

27 Attachment 5

Township of East Rockhill

Table 4
Trip Generation Rates

Type of Land Use	Type of Development	Average Trip Generation Rates	Peak Hour Rates of Generator			Weekday			Peak Hour of Adjacent Street Traffic			Saturday Rates			Peak Hour of Generator Total			
			AM	PM	Total	In	Out	Total	In	Out	Total	In	Out	Total				
RESIDENTIAL	Single-family detached	10.0 trips per DU	0.21	0.55	0.76	0.63	0.37	1.00	0.21	0.55	0.75	0.63	0.37	1.00	10.1 trips per D.U	0.50	0.44	0.96
	Townhouse, Multiplex, Twin, Duplex, Patio and Atrium ¹	5.2 trips per D.U	0.07	0.37	0.41	0.37	0.18	0.51	0.07	0.37	0.41	0.37	0.18	0.51	5.3 trips per D.U	0.26	0.22	0.44
	Garden Apart 1 or 2 floors	6.6 trips per D.U	0.1	0.4	0.6	0.4	0.2	0.7	0.1	0.4	0.5	0.4	0.2	0.6	7.2 trips per D.U.	0.3	0.3	0.6
	Mid and High-Rise Apartment 3 or more floors	4.0 trips per D.U.	–	–	–	–	–	–	0.1	0.2	0.3	0.2	0.2	0.4	–	–	–	–
	Mobile Home	4.8 trips per D.U.	0.16	0.38	0.46	0.29	0.22	0.59	0.13	0.38	0.46	0.29	0.18	0.59	4.7 trips per D.U.	0.24	0.22	0.52
	Retirement Community	3.3 trips per D.U.	–	–	0.4	–	–	0.4	–	–	0.4	–	–	0.4	2.6 trips per D.U.	–	–	–
	Planned Unit Development	7.8 trips per D.U.	0.1	0.5	0.7	0.5	0.3	0.8	0.1	0.5	0.7	1.5	0.3	0.8	8.0 trips per D.U.	–	–	–
	COMMERCIAL	Shopping Center																
	0.49,999 G.S.F.	117.9/1,000 G.S.F.	2.07	2.03	8.88	8.84	7.03	15.51	0.91	0.80	2.93	5.77	5.81	14.42	–	3.20	9.75	12.72
	50,000-99,999 G.S.F.	82.0/1,000 G.S.F.	3.0	2.9	7.5	3.9	3.8	9.3	1.4	1.3	2.4	3.2	3.4	7.8	107.0/1,000 G.S.F.	5.1	5.3	11.1
	100,000-199,999 G.S.F.	66.7/1,000 G.S.F.	2.6	2.5	5.3	3.6	3.5	6.6	0.9	0.8	1.7	2.9	3.1	5.9	112.4/1,000 G.S.F.	4.4	4.1	8.9
	200,000-299,999 G.S.F.	50.6/1,000 G.S.F.	2.0	2.2	3.9	2.5	2.7	5.2	0.4	0.2	0.6	2.1	2.2	4.8	74.2/1,000 G.S.F.	3.5	3.3	6.8
	300,000-399,999 G.S.F.	41.9/1,000 G.S.F.	3.0	3.0	3.5	3.7	3.6	4.8	1.6	0.7	2.3	3.1	3.3	5.5	69.6/1,000 G.S.F.	3.8	3.6	7.2
	400,000-499,999 G.S.F.	49.7/1,000 G.S.F.	2.0	1.6	3.7	2.2	2.1	4.9	0.3	0.2	0.5	1.9	1.9	4.5	61.4/1,000 G.S.F.	2.4	2.8	5.2
	500,000-599,999 G.S.F.	37.2/1,000 G.S.F.	1.40	1.35	2.54	1.68	1.81	3.83	0.38	0.23	0.61	1.59	1.65	3.12	45.3/1,000 G.S.F.	2.30	2.35	4.87
	1,000,000-1,249,999 G.S.F.	37.1/1,000 G.S.F.	–	1.5	–	3.0	1.9	4.7	–	–	–	1.4	1.9	–	39.2/1,000 G.S.F.	–	2.1	3.3
	Over 1,250,000 G.S.F.	34.1/1,000 G.S.F.	1.20	1.39	1.94	1.42	1.76	2.93	0.36	0.13	0.49	1.10	1.41	2.51	39.0/1,000 G.S.F.	1.83	2.23	8.84
	Discount Store	70.1/1,000 G.S.F.	–	–	5.59	2.60	2.40	6.97	–	–	0.51	1.4	1.9	3.79	72.7/1,000 G.S.F.	–	–	6.89
	Restaurant																	
	Quality Restaurant	2.34 trips per seat	–	–	–	0.16	0.15	0.24	0.03	0.02	0.02	0.09	0.05	0.14	2.60 trips per seat	0.22	0.28	0.69
		74.9/1,000 G.S.F.	6.48	1.14	6.70	7.71	2.80	10.35	0.85	0.46	1.02	2.74	1.69	6.14	99.1/1,000 G.S.F.	9.36	5.8	10.94

