

Thrust Blocks for Tees and Anchor Blocks

10 : 7300

| Branch Pipe dia | Transmission 9 bar | | | Distribution 6 bar | | |
|--------------------|--------------------|--------------------|---------|--------------------|--------------------|---------|
| | H-m | Con-m ³ | Con-Rs. | H-m | Con-m ³ | Con-Rs. |
| 50 | 0.22 | 0.0027 | 19 | 0.19 | 0.0017 | 13 |
| 90 | 0.37 | 0.0127 | 92 | 0.3 | 0.0068 | 49 |
| 100 | 0.41 | 0.0172 | 126 | 0.33 | 0.0090 | 66 |
| 150 | 0.61 | 0.0567 | 414 | 0.5 | 0.0313 | 228 |
| 200 | 0.8 | 0.1280 | 934 | 0.65 | 0.0687 | 501 |
| 250 | 0.99 | 0.2426 | 1,771 | 0.81 | 0.1329 | 970 |
| 300 | 1.18 | 0.4108 | 2,999 | 0.96 | 0.2212 | 1,615 |
| 400 | 1.53 | 0.8954 | 6,536 | 1.25 | 0.4883 | 3,564 |
| 500 | 1.88 | 1.6612 | 12,127 | 1.53 | 0.8954 | 6,536 |
| 600 | 2.21 | 2.6985 | 19,699 | 1.81 | 1.4824 | 10,822 |

Thrust Blocks for Tapers

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| D1 Diameter 1 | D2 Diameter 2 | W Width | Transmission 9 bar | | | Distribution 6 bar | | |
|------------------|------------------|------------|--------------------|--------------------|---------|--------------------|--------------------|---------|
| | | | H (Height) | Con-m ³ | Con-Rs. | H (Height) | Con-m ³ | Con-Rs. |
| 110 | 90 | 0.20 | 0.23 | 0.01 | 77 | 0.20 | 0.01 | 58 |
| 160 | 110 | 0.20 | 0.41 | 0.03 | 245 | 0.34 | 0.02 | 169 |
| 225 | 160 | 0.20 | 0.55 | 0.06 | 442 | 0.47 | 0.04 | 323 |
| 250 | 150 | 0.20 | 0.68 | 0.09 | 675 | 0.57 | 0.06 | 474 |
| 300 | 150 | 0.20 | 0.87 | 0.15 | 1,105 | 0.73 | 0.11 | 778 |
| 300 | 200 | 0.20 | 0.76 | 0.12 | 843 | 0.64 | 0.08 | 598 |
| 300 | 250 | 0.20 | 0.59 | 0.07 | 508 | 0.51 | 0.05 | 380 |
| 400 | 200 | 0.20 | 1.17 | 0.27 | 1,999 | 0.95 | 0.18 | 1,318 |
| 400 | 250 | 0.20 | 1.07 | 0.23 | 1,672 | 0.87 | 0.15 | 1,105 |
| 400 | 300 | 0.20 | 0.90 | 0.16 | 1,183 | 0.76 | 0.12 | 843 |
| 500 | 300 | 0.25 | 1.31 | 0.43 | 3,132 | 1.10 | 0.30 | 2,208 |
| 500 | 400 | 0.25 | 1.02 | 0.26 | 1,899 | 0.87 | 0.19 | 1,381 |
| 600 | 300 | 0.30 | 1.65 | 0.82 | 5,962 | 1.38 | 0.57 | 4,171 |
| 600 | 400 | 0.30 | 1.45 | 0.63 | 4,604 | 1.22 | 0.45 | 3,260 |
| 600 | 500 | 0.30 | 1.13 | 0.38 | 2,796 | 0.97 | 0.28 | 2,061 |

Summary of Chamber costs

| | | | | | | |
|-------------------------|-------------------------|-----------|-----------|-------------------|-----------|--------|
| Butterfly Valve Chamber | Nominal Depth | | | Extra Meter Depth | | |
| | A | B | C | A | B | C |
| | 120,216 | 153,080 | 189,540 | 37,630 | 42,660 | 46,790 |
| Waste Meter Chamber | A | B | | | | |
| | 35,250 | 38,820 | | | | |
| | | | | | | |
| Air valve chamber | Nominal Depth | | | | | |
| | A | B | C | | | |
| | 10,090 | 11,700 | 13,060 | | | |
| Washout chamber | Nominal Depth upto 2.5m | | | Extra Meter Depth | | |
| | A | B | C | A | B | C |
| | Concrete | Hume Pipe | Head Wall | Concrete | Hume Pipe | |
| | 23,400 | 11,190 | 1,710 | 7,895 | 3,475 | |

Butterfly Valve Chamber

| Description | Rate | Unit | Extra Meter Depth | | |
|----------------------------------|-------|-------------------|-------------------|-----------|-------------|
| | | | A | B | C |
| Type | | | A | B | C |
| Valve dia | | | 400 - 600 | 700 - 900 | 1000 - 1200 |
| L | | | | | |
| W | | | | | |
| H | | | | | |
| Earth Excavation | 147.5 | Rs/m ³ | 6.4 | 7.638 | 8.711 |
| | | | 944.00 | 1126.61 | 1284.87 |
| C15 blind concrete | 4118 | Rs/m ³ | | | |
| Formwork | 328 | Rs/m ² | 18.71 | 21.18 | 23.20 |
| | | | 6136.88 | 6947.04 | 7609.60 |
| C25 RF concrete | 5179 | Rs/m ³ | 1.871 | 2.118 | 2.32 |
| | | | 9689.91 | 10969.12 | 12015.28 |
| Reinforcement | 55.25 | Rs/Kg. | 199.37 | 225.69 | 247.22 |
| | | | 11015.40 | 12469.60 | 13658.86 |
| Backfilling | 41.5 | Rs/m ³ | 2.065 | 2.07 | 2.13 |
| | | | 85.70 | 85.91 | 88.40 |
| Manhole cover fixing | 170 | Rs/Nr | | | |
| | | | | | |
| Sub Total | | | 27871.89 | 31598.27 | 34657.01 |
| Add 35% overhead & profit | | | 9755.16 | 11059.39 | 12129.95 |
| | | | 37627.05 | 42657.66 | 46786.96 |
| Cost for butterfly valve chamber | | | 37,630 | 42,660 | 46,790 |

Waste Meter Chambers

| Description | Rate | Unit | Waste Meter Chamber | |
|---------------------------|-------|-------------------|---------------------|----------|
| | | | A | B |
| Type | | | A | B |
| Valve dia | | | 300,400 | 225/150 |
| L | | | 1.0 | 1.4 |
| W | | | 0.8 | 0.8 |
| H | | | 1.7 | 1.5 |
| Earth Excavation | 147.5 | Rs/m ³ | 1.38 | 1.68 |
| | | | 203.55 | 247.80 |
| C15 blind concrete | 4118 | Rs/m ³ | 0.06 | 0.084 |
| | | | 247.08 | 345.91 |
| Formwork | 328 | Rs/m ² | 17.76 | 19.50 |
| | | | 5825.28 | 6396.00 |
| C25 RF concrete | 5179 | Rs/m ³ | 1.776 | 1.95 |
| | | | 9197.90 | 10099.05 |
| Reinforcement | 55.25 | Rs/Kg. | 189.25 | 207.79 |
| | | | 10456.09 | 11480.51 |
| Backfilling | 41.5 | Rs/m ³ | 0.345 | 0.42 |
| | | | 14.32 | 17.43 |
| Manhole cover fixing | 170 | Rs/Nr | 1 | 1 |
| | | | 170.00 | 170.00 |
| Sub Total | | | 26114.22 | 28756.70 |
| Add 35% overhead & profit | | | 9139.98 | 10064.85 |
| | | | 35254.20 | 38821.55 |
| Cost of Chamber | | | 35,250 | 38,820 |

Air Valve Chamber

| Description | Rate | |
|-----------------------------------|--------|-------------------|
| Type | | |
| Valve dia | | |
| L | | |
| W | | |
| H | | |
| Earth Excavation | 147.5 | Rs/m ³ |
| C15 blind concrete | 4118 | Rs/m ³ |
| Formwork | 328 | Rs/m ² |
| C25 RF concrete | 5214 | Rs/m ³ |
| Reinforcement | 55.25 | Rs/Kg. |
| Backfilling | 41.5 | Rs/m ³ |
| Granula niling | 636.04 | Rs/m ³ |
| Manhole cover fixing | 170 | Rs/Nr |
| Sub Total | | |
| Add 35% overhead & profit | | |
| Cost for air valve chamber | | |

Washout Chamber

| Description | Rate | | Extra Meter Depth | | |
|---------------------------------|--------|-------------------|-------------------|--------------|---|
| | | | A | B | C |
| Type | | | Concrete | Hume Pipe | |
| Earth Excavation | 147.5 | Rs/m ³ | 0.81 | 1.21 | |
| | | | 119.48 | 178.48 | |
| C15 blind concrete | 4118 | Rs/m ³ | - | - | |
| | | | - | - | |
| Formwork | 328 | Rs/m ² | 6.00 | - | |
| | | | 1,968.00 | - | |
| C25 RF concrete | 5179 | Rs/m ³ | 0.45 | - | |
| | | | 2,330.55 | - | |
| Reinforcement | 55.25 | Rs/Kg. | 25.88 | - | |
| | | | 1,429.59 | - | |
| Backfilling | 41.5 | Rs/m ³ | - | - | |
| | | | - | - | |
| Manhole cover fixing | 170 | Rs/Nr | - | - | |
| | | | - | - | |
| Hume Pipe supply | 1795 | Rs/m | - | 1.00 | |
| | | | - | 1,795.00 | |
| Hume pipe lay & jointing | 600 | Rs/m | - | 1.00 | |
| | | | - | 600.00 | |
| Rubble pitching | 671.38 | Rs/m ³ | - | - | |
| | | | - | - | |
| Sub Total | | | 5,847.62 | 2,573.48 | |
| Add 35% overhead & profit | | | 2,046.67 | 900.72 | |
| | | | 7,894.29 | 3,474.19 | |
| Cost for washout chamber | | | 7,895 | 3,475 | |

Surface Box

| Description | Rate | | Valve | | Washouts | |
|-----------------------------------|-------|--------------------|--------|---------|----------|---------|
| | price | unit | Qty. | Amount | Qty. | Amount |
| 160 mm dia Type 1000 Pipe | 600.3 | Rs./m | 1 | 600.30 | 2 | 1200.60 |
| Grade 20 Precast Concrete | 11000 | Rs./m ³ | 0.0695 | 764.50 | 0.0695 | 764.50 |
| Excavation | 92.85 | Rs./m ³ | 0.6 | 55.71 | 2 | 185.70 |
| Backfilling | 41.25 | Rs./m ³ | 0.6 | 24.75 | 2 | 82.50 |
| Sub Total | | | | 1445.26 | | 2233.30 |
| Add 35% overhead & profit | | | | 505.84 | | 781.66 |
| | | | | 1951.10 | | 3014.96 |
| Cost per surface box installation | | | | 1950.00 | | 3015.00 |

Marker Posts

| Description | Price | unit | Qty. | Amount |
|-----------------------------------|-------|-------------------|--------|---------|
| Grade 20 Concrete | 7300 | Rs/m | 0.0835 | 609.55 |
| Grade 20 Precast Concrete | 11000 | Rs/m ³ | 0.014 | 154.00 |
| Excavation | 174 | Rs/m ³ | 0.125 | 21.75 |
| Aluminium Plate (sup & ins) | 1000 | Rs/Nr | 1 | 1000.00 |
| Sub Total | | | | 1785.30 |
| Add 35% overhead & profit | | | | 624.86 |
| | | | | 2410.16 |
| Cost per Marker post installation | | | | 2400.00 |

CALCULATION OF RATES FOR SUPPLY OF FLANGES

| Description | Unit | 80 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 600 | 800 |
|----------------------------------------|----------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| a Number of bolts in 1 joint | Nr | 0 | 8 | 8 | 12 | 12 | 12 | 16 | 16 | 20 | 20 | 20 | 24 |
| b Cost of Bolts & Nuts and Washers CIF | ₹/Bolt | 0.15 | 0.2 | 0.26 | 0.26 | 0.51 | 0.51 | 0.51 | 0.86 | 0.86 | 1.47 | 1.63 | 1.94 |
| c Cost of Gaskets EPDM CIF | ₹/Gasket | 1.06 | 1.4 | 2.37 | 2.65 | 4.98 | 5.3 | 7.3 | 8.09 | 14.41 | 18.34 | 21.41 | 25.52 |
| d Cost per flanged joint | ₹ | 2.26 | 3.00 | 4.45 | 5.77 | 11.10 | 11.42 | 15.46 | 21.85 | 31.61 | 45.74 | 64.01 | 72.08 |

CALCULATION OF RATES FOR SUPPLY & INSTALLATION OF JOINT PROTECTION FOR FLANGES ON PIPES

| Description | Unit Price | Unit | 80 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 600 | 800 |
|-------------------------------------------------|------------|-----------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|
| a Denso Paste Quantity | | Kg | 0.2 | 0.2 | 0.25 | 0.3 | 0.3 | 0.35 | 0.35 | 0.4 | 0.4 | 0.45 | 0.5 | 0.65 |
| b Denso Priming Solution = 0.45* Paste Quantity | | Lit | 0.090 | 0.090 | 0.113 | 0.135 | 0.135 | 0.158 | 0.158 | 0.180 | 0.180 | 0.203 | 0.225 | 0.293 |
| c Cost for Denso Primer | 418.84 | Rs./Lit | 37.70 | 37.70 | 47.33 | 56.54 | 56.54 | 66.18 | 66.18 | 75.39 | 75.39 | 85.02 | 94.24 | 122.72 |
| d Denso Mastic | | Kg | 1 | 1 | 2 | 2.5 | 4 | 4 | 4.5 | 7.5 | 8 | 12 | 15 | 20 |
| e Denso Profile Quantity = Mastic Qty / 2.13 | | Kg | 0.47 | 0.47 | 0.94 | 1.17 | 1.88 | 1.88 | 2.11 | 3.52 | 3.76 | 5.63 | 7.04 | 9.39 |
| f Cost for Denso Profile | 275.91 | Rs./Kg | 129.88 | 129.88 | 259.36 | 322.81 | 518.71 | 518.71 | 582.17 | 971.2 | 1037.42 | 1553.37 | 1942.41 | 2590.79 |
| g Denso Tape 150mm Wide | | m | 2 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 10 | 12 | 15 | 19 |
| h Cost for Denso Tape | 52.32 | Rs./m | 104.64 | 104.64 | 156.96 | 209.28 | 261.6 | 313.92 | 366.24 | 418.56 | 523.2 | 627.84 | 784.8 | 994.08 |
| i Total Material Cost | | Rs./Joint | 272.00 | 272.00 | 463.70 | 588.60 | 836.90 | 898.80 | 1014.60 | 1465.20 | 1636.00 | 2266.20 | 2821.50 | 3707.60 |
| j Installation Cost | | Rs./Joint | 90 | 90 | 90 | 90 | 90 | 90 | 101 | 147 | 164 | 227 | 282 | 371 |
| Total Cost including 35% O/H and Profit | | Rs./Joint | 489 | 489 | 747 | 916 | 1,251 | 1,335 | 1,506 | 2,176 | 2,430 | 3,366 | 4,190 | 5,506 |

CALCULATION OF RATES FOR SUPPLY & INSTALLATION OF JOINT PROTECTION FOR COUPLINGS AND FLANGE ADAPTERS

| | Description | Unit Price | Unit | 80 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 600 | 800 |
|---|----------------------------------------------|-----------------|-----------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| a | Denso Paste Quantity | | Kg | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.4 | 0.4 | 0.5 | 0.5 | 0.6 |
| b | Denso Priming Solution = 0.45*Paste Quantity | | Ltr | 0.045 | 0.045 | 0.090 | 0.090 | 0.090 | 0.135 | 0.135 | 0.180 | 0.180 | 0.225 | 0.225 | 0.270 |
| c | Cost for Denso Primer | 418.84 Rs./Lit. | Rs | 18.85 | 18.85 | 37.70 | 37.70 | 37.70 | 56.54 | 56.54 | 75.39 | 75.39 | 94.24 | 94.24 | 113.09 |
| d | Denso Mastic | | Kg | 4 | 5 | 7 | 8 | 10 | 11 | 16 | 18 | 20 | 22 | 25 | 30 |
| e | Denso Profile Quantity = Mastic Qty / 2.13 | | Kg | 1.88 | 2.35 | 3.29 | 3.76 | 4.69 | 5.16 | 7.51 | 8.45 | 9.39 | 10.33 | 11.74 | 14.08 |
| f | Cost for Denso Profile | 275.91 Rs./Kg | Rs. | 518.71 | 648.39 | 907.74 | 1037.42 | 1284.02 | 1423.7 | 2072.08 | 2331.44 | 2590.79 | 2850.15 | 3239.18 | 3884.81 |
| g | Denso Tape 150mm Wide | | m | 3 | 3 | 4 | 5 | 6 | 7 | 9 | 10 | 11 | 12 | 14 | 19 |
| h | Cost for Denso Tape | 52.32 Rs./m | Rs. | 156.96 | 156.96 | 209.28 | 261.6 | 313.92 | 366.24 | 470.88 | 523.2 | 575.52 | 627.84 | 732.48 | 994.08 |
| i | Total Material Cost | | Rs./Joint | 694.50 | 824.20 | 1154.70 | 1336.70 | 1645.60 | 1846.50 | 2599.50 | 2930.00 | 3241.70 | 3572.20 | 4065.90 | 4992.00 |
| j | Installation Cost | | Rs./Joint | 185 | 185 | 185 | 185 | 185 | 185 | 260 | 293 | 324 | 357 | 407 | 499 |
| | Total Cost Including 35% O/H and Profit | | Rs./Joint | 1,187 | 1,362 | 1,809 | 2,054 | 2,471 | 2,743 | 3,860 | 4,351 | 4,814 | 5,304 | 6,038 | 7,413 |

CALCULATION OF RATES FOR SUPPLY & INSTALLATION OF JOINT PROTECTION FOR VALVES

| | Description | Unit Price | Unit | 80 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 600 | 800 |
|---|------------------------------------------------|------------|-----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|
| a | Denso Paste Quantity | | Kg | 0.39 | 0.39 | 0.39 | 0.39 | 0.39 | 0.75 | 0.75 | 0.75 | 0.75 | 1.05 | 1.05 | 1.5 |
| b | Denso Priming Solution = 0.45 * Paste Quantity | | Lit | 0.176 | 0.176 | 0.176 | 0.176 | 0.176 | 0.338 | 0.338 | 0.338 | 0.338 | 0.473 | 0.473 | 0.675 |
| c | Cost for Denso Primer | 418.84 | Rs./lit | 73.72 | 73.72 | 73.72 | 73.72 | 73.72 | 141.57 | 141.57 | 141.57 | 141.57 | 198.11 | 198.11 | 282.72 |
| d | Denso Mastic | | Kg | 4 | 5 | 10 | 14 | 19 | 27 | 32 | 37 | 43 | 50 | 59 | 84 |
| e | Denso Profile Quantity = Mastic Qty / 2.13 | | Kg | 1.88 | 2.35 | 4.69 | 6.57 | 8.92 | 12.68 | 15.02 | 17.37 | 20.19 | 23.47 | 27.7 | 39.44 |
| f | Cost for Denso Profile | 275.91 | Rs./Kg | 518.71 | 648.39 | 1294.02 | 1812.73 | 2461.12 | 3498.54 | 4144.17 | 4792.56 | 5570.62 | 6475.61 | 7642.71 | 10881.9 |
| g | Denso Tape 150mm Wide | | m | 9 | 11 | 14 | 17 | 20 | 23 | 34 | 39 | 40 | 45 | 54 | 73 |
| h | Cost for Denso Tape | 52.32 | Rs./m | 470.88 | 575.52 | 732.48 | 889.44 | 1046.4 | 1203.36 | 1778.88 | 2040.48 | 2092.8 | 2354.4 | 2825.28 | 3819.36 |
| i | Total Material Cost | | Rs./Joint | 1063.30 | 1297.60 | 2100.20 | 2775.90 | 3581.20 | 4843.50 | 6064.60 | 6974.60 | 7805.00 | 9028.10 | 10666.10 | 14984.00 |
| j | Installation Cost | | Rs./Joint | 484 | 484 | 484 | 484 | 484 | 484 | 606 | 697 | 781 | 903 | 1067 | 1498 |
| | Total Cost including 35% O/H and Profit | | Rs./Joint | 2,089 | 2,405 | 3,489 | 4,401 | 5,488 | 7,192 | 9,005 | 10,357 | 11,591 | 13,407 | 15,840 | 22,251 |

Other Expenditure on 1Nr. Testing (for PVC & DI lines up to 350mm dia) - length 1000m (for 63mm dia length 1500m)

| | Description | Unit | Quantity | Unit price | Amount |
|--|----------------------------------------------------------|-------|----------|------------|--------------|
| | Machinery & Plant | | | | |
| | Generator 3KVA | Days | 2.50 | 300 | 750 |
| | Submersible pump | Hrs | 1.00 | 225 | 225 |
| | Testing pump | Hrs | 24.00 | 250 | 6000 |
| | Pipe fittings for plug-in | Allow | 300.00 | 1 | 300 |
| | Other Materials | Allow | 400.00 | 1 | 400 |
| | Labour | | | | |
| | Skilled | Days | 2.50 | 450 | 1125 |
| | Un Skilled | Days | 2.50 | 300 | 750 |
| | Total Machinery, Plant and labour cost for 2 days | | | | 9,550 |

Other Expenditure on 1Nr. Testing (for DI lines of 350mmdia & Above)- length 500m

| | Description | Unit | Quantity | Unit price | Amount |
|--|----------------------------------------------------------|-------|----------|------------|---------------|
| | Machinery & Plant | | | | |
| | Generator 3KVA | Days | 4.00 | 300 | 1200 |
| | Pickup | Days | 4.00 | 1000 | 4000 |
| | Submersible pump | Hrs | 8.00 | 225 | 1800 |
| | Testing pump | Hrs | 24.00 | 250 | 6000 |
| | Pipe fittings for plug-in | Allow | 500.00 | 1 | 500 |
| | Other Materials | Allow | 500.00 | 1 | 500 |
| | Labour | | | | |
| | Skilled | Days | 4.00 | 450 | 1800 |
| | Un Skilled | Days | 8.00 | 300 | 2400 |
| | Total Machinery, Plant and labour cost for 4 days | | | | 18,200 |

Unit Prices for Basic Construction Materials

Current market prices for basic construction materials e.g. cement, sand, reinforcement, scaffolding, readymix concrete etc., were obtained from suppliers and compared with that shown in NWSDB Rate Book 2000. Higher of either value is selected.

- (a) Cement
- (b) Bricks
- (c) Cement Blocks
- (d) Sand
- (e) Metal
- (f) Rubble
- (g) Concrete (Ready Mix)
- (h) Imported Timber
- (i) Roofing Materials
- (j) Ceiling Sheets
- (k) Plywood Sheets (PVC Coated)
- (l) Scaffolding (Hire Rate)
- (m) Scaffolding (Buying Rate)
- (n) Fuel
- (o) D. P. C. Tar
- (p) Steel
- (q) Paint
- (r) Wood Preservative

Unit Rates for Labour

Unit rates for skilled labour for various building trades were obtained and compared with NWSDB Rate Book 2000. Market price is higher than that shown in rate Book and the market price is adopted.

Unit Rates for Buildings

Building Schedule of Rates (BSR) published by Department of Building which is widely used in Sri Lanka provides the unit rates for construction of buildings. Rates from these are used for the cost estimation of Maligakanda Office Building. Summary and analysis of rates are shown.

