

2015 Pennsylvania Traffic Data



**Bureau of Planning and Research
Transportation Planning Division**



In cooperation with:
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On The Cover:
US 22/322 in Juniata County.

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Introduction

The “Pennsylvania Traffic Data Book” documents procedures for developing accurate estimates of highway traffic volumes based on sample traffic counts.

Traffic information is critical in transportation decision-making related to highway funding, traffic engineering, highway design, air quality analysis, planning and programming, as well as winter services, highway maintenance and construction.

The “Pennsylvania Traffic Data Book” provides current traffic expansion factors through the use of tables, charts, and graphs. Expansion factors allow the traffic professional to use a sample traffic count and develop reliable and comparable Annual Average Daily Traffic (AADT) estimates. All tables & charts in the “Pennsylvania Traffic Data Book” are derived from the data of permanent sites. Of the 92 sites in Pennsylvania, 79 were used to calculate the factors.

Some of the permanent sites are excluded on a year to year basis. If it is determined a permanent site has less than 50% of the current year’s data, it is not used for the factors. Reasons for a permanent site having less than 50% of the current year’s data would be construction projects or equipment malfunction.

How to Use this Booklet

This booklet provides current traffic expansion factors through the use of tables, charts, and graphs. All of the tables, charts, and graphs are listed in the Table of Contents. Refer to the description provided with each table, chart, and graph to ensure that the data presented is what you need.

Acronyms are used quite often throughout this publication. A complete list of acronyms and their meanings are located in the back of the booklet. In addition, an index was created for this booklet to help you find a particular topic quickly.

We would appreciate any comments or suggestions you can provide on information presented in this booklet. Questions or comments relating to data presented in this publication can be directed to:

Andrew O’Neill
Telephone: (717) 346-3250
Fax: (717) 783-9152
Email: andoneill@pa.gov

The 2015 Traffic Data Book and County Traffic Volume Maps are available free on our website! Traffic Volume Maps can also be purchased through our Maps and Publications Sales Store on the website.

www.penndot.gov
Select: Projects & Programs
Select: Planning
Select: Maps for the County Traffic Volume Maps
or select Traffic Information for the Traffic Data Book
or select Maps followed by Sales Store List to purchase a map

New Developments

New Permanent Continuous Automatic Vehicle Classification (CAVC) Site

A new CAVC was installed on I-283 in Lower Swatara Township of Dauphin County. The site, identified as CAVC 823 (Swatara), was part of a PennDOT Engineering District 8-0 project. The project removed the existing short term in pavement (STIP) site at the same location. CAVC 823 began collecting classification data in all four lanes in June 2015.

Virtual Weigh-In-Motion (VWIM) Site Upgrade

The permanent site located on I-78 in Windsor Township of Berks County was upgraded in the fall of 2015. The site, identified as WIM 106 (Hamburg), was upgraded to a virtual site. The site now utilizes a camera to capture images of every truck passing over the sensors in the westbound direction. The images can be remotely accessed by either PennDOT or the Pennsylvania State Police. The system is used by PennDOT to collect traffic and weight data and by the State Police as a screening tool for weight enforcement as part of an agreement between the two departments.



New Virtual WIM Camera and Solar Panels in Berks County

Traffic Data Collection

Traffic data is collected on 40,000 miles of PennDOT owned roads and 3,500 miles of local federal aid roads in Pennsylvania. Approximately 10,000 raw traffic counts are collected per year by:

- 3 Bureau of Planning and Research (BPR) Field Staff
- PennDOT Engineering District 1-0, 2-0, 10-0, and 12-0
- 9 Metropolitan Planning Organizations (MPOs)
- Contractors

Volume: The majority of the counts taken as part of our statewide count program record volume of traffic on a roadway. Volume is usually expressed as Annual Average Daily Traffic, (AADT) which represents traffic volume over an average 24-hour period.

Classification: One method of data collection used for our count program is vehicle classification. Vehicles are classified into 13 classes ranging from cars to trucks in accordance with the Federal Highway Administration vehicle classification scheme.

Weight: Truck weight data is collected from WIM stations.

Speed: Speed data is collected from permanent traffic recorders.



Short-Term traffic count being installed.

Traffic Data Collection Sources

Automatic Traffic Recorders (ATRs)

41 ATRs strategically located throughout the state count volume and speed data on a continuous basis 365 days per year. A map showing the locations of ATRs throughout the state is provided on page 11.

Short-Term In-Pavement Sites (STIP)

Approximately 175 inductive loop sites, referred to as STIP sites are installed throughout the state of Pennsylvania. Volume data is collected from these permanent sites for a 24-hour period.

Continuous Automatic Vehicle Classifier (CAVC)

38 CAVC sites collect continuous vehicle classification data. A map showing CAVC locations are provided on page 11.

Weigh-In-Motion (WIM)

13 WIM stations provide continuous truck weight and vehicle classification data. 3 of the 13 sites are VWIM. WIM stations are shown on the map on page 11.

Pneumatic Tubes

The majority of the counts are collected using pneumatic tubes. Axle counts are collected using a traffic counting device in association with a single pneumatic tube stretched across the roadway. An axle correction factor is applied to adjust vehicle axle base data for the incidence of vehicles with more than two axles.

Two tubes are used to count and classify vehicles by type based on axle configuration.

Manual Counts

Manual counts are taken on sections of roadways that are not accessible to automated data collection equipment or have safety limitations. Observers classify vehicles by type based on axle configuration.

Toll Receipts

The Delaware River Joint Toll Bridge Commission and the Delaware River Port Authority document traffic between Pennsylvania and New Jersey.

The Pennsylvania Turnpike Commission toll receipt surveys provide data on the Commonwealth's toll roads.

Permanent Traffic Recorders

Pennsylvania maintains permanent traffic recorders at 92 strategically selected locations throughout the state. These permanent sites collect traffic volume data on a continuous basis throughout the year. This data is used to develop daily and seasonal factors, as well as to identify changes in traffic patterns. Based on a research study performed by Pennsylvania State University and West Virginia University, it was determined that PennDOT locations in the traffic pattern groups were acceptable according to the FHWA Traffic Monitoring Guide.



WIM 158 in Centre County

The permanent sites use magnetic loops embedded in the pavement for vehicle detection. Additionally, CAVC sites utilize piezo sensors to classify and WIM sites utilize Lineas™ quartz sensors to weigh. The data is stored on-site in traffic counters, prior to being automatically polled every night through the use of modems located at each permanent site.

Traffic Pattern Group (TPG)

Highway traffic characteristics can vary by geographical area, roadway type, and population density. Therefore, individual traffic volume counts are categorized into one of ten Traffic Pattern Groups (TPGs). The TPGs are based on highway functional classification, geographic area, and urban/rural characteristics. Each permanent site is associated with one of the ten TPGs listed below.

TRAFFIC PATTERN GROUP	DESCRIPTION
TPG 1	URBAN - INTERSTATE
TPG 2	RURAL - INTERSTATE
TPG 3	URBAN - OTHER PRINCIPAL ARTERIALS
TPG 4	RURAL - OTHER PRINCIPAL ARTERIALS
TPG 5	URBAN - MINOR ARTERIALS, COLLECTORS, LOCAL ROADS
TPG 6	NORTH RURAL - MINOR ARTERIALS
TPG 7	CENTRAL RURAL- MINOR ARTERIALS
TPG 8	NORTH RURAL - COLLECTORS AND LOCAL ROADS
TPG 9	CENTRAL RURAL- COLLECTORS AND LOCAL ROADS
TPG 10	SPECIAL RECREATIONAL

Permanent Site data is used in computing:

- Daily, monthly, and seasonal adjustment factors by highway functional classification and geographic location.
- Yearly growth factors which are used to update older counts in the Department's Roadway Management System (RMS).
- Design hour factors (peak hour, 30th highest, and 50th highest hour) used for the design of highways.

Permanent Site Locations

This chart lists the permanent site stations by number, county, municipality, traffic route number, state route (SR), segment, and also by a physical description of where the permanent site is located in the state.

SITE #	COUNTY	MUNICIPALITY	ROUTE	SR	SEGMENT	LOCATION
1 *	Erie	Springfield Twp.	US 20	20	10	0.4 mi. E of Ohio/Pennsylvania Line (West Springfield)
2	Crawford	Richmond Twp.	PA 77	77	270	0.5 mi. W of PA 408 (New Richmond)
3	Clearfield	Huston Twp.	PA 255	255	280	1.4 mi. N of PA 153 (Penfield)
4	Tioga	Delmar Twp.	US 6	6	400	0.9 mi. W of PA 287 (Wellsboro)
5 *	Bradford	Wysox Twp.	***	1043	10	0.1 mi. NW of SR 1041 (Towanda)
8	Montgomery	Whitemarsh Twp.	PA 73	73	534	1.4 mi. NW of PA 309-Skipack Pike (Whitemarsh)
15	Fulton	Todd Twp.	US 522	522	540	1.2 mi. N of US 30 (McConnellsburg)
18 *	Butler	Summitt Twp.	PA 38	38	20	0.7 mi. NW of PA 68 (Butler)
19	Washington	Union Twp.	PA 88	88	750	0.4 mi. S of SR 1006-Washington Ave. (Finleyville)
20 *	Lawrence	Shenango Twp.	PA 65	65	264	1.1 mi. S of US 422 (New Castle)
24 *	Westmoreland	Derry Twp.	US 22	22	340	1.0 mi. E of PA 981 (New Alexandria)
27	Elk	Highland Twp.	PA 66/948	66	60	1.1 mi. E of PA 948 (Russell City)
29	Susquehanna	Rush Twp.	PA 267	267	190	0.7 mi. S of PA 367 (Lawton)
40 *	Schuylkill	Schuylkill Twp.	US 209	209	860	0.7 mi. S of PA 309 (Tamaqua)
48 *	Susquehanna	New Milford Twp.	US 11	11	420	0.8 mi. SW of PA 848 (New Milford)
51	Potter	Eulalia Twp.	PA 44	44	700	1.3 mi. SW of PA 49 (Coudersport)
106 **	Berks	Windsor Twp.	I-78	78	330	1.5 mi. W of PA 143 (Hamburg)
126 *	Jefferson	Brookville Boro.	I-80	80	790	0.6 mi. E of PA 36 (Brookville)
158 **	Centre	Boggs Twp.	I-80	80	1580	0.6 mi. E of PA 150 (Milesburg)
203 *	Allegheny	Leetsdale Boro.	PA 65	65	270	1.0 mi. S of SR 4036 (Leetsdale)
205 *	York	Manchester Twp.	I-83	83	220	1.4 mi. S of PA 238 (North York)
206	Cumberland	Wormleysburg Boro.	***	1014	30	Harvey Taylor Bridge on west approach (Harvey Taylor Bridge)
207	Erie	Springfield Twp.	I-90	90	10	1.1 mi. E of Ohio/Pennsylvania Line (West Springfield)
208	Allegheny	Churchill Boro.	I-376	376	795	1.5 mi. W of PA 791 (Monroeville)
216	Susquehanna	Great Bend Twp.	I-81	81	2314	1.1 mi. N of PA 171 (Hallstead)
301	Erie	Lawrence Park Twp.	PA 5	5	680	0.5 mi. W of PA 955 (Erie)
304	Lycoming	S. Williamsport Boro.	US 15	15	250	0.3 mi. S of I-180 (Williamsport)
306 *	Pike	Palmyra Twp.	PA 507	507	280	0.7 mi. N of PA 390 (Hawley)
317 **	Blair	Freedom Twp.	I-99	99	214	1.0 mi. S of PA 36/PA 164 (East Freedom)
323	Bedford	Bedford Twp.	US 220	220	310	0.7 mi. S of Business US 220 (Bedford Springs)
324 **	Elk	Ridgway Boro.	PA 120	120	42	1.1 mi. E of US 219 (Ridgway)
326	Clarion	Paint Twp.	US 322	322	280	0.5 mi. E of PA 66 (Clarion)
328 *	Centre	Boggs Twp.	PA 150	150	194	1.2 mi. N of I-80 (Milesburg)
330	Bucks	Northampton Twp.	PA 532	532	130	1.4 mi. SW of PA 413 (Newtown)
334 *	York	W. Manchester Twp.	US 30	30	170	0.6 mi. W of PA 116 (Thomasville)
349	Lehigh	Upper Saucon Twp.	PA 309	309	30	0.7 mi. S of PA 378 (Coopersburg)
360	Clearfield	Union Twp.	US 219	219	670	3.2 mi. S of US 322 (Luthersburg)
362	York	North Codorus Twp.	PA 616	616	240	1.6 mi. N of PA 214 (New Salem)
363	McKean	Lafayette Twp.	US 219	219	290	0.1 mi. N of PA 59 (Lewis Run)
364	Lackawanna	Newton Twp.	PA 307	307	360	50 ft. W of SR 4017 (Clarks Summit)
367	Union	Limestone Twp.	PA 45	45	250	0.6 mi. W of PA 104 (Mifflinburg)
370 *	Westmoreland	Rostraver Twp.	I-70	70	454	0.9 mi. W of PA 51 (Belle Vernon)
371	Fulton	Brush Creek Twp.	I-70	70	1522	1.1 mi. S of PA 915 (Crystal Springs)
372	Union	White Deer Twp.	I-80	80	2104	0.7 mi. E of US 15 (Milton)
374	Butler	Lancaster Twp.	I-79	79	904	3.5 mi. N of PA 68 (Zelienople)

