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**Eric Holcomb, Governor**
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# Latest INDOT Traffic Adjustment Factors

Effective for 2016

The Indiana Department of Transportation (INDOT), through its Traffic Monitoring Section, collects, summarizes and interprets information on the traffic traveling on the state's highway system. The data is used to assess transportation needs, system performance and to develop highway planning and programming recommendations. Traffic data also plays a very important role in route planning and in the design of highway projects.

To collect this information, the Department operates two traffic monitoring systems:
Annual average daily traffic is the total volume for the year divided by 365 days. Only 122 of INDOT's 8,000 Traffic Sections are equipped with Continuous Traffic counters. The remaining sections are counted as part of the short term or "Coverage Count" program. The Coverage Count Program consists of more than 23,000 count locations, approximately one-third of which are counted annually. A minimum of 48 hours of count data is collected at each count location and, the 48 hour counts are then averaged to 24 before utilizing factors developed from Continuous Traffic Counters, an estimated AADT is developed. AADT is necessary for presenting a statewide picture of traffic flow, evaluating traffic trends, computing accident rates, planning and designing highways, and other purposes.

1. A Statewide Traffic Monitoring System consisting of 117 permanent continuous count stations that collect volume, speed and vehicle classification data 24 hours per day, 365 days per year. Some of these sites also utilize weigh-in motion (WIM) technology to collect continuous truck weight data. These sites are located throughout the state to monitor overall traffic trends. Information from these counters is used to determine ANNUAL TRAFFIC GROWTH trends as well as develop AXLE, WEEKDAY and SEASONAL adjustment factors used with the state’s coverage count program to determine estimates of annual average daily traffic (AADT).

2. The statewide coverage count program utilizes portable pneumatic road-tubes traffic counters and laser counters to collect 48 hour traffic counts on all State Highway System traffic sections and in rural and small urban areas and all highway performance monitoring sections (HPMS). Video data collection is also deployed. The coverage count program operates on a two-year cycle for Interstates, a three-year cycle other State Owned routes and many non-state owned urban and highly traveled rural roads, and a six-year cycle for low volume rural Federal Aid Eligible routes. One-third of all sections are collected annually, or approximately 8,000 of the 23,000 count sites. Where possible, portable classifiers are used so that approximately 65% of all coverage counts collected are classification counts. Use of video data collection expands the reach of classification counts in urban areas. Additional counts are taken within this program to support specific state projects. In addition INDOT also contracts with some Metropolitan Planning Organizations (MPOs) and Regional Planning Organizations (RPOs) to collect coverage count data within their areas as well as contracting with Consultants. We are expanding the number of MPO and RPO counting partners in the future.

## FUNCTIONAL CLASSIFICATION UPDATE

In 2010, The Federal Highway Administration (FHWA) revised its Functional Classification scheme. Prior to 2010, an interstate highway would have a different functional classification depending on whether it was in an urban or rural area. The 2010 scheme removed the urban/rural designation from the functional classification in favor to tracking that attribute separately. This reduced the number of classifications from 12 to 7. This change is reflected in numbers listed in the tables along with the classification description. For example, the Urban Interstates and Rural Interstates are both followed by the Functional Class (1)

## FACTOR GROUPS

The Federal Highway Administration (FHWA) has seven classifications of roadways and four classifications of urban/rural nature. INDOT groups these 28 potential combinations of classification and urban/rural nature into Factor Groups. For the Seasonal, Weekday, and Growth INDOT uses two groups for all urban roadways and three groups for all rural roadways. For the Axle Adjustment, INDOT uses three groups for all urban roadways and three groups for all rural roadways.

## ADJUSTMENT FACTORS

Adjustment factors are necessary to convert an Average Daily Traffic (ADT) volume into an Annual Average Daily Traffic (AADT) estimate. Depending on the type of counter, the seasonal period of the setting, multiple factors may be necessary. These include axle, weekday and seasonal adjustment factors. For the 2/3's of the system not counted in the current year, the previously derived AADTs can be adjusted to the current year by utilizing the annual growth factors.

### *AXLE ADJUSTMENT FACTORS*

There are times when portable classifiers cannot be set due to number of lanes or the lack of free-flow speeds. In these cases, portable traffic counters utilizing single pneumatic road-tubes stretched across a lane or roadway are used. These types of counters register two axle impacts as one vehicle so when vehicles with three or more axles cross the road-tube they will be counted as multiple vehicles. Whenever possible axle adjustment factors should be developed from vehicle classification counters set on the same route within the vicinity of the axle counter and during the same relative time period. If this is not possible then the use of these factors applied by functional classification and volume groups are deemed acceptable.

### *WEEKDAY ADJUSTMENT FACTORS*

The purpose of these factors is to normalize the variability of traffic counts that exists between counts taken during the weekday, Friday, Saturdays and/or Sundays. In developing the weekday factors we found no significant statistical difference in the Monday through Thursday trends and for this reason combine these into a weekday factor. This is further justified as counts taken for INDOT will usually span a Monday through Wednesday or a Tuesday through Thursday count period.

### ***SEASONAL (MONTHLY) ADJUSTMENT FACTORS***

Seasonal or monthly adjustment factors convert average daily traffic (ADT) to annual average daily traffic (AADT). Observed traffic volumes at a location often vary from month to month with higher summer traffic volumes and lower winter traffic volumes. To compare traffic volume data collected in different months, seasonal adjustment factors must be applied. The ADT is multiplied by the seasonal factor to obtain the AADT value. The continuous counter sites are grouped into five major factor groups (FG). Currently there are two urban factor groups and three rural factor groups which are based on grouped functional classifications.

