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Additional Results to

**"Incorporating Autonomous Vehicles in the Traditional Four Step Model:
A Case Study in Dallas-Fort Worth"**

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TABLE A.1 Non-AV and AV-specific results
(This table is to be read along with section 5.2 of the original paper.)

Result	Mode	Base – No AV	Base – High AV	Increased Trip Generation	No Change in VOT	Capacity Decrease
Trips	Auto - Non-AV	31,537,831	20,012,733	20,012,937	20,012,471	20,015,102
	Auto - AV	---	12,146,912	12,473,110	12,115,429	12,138,898
VMTs	Auto - Non-AV	284,954,405	185,978,835	184,918,753	184,817,284	179,886,669
	Auto - AV	---	119,216,118	120,693,312	115,543,844	114,983,408
VHTs	Auto - Non-AV	9,099,179	5,569,718	5,534,352	5,499,651	5,958,368
	Auto - AV	---	3,780,950	3,829,575	3,611,514	4,100,215
Avg. Travel Time	Auto - Non-AV	17.31	16.70	16.59	16.49	17.86
	Auto - AV	---	18.68	18.42	17.89	20.27
Avg. Trip Distance	Auto - Non-AV	9.04	9.29	9.24	9.24	8.99
	Auto - AV	---	9.81	9.68	9.54	9.47

For all scenarios, AVs are associated with longer trips in terms of both time and distance than Non-AVs. We did not expect to see this effect in the "No Change in VOT" scenario, since that scenario directly assumes that AVs have the same values of time as Non-AVs. Notably, the difference between the average Non-AV and AV travel times and distances are smaller for the "No Change in VOT" scenario, but there still seems to be some residual difference between two modes. This is likely due to an assumption made in our extension of the mode choice model. NCTCOG's original mode choice model was segmented according to several categories: income level, number of workers, number of adults, number of children, and, more importantly, number of vehicles – each trip type was segmented slightly differently. When implementing our extension, we assumed that households that were deemed "AV households" should not be segmented based on number vehicles in the household since a single AV could serve multiple household members simultaneously. All other segmentations remained, only number of vehicles was removed. This was done by copying the mode choice model from the highest level of vehicle ownership to all other vehicle ownership categories. This, combined with the higher sensitivity towards travel time (for the AV mode in the "No Change in VOT" scenario compared to the AV mode in the "Base – High AV" scenario) likely pushed travelers away from the Auto – AV mode to other modes (as evidenced by Auto-AV's lower number of trips), leading to different geographic spreads of AV trips, ultimately generating slightly longer trips. This could also just be an odd non-representative numerical artifact resulting from the accumulation of slight differences across the multiple pieces of the model.