

DAFTAR LAMPIRAN

- Lampiran 1** Data Kecelakaan per Km Ruas Tol Jakarta – Cikampek
- Lampiran 2** Perhitungan Uji Hipotesis untuk Data Kecelakaan Jalur A
- Lampiran 3** Perhitungan Uji Hipotesis untuk Data Kecelakaan Jalur B
- Lampiran 4** Tabulasi Perhitungan Metode Frekuensi Jalur A
- Lampiran 5** Tabulasi Perhitungan Metode Frekuensi Jalur B
- Lampiran 6** Tabulasi Perhitungan Metode *Upper Control Limit* Jalur A
- Lampiran 7** Tabulasi Perhitungan Metode *Upper Control Limit* Jalur B
- Lampiran 8** Data Kecelakaan *Moving Average* 5 Tahunan
- Lampiran 9** Tabulasi Perhitungan Metode Frekuensi Jalur A dengan Data *Moving Average* 5 Tahunan
- Lampiran 10** Tabulasi Perhitungan Metode Frekuensi Jalur B dengan Data *Moving Average* 5 Tahunan
- Lampiran 11** Tabel χ^2 (Chi-Kuadrat)



LAMPIRAN 1

Data Kecelakaan per Km Ruas Tol Jakarta – Cikampek

Data Kecelakaan per Km Ruas Tol Jakarta Cikampek (Jalur A)

Lokasi (KM)	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
02 - 03	7	3	2	2	6	0	0	3	2	0	0
03 - 04	6	3	8	5	8	2	2	4	2	1	3
06 - 07	19	10	13	9	13	4	7	3	5	4	6
10 - 11	23	10	12	12	6	6	7	5	6	1	4
11 - 12	14	9	8	16	10	7	6	6	6	9	8
12 - 13	12	11	15	14	9	10	17	6	15	11	7
13 - 14	14	23	27	20	13	17	12	13	5	7	10
19 - 20	10	12	2	5	8	3	2	7	9	10	2
20 - 21	12	10	7	3	4	4	2	2	8	9	6
21 - 22	11	23	4	7	6	5	12	10	5	10	5
22 - 23	18	37	10	5	7	8	8	7	13	8	13
25 - 26	7	11	8	7	7	5	10	10	10	10	3
26 - 27	6	13	11	18	11	6	8	6	10	13	5
27 - 28	11	10	7	9	14	7	9	8	12	7	7
28 - 29	12	12	8	5	9	9	14	10	4	15	27
29 - 30	8	25	7	6	5	14	9	8	7	11	7
32 - 33	8	9	6	15	5	5	6	5	8	13	11
33 - 34	5	12	7	12	9	4	9	6	8	8	6
35 - 36	4	5	6	9	7	5	5	3	4	8	8
36 - 37	5	6	5	11	2	12	3	4	7	10	9
37 - 38	11	6	11	7	9	3	5	5	3	5	6
38 - 39	1	5	11	5	6	4	3	3	4	4	4
39 - 40	8	9	9	7	6	7	9	5	7	7	5
40 - 41	8	8	5	5	11	6	8	4	15	7	8
41 - 42	7	12	2	8	7	4	8	4	2	7	9
42 - 43	11	5	4	3	8	8	2	6	8	6	6
44 - 45	4	5	8	8	7	5	6	6	9	6	6
46 - 47	3	6	6	4	5	7	3	3	5	13	8
47 - 48	7	5	4	9	2	6	10	8	4	10	12
48 - 49	6	12	7	10	3	9	4	7	10	8	9
49 - 50	5	10	10	10	7	6	8	3	8	7	9
50 - 51	5	9	6	12	8	6	6	5	8	5	3
51 - 52	5	11	5	8	11	7	9	3	8	11	15
54 - 55	7	7	6	9	6	6	4	8	9	4	12
55 - 56	2	2	3	12	7	10	2	7	1	4	11
56 - 57	4	6	1	2	3	6	3	3	3	4	9
57 - 58	11	5	3	2	4	6	6	1	5	2	3
58 - 59	5	5	10	1	7	7	5	3	6	5	7
59 - 60	3	6	2	3	2	3	6	3	4	8	8
60 - 61	2	3	8	3	6	10	5	4	3	10	7
61 - 62	4	3	5	8	4	3	6	5	4	5	7
62 - 63	5	5	4	6	3	5	3	3	3	3	5
63 - 64	2	1	2	3	2	1	0	2	4	6	4
64 - 65	3	5	5	1	2	3	5	3	7	4	2
66 - 67	5	4	7	9	7	7	6	8	3	6	3
67 - 68	6	4	6	3	6	6	10	1	1	2	3
68 - 69	4	4	7	4	8	7	7	4	6	4	6
69 - 70	7	5	6	2	1	4	4	1	4	3	3
70 - 71	6	10	2	6	4	9	6	2	4	1	2
71 - 72	6	7	10	9	8	8	8	2	3	8	7

Data Kecelakaan per Km Ruas Tol Jakarta Cikampek (Jalur B)

KM	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
02 - 03	6	2	3	4	9	5	0	1	2	1	2
03 - 04	14	13	6	5	1	1	4	4	3	2	2
06 - 07	8	10	6	2	6	3	5	5	0	3	4
10 - 11	13	11	19	7	11	12	7	14	13	7	8
11 - 12	25	15	13	13	14	10	15	10	14	9	15
12 - 13	16	12	14	14	10	22	9	4	9	19	17
13 - 14	33	11	21	15	11	6	6	13	13	12	14
19 - 20	14	16	4	11	10	6	7	3	9	5	7
20 - 21	17	20	5	1	8	3	6	2	4	6	2
21 - 22	19	15	9	11	10	9	6	8	9	8	10
25 - 26	12	22	9	9	14	8	10	13	8	18	6
26 - 27	13	16	17	8	7	12	20	14	25	26	6
27 - 28	10	12	10	8	13	12	7	7	10	15	7
28 - 29	8	22	7	6	8	9	14	8	9	18	10
29 - 30	15	13	8	9	11	16	5	15	12	14	7
32 - 33	6	11	10	7	7	14	12	9	7	9	8
33 - 34	7	16	16	14	9	4	10	9	5	11	8
35 - 36	8	9	14	5	4	5	8	4	9	13	13
36 - 37	9	7	5	9	8	6	4	6	8	11	13
37 - 38	9	15	5	9	8	5	5	8	15	8	16
38 - 39	3	10	5	10	6	2	10	6	13	9	7
39 - 40	4	7	8	9	2	3	6	3	8	5	5
40 - 41	9	10	6	10	3	9	6	6	8	2	6
41 - 42	6	8	6	6	4	3	8	6	5	11	8
42 - 43	10	16	8	11	8	7	4	7	6	4	7
44 - 45	16	14	21	16	15	9	12	8	16	6	11
46 - 47	7	5	5	3	9	6	3	3	3	6	11
47 - 48	9	7	8	6	4	7	7	6	4	12	4
48 - 49	10	6	4	6	4	3	7	6	3	4	7
49 - 50	5	3	4	7	5	6	5	6	8	9	3
50 - 51	8	10	9	9	10	9	4	5	9	5	6
51 - 52	6	8	7	8	5	9	6	4	9	5	7
52 - 53	9	8	9	8	10	7	7	9	14	8	5
54 - 55	4	3	4	5	9	13	5	5	7	5	8
55 - 56	2	7	7	5	13	6	5	3	7	8	7
56 - 57	6	6	2	4	5	9	5	9	10	5	5
57 - 58	5	1	2	5	3	7	5	5	12	8	10
58 - 59	6	3	5	9	7	7	3	1	6	7	9
59 - 60	3	6	5	4	4	7	2	0	6	1	5
60 - 61	4	9	5	4	5	3	9	8	1	4	14
61 - 62	6	1	7	1	1	2	6	6	4	4	8
62 - 63	2	3	4	4	6	8	4	8	5	11	10
63 - 64	0	5	4	1	2	3	2	5	8	11	8
64 - 65	3	0	4	2	2	1	2	6	2	2	3
66 - 67	3	2	7	1	3	4	2	1	1	3	6
67 - 68	3	4	4	7	3	2	1	3	0	3	2
68 - 69	0	3	2	1	1	3	0	1	2	2	6
69 - 70	2	1	0	1	3	2	2	3	1	0	1
70 - 71	0	5	2	1	1	3	3	1	0	1	1
71 - 72	1	0	3	1	0	3	5	0	1	2	2



LAMPIRAN 2

Perhitungan Uji Hipotesis untuk Data Kecelakaan Jalur A

Uji Hipotesis untuk data kecelakaan tahun 1996 (Jalur A)

Jml Muncul (x)	Frekuensi Observasi (f)	Total Kejadian (fx)	Probabilitas Poisson P(x)	Frekuensi Teoritis N*P(x)=f'	$(f-f')^2/f'$
0	0	0	0.000553087	0.027654358	0.027654
1	1	1	0.004148154	0.207407685	3.02883
2	3	6	0.015555576	0.777778819	6.349192
3	3	9	0.038888941	1.944447048	0.573012
4	5	20	0.072916764	3.645838216	0.502972
5	8	40	0.109375146	5.468757323	1.171599
6	6	36	0.136718933	6.835946654	0.102225
7	6	42	0.146484571	7.324228558	0.239422
8	4	32	0.137329285	6.866464273	1.19663
9	0	0	0.114441071	5.722053561	5.722054
10	1	10	0.085830803	4.291540171	2.524557
11	5	55	0.058521002	2.926050116	1.469991
12	3	36	0.036575626	1.828781323	0.750091
13	0	0	0.021101323	1.055066148	1.055066
14	2	28	0.01130428	0.565214008	3.642179
15	0	0	0.00565214	0.282607004	0.282607
16	0	0	0.002649441	0.132472033	0.132472
17	0	0	0.001168871	0.058443544	0.058444
18	1	18	0.00048703	0.024351477	39.08962
19	1	19	0.000192248	0.009612425	102.0416
20	0	0	7.20932E-05	0.003604659	0.003605
21	0	0	2.57476E-05	0.001287378	0.001287
22	0	0	8.77758E-06	0.000438879	0.000439
23	1	23	2.86225E-06	0.000143113	6985.5
Total	50	375	1.000003775	50.00018877	7155.465

χ^2_0

7155.46522

$\chi^2_{0,05(22)}$

33.9245

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Uji Hipotesis untuk data kecelakaan tahun 1997 (Jalur A)

Jml Muncul (x)	Frekuensi Observasi (f)	Total Kejadian (fx)	Probabilitas Poisson P(x)	Frekuensi Teoritis N*P(x)=f'	$(f-f')^2/f'$
0	0	0	0.000153779	0.00768895	0.00768895
1	1	1	0.00135018	0.067508978	12.88035355
2	1	2	0.005927288	0.296364414	1.670588691
3	4	12	0.017347197	0.867359851	11.314144405
4	3	12	0.038077097	1.903854873	0.63110595
5	10	50	0.066863383	3.343169158	13.25490718
6	5	30	0.097843417	4.892170868	0.002376679
7	2	14	0.122723601	6.136180031	2.788051388
8	1	8	0.134689152	6.734457584	4.882947643
9	4	36	0.13139675	6.56983751	1.005209766
10	6	60	0.115366347	5.768317334	0.009305462
11	3	33	0.09208332	4.604166017	0.558917424
12	5	60	0.067374296	3.368714803	0.789942619
13	1	13	0.045503563	2.275178151	0.714704172
14	0	0	0.028537235	1.426861726	1.426861726
15	0	0	0.016703795	0.83518973	0.83518973
16	0	0	0.009166207	0.458310365	0.458310365
17	0	0	0.004734076	0.236703824	0.236703824
18	0	0	0.002309177	0.115458865	0.115458865
19	0	0	0.001067083	0.053354149	0.053354149
20	0	0	0.000468449	0.023422472	0.023422472
21	0	0	0.000195856	0.009792824	0.009792824
22	0	0	2.04752E-06	0.000102376	0.000102376
23	2	46	2.98385E-05	0.001491923	2677.104722
24	0	0	1.09159E-05	0.000545795	0.000545795
25	1	25	3.83367E-06	0.000191683	5214.939244
26	0	0	1.2946E-06	6.473E-05	6.473E-05
27	0	0	4.20985E-07	2.10492E-05	2.10492E-05
28	0	0	1.32009E-07	6.60044E-06	6.60044E-06
29	0	0	3.99668E-08	1.99834E-06	1.99834E-06
30	0	0	1.16969E-08	5.84847E-07	5.84847E-07
31	0	0	3.31288E-09	1.65644E-07	1.65644E-07
32	0	0	9.0897E-10	4.54485E-08	4.54485E-08
33	0	0	2.41841E-10	1.20921E-08	1.20921E-08
34	0	0	6.24519E-11	3.1226E-09	3.1226E-09
35	0	0	1.56665E-11	7.83326E-10	7.83326E-10
36	0	0	3.82089E-12	1.91044E-10	1.91044E-10
37	1	37	9.06687E-13	4.53343E-11	22058336952
Total	49	402	0.999929789	49.99648944	22058344898

χ^2_0 2.2058E+10
 $\chi^2_{0,05(36)}$ 50.9643
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Uji Hipotesis untuk data kecelakaan tahun 1998 (Jalur A)

Jml Muncul (x)	Frekuensi Observasi (f)	Total Kejadian (fx)	Probabilitas Poisson P(x)	Frekuensi Teoritis N*P(x)=f'	$(f-f')^2/f'$
0	0	0	0.000949101	0.047455051	0.0475
1	1	1	0.006605743	0.330287154	1.358
2	6	12	0.022987986	1.149399297	20.47
3	2	6	0.053332127	2.666606368	0.1666
4	4	16	0.092797902	4.639895081	0.0882
5	5	25	0.129174679	6.458733953	0.3295
6	7	42	0.149842628	7.492131385	0.0323
7	7	49	0.148986384	7.449319206	0.0271
8	6	48	0.129618154	6.480907709	0.0357
9	1	9	0.100238039	5.011901962	3.2114
10	4	40	0.069765675	3.488283765	0.0751
11	3	33	0.044142645	2.207132273	0.2848
12	1	12	0.025602734	1.280136719	0.0613
13	1	13	0.01370731	0.685365505	0.1444
14	0	0	0.006814491	0.340724565	0.3407
15	1	15	0.003161924	0.158096198	4.4834
16	0	0	0.001375437	0.068771846	0.0688
17	0	0	0.00056312	0.028156003	0.0282
18	0	0	0.00021774	0.010886988	0.0109
19	0	0	7.97615E-05	0.003988076	0.004
20	0	0	2.7757E-05	0.00138785	0.0014
21	0	0	9.19946E-06	0.000459973	0.0005
22	0	0	2.91038E-06	0.000145519	0.0001
23	0	0	8.80705E-07	4.40353E-05	4E-05
24	0	0	2.55404E-07	1.27702E-05	1E-05
25	0	0	7.11046E-08	3.55523E-06	4E-06
26	0	0	1.90342E-08	9.51708E-07	1E-06
27	1	27	4.90658E-09	2.45329E-07	4E+06
Total	50	348	1.00000468	50.000234	4E+06

χ^2_0 4076186.03
 $\chi^2_{0,05(26)}$ 38.8851
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Uji Hipotesis untuk data kecelakaan tahun 1999 (Jalur A)

Jml Muncul (x)	Frekuensi Observasi (f)	Total Kejadian (fx)	Probabilitas Poisson P(x)	Frekuensi Teoritis N*P(x)=f'	$(f-f')^2/f'$
0	0	0	0.000623604	0.031180199	0.0312
1	2	2	0.004602197	0.230109869	13.613
2	4	8	0.016982108	0.849105417	11.692
3	6	18	0.041775987	2.088799327	7.3236
4	2	8	0.077076695	3.853834758	0.8918
5	6	30	0.113765202	5.688260103	0.0171
6	3	18	0.139931199	6.996559927	2.2829
7	4	28	0.147527464	7.37637318	1.5455
8	4	32	0.136094085	6.804704259	1.156
9	7	63	0.11159715	5.579857492	0.3614
10	2	20	0.082358697	4.117934829	1.0893
11	1	11	0.055255198	2.762759913	1.1247
12	4	48	0.033981947	1.699097346	3.1159
13	0	0	0.01929129	0.964564494	0.9646
14	1	14	0.010169266	0.508463283	0.4752
15	1	15	0.005003279	0.250163935	2.2475
16	1	16	0.002307762	0.115388115	6.7818
17	0	0	0.00100184	0.050092017	0.0501
18	1	18	0.000410755	0.020537727	46.711
19	0	0	0.000159546	0.007977286	0.008
20	1	20	5.88724E-05	0.002943618	337.72
Total	50	369	0.999974142	49.9987071	439.2

$$\chi^2_0 = 439.204344$$

$$\chi^2_{0,05(19)} = 30.1435$$

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Uji Hipotesis untuk data kecelakaan tahun 2000 (Jalur A)

Jml Muncul (x)	Frekuensi Observasi (f)	Total Kejadian (fx)	Probabilitas Poisson P(x)	Frekuensi Teoritis N*P(x)=f'	(f-f') ² /f'
0	0	0	0.001387855	0.069392772	0.0693928
1	1	1	0.009132089	0.456604439	0.6466839
2	5	10	0.030044572	1.502228604	8.1441697
3	3	9	0.065897761	3.294888072	0.0263921
4	4	16	0.108401818	5.420090878	0.3720709
5	3	15	0.142656792	7.132839596	2.3946092
6	8	48	0.156446948	7.822347423	0.0040347
7	9	63	0.147060132	7.353006578	0.3689086
8	6	48	0.120956958	6.04784791	0.0003786
9	4	36	0.088432976	4.421648805	0.0402085
10	1	10	0.058188898	2.909444914	1.2531531
11	3	33	0.034807541	1.740377049	0.9116703
12	0	0	0.019086135	0.954306748	0.9543067
13	2	26	0.009660521	0.483026031	4.7641532
14	1	14	0.004540445	0.227022235	2.6318771
15	0	0	0.001991742	0.099587087	0.0995871
Total	50	329	0.998693183	49.93465914	22.681596

χ^2_0 22.6815963

$\chi^2_{0,05(14)}$ 23.6848

Ho Diterima

Uji Hipotesis untuk data kecelakaan tahun 2001 (Jalur A)

Jml Muncul (x)	Frekuensi Observasi (f)	Total Kejadian (fx)	Probabilitas Poisson P(x)	Frekuensi Teoritis N*P(x)=f'	(f-f') ² /f'
0	1	0	0.001949864	0.097493185	8.3546204
1	1	1	0.01216715	0.608357477	0.2521279
2	1	2	0.037961507	1.898075327	0.4249248
3	5	15	0.078959934	3.94799668	0.2803222
4	6	24	0.123177496	6.158874821	0.0040983
5	6	30	0.153725516	7.686275777	0.3699485
6	10	60	0.159874536	7.993726808	0.5035364
7	8	56	0.142516729	7.125836469	0.1072382
8	3	24	0.111163049	5.558152446	1.1773955
9	3	27	0.077073047	3.853652362	0.1890991
10	3	30	0.048093581	2.404679074	0.1473822
11	0	0	0.027282177	1.364108857	1.3641089
12	1	12	0.014186732	0.709336605	0.1191045
13	0	0	0.006809631	0.340481571	0.3404816
14	1	14	0.00303515	0.1517575	4.7412177
15	0	0	0.001262622	0.06313112	0.0631311
16	0	0	0.000492423	0.024621137	0.0246211
17	1	17	0.000180748	0.009037406	108.66026
Total	50	312	0.999911892	49.99559462	127.12362

χ^2_0 127.123622

$\chi^2_{0,05(16)}$ 26.2962

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Uji Hipotesis untuk data kecelakaan tahun 2002 (Jalur A)

Jml Muncul (x)	Frekuensi Observasi (f)	Total Kejadian (fx)	Probabilitas Poisson P(x)	Frekuensi Teoritis N*P(x)=f'	(f-f') ² /f'
0	2	0	0.001836313	0.091815628	39.657384
1	0	0	0.011568769	0.578438456	0.5784385
2	5	10	0.036441623	1.822081136	5.5426556
3	5	15	0.076527408	3.826370387	0.3599773
4	3	12	0.120530667	6.026533359	1.5199292
5	5	25	0.151868641	7.593432032	0.885751
6	9	54	0.159462073	7.973103634	0.1322592
7	3	21	0.143515865	7.17579327	2.43001
8	6	48	0.113018744	5.6509372	0.0215619
9	5	45	0.079113121	3.95565604	0.2757202
10	3	30	0.049841266	2.492063305	0.1035285
11	0	0	0.028545452	1.42727262	1.4272726
12	2	24	0.014986363	0.749318126	2.0875048
13	0	0	0.007262622	0.363131092	0.3631311
14	1	14	0.00326818	0.163408991	4.2830233
15	0	0	0.001372636	0.068631776	0.0686318
16	0	0	0.000540475	0.027023762	0.0270238
17	1	17	0.000200294	0.010014688	97.863348
Total	50	315	0.99990051	49.9950255	157.62715

χ^2_0 157.6271502
 $\chi^2_{0,05(16)}$ 26.2962
 Ho Ditolak

Uji Hipotesis untuk data kecelakaan tahun 2003 (Jalur A)

Jml Muncul (x)	Frekuensi Observasi (f)	Total Kejadian (fx)	Probabilitas Poisson P(x)	Frekuensi Teoritis N*P(x)=f'	(f-f') ² /f'
0	0	0	0.007012951	0.350647562	0.3506476
1	3	3	0.034784238	1.739211905	0.9139695
2	4	8	0.08626491	4.313245525	0.0227492
3	12	36	0.142624652	7.131232601	3.3240952
4	6	24	0.176854568	8.842728425	0.9138701
5	6	30	0.175439732	8.771986598	0.87596
6	6	36	0.145030178	7.251508921	0.2159929
7	4	28	0.102764241	5.138212035	0.2521357
8	5	40	0.063713829	3.185691462	1.0332813
9	0	0	0.035113399	1.755669961	1.75567
10	3	30	0.017416246	0.870812301	5.2059901
11	0	0	0.007853144	0.392657183	0.3926572
12	0	0	0.003245966	0.162298302	0.1622983
13	1	13	0.001238461	0.061923045	14.211
14	0	0	0.000438769	0.02193845	0.0219385
15	0	0	0.000145086	0.007254314	0.0072543
Total	50	248	0.999940372	49.99701859	29.65951

χ^2_0 29.65950962
 $\chi^2_{0,05(14)}$ 23.6848
 Ho Ditolak

Uji Hipotesis untuk data kecelakaan tahun 2004 (Jalur A)

Jml Muncul (x)	Frekuensi Observasi (f)	Total Kejadian (fx)	Probabilitas Poisson P(x)	Frekuensi Teoritis N*P(x)=f'	(f- f') ² /f'
0	0	0	0.002154933	0.107746626	0.107747
1	2	2	0.013231286	0.661564283	2.70784
2	3	6	0.040620047	2.031002349	0.462312
3	6	18	0.083135696	4.156784808	0.817325
4	9	36	0.127613294	6.38066468	1.075267
5	5	25	0.156709125	7.835456227	1.026081
6	4	24	0.160365671	8.018283539	2.013723
7	4	28	0.140663603	7.033180133	1.308111
8	7	56	0.107959315	5.397965752	0.475459
9	3	27	0.073652244	3.682612191	0.12653
10	3	30	0.045222478	2.261123885	0.241445
11	0	0	0.025242365	1.262118241	1.262118
12	1	12	0.012915677	0.645783834	0.19429
13	1	13	0.006100173	0.305008672	1.583604
14	0	0	0.002675362	0.133768089	0.133768
15	2	30	0.001095115	0.054755738	69.10646
Total	50	307	0.999356381	49.96781905	82.64208