- (a) Earth Work
- (b) Concrete Work
- (c) Ready Mix Concrete
- (d) Form Work
- (e) Reinforcement Steel
- (f) Masonry Work
- (g) Roof Work and Ceiling
- (h) Plaster Work and Rendering
- (i) Joinery Work
- (j) Painting
- (k) Aluminium Joinery
- (l) Sanitary Installation

UNIT PRICES FOR BASIC CONSTRUCTION MATERIALS

| DESCRIPTION | UNIT | PRICE in Rs. | REMARKS | NWSDDB RATES in Rs. | Selected Rate in Rs. |
|-------------------------------------|-------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------------------|
| Cement | | | | | |
| Mahaweli Marine | 1Bag (50Kg) | 315.00 | Whole Sale Colombo 295/= | 325.00 | 315.00 |
| Sanstha | 1Bag (50Kg) | 320.00 | Whole Sale Colombo 300/= | | |
| Bricks | 1000 Nos. | 2,500.00 | Large size - 2500/=, Small size - 2200/= | 2,700.00 | 2,700.00 |
| Cement Blocks | | | | | |
| Hollow (WidthxHeightxLength) | | | | | |
| 4" x 8" x16" | 1No. | 14.75 | Price given is net Price. | 14.10 | 14.75 |
| 6" x 8" x16" | 1No. | 23.75 | | 23.75 | 23.75 |
| 8" x 8" x16" | 1No. | 29.75 | | 29.20 | 29.75 |
| Solid | | | | | |
| 4" x 8" x16" | 1No. | 16.75 | | | 16.75 |
| Sand | 1Cube | 1,300.00 | Colombo Price | 1,300.00 | 1,300.00 |
| Metal | | | | | |
| 3/4" | 1Cube | 3,000.00 | Colombo Price | 3,300.00 | 3,300.00 |
| 1" | 1Cube | 2,500.00 | -do- | 2,650.00 | 2,650.00 |
| Rubble | | | | | |
| 6" x 9" | 1Cube | 1,300.00 | Colombo Price | 1,350.00 | 1,350.00 |
| 6" x 4" | 1Cube | 1,500.00 | -do- | | 1,500.00 |
| Concrete (Ready Mix) | | | | | |
| Gr.15 | 1Cu.m | 3,800.00 | Prices taken from ICC. Prices given without GST | | 3,800.00 |
| Gr.20 | 1Cu.m | 4,100.00 | | 4,100.00 | |
| Gr. 25 | 1Cu.m | 4,320.00 | | 4,320.00 | |
| Gr. 30 | 1Cu.m | 4,500.00 | | 4,500.00 | |
| Gr.35 | 1Cu.m | 4,800.00 | | 4,800.00 | |
| Gr.40 | 1Cu.m | 5,200.00 | | 5,200.00 | |
| Lime | 1 Ton | 7,500.00 | | 8,711.00 | 8,711.00 |
| Timber (Imported) | | | | | |
| 6"x 2" | 1 Ft | 84.38 | Prices inclusive GST | | 84.38 |
| 4"x 3" | 1 Ft | 84.38 | | 84.38 | |
| 5"x 2" | 1 Ft | 67.50 | | 67.50 | |
| 2"x 2" | 1 Ft | 21.94 | | 21.94 | |
| 2"x1" | 1 Ft | 10.13 | | 10.13 | |
| Roofing Materials | | | | | |
| Calicut Tiles | 1No. | 10.00 | Class one Tile | 9.50 | 10.00 |
| Asbestos roofing sheets | | | | | |
| 6' | 1No. | 387.20 | Width of the sheet is 3.5 feet. Given price is whole sale price. Retail price is 1% more than the whole sale price. Prices given is inclusive GST | 450.00 | 450.00 |
| 8' | 1No. | 553.15 | | 607.00 | 607.00 |
| 10' | 1No. | 663.78 | | 760.00 | 760.00 |
| Ceiling Sheets (Asbestos) | | | | | |
| 4'x4' | 1 No. | 179.78 | Given price is whole sale price. Retail price is 1% more than the whole sale price. Prices given is inclusive GST | 200.00 | 200.00 |

| DESCRIPTION | UNIT | PRICE in Rs. | REMARKS | NWSDB RATES in Rs. | Selected Rate in Rs. |
|---------------------------------------------|--------------|--------------------------|------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------------|
| Plywood Sheets (PVC Coated) | | | | | |
| 12mm thick 8'x4' | 1No. | 1,600.00 | | 1,097.00 | 1,600.00 |
| 10mm thick 8'x4' | 1No. | 1,450.00 | | 875.00 | 1,450.00 |
| Sheet Piles 'U' type (400mm or 600mm width) | Ton | 350 £+25% of basic price | Price is given in £ FOB price 25% should be added to the above price. JSI complied | | 350 £+25% of basic price |
| Scaffolding (Hire Rate) | | | | | |
| 1Day | Rs./Day.Unit | 60.00 | Deposit for Large Size (56"height x 59" width x 74" length) - 2860/=, Small Size (56" height x 31" width x 59" length) - 2670/= | | 60.00 |
| 2 - 3 Days | Rs./Day.Unit | 45.00 | | | 45.00 |
| 4 - 6 Days | Rs./Day.Unit | 25.00 | | | 25.00 |
| 7 - 16 Days | Rs./Day.Unit | 20.00 | | | 20.00 |
| 17 - 29 Days | Rs./Day.Unit | 15.00 | | | 15.00 |
| 30 Days onwards | Rs./Day.Unit | 10.00 | | | 10.00 |
| Scaffolding (Buying Rate) | | | | | |
| Large | Rs./Unit | 3,175.00 | Large and small sizes are given above | | 3,175.00 |
| Small | Rs./Unit | 2,965.00 | | | 2,965.00 |
| Fuel | | | | | |
| Petrol | 1lit. | 50.00 | | 50.00 | 50.00 |
| Diesel | 1lit. | 19.50 | | 16.50 | 19.50 |
| D.P.C. Tar | 4 lit | 219.00 | | 219.00 | 219.00 |
| Steel | | | | | |
| Mild Steel | 1Ton | 34,500.00 | | 27,500.00 | 34,500.00 |
| Tor Steel | 1Ton | 37,500.00 | | 28,000.00 | 37,500.00 |
| Binding Wire | 1 Kg | 65.00 | | 80.00 | 65.00 |
| Paint | | | | | |
| Paint Weather Shield | 10 lit | 3,170.00 | | 2,960.00 | 3,170.00 |
| Paint Emulsion | 10 lit | 2,418.00 | | 2,340.00 | 2,418.00 |
| Wood Preservative | | | | | |
| Black | 10 lit | 460.00 | | 725.00 | 460.00 |
| Colour less | 10 lit | 828.00 | | | 828.00 |

CEYLON HEAVY INDUSTRIES & CONSTRUCTION CO. LTD

ATHURUGIRIYA

PRICE LIST NO :- 75

G.S.T. NO. 294001581-5000

(EFFECTIVE FROM 01ST JULY 2000)

Handwritten signature and date
1/7

| ROLLED PRODUCTS | | | PRICE * PER M. TON (RS.) EX-WORKS, ATHURUGIRIYA | |
|-----------------|--------------|--------------------------|----------------------------------------------------|-------------|
| SER. NO. | ITEM | SIZE (M.M) | WHOLESALE | RETAIL |
| | | | PRICE (RS.) ** | PRICE (RS.) |
| 01 | TOR STEEL | 10.12 | 27,600.00 | 30,600.00 |
| | | 16, 20 & 25 | 28,000.00 | 30,950.00 |
| 02 | M. S. ROUNDS | 10, 12, 16, & 20 | 27,050.00 | 30,050.00 |
| 03 | M.S. FLATS - | 12 X 5 & 12 X 6 | 28,350.00 | 31,500.00 |
| | | 16 X 5 & 16 X 6 | 27,500.00 | 30,650.00 |
| | | 20X5 & 20X6, 25X5 & 25X6 | 27,050.00 | 30,050.00 |
| | | 30X6 & 40X6 | 27,050.00 | 30,050.00 |

| WIRE RODS (IMPORTED) | | | | |
|----------------------------------------------------------------------|----------------------|------|---|---|
| 01 | WIRE RODS (IMPORTED) | 6.00 | # | # |
| # Wire Rod price will be decided according to the market conditions. | | | | |

** Wholesale price applicable only for Registered Dealers and Agents.

| WIRE PRODUCTS | | | RETAIL PRICE (RS) * |
|---------------|-----------------------------------|-------------------------------------------------------|------------------------------|
| 01 | G.I. WELDED MESH | 2"X2" (Mesh Size, 50X50 M.M.) 3.15 M.M. (Gauge 10) | 915.00 (PER 12'X7' SHEET) |
| 02 | DOUBLE STRAND BARBED WIRE | 2.00 M.M. (Gauge 14) | 969.74 (PER 25 KG. COIL) |
| 03 | HARD FACING WELDING ELECTRODES | Gauge 3/6 Gauge 3/8 | 420.55 (PER 4 KG. PACKET) |

| NAIL WIRE | | | | |
|-----------|-----------------------------------------------|---------------------------------|------------------|--------------|
| | SIZE M.M. | SELLING PRICE * (RS.) PER M.TON | | |
| | | 5 M.T. & OVER | 3 M.T. TO 5 M.T. | BELOW 3 M.T. |
| 01 | 5.6, 5.0, 4.0 & 3.15 (Gauge 5, 6, 8, & 10) | 24,260.00 | 24,700.00 | 25,140.00 |
| 02 | 2.5 (Gauge 12) | 27,790.00 | 28,230.00 | 28,670.00 |
| 03 | 2.24 & 2.00 (Gauge 13 & 14) | 28,320.00 | 28,670.00 | 28,930.00 |
| 04 | 1.6 & 1.4 (Gauge 16 & 17) | 35,560.00 | 36,590.00 | 38,370.00 |
| 05 | 1.0 & 0.9 (Gauge 19 & 20) | - | - | 48,290.00 |

Note: ASSORTED QUANTITY COULD BE PURCHASED AT ABOVE RELEVANT RATES.

* G.S.T. 12.5% & N.S.L. 6.5% TO BE ADDED TO ABOVE PRICES.

SCFD

26 July
(99's cost)

**SUMMARY
FOR
BUILDING UNIT COST**

| Page No. | Description | Unit | Rate | |
|----------|--------------------------------------------------------|----------------|-----------|-----------|
| * | <u>Earth Work</u> | | | |
| | 1. Remove top soil | m ³ | 43.60 | 44.00 |
| | 2. Excavation over site to reduce level | m ³ | 250.44 | 250.00 |
| | 3. Excavation in trenches for walls in columns | m ³ | 357.77 | 358.00 |
| | 4. Backfilling & Compacting | m ³ | 143.11 | 143.00 |
| | 5. Backfilling to trenches | m ³ | 357.18 | 357.00 |
| | 6. Filling under floor | m ³ | 286.22 | 286.00 |
| | 7. Filling under floor with imported earth | m ³ | 464.51 | 464.51 |
| * | <u>Concrete Work</u> | | | |
| | 8. Grade 15 | m ³ | 4,660.60 | 4,661.00 |
| | 9. Grade 20 | m ³ | 5,667.61 | 5,668.00 |
| | 10. Grade 25 | m ³ | 6,071.18 | 6,071.00 |
| | 11. Grade 30 | m ³ | 7,669.72 | 6,670.00 |
| | 12. 50mm.thick concrete screed | m ² | 288.44 | 288.00 |
| | 13. 75mm.thick concrete screed | m ² | 429.49 | 429.00 |
| | 14. 150mm.thick floor | m ² | 854.36 | 854.00 |
| | 15. 112mmx150mm Column for Site mixing Concrete | m ³ | 10,840.38 | 10,840.00 |
| | 16. 150mmx150mm Column | m ³ | 10,734.38 | 10,734.00 |
| | 17. 225mmx225mm Column | m ³ | 10,564.77 | 10,565.00 |
| | 18. 300mmx300mm Column | m ³ | 9,733.86 | 9,734.00 |
| | 19. 337mmx337mm Column | m ³ | 9,687.74 | 9,688.00 |
| | 20. 225mmx225mm beam | m ³ | 10,903.99 | 10,904.00 |
| | 21. 150mm.thick floor slab | m ³ | 10,208.05 | 10,208.00 |
| * | <u>Ready Mix Concrete</u> | | | |
| | 22. Grade 15 | m ³ | 5,261.25 | 5,216.00 |
| | 23. Grade 20 | m ³ | 5,649.38 | 5,650.00 |
| | 24. Grade 25 | m ³ | 5,934.00 | 5,934.00 |
| | 25. Grade 30 | m ³ | 6,166.88 | 6,167.00 |
| | 26. Grade 35 | m ³ | 6,555.00 | 6,555.00 |
| | 27. Grade 40 | m ³ | 7,072.50 | 7,072.00 |
| | 28. 112mmx150mm Column for ready mix Concrete | m ³ | 11,900.87 | 11,901.00 |
| | 29. 150mmx150mm Column for ready mix Concrete | m ³ | 11,794.87 | 11,795.00 |
| | 30. 225mmx225mm Column for ready mix Concrete | m ³ | 11,625.25 | 11,625.00 |
| | 31. 300mmx300mm Column for ready mix Concrete | m ³ | 10,746.14 | 10,746.00 |
| | 32. 337mmx337mm Column for ready mix Concrete | m ³ | 10,700.03 | 10,700.00 |
| | 33. 225mmx225mm beam for ready mix Concrete | m ³ | 11,964.48 | 11,964.00 |
| | 34. 150mm.thick floor slab for ready mix Concrete | m ³ | 11,268.54 | 11,268.00 |
| * | <u>Form Work</u> | | | |
| | Timber | | | |
| | 35. Columns | m ² | 546.90 | 547.00 |
| | 36. Beams | m ² | 959.68 | 960.00 |
| | 37. Slab | m ² | 541.16 | 541.16 |
| * | <u>G.I Props with plywood sheet (two users)</u> | | | |
| | 38. Slab | m ² | 832 | 832.00 |

| | | | |
|----------------------------------------------------|----------------|----------|----------|
| * <u>Reinforcement steel</u> | | | |
| 39. Tor steel | | | |
| - 10 < 12 | Kg | 68.52 | 68.00 |
| - 16 and above | Kg | 69.34 | 69.00 |
| 40. Mild steel | Kg | 67.68 | 68.00 |
| * <u>Masonry work</u> | | | |
| 41. Random rubble masonry | m ³ | 3,465.64 | 3,466.00 |
| 42. Random rubble masonry in superstructure. | m ³ | 3,704.15 | 3,704.00 |
| 43. 112mm brick work | m ² | 492.77 | 493.00 |
| 44. 225mm brick work | m ² | 951.03 | 951.00 |
| 45. 112mm wire cut brick work | m ² | 949.87 | 950.00 |
| 46. 225mm wire cut brick work | m ² | 1,852.18 | 1,852.00 |
| 47. Brick paved floor | m ² | 451.03 | 451.00 |
| * <u>Roof work & Ceiling</u> | | | |
| 48. Calicut tiles roof with timber fram work | m ² | 1,390.25 | 1,390.00 |
| 49. Asbestos roof with timber fram work | m ² | 1,117.71 | 1,118.00 |
| 50. Valance board | m ² | 415.15 | 415.00 |
| 51. Flat asbestor ceiling with timber fram work | m ² | 917.10 | 917.00 |
| 52. Indined asbestos ceiling with timber fram work | m ² | 618.76 | 619.00 |
| 53. Flat timber ceiling | m ² | 1,262.23 | 1,262.00 |
| 54. Indined timber ceiling | m ² | 841.82 | 842.00 |
| * <u>Plaster work and rendering</u> | | | |
| 55. D.P.C | m ² | 332.09 | 332.00 |
| 56. Plinth plaster | m ² | 199.23 | 199.00 |
| 57. External plastering | m ² | 199.14 | 199.00 |
| 58. Internal Plastering | m ² | 239.43 | 239.00 |
| 59. Cement skirting | | 204.37 | 204.00 |
| 60. Rendering | m ² | 138.35 | 138.00 |
| 61. Wall tilling - 150x100mm | m ² | 1,433.19 | 1,433.00 |
| 62. Wall tilling - 150x150mm | m ² | 1,358.90 | 1,359.00 |
| 63. Floor tilling - 300x300mm | m ² | 1,541.13 | 1,541.00 |
| 64. Terrazo floor tile | m ² | 1,558.71 | 1,558.00 |
| 65. Terra-cotta tile | m ² | 1,057.37 | 1,057.00 |
| * <u>Joinery work</u> | | | |
| 66. Timber pannel door | m ² | 6,607.19 | 6,607.00 |
| 67. Ordinary flywood door | m ² | 4,013.33 | 4,013.00 |
| 68. Marine plywood door | m ² | 5,081.34 | 5,081.00 |
| 69. Glazed window | m ² | 6,299.55 | 6,300.00 |
| * <u>Painting</u> | | | |
| 70. Enamel paint to steel trusses | m ² | 270.53 | 270.00 |
| 71. Enamel paint to mild steel | m ² | 287.40 | 287.00 |
| 72. Enamel paint to wood | m ² | 404.75 | 405.00 |
| 73. External painting | m ² | 197.74 | 198.00 |
| 74. Internal painting | m ² | 182.69 | 183.00 |
| 75. Paint wood shein and varnish to timber work | m ² | 347.24 | 347.00 |
| * <u>Aluminium Joinery</u> | | | |
| 76. Natural Aluminium | m ² | 5,991.70 | 5,991.00 |
| 77. Powder coated Aluminium | m ² | 7,189.60 | 7,190.00 |

*

Sanitary Installation

| | | | |
|----------------------------------------------|-----|-----------|-----------|
| 78. Closet pedestal type (American standard) | Nr. | 26,881.88 | 26,882.00 |
| 79. Bidet suit (American standard) | Nr. | 12,420.00 | 12,420.00 |
| 80. Washbasin with tap | Nr. | 15,587.78 | 15,588.00 |
| 81. Shower with all accessories | Nr. | 2,835.00 | 2,835.00 |
| 82. Bathroom Accessories | set | 6,478.65 | 6,479.00 |

DRAFT.
26. July
(99's cost)

EARTH WORK

| Item No. | Description | Qty | Unit | Earth cu. | Labour | | Labour cost | Material cost | Basic cost | Add O/H | Total Unit cost Rs. Imperial | Total Unit cost Metric |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|-----------|--------|------|-------------|---------------|------------|---------|------------------------------|------------------------|
| | | | | | SK | UNSK | | | | | | |
| 1 | Price Removing top soil to a depth not exceeding 150mm and depositing as directed within site | 1 | sq. | 325 | 350 | 300 | 300.00 | | 300.00 | 35% | 405.00 | 43.60 |
| 2 | Excavation over site to reduce level in any material except rock requiring blasting including depositing and leveling as directed up to a distance not exceeding 10m | 1 | cu. | | | 1.75 | 525.00 | | 525.00 | 183.75 | 708.75 | 250.44 |
| 3 | Excavation in trenches for walls/ columns pits in ordinary soil from 0-1.5m deepend depositing excavated materials not exceeding 10m | 1 | cu. | | | 2.50 | 750.00 | | 750.00 | 262.50 | 1,012.50 | 357.77 |
| 4 | Back filling and compacting | 1 | cu. | | | 1.00 | 300.00 | | 300.00 | 105.00 | 405.00 | 143.11 |
| 5 | Back filling to trenches with imported materials | 1 | cu. | 1.15 | | 1.25 | 375.00 | 373.75 | 748.75 | 262.06 | 1,010.81 | 357.18 |
| 6 | Filling under floors including levelling, watering & compacting in 75mm layer with available and selected earth at site. | 1 | cu. | | | 2.00 | 600.00 | | 600.00 | 210.00 | 810.00 | 286.22 |
| 7 | Filling under floors including levelling, watering & compacting in 75mm layer with imported and selected earth. | 1 | cu. | 1.15 | | 2.00 | 600.00 | 373.75 | 973.75 | 340.81 | 1,314.56 | 464.51 |

BUILDING UNIT COST CONCRETE WORK

| Item No. | Description | Qty | Unit | Cement Bags | Sand cu. | Metal 3/4" cu. | Metal 1" cu. | Metal 1 1/2" cu. | Water (gal) | Concrete Mixer day | Labour day | | Basic Cost | Add O.H | Total Unit Cost Rs/Imp. Unit. | Total Unit Cost Rs/Metric Unit |
|----------|------------------------------------------|-----|------|-------------|----------|----------------|--------------|------------------|-------------|--------------------|------------|-----------|------------|----------|-------------------------------|--------------------------------|
| | | | | | | | | | | | Skilled | Unskilled | | | | |
| | Price (Rs.) | | | 305 | 1400 | 2950 | 2500 | 2150 | 1 | 2500 | 350.00 | 300.00 | | 35% | | |
| 1. | Concrete work 1:3:6 (1 1/2") Grade 15 | 1 | cu. | 13 | 0.53 | | | 0.92 | 110 | 0.33 | 1 | 6 | 9,770.00 | 3,419.50 | 13,189.50 | 4,660.60 |
| 2. | Concrete work 1:2:4 (3/4") Grade 20 | 1 | cu. | 18 | 0.5 | 0.88 | | | 120 | 0.33 | 1 | 6 | 11,881.00 | 4,158.35 | 16,039.35 | 5,667.61 |
| 3. | Concrete work 1:1 1/2 :3 (3/4") Grade 25 | 1 | cu. | 23 | 0.12 | 0.82 | | | 150 | 0.33 | 1 | 6 | 12,727.00 | 4,454.45 | 17,181.45 | 6,071.18 |
| 4. | Concrete work 1:1:2 (3/4") Grade 30 | 1 | cu. | 31 | 0.44 | 0.96 | | | 200 | 0.33 | 1 | 6 | 16,078.00 | 5,627.30 | 21,705.30 | 7,669.72 |

31

READY MIX CONCRETE

| Item No. | Description | Qty | Unit | Price with GST | Pumping | Basic Cost | Add O.H. | Total Unit Cost |
|----------|-------------------|-----|----------------|----------------|---------|------------|----------|-----------------|
| | | | | | | | 15% | |
| 1 | Grade 15 Concrete | 1 | m ³ | 4,275.00 | 300.00 | 4,575.00 | 686.25 | 5,261.25 |
| 2 | Grade 20 Concrete | 1 | m ³ | 4,612.50 | 300.00 | 4,912.50 | 736.88 | 5,649.38 |
| 3 | Grade 25 Concrete | 1 | m ³ | 4,860.00 | 300.00 | 5,160.00 | 774.00 | 5,934.00 |
| 4 | Grade 30 Concrete | 1 | m ³ | 5,062.50 | 300.00 | 5,362.50 | 804.38 | 6,166.88 |
| 5 | Grade 35 Concrete | 1 | m ³ | 5,400.00 | 300.00 | 5,700.00 | 855.00 | 6,555.00 |
| 6 | Grade 40 Concrete | 1 | m ³ | 5,850.00 | 300.00 | 6,150.00 | 922.50 | 7,072.50 |

CONCRETE SCREED AND GROUND FLOOR SLAB

| Item No. | Description | Qty | Unit | Cement Grade 15 Cu | Add. Wastege | | Water (gal) | Labour | | Basic Cost | Add O.H | Total Unit Cost Rs./Imperial | Total Unit Cost Rs./Metric |
|----------|------------------------------------|-----|------|--------------------|--------------|--------|-------------|---------|-----------|------------|----------|------------------------------|----------------------------|
| | | | | | 10% | 5% | | Skilled | Unskilled | | | | |
| | Price (Rs.) | | | 9770.00 | | | 1.00 | 350.00 | 300.00 | | 35% | | |
| 1. | 50 mm thick Cement Concrete screed | 1 | Sqr | 1/6 | 162.83 | | | 0.13 | 0.50 | 1,984.92 | 694.72 | 2,679.64 | 288.44 |
| 2. | 75 mm thick Cement Concrete screed | 1 | Sqr | 1/4 | 244.25 | | | 0.13 | 0.75 | 2,955.50 | 1,034.43 | 3,989.93 | 429.49 |
| 3. | 150 mm thick Concrete floor | 1 | Sqr | 1/2 | | 244.25 | 200.00 | 0.50 | 1.25 | 5,879.25 | 2,057.74 | 7,936.99 | 854.36 |

COLOUMNS, BEAMS & 1ST FLOOR SLAB-Site Mixing Concrete Grade 20

| Item No. | Description | Qty | Unit | Concrete Grade 20 cube | Add Wastage | | Vibrator | Placing Labour days | | | | Curing | | | Basic Cost | Add O.H 35% | Total Unit Cost Rs/Cu | Total Unit Cost Rs/Metric |
|----------|-------------------------------------|------|------|------------------------|-------------|--------|----------|---------------------|-----|-----|-------|-----------|-------------|-------|------------|-------------|-----------------------|---------------------------|
| | | | | | 10% | 5% | | Mas | Car | Sk | Un/sk | Jut. Hess | Water (gal) | Un/sk | | | | |
| | Price (Rs.) | | | 11,881.00 | 10% | 5% | 1126 | 400 | 400 | 350 | 300 | 6.0 | 1 | 300 | 35% | | | |
| 1 | 112 x 150 mm Column in Ground Floor | 0.45 | Cu | 0.45 | 534.65 | | 1 | 1 | 1 | 3 | 1 | 100 | 170.0 | 1.00 | 3,579.13 | 30,678.29 | 10,840.38 | |
| 2 | 150 x 150 mm Column in Ground Floor | 0.45 | Cu | 0.45 | 534.65 | | 1 | 1 | 1 | 1 | 3 | 80 | 140.0 | 1.50 | 3,544.13 | 30,378.29 | 10,734.38 | |
| 3 | 225 x 225 mm Column in Ground Floor | 0.45 | Cu | 0.45 | 534.65 | | 1 | 1 | 1 | 1 | 3 | 60 | 100.0 | 1.50 | 3,488.13 | 29,898.29 | 10,564.77 | |
| 4 | 300 x 300 mm Column in Ground Floor | 0.50 | Cu | 0.5 | | 297.03 | 1 | 1 | 1 | 1 | 3 | 40 | 100.0 | 1.50 | 3,570.88 | 27,546.82 | 9,733.86 | |
| 5 | 337 x 337 mm Column in Ground Floor | 0.51 | Cu | 0.51 | | 302.97 | 1 | 1 | 1 | 1 | 3 | 45 | 100.0 | 1.50 | 3,625.05 | 27,416.32 | 9,687.74 | |
| 6 | 225 x 225 mm beam | 0.45 | Cu | 0.45 | 534.65 | | 1 | 1 | 1 | 1 | 4 | 60 | 120.0 | 1.50 | 3,600.13 | 30,858.29 | 10,903.99 | |
| 7 | 150 mm thick floor slab | 0.50 | Cu | 0.5 | 594.05 | | 1 | 1 | 1 | 1 | 4 | 25 | 90.0 | 1.50 | 3,744.84 | 28,888.79 | 10,208.05 | |

