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**APPENDIX – A: Gazette Notification on axle weight regulations**

# ශ්‍රී ලංකා ප්‍රජාතාන්ත්‍රික සමාජවාදී ජනරජයේ ගැසට් පත්‍රය

අති විශේෂ

## The Gazette of the Democratic Socialist Republic of Sri Lanka

EXTRAORDINARY

අංක 1847/32 - 2014 ජනවාරි මස 29 වැනි බදාදා - 2014.01.29  
No. 1847/32 - WEDNESDAY, JANUARY 29, 2014

(Published by Authority)

### PART I : SECTION (I) — GENERAL

#### Government Notifications

L.D.B 24/51 (vi).

#### THE MOTOR TRAFFIC ACT (CHAPTER 203)

REGULATIONS made by the Minister of Transport under Section 237 read with Section 19 of the Motor Traffic Act, (Chapter 203).

KUMARA WELGAMA,  
Minister of Transport.

Colombo,  
21st January, 2014.

#### Regulation

1. The Motor Traffic (Construction of Vehicles) Regulations 1983 published in the *Gazette Extraordinary* No. 248 of June, 3, 1983, as amended from time to time and last amended by regulation published in *Gazette Extraordinary* No. 1805/34 of April 11, 2013 are hereby further amended by the repeal of regulation 2 and substitution therefore of the following :-

"2. (1) The dimensions of any motor vehicle shall not exceed the dimensions specified in Column II below in respect of motor vehicles of the class or description specified in the corresponding entry in Column I :-

#### LENGTH, WIDTH AND HEIGHT

<i>Column I</i> <i>Class or description of motor vehicles</i>	<i>Column II</i> <i>millimeters</i>
(a) Overall width of the motor vehicle (other than a motor coach)	2,500
(b) Overall width of the motor coach	2,600
(c) Height of motor vehicle (other than a double decked motor coach)	3,800
(d) Height of a double decked motor coach	4,600
(e) Overall length of motor vehicle with two axles other than a motor coach	10,000
(f) Overall length of motor vehicle with more than two axles	11,000
(g) Overall length of motor coach (other than a heavy motor coach)	12,000
(h) Overall length of an articulated vehicle	16,000
(i) Overall length of combination vehicle with one trailer	17,000
(j) Overall length of a heavy motor coach	24,000



## SCHEDULE (Contd.)

(2) The height of any motor vehicle shall not exceed One Hundred and Sixty Five per cent (165%) of the width.

(3) (a) the axle load of the any motor vehicle shall not exceed the axle load specified in Column II below, in respect of motor vehicles of the class or description specified in the corresponding entry in Column I :-

## AXLE LOAD OF A VEHICLE

<i>Column I</i> <i>Class or description of motor vehicles</i>	<i>Column II</i> <i>Kilogrammes</i>
(i) Two wheeled single axle	6,000
(ii) Four wheeled single axle	10,000
(iii) Four wheeled dual axle	10,000
(iv) Eight wheeled dual axle or any two consecutive axles with 8 wheels where the axle centers are not more than 2.45 metres apart	16,500
(v) Twelve wheeled triple axle or any three consecutive axles with 12 wheels where the centers of the extreme axles are not more than 3.66 metres apart	22,000

(b) The Gross Vehicle Weight of any motor vehicle shall not exceed the Gross Vehicle Weight specified in Column II below in respect of motor vehicles of the description specified in the corresponding entry in Column I :-

## GROSS VEHICLE WEIGHT

<i>Column I</i> <i>Description of motor vehicles</i>	<i>Column II</i> <i>Kilogrammes</i>
(i) Motor vehicle with a four wheeled rear axle	15,275
(ii) Motor vehicle with an eight wheeled dual rear axle	21,300
(iii) Articulated or combination vehicle with two wheeled front axle and two wheeled rear axle for driving unit and four wheeled axle for trailer	19,900
(iv) Articulated or combination vehicle with two wheeled front axle and four-wheeled rear axle for driving unit and a four wheeled axle for trailer	23,500
(v) Articulated or combination vehicle with two wheeled front axle and four wheeled rear axle for driving unit and eight wheeled dual axle for trailer	29,800
(vi) Articulated or combination vehicle with two wheeled front axle and eight wheeled dual rear axle for driving unit and four wheeled axle for trailer	30,400
(vii) Articulated or combination vehicle with two wheeled front axle and four wheeled rear axle for driving unit and twelve wheeled triple axle for trailer	33,900
(viii) Articulated or combination vehicle with two wheeled front axle and eight wheeled dual rear axle for driving unit and eight wheeled dual axle for trailer	36,700
(ix) Articulated or combination vehicle with two wheeled front axle and four wheeled dual rear axle for driving unit and twelve wheeled triple axle for trailer	31,200
(x) Articulated or combination vehicle with two wheeled front axle and eight wheeled dual rear axle for driving unit and twelve wheeled triple axle for trailer	42,500"

(2) The regulations published in *Gazette Extraordinary* No. 1380/14 of February 16, 2005 and No. 1726/12 of October 5, 2011 are hereby rescinded.

**APPENDIX – B: SAMPLE DATA SHEET USED IN AXLE LOAD SURVEY**

**AXLE LOAD SURVEY**

Name of Rd : Colombo-Ratnapura-Wellawaya-Batticaloa (A004)  
 Location : 22km  
 Date : 11/09/2013

Direction 1 : Homagama  
 Direction 2 : Kottawa

S/No	Direction	Vehicle Type	Axle conf	Vehicle bucket size				Filling Type	Load Type		Origin		Distination		Axle1	Axle2	Axle3	Axle4	Axle5	Axle6
				Length	Width	Height	Load height		Code	Name	Code	Name	Code	Name						
1	1	6	1.2					50	Passengers	1100	Colombo	8103	Badulla	4.47	6.87					
2	1	9	1.2					20	Empty	1154	Kottawa	1133	Godagama	3.63	3.23					
3	1	8	1.2					20	Empty	1154	Kottawa	1139	Homagama	1.56	1.25					
4	1	6	1.2					50	Passengers	1158	Maharagama	1121	Avissawella	3.47	5.74					
5	1	7	1.1					20	Empty	1122	Battaramulla	1139	Homagama	1.36	0.69					
6	1	6	1.2					50	Passengers	1100	Colombo	1174	Padukka	4.81	6.38					
7	1	9	1.2					20	Empty	3116	Galle	1139	Homagama	3.22	3.83					
8	1	8	1.2					26	Fertiliser	3116	Galle	1121	Avissawella	2.53	4.07					
9	1	6	1.2					50	Passengers	1100	Colombo	1139	Homagama	3.31	4.43					
10	1	9	1.2					20	Empty	1100	Colombo	9103	Balangoda	3.62	3.47					
11	1	8	1.2					20	Empty	1172	Nugegoda	1139	Homagama	1.52	1.41					
12	1	6	1.2					50	Passengers	1178	Pannipitiya	1139	Homagama	2.46	2.27					
13	1	6	1.2					50	Passengers	1158	Maharagama	1162	Meepe	3.62	4.97					
14	1	8	1.2					20	Empty	1158	Maharagama	1136	Hanwella	1.33	1.08					
15	1	9	1.2					20	Empty	1154	Kottawa	9212	Hettipola (Keg	3.60	3.28					
16	1	5	1.2					50	Passengers	1100	Colombo	2222	Matale	2.17	3.13					
17	1	8	1.2					71	Vegetables	1157	Madiwela	1136	Hanwella	2.23	1.75					
18	1	6	1.2					50	Passengers	1158	Maharagama	1162	Meepe	4.07	5.37					
19	1	9	1.2					20	Empty	1100	Colombo	1139	Homagama	3.61	5.80					
20	1	6	1.2					50	Passengers	1158	Maharagama	1121	Avissawella	2.99	3.49					
21	1	8	1.2					20	Empty	1154	Kottawa	9103	Balangoda	1.69	1.48					
22	1	5	1.2					50	Passengers	1154	Kottawa	1139	Homagama	1.56	1.98					
23	1	6	1.2					50	Passengers	1100	Colombo	1174	Padukka	4.35	5.60					
24	1	8	1.2					9	Charcoal/Coal	1154	Kottawa	1139	Homagama	1.29	2.28					
25	1	8	1.2					68	Tile	1154	Kottawa	1326	Kalutara North	2.01	1.35					
26	1	7	1.1					50	Passengers	1100	Colombo	1325	Ingiriya	4.16	3.52					
27	1	9	1.2					57	Rubber/Rubbe	1154	Kottawa	2122	Kandy	3.69	4.12					
28	1	8	1.2					20	Empty	1154	Kottawa	1139	Homagama	1.63	1.35					
29	1	6	1.2					50	Passengers	1158	Maharagama	1121	Avissawella	2.74	5.17					
30	1	5	1.2					50	Passengers	1165	Moratuwa	2122	Kandy	2.15	2.26					
31	1	7	1.1					67	Textiles	1158	Maharagama	1133	Godagama	0.65	0.43					
32	1	9	1.2					28	Flour	1178	Pannipitiya	1139	Homagama	4.24	7.19					
33	1	9	1.2					29	Food Items	1154	Kottawa	6127	Kurunegala	4.97	6.50					
34	1	6	1.2					50	Passengers	1100	Colombo	8211	Kataragama	3.81	6.65					
35	1	9	1.2					10	Chemicals	1158	Maharagama	8103	Badulla	2.56	8.31					
36	1	9	1.2					20	Empty	1165	Moratuwa	1139	Homagama	3.55	3.60					
37	1	8	1.2					73	Woodden Proc	1154	Kottawa	6127	Kurunegala	2.01	2.51					
38	1	7	1.1					20	Empty	1154	Kottawa	1139	Homagama	0.68	0.47					
39	1	5	1.2					50	Passengers	1172	Nugegoda	1139	Homagama	1.90	2.07					
40	1	6	1.2					50	Passengers	1122	Battaramulla	1139	Homagama	3.69	2.91					
41	1	9	1.2					29	Food Items	1154	Kottawa	6127	Kurunegala	4.92	7.10					
42	1	7	1.1					48	Non Durable I	1154	Kottawa	1139	Homagama	0.62	0.54					
43	1	8	1.2					39	Machines	1154	Kottawa	1139	Homagama	1.54	1.72					
44	1	7	1.1					54	Pvc Prod	1126	Dehiwala	1136	Hanwella	1.35	1.30					
45	1	6	1.2					50	Passengers	1154	Kottawa	1139	Homagama	4.21	4.53					

**AXLE LOAD SURVEY**

Name of Rd : Colombo-Ratnapura-Wellawaya-Batticaloa (A004)  
 Location : 22km  
 Date : 11/09/2013

Direction 1 : Homagama  
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S/No	Direction	Vehicle Type	Axle conf	Vehicle bucket size				Filling Type	Load Type		Origin		Distination		Axle1	Axle2	Axle3	Axle4	Axle5	Axle6
				Length	Width	Height	Load height		Code	Name	Code	Name	Code	Name						
46	1	9	1.2					20	Empty	1100	Colombo	1139	Homagama	2.94	3.27					
47	1	5	1.2					50	Passengers	1100	Colombo	8103	Badulla	2.07	3.15					
48	1	6	1.2					50	Passengers	1100	Colombo	9144	Ratnapura	4.35	5.95					
49	1	7	1.1					55	Rice/Paddy	1154	Kottawa	1139	Homagama	1.15	1.36					
50	1	9	1.2					20	Empty	1154	Kottawa	1139	Homagama	3.65	3.34					
51	1	8	1.2					29	Food Items	1154	Kottawa	1133	Godagama	1.74	2.20					
52	1	9	1.2					20	Empty	1158	Maharagama	7214	Manampitiya	3.32	3.51					
53	1	9	1.2					20	Empty	1165	Moratuwa	9215	Kegalle	3.49	3.49					
54	1	6	1.2					50	Passengers	1100	Colombo	1121	Avissawella	4.49	6.22					
55	1	8	1.2					34	Groceries	1158	Maharagama	1133	Godagama	1.10	1.97					
56	1	7	1.1					20	Empty	1280	Wattala	1139	Homagama	0.71	0.40					
57	1	9	1.2					20	Empty	1178	Pannipitiya	1136	Hanwella	3.51	3.22					
58	1	9	1.2					20	Empty	1179	Piliyandala	7219	Polonnaruwa	2.37	2.08					
59	1	8	1.2					20	Empty	1179	Piliyandala	1139	Homagama	1.12	0.78					
60	1	6	1.2					50	Passengers	1100	Colombo	1139	Homagama	4.38	5.39					
61	1	8	1.2					20	Empty	1100	Colombo	1139	Homagama	1.18	0.69					
62	1	9	1.2					29	Food Items	1154	Kottawa	6127	Kurunegala	4.58	7.81					
63	1	6	1.2					50	Passengers	1303	Aluthgama(Ka	1139	Homagama	2.59	6.46					
64	1	9	1.2					29	Food Items	1154	Kottawa	6127	Kurunegala	4.37	7.13					
65	1	9	1.2					20	Empty	1154	Kottawa	1139	Homagama	3.65	3.56					
66	1	10	1.22					20	Empty	1158	Maharagama	1139	Homagama	3.79	4.17	3.84				
67	1	6	1.2					50	Passengers	1100	Colombo	1139	Homagama	3.99	5.09					
68	1	7	1.1					71	Vegetables	1100	Colombo	1139	Homagama	1.03	1.99					
69	1	8	1.2					72	Water	1154	Kottawa	1139	Homagama	2.36	4.02					
70	1	6	1.2					50	Passengers	1126	Dehiwala	1139	Homagama	4.26	5.27					
71	1	9	1.2					62	Steel Prod	1154	Kottawa	4108	Jaffna	3.69	5.33					
72	1	8	1.2					39	Machines	1179	Piliyandala	7130	Tambuthegama	2.41	4.68					
73	1	8	1.2					57	Rubber/Rubbe	1179	Piliyandala	7102	Anuradhapura	1.99	2.70					
74	1	7	1.1					67	Textiles	1185	Ratmalana	1174	Padukka	0.68	0.42					
75	1	7	1.1					35	Hardwere Item	1154	Kottawa	1139	Homagama	0.68	0.54					
76	1	8	1.2					20	Empty	1158	Maharagama	1139	Homagama	1.87	1.72					
77	1	8	1.2					29	Food Items	1154	Kottawa	1136	Hanwella	2.05	3.86					
78	1	10	1.22					52	Petroleum Pro	1150	Kolonnawa	1325	Ingiriya	7.60	7.70	7.40				
79	1	8	1.2					39	Machines	1179	Piliyandala	6127	Kurunegala	2.41	4.85					
80	1	6	1.2					50	Passengers	1100	Colombo	1139	Homagama	4.07	5.41					
81	1	7	1.1					20	Empty	1154	Kottawa	1139	Homagama	0.74	0.73					
82	1	10	1.22					57	Rubber/Rubbe	1312	Dodangoda	1207	Biyagama	5.85	11.58	11.56				
83	1	8	1.2					57	Rubber/Rubbe	1179	Piliyandala	1139	Homagama	2.39	3.68					
84	1	8	1.2					20	Empty	1172	Nugegoda	1121	Avissawella	1.63	1.18					
85	1	6	1.2					50	Passengers	1100	Colombo	1162	Meepe	3.82	4.68					
86	1	10	1.22					20	Empty	1165	Moratuwa	1121	Avissawella	3.71	2.84	2.80				
87	1	7	1.1					20	Empty	3222	Matara	1139	Homagama	0.71	0.68					
88	1	8	1.2					71	Vegetables	1100	Colombo	1139	Homagama	2.60	6.58					
89	1	6	1.2					50	Passengers	1100	Colombo	1139	Homagama	4.25	5.92					
90	1	9	1.2					20	Empty	1154	Kottawa	7219	Polonnaruwa	3.36	4.23					

**APPENDIX – C: AXLE LOAD DATA ANALYSIS SHEETS**

**APPENDIX – C 1:** Analysis of axle load growth trend

**APPENDIX – C 2:** Vehicle & ESA composition

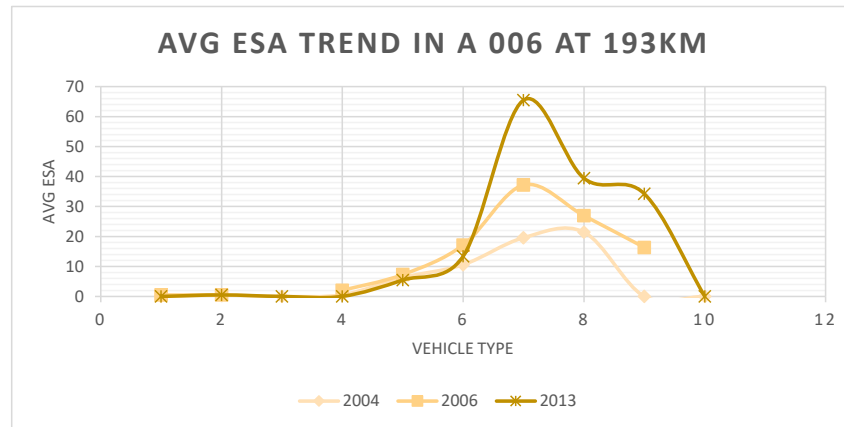
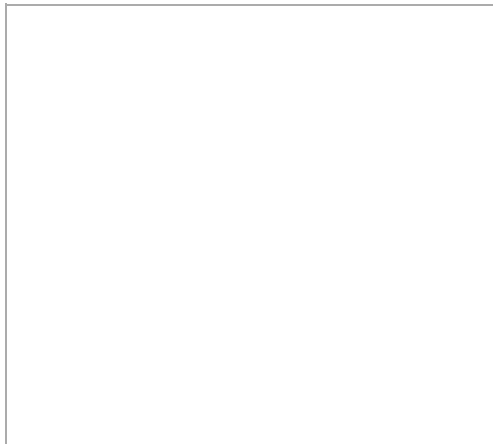
**APPENDIX – C 3:** Overloaded vehicle percentage, overloaded extent in each road