χ^2_0 82.64207999
 $\chi^2_{0,05(14)}$ 23.6848
 Ho Ditolak

Uji Hipotesis untuk data kecelakaan tahun 2005 (Jalur A)

Jml Muncul (x)	Frekuensi Observasi (f)	Total Kejadian (fx)	Probabilitas Poisson P(x)	Frekuensi Teoritis N*P(x)=f'	(f- f') ² /f'
0	1	0	0.00111378	0.055689012	16.01255
1	3	3	0.007573706	0.378685282	18.14512
2	2	4	0.025750599	1.28752996	0.394254
3	2	6	0.058368025	2.918401243	0.289015
4	7	28	0.099225642	4.961282113	0.837761
5	4	20	0.134946873	6.747343674	1.118647
6	4	24	0.15293979	7.646989497	1.739316
7	6	42	0.148570082	7.428504083	0.274702
8	6	48	0.126284569	6.31422847	0.015638
9	2	18	0.095415008	4.7707504	1.609193
10	6	60	0.064882205	3.244110272	2.341144
11	3	33	0.040109	2.005449986	0.493221
12	0	0	0.022728433	1.136421659	1.136422
13	3	39	0.011888719	0.594435945	9.734839
14	0	0	0.005774521	0.28872603	0.288726
15	1	15	0.002617783	0.130889134	5.770943
Total	50	340	0.998188735	49.90943676	60.2015

χ^2_0 60.2014952
 $\chi^2_{0,05(14)}$ 23.6848
 Ho Ditolak

Uji Hipotesis untuk data kecelakaan tahun 2006 (Jalur A)

Jml Muncul (x)	Frekuensi Observasi (f)	Total Kejadian (fx)	Probabilitas Poisson P(x)	Frekuensi Teoritis N*P(x)=f'	(f-f') ² /f'
0	1	0	0.000987835	0.049391727	18.2957
1	0	0	0.006835815	0.34179075	0.341791
2	3	6	0.02365192	1.182595996	2.792972
3	7	21	0.054557095	2.727854765	6.690688
4	3	12	0.094383775	4.719188743	0.626296
5	4	20	0.130627144	6.53135722	0.981078
6	7	42	0.15065664	7.532831994	0.03769
7	7	49	0.14893485	7.446742486	0.026801
8	5	40	0.128828645	6.44143225	0.322557
9	5	45	0.099054914	4.952745686	0.000451
10	1	10	0.068546	3.427300014	1.719075
11	2	22	0.043121666	2.156083282	0.011299
12	2	24	0.024866827	1.243341359	0.460479
13	1	13	0.013236803	0.66184017	0.172779
14	0	0	0.006542763	0.327138141	0.327138
15	1	15	0.003018395	0.150919729	4.776959
16	0	0	0.001305456	0.065272783	0.065273
17	0	0	0.000531397	0.026569862	0.02657
18	0	0	0.000204293	0.010214636	0.010215
19	0	0	7.44056E-05	0.003720278	0.00372
20	0	0	2.57443E-05	0.001287216	0.001287
21	0	0	8.48337E-06	0.000424168	0.000424
22	0	0	2.6684E-06	0.00013342	0.000133
23	0	0	8.02842E-07	4.01421E-05	4.01E-05
24	0	0	2.31486E-07	1.15743E-05	1.16E-05
25	0	0	6.40753E-08	3.20377E-06	3.2E-06
26	0	0	1.70539E-08	8.52695E-07	8.53E-07
27	1	27	4.37085E-09	2.18543E-07	4575766
Total	50	346	1.000004653	50.00023267	4575804

$$\chi^2_0 = 4575804.04$$

$$\chi^2_{0,05(26)} = 38.8851$$

Ho Ditolak



LAMPIRAN 3

Perhitungan Uji Hipotesis untuk Data Kecelakaan Jalur B

Uji Hipotesis untuk data kecelakaan tahun 1996 (Jalur B)

Jml Muncul (x)	Frekuensi Observasi (f)	Total Kejadian (fx)	Probabilitas Poisson P(x)	Frekuensi Teoritis N*P(x)=f'	(f-f') ² /f'
0	3	0	0.000253539	0.012676931	703.9637116
1	1	1	0.0020993	0.104964985	7.631951494
2	3	6	0.008691101	0.43455504	15.14539528
3	5	15	0.023987438	1.199371909	12.0436153
4	3	12	0.049653997	2.482699853	0.10778566
5	2	10	0.082227019	4.111350956	1.084267168
6	7	42	0.113473286	5.673664319	0.310058234
7	2	14	0.134222687	6.711134366	3.307158791
8	4	32	0.138920481	6.946024069	1.249500106
9	5	45	0.127806843	6.390342143	0.30249574
10	3	30	0.105824066	5.291203295	0.992139641
11	0	0	0.079656661	3.982833025	3.982833025
12	1	12	0.054963096	2.748154787	1.11203531
13	2	26	0.035007264	1.750363203	0.0356032
14	2	28	0.020704296	1.035214809	0.89914717
15	1	15	0.011428771	0.571438574	0.321407941
16	2	32	0.005914389	0.295719462	9.822052729
17	1	17	0.002880655	0.144032773	5.086897071
18	0	0	0.001325102	0.066255076	0.066255076
19	1	19	0.000577465	0.028873265	32.66298943
20	0	0	0.000239071	0.011953532	0.011953532
21	0	0	9.42621E-05	0.004713107	0.004713107
22	0	0	3.54768E-05	0.001773842	0.001773842
23	0	0	1.27717E-05	0.000638583	0.000638583
24	0	0	4.40622E-06	0.000220311	0.000220311
25	1	25	1.45934E-06	7.29671E-05	13702.81409
26	0	0	4.64744E-07	2.32372E-05	2.32372E-05
27	0	0	1.42522E-07	7.12608E-06	7.12608E-06
28	0	0	4.21456E-08	2.10728E-06	2.10728E-06
29	0	0	1.20333E-08	6.01665E-07	6.01665E-07
30	0	0	3.32119E-09	1.6606E-07	1.6606E-07
31	0	0	8.8708E-10	4.4354E-08	4.4354E-08
32	0	0	2.29532E-10	1.14766E-08	1.14766E-08
33	1	33	5.75917E-11	2.87958E-09	347272551.2
Total	50	414	1.00000557	50.00027848	347287054.2

χ^2_0 347287054.2
 $\chi^2_{0,05(32)}$ 46.1701
 Ho Ditolak

Uji Hipotesis untuk data kecelakaan tahun 1997 (Jalur B)

Jml Muncul (x)	Frekuensi Observasi (f)	Total Kejadian (fx)	Probabilitas Poisson P(x)	Frekuensi Teoritis N*P(x)=f'	$(f-f')^2/f'$
0	2	0	0.000153779	0.00768895	516.2347904
1	3	3	0.00135018	0.067508978	127.3831101
2	2	4	0.005927288	0.296364414	9.79326152
3	5	15	0.017347197	0.867359851	19.69046016
4	1	4	0.038077097	1.903854873	0.429104993
5	3	15	0.066863383	3.343169158	0.035225579
6	3	18	0.097843417	4.892170868	0.73184496
7	4	28	0.122723601	6.136180031	0.743665457
8	3	24	0.134689152	6.734457584	2.07086811
9	2	18	0.13139675	6.56983751	3.178680574
10	4	40	0.115366347	5.768317334	0.542089835
11	3	33	0.09208332	4.604166017	0.558917424
12	2	24	0.067374296	3.368714803	0.556111253
13	2	26	0.045503563	2.275178151	0.033282235
14	1	14	0.028537235	1.426861726	0.127700484
15	3	45	0.016703795	0.83518973	5.6111843
16	4	0	0.009166207	0.458310365	27.36915078
17	0	0	0.004734076	0.236703824	0.236703824
18	0	0	0.002309177	0.115458865	0.115458865
19	0	0	0.001067083	0.053354149	0.053354149
20	1	20	0.000468449	0.023422472	40.71746522
21	0	0	0.000195856	0.009792824	0.009792824
22	2	44	9.85029E-06	0.000492514	8117.592208
Total	50	375	0.9998911	49.99455499	8873.814431

χ^2_0

8873.814431

$\chi^2_{0,05(21)}$

32.6706

Ho Ditolak

Uji Hipotesis untuk data kecelakaan tahun 1998 (Jalur B)

Jml Muncul (x)	Frekuensi Observasi (f)	Total Kejadian (fx)	Probabilitas Poisson P(x)	Frekuensi Teoritis N*P(x)=f'	$(f-f')^2/f'$
0	1	0	0.000636202	0.03181008	29.46838571
1	0	0	0.004682444	0.234122192	0.234122192
2	4	8	0.017231393	0.861569667	11.43232559
3	2	6	0.042274352	2.113717584	0.006117983
4	8	32	0.077784807	3.889240354	4.344896003
5	8	40	0.114499236	5.724961801	0.904075693
6	4	24	0.140452396	7.022619809	1.300971825
7	5	35	0.147675662	7.383783113	0.769581371
8	4	32	0.135861609	6.793080464	1.148418383
9	4	36	0.111104605	5.555230246	0.435398897
10	2	20	0.081772989	4.088649461	1.066967617
11	0	0	0.054713564	2.735678185	2.735678185
12	0	0	0.033557652	1.67788262	1.67788262
13	1	13	0.018998794	0.949939699	0.002638098
14	2	28	0.009987937	0.49939687	4.509058601
15	0	0	0.004900748	0.245037398	0.245037398
16	1	16	0.002254344	0.112717203	6.984477449
17	1	17	0.000975998	0.048799918	18.54063744
18	0	0	0.000399075	0.019953744	0.019953744
19	1	19	0.000154589	0.00772945	127.3830328
20	0	0	5.68888E-05	0.002844438	0.002844438
21	2	42	1.99382E-05	0.000996908	4008.408504
Total	50	368	0.999995224	49.99976121	4221.621006

χ^2_0

4221.621006

$\chi^2_{0,05(20)}$

31.4104

Ho Ditolak

Uji Hipotesis untuk data kecelakaan tahun 1999 (Jalur B)

Jml Muncul (x)	Frekuensi Observasi (f)	Total Kejadian (fx)	Probabilitas Poisson P(x)	Frekuensi Teoritis N*P(x)=f'	(f-f') ² /f'
0	0	0	0.001307033	0.065351654	0.065351654
1	8	8	0.0086787	0.433934983	131.9214677
2	2	4	0.028813283	1.440664144	0.217161371
3	1	3	0.063773399	3.188669972	1.502280351
4	5	20	0.105863843	5.293192153	0.016240037
5	5	25	0.140587184	7.029359179	0.58587114
6	4	24	0.15558315	7.779157492	1.835935493
7	4	28	0.147581731	7.379086535	1.547376597
8	4	32	0.122492836	6.124641824	0.737039489
9	7	63	0.090372493	4.518624635	1.362632261
10	2	20	0.060007335	3.000366757	0.333537107
11	3	33	0.03622261	1.811130479	0.780402491
12	0	0	0.020043177	1.002158865	1.002158865
13	1	13	0.010237438	0.511871913	0.46548565
14	2	28	0.004855471	0.242773536	12.71903397
15	1	15	0.002149355	0.107467752	7.412584712
16	1	16	0.000891982	0.044599117	20.4665677
17	0	0	0.000348398	0.01741989	0.01741989
Total	50	332	0.999809418	49.99047088	182.9885464

$$\chi^2_0 \quad 182.9885464$$

$$\chi^2_{0,05(16)} \quad 26.2962$$

Ho Ditolak

Uji Hipotesis untuk data kecelakaan tahun 2000 (Jalur B)

Jml Muncul (x)	Frekuensi Observasi (f)	Total Kejadian (fx)	Probabilitas Poisson P(x)	Frekuensi Teoritis N*P(x)=f'	(f-f') ² /f'
0	1	0	0.001307033	0.065351654	13.36718317
1	4	4	0.0086787	0.433934983	29.30581815
2	3	6	0.028813283	1.440664144	1.687782904
3	5	15	0.063773399	3.188669972	1.02892946
4	5	20	0.105863843	5.293192153	0.016240037
5	4	20	0.140587184	7.029359179	1.305526834
6	3	18	0.15558315	7.779157492	2.936095118
7	3	21	0.147581731	7.379086535	2.598749695
8	5	40	0.122492836	6.124641824	0.206513176
9	4	36	0.090372493	4.518624635	0.059525084
10	5	50	0.060007335	3.000366757	1.332681445
11	3	33	0.03622261	1.811130479	0.780402491
12	0	0	0.020043177	1.002158865	1.002158865
13	2	26	0.010237438	0.511871913	4.32632686
14	2	28	0.004855471	0.242773536	12.71903397
15	1	15	0.002149355	0.107467752	7.412584712
Total	50	332	0.998569037	49.92845187	80.08555197

$$\chi^2_0 \quad 80.08555197$$

$$\chi^2_{0,05(14)} \quad 23.6848$$

Ho Ditolak

Uji Hipotesis untuk data kecelakaan tahun 2001 (Jalur B)

Jml Muncul (x)	Frekuensi Observasi (f)	Total Kejadian (fx)	Probabilitas Poisson P(x)	Frekuensi Teoritis N*P(x)=f'	$(f-f')^2/f'$
0	0	0	0.001333437	0.066671844	0.066671844
1	2	2	0.008827352	0.441367608	5.504107882
2	4	8	0.029218536	1.460926784	4.412878776
3	10	30	0.064475569	3.223778436	14.24327992
4	2	8	0.106707066	5.335353312	2.08506936
5	3	15	0.141280156	7.064007785	2.338072066
6	6	36	0.155879105	7.793955256	0.412919417
7	6	42	0.147417097	7.370854828	0.254955904
8	2	16	0.121987647	6.09938237	2.755186476
9	7	63	0.089728692	4.486434588	1.408247676
10	1	10	0.059400394	2.970019697	1.306717801
11	0	0	0.035748237	1.787411854	1.787411854
12	3	36	0.019721111	0.986055539	4.113330464
13	1	13	0.010042596	0.502129821	0.493646673
14	1	14	0.004748713	0.237435672	2.44910273
15	0	0	0.002095766	0.104788277	0.104788277
16	1	16	0.000867123	0.04335615	21.10813499
17	0	0	0.000337668	0.016883395	0.016883395
18	0	0	0.000124187	0.006209337	0.006209337
19	0	0	4.32693E-05	0.002163464	0.002163464
20	0	0	1.43221E-05	0.000716107	0.000716107
21	0	0	4.51488E-06	0.000225744	0.000225744
22	1	22	1.35857E-06	6.79284E-05	14719.37442
Total	50	331	1.000003916	50.0001958	14784.24515

χ^2_0

14784.24515

$\chi^2_{0,05(21)}$

32.6706

Ho Ditolak

Uji Hipotesis untuk data kecelakaan tahun 2002 (Jalur B)

Jml Muncul (x)	Frekuensi Observasi (f)	Total Kejadian (fx)	Probabilitas Poisson P(x)	Frekuensi Teoritis N*P(x)=f'	(f-f') ² /f'
0	2	0	0.002198465	0.109923251	32.49894901
1	1	1	0.013454606	0.672730294	0.159210105
2	5	10	0.041171094	2.0585547	4.202997596
3	3	9	0.083989032	4.199451588	0.342588569
4	5	20	0.128503219	6.425160929	0.316114055
5	9	45	0.15728794	7.864396977	0.16397878
6	7	42	0.160433698	8.021684917	0.130127284
7	6	42	0.140264891	7.013244527	0.146389373
8	2	16	0.107302641	5.365132063	2.11068687
9	2	18	0.072965796	3.648289803	0.744693931
10	3	30	0.044655067	2.23275336	0.263650889
11	0	0	0.024844456	1.242222778	1.242222778
12	2	24	0.012670672	0.633533617	2.947326435
13	0	0	0.005964963	0.298248133	0.298248133
14	1	14	0.002607541	0.130377041	5.800439122
15	1	15	0.001063877	0.053193833	16.8523656
16	0	0	0.000406933	0.020346641	0.020346641
17	0	0	0.000146496	0.007324791	0.007324791
18	0	0	4.98086E-05	0.002490429	0.002490429
19	0	0	1.60436E-05	0.00080218	0.00080218
20	1	20	4.90934E-06	0.000245467	4071.865037
Total	50	306	1.000002146	50.00010732	4140.11599

$$\chi^2_0 = 4140.11599$$

$$\chi^2_{0,05(19)} = 30.1435$$

Ho Ditolak

Uji Hipotesis untuk data kecelakaan tahun 2003 (Jalur B)

Jml Muncul (x)	Frekuensi Observasi (f)	Total Kejadian (fx)	Probabilitas Poisson P(x)	Frekuensi Teoritis N*P(x)=f'	(f-f') ² /f'
0	2	0	0.00263204	0.131602008	26.52627493
1	5	5	0.015634319	0.78171593	22.76264282
2	1	2	0.046433926	2.321696311	0.752415865
3	6	18	0.091939174	4.596958696	0.428223317
4	4	16	0.136529673	6.826483664	1.170296495
5	5	25	0.162197252	8.109862593	1.192528879
6	9	54	0.160575279	8.028763967	0.117489994
7	2	14	0.136259594	6.812979709	3.40009433
8	6	48	0.101172749	5.058637434	0.175178295
9	4	36	0.066774014	3.338700707	0.130984114
10	1	10	0.039663764	1.98318822	0.487426794
11	0	0	0.021418433	1.070921639	1.070921639
12	0	0	0.010602124	0.530106211	0.530106211
13	2	26	0.004844355	0.242217761	12.75628338
14	2	28	0.002055391	0.102769536	35.02480971
15	1	15	0.000813935	0.040696736	22.6126918
Total	50	297	0.999546022	49.97730112	129.1383686

$$\chi^2_0 = 129.1383686$$

$$\chi^2_{0,05(14)} = 23.6848$$

Ho Ditolak

Uji Hipotesis untuk data kecelakaan tahun 2004 (Jalur B)

Jml Muncul (x)	Frekuensi Observasi (f)	Total Kejadian (fx)	Probabilitas Poisson P(x)	Frekuensi Teoritis N*P(x)=f'	$(f-f')^2/f'$
0	3	0	0.000703111	0.035155573	250.0400821
1	4	4	0.005104589	0.255229463	54.9439167
2	3	6	0.018529659	0.926482952	4.640639032
3	3	9	0.044841775	2.242088744	0.256202826
4	3	12	0.081387821	4.069391069	0.281024173
5	3	15	0.118175117	5.908755833	1.431919127
6	3	18	0.142991891	7.149594558	2.408407198
7	3	21	0.148303019	7.415150927	2.628882123
8	6	48	0.134584989	6.729249466	0.079028841
9	7	63	0.108565225	5.428261236	0.455092825
10	2	20	0.078818353	3.940917657	0.955909684
11	0	0	0.052020113	2.601005654	2.601005654
12	2	24	0.031472168	1.573608421	0.115536862
13	3	39	0.017575996	0.87879978	5.120040401
14	2	28	0.009114409	0.455720457	5.23303106
15	1	15	0.004411374	0.220568701	2.754303517
16	1	16	0.002001661	0.100083048	8.091785121
17	0	0	0.000854827	0.042741349	0.042741349
18	0	0	0.00034478	0.017239011	0.017239011
19	0	0	0.000131742	0.006587117	0.006587117
20	0	0	4.78225E-05	0.002391123	0.002391123
21	0	0	1.65329E-05	0.000826646	0.000826646
22	0	0	5.45586E-06	0.000272793	0.000272793
23	0	0	1.72215E-06	8.61077E-05	8.61077E-05
24	0	0	5.20952E-07	2.60476E-05	2.60476E-05
25	1	25	1.51284E-07	7.56422E-06	132199.3758
Total	50	363	1.000004826	50.0002413	132541.4828

χ^2_0 132541.4828
 $\chi^2_{0,05(24)}$ 36.415
 Ho Ditolak

Uji Hipotesis untuk data kecelakaan tahun 2005 (Jalur B)

Jml Muncul (x)	Frekuensi Observasi (f)	Total Kejadian (fx)	Probabilitas Poisson P(x)	Frekuensi Teoritis N*P(x)=f'	$(f-f')^2/f'$
0	1	0	0.000520878	0.026043895	36.4227589
1	3	3	0.003937837	0.196891843	39.90726686
2	5	10	0.014885023	0.744251168	24.33506173
3	3	9	0.037510259	1.875512944	0.674200167
4	4	16	0.070894389	3.544719464	0.058475817
5	6	30	0.107192317	5.359615829	0.076515164
6	3	18	0.135062319	6.753115945	2.085834067
7	2	14	0.145867304	7.29336522	3.841808892
8	5	40	0.137844603	6.892230133	0.519503094
9	4	36	0.115789466	5.789473312	0.553109853
10	0	0	0.087536836	4.376841824	4.376841824
11	5	55	0.06016168	3.008084017	1.319022095
12	2	24	0.037901859	1.895092931	0.005807363
13	1	13	0.022041389	1.102069427	0.009453277
14	1	14	0.01190235	0.595117491	0.275457954
15	1	15	0.005998784	0.299939215	1.63394807
16	0	0	0.002834426	0.141721279	0.141721279
17	0	0	0.001260486	0.063024287	0.063024287
18	2	36	0.000529404	0.0264702	147.1397957
19	1	19	0.000210647	0.010532353	92.95607414
20	0	0	7.96246E-05	0.00398123	0.00398123
21	0	0	2.86649E-05	0.001433243	0.001433243
22	0	0	9.85029E-06	0.000492514	0.000492514
23	0	0	3.23775E-06	0.000161887	0.000161887
24	0	0	1.01989E-06	5.09945E-05	5.09945E-05
25	0	0	3.08415E-07	1.54207E-05	1.54207E-05
26	1	26	8.96775E-08	4.48388E-06	223019.3365
Total	50	378	1.000005051	50.00025255	223375.7383

χ^2_0
 $\chi^2_{0,05(25)}$

223375.738

37.6525

Ho Ditolak

Uji Hipotesis untuk data kecelakaan tahun 2006 (Jalur B)

Jml Muncul (x)	Frekuensi Observasi (f)	Total Kejadian (fx)	Probabilitas Poisson P(x)	Frekuensi Teoritis N*P(x)=f'	$(f-f')^2/f'$
0	0	0	0.000649054	0.032452686	0.032452686
1	2	2	0.004764054	0.238202717	13.03062241
2	5	10	0.017484079	0.874203972	19.47164895
3	2	6	0.042777714	2.13885719	0.009018361
4	2	8	0.078497106	3.924855294	0.944001148
5	4	20	0.115233751	5.761687572	0.538651751
6	6	36	0.140969289	7.048464463	0.155959888
7	8	56	0.147816369	7.390818451	0.05021124
8	7	56	0.135621519	6.781075929	0.007067868
9	1	9	0.110606883	5.530344147	3.71116472
10	4	40	0.081185452	4.059272604	0.000865485
11	2	22	0.054172838	2.708641901	0.185396727
12	0	0	0.033135719	1.656785963	1.656785963
13	2	26	0.018708937	0.935446844	1.211478162
14	2	28	0.009808828	0.490441417	4.646359463
15	1	15	0.004799787	0.239989333	2.406841196
16	1	16	0.002201902	0.110095107	7.193150939
17	1	17	0.000950704	0.047535181	19.08458547
Total	50	367	0.999383986	49.9691993	74.33626243