COLOUMNS, BEAMS & 1ST FLOOR SLAB- Ready mix Concrete Grade 20

| Item No. | Description | Qty | Unit | Concrete Grade 20 cube | Add Wastage | Vibra- tor | Placing Labour days | | | | Curing | | Basic Cost | Add O.H | Total Unit Cost Rs./ 1 Cube | Total Unit Cost Rs/Metric |
|----------|-------------------------------------|------|------|------------------------|-------------|-------------|---------------------|------------|------------|------------|-----------|-------------|------------|------------|-----------------------------|---------------------------|
| | | | | | | | Mas | Car | Sk | Un/sk | Jun. Hess | Water (gat) | | | | |
| | Price (Rs.) | | | 13,902.00 | 10% | 1125 | 400 | 400 | 350 | 300 | 1 | 300 | | 35% | | |
| 1 | 112 x 150 mm Column in Ground Floor | 0.45 | Cu | 0.45 | 625.59 | 1 | 1 | 1 | 3 | 1 | 100 | 170.0 | 1.00 | 3,929.27 | 33,679.47 | 11,900.87 |
| 2 | 150 x 150 mm Column in Ground Floor | 0.45 | Cu | 0.45 | 625.59 | 1 | 1 | 1 | 1 | 3 | 80 | 140.0 | 1.50 | 3,894.27 | 33,379.47 | 11,794.87 |
| 3 | 225 x 225 mm Column in Ground Floor | 0.45 | Cu | 0.45 | 625.59 | 1 | 1 | 1 | 1 | 3 | 60 | 100.0 | 1.50 | 3,838.27 | 32,899.47 | 11,625.25 |
| 4 | 300 x 300 mm Column in Ground Floor | 0.50 | Cu | 0.5 | | 1 | 1 | 1 | 1 | 3 | 40 | 100.0 | 1.50 | 3,942.24 | 30,411.59 | 10,746.14 |
| 5 | 337 x 337 mm Column in Ground Floor | 0.51 | Cu | 0.51 | | 1 | 1 | 1 | 1 | 3 | 45 | 100.0 | 1.50 | 4,003.83 | 30,281.09 | 10,700.03 |
| 6 | 225 x 225 mm beam | 0.45 | Cu | 0.45 | 625.59 | 1 | 1 | 1 | 1 | 4 | 60 | 120.0 | 1.50 | 3,950.27 | 33,859.47 | 11,964.48 |
| 7 | 150 mm thick floor slab | 0.50 | Cu | 0.5 | 695.10 | 1 | 1 | 1 | 1 | 4 | 25 | 90.0 | 1.50 | 4,133.89 | 31,889.97 | 11,268.54 |

FORM WORK

| Item No. | Description | Thickm m | Qty | Unit | 25mm.thick Timber ft ² | 50x50 mm Timber Lift | 50x25 mm Timber Lft | 50x100 mm Timber Lft | Bam- boos Nos. | Wire/Nails Kg. | Labour | | Material Cost | Basic Cost | Add O.H | Total Cost Rs./Imp. | Total Cost Rs./Met. |
|----------|------------------|-------------|-----|------|--------------------------------------|-------------------------|------------------------------|-------------------------------|----------------------|-------------------|--------------|--------------|------------------|------------|----------|------------------------|------------------------|
| | | | | | | | | | | | Carp. day | U/SK. day | | | | | |
| | Price | | | | 22 | 17 | 5 | 38 | 60 | 60 | 400 | 300 | | | 35% | | 546.90 |
| 1 | Formwork-Coloumn | 20 | 1 | sqr. | 30 | 28.5 | 27 | 23 | 3.5 | 3.5 | 2 | 2 | 2,363.50 | 3,763.50 | 1,317.23 | 5,080.73 | |
| 2 | Formwork-Beam | 20 | 1 | sqr. | 29 | 40 | 11 | 14 | 1.65 | 1.65 | 4 | 8 | 2,604.00 | 6,604.00 | 2,311.40 | 8,915.40 | 959.68 |
| 3 | Formwork-Slab | 20 | 1 | sqr. | 31 | 6 | | 15 | 2 | 2 | 1.5 | 3.5 | 2,074.00 | 3,724.00 | 1,303.40 | 5,027.40 | 541.16 |

80

Formwork to slab with 15mm.thick plywood and G.I Props

Consider 10'x12' with 15mm plywood sheet (2 users)

| | | | |
|-----------------------------|-----------|----------|-----------------|
| 4 No 4'x8' plywood sheet | @ 1200.00 | 2,400.00 | |
| 2'x4' Timber 110ft 3 users) | @ 38.00 | 1,393.00 | |
| | | | <u>3,793.00</u> |

add

| | | | |
|----------------------|---------------|---------|----------------|
| Wire Nails 3Kg. | @ 50.00 | 150.00 | |
| Propping 24Nr. Jacks | @ 4.50.00 | 1620.00 | |
| | (for 15 days) | | |
| Transport | | 250.00 | |
| 1 1/2l m/oil | @ 65.00 | 97.50 | |
| Labor for 120 ft2 | @ 8.00 | 960.00 | |
| | | | <u>3077.50</u> |
| | | | <u>6870.50</u> |

| | |
|--------------------------|---------|
| Total 120ft ² | 6870.83 |
| Per 1 ft ² | 57.25 |

| | | |
|-------------|--------|---------------|
| Per 1 m2 | 616.01 | |
| add 35% O/H | 215.60 | |
| | | <u>831.61</u> |

Say Rs. 832 m2

REINFORCEMENT STEEL

| Item No. | Description | Type | Qty | Unit | Steel cwts Price Rs. | Wastage | Binding wire Kg. | Labour day | | Labour Cost | Material Cost | Basic Cost | Add O.H 35% | Total Unit Cost Rs/lmp. | Total Unit Cost Rs/Kg. |
|----------|-------------|--------------|-----|------|----------------------|---------|------------------|-------------------|-------------|-------------|---------------|------------|-------------|-------------------------|------------------------|
| | | | | | | | | Black Smith 1 day | Un/sk 1 day | | | | | | |
| 1. | Tor Steel | 10 & 12 | 1 | CWT | 1,595.00 | 239.25 | 45.00 | 400.00 | 300.00 | 700.00 | 1,879.25 | 2,579.25 | 902.74 | 3,481.99 | 68.52 |
| | | 16 and above | 1 | CWT | 1,622.00 | 243.30 | 45.00 | 400.00 | 300.00 | 700.00 | 1,910.30 | 2,610.30 | 913.61 | 3,523.91 | 69.34 |
| 2. | Mild Steel | R | 1 | CWT | 1,567.67 | 235.15 | 45.00 | 400.00 | 300.00 | 700.00 | 1,847.82 | 2,547.82 | 891.74 | 3,439.56 | 67.68 |

MASONRY WORK

| Item No. | Description | Thick mm | Qty | Unit | Cement bags | Sand cube | Brick No. (add wastage) | Wire cut brick No. (add wastage) | Rubble 6"-9" cube | Water gal | Labour day | | Labour Cost | add scaffolding | Material Cost | Basic Cost | Add O.H | Total Unit Cost Rs/imp. | Total Unit Cost Rs./Met. |
|----------|-------------------------------------------------------|----------|-----|------|-------------|-----------|-------------------------|----------------------------------|-------------------|-----------|------------|-------|-------------|-----------------|---------------|------------|----------|-------------------------|--------------------------|
| | | | | | | | | | | | Maso. | U/ SK | | | | | | | |
| | Price (Rs.) | | | | 305 | 1400 | 2.75 | 8.50 | 1400 | 1.00 | 400 | 300 | | | | | | | |
| 1. | Random rubble masonry in ct.mortar 1:5 | 14" | 1 | cu. | 5 | 0.30 | | | 1.30 | 100 | 4.00 | 6.00 | 3400.00 | | 3,865.00 | 7,265.00 | 2,542.75 | 9,807.75 | 3,465.64 |
| 2. | Random rubble masonry in ct.mortar 1:5 Superstructure | 14" | 1 | cu. | 5 | 0.30 | | | 1.30 | 100 | 4.50 | 7.00 | 3900.00 | | 3,865.00 | 7,765.00 | 2,717.75 | 10,482.75 | 3,704.15 |
| 3. | Brick work in ct, sand 1:5 | 4 1/2" | 1 | sq. | 1.3 | 0.10 | 558.00 | | | 50 | 1.50 | 2.00 | 1200.00 | 70.00 | 2,121.00 | 3,391.00 | 1,186.85 | 4,577.85 | 492.77 |
| 4. | Brick work in ct, sand 1:5 | 9" | 1 | sq. | 3 | 0.20 | 1145.00 | | | 115 | 2.25 | 3.75 | 2025.00 | 60.75 | 4,458.75 | 6,544.50 | 2,290.58 | 8,835.08 | 951.03 |
| 5. | Wire cut brick wall in ct, sand 1:5 | 4 1/2" | 1 | sq. | 1.2 | 0.08 | | 561.00 | | 30 | 1.50 | 2.00 | 1200.00 | 60.00 | 5276.50 | 6,536.50 | 2,287.78 | 8,824.28 | 949.87 |
| 6. | Wire cut brick wall in ct, sand 1:5 | 9" | 1 | sq. | 2.5 | 0.18 | | 1123.00 | | 100 | 2.25 | 3.75 | 2025.00 | 60.75 | 10660.00 | 12,745.75 | 4,461.01 | 17,206.76 | 1,852.18 |
| 7. | Brick paved floor | 3" | 1 | sq. | 1.2 | 0.11 | 485.00 | | | | 1.25 | 2.50 | 1250.00 | | 1,853.75 | 3,103.75 | 1,086.31 | 4,190.06 | 451.03 |

ROOF WORK & CEILING WORK

| Item No. | Description | Qty | Unit | 4"x2" Lft | 2"x1" Lft | 6"x2" Lft | 4"x3" Lft | 2"x2" Lft | 1"x10" Lft | Luxury timber ft ² | Wood preservative l | Wire/Nails 1 1/2" Kg | Screws 2" Nr. | Calicut tiles Nr. | Corru Abs. ft ² | Flat Abs. ft ² | J bolts Nr. | Labour | | | Labour Cost | Material Cost | Basic Cost | Add O.H | Total Cost Rs./Imp. | Total Cost Rs./Met. | |
|----------|----------------------------------------------------|-----|------|-----------|-----------|-----------|-----------|-----------|------------|-------------------------------|---------------------|----------------------|---------------|-------------------|----------------------------|---------------------------|-------------|--------|-----|-------|-------------|---------------|------------|-----------|---------------------|---------------------|----------|
| | | | | | | | | | | | | | | | | | | Carp. | SK. | U/SK. | | | | | | | |
| | Price | | | 53 | 10 | 88 | 88 | 23 | 78 | 27.0 | 369 | 50 | 4.25 | 9.25 | 18 | 12 | 10 | | 400 | 350 | 300 | | | | | | |
| 1 | Calicut tile roof (with timber frame work) | 1 | sqr. | 80 | 110 | 6 | 6 | | | | 0.75 | 0.76 | | 125 | | | | | 2 | | 3 | 1700 | 7,867.00 | 9,567.00 | 3,348.45 | 12,915.45 | 1,390.25 |
| 2 | Asbestos roof (with timber frame work) | 1 | sqr. | 40 | | 6 | 6 | 50 | | | 0.5 | 0.5 | | | 117 | | 20 | 1 | 3 | 1.5 | 850 | 6,841.50 | 7,691.50 | 2,692.03 | 10,383.53 | 1,117.71 | |
| 3 | 20x225m vallance board | 100 | Lft | | | | | 80 | | | 2 | | 70 | | | | | 3 | 3 | 3 | 2100 | 7,275.50 | 9,375.50 | 3,281.43 | 126.57 | 415.15 | |
| 4 | Flat asbestos ceiling (with timber frame work) | 1 | sqr. | 30 | | | | 50 | | | 1.5 | 0.75 | | | | 115 | | 2.5 | 2 | 2 | 1600 | 4,711.00 | 6,311.00 | 2,208.85 | 8,519.85 | 917.10 | |
| 5 | Inclined asbestos ceiling (with timber frame work) | 1 | sqr. | | | | | 50 | | | 1 | 0.5 | | | 122 | | | 2 | 1.5 | 1250 | 3,008.00 | 4,258.00 | 1,490.30 | 5,748.30 | 618.76 | | |
| 6 | Flat timber ceiling | 1 | sqr. | 30 | | | | 50 | | 115 | 1.5 | 0.75 | | | | | | 3 | 3.5 | 2250 | 6,436.00 | 8,686.00 | 3,040.10 | 11,726.10 | 1,262.23 | | |
| 7 | Inclined timber ceiling | 1 | sqr. | | 23 | | | | | 122 | 1 | 1 | | | | | | 2 | 3.5 | 1850 | 3,943.00 | 5,793.00 | 2,027.55 | 7,820.55 | 841.82 | | |

PLASTER WORK & RENDERING WORK

| Item No. | Description | Thick:mm | Qty | Unit | Cement bags cwt | Sand cu. | Lime cwt | Coloured pigment Lbs | Bituman gal | Fire woods Lb. | Cotton waste Lb. | Water gal | Tile 4"x4" | Tile 6"x6" | Tile 1'x1' | Terrazo tile ft ² | Terra cotta | Labour | | Scaffolding | Material Cost | Basic Cost | add O.H | Total Cost Rs./Imp. | Total Cost Rs/Met. |
|----------|------------------------------------------------------------------------------|----------|-----|------|-----------------|----------|----------|----------------------|-------------|----------------|------------------|-----------|------------|------------|------------|------------------------------|-------------|--------|-------|-------------|---------------|------------|----------|---------------------|--------------------|
| | | | | | | | | | | | | | | | | | | Mas. | U/SK. | | | | | | |
| | Price | | | | 305 | 1400 | 356 | 136 | 190 | 5 | 100 | 1 | 6 | 12.5 | 68 | 65 | 35 | 300 | | | | | | | |
| 1 | 1:2 DPC in cement sand | 20 | 1 | sqr. | 2.25 | 0.11 | | | 1.5 | 10 | | 10 | | | | | | 400 | 2.00 | 1,100 | | 2,285.25 | 799.84 | 3,085.09 | 332.09 |
| 2 | Plinth plastering cement sand 1:3 | 16 | 1 | sqr. | 1.4 | 0.06 | | | | | | 10 | | | | | | 1 | 1.50 | 850 | | 1,371.00 | 479.85 | 1,850.85 | 199.23 |
| 3 | External plastering lime, cement and sand 1:1.5 finished semi rough | 16 | 100 | sqr. | 0.8 | 0.07 | 0.4 | | | | | 10 | | | | | | 1 | 1.50 | 850 | 26 | 1,370.40 | 479.64 | 1,850.04 | 199.14 |
| 4 | Internal plastering lime, cement and sand 1:1.5 finished smooth | 16 | 1 | sqr. | 0.8 | 0.07 | 0.6 | | | | | 10 | | | | | | 1.5 | 1.50 | 1,050 | 32 | 1,647.60 | 576.66 | 2,224.26 | 239.43 |
| 5 | Rendering in cement & sand 1:3 | 12 | 1 | sqr. | 1.07 | 0.05 | | | | | | 10 | | | | | | 1 | 2.00 | 1,000 | | 1,406.35 | 492.22 | 1,898.57 | 204.37 |
| 6 | Cement skirting cement & sand 1:3 | 12 | 10 | ft | 0.1 | 0.003 | | 0.25 | | | | | | | | | | 3/8 | 5/16 | 243.75 | | 312.45 | 109.36 | 42.18 | 138.35 |
| 7 | Wall tiling 100x100 (with cement bedded) | | 1 | sqr. | 2.5 | 0.15 | | | | | | | 990 | | | | | 4 | 4.50 | 2,950 | | 9,862.50 | 3,451.88 | 13,314.38 | 1,433.19 |
| 8 | Wall tiling 150x150 (with cement bedded) | | 1 | sqr. | 2.25 | 0.11 | | 1 | | | | | | 440 | | | | 4 | 4.25 | 2,875 | | 9,351.25 | 3,272.94 | 12,624.19 | 1,358.90 |
| 9 | Floor tiling (300x300) | | 1 | sqr. | 1.25 | 0.07 | | 0.25 | | | | 2 | | | 105 | | | 4 | 4.50 | 2,950 | | 10,605.25 | 3,711.84 | 14,317.09 | 1,541.13 |
| 10 | Terrazo floor tile | | 1 | sqr. | 1.25 | 0.07 | | 2 | | | 2 | | | | | 105 | | 4 | 4.50 | 2,950 | | 10,726.25 | 3,754.19 | 14,480.44 | 1,558.71 |
| 11 | Terra Colta floor tiles | | 1 | sqr. | 1.25 | 0.07 | | 2 | | | 2 | | | | | | 105 | 4 | 3.50 | 2,650 | | 7,276.25 | 2,546.69 | 9,822.94 | 1,057.37 |

12

JOINERY WORK

| Item No. | Description | Size | Qty | Unit | 4"x3" Jak ft | 5/8" th./ft² | 1 1/8" th./ft² | 1" th./ft² | Plastic Plug Nr. | Door lock Nr. | B.H. 4"x3" Nr. | B.H. 4"x2" Nr. | B.B. 8" Nr. | B.B. 6" Nr. | C.Stays Nr. | C.Fastners Nr. | Door rings Nr. | 5mm glass sqr./ft | Plywood Door (o) | Plywood Door (M) | Material Cost | Prepared of frams | Prepared louvers per ft² | Prepared of Door sash ft² | Prepared of Win. sash per ft² | Fixing changes labour - | Labour Cost | Basic Cost | Add O.H | Total Cost Rs/Imp. | Total Cost Rs./Met. | |
|----------|-----------------------------------------|-----------|------|------|--------------|--------------|----------------|------------|------------------|---------------|----------------|----------------|-------------|-------------|-------------|----------------|----------------|-------------------|------------------|------------------|---------------|-------------------|--------------------------|---------------------------|-------------------------------|-------------------------|-------------|------------|----------|--------------------|---------------------|--|
| 1 | Trneber paneled door with louvers (Jak) | 4'x8'6" | 34 | ft² | 135 | 100 | 180 | 130 | 5.0 | 750 | 90 | 75 | 95 | 92 | 37.50 | 37.50 | 15 | 55 | 4565 | 1290 | 10105.00 | 400 | 85 | 125 | 90 | 400 | 5360.00 | 15,465.00 | 35% | 614.05 | 6,607.19 | |
| 2 | Ordinary plywood door-Jak frame | 3'0"x7'8" | 21 | ft² | | | | | 6 | 1 | 3 | 3 | 1 | 1 | | | 1 | | 1 | | 5202.00 | 1 | 6 | | | 172 | 600.00 | 5,802.00 | 2,030.70 | 372.99 | 4,013.33 | |
| 3 | Maine plywood door- Jak frame | 2'3"x7'0" | 15.8 | ft² | | | | | 6 | 1 | | 3 | 1 | 1 | | | 1 | | | 1 | 4927.00 | 1 | | | | 172 | 600.00 | 5,527.00 | 1,934.45 | 472.24 | 5,081.34 | |
| 4 | Glass window with louvers on top (Jak) | 6'0"x5'6" | 33 | ft² | | 100 | | | 4 | | | 6 | 3 | 3 | 3 | 3 | 3 | 15.8 | | | 11406.25 | 1 | 9 | 16 | 374 | 2905.00 | 14,311.25 | 5,008.94 | 585.46 | 6,298.55 | | |

PAINING AND DECORATING

| Item No. | Description | Qty | Unit | Anticorrosive ltr | Steel Enamel ltr | Wood Preservative ltr | Wood Primer ltr | Wood Enamel ltr | Wood Shein ltr | Varnish ltr | Thiner ltr | Alk Primer ltr | Wea. Emulsion ltr | Emulsion ltr | Brushes Nr. | S. Paper Nr. | Labour days | | Total Labour Cost (add scapding where necessary) | Material Cost | Basic Cost | add O.H | Total Cost Rs./Imp. | Total Cost Rs./Met. |
|----------|-----------------------------------------------------------------------------------|-----|------|-------------------|------------------|-----------------------|-----------------|-----------------|----------------|-------------|------------|----------------|-------------------|--------------|-------------|--------------|-------------|-------|--------------------------------------------------|---------------|------------|---------|---------------------|---------------------|
| | | | | | | | | | | | | | | | | | Painter | U/SK. | | | | | | |
| | Price | | | 184 | 299 | 285 | 427 | 299 | 291 | 242 | 100 | 217 | 324 | 250 | 341 | 12 | 400 | 300 | | | | | | |
| 1 | One coat of Anticorrosive primer & two coats of enamel paint to steel trusses | 1 | sqr. | 0.2 | 1.3 | | | | | | 0.2 | | | | 0.2 | 4 | 2.5 | 1 | 1300 | 561.65 | 1,861.65 | 651.58 | 2,513.23 | 270.53 |
| 2 | One coat of Anticorrosive primer & two coats of enamel paint to mild steel | 50 | ft2 | 1.5 | 0.67 | | | | | | 0.2 | | | | 0.2 | | 0.75 | 425 | 425 | 564.16 | 989.16 | 346.20 | 26.71 | 287.40 |
| 3 | One coat of wood primer & two coats of enamel paint | 1 | sqr. | | | 2.25 | 0.75 | 2.5 | | | | | | | 0.3 | 2 | 2 | 0.5 | 950 | 1,835.30 | 2,785.30 | 974.86 | 3,760.16 | 404.75 |
| 4 | One coat of primer & two coats of weather sheild Emulsion paint to external walls | 1 | sqr. | | | | | | | | | 0.9 | 1.4 | | 0.2 | 2 | 1.5 | | 620 | 740.75 | 1,360.75 | 476.26 | 1,837.01 | 197.74 |
| 5 | One coat of primer & two coats of emulsion paint to internal walls | 1 | sqr. | | | | | | | | | 0.9 | | 1.4 | 0.2 | 2 | 1.5 | | 620 | 637.15 | 1,257.15 | 440.00 | 1,697.15 | 182.69 |
| 6 | One coat of wood shein & two coats of varnish to timberwork | 1 | sqr. | | | | | | 0.9 | 1.8 | 0.2 | | | | | 6 | 1 | 4 | 1600 | 789.50 | 2,389.50 | 836.33 | 3,225.83 | 347.24 |

ALUMINIUM JOINERY

| Item No. | Description | Unit | Rate | Add O.H | Total Unit Cost | |
|----------|----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------|---------|-----------------|---------|
| 1 | 5mm.thick light bronze tinted glass and 1.2mm.thick framework including lockig arrangement, door coser and ironmongary and fixing etc. | | | 10% | | |
| | | i. Natural Aluminium | m ² | 5447.00 | 544.70 | 5991.70 |
| | | ii. Powder Coated Aluminium | m ² | 6536.00 | 653.60 | 7189.60 |

BUILDING UNIT COST SANITARY INSTALLTION

| Item No | Description | Unit | Closet Pedestal type | Bedet Suit No | Wash Basin No | Shower No | Bathr. Access set | Woo. Plugs | Brass Screws | Cem. Lbs | Labour | | Labou Cost | Mat. Cost | Basic Cost | Add O.H | Total Unit Cost |
|---------|---------------------------------------------------------------------------------------------------|------|----------------------|---------------|---------------|-----------|-------------------|------------|--------------|----------|-----------|-----------|------------|-----------|------------|----------|-----------------|
| | | | | | | | | | | | Masi/Plum | Unskilled | | | | | |
| | Price (Rs.) | | 19000.00 | 8500.00 | 11000.00 | 1750.00 | 4099.00 | 5.00 | 3.5 | 2.75 | 400.0 | 300.0 | | | | 35% | |
| 1 | Closet pedestal Type L.I.flushing cistern with all accessories and connection (American Standard) | Nr. | 1 | | | | | | 2 | 2 | 1.50 | 1.00 | 900 | 19012.5 | 19912.50 | 6969.375 | 26881.88 |
| 2 | Bedet Suite with all accessories and Connection (American Standed) | Nr. | | 1 | | | | | | | 1.00 | 1.00 | 700 | 8500 | 9200.00 | 3220.00 | 12420.00 |
| 3 | Wash Basin with tap, waste plug, chain and all accessories and connection. (American Standard) | Nr. | | | 1 | | | 4 | 6 | 2 | 0.50 | 1.00 | 500 | 11046.5 | 11546.50 | 4041.275 | 15587.78 |
| 4 | Shower with all accessories | Nr. | | | | 1 | | | | | 0.50 | 0.50 | 350 | 1750 | 2100.00 | 735.00 | 2835.00 |
| 5 | Bath Room Accessories including 6 pecie (Thaiwan) | Set | | | | | 1 | | | | 1.00 | 1.00 | 700 | 4099 | 4799.00 | 1679.65 | 6478.65 |

Unit Rates for Daywork

- Rates for daywork schedules - labour
- Dayworks Schedule – Constructional Plant

RATES FOR DAYWORK SCHEDULES - LABOUR

| Item No | Description | Unit | Current Market Rates in Rs. | Water Board Rates in Rs. | Selected Rate in Rs. |
|---------|-------------------------------------------------|------|-----------------------------|--------------------------|----------------------|
| 1 | Ganger | Day | 500 | 400 | 500 |
| 2 | Labourer | Day | 300 | 250 | 300 |
| 3 | Brick Layer | Day | 400 | 350 | 400 |
| 4 | Pipe Layer | Day | 400 | 350 | 400 |
| 5 | Mason | Day | 400 | 350 | 400 |
| 6 | Carpenter and Jointer | Day | 400 | 350 | 400 |
| 7 | Steel Work Erector | Day | 400 | 350 | 400 |
| 8 | Pneumatic Tool Operator | Day | 500 | 400 | 500 |
| 9 | Fitter | Day | 400 | 350 | 400 |
| 10 | Plumber | Day | 400 | 350 | 400 |
| 11 | Welder | Day | 400 | 400 | 400 |
| 12 | Painter | Day | 400 | 300 | 400 |
| 13 | Mechanic | Day | 400 | 350 | 400 |
| 14 | Driver for Vehicle upto 10 ton | Day | 500 | 350 | 500 |
| 15 | Operator for Excavate Dragline, Shovel or Crane | Day | 500 | 400 | 500 |
| 16 | Operator for Dozer, blade or Ripper | Day | 500 | 400 | 500 |
| 17 | Barbender | Day | 400 | 350 | 400 |