### ***ANNUAL GROWTH FACTORS***

As not all road sections are counted each year, there are times when previous years AADTs will need to be factored in order to estimate current year values. Annual Growth Factors are used in these situations and are developed by comparisons of previous years AADTs at INDOT's 117 continuous counting telemetry sites and averaged for the five factor groups (FG).

## FACTOR APPLICATION

The new factors published herein were developed from data collected during the 2016 calendar year and will be applied to all counts processed into the INDOT Traffic Count Database beginning on January 1, 2016, retroactively. These factors will continue to be applied as the current factors until new factors are developed from all of the counts collected during the 2017 calendar year. Counts uploaded to the database have the most current factors applied until the development of new factors at which time; the newly developed factors are applied. Further, when the time comes to publish annual statistics for the Highway Performance Monitoring System (HPMS) submittal, the new factors are retroactively applied to all the short term counts for the respective calendar year. This will cause AADTs viewed for counts collected prior to the development of new factors to change when development is complete and the new factors are applied.

# SEASONAL ADJUSTMENT FACTORS
# BY FUNCTIONAL CLASSIFICATION 2012-2016*

**U1_SWG**

**Urban - Interstate (1), Principal Arterial (Freeways and Expressways) (2)**

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **2016** | **1.213** | **1.067** | **0.977** | **1.011** | **0.996** | **0.934** | **0.943** | **0.969** | **1.001** | **0.992** | **1.008** | **1.058** |
| **2015** | 1.158 | 1.125 | 1.017 | 0.965 | 0.980 | 0.933 | 0.940 | 0.958 | 0.974 | 0.949 | 0.993 | 1.037 |
| **2014** | 1.167 | 1.102 | 1.044 | 0.981 | 0.964 | 0.958 | 0.946 | 0.953 | 0.977 | 0.960 | 1.010 | 1.021 |
| **2013** | 1.136 | 1.079 | 1.030 | 0.995 | 0.958 | 0.954 | 0.944 | 0.934 | 0.978 | 0.970 | 1.005 | 1.057 |
| **2012** | 1.155 | 1.080 | 1.014 | 1.002 | 0.977 | 0.957 | 0.972 | 0.950 | 1.006 | 0.985 | 1.012 | 1.080 |
| **5 YR AVG** | **1.166** | **1.091** | **1.016** | **0.991** | **0.975** | **0.947** | **0.949** | **0.953** | **0.987** | **0.971** | **1.006** | **1.051** |

**U2_SWG**

**Urban - Other Principal Arterials (3), Minor Arterials (4), Collectors (5 & 6), Locals (7)**

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **2016** | **1.099** | **1.026** | **1.000** | **0.947** | **0.984** | **0.973** | **1.002** | **0.961** | **0.972** | **0.969** | **1.000** | **1.026** |
| **2015** | 1.128 | 1.076 | 1.034 | 0.966 | 0.968 | 0.980 | 0.971 | 0.955 | 0.959 | 0.970 | 1.036 | 1.048 |
| **2014** | 1.112 | 1.059 | 1.020 | 0.973 | 0.963 | 0.969 | 0.975 | 0.981 | 0.982 | 0.973 | 1.032 | 1.025 |
| **2013** | 1.095 | 1.060 | 1.052 | 0.981 | 0.950 | 0.976 | 0.976 | 0.953 | 0.970 | 0.962 | 1.015 | 1.066 |
| **2012** | 1.076 | 1.012 | 0.989 | 0.982 | 0.971 | 0.961 | 0.989 | 0.981 | 0.987 | 0.980 | 1.020 | 1.079 |
| **5 YR AVG** | **1.102** | **1.047** | **1.019** | **0.970** | **0.967** | **0.972** | **0.983** | **0.966** | **0.974** | **0.971** | **1.021** | **1.049** |

**R1_SWGA**

**Rural - Interstate (1), Principal Arterial (Freeways and Expressways) (2)**

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **2016** | **1.261** | **1.159** | **1.027** | **1.017** | **0.971** | **0.911** | **0.897** | **0.941** | **0.951** | **0.968** | **1.040** | **1.107** |
| **2015** | 1.232 | 1.182 | 1.056 | 1.000 | 0.950 | 0.909 | 0.888 | 0.915 | 0.965 | 0.954 | 0.997 | 1.053 |
| **2014** | 1.291 | 1.219 | 1.066 | 1.008 | 0.957 | 0.906 | 0.875 | 0.896 | 0.989 | 0.963 | 1.027 | 1.056 |
| **2013** | 1.233 | 1.182 | 1.078 | 1.040 | 0.961 | 0.908 | 0.834 | 0.889 | 0.984 | 0.970 | 1.019 | 1.078 |
| **2012** | 1.212 | 1.142 | 1.037 | 1.008 | 0.936 | 0.897 | 0.892 | 0.916 | 1.012 | 0.983 | 1.004 | 1.107 |
| **5 YR AVG** | **1.246** | **1.177** | **1.053** | **1.015** | **0.955** | **0.906** | **0.877** | **0.911** | **0.980** | **0.968** | **1.017** | **1.080** |