**APPENDIX – C 4:** Tables of cost values for each scenario in A004(18km) & A006



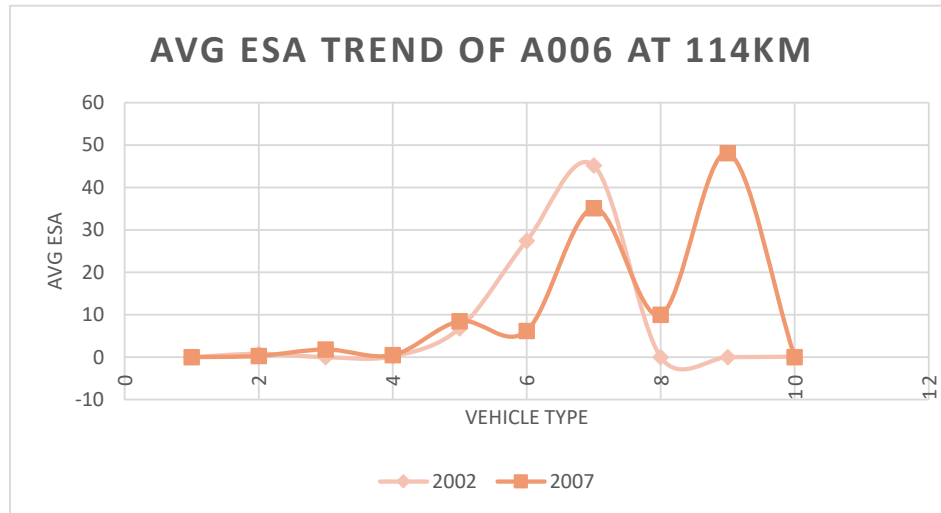
Road A006 Ambepussa - Kurunegala - Trincomalee Road  
 Location 193km

Vehicle Type Axle Notation	Medium Bus (MBU)	Large Bus (LBU)	Light Good Vehicle (LGV)	MG1	MG2	HG3	AG4	AG5	AG6	FVH	
Year	2004	0.0021	0.455	0.0013	0.5604	6.3004	10.5943	19.5978	21.4378	0	0.0188
	2006	0.49	0.49		2.07	7.29	17.13	37.18	26.94	16.34	
	2009		0.8671		0.0801	9.5934	28.4511	4.6455	12.0713	46.3522	0.0328
	2013	0.0053	0.5029	0.004	0.0294	5.4831	13.4101	65.4947	39.4211	34.2229	0.0145
	2014	0.0162	0.2342	0.1361	0.0106	4.6016	9.8096	57.1707	29.6966	0.3896	0.0007



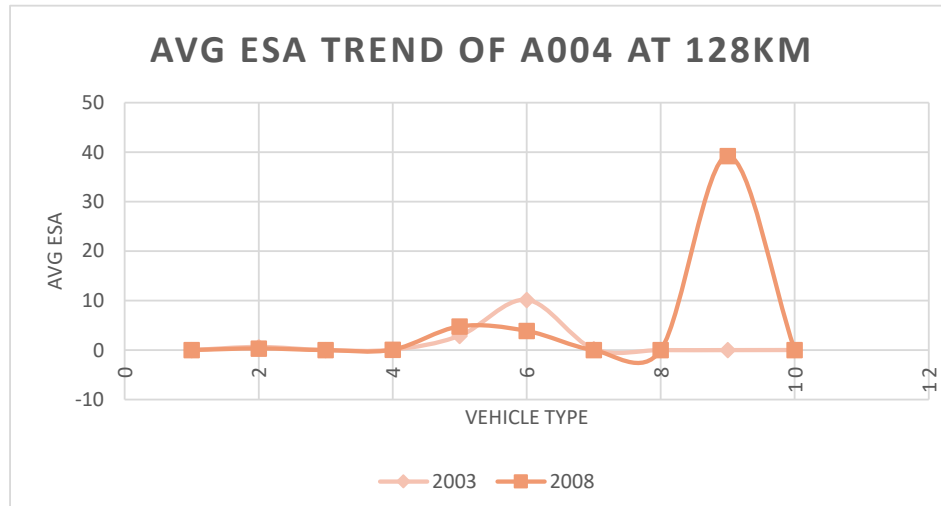
Road A006 Ambepussa - Kurunegala - Trincomalee Road  
 Location 114km

Vehicle Type Axle Notation	Year	Light Good		Medium Bus (MBU)	Large Bus (LBU)	Vehicle (LGV)	MG1	MG2	HG3	AG4	AG5	AG6	FVH
2002	0	0.79	0	0.1959	6.8121	27.4458	45.1946	0	0	0.1159			
2007	0.0003	0.2846	1.8197	0.4682	8.4668	6.2086	35.1606	10	48.1146	0			
2012													
2013													



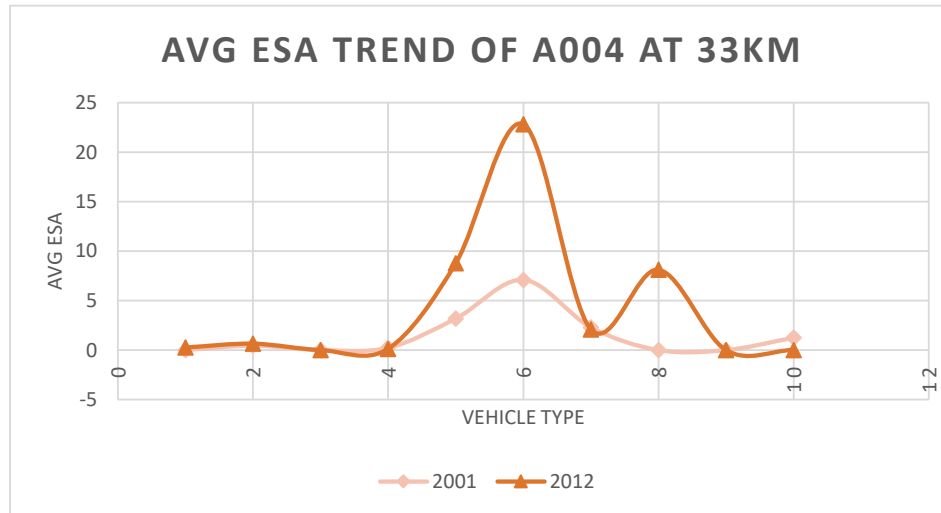
Road A004 Colombo - Rathnapura - Wellawaya - Chenkaladi Road  
 Location 128km

Vehicle Type Axle Notation	Year	Light Good		Medium								
		Bus (MBU)	Large Bus (LBU)	Vehicle (LGV)	MG1	MG2	HG3	AG4	AG5	AG6	FVH	
	2003	0.0066	0.6336	0.0027	0.085	2.8964	10.1531	0.2189		0	0	0.0139
	2008	0.0175	0.3354	0.0021	0.0877	4.7961	3.8817	0		0	39.2422	0
	2012											
	2013											



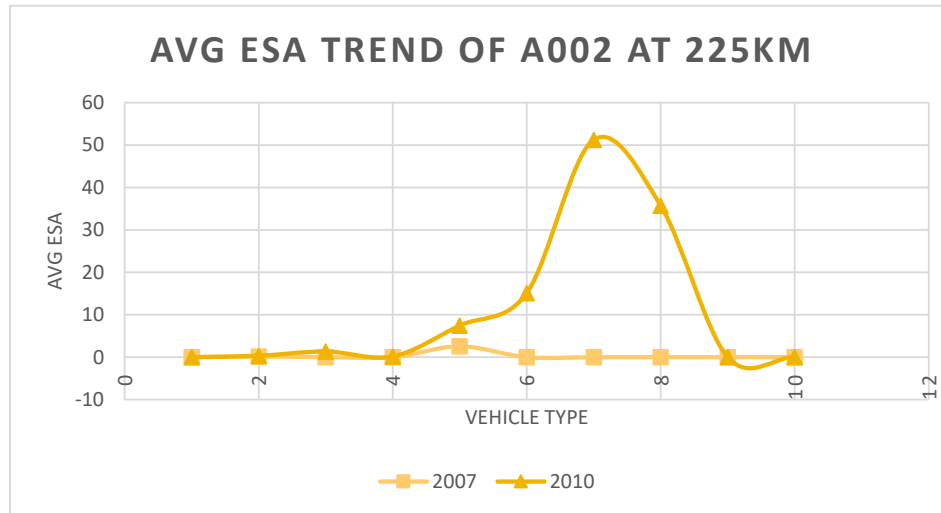
Road A004 Colombo - Rathnapura - Wellawaya - Chenkaladi Road  
 Location 35km

Vehicle Type Axle Notation	Year	Light Good										
		Medium Bus (MBU)	Large Bus (LBU)	Vehicle (LGV)	MG1	MG2	HG3	AG4	AG5	AG6	FVH	
	2001	0.0131	0.4442	0.0033	0.2298	3.1816	7.0962	2.3003	0	0	1.249	
	2010	0.0616	0.5068	0.0005	0.1878	5.8564	4.2597	0.2027	0.2088	0.1067	0	
	2012	0.2608	0.6472	0.0038	0.1328	8.7692	22.8199	2.084	8.1201	0	0.013	
	2013	0.0091	0.2863	0.002	0.06	8.8673	12.3317	0.5161	15.8308	5.8701	0	



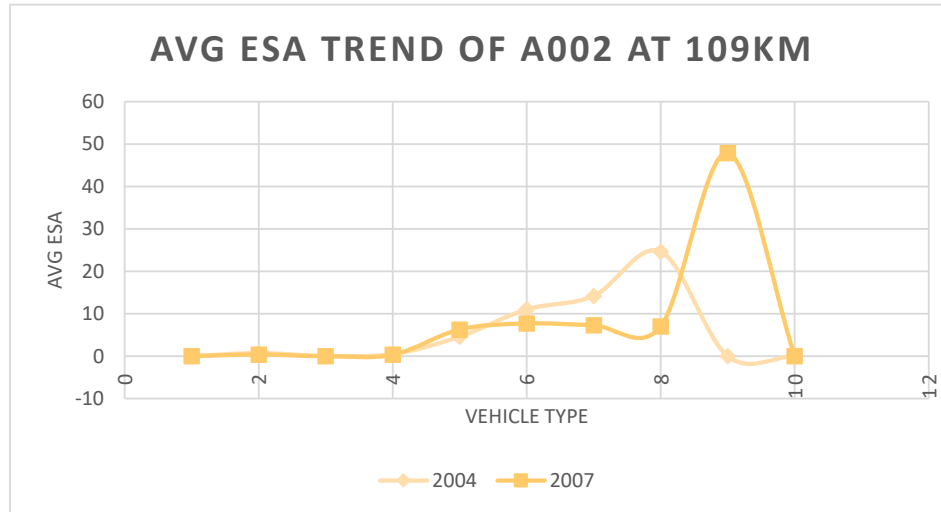
Road A002 Colombo - Galle - Hambanthota - Wellawaya  
 Location 225 Boossa

Vehicle Type Axle Notation Year	Medium Bus (MBU)	Large Bus (LBU)	Light Good Vehicle (LGV)	MG1	MG2	HG3	AG4	AG5	AG6	FVH
2004										
2007	0.0091	0.16	0.0018	0.0058	2.5516	0	0	0	0	0.0021
2010	0.0018	0.3261	1.3364	0.1486	7.4537	15.10013	51.2635	35.7176	0	0.0454
2014	0.0099	0.448	0.0006	0.1296	9.9269	3.9134	8.7454	5.8554	0	0.0071



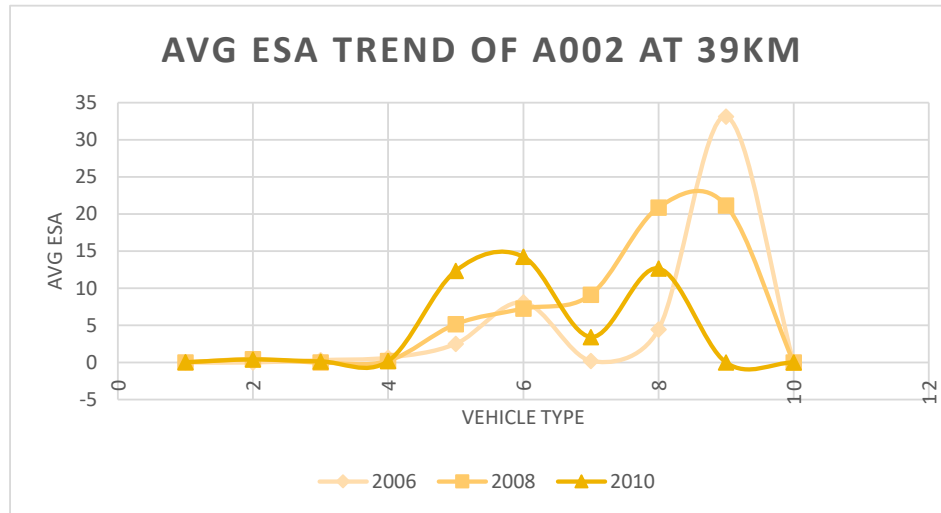
Road A002 Colombo - Galle - Hambanthota - Wellawaya  
 Location 109km Boossa

Vehicle Type Axle Notation	Year	Light Good		Medium								
		Bus (MBU)	Large Bus (LBU)	Vehicle (LGV)	MG1	MG2	HG3	AG4	AG5	AG6	FVH	
	2004	0	0.7296	0.0414	0.5095	4.5983	11.0214	14.2081	24.6524		0	0
	2007	0.0173	0.3757	0.0005	0.336	6.2851	7.7141	7.2975	7	47.899	0.0006	
	2010	0.0518	0.414	0.0026	0.0547	7.8548	22.3686	6.2211	14.533	0	0.0002	
	2013											



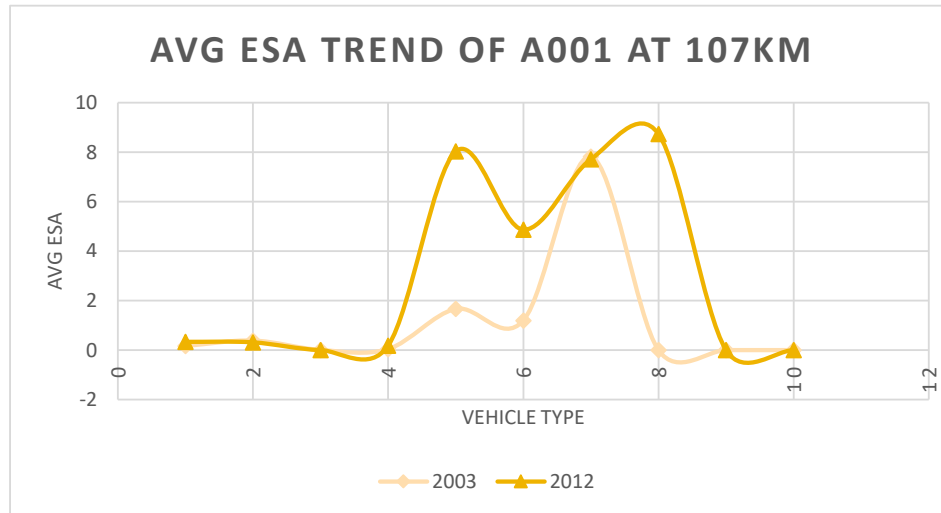
Road A002 Colombo - Galle - Hambanthota - Wellawaya  
 Location 39km Payagala

Vehicle Type Axle Notation	Year	Light Good										
		Medium Bus (MBU)	Large Bus (LBU)	Vehicle (LGV)	MG1	MG2	HG3	AG4	AG5	AG6	FVH	
	2006	0	0.4	0.32	0.65	2.51	8.09	0.2189	4.44	33.12	0	
	2008	0.0202	0.4377	0	0.2223	5.1631	7.2501	9.1358	20.8892	21.1411	0	
	2010	0.0326	0.409	0.1418	0.1899	12.3399	14.2385	3.4306	12.6723	0	0	
	2013											



Road A001  
 Location 107km Pilimathalawa

Vehicle Type Axle Notation Year		Road Condition									
		Medium Bus (MBU)	Large Bus (LBU)	Light Good Vehicle (LGV)	MG1	MG2	HG3	AG4	AG5	AG6	FVH
2003		0.169	0.3856	0.0053	0.0425	1.6645	1.1958	7.8155	0	0	0
2006											
2012		0.334	0.3128	0.0016	0.1792	8.0311	4.8664	7.7156	8.7334	0	0
2013											





Road Name : Colombo-Ratnapura-Wellawaya-Batticaloa (A004)  
 Location Name : 22km  
 Survey Date : 11.09.2013  
 Period of Survey : 12hrs