DAY WORKS SCHEDULE - CONSTRUCTIONAL PLANT

| ITEM | DESCRIPTION | ** Minimum Capacity | UNIT | Navalokn Group | | General Engineering | | Tropien Construction | | Niwami Construction | | National Equip.&M.O. | | NWSDB | | Selected Rate | |
|------|---------------------------------------------------------------------------------------------------|----------------------------------|----------------------|----------------|----------------------|---------------------|----------------------|-----------------------|----------------------|---------------------|----------------------|----------------------|--------------|----------------------|--------------|----------------------|-------------------------|
| | | | | Capacity | Rate | Capacity | Rate | Capacity | Rate | Capacity | Rate | Capacity | Rate | Capacity | Rate | Capacity | Rate |
| 1 | a) Excavator- Crawler mounted b) -do- c) -do- | 0.4 Cu.m 0.7 Cu.m 1.6 Cu.m | Hour Hour Hour | ** ** ** | 1200 2750 1300 | ** ** ** | 1200 1400 1850 | ** ** ** | 1200 1400 1850 | ** ** ** | 1200 1400 1850 | 0.375cu.m 0.5cu.m | 1220 1920 | 0.375cu.m 0.5cu.m | 1220 1920 | 0.375cu.m 0.5cu.m | 1,200 1,400 1,850 |
| 2 | a) Bull-Dozer with Ripper-Crawler mounted b) -do- | 90Hp 125Hp | Hour Hour | ** ** | 1600 | ** ** | 2500 950 | 75 HP 200Hp | 1100 2500 | ** ** | 1100 800 | ** | 1100 | ** | 55Hp | 55Hp | 1,100 2,500 |
| 3 | Back-hoe Excavator- Wheel mounted with bucket width 0.3,0.45 and 0.6m. | 70Hp | Hour | ** | 1500 | ** | 1000 | ** | 1000 | ** | 1000 | 1.4cu.m. | 1000 | 1.4cu.m. | 1,000 | 1,000 | 1,000 |
| 4 | a) Front End Loader- Wheel mounted b) -do- | 1.5Cu. m 2.6Cu. m | Hour Hour | ** ** | 2000 1350 | ** ** | 1200 1550 | 1.4cu.m. 2.3 cu.m. | 1200 1550 | ** ** | 1300 | 135 Hp | 1300 | 90Hp | 1,550 | 1,550 | 1,550 |
| 5 | Motor Grader - Wheel mounted - 12" Blade | 90Hp | Hour | ** | 1350 | ** | 1000 | ** | 1000 | ** | 1170 | ** | 1170 | 2Tonne | 1,000 | 1,000 | 1,000 |
| 6 | a) Mobile Crane b) -do- | 5 Tonne | Hour | ** | 1000 | ** | 1350 | ** | 1350 | ** | 1420 | ** | 1420 | 5 Tonne | 1,350 | 1,350 | 1,350 |
| 7 | a) Concrete pump cart b) -do- | 30 cu.m. 50 cu.m. | Hour Hour | ** ** | 1000 | ** ** | 687.5 300 | 8 Tonne | 687.5 | ** | 687.5 | 8 Tonne | 687.5 | 8 Tonne | 688 | 688 | 688 |
| 8 | Boom Truck | 2 1/2 Tonne | Hour | ** | 1875 | ** | 300 | 01 Km. | 300 | ** | 300 | 01 Km. | 300 | 01 Km. | 300 | 300 | 300 |
| 9 | Dump Truck | 17 Tonne | Hour | ** | 1250 | ** | 500 | 01 Km. | 500 | ** | 500 | 3600 Ltrs | 100 | 01 Km. | 500 | 500 | 500 |
| 10 | a) Low bed Trailer with prime mover for machine /pipe transport with load b) -do- without load | 4000Ltr 2 Cu.m | Hour Hour | ** ** | 1250 | ** ** | 315 212.5 | ** ** | 315 212.5 | ** | 187.5 | 5 Tonne | 125 | ** | 200 | 200 | 200 |
| 11 | a) Water Bowser | 1.5 Tonner | Hour | ** | 625 | ** | 875 | ** | 875 | ** | 125 | 5 Tonne | 125 | 1.5 Tonne | 200 | 200 | 200 |
| 12 | Tractor with Trailer | 10 Tonner | Hour | ** | 625 | ** | 250 | ** | 250 | ** | 250 | 5 Tonne | 210 | 1.5 Tonne | 210 | 210 | 210 |
| 13 | a) Lorry b) Lorry | 2 Tonner | Hour Hour | ** ** | 625 | ** ** | 250 237.5 | ** ** | 250 237.5 | ** | 200 | 5 Tonne | 210 | 1.5 Tonne | 200 | 200 | 200 |
| 14 | Plate Compactor/Vibrator | 80 Kg | Hour | ** | 315 | ** | 500 | ** | 500 | ** | 650 | 1 Tonne | 250 | 1 Tonne | 250 | 250 | 250 |
| 15 | Rammer Compactor/Vibrator | 4 Tonner | Hour | ** | 1350 | ** | 1200 | ** | 1200 | ** | 437.5 | 7 Tonne | 437.5 | 2 Tonne | 438 | 438 | 438 |
| 16 | a) Roller compactor/Vibrator b) -do- | 10 Tonner | Hour Hour | ** ** | 1350 | ** ** | 250 375 | ** ** | 250 375 | ** | 200 | 0.1 Psi | 425 | 2 Tonne | 438 | 438 | 438 |
| 17 | Form Vibrator | 1" dia | Hour | ** | 250 | ** | 250 | ** | 250 | ** | 200 | 0.1 Psi | 425 | 2 Tonne | 438 | 438 | 438 |
| 18 | Poker Vibrator Plant including 25,32,50mm poker | 0.4 Kw | Hour | ** | 375 | ** | 625 | ** | 625 | ** | 400 | 0.1 Psi | 425 | 2 Tonne | 438 | 438 | 438 |
| 19 | a) Diesel Generator b) -do- | 20 kVA 50 kVA | Hour Hour | ** ** | 625 | ** ** | 650 | ** ** | 650 | ** | 400 | 0.1 Psi | 425 | 2 Tonne | 438 | 438 | 438 |
| 20 | a) Portable Air Compressor including rock Breakers & Hammers b) -do- | 175cfm 300cfm | Hour Hour | ** ** | 250 | ** ** | 250 | ** ** | 250 | ** | 845 | 250 Cfm | 845 | 250 Cfm | 845 | 845 | 845 |
| 21 | a) Submersible Pump | 2" | Hour | ** | 250 | ** | 250 | ** | 250 | ** | 250 | 1" | 250 | 1" | 250 | 250 | 250 |

| ITEM | DESCRIPTION | ** Minimum Capacity | UNIT | Nawaloka Group | | General Engineering | | Tropica Construction | | Nuwan Construction | | National Equip. & M.O. | | NWSDB | | Selected Rate | |
|------|----------------------------------------------------------------|---------------------|------|----------------|------|---------------------|------|----------------------|-------|--------------------|-------------|------------------------|------|----------|------|---------------|------|
| | | | | Capacity | Rate | Capacity | Rate | Capacity | Rate | Capacity | Rate | Capacity | Rate | Capacity | Rate | Capacity | Rate |
| b) | -do- | 4" | Hour | | | ** | 500 | | | | | | | ** | | ** | 500 |
| c) | -do- | 6" | Hour | | | ** | 750 | | | | | | | ** | | ** | 750 |
| 22 | a) Portable self priming engine driven Centrifugal diesel pump | 50mm | Hour | | | | | ** | 187.5 | | | | | 75mm | 225 | ** | 188 |
| 23 | Spray painting Equipment | | Hour | | | ** | 250 | ** | 200 | | | | ** | ** | 135 | ** | 200 |
| 24 | Portable welding Plant | | Hour | | | without rods | 62.5 | | | | (with rods) | 160 | | | | (with rods) | 160 |
| 25 | Bar Cutting/ Bending Machine | | Hour | | | ** | 250 | ** | 187.5 | ** | 375 | | ** | | ** | ** | 188 |
| 26 | Concrete Mixer | 0.3 Cum | Hour | | | | | ** | 187.5 | ** | 187.5 | 200 | 10/7 | 10/7 | 250 | ** | 188 |
| 27 | Asphalt Cutter with diamond disc- 300 meter | | Hour | | | ** | 37.5 | Lft. | 125 | | | | | | | Lft. | 125 |
| 28 | Crane Mobile | 15 T | Hour | ** | 1750 | | | | | | | | | | | | |

The above rates are excluding GST

** Same as given minimum capacity

Item No.07 - Concrete Pump cart -
Tudawe Brothers Quote
Min. 30 cu.m. - Rs.9000/=

Unit Rates for Demolition

Demolition of existing structures is required at Maligakanda Reservoir site, Ellie House Reservoir site and at Gothatuwa Site.

Unit rates for demolition was calculated for each item.

Unit Rates for Civil Structures

Unit rate for civil structures is calculated for each item based on the basic costs, e.g. material, machinery, labour etc. which are not covered under the BSR (Building Schedule of Rates).

Foreign component is taken as 20% and the local component is taken as 80%.

**THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER
COLOMBO AREA**

RATE ANALYSIS

SITE WORKS AND RELOCATION OF SERVICES

OB.01.01 Removal of existing sewer lines

Rate per item

| | | | | | |
|--------------------------------------------------------------------------------|--------|-----|---|---------------|-------------------|
| Removal of sewer pipe(exc. + removal+ back filling | 135.00 | M | @ | 350.00 = Rs. | 47,250.00 |
| Removing manholes ,Rate shall include for excavation, removal & backfilling | 6.00 | Nos | @ | 2000.00 = Rs. | 12,000.00 |
| Transport of debris : pipes - lorry loads | 3.00 | Nos | @ | 3000.00 = Rs. | 9,000.00 |
| Concrete - lorry loads | 3.00 | Nos | @ | 3000.00 = Rs. | 9,000.00 |
| | | | | = Rs. | 77,250.00 |
| Add 35% O/H | | | | = Rs. | 27,037.50 |
| Total cost | | | | = Rs. | <u>104,287.50</u> |

Sav Rs 100,000/= per Item

OB.01.02 Supply and laying 150 mm dia. PVC pipes

Rate per item

| | | | | | |
|-------------------------------------------------------------|--------|-----|---|----------------|-------------------|
| Supply and laying 150 mm dia. PVC pipes | 115.00 | M | @ | 500.00 = Rs. | 57,500.00 |
| Manholes rate shall include for excavation & backfilling | 3.00 | Nos | @ | 25000.00 = Rs. | 75,000.00 |
| | | | | = Rs. | 132,500.00 |
| Add 35% O/H | | | | = Rs. | 46,375.00 |
| Total cost | | | | = Rs. | <u>178,875.00</u> |

Sav Rs 200,000/= per Item

THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER COLOMBO AREA

OB.01.03 Removal of existing storm water lines

Rate per item

| | | | | | |
|----------------------------------------------------------------------------|-------|-----|---|---------------|-------------------------|
| Removal of storm water pipe(exca. + removal+ back filling) | 55.00 | M | @ | 350.00 = Rs. | 19,250.00 |
| Removing manholes,Rate shall include for excavation, removal & backfilling | 3.00 | Nr | @ | 2000.00 = Rs. | 6,000.00 |
| Transport of debris : Pipes - lorry loads | 2.00 | Nos | @ | 3000.00 = Rs. | 6,000.00 |
| Concrete - lorry loads | 4.00 | Nos | @ | 3000.00 = Rs. | 12,000.00 |
| | | | | | <u>43,250.00</u> |
| Add 35% O/H | | | | = Rs. | <u>15,137.50</u> |
| Total cost | | | | = Rs. | <u><u>58,387.50</u></u> |

Sav Rs 60,000/= per Item

OB.01.04 Removal of existing Telephone lines

Rate per item

| | | | | | |
|----------------------------------|--------|---|---|---------------|--------------------------|
| Removal and relocation | 100.00 | M | @ | 500.00 = Rs. | 50,000.00 |
| Removing cable duct casings etc. | 100.00 | M | @ | 1000.00 = Rs. | 100,000.00 |
| | | | | | <u>150,000.00</u> |
| Add 35% O/H | | | | = Rs. | <u>52,500.00</u> |
| Total cost | | | | = Rs. | <u><u>202,500.00</u></u> |

Sav Rs 200,000/= per Item

OB.01.05 Removal of existing chambers and reconstruction.

Rate per item

| | | | | | |
|---------------------------------------|------|----|---|-----------------|--------------------------|
| Removal / repair sluice valve chamber | 2.00 | Nr | @ | 15000.00 = Rs. | 30,000.00 |
| Removal / repair flow meter chamber | 2.00 | Nr | @ | 25000.00 = Rs. | 50,000.00 |
| Reconstruction of s/v. chamber | 2.00 | Nr | @ | 50000.00 = Rs. | 100,000.00 |
| Reconstruction of F/m. chamber | 2.00 | Nr | @ | 100000.00 = Rs. | 200,000.00 |
| | | | | | <u>380,000.00</u> |
| Add 35% O/H | | | | = Rs. | <u>133,000.00</u> |
| Total cost | | | | = Rs. | <u><u>513,000.00</u></u> |

Sav Rs 500,000/= per Item

**THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER
COLOMBO AREA**

OB.01.06 Site clearing

Rate per item

(a) 90 x 70 = 6300

(b) 80 x 35 = 2800

(c) 40 x 18 = 720
= 9820

| | | | | |
|---------------|----------------------|---|-------------|-------------------|
| Clearing site | 10000 m ² | @ | 25.00 = Rs. | <u>250,000.00</u> |
| | | | | <u>250,000.00</u> |

Sav Rs 250,000/= per Item

OB.01.07 Cutting trees

Rate per item

| | | | | |
|-------------------------|-----------|---|---------------|------------------|
| Allow for cutting trees | 22.00 Nos | @ | 700.00 = Rs. | 15,400.00 |
| Transport - Lorry Loads | 15.00 Nos | @ | 3000.00 = Rs. | <u>45,000.00</u> |
| | | | | <u>60,400.00</u> |

Sav Rs 60,000/= per Item

OB.01.08 Cutting trees

Rate per item

| | | | | |
|-------------------------|-----------|---|------------|------------------|
| Allow for cutting trees | 36.00 Nos | @ | 1000 = Rs. | 36,000.00 |
| Transport - Lorry Loads | 20.00 Nos | @ | 3000 = Rs. | <u>60,000.00</u> |
| | | | | <u>96,000.00</u> |

Sav Rs 100,000/= per Item

THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER COLOMBO AREA

OB.01.09 Allow for stripping 150 mm thick top soil

Rate per item

$60 \times 60 = 3600$

$50 \times 30 = \underline{1500}$

$= 5100$

Stripping top soil

5100.00 m2 @ 50.00 = Rs. 255,000.00

Removing (5100 x 0.15)

765.00 m3 @ 100.00 = Rs. 76,500.00

331,500.00

Add 15% O/H

= Rs. 49,725.00

Total cost

= Rs. 381,225.00

Sav Rs 400,000/= per Item

OB.01.10 Allow for cutting and removing earth

Rate per item

$1/2 \times 60 \times 60 \times 0.5 = 900$

$1/2 \times 50 \times 30 \times 0.5 = \underline{375}$

$= 1275$

Cutting and removing earth

1275.00 m3 @ 300.00 = Rs. 382,500.00

Total cost

= Rs. 382,500.00

Sav Rs 400,000/= per Item

OB.01.11 Allow for filling

Rate per item

$1/2 \times 60 \times 60 \times 0.5 = 900$

$1/2 \times 50 \times 30 \times 0.5 = \underline{375}$

$= \underline{1275} - 600 = 675 \text{ m3}$

Cutting and removing earth

675.00 m3 @ 600.00 = Rs. 405,000.00

Total cost

= Rs. 405,000.00

Sav Rs 400,000/= per Item

THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER COLOMBO AREA

OB.01.20 Construction of Man hole (size 1.8 x 1.8 x 2.0)

Rate per item

| | | | |
|--------------------------------------|-----------|----------------|-------------------------|
| Excavation (1.8 x 1.8 x 2.0) | 6.48 m3 @ | 300.00 = Rs. | 1,944.00 |
| Concrete screede (1.8 x 1.8) | 3.25 m2 @ | 400.00 = Rs. | 1,300.00 |
| RCC base (1.8 x 1.8 x 0.15 = 0.48) | 2.32 m3 @ | 12000.00 = Rs. | 27,840.00 |
| walls (2x 1.2 x 2.0 x 0.15 = 0.72) | | | |
| (2x 1.5 x 2.0 x 0.15 = 0.90) | | | |
| Cover slab (1.2 x 1.2 x 0.15 = 0.22) | | | |
| | | | = <u>2.32</u> |
| Man hole cover 600 mm dia. | | = Rs. | <u>12,000.00</u> |
| Total cost | | = Rs. | 43,084.00 |
| Add 35% O/H | | = Rs. | <u>15,079.40</u> |
| Total cost | | = Rs. | <u><u>58,163.40</u></u> |

Sav Rs 60,000/= per Item

COURT BUILDING

OB.02.01 Removal of roof

Rate per item

| | | | |
|------------------------------|--------------------------|---------------|--------------------------|
| Removal of roofing materials | 2000.00 m ² @ | 50.00 = Rs. | 100,000.00 |
| Removing timber frame work | 2000.00 m ² @ | 100.00 = Rs. | 200,000.00 |
| Removing timber valnce board | | = Rs. | 10,000.00 |
| Transport of lorry load | 20.00 Nos @ | 3000.00 = Rs. | <u>60,000.00</u> |
| | | = Rs. | 370,000.00 |
| Add 35% O/H | | = Rs. | <u>129,500.00</u> |
| Total cost | | = Rs. | <u><u>499,500.00</u></u> |

Sav Rs 500000/= per Item

THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER COLOMBO AREA

OB.02.02 Removal of steel roof truss

Rate per item

| | | | |
|-------------------------|-------------|---------------|-------------------------|
| Removal of roof trusses | 10.00 Nos @ | 3000.00 = Rs. | 30,000.00 |
| | 5.00 Nos @ | 3000.00 = Rs. | <u>15,000.00</u> |
| | | | 45,000.00 |
| Add 35% O/H | | = Rs. | <u>15,750.00</u> |
| Total cost | | = Rs. | <u><u>60,750.00</u></u> |

Sav Rs 60000/= per Item

OB.02.03 Removal of roof ceiling

Rate per item

| | | | |
|------------------------------------|--------------------------|---------------|--------------------------|
| Removal of Asbestos ceiling sheets | 1200.00 m ² @ | 50.00 = Rs. | 60,000.00 |
| Removing timber frame work | 1200.00 m ² @ | 100.00 = Rs. | 120,000.00 |
| Transport of lorry load | 10.00 Nos @ | 3000.00 = Rs. | <u>30,000.00</u> |
| | | | 210,000.00 |
| Add 35% O/H | | = Rs. | <u>73,500.00</u> |
| Total cost | | = Rs. | <u><u>283,500.00</u></u> |

Sav Rs 300,000/= per Item

OB.02.04 Removal of doors

Rate per item

| | | | |
|-------------------------|------------|---------------|-------------------------|
| Removal of doors | 38.00 Nr @ | 100.00 = Rs. | 3,800.00 |
| Removal of windows | 10.00 Nr @ | 200.00 = Rs. | 2,000.00 |
| Removal of Grills | 2.00 Nr @ | 200.00 = Rs. | 400.00 |
| Transport of lorry load | 3.00 Nos @ | 3000.00 = Rs. | <u>9,000.00</u> |
| | | | 15,200.00 |
| Add 35% O/H | | = Rs. | <u>5,320.00</u> |
| Total cost | | = Rs. | <u><u>20,520.00</u></u> |

Sav Rs 25000/= per Item

THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER COLOMBO AREA

OB.02.05 Demolition of brick walls

Rate per item

5 x 45 x 10 = 2250

10 x 30 x 10 = 3000

4 x 8 x 10 = 320

2 x 5 x 10 = 100

2 x 35 x 10 = 700

= 6370 m²

| | | | | |
|-----------------------------------------|------------------------|---|---------------|--------------------------|
| Demolition of brick work (6500 x 0.225) | 1463.00 m ³ | @ | 300.00 = Rs. | 438,900.00 |
| Transport of lorry load (1463 x 0.35) | 512.00 Nos | @ | 1000.00 = Rs. | <u>512,000.00</u> |
| | | | | <u><u>950,900.00</u></u> |

Sav Rs 1,000,000/= per Item

OB.02.07 Demolition of concrete works

Rate per item

| | | | | |
|-------------------------------------------|-----------------------|---|---------------|--------------------------|
| Demolition of concrete works(1500 x 25 %) | 375.00 m ³ | @ | 750.00 = Rs. | 281,250.00 |
| Transport of lorry load (375 x 35 %) | 131.20 Nos | @ | 1000.00 = Rs. | <u>131,200.00</u> |
| | | | | <u><u>412,450.00</u></u> |

Sav Rs 400,000/= per Item

OB.02.08 Removal of brick paved floor

Rate per item

1500 x 0.1 = 150

| | | | | |
|-----------------------------------------------------|-----------------------|---|---------------|-------------------------|
| Removal of Brick paving | 150.00 m ³ | @ | 300.00 = Rs. | 45,000.00 |
| Transport of Lorry Loads (1500 x 0.1 x 0.35 =52.5) | 52.50 Nos | @ | 1000.00 = Rs. | <u>52,500.00</u> |
| | | | = Rs. | <u><u>97,500.00</u></u> |

Sav Rs 100,000/= per Item

**THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER
COLOMBO AREA**

OB.02.09 Removal of concrete floor

Rate per item

$1500 \times 0.1 = 150$

Removal of Brick paving (150 x 1/4)

38.00 m³ @ 750.00 = Rs. 28,500.00

Transport of Lorry Loads (52.5 /4)

13.00 Nos @ 1000.00 = Rs. 13,000.00

41,500.00

Sav Rs 50,000/= per Item

OB.02.10 Grubbing up brick foundation

Rate per item

$5 \times 45 \times 0.3 \times 0.75 = 50.63$

$10 \times 30 \times 0.3 \times 0.75 = 67.50$

$4 \times 8 \times 0.3 \times 0.45 = 4.32$

$2 \times 5 \times 0.3 \times 0.45 = 1.35$

$2 \times 35 \times 0.3 \times 0.3 = 6.30$

130.10

Removal of foundation

130.00 m³ @ 400.00 = Rs. 52,000.00

Transport of Lorry Loads (130 x 0.35)

46.00 Nos @ 1000.00 = Rs. 46,000.00

98,000.00

Sav Rs 100,000/= per Item

OB.02.11 Grubbing up concrete foundation

Rate per item

$5 \times 45 \times 0.6 \times 0.150 = 20.25$

$10 \times 30 \times 0.6 \times 0.150 = 27.00$

$4 \times 8 \times 0.6 \times 0.150 = 2.88$

50.13

Removal of foundation

50.13 m³ @ 850.00 = Rs. 42,610.50

Transport of Lorry Loads (50 x 0.35)

17.50 Nos @ 1000.00 = Rs. 17,500.00

60,110.50

Sav Rs 60,000/= per Item

**THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER
COLOMBO AREA**

WATER WORK ENGINEER 'S OFFICE

OB.03.01 Removal of roof

Rate per item

$$\begin{aligned} 2/42.5 \times 13 &= 1105 \text{ m}^2 \\ 1/8.0 \times 25 &= 200 \text{ m}^2 \\ 2/2/120 \times 5 &= \underline{400 \text{ m}^2} \\ &1705 \text{ m}^2 \end{aligned}$$

| | | | | |
|------------------------------|------------------------|---|---------------|--------------------------|
| Say removal of roof | 1700.00 m ² | @ | 50.00 = Rs. | 85,000.00 |
| Removing timber frame work | 1700.00 m ² | @ | 100.00 = Rs. | 170,000.00 |
| Removing timber valnce board | | | = Rs. | 10,000.00 |
| Transport of lorry load | 18.00 Nos | @ | 3000.00 = Rs. | <u>54,000.00</u> |
| | | | | 319,000.00 |
| Add 35% O/H | | | = Rs. | <u>111,650.00</u> |
| Total cost | | | = Rs. | <u><u>430,650.00</u></u> |

Sav Rs 450,000/= per Item

OB.03.02 Removal of steel roof truss

Rate per item

| | | | | |
|-------------------------|-----------|---|---------------|--------------------------|
| Removal of roof truss | 31.00 Nos | @ | 3000.00 = Rs. | 93,000.00 |
| Removal of roof truss | 60.00 Nos | @ | 1500.00 = Rs. | 90,000.00 |
| Transport of lorry load | 30.00 Nos | @ | 3000.00 = Rs. | <u>90,000.00</u> |
| | | | | 273,000.00 |
| Add 35% O/H | | | = Rs. | <u>95,550.00</u> |
| Total cost | | | = Rs. | <u><u>368,550.00</u></u> |

