02 Blinding co	/02 Blinding concrete, Class D	m3	28	104.27	2,919	981.90	27,493		10301
/03 Concrete, Class B	Class B	т3	42	111.52	4,683	1,065.78	44,762		10301
					:				

Item No. Description	Unit	Unit Quantity F	Foreign Currency (US\$)	ncy (US\$)	Local Currency (Rs)	icy (Rs)	Total	Ref. Clause
	ļ		Unit Price	Amount	Unit Price	Amount	Equivalent (Rs)	or Sub-clause
/04 Concrete filling, Class C	m3	14	107.54	1,505	1,012.14	14,169		10301
/05 Formwork, Type F1	m2	93	6.30	585	344.00	31,992		10303
/06 Reinforcing bars	ton	33	748.22	2,244	1,861.92	5,585		10304
Subtotal of Item B1.3				12,163		125,359		
B1.4 Pipe Work								
/01 Sluice gate with head stock, type C and	sum			40,348		56,575		10503.3 &
bellmouth, DN 800 including installation work	work							10503.5
Subtotal of Item B1.4				40,348		56,575		
BI.5 Metal Work								
/01 Bar screen, ss400	m		1,079.00	1,079	15,515.00	15,515		10702
/02 Step iron	ını	20	15.30	306	20.96	419		10514.5
/03 Manhole cover, checkered plate	nr	+1	33.00	33	476.00	476		10706
$950 \times 950 \times t = 4.5 \text{ mm}$ with tar-eboxy resin painting								
Subtotal of Item B1.5				1,418		16,410		
Total of Item B1			,	65,605	I	288,159		

Item No	o Description	Unit (	Quantity Fo	Unit Quantity Foreign Currency (US\$)	sy (US\$)	Local Currency (Rs)	cy (Rs)	Total	Rcf. Clause
				Unit Price	Amount	Unit Price	Amount	Equivalent (Rs)	or Sub-clause
B.2	RAW WATER TRANSMISSION PIPELINE	ELINE							
B2.1	Earthwork								
/01	/01 Slope cutting, common soil	т3	266	2.28	2,273	12.14	12,103		10202.2
70/	/02 Slope cutting, rock (shown as provisional	m3	499	1.94	896	13.01	6,491		10202.2
	quantity)								
705	/03 Trench excavation, common soil	m3	6,573	2.28	14,986	12.14	79,796		10202.3
70/	/04 Trench excavation, rock (as shown	m3	3,944	1.94	7,651	13.01	51,311		10202.3
	provisional quantity)								
70,	/05 Backfilling, crusher run	m3	1,510	10.21	15,417	105.35	159,078		10205.2
^-	with grain size of 5 mm								
)Q( _	/06 Backfilling, selected material	m3	4,122	1.50	6,183	20.04	82,604		10205.2
/0.	/07 Protection fence for falling rocks,	Sum			57,620		227,341		10509
	fence area of 1500 m2								
ĩO/	/08 Slope protection (shotcrete)	m2	890	12.23	10,884	58.40	51,976		10510
	Subtotal of Item B2.1				115,982		670,700		
B2.2	Concrete Work								
.0/	/01 Protection concrete, Class B	m3	879	111.52	98,026	1,065.78	936,820		10301
	for straight pipe and bend protections								
,0/	/02 Formwork, type F1	m2	1,956	6.30	12,322	344.00	672,864		10303
<u>'0</u> /	/03 Reinforcing bars	ton	31	748.22	23,194	1,861.92	57,719		10304
	Subtotal of Item B2.2				133,542		1,667,403		

Item No	Description	Unit	Unit Quantity	Foreign Currency (US\$)	ncy (US\$)	Local Currency (Rs)	icy (Rs)	Total	Ref. Clause
			•	Unit Price	Amount	Unit Price	Amount	Equivalent (Rs)	or Sub-clause
B2.3 Pipe Work						i			
/01 Raw water	/01 Raw water pipelaying works, DN 800 DIP	E	2,131	470.90	1,003,487	696.39	1,484,007		10500
including p	including pipes, fittings, joints, laying works,	ćS,							
pressure tes	pressure testing and washing out								
/02 Air valve in	/02 Air valve installation DN 80	nr	5	1,096	5,480	1,646	8,230		10503.4
quick exhaust type	ist type								
/03 Air valve box	xc	П	3	91.81	459	4,740.60	23,703		10505.2
/04 Leakage rep	/04 Leakage repair work of existing pipelines	Sum			1		500,000		10511
provisional	provisionally for thirty (30) visible								
leakage spots	ts								
ଷା	Subtotal of Item B2.3				1,009,426		2,015,940		
	Total of Item B2			ı	1,258,950	•	4,354,043		

Item No	o Description	Unit Quantity	1 '	Foreign Currency (US\$ Unit Price Amount	y (US\$) Amount	Local Currency (Rs) Unit Price Amou	y (Rs) Amount	Total Equivalent (Rs)	Ref. Clause or Sub-clause
B.3	RIVER CROSSING (2 - Places) (As per DWG. Nos. P-045 and P-046)								
<b>B3.1</b> /0.1	Temporary Work /01 Temporary coffering Subtotal of Item B3.1	sum			969 969		43,635		10508
B3.2	Earthwork  101 Trench excavation, rock	m3	699	4.22	2,823	25.15	16,825		10202.3
- 23 -	/02 Backfilling, excavated rock (Manpower)  Subtotal of Item B3.2	ш3	305	0.05	15 2,838	28.18	8,594 25,419		10205.2
B3.3	Concrete Work								
0/	/01 Portection concrete, Class B	m3	252	111.52	28,103	1,065.78	268,576		10301
0/	/02 Formwork, type F1	m2	553	6.30	3,483	344.00	190,232		10303
0/	/03 Reinforcing bars	ton	12	748.22	8,978	1,861.92	22,343		10304
	Subtotal of Item B3.3				40,564		481,151		
	Total of Item B3				44,098	Į.	550,205		

Item No.	Description	Unit Quantity	1 '	Foreign Currency (US\$ Unit Price Amount	y (US\$) Amount	Local Currency (Rs) Unit Price Amou	y (Rs) Amount	Total Equivalent (Rs)	Ref. Caluse or Sub-clause
B.4 WASH-O	WASH-OUT PIPE								
(As per D	(As per DWG. No. P-047)								
B4.1 Earthwork	rk								
/01 Trench ex	/01 Trench excavation, rock (manpower)	m3	6	11.65	104	169.78	1,528		10202.3
/02 Backfillin	/02 Backfilling, excavated material	m3	9	0.05	0	28.18	169		10205.2
·	Subtotal of Item B4.1				104		1,697		
B4.2 Concrete Work	Work								
	/01 Reinforced concrete, Class B	m3	7	111.52	780	1,065.78	7,460		10301
ှ ည /02 Formwork, type F1	; type F1	m2	28	6.30	176	344.00	9,632		10303
1 /03 Reinforcing bars	ng bars	ton	0.4	748.22	299	1,861.92	744		10304
/04 Drain-pit	/04 Drain-pit including grating cover	nr	₩.	21.43	21	6,083.55	6,083		10705
	Subtotal of Item B4.2		÷		1,276		23,919		
B4.3 Pipe Work	<b>½</b>								
/01 Pipelaying	/01 Pipelaying work, DN 150 DIP	Ħ	29	65.69	1,818	116.26	3,371		10500
including works, pre	including pipes, fittings, joints, laying works, pressure testing and washing out								
/02 Wash-out	/02 Wash-out valve installation, sluice valve	ш	Н	1,090.32	1,090	3,370.25	3,370		10503.1 &
with hand	with handwheel DN 150 including valve box	χo							10505.2
	Subtotal of Item B4.3				2,908		6,741		
	Total of Item B4				4 288		725 65		
					227,1		0,11		

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Item No	Description	Unit Q	uantity Fo	Unit Quantity Foreign Currency (US\$)  Unit Price Amount	sy (US\$) Amount	Local Currency (Rs) Unit Price Amou	cy (Rs) Amount	Total Equivalent (Rs)	Ref. Clause or Sub-clause
B.5 TUNI	TUNNEL CROSSING								
(As pe	(As per DWG. Nos. P-031 and P-048)								
B5.1 Earth	Earthwork								
/01 Open-	/01 Open-cut excavation, common soil	m3	278	2.28	633	12.14	3,374		10202.2
/02 Backf	/02 Backfilling, selected material	т.3	239	0.05	11	28.18	6,735		10205
	Subtotal of Item B5.1				644		10,109		
B5.2 Conc	Concrete Work								
, /01 Concr	/01 Concrete, Class B	m3	32	111.52	3,568	1,065.78	34,104		10301
. 702 Form	/02 Formwork type F1	m2	49	6.30	308	344.00	16,856		10303
	/03 Reinforcing bars	ton	1.6	748.22	1,197	1,861.92	2,979		10304
•	Subtotal of Item B5.2				5,073		53,939		
	Total of Item B5			1	5,717	1	64,048		
	TOTAL OF ITEM B				1,378,658	'	5,288,812		

Item No Description	Unit	Unit Quantity F	Foreign Currency (US\$) Unit Price Amount	ncy (US\$) Amount	Local Currency (Rs) Unit Price Amou	ncy (Rs) Amount	Total Equivalent (Rs)	Ref. Clause or Sub-clause
C. TREATMENT FACILITIES								
C1 RECEIVING TANK								
CI.1 Earth Work								
/01 Open-cut excavation, residual soil with	m3	308	2.28	702	12.14	3,739		10202
rock fragment								
/02 Backfilling, backhoe	m3	212	1.50	318	20.04	4,248		10205.1
/03 Surplus soil disposal	m3	96	3.48	334	19.40	1,862		10206
Subtotal of Item C1.1				1,354	,	9,849		
CI.2 Concrete Work								
/01 Concrete, Class A, C25/20	т3	80	114.79	9,183	1,096.02	87,681		10301
/02 Concrete, Class B, C20/20	m3	2	111.52	223	1,065.78	2,131		10301
/03 Concrete, Class D, C15/40	m3	9	104.27	625	981.90	5,891		10301
/04 Concrete, Class E, C15/20	m3	22	105.28	2,316	990.72	21,795		10301
/05 Formwork, Type F1	m2	220	6.30	1,386	344.00	75,680		10303
/06 Formwork, Type F3	m2	137	96.90	945	379.00	51,923		10303
/07 Reinforcing bars	ton	5.8	748.22	4,339	1,861.92	10,799		10304
Subtotal of Item C1.2				19,017		255,900		
C1.3 Equipment and Materials								
/01 Precast concrete cover 300B x 1,690L x 100T	nr	4	32.15	128	239.04	956		10403
Subtotal of Item C1.3				128		956		

Item No	Description	Unit	Unit Quantity	Foreign Currency (US\$) Unit Price Amount	ancy (US\$) Amount	Local Currency (Rs) Unit Price Amou	ncy (Rs) Amount	Total Equivalent (Rs)	Ref. Clause or Sub-clause
C1.4 P	Pipe Work (DWG. No. C-008)								
1 10/	/01 DN 800 mm DIP	E	6	1,466.70	13,200	1,908.04	17,172		10502.1
ŭ	naw water transmission pupe								
/02 I	/02 DN 700 mm DIP	E	∞	741.89	5,935	1,047.96	8,383		10502.1
<u></u>	Raw water pipe to existing system								
1 (03 I	DN 150 mm DIP Drain pipe	E	<del></del>	123.48	123	200.03	200		10502.1
/04 L	DN 800 mm Butterfly valves for flow control and shut-off with headstocks, type B	nr	23	29,776	59,552	42,834	82,668		10503.2
705 II	DN 700 mm Butterfly valve for flow control with headstock, type B	nr	<del></del> 1	22,580	22,580	32,800	32,800		10503.2
1 90/	/06 DN 150 mm Sluice valve for drain valve with headstock, type A	пŗ	<del>,</del> i	3,074	3,074	4,856	4,856		10503.1
	Subtotal of Item C1.4				104,464		149,079		
C1.5 N	Metal Work								
/01 I	/01 Ladder, L=2,500 mm x 1 mr as per DWG. No. C-019	kg	09	0.90	54	14.89	893		10704
/02 1	/02 Ladder, L=2,900 mm x 1 nr	kg	69	0.00	62	14.89	1,027		10704
/03 1	/03 Ladder, L=3,200 mm x 3 ms	kg	228	0.30	205	14.89	3,394		10704
) 40/ 3	/04 Grating, 700A x 700B as per DWG. No. C-019	m2	1.47	78.10	114	53.50	78		10705
) 50/	/05 Grey iron manhole cover, 600 mm dia.	ш	2	269.40	538	369.08	738		10706
	Subtotal of Item C1.5				973		6,130		
	Total of Item CI			1	125,936	,	421,914		

Item No Description	Unit	Unit Quantity Fo	Foreign Currency (US\$ Unit Price Amount	cy (US\$) Amount	Local Currency (Rs) Unit Price Amou	l t	Total Ref. Clause Equivalent (Rs) or Sub-clause
C2 RAPID MIXING TANK							
C2.1 Earth Work							
/01 Open-cut excavation, residual soil with	m3	196	2.28	446	12.14	2,379	10202
rock fragment, backhoe							
/02 Backfilling	m3	41	1.50	61	20.04	821	10205.1
/03 Surplus soil disposal	т3	155	3.48	539	19.40	3,007	10206
Subtotal of Item C2.1				1,046		6,207	
C2.2 Concrete Work							
/01 Concrete, Class A, C25/20	m3	73	114.79	8,379	1,096.02	80,009	10301
/02 Concrete, Class B, C20/20	m3	7	111.52	223	1,065.78	2,131	10301
/03 Concrete, Class D, C15/40	m3	46	104.27	4,796	981.90	45,167	10301
/04 Formwork, Type F1	m2	157	6.30	686	344.00	54,008	10303
/05 Formwork, Type F3	m2	196	9.30	1,352	379.00	74,284	10303
/06 Reinforcing bars	ton	6.1	748.22	4,564	1,861.92	11,357	10304
Subtotal of Item C2.2				20,303		266,956	
C2.3 Equipment and Materials							
/01 Precast concrete cover	nr	ν.	32.15	160	239.04	1,195	10403
$300B \times 1,690L \times 100T$							
Subtotal of Item C2.3				160		1,195	
C2.4 Pipe Work							
/01 DN 800 mm DIP	E	ν,	2,105.37	10,526	2,734.07	13,670	10502.1
Inlet pipe							

Item No. Description	Unit	Unit Quantity F	Foreign Currency (US\$)	cy (US\$)	Local Currency (Rs)	cy (Rs)	Total	Ref. Clause
			Unit Price	Amount	Unit Price	Amount	Equivalent (Rs)	or Sub-clause
/02 DN 150 mm DIP	ш	1	123.48	123	200.03	200		10502.1
Drain pipe								
/03 DN 800 mm Butterfly valve for inlet flow	» nr	<del></del>	29,776	29,776	42,834	42,834		10503.2
control with headstock, type B								
/04 DN 150 mm Sluice valve for drain pipe	nr	<del>, , , , ,</del>	3,074	3,074	4,856	4,856		10503.1
with headstock, type A								
Subtotal of Item C2.4				43,499		61,560		
C2.5 Metal Work						٠.		
/01 Ladder, L=2.75 m x 1 m	kg	92	0.00	58	14.89	196		10704
102 Ladder, L= 5.05 m x 2 nrs	kg	240	0.90	216	14.49	3,477		10704
/03 Grating, 700Ax 400B x 2 nrs	m2	0.56	78.10	43	53.50	29		10705
/04 Grey iron manhole cover, 600 mm dia.	nr		269.40	269	369.08	369		10706
/05 Handrail	E	24.3	12.92	313	138.44	3,364		10703
Subtotal of Item C2.5				668		8,206		
Total of Item C2			l	65,907	'	344,124		

Item No Description	Unit Quantity		Tenc	, (US\$)	Local Currency (Rs)	cy (Rs)	Total	Ref. Clause
			Unit Price A	Amount	Unit Price	Amount	Equivalent (Ks)	or Sub-clause
C3 FLOCCULATION AND SEDIMENTATION TANK	ON TAN	<b>⊻</b>						
C3.1 Earth Work								
/01 Open-cut excavation, residual soil	m3 3	3,095	2.28	7,056	12.14	37,573		10202
with rock fragment, backhoe			•					
/02 Backfilling	m3	245	1.50	367	20.04	4,909		10205.1
/03 Surplus soil disposal	m3 2	2,850	3.48	9,918	19.40	55,290		10206
Subtotal of Item C3.1				17,341		97,772		
C3.2 Concrete Work								
/01 Concrete, Class A, C25/20	m3 1	1,595	114.79	183,090	1,096.02	1,748,151		10301
/02 Concrete, Class B, C20/20	m3	<del></del>	111.52	111	1,065.78	1,065		10301
/03 Concrete, Class D, C15/40	m3	126	104.27	13,138	981.90	123,719		10301
/04 Concrete, Class E, C15/20	m3	176	105.28	18,529	990.72	174,366		10301
/05 Formwork, Type F1	m2 1	1,639	6.30	10,325	344.00	563,816		10303
/06 Formwork, Type F3	m2 4	4,900	06.9	33,810	379.00	1,857,100		10303
/07 Reinforcing bars	ton 1	171.0	748.22	127,945	1,861.92	318,388		10304
/08 Expansion joint, $t = 20 \text{ mm}$ with water stop	ш	117	43.73	5,116	90'36	10,572		10305
/09 Water stop with protective cover	ш	20	26.88	537	56.34	1,126		10305
/10 Expansion joint, t= 10 mm without water stop	H	77	13.86	1,067	33.60	2,587		10305
Subtotal of Item C3.2				393,668		4,800,890		
C3.3 Equipment and Materials								
/01 Clarified water effluent trough 250 W x 350 H x 3,230 L	nr	18	181.64	3,269	3,158.62	56,855		10404