1 Homagama 2 Kottawa

Sr No	DIR	VEH TYPE	AXLE CONFIG	LOAD	ORIG	DISTI	Distance	Tare Weight	Weight of Load Only	Cost/Ton.km	Cost incurred for a trip	Measured														Adjusted										
												Axle Load						Total load	No GVW	Excess Weight	Overload	ESA						Limited axle load								
												AXLE1	AXLE2	AXLE3	AXLE4	AXLE5	AXLE6					AXLE1	AXLE2	AXLE3	AXLE4	AXLE5	AXLE6	SUM ESA	AVE ESA	AXLE1	AXLE2	AXLE3	AXLE4	AXLE5	AXLE6	SUM ESA
1	1	6	1.2	50	Passengers	1100	Colombo	8103	Badulla	224	5.25	6.090	16,800.00	4.47	6.87	11.34	15.275	No	0.065	0.457	-	-	-	-	0.522	4.47	6.87	0.065	0.457	-	-	-	-	0.522	4.47	
2	1	9	1.2	20	Empty	1154	Kottawa	1133	Godagama	10	6.75	-	-	3.63	3.23	6.86	15.275	No	0.025	0.015	-	-	-	-	0.040	3.63	3.23	0.025	0.015	-	-	-	-	0.040	3.63	
3	1	8	1.2	20	Empty	1154	Kottawa	1139	Homagama	5	3.00	-	-	1.56	1.25	2.81	15.275	No	0.001	0.000	-	-	-	-	0.001	1.56	1.25	0.001	0.000	-	-	-	-	0.001	1.56	
4	1	6	1.2	50	Passengers	1158	Maharagama	1121	Avissawella	36	5.25	3.960	75.00	2,700.00	5.74	9.21	15.275	No	0.020	0.202	-	-	-	-	0.222	3.47	5.74	0.020	0.202	-	-	-	-	0.222	3.47	
5	1	7	1.1	20	Empty	1122	Battaramulla	1139	Homagama	15	1.10	-	-	1.36	0.69	2.05	15.275	No	0.000	0.000	-	-	-	-	0.000	1.36	0.69	0.000	0.000	-	-	-	-	0.000	1.36	
6	1	6	1.2	50	Passengers	1100	Colombo	1174	Padukka	25	5.25	5.940	75.00	1,875.00	4.81	6.38	11.19	15.275	No	0.090	0.326	-	-	-	-	0.417	4.81	6.38	0.090	0.326	-	-	-	-	0.417	4.81
7	1	9	1.2	20	Empty	3116	Galle	1139	Homagama	105	6.75	-	-	3.22	3.83	7.05	15.275	No	0.015	0.032	-	-	-	-	0.047	3.22	3.83	0.015	0.032	-	-	-	-	0.047	3.22	
8	1	8	1.2	26	Fertiliser	3116	Galle	1121	Avissawella	135	3.00	3.600	8.13	3,951.18	2.53	4.07	6.6	15.275	No	0.005	0.042	-	-	-	-	0.047	2.53	4.07	0.005	0.042	-	-	-	-	0.047	2.53
9	1	6	1.2	50	Passengers	1100	Colombo	1139	Homagama	20	5.25	2.490	75.00	1,500.00	3.31	4.43	7.74	15.275	No	0.016	0.062	-	-	-	-	0.079	3.31	4.43	0.016	0.062	-	-	-	-	0.079	3.31
10	1	9	1.2	20	Empty	1100	Colombo	9103	Balangoda	143	6.75	-	-	3.62	3.47	7.09	15.275	No	0.025	0.020	-	-	-	-	0.045	3.62	3.47	0.025	0.020	-	-	-	-	0.045	3.62	
11	1	8	1.2	20	Empty	1172	Nugegoda	1139	Homagama	15	3.00	-	-	1.52	1.41	2.93	15.275	No	0.000	0.000	-	-	-	-	0.001	1.52	1.41	0.000	0.000	-	-	-	-	0.001	1.52	
12	1	6	1.2	50	Passengers	1178	Pannipitiya	1139	Homagama	10	5.25	75.00	750.00	2.46	2.27	4.73	15.275	No	0.004	0.003	-	-	-	-	0.007	2.46	2.27	0.004	0.003	-	-	-	-	0.007	2.46	
13	1	6	1.2	50	Passengers	1158	Maharagama	1162	Meepe	20	5.25	3.340	75.00	1,500.00	3.62	4.97	8.59	15.275	No	0.025	0.105	-	-	-	-	0.130	3.62	4.97	0.025	0.105	-	-	-	-	0.130	3.62
14	1	8	1.2	20	Empty	1136	Hanwella	1136	Maharagama	25	3.00	-	-	1.33	1.08	2.41	15.275	No	0.000	0.000	-	-	-	-	0.000	1.33	1.08	0.000	0.000	-	-	-	-	0.000	1.33	
15	1	9	1.2	20	Empty	1154	Kottawa	9212	Hettipola (Keg)	95	6.75	-	-	3.60	3.28	6.88	15.275	No	0.024	0.016	-	-	-	-	0.040	3.60	3.28	0.024	0.016	-	-	-	-	0.040	3.60	
16	1	5	1.2	50	Passengers	1100	Colombo	2222	Matale	155	3.50	1.800	65.00	10,075.00	2.17	3.13	5.3	15.275	No	0.002	0.013	-	-	-	-	0.015	2.17	3.13	0.002	0.013	-	-	-	-	0.015	2.17
17	1	8	1.2	71	Vegetables	1157	Madiwela	1136	Hanwella	44	3.00	0.980	25.50	1,099.56	2.23	1.75	3.98	15.275	No	0.003	0.001	-	-	-	-	0.004	2.23	1.75	0.003	0.001	-	-	-	-	0.004	2.23
18	1	6	1.2	50	Passengers	1158	Maharagama	1162	Meepe	20	5.25	4.190	75.00	1,500.00	4.07	5.37	9.44	15.275	No	0.042	0.149	-	-	-	-	0.191	4.07	5.37	0.042	0.149	-	-	-	-	0.191	4.07
19	1	9	1.2	20	Empty	1100	Colombo	1139	Homagama	20	6.75	-	-	3.61	5.80	9.41	15.275	No	0.024	0.212	-	-	-	-	0.236	3.61	5.80	0.024	0.212	-	-	-	-	0.236	3.61	
20	1	6	1.2	50	Passengers	1158	Maharagama	1121	Avissawella	36	5.25	1.230	75.00	2,700.00	2.99	3.49	6.48	15.275	No	0.010	0.021	-	-	-	-	0.031	2.99	3.49	0.010	0.021	-	-	-	-	0.031	2.99
21	1	8	1.2	20	Empty	1154	Kottawa	9103	Balangoda	130	3.00	-	-	1.69	1.48	3.17	15.275	No	0.001	0.000	-	-	-	-	0.001	1.69	1.48	0.001	0.000	-	-	-	-	0.001	1.69	
22	1	5	1.2	50	Passengers	1154	Kottawa	1139	Homagama	10	3.50	0.040	65.00	650.00	1.56	1.98	3.54	15.275	No	0.001	0.002	-	-	-	-	0.002	1.56	1.98	0.001	0.002	-	-	-	-	0.002	1.56
23	1	6	1.2	50	Passengers	1100	Colombo	1174	Padukka	25	5.25	4.700	75.00	1,875.00	4.35	5.60	9.95	15.275	No	0.057	0.180	-	-	-	-	0.237	4.35	5.60	0.057	0.180	-	-	-	-	0.237	4.35
24	1	8	1.2	6	Charcoal/Coal	1154	Kottawa	1139	Homagama	5	3.00	0.570	18.75	53.44	1.29	2.38	3.57	15.275	No	0.000	0.003	-	-	-	-	0.003	1.29	2.38	0.000	0.003	-	-	-	-	0.003	1.29
25	1	8	1.2	68	Tile	1154	Kottawa	1326	Kalutara North	40	3.00	0.360	18.75	270.00	2.01	1.35	3.36	15.275	No	0.002	0.000	-	-	-	-	0.002	2.01	1.35	0.002	0.000	-	-	-	-	0.002	2.01
26	1	7	1.1	50	Passengers	1100	Colombo	1325	Ingiriya	60	1.10	6.580	75.00	4,500.00	4.16	3.52	7.68	15.275	No	0.047	0.022	-	-	-	-	0.068	4.16	3.52	0.047	0.022	-	-	-	-	0.068	4.16
27	1	9	1.2	57	Rubber/Rubber Prod	1154	Kottawa	2122	Kandy	121	6.75	1.060	16.29	2,089.36	3.69	4.12	7.81	15.275	No	0.027	0.045	-	-	-	-	0.072	3.69	4.12	0.027	0.045	-	-	-	-	0.072	3.69
28	1	8	1.2	20	Empty	1154	Kottawa	1139	Homagama	5	3.00	-	-	1.63	1.35	2.98	15.275	No	0.001	0.000	-	-	-	-	0.001	1.63	1.35	0.001	0.000	-	-	-	-	0.001	1.63	
29	1	6	1.2	50	Passengers	1158	Maharagama	1121	Avissawella	36	5.25	2.660	75.00	2,700.00	2.74	5.17	7.91	15.275	No	0.007	0.125	-	-	-	-	0.132	2.74	5.17	0.007	0.125	-	-	-	-	0.132	2.74
30	1	5	1.2	50	Passengers	1165	Moratuwa	2122	Kandy	135	3.50	0.910	65.00	8,775.00	2.15	2.26	4.41	15.275	No	0.002	0.003	-	-	-	-	0.005	2.15	2.26	0.002	0.003	-	-	-	-	0.005	2.15
31	1	7	1.1	67	Textiles	1158	Maharagama	1133	Godagama	15	1.10	1.000	43.14	647.10	0.65	0.43	1.08	15.275	No	0.000	0.000	-	-	-	-	0.000	0.65	0.43	0.000	0.000	-	-	-	-	0.000	0.65
32	1	9	1.2	28	Flour	1178	Pannipitiya	1139	Homagama	7	6.75	4.680	6.25	204.75	4.24	7.19	11.43	15.275	No	0.051	0.562	-	-	-	-	0.613	4.24	7.19	0.051	0.562	-	-	-	-	0.613	4.24
33	1	9	1.2	29	Food Items	1154	Kottawa	6127	Kurunegala	98	6.75	4.720	13.50	6,244.56	4.97	6.50	11.47	15.275	No	0.105	0.355	-	-	-	-	0.460	4.97	6.50	0.105	0.355	-	-	-	-	0.460	4.97
34	1	6	1.2	50	Passengers	1100	Colombo	8211	Kataragama	280	5.25	5.210	75.00	21,000.00	3.81	6.65	10.46	15.275	No	0.031	0.394	-	-	-	-	0.425	3.81	6.65	0.031	0.394	-	-	-	-	0.425	3.81
35	1	9	1.2	10	Chemicals	1158	Maharagama	8103	Badulla	206	6.75	4.120	13.50	11,457.72	2.66	8.31	10.87	15.275	No	0.005	1.086	-	-	-	-	1.092	2.56	8.31	0.005	1.086	-	-	-	-	1.092	2.56
36	1	9	1.2	20	Empty	1165	Moratuwa	1139	Homagama	10	6.75	-	-	3.55	3.60	7.15	15.275	No	0.023	0.024	-	-	-	-	0.047	3.55	3.60	0.023	0.024	-						



**APPENDIX – D: DATA COLLECTION SHEET USED IN QUESTIONNAIRE SURVEY**

Cost Tables for A004 & A006 Road



**APPENDIX – E: Cost tables for A004 & A006 road / Calculation of Average Cost Values/ Adjustments to MCC & ADT data/ Calculation of Cumulative user cost**

A 004 Road 22nd km - Cost incurred for a vehicle in Rs. Per ton per km	Loading Scenario	Actual Condition
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CODE LO_TYPE	Medium Bus	Large Bus	Light Goods Vehicle	Goods Vehicle (<8.5 T)	Large Lorries (>8.5 T)	Axles Vehicle Combined	Vehicle Articulate d	Vehicle Articulate d	Vehicle Articulate d	Farm Vehicles
	5	6	7	8	9	10	12	13	14	15
1 Arrack/Beer			53.33		17.5	11.36				
2 Asphalt					8.00	5.71				
4 Bricks				10.77	6.92	6.14				
6 Cement				6.7	8	6.98	9	8		
7 Cement Prod/Terras				16.25	8.9	6.98				
9 Charcoal/Coal			22	18.75	9.25	7.25				
10 Chemicals			29.15		13.5	12.25				
13 Coconuts			43.14							
15 Concrete Beams/PSC				16.25	8.9	6.98				
17 Earth/Soil/Clay				57.14	10.37	5.37				
18 Electric Post					8.9					
19 Electrical Goods			29.15	18.75		12.25				
26 Fertiliser				8.13	10	7.7				
27 Fish/dry Fish				21.51						
28 Flour				9	6.25	5	5.63	9.74	8.26	
29 Food Items			29.15	18.75	13.5					
30 Fruits			43.14	24.37						
32 Glass			43.14		16.29					
34 Groceries			29.15	18.75	13.5	12.25				
35 Hardware Items			29.15	18.75	13.5					
37 Lime/Lime Stones					13.33	8.57				
39 Machines				16.25	11.00		9.91			
40 Medince			29.15	18.75						
41 Matal			22	57.14	9.25	7.25				
42 Milk				13						
46 Motor/Foot Cycle				18.75	13.5					
47 Motor Spare Parts			29.15							
48 Non Durable Items			22	57.14						

49 Paper/Stationary  
 50 Passengers  
 51 Faultry Foods  
 52 Petroleum Product  
 53 Plastic Product  
 54 PVC Product  
 55 Rice/Paddy  
 56 Rock Boulders  
 57 Rubber/Rubber Prod  
 58 Salt Bags  
 59 Sand  
 60 Soap  
 61 Soft Drinks  
 62 Steel Prod  
 63 Steel/Bars  
 65 Suger Cane  
 66 Tea  
 67 Textiles  
 68 Tile  
 69 Timber,T/Logs,Trun  
 71 Vegetables  
 72 Water  
 73 Wooden Prod  
 74 Plants

		29.15	18.75	16.29	12	11			
65	75		75						
			18.75	16.29					
		22	16.75	11.5	10.25	9.5			
		47	50	52					
		47		52					
		16.875	8.13	6.25	5.36				
			57.14	15	9.52				
			18.75						
			18.75						
			57.14	10.37	5.37				
			18.75		12				
		29.15							
		29.15	18.75	16.29					
		150		10					
			18.75						
		43.14		16.29					
		43.14	18.75	16.29					
			18.75	16.29					
		22	16.25	8.9	6.98				
		43.14	25.5	21.1					
		47	33.5						35
		29.15	18.75	16.29	12				
		29.15							

A 004 Road 22nd km - Cost incurred for a vehicle in Rs. Per ton per km	Loading Scenario	Legal Limit
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CODE	LO_TYPE	Medium Bus	Large Bus	Light Goods Vehicle	Goods Vehicle (<8.5 T)	Large Lorries (>8.5 T)	Axles Vehicle Combined	Vehicle Articulate d	Vehicle Articulate d	Vehicle Articulate d	Farm Vehicles
		5	6	7	8	9	10	12	13	14	15
	1 Arrack/Beer			53.33		17.5	11.36				
	2 Asphalt					18.13	15.25				
	4 Bricks				11.07	13.84	11.76				
	6 Cement				7.70	15.50	13.00	18.00	19.00	18.75	
	7 Cement Prod/Terras				16.25	15.50	13.00	18.00			
	9 Charcoal/Coal			22	18.75	20.51	16.15				
	10 Chemicals			29.15		13.50	12.25				
	13 Coconuts			43.14							
	15 Concrete Beams/PSC				16.25	15.50	13.00	18.00			
	17 Earth/Soil/Clay				57.14	15.71	14.41				
	18 Electric Post					15.50					
	19 Electrical Goods			29.15	18.75		12.25				
	26 Fertiliser				8.13	19.30	14.60				
	27 Fish/dry Fish				21.51						
	28 Flour				9.00	10.20	9.87	13.44	15.90	14.48	
	29 Food Items			29.15	18.75	13.50					
	30 Fruits			43.14	24.37						
	32 Glass			43.14		16.29					
	34 Groceries			29.15	18.75	13.50	12.25				
	35 Hardware Items			29.15	18.75	13.50					
	37 Lime/Lime Stones					18.13	13.56				
	39 Machines				16.25	12.00		18.00			
	40 Medince			29.15	18.75						
	41 Matal			22	57.14	13.60	14.60				
	42 Milk				13						
	46 Motor/Foot Cycle				18.75	13.5					
	47 Motor Spare Parts			29.15							
	48 Non Durable Items			22	57.14						



49 Paper/Stationary		29.15	18.75	16.29	12	11			
50 Passengers	65.00	75.00	75.00						
51 Faultry Foods			18.75	16.29					
52 Petroleum Product		22	16.75	14.47	13.65	14.80			
53 Plastic Product		47	50.00	52.00					
54 PVC Product		47		52					
55 Rice/Paddy		16.875	8.13	12.08	11.65				
56 Rock Boulders			57.14	19.34	15.25				
57 Rubber/Rubber Prod		29.15	18.75	16.29	12				
58 Salt Bags			18.75						
59 Sand			57.14	15.71	14.41				
60 Soap			18.75		12.00				
61 Soft Drinks		29.15							
62 Steel Prod		29.15	18.75	16.29					
63 Steel/Bars		150		13.5					
65 Suger Cane			18.75						
66 Tea		43.14		16.29					
67 Textiles		43.14	18.75	16.29					
68 Tile			18.75	16.29					
69 Timber,T/Logs,Trun		22	16.25	8.9	6.98				
71 Vegetables		43.14	25.5	21.1					
72 Water		47	33.5						35.00
73 Wooden Prod		29.15	18.75	16.29	12				
74 Plants		29.15							