Sav Rs 350,000/= per Item

THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER COLOMBO AREA

OB.03.03 Removal of roof ceiling

Rate per item

| | | | | |
|----------------------------|-----------------------|---|---------------|--------------------------|
| Removal of Asbestos sheets | 316.00 m ² | @ | 50.00 = Rs. | 15,800.00 |
| Removal of timber planks | 530.00 m ² | @ | 50.00 = Rs. | 26,500.00 |
| Removing timber frame work | 846.00 m ² | @ | 100.00 = Rs. | 84,600.00 |
| Transport of lorry load | 8.00 Nos | @ | 3000.00 = Rs. | 24,000.00 |
| | | | | <u>150,900.00</u> |
| Add 35% O/H | | | = Rs. | <u>52,815.00</u> |
| Total cost | | | = Rs. | <u><u>203,715.00</u></u> |

Sav Rs 200,000/= per Item

OB.03.04 Removal of doors

Rate per item

Doors = 61 m²
 Windows = 108 m²
 Fanlights = 6 m²
 175 m²

Glazed partition

6/7.1 x 2 = 85.2
 18/3.3 x 2 = 118.8
 2/5.5 x 2 = 22.0
 2/2.85 x 2 = 11.4
 = 237.4 m²

| | | | | |
|------------------------------|-----------------------|---|---------------|-------------------------|
| Removal of doors and windows | 175.00 m ² | @ | 100.00 = Rs. | 17,500.00 |
| Removal of glazed partition | 237.40 m ² | @ | 100.00 = Rs. | 23,740.00 |
| Transport of lorry load | 5.00 Nos | @ | 3000.00 = Rs. | 15,000.00 |
| | | | | <u>56,240.00</u> |
| Add 35% O/H | | | = Rs. | <u>19,684.00</u> |
| Total cost | | | = Rs. | <u><u>75,924.00</u></u> |

Sav Rs 75,000/= per Item

**THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER
COLOMBO AREA**

OB.03.05 Demolition brick walls

Rate per item

$3/41 \times 3.6 = 442.8$

$9/7.2 \times 3.6 = 233.3$

$8/5 \times 3 = 120$

$6/21 \times 3.6 = 453.6$

$5/7 \times 3 = 105$

$6/7.5 \times 3 = 135$

$2/15.3 \times 3 = 91.8$

$= 1581.5 \text{ m}^2$

| | | | | |
|---------------------------------------------|-----------------------|---|---------------|--------------------------|
| Demolition of brick work 1600 x .225 | 360.00 m ³ | @ | 300.00 = Rs. | 108,000.00 |
| Transport of lorry load (600x 0.225 x 0.35) | 126.00 Nos | @ | 1000.00 = Rs. | <u>126,000.00</u> |
| | | | | <u><u>234,000.00</u></u> |

Sav Rs 250,000/= per Item

OB.03.06 Demolition of concrete works

Rate per item

$1600 \times .225 \times 25 \% = 90 \text{ m}^3$

| | | | | |
|-------------------------------------|----------------------|---|---------------|-------------------------|
| Demolition of concrete works | 90.00 m ³ | @ | 750.00 = Rs. | 67,500.00 |
| Transport of lorry load (90 x 35 %) | 31.50 Nos | @ | 1000.00 = Rs. | <u>31,500.00</u> |
| | | | = Rs. | <u><u>99,000.00</u></u> |

Sav Rs 100,000/= per Item

OB.03.07 Removal of " H" iron column

Rate per item

| | | | | |
|--------------------------|----------|---|-------------|------------------------|
| Removal of H iron column | 23.00 m | @ | 50.00 = Rs. | 1,150.00 |
| L iron railing | 174.00 m | @ | 10.00 = Rs. | <u>1,740.00</u> |
| | | | | <u><u>2,890.00</u></u> |

Sav Rs 5,000/= per Item

THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER COLOMBO AREA

OB.03.09 Removal of brick paved floor

Rate per item

1523 x 0.1 = 152.3

| | | | | |
|----------------------------------------------------|-----------------------|---|---------------|------------------|
| Removal of Brick paving | 152.30 m ² | @ | 300.00 = Rs. | 45,690.00 |
| Transport of Lorry Loads 1523 x 0.1 x 0.35 = 53.31 | 53.31 Nos | @ | 1000.00 = Rs. | 53,310.00 |
| | | | | <u>99,000.00</u> |

Sav Rs 100,000/= per Item

OB.03.10 Removal of foundation

Rate per item

3 x 41 = 123.0

9 x 7.2 = 64.8

8 x 5 = 40.0

6 x 21 = 126.0

5 x 7 = 35.0

6 x 7.5 = 45.0

2 x 15.3 = 30.6

= 464.40

| | | | | |
|-------------------------------------------|-----------------------|---|---------------|-------------------|
| Removal of foundation (465 x 0.5 x 0.75) | 174.00 m ³ | @ | 400.00 = Rs. | 69,600.00 |
| Transport of Lorry Loads (174 x 0.35) | 61.00 Nos | @ | 1000.00 = Rs. | 61,000.00 |
| | | | | <u>130,600.00</u> |

Sav Rs 150,000/= per Item

OB.03.13 Removal of roof

Rate per item

Calicut tile = 223

Asbestos = 370

= 593

| | | | | |
|------------------------------|-----------------------|---|---------------|------------------------|
| Removal of roofing materials | 593.00 m ² | @ | 50.00 = Rs. | 29,650.00 |
| Removal of timber frame work | 593.00 m ² | @ | 100.00 = Rs. | 59,300.00 |
| Transport of Lorry Loads | 6.00 Nos | @ | 3000.00 = Rs. | 18,000.00 |
| | | | | = Rs. 106,950.00 |
| Add 35% O/H | | | | = Rs. <u>37,432.50</u> |
| Total cost | | | | <u>144,382.50</u> |

Sav Rs 150,000/= per Item

**THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER
COLOMBO AREA**

OB.03.14 Removal of asbestos sheet ceiling

Rate per item

| | | | | |
|------------------------------|-----------------------|---|---------------|-------------------------|
| Removal of ceiling sheets | 185.00 m ² | @ | 50.00 = Rs. | 9,250.00 |
| Removal of timber frame work | 185.00 m ² | @ | 100.00 = Rs. | 18,500.00 |
| Transport of Lorry Loads | 2.00 Nos | @ | 3000.00 = Rs. | 6,000.00 |
| | | | = Rs. | <u>33,750.00</u> |
| Add 35% O/H | | | = Rs. | <u>11,812.50</u> |
| Total cost | | | = Rs. | <u><u>45,562.50</u></u> |

Sav Rs 50,000/= per Item

OB.03.15 Removal of doors and windows

Rate per item

| | | | | |
|--------------------------|----------------------|---|---------------|-------------------------|
| Removal of doors | 8.00 Nos | @ | 100.00 = Rs. | 800.00 |
| Removal of windows | 7.00 Nos | @ | 150.00 = Rs. | 1,050.00 |
| Removal of glass | 33.00 m ² | @ | 100.00 = Rs. | 3,300.00 |
| Transport of Lorry Loads | 4.00 Nos | @ | 3000.00 = Rs. | 12,000.00 |
| | | | = Rs. | <u>17,150.00</u> |
| Add 35% O/H | | | = Rs. | <u>6,002.50</u> |
| Total cost | | | = Rs. | <u><u>23,152.50</u></u> |

Sav Rs 25,000/= per Item

OB.03.16 Demolition of existing brick walls

Rate per item

382 x 0.225 = 85.95

| | | | | |
|--------------------------------------------------|----------------------|---|---------------|-------------------------|
| Demolition of brick work | 85.95 m ³ | @ | 300.00 = Rs. | 25,785.00 |
| | 3.08 Nos | @ | 1000.00 = Rs. | 3,080.00 |
| Transport of lorry load (382x 0.225 x 0.35 x10%) | | | | |
| | | | | <u><u>28,865.00</u></u> |

Sav Rs 30,000/= per Item

THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER COLOMBO AREA

OB.03.18 Demolition of concrete works

Rate per item

382 x 0.225 x 0.75 x 25 %

| | | | | |
|---------------------------------------|----------------------|---|---------------|-------------------------|
| Demolition of concrete works | 21.52 m ³ | @ | 750.00 = Rs. | 16,141.50 |
| Transport of lorry load (21.5 x 35 %) | 7.50 Nos | @ | 1000.00 = Rs. | <u>7,500.00</u> |
| | | | | <u><u>23,641.50</u></u> |

Sav Rs 25000/= per Item

OB.03.20 Remove Brick paved floor

Rate per item

308 x 0.1 = 30.8

| | | | | |
|---------------------------------------------------|----------------------|---|---------------|-------------------------|
| Removal of Brick paving | 30.80 m ² | @ | 300.00 = Rs. | 9,240.00 |
| Transport of Lorry Loads 308 x 0.1 x 0.35 = 10.78 | 10.78 Nos | @ | 1000.00 = Rs. | <u>10,780.00</u> |
| | | | | <u><u>20,020.00</u></u> |

Sav Rs 20,000/= per Item

OB.03.21 Removal of rubble foundation

Rate per item

30 x 0.3 x 1.5 = 13.5

30 x 0.3 x 0.525 = 7.88

2 x 7 x 0.3 x 1.5 = 6.30

35 x 0.3 x 0.525 = 5.51

= 33.19

| | | | | |
|----------------------------------------|----------------------|---|---------------|-------------------------|
| Removal of foundation | 35.00 m ³ | @ | 400.00 = Rs. | 14,000.00 |
| Transport of Lorry Loads (35 x 0.35) | 12.25 Nos | @ | 1000.00 = Rs. | <u>12,250.00</u> |
| | | | | <u><u>26,250.00</u></u> |

Sav Rs 50,000/= per Item

**THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER
COLOMBO AREA**

OB.03.22 Demolition of concrete foundation

Rate per item

$109 \times 0.55 \times 0.1 = 6$

| | | | | |
|-----------------------------------------------------|---------------------|---|---------------|------------------------|
| Removal of foundation | 6.00 m ³ | @ | 750.00 = Rs. | 4,500.00 |
| Transport of Lorry Loads (109 x 0.55 x .10 x 0.35) | 2.09 Nos | @ | 1000.00 = Rs. | <u>2,090.00</u> |
| | | | | <u><u>6,590.00</u></u> |

Sav Rs7,000/= per Item

OB.03.35 Demolition of brick walls

Rate per item

$3 \times 10 \times 0.225 \times 3 = 20.25$

$3 \times 7 \times 0.225 \times 3 = 14.17$

$1 \times 5 \times 0.225 \times 3 = 3.38$

| | | | | |
|-------------------------------------|----------------------|---|---------------|-------------------------|
| Demolition of brick work | 50.00 m ³ | @ | 300.00 = Rs. | 15,000.00 |
| Transport of lorry load (50x 0.35) | 17.50 Nos | @ | 1000.00 = Rs. | <u>17,500.00</u> |
| | | | = Rs. | <u><u>32,500.00</u></u> |

Sav Rs 35,000/= per Item

OB.03.38 Demolition of rubble foundation

Rate per item

$2 \times 10 = 20.0$

$3 \times 7 = 14.0$

$1 \times 5 = 5.0$

$= 39.0$

| | | | | |
|-----------------------------------------|---------------------|---|---------------|------------------------|
| Removal of foundation (40 x 0.3 x 0.5) | 6.00 m ³ | @ | 300.00 = Rs. | 1,800.00 |
| Transport of Lorry Loads (6 x 0.35) | 2.10 Nos | @ | 1000.00 = Rs. | <u>2,100.00</u> |
| | | | | <u><u>3,900.00</u></u> |

Sav Rs 5,000/= per Item

THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER COLOMBO AREA

OB.03.40 Removal of roof

Rate per item

Calicut tile = 384

Asbestos = 120

= 504

Removal of roofing materials

504.00 m² @ 50.00 = Rs. 25,200.00

Removal of timber frame work

504.00 m² @ 100.00 = Rs. 50,400.00

Transport of Lorry Loads

6.00 Nos @ 3000.00 = Rs. 18,000.00

= Rs. 93,600.00

Add 35% O/H

= Rs. 32,760.00

Total cost

= Rs. 126,360.00

Sav Rs 130,000/= per Item

OB.03.43 Demolition of brick walls

Rate per item

5 x 13.2 x 0.225 x 3 = 44.55

2 x 11 x 0.225 x 3 = 14.85

2 x 22 x 0.225 x 3 = 29.70

1 x 7.2 x 0.225 x 3 = 4.86

= 93.96

Demolition of brick work

93.96 m³ @ 300.00 = Rs. 28,188.00

Transport of lorry load (93.96 x 0.35)

33.00 Nos @ 1000.00 = Rs. 33,000.00

= Rs. 61,188.00

Sav Rs 65000/= per Item

OB.03.45 Removal of brick paved floor

Rate per item

22 x 13.2 x 0.1 = 29.04

11 x 7.2 x 0.1 = 7.92

= 36.96

Removal of Brick paving

37.00 m² @ 300.00 = Rs. 11,100.00

Transport of Lorry Loads 37 x 0.35 =12.95

12.95 Nos @ 1000.00 = Rs. 12,950.00

24,050.00

Sav Rs 25,000/= per Item

**THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER
COLOMBO AREA**

OB.03.46 Demolition of brick foundation

Rate per item

$$5 \times 13.2 \times = 66$$

$$2 \times 11 = 22$$

$$2 \times 22 = 44$$

$$1 \times 7.2 = \underline{7.2}$$

$$= \underline{139.2}$$

| | | | |
|-----------------------------------------------------------------------|------------------------|---------------|-------------------------|
| Removal of foundation $9140 \times 0.3 \times 0.75$) | 31.50 m ³ @ | 300.00 = Rs. | 9,450.00 |
| Transport of Lorry Loads ($140 \times 0.3 \times 0.75 \times 0.35$) | 11.03 Nos @ | 1000.00 = Rs. | <u>11,030.00</u> |
| | | | <u><u>20,480.00</u></u> |

Sav Rs 20,000/= per Item

OB.03.50 Demolition of brick walls

Rate per item

$$2 \times 13.5 \times 0.225 \times 3 = 18.23$$

$$2 \times 3 \times 0.225 \times 3 = 4.05$$

$$2 \times 6.3 \times 0.225 \times 3 = 8.51$$

$$1 \times 16 \times 0.225 \times 2.5 = \underline{9.00}$$

$$= \underline{39.79}$$

| | | | |
|----------------------------------------------|------------------------|---------------|-------------------------|
| Demolition of brick work | 40.00 m ³ @ | 300.00 = Rs. | 12,000.00 |
| Transport of lorry load (40×0.35) | 14.00 Nos @ | 1000.00 = Rs. | <u>14,000.00</u> |
| | | = Rs. | <u><u>26,000.00</u></u> |

Sav Rs 25,000/= per Item

OB.03.52 Removal of brick paved floor

Rate per item

$$17 \times 6.3 \times 0.1 = 10.71$$

$$9.3 \times 2.7 \times 0.1 = \underline{2.51}$$

$$= \underline{13.22}$$

| | | | |
|--------------------------------------------------|------------------------|---------------|-------------------------|
| Removal of Brick paving | 13.22 m ² @ | 400.00 = Rs. | 5,288.00 |
| Transport of Lorry Loads $13 \times 0.35 = 4.55$ | 5.00 Nos @ | 1000.00 = Rs. | <u>5,000.00</u> |
| | | | <u><u>10,288.00</u></u> |

Sav Rs 10,000/= per Item

THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER COLOMBO AREA

OB.03.58 Demolition of brick walls

Rate per item

$$2 \times 6 \times 0.225 \times 3 = 8.1$$

$$2 \times 7.2 \times 0.225 \times 3 = 9.72$$

$$= 17.82$$

| | | | | |
|--------------------------------------|----------------------|---|---------------|-------------------------|
| Demolition of brick work | 18.00 m ³ | @ | 300.00 = Rs. | 5,400.00 |
| Transport of lorry load (18 x 0.35) | 6.30 Nos | @ | 1000.00 = Rs. | <u>6,300.00</u> |
| | | | = Rs. | <u><u>11,700.00</u></u> |

Sav Rs 15,000/= per Item

OB.03.60 Removal of brick paved floor

Rate per item

$$9 \times 7.2 \times 0.1 = 6.48$$

| | | | | |
|-----------------------------------------|---------------------|---|---------------|------------------------|
| Removal of Brick paving | 7.00 m ² | @ | 400.00 = Rs. | 2,800.00 |
| Transport of Lorry Loads 7x 0.35 = 2.45 | 2.50 Nos | @ | 1000.00 = Rs. | <u>2,500.00</u> |
| | | | | <u><u>5,300.00</u></u> |

Sav Rs 5,000/= per Item

OB.03.46 Demolition of foundation

Rate per item

$$2 \times 9 = 18$$

$$3 \times 7.5 = 22.5$$

$$= 30.5$$

| | | | | |
|----------------------------------------------|---------------------|---|---------------|-------------------------|
| Removal of foundation (30.5 x 0.3 x 0.75) | 7.00 m ³ | @ | 300.00 = Rs. | 2,100.00 |
| Transport of Lorry Loads (40 x 0.3 x 0.75) | 9.00 Nos | @ | 1000.00 = Rs. | <u>9,000.00</u> |
| | | | | <u><u>11,100.00</u></u> |

Sav Rs 12,000/= per Item

THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER COLOMBO AREA

OB.03.62 Removal of concrete roof

Rate per item

$1 \times 4.8 \times 4.8 \times 0.15 = 3.5$

| | | | | |
|---------------------------------------|---------------------|---|---------------|------------------------|
| Removal of concrete roof | 3.50 m ³ | @ | 1600.00 = Rs. | 5,600.00 |
| Transport of lorry load (3.5 x 0.35) | 1.30 Nos | @ | 1000.00 = Rs. | <u>1,300.00</u> |
| | | | | 6,900.00 |
| Add 35% O/H | | | = Rs. | <u>2,415.00</u> |
| Total cost | | | = Rs. | <u><u>9,315.00</u></u> |

Sav Rs 10,000/= per Item

OB.03.64 Demolition of brick walls

Rate per item

$4 \times 4.2 \times 0.225 \times 5.4 = 20.41$

| | | | | |
|----------------------------------------|----------------------|---|---------------|-------------------------|
| Demolition of brick work | 20.40 m ³ | @ | 300.00 = Rs. | 6,120.00 |
| Transport of lorry load (20.4 x 0.35) | 7.10 Nos | @ | 1000.00 = Rs. | <u>7,100.00</u> |
| | | | = Rs. | <u><u>13,220.00</u></u> |

Sav Rs 15,000/= per Item

OB.03.66 Removal of brick paved floor

Rate per item

$4.2 \times 4.2 \times 0.1 = 1.8$

| | | | | |
|--------------------------------------------|---------------------|---|---------------|------------------------|
| Removal of Brick paving | 1.80 m ² | @ | 400.00 = Rs. | 720.00 |
| Transport of Lorry Loads 1.8 x 0.35 = 2.45 | 1.00 Nos | @ | 1000.00 = Rs. | <u>1,000.00</u> |
| | | | | <u><u>1,720.00</u></u> |

Sav Rs 2,000/= per Item

THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER COLOMBO AREA

OB.03.67 Demolition of rubble foundation

Rate per item

$4 \times 4.2 \times 0.35 \times 0.55 = 3.23$

| | | | | |
|------------------------------------------|---------------------|---|---------------|------------------------|
| Removal of foundation | 3.23 m ³ | @ | 400.00 = Rs. | 1,292.00 |
| Transport of Lorry Loads (3.23 x 0.35) | 1.00 Nos | @ | 1000.00 = Rs. | <u>1,000.00</u> |
| | | | | <u><u>2,292.00</u></u> |

Sav Rs 3,000/= per Item

OB.03.72 Demolition of brick walls

Rate per item

$4 \times 18.5 = 37$

$3 \times 3.0 = 9$

$2 \times 7.8 = 15.6$

$2 \times 6.3 = 12.6$

$= 74.2$

| | | | | |
|-------------------------------------------|----------------------|---|---------------|-------------------------|
| Demolition of brick work (75 x 0.225 x 3) | 50.63 m ³ | @ | 300.00 = Rs. | 15,189.00 |
| Transport of lorry load (50.63 x 0.35) | 18.00 Nos | @ | 1000.00 = Rs. | <u>18,000.00</u> |
| | | | = Rs. | <u><u>33,189.00</u></u> |

Sav Rs 35,000/= per Item

OB.03.75 Removal of brick paved floor

Rate per item

$15.6 \times 6.3 \times 0.1 = 9.82$

$3.3 \times 1.5 \times 0.1 = 0.49$

$= 10.31$

| | | | | |
|-----------------------------------------|----------------------|---|---------------|------------------------|
| Removal of Brick paving | 10.31 m ³ | @ | 300.00 = Rs. | 3,093.00 |
| Transport of Lorry Loads (10.31 x 0.35) | 3.60 Nos | @ | 1000.00 = Rs. | <u>3,600.00</u> |
| | | | | <u><u>6,693.00</u></u> |

Sav Rs 10,000/= per Item

THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER COLOMBO AREA

OB.03.76 Demolition of foundation

Rate per item

74.2 x 0.3 x 0.85 = 18.92

| | | | | |
|------------------------------------------|----------------------|---|---------------|------------------|
| Removal of foundation | 18.92 m ³ | @ | 400.00 = Rs. | 7,568.00 |
| Transport of Lorry Loads (18.9 x 0.35) | 6.60 Nos | @ | 1000.00 = Rs. | 6,600.00 |
| | | | | <u>14,168.00</u> |

Sav Rs 15,000/= per Item

MK - OB OFFICE BUILDING

EARTH WORK

OB - 4.1 Excavation in Foundation for Columns / Wall up to 1.5m deep (including necessary shoring)

Rate per m³

Labour Cost

| | | | | |
|-------------------------------------------|----------|---|-------------|---------------|
| For Excavation - Unskilled labour | 7.00 hrs | @ | 37.50 = Rs. | 262.50 |
| For Back Filling & Compacting U/sk labour | 3.00 hrs | @ | 37.50 = Rs. | 112.50 |
| Allow for planking and stuting | | | = Rs. | 80.00 |
| | | | = Rs. | 455.00 |
| Add 35% O/H | | | = Rs. | 159.25 |
| Total cost | | | = Rs. | <u>614.25</u> |

Sav Rs 615/= per m³

OB - 4.2 Excavation in Foundation of Column Wall below 1.5m deep

Rate per m³

Labour Cost

| | | | | |
|-------------------------------------------|----------|---|--------------|---------------|
| For Excavation - Unskilled labour | 1.00 day | @ | 300.00 = Rs. | 300.00 |
| For Back Filling & Compacting U/sk labour | 4.00 hrs | @ | 37.50 = Rs. | 150.00 |
| Allow for planking and stuting | | | = Rs. | 110.00 |
| | | | = Rs. | 560.00 |
| Add 35% O/H | | | = Rs. | 196.00 |
| Total cost | | | = Rs. | <u>756.00</u> |

Sav Rs 750/= per m³

THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER COLOMBO AREA

CONCRETE WORK - READY MIX CONCRETE

OB-4-10 **Grade 15(25) ,40mm thick.**

Rate per m²

Material cost

| | | | | |
|--------------------------------------|---------------------|---|---------------|----------|
| Ready mix concrete delivered to site | 1.00 m ³ | @ | 4275.00 = Rs. | 4,275.00 |
| Add 3% wastage | | | = Rs. | 128.25 |

Labour cost

| | | | | |
|---------------------------------------|----------|---|-------------|-----------------|
| For placing concrete Unskilled labour | 4.00 hrs | @ | 37.50 = Rs. | 150.00 |
| Skilled labour | 1.50 hrs | @ | 43.75 = Rs. | 65.63 |
| Allow for small tools etc., | | | = Rs. | 18.00 |
| | | | = Rs. | 4,636.88 |
| Add 35% O/H | | | = Rs. | 1,622.91 |
| Total cost per m ³ | | | = Rs. | <u>6,259.78</u> |

Rate per 40 mm thick = Rs. 6259.78 x 0.040 = 250.39

Sav Rs 250/= per m²

OB-4-13 **Grade 25(20).Ground floor**

to

OB-4-16 **Rate per m³**

Material cost

| | | | | |
|--------------------------------------|---------------------|---|---------------|----------|
| Ready mix concrete delivered to site | 1.00 m ³ | @ | 4860.00 = Rs. | 4,860.00 |
| Add 3% wastage | | | = Rs. | 145.80 |

Labour cost

| | | | | |
|---------------------------------------|----------|---|-------------|-------|
| For placing concrete Unskilled labour | 0.75 hrs | @ | 37.50 = Rs. | 28.13 |
| Skilled labour | 0.50 hrs | @ | 43.75 = Rs. | 21.88 |

Machine cost

| | | | | |
|-----------------|---------------------|---|--------------|----------|
| Pumping charges | 1.00 m ³ | @ | 300.00 = Rs. | 300.00 |
| | | | = Rs. | 5,355.80 |

| | | | | |
|-------------|--|--|-------|-----------------|
| Add 35% O/H | | | = Rs. | 1,874.53 |
| Total cost | | | = Rs. | <u>7,230.33</u> |