Permanent Site Locations (Continued)

SITE #	COUNTY	MUNICIPALITY	ROUTE	SR	SEGMENT	LOCATION
375	Allegheny	N. Fayette Twp.	US 22/30	22	80	0.8 mi. E of PA 978 (Imperial)
376	Luzerne	Wilkes-Barre Twp.	I-81	81	1664	0.7 mi. N of PA 309-Exit 165A/165B (Wilkes-Barre)
377	Bucks	Bristol Twp.	I-95	95	404	2.5 mi. S of US 1 (PennDel)
378	Fayette	Redstone Twp.	US 40	40	160	0.6 mi. W of SR 4010 (Briar Hill)
379	Blair	Logan Twp.	***	4013	80	0.4 mi. E of SR 4015 (Altoona)
380 *	Berks	Exeter Twp.	PA 562	562	40	0.2 mi. W of SR 2033 (St. Lawrence)
381	Mercer	Hermitage City	***	3019	20	0.9 mi. N of PA 718 (Sharon)
382	Cambria	Lower Yoder Twp.	***	3005	40	0.7 mi. SW of PA 56 (Morrellville)
383 *	Clinton	Pine Creek Twp.	PA 150	150	360	0.5 mi. N of SR 1005 (Chatham Run)
384	Tioga	Lawence Twp.	***	4022	50	1.9 mi. E of PA 49 (Nelson)
385	Warren	Southwest Twp.	***	3002	30	0.7 mi. W of PA 27 (Enterprise)
386 *	Montour	Limestone Twp.	PA 254	254	10	2.0 mi. E of I-80 (Limestoneville)
387 *	Somerset	Brothers Valley Twp.	***	2031	110	2.0 mi. S of US 219 (Garrett)
388 *	Monroe	Ross Twp.	***	3004	170	0.4 mi. SW of SR 3015 (Saylorsburg)
389 *	Jefferson	Perry Twp.	PA 536	536	210	0.3 mi. W of SR 3011 (Frostburg)
390 *	Lancaster	West Donegal Twp.	PA 230	230	20	1.7 mi. W of PA 743/PA 241 (Elizabethtown)
391	Chester	Warwick Twp.	PA 23	23	110	1.5 mi. E of PA 345 (Warwick Area)
392	Luzerne	Foster Twp.	I-80	80	2684	5.9 mi. E of PA 309 (White Haven)
393	Washington	Donegal Twp.	I-70	70	2	0.3 mi. E of W. Virginia/Pennsylvania Line (West Alexander)
394 *	Lehigh	Upper Saucon Twp.	I-78	78	614	1.1 mi. E of PA 309/PA 145/I-78 Interchange (Allentown)
395	Fayette	German Twp.	PA 21	21	230	0.1 mi. E of SR 3023 (Uniontown)
396	Washington	North Franklin Twp.	US 40	40	320	0.4 mi E of SR 3013 (Washington)
410 **	Tioga	Nelson Twp.	PA 49	49	520	0.5 mi. W of SR 4027 (Nelson)
501 **	Tioga	Liberty Twp.	US 15	15	142	2.7 mi. N of SR 2005 (Blossburg)
502 **	Mercer	Wolf Creek Twp.	I-80	80	220	1.4 mi. W of PA 173 (Barkeyville)
503 **	Warren	Youngsville Boro.	US 6	6	420	0.6 mi. E of Railroad St (Youngsville)
504 **	Delaware	Chadds Ford Twp.	US 202	202	114	0.8 mi. N of US 1 (Dilworthtown)
505 **	Perry	Howe Twp.	US 22	22	160	0.7 mi. E of PA 34 (Newport)
506 **	Blair	Allegheny Twp.	***	1001	30	0.2 mi. N of SR 1002 (Altoona)
600 **	Franklin	Southampton Twp.	I-81	81	244	0.7 mi. N of PA 696 (Shippensburg)
700 **	Indiana	Armstrong Twp.	US 422	422	120	0.5 mi. W of SR 4004 (Indiana)
800 *	Centre	Spring Twp.	I-99	99	800	1.2 mi. N of PA 150 (Bellefonte)
801 *	Dauphin	Lower Paxton Twp.	I-81	81	714	0.7 mi. S of SR 3019 (Paxtonia)
802 *	Monroe	Coolbaugh Twp.	PA 423	423	140	0.2 mi. E of I-380 (Tobyhanna)
803 *	Adams	Freedom Twp.	US 15	15	20	0.5 mi. N of Maryland/Pennsylvania Line (Gettysburg)
804 *	Washington	Canton Twp.	I-70	70	160	1.3 mi. E of US 40 (Washington)
805 *	Crawford	N. Shenango Twp.	PA 285	285	20	0.1 mi. E of SR 3007 (Espyville)
806 *	Westmoreland	Hempfield Twp.	US 30	30	170	0.2 mi. E of Strawberry Lane (Jeannette)
807 *	Washington	Twilight Boro.	I-70	70	380	0.6 mi. W of Exit 39 (Spears)
808 *	Indiana	W. Wheatfield Twp.	US 22	22	242	0.2 mi. E of Bethel Cemetery Rd. (Clyde)
809 *	McKean	Foster Twp.	US 219	219	594	50 ft. S of Tuna Crossroads Bridge (Foster Brook)
810 *	Bucks	Doylestown Twp.	US 611	611	130	0.3 mi. S of SR 4202 (Doylestown)
811 *	Cumberland	Hampden Twp.	PA 581	581	10	Between the I-81 Junction and Creekview Rd. Exit (Creek View)
812 *	Westmoreland	S. Greenburg Twp.	US 30	30	300	Between Exits for SR 119 and Cedar St. (Cedar Creek)
813 *	Cumberland	Camp Hill Boro.	PA 581	581	120	Between US 11/15 and I-83 (Camp Hill)
823 *	Dauphin	Lower Swatara Twp.	PA 283	283	4	1.1 mi. S of SR 441 (Swatara)
985 *	Cambria	Richland Twp.	US 219	219	120	1.6 mi. N of PA 56 (St. Michael)

* Indicates CAVC site

** Indicates WIM site

*** Indicates road is not a PA, US, or Interstate Route

Long-Term Pavement Performance Program (LTPP)

The Long Term Pavement Performance (LTPP) program was established under the Strategic Highway Research Program (SHRP). The first five years of the LTPP program were funded and managed under SHRP. Beginning in 1991, the Federal Highway Administration (FHWA) has sustained the management and funding of the program.

The Federal Highway Administration assumed coordination of a national program to move the products evaluated or developed under SHRP to the state and local agencies upon completion of the research phase.

LTPP, which is a study of in-service pavements, provides the basis for pavement design, maintenance, rehabilitation, and construction methodologies. The LTPP program monitors and collects pavement performance data on all active LTPP sites. The Bureau supports this program by collecting weight and vehicle classification data and reporting the data to LTPP.

ATR, CAVC and WIM Locations Map (Opposite)

The ATR, CAVC, and WIM locations map of Pennsylvania, which is shown on the following page, gives an overview of where all of the ATR, CAVC and WIM sites are located. Symbols are used in addition to the site number to identify the location of the site.



US 22/US 322 in Juniata County

Permanent Site Locations by Traffic Pattern Group (TPG)

This chart groups the permanent site locations by Traffic Pattern Group. It gives the permanent site number, route, and the urban area or county depending on the TPG into which the permanent site falls. The Annual Average Daily Traffic (AADT) for each permanent site is also listed on this chart.

PERMANENT SITE LOCATIONS BY TPG							
TPG 1: URBAN INTERSTATE				TPG 2: RURAL INTERSTATE			
SITE #	ROUTE	URBAN AREA	AADT	SITE #	ROUTE	COUNTY	AADT
208	I-376	PITTSBURGH	92,030	106	I-78	BERKS	43,133
317	I-99	ALTOONA	13,152	126	I-80	JEFFERSON	26,181
370	I-70	MONESSEN	30,969	158	I-80	CENTRE	26,238
376	I-81	WILKES-BARRE	59,023	207	I-90	ERIE	21,452
377	I-95	PHILADELPHIA	60,154	371	I-70	FULTON	19,391
394	I-78	ALLENTOWN	65,047	372	I-80	UNION	26,767
801	I-81	HARRISBURG	77,422	392	I-80	LUZERNE	24,347
804	I-70	PITTSBURGH	49,356	393	I-70	WASHINGTON	34,213
807	I-70	MONESSEN	32,619	502	I-80	MERCER	26,521
823	I-283	HARRISBURG	54,840	600	I-81	FRANKLIN	42,039
				800	I-99	CENTRE	22,615