χ^2_0

74.33626243

$\chi^2_{0,05(16)}$

26.2962

Ho Ditolak



LAMPIRAN 4

Tabulasi Perhitungan Metode Frekuensi Jalur A

Tabulasi Metode Frekuensi Data Kecelakaan Tahun 1999 (Jalur A)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Keterangan
1	02 - 03	2	
2	03 - 04	5	
5	06 - 07	9	
9	10 - 11	12	Black Spot
10	11 - 12	16	Black Spot
11	12 - 13	14	Black Spot
12	13 - 14	20	Black Spot
18	19 - 20	5	
19	20 - 21	3	
20	21 - 22	7	
21	22 - 23	5	
24	25 - 26	7	
25	26 - 27	18	Black Spot
26	27 - 28	9	
27	28 - 29	5	
28	29 - 30	6	
31	32 - 33	15	Black Spot
32	33 - 34	12	Black Spot
34	35 - 36	9	
35	36 - 37	11	Black Spot
36	37 - 38	7	
37	38 - 39	5	
38	39 - 40	7	
39	40 - 41	5	
40	41 - 42	8	
41	42 - 43	3	
43	44 - 45	8	
45	46 - 47	4	
46	47 - 48	9	
47	48 - 49	10	Black Spot
48	49 - 50	10	Black Spot
49	50 - 51	12	Black Spot
50	51 - 52	8	
53	54 - 55	9	
54	55 - 56	12	Black Spot
55	56 - 57	2	
56	57 - 58	2	
57	58 - 59	1	
58	59 - 60	3	
59	60 - 61	3	
60	61 - 62	8	
61	62 - 63	6	
62	63 - 64	3	
63	64 - 65	1	
65	66 - 67	9	
66	67 - 68	3	
67	68 - 69	4	
68	69 - 70	2	
69	70 - 71	6	
70	71 - 72	9	
Total		369	

Tabulasi Metode Frekuensi Data Kecelakaan Tahun 2000 (Jalur A)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Keterangan
1	02 - 03	6	
2	03 - 04	8	
5	06 - 07	13	Black Spot
9	10 - 11	6	
10	11 - 12	10	Black Spot
11	12 - 13	9	
12	13 - 14	13	Black Spot
18	19 - 20	8	
19	20 - 21	4	
20	21 - 22	6	
21	22 - 23	7	
24	25 - 26	7	
25	26 - 27	11	Black Spot
26	27 - 28	14	Black Spot
27	28 - 29	9	
28	29 - 30	5	
31	32 - 33	5	
32	33 - 34	9	
34	35 - 36	7	
35	36 - 37	2	
36	37 - 38	9	
37	38 - 39	6	
38	39 - 40	6	
39	40 - 41	11	Black Spot
40	41 - 42	7	
41	42 - 43	8	
43	44 - 45	7	
45	46 - 47	5	
46	47 - 48	2	
47	48 - 49	3	
48	49 - 50	7	
49	50 - 51	8	
50	51 - 52	11	Black Spot
53	54 - 55	6	
54	55 - 56	7	
55	56 - 57	3	
56	57 - 58	4	
57	58 - 59	7	
58	59 - 60	2	
59	60 - 61	6	
60	61 - 62	4	
61	62 - 63	3	
62	63 - 64	2	
63	64 - 65	2	
65	66 - 67	7	
66	67 - 68	6	
67	68 - 69	8	
68	69 - 70	1	
69	70 - 71	4	
70	71 - 72	8	
Total		329	

Tabulasi Metode Frekuensi Data Kecelakaan Tahun 2001 (Jalur A)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Keterangan
1	02 - 03	0	
2	03 - 04	2	
5	06 - 07	4	
9	10 - 11	6	
10	11 - 12	7	
11	12 - 13	10	Black Spot
12	13 - 14	17	Black Spot
18	19 - 20	3	
19	20 - 21	4	
20	21 - 22	5	
21	22 - 23	8	
24	25 - 26	5	
25	26 - 27	6	
26	27 - 28	7	
27	28 - 29	9	
28	29 - 30	14	Black Spot
31	32 - 33	5	
32	33 - 34	4	
34	35 - 36	5	
35	36 - 37	12	Black Spot
36	37 - 38	3	
37	38 - 39	4	
38	39 - 40	7	
39	40 - 41	6	
40	41 - 42	4	
41	42 - 43	8	
43	44 - 45	5	
45	46 - 47	7	
46	47 - 48	6	
47	48 - 49	9	
48	49 - 50	6	
49	50 - 51	6	
50	51 - 52	7	
53	54 - 55	6	
54	55 - 56	10	Black Spot
55	56 - 57	6	
56	57 - 58	6	
57	58 - 59	7	
58	59 - 60	3	
59	60 - 61	10	Black Spot
60	61 - 62	3	
61	62 - 63	5	
62	63 - 64	1	
63	64 - 65	3	
65	66 - 67	7	
66	67 - 68	6	
67	68 - 69	7	
68	69 - 70	4	
69	70 - 71	9	
70	71 - 72	8	
Total		312	

Tabulasi Metode Frekuensi Data Kecelakaan Tahun 2002 (Jalur A)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Keterangan
1	02 - 03	0	
2	03 - 04	2	
5	06 - 07	7	
9	10 - 11	7	
10	11 - 12	6	
11	12 - 13	17	Black Spot
12	13 - 14	12	Black Spot
18	19 - 20	2	
19	20 - 21	2	
20	21 - 22	12	Black Spot
21	22 - 23	8	
24	25 - 26	10	Black Spot
25	26 - 27	8	
26	27 - 28	9	
27	28 - 29	14	Black Spot
28	29 - 30	9	
31	32 - 33	6	
32	33 - 34	9	
34	35 - 36	5	
35	36 - 37	3	
36	37 - 38	5	
37	38 - 39	3	
38	39 - 40	9	
39	40 - 41	8	
40	41 - 42	8	
41	42 - 43	2	
43	44 - 45	6	
45	46 - 47	3	
46	47 - 48	10	Black Spot
47	48 - 49	4	
48	49 - 50	8	
49	50 - 51	6	
50	51 - 52	9	
53	54 - 55	4	
54	55 - 56	2	
55	56 - 57	3	
56	57 - 58	6	
57	58 - 59	5	
58	59 - 60	6	
59	60 - 61	5	
60	61 - 62	6	
61	62 - 63	3	
62	63 - 64	0	
63	64 - 65	5	
65	66 - 67	6	
66	67 - 68	10	Black Spot
67	68 - 69	7	
68	69 - 70	4	
69	70 - 71	6	
70	71 - 72	8	
Total		315	

Tabulasi Metode Frekuensi Data Kecelakaan Tahun 2003 (Jalur A)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Keterangan
1	02 - 03	3	
2	03 - 04	4	
5	06 - 07	3	
9	10 - 11	5	
10	11 - 12	6	
11	12 - 13	6	
12	13 - 14	13	Black Spot
18	19 - 20	7	
19	20 - 21	2	
20	21 - 22	10	Black Spot
21	22 - 23	7	
24	25 - 26	10	Black Spot
25	26 - 27	6	
26	27 - 28	8	
27	28 - 29	10	Black Spot
28	29 - 30	8	
31	32 - 33	5	
32	33 - 34	6	
34	35 - 36	3	
35	36 - 37	4	
36	37 - 38	5	
37	38 - 39	3	
38	39 - 40	5	
39	40 - 41	4	
40	41 - 42	4	
41	42 - 43	6	
43	44 - 45	6	
45	46 - 47	3	
46	47 - 48	8	
47	48 - 49	7	
48	49 - 50	3	
49	50 - 51	5	
50	51 - 52	3	
53	54 - 55	8	
54	55 - 56	7	
55	56 - 57	3	
56	57 - 58	1	
57	58 - 59	3	
58	59 - 60	3	
59	60 - 61	4	
60	61 - 62	5	
61	62 - 63	3	
62	63 - 64	2	
63	64 - 65	3	
65	66 - 67	8	
66	67 - 68	1	
67	68 - 69	4	
68	69 - 70	1	
69	70 - 71	2	
70	71 - 72	2	
Total		248	

Tabulasi Metode Frekuensi Data Kecelakaan Tahun 2004 (Jalur A)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Keterangan
1	02 - 03	2	
2	03 - 04	2	
5	06 - 07	5	
9	10 - 11	6	
10	11 - 12	6	
11	12 - 13	15	Black Spot
12	13 - 14	5	
18	19 - 20	9	
19	20 - 21	8	
20	21 - 22	5	
21	22 - 23	13	Black Spot
24	25 - 26	10	Black Spot
25	26 - 27	10	Black Spot
26	27 - 28	12	Black Spot
27	28 - 29	4	
28	29 - 30	7	
31	32 - 33	8	
32	33 - 34	8	
34	35 - 36	4	
35	36 - 37	7	
36	37 - 38	3	
37	38 - 39	4	
38	39 - 40	7	
39	40 - 41	15	Black Spot
40	41 - 42	2	
41	42 - 43	8	
43	44 - 45	9	
45	46 - 47	5	
46	47 - 48	4	
47	48 - 49	10	Black Spot
48	49 - 50	8	
49	50 - 51	8	
50	51 - 52	8	
53	54 - 55	9	
54	55 - 56	1	
55	56 - 57	3	
56	57 - 58	5	
57	58 - 59	6	
58	59 - 60	4	
59	60 - 61	3	
60	61 - 62	4	
61	62 - 63	3	
62	63 - 64	4	
63	64 - 65	7	
65	66 - 67	3	
66	67 - 68	1	
67	68 - 69	6	
68	69 - 70	4	
69	70 - 71	4	
70	71 - 72	3	
Total		307	

Tabulasi Metode Frekuensi Data Kecelakaan Tahun 2005 (Jalur A)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Keterangan
1	02 - 03	0	
2	03 - 04	1	
5	06 - 07	4	
9	10 - 11	1	
10	11 - 12	9	
11	12 - 13	11	Black Spot
12	13 - 14	7	
18	19 - 20	10	Black Spot
19	20 - 21	9	
20	21 - 22	10	Black Spot
21	22 - 23	8	
24	25 - 26	10	Black Spot
25	26 - 27	13	Black Spot
26	27 - 28	7	
27	28 - 29	15	Black Spot
28	29 - 30	11	Black Spot
31	32 - 33	13	Black Spot
32	33 - 34	8	
34	35 - 36	8	
35	36 - 37	10	Black Spot
36	37 - 38	5	
37	38 - 39	4	
38	39 - 40	7	
39	40 - 41	7	
40	41 - 42	7	
41	42 - 43	6	
43	44 - 45	6	
45	46 - 47	13	Black Spot
46	47 - 48	10	Black Spot
47	48 - 49	8	
48	49 - 50	7	
49	50 - 51	5	
50	51 - 52	11	Black Spot
53	54 - 55	4	
54	55 - 56	4	
55	56 - 57	4	
56	57 - 58	2	
57	58 - 59	5	
58	59 - 60	8	
59	60 - 61	10	Black Spot
60	61 - 62	5	
61	62 - 63	3	
62	63 - 64	6	
63	64 - 65	4	
65	66 - 67	6	
66	67 - 68	2	
67	68 - 69	4	
68	69 - 70	3	
69	70 - 71	1	
70	71 - 72	8	
Total		340	

Tabulasi Metode Frekuensi Data Kecelakaan Tahun 2006 (Jalur A)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Keterangan
1	02 - 03	0	
2	03 - 04	3	
5	06 - 07	6	
9	10 - 11	4	
10	11 - 12	8	
11	12 - 13	7	
12	13 - 14	10	Black Spot
18	19 - 20	2	
19	20 - 21	6	
20	21 - 22	5	
21	22 - 23	13	Black Spot
24	25 - 26	3	
25	26 - 27	5	
26	27 - 28	7	
27	28 - 29	27	Black Spot
28	29 - 30	7	
31	32 - 33	11	Black Spot
32	33 - 34	6	
34	35 - 36	8	
35	36 - 37	9	
36	37 - 38	6	
37	38 - 39	4	
38	39 - 40	5	
39	40 - 41	8	
40	41 - 42	9	
41	42 - 43	6	
43	44 - 45	6	
45	46 - 47	8	
46	47 - 48	12	Black Spot
47	48 - 49	9	
48	49 - 50	9	
49	50 - 51	3	
50	51 - 52	15	Black Spot
53	54 - 55	12	Black Spot
54	55 - 56	11	Black Spot
55	56 - 57	9	
56	57 - 58	3	
57	58 - 59	7	
58	59 - 60	8	
59	60 - 61	7	
60	61 - 62	7	
61	62 - 63	5	
62	63 - 64	4	
63	64 - 65	2	
65	66 - 67	3	
66	67 - 68	3	
67	68 - 69	6	
68	69 - 70	3	
69	70 - 71	2	
70	71 - 72	7	
Total		346	



LAMPIRAN 5

Tabulasi Perhitungan Metode Frekuensi Jalur B

Tabulasi Metode Frekuensi Data Kecelakaan Tahun 1999 (Jalur B)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Keterangan
1	02 - 03	4	
2	03 - 04	5	
5	06 - 07	2	
9	10 - 11	7	
10	11 - 12	13	Black Spot
11	12 - 13	14	Black Spot
12	13 - 14	15	Black Spot
18	19 - 20	11	Black Spot
19	20 - 21	1	
20	21 - 22	11	Black Spot
24	25 - 26	9	
25	26 - 27	8	
26	27 - 28	8	
27	28 - 29	6	
28	29 - 30	9	
31	32 - 33	7	
32	33 - 34	14	Black Spot
34	35 - 36	5	
35	36 - 37	9	
36	37 - 38	9	
37	38 - 39	10	Black Spot
38	39 - 40	9	
39	40 - 41	10	Black Spot
40	41 - 42	6	
41	42 - 43	11	Black Spot
43	44 - 45	16	Black Spot
45	46 - 47	3	
46	47 - 48	6	
47	48 - 49	6	
48	49 - 50	7	
49	50 - 51	9	
50	51 - 52	8	
51	52 - 53	8	
53	54 - 55	5	
54	55 - 56	5	
55	56 - 57	4	
56	57 - 58	5	
57	58 - 59	9	
58	59 - 60	4	
59	60 - 61	4	
60	61 - 62	1	
61	62 - 63	4	
62	63 - 64	1	
63	64 - 65	2	
65	66 - 67	1	
66	67 - 68	7	
67	68 - 69	1	
68	69 - 70	1	
69	70 - 71	1	
70	71 - 72	1	
Total		332	

Tabulasi Metode Frekuensi Data Kecelakaan Tahun 2000 (Jalur B)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Keterangan
1	02 - 03	9	
2	03 - 04	1	
5	06 - 07	6	
9	10 - 11	11	Black Spot
10	11 - 12	14	Black Spot
11	12 - 13	10	Black Spot
12	13 - 14	11	Black Spot
18	19 - 20	10	Black Spot
19	20 - 21	8	
20	21 - 22	10	Black Spot
24	25 - 26	14	Black Spot
25	26 - 27	7	
26	27 - 28	13	Black Spot
27	28 - 29	8	
28	29 - 30	11	Black Spot
31	32 - 33	7	
32	33 - 34	9	
34	35 - 36	4	
35	36 - 37	8	
36	37 - 38	8	
37	38 - 39	6	
38	39 - 40	2	
39	40 - 41	3	
40	41 - 42	4	
41	42 - 43	8	
43	44 - 45	15	Black Spot
45	46 - 47	9	
46	47 - 48	4	
47	48 - 49	4	
48	49 - 50	5	
49	50 - 51	10	Black Spot
50	51 - 52	5	
51	52 - 53	10	Black Spot
53	54 - 55	9	
54	55 - 56	13	Black Spot
55	56 - 57	5	
56	57 - 58	3	
57	58 - 59	7	
58	59 - 60	4	
59	60 - 61	5	
60	61 - 62	1	
61	62 - 63	6	
62	63 - 64	2	
63	64 - 65	2	
65	66 - 67	3	
66	67 - 68	3	
67	68 - 69	1	
68	69 - 70	3	
69	70 - 71	1	
70	71 - 72	0	
Total		332	

Tabulasi Metode Frekuensi Data Kecelakaan Tahun 2001 (Jalur B)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Keterangan
1	02 - 03	5	
2	03 - 04	1	
5	06 - 07	3	
9	10 - 11	12	<i>Black Spot</i>
10	11 - 12	10	<i>Black Spot</i>
11	12 - 13	22	<i>Black Spot</i>
12	13 - 14	6	
18	19 - 20	6	
19	20 - 21	3	
20	21 - 22	9	
24	25 - 26	8	
25	26 - 27	12	<i>Black Spot</i>
26	27 - 28	12	<i>Black Spot</i>
27	28 - 29	9	
28	29 - 30	16	<i>Black Spot</i>
31	32 - 33	14	<i>Black Spot</i>
32	33 - 34	4	
34	35 - 36	5	
35	36 - 37	6	
36	37 - 38	5	
37	38 - 39	2	
38	39 - 40	3	
39	40 - 41	9	
40	41 - 42	3	
41	42 - 43	7	
43	44 - 45	9	
45	46 - 47	6	
46	47 - 48	7	
47	48 - 49	3	
48	49 - 50	6	
49	50 - 51	9	
50	51 - 52	9	
51	52 - 53	7	
53	54 - 55	13	<i>Black Spot</i>
54	55 - 56	6	
55	56 - 57	9	
56	57 - 58	7	
57	58 - 59	7	
58	59 - 60	7	
59	60 - 61	3	
60	61 - 62	2	
61	62 - 63	8	
62	63 - 64	3	
63	64 - 65	1	
65	66 - 67	4	
66	67 - 68	2	
67	68 - 69	3	
68	69 - 70	2	
69	70 - 71	3	
70	71 - 72	3	
Total		331	

Tabulasi Metode Frekuensi Data Kecelakaan Tahun 2002 (Jalur B)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Keterangan
1	02 - 03	0	
2	03 - 04	4	
5	06 - 07	5	
9	10 - 11	7	
10	11 - 12	15	<i>Black Spot</i>
11	12 - 13	9	
12	13 - 14	6	
18	19 - 20	7	
19	20 - 21	6	
20	21 - 22	6	
24	25 - 26	10	<i>Black Spot</i>
25	26 - 27	20	<i>Black Spot</i>
26	27 - 28	7	
27	28 - 29	14	<i>Black Spot</i>
28	29 - 30	5	
31	32 - 33	12	<i>Black Spot</i>
32	33 - 34	10	<i>Black Spot</i>
34	35 - 36	8	
35	36 - 37	4	
36	37 - 38	5	
37	38 - 39	10	<i>Black Spot</i>
38	39 - 40	6	
39	40 - 41	6	
40	41 - 42	8	
41	42 - 43	4	
43	44 - 45	12	<i>Black Spot</i>
45	46 - 47	3	
46	47 - 48	7	
47	48 - 49	7	
48	49 - 50	5	
49	50 - 51	4	
50	51 - 52	6	
51	52 - 53	7	
53	54 - 55	5	
54	55 - 56	5	
55	56 - 57	5	
56	57 - 58	5	
57	58 - 59	3	
58	59 - 60	2	
59	60 - 61	9	
60	61 - 62	6	
61	62 - 63	4	
62	63 - 64	2	
63	64 - 65	2	
65	66 - 67	2	
66	67 - 68	1	
67	68 - 69	0	
68	69 - 70	2	
69	70 - 71	3	
70	71 - 72	5	
Total		306	

Tabulasi Metode Frekuensi Data Kecelakaan Tahun 2003 (Jalur B)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Keterangan
1	02 - 03	1	
2	03 - 04	4	
5	06 - 07	5	
9	10 - 11	14	Black Spot
10	11 - 12	10	Black Spot
11	12 - 13	4	
12	13 - 14	13	Black Spot
18	19 - 20	3	
19	20 - 21	2	
20	21 - 22	8	
24	25 - 26	13	Black Spot
25	26 - 27	14	Black Spot
26	27 - 28	7	
27	28 - 29	8	
28	29 - 30	15	Black Spot
31	32 - 33	9	
32	33 - 34	9	
34	35 - 36	4	
35	36 - 37	6	
36	37 - 38	8	
37	38 - 39	6	
38	39 - 40	3	
39	40 - 41	6	
40	41 - 42	6	
41	42 - 43	7	
43	44 - 45	8	
45	46 - 47	3	
46	47 - 48	6	
47	48 - 49	6	
48	49 - 50	6	
49	50 - 51	5	
50	51 - 52	4	
51	52 - 53	9	
53	54 - 55	5	
54	55 - 56	3	
55	56 - 57	9	
56	57 - 58	5	
57	58 - 59	1	
58	59 - 60	0	
59	60 - 61	8	
60	61 - 62	6	
61	62 - 63	8	
62	63 - 64	5	
63	64 - 65	6	
65	66 - 67	1	
66	67 - 68	3	
67	68 - 69	1	
68	69 - 70	3	
69	70 - 71	1	
70	71 - 72	0	
Total		297	

Tabulasi Metode Frekuensi Data Kecelakaan Tahun 2004 (Jalur B)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Keterangan
1	02 - 03	2	
2	03 - 04	3	
5	06 - 07	0	
9	10 - 11	13	Black Spot
10	11 - 12	14	Black Spot
11	12 - 13	9	
12	13 - 14	13	Black Spot
18	19 - 20	9	
19	20 - 21	4	
20	21 - 22	9	
24	25 - 26	8	
25	26 - 27	25	Black Spot
26	27 - 28	10	Black Spot
27	28 - 29	9	
28	29 - 30	12	Black Spot
31	32 - 33	7	
32	33 - 34	5	
34	35 - 36	9	
35	36 - 37	8	
36	37 - 38	15	Black Spot
37	38 - 39	13	Black Spot
38	39 - 40	8	
39	40 - 41	8	
40	41 - 42	5	
41	42 - 43	6	
43	44 - 45	16	Black Spot
45	46 - 47	3	
46	47 - 48	4	
47	48 - 49	3	
48	49 - 50	8	
49	50 - 51	9	
50	51 - 52	9	
51	52 - 53	14	Black Spot
53	54 - 55	7	
54	55 - 56	7	
55	56 - 57	10	Black Spot
56	57 - 58	12	Black Spot
57	58 - 59	6	
58	59 - 60	6	
59	60 - 61	1	
60	61 - 62	4	
61	62 - 63	5	
62	63 - 64	8	
63	64 - 65	2	
65	66 - 67	1	
66	67 - 68	0	
67	68 - 69	2	
68	69 - 70	1	
69	70 - 71	0	
70	71 - 72	1	
Total		363	