Sav Rs 7,230/= per m³

THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER COLOMBO AREA

| | | | | |
|---------|---------------------------------------------------|------------------------|---------------|-----------------|
| OB-4-17 | Rate from Item No OB - 4.13 225 mm thick walls | 0.225 m ² @ | 7230.33 = Rs. | 7,230.33 |
| | | | 7230.33 = Rs. | <u>1,626.82</u> |

Sav Rs 1,650/= per m²

OB-4-19 Grade 20(20) ,Ground floor

Rate per m³

Material cost

| | | | |
|--------------------------------------|-----------------------|---------------|----------|
| Ready mix concrete delivered to site | 1.00 m ³ @ | 4625.00 = Rs. | 4,625.00 |
| Add 3% wastage | | = Rs. | 138.75 |

Labour cost

| | | | |
|---------------------------------------|------------|-------------|-------|
| For placing concrete Unskilled labour | 0.75 hrs @ | 37.50 = Rs. | 28.13 |
| Skilled labour | 0.50 hrs @ | 43.75 = Rs. | 21.88 |

Machine cost

| | | | |
|-----------------|-----------------------|--------------|------------------------|
| Pumping charges | 1.00 m ³ @ | 300.00 = Rs. | <u>300.00</u> |
| | | = Rs. | 5,113.75 |
| Add 35% O/H | | = Rs. | <u>1,789.81</u> |
| Total cost | | = Rs. | <u><u>6,903.56</u></u> |

Sav Rs 6,900/= per m³

**THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER
COLOMBO AREA**

FORM WORK

OB-4-73 **Form work for columns - ground floor**

OB-4-78

Cosider contact area = 1.4m²

Rate per 1.40 m²

Making mould

| | | | | |
|-----------------------------------|---------------------|---|--------------|--------|
| Ply wood planks | 1.54 m ² | @ | 398.00 = Rs. | 612.92 |
| 50 x50 mm class 11 Timber yokes | 5.21 m | @ | 56.00 = Rs. | 291.76 |
| 50 x 25 mm cass 11 timber battens | 5.00 m | @ | 16.40 = Rs. | 82.00 |
| Wire nails | 0.50 Kg | @ | 60.00 = Rs. | 30.00 |

Fabricating

| | | | | |
|---------------------------------|----------|---|--------------|-----------------|
| Carpenter | 0.50 day | @ | 400.00 = Rs. | 200.00 |
| Unskilled day | 0.50 day | @ | 300.00 = Rs. | 150.00 |
| Total cost for 4 uses | | | = Rs. | 1,366.68 |
| Total cost per use for moulding | | | = Rs. | <u>1,366.68</u> |
| | | | | 4 |
| Total cost per use for moulding | | | = Rs. | 341.67 |

Assembling per use

| | | | | |
|-----------------------------------------|----------|---|--------------|---------------|
| 16 mm dia. 450 mm long bolts.(20 uses) | 12 Nos | @ | 20.00 = Rs. | 12.00 |
| Mould oil | 1 Ltr | @ | 50.00 = Rs. | 50.00 |
| 100 x 50 mm props (10 uses) | 11 Nos | @ | 125.00 = Rs. | 137.50 |
| Carpenter | 0.25 day | @ | 400.00 = Rs. | 100.00 |
| Unskilled day | 0.25 day | @ | 300.00 = Rs. | 75.00 |
| Total cost per use for assembling | | | = Rs. | 374.50 374.50 |

Dismantling and cleaning repairing (per use)

| | | | | |
|-----------------------------------------|----------|---|--------------|----------------------|
| Carpenter | 0.25 day | @ | 400.00 = Rs. | 100.00 |
| Unskilled day | 0.20 day | @ | 300.00 = Rs. | 60.00 |
| Total cost per use for dismantling | | | | 160.00 <u>160.00</u> |
| Rate for 1.4 m ² | | | = Rs. | 876.17 |
| Rate for 1 m ² = 876.17 /1.4 | | | = Rs. | 625.84 |
| Add 35% O/H | | | = Rs. | <u>219.04</u> |
| Total cost per m ² | | | = Rs. | <u><u>844.88</u></u> |

Sav Rs 850/= per m²

**THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER
COLOMBO AREA**

Note : Each floor of column form work multipale by 1.2 %

REINFORCEMENT

OB-4-106 Tor steel - Ground floor

to

OB-4-117, Rate per MT

and

| | | | | | | | |
|-----------------|-----------|------|----|---|----------|-------|------------------|
| OB-4-120 | Tor steel | 1.00 | Mt | @ | 35224.00 | = Rs. | 35,224.00 |
| | to | | | | | = Rs. | 400.00 |
| OB-4-132 | | | | | | | <u>35,624.00</u> |

| | | | | | | | |
|--|-------------------------------------------------------------|-------|----|---|----------|-------|------------------|
| | Tor steel delivered to site. | 1.00 | Mt | @ | 35624.00 | = Rs. | 35,624.00 |
| | Add : 15 % wastage | | | | | = Rs. | 5,343.60 |
| | Binding wire | 13.00 | Kg | @ | 45.00 | = Rs. | 585.00 |
| | Add : 1.5 % of steel cost for spacer bars | | | | | = Rs. | 534.36 |
| | Labour for cutting bending tying and placing reinforcement. | 1.00 | Mt | @ | 5700.00 | = Rs. | <u>5,700.00</u> |
| | Total cost | | | | | | 47,786.96 |
| | Add 35% O/H | | | | | = Rs. | <u>16,725.44</u> |
| | Total cost per m ² | | | | | = Rs. | <u>64,512.40</u> |

Sav Rs 64500/= per Mt

OB-4-118 Mild steel - Ground floor

OB-4-119

OB-4-133 Rate per MT

| | | | | | | | |
|--|---------------------|------|----|---|----------|-------|------------------|
| | Mild steel | 1.00 | Mt | @ | 34034.00 | = Rs. | 34,034.00 |
| | to | | | | | = Rs. | 400.00 |
| | Allow for transport | | | | | = Rs. | <u>34,434.00</u> |

| | | | | | | | |
|--|-------------------------------------------------------------|-------|----|---|----------|-------|------------------|
| | Tor steel delivered to site. | 1.00 | Mt | @ | 34434.00 | = Rs. | 34,434.00 |
| | Add : 15 % wastage | | | | | | 5,165.10 |
| | Binding wire | 13.00 | Kg | @ | 45.00 | = Rs. | 585.00 |
| | Allow for spacer bars | | | | | | 490.00 |
| | Labour for cutting bending tying and placing reinforcement. | 1 | Mt | @ | 5700.00 | = Rs. | <u>5,700.00</u> |
| | Total cost | | | | | | 46,374.10 |
| | Add 35% O/H | | | | | = Rs. | <u>16,230.94</u> |
| | Total cost per m ² | | | | | = Rs. | <u>62,605.04</u> |

Sav Rs 62,600/= per Mt

**THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER
COLOMBO AREA**

OB-4-134 Tor steel - First floor

to

OB-4-147, Rate per MT

Rate as same as item no OB - 4.106
Add : 0.93 % for first floor
Total cost

= Rs. 64,500.00
= Rs. 599.85
= Rs. 65,099.85

Sav Rs 65,100/= per Mt

OB-4-148 Mild steel - First floor

Rate per MT

Rate as same as item no OB - 4.118
Add : 0.93 % for first floor
Total cost

= Rs. 62,600.00
= Rs. 582.18
= Rs. 63,182.18

Sav Rs 63,200/= per Mt

OB-4-149 Tor steel - Second floor

to

OB-4-161, Rate per MT

Rate as same as item no OB - 4.106
Add : 1.86 % for first floor
Total cost

= Rs. 64,500.00
= Rs. 1,199.70
= Rs. 65,699.70

Sav Rs 65,700/= per Mt

OB-4-162 Mild steel - Second floor

Rate per MT

Rate as same as item no OB - 4.118
Add : 1.86% for first floor
Total cost

= Rs. 62,600.00
= Rs. 1,164.36
= Rs. 63,764.36

Sav Rs 63,800/= per Mt

THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER COLOMBO AREA

OB-4-163 Tor steel - Third floor and above

to

OB-4-173 Rate per MT

| | | |
|------------------------------------|-------|-------------------------|
| Rate as same as item no OB - 4.106 | = Rs. | 64,500.00 |
| Add : 2.79 % for first floor | = Rs. | <u>1,799.55</u> |
| Total cost | = Rs. | <u><u>66,299.55</u></u> |

Sav Rs 66,300/= per Mt

OB-4-174 Mild steel - Third floor and above

Rate per MT

| | | |
|------------------------------------|-------|-------------------------|
| Rate as same as item no OB - 4.118 | = Rs. | 62,600.00 |
| Add : 2.79 % for first floor | = Rs. | <u>1,746.54</u> |
| Total cost | = Rs. | <u><u>64,346.54</u></u> |

Sav Rs 64,400/= per Mt

OB-4-175 Rubble masonry in foundation.

Rate per m³

Material cost

| | | | |
|---------------------|-----------------------|--------------|--------|
| 150 x 225 mm rubble | 1.30 m ³ @ | 495.00 = Rs. | 643.50 |
| Cement | 1.77 bag @ | 305.00 = Rs. | 539.85 |
| Sand | 0.30 m ³ @ | 495.00 = Rs. | 148.50 |
| Allow for water | | = Rs. | 35.00 |

Labour cost

| | | | |
|-------------------------------|------------|--------------|------------------------|
| Unskilled labour | 2.00 day @ | 300.00 = Rs. | 600.00 |
| Mason | 1.50 day @ | 400.00 = Rs. | <u>600.00</u> |
| Total cost | | = Rs. | 2,566.85 |
| Add 35% O/H | | = Rs. | <u>898.40</u> |
| Total cost per m ³ | | = Rs. | <u><u>3,465.25</u></u> |

Sav Rs 3,465/= per m³

**THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER
COLOMBO AREA**

OB-4-176 Pointed rubble masonry in foundation.

Rate per m³

Material cost

| | | | |
|---------------------|-----------------------|--------------|----------|
| 150 x 225 mm rubble | 1.30 m ³ @ | 777.00 = Rs. | 1,010.10 |
| Cement | 1.77 bag @ | 305.00 = Rs. | 539.85 |
| Sand | 0.30 m ³ @ | 495.00 = Rs. | 148.50 |
| Allow for water | | = Rs. | 35.00 |

Labour cost

| | | | |
|-------------------------------|------------|--------------|------------------------|
| Unskilled labour | 2.00 day @ | 300.00 = Rs. | 600.00 |
| Mason | 2.50 day @ | 400.00 = Rs. | <u>1,000.00</u> |
| Total cost | | = Rs. | 3,333.45 |
| Add 35% O/H | | = Rs. | <u>1,166.71</u> |
| Total cost per m ³ | | = Rs. | <u><u>4,500.16</u></u> |

Sav Rs 4500/= per m³

OB-4-177 400 mm thick Brick work.

Rate per m³

Material cost

| | | | |
|-------------------|-----------------------|--------------|----------|
| Bricks | 512.00 Nos @ | 2.60 = Rs. | 1,331.20 |
| Add : 5 % wastage | | = Rs. | 66.56 |
| Cement | 1.50 bag @ | 305.00 = Rs. | 457.50 |
| Sand | 0.25 m ³ @ | 495.00 = Rs. | 123.75 |

Labour cost

| | | | |
|-------------------------------|------------|--------------|------------------------|
| Unskilled labour | 1.50 day @ | 300.00 = Rs. | 450.00 |
| Mason | 1.00 day @ | 400.00 = Rs. | <u>400.00</u> |
| Total cost | | = Rs. | 2,829.01 |
| Add 35% O/H | | = Rs. | <u>990.15</u> |
| Total cost per m ³ | | = Rs. | <u><u>3,819.16</u></u> |

Sav Rs 3,820/= per m³

**THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER
COLOMBO AREA**

OB-4-178 225 mm thick Brick work. - ground floor

Rate per m²

Material cost

| | | | |
|-------------------|-----------------------|--------------|--------|
| Bricks | 117.00 Nos @ | 2.60 = Rs. | 304.20 |
| Add : 5 % wastage | | = Rs. | 15.21 |
| Cement | 0.30 bag @ | 305.00 = Rs. | 91.50 |
| Sand | 0.06 m ³ @ | 495.00 = Rs. | 29.70 |

Labour cost

| | | | |
|-------------------------------|-----------|-------------|---------------|
| Unskilled labour | 2.25 hr @ | 37.50 = Rs. | 84.38 |
| Mason | 2.50 hr @ | 50.00 = Rs. | 125.00 |
| Total cost | | = Rs. | 649.99 |
| Add 35% O/H | | = Rs. | 227.49 |
| Total cost per m ² | | = Rs. | <u>877.48</u> |

Sav Rs 875/= per m²

OB-4-179 200 mm thick Block work. - ground floor

Rate per m²

Material cost

| | | | |
|---------------------|-----------------------|--------------|--------|
| 200 mm thick Blocks | 12 Nos @ | 32.00 = Rs. | 384.00 |
| Add : 5 % wastage | | = Rs. | 19.20 |
| Cement | 0.08 bag @ | 305.00 = Rs. | 24.40 |
| Sand | 0.02 m ³ @ | 495.00 = Rs. | 9.90 |

Labour cost

| | | | |
|-------------------------------|-----------|-------------|---------------|
| Unskilled labour | 2.25 hr @ | 37.50 = Rs. | 84.38 |
| Mason | 1.50 hr @ | 50.00 = Rs. | 75.00 |
| Total cost | | = Rs. | 596.88 |
| Add 35% O/H | | = Rs. | 208.91 |
| Total cost per m ² | | = Rs. | <u>805.78</u> |

Sav Rs 805/= per m²

**THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER
COLOMBO AREA**

OB-4-180 150 mm thick Block work. - ground floor

Rate per m²

Material cost

| | | | |
|---------------------|-----------------------|--------------|--------|
| 150 mm thick Blocks | 12 Nos @ | 27.50 = Rs. | 330.00 |
| Add : 5 % wastage | | = Rs. | 16.50 |
| Cement | 0.06 bag @ | 305.00 = Rs. | 18.30 |
| Sand | 0.02 m ³ @ | 495.00 = Rs. | 9.90 |

Labour cost

| | | | |
|-------------------------------|-----------|-------------|---------------|
| Unskilled labour | 2.50 hr @ | 37.50 = Rs. | 93.75 |
| Mason | 1.25 hr @ | 50.00 = Rs. | 62.50 |
| Total cost | | = Rs. | 530.95 |
| Add 35% O/H | | = Rs. | 185.83 |
| Total cost per m ³ | | = Rs. | <u>716.78</u> |

Sav Rs 720/= per m²

OB-4-181 100 mm thick Block work. - ground floor

Rate per m²

Material cost

| | | | |
|---------------------|-----------------------|--------------|--------|
| 100 mm thick Blocks | 12 Nos @ | 20.00 = Rs. | 240.00 |
| Add : 5 % wastage | | = Rs. | 12.00 |
| Cement | 0.04 bag @ | 305.00 = Rs. | 12.20 |
| Sand | 0.01 m ³ @ | 495.00 = Rs. | 4.95 |

Labour cost

| | | | |
|-------------------------------|-----------|-------------|---------------|
| Unskilled labour | 2.00 hr @ | 37.50 = Rs. | 75.00 |
| Mason | 2.50 hr @ | 50.00 = Rs. | 125.00 |
| Total cost | | = Rs. | 469.15 |
| Add 35% O/H | | = Rs. | 164.20 |
| Total cost per m ³ | | = Rs. | <u>633.35</u> |

Sav Rs 720/= per m²

OB-4-182

to Rates as same as item no OB -4.178 to OB .4.181

OB-4-185 multiple by 2.5 %

THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER COLOMBO AREA

OB-4-186

to Rates as same as item no OB -4.178 to OB .4.181
 OB-4-189 multiple by 5 %

OB-4-186

to Rates as same as item no OB -4.178 to OB .4.181
 OB-4-189 multiple by 7 %

MK-GR 22000 m³ GROUND RESERVIOR

EARTH WORK

GR.1.1 As same as item no OB - 4.2 Rate = 750/=

GR.1.2 As same as item no OB - 4.2 Rate X 3%

GR.1.3 As same as item no OB - 4.2 Rate X 4.5%

GR.1.4 **Rock excavation**

Rate per m³

Material cost

| | | | |
|---------------------------|-----------|---------------|--------|
| Allow for blasting powder | 0.15 Kg @ | 2500.00 = Rs. | 375.00 |
| Fruse | 3.00 m @ | 33.00 = Rs. | 99.00 |
| Jumper steel | 0.16 Kg @ | 100.00 = Rs. | 16.00 |
| Allow for fuel and frogs | | = Rs. | 265.00 |

Labour cost

| | | | |
|-------------------------------|------------|--------------|-----------------|
| Unskilled labour | 0.50 day @ | 300.00 = Rs. | 150.00 |
| Skilled labour | 0.75 day @ | 350.00 = Rs. | 262.50 |
| Total cost | | = Rs. | 1,167.50 |
| Add 35% O/H | | = Rs. | 408.63 |
| Total cost per m ³ | | = Rs. | <u>1,576.13</u> |

Sav Rs 1,575/= per m³

THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER COLOMBO AREA

GR.1.5 Filling, Ramming and compacting with selected gravelly material from aproved borrow site

Rate per m³

Material cost

| | | | |
|-------------------------------------|-----------------------|--------------|--------|
| Gravelly material delivered to site | 1.25 m ³ @ | 194.00 = Rs. | 242.50 |
|-------------------------------------|-----------------------|--------------|--------|

Labour cost

| | | | |
|------------------|------------|--------------|--------|
| Unskilled labour | 1.00 day @ | 300.00 = Rs. | 300.00 |
|------------------|------------|--------------|--------|

| | | | |
|----------------------|--|-------|-------|
| Allow for smal tools | | = Rs. | 10.00 |
|----------------------|--|-------|-------|

| | | | |
|------------|--|-------|--------|
| Total cost | | = Rs. | 552.50 |
|------------|--|-------|--------|

| | | | |
|-------------|--|-------|--------|
| Add 35% O/H | | = Rs. | 193.38 |
|-------------|--|-------|--------|

| | | | |
|-------------------------------|--|-------|---------------|
| Total cost per m ³ | | = Rs. | <u>745.88</u> |
|-------------------------------|--|-------|---------------|

Sav Rs 745/= per m³

GR.1.8 Specified concreting including form work

Rate per m³

Assume (2.5 x 2 x 0.2 m = 1m³)

| | | | |
|--------------------------------------------------------|-----------------------|---------------|----------|
| Specified concrete (Rate as same as KMU GR.2.12 rate) | 1.00 m ³ @ | 9108.18 = Rs. | 9,108.18 |
|--------------------------------------------------------|-----------------------|---------------|----------|

| | | | |
|-----------|------------------------|--------------|----------|
| Form work | 10.00 m ² @ | 636.55 = Rs. | 6,365.50 |
|-----------|------------------------|--------------|----------|

| | | | |
|------------|--|-------|-----------|
| Total cost | | = Rs. | 15,473.68 |
|------------|--|-------|-----------|

| | | | |
|-------------|--|-------|----------|
| Add 35% O/H | | = Rs. | 5,415.79 |
|-------------|--|-------|----------|

| | | | |
|-------------------------------|--|-------|------------------|
| Total cost per m ² | | = Rs. | <u>20,889.47</u> |
|-------------------------------|--|-------|------------------|

Allow for average rate for bases,walls and slabs about 80%

Sav Rs 16,540/= per m²

GR-1.12

GR-1.13 Rates as same as item no MK OB -4.118 and MK OB .4.106 rates.

THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER COLOMBO AREA

GR-1.14 Post tensioning wires (7.0 mm wire)

Rate per MT

Material cost

| | | | |
|------------------------------------|---------------|----------------|--------------|
| Prestressing wires | 52.00 Mt @ | 50000.00 = Rs. | 2,600,000.00 |
| Add : For transport | 52.00 Mt @ | 500.00 = Rs. | 26,000.00 |
| 137.5 x137.5 x 50 mm Anchor plates | 268.00 Nos @ | 1750.00 = Rs. | 469,000.00 |
| Pins | 1608.00 Nos @ | 151.00 = Rs. | 242,808.00 |

| | | | |
|---------------------------------------------------------------------------------|--|-------|-------------------|
| Allow for Temporary platform, gruting, closing of anchor plates, spacers , etc, | | = Rs. | <u>270,000.00</u> |
| | | | 3,607,808.00 |

Labour cost

| | | | |
|----------------------------------------|--|-------|--------------|
| Allow for labour 35 % of material cost | | = Rs. | 1,262,732.80 |
|----------------------------------------|--|-------|--------------|

| | | | |
|------------|--|-------|---------------------|
| Total cost | | = Rs. | <u>4,870,540.80</u> |
|------------|--|-------|---------------------|

| | | | |
|-------------|--|-------|---------------------|
| Add 35% O/H | | = Rs. | <u>1,704,689.28</u> |
|-------------|--|-------|---------------------|

| | | | |
|----------------------|--|-------|--------------|
| Total cost per 52 Mt | | = Rs. | 6,575,230.08 |
|----------------------|--|-------|--------------|

| | | | |
|-------------------|--|-------|---------------------|
| Total cost per Mt | | = Rs. | <u>6,575,230.08</u> |
|-------------------|--|-------|---------------------|

52.00

| | | | |
|--|--|-------|------------|
| | | = Rs. | 126,446.73 |
|--|--|-------|------------|

Sav Rs 12,6450/= per MT

GR.1.16 1000 gauge damp proof memberane

Rate per m²

Material cost

| | | | |
|----------------------------------------|-----------------------|-------------|-------|
| Gauge 1000 polythene delivered to site | 1.25 m ² @ | 18.00 = Rs. | 22.50 |
| Allow for adhesive | | = Rs. | 5.50 |

Labour cost

| | | | |
|----------------|-----------|-------------|--------------|
| Skilled labour | 0.25 hr @ | 43.75 = Rs. | <u>10.94</u> |
|----------------|-----------|-------------|--------------|

| | | | |
|------------|--|-------|--------------|
| Total cost | | = Rs. | <u>38.94</u> |
|------------|--|-------|--------------|

| | | | |
|-------------|--|-------|--------------|
| Add 35% O/H | | = Rs. | <u>13.63</u> |
|-------------|--|-------|--------------|

| | | | |
|-------------------------------|--|-------|---------------------|
| Total cost per m ² | | = Rs. | <u><u>52.57</u></u> |
|-------------------------------|--|-------|---------------------|

Sav Rs 52/50 per m²

THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER COLOMBO AREA

GR-1.23

Supply and install 3nos stainless steel ladders inside the reservoir.
(10.2m high each ladder)

Rate per Item

Material cost

10.2 m high stainless steel ladder 3.00 Nos @ 62750.00 = Rs. 188,250.00

Construction of RCC platform Including base plate

Excav. 1x1.3x .5 =0.65 @ 455/= = 295.75

F.work 2/2/1x.5]

2/1.3x.5] =4 @ 637/= = 2548.00

2/.7x .5]

con . 1.3 x 1x .2]

{2(1.15 x.85)x.5x.15 = 0.30 @ 5356/= = 1606.80

Rein. 2/7/1.5] 80 x .617=49.36@47/78 = 2358.42

2/10/1.5]

20/0.85]

3/4]

= 6808.97

RCC platform 2.00 Nos @ 6808.97 = Rs. 13,617.94

Labour cost

Allow for labour for fixing ladders 3.00 Nos @ 2000.00 = Rs. 6,000.00

Total cost = Rs. 207,867.94

Add 35% O/H = Rs. 72,753.78

Total cost per Item = Rs. 280,621.72

Sav Rs 280,619/= per Item

THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER COLOMBO AREA

GR-1.27 Supply and fix GI access ladder. (11.4m high ladder)

Rate per Item

| | | | |
|---------------------------------------------------------|---------------------|------------------|-------------------------|
| <u>Excavation for pit</u> | | | |
| 0.75 x 0.75 x 0.70 m | 0.40 m ³ | @ 455.00 = Rs. | 182.00 |
| <u>Concrete blinding layer (50 mm thick)</u> | | | |
| 0.5 x 0.5 m | 0.30 m ² | @ 232.00 = Rs. | 69.60 |
| <u>Concrete pad</u> | | | |
| 0.5 x 0.5 x 0.6 m | 0.15 m ³ | @ 5356.00 = Rs. | 803.40 |
| <u>Steel Tor steel 10 mm dia.</u> | | | |
| 8/2/1.0 x 0.67 | 10.00 Kg | @ 47.78 = Rs. | 477.80 |
| <u>Form work</u> | | | |
| 4/0.5 x 0.6 m | 1.20 m ² | @ 637.00 = Rs. | 764.40 |
| Supply of G I ladder | 1.00 Nos | @ 16530.00 = Rs. | 16,530.00 |
| Fixng for GI ladder including base plates ,welding etc, | | = Rs. | <u>5,000.00</u> |
| Total cost | | = Rs. | 23,827.20 |
| Add 35% O/H | | = Rs. | <u>8,339.52</u> |
| Total cost per Item | | = Rs. | <u><u>32,166.72</u></u> |

Sav Rs 32,170/= per Item

MK-RF REHABILITATION OF THE ROOF STRUCTURE

RF.1.1 Demolition of Vault

Rate per item

| | | | |
|-------------------------------------|------------------------|-----------------|----------------------------|
| Removing concrete and reinforcement | 3400.00 m ² | @ 250.00 = Rs. | 850,000.00 |
| Add using water jet | 3400.00 m ² | @ 150.00 = Rs. | 510,000.00 |
| Transport - lorry load | 30.00 Nr | @ 3000.00 = Rs. | <u>90,000.00</u> |
| Total cost Item | | = Rs. | 1,450,000.00 |
| Add 35% O/H | | = Rs. | <u>507,500.00</u> |
| Total cost per Item | | = Rs. | <u><u>1,957,500.00</u></u> |