PERMANENT SITE LOCATIONS BY TPG							
TPG 3: URBAN PRINCIPAL ARTERIAL				TPG 4: RURAL PRINCIPAL ARTERIAL			
SITE #	ROUTE	URBAN AREA	AADT	SITE #	ROUTE	COUNTY	AADT
8	PA 73	PHILADELPHIA	17,477	4	US 6	TIOGA	2,602
203	PA 65	PITTSBURGH	19,459	19	PA 88	WASHINGTON	5,739
206	H. Taylor Br.	HARRISBURG	26,749	24	US 22	WESTMORELAND	20,004
301	PA 5	ERIE	13,620	323	US 220	BEDFORD	4,347
304	US 15	WILLIAMSPORT	28,218	324	PA 120	ELK	4,208
330	PA 532	PHILADELPHIA	10,988	326	US 322	CLARION	8,935
334	US 30	YORK	17,213	360	US 219	CLEARFIELD	2,636
349	PA 309	ALLENTOWN	37,781	363	US 219	MCKEAN	4,905
375	US 22/30	PITTSBURGH	23,191	378	US 40	FAYETTE	7,561
395	PA 21	FAYETTE	9,490	501	US 15	TIOGA	10,343
396	US 40	PITTSBURGH	12,995	505	US 22	PERRY	21,902
806	US 30	GREENSBURG	29,237	700	US 422	INDIANA	12,952
810	PA 611	DOYLESTOWN	36,157	808	US 22	INDIANA	13,485
811	PA 581	HARRISBURG	45,707	985	US 219	JOHNSTOWN	18,537
812	US 30	GREENSBURG	47,967				
813	PA 581	HARRISBURG	86,195				

Permanent Site Locations by TPG (Continued)

PERMANENT SITE LOCATIONS BY TPG							
TPG 5: URBAN MINOR ARTERIAL/COLLECTOR				TPG 6: NORTH RURAL MINOR ARTERIAL			
SITE #	ROUTE	URBAN AREA	AADT	SITE #	ROUTE	COUNTY	AADT
18	PA 38	BUTLER	6,628	2	PA 77	CRAWFORD	1,944
20	PA 65	NEW CASTLE	7,179	3	PA 255	CLEARFIELD	5,585
381	SR 3019	YOUNGSTOWN	437	27	PA 66/948	ELK	2,748
382	SR 3005	JOHNSTOWN	1,722	51	PA 44	POTTER	3,105
390	PA 230	LANCASTER	6,216	328	PA 150	CENTRE	4,768
506	SR 1001	ALTOONA	16,148				

PERMANENT SITE LOCATIONS BY TPG							
TPG 7: CENTRAL RURAL MINOR ARTERIAL				TPG 8: NORTH RURAL COLLECTOR			
SITE #	ROUTE	COUNTY	AADT	SITE #	ROUTE	COUNTY	AADT
1	US 20	ERIE	3,093	5	SR 1043	BRADFORD	1,505
15	US 522	FULTON	5,208	29	PA 267	SUSQUEHANNA	1,235
40	US 209	SCHUYLKILL	4,371	383	PA 150	CLINTON	4,179
367	PA 45	UNION	6,035	384	SR 4022	TIOGA	371
391	PA 23	CHESTER	8,054	802	PA 423	MONROE	3,819

PERMANENT SITE LOCATIONS BY TPG							
TPG 9: CENTRAL RURAL COLLECTOR				TPG 10: SPECIAL RECREATIONAL			
SITE #	ROUTE	COUNTY	AADT	SITE #	ROUTE	COUNTY	AADT
362	PA 616	YORK	6,043	306	PA 507	PIKE	5,435
364	PA 307	LACKAWANNA	4,952	805	PA 285	CRAWFORD	2,867
386	PA 254	MONTOUR	2,157				
387	SR 2031	SOMERSET	3,351				
389	PA 536	JEFFERSON	1,905				

2015 Peak Hour by Traffic Pattern Group (TPG)

2015 Peak Hour by Traffic Pattern Group (TPG)													
TPG 1: Urban Interstate							TPG 2: Rural Interstate						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
208	11/13	6:00 PM	Fri	8,141	8.85%	92,030	106	11/29	2:00 PM	Sun	4,969	11.52%	43,133
317	9/4	4:00 PM	Fri	1,854	14.10%	13,152	126	11/29	2:00 PM	Sun	3,900	14.90%	26,181
370	9/4	4:00 PM	Fri	3,362	10.86%	30,969	158	11/29	2:00 PM	Sun	3,735	14.24%	26,238
376	11/24	4:00 PM	Tue	5,944	10.07%	59,023	207	7/5	3:00 PM	Sun	3,475	16.20%	21,452
377	10/22	5:00 PM	Thur	6,040	10.04%	60,154	371	7/5	1:00 PM	Sun	3,590	18.51%	19,391
394	5/1	4:00 PM	Fri	6,241	9.59%	65,047	372	11/29	3:00 PM	Sun	4,457	16.65%	26,767
801	2/17	12:00 PM	Tue	7,698	9.94%	77,422	392	11/29	4:00 PM	Sun	4,035	16.57%	24,347
804	11/29	1:00 PM	Sun	5,333	10.81%	49,356	393	11/29	2:00 PM	Sun	4,538	13.26%	34,213
807	1/7	4:00 PM	Wed	4,217	12.93%	32,619	502	11/29	2:00 PM	Sun	3,979	15.00%	26,521
823	10/16	3:00 PM	Fri	4,644	8.47%	54,840	600	7/6	3:00 PM	Mon	4,288	10.20%	42,039
							800	11/20	4:00 PM	Fri	3,058	13.52%	22,615

2015 Peak Hour by Traffic Pattern Group (TPG)													
TPG 3: Urban Principal Arterial							TPG 4: Rural Principal Arterial						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
8	10/6	7:00 AM	Tue	2,155	12.33%	17,477	4	10/11	2:00 PM	Sun	430	16.53%	2,602
203	4/24	3:00 PM	Fri	2,075	10.66%	19,459	19	9/15	4:00 PM	Tue	739	12.88%	5,739
206	8/17	4:00 PM	Mon	3,915	14.64%	26,749	24	11/29	2:00 PM	Sun	2,373	11.86%	20,004
301	11/19	4:00 PM	Thur	1,691	12.42%	13,620	323	9/4	4:00 PM	Fri	576	13.25%	4,347
304	5/8	3:00 PM	Fri	2,990	10.60%	28,218	324	6/18	3:00 PM	Thur	656	15.59%	4,208
330	6/17	5:00 PM	Wed	1,193	10.86%	10,988	326	5/8	3:00 PM	Fri	1,252	14.01%	8,935
334	10/19	7:00 AM	Mon	1,999	11.61%	17,213	360	8/25	2:00 PM	Tue	366	13.88%	2,636
349	12/11	4:00 PM	Fri	3,557	9.41%	37,781	363	9/4	3:00 PM	Fri	599	12.21%	4,905
375	7/31	5:00 PM	Fri	2,823	12.17%	23,191	378	1/23	4:00 PM	Fri	828	10.95%	7,561
395	1/23	4:00 PM	Fri	978	10.31%	9,490	501	11/29	1:00 PM	Sun	1,784	17.25%	10,343
396	12/22	1:00 PM	Tue	1,627	12.52%	12,995	505	11/29	4:00 PM	Sun	3,157	14.41%	21,902
806	12/22	4:00 PM	Tue	2,951	10.09%	29,237	700	9/4	3:00 PM	Fri	1,648	12.72%	12,952
810	12/3	4:00 PM	Thur	3,736	10.33%	36,157	808	9/4	3:00 PM	Fri	1,942	14.40%	13,485
811	10/29	4:00 PM	Thur	4,956	10.84%	45,707	985	11/20	4:00 PM	Fri	2,198	11.86%	18,537
812	12/18	3:00 PM	Fri	5,026	10.48%	47,967							
813	10/1	7:00 AM	Thur	7,501	8.70%	86,195							

2015 Peak Hour by TPG (Continued)

2015 Peak Hour by Traffic Pattern Group (TPG)													
TPG 5: Urban Minor Arterial/Collector							TPG 6: North Rural Minor Arterial						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
18	4/17	4:00 PM	Fri	823	12.42%	6,628	2	4/18	3:00 PM	Sat	292	15.02%	1,944
20	9/11	4:00 PM	Fri	768	10.70%	7,179	3	9/7	12:00 PM	Mon	753	13.48%	5,585
381	8/2	8:00 PM	Sun	101	23.11%	437	27	7/5	12:00 PM	Sun	457	16.63%	2,748
382	10/30	4:00 PM	Fri	230	13.36%	1,722	51	7/31	3:00 PM	Fri	386	12.43%	3,105
390	5/13	3:00 PM	Wed	801	12.89%	6,216	328	11/9	4:00 PM	Mon	683	14.32%	4,768
506	12/18	11:00 AM	Fri	1,796	11.12%	16,148							

2015 Peak Hour by Traffic Pattern Group (TPG)													
TPG 7: Central Rural Minor Arterial							TPG 8: North Rural Collector						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
1	10/13	3:00 PM	Tue	578	18.69%	3,093	5	4/30	4:00 PM	Thur	240	15.95%	1,505
15	10/16	3:00 PM	Fri	853	16.38%	5,208	29	1/15	2:00 PM	Thur	210	17.00%	1,235
40	2/11	1:00 PM	Wed	559	12.79%	4,371	383	8/12	5:00 PM	Wed	737	17.64%	4,179
367	8/7	5:00 PM	Fri	829	13.74%	6,035	384	12/1	4:00 PM	Tue	95	25.61%	371
391	10/16	4:00 PM	Fri	970	12.04%	8,054	802	8/28	3:00 PM	Fri	694	18.17%	3,819

2015 Peak Hour by Traffic Pattern Group (TPG)													
TPG 9: Central Rural Collector							TPG 10: Special Recreational						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
362	4/9	4:00 PM	Thur	646	10.69%	6,043	306	5/23	11:00 AM	Sat	868	15.97%	5,435
364	5/29	4:00 PM	Fri	618	12.48%	4,952	805	5/24	12:00 PM	Sun	867	30.24%	2,867
386	10/16	6:00 AM	Fri	485	22.48%	2,157							
387	8/28	5:00 PM	Fri	493	14.71%	3,351							
389	4/27	3:00 PM	Mon	265	13.91%	1,905							

2015 30th Highest Hour by Traffic Pattern Group (TPG)

2015 30th Highest Hour by Traffic Pattern Group													
TPG 1: Urban Interstate							TPG 2: Rural Interstate						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
208	5/7	6:00 PM	Thur	7,853	8.53%	92,030	106	8/16	4:00 PM	Sun	4,133	9.58%	43,133
317	11/25	4:00 PM	Wed	1,526	11.60%	13,152	126	7/5	12:00 PM	Sun	2,505	9.57%	26,181
370	7/31	3:00 PM	Fri	3,083	9.96%	30,969	158	10/9	4:00 PM	Fri	2,403	9.16%	26,238
376	8/14	4:00 PM	Fri	5,569	9.44%	59,023	207	8/2	2:00 PM	Sun	2,809	13.09%	21,452
377	10/19	5:00 PM	Mon	5,681	9.44%	60,154	371	8/9	2:00 PM	Sun	2,894	14.92%	19,391
394	4/2	5:00 PM	Thur	5,857	9.00%	65,047	372	4/2	4:00 PM	Thur	2,810	10.50%	26,767
801	2/6	4:00 PM	Fri	6,323	8.17%	77,422	392	8/21	5:00 PM	Fri	2,598	10.67%	24,347
804	5/15	5:00 PM	Fri	4,487	9.09%	49,356	393	8/2	3:00 PM	Sun	3,391	9.91%	34,213
807	8/12	4:00 PM	Wed	3,192	9.79%	32,619	502	9/7	3:00 PM	Mon	2,717	10.24%	26,521
823	9/22	7:00 AM	Tue	4,391	8.01%	54,840	600	12/27	12:00 PM	Sun	3,841	9.14%	42,039
							800	10/7	7:00 AM	Wed	2,552	11.28%	22,615

