

Section 17D.075.210

Appendix C

Formulas, Trip Rates, Pass-By, Trip Length Adjustment Factors used in Rate Schedule

17D.075.200 Appendix C
Trip Rates, Pass-By, Trip Length Adjustment Factors used in Rate Schedule

| | | | ITE Avg. | | Trip |
|---|----------|-------------|-----------|---------|-------------|
| Land Use Category | Land Use | | Trip Rate | Pass-by | Length Adj. |
| | Code | Unit | | Rate | Factor* |
| Residential | | | | | |
| Single Family & Duplex | 210 | dwelling | 1 | 0% | 1.17 |
| Multi-Family 1-2 level | 220 | dwelling | 0.67 | 0% | 1.23 |
| Multi-Family 3-10 level | 221 | dwelling | 0.44 | 0% | 1.23 |
| ADU | - | dwelling | 0.44 | 0% | 1.23 |
| Multi Family Low-Income | - | dwelling | 0.4 | 0% | 1.23 |
| Assisted Living | 254 | bed | 0.29 | 0% | 0.93 |
| Continuing Care Retirement Community | 255 | dwelling | 0.16 | 0% | 0.93 |
| Nursing Home | 620 | beds | 0.22 | 0% | 0.93 |
| Commercial Services | | | | | |
| Hotel (3 Levels or More) | 310 | room | 0.59 | 0% | 1.33 |
| Hotel/Motel | 320 | room | 0.47 | 0% | 1.33 |
| Multiplex Movie Theater | 445 | sq ft/GFA | 0.00294 | 0% | 0.77 |
| Health Club | 492 | sq ft/GFA | 0.00353 | 25% | 1.03 |
| Day Care | 565 | sq ft/GFA | 0.01234 | 25% | 0.60 |
| Bank | 912 | sq ft/GFA | 0.0243 | 50% | 0.50 |
| Commercial Institutional | | | | | |
| Elementary School | 520 | sq ft/GFA | 0.0013 | 30% | 0.67 |
| Middle School | 522 | sq ft/GFA | 0.0009 | 30% | 0.67 |
| High School | 530 | sq ft/GFA | 0.0007 | 20% | 0.90 |
| University/College | 550 | ASF * | 0.000445 | 0% | 1.50 |
| Religious Institute | 560 | sq ft/GFA | 0.00055 | 0% | 1.00 |
| Library | 590 | sq ft/GFA | 0.0073 | 25% | 0.67 |
| Hospital | 610 | sq ft/GFA | 0.00093 | 20% | 1.67 |
| Commercial - Restaurant | | | | | |
| Drinking Establishment | 925 | sq ft/GFA | 0.01134 | 40% | 0.67 |
| Quality Restaurant | 931 | sq ft/GFA | 0.00749 | 35% | 0.90 |
| High Turnover Restaurant | 932 | sq ft/GFA | 0.00985 | 40% | 0.75 |
| Fast Casual Restaurant | - | sq ft/GFA | 0.01835 | 40% | 0.67 |
| Fast Food Restaurant (with drive-thru) | 934 | sq ft/GFA | 0.03265 | 50% | 0.67 |
| Coffee Shop with Drive-Thru | 937 | sq ft/GFA | 0.0428 | 80% | 0.50 |
| Commercial - Retail | | | | | |
| Free-Standing Discount Superstore | 813 | sq ft/GLA | 0.00435 | 40% | 0.70 |
| Specialty Retail Center | 826 | sq ft/GLA | 0.00271 | 45% | 0.70 |
| Hardware/Paint Store | 816 | sq ft/GFA | 0.00484 | 45% | 0.70 |
| Nursery/Garden Center | 817 | sq ft/GFA | 0.00694 | 30% | 0.70 |
| Shopping Center | 820 | sq ft/GLA | 0.00371 | 40% | 0.70 |
| Automobile Sales - Used/New | 841 | sq ft/GFA | 0.00262 | 20% | 1.10 |
| Tire Store | 848 | Service bay | 3.54 | 28% | 0.80 |
| Supermarket | 850 | sq ft/GFA | 0.00948 | 40% | 0.70 |
| Convenience Market | 851 | sq ft/GFA | 0.05241 | 60% | 0.43 |
| Pharmacy | 881 | sq ft/GFA | 0.00991 | 50% | 0.57 |
| Furniture Store | 890 | sq ft/GFA | 0.00045 | 40% | 0.57 |
| Quick Lubrication Vehicle Shop | 941 | Service Bay | 5.19 | 20% | 0.80 |
| Auto Parts & Service Center | 943 | sq ft/GFA | 0.00446 | 30% | 0.80 |
| Service Station/Minimart/Carwash | 853 | VFP | 19.07 | 70% | 0.60 |
| Industrial | | | | | |
| Light Industry/High Technology | 110 | sq ft/GFA | 0.00097 | 0% | 1.50 |
| Heavy Industrial | 120 | sq ft/GFA | 0.00068 | 0% | 1.50 |
| Industrial Park | 130 | sq ft/GFA | 0.00085 | 0% | 1.50 |
| Manufacturing | 140 | sq ft/GFA | 0.00073 | 0% | 1.50 |
| Warehousing | 150 | sq ft/GFA | 0.00032 | 0% | 1.50 |
| Mini-Storage | 151 | sq ft/GFA | 0.00019 | 0% | 1.30 |
| Commercial - Administrative Office | | | | | |
| Veterinary Clinic | 640 | sq ft/GFA | 0.00472 | 10% | 1.20 |
| General Office | 710 | sq ft/GFA | 0.00149 | 10% | 1.30 |
| Medical Office / Clinic | 720 | sq ft/GFA | 0.00357 | 10% | 1.20 |
| Office Park | 750 | sq ft/GFA | 0.00148 | 10% | 1.30 |

Formula for Base Fee by District

$$\text{Base Fee} = (\text{Project Costs}) / (\text{Trip Ends}) * \text{Developer \%}$$

Project Costs = Total cost of capacity improvement projects for each district

Trip Ends = growth in PM peak trips over 20 years from SRTC travel demand model.

Developer % = Share of costs assigned to developers vs. city or grant funds. (currently 50%)

Formula for Land Use Rates

$$\text{Rate} = [(\text{Base Fee} * \text{ITE Trip Rate}) - (\text{Base Fee} * \text{ITE Trip Rate} * \text{Pass-by \%})] * \text{Trip Length Factor}$$

ITE Trip Rate = Trip generation rate from ITE Manual, varies by land use

Pass-by % = Trips that are already using the adjacent arterial and stop at the land use. Does not add new trips to the network.

Trip Length Factor = adjusts the rate to account for trip length. People drive farther to unique destinations such as Costco or the hospital, but often go to the closest grocery store or gas station.