**R2_SWGA**

**Rural - Principal Arterials (3), Minor Arterials (4)**

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **2016** | **1.202** | **1.102** | **1.046** | **0.965** | **0.963** | **0.923** | **0.964** | **0.954** | **0.921** | **0.958** | **1.013** | **1.062** |
| **2015** | 1.174 | 1.119 | 1.081 | 0.994 | 0.958 | 0.961 | 0.948 | 0.930 | 0.914 | 0.972 | 1.055 | 1.090 |
| **2014** | 1.219 | 1.145 | 1.081 | 0.988 | 0.938 | 0.935 | 0.940 | 0.937 | 0.936 | 0.946 | 1.022 | 1.060 |
| **2013** | 1.127 | 1.077 | 1.059 | 0.992 | 0.957 | 0.968 | 0.966 | 0.935 | 0.948 | 0.955 | 1.001 | 1.062 |
| **2012** | 1.153 | 1.070 | 1.023 | 0.985 | 0.949 | 0.928 | 0.940 | 0.943 | 0.975 | 0.989 | 1.018 | 1.124 |
| **5 YR AVG** | **1.175** | **1.103** | **1.058** | **0.985** | **0.953** | **0.943** | **0.952** | **0.940** | **0.939** | **0.964** | **1.022** | **1.080** |

**R3_SWGA**

**Rural - Major Collectors (5), Minor Collectors (6), Locals (7)**

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **2016** | **1.153** | **1.115** | **1.064** | **0.921** | **0.937** | **0.896** | **0.956** | **0.965** | **0.951** | **0.943** | **0.993** | **1.114** |
| **2015** | 1.138 | 1.103 | 1.058 | 0.965 | 0.915 | 0.943 | 0.961 | 0.951 | 0.950 | 0.963 | 1.022 | 1.043 |
| **2014** | 1.150 | 1.121 | 1.077 | 0.952 | 0.923 | 0.954 | 0.955 | 0.979 | 0.958 | 0.981 | 1.045 | 1.074 |
| **2013** | 1.139 | 1.106 | 1.095 | 0.989 | 0.922 | 0.948 | 0.946 | 0.928 | 0.935 | 0.941 | 1.001 | 1.085 |
| **2012** | 1.166 | 1.088 | 1.028 | 0.983 | 0.930 | 0.931 | 0.954 | 0.931 | 0.960 | 0.973 | 1.020 | 1.126 |
| **5 YR AVG** | **1.149** | **1.107** | **1.064** | **0.962** | **0.925** | **0.934** | **0.954** | **0.951** | **0.951** | **0.960** | **1.016** | **1.088** |

***The seasonal adjustment factors are used to expand average 24-hour volumes to estimated Annual Average Daily Traffic (AADT).***

Source: Indiana Department of Transportation
Division of Engineering and Asset Management, Asset Planning

August 2016

# WEEKDAY FACTORS
# BY FUNCTIONAL CLASSIFICATION 2016*

**U1_SWG**

**Urban - Interstate (1), Principal Arterial (Freeways and Expressways) (2)**

| | Average | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Weekday | 0.995 | 0.984 | 1.012 | 1.012 | 1.001 | 0.980 | 1.003 | 1.013 | 0.992 | 1.013 | 0.999 | 0.987 | 0.946 |
| Monday | 1.038 | 1.036 | 1.012 | 1.038 | 1.040 | 1.030 | 1.035 | 1.097 | 1.027 | 1.056 | 1.039 | 1.028 | 1.015 |
| Tuesday | 1.013 | 0.995 | 1.033 | 1.040 | 1.013 | 1.012 | 1.034 | 1.014 | 1.022 | 1.034 | 1.018 | 0.998 | 0.946 |
| Wednesday | 0.987 | 0.987 | 1.019 | 1.019 | 0.989 | 0.975 | 1.005 | 0.997 | 0.982 | 1.007 | 0.990 | 0.950 | 0.924 |
| Thursday | 0.943 | 0.916 | 0.985 | 0.949 | 0.961 | 0.902 | 0.939 | 0.944 | 0.938 | 0.956 | 0.949 | 0.971 | 0.900 |
| Friday | 0.851 | 0.914 | 0.843 | 0.845 | 0.844 | 0.791 | 0.859 | 0.826 | 0.858 | 0.847 | 0.839 | 0.882 | 0.858 |
| Saturday | 1.070 | 1.058 | 0.980 | 1.060 | 1.078 | 1.059 | 1.065 | 1.047 | 1.081 | 1.088 | 1.072 | 1.082 | 1.167 |
| Sunday | 1.164 | 1.233 | 1.188 | 1.091 | 1.148 | 1.134 | 1.092 | 1.129 | 1.166 | 1.134 | 1.112 | 1.136 | 1.410 |