2015 30th Highest Hour by Traffic Pattern Group													
TPG 3: Urban Principal Arterial							TPG 4: Rural Principal Arterial						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
8	9/16	7:00 AM	Wed	2,043	11.69%	17,477	4	4/18	12:00 PM	Sat	301	11.57%	2,602
203	11/20	4:00 PM	Fri	1,905	9.79%	19,459	19	4/29	4:00 PM	Wed	616	10.73%	5,739
206	4/15	7:00 AM	Wed	3,626	13.56%	26,749	24	10/30	5:00 PM	Fri	2,089	10.44%	20,004
301	6/23	3:00 PM	Tue	1,505	11.05%	13,620	323	11/20	3:00 PM	Fri	489	11.25%	4,347
304	9/25	3:00 PM	Fri	2,839	10.06%	28,218	324	8/26	3:00 PM	Wed	503	11.95%	4,208
330	3/13	5:00 PM	Fri	1,109	10.09%	10,988	326	5/12	4:00 PM	Tue	1,084	12.13%	8,935
334	4/23	4:00 PM	Thur	1,529	8.88%	17,213	360	5/8	3:00 PM	Fri	287	10.89%	2,636
349	4/30	4:00 PM	Thur	3,310	8.76%	37,781	363	9/4	1:00 PM	Fri	539	10.99%	4,905
375	5/8	4:00 PM	Fri	2,320	10.00%	23,191	378	7/10	4:00 PM	Fri	757	10.01%	7,561
395	1/23	5:00 PM	Fri	894	9.42%	9,490	501	7/12	3:00 PM	Sun	1,298	12.55%	10,343
396	12/18	3:00 PM	Fri	1,390	10.70%	12,995	505	3/15	3:00 PM	Sun	2,412	11.01%	21,902
806	4/23	4:00 PM	Thur	2,757	9.43%	29,237	700	4/17	3:00 PM	Fri	1,372	10.59%	12,952
810	11/12	4:00 PM	Thur	3,594	9.94%	36,157	808	5/22	4:00 PM	Fri	1,438	10.66%	13,485
811	3/13	4:00 PM	Fri	4,745	10.38%	45,707	985	6/26	4:00 PM	Fri	2,044	11.03%	18,537
812	10/23	4:00 PM	Fri	4,571	9.53%	47,967							
813	12/10	3:00 PM	Thur	7,214	8.37%	86,195							

2015 30th Highest Hour by TPG (Continued)

2015 30th Highest Hour by Traffic Pattern Group													
TPG 5: Urban Minor Arterial/Collector							TPG 6: North Rural Minor Arterial						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
18	4/7	4:00 PM	Tue	735	11.09%	6,628	2	8/3	4:00 PM	Mon	231	11.88%	1,944
20	9/8	4:00 PM	Tue	721	10.04%	7,179	3	10/12	2:00 PM	Mon	632	11.32%	5,585
381	6/23	4:00 PM	Tue	52	11.90%	437	27	5/15	2:00 PM	Fri	348	12.66%	2,748
382	4/2	3:00 PM	Thur	197	11.44%	1,722	51	9/24	3:00 PM	Thur	338	10.89%	3,105
390	8/26	4:00 PM	Wed	659	10.60%	6,216	328	5/16	3:00 PM	Sat	525	11.01%	4,768
506	11/20	4:00 PM	Fri	1,659	10.27%	16,148							

2015 30th Highest Hour by Traffic Pattern Group													
TPG 7: Central Rural Minor Arterial							TPG 8: North Rural Collector						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
1	4/1	3:00 PM	Wed	336	10.86%	3,093	5	6/18	3:00 PM	Thur	180	11.96%	1,505
15	12/14	3:00 PM	Mon	643	12.35%	5,208	29	6/4	5:00 PM	Thur	147	11.90%	1,235
40	4/2	5:00 PM	Thur	450	10.30%	4,371	383	7/15	4:00 PM	Wed	478	11.44%	4,179
367	12/4	5:00 PM	Fri	639	10.59%	6,035	384	7/17	4:00 PM	Fri	54	14.56%	371
391	10/27	4:00 PM	Tue	874	10.85%	8,054	802	10/21	4:00 PM	Wed	566	14.82%	3,819

2015 30th Highest Hour by Traffic Pattern Group													
TPG 9: Central Rural Collector							TPG 10: Special Recreational						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
362	10/16	5:00 PM	Fri	616	10.19%	6,043	306	7/25	10:00 AM	Sat	726	13.36%	5,435
364	7/3	10:00 AM	Fri	563	11.37%	4,952	805	7/5	2:00 PM	Sun	616	21.49%	2,867
386	12/3	7:00 AM	Thur	238	11.03%	2,157							
387	7/15	4:00 PM	Wed	360	10.74%	3,351							
389	5/29	3:00 PM	Fri	228	11.97%	1,905							

2015 50th Highest Hour by Traffic Pattern Group (TPG)

2015 50th Highest Hour by Traffic Pattern Group													
TPG 1: Urban Interstate							TPG 2: Rural Interstate						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
208	4/2	5:00 PM	Thur	7,779	8.45%	92,030	106	8/9	1:00 PM	Sun	4,008	9.29%	43,133
317	7/24	4:00 PM	Fri	1,479	11.25%	13,152	126	5/22	5:00 PM	Fri	2,413	9.22%	26,181
370	3/6	4:00 PM	Fri	3,002	9.69%	30,969	158	12/27	12:00 PM	Sun	2,280	8.69%	26,238
376	4/2	3:00 PM	Thur	5,459	9.25%	59,023	207	9/7	4:00 PM	Mon	2,705	12.61%	21,452
377	12/9	5:00 PM	Wed	5,605	9.32%	60,154	371	8/16	4:00 PM	Sun	2,811	14.50%	19,391
394	10/15	4:00 PM	Thur	5,800	8.92%	65,047	372	4/3	4:00 PM	Fri	2,705	10.11%	26,767
801	3/9	4:00 PM	Mon	6,227	8.04%	77,422	392	10/11	4:00 PM	Sun	2,510	10.31%	24,347
804	3/13	4:00 PM	Fri	4,415	8.95%	49,356	393	7/5	5:00 PM	Sun	3,286	9.60%	34,213
807	8/7	4:00 PM	Fri	3,139	9.62%	32,619	502	8/14	2:00 PM	Fri	2,641	9.96%	26,521
823	10/22	7:00 AM	Thur	4,349	7.93%	54,840	600	10/16	4:00 PM	Fri	3,775	8.98%	42,039
							800	10/16	5:00 PM	Fri	2,500	11.05%	22,615

2015 50th Highest Hour by Traffic Pattern Group													
TPG 3: Urban Principal Arterial							TPG 4: Rural Principal Arterial						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
8	10/6	5:00 PM	Tue	2,023	11.58%	17,477	4	5/25	12:00 PM	Mon	286	10.99%	2,602
203	6/4	5:00 PM	Thur	1,879	9.66%	19,459	19	7/20	4:00 PM	Mon	599	10.44%	5,739
206	9/1	7:00 AM	Tue	3,583	13.39%	26,749	24	5/22	4:00 PM	Fri	1,994	9.97%	20,004
301	5/13	4:00 PM	Wed	1,484	10.90%	13,620	323	8/7	3:00 PM	Fri	471	10.84%	4,347
304	6/5	5:00 PM	Fri	2,795	9.91%	28,218	324	11/6	3:00 PM	Fri	491	11.67%	4,208
330	5/14	6:00 PM	Thur	1,076	9.79%	10,988	326	4/3	2:00 PM	Fri	1,043	11.67%	8,935
334	6/5	3:00 PM	Fri	1,507	8.76%	17,213	360	11/13	3:00 PM	Fri	280	10.62%	2,636
349	12/22	4:00 PM	Tue	3,273	8.66%	37,781	363	6/26	3:00 PM	Fri	525	10.70%	4,905
375	2/13	4:00 PM	Fri	2,238	9.65%	23,191	378	10/5	4:00 PM	Mon	749	9.91%	7,561
395	5/1	4:00 PM	Fri	879	9.26%	9,490	501	7/26	4:00 PM	Sun	1,231	11.90%	10,343
396	7/10	4:00 PM	Fri	1,357	10.44%	12,995	505	1/16	4:00 PM	Fri	2,344	10.70%	21,902
806	12/2	4:00 PM	Wed	2,730	9.34%	29,237	700	5/1	4:00 PM	Fri	1,334	10.30%	12,952
810	11/3	7:00 AM	Tue	3,552	9.82%	36,157	808	11/25	4:00 PM	Wed	1,409	10.45%	13,485
811	9/22	4:00 PM	Tue	4,680	10.24%	45,707	985	10/9	4:00 PM	Fri	2,018	10.89%	18,537
812	12/28	4:00 PM	Mon	4,512	9.41%	47,967							
813	3/26	4:00 PM	Thur	7,165	8.31%	86,195							

2015 50th Highest Hour by TPG (Continued)

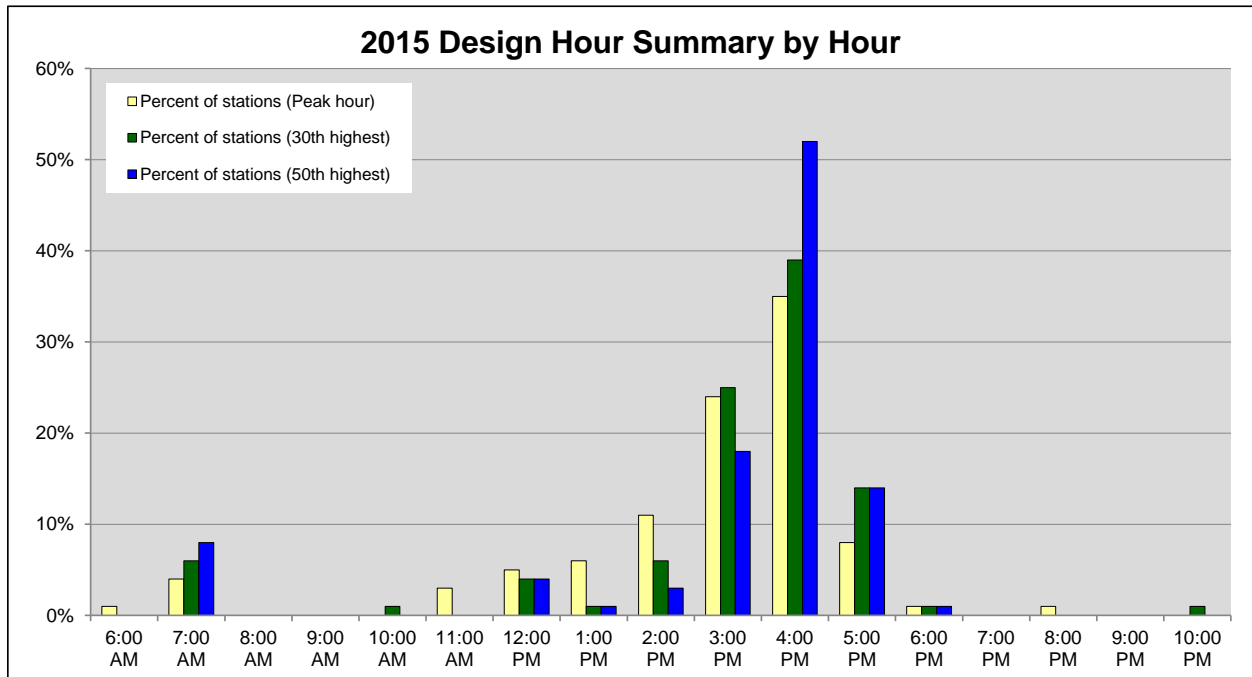
2015 50th Highest Hour by Traffic Pattern Group													
TPG 5: Urban Minor Arterial/Collector							TPG 6: North Rural Minor Arterial						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
18	2/27	4:00 PM	Fri	713	10.76%	6,628	2	5/21	4:00 PM	Thur	221	11.37%	1,944
20	4/30	4:00 PM	Thur	708	9.86%	7,179	3	9/25	3:00 PM	Fri	603	10.80%	5,585
381	5/15	4:00 PM	Fri	50	11.44%	437	27	7/2	3:00 PM	Thur	332	12.08%	2,748
382	9/22	3:00 PM	Tue	192	11.15%	1,722	51	4/8	4:00 PM	Wed	329	10.60%	3,105
390	9/15	7:00 AM	Tue	645	10.38%	6,216	328	4/27	7:00 AM	Mon	509	10.68%	4,768
506	12/17	3:00 PM	Thur	1,614	10.00%	16,148							