Item No	Description	Unit (	Unit Quantity For	Foreign Currency (US\$)	cy (US\$)	Local Currency (Rs)	ıcy (Rs)	Total	Ref. Clause
				Unit Price	Amount	Unit Price	Amount	Equivalent (Rs)	or Sub-clause
/02 Baffle plate and stop log	nd stop log								10402
- Baffle plate, t = 20 mm	t = 20  mm	m3	0.114	3,380.92	385	41,967.48	4,784		
- Stop $\log$ , $t = 50 \text{ mm}$	= 50 mm	m3	0.057	31.22	<b></b>	1,510.52	86		
SI	Subtotal of Item C3.3				3,655		61,725		
C3.4 Pipe Work									
Pipe work in	Pipe work includes installation of pipes and valves	alves							
necessary for	necessary for cleaning the tank and also includes	qes							
inlet gates an	inlet gates and pipes in perforated walls.								
/01 Desludging p	/01 Desludging pipe, DN 300 DIP	Ħ	4.2	490.12	2,058	627.98	2,637		10502.1
, /02 Scouring pipe, DN 200 DIP	e, DN 200 DIP	Ħ	35.4	115.97	4,105	185.65	6,572		10502.1
as per DWG. No. C-015	. No. C-015								
/03 Flush pipe, L	/03 Flush pipe, DN 100 GSP and 65 GSP	uns			14,347		24,627		10502.2
as per DWG. No. C-017	No. C-017								
/04 DN 300 mm Sluice valve	Sluice valve	Ħ	4	5,065	20,260	8,230	32,920		10503.1
with headstock, Type A	ck, Type A								
/05 DN 200 mm Sluice valve	Sluice valve	占	т	3,578	10,734	5,744	17,232		10503.1
with headstock, Type A	ck, Type A								
$/06$ Inlet gate $500 \times 500$	0 x 500	Ħ	m	12,396	37,188	18,221	54,663		10503.3
with headstock, Type C	ck, Type C								
/07 DN 110 uPVC pipe for	C pipe for	Ħ	1,377	3.00	4,131	5.00	6,885		10502.3
perforated wall, I = 250	all, $I = 250$								
as per DWG. No. C-015	. No. C-015								
V3	Subtotal of Item C3.4				92,823		145,536		

C3.5         Metal Work         Unit Price         Amount         Link Price         Amount         Equivalent (Rs) or Subscription           A) Ladder, L= 3.84 m x 2 ms         kg         283         0.90         254         14.89         4.213           A) Ladder, L= 3.85 m x 6 ms         kg         550         0.90         482         14.89         10,184           A) Ladder, L= 3.75 m x 6 ms         kg         556         0.90         482         14.89         7,981           A) Ladder, L= 3.75 m x 6 ms         kg         556         0.90         482         14.89         7,981           A) Ladder, L= 3.75 m x 6 ms         kg         556         0.90         482         14.89         7,981           A) Ladder, L= 3.75 m x 6 ms         kg         556         0.90         85         14.89         7,981           A) Ladder, L= 3.75 m x 6 ms         kg         557         0.90         831         14.89         7,981           A) Ladder, L= 3.60 m x 3 ms         ms         1.92         78.10         14.89         1,414           A) Gader, L= 2.00 m x 2 ms         ms         1.92         78.10         14.89         1,414           A) Gader, L= 2.00 m x 2 ms         ms         1.2         78.10 <th>Item No</th> <th>No Description</th> <th>Unit</th> <th>Unit Quantity</th> <th>Foreign Currency (US\$</th> <th>incy (US\$)</th> <th>Local Currency (Rs)</th> <th>icy (Rs)</th> <th>Total</th> <th>Ref. Clause</th>	Item No	No Description	Unit	Unit Quantity	Foreign Currency (US\$	incy (US\$)	Local Currency (Rs)	icy (Rs)	Total	Ref. Clause
Marcial Work   Mg   283   0.90   254   14.89   4,213   14.84					Unit Price	Amount	Unit Price	Amount	Equivalent (Rs)	or Sub-clause
Miles   Mile	(S)									
0.2 Laddet, L= 3.85 m x 6 ms       kg       684       0.90       615       14.89       10,184         0.3 Laddet, L= 3.85 m x 6 ms       kg       550       0.90       495       14.89       8,189         0.4 Laddet, L= 3.60 m x 3 ms       kg       536       0.90       482       14.89       8,189         0.5 Laddet, L= 3.60 m x 3 ms       kg       537       0.90       85       14.89       7,81         0.6 Laddet, L= 2.00 m x 3 ms       m2       1.92       78.10       14.89       3,826         0.6 Laddet, L= 2.00 m x 2 ms       m2       1.92       78.10       262       1744         0.8 Grating, 700A x 600B x 8 ms       m2       1.92       78.10       262       53.50       102         0.9 Grating, 700A x 600B x 4 ms       m2       0.96       78.10       74       53.50       102         1.1 Grating, 400A x 450B x 1 ms       m2       2.88       78.10       224       53.50       19         1.1 Grating, 400A x 450B x 2 ms       m2       3.78       78.10       28       53.50       19         1.1 Grating, 400A x 450B x 2 ms       m       317       12.91       4,092       138.44       43.885         1.1 Grating, 400A x 450B x 2 ms		/01 Ladder, $L=5.94 \text{ m x } 2 \text{ nrs}$	kg	283		254	14.89	4,213		10704
03 Laddet, L= 3.85 m x 6 ms         kg         550         0.90         495         14.89         8,189           04 Laddet, L= 3.75 m x 6 ms         kg         536         0.90         482         14.89         7,981           05 Laddet, L= 3.50 m x 3 ms         kg         257         0.90         231         14.89         7,981           06 Laddet, L= 3.00 m x 2 ms         kg         25         0.90         85         14.89         7,981           07 Grating, 800A x 800B x 3 ms         m2         1.92         78.10         149         53.50         179           08 Grating, 700A x 600B x 8 ms         m2         3.36         78.10         262         53.50         179           10 Grating, 400A x 450B x 1 ms         m2         3.78         78.10         72         51           11 Grating, 400A x 450B x 2 ms         m2         3.78         78.10         224         53.50         154           11 Grating, 400A x 450B x 2 ms         m2         3.17         4.092         138.44         43.885           11 Grating, 400A x 450B x 2 ms         m2         3.1         4.092         138.44         43.885           All Grating, 400A x 450B x 2 ms         m2         1.2         7.286         138.44	-	/02 Ladder, L= 4.79 m x 6 nrs	kg	684		615	14.89	10,184		10704
/04 Laddet, L= 3.75 m x 6 ms         kg         536         0.90         482         14.89         7,981           /05 Laddet, L= 3.60 m x 3 ms         kg         257         0.90         231         14.89         3,826           /06 Laddet, L= 2.00 m x 2 ms         kg         257         0.90         231         14.89         3,826           /07 Grating, 800A x 800B x 3 ms         m2         1.92         78.10         149         55.50         102           /08 Grating, 700A x 600B x 8 ms         m2         3.36         78.10         262         53.50         179           /08 Grating, 700A x 600B x 4 ms         m2         3.78         78.10         262         53.50         179           /10 Grating, 400A x 450B x 12 ms         m2         2.88         78.10         224         53.50         19           /13 Handrail         m3         317         12.91         4,092         138.44         43.885           /13 Handrail         m3         317         12.91         4,092         138.44         43.885           All Concrete Block masonry work         m2         1.6         12.26         80,399         80,399           All Concrete block masonry work         m3         1.6         10.82 <td></td> <td>/03 Ladder, <math>L=3.85 \text{ m x 6 nrs}</math></td> <td>kg</td> <td>550</td> <td></td> <td>495</td> <td>14.89</td> <td>8,189</td> <td></td> <td>10704</td>		/03 Ladder, $L=3.85 \text{ m x 6 nrs}$	kg	550		495	14.89	8,189		10704
/05 Ladder, L= 3.60 m x 3 ms         kg         257         0.90         231         14.89         3,826           /06 Ladder, L= 2.00 m x 2 ms         kg         95         0.90         85         14.49         3,826           /07 Grating, 800A x 800B x 3 ms         m2         1.92         78.10         149         53.50         1,91           /08 Grating, 700A x 600B x 8 ms         m2         3.36         78.10         262         53.50         179           /09 Grating, 700A x 450B x 12 ms         m2         3.78         78.10         226         53.50         179           /10 Grating, 400A x 450B x 1 ms         m2         2.88         78.10         224         53.50         154           /12 Grating, 400A x 450B x 2 ms         m2         2.88         78.10         224         53.50         154           /13 Handrail         m         317         12.91         4,092         138.44         43.885           /13 Handrail         m         317         12.91         4,092         138.44         43.885           /13 Handrail         m         317         12.91         4,092         138.44         43.885           /13 Handrail         m         1.62         1.30         1		/04 Ladder, $L=3.75 \text{ m x 6 nrs}$	kg	536		482	14.89	7,981		10704
//O Ladder, L= 2.00 m x 2 ms       kg       95       0.90       85       14.89       1,414         //O Grating, 800A x 800B x 3 ms       m2       1.92       78.10       149       53.50       102         //O Grating, 800A x 800B x 8 ms       m2       1.92       78.10       262       53.50       179         //O Grating, 700A x 600B x 4 ms       m2       3.78       78.10       265       53.50       179         //O Grating, 400A x 600B x 4 ms       m2       0.96       78.10       724       53.50       179         //O Grating, 400A x 450B x 1 ms       m2       2.88       78.10       224       53.50       154         //O Grating, 400A x 450B x 2 ms       m2       0.36       78.10       4,092       138.44       43.885         //O Grating, 400A x 450B x 2 ms       m       317       12.91       4,092       138.44       43.885         //O Grating, 400A x 450B x 2 ms       m       317       12.91       4,092       138.44       43.885         //O Grating, 400A x 450B x 2 ms       m       317       1,206       36.39       36.39         A.13 Handrail       //O Grating, 800 ms       m       16       10.82       17       1,301.03       2,081		$/05$ Ladder, L= $3.60 \mathrm{m} \mathrm{x} 3 \mathrm{ms}$	kg	257		231	14.89	3,826		10704
AO7 Grating, 800A x 800B x 3 mrs       m2       1.92       78.10       149       53.50       102         AO8 Grating, 700A x 600B x 8 mrs       m2       3.36       78.10       262       53.50       179         AO9 Grating, 700A x 450B x 12 mrs       m2       3.78       78.10       205       53.50       179         A11 Grating, 400A x 450B x 2 mrs       m2       2.88       78.10       224       53.50       154         A12 Grating, 400A x 450B x 2 mrs       m2       0.36       78.10       224       53.50       154         A13 Handrail       Subfotal of Item C3.5       m       317       12.91       4,092       138.44       43.885         A25 Concrete Block wall       m3       317       12.91       4,092       138.44       43.885         A3 Concrete Block masony work       m2       1.6       10.82       17       1,301.03       2,081         A3 Concrete block masony work       m2       1.6       1.6       1.7       1,301.03       2,081         A40 Concrete block masony work       m2       1.6       1.6       1.7       1,301.03       2,081         Back No. C-014, SECTION B-B       A3.40       A3.40       A3.40       A3.40       A3.40		/06 Ladder, $L=2.00 \text{ m x } 2 \text{ nrs}$	kg	95		85	14.89	1,414		10704
c 8 ms         m2         3.36         78.10         262         53.50         179           c 12 ms         m2         3.78         78.10         295         53.50         179           c 4 ms         m2         0.96         78.10         74         53.50         51           c 18 ms         m2         2.88         78.10         224         53.50         154           c 2 ms         m         317         12.91         4,092         138.44         43,885           Item C3.5           r work         m2         1.6         10.82         17         1,301.03         2,081           Item C3.6         5.188,403		/07 Grating, 800A x 800B x 3 nrs	m2	1.92		149	53.50	102		10705
Age Grating, 700A x 450B x 12 nrs       m2       3.78       78.10       295       53.50       202         710 Grating, 400A x 600B x 4 nrs       m2       0.96       78.10       74       53.50       51         712 Grating, 400A x 450B x 2 nrs       m2       2.88       78.10       224       53.50       154         712 Grating, 400A x 450B x 2 nrs       m2       0.36       78.10       224       53.50       19         713 Handrail       m317       12.91       4,092       138.44       43.885         Subtotal of Item C3.5         All Concrete block masomy work       m2       1.6       10.82       17       1,301.03       2,081         DWG. No. C-014, SECTION B-B       Subtotal of Item C3.6       714,790       5,188,403       5,188,403		/08 Grating, 700A x 600B x 8 nrs	m2	3.36		262	53.50	179		10705
/10 Grating, 400A x 600B x 4 nrs       m2       0.96       78.10       74       53.50       51         /11 Grating, 400A x 450B x 18 ms       m2       2.88       78.10       224       53.50       154         /12 Grating, 400A x 450B x 2 nrs       m2       0.36       78.10       28       53.50       19         /13 Handrail       m317       12.91       4,092       138.44       43,885         /13 Handrail       m317       12.91       4,092       138.44       43,885         Concrete Block Wall       n2       1.6       10.82       17       1,301.03       2,081         OI Concrete block masonry work       n2       1.6       10.82       17       1,301.03       2,081         Subtotal of Item C3.6       n3       17       2,188,403       2,081		/09 Grating, 700A x 450B x 12 nrs	m2	3.78		295	53.50	202		10705
/11 Grating, 400A x 450B x 18 ms       m2       2.88       78.10       224       53.50       154         /12 Grating, 400A x 450B x 2 ms       m2       0.36       78.10       28       53.50       19         /13 Handrail       Subtotal of Item C3.5       m317       12.91       4,092       138.44       43,885         C3.6       Concrete Block Wall         A01 Concrete block masonry work       m2       1.6       10.82       17       1,301.03       2,081         DWG. No. C-014, SECTION B-B       Subtotal of Item C3.6         Total of Item C3.6       514,790       5,188,403	- 3:	/10 Grating, 400A x 600B x 4 nrs	m2	0.96		74	53.50	51		10705
C 2 mrs       mm2       0.36       78.10       28       53.50       19         Item C3.5       m       317       12.91       4,092       138.44       43,885         Item C3.6       m       7,286       138.44       43,885         y work       m       7,286       80,399         TION B-B       Item C3.6       17       1,301.03       2,081         Item C3.6       5,188,403       5,188,403	2	/11 Grating, 400A x 400B x 18 nrs	m2	2.88		224	53.50	154		10705
Item C3.5       m       317       12.91       4,092       138.44       43,885         Titem C3.5       m2       1.6       10.82       17       1,301.03       2,081         TION B-B       17       1,301.03       2,081         Item C3.6       5,188,403		/12 Grating, 400A x 450B x 2 nrs	m2	0.36		28	53.50	19		10705
Item C3.5       7,286       80,399         y work       m2       1.6       10.82       17       1,301.03       2,081         TION B-B       Item C3.6       5,188,403       5,188,403		/13 Handrail	Ħ	317		4,092	138.44	43,885		10703
y work       m2       1.6       10.82       17       1,301.03       2,081         TION B-B       Item C3.6       17       2,081         Item C3       514,790       5,188,403		Subtotal of Item C3.5				7,286		80,399		
B-B 1.6 10.82 17 1,301.03 2,081 23.6 17 2,081 2,	S	6 Concrete Block Wall								
514,790		/01 Concrete block masonry work	m2	1.6		17	1,301.03	2,081		20401
514,790		DWG. No. C-014, SECTION B-B								
514,790		Subtotal of Item C3.6				17		2,081		
		Total of Item C3			·	514,790	ı	5,188,403		

Item No	Description	Unit	Quantity Fo	Foreign Currency (US\$	icy (US\$)	Local Currency (Rs)	cy (Rs)	Total Ref. Clause	use
			•	Unit Price	Amount	Unit Price	Amount	Equivalent (Rs) or Sub-clause	lause
C4 FILTER									
C4.1 Earth Work	<b>.</b> **								
/01 Open-cut exc	vation with backhoe,	m3	1,518	2.28	3,461	12.14	18,428		10202.1
residual soil	residual soil with rock fragment								
/02 Backfilling		m3	185	1.50	277	20.04	3,707		10205.1
/03 Surplus soil disposal		m3	1,333	3.48	4,638	19.40	25,860		10206
<b>94</b>	Subtotal of Item C4.1				8,376		47,995		
C4.2 Concrete Work	Vork								
/ /01 Concrete, Class A, C25/20	ass A, C25/20	m3	1,094	114.79	125,580	1,096.02	1,199,045		10301
/02 Concrete, Class B, C20/20	ass B, C20/20	m3	2	111.52	223	1,065.78	2,131		10301
/03 Concrete, Class D, C15/40	ass D, C15/40	т3	47	104.27	4,900	981.90	46,149		10301
/04 Concrete, Class E, C15/20	ass E, C15/20	m3	10	105.28	1,052	990.72	9,907		10301
/05 Formwork, Type F1	.ype F1	m2	599	6.30	3,773	344.00	206,056		10303
/06 Formwork, Type F3	Type F3	m2	3,665	6.90	25,288	379.00	1,389,035		10303
/07 Reinforcing bars	bars	ton	104.9	748.22	78,488	1,861.92	195,315		10304
/08 Water stop w	/08 Water stop with protective cover	田	44	26.88	1,182	56.34	2,478		10305.2
/09 Expansion jc	/09 Expansion joint, $t = 20 \text{ mm}$ without water stop	m2	142	27.72	3,936	58.86	8,358		10305
	Subtotal of Item C4.2				244,422		3,058,474		
C4.3 Equipment	Equipment and Materials								
/01 Filter underdrain system, complete with nozzles, k- panels, accessories and al	Filter underdrain system, complete with nozzles, k-floor, form work panels, accessories and all necessary work	m2	225	1,540	346,500	5,270.00	1,185,750		10405
for installation	nc								

OD Filter sand, effective size of 1.0 mm, max uniformity coefficient of 1.5       max uniformity coefficient of 1.5       Common to 4.7.1       529.20         A03 Supporting gravel, particle size of 2.38 mm to 4.76 mm       m3       22.5       507.78         A04 Precast concrete cover 300B x 1,690L x 100T       nr       5       32.15         A05 Roof light with frame A05 Roof light with frame A06 Ventilation louver (steel)       set       11       434.29         W400 x H400 mm       set       1       57.56         W700 x H400 mm       set       1       57.56	An		Local Cullettey (NS)		Lotai	Nel. Clause
m, m3 247.1 m3 22.5 m7 5 nr 5 set 11 set 1	<del></del>	Amount	Unit Price	Amount	Equivalent (Rs) o	or Sub-clause
m3 22.5 nr 5 set 11 set 1 set 8		130,765	757.51	187,180		10406
m3 22.5 nr 5 set 11 set 1 set 8						
m3 22.5 nr 5 set 11 set 1 set 8						
nr 5 set 11 set 1 set 8		11,425	739.25	16,633		10406
set 11 set 1 set 1 set 8	32.15	160	239.04	1,195		10403
set 11 set 1 set 1 set 8						
set 1 set 8	434.29	4,777	1,291.88	14,210		10708
set 1 set 8						
set 8	57.50	57	377.30	377		21401, 21402
	100.70	805	660.20	5,281		
/07 Steel flush door with wired glass set 2	201.40	402	1,320.50	2,641		21301, 21302
W800 x H2,100 mm						21303
Subtotal of Item C4.3	4	494,891		1,413,267		
C4.4 Pipe Work						
Pipe work in filter includes gates for filter inlet,						
pipes, valves for air scouring and backwash,						
pipes, gates and valves for wash drain.						
/01 Filter outlet/backwash pipe m 97.0 1,0' DN 350 SP	1,078.00 10	104,566	1,574.00	152,678		10502.2
oe DN 200 SP m 78.4	00.786	77,380	1,418.00	111,171		10502.2
m 47.1	797.00	37,538	1,152.00	54,259		10502.2
00, 125 SP m 10.4	761.00	7,914	1,096.00	11,398		10501
steel m 6	224.44	1,346	540.27	3,241		
l = 0.675 m			į			i

