



## ISDSI CHIANG MAI URBAN SUSTAINABILITY STUDENT STUDY: FALL, 2009

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**TITLE:** Traffic Composition in Chiang Mai

### METHODS

To conduct this survey, we counted vehicles at four different intersections during mid- morning for two days. Two large intersections with the superhighway; measuring Northbound traffic at Changpuak Rd. and Huay Kaew Rd., and traffic in both directions on two smaller roads: Phra Pokklao Rd., and Nimmanhaemin Rd. Lane 7. We divided the counting of vehicles into four different sections for each of the four researchers: song Taews (including number of passengers), motorcycles, cars and trucks, and other large or odd vehicles (including semis, buses, and minivans). At the large roads, we counted the composition of the traffic going back approximately 100 m from the stoplight for ten consecutive red lights. At the smaller intersections, we counted the composition of traffic for one hour each.

### RESULTS

Table I. Traffic Composition at 4 Intersections.

	Song Taews	Trucks	Cars	Motorcycle	Other
Changpuak Rd.	42	100	75	235	14
Phra Pokklao Rd.	148	158	180	396	50
Huay Kaew Rd.	54	51	72	88	15
Nimmanhaemin Rd. Lane 7	8	24	38	40	8
Total	252	333	365	759	87

Table II. Number of Passengers in Each Type of Song Taew at 4 Intersections.

	Red Song Taews			Yellow Song Taews		
	No pass.	1-5 pass.	5+ pass.	No pass.	1-5 pass.	5+ pass.
Changpuak Rd.	12	6	4	0	8	6
Phra Pokklao Rd.	62	42	0	12	24	8
Huay Kaew Rd.	30	24	0	0	0	0
Nimmanhaemin Rd. Lane 7	0	4	2	0	0	2
Total	104	76	6	12	32	16



## **CONCLUSION**

We found that motorcycles were consistently between 31-51%, which is a large majority. Because of their ability to move forward during stopped traffic, this number could be skewed compared to total traffic composition. The remaining traffic composition included: 6-19% Song Taews, 17-22% trucks, 19-32% cars, and 1-8% other. While collecting research we realized that Song Taews took up a significant percentage of the traffic composition. However, 47% of the Song Taews had no passengers. Empty vehicles driving aimlessly around the city is unsustainable. We hypothesize that at this time of day, there are too many Song Taews on the road, as it is possible that less people travel during mid-morning. Further research on Song Taews, such as conducting counts at other times of the day, could help characterize the efficiency of public transportation and make Chiang Mai a more sustainable city. Additional counts of Tuk Tuks, metered taxis and buses, could help summarize public transportation in Chiang Mai, Thailand.