

# INSTITUTE OF TRANSPORTATION ENGINEERS COMMON TRIP GENERATION RATES (PM Peak Hour)

(Trip Generation Manual, 10th Edition)

Code	Description	Unit of Measure	Trips Per Unit	Setting/Location	
				General Urban/ Suburban	Dense Multi- Use Urban
<b>PORT AND TERMINAL</b>					
30	Intermodal Truck Terminal	1,000 SF GFA	1.72		
90	Park-and-Ride Lot with Bus Service	Parking Spaces	0.43		
<b>INDUSTRIAL</b>					
110	General Light Industrial	1,000 SF GFA	0.63		
130	Industrial Park	1,000 SF GFA	0.40		
140	Manufacturing	1,000 SF GFA	0.67		
150	Warehousing	1,000 SF GFA	0.19		
151	Mini-Warehouse	1,000 SF GFA	0.17		
154	High-Cube Transload & Short-Term Storage Warehouse	1,000 SF GFA	0.10		
155	High-Cube Fulfillment Center Warehouse	1,000 SF GFA	1.37		
156	High-Cube Parcel Hub Warehouse	1,000 SF GFA	0.64		
157	High-Cube Cold Storage Warehouse	1,000 SF GFA	0.12		
160	Data Center	1,000 SF GFA	0.09		
170	Utilities	1,000 SF GFA	2.27		
180	Specialty Trade Contractor	1,000 SF GFA	1.97		
<b>RESIDENTIAL</b>					
210	Single-Family Detached Housing	Dwelling Units	0.99		
220	Multifamily Housing (Low-Rise)	Dwelling Units	0.56		
221	Multifamily Housing (Mid-Rise)	Dwelling Units	→	0.44	0.18
222	Multifamily Housing (High-Rise)	Dwelling Units	→	0.36	0.19
231	Mid-Rise Residential with 1st-Floor Commercial	Dwelling Units	0.36		
232	High-Rise Residential with 1st-Floor Commercial	Dwelling Units	0.21		
240	Mobile Home Park	Dwelling Units	0.46		
251	Senior Adult Housing - Detached	Dwelling Units	0.30		
252	Senior Adult Housing - Attached	Dwelling Units	0.26		
253	Congregate Care Facility	Dwelling Units	0.18		
254	Assisted Living	1,000 SF GFA	0.48		
255	Continuing Care Retirement Community	Units	0.16		
260	Recreation Homes	Dwelling Units	0.28		
265	Timeshare	Dwelling Units	0.63		
270	Residential Planned Unit Development	Dwelling Units	0.69		
<b>LODGING</b>					
310	Hotel	Rooms	0.60		
311	All Suites Hotel	Rooms	→	0.36	0.17
312	Business Hotel	Rooms	0.32		
320	Motel	Rooms	0.38		
330	Resort Hotel	Rooms	0.41		
<b>RECREATIONAL</b>					
411	Public Park	Acres	0.11		
416	Campground / Recreation Vehicle Park	Acres	0.98		
420	Marina	Berths	0.21		
430	Golf Course	Acres	0.28		
431	Miniature Golf Course	Holes	0.33		

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432	Golf Driving Range	Tees/Driving Positions	1.25		
433	Batting Cages	Cages	2.22		
434	Rock Climbing Gym	1,000 SF GFA	1.64		
435	Multi-Purpose Recreational Facility	1,000 SF GFA	3.58		
436	Trampoline Park	1,000 SF GFA	1.50		
437	Bowling Alley	1,000 SF GFA	1.16		
440	Adult Cabaret	1,000 SF GFA	2.93		
444	Movie Theater	1,000 SF GFA	6.17		
445	Multiplex Movie Theater	1,000 SF GFA	4.91		
452	Horse Racetrack	Seats	0.06		
454	Dog Racetrack	Attendees	0.15		
460	Arena	1,000 SF GFA	0.47		
462	Professional Baseball Stadium	Attendees	0.15		
465	Ice Skating Rink	1,000 SF GFA	1.33		
466	Snow Ski Area	Slopes	26.00		
473	Casino/Video Lottery Establishment	1,000 SF GFA	13.49		
480	Amusement Park	Acres	3.95		
482	Water Slide Park	Parking Spaces	0.28		
488	Soccer Complex	Fields	16.43		
490	Tennis Courts	Courts	4.21		
491	Racquet/Tennis Club	Courts	3.82		
492	Health/Fitness Club	1,000 SF GFA	3.45		
493	Athletic Club	1,000 SF GFA	6.29		
495	Recreational Community Center	1,000 SF GFA	2.31		
<b>INSTITUTIONAL</b>					
520	Elementary School	1,000 SF GFA	1.37		
522	Middle School / Junior High School	1,000 SF GFA	1.19		
530	High School	1,000 SF GFA	0.97		
534	Private School (K-8)	Students	0.26		
536	Private School (K-12)	Students	0.17		
537	Charter Elementary School	Students	0.14		
538	School District Office	1,000 SF GFA	2.04		
540	Junior / Community College	1,000 SF GFA	1.86		
550	University/College	1,000 SF GFA	1.17		
560	Church	1,000 SF GFA	0.49		
561	Synagogue	1,000 SF GFA	2.92		
562	Mosque	1,000 SF GFA	4.22		
565	Daycare Center	1,000 SF GFA	11.12		
566	Cemetery	Acres	0.46		
571	Prison	1,000 SF GFA	2.91		
575	Fire and Rescue Station	1,000 SF GFA	0.48		
580	Museum	1,000 SF GFA	0.18		
590	Library	1,000 SF GFA	8.16		