A 004 Road 22nd km - Cost incurred for a vehicle in Rs. Per ton per km	Loading Scenario	10% than Legal Limit
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CODE	LO_TYPE										
		5	6	7	8	9	10	12	13	14	15
		Medium Bus	Large Bus	Light Goods Vehicle	Goods Vehicle (<8.5 T)	Large Lorries (>8.5 T)	Axles Vehicle Combined	Vehicle Articulate d	Vehicle Articulate d	Vehicle Articulate d	Farm Vehicles
				53.33		17.5	11.36				
						15.31	12.92				
					10.77	11.71	9.95				
					7.70	15.30	13.00	14.70	15.60	16.00	
					16.25	15.30	13.00	18.00			
				22	18.75	18.36	15.80				
				29.15		13.5	12.25				
				43.14							
					16.25	15.3	13				
					57.14	13.27	12.20				
						15.3					
				29.15	18.75		12.25				
					8.13	18.40	14.60				
					21.51						
					9.00	10.20	9.87	13.44	15.90	14.48	
				29.15	18.75						
				43.14	24.37						
				43.14		16.29					
				29.15	18.75	13.5	12.25				
				29.15	18.75						
						15.31	11.49				
					16.25	11.00		9.91			
				29.15	18.75						
				22	57.14	12.24	12.85				
					13						
					18.75	13.5					
				29.15							

48 Non Durable Items  
 49 Paper/Stationary  
 50 Passengers  
 51 Faultry Foods  
 52 Petroleum Product  
 53 Plastic Product  
 54 PVC Product  
 55 Rice/Paddy  
 56 Rock Boulders  
 57 Rubber/Rubber Prod  
 58 Salt Bags  
 59 Sand  
 60 Soap  
 61 Soft Drinks  
 62 Steel Prod  
 63 Steel/Bars  
 65 Suger Cane  
 66 Tea  
 67 Textiles  
 68 Tile  
 69 Timber,T/Logs,Trun  
 71 Vegetables  
 72 Water  
 73 Wooden Prod  
 74 Plants

		22	57.14						
		29.15	18.75	16.29	12	11			
65.00	75.00		75.00						
			18.75	16.29					
		22	16.75	14.47	13.65	14.80			
		47	50.00	52.00					
		47		52					
		16.875	8.13	10.20	9.87				
			57.14	16.33	12.92				
		29.15	18.75	16.29	12				
			18.75						
			57.14	13.27	12.20				
			18.75		12.00				
		29.15							
		29.15	18.75	16.29					
		150		12					
			18.75						
		43.14		16.29					
		43.14	18.75	16.29					
			18.75	16.29					
		22	16.25	8.9	6.98				
		43.14	25.5	21.1					
		47	33.5						35.00
		29.15	18.75	16.29	12				
		29.15							

A 004 Road 22nd km - Cost incurred for a vehicle in Rs. Per ton per km	Loading Scenario	20% than Legal Limit
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CODE	LO_TYPE	20% of LL				11.33	16.06	19.26	26.54	32.5	
		Medium Bus	Large Bus	Light Goods Vehicle	Goods Vehicle (<8.5 T)	Large Lorries (>8.5 T)	Axles Vehicle Combined	Vehicle Articulate d	Vehicle Articulate d	Vehicle Articulate d	Farm Vehicles
		5	6	7	8	9	10	12	13	14	15
1	Arrack/Beer			53.33		17.5	11.36				
2	Asphalt					14.12	12.45				
4	Bricks				10.77	10.16	9.41				
6	Cement				7.70	11.03	10.12	12.98	10.60	9.62	
7	Cement Prod/Terras				16.25	11.03	10.12	18.00			
9	Charcoal/Coal			22	18.75	15.89	13.70				
10	Chemicals			29.15		13.5	12.25				
13	Coconuts			43.14							
15	Concrete Beams/PSC				16.25	11.03	10.12	18.00			
17	Earth/Soil/Clay				57.14	12.36	11.21				
18	Electric Post					11.03					
19	Electrical Goods			29.15	18.75		12.25				
26	Fertiliser				8.13	11.03	10.12				
27	Fish/dry Fish				21.51						
28	Flour				9.00	9.65	9.34	11.68	15.41	13.99	
29	Food Items			29.15	18.75	13.50	12.25				
30	Fruits			43.14	24.37						
32	Glass			43.14		16.29					
34	Groceries			29.15	18.75	13.5	12.25				
35	Hardware Items			29.15	18.75						
37	Lime/Lime Stones					14.12	11.21				
39	Machines				16.25	11.00		9.91		13.99	
40	Medince			29.15	18.75						
41	Matal			22	57.14	10.59	11.12				
42	Milk				13						
46	Motor/Foot Cycle				18.75	13.5					
47	Motor Spare Parts			29.15							

48 Non Durable Items  
 49 Paper/Stationary  
 50 Passengers  
 51 Faultry Foods  
 52 Petroleum Product  
 53 Plastic Product  
 54 PVC Product  
 55 Rice/Paddy  
 56 Rock Boulders  
 57 Rubber/Rubber Prod  
 58 Salt Bags  
 59 Sand  
 60 Soap  
 61 Soft Drinks  
 62 Steel Prod  
 63 Steel/Bars  
 65 Suger Cane  
 66 Tea  
 67 Textiles  
 68 Tile  
 69 Timber,T/Logs,Trun  
 71 Vegetables  
 72 Water  
 73 Wooden Prod  
 74 Plants

		22	57.14						
		29.15	18.75	16.29	12	11			
65.00	75.00	75	75.00						
			18.75	16.29					
		22	16.75	12.97	11.02	14.80			
		47	50.00	52.00					
		47		52					
		16.875	8.13	9.65	9.34				
			57.14	15.89	12.45				
		29.15	18.75	16.29	12				
			18.75						
			57.14	12.36	11.21				
			18.75		12.00				
		29.15							
		29.15	18.75	16.29					
		150		10					
			18.75						
		43.14		16.29					
		43.14	18.75	16.29					
			18.75	16.29					
		22	16.25	8.9	6.98				
		43.14	25.5	21.1					
		47	33.5						35.00
		29.15	18.75	16.29	12				
		29.15							

A 004 Road 22nd km - Cost incurred for a vehicle in Rs. Per ton per km	Loading Scenario	30% than Legal Limit
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CODE	LO_TYPE	30% LL			11.33	16.06	19.26	26.54	32.5		
		Medium Bus	Large Bus	Light Goods Vehicle	Goods Vehicle (<8.5 T)	Large Lorries (>8.5 T)	Axles Vehicle Combined	Vehicle Articulate d	Vehicle Articulate d	Vehicle Articulate d	Farm Vehicles
		5	6	7	8	9	10	12	13	14	15
1	Arrack/Beer			53.33		17.5	11.36				
2	Asphalt					12.44	11				
4	Bricks				10.77	8.97	8.3				
6	Cement				7.70	9.72	8.93	11.16	9.31	8.50	
7	Cement Prod/Terras				16.25	9.72	8.93	11.16			
9	Charcoal/Coal			22	18.75	14.00	12.09				
10	Chemicals			29.15		13.5	12.25				
13	Coconuts			43.14							
15	Concrete Beams/PSC				16.25	9.72	8.93	11.16			
17	Earth/Soil/Clay				57.14	10.89	9.90				
18	Electric Post					9.72					
19	Electrical Goods			29.15	18.75		12.25				
26	Fertiliser				8.13	9.72	8.93				
27	Fish/dry Fish				21.51						
28	Flour				9.00	8.51	8.25	10.04	13.54	12.37	
29	Food Items			29.15	18.75	13.50	12.25				
30	Fruits			43.14	24.37						
32	Glass			43.14		16.29					
34	Groceries			29.15	18.75	13.5	12.25				
35	Hardware Items			29.15	18.75	13.50					
37	Lime/Lime Stones					12.44	9.9				
39	Machines				16.25	11.00		9.91		13.99	
40	Medince			29.15	18.75						
41	Matal			22	57.14	9.33	9.90				
42	Milk				13						
46	Motor/Foot Cycle				18.75	13.5					
47	Motor Spare Parts			29.15							
48	Non Durable Items			22	57.14						

49 Paper/Stationary  
 50 Passengers  
 51 Faultry Foods  
 52 Petroleum Product  
 53 Plastic Product  
 54 PVC Product  
 55 Rice/Paddy  
 56 Rock Boulders  
 57 Rubber/Rubber Prod  
 58 Salt Bags  
 59 Sand  
 60 Soap  
 61 Soft Drinks  
 62 Steel Prod  
 63 Steel/Bars  
 65 Suger Cane  
 66 Tea  
 67 Textiles  
 68 Tile  
 69 Timber,T/Logs,Trun  
 71 Vegetables  
 72 Water  
 73 Wooden Prod  
 74 Plants

		29.15	18.75	16.29	12	11			
65.00	75.00	75	75.00	75.00					
			18.75	16.29					
		22	16.75	12.97	11.02	14.51			
		47	50.00	52.00					
		47		52					
		16.875	8.13	8.51	8.25				
			57.14	14.00	11.00				
		29.15	18.75	16.29	12				
			18.75						
			57.14	10.89	9.90				
			18.75		12.00				
		29.15							
		29.15	18.75	16.29					
		150		10					
			18.75						
		43.14		16.29					
		43.14	18.75	16.29					
			18.75	16.29					
		22	16.25	8.9	6.98				
		43.14	25.5	21.1					
		47	33.5						35.00
		29.15	18.75	16.29	12				
		29.15							

A 004 Road 22nd km - Cost incurred for a vehicle in Rs. Per ton per km	Loading Scenario	40% than Legal Limit
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CODE	LO_TYPE	40% LL			11.33	16.06	19.26	26.54	32.5		
		Medium Bus	Large Bus	Light Goods Vehicle	Goods Vehicle (<8.5 T)	Large Lorries (>8.5 T)	Axles Vehicle Combined	Vehicle Articulate d	Vehicle Articulate d	Vehicle Articulate d	Farm Vehicles
		5	6	7	8	9	10	12	13	14	15
1	Arrack/Beer			53.33		17.5	11.36				
2	Asphalt					11.14	9.84				
4	Bricks				10.77	8.06	7.43				
6	Cement				7.70	8.70	8.00	9.91	8.30	7.62	
7	Cement Prod/Terras				16.25	8.10	8.00	9.91			
9	Charcoal/Coal			22	18.75	12.53	10.89				
10	Chemicals			29.15		13.5	12.25				
13	Coconuts			43.14							
15	Concrete Beams/PSC				16.25	8.10	8.00				
17	Earth/Soil/Clay				57.14	9.75	8.86				
18	Electric Post					8.1					
19	Electrical Goods			29.15	18.75		12.25				
26	Fertiliser				8.13	8.70	8.00				
27	Fish/dry Fish				21.51						
28	Flour				9.00	7.62	7.38	8.92	12.07	11.09	
29	Food Items			29.15	18.75	13.50	12.25				
30	Fruits			43.14	24.37						
32	Glass			43.14		16.29					
34	Groceries			29.15	18.75	13.5	12.25				
35	Hardwre Items			29.15	18.75	13.50					
37	Lime/Lime Stones					11.14	8.86				
39	Machines				16.25	11.00		9.91		13.99	
40	Medince			29.15	18.75						
41	Matal			22	57.14	8.36	8.86				
42	Milk				13						
46	Motor/Foot Cycle				18.75	13.5					
47	Motor Spare Parts			29.15							



48 Non Durable Items  
 49 Paper/Stationary  
 50 Passengers  
 51 Faultry Foods  
 52 Petroleum Product  
 53 Plastic Product  
 54 PVC Product  
 55 Rice/Paddy  
 56 Rock Boulders  
 57 Rubber/Rubber Prod  
 58 Salt Bags  
 59 Sand  
 60 Soap  
 61 Soft Drinks  
 62 Steel Prod  
 63 Steel/Bars  
 65 Suger Cane  
 66 Tea  
 67 Textiles  
 68 Tile  
 69 Timber,T/Logs,Trun  
 71 Vegetables  
 72 Water  
 73 Wooden Prod  
 74 Plants

		22	57.14					
		29.15	18.75	16.29	12	11		
65.00	75.00	75	75.00	75.00				
			18.75	16.29				
		22	16.75	12.97	11.02	12.89		
		47	50.00	52.00				
		47		52				
		16.875	8.13	7.62	7.38			
			57.14	12.53	9.84			
		29.15	18.75	16.29	12			
			18.75					
			57.14	9.75	8.86			
			18.75		12.00			
		29.15						
		29.15	18.75	16.29				
		150		10				
			18.75					
		43.14		16.29				
		43.14	18.75	16.29				
			18.75	16.29				
		22	16.25	8.9	6.98			
		43.14	25.5	21.1				
		47	33.5					35.00
		29.15	18.75	16.29	12			
		29.15						

A 006 Road 196th km - Cost incurred for a vehicle in Rs. Per ton per km

Loading Scenario

Actual Condition

**Normal Rates**

**CODE LO\_TYPE**

Medium Bus	Large Bus	Light Goods Vehicle	Goods Vehicle (<8.5 T)	Large Lorries (>8.5 T)	Axles Vehicle Combined	Axles Vehicle Articulate	Vehicle Articulate d	Vehicle Articulate d	Farm Vehicles
5	6	7	8	9	10	12	13	14	15
				17.5	11.36				
			6.7	8	6.98	9	8		
			16.25	8.9	6.98				
		22	18.75	9.25	7.25				
		29.15							
				11	9				
			18.75						
				10	7.7				
					7.7		10	9.09	
		29.15	18.75						
		29.15	18.75						
			18.75						
				9					
			18.75						
		22		9.25	7.25				
		22							
65	75		75						
		22	16.75	11.5	10.25	9.5			
		52							
		16.875		7.14	4.8				
				9					
			18.75						
			18.75						
			18.75						
			13.2						
		22							
			25.5						
			33.5						35
				7.5					
		29.15							

A 006 Road 196th km - Cost incurred for a vehicle in Rs. Per ton per km						Loading Scenario			Legal Limit	
Legal Limit Rates	Medium Bus	Large Bus	Light Goods Vehicle	Goods Vehicle (<8.5 T)	Large Lorries (>8.5 T)	Axles Vehicle Combined	Axles Vehicle Articulate	Vehicle Articulate d	Vehicle Articulate d	Farm Vehicles
CODE LO_TYPE	5	6	7	8	9	10	12	13	14	15
1 Arrack/Beer					18.12	15.25				
6 Cement				7.70	15.50	13.00	18.00	19.00	18.75	
7 Cement Prod/Terras				16.25	15.50	13.00	18.00			
9 Charcoal/Coal			22	18.75	20.51	16.15				
10 Chemicals			29.15							
17 Earth/Soil/Clay					11.00	9.00				
19 Electrical Goods				18.75						
26 Fertiliser					19.30	14.60				
28 Flour						14.60		19.00	18.75	
29 Food Items			29.15	18.75						
34 Groceries			29.15	18.75						
35 Hardware Items				18.75						
39 Machines					12.00					
40 Medince				18.75						
41 Matal			22		13.60	14.60				
48 Non Durable Items			22							
50 Passengers	65.00	75.00		75.00						
52 Petroleum Product			22	16.75	14.47	13.65	14.80			
53 Plastic Product			52							
55 Rice/Paddy			16.875		19.30	14.60				
56 Rock Boulders					13.60					
57 Rubber/Rubber Prod				18.75						
58 Salt Bags				18.75						
60 Soap				18.75						
62 Steel Prod				13.20						
69 Timber,T/Logs,Trun			22							
71 Vegetables				25.50						
72 Water				33.50						35.00
73 Wooden Prod					11.00					
74 Plants			29.15							

A 006 Road 196th km - Cost incurred for a vehicle in Rs. Per ton per km					Loading Scenario				10% than Legal Limit		
					9.8	13.93	16.28	22.87	28.25		
		Medium Bus	Large Bus	Light Goods Vehicle	Goods Vehicle (<8.5 T)	Large Lorries (>8.5 T)	Axles Vehicle Combined	Axles Vehicle Articulate	Vehicle Articulate d	Vehicle Articulate d	Farm Vehicles
CODE	LO_TYPE	5	6	7	8	9	10	12	13	14	15
	1 Arrack/Beer					15.30	12.93				
	6 Cement				7.70	15.30	13.00	14.70	15.60	16.00	
	7 Cement Prod/Terras				16.25	15.30	13.00	18.00			
	9 Charcoal/Coal			22	18.75	18.36	15.80				
	10 Chemicals			29.15							
	17 Earth/Soil/Clay					11.00	9.00				
	19 Electrical Goods				18.75						
	26 Fertiliser					18.40	14.60				
	28 Flour						14.60		16.55	15.93	
	29 Food Items			29.15	18.75						
	34 Groceries			29.15	18.75						
	35 Hardwere Items				18.75						
	39 Machines					11.00					
	40 Medince				18.75						
	41 Matal			22		12.24	12.85				
	48 Non Durable Items			22							
	50 Passengers	65.00	75.00		75.00						
	52 Petroleum Product			22	16.75	14.47	13.65	14.80			
	53 Plastic Product			52							
	55 Rice/Paddy			16.875		16.32	13.60				
	56 Rock Boulders					13.60					
	57 Rubber/Rubber Prod				18.75						
	58 Salt Bags				18.75						
	60 Soap				18.75						
	62 Steel Prod				13.20						
	69 Timber,T/Logs,Trun			22							
	71 Vegetables				25.50						
	72 Water				33.50						35.00
	73 Wooden Prod					11.00					
	74 Plants			29.15							