2015 50th Highest Hour by Traffic Pattern Group													
TPG 7: Central Rural Minor Arterial							TPG 8: North Rural Collector						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
1	1/9	5:00 PM	Fri	323	10.44%	3,093	5	6/30	4:00 PM	Tue	175	11.63%	1,505
15	9/11	3:00 PM	Fri	623	11.96%	5,208	29	5/18	4:00 PM	Mon	139	11.26%	1,235
40	11/11	3:00 PM	Wed	437	10.00%	4,371	383	9/2	4:00 PM	Wed	471	11.27%	4,179
367	8/21	4:00 PM	Fri	615	10.19%	6,035	384	6/4	5:00 PM	Thur	51	13.75%	371
391	5/7	4:00 PM	Thur	844	10.48%	8,054	802	10/6	4:00 PM	Tue	556	14.56%	3,819

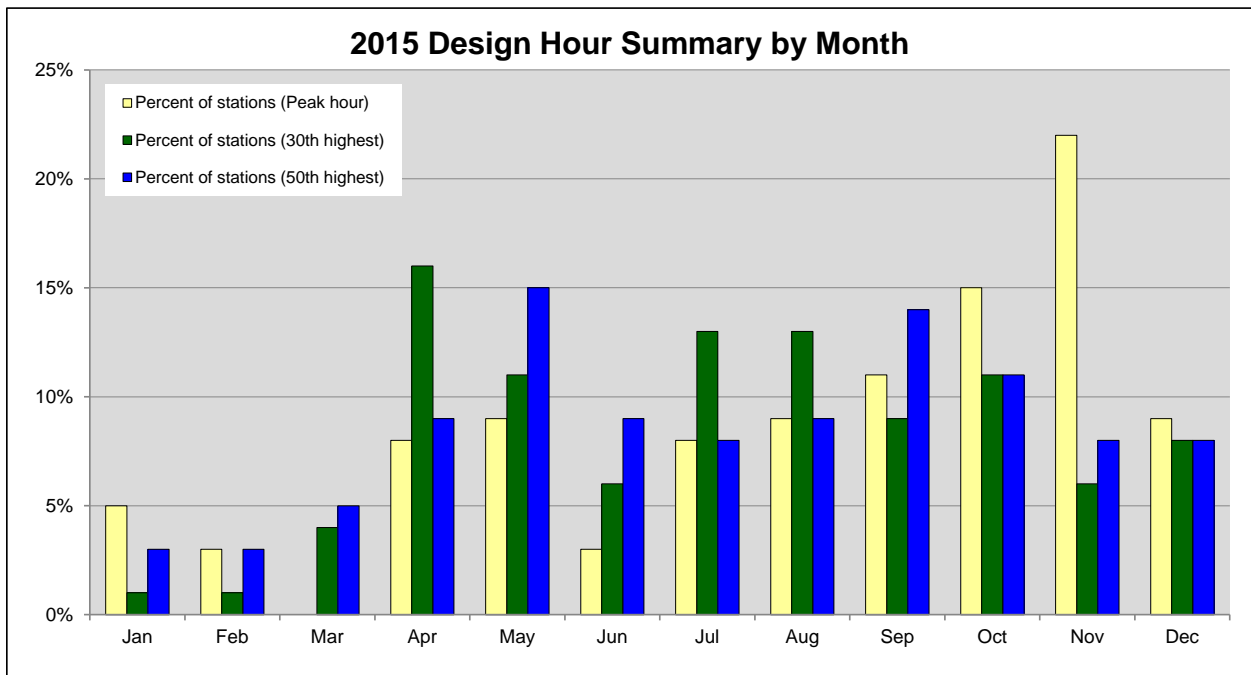
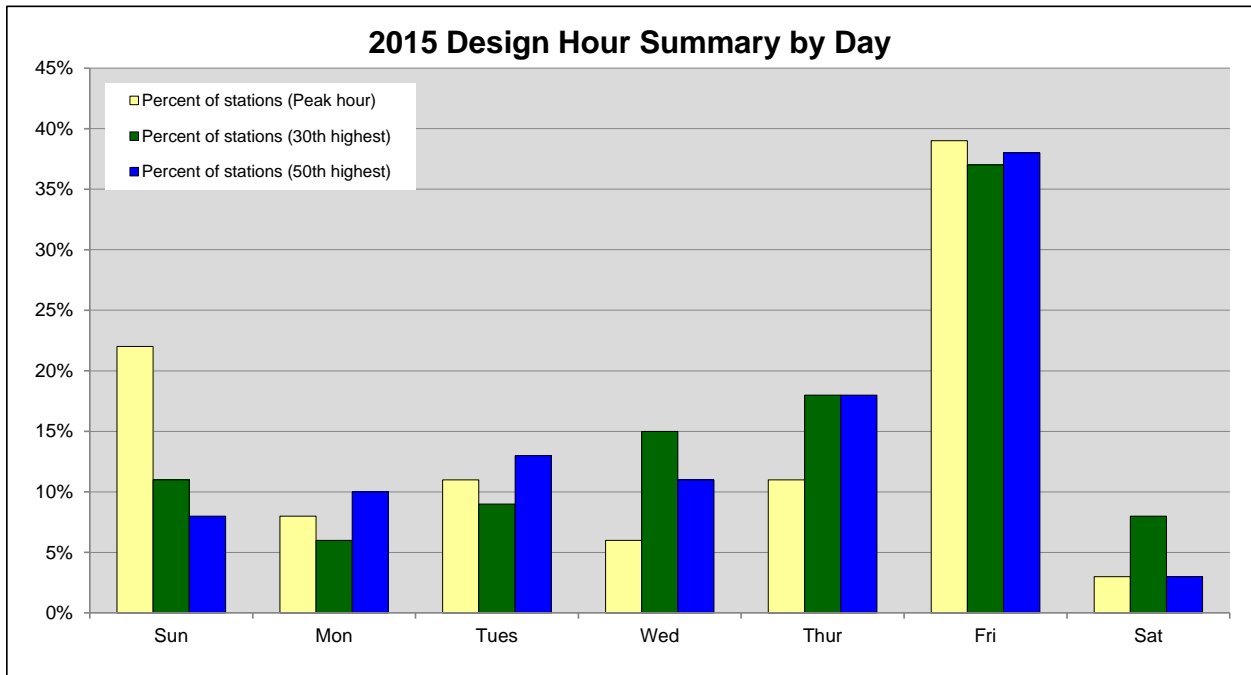
2015 50th Highest Hour by Traffic Pattern Group													
TPG 9: Central Rural Collector							TPG 10: Special Recreational						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
362	9/23	3:00 PM	Wed	607	10.04%	6,043	306	5/23	4:00 PM	Sat	675	12.42%	5,435
364	6/19	5:00 PM	Fri	549	11.09%	4,952	805	8/8	12:00 PM	Sat	569	19.85%	2,867
386	11/24	7:00 AM	Tue	231	10.71%	2,157							
387	9/3	4:00 PM	Thur	349	10.41%	3,351							
389	9/16	3:00 PM	Wed	219	11.50%	1,905							

2015 Design Hour Summaries: Peak, 30th and 50th Highest Hour

Design Hour Volume (DHV) is the hourly traffic volume used in the design of highways. The DHV is usually represented by the 30th highest hourly volume of the future year chosen for design. The following three graphs show the peak, 30th and 50th highest hour summary by hour, day, and month.



2015 Design Hour Summaries: Peak, 30th and 50th Highest Hour



Five Year Summary of Annual Average Daily Traffic (AADT) from Permanent Sites

This chart shows the permanent site station numbers and their Annual Average Daily Traffic (AADT) for the past five years, 2011 through 2015. The percent change is also given for 2014 to 2015 and 2011 to 2015, showing where traffic has increased or decreased.

**Indicates there is no data available.*

Site #	Annual Average Daily Traffic (AADT)					Percent Change	
	2011	2012	2013	2014	2015	2014-2015	2011-2015
1	**	3,486	3,477	3,492	3,093	-12.9%	-12.7%
2	1,916	1,901	1,919	1,908	1,944	1.9%	1.4%
3	5,481	5,261	5,204	5,337	5,585	4.4%	1.9%
4	3,438	3,221	2,728	2,669	2,602	-2.6%	-32.1%
5	2,187	1,985	1,609	1,542	1,505	-2.5%	-45.3%
8	17,515	16,702	17,080	17,358	17,477	0.7%	-0.2%
15	5,241	5,210	5,105	5,083	5,208	2.4%	-0.6%
18	6,887	6,734	6,690	6,824	6,628	-3.0%	-3.9%
19	5,736	5,865	5,874	5,783	5,739	-0.8%	0.1%
20	7,591	7,473	7,214	7,106	7,179	1.0%	-5.7%
24	18,911	19,476	20,225	20,354	20,004	-1.7%	5.5%
27	2,777	2,789	2,808	2,719	2,748	1.1%	-1.1%
29	1,606	1,432	1,458	1,385	1,235	-12.1%	-30.0%
40	4,710	4,725	4,516	4,325	4,374	1.1%	-7.7%
48	5,299	**	**	**	**	0.0%	0.0%
51	3,323	3,149	3,187	3,047	3,105	1.9%	-7.0%
106	39,465	39,929	38,868	43,304	43,133	-0.4%	8.5%
126	**	**	25,603	22,771	26,181	13.0%	2.2%
158	24,032	23,392	23,046	**	26,238	0.0%	8.4%
203	**	**	20,266	19,444	19,459	0.1%	-4.1%
205	54,411	54,011	54,109	49,742	**	0.0%	-9.4%
206	27,180	27,703	27,902	26,529	26,749	0.8%	-1.6%
207	21,499	21,007	20,750	20,275	21,452	5.5%	-0.2%
208	**	**	**	87,652	92,030	4.8%	4.8%
216	28,168	**	**	**	**	0.0%	0.0%
301	13,733	13,827	13,558	13,347	13,620	2.0%	-0.8%
304	28,530	28,983	28,004	**	28,218	0.0%	-1.1%
306	5,680	5,684	5,668	5,340	5,435	1.7%	-4.5%
317	**	**	12,263	12,510	13,152	4.9%	6.8%
323	3,865	3,920	4,008	4,219	4,347	2.9%	11.1%
324	4,468	4,470	4,514	4,351	4,208	-3.4%	-6.2%
326	9,051	8,940	8,989	8,929	8,935	0.1%	-1.3%
328	5,101	5,052	4,956	4,737	4,768	0.7%	-7.0%
330	11,200	11,091	10,948	10,938	10,988	0.5%	-1.9%
334	16,535	17,717	17,162	17,006	17,213	1.2%	3.9%
349	36,482	35,498	36,585	36,263	37,781	4.0%	3.4%
360	2,639	2,598	2,609	2,580	2,636	2.1%	-0.1%
362	6,059	5,632	5,813	5,740	6,043	5.0%	-0.3%
363	4,901	4,828	4,755	4,833	4,905	1.5%	0.1%
364	5,020	4,949	4,834	4,816	4,952	2.7%	-1.4%

Five Year Summary of AADT from Permanent Sites (Continued)

*Indicates there is no data available.