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<b>MEDICAL</b>					
610	Hospital	1,000 SF GFA	0.97		
620	Nursing Home	1,000 SF GFA	0.59		
630	Clinic	1,000 SF GFA	→	3.28	5.18
640	Animal Hospital / Veterinary Clinic	1,000 SF GFA	3.53		
650	Free-Standing Emergency Room	1,000 SF GFA	1.52		
<b>OFFICE</b>					
710	General Office Building	1,000 SF GFA	→	1.15	0.87
712	Small Office Building	1,000 SF GFA	2.45		
714	Corporate Headquarters Building	1,000 SF GFA	0.60		
715	Single Tenant Office Building	1,000 SF GFA	1.74*		
720	Medical-Dental Office Building	1,000 SF GFA	3.46		
730	Government Office Building	1,000 SF GFA	1.71		
731	State Motor Vehicles Department	1,000 SF GFA	5.20		
732	United States Post Office	1,000 SF GFA	11.21		
733	Government Office Complex	1,000 SF GFA	2.82		
750	Office Park	1,000 SF GFA	1.07		
760	Research and Development Center	1,000 SF GFA	0.49		
770	Business Park	1,000 SF GFA	0.42		
<b>RETAIL</b>					
810	Tractor Supply Store	1,000 SF GFA	1.40		
811	Construction Equipment Rental Store	1,000 SF GFA	0.99		
812	Building Materials and Lumber Store	1,000 SF GFA	2.06		
813	Free-Standing Discount Superstore	1,000 SF GFA	4.33		
814	Variety Store	1,000 SF GFA	6.84		
815	Free Standing Discount Store	1,000 SF GFA	4.83		
816	Hardware / Paint Store	1,000 SF GFA	2.68		
817	Nursery (Garden Center)	1,000 SF GFA	6.94		
818	Nursery (Wholesale)	1,000 SF GFA	5.18		
820	Shopping Center	1,000 SF GFA	3.81	3.81	4.92
823	Factory Outlet Center	1,000 SF GFA	2.29		
840	Automobile Sales (New)	1,000 SF GFA	2.43		
841	Automobile Sales (Used)	1,000 SF GFA	3.75		
842	Recreational Vehicle Sales	1,000 SF GFA	0.77		
843	Automobile Parts Sales	1,000 SF GFA	4.91		
848	Tire Store	1,000 SF GFA	3.98		
849	Tire Superstore	1,000 SF GFA	2.11		
850	Supermarket	1,000 SF GFA	9.24		
851	Convenience Market (Open 24 Hours)	1,000 SF GFA	49.11		
853	Convenience Market with Gasoline Pumps	1,000 SF GFA	49.29		
854	Discount Supermarket	1,000 SF GFA	8.38		
857	Discount Club	1,000 SF GFA	4.18		
860	Wholesale Market	1,000 SF GFA	1.76		
861	Sporting Goods Superstore	1,000 SF GFA	→	2.02	1.65
862	Home Improvement Superstore	1,000 SF GFA	→	2.33	3.35
863	Electronics Superstore	1,000 SF GFA	4.26		