Sav Rs 2,000,000/= per Item

THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER COLOMBO AREA

RF.1.2 Removing steel girders

Rate per item

$2/13 \times 58.2 \times = 1513.2$

| | | | | | |
|------------------------|---------|----|---|---------------|--------------------------|
| For cutting | 1600.00 | m | @ | 100.00 = Rs. | 160,000.00 |
| Removing and storing | 1600.00 | m | @ | 25.00 = Rs. | 40,000.00 |
| Transport -lorry loard | 25.00 | Nr | @ | 3000.00 = Rs. | <u>75,000.00</u> |
| Total cost Item | | | | = Rs. | <u>275,000.00</u> |
| Add 35% O/H | | | | = Rs. | <u>96,250.00</u> |
| Total cost per Item | | | | = Rs. | <u><u>371,250.00</u></u> |

Sav Rs 500,000/= per Item

RF.1.3 Removing cast iron column

Rate per item

| | | | | | |
|---------------------------|---------|----|---|---------------|--------------------------|
| For cutting (121 x 12.5) | 1512.50 | m | @ | 100.00 = Rs. | 151,250.00 |
| Removing and storing | 1512.50 | m | @ | 50.00 = Rs. | 75,625.00 |
| Transport -lorry loard | 25.00 | Nr | @ | 3000.00 = Rs. | <u>75,000.00</u> |
| Total cost Item | | | | = Rs. | <u>301,875.00</u> |
| Add 35% O/H | | | | = Rs. | <u>105,656.25</u> |
| Total cost per Item | | | | = Rs. | <u><u>407,531.25</u></u> |

Sav Rs 500,000/= per Item

RF.1.4 Removing cocrete base slab

Rate per item

| | | | | | |
|------------------------|--------|----|---|---------------|-------------------------|
| Removing | 121.00 | m | @ | 250.00 = Rs. | 30,250.00 |
| Transport -lorry loard | 6.00 | Nr | @ | 3000.00 = Rs. | <u>18,000.00</u> |
| Total cost Item | | | | = Rs. | <u>48,250.00</u> |
| Add 35% O/H | | | | = Rs. | <u>16,887.50</u> |
| Total cost per Item | | | | = Rs. | <u><u>65,137.50</u></u> |

Sav Rs 70,000/= per Item

THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER COLOMBO AREA

RF.1.5 Removing concrete wall

Rate per item

| | | | | |
|----------------------------|-----------------------|---|---------------|--------------------------|
| Removing (240 x 1.25 x1) | 300.00 m ³ | @ | 1000.00 = Rs. | 300,000.00 |
| For cutting | 300.00 m ³ | @ | 300.00 = Rs. | 90,000.00 |
| Transport -lorry load | | | = Rs. | <u>10,000.00</u> |
| Total cost Item | | | = Rs. | 400,000.00 |
| Add 35% O/H | | | = Rs. | <u>140,000.00</u> |
| Total cost per Item | | | = Rs. | <u><u>540,000.00</u></u> |

Sav Rs 600,000/= per Item

RF.1.6 Demolition of Barrel Vault

Rate per item

| | | | | |
|-------------------------------------|----------------------|---|---------------|-------------------------|
| Removing concrete and reinforcement | 40.00 m ² | @ | 250.00 = Rs. | 10,000.00 |
| Add using water jet | 40.00 m ² | @ | 150.00 = Rs. | 6,000.00 |
| Transport - lorry load | 1.00 Nr | @ | 3000.00 = Rs. | <u>3,000.00</u> |
| Total cost Item | | | = Rs. | 19,000.00 |
| Add 35% O/H | | | = Rs. | <u>6,650.00</u> |
| Total cost per Item | | | = Rs. | <u><u>25,650.00</u></u> |

Sav Rs 30,000/= per Item

RF.1.7 Removal of existing MS sheet and frame

Rate per item

| | | | | |
|---------------------------|----------------------|---|--------------|------------------------|
| Removing sheets and frame | 13.00 m ² | @ | 250.00 = Rs. | 3,250.00 |
| Total cost Item | | | = Rs. | <u>3,250.00</u> |
| Add 35% O/H | | | = Rs. | <u>1,137.50</u> |
| Total cost per Item | | | = Rs. | <u><u>4,387.50</u></u> |

Sav Rs 5,000/= per Item

THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER COLOMBO AREA

RF.1.9 Erection of temporary platform

Rate per item

| | | | | | | |
|-------------------------------------|--------|----------------|---|---------|-------|--------------------------|
| 50 mm thick planks (30 x 30 = 900) | 900.00 | m ² | @ | 500.00 | = Rs. | 450,000.00 |
| Cross beams (15 x 30) | 450.00 | m | @ | 200.00 | = Rs. | 90,000.00 |
| Supports (2 x 10) | 20.00 | m | @ | 1000.00 | = Rs. | 20,000.00 |
| Total cost Item | | | | | = Rs. | <u>560,000.00</u> |
| Add 35% O/H | | | | | = Rs. | <u>196,000.00</u> |
| Total cost per Item | | | | | = Rs. | <u><u>756,000.00</u></u> |

Sav Rs 800,000/= per Item

RF.1.11 Allow for approved bonding agent on top of concrete wall

Rate per item

| | | | | | | |
|--------------------------------------------|--------|----------------|---|---------|-------|--------------------------|
| Approved bonding 'agent'(240 x 1.25= 300) | 300.00 | m ² | @ | 500.00 | = Rs. | 150,000.00 |
| Allow for concrete (240 x 1.25= 300) | 300.00 | m ² | @ | 400.00 | = Rs. | 120,000.00 |
| Allow for form work(2x 240 x 0.05= 300) | 24.00 | m ² | @ | 1000.00 | = Rs. | 24,000.00 |
| Total cost Item | | | | | = Rs. | <u>294,000.00</u> |
| Add 35% O/H | | | | | = Rs. | <u>102,900.00</u> |
| Total cost per Item | | | | | = Rs. | <u><u>396,900.00</u></u> |

Sav Rs 400,000/= per Item

RF.1.12 Allow for earth fill

Rate per item

| | | | | | | |
|---------------------|--------|----------------|---|--------|-------|-------------------------|
| Allow forearth fill | 100.00 | m ³ | @ | 400.00 | = Rs. | <u>40,000.00</u> |
| Total cost Item | | | | | = Rs. | <u><u>40,000.00</u></u> |

Sav Rs 100,000/= per Item

RF.1.13 Allow for turfing

Rate per item

| | | | | | | |
|-------------------|---------|----------------|---|--------|-------|--------------------------|
| Allow for turfing | 6400.00 | m ² | @ | 100.00 | = Rs. | <u>640,000.00</u> |
| Total cost Item | | | | | = Rs. | <u><u>640,000.00</u></u> |

Sav Rs 700,000/= per Item

THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER COLOMBO AREA

RF.1.14 Repairing and cleaning existing drain

Rate per m

| | | | |
|---------------|------------|--------------|----------------------|
| Clearing | 1.00 m @ | 25.00 = Rs. | 25.00 |
| Plaster | 1.00 m @ | 300.00 = Rs. | 300.00 |
| slopping | 1.00 m @ | 25.00 = Rs. | <u>25.00</u> |
| Total cost m | | = Rs. | <u><u>350.00</u></u> |
| | | | |
| Cost per 330m | 330.00 m @ | 350.00 = Rs. | <u>115,500.00</u> |

Sav Rs 150,000/= per Item

KMU-GR SITE WORKS

GR.1.1 Demolition of building

Rate per item

| | | | |
|----------------------------------------|------------------------|---------------|--------------------------|
| Demolition of building | | | |
| 12 x 4 = 48 | | | |
| 6 x 2 = <u>12</u> | | | |
| = 60 | | | |
| Demolition of building | 60.00 m ² @ | 3000.00 = Rs. | 180,000.00 |
| Toilet | | = Rs. | 5,000.00 |
| Boundry wall (12.5 + 26 + 18 = 56.5) | 56.50 m ² @ | 500.00 = Rs. | <u>28,250.00</u> |
| Total cost Item | | = Rs. | <u><u>213,250.00</u></u> |

Sav Rs 225,000/= per Item

GR.1.2 Removal of existing fence

Rate per item

| | | | |
|--------------------------------------|-----------|--------------|-------------------------|
| Removal of existing fence (15+28+25) | 68.00 m @ | 200.00 = Rs. | <u>13,600.00</u> |
| Total cost Item | | = Rs. | <u><u>13,600.00</u></u> |

Sav Rs 15,000/= per Item

THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER COLOMBO AREA

GR.1.3 Site clearing

Rate per item

(a) $42.5 \times 38 = 1615$
 (b) $(42.5 + 47.5)/2 \times 25 = 1125$
 = 2740

| | | | | |
|---------------|------------------------|---|------------|------------------|
| Clearing site | 2800.00 m ² | @ | 25.0 = Rs. | <u>70,000.00</u> |
| | | | | <u>70,000.00</u> |

Sav Rs 70,000/= per Item

GR.01.05 Allow for stripping 150 mm thick top soil

Rate per item

$20 \times 40 \times 0.75 = 600$

| | | | | |
|--------------------|-----------------------|---|-------------|-------------------|
| Stripping top soil | 600.00 m ³ | @ | 300.0 = Rs. | <u>180,000.00</u> |
| Total cost | | | = Rs. | <u>180,000.00</u> |

Sav Rs 200,000/= per Item

GR.01.06 Earth filling

Rate per Item

| | | | | |
|---------------|-----------------------|---|-------------|-------------------|
| Filling earth | 757.00 m ³ | @ | 600.0 = Rs. | <u>454,200.00</u> |
| Total cost | | | = Rs. | <u>454,200.00</u> |

Sav Rs 500,000/= per Item

GR.01.07 Turfing

Rate per item

$2 \times 6 = 12$
 $35 = 35$
 $2 \times 29 = 58$
 = 105 x 2 = 210 m²

| | | | | |
|------------|-----------------------|---|--------------|------------------|
| Turfing | 210.00 m ² | @ | 150.00 = Rs. | <u>31,500.00</u> |
| Total cost | | | = Rs. | <u>31,500.00</u> |

Sav Rs 50,000/= per Item

THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER COLOMBO AREA

GR.01.08 6000mm wide road

Rate per m²

6 x 60 = 360

| | | | | | |
|-------------------------|-----------------------|---|---------|-------|-------------------|
| Road work | 360.00 m ² | @ | 1800.00 | = Rs. | <u>648,000.00</u> |
| Total cost | | | | = Rs. | <u>648,000.00</u> |
| Rate per m ² | | | | = Rs. | <u>1,800.00</u> |

Sav Rs 1800/= per m²

GR.01.11 Construction of 800 x2000 mm ~~gabion~~ ^{Gabion}

Rate per m

| | | | | | |
|-----------------------------------------|----------------------|---|--------|-------|--------------------------|
| Excavation (13 x 0.8 x 2) | 21.00 m ³ | @ | 300.0 | = Rs. | 6,300.00 |
| Rubble work | 21.00 m ³ | @ | 1500.0 | = Rs. | 31,500.00 |
| Gabion ^{Gabion} net | 80.00 m ² | @ | 500.0 | = Rs. | 40,000.00 |
| labour | | | | = Rs. | <u>25,000.00</u> |
| Total cost | | | | = Rs. | 102,800.00 |
| Add 35% O/H | | | | = Rs. | <u>35,980.00</u> |
| Total cost per 13m | | | | = Rs. | <u><u>138,780.00</u></u> |

Sav Rs 11000/= per m

GR.01.12 Construction of storm water drain

Rate per Item

| | | | | | |
|---------------------|----------|---|---------|-------|--------------------------|
| Drain | 50.00 m | @ | 3000.00 | = Rs. | 150,000.00 |
| Kerbs | 120.00 m | @ | 900.00 | = Rs. | <u>108,000.00</u> |
| Total cost | | | | = Rs. | 258,000.00 |
| Add 15% O/H | | | | = Rs. | <u>38,700.00</u> |
| Total cost per Item | | | | = Rs. | <u><u>296,700.00</u></u> |

Sav Rs 300,000/= per Item

THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER COLOMBO AREA

GR.01.15 Construction of inlet valve chamber

Rate per m

| | | | | |
|-------------------------------|----------------------|---|----------------|-------------------|
| Excavation (13 x 3x 2) | 78.00 m ³ | @ | 300.00 = Rs. | 23,400.00 |
| Screed concrete work (13 x 3) | 40.00 m ² | @ | 400.00 = Rs. | 16,000.00 |
| RCC Concrete | 30.00 m ² | @ | 15000.00 = Rs. | 450,000.00 |
| Base - 13 x 3 x 0.2 | =7.8] | | | |
| walls - 2 x 13 x 0.25 x 2 | = 13] | | | |
| 2 x 3 x 0.25 x 2 | = 3] 29 | | | |
| Cover slab -13 x 2 x 0.2 | = 5.2] | | | |
| Total cost per Item | | | = Rs. | <u>489,400.00</u> |

Sav Rs 500,000/= per m

KMU- GR GROUND RESERVIOR

GR 2.12

to

Concreting water retaining structure as per specification.

GR 2.18

Rate per m³

(Assume 1.3 x1.3 x 0.6 = 1.01 m³)

Material cost

| | | | | |
|--------------------------------------|---------------------|---|---------------|----------|
| Ready mix concrete delivered to site | 1.00 m ³ | @ | 5850.00 = Rs. | 5,850.00 |
| Add 3% wastage | | | = Rs. | 175.50 |

Elastomric cementitious coats

Per m²

3.57 kg powder @297/63 = 1062.54

Labour for application = 300.00

Rate per m² = 1362.54

1.69 m² contact area reuired to 1 m³ concrete

Allow for coating 1.69 m² @ 1362.54 = Rs. 2,302.69

Allow for fule ash = Rs. 430.00

Labour cost

For placing concrete Unskilled labour 0.75 hrs @ 37.50 = Rs. 28.13

Skilled labour 0.50 hrs @ 43.75 = Rs. 21.88

Machine cost

Pumping charges 1.00 m³ @ 300.00 = Rs. 300.00

= Rs. 9,108.19

Add 35% O/H = Rs. 3,187.87

Total cost = Rs. 12,296.06

Sav Rs 12,300/= per m³

THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER COLOMBO AREA

WALL AND FLOOR FINISHES

GR 2-76 16 mm thick plaster in cement ,lime, andsand 1:1:5 finished smooth with lime putty .

Rate per m²

Material cost

| | | | |
|-------------|-----------------------|--------------|-------|
| Cement | 0.10 Nos @ | 305.00 = Rs. | 30.50 |
| Slaked lime | 3.30 Kg @ | 7.00 = Rs. | 23.10 |
| Sand | 0.03 m ³ @ | 495.00 = Rs. | 14.85 |
| Water | 5.00 Ltr @ | 1.00 = Rs. | 5.00 |

Labour cost

| | | | |
|-------------------------------|-----------|-------------|---------------|
| Unskilled labour | 1.25 hr @ | 37.50 = Rs. | 46.88 |
| Mason | 1.50 hr @ | 50.00 = Rs. | 75.00 |
| Total cost | | = Rs. | 195.33 |
| Add 35% O/H | | = Rs. | 68.36 |
| Total cost per m ² | | = Rs. | <u>263.69</u> |

Sav Rs 263/= per m²

GR 2-78 16 mm thick plaster in cement ,lime, andsand 1:1:5 finished semi rough with lime putty .

Rate per m²

Material cost

| | | | |
|-------------|-----------------------|--------------|-------|
| Cement | 0.10 Nos @ | 305.00 = Rs. | 30.50 |
| Slaked lime | 2.30 Kg @ | 7.00 = Rs. | 16.10 |
| Sand | 0.03 m ³ @ | 495.00 = Rs. | 14.85 |
| Water | 5.00 Ltr @ | 1.00 = Rs. | 5.00 |

Labour cost

| | | | |
|-------------------------------|-----------|-------------|---------------|
| Unskilled labour | 1.25 hr @ | 37.50 = Rs. | 46.88 |
| Mason | 1.35 hr @ | 50.00 = Rs. | 67.50 |
| Total cost | | = Rs. | 180.83 |
| Add 35% O/H | | = Rs. | 63.29 |
| Total cost per m ² | | = Rs. | <u>244.11</u> |

Sav Rs 245/= per m²

THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER COLOMBO AREA

GR 2- 80 20 mm thick plaster in cement ,lime, and sand 1:3 finished smooth with neat red cement float .
to

GR 2- 82

Rate per m²

Material cost

| | | | |
|---------------------------|-----------------------|--------------|-------|
| Cement | 0.02 Nos @ | 305.00 = Rs. | 6.10 |
| Sand | 0.02 m ³ @ | 495.00 = Rs. | 9.90 |
| Water | 5.00 Ltr @ | 1.00 = Rs. | 5.00 |
| Allow for coloured cement | | = Rs. | 43.00 |

Labour cost

| | | | |
|-------------------------------|-----------|-------------|---------------|
| Unskilled labour | 1.35 hr @ | 37.50 = Rs. | 50.63 |
| Mason | 1.75 hr @ | 50.00 = Rs. | 87.50 |
| Total cost | | = Rs. | 202.13 |
| Add 35% O/H | | = Rs. | 70.74 |
| Total cost per m ² | | = Rs. | <u>272.87</u> |

Sav Rs 272/= per m²

PAINTING AND DECORATING

GR.2.84 One primer coat and two coats of approved emulsion paint to internal walls.

Rate per m²

Material cost

| | | | |
|-------------------------------|------------|--------------|-------|
| Primer | 0.10 Ltr @ | 217.50 = Rs. | 21.75 |
| Emulsion | 0.20 Ltr @ | 249.75 = Rs. | 49.95 |
| Allow for brushes sand papers | | = Rs. | 6.00 |

Labour cost

| | | | |
|-------------------------------|-----------|-------------|---------------|
| Painter | 1.25 hr @ | 50.00 = Rs. | 62.50 |
| Total cost | | = Rs. | 140.20 |
| Add 35% O/H | | = Rs. | 49.07 |
| Total cost per m ² | | = Rs. | <u>189.27</u> |

Sav Rs 189/= per m²

THE PROJECT FOR THE REDUCTION OF NON REVENUE WATER IN THE GREATER COLOMBO AREA

GR.2.85 One primer coat and two coats of approved weather shield emulsion paint to internal walls.

Rate per m²

Material cost

| | | | |
|-------------------------------|------------|--------------|-------|
| Primer | 0.10 Ltr @ | 217.50 = Rs. | 21.75 |
| Weather shield Emulsion | 0.20 Ltr @ | 319.00 = Rs. | 63.80 |
| Allow for brushes sand papers | | = Rs. | 3.00 |

Labour cost

| | | | |
|-------------------------------|-----------|-------------|---------------|
| Painter | 1.25 hr @ | 50.00 = Rs. | 62.50 |
| Total cost | | = Rs. | 151.05 |
| Add 35% O/H | | = Rs. | 52.87 |
| Total cost per m ² | | = Rs. | <u>203.92</u> |

Sav Rs 203/= per m²

GR.2.93 Supplying and laying 300 mm dia. pvc perforated pipe as per drawing.

Rate per m

Material cost

| | | | |
|--------------------------------------------------|-----------------------|--------------|-----------------|
| 300 mm dia. pvc perforated pipe including laying | 1.00 m @ | 590.00 = Rs. | 590.00 |
| Geotextile laying | 4.71 m ² @ | 51.00 = Rs. | 240.21 |
| Pebble laying | 1.00 m @ | 54.00 = Rs. | 54.00 |
| Total cost | | = Rs. | 884.21 |
| Add 35% O/H | | = Rs. | 309.47 |
| Total cost per m ² | | = Rs. | <u>1,193.68</u> |

Sav Rs 1,194/= per m²

CHAPTER 10

APPENDIX 10A

FINANCIAL EVALUATION

FINANCIAL EVALUATION

1 Quantifiability of Project

The proposed project can be broken down into the four components, namely:

- ① Rehabilitation of reservoirs
- ② Rehabilitation and strengthening of distribution facilities
- ③ NRW Action Plan
- ④ Rehabilitation of distribution pipe network

Costs and benefits of each component can be identified in comparison between “With Project” and “Without Project” situations. Costs are usually quantifiable, however some of the benefits cannot be reasonably quantified. Those costs and benefits and their quantifiability are summarized in Table 1. Those costs and benefits are further explained in subsequent paragraphs.

Table 1 Costs and Benefits of Components

| Component | Cost | Benefit |
|---------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ① Rehabilitation of reservoirs | Zero for rehabilitation of existing reservoirs Capital expenditure of a new reservoir (quantifiable) | Avoidance of opportunity loss due to water supply cut that will occur if no preventive rehabilitation is made now (quantifiable) Profit increase from newly constructed reservoir (quantifiable) |
| ② Rehabilitation and strengthening of distribution facilities | Capital expenditure (quantifiable) | Profit increase from newly supplied water (quantifiable) |
| ③ NRW Action Plan | Equipment cost, mass media campaign cost, etc. (quantifiable) | Decrease of variable cost incurred at WTPs attributable to production decrease caused by NRW reduction (unquantifiable) Profit increase from newly billed water (unquantifiable) |
| ④ Rehabilitation of distribution pipe network | Capital expenditure (quantifiable) | Ditto |

- ① Rehabilitation of reservoirs

The costs of rehabilitating two existing reservoirs can be regarded zero when compared to “without project” situation. Because those preventive rehabilitation costs should be considered equal to the reconstruction costs to be incurred when the reservoir roofs collapse in future. Comparison between the preventive rehabilitation costs of now and the future reconstruction costs is rather subject to arbitrariness.

However, the cost of constructing a new reservoir at Maligakanda should be separately identified as cost which is only incurred under the “with project” situation. This back up reservoir will not be constructed if the old reservoir roof collapses under the “without project” situation.

In terms of benefit, two types of opportunity gains are identifiable. Firstly, if the rehabilitation is preventively done, NWSDB will be able to earn the operational profit¹ from the water that would be otherwise unable to sell during the temporary operating period due to the roof collapse. Secondly, also during the reconstruction period of the reservoirs, water supply capacity will decrease. Then if the rehabilitation is preventively done, NWSDB will not lose the operational profit of decreased portion of water sales.

Another benefit is realizable after commissioning of the rehabilitated reservoir at Maligakanda. The newly constructed reservoir that has been substituting the old one during the rehabilitation work can be still used after the rehabilitation work is completed. Therefore additional operational profit is expected from the water to be supplied through the new reservoir.

② Rehabilitation and strengthening of distribution facilities in Kotikawatte and Mulleriyawa Areas

The cost is straightforwardly the capital expenditure including direct construction cost, supply of materials, engineering services and contingencies.

The benefit is realized through additional operational profit from newly supplied water, which would not be generated were it not for the supply reinforcement.

¹ “Operational profit” is defined as the amount of cash revenue for a marginal unit sold. According to NWSDB Income Statements of 1999 and 1998, the current operational profit that excludes non-cash costs such as depreciation and amortization of deferred costs, is estimated at 24 percent of average unit price.

③NRW Action Plan, and ④Rehabilitation of distribution pipe network

These two components combinedly contribute to the reduction of NRW in CMC. It goes without saying that other efforts have been and will be made by NWSDB to this same end. Even if we assume that the target levels of NRW set by NWSDB is realizable, it seems too arbitrary to extract the contribution to be made by these components. Therefore, the benefit is unquantifiable although it must exist.

The costs of those components include pipe laying, scraping, supply of materials, mass media campaign, and various activities for NRW reduction.

2 Premises of Financial Evaluation

The financial viability of each component are evaluated by three indicators, which are the Net Present Value (NPV), the Benefit Cost Ratio (B/C) and the Internal Rate of Return (IRR). Those indicators are aggregated, if possible, in order to clarify the viability of the integrated project. Principal premises of financial evaluation are explained in subsequent paragraphs.

(a) Project Life

The Project consists of various types of capital assets that differ in economic life. Pipes well rehabilitated can last more than 50 years, but some valves with poor maintenance easily corrode in a short period. Table 2 shows depreciation rates used at NWSDB. For example, infrastructure assets are depreciated at 2 percent per year, indicating 50 year service life. The project life of the project, for convenience sake, will be set at 30 years starting in 2001 and ending in the year 2030.

Table 2 Depreciation Rate of Fixed Assets

| | |
|---------------------------------------|-------|
| Infrastructures | 2% |
| Buildings | 2% |
| Structures | 1.67% |
| Plant & Equipment (Treatment) | 5% |
| Plant & Equipment (Transmission) | 1.67% |
| Survey Equipment | 10% |
| Laboratory Equipment | 10% |
| Furniture, Fittings & Other equipment | 10% |
| Passenger Vehicles | 14.3% |
| Heavy Vehicles | 10% |
| Services & Bulk Meters | 10% |

(b) Operational Profit

The "Operational profit" is defined as the amount of cash revenue for a marginal unit sold. According to the income statements of 1998 and 1999 (Table 3), the current operational profit that excludes non-cash costs such as depreciation and amortization of deferred costs, is estimated at 24 percent of operating revenue.