Itel	Item No	Description	Unit	Quantity Fe	Foreign Currency (US\$	icy (US\$)	Local Currency (Rs)	cy (Rs)	Total	Ref. Clause
					Unit Price	Amount	Unit Price	Amount	Equivalent (Rs)	or Sub-clause
	/06 Filter inlet	/06 Filter inlet gate 350 x 350	nr	9	9,722	58,332	14,378.00	86,268		10503.3
	with heads	with headstock, Type C								
	/07 Wash drain with heads	/07 Wash drain gate 400 x 400 with headstock, Type C	ıı	9	10,895	65,370	16,036	96,216		10503.3
	/08 DN 350 butterfly valve with headstock, Type B	DN 350 butterfly valve with headstock, Type B, for filter outlet	nr	9	12,565	75,390	18,716	112,296		10503.2
	/09 DN 350 butterfly valve with headstock, Type B	DN 350 butterfly valve with headstock, Type B, for backwash pipe	н	9	12,565	75,390	18,716	112,296		10503.2
	/10 DN 350 butterfly valve with handwheel for bac	DN 350 butterfly valve with handwheel for backwash main	III	<del></del>	9,122	9,122	13,817	13,817		10503.2
<b>-</b> - ;	/11 DN 200 sluice valve with headstock, Type	DN 200 sluice valve with headstock, Type A, for air inlet	n	7	3,578	25,046	5,744	40,208		10503.1
35 –	/12 DN 200 sluice valve with handwheel for a	DN 200 sluice valve with handwheel for air release	nr	⊣	1,562	1,562	2,882	2,882		10503.1
	/13 DN 150 sluice valve with handwheel for o	DN 150 sluice valve with handwheel for drain	ш	9	1,058	6,348	1,993	11,958		10503.1
	/14 DN 150 sluice valve with headstock, Typo	DN 150 sluice valve with headstock, Type A, for drain	ш	<b>←</b>	3,074	3,074	4,856	4,856		10503.1
	/15 Single orit	/15 Single orifice air valve dia. 25 mm	ш		535.50	535	879.79	879		10503.4
		Subtotal of Item C4.4				548,913		814,423		
Ŭ	C4.5 Metal Work	ork								
	/01 Steel pipe support	support	ton	1.48	582.30	861	8,376.40	12,397		ı
	/02 Ductile iron mai	/02 Ductile iron manhole cover, 600 mm dia,, water tight type	ш	9	269.40	1,616	369.08	2,214		10706
	/03 Ductile irc resisting w	/03 Ductile iron manhole cover, 600 mm dia., resisting water pressure type	ш	7	781.20	5,468	1,070.24	7,491		10706

Item No Description	Unit	Quantity F	Foreign Currency (US\$	ncy (US\$)	Local Currency (Rs)	cy (Rs)	Total	Ref. Clause
			Unit Price	Amount	Unit Price	Amount	Equivalent (Rs)	or Sub-clause
/04 Ladder, $L = 5.10 \text{ m x } 1 \text{ nr}$	kg	121	0.90	108	14.89	1,801		10704
/05 Ladder, $L = 4.20 \text{ m x 3 nrs}$	kg	300	0.90	270	14.89	4,467		10704
/06 Ladder, $L=3.80 \text{ m x 6 ms}$	kg	543	0.30	488	14.89	8,085		10704
/07 Ladder, $L=3.10 \text{ m x 1 nr}$	kg	74	0.90	99	14.89	1,101		10704
/08 Ladder, $L=2.80 \text{ m x } 1 \text{ nr}$	kg	<i>L</i> 9	0.00	09	14.89	166		10704
/09 Ladder, $L= 2.40 \text{ m x } 1 \text{ nr}$	kg	57	0.90	51	14.89	848		10704
/10 Ladder, $L = 1.50 \text{ m x 1 nr}$	kg	36	0.90	32	14.89	536		10704
/11 Grating, 700A x 1,200B x 6 ms	m2	5.04	78.10	393	53.50	569		10705
/12 Grating, 700A x 500B x 6 ms	m2	2.10	78.10	164	53.50	112	à	10705
/13 Handrail	B	309	12.91	3,989	138.44	42,777		10703
Subtotal of Item C4.5				13,566		83,095		
C4.6 Concrete Block Wall								
/01 Concrete wall masonry work for ventilation shaft as per DWG. No. C-022	m2	6.1	10.82	99	1,301.03	7,936		20401
Subtotal of Item C4.6				99		7,936		
C4.7 Concrete Mortar for Water Proofing								
/01 Roof of staircase room as per DWG. No. C-023	m2	21.1	28.80	209	188.20	3,971		20802
Subtotal of Item C4.7			•	209		3,971		
Total of Item C4			'	1,310,841	'	5,429,161		

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Item No.	Description	Unit	Quantity F	Foreign Currency (US\$ Unit Price Amount	Amount	Local Currency (KS) Unit Price Amou	cy (Ks) Amount	Total Ref. Clause Equivalent (Rs) or Sub-clause	se Se
CS	WASTEWATER AND SLUDGE PONDS								
C5.1	Earth Work								
/01	/01 Open-cut excavation with backhoe.	m3	4.804	2.28	10.953	12.14	58.320	10202.1	
	residual soil with rock fragment		•		`		•		
/02	/02 Backfilling	m3	673	1.50	1,009	20.04	13,486	10205.1	
/03	/03 Surplus soil disposal	m3	4,131	3.48	14,375	19.40	80,141	10206	90
	Subtotal of Item C3.1				26,337		151,947		
C5.2	Concrete Work								
/01	/01 Concrete, Class A, C25/20	m3	1,200	114.79	137,748	1,096.02	1,315,224	10301	01
/02	/02 Concrete, Class D, C15/40	m3	9/	104.27	7,924	981.90	74,624	10301	01
/03	/03 Concrete, Class E, C15/20	m3	91	105.28	9,580	990.72	90,155	10301	01
/04	/04 Formwork, Type F1	$m_2$	801	6.30	5,046	344.00	275,544	. 10303	03
/05	/05 Formwork, Type F3	$m_2$	1,314	6.90	990'6	379.00	498,006	10303	03
90/	/06 Reinforcing bars	ton	87.2	748.22	65,244	1,861.92	162,359	10304	04
	Subtotal of Item C5.2				234,608		2,415,912	_,	
C53	Equipment and Materials								
/01	Stop log for inlet complete with R.C. stop logs, guide frame, and chain block with support as per DWG. No. C-033	set	4	706.45	2,825	5,821.38	23,285	10707	20
/02	/02 Stop log for outlet complete with R.C. stop logs guide frame, and chain block with support as per DWG. No. C-033	set	4	779.73	3,118	7,243.72	28,974	10707	07
	Subtotal of Item C5.3				5,943		52,259		
									l

Item No.	Description	Unit	Quantity	Unit Quantity Foreign Currency (US\$	ncy (US\$)	Local Currency (Rs)	cy (Rs)	Total	Ref. Clause
	•		•	Unit Price	Amount	Unit Price	Amount	Equivalent (Rs) or Sub-clause	or Sub-clause
C5.4 Pipe Work									
/01 Outlet gate $300 \times 300$	00 x 300	nr	4	8,764	35,056	13,053	52,212	_,	10503.3
with headstock, Type C	ck, Type C								
as per DWG. No. C-032	. No. C-032								
- <b>4</b>	Subtotal of Item C5.4				35,056		52,212		
C5.5 Metal Work	*								
/01 Ladder, $L = 4.45 \text{ m x 2 nrs}$	.45 m x 2 ms	kg	212	0.00	190	14.89	3,156		10704
/02 Ladder, L= 3.85 m x 8 nrs	.85 m x 8 nrs	kg	733	0.00	629	14.89	10,914		10704
/03 Ladder, $L = 1.80 \text{ m x } 2 \text{ nrs}$	80 m x 2 nrs	kg	98	0.90	77	14.89	1,280		10704
ا /04 Handrail		Ħ	116	12.91	1,497	138.44	16,059	•	10703
8 <b>-</b>	Subtotal of Item C5.5				2,423		31,409	0	
	Total of Item C5			,	304,367		2,703,739	o.l	

Item No Description	Unit	Quantity	Foreign Currency (US\$	rency (US\$)	Local Currency (Rs)	cy (Rs)	Total Ref. Clause	lse_
			Unit Price	Amount	Unit Price	Amount	Equivalent (Rs) or Sub-clause	nse
C6 YARD PIPING								
C6.1 Raw Water Pipe								
/01 Pipe laying work, DN 800mmDIP	ш	133	550.68	73,240	941.86	125,267	10502.1	17.7
from receiving tank to rapid mixing tank								
as per DWG. No. C-035								
/02 Pipe laying work, DN 700mm DIP	H	19	489.09	9,292	786.36	14,940	10502.1	17.1
from receiving tank to existing chamber No. 1	<del></del> 4							
as per DWG. No. C-035								
/03 Pipe laying work, DN 200mm DIP for scouring	ing m	72	76.16	5,483	200.21	14,415	10502.1	12.1
/04 Pipe laying work, DN 40mm PE pipe	Ħ	75	8.56	642	18.06	1,354	10502.3	12.3
for sampling								
Subtotal of Item C6.1				88,657		155,976		
C6.2 Filtered Water Pipe								
/01 Pipe laying work, DN 900mm DIP	B	5	1,280.26	6,401	1,822.99	9,114	10502.1	12.1
for connection to existing filtered water pipe								
as per DWG. No. C-035								
/02 Pipe laying work, DN 800mm DIP	Ш	73	721.57	52,674	1,170.71	85,461	10502.1	12.1
for connection to existing filtered water pipe								
as per DWG. No. C-035								
/03 Pipe laying work, DN 600mm DIP	Ħ	93	446.18	41,494	779.91	72,531	10502.1,	2.1,
for replaced filtered water pipe							105	10512
from existing filter								
as per DWG. No. C-037								
	'							

Item No	Description	Unit	Unit Quantity	Foreign Cur	Foreign Currency (US\$)	Local Currency (Rs)	cy (Rs)	Total	Rcf. Clause
	•		•	Unit Price	Amount	Unit Price	ınt	Equivalent (Rs) or Sub-clause	or Sub-clause
/04 F	/04 Removal of existing filtered water pipe,	H	111	51.35	5,699	346.82	38,497		10512
1	DN 600 mm DIP								
/05 F	105 Flowmeter and valve chamber	sum			18,815		117,419		10505.1
ਲ	as per DWG. No. C-038								
1 90/	/06 Valve chamber	uns			7,323		45,109		10505.1
Ø	as per DWG. No. C-038								
1 LO/	/07 DN 800mm Butterfly valve with handwheel	ш	1	26,333	26,333	37,936	37,936		10503.2
I 80/	/08 DN 600mm Butterfly valve with handwheel	ш	1	14,258	14,258	21,067	21,067		10503.2
I 60/	/09 Flowmeter replacement, DN 900mm DIP	uns			1,407		11,923		10505.1
	including removal of existing orifice plate and pipe,	f pipe,							
- 4	installation of pipe w/ annubar flowmeter and demolition	demolit	ion						
	of part of the chamber and restoration of the chamber	hamber							
ro	as per DWG. No. C-038								
	Subtotal of Item C6.2				174,404		439,057		
. C63	Associated Pipe Work								
/01 I	/01 Pipe laying work, DN 350mm DIP	ш	77	187.86	14,465	285.24	21,963		10502.2
<b>+</b>	for backwash main								
•••	as per DWG. No. C-039								
/02 1	/02 Pipe laying work, DN 125mm DIP	Ħ	64	60.59	3,877	112.91	7,226		10502.1
<b>4</b>	for plant water inlet								
w	as per DWG. No. C-								
103 1	/03 Pipe laying work, DN 150mm DIP	B	15	33.86	2,007	189.24	2,838		10502.1
	for water supply								
	as per DWG. No. C-040								

Item No.	Description	Unit	Quantity	Foreign Currency (US\$)	ency (US\$)	Local Currency (Rs)	cy (Rs)	Total Ref. Clause	Sc
	•		`	Unit Price	Amount	Unit Price	Amount	Equivalent (Rs) or Sub-clause	nse
/04 Pipe laying wo:	/04 Pipe laying work, DN 110mm PE pipe	Ħ	131	27.04	3,542	47.55	6,229	10502.3	2.3
for water supply	>-								
as per DWG. No. C-040	o. C-040								
/05 Pipe laying wo.	/05 Pipe laying work, DN 63mm PE pipe	Ш	139	15.70	2,182	31.85	4,427	10502.3	2.3
for water supply	>-								
as per DWG.No. C-040	o. C-040								
/06 Hydrant with box	×o	set	9	224.00	1,344	3,206.00	19,236		ı
as per DWG. No. C-040	io. C-040								
/07 Flexible hose a	/07 Flexible hose and coupling for hydrant	lot			5,200		3,500		
Su	Subtotal of Item C6.3				32,617		65,419		
C6.4 Drain Pipe									
/01 Pipe laying wo	/01 Pipe laying work, DN 600mm RCP	Ħ	243	39.15	9,513	1,840.46	447,231	105	10514
as per DWG No. C-041	o. C-041								
/02 Pipe laying wo	/02 Pipe laying work, DN 450mm RCP	띰	284	. 26.99	7,665	1,136.37	322,729		10514
as per DWG No. C-041	o. C-041								
/03 Pipe laying wo	/03 Pipe laying work, DN 300mm RCP	E	208	22.88	4,759	680.77	141,600	105	10514
as per DWG No. C-041	o. C-041								
/04 Pipe laying wo	/04 Pipe laying work, DN 200mm DIP	Ħ	5	161.45	807	234.38	1,171	10514,	14,
Washout pipe								10502.1	2.1
as per DWG. N	as per DWG. No. C-036 and C-037								
/05 Pipe laying wo	/05 Pipe laying work, DN 225mm uPVC	E	18	49.40	889	163.01	2,934	10514,	14,
as per DWG. No. C-040	lo. C-040							10514.4	4.4
/06 Pipe laying wo	/06 Pipe laying work, DN 160mm uPVC	ш	43	25.99	1,117	65.13	2,800	10514,	14,
as per DWG. No. C-040	Io. C-040							10502.4	12.4

Item	Item No	Description	Unit	Quantity	Unit Quantity Foreign Currency (US\$)	ency (US\$)	Local Currency (Rs)	cy (Rs)	Total	Ref. Clause
					Unit Price	Amount	Unit Price	Amount ]	Equivalent (Rs	Amount Equivalent (Rs) or Sub-clause
	/07 Pipe laying wo	/07 Pipe laying work, DN 90mm uPVC	E	22	7.40	162	15.06	331		10514,
	as per DWG. No. C-040	Vo. C-040								10502.4
	/08 Pipe laying wo	/08 Pipe laying work, DN 63mm uPVC	Ш	8	3.58	28	12.41	66		10514,
	as per DWG. No. C-040	No. C-040								10514.4
	/09 DN 200 sluice valve with box	valve with box	nr	2	1,799.28	3,598	3,770.68	7,541		10503.2
	for washout pipe	be								
	as per DWG.	as per DWG. No. C-036 and C-037								
	/10 Removal of ex	/10 Removal of existing drain pipe, DN 450mm	H	78	0.74	57	16.74	1,305		I
	as per DWG. No. C-037	No. C-037								
	/11 Manholes, total of 24 manholes	al of 24 manholes	Sum			32,555		394,863		10514.5
4.4	as per DWG. No. C-044	No. C-044								
•	/12 Drain pit		ını	4	156.73	979	3,375.86	13,503		i
	as per DWG.	as per DWG. No. C-041 and C-042								
	S	Subtotal of Item C6.4				61,776		1,336,107		
		Total of Item C6				357,454		1,996,559		

Item No	o Description	Unit	Unit Quantity	Foreign Currency (US\$	ncy (US\$)	Local Currency (Rs)	ıcy (Rs)	Total	Ref. Clause
				Unit Price	Amount	Unit Price	Amount	Equivalent (Rs)	or Sub-clause
C1	SITEWORK								
C7.1	Earth Work								
0/	/01 Open-cut excavation, residual soil	m3	7,979	2.12	16,915	11.47	91,519		10202.2
	wit rock fragment								
0/	/02 Embankment	m3	4,684	1.50	7,026	20.04	93,867		10205
0/	/03 Surplus soil disposal	m3	3,295	3.48	11,466	19.40	63,923		10206
	Subtotal of Item C7.1				35,407		249,309		
C7.2	Road	m2	1,024	73.48	75,243	962.37	985,466		10803
- 43 -	Asphalt pavement including subbase, prime coat etc.								
C7.3	Footpaths ( $W = 1.20m$ )	m2	21	22.51	472	566.28	11,891		10804
C7.4	R.C. L-type Retaining Wall including guardrails	sums			39,641		461,766		10803.6
C7.5	Stone Masonry Retaining Wall	Sum			9,241		214,722		10805
9.7.5	Removal of Existing Fences	E	193	1.60	308	97.93	18,900		10806
C7.7	Restoration of Fence	Ħ	121	26.45	3,200	622.10	75,274		10806
C7.8	Indicated Posts for air valves and drain valves	nr		9	48	800.00	6,400		10807

Item No.	io. Description	Unit (	Unit Quantity		icy (US\$)	Local Currency (Rs)	cy (Rs)	Total	Ref. Clause
				Unit Price	Amount	Unit Price	Amount	Equivalent (Rs) or Sub-clause	or Sub-clause
C7.9	Marker Posts	ш	15	5	75	1,800.00	27,000		10807
	for pipeline centres for raw water transmission	sion							
	pipeline and in the treatment works								
	Total of Item C7				163,512	i	2,017,328		

