APPENDIX 6: ANOVA SUMMARY TABLES

Appendix 4 contains the full summary tables for the eight ANOVA's conducted on the lane-keeping and velocity-maintenance performance measures, as well as minimum following distance. They are presented on the following pages in the same order in which they were discussed in section 3 of the main report.

Table 39. The ANOVA conducted to determine if the vehicle's steering instability was affected by the data-collection period (D), the age of the driver (A), or the intra-string gap (I).

Source	Degrees of Freedom	Sum of Squares	Mean Square	F	*p*
Intra-String Gap (I)	2	0.03793604	0.01896802	1.42	0.2549
Age (A)	1	0.00046637	0.00046637	0.03	0.8530
IxA	2	0.01177371	0.00588686	0.44	0.6476
Subjects (Within AxI) [S (w/ A x I)]	39	0.52248338	0.01339701		
Data-collection Period (D)	9	0.07350458	0.00816718	3.68	0.0002
D x I	18	0.06807522	0.00378196	1.70	0.0372
D x A	9	0.02483198	0.00275911	1.24	0.2679
D x A x I	18	0.05897626	0.00327646	1.48	0.0961
D x S (w/ A x I)	331	0.73488368	0.00222019		

Table 40. The ANOVA conducted to determine if the vehicle's steering instability was affected by the data-collection period (D), the age of the driver (A), or the method of transferring control (T).

Source	Degrees of Freedom	Sum of Squares	Mean Square	F	*p*
Transfer Method (T)	3	0.02838698	0.00946233	0.72	0.5465
Age (A)	1	0.00001410	0.00001410	0.00	0.9740
MxA	3	0.05433290	0.01811097	1.38	0.2647
Subjects (Within AxM) [S (w/ A x M)]	37	0.48636077	0.01314489		
Data-Collection Period (D)	9	0.08465011	0.00940557	4.03	0.0001
D x T	27	0.05987102	0.00221745	0.95	0.5403
D x A	9	0.01723823	0.00191536	0.82	0.5979
D x A x T	27	0.07037157	0.00260635	1.12	0.3186
D x S (w/ A x T)	313	0.73096976	0.00233537		

Table 41. The ANOVA conducted to determine if the vehicle's steering oscillations were affected by the data-collection period (D), the age of the driver (A), or the intra-string gap (I).

Source	Degrees of Freedom	Sum of Squares	Mean Square	F	*p*
Intra-String Gap (I)	2	154.944891	77.472445	1.55	0.2259
Age (A)	1	10.9416453	10.9416453	0.22	0.6429
IxA	2	287.943700	143.971850	2.87	0.0685
Subjects (Within AxI) [S (w/ A x I)]	39	1954.20917	50.10793		
Data-Collection Period (D)	9	121.907063	13.545229	1.18	0.3096
D x I	18	261.645361	14.535853	1.26	0.2108
D x A	9	163.355854	18.150650	0.58	0.1212
D x A x I	18	130.339116	7.241062	0.63	0.8770
D x S (w/ A x I)	331	3812.96959	11.51955		

Table 42. The ANOVA conducted to determine if the vehicle's steering oscillations were affected by the data-collection period (D), the age of the driver (A), or the method of transferring control (T).

Source	Degrees of Freedom	Sum of Squares	Mean Square	F	*p*
Transfer Method (T)	3	191.697600	63.899200	1.08	0.3694
Age (A)	1	11.7280261	11.7280261	0.20	0.6587
TxA	3	8.06935094	2.68978365	0.05	0.9869
Subjects (Within AxT) [S (w/ A x T)]	37	2188.47383	59.14794		
Data-Collection Period (D)	9	145.914110	16.212679	1.39	0.1910
D x T	27	333.466994	12.350629	1.06	0.3877
D x A	9	168.275905	18.697323	1.60	0.1129
D x A x T	27	238.211108	8.822634	0.76	0.8055
D x S (w/ A x T)	313	3647.71057	11.65403		

Table 43. The ANOVA conducted to determine if the vehicle's average velocity was affected by the data-collection period (D), the age of the driver (A), or the intra-string gap (I).

Source	Degrees of Freedom	Sum of Squares	Mean Square	F	*p*
Intra-String Gap (I)	2	46.5404783	23.2702392	2.31	0.1125
Age (A)	1	63.8458253	63.8458253	6.34	0.0160
IxA	2	26.9691634	13.4845817	1.34	0.2738
Subjects (Within AxI) [S (w/ A x I)]	39	392.600108	10.066669		
Data-Collection Period (D)	9	6.04668251	0.67185361	0.59	0.8086
D x I	18	17.0744273	0.9485793	0.83	0.6678
D x A	9	10.3820630	1.1535626	1.01	0.4348
D x A x I	18	23.8519727	1.3251096	1.16	0.2971
D x S (w/ A x I)	331	379.535033	1.146632		

Table 44. The ANOVA conducted to determine if the vehicle's average velocity was affected by the data-collection period (D), the age of the driver (A), or the method of transferring control (T).