Site #	Annual Average Daily Traffic (AADT)					Percent Change	
	2011	2012	2013	2014	2015	2014-2015	2011-2015
367	6,059	6,061	5,773	5,644	6,035	6.5%	-0.4%
370	31,848	31,389	31,643	30,650	30,969	1.0%	-2.8%
371	18,588	18,721	18,815	18,439	19,391	4.9%	4.1%
372	27,815	27,657	28,186	27,612	26,767	-3.2%	-3.9%
374	**	**	**	**	**	N/A	N/A
375	22,984	23,709	24,227	23,173	23,191	0.1%	0.9%
376	58,783	59,514	59,807	56,987	59,023	3.4%	0.4%
377	59,762	63,210	60,571	58,994	60,154	1.9%	0.7%
378	8,744	8,352	7,783	7,591	7,561	-0.4%	-15.6%
379	**	1,390	1,642	**	**	0.0%	15.3%
380	7,980	8,300	8,238	**	**	0.0%	3.1%
381	508	494	528	**	437	0.0%	-16.2%
382	1,668	1,719	1,652	1,735	1,722	-0.8%	3.1%
383	4,136	3,987	3,756	3,858	4,179	7.7%	1.0%
384	473	481	426	351	371	5.4%	-27.5%
385	**	**	**	**	**	N/A	N/A
386	2,285	2,189	2,226	2,207	2,157	-2.3%	-5.9%
387	3,122	3,092	3,126	3,250	3,351	3.0%	6.8%
388	3,545	2,884	2,844	2,844	**	0.0%	-24.6%
389	2,091	2,048	2,011	1,935	1,905	-1.6%	-9.8%
390	5,699	5,889	6,131	6,410	6,216	-3.1%	8.3%
391	7,537	7,597	7,642	7,775	8,054	3.5%	6.4%
392	22,693	22,527	22,444	22,522	24,347	7.5%	6.8%
393	31,484	32,703	33,640	34,076	34,213	0.4%	8.0%
394	60,093	61,663	63,576	62,215	65,047	4.4%	7.6%
395	10,957	10,899	10,629	10,400	9,490	-9.6%	-15.5%
396	**	**	**	**	12,995	0.0%	0.0%
410	4,486	**	**	**	**	0.0%	0.0%
501	9,915	10,425	**	9,196	10,343	11.1%	4.1%
502	**	**	**	**	26,521	0.0%	0.0%
503	4,034	3,931	3,866	3,958	**	0.0%	-1.9%
504	43,133	42,886	**	**	**	0.0%	-0.6%
505	21,464	20,488	21,316	21,583	21,902	1.5%	2.0%
506	16,273	16,050	15,835	15,997	16,148	0.9%	-0.8%
600	37,550	38,043	**	**	42,039	0.0%	10.7%
700	13,218	13,310	12,990	12,583	12,952	2.8%	-2.1%
800	20,556	20,737	20,900	20,677	22,615	8.6%	9.1%
801	83,424	83,736	82,903	76,034	77,422	1.8%	-7.8%
802	3,906	3,980	3,791	3,637	3,819	4.8%	-2.3%
803	20,200	20,549	21,023	20,308	**	0.0%	0.5%
804	**	**	**	**	49,356	0.0%	0.0%
805	2,705	2,748	2,844	2,788	2,867	2.8%	5.7%
806	32,163	31,422	30,234	26,822	29,237	8.3%	-10.0%
807	31,419	31,478	31,856	32,727	32,619	-0.3%	3.7%
808	13,518	12,816	13,265	13,272	13,485	1.6%	-0.2%
809	7,823	7,790	**	**	**	0.0%	-0.4%
810	*	35,078	35,312	35,839	36,157	0.9%	3.0%
811	*	*	42,886	43,207	45,707	5.5%	6.2%
812	*	49,627	48,697	47,676	47,967	0.6%	-3.5%
813	*	*	*	77,087	86,195	10.6%	10.6%
823	*	*	*	*	54,840	0.0%	0.0%
985	19,815	19,599	19,216	18,654	18,537	-0.6%	-6.9%

* 810 & 812 2012 was first full year of data.

* 811 2013 was first full year of data.

* 813 2014 was first full year of data.

* 823 2015 was first full year of data.

** Site inactive.

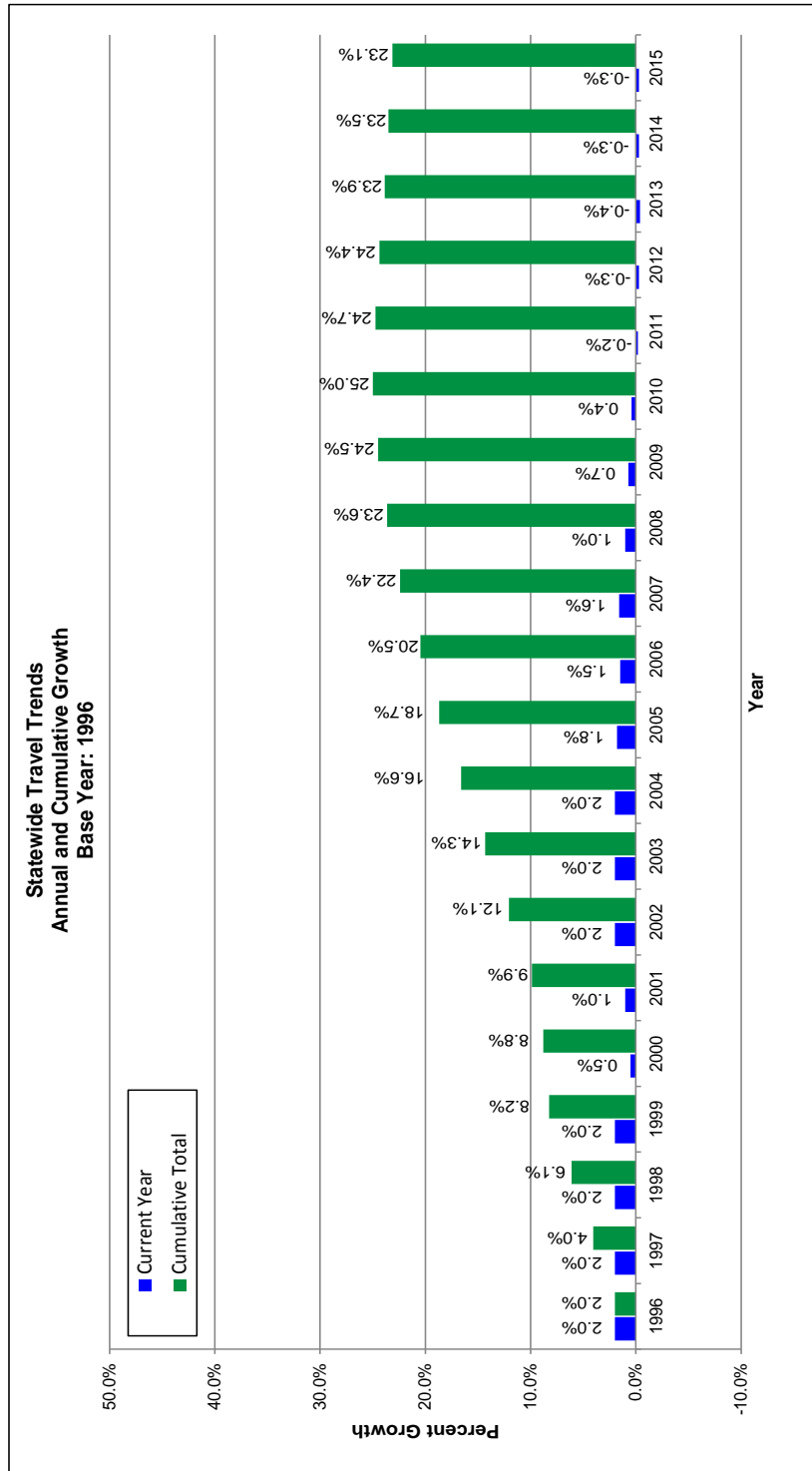
Statewide Traffic Trends: Annual and Multi-Year Change By Traffic Pattern Group

This table shows percent change for the traffic pattern groups at one-year intervals starting with 2010/2011 up to 2014/2015. An overall change in growth over the 5 year period for the traffic pattern groups is also shown on this table.

Percent Change Per Year, 2010 - 2015						
TRAFFIC PATTERN GROUPS	2010-11	2011-12	2012-13	2013-14	2014-15	2010-15
TPG 1 Urban Interstate	-0.7%	-0.9%	-1.1%	0.1%	0.5%	-2.1%
TPG 2 Rural Interstate	1.7%	2.2%	2.2%	1.2%	1.3%	8.6%
TPG 3 Urban Principal Arterial	-0.6%	-1.0%	-1.0%	-0.7%	-0.8%	-4.1%
TPG 4 Rural Principal Arterial	-0.3%	-0.4%	-0.5%	-0.5%	-0.5%	-2.2%
TPG 5 Urban Minor Arterials or Collectors	-0.6%	-1.0%	-1.0%	-0.7%	-0.8%	-4.1%
TPG 6 North Rural Minor Arterials	-0.3%	-0.4%	-0.5%	-0.5%	-0.5%	-2.2%
TPG 7 Central Rural Minor Arterials	-0.3%	-0.4%	-0.5%	-0.5%	-0.5%	-2.2%
TPG 8 North Rural Collectors	-0.3%	-0.4%	-0.5%	-0.5%	-0.5%	-2.2%
TPG 9 Central Rural Collectors	-0.3%	-0.4%	-0.5%	-0.5%	-0.5%	-2.2%
TPG 10 Special Recreational	-0.3%	-0.4%	-0.5%	-0.5%	-0.5%	-2.2%
Statewide	-0.2%	-0.3%	-0.4%	-0.3%	-0.3%	-1.5%