**U2_SWG**

**Urban - Other Principal Arterials (3), Minor Arterials (4), Collectors (5 & 6), Locals (7)**

| | Average | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Weekday | 0.952 | 0.933 | 0.971 | 0.966 | 0.969 | 0.961 | 0.943 | 0.953 | 0.954 | 0.965 | 0.957 | 0.938 | 0.918 |
| Monday | 0.993 | 0.984 | 0.975 | 0.991 | 0.997 | 1.023 | 0.978 | 1.059 | 0.987 | 1.025 | 0.987 | 0.970 | 0.942 |
| Tuesday | 0.949 | 0.930 | 0.978 | 0.962 | 0.977 | 0.967 | 0.952 | 0.929 | 0.951 | 0.949 | 0.955 | 0.931 | 0.909 |
| Wednesday | 0.941 | 0.927 | 0.980 | 0.953 | 0.952 | 0.937 | 0.932 | 0.922 | 0.948 | 0.950 | 0.953 | 0.923 | 0.913 |
| Thursday | 0.926 | 0.892 | 0.949 | 0.957 | 0.950 | 0.917 | 0.911 | 0.900 | 0.931 | 0.936 | 0.933 | 0.928 | 0.909 |
| Friday | 0.874 | 0.888 | 0.870 | 0.888 | 0.873 | 0.853 | 0.873 | 0.853 | 0.878 | 0.868 | 0.859 | 0.932 | 0.855 |
| Saturday | 1.103 | 1.069 | 1.053 | 1.126 | 1.103 | 1.102 | 1.085 | 1.089 | 1.112 | 1.117 | 1.102 | 1.116 | 1.160 |
| Sunday | 1.387 | 1.485 | 1.413 | 1.412 | 1.338 | 1.369 | 1.334 | 1.343 | 1.313 | 1.407 | 1.378 | 1.381 | 1.474 |

**R1_SWGA**

**Rural - Interstate (1), Principal Arterial (Freeways and Expressways) (2)**

| | Average | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Weekday | 1.009 | 0.973 | 1.009 | 1.009 | 1.023 | 1.001 | 1.02 | 1.036 | 1.014 | 1.035 | 1.032 | 1.003 | 0.954 |
| Monday | 1.052 | 1.023 | 1.029 | 1.015 | 1.076 | 1.048 | 1.047 | 1.110 | 1.052 | 1.052 | 1.078 | 1.064 | 1.028 |
| Tuesday | 1.032 | 0.994 | 1.029 | 1.038 | 1.043 | 1.041 | 1.051 | 1.045 | 1.046 | 1.069 | 1.052 | 1.034 | 0.946 |
| Wednesday | 1.003 | 0.977 | 1.028 | 1.022 | 1.013 | 0.991 | 1.026 | 1.025 | 1.009 | 1.042 | 1.030 | 0.946 | 0.923 |
| Thursday | 0.949 | 0.897 | 0.948 | 0.960 | 0.961 | 0.925 | 0.955 | 0.965 | 0.949 | 0.978 | 0.968 | 0.966 | 0.920 |
| Friday | 0.844 | 0.850 | 0.818 | 0.834 | 0.837 | 0.801 | 0.859 | 0.832 | 0.849 | 0.832 | 0.831 | 0.902 | 0.878 |
| Saturday | 1.062 | 1.084 | 1.040 | 1.078 | 1.073 | 1.048 | 1.048 | 1.019 | 1.041 | 1.052 | 1.053 | 1.040 | 1.163 |
| Sunday | 1.103 | 1.277 | 1.178 | 1.068 | 1.068 | 1.092 | 1.026 | 1.035 | 1.021 | 1.091 | 1.035 | 1.051 | 1.292 |

**R2_SWGA**

**Rural - Principal Arterials (3), Minor Arterials (4)**

| | Average | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Weekday | 0.980 | 0.940 | 0.977 | 0.987 | 0.996 | 0.980 | 0.988 | 0.970 | 0.987 | 1.023 | 0.993 | 0.963 | 0.952 |
| Monday | 1.014 | 0.979 | 0.983 | 1.002 | 1.030 | 1.037 | 1.015 | 1.020 | 1.009 | 1.068 | 1.026 | 0.990 | 1.007 |
| Tuesday | 0.981 | 0.966 | 0.997 | 0.981 | 0.997 | 0.992 | 0.995 | 0.957 | 1.009 | 1.017 | 0.970 | 0.945 | 0.949 |
| Wednesday | 0.969 | 0.937 | 0.966 | 0.986 | 0.996 | 0.958 | 0.987 | 0.946 | 0.977 | 1.006 | 0.999 | 0.939 | 0.932 |
| Thursday | 0.954 | 0.877 | 0.960 | 0.979 | 0.960 | 0.934 | 0.956 | 0.956 | 0.951 | 1.000 | 0.975 | 0.979 | 0.921 |
| Friday | 0.851 | 0.824 | 0.842 | 0.876 | 0.853 | 0.829 | 0.853 | 0.848 | 0.852 | 0.849 | 0.840 | 0.890 | 0.858 |
| Saturday | 1.047 | 1.063 | 1.007 | 1.055 | 1.094 | 1.021 | 1.035 | 1.054 | 1.074 | 1.006 | 0.991 | 1.049 | 1.120 |
| Sunday | 1.274 | 1.400 | 1.332 | 1.175 | 1.231 | 1.207 | 1.198 | 1.324 | 1.214 | 1.194 | 1.295 | 1.272 | 1.451 |