Item No	Description	Unit	Quantity	Unit Quantity Foregin Currency (US\$)	ncy (US\$)	Local Currency (Rs)	cy (Rs)	Total	Ref. Clause
	4		•	Unit Price	Amount	Unit Price	Amount	Equivalent (R	Equivalent (Rs) or Sub-clause
C8 CHE	CHEMICAL BUILDING								
C8.1 Earl	Earth Work								
/01 Exca	/01 Excavation, backhoe, common soil	m3	110.0	2.28	250	12.14	1,335	10	10202
/02 Back	/02 Backfill, manpower	m3	63.0	0.05	33	28.18	1,775	10	10205.1
/03 Disposal	oosal	m3	47.0	3.48	163	19.40	911		10206
/04 Grav	/04 Gravel bedding	m3	29.5	10.21	301	105.35	3,107	_	10208
	Subtotal of Item C8.1				717		7,128	~	
C8.2 Con	Concrete Work								
, /01 Conc	/01 Concrete Class A for structure	m3	383.0	114.79	43,964	1,096.02	419,775	10	10301
, /02 Con	/02 Concrete Class D	m3	19.5	104.27	2,033	981.90	19,147	7	10301
/03 Forn	/03 Form for plastering surface and natural	m2	1,140.0	6.30	7,182	344.00	392,160	0	10303
/04 Fотп	/04 Form for exposed surface	m2	870.0	96.90	6,003	379.00	329,730	0	10303
/05 Rein	/05 Reinforcing bars	kg	46,800.0	0.75	35,100	1.86	87,048	8	10304
	Subtotal of Item C8.2				94,282		1,247,860		
C8.3 Mas	Masonry Work								
/01 Con	/01 Concrete block wall, 100mm thick including	m2	37.0	31.20	1,154	204.30	7,559	6	20400
filli	filling cement mortar and with wire lath								
/02 Con	/02 Concrete block wall, 200mm thick including	m2	209.0	54.20	11,327	355.30	74,257	7	20400
	filling cement mortar and with wire lath								
	Subtotal of Item C8.3				12,481		81,816	2	

Item Mo	l linit	Outitue	Onentity Exercise Commence (1100)	(1100)	I good Cumman (Do)	Total Def Classes	
nein ive		Quantity	rolegiii Cuiicii	Cy (034)	Tinit Price	10tal	SC
			Onit Price	Amount	Unit Price	Amount Equivalent (RS) of Sub-clause	ansc —
C8.4 Bituminous Waterproofing Work							
/01 Epoxy waterproofing	m2	297.0	19.10	5,672	125.80	37,362 20502	505
Subtotal of Item C8.4				5,672		37,362	
C8.5 Tile Work							
/01 Porcelain tile to exterior wall	m2	249.0	67.10	16,707	440.10	109,584 20700	00/
including base cement mortar							
Subtotal of Item C8.5				16,707		109,584	
C8.6 Plastering Work							
/01 Cement mortar plaster on floor	m2	278.0	8.60	2,390	56.60	15,734 20801	1080
/02 Cement mortar plaster to interior	田	135.0	7.70	1,039	50.50	6,817 20801	1080
skirting, H=100mm							
/03 Cement mortar plaster to interior wall	m2	490.0	17.70	8,673	116.30	56,987 20801	)801
/04 Cement mortar plaster to exterior wall	m2	48.2	18.70	106	122.40	5,899 20801	)801
/05 Cement mortar plaster to interior ceiling	g m2	22.4	20.70	463	134.60	3,015 20801	1080
/06 Waterproof cement mortar plaster to roof gutter	of gutter m2	258.0	28.80	7,430	188.20	48,555 20802	3802
/07 Waterproof cement mortar plaster to eaves	ves m2	120.0	28.80	3,456	188.20	22,584 2080	20802
Subtotal of Item C8.6				24,352		159,591	
C8.7 Painting Work							
/01 Oil paint to metal surface	m2	227.0	7.20	1,634	47.40	10,759 2090	20900
/02 Vinyl emulsion paint on cement mortar	. m2	682.0	6.20	4,228	41.30	28,166 2090	20900
Subtotal of Item C8.7				5,862		38,925	

Item No.	Description	Unit	Quantity	Foregin Currency (US\$)	ncy (US\$)	Local Currency (Rs)	cy (Rs)	Total Ref. Clause
	*			'	Amount	Unit Price	Amount	Equivalent (Rs) or Sub-clause
C8.8 D	Doors and Windows							
/01 S	/01 Steel door leaves and frames	m2	6.8	119.90	815	786.00	5,344	1 21300
i	including hardware, accessories							
ल	and calking to outside perimeter							
/02 S	/02 Steel windows and frames	$m_2$	31.2	230.20	7,182	1,509.20	47,087	7 21300
.=	including hardware, accessories							
ત	and calking to outside perimeter							
03 S	/03 Steel louver windows and frames	m2	5.6	359.60	2,013	2,357.90	13,204	1 21400
.11	including hardware, accessories							
В	and calking to outside perimeter							
, 704 S	/04 Steel rolling doors including	m2	8.7	551.40	4,797	3,615.40	31,453	3 21300
,	operation devices, accessories							
B	and calking to outside perimeter							
	Subtotal of Item C8.8				14,807		97,088	~
C8.9	Glazing Work							
/01 F	/01 Plate wire glass 6.8mm thick	m2	32.9	39.00	1,283	255.90	8,419	9 21500
.:1	including glazing bead							
	Subtotal of Item C8.9				1,283		8,419	6
C8.10 N	Miscellaneous Metal Work							
/01 F	/01 Roof drain, cast iron made, 100 mm dia.	n	16	36.00	576	235.60	3,769	9 21600
/02 \$	/02 Steel pipe handrail, 50mm dia.	Ш	22.7	7 12.91	293	138.44	3,142	2 21600
. [2]	including balusters							
8 20/	/03 Stainless steel nosing w/non-slip rubber	E	43.2	2 13.40	578	88.70	3,831	1 21600
				]				

Item No Description	Unit	Quantity For	Foregin Currency (US\$)	y (US\$)	Local Currency (Rs)		ital Ref. Clause
The state of the s			Unit Price	Amount	Unit Price	ınt	Equivalent (Rs) or Sub-clause
/04 Steel hoist beam including base plate,	kg	1230	0.74	910	10.70	13,161	21600
anchor botl and base cement plaster							
/05 Comep protection curb	kg	370	0.74	273	10.70	3,959	21600
/06 Ladder stainless steel	ш	16	14.60	233	220.00	3,520	21600
/07 Unloading hatch cover 1,000, 1,000	111	<del></del> 4	47.00	47	679.20	629	
/08 PVC downspout, 100mm dia.	Ħ	92.8	10.00	928	26.44	2,453	21700
including accessories							
/09 Wire mesh	m2	32.5	3.40	110	22.00	715	
/10 Steel ladder (iron step) ø19mm	п	24	15.30	367	20.96	503	21600
Subtotal of Item C8.10				4,315		35,732	
C8.11 Miscellaneous Work							
/01 Lavatory sink, wall hung w/faucet, stop valve,	set	+	238.80	239	1,565.60	1,565	21800, 22100
mirror and supply and drain water piping							
Subtotal of Item C8.11				239		1,565	
C8.12 Indoor lighting and Auxiliary Service							
/01 Lighting panel (LP-CHE)	set	1		3,039		19,931	22207
/02 Circuit breaker panel	set	<del>,</del>		359		2,358	22207
(ELCB3P-50A)							
/03 Exhaust fan, wall mounted type	set	9	429.50	2,577	2,816.20	16,897	22207
1,680 m3/h (2)							
motor 230V - 0.05kW							
/04 Lighting fixture including lamp,	set	2	62.30	124	408.50	817	22207
ballast and fittings							

Item No.	No.	Description	Unit	Unit Quantity I	Foregin Currency (US\$)	cy (US\$)	Local Currency (Rs)	y (Rs) Total	Ref. Clause
				'	Unit Price	Amount	Unit Price	Amount Equivalent (Rs)	(Rs) or Sub-clause
	/05 Lighting fixtu	/05 Lighting fixture including lamp,	set	4	00.79	268	444.00	1,776	22207
	ballast and fittings	tings							
	FL40Wx1 (D401)	401)							
7	/06 Lighting fixtu	/06 Lighting fixture including lamp,	set	13	84.40	1,097	552.30	7,179	22207
	ballast and fittings	tings							
	FL40Wx2 (D402)	402)							
-	/07 Lighting fixtu	/07 Lighting fixture including lamp,	set	2	126.60	253	829.30	1,658	22207
	ballast and fittings	tings							
	FL20Wx1 (F201)	201)							
	/08 Tumbler swit	/08 Tumbler switch with outlet box	8	33	15.00	45	104.00	312	22207
- 49	1P-15A-300Vx1	/x1							
	/09 Tumbler swit	/09 Tumbler switch with outlet box	g	П		21		142	22207
	1P-15A-300Vx2	7x2							
-	/10 Tumbler swit	/10 Tumbler switch with outlet box	cs	2	21.00	42	142.00	284	22207
	1P-15A-300Vx3	/x3							
	/11 Tumbler swit	/11 Tumbler switch with outlet box	es	7	17.60	17	114.80	114	22207
	1P-15A-300Vx1 (3 way)	/x1 (3 way)							
	/12 Tumbler swit	/12 Tumbler switch with outlet box	င်ဒ	1	20.80	20	136.50	136	22207
	1P-15A-300V	1P-15A-300Vx1 (3 way water proof type)							
	/13 Tumbler swit	/13 Tumbler switch with outlet box	g	2	19.70	39	128.50	257	22207
	1P-15A-300Vx1 (4 way)	/x1 (4 way)							
	/14 Tumbler swit	/14 Tumbler switch with outlet box	a	~		19		126	22207
	1P-15A-300V	1P-15A-300Vx1 (water proof type)							
	/15 Receptacle with outlet box	ith outlet box	မွ	B	15.70	47	102.50	307	22207
	3P-15A-250Vx1	/x1							

Item No.	Description	Unit	Quantity	Unit Quantity Foregin Currency (US\$)	ncy (US\$)	Local Currency (Rs)	cy (Rs)	Total Ref. Clause	anse
				Unit Price	Amount	Unit Price	Amount	Equivalent (Rs) or Sub-clause	lanse
/16 Recep	/16 Receptacle with outlet box	ca	9	15.80	94	104.00	624	2	22207
3P-15	3P-15A-250V (water proof type)								
/17 Electr	/17 Electric conduit, including	E	192	6.20	1,190	41.30	7,929		22207
coupli	couplings, bushings, junction								
boxes	boxes and accessories 16mm dia.			•					
/18 Electr	/18 Electric conduit, including	Ħ	35	8.20	287	53.60	1,876		22207
coupli	couplings, bushings, junction								
boxes	boxes and accessories 22mm dia.								
/19 Electr	/19 Electric wire, PVC insulated,	E	303	0.90	272	6.10	1,848		22204
600V,	600V, with terminals, 1.6mm								
/20 Electr	/20 Electric wire, PVC insulated,	ш	300	1.10	330	6.10	1,830		22204
600V,	600V, with terminals, 2.0mm								
/21 Electr	/21 Electric wire, PVC insulated,	ш	26	1.10	28	7.70	200	2	22204
600V,	600V, with terminals, 5.5mm2								
	Subtotal of Item C8.12				10,168		66,601		
	Total of Item C8				190,885		1,891,671		
				•		1			

Item No. Description	Unit	Unit Quantity	Foregin Currency (US\$)	incy (US\$)	Local Currency (Rs)	y (Rs) Total	Ref. Clause
		1	Unit Price	Amount	Unit Price	Amount Equivalent (F	Equivalent (Rs) or Sub-clause
C9 OPERATION BUILDING						<b>I</b>	
C9.1 Earthwork							
/01 Excavation	m3	74.0	2.28	168	12.14	868	10202
/02 Backfill	m3	36.0	0.05	₩	28.18	1,014	10205
/03 Disposal	m3	38.0	3.48	132	19.40	737	10206
/04 Gravel bedding	m3	41.2	10.21	420	105.35	4,340	10208
Subtotal of Item C9.1				721		686'9	
C9.2 Concrete Work							
/01 Concrete Class A for structure	m3	215.0	114.79	24,679	1,096.02	235,644	10301
/02 Concrete Class D	т3	4.9	104.27	510	981.90	4,811	10301
/03 Form for plastering surface and natural	m2	1,080.0	6.30	6,804	344.00	371,520	10302
/04 Form for exposed surface	m2	259.0	6.90	1,787	379.00	98,161	10302
/05 Reinforcing bars	kg	28,200.0	0.75	21,150	1.86	52,452	10304
Subtotal of Item C9.2				54,930		762,588	
C9.3 Masonry Work							
/01 Concrete block wall, 100mm thick	m2	481.0	31.20	15,007	204.30	98,268	20401
including filling cement mortar							
and with wire lath							
/02 Concrete block wall, 200mm thick	m2	206.0	54.20	11,165	355.30	73,191	20401
including filling cement mortar							
and with wire lath							
Subtotal of Item C9.3				26,172		171,459	

Item No Description	Unit	Unit Ouantity	Foregin Currency (US\$)	ency (US\$)	Local Currency (Rs)	cv (Rs) Total Ref. Clause	Se
			Unit Price	Amount	Unit Price	ant Equivalent (Rs) o	nsc
C9.4 Bituminous Waterproofing Work							
/01 3-ply built-up asphalt roofing	m2	373.0	17.3	6,452	113.2	42,223 20501	501
/02 2-ply built-up asphalt roofing	m2	30.6	15.8	483	104.0	3,182 20501	501
Subtotal of Item C9.4				6,935		45,405	
C9.5 Terrazzo Work							
/01 Terrazzo block on floor including	m2	126.0	129.4	16,304	849.2	106,999 2060	20600
base cement mortar							
/02 Terrazzo block door sill,	ш	4.0	86.3	345	566.1	2,264 20600	009
including base cement mortar							
/03 Terrazzo block shelf, W=150mm	Ħ	10.4	71.1	739	471.2	4,900 20600	009
including base cement mortar							
Subtotal of Item C9.5				17,388		114,163	
C9.6 Tile Work							
/01 Porcelain tile to interior floor	m2	41.9	51.1	2,141	355.0	14,874 2070	20700
including base cement mortar							
/02 Ceramic tile to interior wall	m2	156.0	54.7	8,533	358.0	55,848 207(	20700
including base cement mortar							
/03 Porcelain tile to exterior wall	$m_2$	231.0	67.1	15,500	440.1	101,663 2070	20700
including base cement mortar							
Subtotal of Item C9.6				26,174		172,385	
C9.7 Plastering Work							
/01 Cement mortar plaster on floor	m2	81.7	8.6	702	56.6	4,624 208(	20800

Item No	Description	Unit	Quantity	Foregin Currency (US\$)	ncy (US\$)	Local Currency (Rs)		Total Ref. Clause
				Unit Price	Amount	Unit Price	Amount Equiv	Equivalent (Ks) or Sub-clause
/02 Base c	/02 Base cement mortar plaster 20mm	m2	373.0	6.7	2,499	44.4	16,561	20800
thick f	thick for bituminous waterproofing							
/03 Cemen	/03 Cement mortar plaster to interior	E	179.0	7.7	1,378	50.5	9,039	20800
skirtin	skirting, H=100mm							
/04 Ceme	/04 Cement mortar plaster to interior wall	m2	843.0	17.7	14,921	116.3	98,040	20800
/05 Cemes	/05 Cement mortar plaster to exterior wall	m2	414.0	18.7	7,741	122.4	50,673	20800
/06 Сете	106 Cement mortar plaster to interior ceiling	m2	18.3	20.7	378	134.6	2,463	20800
/07 Water	/07 Waterproof cement mortar	m2	41.5	28.8	1,195	188.2	7,810	20800
plaste	plaster to roof gutter							
/08 Water	/08 Waterproof cement mortar plaster to eaves	ш2	57.8	28.8	1,664	188.2	10,877	20800
- 53 -	Subtotal of Item C9.7				30,478		200,087	
C9.8	Painting Work							
/01 Oil pa	/01 Oil paint to metal surface	m2	71.3	7.2	513	47.4	3,379	20900
/02 Oil pa	/02 Oil paint to wooden surface	m2	223.0	8.1	1,806	53.6	11,952	20900
/03 Vinyl	/03 Vinyl emulsion paint on cement mortar	m2	1,550.0	6.2	9,610	41.3	64,015	20900
/04 Vinyl	/04 Vinyl emulsion paint on	m2	110.0	6.7	737	44.4	4,884	20900
asbest	asbestos cement sheet surface							
	Subtotal of Item C9.8				12,666		84,230	
C9.9 Carp	Carpentry and Joinery Work		٠					
/01 Wood H150¤ requir	Wooden blind box, W200mm x H150mm x T25mm including required accessories	日	24.4	36.9	006	241.7	5,897	21000
	Subtotal of Item C9.9				006		5,897	

Item No	Description	Unit	Quantity	Foregin Currency (US\$) Unit Price Amount	cy (US\$) Amount	Local Currency (Rs) Unit Price Amou	lit.	Total Ref. Clause Equivalent (Rs) or Sub-clause
C9.10 Finishing Work	Vork		·					
/01 Rockwool tile including	/01 Rockwool tile including suspension system and accessories	m2	220.0	25.9	5,698	170.0	37,400	21000
/02 Asbestos cen	/02 Asbestos cement sheet including	ш2	110.0	24.9	2,739	163.7	18,007	21000
suspension sy /03 Vinyl floor ti	suspension system and accessories Vinyl floor tile including base	m2	196.0	19.4	3,802	127.3	24,950	21000
cement mortar /04 Vinyl strip bas including base	cement mortar Vinyl strip base, H=100mm including base cement mortar	CCC	201.0	2.3	462	14.8	2,974	21000
Si	Subtotal of Item C9.10				12,701		83,331	
C9.11 Doors and Windows	Windows							
701 Wooden door including lou accessories	/01 Wooden door leaves and frames including louvers, hardware and accessories	m2	30.8	134.3	4,136	879.8	27,097	21200
/02 Steel door leaves and frames including hardware, accessor and calking to outside perime	Steel door leaves and frames including hardware, accessories and calking to outside perimeter	m2	30.3	119.9	3,632	786.0	23,815	21300
/03 Aluminium doors and frames including hardware, accessori and calking to outside perime	Aluminium doors and frames including hardware, accessories and calking to outside perimeter	m2	10.5	383.5	4,026	2,515.3	26,410	21400
/04 Aluminium v including han and calking t	/04 Aluminium windows and frames including hardware, accessories and calking to outside perimeter	m2	142.0	287.7	40,853	1,886.5	267,883	21400
/05 Jalousie windows and frincluding hardware, acce and calking to outside pe	/05 Jalousie windows and frames including hardware, accessories and calking to outside perimeter as ner DWG, No. C-012	m2	7.7	287.7	2,215	1,886.5	14,526	21400
	Subtotal of Item C9.11				54,862		359,731	