¹ Development type names revised from ITE Manual

Type of Land Use	Type of Development	Average Trip Generation Rates	Pear Hour Rates of Generator			Weekday	Peak Hour of Adjacent Street Traffic			Saturday			Average Trip Generation	Peak Hour of Generator				
			AM		PM		AM (7-9)		PM (4-6)		Rates			Total				
			In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
	High Turnover, Sit-Down	164.4/1,000 G.S.F.	10.1	5.5	15.7	13.0	9.2	22.2	–	–	47.5	9.9	4.0	10.5	67.8/1,000 G.S.F.	–	–	10.0
	Drive-In Restaurant	553.1/1,000 G.S.F.	–	–	–	44.4	41.9	78.8	49.7	40.2	89.8	17.0	14.6	31.6	–	–	–	
	Supermarket	125.5/1,000 G.S.F.	–	–	–	5.97	6.73	15.7	0.38	0.16	0.54	4.54	4.29	8.82	–	6.17	5.83	1.19
	Office																	
	General Office Building	12.3/1,000 G.S.F.	1.86	0.35	2.32	0.27	1.36	2.20	1.86	0.35	2.32	0.27	1.36	2.20	3.34/1,000 G.S.F.	0.19	0.2	0.1
	0.99,999 G.S.F.	17.7/1,000 G.S.F.	2.23	0.45	2.92	0.36	1.88	2.84	1.45	0.25	2.50	0.19	1.14	2.62	2.4/1,000 G.S.F.	–	–	0.48
	100,000-199,999 G.S.F.	14.3/1,000 G.S.F.	1.87	0.22	2.00	0.44	1.76	2.03	1.87	0.22	2.00	0.44	1.76	2.03	3.5/1,000 G.S.F.	0.22	0.19	0.45
	Over 200,000 G.S.F.	10.9/1,000 G.S.F.	1.81	0.34	2.18	0.23	1.70	2.04	–	–	–	–	–	–	–	–	–	–
	Medical Office Building	54.6/1,000 G.S.F.	2.68	4.51	5.30	3.47	5.17	2.79	0.64	0.21	0.85	0.89	3.05	3.94	37.7/1,000 G.S.F.	–	4.3	–
	Government Office Building	68.93/1,000 G.S.F.	4.92	0.96	5.88	8.20	2.63	11.03	4.92	0.96	5.99	–	–	–	–	–	–	–
	Office Park	20.66/1,000 G.S.F.	1.96	0.26	2.63	0.33	1.84	2.38	1.96	0.26	2.63	0.33	1.84	2.38	–	–	–	–
	Research Center	5.3/2,000 G.S.F.	–	–	2.5	–	–	2.1	2.5	0.2	1.2	0.1	0.9	0.9	1.8/1,000 G.S.F.	–	–	–
	Hotel	10.5 trips per occupied room	–	–	0.90	–	–	0.87	0.58	0.29	0.85	0.36	0.37	0.73	8.1 trips per occupied room	–	–	0.67
	Motel	10.14 trips per occupied room	–	–	0.81	–	–	0.83	–	–	0.74	–	–	0.65	8.86 trips per occupied room	–	–	0.76
	Specialty Retail Center	40.7/1,000 G.S.F.	1.99	–	–	2.25	–	–	–	–	–	–	–	–	42.0/1,000 G.S.F.	2.91	–	–
	Hardware Paint Store	51.3/1,000 G.S.F.	–	–	5.1	–	–	5.2	–	–	1.1	–	–	4.9	–	–	–	1.12
	New Car Sale	47.5/1,000 G.S.F.	2.88	2.30	6.00	2.65	2.48	–	2.12	2.94	3.88	1.76	2.32	4.58	20.9/1,000 G.S.F.	–	–	1.76
	24 Hour Open Convenience Market	625.2/1,000 G.S.F.	–	–	54.8	–	–	46.8	–	–	54.8	–	–	46.7	–	–	–	–
	Wholesale	6.73/1,000 G.S.F.	–	–	0.58	–	–	0.52	–	–	0.50	–	–	0.21	1.59/1,000 G.S.F.	–	–	0.18
	Service Station ²	133.0/pump or 748.0/station	–	–	21.00	–	–	25.0	–	–	–	–	–	–	–	–	–	–
INDUSTRIAL/ AGRICULTURAL	General Light Industrial	5.46/1,000 G.S.F.	–	–	–	0.32	0.69	1.13	0.85	0.15	1.11	0.32	0.63	1.18	3.09/1,000 G.S.F.	–	–	0.62
	General Heavy Industrial	1.50/1,000 G.S.F.	–	–	0.69	–	–	0.68	–	–	0.51	–	–	0.19	–	–	–	–
	Industrial Park	7.00/1,000 G.S.F.	0.59	0.10	0.83	0.28	0.47	0.89	0.54	0.18	0.93	0.19	0.59	0.99	2.73/1,000 G.S.F.	0.18	0.18	0.35
	Manufacturing	3.86/1,000 G.S.F.	0.79	0.40	0.78	0.52	0.59	0.75	–	–	0.78	0.52	0.39	0.75	1.49/1,000 G.S.F.	–	–	0.28
	Warehousing	4.99/1,000 G.S.F.	–	–	1.61	–	–	1.63	–	–	0.66	–	–	1.63	–	–	–	–
	Mini-Warehouse	2.80/1,000 G.S.F.	–	–	0.26	–	–	0.32	–	–	0.17	–	–	0.29	2.5/1,000 G.S.F.	–	–	0.40