A 006 Road 196th km - Cost incurred for a vehicle in Rs. Per ton per km

**20%  
Than LL**

**CODE LO\_TYPE**

					Loading Scenario			20% than Legal Limit		
Medium Bus	Large Bus	Light Goods Vehicle	Goods Vehicle (<8.5 T)	Large Lorries (>8.5 T)	Axles Vehicle Combined	Axles Vehicle Articulate	Vehicle Articulate d	Vehicle Articulate d	Farm Vehicles	
5	6	7	8	9	10	12	13	14	15	
				17.48	11.36					
			7.70	11.03	10.12	12.98	10.60	9.62		
			16.25	11.03	10.12	18.00				
		22	18.75	15.89	13.70					
		29.15								
				11.00	9.00					
			18.75							
				11.03	10.12					
					9.34		10.60	9.62		
		29.15	18.75							
		29.15	18.75							
			18.75							
				11.00						
			18.75							
		22		10.59	11.12					
		22								
65.00	75.00		75.00							
		22	16.75	12.97	11.02	14.80				
		52								
		16.875		9.65	9.73					
				13.60						
			18.75							
			18.75							
			18.75							
			13.20							
		22								
			25.50							
			33.50						35.00	
				10.00						
		29.15								





A004 - 22km	Loading Scenario - Actual Condition			Calculation of Average cost incurred per a vehicle							
Sumif fun	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	
Nu Of Empty Veh	3	1	88	66	80	13	7	1	1	1	0
Total Cost	114,985.00	424,425.00	70,761.88	319,335.47	623,176.90	121,150.13	56,381.80	983.74	34,247.52	-	<b>1,765,447.43</b>
Nu Of Vehicles	33	131	78	105	122	29	2	1	1	1	0
Total Vehicles	36	132	166	171	202	42	9	2	2	2	0
Avg Cost Incured per veh	3,194.03	3,215.34	426.28	1,867.46	3,085.03	2,884.53	6,264.64	491.87	17,123.76	-	
Avg km Travelled by veh	50.00	43.00	24.00	40.00	72.00	59.00	166.00	137.00	53.00	-	
Total km Travelled without empties	1,769.00	5,659.00	1,920.00	5,396.00	9,281.00	1,476.00	460.00	5.00	96.00		
AVG Cost per km travelled without empties	65.00	75.00	36.86	59.18	67.15	82.08	122.57	196.75	356.75	-	
AVG Cost per km travelled	<b>63.88</b>	<b>74.78</b>	<b>17.76</b>	<b>46.69</b>	<b>42.85</b>	<b>48.89</b>	<b>37.74</b>	<b>3.59</b>	<b>323.09</b>	<b>0.00</b>	



A004 - 22km	Loading Scenario - Legal Limit			Calculation of Average cost incurred per a vehicle							
Legal Limit											
Nu Of Empty Veh	3	1	92	66	81	13	7	1	1.00	0	
Total Cost	114,985.00	424,425.00	62,194.99	319,413.63	707,033.79	158,119.98	56,381.80	1,605.90	39,168.00	-	<b>1,883,328.09</b>
Nu Of Vehicles	33	131	74	105	121	29	2	1	1.00	0	
Avg Cost Incured per veh	3,484.39	3,239.89	840.47	3,042.03	5,843.25	5,452.41	28,190.90	1,605.90	-	-	
Nu of added vehicles	0	-	-	0	44	20	0	13	2	0	
Cost For Added Vehicles	-	-	-	-	479,922.21	143,296.36	-	1,604.31	14,899.20	-	
Total Cost	114,985.00	424,425.00	62,194.99	319,413.63	1,186,956.00	301,416.34	56,381.80	3,210.21	54,067.20	-	
Total Nu of Vehicles	33	131.00	74	105	165	49	2	14	3.00	0	
Avg Cost	3,484.39	3,239.89	840.47	3,042.03	7,193.67	6,151.35	28,190.90	229.30	18,022.40	-	
Total Nu of Vehicles with empties	36.00	132.00	166.00	171.00	246.00	62.00	9.00	15.00	4.00	-	
Avg Cost with empty veh	3,194.03	3,215.34	374.67	1,867.92	4,825.02	4,861.55	6,264.64	214.01	13,516.80	-	
Avg km Travelled by veh	49.56	42.91	23.99	46.57	80.17	58.78	165.89	18.62	36.20	-	From Data Sheet
AVG Cost per km travelled	64.45	74.93	15.62	40.11	60.19	82.71	37.76	11.50	373.39	0.00	
Total km Travelled	1,784.00	5,664.00	3,982.00	7,964.00	14,459.00	2,458.00	1,493.00	274.00	106.00	-	From Data Sheet
Total km Travelled without empties	1,769.00	5,659.00	1,920.00	5,396.00	9,281.00	1,476.00	460.00	5.00	96.00	-	
Km travelled by Added Vehicles	-	-	-	-	5,262.31	1,186.12	-	5.26	38.80	-	
Avg km without empties	53.61	43.20	25.95	51.39	88.14	54.33	230.00	0.73	44.93	-	
AVG Cost per km travelled without empties	65.00	75.00	32.39	59.19	81.62	113.22	122.57	313.03	401.09	-	
AVG Cost per km travelled	64.45	74.93	15.62	40.11	60.19	82.71	37.76	11.50	373.39	-	

<b>A004 - 22km</b>	<b>Loading Scenario - 10% than Legal Limit</b>				<b>Calculation of Average cost incurred per a vehicle</b>						
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**Overloaded 10% than Legal Limit**

<b>Nu Of Empty Veh</b>	3	1	88	66	80.00	13	7	1	1.00	0	
<b>Total Cost</b>	114,985.00	424,425.00	70,761.88	319,335.47	766,950.98	171,954.13	56,381.80	1,897.67	41,354.88	-	<b>1,968,046.79</b>
<b>Nu Of Vehicles</b>	33	131	78	105	122.00	29	2	1	1.00	0	
<b>Avg Cost Incured per veh</b>	3,484.39	3,239.89	907.20	3,041.29	6,286.48	5,929.45	28,190.90	1,897.67	41,354.88	-	
<b>Nu of added vehicles</b>	0	-	-	0	29.00	14	0	1	1.00	0	
<b>Cost For Added Vehicles</b>	-	-	-	-	360,435.76	113,190.72	-	1,312.55	7,575.94	-	
<b>Total Cost</b>	114,985.00	424,425.00	70,761.88	319,335.47	1,127,386.73	285,144.85	56,381.80	3,210.21	48,930.82	-	
<b>Total Nu of Vehicles</b>	33	131	78	105	151.00	43	2	2	2	0	
<b>Avg Cost</b>	3,484.39	3,239.89	907.20	3,041.29	7,466.14	6,631.28	28,190.90	1,605.11	24,465.41	-	
<b>Total Nu of Vehicles with empti</b>	36.00	132.00	166.00	171.00	231.00	56.00	9.00	3.00	3.00	-	
<b>Avg Cost with empty veh</b>	3,194.03	3,215.34	426.28	1,867.46	4,880.46	5,091.87	6,264.64	1,070.07	16,310.27	-	
<b>Avg km Travelled by veh</b>	49.56	42.91	23.99	46.57	78.14	59.11	165.89	92.54	41.51	#DIV/0!	
<b>AVG Cost per km travelled</b>	64.45	74.93	17.77	40.10	62.46	86.14	37.76	11.56	392.95	#DIV/0!	
<b>Total km Travelled</b>	1,784.00	5,664.00	3,982.00	7,964.00	14,459.00	2,458.00	1,493.00	274.00	106.00		From Data Sheet
<b>Total km Travelled without empties</b>	1,769.00	5,659.00	1,920.00	5,396.00	9,281.00	1,476.00	460.00	5.00	96.00		
<b>Km travelled by Added Vehicles</b>	-	-	-	-	3,591.87	852.17	-	3.61	18.52		
<b>Avg km without empties</b>	53.61	43.20	24.62	51.39	85.25	54.14	230.00	4.30	57.26	-	
<b>AVG Cost per km travelled without empties</b>	65.00	75.00	36.86	59.18	87.58	122.48	122.57	372.87	427.27		
<b>AVG Cost per km travelled</b>	64.45	74.93	17.77	40.10	62.46	86.14	37.76	11.56	392.95	-	

<b>A004 - 22km</b>	<b>Loading Scenario - 20% than Legal Limit</b>				<b>Calculation of Average cost incurred per a vehicle</b>						
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Overloaded 20% than Legal Limit

<b>Nu Of Empty Veh</b>	3	1	88	66	86	13	7	1	1.00	0	
<b>Total Cost</b>	114,985.00	424,425.00	70,761.88	319,335.47	818,932.67	181,876.44	56,381.80	2,121.96	45,663.36	-	<b>2,034,483.57</b>
<b>Nu Of Vehicles</b>	33	131	78	105	116	29	2	1	1.00	0	
<b>Avg Cost Incured per veh</b>	3,484.39	3,239.89	907.20	3,041.29	7,059.76	6,271.60	28,190.90	2,121.96	45,663.36	#DIV/0!	
<b>Nu of added vehicles</b>	0	-	-	0	19	9	0	1	1.00	0	
<b>Cost For Added Vehicles</b>	-	-	-	-	264,383.27	90,115.74	-	989.32	1,611.65	-	
<b>Total Cost</b>	114,985.00	424,425.00	70,761.88	319,335.47	1,083,315.94	271,992.18	56,381.80	3,111.28	47,275.01	-	
<b>Total Nu of Vehicles</b>	33	131	78	105	135	38	2	2	2	0	
<b>Avg Cost</b>	3,484.39	3,239.89	907.20	3,041.29	8,024.56	7,157.69	28,190.90	1,555.64	23,637.50	#DIV/0!	
<b>Total Nu of Vehicles with empties</b>	36.00	132.00	166.00	171.00	221.00	51.00	9.00	3.00	3.00	-	
<b>Avg Cost with empty veh</b>	3,194.03	3,215.34	426.28	1,867.46	4,901.88	5,333.18	6,264.64	1,037.09	15,758.34	-	
<b>Avg km Travelled by veh</b>	49.56	42.91	23.99	46.57	76.21	60.16	165.89	92.14	36.52	#DIV/0!	
<b>AVG Cost per km travelled</b>	64.45	74.93	17.77	40.10	64.32	88.64	37.76	11.26	431.56	-	
<b>Total km Travelled</b>	1,784.00	5,664.00	3,982.00	7,964.00	14,459.00	2,458.00	1,493.00	274.00	106.00	From Data Sheet	
<b>Total km Travelled without empties</b>	1,769.00	5,659.00	1,920.00	5,396.00	9,281.00	1,476.00	460.00	5.00	96.00		
<b>Km travelled by Added Vehicles</b>	-	-	-	-	2,382.50	610.41	-	2.42	3.55		
<b>Avg km without empties</b>	53.61	43.20	24.62	51.39	86.40	54.91	230.00	3.71	49.77	-	
<b>AVG Cost per km travelled without empties</b>	65.00	75.00	36.86	59.18	92.88	130.36	122.57	419.37	474.91		
<b>AVG Cost per km travelled</b>	64.45	74.93	17.77	40.10	64.32	88.64	37.76	11.26	431.56	-	

<b>A004 - 22km</b>	<b>Loading Scenario - 30% than Legal Limit</b>				<b>Calculation of Average cost incurred per a vehicle</b>						
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Overloaded 30% than Legal Limit

<b>Nu Of Empty Veh</b>	3	1	88	66	80	13	7	1	1.00	2	
<b>Total Cost</b>	114,985.00	424,425.00	70,761.88	319,335.47	883,930.86	191,047.75	56,381.80	2,112.92	47,275.01	-	<b>2,110,255.69</b>
<b>Nu Of Vehicles</b>	33	131	78	105	122	29	2	1	1.00	0	
<b>Avg Cost Incured per veh</b>	3,484.39	3,239.89	907.20	3,041.29	7,245.33	6,587.85	28,190.90	2,112.92	47,275.01	#DIV/0!	
<b>Nu of added vehicles</b>	0	-	-	0	12	7	0	1	-	0	
<b>Cost For Added Vehicles</b>	-	-	-	-	180,657.28	68,144.15	-	620.81	-	-	
<b>Total Cost</b>	114,985.00	424,425.00	70,761.88	319,335.47	1,064,588.14	259,191.90	56,381.80	2,733.73	47,275.01	-	
<b>Total Nu of Vehicles</b>	33	131	78	105	134	36	2	2	1	0	
<b>Avg Cost</b>	3,484.39	3,239.89	907.20	3,041.29	7,944.69	7,199.78	28,190.90	1,366.86	47,275.01	#DIV/0!	
<b>Total Nu of Vehicles with empties</b>	36.00	132.00	166.00	171.00	214.00	49.00	9.00	3.00	2.00	2.00	
<b>Avg Cost with empty veh</b>	3,194.03	3,215.34	426.28	1,867.46	4,974.71	5,289.63	6,264.64	911.24	23,637.50	-	
<b>Avg km Travelled by veh</b>	49.56	42.91	23.99	46.57	74.53	58.95	165.89	91.84	53.00	-	
<b>AVG Cost per km travelled</b>	64.45	74.93	17.77	40.10	66.75	89.73	37.76	9.92	445.99	-	
<b>Total km Travelled</b>	1,784.00	5,664.00	3,982.00	7,964.00	14,459.00	2,458.00	1,493.00	274.00	106.00	From Data Sheet	
<b>Total km Travelled without empties</b>	1,769.00	5,659.00	1,920.00	5,396.00	9,281.00	1,476.00	460.00	5.00	96.00		
<b>Km travelled by Added Vehicles</b>	-	-	-	-	1,490.77	430.65	-	1.52	-		
<b>Avg km without empties</b>	53.61	43.20	24.62	51.39	80.39	52.96	230.00	3.26	96.00		
<b>AVG Cost per km travelled without empties</b>	65.00	75.00	36.86	59.18	98.83	135.94	122.57	419.43	492.45		
<b>AVG Cost per km travelled</b>	64.45	74.93	17.77	40.10	66.75	89.73	37.76	9.92	445.99		

<b>A004 - 22km</b>	<b>Loading Scenario - 40% than Legal Limit</b>			<b>Calculation of Average cost incurred per a vehicle</b>						
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Overloaded 40% than Legal Limit

<b>Nu Of Empty Veh</b>	3	1	88	66	80	13	7	1	2.00	2	
<b>Total Cost</b>	114,985.00	424,425.00	70,761.88	319,335.47	922,502.72	199,322.79	56,381.80	2,106.22	47,275.01	-	<b>2,157,095.88</b>
<b>Nu Of Vehicles</b>	33	131	78	105	122	29	2	1	1.00	0	
<b>Avg Cost Incured per veh</b>	3,484.39	3,239.89	907.20	3,041.29	7,561.50	6,873.20	28,190.90	2,106.22	47,275.01	-	
<b>Nu of added vehicles</b>	0	-	-	0	11	6	0	1	-	0	
<b>Cost For Added Vehicles</b>	-	-	-	-	115,797.16	49,815.39	-	330.72	-	-	
<b>Total Cost</b>	114,985.00	424,425.00	70,761.88	319,335.47	1,038,299.88	249,138.18	56,381.80	2,436.93	47,275.01	-	
<b>Total Nu of Vehicles</b>	33	131	78	105	133	35	2	2	1	0	
<b>Avg Cost</b>	3,484.39	3,239.89	907.20	3,041.29	7,806.77	7,118.23	28,190.90	1,218.47	47,275.01	-	
<b>Total Nu of Vehicles with empties</b>	36.00	132.00	166.00	171.00	213.00	48.00	9.00	3.00	3.00	2.00	
<b>Avg Cost with empty veh</b>	3,194.03	3,215.34	426.28	1,867.46	4,874.65	5,190.38	6,264.64	812.31	15,758.34	-	
<b>Avg km Travelled by veh</b>	49.56	42.91	23.99	46.57	72.04	57.36	165.89	91.63	35.33	-	
<b>AVG Cost per km travelled</b>	64.45	74.93	17.77	40.10	67.66	90.49	37.76	8.87	445.99	-	
<b>Total km Travelled</b>	1,784.00	5,664.00	3,982.00	7,964.00	14,459.00	2,458.00	1,493.00	274.00	106.00	-	From Data Sheet
<b>Total km Travelled without empties</b>	1,769.00	5,659.00	1,920.00	5,396.00	9,281.00	1,476.00	460.00	5.00	96.00	-	
<b>Km travelled by Added Vehicles</b>	-	-	-	-	886.56	295.36	-	0.89	-	-	
<b>Avg km without empties</b>	53.61	43.20	24.62	51.39	76.45	50.61	230.00	2.95	96.00	-	
<b>AVG Cost per km travelled without empties</b>	65.00	75.00	36.86	59.18	102.12	140.65	122.57	413.74	492.45	-	
<b>AVG Cost per km travelled</b>	64.45	74.93	17.77	40.10	67.66	90.49	37.76	8.87	445.99	-	

Road : A006 - 196km	Average Cost Incured per a vehicle							Loading Scenario - Actual		
Nu Of Empty Veh	3	0	10	13	35	25	2	6	2	1
Total Cost	48,425.00	325,425.00	36,899.65	81,019.86	508,256.72	1,044,354.58	362,539.08	1,292,520.82	129,689.30	4,163.25
Nu Of Vehicles	3	26	15	19	37	39	5	15	1	1
Avg Cost Incured per veh	16,141.67	12,516.35	2,459.98	4,264.20	13,736.67	26,778.32	72,507.82	86,168.05	129,689.30	4,163.25
Avg km Travelled by veh	248.33	166.88	95.87	127.79	158.38	172.21	311.40	251.47	255.00	39.00
AVG Cost per km travelled	65.00	75.00	25.66	33.37	86.73	155.50	232.84	342.66	508.59	106.75