Item No. Description	Unit	Unit Quantity F	Foregin Currency (US\$)	cy (US\$)	Local Currency (Rs)	Total	Ref. Clause
•		1 1	Unit Price	Amount	Unit Price	Amount Equivalent (Rs) or Sub-clause	ıb-clause
C9.12 Glazing Work							
/01 Plate glass 3mm thick including glazing bead	ш2	76.8	16.9	1,297	109.4	8,401	21500
/02 Plate glass 5mm thick including glazing bead	ш2	77.4	28.8	2,229	188.2	14,566	21500
/03 Plate wire glass 6.8mm thick including glazing bead	m2	8.2	39.0	319	255.9	2,098	21500
/04 Figured glass 4mm thick including glazing bead	т2	1.8	19.2	34	125.5	225	21500
Subtotal of Item C9.12				3,879		25,290	
C9.13 Miscellaneous Metal Work							
/01 Roof drain, cast iron made, 100 mm dia.	nr	14	36.0	504	235.6	3,298	21600
/02 Steel pipe handrail, 50mm dia. including balusters	E	31.2	12.92	403	138.44	4,319	21600
/03 Steel pipe handrail, 50 mm dia. including balusters (removable type)	EI	1.2	0.69	83	453.2	543	21600
/04 Stainless steel nosing w/non-slip rubber	Ħ	44.0	13.4	589	88.7	3,902	21600
/05 Metal coping	E	104.0	36.0	3,744	235.8	24,523	21600
/06 Steel pipe handrail, 50mm dia. including balusters	E	40.3	12.92	520	138.44	5,579	21600
/07 Cable trench cover	m2	22.3	80.76	1,800	836.14	18,645	21600
/08 Steel ladder (iron step), ø19mm	п	21	15.3	321	20.96	440	21600
/09 Manhole ø600mm	ш	₩	269.4	269	369.08	369	21600
Subtotal of Item C9.13				8,232		61,618	

Item No	Description	Unit	Ouantity	Foregin Currency (US\$)	ency (US\$)	Local Currency (Rs)	cv (Rs)	Total Ref. Clause	use
			ì	Unit Price	Amount	Unit Price	Amount	Equivalent (Rs) or Sub-clause	lause
C9.14	14 Miscellaneous Work	  -  -							
	/01 PVC downspout, 100mm dia. including accessories	E	60.8	10.0	809	26.44	1,607		21700
	/02 Laboratory table with two sinks and two drawer cabinets	E	9.6	167.8	1,610	1,100.1	10,560		21700
	/03 Laboratory cabinet	E	1.2	215.7	258	1,415.3	1,698		21700
_	/04 Prefabricated glazed partition	m2	5.1	167.8	855	1,100.1	5,610		21700
7	/05 Vinyl curtain for lavatory including accessories	nr	w	33.5	100	220.3	099		21700
•	/06 Fire extinguishers	nr	20	67.1	1,342	440.1	8,802		22000
	/07 Desk(1) H740 x W1460 x D730	set	Ţ		1	4,430	4,430		ı
	/08 Desk(2) H740 x W915 x D635	set	9		1	2,640	15,840		ı
56	/09 Chair for desk (1)	set	<del>,</del> 1		•	2,630	2,630		•
_	/10 Chairs for desk (2)	set	9		•	1,580	9,480		•
`	/11 Cabinets	set	5		•	2,740	13,700		1
•	/12 Meeting table	set	4		1	3,160	12,640		1
~	/13 Chairs for meeting table	set	8		1	1,060	8,480	(	•
	Subtotal of Item C9.14				4,773		96,137	7	
C9.15	15 Indoor lighting and Auxiliary Service System	H							
•	/01 Lighting panel (LP-OB1)	set	<del>prod</del>	2,272.6	2,272	14,902.2	14,902		22200
•	/02 Lighting panel (LP-OB2)	set		3,845.2	3,845	25,214.4	25,214		22200
•	/03 Circuit breaker, water proof type (ELCB3P-50A)	set	4	575.3	2,301	3,773.0	15,092		22200
•	/04 Circuit breaker, water proof type (ELCB2P-50A)	set	7	546.5	3,825	3,584.4	25,090		22200
-	/05 Lighting fixture including lamp, ballast and fittings FL40Wx2 (B402)	set	4	96.9	387	635.0	2,540		22200

Item No Description	Unit	Unit Ouantity	Foregin Currency (US\$)	ency (US\$)	Local Currency (Rs)	cv (Rs)	Total Ref. Clause
			1 1	Amount	Unit Price	Amount	(Rs) o
/06 Lighting fixture including lamp, ballast and fittings FL40Wx1 (B401)	set	33	62.3	2,055	408.5	13,480	) 22200
/07 Lighting fixture including lamp, ballast and fittings FL40Wx1 (B401, water proof type)	set	2	6.09	121	399.3	798	~
/08 Lighting fixture including lamp, ballast and fittings FL40Wx1 (D401)	set	6	84.4	759	552.3	4,970	) 22200
/09 Lighting fixture including lamp, ballast and fittings FL40Wx1 (D402)	set	€.	84.4	253	552.3	1,656	5 22200
/10 Lighting fixture including lamp, ballast and fittings FL40Wx2 (E402)	set	8	121.8	974	798.7	6,389	9 22200
/11 Lighting fixture including lamp, ballast and fittings FL40Wx1 (E401)	set	4	121.8	487	798.70	3,194	74
/12 Lighting fixture including lamp, ballast and fittings B401WP	set		62.3	62	408.50	408	8
/13 Lighting fixture including lamp, ballast and fittings FL20Wx1 (F201)	set	-	126.60	126	829.30	829	9 22200
/14 Lighting fixture including lamp, ballast and fittings IL40Wx1 (G401)	set	9	51.3	307	336.6	2,019	9 22200
/15 Tumbler switch with outlet box $1P-15A-300Vx1$	III	19	15.8	300	104.0	1,976	5 22200

Item No	Description	Unit Quan	tity	Foregin Currency (US\$)	icy (US\$)	Local Currency (Rs)		Total Ref. Clause
				Unit Price	Amount	Unit Price	Amount Equiv	Equivalent (Rs) or Sub-clause
/16 Tumb 1P-15	/16 Tumbler switch with outlet box 1P-15A-300Vx2	nr	4	18.8	75	122.4	489	22200
/17 Tumb 1P-15	/17 Tumbler switch with outlet box 1P-15A-300Vx3	ы	4	21.7	98	142.3	569	22200
/18 Tumb 1P-15	/18 Tumbler switch with outlet box 1P-15A-300Vx1 (3 way)	놥	9	17.6	105	114.8	889	22200
/19 Recep 3P-15	/19 Receptacle with outlet box 3P-15A-250Vx1	놥	9	15.7	94	102.5	615	22200
/20 Recep 3P-15	/20 Receptacle with outlet box 3P-15A-250Vx2	н	33	15.8	521	104.0	3,432	22200
/21 Electr coupli	Electric conduit, including couplings, bushings, junction boxes and accessories 16mm dia.	E	516	6.2	3,199	41.3	21,310	22200
/22 Electr coupl: boxes	/22 Electric conduit, including couplings, bushings, junction boxes and accessories 22mm dia.	E	88	8.2	721	53.6	4,716	22200
/23 Electr coupl: boxes	/23 Electric conduit, including couplings, bushings, junction boxes and accessories 36mm dia.	ᄄ	m	13.0	39	84.2	252	22200
/24 Circu	/24 Circuit breaker (ELCB50/20)	set	5.0	125.20	979	820.90	4,104	
/25 Electr 600V	/25 Electric wire, PVC insulated, 600V, with terminals, 1.6mm	Ħ	808	0.9	727	6.1	4,928	22200
/26 Electr 600V	/26 Electric wire, PVC insulated, 600V, with terminals, 2.0mm	ш	726	1.1	798	6.1	4,428	22200
/27 Electr 600V	/27 Electric wire, PVC insulated, 600V, with terminals, 22mm2	Ħ	14	2.8	39	18.4	257	22200
	Subtotal of Item C9.15				25,104		164,345	

Item No	Description	Unit	Unit Quantity	Foregin Currency (US\$	ency (US\$)	Local Currency (Rs	cy (Rs)	Total	Ref. Clause
				Unit Price	Amount	Unit Price	Amount	Equivalent (	Equivalent (Rs) or Sub-clause
C9.16 Building Service Work	e Work								
1) Plumbimg works									
Water Supply									
/01 Galvanized steel pipe	pipe DN50mm	E	4	13.3	53	20.2	80		21800, 22100
/02 Galvanized steel pipe	pipe DN40mm	Ħ	7	7.6	53	16.6	116		21800, 22100
/03 Galvanized steel pipe	pipe DN32mm	Ħ	5	6.8	34	15.1	75		21800, 22100
/04 Galvanized steel pipe	pipe DN25mm	田	9	4.5	27	13.7	82		21800, 22100
/05 Galvanized steel pipe	pipe DN20mm	Ħ	19	2.8	187	11.5	770		21800, 22100
/06 Gate valve	DN50mm	пг	1	59.4	59	81.4	81		21800, 22100
/07 Gate valve	DN40mm	ш	₩	47.6	47	65.2	65		21800, 22100
/08 Valve casing		Ħ	<del>,</del> -{	86.3	98	565.9	565		21800, 22100
, /09 Insulation for pipe	be DN40mm	Ħ	9	13.1	78	86.1	516		21800, 22100
/10 Insulation for pipe	oc DN32mm	E	2	12.5	25	81.7	163		21800, 22100
/11 Insulation for pipe	e DN25mm	E	3	11.5	34	75.5	226		21800, 22100
/12 Insulation for pipe	be DN20mm	ш	16	11.0	176	72.3	1,156		21800, 22100
/13 Anticorrosive tap	/13 Anticorrosive tape for pipe DN50mm	Ħ	4	12.5	50	81.7	326		21800, 22100
/14 Anticorrosive tap	/14 Anticorrosive tape for pipe DN40mm	ш		10.0	10	0.99	99		21800, 22100
/15 Anticorrosive tap	/15 Anticorrosive tape for pipe DN32mm	ш	4	9.6	38	62.9	251		21800, 22100
/16 Anticoпosive tag	/16 Anticorrosive tape for pipe DN25mm	ш	4	8.2	32	53.4	213		21800, 22100
/17 Anticorrosive tag	/17 Anticorrosive tape for pipe DN20mm	Ħ	49	7.4	362	48.7	2,386		21800, 22100
/18 Painting to exposed pipe DN40mm	sed pipe DN40mm	E	4	5.8	23	37.7	150		21800, 22100
Drainage and sewage	vage.								
/01 P.V.C pipe	DN140mm	В	3	5.6	16	16.2	48		21800
/02 P.V.C pipe	DN110mm	ш	40	3.3	132	14.7	588		21800
/03 P.V.C pipe	DN90mm	Ħ	44	2.2	96	11.1	488		21800
/04 P.V.C pipe	DN75mm	E	11	1.6	17	10.7	117		21800
		i.							

H	Item No.	Description	Unit	Quantity	Foregin Currency (US\$)	ency (US\$)	Local Currency (Rs)	icy (Rs)	Total	Ref. Clause
				ļ	Unit Price	Amount	Unit Price	Amount	Equivalent (R	Equivalent (Rs) or Sub-clause
	/05 P.V.C pipe	DN63mm	E	29	8.0	23	10.1	292		21800
	/06 P.V.C pipe	DN50mm	E	16	9.0	6	7.8	124		21800
	/07 P.V.C pipe	DN25mm	E	S	0.4	2	0.9	30		21800
	/08 Floor drain	ø50mm	ш	9	19.1	114	13.1	78		21800
	/09 Pipe cleanout	ø100mm	П	7	33	33	22	22		21800
	/10 Vent cap	$\phi 100 nm$	TH.	₩	26	26	18	18		21800
	/11 Vent cap	ø80mm	ם		21	21	15	15		21800
	/12 Vent cap	ø65mm	п	<del></del>	58	58	383	383		21800
	/13 Vent cap	ø50mm	田	.⊶	35	35	232	232		21800
	/14 Catch basin	450x450	set	2	239.7	479	1,571.9	3,143		21800
	w/concrete cover									
(	/15 Cesspool	450x450	set	2	335.6	671	2,200.7	4,401		
50 -	w/cast iron cover									
	Plumbing fixture									
	/01 Water closet w/cistern tank	istem tank	set	S	551.8	2,759	3,618.6	18,093		21800, 22100
•	/02 Urinal, wall hung w/flush valve	g w/flush valve	set	4	421.4	1,685	2,763.4	11,053		21800, 22100
	/03 Lavatory sink, w	/03 Lavatory sink, wall hung w/faucet, stop valve	set	<b>—</b>	198	198	1,298	1,298		21800, 22100
	/04 Lavatory sink, wall hung w/faucet,	all hung w/faucet,	set	9	238.8	1,432	1,565.6	9,393		21800, 22100
	stop valve and mirror	ітог								
	/05 Service sink, floo	/05 Service sink, floor mounted w/ faucet	set	<del>,</del>	451	451	2,961	2,961		21800, 22100
	/06 Shower set w/wa	/06 Shower set w/wall mounted head and stop valve	set	3	92.8	278	608.3	1,824		21800, 22100
	/07 Swing faucet		nr	4	23	92	154	616		21800, 22100
	Septic tank									
	/01 Factory fabricated septic tank,	d septic tank,	set	1	3,020	3,020	19,806	19,806		21800, 22100
	complete, capacity 16 persons	ty 16 persons								
I	w/DIOWEI									

Item No.	Description	Unit	Ouantity	Foregin Currency (US\$)	ency (US\$)	Local Currency (Rs)	cv (Rs)	Total Ref. Clause
	4		3	Unit Price	Amount	Unit Price	Amount	Equivalent (Rs) or Sub-clause
/02 Submerged	/02 Submerged drain pump 50 l/min., w/controls	set	2	316.4	632	2,074.9	4,149	21800, 22100
/03 Drain pump pit	pump pit	ינו	<del>,                                    </del>	719	719	4,715	4,715	
2) Aircoi	2) Airconditioning and ventilation systems							
/01 Aircor unit, 5 w/con	/01 Airconditioner, cassette type room unit, 5,690 kcal/h x 1,080 m3/h w/condensing unit	set	4	2,728.1	10,912	17,888.4	71,553	21902, 22100
/02 Aircor unit, 3 w/con	/02 Airconditioner, cassette type room unit, 3,040 kcal/h x 900 m3/h w/condensing unit	set	4	2,080.8	8,323	13,644.2	54,576	21902, 22100
/03 Exhau	/03 Exhaust propeller fan, ø250mm wall mounted, 900 m3/h	set	Ŋ	214.3	1,071	1,405.3	7,026	21903, 22100
/04 Exhau wall n moto	/04 Exhaust propeller fan, ø 250 mm wall mounted, 900 m3/h, motor ø1, 230v 0.025 kw	set	2	-,				
/05 Refrig	/05 Refrigerant copper tube, ø15.9mm	Ħ	50	38.4	1,920	251.5	12,575	21902
/06 Refrig	/06 Refrigerant copper tube, #12.7mm	Ħ	41	29.2	1,197	191.8	7,863	21902
/07 Refrig	/07 Refrigerant copper tube, ø6.4mm	E	91	18.7	1,701	122.6	11,156	21902
/08 Conde	/08 Condensed water pipe, PVC DN50mm	Ħ	20	1.8	36	1.23	24	
/09 Conde	/09 Condensed water pipe, PVC DN32mm	Ħ	52	1.3	<i>L</i> 9	0.89	46	
	Subtotal of Item C9.16				39,599		255,993	
C9.17 Labo	Laboratory Equipment							
/01 Turbiv standa	/01 Turbidimeter complete with sample cells and standard solutions	set	1	6,500	6,500			. 22300
/02 pHmeter	ster	set	e-med	1,385	1,385		ŀ	. 22300

Item No	Description	Unit	Quantity	Unit Quantity Foregin Currency (US\$)	incy (US\$)	Local Currency (Rs)	3y (Rs)	Total	Ref. Clause
			•	Unit Price	Amount	Unit Price	Amount	Amount Equivalent (Rs) or Sub-clause	or Sub-clause
/03 Electric co	/03 Electric conductivity meter	set	-	2,310	2,310				22300
/04 Laborator	/04 Laboratory flocculator (jar tester)	set	2	4,615	9,230				22300
/05 Disc type	/05 Disc type comparator for colour, residual	set	<del></del>	2,310	2,310			ı	22300
chlorine a	chlorine and ammonia complete with chemicals,								
Sample Co	sampic cens, uises and anacimient								
/06 Disc type	/06 Disc type comparator for residual chlorine	set	Τ	925	925				22300
complete	complete with chemicals, sample cells and discs								
/07 Water sampler	npler	set		925	925				22300
/08 DO meter		set	-	1,850	1,850				22300
/09 Glassware	/09 Glassware and miscellaneous	шns			4,615			·	22300
•	Subtotal of Item C9.17				30,050		)		
	Total of Item C9			1	355,564	ļ	2,609,648	m!	

