2013 - 2014

1(c)

Vehicle categories	Base year 0.5 × two-way flow (Flow/day)	ESA Factor (Table 3, Page 5)	Existing ESAs/day	Annual ESAs
Heavy Truck	40	4.80	192	70080
Medium Truck	300	4.62	1386	505890
Light Truck	100	1.00	100	36500
Large Bus	200	1.00	200	73000
				Σ = 685470

Growth factor (table 4, Page 6) $= \frac{(1+r)^n - 1}{r}$

$= \frac{(1+0.10)^{20} - 1}{0.10}$

$= 57.3$

Cumulative ESA = 685470×57.3

= ∴ 40 million ESAs

A minimum sub-grade strength of 5% CBR is required to adopt the RHD Design guide method for flexible pavements.

Hence, an improved subgrade of 250mm will be needed. (table 6/ Page 7)

The thickness design of the pavement shall be as follows :- (table 5/ Page 6)

40 mm wearing + 125 mm base course
Base N/A
300 mm sub base
250 mm improved subgrade