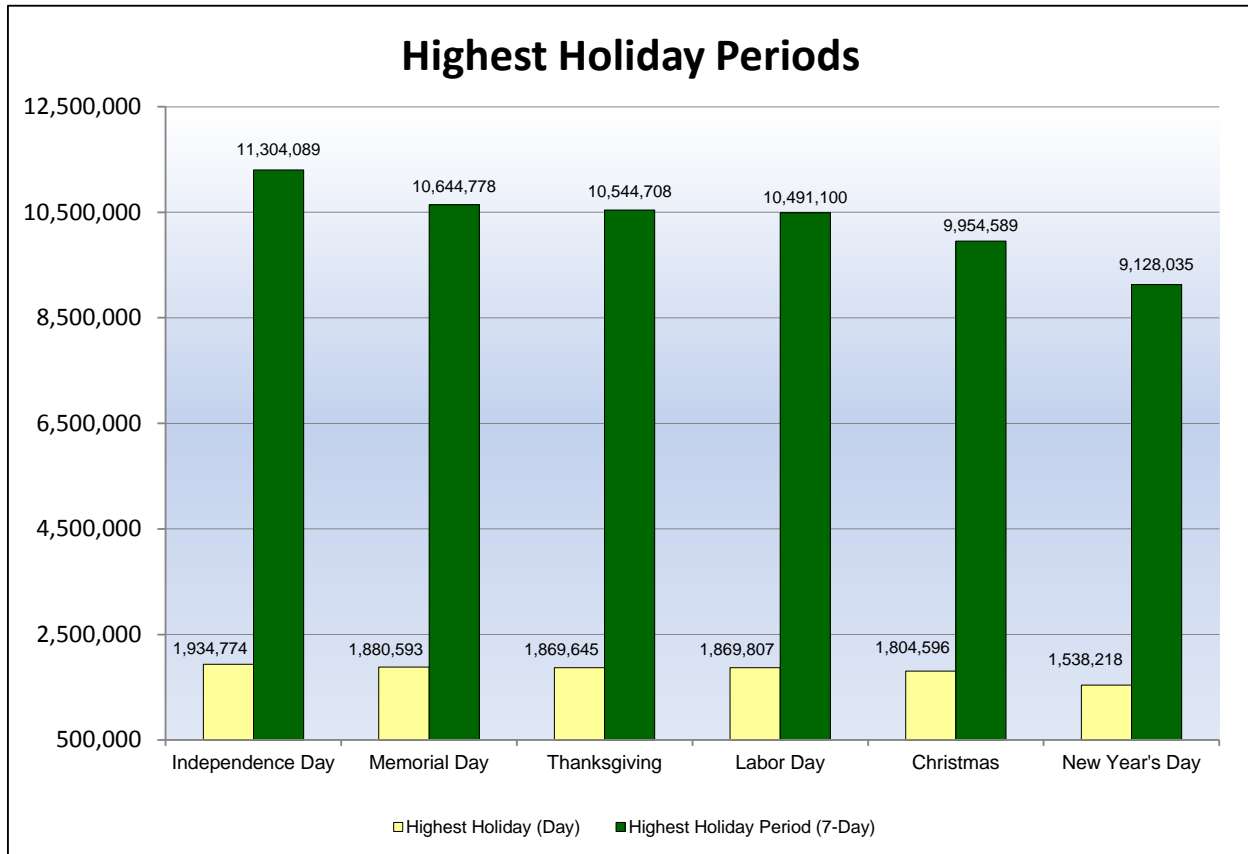
Statewide Traffic Trends

This chart shows yearly changes from 1996 to 2015 and a 20-year cumulative trend for the same period.



Heaviest Holiday Travel Periods: 2015

The 79 permanent sites, which are the total number of sites with a minimum of six months of data, were used to calculate the holidays having the highest seven-day periods of traffic. The highest seven-day holiday periods and the highest day within the seven-day holiday period (total traffic at all permanent site stations) are shown on the chart below:



The chart indicates that Independence Day had the highest seven-day holiday period in 2015 with a total volume of 11,304,089. Memorial Day ranked second (10,644,778) followed by Thanksgiving (10,544,708) and Labor Day (10,491,100). Christmas and New Year's Day ranked fifth (9,954,589) and sixth (9,128,035) respectively.

The highest day during a seven-day holiday period in 2015 was the Thursday before Independence Day (July 2, 2015), which had a volume of 1,934,774. The second highest day was the Friday before Memorial Day (May 22, 2015), which had a volume of 1,880,593. The Friday before Labor Day (September 4, 2015), ranked third with 1,869,807, while the Wednesday before Thanksgiving Day (November 25, 2015), ranked fourth with 1,869,645. The Wednesday before Christmas Day (December 23, 2015) ranked fifth with 1,804,596, while the Monday before New Year's Day (December 29, 2014) ranked sixth with 1,538,218.

Heaviest Holiday Travel Period Comparisons: 2014-2015

Highest Holiday (Day)				
2014			2015	
Holiday	Total Volume		Holiday	Total Volume
1. Independence Day	1,631,646		1. Independence Day	1,934,774
2. Labor Day	1,613,433		2. Memorial Day	1,880,593
3. Thanksgiving	1,610,112		3. Labor Day	1,869,807
4. Christmas	1,602,349		4. Thanksgiving	1,869,645
5. Memorial Day	1,546,280		5. Christmas	1,804,596
6. New Year's Day	1,451,361		6. New Year's Day	1,538,218

Highest Holiday Period (7-Day)				
2014			2015	
Holiday	Total Volume		Holiday	Total Volume
1. Independence Day	9,574,113		1. Independence Day	11,304,089
2. Labor Day	9,392,920		2. Memorial Day	10,644,778
3. Christmas	9,035,741		3. Thanksgiving	10,544,708
4. Memorial Day	8,798,630		4. Labor Day	10,491,100
5. Thanksgiving	8,477,816		5. Christmas	9,954,589
6. New Year's Day	8,175,417		6. New Year's Day	9,128,035

Factoring Process: Traffic Adjustment Factors

Traffic Adjustment Factors

Traffic Adjustment Factors are numbers that are used to create traffic statistics representing an average day. Factors are generated by applying statistical methods and programs to raw traffic counts. The different procedures used to factor counts depend on the following outcomes:

24-Hour Total Traffic and Truck Traffic Estimation

Count data less than 24-hours (short term counts) must first be expanded to a 24-hour total, which is accomplished through the use of hourly percentage tables. Separate tables are utilized for total vehicles and truck data application.

AADT and ADTT Estimation

A 24-hour count is processed to an Annual Average Daily Traffic (AADT) and Average Daily Truck Traffic (ADTT) through the application of a “day of week by month” factor. Separate tables are utilized for total vehicle and truck data application.

Axle Correction

Axle volume count data is collected by counting the number of axles striking a single pneumatic tube stretched across a section of highway and dividing by two. This type of data must be corrected to compensate for vehicles containing more than two axles (specifically truck data) to obtain a representative number of vehicles actually traveling that road section. This representation is obtained through the application of an axle correction factor.

Equivalent Single Axle Load Adjustment (ESAL)

ESAL adjustment factors are applied to the ADTT for each type of truck classification, to determine the loading effect these truck classes have on the pavement. Two separate calculations are performed: one for rigid type pavement (concrete) and one for flexible type pavement (bituminous). The AASHTO Mechanistic Empirical Pavement Design Guide has incorporated improved methods of determining loading effects of traffic. In the future, these new methods will supersede the use of ESAL factors.

Growth Factor

If the count to be analyzed was taken earlier than the current year, a county growth trend is applied to project the older count data to a representative current year estimate. County growth trends are established based on Functional Class Group (FCG).

Design Hour Volume Factor, DHV (K)

The K-factor represents the percentage of AADT during the design hour. It is calculated by dividing the peak hour volume by the AADT. A 24-hour count is required to calculate the K-factor. If this condition is not met (in the case of manual counts), a default value is applied. The default value is calculated from the 79 permanent site stations using the 30th highest hour and is established based on Traffic Pattern Group (TPG).

Table 350
Hourly Percentages Compiled for Total Vehicles

The following table shows hourly percentages of total vehicles sorted by Traffic Pattern Group (TPG) for the year 2015. Factors from this table are applied to raw traffic counts of less than 24 hours, which may include volume counts (axle and loop), automatic vehicle classification (AVC), or manual classification counts. Hourly percentages from this table are applied to the known hour periods of the raw count, converting it to a 24-hour total.

The factors were developed using the Department's Traffic Data System (TDS) Statistical Analysis tool. Raw count data from 2,000 AVC counts, collected statewide and averaged over the last five years, was assigned to the respective TPG and a summary was produced showing the hourly percentage tables by direction (applied to divided roadways).

Hourly Percentages: Total Vehicles							
TPG 1				TPG 2			
HOUR	DIR 1	DIR 2	TOTAL	HOUR	DIR 1	DIR 2	TOTAL
1	0.93%	1.08%	1.03%	1	1.19%	1.40%	1.47%
2	0.70%	0.78%	0.74%	2	0.99%	1.14%	1.20%
3	0.66%	0.68%	0.68%	3	0.95%	1.05%	1.12%
4	0.80%	0.76%	0.79%	4	1.08%	1.14%	1.21%
5	1.27%	1.14%	1.22%	5	1.53%	1.43%	1.55%
6	2.88%	2.21%	2.58%	6	2.84%	2.26%	2.51%
7	6.16%	4.19%	5.14%	7	5.32%	3.77%	4.17%
8	8.44%	5.61%	6.83%	8	7.25%	5.05%	5.43%
9	7.23%	5.32%	6.14%	9	6.32%	4.98%	5.28%
10	5.64%	4.83%	5.23%	10	5.50%	4.89%	5.18%
11	5.12%	4.77%	5.00%	11	5.44%	5.04%	5.35%
12	5.15%	5.02%	5.14%	12	5.51%	5.15%	5.51%
13	5.27%	5.27%	5.33%	13	5.57%	5.47%	5.67%
14	5.34%	5.51%	5.49%	14	5.67%	5.77%	5.88%
15	5.86%	6.30%	6.09%	15	6.08%	6.42%	6.33%
16	6.53%	7.80%	7.07%	16	6.53%	7.58%	6.96%
17	6.91%	8.80%	7.66%	17	6.71%	8.31%	7.24%
18	6.72%	8.49%	7.41%	18	6.48%	7.90%	6.84%
19	5.28%	6.05%	5.69%	19	5.06%	5.62%	5.34%
20	3.87%	4.46%	4.30%	20	3.92%	4.33%	4.30%
21	3.11%	3.67%	3.52%	21	3.27%	3.71%	3.69%
22	2.63%	3.14%	2.98%	22	2.84%	3.14%	3.17%
23	2.08%	2.38%	2.29%	23	2.25%	2.50%	2.58%
24	1.45%	1.76%	1.64%	24	1.70%	1.96%	2.02%
TOTAL	100.00%	100.00%	100.00%	TOTAL	100.00%	100.00%	100.00%

Table 350
Hourly Percentages Compiled for Total Vehicles (Continued)