Item No	Description	Unit Onantity	- 1	Foregin Currency (\$)	ncv (\$)	Local Currency (Rs)	cv (Rs)	Total	Ref. Clause
			•	Unit Price	Amount	Unit Price	ınt	(Rs) c	r Sub-clause
C10 CHLORINA	CHLORINATION BUILDING								
C10.1 Demolition works  Demolition of existing structure and removal of existing equipment and fixutres in preparation for	Demolition works Demolition of existing structures, and removal of existing equipment and fixutres in preparation for	sum			2,397		15,719		1
expansion works as per DWG. No.	expansion works as per DWG. No. B-018 & B-019								
Su	Subtotal of Item C10.1				2,397		15,719		
C10.2 Earthwork									
/01 Excavation		m3	55.0	2.28	125	12.14	<i>L</i> 99		10202
/02 Backfill		т3	24.0	0.05	<del>,</del>	28.18	929		10205
/03 Disposal		m3	31.0	3.48	107	19.40	601		10206
/04 Gravel bedding		т3	3.4	10.21	34	105.35	358		10208
Su	Subtotal of Item C10.2				267		2,302		
C10.3 Concrete Work	rk								
/01 Concrete Class A for structure	A for structure	m3	37.1	114.79	4,258	1,096.02	40,662		10301
/02 Concrete Class D	D	m3	1.2	104.27	125	981.90	1,178		10301
/03 Form for plaste	/03 Form for plastering surface and natural	m2	159.0	6.30	1,001	344.00	54,696		10303
/04 Form for exposed surface	sed surface	m2	79.0	6.90	545	379.00	29,941		10303
/05 Reinforcing bars	rs	kg	4700	0.75	3,525	1.86	8,742		10304
<u>nS</u>	Subtotal of Item C10.3				9,454		135,219		
					į		:		

Item No. Description	Unit (	Unit Quantity Fo	Foregin Currency (\$) Unit Price Amo	ncy (\$) Amount	Local Currency (Rs) Unit Price Amou	icy (Rs) Amount	Total Ref. Clause Equivalent (Rs) or Sub-clause	lse use
C10.4 Masonry Work /01 Concrete block wall, 200mm thick including filling cement mortar and with wire lath	ш2	53.0	54.2	2,872	355.3	18,830	•	20400
Subtotal of Item C10.4				2,872		18,830		
C10.5 Finishing Work				600		000		9
/U1 Finishing work as per DWG. No. B-018 & B-019	ums			18,000		122,000		71100
Subtotal of Item C10.5				18,000		122,000		
C10.6 Indoor lighting and Auxiliary Service								
701 Lighting panel (LP-CHL)	Set	₩	2,632.2	2,632	17,259.9	17,259		22200
/02 Lighting fixture including lamp, ballast and fittings FL40Wx2 (A402)	set	12	264.2	3,170	1,732.0	20,784		22200
/03 Lighting fixture including lamp, ballast and fittings FL40Wx1 (A401)	set	4	62.3	249	408.5	1,634		22200
/04 Circuit breaker, water proof type (ELCB 3P-50A)	set	7	575.3	1,150	3,773.0	7,546		22200
/05 Tumbler switch with outlet box 1P-15A-300Vx1	nr	4	15.8	63	104.0	416		22200
/06 Tumbler switch with outlet box 1P-15A-300Vx1 (water proof type)	nr	4	18.8	75	122.4	489		22200
/07 Receptacle with outlet box 2P-15A-250Vx1, water proof type	Ш	10	17.7	177	116.3	1,163		22200
					į	·		
•								

Item	Item No.	Description	Unit (	Quantity F	Unit Quantity Foregin Currency (\$)	ncy (\$)	Local Currency (Rs)	cy (Rs)	Total	Ref. Clause
					Unit Price	Amount	Unit Price	Amount Ec	quivalent (Rs	Amount Equivalent (Rs) or Sub-clause
	/08 Exhaust fan, wall mounted type 1,500 m3/h (1) motor 230v - 0.05kW	ll mounted type )5kW	set	2	429.5	859	2,816.2	5,632		21900, 22100
	/09 Exhaust fan, wall mounted type 1,140 m3/h (3) motor 230V - 0.025 kW	Il mounted type 025 kW	set	2	367.7	735	2,411.3	4,822		21900, 22100
	/10 Electric wire, PVC insulated, 600V, with terminals, 1.6mm	VC insulated, inals, 1.6mm	Ħ	150	0.9	135	6.1	915		22200
	/11 Electric wire, PVC insulated, 600V, with terminals, 2.0mm	VC insulated, inals, 2.0mm	日	203	1.1	223	6.1	1,238		22200
	/12 Electric conduit, including c bushing, junction boxes and accessories, 16mm dia.	/12 Electric conduit, including couplings bushing, junction boxes and accessories, 16mm dia.	Ħ	164	6.2	1,016	41.3	6,773		22200
	Sub	Subtotal of Item C10.6				10,484		68,671		
	I	Total of Item C10			'	43,474	į	362,741		

Item No. Work	Unit	Unit Quantity	Foregin Currency (US\$) Unit Price Amount	ncy (US\$) Amount	Local Currency (Rs) Unit Price Amou	Till till	Total Ref. Clause Equivalent (Rs) or Sub-clause
CII WORKSHOP							
C11.1 Earthwork							
/01 Excavation	m3	80.0	2.28	182	12.14	971	10202
/02 Backfill	m3	44.0	0.05	2	28.18	1,239	10205
/03 Disposal	т3	36.0	3.48	125	19.40	869	10206
/04 Gravel bedding	m3	70.4	10.21	718	105.35	7,416	10208
Subtotal of Item C11.1				1,027		10,324	
C11.2 Concrete Work							
/01 Concrete Class A for structure	m3	214.0	114.79	24,565	1,096.02	234,548	10301
/02 Concrete Class D	m3	3.7	104.27	385	981.90	3,633	10301
/03 Form for plastering surface and natural	т2	569.0	6.30	3,584	344.00	195,736	10303
/04 Form for exposed surface	m2	576.0	6.90	3,974	379.00	218,304	10303
/05 Reinforcing bars	kg	27,100.0	0.75	20,325	1.86	50,406	10304
Subtotal of Item C11.2				52,833		702,627	
C11.3 Masonry Work							
/01 Concrete block wall, 100mm thick including filling cement mortar and with wire lath	m2	172.0	31.2	5,366	204.3	35,139	20400
/02 Concrete block wall, 200mm thick including filling cement mortar and with wire lath	m2	229.0	54.2	12,411	355.3	81,363	20400
Subtotal of Item C11.3				17,777		116,502	

Item No. Work	Unit	Unit Quantity	Foregin Currency (US\$)	ncy (US\$)	Local Currency (Rs)	Total	Ref. Clause
			Unit Price	Amount	Unit Price	Amount Equivalent (Rs) or Sub-clause	r Sub-clause
C11.4 Bituminous Waterproofing Work					-		ļ
/01 3-ply built-up asphalt roofing	m2	505.0	17.3	8,736	113.2	57,166	20501
Subtotal of Item C11.4				8,736		57,166	
C11.5 Terrazzo Work							
/01 Terrazzo block door sill, W=	E	0.7	86.3	09	566.1	396	20600
including base cement mortar							
Subtotal of Item C11.5				09		396	
C11.6 Tile Work							
/01 Ceramic tile to interior wall	m2	42.3	54.7	2,313	358.0	15,143	20700
including base cement mortar							
Subtotal of Item C11.6				2,313		15,143	
C11.7 Plastering Work							
/01 Cement mortar plaster on floor	m2	476.0	8.6	4,093	56.6	26,941	20800
/02 Base cement mortar plaster 20mm	m2	505.0	6.7	3,383	44.4	22,422	
thick for bituminous waterproofing							
/03 Cement mortar plaster to interior	Ħ	233.0	7.7	1,794	50.5	11,766	
skirting, H=100mm							
/04 Cement mortar plaster to interior wall	m2	721.0	17.7	12,761	116.3	83,852	
/05 Cement mortar plaster to exterior wall	m2	426.0	18.7	7,966	122.4	52,142	
Subtotal of Item C11.7				29,997		197,123	

Unit Price   Amount   Unit Price   Amount   Unit Price	Item No.	Work	Unit	Unit Ouantity	Foregin Currency (US\$	ency (US\$)	Local Currency (Rs)	cv (Rs)	Total Ref. Clause
CILS         Painting Work         n.2         260.0         7.2         1,872           /02 Oil paint to metal surface         n.2         250.0         7.2         1,872           /02 Oil paint to wooden surface         n.2         23.0         8.1         186           /03 Vinyl emulsion paint on cement mortar         n.2         1,746.0         6.2         10,825           Subtotal of Item CIL8         n.2         9.2         134.3         12,883           CIL9         Doors and Windows         n.2         9.2         134.3         1,235           (01 Wooden door leaves and frames including bardware, accessories         n.2         16.1         119.9         1,930           including bardware, accessories and calking to outside perimeter         n.2         76.8         230.2         17,679         1,           /03 Steel vindows and frames including and calking to outside perimeter         n.2         1.6.1         119.9         1,930         1,           /04 Jalousic windows and frames and calking to outside perimeter         n.2         23.6         551.4         13,013         3,4173           /05 Steel rolling doors including perimeter         0.5         23.6         551.4         13,013         34,173           /05 Plate glass 3mm thick including glazing be					Unit Price	Amount	Unit Price	Amount	Equivalent (Rs) or Sub-clause
(01 Oil paint to metal surface         m2         260.0         7.2         1,872           (02 Oil paint to wooden surface         m2         23.0         8.1         186           (03 Vinyl emulsion paint on cement mortar         m2         1,746.0         6.2         10,825           Subtotal of Item CIL.8         m2         1,746.0         6.2         10,825           CIL.9         Doors and Windows         m2         1,746.0         6.2         10,825           (13 Wooden door leaves and frames         m2         9.2         13.4.3         1,235           including louvers, hardware, accessories         m2         16.1         119.9         1,930           including bardware, accessories         m2         76.8         230.2         17,679         1,           A02 Steel windows and frames         m2         76.8         230.2         17,679         1,           including hardware, accessories         m2         16.1         19.9         1,930         1,           and calking to outside perimeter         A2         1.1         287.7         316         1,           A04 lalousic windows and frames         m2         1.2         23.6         551.4         13,013         3           a		Vork		; ; ;	:				
/02 Oil paint to wooden surface         m2         23.0         8.1         186           /03 Vinyl emulsion paint on cement mortar         m2         1,746.0         6.2         10,825           Subtotal of Item C11.8         12,883           C11.9         Doors and Windows         m2         9.2         134.3         1,235           /01 Wooden door leaves and frames         m2         9.2         134.3         1,235           /02 Steel door leaves and frames         m2         16.1         119.9         1,930           /02 Steel door leaves and frames         m2         76.8         230.2         17,679         1,           /02 Steel windows and frames         m2         76.8         230.2         17,679         1,           /03 Steel windows and frames         m2         76.8         230.2         17,679         1,           /04 Jalousie windows and frames         m2         1.1         287.7         316         1,           /04 Jalousie windows and frames         m2         23.6         551.4         13,013         3           /04 Jalousie windows and frames         m2         23.6         551.4         13,013         3           /05 Steel rolling doors including partimeter         m2 <td>/01 Oil paint to</td> <td>metal surface</td> <td>m2</td> <td>260.0</td> <td>7.2</td> <td>1,872</td> <td>47.4</td> <td>12,324</td> <td>1 20900</td>	/01 Oil paint to	metal surface	m2	260.0	7.2	1,872	47.4	12,324	1 20900
(03 Vinyl emulsion paint on cement mortar         m2         1,746.0         6.2         10,825           C11.9 Doors and Windows         (12.883)         12,883         12,883           (11.9 Mooden door leaves and frames including louvers, hardware and accessories including louvers, hardware and accessories and calking to outside perimeter         m2         16.1         119.9         1,930         1,930         1,930         1,100         1,030	/02 Oil paint to	wooden surface	m2	23.0	8.1	186	53.6	1,232	20900
Subtotal of Item C11.8         12,883           C11.9         Doors and Windows         m2         9.2         134.3         1,235           /01         Wooden door leaves and frames including louvers, hardware and accessories and calking to outside perimeter         m2         16.1         119.9         1,930         1,930           /02         Steel door leaves and frames including hardware, accessories and calking to outside perimeter         m2         76.8         230.2         17,679         1, including hardware, accessories and calking to outside perimeter           /04         Jalousie windows and frames including pardware, accessories and calking to outside perimeter         m2         1.1         287.7         316         1, including pardware, accessories and calking to outside perimeter           /05         Steel rolling doors including perimeter         m2         23.6         551.4         13,013         3, and the calking to outside perimeter           /05         Steel rolling doors including glazing bead mtick har glass 68mm thick including glazing bead mtick har glass 93mm thick including glazing bead mtick bead mtick har glass 93mm thick mtick incl	/03 Vinyl emul	sion paint on cement mortar	ш2	1,746.0	6.2	10,825	41.3	72,109	3 20900
O11.9 Doors and Windows         m2         9.2         134.3         1,235           /01 Wooden door leaves and frames including louvers, hardware and accessories         m2         16.1         119.9         1,936           /02 Steel door leaves and frames including hardware, accessories and calking to outside perimeter         m2         76.8         230.2         17,679         1, including hardware, accessories and calking to outside perimeter           /04 Jalousie windows and frames including hardware, accessories and calking to outside perimeter         m2         1.1         287.7         316         1, including doors including goes perimeter           /05 Steel rolling doors including perimeter         m2         23.6         551.4         13,013         3, 173           C11.10 Glazing Work         OI Plate glass 3mm thick including glazing bead         m2         1.1         39.0         42           /02 Plate wire glass 6.8mm thick including elazing bead including elazing bead         m2         1.1         39.0         42	-	Subtotal of Item C11.8				12,883		85,665	10
Mooden door leaves and frames   m2   9.2   134.3   1,235     including louvers, hardware and accessories   m2   16.1   119.9   1,930     including hardware, accessories   m2   76.8   230.2   17,679   1,		Windows							
including hardware, accessories and calking to outside perimeter  //03 Steel windows and frames including hardware, accessories and calking to outside perimeter  //04 Jalousie windows and frames including hardware, accessories and calking to outside perimeter  //05 Steel rolling doors including operation devices, accessories and calking to outside perimeter  //05 Steel rolling doors including operation devices, accessories and calking to outside perimeter  //05 Steel rolling doors including operation devices, accessories and calking to outside perimeter  //05 Steel rolling doors including operation devices, accessories and calking to outside perimeter  //05 Steel rolling accessories and calking to utside perimeter  //05 Steel rolling accessories and calking to outside perimeter  //06 Steel rolling accessories and calking to outside perimeter  //07 Steel rolling accessories and calking to outside perimeter  //08 Steel rolling accessories and calking to outside perimeter  //07 Plate glass 3mm thick including glazing bead //07 Plate wire glass 6.8mm thick //07 Plate wire glass 6.8	/01 Wooden do including le accessories	or leaves and frames ouvers, hardware and	m2	9.2	134.3	1,235	879.8	8,094	4 21200
are, accessories are, accessories tiside perimeter s and frames are, accessories are, accessories are, accessories are including are including glazing bead are including glazing are including are including are included are	1 /02 Steel door less including had and calking	eaves and frames ardware, accessories to outside perimeter	m2	16.1	119.9	1,930	786.0	12,654	4 21300
are, accessories are, accessories are, accessories artside perimeter rs including s, accessories atside perimeter ofal of Item C11.9  thick including glazing bead m2 80.3 16.9 1,357 6.8mm thick m2 1.1 39.0 42		ws and frames ardware, accessories to outside perimeter	m2	76.8	230.2	17,679	1,509.2	115,906	5 21300
rs including rs, accessories stracessories attside perimeter otal of Item C11.9  thick including glazing bead m2 80.3 16.9 1,357 6.8mm thick m2 1.1 39.0 42	/04 Jalousie wi including h and calking	ndows and frames ardware, accessories to outside perimeter	m2	1.1	287.7	316	1,886.5	2,075	5 21300
otal of Item C11.9       34,173         thick including glazing bead       m2       80.3       16.9       1,357         6.8mm thick       m2       1.1       39.0       42         bead       bead	/05 Steel rolling operation dand calking	g doors including evices, accessories to outside perimeter	m2	23.6	551.4	13,013	3,615.4	85,323	3
thick including glazing bead m2 80.3 16.9 1,357 6.8mm thick m2 1.1 39.0 42 9 bead		Subtotal of Item C11.9				34,173		224,052	2
m2 80.3 16.9 1,357 m2 1.1 39.0 42	C11.10 Glazing W	/ork							
m2 1.1 39.0 42	/01 Plate glass	3mm thick including glazing bead	m2	80.3	16.9	1,357	109.4	8,784	
99	/02 Plate wire a including g	glass 6.8mm thick lazing bead	m2	1.1	39.0	42	255.9	281	1 21500

Item No. Work	Unit Q	Quantity	Foregin Currency (US\$)	ency (US\$)	Local Currency (Rs)	ıcy (Rs)	
	!		Unit Price	Amount	Unit Price	Amount	Equivalent (Rs) or Sub-clause
/03 Figured glass 4mm thick including glazing bead	m2	2.1	19.2	40	125.5	263	21500
Subtotal of Item C11.10				1,439		9,328	
C11.11 Miscellaneous Metal Work							
/01 Roof drain, cast iron made,	nr	14	36.0	504	235.8	3,301	21600
100mm dia.							
/02 Steel hoist beam including base	kg	1,100.0	0.74	814	10.7	11,770	21600
plate, anchor bolt and base cement plaster							
/03 Metal coping	日	122.0	36.0	4,392	235.8	28,767	21600
Subtotal of Item C11.11				5,710		43,838	
C11.12 Miscellaneous Work							
/01 PVC downspout, 100mm dia.	Ħ	0.09	10.0	009	26.4	1,586	5 21700
including accessories							
/02 Kitchen sink unit in kitchen	ш	<b>,1</b>	287.7	287	1,886.5	1,886	5 21700
/03 Cupboard unit in kitchen	ш	<b>—</b>	95.9	95	628.8	628	3 21700
/04 Vinyl curtain for lavatory including accessorie	H	+1	33.5	33	220.3	220	21700
/05 Work bench with four chaires	Ħ	14.0	167.8	2,349	1,100.3	15,404	1 21700
Subtotal of Item C11.12				3,364		19,724	
C11.13 Indoor lighting and Auxiliary Service							
/01 Lighting panel (LP-WS)	set		6,434.3	6,434	42,189.7	42,189	22200
/02 Lighting fixture including lamp, ballast and fittings FL40Wx2 (B402)	set	12	6.96	1,162	635.0	7,620	22200

Item No. Work	Unit	Quantity	Foregin Currency (US\$)	icy (US\$)	Local Currency (Rs)		Total Ref. Clause	1
			Unit Price	Amount	Unit Price	Amount Equiv	Equivalent (Rs) or Sub-clause	احد
/03 Lighting fixture including lamp, ballast and fittings FL40Wx1 (B401)	set	5	62.3	311	635.0	3,175	22200	
/04 Lighting fixture including lamp, ballast and fittings FL40Wx2 (D402)	set	22	110.7	2,435	726.7	15,987	22200	
/05 Lighting fixture including lamp, ballast and fittings FL40Wx1 (D401)	set	9	84.4	506	552.3	3,313	22200	
/06 Lighting fixture including lamp, ballast and fittings FL20Wx1 (F201)	set	<b>.</b>	126.6	126	829.3	829	22200	
/07 Lighting fixture including lamp, ballast and fittings IL40Wx1 (G401)	set	2	51.3	102	336.6	673	22200	
/08 Circuit breaker (ELCB 3P-50A)	set	7	359.6	2,517	2357.7	16,503	22200	0
/09 Circuit breaker (ELCB 3P-100A)	set	1	445.9	445	2923.8	2,923	22200	
/10 Circuit breaker (ELCB 3P-225A)	set	2	5'999	1,333	4369.7	8,739	22200	0
/11 Circuit breaker, water proof type (ELCB 3P-50A)	set	9	575.3	3,451	3773	22,638	22200	0
/12 Tumbler switch with outlet box	ш	7	15.8	110	104.0	728	22200	0
/13 Tumbler switch with outlet box		3	18.8	56	122.4	367	22200	
1P-15A-300Vx2								
/14 Tumbler switch with outlet box	ш	2	21.7	43	142.3	284	22200	0
/15 Tumbler switch with outlet box	лп	2	17.6	35	114.8	229	22200	C
1P-15A-300Vx1 (3 way)								1