Tabulasi Metode Frekuensi Data Kecelakaan Tahun 2005 (Jalur B)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Keterangan
1	02 - 03	1	
2	03 - 04	2	
5	06 - 07	3	
9	10 - 11	7	
10	11 - 12	9	
11	12 - 13	19	Black Spot
12	13 - 14	12	Black Spot
18	19 - 20	5	
19	20 - 21	6	
20	21 - 22	8	
24	25 - 26	18	Black Spot
25	26 - 27	26	Black Spot
26	27 - 28	15	Black Spot
27	28 - 29	18	Black Spot
28	29 - 30	14	Black Spot
31	32 - 33	9	
32	33 - 34	11	Black Spot
34	35 - 36	13	Black Spot
35	36 - 37	11	Black Spot
36	37 - 38	8	
37	38 - 39	9	
38	39 - 40	5	
39	40 - 41	2	
40	41 - 42	11	Black Spot
41	42 - 43	4	
43	44 - 45	6	
45	46 - 47	6	
46	47 - 48	12	Black Spot
47	48 - 49	4	
48	49 - 50	9	
49	50 - 51	5	
50	51 - 52	5	
51	52 - 53	8	
53	54 - 55	5	
54	55 - 56	8	
55	56 - 57	5	
56	57 - 58	8	
57	58 - 59	7	
58	59 - 60	1	
59	60 - 61	4	
60	61 - 62	4	
61	62 - 63	11	Black Spot
62	63 - 64	11	Black Spot
63	64 - 65	2	
65	66 - 67	3	
66	67 - 68	3	
67	68 - 69	2	
68	69 - 70	0	
69	70 - 71	1	
70	71 - 72	2	
Total		378	

Tabulasi Metode Frekuensi Data Kecelakaan Tahun 2006 (Jalur B)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Keterangan
1	02 - 03	2	
2	03 - 04	2	
5	06 - 07	4	
9	10 - 11	8	
10	11 - 12	15	Black Spot
11	12 - 13	17	Black Spot
12	13 - 14	14	Black Spot
18	19 - 20	7	
19	20 - 21	2	
20	21 - 22	10	Black Spot
24	25 - 26	6	
25	26 - 27	6	
26	27 - 28	7	
27	28 - 29	10	Black Spot
28	29 - 30	7	
31	32 - 33	8	
32	33 - 34	8	
34	35 - 36	13	Black Spot
35	36 - 37	13	Black Spot
36	37 - 38	16	Black Spot
37	38 - 39	7	
38	39 - 40	5	
39	40 - 41	6	
40	41 - 42	8	
41	42 - 43	7	
43	44 - 45	11	Black Spot
45	46 - 47	11	Black Spot
46	47 - 48	4	
47	48 - 49	7	
48	49 - 50	3	
49	50 - 51	6	
50	51 - 52	7	
51	52 - 53	5	
53	54 - 55	8	
54	55 - 56	7	
55	56 - 57	5	
56	57 - 58	10	Black Spot
57	58 - 59	9	
58	59 - 60	5	
59	60 - 61	14	Black Spot
60	61 - 62	8	
61	62 - 63	10	Black Spot
62	63 - 64	8	
63	64 - 65	3	
65	66 - 67	6	
66	67 - 68	2	
67	68 - 69	6	
68	69 - 70	1	
69	70 - 71	1	
70	71 - 72	2	
Total		367	



LAMPIRAN 6

Tabulasi Perhitungan Metode *Upper Control Limit* Jalur A

Perhitungan *Upper Control Limit* untuk data kecelakaan tahun 1997 (Jalur A)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Volume Lalin	Tingkat Kecelakaan Segmen	Tingkat Kecelakaan Jalur	eksposure	UCL
1	02 - 03	3	37752	21.77	76.98	0.138	125.51
2	03 - 04	3	94380	8.71	76.98	0.344	105.43
5	06 - 07	10	77305	35.44	76.98	0.282	108.86
9	10 - 11	10	63452	43.18	76.98	0.232	112.71
10	11 - 12	9	63452	38.86	76.98	0.232	112.71
11	12 - 13	11	63452	47.50	76.98	0.232	112.71
12	13 - 14	23	57481.5	109.62	76.98	0.210	114.83
18	19 - 20	12	51511	63.82	76.98	0.188	117.34
19	20 - 21	10	51511	53.19	76.98	0.188	117.34
20	21 - 22	23	51511	122.33	76.98	0.188	117.34
21	22 - 23	37	51511	196.79	76.98	0.188	117.34
24	25 - 26	11	40699	74.05	76.98	0.149	123.38
25	26 - 27	13	40699	87.51	76.98	0.149	123.38
26	27 - 28	10	40699	67.32	76.98	0.149	123.38
27	28 - 29	12	40699	80.78	76.98	0.149	123.38
28	29 - 30	25	40699	168.29	76.98	0.149	123.38
31	32 - 33	9	22239	110.88	76.98	0.081	144.01
32	33 - 34	12	22239	147.83	76.98	0.081	144.01
34	35 - 36	5	22239	61.60	76.98	0.081	144.01
35	36 - 37	6	22239	73.92	76.98	0.081	144.01
36	37 - 38	6	22239	73.92	76.98	0.081	144.01
37	38 - 39	5	22239	61.60	76.98	0.081	144.01
38	39 - 40	9	22239	110.88	76.98	0.081	144.01
39	40 - 41	8	22239	98.56	76.98	0.081	144.01
40	41 - 42	12	22239	147.83	76.98	0.081	144.01
41	42 - 43	5	22239	61.60	76.98	0.081	144.01
43	44 - 45	5	22239	61.60	76.98	0.081	144.01
45	46 - 47	6	19151	85.84	76.98	0.070	150.59
46	47 - 48	5	19151	71.53	76.98	0.070	150.59
47	48 - 49	12	19151	171.67	76.98	0.070	150.59
48	49 - 50	10	19151	143.06	76.98	0.070	150.59
49	50 - 51	9	19151	128.75	76.98	0.070	150.59
50	51 - 52	11	19151	157.37	76.98	0.070	150.59
53	54 - 55	7	17397	110.24	76.98	0.063	155.19
54	55 - 56	2	17397	31.50	76.98	0.063	155.19
55	56 - 57	6	17397	94.49	76.98	0.063	155.19
56	57 - 58	5	17397	78.74	76.98	0.063	155.19
57	58 - 59	5	17397	78.74	76.98	0.063	155.19
58	59 - 60	6	17397	94.49	76.98	0.063	155.19
59	60 - 61	3	17397	47.24	76.98	0.063	155.19
60	61 - 62	3	17397	47.24	76.98	0.063	155.19
61	62 - 63	5	17397	78.74	76.98	0.063	155.19
62	63 - 64	1	17397	15.75	76.98	0.063	155.19
63	64 - 65	5	17397	78.74	76.98	0.063	155.19
65	66 - 67	4	16972	64.57	76.98	0.062	156.43
66	67 - 68	4	16972	64.57	76.98	0.062	156.43
67	68 - 69	4	16972	64.57	76.98	0.062	156.43
68	69 - 70	5	16972	80.71	76.98	0.062	156.43
69	70 - 71	10	16972	161.43	76.98	0.062	156.43
70	71 - 72	7	16972	113.00	76.98	0.062	156.43
Total		439	1519547.5				

Perhitungan *Upper Control Limit* untuk data kecelakaan tahun 1998 (Jalur A)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Volume Lalin	Tingkat Kecelakaan Segmen	Tingkat Kecelakaan Jalur	eksposure	UCL
1	02 - 03	2	34961	15.67	65.36	0.128	113.01
2	03 - 04	8	87402	25.08	65.36	0.319	93.07
5	06 - 07	13	72475	49.14	65.36	0.265	96.24
9	10 - 11	12	48131	68.31	65.36	0.176	104.66
10	11 - 12	8	48131	45.54	65.36	0.176	104.66
11	12 - 13	15	48131	85.38	65.36	0.176	104.66
12	13 - 14	27	48017	154.06	65.36	0.175	104.71
18	19 - 20	2	47903	11.44	65.36	0.175	104.77
19	20 - 21	7	47903	40.04	65.36	0.175	104.77
20	21 - 22	4	47903	22.88	65.36	0.175	104.77
21	22 - 23	10	47903	57.19	65.36	0.175	104.77
24	25 - 26	8	37438	58.54	65.36	0.137	111.06
25	26 - 27	11	37438	80.50	65.36	0.137	111.06
26	27 - 28	7	37438	51.23	65.36	0.137	111.06
27	28 - 29	8	37438	58.54	65.36	0.137	111.06
28	29 - 30	7	37438	51.23	65.36	0.137	111.06
31	32 - 33	6	20703	79.40	65.36	0.076	131.33
32	33 - 34	7	20703	92.63	65.36	0.076	131.33
34	35 - 36	6	20703	79.40	65.36	0.076	131.33
35	36 - 37	5	20703	66.17	65.36	0.076	131.33
36	37 - 38	11	20703	145.57	65.36	0.076	131.33
37	38 - 39	11	20703	145.57	65.36	0.076	131.33
38	39 - 40	9	20703	119.10	65.36	0.076	131.33
39	40 - 41	5	20703	66.17	65.36	0.076	131.33
40	41 - 42	2	20703	26.47	65.36	0.076	131.33
41	42 - 43	4	20703	52.93	65.36	0.076	131.33
43	44 - 45	8	20703	105.87	65.36	0.076	131.33
45	46 - 47	6	17836	92.16	65.36	0.065	137.90
46	47 - 48	4	17836	61.44	65.36	0.065	137.90
47	48 - 49	7	17836	107.52	65.36	0.065	137.90
48	49 - 50	10	17836	153.61	65.36	0.065	137.90
49	50 - 51	6	17836	92.16	65.36	0.065	137.90
50	51 - 52	5	17836	76.80	65.36	0.065	137.90
53	54 - 55	6	20403	80.57	65.36	0.074	131.94
54	55 - 56	3	20403	40.28	65.36	0.074	131.94
55	56 - 57	1	20403	13.43	65.36	0.074	131.94
56	57 - 58	3	20403	40.28	65.36	0.074	131.94
57	58 - 59	10	20403	134.28	65.36	0.074	131.94
58	59 - 60	2	20403	26.86	65.36	0.074	131.94
59	60 - 61	8	20403	107.42	65.36	0.074	131.94
60	61 - 62	5	20403	67.14	65.36	0.074	131.94
61	62 - 63	4	20403	53.71	65.36	0.074	131.94
62	63 - 64	2	20403	26.86	65.36	0.074	131.94
63	64 - 65	5	20403	67.14	65.36	0.074	131.94
65	66 - 67	7	15581	123.09	65.36	0.057	144.50
66	67 - 68	6	15581	105.50	65.36	0.057	144.50
67	68 - 69	7	15581	123.09	65.36	0.057	144.50
68	69 - 70	6	15581	105.50	65.36	0.057	144.50
69	70 - 71	2	15581	35.17	65.36	0.057	144.50
70	71 - 72	10	15581	175.84	65.36	0.057	144.50
Total		348	1418717.8				

Perhitungan *Upper Control Limit* untuk data kecelakaan tahun 1999 (Jalur A)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Volume Lalin	Tingkat Kecelakaan Segmen	Tingkat Kecelakaan Jalur	eksposure	UCL
1	02 - 03	2	37550	14.59	68.78	0.137	115.33
2	03 - 04	5	93876	14.59	68.78	0.343	95.97
5	06 - 07	9	79526	31.01	68.78	0.290	98.68
9	10 - 11	12	49178	66.85	68.78	0.179	108.39
10	11 - 12	16	49178	89.14	68.78	0.179	108.39
11	12 - 13	14	49178	77.99	68.78	0.179	108.39
12	13 - 14	20	50507.5	108.49	68.78	0.184	107.76
18	19 - 20	5	51837	26.43	68.78	0.189	107.17
19	20 - 21	3	51837	15.86	68.78	0.189	107.17
20	21 - 22	7	51837	37.00	68.78	0.189	107.17
21	22 - 23	5	51837	26.43	68.78	0.189	107.17
24	25 - 26	7	31280	61.31	68.78	0.114	120.80
25	26 - 27	18	31280	157.66	68.78	0.114	120.80
26	27 - 28	9	31280	78.83	68.78	0.114	120.80
27	28 - 29	5	31280	43.79	68.78	0.114	120.80
28	29 - 30	6	31280	52.55	68.78	0.114	120.80
31	32 - 33	15	22295	184.33	68.78	0.081	132.94
32	33 - 34	12	22295	147.46	68.78	0.081	132.94
34	35 - 36	9	22295	110.60	68.78	0.081	132.94
35	36 - 37	11	22295	135.17	68.78	0.081	132.94
36	37 - 38	7	22295	86.02	68.78	0.081	132.94
37	38 - 39	5	22295	61.44	68.78	0.081	132.94
38	39 - 40	7	22295	86.02	68.78	0.081	132.94
39	40 - 41	5	22295	61.44	68.78	0.081	132.94
40	41 - 42	8	22295	98.31	68.78	0.081	132.94
41	42 - 43	3	22295	36.87	68.78	0.081	132.94
43	44 - 45	8	22295	98.31	68.78	0.081	132.94
45	46 - 47	4	19977	54.86	68.78	0.073	137.53
46	47 - 48	9	19977	123.43	68.78	0.073	137.53
47	48 - 49	10	19977	137.14	68.78	0.073	137.53
48	49 - 50	10	19977	137.14	68.78	0.073	137.53
49	50 - 51	12	19977	164.57	68.78	0.073	137.53
50	51 - 52	8	19977	109.72	68.78	0.073	137.53
53	54 - 55	9	17516	140.77	68.78	0.064	143.52
54	55 - 56	12	17516	187.70	68.78	0.064	143.52
55	56 - 57	2	17516	31.28	68.78	0.064	143.52
56	57 - 58	2	17516	31.28	68.78	0.064	143.52
57	58 - 59	1	17516	15.64	68.78	0.064	143.52
58	59 - 60	3	17516	46.92	68.78	0.064	143.52
59	60 - 61	3	17516	46.92	68.78	0.064	143.52
60	61 - 62	8	17516	125.13	68.78	0.064	143.52
61	62 - 63	6	17516	93.85	68.78	0.064	143.52
62	63 - 64	3	17516	46.92	68.78	0.064	143.52
63	64 - 65	1	17516	15.64	68.78	0.064	143.52
65	66 - 67	9	16506	149.39	68.78	0.060	146.42
66	67 - 68	3	16506	49.80	68.78	0.060	146.42
67	68 - 69	4	16506	66.39	68.78	0.060	146.42
68	69 - 70	2	16506	33.20	68.78	0.060	146.42
69	70 - 71	6	16506	99.59	68.78	0.060	146.42
70	71 - 72	9	16506	149.39	68.78	0.060	146.42
Total		369	1429560.9				

Perhitungan *Upper Control Limit* untuk data kecelakaan tahun 2000 (Jalur A)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Volume Lalin	Tingkat Kecelakaan Segmen	Tingkat Kecelakaan Jalur	eksposure	UCL
1	02 - 03	6	41176	39.92	55.10	0.150	95.44
2	03 - 04	8	102939	21.29	55.10	0.376	78.56
5	06 - 07	13	87693	40.61	55.10	0.320	80.84
9	10 - 11	6	69491	23.66	55.10	0.254	84.59
10	11 - 12	10	69491	39.43	55.10	0.254	84.59
11	12 - 13	9	69491	35.48	55.10	0.254	84.59
12	13 - 14	13	64110	55.56	55.10	0.234	86.02
18	19 - 20	8	48020	45.64	55.10	0.175	91.85
19	20 - 21	4	48020	22.82	55.10	0.175	91.85
20	21 - 22	6	48020	34.23	55.10	0.175	91.85
21	22 - 23	7	48020	39.94	55.10	0.175	91.85
24	25 - 26	7	36629	52.36	55.10	0.134	98.44
25	26 - 27	11	36629	82.28	55.10	0.134	98.44
26	27 - 28	14	36629	104.72	55.10	0.134	98.44
27	28 - 29	9	36629	67.32	55.10	0.134	98.44
28	29 - 30	5	36629	37.40	55.10	0.134	98.44
31	32 - 33	5	25534	53.65	55.10	0.093	109.36
32	33 - 34	9	25534	96.57	55.10	0.093	109.36
34	35 - 36	7	25534	75.11	55.10	0.093	109.36
35	36 - 37	2	25534	21.46	55.10	0.093	109.36
36	37 - 38	9	25534	96.57	55.10	0.093	109.36
37	38 - 39	6	25534	64.38	55.10	0.093	109.36
38	39 - 40	6	25534	64.38	55.10	0.093	109.36
39	40 - 41	11	25534	118.03	55.10	0.093	109.36
40	41 - 42	7	25534	75.11	55.10	0.093	109.36
41	42 - 43	8	25534	85.84	55.10	0.093	109.36
43	44 - 45	7	25534	75.11	55.10	0.093	109.36
45	46 - 47	5	22925	59.75	55.10	0.084	113.20
46	47 - 48	2	22925	23.90	55.10	0.084	113.20
47	48 - 49	3	22925	35.85	55.10	0.084	113.20
48	49 - 50	7	22925	83.66	55.10	0.084	113.20
49	50 - 51	8	22925	95.61	55.10	0.084	113.20
50	51 - 52	11	22925	131.46	55.10	0.084	113.20
53	54 - 55	6	16097	102.12	55.10	0.059	128.10
54	55 - 56	7	16097	119.14	55.10	0.059	128.10
55	56 - 57	3	16097	51.06	55.10	0.059	128.10
56	57 - 58	4	16097	68.08	55.10	0.059	128.10
57	58 - 59	7	16097	119.14	55.10	0.059	128.10
58	59 - 60	2	16097	34.04	55.10	0.059	128.10
59	60 - 61	6	16097	102.12	55.10	0.059	128.10
60	61 - 62	4	16097	68.08	55.10	0.059	128.10
61	62 - 63	3	16097	51.06	55.10	0.059	128.10
62	63 - 64	2	16097	34.04	55.10	0.059	128.10
63	64 - 65	2	16097	34.04	55.10	0.059	128.10
65	66 - 67	7	19323	99.25	55.10	0.071	119.92
66	67 - 68	6	19323	85.07	55.10	0.071	119.92
67	68 - 69	8	19323	113.43	55.10	0.071	119.92
68	69 - 70	1	19323	14.18	55.10	0.071	119.92
69	70 - 71	4	19323	56.71	55.10	0.071	119.92
70	71 - 72	8	19323	113.43	55.10	0.071	119.92
Total		329	1591044.6				

Perhitungan *Upper Control Limit* untuk data kecelakaan tahun 2001 (Jalur A)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Volume Lalin	Tingkat Kecelakaan Segmen	Tingkat Kecelakaan Jalur	eksposure	UCL
1	02 - 03	0	106638	0.00	46.24	0.389	67.59
2	03 - 04	2	106638	5.14	46.24	0.389	67.59
5	06 - 07	4	90402	12.12	46.24	0.330	69.74
9	10 - 11	6	71879	22.87	46.24	0.262	73.15
10	11 - 12	7	71879	26.68	46.24	0.262	73.15
11	12 - 13	10	71879	38.12	46.24	0.262	73.15
12	13 - 14	17	71879	64.80	46.24	0.262	73.15
18	19 - 20	3	51217	16.05	46.24	0.187	79.22
19	20 - 21	4	51217	21.40	46.24	0.187	79.22
20	21 - 22	5	51217	26.75	46.24	0.187	79.22
21	22 - 23	8	51217	42.79	46.24	0.187	79.22
24	25 - 26	5	42145	32.50	46.24	0.154	83.40
25	26 - 27	6	42145	39.00	46.24	0.154	83.40
26	27 - 28	7	42145	45.50	46.24	0.154	83.40
27	28 - 29	9	42145	58.51	46.24	0.154	83.40
28	29 - 30	14	42145	91.01	46.24	0.154	83.40
31	32 - 33	5	27051	50.64	46.24	0.099	95.30
32	33 - 34	4	27051	40.51	46.24	0.099	95.30
34	35 - 36	5	27051	50.64	46.24	0.099	95.30
35	36 - 37	12	27051	121.54	46.24	0.099	95.30
36	37 - 38	3	27051	30.38	46.24	0.099	95.30
37	38 - 39	4	27051	40.51	46.24	0.099	95.30
38	39 - 40	7	27051	70.90	46.24	0.099	95.30
39	40 - 41	6	27051	60.77	46.24	0.099	95.30
40	41 - 42	4	27051	40.51	46.24	0.099	95.30
41	42 - 43	8	27051	81.02	46.24	0.099	95.30
43	44 - 45	5	27051	50.64	46.24	0.099	95.30
45	46 - 47	7	24094	79.60	46.24	0.088	99.08
46	47 - 48	6	24094	68.23	46.24	0.088	99.08
47	48 - 49	9	24094	102.34	46.24	0.088	99.08
48	49 - 50	6	24094	68.23	46.24	0.088	99.08
49	50 - 51	6	24094	68.23	46.24	0.088	99.08
50	51 - 52	7	24094	79.60	46.24	0.088	99.08
53	54 - 55	6	21242	77.39	46.24	0.078	103.56
54	55 - 56	10	21242	128.98	46.24	0.078	103.56
55	56 - 57	6	21242	77.39	46.24	0.078	103.56
56	57 - 58	6	21242	77.39	46.24	0.078	103.56
57	58 - 59	7	21242	90.28	46.24	0.078	103.56
58	59 - 60	3	21242	38.69	46.24	0.078	103.56
59	60 - 61	10	21242	128.98	46.24	0.078	103.56
60	61 - 62	3	21242	38.69	46.24	0.078	103.56
61	62 - 63	5	21242	64.49	46.24	0.078	103.56
62	63 - 64	1	21242	12.90	46.24	0.078	103.56
63	64 - 65	3	21242	38.69	46.24	0.078	103.56
65	66 - 67	7	19210	99.83	46.24	0.070	107.44
66	67 - 68	6	19210	85.57	46.24	0.070	107.44
67	68 - 69	7	19210	99.83	46.24	0.070	107.44
68	69 - 70	4	19210	57.05	46.24	0.070	107.44
69	70 - 71	9	19210	128.36	46.24	0.070	107.44
70	71 - 72	8	19210	114.10	46.24	0.070	107.44
Total		312	1797834				