Source	Degrees of Freedom	Sum of Squares	Mean Square	F	*p*
Transfer Method (T)	3	33.4259202	11.1419734	0.98	0.4134
Age (A)	1	73.0534443	73.0534443	6.41	0.0157
TxA	3	13.3031443	4.4343814	0.39	0.7613
Subjects (Within AxT) [S (w/ A x T)]	37	421.352701	11.387911		
Data-Collection Period (D)	9	6.11314316	0.67923813	0.59	0.8084
D x T	27	23.9744412	0.8879423	0.77	0.7946
D x A	9	8.98492123	0.99832458	0.86	0.5602
D x A x T	27	33.8329247	1.2530713	1.08	0.3605
D x S (w/ A x T)	313	362.753796	1.158958		

Table 45. The ANOVA conducted to determine if the vehicle's velocity drift was affected by the data-collection period (D), the age of the driver (A), or the intra-string gap (I).

Source	Degrees of Freedom	Sum of Squares	Mean Square	F	*p*
Intra-String Gap (I)	2	0.00000109	0.00000055	0.28	0.7610
Age (A)	1	0.00000165	0.00000165	0.83	0.3675
IxA	2	0.00000430	0.00000215	1.09	0.3479
Subjects (Within AxI) [S (w/ A x I)]	39	0.00007731	0.00000198		
Data-Collection Period (D)	9	0.00001627	0.00000181	0.75	0.6630
D x I	18	0.00003718	0.00000207	0.86	0.6317
D x A	9	0.00002430	0.00000270	1.12	0.3476
D x A x I	18	0.00004479	0.00000249	1.03	0.4225
D x S (w/ A x I)	331	0.00079786	0.00000241		

Table 46. The ANOVA conducted to determine if the vehicle's velocity drift was affected by the data-collection period (D), the age of the driver (A), or the method of transferring control (T).

Source	Degrees of Freedom	Sum of Squares	Mean Square	F	*p*
Transfer Method (T)	3	0.00000260	0.00000087	0.47	0.7019
Age (A)	1	0.00000245	0.00000245	1.34	0.2541
TxA	3	0.00001322	0.00000441	2.41	0.0823
Subjects (Within AxT) [S (w/ A x T)]	37	0.00006762	0.00000183		
Data-Collection Period (D)	9	0.00001616	0.00000180	0.74	0.6724
D x T	27	0.00005179	0.00000192	0.79	0.7647
D x A	9	0.00003440	0.00000382	1.57	0.1218
D x A x T	27	0.00006762	0.00000250	1.03	0.4249
D x S (w/ A x T)	313	0.00075985	0.00000243		

Table 47. The ANOVA conducted to determine if the vehicle's velocity instability was affected by the data-collection period (D), the age of the driver (A), or the intra-string gap (I).

Source	Degrees of Freedom	Sum of Squares	Mean Square	F	*p*
Intra-String Gap (I)	2	1.24801790	0.62400895	1.53	0.2291
Age (A)	1	1.06474962	1.06474962	2.61	0.1141
IxA	2	1.78103419	0.89051710	2.18	0.1261
Subjects (Within AxI) [S (w/ A x I)]	39	15.8967149	0.4076081		
Data-Collection Period (D)	9	15.6716798	1.7412978	10.70	0.0001
D x I	18	3.18585440	0.17699191	1.09	0.3629
D x A	9	1.70855007	0.18983890	1.17	0.3156
D x A x I	18	0.86336580	0.04796477	0.29	0.9981
D x S (w/ A x I)	331	53.8553963	0.1627051		

Table 48. The ANOVA conducted to determine if the vehicle's velocity instability was affected by the data-collection period (D), the age of the driver (A), or the method of transferring control (T).

Source	Degrees of Freedom	Sum of Squares	Mean Square	F	*p*
Transfer Method (T)	3	0.53418731	0.17806244	0.38	0.7671
Age (A)	1	0.90638186	0.90638186	1.94	0.1719
TxA	3	1.14709345	0.38236448	0.82	0.4919
Subjects (Within AxT) [S (w/ A x T)]	37	17.2815053	0.4670677		
Data-Collection Period (D)	9	16.9945637	1.8882849	11.66	0.0001
D x T	27	5.15758289	0.19102159	1.18	0.2503
D x A	9	1.67609982	0.18623331	1.15	0.3271
D x A x T	27	1.95279093	0.07232559	0.45	0.9930
D x S (w/ A x T)	313	50.6912463	0.1619529		

Table 49. The ANOVA conducted to determine if the vehicle's velocity fluctuations were affected by the data-collection period (D), the age of the driver (A), or the intra-string gap (I).