² Source: Transportation and Traffic Engineering Handbook, Second Edition, Institute of Transportation Engineers, 1982

Type of Land Use	Type of Development	Average Trip Generation Rates	Peak Hour Rates of Generator			Weekday	Peak Hour of Adjacent Street Traffic			Saturday			Peak Hour of Generator					
			AM	PM	Total		AM (7-9)	PM (4-6)	Rates									
			In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
INSTITUTIONAL	Library	41.80/1,000 G.S.F.	1.10	1.10	2.60	3.00	2.70	6.70	-	-	-	-	-	-	33.6/1,000 G.S.F.	1.70	1.30	3.80
	Elementary School	1.02 trips per student	0.11	0.05	0.26	0.04	0.07	0.24	-	-	0.15	-	-	0.03	-	-	-	-
	High School	1.39 trips per student	0.19	0.07	0.30	0.07	0.13	0.27	-	-	0.27	-	-	0.20	0.77 trips per student	0.11	0.04	0.15
	Junior/Community College	1.55 trips per student	0.16	0.03	0.18	0.05	0.11	0.16	0.15	0.02	0.18	0.04	0.08	0.12	-	-	-	-
	Hospital	11.4 trips per bed	0.94	0.40	1.18	0.65	0.94	1.36	0.73	0.78	1.01	0.46	0.81	1.17	9.3 trips per bed	-	-	0.69
	Nursing Home	2.6 trips per bed	-	-	0.20	0.20	0.23	0.36	-	-	0.14	0.05	0.16	0.21	2.1 trips per bed	-	-	0.37
SERVICES	Bank (Walk-In)	169.0/1,000 G.S.F.	-	-	33.2	7.0	7.0	35.8	-	-	4.4	5.9	5.9	16.7	14.8/1,000 G.S.F.	-	-	5.2
	Bank (Drive In)	192.0/1,000 G.S.F.	15.3	15.3	27.7	17.6	15.7	28.4	3.0	0.3	5.4	14.0	15.1	25.3	8.3/1,000 G.S.F.	-	-	-
	Savings and Loan (Walk-In)	61.0/1,000 G.S.F.	-	-	9.3	-	-	9.7	-	-	1.3	-	-	5.3	109.0/1,000 G.S.F.	-	-	19.7
	Savings and Loan (Drive-In)	74.0/1,000 G.S.F.	-	-	9.3	-	-	9.7	-	-	1.0	-	-	6.8	28.0/1,000 G.S.F.	-	-	6.3
	Insurance	11.5/1,000 G.S.F.	-	-	2.3	-	-	2.4	-	-	2.3	-	-	2.4	2.1/1,000 G.S.F.	-	-	0.5
TERMINAL	Truck Terminals	9.86/1,000 G.S.F.	0.36	0.54	0.90	0.35	0.47	0.82	0.36	0.54	0.90	0.35	0.47	0.82	1.89/1,000 G.S.F.	0.11	0.18	0.29

DU – Dwelling Unit

G.S.F. – Gross Square Feet

(-) – Data Not Available

These rates shall be reviewed the Township Planning Commission for any changes that may be appropriate. The applicant is required to use the above rates where applicable. Where the appropriate data is not available, the developer shall provide the rates and document the appropriate source. If the developer requests to use significantly different rates than those given, he shall submit the rates and the specific justification to the Township Planning Commission prior to submission of the Transportation Impact Study for their approval or denial.