Perhitungan *Upper Control Limit* untuk data kecelakaan tahun 2002 (Jalur A)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Volume Lalin	Tingkat Kecelakaan Segmen	Tingkat Kecelakaan Jalur	eksposure	UCL
1	02 - 03	0	109419	0.00	46.63	0.399	67.73
2	03 - 04	2	109419	5.01	46.63	0.399	67.73
5	06 - 07	7	92380	20.76	46.63	0.337	69.92
9	10 - 11	7	74679	25.68	46.63	0.273	73.02
10	11 - 12	6	74679	22.01	46.63	0.273	73.02
11	12 - 13	17	74679	62.37	46.63	0.273	73.02
12	13 - 14	12	74679	44.02	46.63	0.273	73.02
18	19 - 20	2	53256	10.29	46.63	0.194	78.95
19	20 - 21	2	53256	10.29	46.63	0.194	78.95
20	21 - 22	12	53256	61.73	46.63	0.194	78.95
21	22 - 23	8	53256	41.16	46.63	0.194	78.95
24	25 - 26	10	41473	66.06	46.63	0.151	84.28
25	26 - 27	8	41473	52.85	46.63	0.151	84.28
26	27 - 28	9	41473	59.45	46.63	0.151	84.28
27	28 - 29	14	41473	92.48	46.63	0.151	84.28
28	29 - 30	9	41473	59.45	46.63	0.151	84.28
31	32 - 33	6	26955	60.98	46.63	0.098	95.95
32	33 - 34	9	26955	91.48	46.63	0.098	95.95
34	35 - 36	5	26955	50.82	46.63	0.098	95.95
35	36 - 37	3	26955	30.49	46.63	0.098	95.95
36	37 - 38	5	26955	50.82	46.63	0.098	95.95
37	38 - 39	3	26955	30.49	46.63	0.098	95.95
38	39 - 40	9	26955	91.48	46.63	0.098	95.95
39	40 - 41	8	26955	81.31	46.63	0.098	95.95
40	41 - 42	8	26955	81.31	46.63	0.098	95.95
41	42 - 43	2	26955	20.33	46.63	0.098	95.95
43	44 - 45	6	26955	60.98	46.63	0.098	95.95
45	46 - 47	3	24322	33.79	46.63	0.089	99.30
46	47 - 48	10	24322	112.64	46.63	0.089	99.30
47	48 - 49	4	24322	45.06	46.63	0.089	99.30
48	49 - 50	8	24322	90.12	46.63	0.089	99.30
49	50 - 51	6	24322	67.59	46.63	0.089	99.30
50	51 - 52	9	24322	101.38	46.63	0.089	99.30
53	54 - 55	4	20433	53.63	46.63	0.075	105.58
54	55 - 56	2	20433	26.82	46.63	0.075	105.58
55	56 - 57	3	20433	40.23	46.63	0.075	105.58
56	57 - 58	6	20433	80.45	46.63	0.075	105.58
57	58 - 59	5	20433	67.04	46.63	0.075	105.58
58	59 - 60	6	20433	80.45	46.63	0.075	105.58
59	60 - 61	5	20433	67.04	46.63	0.075	105.58
60	61 - 62	6	20433	80.45	46.63	0.075	105.58
61	62 - 63	3	20433	40.23	46.63	0.075	105.58
62	63 - 64	0	20433	0.00	46.63	0.075	105.58
63	64 - 65	5	20433	67.04	46.63	0.075	105.58
65	66 - 67	6	17086	96.21	46.63	0.062	112.92
66	67 - 68	10	17086	160.35	46.63	0.062	112.92
67	68 - 69	7	17086	112.24	46.63	0.062	112.92
68	69 - 70	4	17086	64.14	46.63	0.062	112.92
69	70 - 71	6	17086	96.21	46.63	0.062	112.92
70	71 - 72	8	17086	128.28	46.63	0.062	112.92
Total		315	1800039				

Perhitungan *Upper Control Limit* untuk data kecelakaan tahun 2003 (Jalur A)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Volume Lalin	Tingkat Kecelakaan Segmen	Tingkat Kecelakaan Jalur	eksposure	UCL
1	02 - 03	3	112397	7.31	37.66	0.410	56.66
2	03 - 04	4	112397	9.75	37.66	0.410	56.66
5	06 - 07	3	95846	8.58	37.66	0.350	58.52
9	10 - 11	5	77740	17.62	37.66	0.284	61.29
10	11 - 12	6	77740	21.15	37.66	0.284	61.29
11	12 - 13	6	77740	21.15	37.66	0.284	61.29
12	13 - 14	13	77740	45.81	37.66	0.284	61.29
18	19 - 20	7	54580	35.14	37.66	0.199	66.95
19	20 - 21	2	54580	10.04	37.66	0.199	66.95
20	21 - 22	10	54580	50.20	37.66	0.199	66.95
21	22 - 23	7	54580	35.14	37.66	0.199	66.95
24	25 - 26	10	42850	63.94	37.66	0.156	71.68
25	26 - 27	6	42850	38.36	37.66	0.156	71.68
26	27 - 28	8	42850	51.15	37.66	0.156	71.68
27	28 - 29	10	42850	63.94	37.66	0.156	71.68
28	29 - 30	8	42850	51.15	37.66	0.156	71.68
31	32 - 33	5	24341	56.28	37.66	0.089	86.48
32	33 - 34	6	24341	67.53	37.66	0.089	86.48
34	35 - 36	3	26604	30.89	37.66	0.097	83.74
35	36 - 37	4	26604	41.19	37.66	0.097	83.74
36	37 - 38	5	26604	51.49	37.66	0.097	83.74
37	38 - 39	3	26604	30.89	37.66	0.097	83.74
38	39 - 40	5	26604	51.49	37.66	0.097	83.74
39	40 - 41	4	26604	41.19	37.66	0.097	83.74
40	41 - 42	4	26604	41.19	37.66	0.097	83.74
41	42 - 43	6	26604	61.79	37.66	0.097	83.74
43	44 - 45	6	26604	61.79	37.66	0.097	83.74
45	46 - 47	3	23456	35.04	37.66	0.086	87.68
46	47 - 48	8	23456	93.44	37.66	0.086	87.68
47	48 - 49	7	23456	81.76	37.66	0.086	87.68
48	49 - 50	3	23456	35.04	37.66	0.086	87.68
49	50 - 51	5	23456	58.40	37.66	0.086	87.68
50	51 - 52	3	23456	35.04	37.66	0.086	87.68
53	54 - 55	8	15402	142.30	37.66	0.056	103.87
54	55 - 56	7	15402	124.52	37.66	0.056	103.87
55	56 - 57	3	15402	53.36	37.66	0.056	103.87
56	57 - 58	1	15402	17.79	37.66	0.056	103.87
57	58 - 59	3	15402	53.36	37.66	0.056	103.87
58	59 - 60	3	15402	53.36	37.66	0.056	103.87
59	60 - 61	4	15402	71.15	37.66	0.056	103.87
60	61 - 62	5	15402	88.94	37.66	0.056	103.87
61	62 - 63	3	15402	53.36	37.66	0.056	103.87
62	63 - 64	2	15402	35.58	37.66	0.056	103.87
63	64 - 65	3	15402	53.36	37.66	0.056	103.87
65	66 - 67	8	15401	142.31	37.66	0.056	103.88
66	67 - 68	1	15401	17.79	37.66	0.056	103.88
67	68 - 69	4	15401	71.16	37.66	0.056	103.88
68	69 - 70	1	15401	17.79	37.66	0.056	103.88
69	70 - 71	2	15401	35.58	37.66	0.056	103.88
70	71 - 72	2	15401	35.58	37.66	0.056	103.88
Total		248	1754852				

Perhitungan *Upper Control Limit* untuk data kecelakaan tahun 2004 (Jalur A)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Volume Lalin	Tingkat Kecelakaan Segmen	Tingkat Kecelakaan Jalur	eksposure	UCL
1	02 - 03	2	114172	4.79	40.81	0.418	60.25
2	03 - 04	2	114172	4.79	40.81	0.418	60.25
5	06 - 07	5	98932	13.81	40.81	0.362	61.95
9	10 - 11	6	73191	22.40	40.81	0.268	66.08
10	11 - 12	6	73191	22.40	40.81	0.268	66.08
11	12 - 13	15	73191	56.00	40.81	0.268	66.08
12	13 - 14	5	73191	18.67	40.81	0.268	66.08
18	19 - 20	9	61057	40.27	40.81	0.223	68.99
19	20 - 21	8	61057	35.80	40.81	0.223	68.99
20	21 - 22	5	61057	22.37	40.81	0.223	68.99
21	22 - 23	13	61057	58.17	40.81	0.223	68.99
24	25 - 26	10	49498	55.20	40.81	0.181	72.84
25	26 - 27	10	49498	55.20	40.81	0.181	72.84
26	27 - 28	12	49498	66.24	40.81	0.181	72.84
27	28 - 29	4	49498	22.08	40.81	0.181	72.84
28	29 - 30	7	49498	38.64	40.81	0.181	72.84
31	32 - 33	8	33115	66.01	40.81	0.121	81.97
32	33 - 34	8	33115	66.01	40.81	0.121	81.97
34	35 - 36	4	32682	33.44	40.81	0.120	82.31
35	36 - 37	7	32682	58.52	40.81	0.120	82.31
36	37 - 38	3	32682	25.08	40.81	0.120	82.31
37	38 - 39	4	32682	33.44	40.81	0.120	82.31
38	39 - 40	7	32682	58.52	40.81	0.120	82.31
39	40 - 41	15	32682	125.40	40.81	0.120	82.31
40	41 - 42	2	32682	16.72	40.81	0.120	82.31
41	42 - 43	8	32682	66.88	40.81	0.120	82.31
43	44 - 45	9	32682	75.24	40.81	0.120	82.31
45	46 - 47	5	29159	46.85	40.81	0.107	85.44
46	47 - 48	4	29159	37.48	40.81	0.107	85.44
47	48 - 49	10	29159	93.70	40.81	0.107	85.44
48	49 - 50	8	29159	74.96	40.81	0.107	85.44
49	50 - 51	8	29159	74.96	40.81	0.107	85.44
50	51 - 52	8	29159	74.96	40.81	0.107	85.44
53	54 - 55	9	24913	98.70	40.81	0.091	90.19
54	55 - 56	1	24913	10.97	40.81	0.091	90.19
55	56 - 57	3	24913	32.90	40.81	0.091	90.19
56	57 - 58	5	24913	54.84	40.81	0.091	90.19
57	58 - 59	6	24913	65.80	40.81	0.091	90.19
58	59 - 60	4	24913	43.87	40.81	0.091	90.19
59	60 - 61	3	24913	32.90	40.81	0.091	90.19
60	61 - 62	4	24913	43.87	40.81	0.091	90.19
61	62 - 63	3	24913	32.90	40.81	0.091	90.19
62	63 - 64	4	24913	43.87	40.81	0.091	90.19
63	64 - 65	7	24913	76.77	40.81	0.091	90.19
65	66 - 67	3	12956	63.27	40.81	0.047	117.10
66	67 - 68	1	12956	21.09	40.81	0.047	117.10
67	68 - 69	6	12956	126.53	40.81	0.047	117.10
68	69 - 70	4	12956	84.35	40.81	0.047	117.10
69	70 - 71	4	12956	84.35	40.81	0.047	117.10
70	71 - 72	3	12956	63.27	40.81	0.047	117.10
Total		307	199859				

Perhitungan *Upper Control Limit* untuk data kecelakaan tahun 2005 (Jalur A)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Volume Lalin	Tingkat Kecelakaan Segmen	Tingkat Kecelakaan Jalur	eksposure	UCL
1	02 - 03	0	118955	0.00	39.27	0.434	57.98
2	03 - 04	1	118955	2.30	39.27	0.434	57.98
5	06 - 07	4	103620	10.58	39.27	0.378	59.55
9	10 - 11	1	90554	3.03	39.27	0.331	61.22
10	11 - 12	9	90554	27.23	39.27	0.331	61.22
11	12 - 13	11	90554	33.28	39.27	0.331	61.22
12	13 - 14	7	90554	21.18	39.27	0.331	61.22
18	19 - 20	10	68332	40.09	39.27	0.249	65.24
19	20 - 21	9	68332	36.08	39.27	0.249	65.24
20	21 - 22	10	68332	40.09	39.27	0.249	65.24
21	22 - 23	8	68332	32.08	39.27	0.249	65.24
24	25 - 26	10	56327	48.64	39.27	0.206	68.47
25	26 - 27	13	56327	63.23	39.27	0.206	68.47
26	27 - 28	7	56327	34.05	39.27	0.206	68.47
27	28 - 29	15	56327	72.96	39.27	0.206	68.47
28	29 - 30	11	56327	53.50	39.27	0.206	68.47
31	32 - 33	13	39211	90.83	39.27	0.143	75.81
32	33 - 34	8	39211	55.90	39.27	0.143	75.81
34	35 - 36	8	38596	56.79	39.27	0.141	76.17
35	36 - 37	10	38596	70.98	39.27	0.141	76.17
36	37 - 38	5	38596	35.49	39.27	0.141	76.17
37	38 - 39	4	38596	28.39	39.27	0.141	76.17
38	39 - 40	7	38596	49.69	39.27	0.141	76.17
39	40 - 41	7	38596	49.69	39.27	0.141	76.17
40	41 - 42	7	38596	49.69	39.27	0.141	76.17
41	42 - 43	6	38596	42.59	39.27	0.141	76.17
43	44 - 45	6	38596	42.59	39.27	0.141	76.17
45	46 - 47	13	34820	102.29	39.27	0.127	78.65
46	47 - 48	10	34820	78.68	39.27	0.127	78.65
47	48 - 49	8	34820	62.95	39.27	0.127	78.65
48	49 - 50	7	34820	55.08	39.27	0.127	78.65
49	50 - 51	5	34820	39.34	39.27	0.127	78.65
50	51 - 52	11	34820	86.55	39.27	0.127	78.65
53	54 - 55	4	30237	36.24	39.27	0.110	82.34
54	55 - 56	4	30237	36.24	39.27	0.110	82.34
55	56 - 57	4	30237	36.24	39.27	0.110	82.34
56	57 - 58	2	30237	18.12	39.27	0.110	82.34
57	58 - 59	5	30237	45.30	39.27	0.110	82.34
58	59 - 60	8	30237	72.49	39.27	0.110	82.34
59	60 - 61	10	30237	90.61	39.27	0.110	82.34
60	61 - 62	5	30237	45.30	39.27	0.110	82.34
61	62 - 63	3	30237	27.18	39.27	0.110	82.34
62	63 - 64	6	30237	54.37	39.27	0.110	82.34
63	64 - 65	4	30237	36.24	39.27	0.110	82.34
65	66 - 67	6	16776	97.99	39.27	0.061	102.64
66	67 - 68	2	12828	42.71	39.27	0.047	115.30
67	68 - 69	4	12828	85.43	39.27	0.047	115.30
68	69 - 70	3	12828	64.07	39.27	0.047	115.30
69	70 - 71	1	12828	21.36	39.27	0.047	115.30
70	71 - 72	8	12828	170.86	39.27	0.047	115.30
Total		340	2306938				

Perhitungan *Upper Control Limit* untuk data kecelakaan tahun 2006 (Jalur A)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Volume Lalin	Tingkat Kecelakaan Segmen	Tingkat Kecelakaan Jalur	eksposure	UCL
1	02 - 03	0	115862	0.00	39.64	0.423	58.71
2	03 - 04	3	115862	7.09	39.64	0.423	58.71
5	06 - 07	6	100029	16.43	39.64	0.365	60.43
9	10 - 11	4	87949	12.46	39.64	0.321	62.06
10	11 - 12	8	87949	24.92	39.64	0.321	62.06
11	12 - 13	7	87949	21.81	39.64	0.321	62.06
12	13 - 14	10	87949	31.15	39.64	0.321	62.06
18	19 - 20	2	68897	7.95	39.64	0.251	65.58
19	20 - 21	6	68897	23.86	39.64	0.251	65.58
20	21 - 22	5	68897	19.88	39.64	0.251	65.58
21	22 - 23	13	68897	51.70	39.64	0.251	65.58
24	25 - 26	3	57267	14.35	39.64	0.209	68.66
25	26 - 27	5	57267	23.92	39.64	0.209	68.66
26	27 - 28	7	57267	33.49	39.64	0.209	68.66
27	28 - 29	27	57267	129.17	39.64	0.209	68.66
28	29 - 30	7	57267	33.49	39.64	0.209	68.66
31	32 - 33	11	40402	74.59	39.64	0.147	75.63
32	33 - 34	6	40402	40.69	39.64	0.147	75.63
34	35 - 36	8	39736	55.16	39.64	0.145	76.00
35	36 - 37	9	39736	62.05	39.64	0.145	76.00
36	37 - 38	6	39736	41.37	39.64	0.145	76.00
37	38 - 39	4	39736	27.58	39.64	0.145	76.00
38	39 - 40	5	39736	34.47	39.64	0.145	76.00
39	40 - 41	8	39736	55.16	39.64	0.145	76.00
40	41 - 42	9	39736	62.05	39.64	0.145	76.00
41	42 - 43	6	39736	41.37	39.64	0.145	76.00
43	44 - 45	6	39736	41.37	39.64	0.145	76.00
45	46 - 47	8	36027	60.84	39.64	0.131	78.31
46	47 - 48	12	36027	91.26	39.64	0.131	78.31
47	48 - 49	9	36027	68.44	39.64	0.131	78.31
48	49 - 50	9	36027	68.44	39.64	0.131	78.31
49	50 - 51	3	36027	22.81	39.64	0.131	78.31
50	51 - 52	15	36027	114.07	39.64	0.131	78.31
53	54 - 55	12	31927	102.97	39.64	0.117	81.39
54	55 - 56	11	31927	94.39	39.64	0.117	81.39
55	56 - 57	9	31927	77.23	39.64	0.117	81.39
56	57 - 58	3	31927	25.74	39.64	0.117	81.39
57	58 - 59	7	31927	60.07	39.64	0.117	81.39
58	59 - 60	8	31927	68.65	39.64	0.117	81.39
59	60 - 61	7	31927	60.07	39.64	0.117	81.39
60	61 - 62	7	31927	60.07	39.64	0.117	81.39
61	62 - 63	5	31927	42.91	39.64	0.117	81.39
62	63 - 64	4	31927	34.32	39.64	0.117	81.39
63	64 - 65	2	31927	17.16	39.64	0.117	81.39
65	66 - 67	3	15394	53.39	39.64	0.056	106.99
66	67 - 68	3	11795	69.68	39.64	0.043	120.43
67	68 - 69	6	11795	139.37	39.64	0.043	120.43
68	69 - 70	3	11795	69.68	39.64	0.043	120.43
69	70 - 71	2	11795	46.46	39.64	0.043	120.43
70	71 - 72	7	11795	162.60	39.64	0.043	120.43
Total		346	2325628				



LAMPIRAN 7

Tabulasi Perhitungan Metode *Upper Control Limit* Jalur B

Perhitungan *Upper Control Limit* untuk data kecelakaan tahun 1997 (Jalur B)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Volume Lalin	Tingkat Kecelakaan Segmen	Tingkat Kecelakaan Jalur	eksposure	UCL
1	02 - 03	2	38325	14.30	83.71	0.140	133.45
2	03 - 04	13	95813	37.17	83.71	0.350	112.96
5	06 - 07	10	80703	33.95	83.71	0.295	115.95
9	10 - 11	11	63595	47.39	83.71	0.232	120.67
10	11 - 12	15	63595	64.62	83.71	0.232	120.67
11	12 - 13	12	63595	51.70	83.71	0.232	120.67
12	13 - 14	11	57834.5	52.11	83.71	0.211	122.76
18	19 - 20	16	40465	108.33	83.71	0.148	131.87
19	20 - 21	20	40465	135.41	83.71	0.148	131.87
20	21 - 22	15	40465	101.56	83.71	0.148	131.87
24	25 - 26	22	33494	179.95	83.71	0.122	137.62
25	26 - 27	16	33494	130.88	83.71	0.122	137.62
26	27 - 28	12	33494	98.16	83.71	0.122	137.62
27	28 - 29	22	33494	179.95	83.71	0.122	137.62
28	29 - 30	13	33494	106.34	83.71	0.122	137.62
31	32 - 33	11	21879	137.74	83.71	0.080	153.61
32	33 - 34	16	21879	200.35	83.71	0.080	153.61
34	35 - 36	9	21879	112.70	83.71	0.080	153.61
35	36 - 37	7	21879	87.66	83.71	0.080	153.61
36	37 - 38	15	21879	187.83	83.71	0.080	153.61
37	38 - 39	10	21879	125.22	83.71	0.080	153.61
38	39 - 40	7	21879	87.66	83.71	0.080	153.61
39	40 - 41	10	21879	125.22	83.71	0.080	153.61
40	41 - 42	8	21879	100.18	83.71	0.080	153.61
41	42 - 43	16	21879	200.35	83.71	0.080	153.61
43	44 - 45	14	21879	175.31	83.71	0.080	153.61
45	46 - 47	5	18758	73.03	83.71	0.068	160.64
46	47 - 48	7	18758	102.24	83.71	0.068	160.64
47	48 - 49	6	18758	87.63	83.71	0.068	160.64
48	49 - 50	3	18758	43.82	83.71	0.068	160.64
49	50 - 51	10	18758	146.06	83.71	0.068	160.64
50	51 - 52	8	18758	116.85	83.71	0.068	160.64
51	52 - 53	8	18758	116.85	83.71	0.068	160.64
53	54 - 55	3	16352	50.26	83.71	0.060	167.58
54	55 - 56	7	16352	117.28	83.71	0.060	167.58
55	56 - 57	6	16352	100.53	83.71	0.060	167.58
56	57 - 58	1	16352	16.75	83.71	0.060	167.58
57	58 - 59	3	16352	50.26	83.71	0.060	167.58
58	59 - 60	6	16352	100.53	83.71	0.060	167.58
59	60 - 61	9	16352	150.79	83.71	0.060	167.58
60	61 - 62	1	16352	16.75	83.71	0.060	167.58
61	62 - 63	3	16352	50.26	83.71	0.060	167.58
62	63 - 64	5	16352	83.77	83.71	0.060	167.58
63	64 - 65	0	16352	0.00	83.71	0.060	167.58
65	66 - 67	2	15548	35.24	83.71	0.057	170.30
66	67 - 68	4	15548	70.48	83.71	0.057	170.30
67	68 - 69	3	15548	52.86	83.71	0.057	170.30
68	69 - 70	1	15548	17.62	83.71	0.057	170.30
69	70 - 71	5	15548	88.11	83.71	0.057	170.30
70	71 - 72	0	15548	0.00	83.71	0.057	170.30
Total		439	1397460.7				

