

Supplementary Note 3. Analysis of freeway data

The statistics of traffic flow operation characteristics are shown in Table 4 and Table 5.

Table 4 Analysis of freeway data in 2017.

Freeway	Mean of volume (veh/h)	Standard deviation of volume (veh/h)	Mean of speed (km/h)	Standard deviation of speed (km/h)	Mean of occupancy (%)	Standard deviation of occupancy (%)
I5-N	824.57	566.90	101.17	19.34	6.63	6.32
I5-S	833.77	548.70	101.32	19.77	6.94	6.89
I10-E	890.40	508.01	99.92	18.89	7.45	6.82
I10-W	943.69	539.68	100.78	17.66	7.45	6.55
I405-N	1033.56	578.97	96.44	23.87	9.27	8.49
I405-S	1041.93	591.06	96.82	23.79	9.35	8.62
I80-E	773.94	515.97	100.26	20.58	5.67	5.28
I80-W	791.24	514.03	100.26	20.10	6.07	6.10
I15-N	838.78	537.70	102.87	16.45	6.24	5.12
I15-S	865.92	555.82	103.00	16.82	6.24	5.11
I880-N	877.70	512.47	97.92	22.28	7.14	6.86
I880-S	880.33	522.97	97.91	22.25	7.41	7.07
I210-E	860.36	526.34	98.02	21.67	7.74	7.12
I210-W	879.19	541.91	97.91	21.54	7.77	7.19

Table 5 Analysis of freeway data in 2022.

Freeway	Mean of volume (veh/h)	Standard deviation of volume (veh/h)	Mean of speed (km/h)	Standard deviation of speed (km/h)	Mean of occupancy (%)	Standard deviation of occupancy (%)
I5-N	809.71	547.85	101.20	16.81	6.71	5.71
I5-S	815.65	564.41	101.81	16.96	6.88	6.42
I10-E	795.91	489.47	97.90	19.62	7.73	7.06
I10-W	830.11	512.74	99.11	17.93	7.49	6.34
I405-N	967.28	573.23	97.97	20.93	9.18	8.68
I405-S	946.82	568.09	98.75	21.24	8.69	8.36
I80-E	730.25	493.78	101.76	18.63	5.37	4.82
I80-W	753.95	491.98	101.30	19.68	5.56	5.06
I15-N	714.81	480.07	102.15	16.56	5.96	5.22
I15-S	744.79	506.51	101.91	17.70	5.96	5.22
I880-N	825.79	490.97	100.19	17.58	6.61	5.82
I880-S	816.16	501.18	100.42	17.56	6.58	5.96
I210-E	789.79	539.07	97.66	21.07	7.42	6.92
I210-W	779.13	518.80	97.98	20.48	7.05	6.15