**R3_SWGA**

**Rural - Major Collectors (5), Minor Collectors (6), Locals (7)**

| | Average | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Weekday | 0.970 | 0.953 | 0.968 | 0.961 | 0.982 | 0.975 | 0.975 | 0.987 | 0.958 | 0.998 | 0.980 | 0.960 | 0.941 |
| Monday | 1.013 | 0.993 | 0.984 | 1.000 | 1.020 | 1.031 | 1.014 | 1.070 | 0.989 | 1.070 | 1.008 | 0.995 | 0.986 |
| Tuesday | 0.968 | 0.960 | 0.981 | 0.946 | 0.974 | 0.990 | 0.991 | 0.983 | 0.955 | 0.981 | 0.974 | 0.938 | 0.945 |
| Wednesday | 0.957 | 0.952 | 0.966 | 0.925 | 0.982 | 0.953 | 0.950 | 0.968 | 0.956 | 0.986 | 0.973 | 0.950 | 0.921 |
| Thursday | 0.940 | 0.905 | 0.940 | 0.971 | 0.951 | 0.926 | 0.943 | 0.927 | 0.930 | 0.955 | 0.966 | 0.955 | 0.911 |
| Friday | 0.882 | 0.894 | 0.877 | 0.894 | 0.879 | 0.853 | 0.882 | 0.858 | 0.884 | 0.895 | 0.883 | 0.915 | 0.865 |
| Saturday | 1.047 | 1.093 | 1.018 | 1.041 | 1.073 | 1.019 | 1.032 | 1.042 | 1.076 | 0.999 | 1.006 | 1.014 | 1.149 |
| Sunday | 1.274 | 1.491 | 1.312 | 1.270 | 1.133 | 1.167 | 1.199 | 1.246 | 1.261 | 1.221 | 1.259 | 1.301 | 1.431 |

***Weekday factors are used to normalize the variability of traffic counts that exists between counts taken on the Weekdays, Friday, Saturday and/or Sunday.***

Source: Indiana Department of Transportation
Division of Engineering and Asset Management
Office of Asset Planning

August 2016

# AXLE ADJUSTMENT FACTORS
# BY FUNCTIONAL CLASSIFICATION 2012-2016*

**U1_A — Urban - Interstate (1)**

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **2016** | **0.774** | **0.727** | **0.794** | **0.812** | **0.83** | **0.855** | **0.867** | **0.843** | **0.843** | **0.817** | **0.846** | **0.854** |
| **2015** | 0.789 | 0.758 | 0.797 | 0.819 | 0.827 | 0.826 | 0.813 | 0.796 | 0.79 | 0.798 | 0.799 | 0.772 |
| **2014** | 0.874 | 0.862 | 0.852 | 0.866 | 0.866 | 0.863 | 0.868 | 0.850 | 0.839 | 0.841 | 0.850 | 0.857 |
| **2013** | 0.833 | 0.844 | 0.843 | 0.831 | 0.836 | 0.846 | 0.846 | 0.841 | 0.809 | 0.829 | 0.842 | 0.840 |
| **2012** | 0.847 | 0.828 | 0.844 | 0.846 | 0.849 | 0.844 | 0.854 | 0.854 | 0.852 | 0.844 | 0.859 | 0.866 |

**U2_A — Urban - Freeways and Expressways (2) Principal Arterials (3)**

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **2016** | **0.963** | **0.968** | **0.968** | **0.958** | **0.967** | **0.966** | **0.969** | **0.967** | **0.969** | **0.968** | **0.97** | **0.937** |
| **2015** | 0.94 | 0.939 | 0.928 | 0.925 | 0.963 | 0.955 | 0.961 | 0.952 | 0.93 | 0.935 | 0.959 | 0.957 |
| **2014** | 0.951 | 0.952 | 0.940 | 0.932 | 0.935 | 0.934 | 0.932 | 0.932 | 0.928 | 0.933 | 0.931 | 0.940 |
| **2013** | 0.953 | 0.956 | 0.956 | 0.953 | 0.954 | 0.956 | 0.955 | 0.954 | 0.954 | 0.951 | 0.955 | 0.965 |
| **2012** | 0.943 | 0.943 | 0.954 | 0.941 | 0.944 | 0.943 | 0.947 | 0.936 | 0.936 | 0.935 | 0.939 | 0.943 |

**U3_A — Urban - Minor Arterials (4), Collectors (5 & 6), Locals (7)**

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **2016** | **0.936** | **0.937** | **0.935** | **0.9265** | **0.935** | **0.936** | **0.94** | **0.936** | **0.934** | **0.929** | **0.935** | **0.935** |
| **2015** | 0.935 | 0.931 | 0.931 | 0.926 | 0.927 | 0.93 | 0.929 | 0.928 | 0.925 | 0.93 | 0.936 | 0.936 |
| **2014** | 0.923 | 0.931 | 0.937 | 0.932 | 0.936 | 0.937 | 0.935 | 0.937 | 0.929 | 0.926 | 0.933 | 0.936 |
| **2013** | 0.927 | 0.929 | 0.93 | 0.931 | 0.931 | 0.929 | 0.931 | 0.927 | 0.924 | 0.915 | 0.932 | 0.936 |
| **2012** | 0.965 | 0.964 | 0.969 | 0.969 | 0.969 | 0.969 | 0.973 | 0.968 | 0.965 | 0.964 | 0.965 | 0.971 |

**R1_SWGA — Rural - Interstate (1), Principal Arterial (Freeways and Expressways) (2)**

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **2016** | **0.702** | **0.704** | **0.702** | **0.738** | **0.744** | **0.758** | **0.774** | **0.745** | **0.748** | **0.741** | **0.748** | **0.748** |
| **2015** | 0.688 | 0.664 | 0.688 | 0.688 | 0.712 | 0.695 | 0.742 | 0.731 | 0.719 | 0.712 | 0.716 | 0.689 |
| **2014** | 0.680 | 0.686 | 0.701 | 0.707 | 0.721 | 0.725 | 0.736 | 0.730 | 0.705 | 0.708 | 0.717 | 0.715 |
| **2013** | 0.702 | 0.707 | 0.728 | 0.708 | 0.731 | 0.741 | 0.753 | 0.742 | 0.728 | 0.716 | 0.733 | 0.730 |
| **2012** | 0.674 | 0.687 | 0.714 | 0.724 | 0.739 | 0.739 | 0.770 | 0.756 | 0.723 | 0.724 | 0.748 | 0.740 |