Source	Degrees of Freedom	Sum of Squares	Mean Square	F	*p*
Intra-String Gap (I)	2	78.0377067	39.0188533	0.98	0.3848
Age (A)	1	62.4059711	62.4059711	1.57	0.2183
IxA	2	208.222086	104.111043	2.61	0.0862
Subjects (Within AxI) [S (w/ A x I)]	39	1554.84138	39.86773		
Data-Collection Period (D)	9	371.372852	41.263650	6.21	0.0001
D x I	18	146.440338	8.135574	1.23	0.2381
D x A	9	55.0193945	6.1132661	0.92	0.5071
D x A x I	18	167.701738	9.316763	1.40	0.1271
D x S (w/ A x I)	331	2197.70491	6.63959		

Table 50. The ANOVA conducted to determine if the vehicle's velocity fluctuations were affected by the data-collection period (D), the age of the driver (A), or the method of transferring control (T).

Source	Degrees of Freedom	Sum of Squares	Mean Square	F	*p*
Transfer Method (T)	3	75.6116564	25.2038855	0.59	0.6275
Age (A)	1	7.3561323	97.3561323	2.27	0.1407
TxA	3	114.206754	38.068918	0.89	0.4571
Subjects (Within AxT) [S (w/ A x T)]	37	1589.12773	42.94940		
Data-Collection Period (D)	9	394.012074	43.779119	6.28	0.0001
D x T	27	144.317832	5.345105	0.77	0.7935
D x A	9	61.9044957	6.8782773	0.99	0.4506
D x A x T	27	184.696483	6.840610	0.98	0.4941
D x S (w/ A x T)	313	2181.18370	6.96864		

Table 51. The ANOVA conducted to determine if the minimum following distance was affected by the data-collection period (D), the age of the driver (A), or the intra-string gap (I).

Source	Degrees of Freedom	Sum of Squares	Mean Square	F	*p*
Intra-String Gap (I)	2	52.4662146	26.2331073	0.12	0.8837
Age (A)	1	823.291303	823.291303	3.89	0.0558
IxA	2	637.040912	318.520456	1.51	0.2347
Subjects (Within AxI) [S (w/ A x I)]	38	8036.28097	211.48108		
Data-Collection Period (D)	1	349.899725	349.899725	7.38	0.0108
D x I	2	151.275862	75.637931	1.60	0.2195
D x A	1	2.27956905	2.27956905	0.05	0.8279
D x A x I	2	93.7251150	46.8625575	0.99	0.3839
D x S (w/ A x I)	30	1422.05591	47.40186		

Table 52. The ANOVA conducted to determine if the minimum following distance was affected by the data-collection period (D), the age of the driver (A), or the method of transferring control (T).

Source	Degrees of Freedom	Sum of Squares	Mean Square	F	*p*
Transfer Method (T)	3	256.440777	85.480259	0.39	0.7637
Age (A)	1	782.678307	782.678307	3.53	0.0682
TxA	3	514.384220	171.461407	0.77	0.5161
Subjects (Within AxT) [S (w/ A x T)]	36	7972.54761	221.45966		
Data-Collection Period (D)	1	413.292087	413.292087	8.06	0.0083
D x T	3	153.817914	51.272638	1.00	0.4073
D x A	1	0.02237825	0.02237825	0.00	0.9835
D x A x T	3	76.1770967	25.3923656	0.50	0.6885
D x S (w/ A x T)	28	1435.49825	51.26779		

Table 53. The ANOVA conducted to determine if the vehicle's percentage of time in the center lane was affected by the data-collection period (D), the age of the driver (A), or the intra-string gap (I).

Source	Degrees of Freedom	Sum of Squares	Mean Square	F	*p*
Intra-String Gap (I)	2	18757.6993	9378.8497	8.25	0.0010
Age (A)	1	11548.5120	11548.5120	10.15	0.0028
IxA	2	1863.11330	931.55665	0.82	0.4483
Subjects (Within AxI) [S (w/ A x I)]	39	44357.9937	1137.3845		
Data-Collection Period (D)	1	3206.43613	3206.43613	6.00	0.0189
D x I	2	625.980850	312.990425	0.59	0.5617
D x A	1	3.05523865	3.05523865	0.01	0.9401
D x A x I	2	3337.23474	1668.61737	3.12	0.0553
D x S (w/ A x I)	39	20850.6093	534.6310		

Table 54. The ANOVA conducted to determine if the vehicle's percentage of time in the center lane was affected by the data-collection period (D), the age of the driver (A), or the method of transferring control (T).

Source	Degrees of Freedom	Sum of Squares	Mean Square	F	*p*
Transfer Method (T)	3	15483.2960	5161.0987	3.90	0.0161
Age (A)	1	11544.7243	11544.7243	8.73	0.0054
TxA	3	871.465356	290.488452	0.22	0.8821
Subjects (Within AxT) [S (w/ A x T)]	37	48917.2484	1322.0878		
Data-Collection Period (D)	1	4180.04300	4180.04300	6.94	0.0122
D x T	3	702.214251	234.071417	0.39	0.7617
D x A	1	12.3326149	12.3326149	0.02	0.8870
D x A x T	3	1867.43576	622.47859	1.03	0.3888
D x S (w/ A x T)	37	22271.9943	601.9458		