**3,833,293.26**

Road : A006 - 196km	Average Cost Incured per a vehicle										Loading Scenario - Actual
Nu Of Empty Veh	3	0	10	13	35	25	1	6	2.00	1	
Total Cost	48,425.00	325,425.00	36,899.65	81,019.86	541,910.13	1,031,073.45	373,230.00	1,447,693.60	121,921.88	4,163.25	<b>4,011,761.81</b>
Nu Of Vehicles	3	26	15	19	37	39	6	15	1.00	1	
Avg Cost Incured per veh	16,141.67	12,516.35	2,459.98	4,264.20	14,646.22	26,437.78	62,205.00	96,512.91	121,921.88	4,163.25	
Nu of added vehicles	0	-	-	0	8	26	13	18	2.00	0	
Cost For Added Vehicles	-	-	-	-	132,924.79	774,389.31	608,270.04	1,572,184.26	145,589.06	-	
Total Cost	48,425.00	325,425.00	36,899.65	81,019.86	674,834.92	1,805,462.77	981,500.04	3,019,877.86	267,510.94	4,163.25	
Total Nu of Vehicles	3	26	15	19	45	65	19	33	3	1	
Avg Cost	16,141.67	12,516.35	2,459.98	4,264.20	14,996.33	27,776.35	51,657.90	91,511.45	89,170.31	4,163.25	
Avg km Travelled by veh	248.33	166.88	95.87	127.79	155.13	177.37	234.95	244.88	192.83	39	
AVG Cost per km travelled	65.00	75.00	25.66	33.37	96.67	156.60	219.87	373.70	462.43	106.75	

Road : A006 - 196km	Average Cost Incured per a vehicle						Loading Scenario - 10% than LL			
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Nu Of Empty Veh	3	0	10	13	35	25	1	6	2.00	1	
Total Cost	48,425.00	325,425.00	36,899.65	81,019.86	602,071.81	1,186,414.11	389,724.67	1,410,596.46	120,848.96	4,163.25	<b>4,205,588.77</b>
Nu Of Vehicles	3	26	15	19	37	39	6	15	1.00	1	
Avg Cost Incured per veh	16,141.67	12,516.35	2,459.98	4,264.20	16,272.21	30,420.87	64,954.11	94,039.76	120,848.96	4,163.25	
Nu of added vehicles	0	-	-	0	3	18	9	12	1.00	0	
Cost For Added Vehicles	-	-	-	-	62,365.44	612,474.22	473,552.52	1,078,854.03	106,428.33	-	
Total Cost	48,425.00	325,425.00	36,899.65	81,019.86	664,437.25	1,798,888.33	863,277.19	2,489,450.48	227,277.29	4,163.25	
Total Nu of Vehicles	3	26	15	19	40	57	15	27	2	1	
Avg Cost	16,141.67	12,516.35	2,459.98	4,264.20	16,610.93	31,559.44	57,551.81	92,201.87	113,638.65	4,163.25	
Avg km Travelled by veh	248.33	166.88	95.87	127.79	157.85	179.52	246.79	251.29	245.75	39	
AVG Cost per km travelled	65.00	75.00	25.66	33.37	105.23	175.80	233.20	373.60	452.22	16.94	



Road : A006 - 196km

Average Cost Incured per a vehicle

Loading Scenario - 20% than LL

Nu Of Empty Veh	3	0	10	13	35	25	1	6	2.00	1	
Total Cost	48,425.00	325,425.00	36,899.65	81,019.86	569,377.88	1,007,787.23	418,747.83	1,101,137.33	83,405.40	4,163.25	<b>3,676,388.43</b>
Nu Of Vehicles	3	26	15	19	37	39	6	15	1.00	1	
Avg Cost Incured per veh	16,141.67	12,516.35	2,459.98	4,264.20	15,388.59	25,840.70	69,791.31	73,409.16	83,405.40	4,163.25	
Nu of added vehicles	0	-	-	0	1	12	7	9	1.00	0	
Cost For Added Vehicles	-	-	-	-	11,552.79	348,002.73	377,525.48	583,636.64	53,845.55	-	
Total Cost	48,425.00	325,425.00	36,899.65	81,019.86	580,930.66	1,355,789.96	796,273.31	1,684,773.96	137,250.95	4,163.25	
Total Nu of Vehicles	3	26	15	19	38	51	13	24	2	1	
Avg Cost	16,141.67	12,516.35	2,459.98	4,264.20	15,287.65	26,584.12	61,251.79	70,198.92	68,625.47	4,163.25	
Avg km Travelled by veh	248.33	166.88	95.87	127.79	154.79	174.71	243.37	243.61	213.61	39	
AVG Cost per km travelled	65.00	75.00	25.66	33.37	98.76	152.16	251.68	288.45	281.70	19.49	

Road : A006 - 196km

Average Cost Incured per a vehicle

Loading Scenario - 30% than LL

Nu Of Empty Veh	3	0	10	13	35	25	1	6	2.00	1	
Total Cost	48,425.00	325,425.00	36,899.65	81,019.86	566,437.14	991,347.58	391,383.46	1,096,011.56	82,906.88	4,163.25	<b>3,624,019.37</b>
Nu Of Vehicles	3	26	15	19	37	39	6	15	1.00	1	
Avg Cost Incured per veh	16,141.67	12,516.35	2,459.98	4,264.20	15,309.11	25,419.17	65,230.58	73,067.44	82,906.88	4,163.25	
Nu of added vehicles	0	-	-	0	1	9	5	6	1.00	0	
Cost For Added Vehicles	-	-	-	-	83.79	244,040.75	244,502.02	383,728.59	38,364.75	-	
Total Cost	48,425.00	325,425.00	36,899.65	81,019.86	566,520.92	1,235,388.33	635,885.48	1,479,740.15	121,271.63	4,163.25	
Total Nu of Vehicles	3	26	15	19	38	48	11	21	2	1	
Avg Cost	16,141.67	12,516.35	2,459.98	4,264.20	14,908.45	25,737.26	57,807.77	70,463.82	60,635.81	4,163.25	
Avg km Travelled by veh	248.33	166.88	95.87	127.79	154.23	171.99	252.91	244.59	188.9	39	
AVG Cost per km travelled	65.00	75.00	25.66	33.37	96.66	149.64	228.57	288.09	239.75	17.02	

Road : A006 - 196km

Average Cost Incured per a vehicle

Loading Scenario - 40% than LL

Nu Of Empty Veh	3	0	10	13	35	25	1	6	2.00	1	
Total Cost	48,425.00	325,425.00	36,899.65	81,019.86	557,351.94	977,377.77	388,294.50	1,089,672.14	82,581.75	4,163.25	<b>3,591,210.87</b>
Nu Of Vehicles	3	26	15	19	37	39	6	15	1.00	1	
Avg Cost Incured per veh	16,141.67	12,516.35	2,459.98	4,264.20	15,063.57	25,060.97	64,715.75	72,644.81	82,581.75	4,163.25	
Nu of added vehicles	0	-	-	0	0	6	4	4	1.00	0	
Cost For Added Vehicles	-	-	-	-	-	172,235.30	179,422.97	229,537.66	26,134.70	-	
Total Cost	48,425.00	325,425.00	36,899.65	81,019.86	557,351.94	1,149,613.07	567,717.47	1,319,209.80	108,716.45	4,163.25	
Total Nu of Vehicles	3	26	15	19	37	45	10	19	2	1	
Avg Cost	16,141.67	12,516.35	2,459.98	4,264.20	15,063.57	25,546.96	56,771.75	69,432.09	54,358.22	4,163.25	
Avg km Travelled by veh	248.33	166.88	95.87	127.79	158.38	173.12	247.81	241.46	169.33	39	
AVG Cost per km travelled	65.00	75.00	25.66	33.37	95.11	147.57	229.09	287.55	321.02	106.75	

	Vehicle Classification		Both Direction	
	Code	Name	# of Vehicle weighted	Traffic Volume (MCC)
	4	Van		1895
	5	Medium Bus	36	91
	6	Large Bus	132	1441
	7	Light Goods Vehicle	166	648
	8	Medium Goods Vehicle (<8.5 T)	171	1258
	9	Large Lorries (>8.5 T)	202	434
	10	Three Axles Vehicle Combined	42	42
	11	Three Axles Vehicle Articulated		
	12	Four Axles Vehicle Articulated	9	10
	13	Five Axles Vehicle Articulated	2	2
	14	Six Axles Vehicle Articulated	2	2
	15	Farm Vehicles	4	4
TOTAL			766	5827
	1	Motor Cycle		6106
	2	Three Wheel		3834
	3	Car		4892
GRAND TOTAL				20659

**Original Traffic Composition**

% of Weighted Vehicles from MCC	Revised # of Weighted Vehicles	Revised Traffic Volm (MCC)	Revised Traffic Composition	ADT 2013
9.173%				42306
0.440%	39.56%			
6.975%	9.16%			
3.137%	25.62%			
6.089%	13.59%			
2.101%	46.54%			
0.203%	100.00%			
0.048%	90.00%			
0.010%	100.00%			
0.010%	100.00%			
0.019%	100.00%			

A004

Loading Scenario - Legal Limit

Adjustments to MCC & ADT

Vehicle Classification		Both Direction	
Code	Name	# of Vehicle weighted	Traffic Volume (MCC)
4	Van		1895
5	Medium Bus	36	91
6	Large Bus	132	1441
7	Light Goods Vehicle	166	648
8	Medium Goods Vehicle (<8.5 T)	171	1258
9	Large Lorries (>8.5 T)	202	434
10	Three Axles Vehicle Combined	42	42
11	Three Axles Vehicle Articulated		
12	Four Axles Vehicle Articulated	9	10
13	Five Axles Vehicle Articulated	2	2
14	Six Axles Vehicle Articulated	2	2
15	Farm Vehicles	4	4
TOTAL		766	5827
1	Motor Cycle		6106
2	Three Wheel		3834
3	Car		4892
GRAND TOTAL			20659

**Original Traffic Composition**

Original Traffic Composition	% of Weighted Vehicles from MCC	Revised # of Weighted Vehicles	Revised MCC Value (MCC)	Revised Traffic Composition	Original ADT 2013 Traffic Volume	Revised Traffic Volume	Revised ADT
9.173%			1895	9.11%	42306	3881	3881
0.440%	39.56%	36	91	0.44%		186	186
6.975%	9.16%	132	1441	6.92%		2951	2951
3.137%	25.62%	166	648	3.11%		1327	1327
6.089%	13.59%	171	1258	6.05%		2576	2576
2.101%	46.54%	246	529	2.54%		889	1075
0.203%	100.00%	62	62	0.30%		86	127
0.048%	90.00%	22	25	0.12%		20	51
0.010%	100.00%	22	22	0.11%		4	47
0.010%	100.00%	2	2	0.01%		4	4
0.019%	100.00%	4	4	0.02%		8	8
29.556%			6106	29.34%		12504	12504
18.558%			3834	18.42%		7851	7851
23.680%			4892	23.51%		10018	10018
100.000%			20809	100.00%		42306	42605

A004

Loading Scenario - 10% than LL

Adjustments to MCC & ADT

	Vehicle Classification		Both Direction	
	Code	Name	# of Vehicle weighted	Traffic Volume (MCC)
	4	Van		1895
	5	Medium Bus	36	91
	6	Large Bus	132	1441
	7	Light Goods Vehicle	166	648
	8	Medium Goods Vehicle (<8.5 T)	171	1258
	9	Large Lorries (>8.5 T)	202	434
	10	Three Axles Vehicle Combined	42	42
	11	Three Axles Vehicle Articulated		
	12	Four Axles Vehicle Articulated	9	10
	13	Five Axles Vehicle Articulated	2	2
	14	Six Axles Vehicle Articulated	2	2
	15	Farm Vehicles	4	4
TOTAL			766	5827
	1	Motor Cycle		6106
	2	Three Wheel		3834
	3	Car		4892
GRAND TOTAL				20659

Original Traffic Composition	% of Weighted Vehicles from MCC	Revised # of Weighted Vehicles with added	Revised Traffic Volm (MCC)	Revised Traffic Composition	ADT 2013	Original Traffic	Revised Traffic	Revised ADT
9.173%			1895	9.14%	42306	3881	3881	42461
0.440%	39.56%	36	91	0.44%		186	186	
6.975%	9.16%	132	1441	6.95%		2951	2951	
3.137%	25.62%	166	648	3.12%		1327	1327	
6.089%	13.59%	171	1258	6.07%		2576	2576	
2.101%	46.54%	231	497	2.40%		889	1015	
0.203%	100.00%	56	56	0.27%		86	114	
0.048%	90.00%	9	10	0.05%		20	20	
0.010%	100.00%	3	3	0.01%		4	4	
0.010%	100.00%	3	3	0.01%		4	4	
0.019%	100.00%	4	4	0.02%		8	8	
29.556%			6106	29.44%		12504	12504	
18.558%			3834	18.49%		7851	7851	
23.680%			4892	23.59%		10018	10018	
100.000%			20738	100.00%		42306	42461	

A004

Loading Scenario - 20% than LL

Adjustments to MCC & ADT

Vehicle Classification		Both Direction	
Code	Name	# of Vehicle weighted	Traffic Volume (MCC)
4	Van		1895
5	Medium Bus	36	91
6	Large Bus	132	1441
7	Light Goods Vehicle	166	648
8	Medium Goods Vehicle (<8.5 T)	171	1258
9	Large Lorries (>8.5 T)	202	434
10	Three Axles Vehicle Combined	42	42
11	Three Axles Vehicle Articulated		
12	Four Axles Vehicle Articulated	9	10
13	Five Axles Vehicle Articulated	2	2
14	Six Axles Vehicle Articulated	2	2
15	Farm Vehicles	4	4
TOTAL		766	5827
1	Motor Cycle		6106
2	Three Wheel		3834
3	Car		4892
GRAND TOTAL			20659

**Original Traffic Composition**

Original Traffic Composition	% of Weighted Vehicles from MCC	Revised # of Weighted Vehicles	Revised Traffic Volm (MCC)	Revised Traffic Composition	Original ADT 2013 Traffic Volume	Revised Traffic Volume	Revised ADT
9.173%			1895	9.15%	42306	3881	3881
0.440%	39.56%	36	91	0.44%		186	186
6.975%	9.16%	132	1441	6.96%		2951	2951
3.137%	25.62%	166	648	3.13%		1327	1327
6.089%	13.59%	171	1258	6.07%		2576	2576
2.101%	46.54%	221	475	2.29%		889	969
0.203%	100.00%	51	51	0.25%		86	106
0.048%	90.00%	9	10	0.05%		20	20
0.010%	100.00%	3	3	0.01%		4	4
0.010%	100.00%	3	3	0.01%		4	4
0.019%	100.00%	4	4	0.02%		8	8
29.556%			6106	29.48%		12504	12504
18.558%			3834	18.51%		7851	7851
23.680%			4892	23.62%		10018	10018
100.000%			20711	99.99%		42306	42406

A004

Loading Scenario - 30% than LL

Adjustments to MCC & ADT

Vehicle Classification		Both Direction	
Code	Name	# of Vehicle weighted	Traffic Volume (MCC)
4	Van		1895
5	Medium Bus	36	91
6	Large Bus	132	1441
7	Light Goods Vehicle	166	648
8	Medium Goods Vehicle (<8.5 T)	171	1258
9	Large Lorries (>8.5 T)	202	434
10	Three Axles Vehicle Combined	42	42
11	Three Axles Vehicle Articulated		
12	Four Axles Vehicle Articulated	9	10
13	Five Axles Vehicle Articulated	2	2
14	Six Axles Vehicle Articulated	2	2
15	Farm Vehicles	4	4
TOTAL		766	5827
1	Motor Cycle		6106
2	Three Wheel		3834
3	Car		4892
GRAND TOTAL			20659

**Original Traffic Composition**

% of Weighted Vehicles from MCC	Revised # of Weighted Vehicles	Revised Traffic Volm (MCC)	Revised Traffic Composition	Original ADT 2013	Revised Traffic Volume	Revised ADT
9.173%		1895	9.16%	42306	3881	3881
0.440%	39.56%	91	0.44%		186	186
6.975%	9.16%	132	6.96%		2951	2951
3.137%	25.62%	166	3.13%		1327	1327
6.089%	13.59%	171	6.08%		2576	2576
2.101%	46.54%	214	2.22%		889	939
0.203%	100.00%	49	0.24%		86	102
0.048%	90.00%	9	0.05%		20	20
0.010%	100.00%	3	0.01%		4	4
0.010%	100.00%	2	0.01%		4	4
0.019%	100.00%	4	0.02%		8	8
29.556%		6106	29.51%		12504	12504
18.558%		3834	18.53%		7851	7851
23.680%		4892	23.64%		10018	10018
100.000%		20693	100.00%		42306	42372





**A004 -22km**  
User cost per km for entire design life - Actual

ACTUAL TRAFFIC 2013

	VAN	MBU	LBU	LGV	MG1	MG2	HG3	AG3	AG4	AG5	AG6	FVH	Total	AADT
	3,881	186	2,951	1,327	2,576	889	86	0	20	4	4	8	11933	42306
<b>% of Vehicle</b>	<b>9.17%</b>	<b>0.44%</b>	<b>6.98%</b>	<b>3.14%</b>	<b>6.09%</b>	<b>2.10%</b>	<b>0.20%</b>	<b>0.00%</b>	<b>0.05%</b>	<b>0.01%</b>	<b>0.01%</b>	<b>0.02%</b>	<b>28.21%</b>	

