

OSTA MAJOR TRAFFIC GENERATOR TRIP GENERATION GUIDELINES

Trip generation is the estimation of the number and the type of trips associated with the land use(s) proposed by the development. In preparing a trip generation analysis, unadjusted (no reduction for trip type or internal trips) trip rates for the appropriate land use codes from the most recent edition of the Institute of Traffic Engineers (ITE) Trip Generation Manual shall be used. Contact the CTDOT Trip Analysis Unit at Gary.Sojka@ct.gov with any questions regarding trip generation or distribution. The amount of information required will be based on the expected number of new trips associated with the development, expansion, or land use change.

Alternative rates will be considered on-case-by-case basis under the following conditions listed below:

- If there is/are no applicable ITE Trip Generation rate(s)
- If the sample size on which the ITE Trip Generation rate(s) is/are based on a prohibitively small sample.
- If the description of the ITE Trip Generation rate(s) does not resemble the characteristics of the proposed project within the land use context.
- An alternative data source is available, such as empirical trip rates measured at existing active sites. The sample size of similar developments must include at least three (3) similar sites with a comparable scale (size) of the proposed development.

General Guidance for Developments with One Land Use:

- The trip generation shall reflect a typical day and not abnormally high-peak periods, such as holiday weekends.
- For apartments, condominiums, hotels, and motels, the number of 1-, 2- and 3-bedroom units, and the square foot area of each type of unit shall be noted.
- For retail developments, Friday afternoon and Saturday midday peak are required study periods.
- In most cases, trip generation data derived from the latest ITE Trip Generation Manual will be acceptable. Approved CTDOT studies are currently used to derive trip generation data for super food stores and Dunkin' Donut's locations. Other studies will be taken into consideration but will be subject to Department approval.
- Out parcels contained within retail developments shall use the most specific land use code available via ITE or other acceptable study data. For restaurants, indicate whether it is a fast-food or sit-down service and if a drive through window is proposed.
- For Transit Oriented Developments (TOD) located within a half (1/2) mile from rail station, either a 20% volume reduction credit can be used or ITE Trip Generation reduced volumes must be provided for each land use.
- **In cases where the redevelopment of an existing, vacant MTG site is proposed, no trip rate credit will be given for total site generated trips. For sites on previously approved MTG that are partially occupied, a partial trip rate credit will be considered at the discretion of CTDOT Trip Analysis Unit.**

Mixed -Use Development Guidance:

- Internal trips occur among mixed-use developments and should be limited to sites or subdivisions that are accessible without using or crossing public roads (trips are “not made on street system.”) Internal trips, if present, shall be subtracted out before pass-by trip reductions are applied. A maximum internal trip reduction rate of 10% can be used.
- Pass-by trips are made as intermediate trips on the way from an origin to a primary trip destination and do not require a route diversion from another roadway. Pass-by trips are new at the site driveway but are not new on the adjacent roadway. The number of pass-by trips is calculated after accounting for internal trips and shall be 20% percent of traffic for most commercial developments.
- Diverted trips should only be estimated in an MTG application if reliable data reporting the percentage of distribution of the three types of trips (primary, pass-by, and diverted trips) are available for the land use(s) being considered and the travel routes for the diverted trips can be clearly established. Diverted linked trips require a route diversion from one roadway to another to reach the site. If these conditions cannot be met, the analysis should treat all non-pass-by trips as primary trips.

Trip Generation Table Samples:

Mixed-Use Development with Commercial, Industrial, and Residential Uses

Development Name / Address											
ITE Land Use Code	Size (ksf/ units)	ADT	Trips								
			AM Peak Hour Adjacent Street Traffic			PM Peak Hour Adjacent Street Traffic			Saturday Midday Peak Hour		
			Total	In	Out	Total	In	Out	Total	In	Out
310 - Hotel	76	400	31	17	14	28	14	14	58	33	25
821 - Shopping Center (40-150k)	42.8	4,707	151	94	57	447	215	232	450	230	220
850 - Supermarket	43.2	4,142	124	73	51	392	196	196	491	246	245
912 - Drive-In Bank	3.5	351	35	20	15	74	37	37	92	47	45
937 - Coffee Shop with Drive-Through Window	2.0	1,067	172	88	84	78	39	39	176	88	88
932 - High Turnover Sit-Down Restaurant	7.0	750	67	37	30	63	39	24	78	40	38
Total Commercial Trips	79.7	11,417	580	329	251	1082	540	542	1345	684	661
Less Internal Capture (10%) ¹		-1,142	-58	-33	-25	-108	-54	-54	-135	-68	-66
Gross Commercial Site Trips		10,275	522	296	226	974	486	488	1,210	616	595
Less Pass-By (20%) ²		-2,055	-104	-52	-52	-195	-98	-98	-98	-49	-49
Net Commercial Site Trips		8,220	418	244	174	779	389	391	1,113	567	546
150 - Warehouse	150.0	275	42	32	10	44	12	32	8	5	3
Net Industrial Site Trips		275	42	32	10	44	12	32	8	5	3
220 - Multifamily housing (Low-Rise) ³	220	1,483	91	22	69	112	74	41	90	45	45
221 - Multifamily housing (Mid-Rise)	270	1,241	107	25	82	106	64	42	109	55	54
Total Residential Trips		2,724	198	47	151	218	138	83	199	100	99
Less Internal Capture (10%) ¹		-272	-20	-5	-15	-22	-14	-8	-20	-10	-10
Net Residential Site Trips		2,452	178	42	136	196	124	75	179	90	89
Net Total New Trips (Commercial, Industrial, and Residential)		10,947	638	318	320	1,019	525	498	1,300	662	638

Ref: Trip Generation, 11th Edition

1. 10% of trips to account for internal capture on site.

2. 20% Pass-by for commercial developments per maximum CTDOT Allowance (50%/50% split between entering and exiting vehicles).

3. Saturday Midday Peak Hour Trips assume 50%/50% split due to lack of values.

Note: No Credit was taken for Transit Oriented Developments (TOD) and potential 20% reduction.

Mixed-Use Development (Commercial Uses Only)

Development Name / Address											
ITE Land Use Code	Size	ADT	Trips								
	(ksf/ units)		AM Peak Hour Adjacent Street Traffic			PM Peak Hour Adjacent Street Traffic			Saturday Midday Peak Hour ¹		
			Total	In	Out	Total	In	Out	Total	In	Out
937 - Coffee Shop with Drive-Through Window	2.0	1,067	172	88	84	78	39	39	176	88	88
822 - Strip Retail Plaza (<40k)	5.5	462	13	8	5	36	18	18	36	18	18
934 - Fast-Food Restaurant with Drive-Through Window	2.5	1,169	112	57	55	83	43	40	138	70	68
Total Commercial Trips	10	2698	297	153	144	197	100	97	350	176	174
Less Pass-By (20%) ²		-540	-60	-30	-30	-40	-20	-20	-20	-10	-10
Net Commercial		2,158	237	123	114	157	80	77	330	166	164

Ref: Trip Generation, 11th Edition

1. Saturday Midday Peak Hour data for Peak Hour of Generator.

2. 20% Pass-by for commercial developments per maximum CTDOT Allowance (50%/50% split between entering and exiting vehicles).

Residential Development Only

Development Name / Address									
ITE Land Use Code	Size	ADT	Trips						
	(ksf/ units)		AM Peak Hour Adjacent Street Traffic			PM Peak Hour Adjacent Street Traffic			
			Total	In	Out	Total	In	Out	
220 Multifamily housing (Low Rise)	220	1,483	91	22	69	112	74	41	
221 Multifamily housing (Mid Rise)	270	1,241	107	25	82	106	64	42	
252 - Senior Adult Housing - Multifamily	105	328	21	7	14	26	15	11	
Total Residential Trips		3,052	219	54	165	244	153	94	
Less Internal Capture (10%) ¹		-305	-22	-5	-17	-24	-15	-9	
Net Residential Site Trips		2,747	197	49	148	220	138	85	

Ref: Trip Generation, 11th Edition

1 10% of trips to account for internal capture on site

Note: No Credit was taken for Transit Oriented Developments (TOD) and potential 20% reduction.