**R2_SWGA — Rural - Other Principal Arterials (3), Minor Arterials (4)**

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **2016** | **0.94** | **0.944** | **0.925** | **0.921** | **0.931** | **0.925** | **0.927** | **0.936** | **0.906** | **0.902** | **0.923** | **0.913** |
| **2015** | 0.915 | 0.884 | 0.915 | 0.912 | 0.928 | 0.93 | 0.882 | 0.855 | 0.883 | 0.881 | 0.882 | 0.913 |
| **2014** | 0.876 | 0.883 | 0.886 | 0.884 | 0.889 | 0.902 | 0.894 | 0.899 | 0.889 | 0.879 | 0.890 | 0.898 |
| **2013** | 0.894 | 0.897 | 0.902 | 0.893 | 0.890 | 0.903 | 0.900 | 0.894 | 0.897 | 0.887 | 0.895 | 0.901 |
| **2012** | 0.877 | 0.889 | 0.898 | 0.883 | 0.886 | 0.883 | 0.892 | 0.885 | 0.901 | 0.897 | 0.892 | 0.892 |

**R3_SWGA — Rural - Major Collectors (5), Minor Collectors (6), Locals (7)**

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **2016** | **0.946** | **0.937** | **0.943** | **0.973** | **0.956** | **0.967** | **0.938** | **0.932** | **0.935** | **0.912** | **0.928** | **0.928** |
| **2015** | 0.904 | 0.923 | 0.932 | 0.938 | 0.953 | 0.964 | 0.93 | 0.937 | 0.96 | 0.933 | 0.926 | 0.925 |
| **2014** | 0.965 | 0.941 | 0.945 | 0.916 | 0.927 | 0.929 | 0.932 | 0.923 | 0.917 | 0.909 | 0.912 | 0.911 |
| **2013** | 0.947 | 0.946 | 0.96 | 0.958 | 0.959 | 0.956 | 0.944 | 0.944 | 0.938 | 0.927 | 0.939 | 0.959 |
| **2012** | 0.923 | 0.923 | 0.920 | 0.927 | 0.927 | 0.927 | 0.925 | 0.926 | 0.922 | 0.927 | 0.921 | 0.940 |

***Axle Adjustment Factors are applied to counts taken with portable counters utilizing a single pneumatic road tube. This type of counter registers two axle impacts as one vehicle. The axle factor is used to account for vehicle types having more than two axles, typically trucks with three or more axles.**

Source: Indiana Department of Transportation
Division of Asset Planning
Office of Engineering and Asset Management

August 2016

# ANNUAL GROWTH FACTORS
# BY FUNCTIONAL CLASSIFICATION 2006 - 2016*

**U1_SWG — Urban - Interstate (1), Principal Arterial (Freeways and Expressways) (2)**

| YEAR TO | YEAR FROM 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | - | 0.962 | 0.982 | 0.964 | 0.960 | 0.946 | 0.937 | 0.949 | 0.928 | 0.889 |
| 2007 | 1.040 | - | 1.021 | 1.002 | 0.998 | 0.984 | 0.975 | 0.987 | 0.965 | 0.923 |
| 2008 | 1.018 | 0.979 | - | 0.981 | 0.977 | 0.963 | 0.954 | 0.966 | 0.945 | 0.904 |
| 2009 | 1.038 | 0.998 | 1.019 | - | 0.996 | 0.981 | 0.973 | 0.984 | 0.963 | 0.922 |
| 2010 | 1.042 | 1.002 | 1.023 | 1.004 | - | 0.985 | 0.976 | 0.988 | 0.967 | 0.925 |
| 2011 | 1.057 | 1.017 | 1.038 | 1.019 | 1.015 | - | 0.991 | 1.003 | 0.982 | 0.939 |
| 2012 | 1.067 | 1.026 | 1.048 | 1.028 | 1.024 | 1.009 | - | 1.012 | 0.990 | 0.948 |
| 2013 | 1.054 | 1.013 | 1.035 | 1.016 | 1.012 | 0.997 | 0.988 | - | 0.978 | 0.936 |
| 2014 | 1.077 | 1.036 | 1.058 | 1.038 | 1.034 | 1.019 | 1.010 | 1.022 | - | 0.957 |
| 2015 | 1.125 | 1.083 | 1.106 | 1.085 | 1.081 | 1.065 | 1.055 | 1.068 | 1.045 | - |
| **2016** | **1.128** | **1.086** | **1.109** | **1.088** | **1.084** | **1.068** | **1.058** | **1.071** | **1.048** | **1.003** |

