

East West Engineering (PVT)LTD.
12-01 East Tower World Trade Center Colombo 00100

CONCRETE MIX DESIGN DATA
(British Method of Normal concrete Mixes)

Client : Access Projects (Pvt) Ltd.

Concrete Grade: 25N

Project : Cape Weligama

Design slump : 125mm (+/-25mm)

| Stage | Item | Reference of Calculation | Values | | | | |
|---------------------------------------|---|--------------------------|----------------------------|------------------|----------------------|------------|------------------------|
| 1 | 1.1 characteristic strength | Specified | Comp. | 25 | N/mm ² at | <u>28</u> | Days |
| | | | Proportion defective | | | | 5 percent |
| | 1.2 standard deviation | | | 6 | N/mm2 | | N/mm2 |
| | 1.3 margin | C1 | (k=1.64) | <u>1.64</u> | | <u>6</u> | 9.84 N/mm2 |
| | | | or specified | | | | |
| | 1.4 Target mean strength | C2 | | <u>25</u> | 10 | | 35 N/mm2 |
| | 1.5 Cement type | Specified | (OPC/SRPC/RHPC) | | | <u>OPC</u> | |
| | 1.6 Aggregate type: coarse | | | <u>Crushed /</u> | Uncrushed | | |
| | Aggregate type: Fine | | | <u>Crushed /</u> | Uncrushed | | |
| 1.7 Free water/cement ratio | Table2 Fig 4 | | 0..64 | | | | |
| 1.8 Max. Free water/cement ratio | Specified | | _____ | | | | |
| 1.9 modified wate/ Cement ratio | | | 0.51 | | | | |
| 2 | 2.1 Slump or Vabe time | Specified | Slump | <u>125</u> mm | or V-B | _____ | s |
| | 2.2 Maximum aggregate size | Specified | | | | | <u>20</u> mm |
| | 2.3 Free water content | Table 3 | | | | | 205 kg/m ³ |
| | 2.4 Reduced water quantity | | | | | | 180 kg/m ³ |
| 3 | 3.1 Cement content | C3 | | 205 | 0.64 | | 320 kg/m ³ |
| | 3.2 Maximum cement content | Specified | | | | | kg/m ³ |
| | 3.3 Modified cement content | | | 180 | 0.51 | | 353 kg/m ³ |
| 4 | 4.1 Relative density of aggregate (ssd) | | <u>Known /</u> | Assumed | | | 2.7 kg/m ³ |
| | 4.2 Concrete density | Fig. 5 | | | | | 2430 kg/m ³ |
| | 4.3 Total aggregate content | C4 | | 2430 | 353 | 180 | 1897 kg/m ³ |
| 5 | 5.1 Grading of fine aggregate | | Percentage passing 600 µm | | | | 35 percent |
| | 5.2 Proportion of fine aggregate | Fig. 6 | | | | | 42 percent |
| | 5.3 fine aggregate content | C5 | | 1897 | 0.42 | | 797 kg/m ³ |
| | 5.4 Coarse aggregate content | C5 | | 1897 | 797 | | 1100 kg/m ³ |
| | 5.5 Admixture 1(Adcrete) dosage | | (450ml / 100 kg of cement) | | | | 1.6 Lts. |
| Quantities | | Cement | Water | Fine agg. | C/agg. 20mm | Admix 1 | Admix 2 |
| | | (kg) | (kg or Lts).. | (kg) | (kg) | Lts. | (Lts.) |
| per m3 (To nearest 5kg) | | 355 | 180 | 800 | 1100 | 1.2 | 0 |
| per trial mix of 0.025 m ³ | | 8.875 | 4.5 | 20 | 27.5 | 0.04 | 0 |

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Quality control officer