Perhitungan *Upper Control Limit* untuk data kecelakaan tahun 1998 (Jalur B)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Volume Lalin	Tingkat Kecelakaan Segmen	Tingkat Kecelakaan Jalur	eksposure	UCL
1	02 - 03	3	36504	22.52	74.83	0.133	123.79
2	03 - 04	6	91261	18.01	74.83	0.333	103.48
5	06 - 07	6	77790	21.13	74.83	0.284	106.22
9	10 - 11	19	47433	109.74	74.83	0.173	116.71
10	11 - 12	13	47433	75.09	74.83	0.173	116.71
11	12 - 13	14	47433	80.86	74.83	0.173	116.71
12	13 - 14	21	47623.5	120.81	74.83	0.174	116.61
18	19 - 20	4	38005	28.84	74.83	0.139	122.62
19	20 - 21	5	38005	36.04	74.83	0.139	122.62
20	21 - 22	9	38005	64.88	74.83	0.139	122.62
24	25 - 26	9	31359	78.63	74.83	0.114	128.51
25	26 - 27	17	31359	148.52	74.83	0.114	128.51
26	27 - 28	10	31359	87.37	74.83	0.114	128.51
27	28 - 29	7	31359	61.16	74.83	0.114	128.51
28	29 - 30	8	31359	69.89	74.83	0.114	128.51
31	32 - 33	10	20192	135.68	74.83	0.074	145.28
32	33 - 34	16	20192	217.09	74.83	0.074	145.28
34	35 - 36	14	20192	189.96	74.83	0.074	145.28
35	36 - 37	5	20192	67.84	74.83	0.074	145.28
36	37 - 38	5	20192	67.84	74.83	0.074	145.28
37	38 - 39	5	20192	67.84	74.83	0.074	145.28
38	39 - 40	8	20192	108.55	74.83	0.074	145.28
39	40 - 41	6	20192	81.41	74.83	0.074	145.28
40	41 - 42	6	20192	81.41	74.83	0.074	145.28
41	42 - 43	8	20192	108.55	74.83	0.074	145.28
43	44 - 45	21	20192	284.94	74.83	0.074	145.28
45	46 - 47	5	17577	77.93	74.83	0.064	151.73
46	47 - 48	8	17577	124.70	74.83	0.064	151.73
47	48 - 49	4	17577	62.35	74.83	0.064	151.73
48	49 - 50	4	17577	62.35	74.83	0.064	151.73
49	50 - 51	9	17577	140.28	74.83	0.064	151.73
50	51 - 52	7	17577	109.11	74.83	0.064	151.73
51	52 - 53	9	17577	140.28	74.83	0.064	151.73
53	54 - 55	4	19218	57.02	74.83	0.070	147.51
54	55 - 56	7	19218	99.79	74.83	0.070	147.51
55	56 - 57	2	19218	28.51	74.83	0.070	147.51
56	57 - 58	2	19218	28.51	74.83	0.070	147.51
57	58 - 59	5	19218	71.28	74.83	0.070	147.51
58	59 - 60	5	19218	71.28	74.83	0.070	147.51
59	60 - 61	5	19218	71.28	74.83	0.070	147.51
60	61 - 62	7	19218	99.79	74.83	0.070	147.51
61	62 - 63	4	19218	57.02	74.83	0.070	147.51
62	63 - 64	4	19218	57.02	74.83	0.070	147.51
63	64 - 65	4	19218	57.02	74.83	0.070	147.51
65	66 - 67	7	14590	131.45	74.83	0.053	161.45
66	67 - 68	4	14590	75.11	74.83	0.053	161.45
67	68 - 69	2	14590	37.56	74.83	0.053	161.45
68	69 - 70	0	14590	0.00	74.83	0.053	161.45
69	70 - 71	2	14590	37.56	74.83	0.053	161.45
70	71 - 72	3	14590	56.33	74.83	0.053	161.45
Total		368	1310376.9				

Perhitungan *Upper Control Limit* untuk data kecelakaan tahun 1999 (Jalur B)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Volume Lalin	Tingkat Kecelakaan Segmen	Tingkat Kecelakaan Jalur	eksposure	UCL
1	02 - 03	4	35459	30.91	65.92	0.129	113.31
2	03 - 04	5	88648	15.45	65.92	0.324	93.51
5	06 - 07	2	81793	6.70	65.92	0.299	94.82
9	10 - 11	7	49979	38.37	65.92	0.182	104.48
10	11 - 12	13	49979	71.26	65.92	0.182	104.48
11	12 - 13	14	49979	76.74	65.92	0.182	104.48
12	13 - 14	15	50252.5	81.78	65.92	0.183	104.35
18	19 - 20	11	40992	73.52	65.92	0.150	109.33
19	20 - 21	1	40992	6.68	65.92	0.150	109.33
20	21 - 22	11	40992	73.52	65.92	0.150	109.33
24	25 - 26	9	33830	72.89	65.92	0.123	114.69
25	26 - 27	8	33830	64.79	65.92	0.123	114.69
26	27 - 28	8	33830	64.79	65.92	0.123	114.69
27	28 - 29	6	33830	48.59	65.92	0.123	114.69
28	29 - 30	9	33830	72.89	65.92	0.123	114.69
31	32 - 33	7	21295	90.06	65.92	0.078	130.92
32	33 - 34	14	21295	180.12	65.92	0.078	130.92
34	35 - 36	5	21295	64.33	65.92	0.078	130.92
35	36 - 37	9	21295	115.79	65.92	0.078	130.92
36	37 - 38	9	21295	115.79	65.92	0.078	130.92
37	38 - 39	10	21295	128.66	65.92	0.078	130.92
38	39 - 40	9	21295	115.79	65.92	0.078	130.92
39	40 - 41	10	21295	128.66	65.92	0.078	130.92
40	41 - 42	6	21295	77.19	65.92	0.078	130.92
41	42 - 43	11	21295	141.52	65.92	0.078	130.92
43	44 - 45	16	21295	205.85	65.92	0.078	130.92
45	46 - 47	3	18795	43.73	65.92	0.069	136.29
46	47 - 48	6	18795	87.46	65.92	0.069	136.29
47	48 - 49	6	18795	87.46	65.92	0.069	136.29
48	49 - 50	7	18795	102.04	65.92	0.069	136.29
49	50 - 51	9	18795	131.19	65.92	0.069	136.29
50	51 - 52	8	18795	116.62	65.92	0.069	136.29
51	52 - 53	8	18795	116.62	65.92	0.069	136.29
53	54 - 55	5	16861	81.24	65.92	0.062	141.35
54	55 - 56	5	16861	81.24	65.92	0.062	141.35
55	56 - 57	4	16861	65.00	65.92	0.062	141.35
56	57 - 58	5	16861	81.24	65.92	0.062	141.35
57	58 - 59	9	16861	146.24	65.92	0.062	141.35
58	59 - 60	4	16861	65.00	65.92	0.062	141.35
59	60 - 61	4	16861	65.00	65.92	0.062	141.35
60	61 - 62	1	16861	16.25	65.92	0.062	141.35
61	62 - 63	4	16861	65.00	65.92	0.062	141.35
62	63 - 64	1	16861	16.25	65.92	0.062	141.35
63	64 - 65	2	16861	32.50	65.92	0.062	141.35
65	66 - 67	1	15423	17.76	65.92	0.056	145.82
66	67 - 68	7	15423	124.35	65.92	0.056	145.82
67	68 - 69	1	15423	17.76	65.92	0.056	145.82
68	69 - 70	1	15423	17.76	65.92	0.056	145.82
69	70 - 71	1	15423	17.76	65.92	0.056	145.82
70	71 - 72	1	15423	17.76	65.92	0.056	145.82
Total		332	1342034.7				

Perhitungan *Upper Control Limit* untuk data kecelakaan tahun 2000 (Jalur B)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Volume Lalin	Tingkat Kecelakaan Segmen	Tingkat Kecelakaan Jalur	eksposure	UCL
1	02 - 03	9	41359	59.62	57.55	0.151	98.47
2	03 - 04	1	103398	2.65	57.55	0.377	81.39
5	06 - 07	6	88797	18.51	57.55	0.324	83.57
9	10 - 11	11	71319	42.26	57.55	0.260	87.12
10	11 - 12	14	71319	53.78	57.55	0.260	87.12
11	12 - 13	10	71319	38.42	57.55	0.260	87.12
12	13 - 14	11	64043.5	47.06	57.55	0.234	89.05
18	19 - 20	10	47402	57.80	57.55	0.173	95.23
19	20 - 21	8	47402	46.24	57.55	0.173	95.23
20	21 - 22	10	47402	57.80	57.55	0.173	95.23
24	25 - 26	14	38389	99.91	57.55	0.140	100.37
25	26 - 27	7	38389	49.96	57.55	0.140	100.37
26	27 - 28	13	38389	92.78	57.55	0.140	100.37
27	28 - 29	8	38389	57.09	57.55	0.140	100.37
28	29 - 30	11	38389	78.50	57.55	0.140	100.37
31	32 - 33	7	24609	77.93	57.55	0.090	113.99
32	33 - 34	9	24609	100.20	57.55	0.090	113.99
34	35 - 36	4	24609	44.53	57.55	0.090	113.99
35	36 - 37	8	24609	89.06	57.55	0.090	113.99
36	37 - 38	8	24609	89.06	57.55	0.090	113.99
37	38 - 39	6	24609	66.80	57.55	0.090	113.99
38	39 - 40	2	24609	22.27	57.55	0.090	113.99
39	40 - 41	3	24609	33.40	57.55	0.090	113.99
40	41 - 42	4	24609	44.53	57.55	0.090	113.99
41	42 - 43	8	24609	89.06	57.55	0.090	113.99
43	44 - 45	15	24609	167.00	57.55	0.090	113.99
45	46 - 47	9	21761	113.31	57.55	0.079	118.56
46	47 - 48	4	21761	50.36	57.55	0.079	118.56
47	48 - 49	4	21761	50.36	57.55	0.079	118.56
48	49 - 50	5	21761	62.95	57.55	0.079	118.56
49	50 - 51	10	21761	125.90	57.55	0.079	118.56
50	51 - 52	5	21761	62.95	57.55	0.079	118.56
51	52 - 53	10	21761	125.90	57.55	0.079	118.56
53	54 - 55	9	15634	157.72	57.55	0.057	133.08
54	55 - 56	13	15634	227.81	57.55	0.057	133.08
55	56 - 57	5	15634	87.62	57.55	0.057	133.08
56	57 - 58	3	15634	52.57	57.55	0.057	133.08
57	58 - 59	7	15634	122.67	57.55	0.057	133.08
58	59 - 60	4	15634	70.10	57.55	0.057	133.08
59	60 - 61	5	15634	87.62	57.55	0.057	133.08
60	61 - 62	1	15634	17.52	57.55	0.057	133.08
61	62 - 63	6	15634	105.14	57.55	0.057	133.08
62	63 - 64	2	15634	35.05	57.55	0.057	133.08
63	64 - 65	2	15634	35.05	57.55	0.057	133.08
65	66 - 67	3	16081	51.11	57.55	0.059	131.70
66	67 - 68	3	16081	51.11	57.55	0.059	131.70
67	68 - 69	1	16081	17.04	57.55	0.059	131.70
68	69 - 70	3	16081	51.11	57.55	0.059	131.70
69	70 - 71	1	16081	17.04	57.55	0.059	131.70
70	71 - 72	0	16081	0.00	57.55	0.059	131.70
Total		332	1537191.7				

Perhitungan *Upper Control Limit* untuk data kecelakaan tahun 2001 (Jalur B)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Volume Lalin	Tingkat Kecelakaan Segmen	Tingkat Kecelakaan Jalur	eksposure	UCL
1	02 - 03	5	107344	12.76	50.82	0.392	72.94
2	03 - 04	1	107344	2.55	50.82	0.392	72.94
5	06 - 07	3	92011	8.93	50.82	0.336	75.01
9	10 - 11	12	74039	44.40	50.82	0.270	78.29
10	11 - 12	10	74039	37.00	50.82	0.270	78.29
11	12 - 13	22	74039	81.41	50.82	0.270	78.29
12	13 - 14	6	74039	22.20	50.82	0.270	78.29
18	19 - 20	6	50326	32.66	50.82	0.184	85.41
19	20 - 21	3	50326	16.33	50.82	0.184	85.41
20	21 - 22	9	50326	49.00	50.82	0.184	85.41
24	25 - 26	8	40899	53.59	50.82	0.149	90.07
25	26 - 27	12	40899	80.39	50.82	0.149	90.07
26	27 - 28	12	40899	80.39	50.82	0.149	90.07
27	28 - 29	9	40899	60.29	50.82	0.149	90.07
28	29 - 30	16	40899	107.18	50.82	0.149	90.07
31	32 - 33	14	26117	146.86	50.82	0.095	102.74
32	33 - 34	4	26117	41.96	50.82	0.095	102.74
34	35 - 36	5	26117	52.45	50.82	0.095	102.74
35	36 - 37	6	26117	62.94	50.82	0.095	102.74
36	37 - 38	5	26117	52.45	50.82	0.095	102.74
37	38 - 39	2	26117	20.98	50.82	0.095	102.74
38	39 - 40	3	26117	31.47	50.82	0.095	102.74
39	40 - 41	9	26117	94.41	50.82	0.095	102.74
40	41 - 42	3	26117	31.47	50.82	0.095	102.74
41	42 - 43	7	26117	73.43	50.82	0.095	102.74
43	44 - 45	9	26117	94.41	50.82	0.095	102.74
45	46 - 47	6	22959	71.60	50.82	0.084	107.18
46	47 - 48	7	22959	83.53	50.82	0.084	107.18
47	48 - 49	3	22959	35.80	50.82	0.084	107.18
48	49 - 50	6	22959	71.60	50.82	0.084	107.18
49	50 - 51	9	22959	107.40	50.82	0.084	107.18
50	51 - 52	9	22959	107.40	50.82	0.084	107.18
51	52 - 53	7	22959	83.53	50.82	0.084	107.18
53	54 - 55	13	20068	177.48	50.82	0.073	112.29
54	55 - 56	6	20068	81.91	50.82	0.073	112.29
55	56 - 57	9	20068	122.87	50.82	0.073	112.29
56	57 - 58	7	20068	95.57	50.82	0.073	112.29
57	58 - 59	7	20068	95.57	50.82	0.073	112.29
58	59 - 60	7	20068	95.57	50.82	0.073	112.29
59	60 - 61	3	20068	40.96	50.82	0.073	112.29
60	61 - 62	2	20068	27.30	50.82	0.073	112.29
61	62 - 63	8	20068	109.22	50.82	0.073	112.29
62	63 - 64	3	20068	40.96	50.82	0.073	112.29
63	64 - 65	1	20068	13.65	50.82	0.073	112.29
65	66 - 67	4	18096	60.56	50.82	0.066	116.57
66	67 - 68	2	18096	30.28	50.82	0.066	116.57
67	68 - 69	3	18096	45.42	50.82	0.066	116.57
68	69 - 70	2	18096	30.28	50.82	0.066	116.57
69	70 - 71	3	18096	45.42	50.82	0.066	116.57
70	71 - 72	3	18096	45.42	50.82	0.066	116.57
Total		331	1735652				

Perhitungan *Upper Control Limit* untuk data kecelakaan tahun 2002 (Jalur B)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Volume Lalin	Tingkat Kecelakaan Segmen	Tingkat Kecelakaan Jalur	eksposure	UCL
1	02 - 03	0	108807	0.00	46.94	0.397	68.17
2	03 - 04	4	108807	10.07	46.94	0.397	68.17
5	06 - 07	5	93119	14.71	46.94	0.340	70.18
9	10 - 11	7	76242	25.15	46.94	0.278	73.08
10	11 - 12	15	76242	53.90	46.94	0.278	73.08
11	12 - 13	9	76242	32.34	46.94	0.278	73.08
12	13 - 14	6	76242	21.56	46.94	0.278	73.08
18	19 - 20	7	52563	36.49	46.94	0.192	79.60
19	20 - 21	6	52563	31.27	46.94	0.192	79.60
20	21 - 22	6	52563	31.27	46.94	0.192	79.60
24	25 - 26	10	40848	67.07	46.94	0.149	85.04
25	26 - 27	20	40848	134.14	46.94	0.149	85.04
26	27 - 28	7	40848	46.95	46.94	0.149	85.04
27	28 - 29	14	40848	93.90	46.94	0.149	85.04
28	29 - 30	5	40848	33.54	46.94	0.149	85.04
31	32 - 33	12	26024	126.33	46.94	0.095	97.50
32	33 - 34	10	26024	105.28	46.94	0.095	97.50
34	35 - 36	8	26024	84.22	46.94	0.095	97.50
35	36 - 37	4	26024	42.11	46.94	0.095	97.50
36	37 - 38	5	26024	52.64	46.94	0.095	97.50
37	38 - 39	10	26024	105.28	46.94	0.095	97.50
38	39 - 40	6	26024	63.17	46.94	0.095	97.50
39	40 - 41	6	26024	63.17	46.94	0.095	97.50
40	41 - 42	8	26024	84.22	46.94	0.095	97.50
41	42 - 43	4	26024	42.11	46.94	0.095	97.50
43	44 - 45	12	26024	126.33	46.94	0.095	97.50
45	46 - 47	3	23103	35.58	46.94	0.084	101.51
46	47 - 48	7	23103	83.01	46.94	0.084	101.51
47	48 - 49	7	23103	83.01	46.94	0.084	101.51
48	49 - 50	5	23103	59.29	46.94	0.084	101.51
49	50 - 51	4	23103	47.43	46.94	0.084	101.51
50	51 - 52	6	23103	71.15	46.94	0.084	101.51
51	52 - 53	7	23103	83.01	46.94	0.084	101.51
53	54 - 55	5	19309	70.94	46.94	0.070	108.25
54	55 - 56	5	19309	70.94	46.94	0.070	108.25
55	56 - 57	5	19309	70.94	46.94	0.070	108.25
56	57 - 58	5	19309	70.94	46.94	0.070	108.25
57	58 - 59	3	19309	42.57	46.94	0.070	108.25
58	59 - 60	2	19309	28.38	46.94	0.070	108.25
59	60 - 61	9	19309	127.70	46.94	0.070	108.25
60	61 - 62	6	19309	85.13	46.94	0.070	108.25
61	62 - 63	4	19309	56.76	46.94	0.070	108.25
62	63 - 64	2	19309	28.38	46.94	0.070	108.25
63	64 - 65	2	19309	28.38	46.94	0.070	108.25
65	66 - 67	2	16510	33.19	46.94	0.060	114.91
66	67 - 68	1	16510	16.59	46.94	0.060	114.91
67	68 - 69	0	16510	0.00	46.94	0.060	114.91
68	69 - 70	2	16510	33.19	46.94	0.060	114.91
69	70 - 71	3	16510	49.78	46.94	0.060	114.91
70	71 - 72	5	16510	82.97	46.94	0.060	114.91
Total		306	1737074				

Perhitungan *Upper Control Limit* untuk data kecelakaan tahun 2003 (Jalur B)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Volume Lalin	Tingkat Kecelakaan Segmen	Tingkat Kecelakaan Jalur	eksposure	UCL
1	02 - 03	1	113139	2.42	43.68	0.413	63.82
2	03 - 04	4	113139	9.69	43.68	0.413	63.82
5	06 - 07	5	95311	14.37	43.68	0.348	65.94
9	10 - 11	14	80025	47.93	43.68	0.292	68.35
10	11 - 12	10	80025	34.24	43.68	0.292	68.35
11	12 - 13	4	80025	13.69	43.68	0.292	68.35
12	13 - 14	13	80025	44.51	43.68	0.292	68.35
18	19 - 20	3	54402	15.11	43.68	0.199	74.77
19	20 - 21	2	54402	10.07	43.68	0.199	74.77
20	21 - 22	8	54402	40.29	43.68	0.199	74.77
24	25 - 26	13	42176	84.45	43.68	0.154	80.03
25	26 - 27	14	42176	90.94	43.68	0.154	80.03
26	27 - 28	7	42176	45.47	43.68	0.154	80.03
27	28 - 29	8	42176	51.97	43.68	0.154	80.03
28	29 - 30	15	42176	97.44	43.68	0.154	80.03
31	32 - 33	9	23619	104.40	43.68	0.086	96.13
32	33 - 34	9	23619	104.40	43.68	0.086	96.13
34	35 - 36	4	26034	42.09	43.68	0.095	92.94
35	36 - 37	6	26034	63.14	43.68	0.095	92.94
36	37 - 38	8	26034	84.19	43.68	0.095	92.94
37	38 - 39	6	26034	63.14	43.68	0.095	92.94
38	39 - 40	3	26034	31.57	43.68	0.095	92.94
39	40 - 41	6	26034	63.14	43.68	0.095	92.94
40	41 - 42	6	26034	63.14	43.68	0.095	92.94
41	42 - 43	7	26034	73.67	43.68	0.095	92.94
43	44 - 45	8	26034	84.19	43.68	0.095	92.94
45	46 - 47	3	23078	35.61	43.68	0.084	96.92
46	47 - 48	6	23078	71.23	43.68	0.084	96.92
47	48 - 49	6	23078	71.23	43.68	0.084	96.92
48	49 - 50	6	23078	71.23	43.68	0.084	96.92
49	50 - 51	5	23078	59.36	43.68	0.084	96.92
50	51 - 52	4	23078	47.49	43.68	0.084	96.92
51	52 - 53	9	23078	106.84	43.68	0.084	96.92
53	54 - 55	5	23753	57.67	43.68	0.087	95.94
54	55 - 56	3	23753	34.60	43.68	0.087	95.94
55	56 - 57	9	23753	103.81	43.68	0.087	95.94
56	57 - 58	5	23753	57.67	43.68	0.087	95.94
57	58 - 59	1	23753	11.53	43.68	0.087	95.94
58	59 - 60	0	23753	0.00	43.68	0.087	95.94
59	60 - 61	8	23753	92.27	43.68	0.087	95.94
60	61 - 62	6	23753	69.21	43.68	0.087	95.94
61	62 - 63	8	23753	92.27	43.68	0.087	95.94
62	63 - 64	5	23753	57.67	43.68	0.087	95.94
63	64 - 65	6	23753	69.21	43.68	0.087	95.94
65	66 - 67	1	15265	17.95	43.68	0.056	113.59
66	67 - 68	3	15265	53.84	43.68	0.056	113.59
67	68 - 69	1	15265	17.95	43.68	0.056	113.59
68	69 - 70	3	15265	53.84	43.68	0.056	113.59
69	70 - 71	1	15265	17.95	43.68	0.056	113.59
70	71 - 72	0	15265	0.00	43.68	0.056	113.59
Total		297	1811738				

Perhitungan *Upper Control Limit* untuk data kecelakaan tahun 2004 (Jalur B)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Volume Lalin	Tingkat Kecelakaan Segmen	Tingkat Kecelakaan Jalur	eksposure	UCL
1	02 - 03	2	115734	4.72	46.06	0.424	66.36
2	03 - 04	3	115734	7.08	46.06	0.424	66.36
5	06 - 07	0	99249	0.00	46.06	0.363	68.25
9	10 - 11	13	74807	47.48	46.06	0.274	72.25
10	11 - 12	14	74807	51.13	46.06	0.274	72.25
11	12 - 13	9	74807	32.87	46.06	0.274	72.25
12	13 - 14	13	74807	47.48	46.06	0.274	72.25
18	19 - 20	9	61012	40.30	46.06	0.223	75.64
19	20 - 21	4	61012	17.91	46.06	0.223	75.64
20	21 - 22	9	61012	40.30	46.06	0.223	75.64
24	25 - 26	8	49515	44.14	46.06	0.181	79.62
25	26 - 27	25	49515	137.95	46.06	0.181	79.62
26	27 - 28	10	49515	55.18	46.06	0.181	79.62
27	28 - 29	9	49515	49.66	46.06	0.181	79.62
28	29 - 30	12	49515	66.22	46.06	0.181	79.62
31	32 - 33	7	32455	58.93	46.06	0.119	89.65
32	33 - 34	5	32455	42.09	46.06	0.119	89.65
34	35 - 36	9	48968	50.22	46.06	0.179	79.85
35	36 - 37	8	48968	44.64	46.06	0.179	79.85
36	37 - 38	15	48968	83.69	46.06	0.179	79.85
37	38 - 39	13	48968	72.54	46.06	0.179	79.85
38	39 - 40	8	48968	44.64	46.06	0.179	79.85
39	40 - 41	8	48968	44.64	46.06	0.179	79.85
40	41 - 42	5	48968	27.90	46.06	0.179	79.85
41	42 - 43	6	48968	33.48	46.06	0.179	79.85
43	44 - 45	16	48968	89.27	46.06	0.179	79.85
45	46 - 47	3	27281	30.05	46.06	0.100	94.71
46	47 - 48	4	27281	40.06	46.06	0.100	94.71
47	48 - 49	3	27281	30.05	46.06	0.100	94.71
48	49 - 50	8	27281	80.12	46.06	0.100	94.71
49	50 - 51	9	27281	90.14	46.06	0.100	94.71
50	51 - 52	9	27281	90.14	46.06	0.100	94.71
51	52 - 53	14	27281	140.21	46.06	0.100	94.71
53	54 - 55	7	24046	79.54	46.06	0.088	98.80
54	55 - 56	7	24046	79.54	46.06	0.088	98.80
55	56 - 57	10	24046	113.63	46.06	0.088	98.80
56	57 - 58	12	24046	136.35	46.06	0.088	98.80
57	58 - 59	6	24046	68.18	46.06	0.088	98.80
58	59 - 60	6	24046	68.18	46.06	0.088	98.80
59	60 - 61	1	24046	11.36	46.06	0.088	98.80
60	61 - 62	4	24046	45.45	46.06	0.088	98.80
61	62 - 63	5	24046	56.81	46.06	0.088	98.80
62	63 - 64	8	24046	90.90	46.06	0.088	98.80
63	64 - 65	2	24046	22.73	46.06	0.088	98.80
65	66 - 67	1	12079	22.62	46.06	0.044	129.22
66	67 - 68	0	12079	0.00	46.06	0.044	129.22
67	68 - 69	2	12079	45.24	46.06	0.044	129.22
68	69 - 70	1	12079	22.62	46.06	0.044	129.22
69	70 - 71	0	12079	0.00	46.06	0.044	129.22
70	71 - 72	1	12079	22.62	46.06	0.044	129.22
Total		363	2094125				