**U2_SWG — Urban - Other Principal Arterials (3), Minor Arterials (4), Collectors (5 &6), Locals (7)**

| YEAR TO | YEAR FROM 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | - | 1.013 | 1.046 | 1.050 | 1.042 | 1.024 | 1.025 | 1.040 | 1.029 | 0.985 |
| 2007 | 0.987 | - | 1.032 | 1.036 | 1.029 | 1.011 | 1.012 | 1.026 | 1.016 | 0.972 |
| 2008 | 0.956 | 0.969 | - | 1.004 | 0.997 | 0.979 | 0.980 | 0.994 | 0.984 | 0.943 |
| 2009 | 0.953 | 0.965 | 0.996 | - | 0.993 | 0.975 | 0.976 | 0.990 | 0.981 | 0.938 |
| 2010 | 0.959 | 0.972 | 1.003 | 1.007 | - | 0.982 | 0.983 | 0.997 | 0.987 | 0.945 |
| 2011 | 0.977 | 0.989 | 1.021 | 1.025 | 1.018 | - | 1.001 | 1.015 | 1.005 | 0.962 |
| 2012 | 0.976 | 0.988 | 1.020 | 1.024 | 1.017 | 0.999 | - | 1.014 | 1.004 | 0.961 |
| 2013 | 0.962 | 0.975 | 1.006 | 1.010 | 1.003 | 0.985 | 0.986 | - | 0.990 | 0.948 |
| 2014 | 0.971 | 0.984 | 1.016 | 1.020 | 1.013 | 0.995 | 0.996 | 1.010 | - | 0.978 |
| 2015 | 1.015 | 1.029 | 1.061 | 1.066 | 1.058 | 1.040 | 1.041 | 1.055 | 1.022 | - |
| **2016** | **1.018** | **1.032** | **1.064** | **1.069** | **1.061** | **1.043** | **1.044** | **1.058** | **1.025** | **1.003** |

**R1_SWGA — Rural - Interstate (1), Principal Arterial (Freeways and Expressways) (2)**

| YEAR TO | YEAR FROM 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | - | 0.992 | 1.009 | 1.018 | 1.022 | 1.020 | 1.000 | 1.001 | 0.989 | 0.947 |
| 2007 | 1.008 | - | 1.017 | 1.027 | 1.031 | 1.029 | 1.008 | 1.009 | 0.997 | 0.954 |
| 2008 | 0.991 | 0.983 | - | 1.009 | 1.013 | 1.011 | 0.991 | 0.992 | 0.980 | 0.938 |
| 2009 | 0.982 | 0.974 | 0.991 | - | 1.004 | 1.002 | 0.982 | 0.983 | 0.972 | 0.930 |
| 2010 | 0.978 | 0.970 | 0.987 | 0.996 | - | 0.998 | 0.978 | 0.979 | 0.968 | 0.927 |
| 2011 | 0.980 | 0.972 | 0.989 | 0.998 | 1.002 | - | 0.980 | 0.981 | 0.970 | 0.929 |
| 2012 | 1.000 | 0.992 | 1.009 | 1.018 | 1.022 | 1.020 | - | 1.001 | 0.989 | 0.947 |
| 2013 | 0.999 | 0.991 | 1.008 | 1.017 | 1.021 | 1.019 | 0.999 | - | 0.988 | 0.945 |
| 2014 | 1.011 | 1.003 | 1.020 | 1.029 | 1.033 | 1.031 | 1.011 | 1.012 | - | 0.961 |
| 2015 | 1.056 | 1.048 | 1.066 | 1.075 | 1.079 | 1.077 | 1.056 | 1.058 | 1.041 | - |
| **2016** | **1.07** | **1.062** | **1.08** | **1.089** | **1.093** | **1.091** | **1.07** | **1.072** | **1.055** | **1.013** |

**R2_SWGA — Rural - Other Principal Arterials (3), Minor Arterials (4)**

| YEAR TO | YEAR FROM 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | - | 1.000 | 1.052 | 1.057 | 1.060 | 1.059 | 1.052 | 1.019 | 1.005 | 0.962 |
| 2007 | 1.000 | - | 1.052 | 1.057 | 1.060 | 1.059 | 1.052 | 1.019 | 1.005 | 0.962 |
| 2008 | 0.951 | 0.951 | - | 1.005 | 1.008 | 1.007 | 1.000 | 0.969 | 0.956 | 0.915 |
| 2009 | 0.946 | 0.946 | 0.995 | - | 1.003 | 1.002 | 0.995 | 0.964 | 0.951 | 0.910 |
| 2010 | 0.943 | 0.943 | 0.992 | 0.997 | - | 0.999 | 0.992 | 0.961 | 0.948 | 0.907 |
| 2011 | 0.944 | 0.944 | 0.993 | 0.998 | 1.001 | - | 0.993 | 0.962 | 0.949 | 0.908 |
| 2012 | 0.951 | 0.951 | 1.000 | 1.005 | 1.008 | 1.007 | - | 0.969 | 0.956 | 0.914 |
| 2013 | 0.981 | 0.981 | 1.032 | 1.037 | 1.040 | 1.039 | 1.032 | - | 0.986 | 0.943 |
| 2014 | 0.995 | 0.995 | 1.046 | 1.052 | 1.055 | 1.054 | 1.046 | 1.014 | - | 0.981 |
| 2015 | 1.040 | 1.040 | 1.093 | 1.099 | 1.102 | 1.101 | 1.094 | 1.060 | 1.019 | - |
| **2016** | **1.058** | **1.058** | **1.112** | **1.118** | **1.121** | **1.120** | **1.113** | **1.078** | **1.036** | **1.017** |