Table 3 Income Statements of NWSDB

| | (Rs. million) | | |
|---------------------------------------|---------------|--------------|-------------------|
| | 1999 | 1998 | Average |
| Operating revenues : | | | |
| Sale of water | 2,861 | 2,569 | 2,715 |
| Fees & other charges | 333 | 264 | 298 |
| Total operating revenues | <u>3,194</u> | <u>2,833</u> | <u>3,013 100%</u> |
| Operating expenses : | | | 0 |
| Direct operating expenses | 1,593 | 1,560 | 1,577 |
| Administration overheads | 357 | 374 | 365 |
| Depreciation | 510 | 474 | 492 16% |
| Deferred cost amortization | 22 | 20 | 21 1% |
| Bad debt expense | 236 | 19 | 127 |
| Provision for retiring gratuity | 37 | 67 | 52 |
| Total operating expenses | <u>2,755</u> | <u>2,514</u> | <u>2,634</u> |
| Operating income | <u>438</u> | <u>319</u> | <u>379</u> |
| | | | 0 |
| Interest expense | 413 | 300 | 357 |
| Operating income after interest | <u>25</u> | <u>19</u> | <u>22</u> |
| | | | 0 |
| Non-operating revenues | 219 | 163 | 191 |
| | | | 0 |
| Non-operating expenses : | | | 0 |
| Provision for irrevocable staff debts | 4 | 0 | 2 |
| | | | 0 |
| Net income | <u>240</u> | <u>182</u> | <u>211 7%</u> |

Source: NWSDB

Note: Operational profit margin is computed at 24% (=16%+1%+7%).

(c) Tariff Increase

The average tariff of entire NWSDB supply area are Rs.12.97 /m³, Rs.12.96 /m³, and Rs.14.24 /m³ respectively as of 1998, 1999, and June 2000. NWSDB has no mechanism by which tariffs are annually adjusted according to inflationary variation of costs. However, in August 1999 a tariff increase took effect and another tariff increase is expected in January 2001. Although such price adjustment mechanism is yet to be established, it can be assumed that NWSDB's

solicitations of tariff increase will be timely approved by GOSL in future. Comparison between the August 1999 tariff and that of January 2001 is shown in Table 4. The monthly water bills are selectively compared in Table 5. In the absence of further detailed information, it can be said that the average tariff will increase approximately by 20 to 30 percent in January 2001. Referring to this data, it is assumed in the financial simulation, that the average tariff will increase by 20 percent biennially.

Table 4 Water Tariff Comparison

| Customers | Period | From Aug. 1999 | From Jan. 2001 | Change (%) |
|-----------------------------|-------------|-------------------|-------------------|---------------|
| Domestic | | | | |
| Fixed charge | (Rs./month) | 35.00 | 40.00 | 14% |
| 1-10 m3 | (Rs./m3) | 0.00 | 1.00 | n.a. |
| 11-15 m3 | (Rs./m3) | 2.75 | 2.00 | -27% |
| 16-20 m3 | (Rs./m3) | 2.75 | 8.00 | 191% |
| 21-25 m3 | (Rs./m3) | 9.50 | 13.00 | 37% |
| 26-30 m3 | (Rs./m3) | 18.00 | 24.00 | 33% |
| 31-40 m3 | (Rs./m3) | 20.00 | 30.00 | 50% |
| 41-50 m3 | (Rs./m3) | 25.00 | 40.00 | 60% |
| 51-75 m3 | (Rs./m3) | 38.00 | 45.00 | 18% |
| Over 75 m3 | (Rs./m3) | 40.00 | 45.00 | 13% |
| Standposts | (Rs./m3) | 5.00 | 6.00 | 20% |
| Bulk | (Rs./m3) | 8.00 | 8.00 | 0% |
| Religious up to 50 m3 | (Rs./m3) | 3.00 | 3.00 | 0% |
| Religious over 50 m3 | (Rs./m3) | 10.00 | 12.00 | 20% |
| Schools | (Rs./m3) | 3.00 | 3.00 | 0% |
| Commercial / Industrial | (Rs./m3) | 30.00 | 35.00 | 17% |
| BOI | (Rs./m3) | 22.00 | 24.00 | 9% |
| Shipping | (Rs./m3) | 120.00 | 125.00 | 4% |
| Non-Domestic service charge | (Rs./month) | 120.00 | 120.00 | 0% |

Source: NWSDB

Table 5 Monthly Water Bill Comparison

| Consumption | Period | From Aug. 1999 (Rs./m3) | From Jan. 2001 (Rs./m3) | Increase (%) |
|---------------------|--------|-------------------------------|-------------------------------|-----------------|
| Domestic | | | | |
| 10 m3 | | 35.00 | 50.00 | 43% |
| 15 m3 | | 48.75 | 60.00 | 23% |
| 20 m3 | | 62.50 | 100.00 | 60% |
| 25 m3 | | 110.00 | 165.00 | 50% |
| 30 m3 | | 200.00 | 285.00 | 43% |
| 40 m3 | | 400.00 | 585.00 | 46% |
| 50 m3 | | 650.00 | 985.00 | 52% |
| Non-Domestic | | | | |
| 25 m3 | | 750.00 | 875.00 | 17% |

Source: NWSDB

(d) Incremental Water Supply in Kotikawatte – Mulleriyawa

The water demand in this area is not met due to the shortage of capacity. Thus, by reinforcing the distribution capacity, NWSDB can supply additional water to this area until the new capacity is caught up by the demand. The water demand in this area has been revised and additional supply realizable by the Project is estimated as shown in Table 6.

Table 6 Water Demand for Kotikawatte and Mulleriyawa Area

| Year | Water demand (m ³ /day) | Additional supply (m ³ /day) | Remark |
|------|------------------------------------|-----------------------------------------|--------------------------------------------|
| 2000 | 17,900 | | |
| 2001 | 18,327 | | |
| 2002 | 18,754 | | |
| 2003 | 19,182 | | |
| 2004 | 19,609 | | |
| 2005 | 20,036 | 1,200 | Completion of facility is scheduled in May |
| 2006 | 20,514 | 2,614 | |
| 2007 | 20,992 | 3,092 | |
| 2008 | 21,470 | 3,570 | |
| 2009 | 21,948 | 4,048 | |
| 2010 | 22,426 | 4,526 | |
| 2011 | 22,961 | 5,061 | |
| 2012 | 23,496 | 5,596 | |
| 2013 | 24,032 | 6,132 | |
| 2014 | 24,567 | 6,667 | |
| 2015 | 25,102 | 7,202 | |
| 2016 | 25,702 | 7,802 | |
| 2017 | 26,301 | 8,401 | |
| 2018 | 26,901 | 9,001 | |
| 2019 | 27,500 | 9,600 | |
| 2020 | 28,100 | 10,200 | Demand catches up the new capacity |
| 2021 | 28,100 | 10,200 | |
| 2022 | 28,100 | 10,200 | |
| 2023 | 28,100 | 10,200 | |
| 2024 | 28,100 | 10,200 | |
| 2025 | 28,100 | 10,200 | |
| 2026 | 28,100 | 10,200 | |
| 2027 | 28,100 | 10,200 | |
| 2028 | 28,100 | 10,200 | |
| 2029 | 28,100 | 10,200 | |
| 2030 | 28,100 | 10,200 | |

(e) Supply Capacity of Maligakanda Reservoirs

The supply capacity by way of the existing Maligakanda Reservoir is 30,000 m³/day. A new reservoir of 22,000 m³/day capacity will be constructed by the Project. Without the Project, the roof will collapse, whose timing is assumed to be in the year 2010, then the supply capacity will decrease to 50 percent during the temporary operating period of 6 months. During the

succeeding reconstruction period that may last for 4 years, the supply capacity will keep 60 percent of 30,000 m³/day.

(f) Supply Capacity of Ellie House Reservoir

The supply capacity by way of the existing Ellie House Reservoir is 36,000 m³/day. Without the Project, the roof will collapse, whose timing is assumed to be in the year 2010, then the supply capacity will decrease to 50 percent during the temporary operating period of 6 months. During the succeeding reconstruction period that may last for 4 years, the supply capacity will keep 60 percent of 36,000 m³/day.

(g) Cash Outlay Schedule

The cash outlay schedule relevant to the financial analysis is summarized in Table 7, which is based on the latest work program available.

Table 7 Cash Outlay Schedule Relevant to Financial Analysis

| Year | Rehabilitation & strengthening of distribution facilities in Kotikawatte and Mulleriyawa | Construction of a new reservoir at Maligakanda |
|-------|------------------------------------------------------------------------------------------|------------------------------------------------|
| 2002 | Rs. 87.2 M (15%) | |
| 2003 | Rs. 203.4 M (35%) | |
| 2004 | Rs. 174.3 M (30%) | Rs. 61.8 M (35%) |
| 2005 | Rs. 116.2 M (20%) | Rs. 114.7 M (65%) |
| Total | Rs. 581.0 M (100%) | Rs. 176.5 M (100%) |

3 Analysis of Financial Indicators

The results of computation of NPV, B/C, and IRR and NPV are summarized in Table 8. Detailed computations are shown in Tables 9, 10, 11 and 12.

NPV is computable for “①Rehabilitation of reservoirs component”, and “②Rehabilitation and strengthening of distribution facilities component”. B/C and IRR are computable only for “② Rehabilitation and strengthening of distribution facilities component”.

“①Rehabilitation of reservoirs component” is regarded financially viable because of its positive NPV. “②Rehabilitation and strengthening of distribution facilities component” is not financially viable if it is implemented alone. However if “①Rehabilitation of reservoirs component” and “②Rehabilitation and strengthening of distribution facilities component” are implemented together, or all of the four components are combined, the overall NPV would exceed Rs. 911 million. Therefore the financial viability is justifiable.

“③NRW Action Plan component” and “④Rehabilitation of distribution pipe network component” cannot be judged as financially sound from NPV, B/C, or IRR. However they must have more benefits than costs. Those unquantifiable benefits are presented in the subsequent chapter.

Table 8 Summary of Financial Indicators

| Component | NPV | B/C | IRR |
|------------------------------------------------------------------|----------------|--------------|--------------|
| ①Rehabilitation of reservoirs | Rs. 1,091 M | Incomputable | Incomputable |
| ②Rehabilitation and strengthening of distribution facilities | - Rs. 180 M | 0.5 | 6.4 % |
| ③NRW Action Plan ④Rehabilitation of distribution pipe network | Incomputable | Incomputable | Incomputable |
| Total Project | Over Rs. 911 M | Incomputable | Incomputable |

Table 9 Financial Evaluation - Rehabilitation of Maligakanda Reservoir

(Current Rs.)

| Year No. | Actual year | Average tariff (Rs./m ³) | Prevented loss when shutdown (Rs. million) | Prevented loss when reconstruction (Rs. million) | Net cash flow (Rs. million) |
|---------------------------------|-------------|--------------------------------------|--------------------------------------------|--------------------------------------------------|-----------------------------|
| -1 | 1999 | 13.0 | | | |
| 0 | 2000 | 14.2 | | | |
| 1 | 2001 | 17.1 | | | |
| 2 | 2002 | 17.1 | | | |
| 3 | 2003 | 20.5 | | | |
| 4 | 2004 | 20.5 | | | |
| 5 | 2005 | 24.6 | | | |
| 6 | 2006 | 24.6 | | | |
| 7 | 2007 | 29.5 | | | |
| 8 | 2008 | 29.5 | | | |
| 9 | 2009 | 35.4 | | | |
| 10 | 2010 | 35.4 | 23.2 | | 23.2 |
| 11 | 2011 | 42.5 | | 44.7 | 44.7 |
| 12 | 2012 | 42.5 | | 44.7 | 44.7 |
| 13 | 2013 | 51.0 | | 53.6 | 53.6 |
| 14 | 2014 | 51.0 | | 53.6 | 53.6 |
| 15 | 2015 | 61.2 | | | |
| 16 | 2016 | 61.2 | | | |
| 17 | 2017 | 73.5 | | | |
| 18 | 2018 | 73.5 | | | |
| 19 | 2019 | 88.2 | | | |
| 20 | 2020 | 88.2 | | | |
| 21 | 2021 | 105.8 | | | |
| 22 | 2022 | 105.8 | | | |
| 23 | 2023 | 127.0 | | | |
| 24 | 2024 | 127.0 | | | |
| 25 | 2025 | 152.4 | | | |
| 26 | 2026 | 152.4 | | | |
| 27 | 2027 | 182.8 | | | |
| 28 | 2028 | 182.8 | | | |
| 29 | 2029 | 219.4 | | | |
| 30 | 2030 | 219.4 | | | |
| Total | | | | | 219.9 |
| Net Present Value (Rs. Million) | | | | 161.6 | |
| Benefit Cost Ratio | | | | Incomputable | |
| Internal Rate of Return | | | | Incomputable | |

Assumptions:

| | |
|-----------------------------------------|----------------------------|
| Supply capacity via Maligakanda | 30,000 m ³ /day |
| Temporary operation period | 182 days in 2010 |
| Reconstruction period | 365 days in 2011 |
| | 366 days in 2012 |
| | 365 days in 2013 |
| | 365 days in 2014 |
| Supply capacity during shutdown | 50% |
| Supply capacity during reconstruction | 60% |
| Biennial tariff increase | 20% |
| Operational profit margin | 24% |
| Discount rate for NPV & B/C computation | 10% |

Table 10 Financial Evaluation – Construction of New Reservoir at Maligakanda

(Current Rs.)

| Year No. | Actual year | Average tariff (Rs./m3) | Additional supply (m3/day) | Capital expenditure (Rs. million) | Incremental operational profit * (Rs. million) | Net cash flow (Rs. million) |
|-------------------------|-------------|----------------------------|-------------------------------|--------------------------------------|---------------------------------------------------|--------------------------------|
| 0 | 2000 | 14.2 | | | | |
| 1 | 2001 | 17.1 | | | | |
| 2 | 2002 | 17.1 | | | | |
| 3 | 2003 | 20.5 | | | | |
| 4 | 2004 | 20.5 | | 61.8 | 0.0 | -61.8 |
| 5 | 2005 | 24.6 | | 114.7 | 0.0 | -114.7 |
| 6 | 2006 | 24.6 | 22,000 | | 47.4 | 47.4 |
| 7 | 2007 | 29.5 | 22,000 | | 56.9 | 56.9 |
| 8 | 2008 | 29.5 | 22,000 | | 56.9 | 56.9 |
| 9 | 2009 | 35.4 | 22,000 | | 68.3 | 68.3 |
| 10 | 2010 | 35.4 | 22,000 | | 68.3 | 68.3 |
| 11 | 2011 | 42.5 | 22,000 | | 81.9 | 81.9 |
| 12 | 2012 | 42.5 | 22,000 | | 81.9 | 81.9 |
| 13 | 2013 | 51.0 | 22,000 | | 98.3 | 98.3 |
| 14 | 2014 | 51.0 | 22,000 | | 98.3 | 98.3 |
| 15 | 2015 | 61.2 | 22,000 | | 118.0 | 118.0 |
| 16 | 2016 | 61.2 | 22,000 | | 118.0 | 118.0 |
| 17 | 2017 | 73.5 | 22,000 | | 141.6 | 141.6 |
| 18 | 2018 | 73.5 | 22,000 | | 141.6 | 141.6 |
| 19 | 2019 | 88.2 | 22,000 | | 169.9 | 169.9 |
| 20 | 2020 | 88.2 | 22,000 | | 169.9 | 169.9 |
| 21 | 2021 | 105.8 | 22,000 | | 203.9 | 203.9 |
| 22 | 2022 | 105.8 | 22,000 | | 203.9 | 203.9 |
| 23 | 2023 | 127.0 | 22,000 | | 244.7 | 244.7 |
| 24 | 2024 | 127.0 | 22,000 | | 244.7 | 244.7 |
| 25 | 2025 | 152.4 | 22,000 | | 293.6 | 293.6 |
| 26 | 2026 | 152.4 | 22,000 | | 293.6 | 293.6 |
| 27 | 2027 | 182.8 | 22,000 | | 352.3 | 352.3 |
| 28 | 2028 | 182.8 | 22,000 | | 352.3 | 352.3 |
| 29 | 2029 | 219.4 | 22,000 | | 422.8 | 422.8 |
| 30 | 2030 | 219.4 | 22,000 | | 422.8 | 422.8 |
| Total | | | | 176.5 | 4,552.2 | 4,375.7 |
| Net Present Value ** | | | 735.7 | | | |
| Benefit Cost Ratio ** | | | 5.9 | | | |
| Internal Rate of Return | | | 34.4% | | | |

Note:

* Operational profit margin = 24%

** Discount rate = 10%

Table 11 Financial Evaluation – Rehabilitation of Ellie House Reservoir

(Current Rs.)

| Year No. | Actual year | Average tariff (Rs./m3) | Prevented loss when shutdown (Rs. million) | Prevented loss when reconstruction (Rs. million) | Net cash flow (Rs. million) |
|---------------------------------|-------------|-------------------------|--------------------------------------------|--------------------------------------------------|-----------------------------|
| -1 | 1999 | 13.0 | | | |
| 0 | 2000 | 14.2 | | | |
| 1 | 2001 | 17.1 | | | |
| 2 | 2002 | 17.1 | | | |
| 3 | 2003 | 20.5 | | | |
| 4 | 2004 | 20.5 | | | |
| 5 | 2005 | 24.6 | | | |
| 6 | 2006 | 24.6 | | | |
| 7 | 2007 | 29.5 | | | |
| 8 | 2008 | 29.5 | | | |
| 9 | 2009 | 35.4 | | | |
| 10 | 2010 | 35.4 | 27.9 | | 27.9 |
| 11 | 2011 | 42.5 | | 53.6 | 53.6 |
| 12 | 2012 | 42.5 | | 53.6 | 53.6 |
| 13 | 2013 | 51.0 | | 64.4 | 64.4 |
| 14 | 2014 | 51.0 | | 64.4 | 64.4 |
| 15 | 2015 | 61.2 | | | |
| 16 | 2016 | 61.2 | | | |
| 17 | 2017 | 73.5 | | | |
| 18 | 2018 | 73.5 | | | |
| 19 | 2019 | 88.2 | | | |
| 20 | 2020 | 88.2 | | | |
| 21 | 2021 | 105.8 | | | |
| 22 | 2022 | 105.8 | | | |
| 23 | 2023 | 127.0 | | | |
| 24 | 2024 | 127.0 | | | |
| 25 | 2025 | 152.4 | | | |
| 26 | 2026 | 152.4 | | | |
| 27 | 2027 | 182.8 | | | |
| 28 | 2028 | 182.8 | | | |
| 29 | 2029 | 219.4 | | | |
| 30 | 2030 | 219.4 | | | |
| Total | | | | | 263.9 |
| Net Present Value (Rs. Million) | | | | 193.9 | |
| Benefit Cost Ratio | | | | Incomputable | |
| Internal Rate of Return | | | | Incomputable | |

Assumptions:

| | |
|-----------------------------------------|------------------|
| Supply capacity via Ellie House | 36,000 m3/day |
| Temporary operation period | 182 days in 2010 |
| Reconstruction period | 365 days in 2011 |
| | 366 days in 2012 |
| | 365 days in 2013 |
| | 365 days in 2014 |
| Supply capacity during shutdown | 50% |
| Supply capacity during reconstruction | 60% |
| Biennial tariff increase | 20% |
| Operational profit margin | 24% |
| Discount rate for NPV & B/C computation | 10% |

Table 12 Financial Evaluation – Rehabilitation and Strengthening of Distribution Facilities in Kotikawatte and Mulleriyawa

| (Current Rs.) | | | | | | | | |
|------------------------------------|-------------|----------------------------|--------------------------|-----------------------------|-------------------------------|--------------------------------------|---------------------------------------------------|--------------------------------|
| Year No. | Actual year | Average tariff (Rs./m3) | Water demand (m3/day) | Supply capacity (m3/day) | Additional supply (m3/day) | Capital expenditure (Rs. million) | Incremental operational profit * (Rs. million) | Net cash flow (Rs. million) |
| 0 | 2000 | 14.2 | 17,900 | 17,262 | 0 | | | |
| 1 | 2001 | 17.1 | 18,327 | 17,262 | 0 | | 0.0 | 0.0 |
| 2 | 2002 | 17.1 | 18,754 | 17,262 | 0 | 87.2 | 0.0 | -87.2 |
| 3 | 2003 | 20.5 | 19,182 | 17,262 | 0 | 203.4 | 0.0 | -203.4 |
| 4 | 2004 | 20.5 | 19,609 | 17,262 | 0 | 174.3 | 0.0 | -174.3 |
| 5 | 2005 | 24.6 | 20,036 | 22,039 | 1,200 | 116.2 | 2.6 | -113.6 |
| 6 | 2006 | 24.6 | 20,514 | 22,039 | 2,614 | | 5.6 | 5.6 |
| 7 | 2007 | 29.5 | 20,992 | 22,039 | 3,092 | | 8.0 | 8.0 |
| 8 | 2008 | 29.5 | 21,470 | 22,039 | 3,570 | | 9.2 | 9.2 |
| 9 | 2009 | 35.4 | 21,948 | 22,039 | 4,048 | | 12.6 | 12.6 |
| 10 | 2010 | 35.4 | 22,426 | 24,669 | 4,526 | | 14.0 | 14.0 |
| 11 | 2011 | 42.5 | 22,961 | 24,669 | 5,061 | | 18.9 | 18.9 |
| 12 | 2012 | 42.5 | 23,496 | 24,669 | 5,596 | | 20.8 | 20.8 |
| 13 | 2013 | 51.0 | 24,032 | 24,669 | 6,132 | | 27.4 | 27.4 |
| 14 | 2014 | 51.0 | 24,567 | 24,669 | 6,667 | | 29.8 | 29.8 |
| 15 | 2015 | 61.2 | 25,102 | 27,612 | 7,202 | | 38.6 | 38.6 |
| 16 | 2016 | 61.2 | 25,702 | 27,612 | 7,802 | | 41.8 | 41.8 |
| 17 | 2017 | 73.5 | 26,301 | 27,612 | 8,401 | | 54.1 | 54.1 |
| 18 | 2018 | 73.5 | 26,901 | 27,612 | 9,001 | | 57.9 | 57.9 |
| 19 | 2019 | 88.2 | 27,500 | 27,612 | 9,600 | | 74.2 | 74.2 |
| 20 | 2020 | 88.2 | 28,100 | 30,910 | 10,200 | | 78.8 | 78.8 |
| 21 | 2021 | 105.8 | 28,100 | 30,910 | 10,200 | | 94.5 | 94.5 |
| 22 | 2022 | 105.8 | 28,100 | 30,910 | 10,200 | | 94.5 | 94.5 |
| 23 | 2023 | 127.0 | 28,100 | 30,910 | 10,200 | | 113.4 | 113.4 |
| 24 | 2024 | 127.0 | 28,100 | 30,910 | 10,200 | | 113.4 | 113.4 |
| 25 | 2025 | 152.4 | 28,100 | 30,910 | 10,200 | | 136.1 | 136.1 |
| 26 | 2026 | 152.4 | 28,100 | 30,910 | 10,200 | | 136.1 | 136.1 |
| 27 | 2027 | 182.8 | 28,100 | 30,910 | 10,200 | | 163.4 | 163.4 |
| 28 | 2028 | 182.8 | 28,100 | 30,910 | 10,200 | | 163.4 | 163.4 |
| 29 | 2029 | 219.4 | 28,100 | 30,910 | 10,200 | | 196.0 | 196.0 |
| 30 | 2030 | 219.4 | 28,100 | 30,910 | 10,200 | | 196.0 | 196.0 |
| Total | | | | | | 581.0 | 1,901.4 | 1,320.4 |
| Net Present Value (Rs. Million) ** | | | | | -179.8 | | | |
| Benefit Cost Ratio ** | | | | | 0.5 | | | |
| Internal Rate of Return | | | | | 6.4% | | | |

* Operational profit margin = 24%

** Discount rate = 10%

4 Unquantifiable Benefits

Various types of intangible benefits are expected from the project. Since those benefits are mostly unquantifiable in nature, no attempt for quantification are made. Those unquantified benefits include:

- Reduction of road maintenance cost ----- Present leak repair work causes the damage to road pavement due to frequent incidence of leaks. Especially leaks originated by poor pipe materials and poor jointing work are predominant among the causes of leaks from service connections. If such leaks are reduced by adopting standard material and appropriate pipe installation work, frequent excavation of pavement could be also reduced, resulting in cost saving for road reinstatement;
- Reduction of fire loss ----- The augmentation of water supply in the project area will strengthen the fire fighting capabilities. As a result, it is expected that fire loss from damaging property values and from jeopardising or losing human lives will decrease;
- Alleviation of household chores ----- The improvement of water supply condition will lead to reduction of household offices related to securing water. For example the weak in a family such as women and children are expected to be discharged from duty of fetching water, thanks to extension of piped water to the household;
- Improvement of health condition ----- Infant mortality and morbidity of water-borne disease will be lowered. Consequently medical expenditures of GOSL will decrease and patients' loss during days under medical treatment will be saved;
- Increase of land prices ----- The Project will contribute to increase of land value. The additional land value will constitute a major economic benefit such as elimination of the present inconvenience of water supply and unsanitary environments. This price increase will also contribute as incremental taxation source in favour of GOSL;
- Ripple effect on local and national economy ----- The Project will help to promote the development of the local economy that in turn, will boost the national economy. Among those originate the economic development are increase of employment opportunities by the Project's direct and indirect job creativity, and procurement of materials during construction and operational period of the Project.

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