11,932.67

Private Vehicle Public Vehicles Frieght

Design Life from 2013 to 2022  
Calculation of Cumulative nos. of ESAL (for both lanes)

2010-2012  
2016-2020  
2021-2025

Growth Rate & Average ESA												
Vehicle	VAN	MBU	LBU	LGV	MG1	MG2	HG3	AH3	AG4	AG5	AG6	FVH
GR 2010-2012	2.4	2.4	2.4	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
GR 2013 - 2017	2.90	2.90	2.90	6.30	6.30	6.30	6.30	6.30	6.30	6.30	6.30	6.30
GR 2017 - 2022	2.30	2.30	2.30	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
GR 2022 - 2027	2.1	2.1	2.1	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
Average ESA	0.009	0.286	0.002	0.060	8.867	12.332	0.000	0.516	15.831	5.870	0.000	
Avg Cost 2013	52.55	61.52	14.60	38.41	35.26	40.22		31.05	2.95	265.81	-	
Avg Cost 2014	55.18	64.60	15.33	40.33	37.02	42.23		32.60	3.10	279.10	-	
Avg Cost 2015	57.94	67.83	16.10	42.35	38.87	44.34		34.23	3.26	293.05	-	
Avg Cost 2016	60.84	71.22	16.91	44.47	40.81	46.56		35.94	3.42	307.70	-	
Avg Cost 2017	63.88	74.78	17.76	46.69	42.85	48.89		37.74	3.59	323.09	0	
Avg Cost 2018	67.07	78.52	18.65	49.02	44.99	51.33		39.63	3.77	339.24	-	
Avg Cost 2019	70.42	82.45	19.58	51.47	47.24	53.90		41.61	3.96	356.20	-	
Avg Cost 2020	73.94	86.57	20.56	54.04	49.60	56.60		43.69	4.16	374.01	-	
Avg Cost 2021	77.64	90.90	21.59	56.74	52.08	59.43		45.87	4.37	392.71	-	
Avg Cost 2022	81.52	95.45	22.67	59.58	54.68	62.40		48.16	4.59	412.35	-	
Avg Tonnage as it is	0	1.235	4.391	1.423	2.358	7.638	18.917	0	20.405	44.030	46.170	

Year	VAN	MBU	LBU	LGV	MG1	MG2	HG3	AH3	AG4	AG5	AG6	FVH	No.of ESALs	Cum. No. of ESALs	Cost	Cum Cost	Tonnage	Cum Tonnage
1 2011	3974	191	3022	1396	2711	935	91	0	22	5	5	9	Constrction					
2 2012	4070	196	3095	1469	2852	984	96	0	23	5	5	10	Constrction					
1 2013	4189	202	3185	1562	3032	1046	103	0	25	6	6	11	4,302,404	4,302,404	142,070,428.25	142,070,428.25	12,627,580.52	12,627,580.52
2 2014	4310	208	3278	1660	3223	1112	109	0	26	6	6	12	4,557,207	8,859,611	155,846,875.10	297,917,303.35	13,227,501.82	25,855,082.33
3 2015	4435	214	3373	1765	3426	1182	116	0	28	7	7	13	4,838,044	13,697,655	171,118,475.10	469,035,778.45	13,903,019.36	39,758,101.69
4 2016	4564	220	3470	1876	3642	1257	123	0	30	7	7	13	5,127,642	18,825,297	187,785,999.35	656,821,777.80	14,577,063.77	54,335,165.46
5 2017	4696	227	3571	1994	3871	1336	131	0	32	7	7	14	5,435,397	24,260,694	205,757,533.55	862,579,311.35	15,290,850.47	69,626,015.92
1 2018	4805	233	3654	2124	4123	1423	140	0	35	8	8	15	5,780,284	30,040,978	226,153,835.75	1,088,733,147.10	16,070,944.16	85,696,960.08
2 2019	4915	238	3738	2262	4391	1516	149	0	37	8	8	16	6,136,938	36,177,917	247,952,011.70	1,336,685,158.80	16,846,472.07	102,543,432.15
3 2020	5028	244	3824	2409	4676	1614	159	0	39	9	9	17	6,522,789	42,700,705	272,095,221.40	1,608,780,380.20	17,698,729.19	120,242,161.34
4 2021	5144	249	3912	2566	4980	1719	169	0	42	10	10	19	6,932,113	49,632,818	298,703,162.95	1,907,483,543.15	18,602,250.55	138,844,411.89
5 2022	5262	255	4001	2732	5304	1831	180	0	44	10	10	20	7,361,037	56,993,856	327,868,305.45	2,235,351,848.60	19,515,762.33	158,360,174.22
													57.0			2,235.35		158.36
													Directional Distribution Factor	0.5		0.50		0.50
													Lane distribution Factor	1		1.00		1.00
													Cumalative Number of Standard Axles (msa)	28.50		1,117.68		79.18

	NPV (at 10%)	NPV (at -2.27%)
	142,070,428.25	142,070,428.25
1	141,678,977.36	159,515,737.05
2	141,420,227.36	179,270,064.19
3	141,086,400.71	201,362,928.43
4	140,535,163.96	225,827,845.11
5	140,423,738.91	254,056,984.83
6	139,962,446.51	285,101,993.41
7	139,627,871.79	320,227,753.49
8	139,347,230.01	359,818,353.22
9	139,048,167.48	404,248,449.29

5.22%  
0.96% 0.005 0.005 0.005

1405200652 2,531,500,537.27  
1,405.20 2,531.50

**A004 -22km -LL**  
**User cost per km for entire design life - Legal Limit**

ACTUAL TRAFFIC 2013

	VAN	MBU	LBU	LGV	MG1	MG2	HG3	AG3	AG4	AG5	AG6	FVH	Total	AADT
	3,881	187	2,948	1,325	2,578	1,082	128	0	51	47	4	9	12240	42605
<b>% of Vehicle</b>	<b>9.11%</b>	<b>0.44%</b>	<b>6.92%</b>	<b>3.11%</b>	<b>6.05%</b>	<b>2.54%</b>	<b>0.30%</b>	<b>0.00%</b>	<b>0.12%</b>	<b>0.11%</b>	<b>0.01%</b>	<b>0.02%</b>	<b>28.73%</b>	

12,240.42

Private Vehicle Public Vehicles Frieght

Design Life from 2013 to 2022

Calculation of Cumulative nos. of ESAL (for both lanes)

2010-2012  
 2016-2020  
 2021-2025

Growth Rate & Average ESA												
Vehicle	VAN	MBU	LBU	LGV	MG1	MG2	HG3	AH3	AG4	AG5	AG6	FVH
GR 2010-2012	2.4	2.4	2.4	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
GR 2013 - 2017	2.90	2.90	2.90	6.30	6.30	6.30	6.30	6.30	6.30	6.30	6.30	6.30
GR 2017 - 2022	2.30	2.30	2.30	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
GR 2022 - 2027	2.1	2.1	2.1	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
<b>Average ESA</b>	<b>0.009</b>	<b>0.286</b>	<b>0.002</b>	<b>0.060</b>	<b>0.932</b>	<b>1.241</b>	<b>0.000</b>	<b>1.917</b>	<b>2.480</b>	<b>2.062</b>	<b>0.000</b>	
Avg Cost 2013		53.03	61.64	12.86	33.00	49.51	68.05		31.07	9.46	307.19	-
Avg Cost 2014		55.68	64.72	13.50	34.65	51.99	71.45		32.62	9.93	322.55	-
Avg Cost 2015		58.46	67.96	14.17	36.38	54.59	75.02		34.25	10.43	338.68	-
Avg Cost 2016		61.38	71.36	14.88	38.20	57.32	78.77		35.96	10.95	355.61	-
Avg Cost 2017		64.45	74.93	15.62	40.11	60.19	82.71		37.76	11.5	373.39	0
Avg Cost 2018		67.67	78.68	16.40	42.12	63.20	86.85		39.65	12.08	392.06	-
Avg Cost 2019		71.05	82.61	17.22	44.23	66.36	91.19		41.63	12.68	411.66	-
Avg Cost 2020		74.60	86.74	18.08	46.44	69.68	95.75		43.71	13.31	432.24	-
Avg Cost 2021		78.33	91.08	18.98	48.76	73.16	100.54		45.90	13.98	453.85	-
Avg Cost 2022		82.25	95.63	19.93	51.20	76.82	105.57		48.20	14.68	476.54	-
Avg Tonnage as it is	0	1.235	4.391	1.423	2.358	7.638	18.917	0	20.405	44.030	46.170	

0.005284  
 0.502914  
 0.000372  
 0.029444  
 2.607278  
 8.545115  
 24.79968  
 22.78953  
 21.88932  
 0.014522

Year	VAN	MBU	LBU	LGV	MG1	MG2	HG3	AH3	AG4	AG5	AG6	FVH	No.of ESALs	Cum. No. of ESALs	Cost	Cum Cost	Tonnage	Cum Tonnage
1 2011	3975	192	3020	1394	2712	1139	135	0	54	50	5	9	Constrction					
2 2012	4070	197	3092	1467	2853	1198	142	0	57	52	5	10	Constrction					
1 2013	4189	203	3182	1560	3033	1274	151	0	61	56	6	11	1,000,073	1,000,073	147,705,874.95	147,705,874.95	14,661,774.43	14,661,774.43
2 2014	4310	209	3274	1658	3224	1354	161	0	65	59	6	12	1,051,210	2,051,283	162,119,998.70	309,825,873.65	15,397,298.34	30,059,072.76
3 2015	4435	215	3369	1763	3427	1439	171	0	69	63	7	13	1,106,286	3,157,569	178,104,173.60	487,930,047.25	16,198,456.55	46,257,529.31
4 2016	4564	221	3467	1874	3643	1530	182	0	73	67	7	13	1,163,706	4,321,276	195,604,069.40	683,534,116.65	17,025,507.86	63,283,037.16
5 2017	4696	228	3568	1992	3873	1627	193	0	78	71	7	14	1,224,495	5,545,771	222,579,102.40	906,113,219.05	17,897,678.28	81,180,715.44
1 2018	4805	234	3651	2122	4125	1733	206	0	84	76	8	15	1,290,217	6,835,988	235,951,738.80	1,142,064,957.85	18,844,987.60	100,025,703.03
2 2019	4915	239	3735	2260	4393	1846	219	0	89	81	8	16	1,357,326	8,193,314	258,874,603.85	1,400,939,561.70	19,806,589.95	119,832,292.98
3 2020	5028	245	3820	2407	4679	1966	234	0	95	86	9	17	1,429,682	9,622,996	284,341,851.05	1,685,281,412.75	20,848,036.79	140,680,329.77
4 2021	5144	250	3908	2563	4983	2094	249	0	101	92	10	19	1,506,376	11,129,372	312,378,687.30	1,997,660,100.05	21,952,381.52	162,632,711.28
5 2022	5262	256	3998	2730	5307	2230	265	0	107	98	10	20	1,586,150	12,715,522	343,157,717.45	2,340,817,817.50	23,095,664.81	185,728,376.09
													12.7			2,340.82		185.73
														0.5		0.50		0.50
														1		1.00		1.00
														6.36		1,170.41		92.86

5.22%  
 0.96% 0.005 0.005 0.005

Directional Distribution Factor	0.5
Lane distribution Factor	1
Cumulative Number of Standard Axles (msa)	6.36

NPV 147705875 147705875  
 NPV (at -2.27%)  
 1 147381817 165936539.1  
 2 147193531.9 186588541.2  
 3 146960232.5 209746245  
 4 152024521.8 244290248.8  
 5 146507465.8 265063765.7  
 6 146127965 297661088.1  
 7 145912329.2 334640761.8  
 8 145726963 376291913.8  
 9 145532370.7 423099680.1  
 1471073072 2651024658  
 1,471.07 2,651.02

**A004 -22km**  
User cost per km for entire design life - 10% than LL

ACTUAL TRAFFIC 2013

	VAN	MBU	LBU	LGV	MG1	MG2	HG3	AG3	AG4	AG5	AG6	FVH	Total	AADT
	3,881	187	2,951	1,325	2,577	1,019	115	0	21	4	4	8	12093	42461
<b>% of Vehicle</b>	<b>9.14%</b>	<b>0.44%</b>	<b>6.95%</b>	<b>3.12%</b>	<b>6.07%</b>	<b>2.40%</b>	<b>0.27%</b>	<b>0.00%</b>	<b>0.05%</b>	<b>0.01%</b>	<b>0.01%</b>	<b>0.02%</b>	<b>28.48%</b>	

12,092.89

Private Vehicle Public Vehicles Freight

Design Life from 2013 to 2022

Calculation of Cumulative nos. of ESAL (for both lanes)

2010-2012  
2016-2020  
2021-2025

Growth Rate & Average ESA												
Vehicle	VAN	MBU	LBU	LGV	MG1	MG2	HG3	AH3	AG4	AG5	AG6	FVH
GR 2010-2012	2.4	2.4	2.4	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
GR 2013 - 2017	2.90	2.90	2.90	6.30	6.30	6.30	6.30	6.30	6.30	6.30	6.30	6.30
GR 2017 - 2022	2.30	2.30	2.30	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
GR 2022 - 2027	2.1	2.1	2.1	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
Average ESA	0.009	0.286	0.002	0.060	1.296	1.793	0.000	0.516	3.719	3.770	0.000	
Avg Cost 2013	53.03	61.64	14.61	32.99	51.39	70.87		31.07	9.51	323.29	-	
Avg Cost 2014	55.68	64.72	15.34	34.64	53.96	74.41		32.62	9.99	339.45	-	
Avg Cost 2015	58.46	67.96	16.11	36.37	56.66	78.13		34.25	10.49	356.42	-	
Avg Cost 2016	61.38	71.36	16.92	38.19	59.49	82.04		35.96	11.01	374.24	-	
Avg Cost 2017	64.45	74.93	17.77	40.1	62.46	86.14		37.76	11.56	392.95	0	
Avg Cost 2018	67.67	78.68	18.66	42.11	65.58	90.45		39.65	12.14	412.60	-	
Avg Cost 2019	71.05	82.61	19.59	44.22	68.86	94.97		41.63	12.75	433.23	-	
Avg Cost 2020	74.60	86.74	20.57	46.43	72.30	99.72		43.71	13.39	454.89	-	
Avg Cost 2021	78.33	91.08	21.60	48.75	75.92	104.71		45.90	14.06	477.63	-	
Avg Cost 2022	82.25	95.63	22.68	51.19	79.72	109.95		48.20	14.76	501.51	-	
Avg Tonnage as it is	0	1.235	4.391	1.423	2.358	7.638	18.917	0	20.405	44.030	46.170	

Year	VAN	MBU	LBU	LGV	MG1	MG2	HG3	AH3	AG4	AG5	AG6	FVH	No. of ESALs	Cum. No. of ESALs	Cost	Cum Cost	Tonnage	Cum Tonnage
1 2011	3975	192	3022	1394	2712	1073	121	0	23	5	5	9	Constrction					
2 2012	4070	196	3095	1467	2853	1128	127	0	24	5	5	10	Constrction					
1 2013	4189	202	3185	1560	3033	1200	136	0	26	6	6	11	1,078,657	1,078,657	147,458,784.55	147,458,784.55	13,292,037.47	13,292,037.47
2 2014	4310	208	3278	1658	3224	1275	144	0	28	6	6	12	1,133,730	2,212,388	161,830,312.80	309,289,097.35	13,938,306.83	27,230,344.30
0.029444 3 2015	4435	214	3373	1763	3427	1355	153	0	29	7	7	13	1,194,844	3,407,232	177,781,006.25	487,070,103.60	14,648,064.66	41,878,408.96
2.607278 4 2016	4564	220	3470	1874	3643	1441	163	0	31	7	7	13	1,257,404	4,664,636	195,226,152.05	682,296,255.65	15,373,489.75	57,251,898.71
8.545115 5 2017	4696	227	3571	1992	3873	1532	173	0	33	7	7	14	1,323,061	5,987,697	214,121,187.35	896,417,443.00	16,135,400.97	73,387,299.68
1 2018	4805	233	3654	2122	4125	1632	185	0	36	8	8	15	1,395,815	7,383,512	235,479,468.95	1,131,896,911.95	16,972,451.09	90,359,750.77
24.79968 2 2019	4915	238	3738	2260	4393	1738	197	0	38	8	8	16	1,468,942	8,852,454	258,338,053.85	1,390,234,965.80	17,804,935.43	108,164,686.19
22.78953 3 2020	5028	244	3824	2407	4679	1851	209	0	40	9	9	17	1,548,727	10,401,181	283,709,324.30	1,673,944,290.10	18,713,680.67	126,878,366.86
21.88932 4 2021	5144	249	3912	2563	4983	1971	223	0	43	10	10	19	1,633,927	12,035,108	311,699,206.95	1,985,643,497.05	19,686,119.51	146,564,486.37
0.014522 5 2022	5262	255	4001	2730	5307	2099	238	0	46	10	10	20	1,721,386	13,756,493	342,388,757.35	2,328,032,254.40	20,679,823.25	167,244,309.62
													13.8			2,328.03		167.24

Directional Distribution Factor	0.5	0.50	0.50
Lane distribution Factor	1	1.00	1.00
Cumulative Number of Standard Axles (msa)	6.88	1,164.02	83.62

5.22%  
0.96% 0.005 0.005 0.005  
3.55% 0.441 0.441 0.441

NPV NPV (at -2.27%)  
147458784.6 147458784.6  
147118466.2 165640033.6  
146926451.4 186249979  
146676297.6 209341004.2  
146247652 235007319  
146214223.4 264533226.6  
145825096.5 297044148.3  
145587743 333896343.7  
145409980.4 375473410.6  
145206256.5 422151583.2  
  