**R3_SWGA — Rural - Major Collectors (5), Minor Collectors (6), Locals (7)**

| YEAR TO | YEAR FROM 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | - | 0.993 | 1.062 | 1.054 | 1.058 | 1.054 | 1.054 | 1.046 | 1.036 | 0.991 |
| 2007 | 1.007 | - | 1.070 | 1.061 | 1.065 | 1.061 | 1.061 | 1.054 | 1.043 | 0.998 |
| 2008 | 0.942 | 0.935 | - | 0.992 | 0.996 | 0.992 | 0.992 | 0.985 | 0.975 | 0.934 |
| 2009 | 0.949 | 0.942 | 1.008 | - | 1.004 | 1.000 | 1.000 | 0.993 | 0.983 | 0.941 |
| 2010 | 0.945 | 0.939 | 1.004 | 0.996 | - | 0.996 | 0.996 | 0.989 | 0.979 | 0.937 |
| 2011 | 0.949 | 0.942 | 1.008 | 1.000 | 1.004 | - | 1.000 | 0.993 | 0.983 | 0.941 |
| 2012 | 0.949 | 0.942 | 1.008 | 1.000 | 1.004 | 1.000 | - | 0.993 | 0.983 | 0.941 |
| 2013 | 0.956 | 0.949 | 1.015 | 1.007 | 1.011 | 1.007 | 1.007 | - | 0.990 | 0.948 |
| 2014 | 0.965 | 0.959 | 1.025 | 1.017 | 1.021 | 1.017 | 1.017 | 1.010 | - | 0.994 |
| 2015 | 1.009 | 1.002 | 1.071 | 1.063 | 1.067 | 1.063 | 1.063 | 1.055 | 1.006 | - |
| **2016** | **1.014** | **1.007** | **1.076** | **1.068** | **1.072** | **1.068** | **1.068** | **1.060** | **1.011** | **1.005** |

***Factors in this table are used to adjust previous year AADTs to a more current year for similarly classed roads (e.g. to adjust a 2006 urban interstate AADT to a 2010 equivalent, you would multiply the 2006 AADT by 1.042).***

Source: Indiana Department of Transportation
Division of Asset Planning
Office of Engineering and Asset Management

August 2016

# TRANSITION FROM OLD TO NEW FUNCTIONAL CLASSIFICATION AND FACTOR GROUPS

| Old Functional Class Code | 2010 Functional Class Code | 2010 Funcional Class Description | Rural Code | Factor Group - Seasonal, Weekday, and Growth | Factor Group - Axle |
|---|---|---|---|---|---|
| 01 | 1 | Interstates | 0 | R1_SWGA | R1_SWGA |
| Not Applicable | 2 | Principal Arterial (Freeways and Expressways) | 0 | R1_SWGA | R1_SWGA |
| 02 | 3 | Other Principal Arterials | 0 | R2_SWGA | R2_SWGA |
| 06 | 4 | Minor Arterials | 0 | R2_SWGA | R2_SWGA |
| 07 | 5 | Major Collectors | 0 | R3_SWGA | R3_SWGA |
| 08 | 6 | Minor Collectors | 0 | R3_SWGA | R3_SWGA |
| 09 | 7 | Locals | 0 | R3_SWGA | R3_SWGA |
| 11 | 1 | Interstates | 1 | U1_SWG | U1_A |
| 12 | 2 | Principal Arterial (Freeways and Expressways) | 1 | U1_SWG | U2_A |
| 14 | 3 | Other Principal Arterials | 1 | U2_SWG | U2_A |
| 16 | 4 | Minor Arterials | 1 | U2_SWG | U3_A |
| 17 | 5 | Major Collectors | 1 | U2_SWG | U3_A |
| Not Applicable | 6 | Minor Collectors | 1 | U2_SWG | U3_A |
| 19 | 7 | Locals | 1 | U2_SWG | U3_A |
| 11 | 1 | Interstates | 2 | U1_SWG | U1_A |
| 12 | 2 | Principal Arterial (Freeways and Expressways) | 2 | U1_SWG | U2_A |
| 14 | 3 | Other Principal Arterials | 2 | U2_SWG | U2_A |
| 16 | 4 | Minor Arterials | 2 | U2_SWG | U3_A |
| 17 | 5 | Major Collectors | 2 | U2_SWG | U3_A |
| Not Applicable | 6 | Minor Collectors | 2 | U2_SWG | U3_A |
| 19 | 7 | Locals | 2 | U2_SWG | U3_A |
| 01 | 1 | Interstates | 3 | R1_SWGA | R1_SWGA |
| Not Applicable | 2 | Principal Arterial (Freeways and Expressways) | 3 | R1_SWGA | R1_SWGA |
| 02 | 3 | Other Principal Arterials | 3 | R2_SWGA | R2_SWGA |
| 06 | 4 | Minor Arterials | 3 | R2_SWGA | R2_SWGA |
| 07 | 5 | Major Collectors | 3 | R3_SWGA | R3_SWGA |
| 08 | 6 | Minor Collectors | 3 | R3_SWGA | R3_SWGA |
| 09 | 7 | Locals | 3 | R3_SWGA | R3_SWGA |

| Factor Initial |
|---|
| S = Seasonal Adjustment |
| W = Weekday Adjustment |
| G = Annual Growth |
| A = Axle Adjustment |

| Rural Code |
|---|
| 0 = Outside Urban Area Boundary, Outside Corporation Boundary |
| 1 = Inside Urban Area Boundary, Inside Corporation Boundary |
| 2 = Inside Urban Area Boundary, Outside Corporation Boundary |
| 3 = Outside Urban Area Boundary, Inside Corporation Boundary |

Source: Indiana Department of Transportation
Division of Asset Planning
Office of Engineering and Asset Management

June 2015