Perhitungan *Upper Control Limit* untuk data kecelakaan tahun 2005 (Jalur B)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Volume Lalin	Tingkat Kecelakaan Segmen	Tingkat Kecelakaan Jalur	eksposure	UCL
1	02 - 03	1	118866	2.30	45.76	0.434	65.71
2	03 - 04	2	118866	4.61	45.76	0.434	65.71
5	06 - 07	3	101084	8.13	45.76	0.369	67.68
9	10 - 11	7	89507	21.43	45.76	0.327	69.29
10	11 - 12	9	89507	27.55	45.76	0.327	69.29
11	12 - 13	19	89507	58.16	45.76	0.327	69.29
12	13 - 14	12	89507	36.73	45.76	0.327	69.29
18	19 - 20	5	66934	20.47	45.76	0.244	73.71
19	20 - 21	6	66934	24.56	45.76	0.244	73.71
20	21 - 22	8	66934	32.75	45.76	0.244	73.71
24	25 - 26	18	54523	90.45	45.76	0.199	77.38
25	26 - 27	26	54523	130.65	45.76	0.199	77.38
26	27 - 28	15	54523	75.37	45.76	0.199	77.38
27	28 - 29	18	54523	90.45	45.76	0.199	77.38
28	29 - 30	14	54523	70.35	45.76	0.199	77.38
31	32 - 33	9	37442	65.86	45.76	0.137	85.58
32	33 - 34	11	37442	80.49	45.76	0.137	85.58
34	35 - 36	13	36961	96.36	45.76	0.135	85.90
35	36 - 37	11	36961	81.54	45.76	0.135	85.90
36	37 - 38	8	36961	59.30	45.76	0.135	85.90
37	38 - 39	9	36961	66.71	45.76	0.135	85.90
38	39 - 40	5	36961	37.06	45.76	0.135	85.90
39	40 - 41	2	36961	14.82	45.76	0.135	85.90
40	41 - 42	11	36961	81.54	45.76	0.135	85.90
41	42 - 43	4	36961	29.65	45.76	0.135	85.90
43	44 - 45	6	36961	44.47	45.76	0.135	85.90
45	46 - 47	6	32904	49.96	45.76	0.120	88.93
46	47 - 48	12	32904	99.92	45.76	0.120	88.93
47	48 - 49	4	32904	33.31	45.76	0.120	88.93
48	49 - 50	9	32904	74.94	45.76	0.120	88.93
49	50 - 51	5	32904	41.63	45.76	0.120	88.93
50	51 - 52	5	32904	41.63	45.76	0.120	88.93
51	52 - 53	8	32904	66.61	45.76	0.120	88.93
53	54 - 55	5	28460	48.13	45.76	0.104	93.07
54	55 - 56	8	28460	77.01	45.76	0.104	93.07
55	56 - 57	5	28460	48.13	45.76	0.104	93.07
56	57 - 58	8	28460	77.01	45.76	0.104	93.07
57	58 - 59	7	28460	67.39	45.76	0.104	93.07
58	59 - 60	1	28460	9.63	45.76	0.104	93.07
59	60 - 61	4	28460	38.51	45.76	0.104	93.07
60	61 - 62	4	28460	38.51	45.76	0.104	93.07
61	62 - 63	11	28460	105.89	45.76	0.104	93.07
62	63 - 64	11	28460	105.89	45.76	0.104	93.07
63	64 - 65	2	28460	19.25	45.76	0.104	93.07
65	66 - 67	3	15913	51.65	45.76	0.058	114.81
66	67 - 68	3	12852	63.95	45.76	0.047	125.46
67	68 - 69	2	12852	42.64	45.76	0.047	125.46
68	69 - 70	0	12852	0.00	45.76	0.047	125.46
69	70 - 71	1	12852	21.32	45.76	0.047	125.46
70	71 - 72	2	12852	42.64	45.76	0.047	125.46
Total		378	2201355				

Perhitungan *Upper Control Limit* untuk data kecelakaan tahun 2006 (Jalur B)

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Volume Lalin	Tingkat Kecelakaan Segmen	Tingkat Kecelakaan Jalur	eksposure	UCL
1	02 - 03	2	114855	4.77	43.66	0.419	63.62
2	03 - 04	2	114855	4.77	43.66	0.419	63.62
5	06 - 07	4	98970	11.07	43.66	0.361	65.43
9	10 - 11	8	87709	24.99	43.66	0.320	67.02
10	11 - 12	15	87709	46.85	43.66	0.320	67.02
11	12 - 13	17	87709	53.10	43.66	0.320	67.02
12	13 - 14	14	87709	43.73	43.66	0.320	67.02
18	19 - 20	7	67769	28.30	43.66	0.247	70.89
19	20 - 21	2	67769	8.09	43.66	0.247	70.89
20	21 - 22	10	67769	40.43	43.66	0.247	70.89
24	25 - 26	6	55057	29.86	43.66	0.201	74.52
25	26 - 27	6	55057	29.86	43.66	0.201	74.52
26	27 - 28	7	55057	34.83	43.66	0.201	74.52
27	28 - 29	10	55057	49.76	43.66	0.201	74.52
28	29 - 30	7	55057	34.83	43.66	0.201	74.52
31	32 - 33	8	39316	55.75	43.66	0.144	81.62
32	33 - 34	8	39316	55.75	43.66	0.144	81.62
34	35 - 36	13	38807	91.78	43.66	0.142	81.93
35	36 - 37	13	38807	91.78	43.66	0.142	81.93
36	37 - 38	16	38807	112.96	43.66	0.142	81.93
37	38 - 39	7	38807	49.42	43.66	0.142	81.93
38	39 - 40	5	38807	35.30	43.66	0.142	81.93
39	40 - 41	6	38807	42.36	43.66	0.142	81.93
40	41 - 42	8	38807	56.48	43.66	0.142	81.93
41	42 - 43	7	38807	49.42	43.66	0.142	81.93
43	44 - 45	11	38807	77.66	43.66	0.142	81.93
45	46 - 47	11	34551	87.22	43.66	0.126	84.81
46	47 - 48	4	34551	31.72	43.66	0.126	84.81
47	48 - 49	7	34551	55.51	43.66	0.126	84.81
48	49 - 50	3	34551	23.79	43.66	0.126	84.81
49	50 - 51	6	34551	47.58	43.66	0.126	84.81
50	51 - 52	7	34551	55.51	43.66	0.126	84.81
51	52 - 53	5	34551	39.65	43.66	0.126	84.81
53	54 - 55	8	30532	71.79	43.66	0.111	88.15
54	55 - 56	7	30532	62.81	43.66	0.111	88.15
55	56 - 57	5	30532	44.87	43.66	0.111	88.15
56	57 - 58	10	30532	89.73	43.66	0.111	88.15
57	58 - 59	9	30532	80.76	43.66	0.111	88.15
58	59 - 60	5	30532	44.87	43.66	0.111	88.15
59	60 - 61	14	30532	125.63	43.66	0.111	88.15
60	61 - 62	8	30532	71.79	43.66	0.111	88.15
61	62 - 63	10	30532	89.73	43.66	0.111	88.15
62	63 - 64	8	30532	71.79	43.66	0.111	88.15
63	64 - 65	3	30532	26.92	43.66	0.111	88.15
65	66 - 67	6	15629	105.18	43.66	0.057	112.47
66	67 - 68	2	12086	45.34	43.66	0.044	125.54
67	68 - 69	6	12086	136.01	43.66	0.044	125.54
68	69 - 70	1	12086	22.67	43.66	0.044	125.54
69	70 - 71	1	12086	22.67	43.66	0.044	125.54
70	71 - 72	2	12086	45.34	43.66	0.044	125.54
Total		367	2239771				



LAMPIRAN 8

Data Kecelakaan *Moving Average* 5 Tahunan

Data Kecelakaan *Moving Average* 5 Tahunan (Jalur A)

Lokasi (KM)	2000	2001	2002	2003	2004	2005	2006
02 - 03	4	2.6	2	2.2	2.2	1	1
03 - 04	6	5.2	5	4.2	3.6	2.2	2.4
06 - 07	12.8	9.8	9.2	7.2	6.4	4.6	5
10 - 11	12.6	9.2	8.6	7.2	6	5	4.6
11 - 12	11.4	10	9.4	9	7	6.8	7
12 - 13	12.2	11.8	13	11.2	11.4	11.8	11.2
13 - 14	19.4	20	17.8	15	12	10.8	9.4
19 - 20	7.4	6	4	5	5.8	6.2	6
20 - 21	7.2	5.6	4	3	4	5	5.4
21 - 22	10.2	9	6.8	8	7.6	8.4	8.4
22 - 23	15.4	13.4	7.6	7	8.6	8.8	9.8
25 - 26	8	7.6	7.4	7.8	8.4	9	8.6
26 - 27	11.8	11.8	10.8	9.8	8.2	8.6	8.4
27 - 28	10.2	9.4	9.2	9.4	10	8.6	8.6
28 - 29	9.2	8.6	9	9.4	9.2	10.4	14
29 - 30	10.2	11.4	8.2	8.4	8.6	9.8	8.4
32 - 33	8.6	8	7.4	7.2	5.8	7.4	8.6
33 - 34	9	8.8	8.2	8	7.2	7	7.4
35 - 36	6.2	6.4	6.4	5.8	4.8	5	5.6
36 - 37	5.8	7.2	6.6	6.4	5.6	7.2	6.6
37 - 38	8.8	7.2	7	5.8	5	4.2	4.8
38 - 39	5.6	6.2	5.8	4.2	4	3.6	3.6
39 - 40	7.8	7.6	7.6	6.8	6.8	7	6.6
40 - 41	7.4	7	7	6.8	8.8	8	8.4
41 - 42	7.2	6.6	5.8	6.2	5	5	6
42 - 43	6.2	5.6	5	5.4	6.4	6	5.6
44 - 45	6.4	6.6	6.8	6.4	6.6	6.4	6.6
46 - 47	4.8	5.6	5	4.4	4.6	6.2	6.4
47 - 48	5.4	5.2	6.2	7	6	7.6	8.8
48 - 49	7.6	8.2	6.6	6.6	6.6	7.6	7.6
49 - 50	8.4	8.6	8.2	6.8	6.4	6.4	7
50 - 51	8	8.2	7.6	7.4	6.6	6	5.4
51 - 52	8	8.4	8	7.6	7.6	7.6	9.2
54 - 55	7	6.8	6.2	6.6	6.6	6.2	7.4
55 - 56	5.2	6.8	6.8	7.6	5.4	4.8	5
56 - 57	3.2	3.6	3	3.4	3.6	3.8	4.4
57 - 58	5	4	4.2	3.8	4.4	4	3.4
58 - 59	5.6	6	6	4.6	5.6	5.2	5.2
59 - 60	3.2	3.2	3.2	3.4	3.6	4.8	5.8
60 - 61	4.4	6	6.4	5.6	5.6	6.4	5.8
61 - 62	4.8	4.6	5.2	5.2	4.4	4.6	5.4
62 - 63	4.6	4.6	4.2	4	3.4	3.4	3.4
63 - 64	2	1.8	1.6	1.6	1.8	2.6	3.2
64 - 65	3.2	3.2	3.2	2.8	4	4.4	4.2
66 - 67	6.4	6.8	7.2	7.4	6.2	6	5.2
67 - 68	5	5	6.2	5.2	4.8	4	3.4
68 - 69	5.4	6	6.6	6	6.4	5.6	5.4
69 - 70	4.2	3.6	3.4	2.4	2.8	3.2	3
70 - 71	5.6	6.2	5.4	5.4	5	4.4	3
71 - 72	8	8.4	8.6	7	5.8	5.8	5.6

Data Kecelakaan *Moving Average* 5 Tahunan (Jalur B)

Lokasi (KM)	2000	2001	2002	2003	2004	2005	2006
02 - 03	4.8	4.6	4.2	3.8	3.4	1.8	1.2
03 - 04	7.8	5.2	3.4	3	2.6	2.8	3
06 - 07	6.4	5.4	4.4	4.2	3.8	3.2	3.4
10 - 11	12.2	12	11.2	10.2	11.4	10.6	9.8
11 - 12	16	13	13	12.4	12.6	11.6	12.6
12 - 13	13.2	14.4	13.8	11.8	10.8	12.6	11.6
13 - 14	18.2	12.8	11.8	10.2	9.8	10	11.6
19 - 20	11	9.4	7.6	7.4	7	6	6.2
20 - 21	10.2	7.4	4.6	4	4.6	4.2	4
21 - 22	12.8	10.8	9	8.8	8.4	8	8.2
22 - 23	13.2	12.4	10	10.8	10.6	11.4	11
25 - 26	12.2	12	12.8	12.2	15.6	19.4	18.2
26 - 27	10.6	11	10	9.4	9.8	10.2	9.2
27 - 28	10.2	10.4	8.8	9	9.6	11.6	11.8
28 - 29	11.2	11.4	9.8	11.2	11.8	12.4	10.6
29 - 30	8.2	9.8	10	9.8	9.8	10.2	9
32 - 33	12.4	11.8	10.6	9.2	7.4	7.8	8.6
33 - 34	8	7.4	7.2	5.2	6	7.8	9.4
35 - 36	7.6	7	6.4	6.6	6.4	7	8.4
36 - 37	9.2	8.4	6.4	7	8.2	8.2	10.4
37 - 38	6.8	6.6	6.6	6.8	7.4	8	9
38 - 39	6	5.8	5.6	4.6	4.4	5	5.4
39 - 40	7.6	7.6	6.8	6.8	6.4	6.2	5.6
40 - 41	6	5.4	5.4	5.4	5.2	6.6	7.6
41 - 42	10.6	10	7.6	7.4	6.4	5.6	5.6
42 - 43	16.4	15	14.6	12	12	10.2	10.6
44 - 45	5.8	5.6	5.2	4.8	4.8	4.2	5.2
46 - 47	6.8	6.4	6.4	6	5.6	7.2	6.6
47 - 48	6	4.6	4.8	5.2	4.6	4.6	5.4
48 - 49	4.8	5	5.4	5.8	6	6.8	6.2
49 - 50	9.2	9.4	8.2	7.4	7.4	6.4	5.8
50 - 51	6.8	7.4	7	6.4	6.6	6.6	6.2
51 - 52	8.8	8.4	8.2	8.2	9.4	9	8.6
54 - 55	5	6.8	7.2	7.4	7.8	7	6
55 - 56	6.8	7.6	7.2	6.4	6.8	5.8	6
56 - 57	4.6	5.2	5	6.4	7.6	7.6	6.8
57 - 58	3.2	3.6	4.4	5	6.4	7.4	8
58 - 59	6	6.2	6.2	5.4	4.8	4.8	5.2
59 - 60	4.4	5.2	4.4	3.4	3.8	3.2	2.8
60 - 61	5.4	5.2	5.2	5.8	5.2	5	7.2
61 - 62	3.2	2.4	3.4	3.2	3.8	4.4	5.6
62 - 63	3.8	5	5.2	6	6.2	7.2	7.6
63 - 64	2.4	3	2.4	2.6	4	5.8	6.8
64 - 65	2.2	1.8	2.2	2.6	2.6	2.6	3
66 - 67	3.2	3.4	3.4	2.2	2.2	2.2	2.6
67 - 68	4.2	4	3.4	3.2	1.8	1.8	1.8
68 - 69	1.4	2	1.4	1.2	1.4	1.6	2.2
69 - 70	1.4	1.4	1.6	2.2	2.2	1.6	1.4
70 - 71	1.8	2.4	2	1.8	1.6	1.6	1.2
71 - 72	1	1.4	2.4	1.8	1.8	2.2	2



LAMPIRAN 9

Tabulasi Perhitungan Metode Frekuensi Jalur A dengan Data
Moving Average 5 Tahunan

Perhitungan Metode Frekuensi Tahun
2000 Data *Moving Average* 5 Tahunan

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Keterangan
1	02 - 03	4	
2	03 - 04	6	
5	06 - 07	12.8	<i>Black Spot</i>
9	10 - 11	12.6	<i>Black Spot</i>
10	11 - 12	11.4	<i>Black Spot</i>
11	12 - 13	12.2	<i>Black Spot</i>
12	13 - 14	19.4	<i>Black Spot</i>
18	19 - 20	7.4	
19	20 - 21	7.2	
20	21 - 22	10.2	<i>Black Spot</i>
21	22 - 23	15.4	<i>Black Spot</i>
24	25 - 26	8	
25	26 - 27	11.8	<i>Black Spot</i>
26	27 - 28	10.2	<i>Black Spot</i>
27	28 - 29	9.2	
28	29 - 30	10.2	<i>Black Spot</i>
31	32 - 33	8.6	
32	33 - 34	9	
34	35 - 36	6.2	
35	36 - 37	5.8	
36	37 - 38	8.8	
37	38 - 39	5.6	
38	39 - 40	7.8	
39	40 - 41	7.4	
40	41 - 42	7.2	
41	42 - 43	6.2	
43	44 - 45	6.4	
45	46 - 47	4.8	
46	47 - 48	5.4	
47	48 - 49	7.6	
48	49 - 50	8.4	
49	50 - 51	8	
50	51 - 52	8	
53	54 - 55	7	
54	55 - 56	5.2	
55	56 - 57	3.2	
56	57 - 58	5	
57	58 - 59	5.6	
58	59 - 60	3.2	
59	60 - 61	4.4	
60	61 - 62	4.8	
61	62 - 63	4.6	
62	63 - 64	2	
63	64 - 65	3.2	
65	66 - 67	6.4	
66	67 - 68	5	
67	68 - 69	5.4	
68	69 - 70	4.2	
69	70 - 71	5.6	
70	71 - 72	8	
Total		372	

Perhitungan Metode Frekuensi Tahun
2001 Data *Moving Average* 5 Tahunan

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Keterangan
1	02 - 03	2.6	
2	03 - 04	5.2	
5	06 - 07	9.8	
9	10 - 11	9.2	
10	11 - 12	10	<i>Black Spot</i>
11	12 - 13	11.8	<i>Black Spot</i>
12	13 - 14	20	<i>Black Spot</i>
18	19 - 20	6	
19	20 - 21	5.6	
20	21 - 22	9	
21	22 - 23	13.4	<i>Black Spot</i>
24	25 - 26	7.6	
25	26 - 27	11.8	<i>Black Spot</i>
26	27 - 28	9.4	
27	28 - 29	8.6	
28	29 - 30	11.4	<i>Black Spot</i>
31	32 - 33	8	
32	33 - 34	8.8	
34	35 - 36	6.4	
35	36 - 37	7.2	
36	37 - 38	7.2	
37	38 - 39	6.2	
38	39 - 40	7.6	
39	40 - 41	7	
40	41 - 42	6.6	
41	42 - 43	5.6	
43	44 - 45	6.6	
45	46 - 47	5.6	
46	47 - 48	5.2	
47	48 - 49	8.2	
48	49 - 50	8.6	
49	50 - 51	8.2	
50	51 - 52	8.4	
53	54 - 55	6.8	
54	55 - 56	6.8	
55	56 - 57	3.6	
56	57 - 58	4	
57	58 - 59	6	
58	59 - 60	3.2	
59	60 - 61	6	
60	61 - 62	4.6	
61	62 - 63	4.6	
62	63 - 64	1.8	
63	64 - 65	3.2	
65	66 - 67	6.8	
66	67 - 68	5	
67	68 - 69	6	
68	69 - 70	3.6	
69	70 - 71	6.2	
70	71 - 72	8.4	
Total		359.4	

Perhitungan Metode Frekuensi Tahun
2002 Data *Moving Average* 5 Tahunan

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Keterangan
1	02 - 03	2	
2	03 - 04	5	
5	06 - 07	9.2	
9	10 - 11	8.6	
10	11 - 12	9.4	
11	12 - 13	13	<i>Black Spot</i>
12	13 - 14	17.8	<i>Black Spot</i>
18	19 - 20	4	
19	20 - 21	4	
20	21 - 22	6.8	
21	22 - 23	7.6	
24	25 - 26	7.4	
25	26 - 27	10.8	<i>Black Spot</i>
26	27 - 28	9.2	
27	28 - 29	9	
28	29 - 30	8.2	
31	32 - 33	7.4	
32	33 - 34	8.2	
34	35 - 36	6.4	
35	36 - 37	6.6	
36	37 - 38	7	
37	38 - 39	5.8	
38	39 - 40	7.6	
39	40 - 41	7	
40	41 - 42	5.8	
41	42 - 43	5	
43	44 - 45	6.8	
45	46 - 47	5	
46	47 - 48	6.2	
47	48 - 49	6.6	
48	49 - 50	8.2	
49	50 - 51	7.6	
50	51 - 52	8	
53	54 - 55	6.2	
54	55 - 56	6.8	
55	56 - 57	3	
56	57 - 58	4.2	
57	58 - 59	6	
58	59 - 60	3.2	
59	60 - 61	6.4	
60	61 - 62	5.2	
61	62 - 63	4.2	
62	63 - 64	1.6	
63	64 - 65	3.2	
65	66 - 67	7.2	
66	67 - 68	6.2	
67	68 - 69	6.6	
68	69 - 70	3.4	
69	70 - 71	5.4	
70	71 - 72	8.6	
Total		334.6	