Code	Description	Unit of Measure	Trips Per Unit	Setting/Location	
				General Urban/ Suburban	Dense Multi- Use Urban
864	Toy/Children's Superstore	1,000 SF GFA	5.00		
865	Baby Superstore	1,000 SF GFA	1.82		
866	Pet Supply Superstore	1,000 SF GFA	3.55		
867	Office Supply Superstore	1,000 SF GFA	2.77		
868	Book Superstore	1,000 SF GFA	15.83		
869	Discount Home Furnishing Superstore	1,000 SF GFA	1.57		
872	Bed and Linen Superstore	1,000 SF GFA	2.22		
875	Department Store	1,000 SF GFA	1.95		
876	Apparel Store	1,000 SF GFA	→	4.12	1.12
879	Arts and Craft Store	1,000 SF GFA	6.21		
880	Pharmacy / Drugstore without Drive-Through Window	1,000 SF GFA	8.51		
881	Pharmacy / Drugstore with Drive-Through Window	1,000 SF GFA	10.29		
882	Marijuana Dispensary	1,000 SF GFA	21.83		
890	Furniture Store	1,000 SF GFA	0.52		
897	Medical Equipment Store	1,000 SF GFA	1.24		
899	Liquor Store	1,000 SF GFA	16.37		
<b>SERVICES</b>					
911	Walk-In Bank	1,000 SF GFA	12.13		
912	Drive-In Bank	1,000 SF GFA	20.45		
918	Hair Salon	1,000 SF GFA	1.45		
920	Copy, Print, and Express Ship Store	1,000 SF GFA	7.42		
925	Drinking Place	1,000 SF GFA	11.36		
926	Food Cart Pod	Food Carts	3.08		
930	Fast Casual Restaurant	1,000 SF GFA	14.13		
931	Quality Restaurant	1,000 SF GFA	7.80		
932	High-Turnover (Sit-Down) Restaurant	1,000 SF GFA	→	9.77	9.80
933	Fast Food Restaurant without Drive-Through Window	1,000 SF GFA	28.34		
934	Fast Food Restaurant with Drive-Through Window	1,000 SF GFA	→	32.67	78.74
935	Fast Food Restaurant with Drive-Through Window and No Indoor Seating	1,000 SF GFA	42.65		
936	Coffee/Donut Shop without Drive-Through Window	1,000 SF GFA	36.31		
937	Coffee/Donut Shop with Drive-Through Window	1,000 SF GFA	→	43.38	83.19
938	Coffee/Donut Shop with Drive-Through Window and No Indoor Seating	1,000 SF GFA	83.33		
939	Bread / Donut / Bagel Shop without Drive-Through Window	1,000 SF GFA	28.00		
940	Bread / Donut / Bagel Shop with Drive-Through Window	1,000 SF GFA	19.02		
941	Quick Lubrication Vehicle Shop	1,000 SF GFA	8.70		
942	Automobile Care Center	1,000 SF GFA	3.11		
943	Automobile Parts and Service Center	1,000 SF GFA	2.26		
944	Gasoline / Service Station	1,000 SF GFA	109.27		
945	Gasoline / Service Station with Convenience Market	1,000 SF GFA	88.35		
947	Self Service Car Wash	Wash Stalls	5.54		
948	Automated Car Wash	1,000 SF GFA	14.20		
949	Car Wash and Detail Center	Wash Stalls	13.60		
950	Truck Stop	1,000 SF GFA	22.73		
960	Super Convenience Market/Gas Station	1,000 SF GFA	69.28		
970	Winery	1,000 SF GFA	7.31		

**Note: All land uses in the 800 and 900 series are entitled to a "pass-by" trip reduction of 60% if less than 50,000 ft<sup>2</sup> or a reduction of 40% if equal to or greater than 50,000ft<sup>2</sup>.**

\*From 9th edition, no PM peak hour in 10th

An area designated as **General Urban/Suburban** in the *Trip Generation Manual* is an area associated with almost homogeneous vehicle-centered access. Nearly all person trips that enter or exit a development site are by personal passenger or commercial vehicle.

The area can be fully developed (or nearly so) at low-medium density with a mix of residential and commercial uses. The commercial land uses are typically concentrated at intersections or spread along commercial corridors, often surrounded by low-density, almost entirely residential development. Most commercial buildings are located behind or surrounded by parking.

The mixing of land uses is only in terms of their proximity, not in terms of function. A retail land use may focus on serving a regional clientele or a services land use may target motorists or pass-by vehicle trips for its customers. Even if the land uses are complementary, a lack of pedestrian, bicycling, and transit facilities or services limit non-vehicle travel.

An area designated as **Dense Multi-Use Urban** in the *Trip Generation Manual* is a fully developed area (or nearly so), with diverse and complementary land uses, good pedestrian connectivity, and convenient and frequent transit. This area type can be a well-developed urban area outside a major metropolitan downtown or a moderate size urban area downtown.

The land use mix typically includes office, retail, residential, and often entertainment, hotel, and other commercial uses. The residential uses are typically multifamily or single-family on lots no larger than one-fourth acre. The commercial uses often have little or no setback from the sidewalk. Because the motor vehicle still represents the primary mode of travel to and from the area, there typically is on-street parking and often public off-street parking.

The complementary land uses provide the opportunity for short trips within the Dense Multi-Use Urban area, made conveniently by walking, biking, or transit. The area is served by significant transit (either rail or bus) that enables a high level of transit usage to and from area development.