Item	Item No.	Work	Unit	Quantity	Foregin Currency (US\$)	ency (US\$)	Local Currency (Rs)	cy (Rs)	Total	Ref. Clause
=					1 1	Amount	Unit Price	ınt	Equivalent (Rs) or Sub-clause	or Sub-clause
ı	/16 Receptacle with outlet box	t box	ш	2	15.7	31	102.5	202		22200
	3P-15A-250Vx1									
	/17 Receptacle with outlet box	t box	III	23	15.8	363	104.0	2,392		22200
	3P-15A-250Vx2									
	/18 Electric wire, PVC insulated,	sulated,	Ħ	571	0.0	513	6.1	3,483		22200
	600V, with terminals, 1.6mm	1.6mm								
	/19 Electric wire, PVC insulated,	sulated,	Ħ	200	1.1	266	6.1	5,532		22200
	600V, with terminals, 2.0mm	2.0mm								
	/20 Electric wire, PVC insulated,	sulated,	Ħ	149	2.2	327	15.3	2,279		22200
	600V, with terminals, 14mm2	14mm2								
,	/21 Electric wire, PVC insulated,	sulated,	E	77	2.8	215	18.4	1,416		22200
14	600V, with terminals, 22mm2	22mm2								
	/22 Electric wire, PVC insulated,	sulated,	ш	77	3.9	300	26.0	2,002		22200
	600V, with terminals, 38mm2	.38mm2								
	/23 Electric conduit, including couplings, bushings, junction boxes and accessories 16mm dia.	ıding unction i 16mm dia.	E	403	6.2	2,498	41.3	16,643		22200
	/24 Electric conduit, including couplings, bushings, junction boxes and accessories 22mm dia.	ıding ıunction s 22mm dia.	Ħ	136	8.2	1,115	53.6	7,289		22200
	/25 Electric conduit, including couplings, bushings, junction boxes and accessories 28mm dia.	ıding unction s 28mm dia.	E	36	10.7	385	70.4	2,534	*.	22200
	/26 Electric conduit, including couplings, bushings, junction boxes and accessories 36mm dia	ıding junction s 36mm dia.	8	18	13.0	234	84.2	1,515		22200

Iter	Item No.	Work	Unit	Unit Quantity	Foregin Cur	Foregin Currency (US\$)	Local Currency (Rs)		
2					Unit Price	Amount	Unit Price	Amount Equivalent (Rs)	(s) or Sub-clause
	/27 Electric conduit, including couplings, bushings, junction boxes and accessories 54mm dia	cluding s, junction ies 54mm dia.	ш	18	13.2	237	87.2	1,569	22200
	Subtota	Subtotal of Item C11.13				26,281		173,056	
CI	C11.14 Building Service Work	Work							
	1) Plumbing works								
	Water Supply								
	/01 Galvanized steel pipe	ipe DN25mm	Ħ	9	4.5	27	13.7	82	21800
_	/02 Galvanized steel pipe	ipe DN20mm	Ħ	21	2.8	58	11.5	241	21800
72	/03 Gate valve	DN25mm	III	<u> </u>	18.0	18	25.0	25	21800
~	/04 Valve casing		Ħ	1	86.3	98	65.0	65	21800
	/05 Anticorrosive tape for pipe DN25mm	for pipe DN25mm	E	9	8.2	49	53.4	320	21800
	/06 Anticoпоsive tape for pipe DN20	for pipe DN20	н	21	7.4	155	48.7	1,022	21800
	Drainage and sewage	<b>ୁ</b>							
	/01 P.V.C pipe	DN110mm	ш	7	3.3	23	14.7	102	21800
	/02 P.V.C pipe	DN90mm	ш	11	2.2	24	11.1	122	21800
	/03 P.V.C pipe	DN63mm	E	11	0.8		10.1	111	21800
	/04 P.V.C pipe	DN50mm	E	9	0.0	B	7.8	46	21800
	/05 P.V.C pipe	DN26mm	Ħ	3	0.4	<b>.</b>	0.9	18	21800
	/06 Floor drain	ø50mm	nr	<del></del>	19	19	13	13	21800
	/07 Pipe cleanout	ø100mm	П	_	33	33	22	22	21800
	/08 Pipe cleanout	ø80mm	III	<b>←</b>	26	26	18	18	21800

Item	Item No.	Work	Unit	Unit Quantity	Foregin Currency (US\$)	ency (US\$)	Local Currency (Rs)	cy (Rs)	Total	Rcf. Clause
					Unit Price	Amount	Unit Price	Amount	Equivalent (Rs	Equivalent (Rs) or Sub-clause
	/09 Pipe cleanout	ø50mm	nr	₩.	16	16	11	11		21800
	/10 Cesspool	450x450	nr	<del>•</del>	335	335	2,200	2,200		21800
	w/cast iron cover	Ia								
	Plumbing fixture	ઇ								
	/01 Water closet w/cistern tank	cistern tank	set	2	551.8	1,103	3,618.6	7,237		21800
	/02 Lavatory sink, wall hung w/faucet,	wall hung w/faucet,	set	3	238.8	716	1,565.6	4,696		21800
	stop valve and mirror	mirror								
	/03 Shower set w/wall mounted head	vall mounted head	set	<del></del>	92.8	92	608.3	809	•	21800
	and stop valve									
_ 72	/04 Swing faucet		ш	2	23.5	47	154.0	308		21800
	Septic tank									
	/01 Factory fabricated septic tank,	ted septic tank,	set	<b></b>	1,534.2	1,534	10,060.3	10,060		21800
	complete, capao	complete, capacity 10 persons w/ blower								
	/02 Submerged drain pump 50 l/min.,	in pump 50 1/min.,	set	2	316.4	632	2,074.9	4,149		21800
	w/controls									
	/03 Drain pump pit		ш	<b>.</b> ⊣	719.2	719	4,715.8	4,715		21800
	2) Airconditioning	2) Airconditioning and ventilation systems								
	/01 Airconditioner, sus unit, 5690 kcal/h x w/condensing unit	/01 Airconditioner, suspended type room unit, 5690 kcal/h x 1,080 m3/h w/condensing unit	set	ς,	2,517.1	7,551	16,505.1	49,515		21900, 22100
	/02 Exhaust propeller fan, ø250mm	ler fan, ø250mm 900 m3/h	set	3	214.3	642	1,405.3	4,215	10	21900, 22100
	forman man									112

		;					1		
Item No. Work		Cnit	Unit Quantity	Foregin Currency (US\$)	ency (US\$)	Local Currency (Rs)	icy (Rs)	Total	Ref. Clause
				Unit Price	Amount	Unit Price	Amount	Amount Equivalent (Rs) or Sub-clause	or Sub-clause
/03 Refrigerant copper tube, ø15.9mm	15.9mm	ш	30	38.4	1,152	251.5	7,545		21900, 22100
/04 Refrigerant copper tube, ø9.5mm	J.Smm	Ħ	30	23.5	705	154.0	4,620		21900, 22100
/05 Condensed water pipe, PVC DN50mm	C DN50mm	딤	13	1.8	23	1.23	15		21900, 22100
/06 Condensed water pipe, PVC DN32mm	C DN32mm	Ħ	9	0.7	4	0.48	(1		21900, 22100
Subtotal of Item C11.14	n C11.14				15,801		102,103		
Total of Item C11	n C11			ı	212,394	I	1,757,047	~ I	

Item No	Description	Unit	Unit Quantity_	Foreign Currency (US\$) Unit Price Amount	ency (US\$) Amount	Local Currency (Rs) Unit Price Amou	cy (Rs) Amount	Total Equivalent (Rs	Total Ref. Clause Equivalent (Rs) or Sub-clause
C12	MECHANICAL FACILITIES								
C12.1	Plant water pumps								
/01	/01 Plant water pump (P-PW1,2) w/ accessories	set	2	3,300	6,600		8,400		30200
/02	/02 Valves, and flexible joints	lot	<del></del>		3,400		2,300		30207
/03	/03 Spare parts	lot	7		009		200		30209
	Subtotal of Item C12.1				10,600		10,900		
C12.2	Air-scouring Blower								
/01	/01 Air-scouring bloweres (B-AS1,2) with appurtenance and accessories	set	2	46,900	93,800		122,000		30300
70/	/02 Spare parts	lot	₩		16,900		6,000		30308
	Subtotal of Item C12.2				110,700		128,000		
C12.3	Alum Dosing System								
/01	/01 Alum solution mixers (MX-AL1,2)	set	2	12,700	25,400		33,000		30400, 30405
/02	/02 Alum dosing pumps (P-AL1 to 3) w/ accessories	set	Э	906'9	20,700		27,000		30400, 30406
/03	/03 Alum solution baskets	set	2	6,600	19,200		10,000		30400
/04	/04 Wheelbarrow for solid alum package	set	-		300		100		30400
/05	/05 Wooden floor steped for solid alum packages	lot	₩		•		80,000		30400
90/	/06 Spare parts	lot	₩		6,100		1,900		30411
<i>L0/</i>	107 Bridge walkway and mixer drive platform	uns			10,700		14,000		30407
80/	/08 All piping and valve installation works in the chemical building and from the chemical building to the dosing points	sum			17,000		44,000		30400, 30408
	Subtotal of Item C12.3				99,400		210,000		

C1.2.4 Linne Dosing System         Unit Price         Amount         Unit Price         Amount         Equivalent (Rs) or Subscription mixers (MX-LM 1,2)         set         2         11,500         23,000         30,000         305,001           AD Linne dosing pumps (P-LM 1,2)         set         2         5,900         13,800         18,000         305,001           With accessories         AD Linne dosing pumps (P-LM 1,2)         set         2         5,100         10,200         8,800         305,001           AD Linne dosing injectors (LLMB 1,2)         set         2         3,400         6,800         8,800         305,001           AD Linne dosing injectors (LLLMB 1,2)         set         2         3,400         6,800         8,800         305,001           AD Linne dosing injectors (LLLMB 1,2)         set         1         300         100         305,001           AD A Linne dosing points         set         1         1         3,200         3,500         3,500           AD All points and roate basing points         simpted and roate installation works in the chanical building and from the chanical         1         1         2,300         4,000         305,00           AD Calorimator (CH-CHL 1,2)         set         2         23,600         4,500         3,500 <th>Item No. Description</th> <th>Unit Quantity</th> <th></th> <th>Foreign Currency (US\$</th> <th>incy (UVV)</th> <th>Local Currency (KS)</th> <th>I otal Ker. Clause</th>	Item No. Description	Unit Quantity		Foreign Currency (US\$	incy (UVV)	Local Currency (KS)	I otal Ker. Clause
C12.4 Line Dosing System         C12.4 Line Posing System         Set         2         11,500         23,000         30,000         30500,			1	Juit Price	Amount	Amount	ivalent (Rs) or Sub-clause
Of Lime solution mixers (MX-LM 1,2)         set         2         1,500         23,000         30,000         30,500,           Of Lime dosing pumps (P-LM 1,2)         set         2         6,900         13,800         18,000         30500,           with accessories         // With accessories	C12.4 Lime Dosing System						
VD2 Lime dosing pumps (P-LM 1,2)         set         2         6,900         13,800         18,000         30500,	/01 Lime solution mixers (MX-LM 1,2)	set	7	11,500	23,000	30,000	30500, 30505
with accessories         Lime injection pumps (P-LMB 1,2)         set         2         5,100         10,200         8,800         30500, 30	/02 Lime dosing pumps (P-LM 1,2)	set	7	6,900	13,800	18,000	30500, 30506
O3 Lime injection pumps (P-LMB 1,2)         set         2         5,100         10,200         8,800         30500, 30500	with accessories						
with accessories         with accessories         with accessories           A04 Line dosing injectors (Ju-LMB1,2)         set         2         3,400         6,800         6,600         30500,           A05 Wheelbarrow for solid line package         set         1         9,200         3,500         100           A07 Bridge walkway and mixer dive platform         sum         10,700         14,000         30500,           A08 Wooden floor steped for solid line packages         lot         1         23,000         14,000         30500,           A08 Wooden floor steped for solid line packages         lot         1         23,000         14,000         30500,           A08 Wooden floor steped for solid line packages         lot         1         23,000         61,000         30500,           A08 Wooden floor steped for solid line packages         lot         1         23,000         61,000         30500,           A08 Wooden floor steped for solid line packages         sum         23,000         232,000         30500,         30500,           A09 Lidenia on the dosing points         set         2 23,800         47,600         62,000         30600,           A01 Chlorinators (CH-CHL.3)         set         2 3,400         10,800         4,000         30600, <tr< td=""><td>/03 Lime injection pumps (P-LMB 1,2)</td><td>set</td><td>2</td><td>5,100</td><td>10,200</td><td>8,800</td><td>30500, 30507</td></tr<>	/03 Lime injection pumps (P-LMB 1,2)	set	2	5,100	10,200	8,800	30500, 30507
Odd Lime dosing injectors (IJ-LMB1,2)         set         2         3,400         6,800         6,600         30500,           05 Wheelbarrow for solid lime package         set         1         300         100         100           06 Spare parts         07 Bridge walkway and mixer drive platform         sum         10,700         3,500         3,500           08 Wooden floor steped for solid lime packages         lot         1         9,200         3,500           08 Wooden floor steped for solid lime packages         lot         1         9,200         3,500           08 Wooden floor steped for solid lime packages         lot         1         9,200         14,000         30500,           09 All points and such installation works in the chemical building and from the chemical building a	with accessories						
OS Wheelbarrow for solid lime package         set         1         300         100           AOS Bare parts         lot         1         9,200         3,500           AOS Bridge walkway and mixer drive platform         sum         10,700         14,000         30500,           AOS Wooden floor steped for solid lime packages         lot         1         23,000         61,000         30500,           AOS All piping and valve installation works in the chemical building and from the chemical building and valve installation works in the sum         23,000         61,000         30500,           CL2.5 Chlorinators (CH-CHL.12)         set         2         23,800         47,600         62,000         30600,           AOS Chlorinators (CH-CHL.3)         set         2         24,00         10,800         4,000         30600,           AOS Chlorinator (CH-CHL.3)         set         2         5,400         14,000         30600,           AOS Weighing scales (WS-CHL.12)         set         2         31,500         63,000         4,000         30600,           AOS Chlorine containers </td <td>/04 Lime dosing injectors (IJ-LMB1,2)</td> <td>set</td> <td>7</td> <td>3,400</td> <td>6,800</td> <td>0,000</td> <td>30500, 30508</td>	/04 Lime dosing injectors (IJ-LMB1,2)	set	7	3,400	6,800	0,000	30500, 30508
/05 Spare parts         lot         1         9,200         3,500           /07 Bridge walkway and mixer drive platform         sum         10,700         14,000         30500,           /08 Wooden floor steped for solid lime packages         lot         1         -         90,000         30500,           /09 All piping and valve installation works in the chemical building and from the chemical building to the dosing points         23,000         61,000         30500,           CL2.5 Chlorinators (CH-CHI.12)         set         2 23,800         47,600         52,000         30600,           /02 Chlorinator (CH-CHI.12)         set         2 3,400         10,800         4,000         30600,           /03 Booster pump (P-CHI.12)         set         2 3,500         4,000         30600,           /05 Weighing scales (WS-CHI.12)         set         2 31,500         63,000         4,000         30600,           /05 Chlorine containers grabs         set         1 3,000         4,000         30600,         30600,           /07 Chlorine containers grabs         set	/05 Wheelbarrow for solid lime package	set	<b></b>		300	100	30500
/07 Bridge walkway and mixer drive platform         sum         10,700         14,000         30500,           /08 Wooden floor steped for solid line packages         lot         1         -         90,000         30500,           /09 All piping and valve installation works in the chemical building and from the chemical building to the dosing points         \$23,000         61,000         30500,           Subtotal Of Item C12.4         \$1,000         \$23,000         \$3500,         \$30500,           C12.5 Chlorination System         \$1,000         \$1,000         \$23,000         \$30600,           /01 Chlorinators (CH-CHLJ,2)         set         2,3800         47,600         62,000         30600,           /02 Chlorinator (CH-CHL 3)         set         2,5400         10,800         4,000         30600,           /03 Booster pumps (P-CHL 1,2) w/ accessories         set         2,500         4,000         30600,           /03 Weighing scales (WS-CHL 1,2)         set         2,500         4,000         30600,           /05 Weighing scales (WS-CHL 1,2)         set         2,31,500         63,000         4,000         30600,           /05 Weighing scales (WS-CHL 1,2)         set         1,500         4,500         3,000         30600,           /05 Chlorine containers         set	/06 Spare parts	lot	<del></del>		9,200	3,500	30513
/09 All piping and valve installation works in the chemical building and valve installation works in the chemical building and from the chemical building and solution containers         101 Chlorina chemical building and from the chemical building and valve barts         101 Chlorina chemical building and from the chemical building and valve barts         101 Chlorina chemical building and valve barts         102 Chlorina chemical build	/07 Bridge walkway and mixer drive platform	uns			10,700	14,000	30500, 30509
O9 All piping and valve installation works in the chemical building and from the chemical Subtotal of Item C12.4         97,000         61,000         30500,           C12.5 Chlorination System         set         2         23,800         47,600         62,000         30600,           O2 Chlorinator (CH-CHL 3)         set         1         21,500         28,000         30600,           O3 Booster pumps (P-CHL 1,2) w/ accessories         set         2         5,400         10,800         4,000         30600,           O4 Booster pump (P-CHL 3)         set         1         2,500         4,000         30600,           O5 Weighing scales (WS-CHL 1,2) w/ accessories         set         1         2,500         4,000         30600,           O6 Chlorine containers         set         1         3,800         35,000         30600,           O7 Chlorine container grabs         set         3         1,500         4,500         15,000           O8 Accessories and spare parts         lot         1         44,600         15,000         15,000		lot	<del>,</del> (		•	000,00	30500
Chlorination System         5ch 10ch 10ch 10ch 10ch 10ch 10ch 10ch 10		wns			23,000	61,000	30500, 30510
Chlorination System         set         2         23,800         47,600         62,000         30600, 30600	Subtotal of Item C12.4				92,000	232,000	
set         23,800         47,600         52,000         30600, 306000, 30600, 30600, 30600, 30600, 30600, 30600, 30600, 30600, 306000, 30600, 30600, 30600, 30600, 30600, 30600, 30600, 30600, 306000, 30600, 30600, 30600, 30600, 30600, 30600, 30600, 30600, 306000, 30600, 30600, 30600, 30600, 30600, 30600, 30600, 30600, 306000, 30600, 30600, 30600, 30600, 30600, 30600, 30600, 30600, 306000, 30600, 30600, 30600, 30600, 30600, 30600, 30600, 30600, 306000, 30600, 30600, 30600, 30600, 306000, 306000, 306000, 306000, 306000, 306000, 306000, 306000, 306000, 306000, 306000, 306000,							
set         1         21,500         28,000         30600,           accessories         set         2         5,400         10,800         4,000         30600,           set         2         31,500         63,000         82,000         30600,           set         10         3,800         38,000         30600,           set         3         1,500         4,500         3000           lot         1         44,600         15,000	/01 Chlorinators (CH-CHL1,2)	set	2	23,800	47,600	62,000	30600, 30607
accessories         set         2,400         10,800         4,000         30600,           cessories         set         31,500         63,000         82,000         30600,           set         10         3,800         38,000         25,000         30600,           set         3         1,500         4,500         3000         30600,           lot         1         44,600         15,000         15,000	/02 Chlorinator (CH-CHL 3)	set	<del></del>		21,500	28,000	30600, 30607
cessories         set         1         2,500         4,000         30600,           set         2         31,500         63,000         82,000         30600,           set         10         3,800         38,000         3,000         30600,           set         3         1,500         4,500         3,000         30600,           lot         1         44,600         15,000	/03 Booster pumps (P-CHL 1,2) w/ accessories	set	2	5,400	10,800	14,000	30600, 30609
set         2         31,500         63,000         82,000         30600,           set         10         3,800         38,000         25,000         30600,           set         3         1,500         4,500         3,000         30600,           lot         1         44,600         15,000         15,000	/04 Booster pump (P-CHL 3) w/ accessories	set	<b>⊷</b>		2,500	4,000	30600, 30609
	/05 Weighing scales (WS-CHL 1,2)	set	2	31,500	63,000	82,000	30600, 30608
set 3 1,500 4,500 3,000 30600, rts lot 1 44,600 15,000	/06 Chlorine containers	set	10	3,800	38,000	25,000	30600, 30610
lot 1 44,600 15,000	/07 Chlorine container grabs	set	3	1,500	4,500	3,000	30600, 30611
	/08 Accessories and spare parts	lot	-		44,600	15,000	30615