Perhitungan Metode Frekuensi Tahun
2003 Data *Moving Average* 5 Tahunan

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Keterangan
1	02 - 03	2.2	
2	03 - 04	4.2	
5	06 - 07	7.2	
9	10 - 11	7.2	
10	11 - 12	9	
11	12 - 13	11.2	<i>Black Spot</i>
12	13 - 14	15	<i>Black Spot</i>
18	19 - 20	5	
19	20 - 21	3	
20	21 - 22	8	
21	22 - 23	7	
24	25 - 26	7.8	
25	26 - 27	9.8	
26	27 - 28	9.4	
27	28 - 29	9.4	
28	29 - 30	8.4	
31	32 - 33	7.2	
32	33 - 34	8	
34	35 - 36	5.8	
35	36 - 37	6.4	
36	37 - 38	5.8	
37	38 - 39	4.2	
38	39 - 40	6.8	
39	40 - 41	6.8	
40	41 - 42	6.2	
41	42 - 43	5.4	
43	44 - 45	6.4	
45	46 - 47	4.4	
46	47 - 48	7	
47	48 - 49	6.6	
48	49 - 50	6.8	
49	50 - 51	7.4	
50	51 - 52	7.6	
53	54 - 55	6.6	
54	55 - 56	7.6	
55	56 - 57	3.4	
56	57 - 58	3.8	
57	58 - 59	4.6	
58	59 - 60	3.4	
59	60 - 61	5.6	
60	61 - 62	5.2	
61	62 - 63	4	
62	63 - 64	1.6	
63	64 - 65	2.8	
65	66 - 67	7.4	
66	67 - 68	5.2	
67	68 - 69	6	
68	69 - 70	2.4	
69	70 - 71	5.4	
70	71 - 72	7	
Total		314.6	

Perhitungan Metode Frekuensi Tahun
2004 Data *Moving Average* 5 Tahunan

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Keterangan
1	02 - 03	2.2	
2	03 - 04	3.6	
5	06 - 07	6.4	
9	10 - 11	6	
10	11 - 12	7	
11	12 - 13	11.4	<i>Black Spot</i>
12	13 - 14	12	<i>Black Spot</i>
18	19 - 20	5.8	
19	20 - 21	4	
20	21 - 22	7.6	
21	22 - 23	8.6	
24	25 - 26	8.4	
25	26 - 27	8.2	
26	27 - 28	10	<i>Black Spot</i>
27	28 - 29	9.2	
28	29 - 30	8.6	
31	32 - 33	5.8	
32	33 - 34	7.2	
34	35 - 36	4.8	
35	36 - 37	5.6	
36	37 - 38	5	
37	38 - 39	4	
38	39 - 40	6.8	
39	40 - 41	8.8	
40	41 - 42	5	
41	42 - 43	6.4	
43	44 - 45	6.6	
45	46 - 47	4.6	
46	47 - 48	6	
47	48 - 49	6.6	
48	49 - 50	6.4	
49	50 - 51	6.6	
50	51 - 52	7.6	
53	54 - 55	6.6	
54	55 - 56	5.4	
55	56 - 57	3.6	
56	57 - 58	4.4	
57	58 - 59	5.6	
58	59 - 60	3.6	
59	60 - 61	5.6	
60	61 - 62	4.4	
61	62 - 63	3.4	
62	63 - 64	1.8	
63	64 - 65	4	
65	66 - 67	6.2	
66	67 - 68	4.8	
67	68 - 69	6.4	
68	69 - 70	2.8	
69	70 - 71	5	
70	71 - 72	5.8	
Total		302.2	

Perhitungan Metode Frekuensi Tahun
2005 Data *Moving Average* 5 Tahunan

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Keterangan
1	02 - 03	1	
2	03 - 04	2.2	
5	06 - 07	4.6	
9	10 - 11	5	
10	11 - 12	6.8	
11	12 - 13	11.8	<i>Black Spot</i>
12	13 - 14	10.8	<i>Black Spot</i>
18	19 - 20	6.2	
19	20 - 21	5	
20	21 - 22	8.4	
21	22 - 23	8.8	
24	25 - 26	9	
25	26 - 27	8.6	
26	27 - 28	8.6	
27	28 - 29	10.4	<i>Black Spot</i>
28	29 - 30	9.8	
31	32 - 33	7.4	
32	33 - 34	7	
34	35 - 36	5	
35	36 - 37	7.2	
36	37 - 38	4.2	
37	38 - 39	3.6	
38	39 - 40	7	
39	40 - 41	8	
40	41 - 42	5	
41	42 - 43	6	
43	44 - 45	6.4	
45	46 - 47	6.2	
46	47 - 48	7.6	
47	48 - 49	7.6	
48	49 - 50	6.4	
49	50 - 51	6	
50	51 - 52	7.6	
53	54 - 55	6.2	
54	55 - 56	4.8	
55	56 - 57	3.8	
56	57 - 58	4	
57	58 - 59	5.2	
58	59 - 60	4.8	
59	60 - 61	6.4	
60	61 - 62	4.6	
61	62 - 63	3.4	
62	63 - 64	2.6	
63	64 - 65	4.4	
65	66 - 67	6	
66	67 - 68	4	
67	68 - 69	5.6	
68	69 - 70	3.2	
69	70 - 71	4.4	
70	71 - 72	5.8	
Total		304.4	

Perhitungan Metode Frekuensi Tahun
2006 Data *Moving Average* 5 Tahunan

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Keterangan
1	02 - 03	1	
2	03 - 04	2.4	
5	06 - 07	5	
9	10 - 11	4.6	
10	11 - 12	7	
11	12 - 13	11.2	<i>Black Spot</i>
12	13 - 14	9.4	
18	19 - 20	6	
19	20 - 21	5.4	
20	21 - 22	8.4	
21	22 - 23	9.8	
24	25 - 26	8.6	
25	26 - 27	8.4	
26	27 - 28	8.6	
27	28 - 29	14	<i>Black Spot</i>
28	29 - 30	8.4	
31	32 - 33	8.6	
32	33 - 34	7.4	
34	35 - 36	5.6	
35	36 - 37	6.6	
36	37 - 38	4.8	
37	38 - 39	3.6	
38	39 - 40	6.6	
39	40 - 41	8.4	
40	41 - 42	6	
41	42 - 43	5.6	
43	44 - 45	6.6	
45	46 - 47	6.4	
46	47 - 48	8.8	
47	48 - 49	7.6	
48	49 - 50	7	
49	50 - 51	5.4	
50	51 - 52	9.2	
53	54 - 55	7.4	
54	55 - 56	5	
55	56 - 57	4.4	
56	57 - 58	3.4	
57	58 - 59	5.2	
58	59 - 60	5.8	
59	60 - 61	5.8	
60	61 - 62	5.4	
61	62 - 63	3.4	
62	63 - 64	3.2	
63	64 - 65	4.2	
65	66 - 67	5.2	
66	67 - 68	3.4	
67	68 - 69	5.4	
68	69 - 70	3	
69	70 - 71	3	
70	71 - 72	5.6	
Total		311.2	



LAMPIRAN 10

Tabulasi Perhitungan Metode Frekuensi Jalur B dengan Data
Moving Average 5 Tahunan

Perhitungan Metode Frekuensi Tahun
2000 Data *Moving Average* 5 Tahunan

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Keterangan
1	02 - 03	4.8	
2	03 - 04	7.8	
5	06 - 07	6.4	
9	10 - 11	12.2	<i>Black Spot</i>
10	11 - 12	16	<i>Black Spot</i>
11	12 - 13	13.2	<i>Black Spot</i>
12	13 - 14	18.2	<i>Black Spot</i>
18	19 - 20	11	<i>Black Spot</i>
19	20 - 21	10.2	<i>Black Spot</i>
20	21 - 22	12.8	<i>Black Spot</i>
24	25 - 26	13.2	<i>Black Spot</i>
25	26 - 27	12.2	<i>Black Spot</i>
26	27 - 28	10.6	<i>Black Spot</i>
27	28 - 29	10.2	<i>Black Spot</i>
28	29 - 30	11.2	<i>Black Spot</i>
31	32 - 33	8.2	
32	33 - 34	12.4	<i>Black Spot</i>
34	35 - 36	8	
35	36 - 37	7.6	
36	37 - 38	9.2	
37	38 - 39	6.8	
38	39 - 40	6	
39	40 - 41	7.6	
40	41 - 42	6	
41	42 - 43	10.6	<i>Black Spot</i>
43	44 - 45	16.4	<i>Black Spot</i>
45	46 - 47	5.8	
46	47 - 48	6.8	
47	48 - 49	6	
48	49 - 50	4.8	
49	50 - 51	9.2	
50	51 - 52	6.8	
51	52 - 53	8.8	
53	54 - 55	5	
54	55 - 56	6.8	
55	56 - 57	4.6	
56	57 - 58	3.2	
57	58 - 59	6	
58	59 - 60	4.4	
59	60 - 61	5.4	
60	61 - 62	3.2	
61	62 - 63	3.8	
62	63 - 64	2.4	
63	64 - 65	2.2	
65	66 - 67	3.2	
66	67 - 68	4.2	
67	68 - 69	1.4	
68	69 - 70	1.4	
69	70 - 71	1.8	
70	71 - 72	1	
Total		377	

Perhitungan Metode Frekuensi Tahun
2001 Data *Moving Average* 5 Tahunan

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Keterangan
1	02 - 03	4.6	
2	03 - 04	5.2	
5	06 - 07	5.4	
9	10 - 11	12	<i>Black Spot</i>
10	11 - 12	13	<i>Black Spot</i>
11	12 - 13	14.4	<i>Black Spot</i>
12	13 - 14	12.8	<i>Black Spot</i>
18	19 - 20	9.4	
19	20 - 21	7.4	
20	21 - 22	10.8	<i>Black Spot</i>
24	25 - 26	12.4	<i>Black Spot</i>
25	26 - 27	12	<i>Black Spot</i>
26	27 - 28	11	<i>Black Spot</i>
27	28 - 29	10.4	<i>Black Spot</i>
28	29 - 30	11.4	<i>Black Spot</i>
31	32 - 33	9.8	
32	33 - 34	11.8	<i>Black Spot</i>
34	35 - 36	7.4	
35	36 - 37	7	
36	37 - 38	8.4	
37	38 - 39	6.6	
38	39 - 40	5.8	
39	40 - 41	7.6	
40	41 - 42	5.4	
41	42 - 43	10	<i>Black Spot</i>
43	44 - 45	15	<i>Black Spot</i>
45	46 - 47	5.6	
46	47 - 48	6.4	
47	48 - 49	4.6	
48	49 - 50	5	
49	50 - 51	9.4	
50	51 - 52	7.4	
51	52 - 53	8.4	
53	54 - 55	6.8	
54	55 - 56	7.6	
55	56 - 57	5.2	
56	57 - 58	3.6	
57	58 - 59	6.2	
58	59 - 60	5.2	
59	60 - 61	5.2	
60	61 - 62	2.4	
61	62 - 63	5	
62	63 - 64	3	
63	64 - 65	1.8	
65	66 - 67	3.4	
66	67 - 68	4	
67	68 - 69	2	
68	69 - 70	1.4	
69	70 - 71	2.4	
70	71 - 72	1.4	
Total		360.4	

Perhitungan Metode Frekuensi Tahun
2002 Data *Moving Average* 5 Tahunan

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Keterangan
1	02 - 03	4.2	
2	03 - 04	3.4	
5	06 - 07	4.4	
9	10 - 11	11.2	<i>Black Spot</i>
10	11 - 12	13	<i>Black Spot</i>
11	12 - 13	13.8	<i>Black Spot</i>
12	13 - 14	11.8	<i>Black Spot</i>
18	19 - 20	7.6	
19	20 - 21	4.6	
20	21 - 22	9	
24	25 - 26	10	<i>Black Spot</i>
25	26 - 27	12.8	<i>Black Spot</i>
26	27 - 28	10	<i>Black Spot</i>
27	28 - 29	8.8	
28	29 - 30	9.8	
31	32 - 33	10	<i>Black Spot</i>
32	33 - 34	10.6	<i>Black Spot</i>
34	35 - 36	7.2	
35	36 - 37	6.4	
36	37 - 38	6.4	
37	38 - 39	6.6	
38	39 - 40	5.6	
39	40 - 41	6.8	
40	41 - 42	5.4	
41	42 - 43	7.6	
43	44 - 45	14.6	<i>Black Spot</i>
45	46 - 47	5.2	
46	47 - 48	6.4	
47	48 - 49	4.8	
48	49 - 50	5.4	
49	50 - 51	8.2	
50	51 - 52	7	
51	52 - 53	8.2	
53	54 - 55	7.2	
54	55 - 56	7.2	
55	56 - 57	5	
56	57 - 58	4.4	
57	58 - 59	6.2	
58	59 - 60	4.4	
59	60 - 61	5.2	
60	61 - 62	3.4	
61	62 - 63	5.2	
62	63 - 64	2.4	
63	64 - 65	2.2	
65	66 - 67	3.4	
66	67 - 68	3.4	
67	68 - 69	1.4	
68	69 - 70	1.6	
69	70 - 71	2	
70	71 - 72	2.4	
Total		333.8	

Perhitungan Metode Frekuensi Tahun
2003 Data *Moving Average* 5 Tahunan

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Keterangan
1	02 - 03	3.8	
2	03 - 04	3	
5	06 - 07	4.2	
9	10 - 11	10.2	<i>Black Spot</i>
10	11 - 12	12.4	<i>Black Spot</i>
11	12 - 13	11.8	<i>Black Spot</i>
12	13 - 14	10.2	<i>Black Spot</i>
18	19 - 20	7.4	
19	20 - 21	4	
20	21 - 22	8.8	
24	25 - 26	10.8	<i>Black Spot</i>
25	26 - 27	12.2	<i>Black Spot</i>
26	27 - 28	9.4	
27	28 - 29	9	
28	29 - 30	11.2	<i>Black Spot</i>
31	32 - 33	9.8	
32	33 - 34	9.2	
34	35 - 36	5.2	
35	36 - 37	6.6	
36	37 - 38	7	
37	38 - 39	6.8	
38	39 - 40	4.6	
39	40 - 41	6.8	
40	41 - 42	5.4	
41	42 - 43	7.4	
43	44 - 45	12	<i>Black Spot</i>
45	46 - 47	4.8	
46	47 - 48	6	
47	48 - 49	5.2	
48	49 - 50	5.8	
49	50 - 51	7.4	
50	51 - 52	6.4	
51	52 - 53	8.2	
53	54 - 55	7.4	
54	55 - 56	6.4	
55	56 - 57	6.4	
56	57 - 58	5	
57	58 - 59	5.4	
58	59 - 60	3.4	
59	60 - 61	5.8	
60	61 - 62	3.2	
61	62 - 63	6	
62	63 - 64	2.6	
63	64 - 65	2.6	
65	66 - 67	2.2	
66	67 - 68	3.2	
67	68 - 69	1.2	
68	69 - 70	2.2	
69	70 - 71	1.8	
70	71 - 72	1.8	
Total		319.6	

Perhitungan Metode Frekuensi Tahun
2004 Data *Moving Average* 5 Tahunan

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Keterangan
1	02 - 03	3.4	
2	03 - 04	2.6	
5	06 - 07	3.8	
9	10 - 11	11.4	<i>Black Spot</i>
10	11 - 12	12.6	<i>Black Spot</i>
11	12 - 13	10.8	<i>Black Spot</i>
12	13 - 14	9.8	
18	19 - 20	7	
19	20 - 21	4.6	
20	21 - 22	8.4	
24	25 - 26	10.6	<i>Black Spot</i>
25	26 - 27	15.6	<i>Black Spot</i>
26	27 - 28	9.8	
27	28 - 29	9.6	
28	29 - 30	11.8	<i>Black Spot</i>
31	32 - 33	9.8	
32	33 - 34	7.4	
34	35 - 36	6	
35	36 - 37	6.4	
36	37 - 38	8.2	
37	38 - 39	7.4	
38	39 - 40	4.4	
39	40 - 41	6.4	
40	41 - 42	5.2	
41	42 - 43	6.4	
43	44 - 45	12	<i>Black Spot</i>
45	46 - 47	4.8	
46	47 - 48	5.6	
47	48 - 49	4.6	
48	49 - 50	6	
49	50 - 51	7.4	
50	51 - 52	6.6	
51	52 - 53	9.4	
53	54 - 55	7.8	
54	55 - 56	6.8	
55	56 - 57	7.6	
56	57 - 58	6.4	
57	58 - 59	4.8	
58	59 - 60	3.8	
59	60 - 61	5.2	
60	61 - 62	3.8	
61	62 - 63	6.2	
62	63 - 64	4	
63	64 - 65	2.6	
65	66 - 67	2.2	
66	67 - 68	1.8	
67	68 - 69	1.4	
68	69 - 70	2.2	
69	70 - 71	1.6	
70	71 - 72	1.8	
Total		325.8	

Perhitungan Metode Frekuensi Tahun
2005 Data *Moving Average* 5 Tahunan

Kode Wilayah	Lokasi KM	Jumlah Kecelakaan	Keterangan
1	02 - 03	1.8	
2	03 - 04	2.8	
5	06 - 07	3.2	
9	10 - 11	10.6	<i>Black Spot</i>
10	11 - 12	11.6	<i>Black Spot</i>
11	12 - 13	12.6	<i>Black Spot</i>
12	13 - 14	10	
18	19 - 20	6	
19	20 - 21	4.2	
20	21 - 22	8	
24	25 - 26	11.4	<i>Black Spot</i>
25	26 - 27	19.4	<i>Black Spot</i>
26	27 - 28	10.2	<i>Black Spot</i>
27	28 - 29	11.6	<i>Black Spot</i>
28	29 - 30	12.4	<i>Black Spot</i>
31	32 - 33	10.2	<i>Black Spot</i>
32	33 - 34	7.8	
34	35 - 36	7.8	
35	36 - 37	7	
36	37 - 38	8.2	
37	38 - 39	8	
38	39 - 40	5	
39	40 - 41	6.2	
40	41 - 42	6.6	
41	42 - 43	5.6	
43	44 - 45	10.2	<i>Black Spot</i>
45	46 - 47	4.2	
46	47 - 48	7.2	
47	48 - 49	4.6	
48	49 - 50	6.8	
49	50 - 51	6.4	
50	51 - 52	6.6	
51	52 - 53	9	
53	54 - 55	7	
54	55 - 56	5.8	
55	56 - 57	7.6	
56	57 - 58	7.4	
57	58 - 59	4.8	
58	59 - 60	3.2	
59	60 - 61	5	
60	61 - 62	4.4	
61	62 - 63	7.2	
62	63 - 64	5.8	
63	64 - 65	2.6	
65	66 - 67	2.2	
66	67 - 68	1.8	
67	68 - 69	1.6	
68	69 - 70	1.6	
69	70 - 71	1.6	
70	71 - 72	2.2	
Total		335	

Perhitungan Metode Frekuensi Tahun
2006 Data *Moving Average* 5 Tahunan

Kode	Lokasi	Jumlah	Keterangan
Wilayah	KM	Kecelakaan	
1	02 - 03	1.2	
2	03 - 04	3	
5	06 - 07	3.4	
9	10 - 11	9.8	
10	11 - 12	12.6	<i>Black Spot</i>
11	12 - 13	11.6	<i>Black Spot</i>
12	13 - 14	11.6	<i>Black Spot</i>
18	19 - 20	6.2	
19	20 - 21	4	
20	21 - 22	8.2	
24	25 - 26	11	<i>Black Spot</i>
25	26 - 27	18.2	<i>Black Spot</i>
26	27 - 28	9.2	
27	28 - 29	11.8	<i>Black Spot</i>
28	29 - 30	10.6	<i>Black Spot</i>
31	32 - 33	9	
32	33 - 34	8.6	
34	35 - 36	9.4	
35	36 - 37	8.4	
36	37 - 38	10.4	<i>Black Spot</i>
37	38 - 39	9	
38	39 - 40	5.4	
39	40 - 41	5.6	
40	41 - 42	7.6	
41	42 - 43	5.6	
43	44 - 45	10.6	<i>Black Spot</i>
45	46 - 47	5.2	
46	47 - 48	6.6	
47	48 - 49	5.4	
48	49 - 50	6.2	
49	50 - 51	5.8	
50	51 - 52	6.2	
51	52 - 53	8.6	
53	54 - 55	6	
54	55 - 56	6	
55	56 - 57	6.8	
56	57 - 58	8	
57	58 - 59	5.2	
58	59 - 60	2.8	
59	60 - 61	7.2	
60	61 - 62	5.6	
61	62 - 63	7.6	
62	63 - 64	6.8	
63	64 - 65	3	
65	66 - 67	2.6	
66	67 - 68	1.8	
67	68 - 69	2.2	
68	69 - 70	1.4	
69	70 - 71	1.2	
70	71 - 72	2	
Total		342.2	



LAMPIRAN 11

Tabel χ^2 (Chi-Kuadrat)



LAMPIRAN 12

Form Laporan Kecelakaan Lalu Lintas
PT. JASA MARGA (Persero)

Tabel χ^2 (Chi-Kuadrat)

v	α					
	0,995	0,975	0,05	0,025	0,01	0,005
1	0,0000	0,0010	3,8415	5,0239	6,6349	7,8794
2	0,0100	0,0506	5,9915	7,3778	9,2104	10,5965
3	0,0717	0,2158	7,8147	9,3484	11,3449	12,8381
4	0,2070	0,4844	9,4877	11,1433	13,2767	14,8602
5	0,4118	0,8312	11,0705	12,8325	15,0863	16,7496
6	0,6757	1,2373	12,5916	14,4494	16,8119	18,5475
7	0,9893	1,6899	14,0671	16,0128	18,4753	20,2777
8	1,3444	2,1797	15,5073	17,5345	20,0902	21,9549
9	1,7349	2,7004	16,9190	19,0228	21,6660	23,5893
10	2,1558	3,2470	18,3070	20,4832	23,2093	25,1881
11	2,6032	3,8157	19,6752	21,9200	24,7250	26,7569
12	3,0738	4,4038	21,0261	23,3367	26,2170	28,2997
13	3,5650	5,0087	22,3620	24,7356	27,6882	29,8193
14	4,0747	5,6287	23,6848	26,1189	29,1412	31,3194
15	4,6009	6,2621	24,9958	27,4884	30,5780	32,8015
16	5,1422	6,9077	26,2962	28,8453	31,9999	34,2671
17	5,6973	7,5642	27,5871	30,1910	33,4087	35,7184
18	6,2648	8,2307	28,8693	31,5264	34,8052	37,1564
19	6,8439	8,9065	30,1435	32,8523	36,1908	38,5821
20	7,4338	9,5908	31,4104	34,1696	37,5663	39,9969
21	8,0336	10,2829	32,6706	35,4789	38,9322	41,4009
22	8,6427	10,9823	33,9245	36,7807	40,2894	42,7957
23	9,2604	11,6885	35,1725	38,0756	41,6383	44,1814
24	9,8862	12,4011	36,4150	39,3641	42,9798	45,5584
25	10,5196	13,1197	37,6525	40,6465	44,3140	46,9280
26	11,1602	13,8439	38,8851	41,9231	45,6416	48,2898
27	11,8077	14,5734	40,1133	43,1945	46,9628	49,6450
28	12,4613	15,3079	41,3372	44,4608	48,2782	50,9936
29	13,1211	16,0471	42,5569	45,7223	49,5878	52,3355
30	13,7867	16,7908	43,7730	46,9792	50,8922	53,6719
40	20,7066	24,4331	55,7585	59,3417	63,6908	66,7660
50	27,9908	32,3574	67,5048	71,4202	76,1538	79,4898
60	35,5344	40,4817	79,0820	83,2977	88,3794	91,9518
70	43,2753	48,7575	90,5313	95,0231	100,4251	104,2148
80	51,1719	57,1532	101,8795	106,6285	112,3288	116,3209
90	59,1963	65,6466	113,1452	118,1359	124,1162	128,2987
100	67,3275	74,2219	124,3421	129,5613	135,8069	140,1697