1462670952 2636795833  
1,462.67 2636.795833

**A004 -22km**  
User cost per km for entire design life - 20%

ACTUAL TRAFFIC 2013

	VAN	MBU	LBU	LGV	MG1	MG2	HG3	AG3	AG4	AG5	AG6	FVH	Total	AADT
	3,880	187	2,951	1,327	2,574	971	106	0	21	4	4	8	12035	42406
% of Vehicle	9.15%	0.44%	6.96%	3.13%	6.07%	2.29%	0.25%	0.00%	0.05%	0.01%	0.01%	0.02%	28.38%	

12,034.82

Private Vehicle Public Vehicles Frieght

Design Life from 2013 to 2022

Calculation of Cumulative nos. of ESAL (for both lanes)

2010-2012  
2016-2020  
2021-2025

Growth Rate & Average ESA													
Vehicle	VAN	MBU	LBU	LGV	MG1	MG2	HG3	AH3	AG4	AG5	AG6	FVH	
GR 2010-2012	2.4	2.4	2.4	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	
GR 2013 - 2017	2.90	2.90	2.90	6.30	6.30	6.30	6.30	6.30	6.30	6.30	6.30	6.30	
GR 2017 - 2022	2.30	2.30	2.30	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	
GR 2022 - 2027	2.1	2.1	2.1	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	
Average ESA		0.009	0.286	0.002	0.060	1.809	2.492	0.000	0.516	6.092	6.432	0.000	
Avg Cost 2013		53.03	61.64	14.61	32.99	52.91	72.92		31.07	9.26	355.05	-	
Avg Cost 2014		55.68	64.72	15.34	34.64	55.56	76.57		32.62	9.72	372.80	-	
Avg Cost 2015		58.46	67.96	16.11	36.37	58.34	80.40		34.25	10.21	391.44	-	
Avg Cost 2016		61.38	71.36	16.92	38.19	61.26	84.42		35.96	10.72	411.01	-	
Avg Cost 2017		64.45	74.93	17.77	40.1	64.32	88.64		37.76	11.26	431.56	0	
Avg Cost 2018		67.67	78.68	18.66	42.11	67.54	93.07		39.65	11.82	453.14	-	
Avg Cost 2019		71.05	82.61	19.59	44.22	70.92	97.72		41.63	12.41	475.80	-	
Avg Cost 2020		74.60	86.74	20.57	46.43	74.47	102.61		43.71	13.03	499.59	-	
Avg Cost 2021		78.33	91.08	21.60	48.75	78.19	107.74		45.90	13.68	524.57	-	
Avg Cost 2022		82.25	95.63	22.68	51.19	82.10	113.13		48.20	14.36	550.80	-	
Avg Tonnage as it is	0	1.235	4.391	1.423	2.358	7.638	18.917	0	20.405	44.030	46.170		

Year	VAN	MBU	LBU	LGV	MG1	MG2	HG3	AH3	AG4	AG5	AG6	FVH	No. of ESALs	Cum. No. of ESALs	Cost	Cum Cost	Tonnage	Cum Tonnage
1 2011	3974	192	3023	1397	2708	1022	112	0	23	5	5	9	Constrction					
2 2012	4069	196	3095	1469	2849	1075	118	0	24	5	5	10	Constrction					
1 2013	4188	202	3185	1562	3029	1143	126	0	26	6	6	11	1,302,258	1,302,258	146,890,862.80	146,890,862.80	13,061,677.94	13,061,677.94
2 2014	4309	208	3278	1660	3220	1215	134	0	28	6	6	12	1,371,435	2,673,693	161,225,266.90	308,116,129.70	13,699,583.69	26,761,261.63
3 2015	4434	214	3373	1765	3423	1292	142	0	29	7	7	13	1,448,772	4,122,465	177,121,746.90	485,237,876.60	14,394,073.21	41,155,334.83
4 2016	4562	220	3470	1876	3638	1373	151	0	31	7	7	13	1,525,753	5,648,218	194,444,336.65	679,682,213.25	15,097,793.57	56,253,128.40
5 2017	4695	227	3571	1994	3867	1460	161	0	33	7	7	14	1,608,338	7,256,556	213,260,740.00	892,942,953.25	15,847,692.64	72,100,821.04
1 2018	4803	233	3654	2124	4119	1555	172	0	36	8	8	15	1,700,504	8,957,060	234,522,931.70	1,127,465,884.95	16,663,898.71	88,764,719.75
2 2019	4914	238	3738	2262	4387	1656	183	0	38	8	8	16	1,792,330	10,749,390	257,261,380.50	1,384,727,265.45	17,475,538.99	106,240,258.73
3 2020	5027	244	3824	2409	4672	1764	195	0	40	9	9	17	1,894,850	12,644,240	282,548,784.90	1,667,276,050.35	18,369,484.21	124,609,742.94
4 2021	5143	249	3912	2566	4975	1879	208	0	43	10	10	19	2,003,697	14,647,937	310,414,655.15	1,977,690,705.50	19,320,737.72	143,930,480.66
5 2022	5261	255	4001	2732	5299	2001	221	0	46	10	10	20	2,113,168	16,761,105	340,895,246.70	2,318,585,952.20	20,283,385.44	164,213,866.10
													16.8			2,318.59		164.21
													Directional Distribution Factor	0.5		0.50		0.50
													Lane distribution Factor	1		1.00		1.00
													Cumalative Number of Standard Axles (msa)	8.38		1,159.29		82.11

NPV	NPV (at -2.27%)
146890862.8	146890862.8
146568424.5	165020744
146381609	185559314.5
146088908.1	208502663.6
145659954.9	234062940.6
145620289	263458670.5
145217342.5	295806159.9
144992202.8	332530509.6
144810727.6	373926037.2
144572862.2	420310144.5

5.22%				
0.96%	0.005	0.005	0.005	
3.55%	0.441	0.441	0.441	

1456803183	2626068047
1,456.80	2,626.07

A004 -22km

User cost per km for entire design life - 30%

ACTUAL TRAFFIC 2013

	VAN	MBU	LBU	LGV	MG1	MG2	HG3	AG3	AG4	AG5	AG6	FVH	Total	AADT
	3,881	186	2,949	1,326	2,576	941	102	0	21	4	4	8	12000	42372
% of Vehicle	9.16%	0.44%	6.96%	3.13%	6.08%	2.22%	0.24%	0.00%	0.05%	0.01%	0.01%	0.02%	28.32%	

11,999.75

Private Vehicle Public Vehicles Frieght

Design Life from 2013 to 2022

Calculation of Cumulative nos. of ESAL (for both lanes)

2010-2012

2016-2020

2021-2025

Growth Rate & Average ESA													
Vehicle	VAN	MBU	LBU	LGV	MG1	MG2	HG3	AH3	AG4	AG5	AG6	FVH	
GR 2010-2012	2.4	2.4	2.4	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
GR 2013 - 2017	2.90	2.90	2.90	6.30	6.30	6.30	6.30	6.30	6.30	6.30	6.30	6.30	6.30
GR 2017 - 2022	2.30	2.30	2.30	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
GR 2022 - 2027	2.1	2.1	2.1	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
Average ESA		0.009	0.286	0.002	0.060	2.672	3.640	0.000	0.516	10.660	5.870	0.000	
Avg Cost 2013		53.03	61.64	14.61	32.99	54.91	73.82		31.07	8.16	366.91	-	
Avg Cost 2014		55.68	64.72	15.34	34.64	57.66	77.51		32.62	8.57	385.26	-	
Avg Cost 2015		58.46	67.96	16.11	36.37	60.54	81.39		34.25	9.00	404.52	-	
Avg Cost 2016		61.38	71.36	16.92	38.19	63.57	85.46		35.96	9.45	424.75	-	
Avg Cost 2017		64.45	74.93	17.77	40.1	66.75	89.73		37.76	9.92	445.99	0	
Avg Cost 2018		67.67	78.68	18.66	42.11	70.09	94.22		39.65	10.42	468.29	-	
Avg Cost 2019		71.05	82.61	19.59	44.22	73.59	98.93		41.63	10.94	491.70	-	
Avg Cost 2020		74.60	86.74	20.57	46.43	77.27	103.88		43.71	11.49	516.29	-	
Avg Cost 2021		78.33	91.08	21.60	48.75	81.13	109.07		45.90	12.06	542.10	-	
Avg Cost 2022		82.25	95.63	22.68	51.19	85.19	114.52		48.20	12.66	569.21	-	
Avg Tonnage as it is	0	1.235	4.391	1.423	2.358	7.638	18.917	0	20.405	44.030	46.170		

Year	VAN	MBU	LBU	LGV	MG1	MG2	HG3	AH3	AG4	AG5	AG6	FVH	No. of ESALs	Cum. No. of ESALs	Cost	Cum Cost	Tonnage	Cum Tonnage
1 2011	3975	191	3020	1396	2711	990	107	0	23	5	5	9	Construction					
2 2012	4070	196	3093	1468	2852	1042	113	0	24	5	5	10	Construction					
1 2013	4189	202	3183	1561	3032	1108	121	0	26	6	6	11	1,682,946	1,682,946	146,939,805.65	146,939,805.65	12,928,436.15	12,928,436.15
2 2014	4310	208	3275	1659	3223	1178	128	0	28	6	6	12	1,774,770	3,457,716	161,240,326.80	308,180,132.45	13,552,258.74	26,480,694.89
3 2015	4435	214	3370	1764	3426	1252	136	0	29	7	7	13	1,878,251	5,335,966	177,138,263.15	485,318,395.60	14,238,384.65	40,719,079.53
4 2016	4564	220	3468	1875	3642	1331	145	0	31	7	7	13	1,982,693	7,318,660	194,526,965.35	679,845,360.95	14,938,992.66	55,658,072.19
5 2017	4696	227	3569	1993	3871	1415	154	0	33	7	7	14	2,092,618	9,411,278	213,312,201.35	893,157,562.30	15,673,623.41	71,331,695.60
1 2018	4805	233	3652	2123	4123	1507	165	0	36	8	8	15	2,217,855	11,629,133	234,611,119.35	1,127,768,681.65	16,481,465.87	87,813,161.46
2 2019	4915	238	3736	2261	4391	1605	175	0	38	8	8	16	2,341,850	13,970,983	257,336,544.95	1,385,105,226.60	17,277,837.83	105,090,999.29
3 2020	5028	244	3821	2408	4676	1710	187	0	40	9	9	17	2,481,850	16,452,833	282,630,763.90	1,667,735,990.50	18,161,816.73	123,252,816.02
4 2021	5144	249	3909	2564	4980	1821	199	0	43	10	10	19	2,628,622	19,081,454	310,487,706.25	1,978,223,696.75	19,095,355.33	142,348,171.35
5 2022	5262	255	3999	2731	5304	1939	211	0	46	10	10	20	2,776,845	21,858,299	340,994,676.35	2,319,218,373.10	20,042,068.97	162,390,240.32
													21.9			2,319.22		162.39
													0.5			0.50		0.50
													1			1.00		1.00
													10.93			1,159.61		81.20

5.22%  
0.96% 0.005 0.005 0.005

Directional Distribution Factor	0.5		
Lane distribution Factor	1		
Cumulative Number of Standard Axles (msa)	10.93		

	NPV	NPV (at -2.27%)
1	146939805.7	146939805.7
2	146582115.3	165036158.4
3	146395258.8	185576617.5
4	146150988.2	208591266.3
5	145695103.7	234119421.7
6	145675046.6	263557738.9
7	145259770.9	295892586
8	145034271	332626990.4
9	144844806.4	374014034.7
9	144615030.1	420432737.3

1457192197  
1,457.19 2626787357  
2,626.79

**A004 -22km**  
User cost per km for entire design life - 40%

ACTUAL TRAFFIC 2013

	VAN	MBU	LBU	LGV	MG1	MG2	HG3	AG3	AG4	AG5	AG6	FVH	Total	AADT
	3,881	186	2,949	1,326	2,576	936	97	0	21	4	4	8	11989	42364
% of Vehicle	9.16%	0.44%	6.96%	3.13%	6.08%	2.21%	0.23%	0.00%	0.05%	0.01%	0.01%	0.02%	28.30%	

11,989.01

Private Vehicle Public Vehicles Frieght

Design Life from 2013 to 2022

Calculation of Cumulative nos. of ESAL (for both lanes)

2010-2012  
2016-2020  
2021-2025

Growth Rate & Average ESA												
Vehicle	VAN	MBU	LBU	LGV	MG1	MG2	HG3	AH3	AG4	AG5	AG6	FVH
GR 2010-2012	2.4	2.4	2.4	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
GR 2013 - 2017	2.90	2.90	2.90	6.30	6.30	6.30	6.30	6.30	6.30	6.30	6.30	6.30
GR 2017 - 2022	2.30	2.30	2.30	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
GR 2022 - 2027	2.1	2.1	2.1	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
Average ESA		0.009	0.286	0.002	0.060	3.875	5.069	0.000	0.516	11.934	5.870	0.000
Avg Cost 2013		53.03	61.64	14.61	32.99	54.88	74.12		31.07	7.30	366.91	-
Avg Cost 2014		55.68	64.72	15.34	34.64	57.62	77.83		32.62	7.67	385.26	-
Avg Cost 2015		58.46	67.96	16.11	36.37	60.50	81.72		34.25	8.05	404.52	-
Avg Cost 2016		61.38	71.36	16.92	38.19	63.52	85.81		35.96	8.45	424.75	-
Avg Cost 2017		64.45	74.93	17.77	40.1	66.7	90.1		37.76	8.87	445.99	0
Avg Cost 2018		67.67	78.68	18.66	42.11	70.04	94.61		39.65	9.31	468.29	-
Avg Cost 2019		71.05	82.61	19.59	44.22	73.54	99.34		41.63	9.78	491.70	-
Avg Cost 2020		74.60	86.74	20.57	46.43	77.22	104.31		43.71	10.27	516.29	-
Avg Cost 2021		78.33	91.08	21.60	48.75	81.08	109.53		45.90	10.78	542.10	-
Avg Cost 2022		82.25	95.63	22.68	51.19	85.13	115.01		48.20	11.32	569.21	-
Avg Tonnage as it is	0	1.235	4.391	1.423	2.358	7.638	18.917	0	20.405	44.030	46.170	

Year	VAN	MBU	LBU	LGV	MG1	MG2	HG3	AH3	AG4	AG5	AG6	FVH	No.of ESALs	Cum. No. of ESALs	Cost	Cum Cost	Tonnage	Cum Tonnage
1 2011	3974	191	3020	1395	2710	985	103	0	23	5	5	9	Constrction					
2 2012	4070	196	3092	1468	2851	1037	108	0	24	5	5	10	2,217,065	2,217,065	146,642,020.40	146,642,020.40	12,870,605.18	12,870,605.18
1 2013	4189	202	3182	1561	3031	1103	115	0	26	6	6	11	2,343,714	4,560,779	160,931,613.45	307,573,633.85	13,498,544.61	26,369,149.79
2 2014	4310	208	3274	1659	3222	1172	123	0	28	6	6	12	2,482,475	7,043,254	176,784,395.65	484,358,029.50	14,177,765.81	40,546,915.60
3 2015	4435	214	3369	1764	3425	1246	130	0	29	7	7	13	2,624,450	9,667,703	194,120,304.25	678,478,333.75	14,871,469.12	55,418,384.72
4 2016	4564	220	3467	1875	3641	1325	138	0	31	7	7	13	2,774,539	12,442,242	212,851,918.10	891,330,251.85	15,603,312.00	71,021,696.72
5 2017	4696	227	3568	1993	3870	1408	147	0	33	7	7	14	2,944,524	15,386,766	234,104,561.40	1,125,434,813.25	16,404,249.75	87,425,946.47
1 2018	4805	233	3651	2123	4122	1500	157	0	36	8	8	15	3,115,352	18,502,119	256,778,952.70	1,382,213,765.95	17,197,833.85	104,623,780.31
2 2019	4915	238	3735	2261	4390	1597	167	0	38	8	8	16	3,304,916	21,807,035	281,979,965.25	1,664,193,731.20	18,072,120.17	122,695,900.48
3 2020	5028	244	3820	2408	4675	1701	178	0	40	9	9	17	3,507,152	25,314,187	309,806,021.30	1,973,999,752.50	19,005,658.77	141,701,559.25
4 2021	5144	249	3908	2564	4979	1812	190	0	43	10	10	19	3,713,448	29,027,634	340,274,009.40	2,314,273,761.90	19,952,372.41	161,653,931.66
5 2022	5262	255	3998	2731	5303	1930	202	0	46	10	10	20		29.0		2,314,273,761.90	19,952,372.41	161,653,931.66
														29.0		2,314,273,761.90	19,952,372.41	161,653,931.66

NPV	NPV (at -2.27%)
146642020.4	146642020.4
146301466.8	164720177.5
146102806.3	185205892.8
145845457.7	208155203.6
145380724.1	233614240.8
145360514	262988681.2
144945024.6	295251451.2
144700308.3	331861068.1
144526795.4	373192875.8
144309397	419544183.9

Directional Distribution Factor	0.5	0.50	0.50
Lane distribution Factor	1	1.00	1.00
Cumalative Number of Standard Axles (msa)	14.51	1,157.14	80.83

5.22%  
0.96% 0.005 0.005 0.005  
3.55% 0.441 0.441 0.441

1454114515 2621175795  
1,454.11 2,621.18