Item No.	Description	Unit (	Unit Ouantity	Foreign Currency (US\$)	ency (US\$)	Local Currency (Rs)	cy (Rs)	Total	Ref. Clause
	•		•	Unit Price	Amount	Unit Price	Amount	-Equivalent (R.	Equivalent (Rs) or Sub-clause
/09 All pipin chlorinat building	/09 All piping and valve installation works in the chlorination building and from the chlorination building to the dosing points	mns			53,000		138,000		30600, 30612
/10 Existing	/10 Existing system translocation works and	sum			1		80,000	0	30600, 30606
reinstalla	reinstallation works								
	Subtotal of Item C12.5				285,500		451,000	0	
C12.6 Flush W	Flush Water Pumps and Portable Sump Pump	ump							
/01 Flush wa	Flush water pumps (P-FW 1,2) w/ accessories	set	2	3,300	6,600		8,400	0	30700
/02 Valves a	/02 Valves and flexible joints	lot	7		4,100		2,700	•	30700, 30707
- /03 Portable 22 Complete etc. as sh	/03 Portable sump pump (P-SP 1,2) Complete with accessories, flexible drain pipe, etc. as shown on the Specifications	set	7	3,920	7,840	5,370	10,740	0	30800
/04 Accessor	/04 Accessories and spare parts	lot	<del></del> (		400		100	0	30711
	Subtotal of Item C12.6				18,940		21,940	0	
C12.7 Ventilation Fans	tion Fans								
/01 Ventilati	/01 Ventilation fans (EF-FIL 1,2)	set	2	800	1,600		10,000	3	30900
/02 Accessories	ries	lot	<b>—</b>		1,500		3,000	C	30900
	Subtotal of Item C12.7				3,100		13,000	0	
C12.8 Chain Hoists	Joists								
/01 Hand op	/01 Hand operated chain hoist (C-CHE1)	set	<del></del> 1		1,500		1,000	0	31000
/02 Hand op	/02 Hand operated chain hoist (C-CHE2)	set	2	1,400	2,800	1,000	2,000	0	31000
/03 Hand op	/03 Hand operated chain hoist (C-CHE3)	set	-		1,300		1,000	. (	31000
/04 Hand op	/04 Hand operated chain hoist (C-CHL1)	set	τ⊶		1,700		1,000	0	31000
		.					•		

Item No Description		Unit Qua	ıntity_	Unit Quantity Foreign Currency (US\$) Unit Price Amount		Local Currency (Rs) Unit Price Amou	cy (Rs) Amount E	y (Rs) Total Ref. Clause Amount Equivalent (Rs) or Sub-clause	Ref. Clause or Sub-clause
/05 Hand operated chain hoist (C-WS1)	S1)	set	7	1,700	3,400	1,000	2,000		31000
/06 Hand operated chain hoist (G-CHL1)	IL1)	set	<del></del>		4,000		2,600		31000
Subtotal of Item C12.8	<u>[2.8</u>				14,700		009'6		
C12.9 Pipe work for Elevated Tank									
/01 All piping and valves for elevated tank inlet,	d tank inlet,	sum			27,000		72,000		31100
outlets, overflow, and drain in the chemical	e chemical								
building									
Subtotal of Item C12.9	[2.9				27,000		72,000		
- 88 - Total of Item C12	<b>2</b> 1			ı	666,940	ł	1,148,440		

Item No. Description	Unit Q	Unit Quantity Foreign Currency (US\$ Unit Price Amount		Local Currency (Rs) Unit Price Amount	Total Ref. Clause Equivalent (Rs) or Sub-clause	ause
C13 ELECTRICAL FACILITIES						į
C13.1 Low-Voltage Switchgear						
/01 Low-voltage switchgear (LVS-MAIN)	set	<b></b>	17,500	12,000		40300
/02 Low-voltage switchgear (LVS-P)	set	1	14,500	10,000		40300
/03 Low-voltage switchgear (LVS-L)	set	<del></del>	14,500	10,000		40300
/04 Existing power distribution system	uns		•	30,000		40300
removal works						
/05 Accessories and spare parts	lot	<del></del>	8,000	2,700		40300
Subtotal of Item C13.1			54,500	64,700	00	
C13.2 Emergency Generator System						
/01 Generator (G-OB)	set	<b>—</b>	35,000	23,000		40400
/02 Diesel engine (DE-OB)	set	<del>t-ma</del>	66,500	46,000		40400
/03 Generator control panel (GCP-OB)	set	<b>—</b>	24,500	16,000		40400
/04 Battery and charger (B-OB, BC-OB)	set	<b>****</b> 1	47,500	31,000		40400
/05 Fuel system	lot	⊣	13,500	18,000		40400
/06 Engine cooling water system	lot	<del></del> (	3,500	5,000		40400
/07 Silencer and exhaust system	lot	₩	17,000	11,000		40400
/08 Existing generator sets removal works	lot	₩	1	30,000		40400
/09 Accessories and spare parts	lot	7	4,000	1,400		40400
Subtotal of Item C13.2			211,500	181,400	96	

Item No. Description	Unit Qu	Quantity Foreign Currency (US\$ Unit Price Amount	Amount	Local Currency (Rs) Total Unit Price Amount Equivalent	Total Ref. Clause Equivalent (Rs) or Sub-clause
C13.3 Motor Control Centres					
/01 Motor control centre (MCC-FIL)	set	1	32,500	23,000	40500
/02 Motor control centre (MCC-CHE)	set	H	20,500	16,000	40500
/03 Motor control centre (MCC-CHL)	set	Ţ,	17,500	13,000	40500
/04 Motor control centre (MCC-TRP)	set		14,500	11,000	40500
/05 Auxiliary relay panel (AUX-FIL)	set	1	15,500	14,000	40500
/06 Auxiliary relay panel (AUX-CH)	set	1	13,000	11,000	40500
/07 Existing panels removal works	шns		1	30,000	40500
/08 Spare Parts	lot		4,000	1,400	40500
Subtotal of Item C13.3			117,500	119,400	
C13.4 Local Control Panels					
/01 Local control panel (LCP-RW1)	set		3,500	2,200	40500
/02 Local control panel (LCP-RW2)	set	1	4,200	2,700	40500
/03 Local control panel (LCP-FIL1)	set	1	4,200	2,800	40500
/04 Local control panel (LCP-FIL2)	set	1	4,200	2,500	40500
/05 Local control panel (LCP-FIL3)	set	<del></del> 1	4,900	3,200	40500
/06 Local control panel (LCP-FIL4)	set	П	2,400	1,600	40500
/07 Local control panel (LCP-AL1)	set	<b>,</b>	3,100	2,000	40500
/08 Local control panel (LCP-AL2)	set	1	4,600	3,100	40500
/09 Local control panel (LCP-LM1)	set	<del></del> -	3,100	2,000	40500
/10 Local control panel (LCP-LM2)	set		3,700	2,500	40500
/11 Local control panel (LCP-LM3)	set	_	3,100	2,000	40500
/12 Local control panel (LCP-LM4)	set	1	1,500	1,000	40500
/13 Local control panel (LCP-CHL1)	set	<del>,</del> 1	3,500	2,300	40500

Ite1	Item No.	Description	Unit Qu	antity Foreign	Unit Quantity Foreign Currency (US\$	\$ Local Currency (Rs)	cy (Rs) Total	Ref. Clause
				Unit Price	Price Amount	nt Unit Price	Amount Equivalent (Re	Equivalent (Rs) or Sub-clause
	/14 Local com	/14 Local control panel (LCP-CHL2)	set	1	3	3,700	2,400	40500
	/15 Local cont	/15 Local control panel (LCP-CHL3)	set		2	2,600	1,700	40500
	/16 Local con	/16 Local control panel (LCP-CHL4)	set	₩		1,500	1,000	40500
	/17 Local con	/17 Local control panel (LCP-TRP1)	set	<del>,</del>	2	2,200	1,400	40500
	/18 Local con	/18 Local control panel (LCP-TRP2)	set	1	1	1,700	1,100	40500
	/19 Accessorie	/19 Accessories and spare parts	lot	1	2	2,300	800	40500
		Subtotal of Item C13.4			09	00009	38,300	
C	C13.5 Flowmeters	ers						
	/01 Raw wate.	/01 Raw water flowmeter (Fa-2, Ft, Fm)	set	1	15	15,200	10,500	40600, 40605
– 8 <sup>.</sup>	/02 Raw wate.	/02 Raw water flowmeter (Fa-5, Ft, Fm)	set	П	15	15,200	10,500	40600, 40605
1 –	/03 Filtered w	/03 Filtered water flowmeter - 1(Fo-6, Ft, Fm)	set	<del></del> 1	<b>∞</b>	8,800	5,500	40600, 40605
	/04 Filtered w	/04 Filtered water flowmeter - 2(Fa-7, Ft, Fm)	set	1	16	16,400	10,000	40600, 40605
	/05 Filtered w	/05 Filtered water flowmeter - 3(Fa-8, Ft, Fm)	set		15	15,200	10,500	40600, 40605
	/06 Air scouri	/06 Air scouring flowmeter (Fa-15,Fm FI-15)	set	<del></del>	4	4,000	2,600	40600, 40605
	/07 Backwash	/07 Backwash water flowmeter (Fo-16,Fm FI-16)	set	1	4	4,100	1,600	40600, 40605
	/08 Plant wate	/08 Plant water outlet flowmeter (Fq-17)	set	<del></del> 4	60	3,700	2,600	40600, 40605
	/09 Existing e	/09 Existing equipment removal works	snm			ı	30,000	40600
	/10 Spare parts	ts	lot		4	4,000	1,400	40600, 40605
		Subtotal of Item C13.5			98	86,600	85,200	
ご	C13.6 Level Me	Level Meters and Switches						
	/01 Clear water tank le (LTfg-1,2, valves)	/01 Clear water tank level meters (LTfg-1,2, valves)	set	2	4,600	9,200	7,200	40600, 40606
	/02 Lime solution tanl (LTfg-3,4, valves)	/02 Lime solution tank level meters (LTfg-3,4, valves)	set	2	4,600 9	9,200	7,200	40600, 40606

		Ini					
		OIII	Unit Price	Amount	Unit Price	Amount Equivalent (R	Equivalent (Rs) or Sub-clause
/03 Alum solution tank level meters (LTfg-5,6, valves)	set	2	4,600	9,200		7,200	40600, 40606
/04 Receiving tank level switch (ER-RM)	set	7		200		200	40600, 40606
/05 Filter unit level switches (ER-F1 to 6)	set	9	400	2,400		3,000	40600, 40606
/06 Elevated tank level switches (ER-ELT 1,2)	set	7	200	1,000		1,000	40600, 40606
/07 Filtered water effluent pit level switch (ER-FEP)	set	frank		400		200	40600, 40606
/08 Spare parts	lot			4,000		1,400	40600, 40611
Subtotal of Item C13.6				35,900		28,000	
C13.7 Chlorine Gas Leakage Meters							
/01 Chlorine container room meter (CGD-1,2,Cl2LA)	set	2	6,700	13,400		10,000	40600, 40607
/02 Chlorinator room meter (CGD-3, Cl2IA)	set			6,700		2,000	40600, 40607
/03 Spare parts	lot	<b></b>		5,500		1,900	40600, 40607
Subtotal of Item C13.7				25,600		16,900	
C13.8 Panel Mounted Instrumentation Equipment	D.						
/01 Local control panel mounted equipment	lot	₩		2,600		006	40600, 40608
/02 Monitor and control panel mounted equipment	lot			70,200		24,000	40600, 40608
/03 Accessories for all instrumentation and spare parts for panel mounted instrument	lot	₩		2,000		1,700	40600, 40608
Subtotal of Item C13.8				77,800		26,600	

Item No. Description	Unit Quan	uantity Forei	tity Foreign Currency (US\$	y (US\$)	Local Currency (Rs	icy (Rs)	Total	Ref. Clause
		Uni	Unit Price /	Amount	Unit Price	Amount	Equivalent (R	Equivalent (Rs) or Sub-clause
C13.9 Monitor and Control Panels								
/01 Monitor and control panels (MCP-OB)	set	<del>,</del>		67,000		43,000	~	40700
/02 Spare parts	lot	<del>,                                    </del>		5,000		1,700		40707
Subtotal of Item C13.9				72,000		44,700		
C13.10 Lighting Fixtures (Indoor)								
/01 Lighting panel board (LP-FIL)	set	<b>—</b>		800		2,000		40800, 40804
/02 Lighting fixture with auxiliary devices	uns			1,200		6,000		40800, 40804
/03 Accessory and spare parts	lot	₩		200		100		40800, 40804
Subtotal of Item C13.10				2,200		8,100		
os Costa Control Control (Control)								
/01 Street lighting fixture (A)	set	<b>,</b> ~~-1		1,500		2,000		40800, 40804
/02 Street lighting fixture (B)	set	ю	1,600	4,800		4,400		40800, 40804
/03 Street lighting fixture (C)	set	4	2,400	6,600		13,000		40800, 40804
/04 Street lighting fixture (D)	set	2	2,500	5,000		6,600		40800, 40804
/05 Poto-switch	п	<del></del>		20		1,000		40800, 40804
/05 Accessories and spare parts	lot	1		780		300	0	40800, 40804
Subtotal of Item C13.11				21,700		27,300		
C13.12 Intercom System								
/01 Exchange with terminal board and power unit	it set	1		2,500		5,000	•	40800, 40805
/02 Hand set (G)	set	80	300	2,400		8,000		40800, 40805
/03 Hand set (H)	set	15	100	1,500		15,000	•	40800, 40805
/04 Telephone	set	33	100	300		3,000		40800, 40805

l <sub>3</sub>	Item No.	Description	Unit Qua	Unit Quantity Foreign Currency (US\$	Currency		Local Currency (Rs)	(Rs)	Total	Ref. Clause
				Unit Price		Amount U	Unit Price A	Amount Equ	ivalent (Rs)	Equivalent (Rs) or Sub-clause
	/05 Terminal bo	/05 Terminal boads TB-CHE, CHL, WS1, CWR	set	10	300	3,000		20,000		40800, 40806
٠	OW,DH, W.	OW,DH, WS2, SH, FIL, PS								
	/06 Existing rad	/06 Existing radio telephony system	sum			ı		30,000		40800
	re-installation works	on works								
	/07 Spare parts		lot	<del>,</del>		700		300		40800, 40809
	<b>•</b>	Subtotal of Item C13.12				10,400		81,300		
ξ	C12.12 Dublic Address Cuctom	Troco Crotom								
3	LJ.T. I HDIIL AUG	il cas of steni								
÷	/01 Power amplifier	iffer	set	₩		980		2,000		40800, 40806
	/02 Paging microphone	rophone	set	<del></del>		09		1,000		40800, 40806
- 8	/03 Speaker (3W)	(λ)	set	11	98	066		11,000		40800, 40806
4 –	/04 Speaker (10W)	(W)	set	co	100	300		4,500		40800, 40806
	/05 Spare parts		lot	₩		170		•		40800, 40806
	<b>√</b> √1	Subtotal of Item C13.13				2,500		18,500		
Ì										
Ü	C13.14 Wiring System	stem								
	/01 Power receiving system	ving system	uns			10,000		52,000		40900
	/02 Cable wiring system	g system	uns			70,000		364,000		40900
	/03 Conduit system	item	uns			9,200		48,000		40900
	/04 Electrical flo	/04 Electrical flexible conduit, manhole and	uns			43,000		230,000		40900
	handhole system	stem								
	/05 Cable racks.	/05 Cable racks, duct and pit system	uns			2,700		10,000		40900
	/06 Spare materils	ils	lot	П		2,300		800		40900, 40906
	94	Subtotal of Item C13.14				137,200		704,800		

Local Currency (Rs) Total Ref. Clause Unit Price Amount Equivalent (Rs) or Sub-clause	1,418,600	27,289,375
Unit Quantity Foreign Currency (US\$) Loca Unit Price Amount Unit	915,400	5,227,464
Description	Total of Item C13	TOTAL OF ITEM C
Item No.		