Hourly Percentages: Total Vehicles							
TPG 3				TPG 4			
HOUR	DIR 1	DIR 2	TOTAL	HOUR	DIR 1	DIR 2	TOTAL
1	0.68%	0.89%	0.73%	1	0.71%	0.89%	0.73%
2	0.44%	0.54%	0.45%	2	0.51%	0.58%	0.50%
3	0.40%	0.44%	0.38%	3	0.50%	0.54%	0.47%
4	0.50%	0.47%	0.44%	4	0.68%	0.65%	0.58%
5	0.99%	0.73%	0.82%	5	1.32%	0.98%	1.12%
6	2.73%	1.72%	2.15%	6	3.31%	2.10%	2.71%
7	6.13%	3.72%	4.69%	7	6.22%	3.95%	4.99%
8	8.60%	5.49%	6.70%	8	7.91%	5.45%	6.43%
9	7.49%	5.26%	6.23%	9	6.61%	5.07%	5.80%
10	5.72%	4.75%	5.32%	10	5.55%	4.76%	5.30%
11	5.19%	4.71%	5.14%	11	5.41%	4.86%	5.38%
12	5.28%	5.12%	5.43%	12	5.50%	5.17%	5.59%
13	5.49%	5.51%	5.76%	13	5.65%	5.49%	5.81%
14	5.50%	5.62%	5.79%	14	5.79%	5.82%	5.99%
15	5.92%	6.44%	6.34%	15	6.24%	6.61%	6.58%
16	6.54%	7.98%	7.26%	16	7.00%	8.29%	7.59%
17	6.84%	9.02%	7.79%	17	7.15%	9.28%	8.00%
18	6.83%	8.93%	7.73%	18	6.79%	8.63%	7.50%
19	5.47%	6.57%	6.06%	19	5.03%	5.94%	5.48%
20	4.09%	4.86%	4.60%	20	3.72%	4.43%	4.14%
21	3.24%	3.96%	3.75%	21	2.96%	3.73%	3.41%
22	2.64%	3.27%	2.98%	22	2.44%	3.12%	2.72%
23	1.97%	2.31%	2.08%	23	1.81%	2.10%	1.89%
24	1.31%	1.66%	1.39%	24	1.21%	1.56%	1.30%
TOTAL	100.00%	100.00%	100.00%	TOTAL	100.00%	100.00%	100.00%

Table 350
Hourly Percentages Compiled for Total Vehicles (Continued)

Hourly Percentages: Total Vehicles							
TPG 5				TPG 6			
HOUR	DIR 1	DIR 2	TOTAL	HOUR	DIR 1	DIR 2	TOTAL
1	0.62%	0.83%	0.63%	1	0.63%	0.62%	0.63%
2	0.41%	0.50%	0.38%	2	0.40%	0.34%	0.40%
3	0.37%	0.41%	0.32%	3	0.42%	0.33%	0.36%
4	0.47%	0.43%	0.36%	4	0.43%	0.36%	0.45%
5	0.92%	0.68%	0.71%	5	0.80%	0.76%	0.92%
6	2.53%	1.56%	1.96%	6	2.42%	1.75%	2.39%
7	5.80%	3.61%	4.44%	7	5.51%	3.82%	4.69%
8	8.16%	5.40%	6.63%	8	7.57%	5.96%	6.12%
9	7.26%	5.18%	6.14%	9	6.63%	6.01%	5.62%
10	5.59%	4.63%	5.15%	10	5.33%	5.05%	5.38%
11	5.09%	4.54%	5.01%	11	5.25%	4.64%	5.57%
12	5.28%	4.95%	5.42%	12	5.58%	5.26%	5.85%
13	5.63%	5.44%	5.80%	13	5.72%	5.65%	6.09%
14	5.64%	5.54%	5.77%	14	5.67%	5.74%	6.19%
15	6.04%	6.49%	6.37%	15	6.39%	6.65%	6.86%
16	6.84%	8.26%	7.51%	16	7.12%	7.89%	7.84%
17	7.21%	9.54%	8.19%	17	7.43%	8.53%	8.10%
18	7.15%	9.38%	8.17%	18	7.50%	8.61%	7.47%
19	5.66%	6.79%	6.29%	19	5.87%	6.74%	5.65%
20	4.22%	4.94%	4.77%	20	4.36%	5.16%	4.36%
21	3.35%	3.95%	3.87%	21	3.29%	3.87%	3.46%
22	2.67%	3.16%	2.91%	22	2.58%	2.98%	2.62%
23	1.90%	2.22%	1.95%	23	1.92%	1.89%	1.81%
24	1.20%	1.56%	1.24%	24	1.19%	1.37%	1.17%
TOTAL	100.00%	100.00%	100.00%	TOTAL	100.00%	100.00%	100.00%

Table 350
Hourly Percentages Compiled for Total Vehicles (Continued)

Hourly Percentages: Total Vehicles							
TPG 7				TPG 8			
HOUR	DIR 1	DIR 2	TOTAL	HOUR	DIR 1	DIR 2	TOTAL
1	0.81%	0.97%	0.67%	1	0.83%	1.00%	0.68%
2	0.58%	0.63%	0.43%	2	0.58%	0.62%	0.44%
3	0.53%	0.56%	0.40%	3	0.54%	0.51%	0.37%
4	0.70%	0.60%	0.51%	4	0.66%	0.50%	0.43%
5	1.24%	0.94%	1.03%	5	1.11%	0.74%	0.84%
6	3.03%	1.96%	2.66%	6	2.69%	1.69%	2.17%
7	6.04%	3.97%	5.07%	7	5.57%	3.58%	4.50%
8	8.00%	5.32%	6.52%	8	7.60%	5.32%	6.29%
9	6.83%	4.94%	5.72%	9	6.87%	5.22%	5.78%
10	5.54%	4.55%	5.12%	10	5.54%	5.17%	5.17%
11	5.37%	4.76%	5.16%	11	5.18%	5.12%	5.23%
12	5.31%	5.09%	5.40%	12	5.41%	5.31%	5.56%
13	5.52%	5.52%	5.66%	13	5.91%	5.78%	5.97%
14	5.52%	5.65%	5.78%	14	5.66%	5.71%	5.93%
15	6.05%	6.41%	6.47%	15	6.13%	6.52%	6.56%
16	6.83%	8.14%	7.68%	16	6.62%	7.98%	7.72%
17	7.26%	9.20%	8.19%	17	6.96%	8.70%	8.19%
18	6.93%	8.97%	7.87%	18	6.77%	8.58%	7.85%
19	5.37%	6.34%	5.82%	19	5.54%	6.46%	5.96%
20	3.90%	4.63%	4.38%	20	4.24%	4.72%	4.61%
21	3.05%	3.92%	3.61%	21	3.49%	3.79%	3.76%
22	2.46%	3.13%	2.75%	22	2.79%	3.05%	2.81%
23	1.86%	2.26%	1.88%	23	2.01%	2.26%	1.91%
24	1.26%	1.55%	1.23%	24	1.30%	1.67%	1.27%
TOTAL	100.00%	100.00%	100.00%	TOTAL	100.00%	100.00%	100.00%

Table 350
Hourly Percentages Compiled for Total Vehicles (Continued)

Hourly Percentages: Total Vehicles							
TPG 9				TPG 10			
HOUR	DIR 1	DIR 2	TOTAL	HOUR	DIR 1	DIR 2	TOTAL
1	0.76%	1.15%	0.67%	1	0.28%	0.92%	0.64%
2	0.50%	0.75%	0.42%	2	0.22%	0.33%	0.42%
3	0.48%	0.62%	0.36%	3	0.34%	0.25%	0.37%
4	0.57%	0.64%	0.43%	4	0.62%	0.28%	0.46%
5	1.11%	0.91%	0.87%	5	1.22%	0.53%	0.80%
6	2.96%	1.90%	2.32%	6	4.53%	1.41%	1.97%
7	6.36%	3.75%	4.76%	7	8.54%	2.70%	3.87%
8	7.76%	5.22%	6.59%	8	9.02%	3.74%	5.81%
9	6.96%	5.24%	5.85%	9	6.90%	3.66%	5.41%
10	5.76%	4.73%	5.04%	10	5.32%	3.46%	5.27%
11	5.14%	4.57%	4.98%	11	5.10%	3.68%	5.43%
12	5.31%	4.80%	5.29%	12	5.44%	4.09%	6.03%
13	5.52%	5.50%	5.66%	13	5.81%	4.84%	6.34%
14	5.54%	5.61%	5.70%	14	5.96%	5.40%	6.48%
15	5.78%	6.44%	6.42%	15	5.44%	6.78%	6.90%
16	6.42%	7.77%	7.66%	16	5.96%	9.85%	7.74%
17	6.94%	8.86%	8.26%	17	6.35%	10.62%	8.16%
18	6.76%	8.48%	8.02%	18	6.53%	10.53%	7.72%
19	5.57%	6.34%	6.09%	19	5.36%	7.80%	5.88%
20	4.27%	4.68%	4.63%	20	4.03%	6.25%	4.70%
21	3.28%	3.87%	3.80%	21	2.85%	5.76%	3.76%
22	2.75%	3.39%	2.90%	22	2.18%	3.75%	2.83%
23	2.15%	2.73%	1.99%	23	1.24%	1.87%	1.83%
24	1.38%	2.06%	1.28%	24	0.77%	1.49%	1.17%
TOTAL	100.00%	100.00%	100.00%	TOTAL	100.00%	100.00%	100.00%

Table 360
Hourly Percentages Compiled for Truck Traffic

The following four tables and two charts show hourly percentages of truck traffic sorted by Maintenance Functional Class (MFC). These tables are applied separately to raw truck data of less than 24-hours, including both automatic vehicle classification (AVC) and manual counts. Manual classification counts are the primary source of data using these tables. The hourly percentages are calculated from these tables and applied to the sum of the known hour periods and in turn converted to a 24-hour truck total.

The factors were developed using 2,000 AVC counts, collected and verified over the last five years. The raw count data was assigned to the respective Traffic Pattern Group (TPG), the truck data was extracted by vehicle type, and the TDS Statistical Analysis tool generated a summary showing the hourly percentage table by direction (applied to divided roadways). Truck data is tabulated according to MFC. Hourly weekday truck distribution provides evidence that the hourly percentage changes by MFC provide a valid breakdown of groups. Therefore, a summary was produced converting the TPGs to comparable MFC groups to be consistent with the characteristics of the 2015 Hourly Percentages (Truck Traffic) tables.

TPG 1 & 2				TPG 3 & 4			
MAINTENANCE FUNCTIONAL CLASS A (INTERSTATES)				MAINTENANCE FUNCTIONAL CLASS B (PRINCIPAL ARTERIALS)			
HOURL	DIR 1	DIR 2	TOTAL	HOURL	DIR 1	DIR 2	TOTAL
1	2.00%	2.25%	2.21%	1	1.13%	1.38%	1.04%
2	1.75%	2.09%	2.01%	2	1.05%	1.28%	0.97%
3	1.79%	2.07%	2.00%	3	1.10%	1.36%	1.06%
4	1.97%	2.32%	2.24%	4	1.39%	1.72%	1.37%
5	2.44%	2.74%	2.67%	5	2.00%	2.23%	2.00%
6	3.25%	3.50%	3.42%	6	3.39%	3.33%	3.35%
7	4.45%	4.45%	4.37%	7	5.35%	5.04%	5.34%
8	4.90%	4.86%	4.82%	8	6.33%	5.90%	6.47%
9	5.20%	5.14%	5.12%	9	6.68%	6.13%	6.81%
10	5.61%	5.30%	5.40%	10	6.50%	6.16%	6.73%
11	5.84%	5.27%	5.53%	11	6.50%	6.14%	6.70%
12	5.88%	5.24%	5.58%	12	6.56%	6.21%	6.76%
13	5.78%	5.39%	5.60%	13	6.50%	6.27%	6.67%
14	5.74%	5.54%	5.67%	14	6.54%	6.29%	6.70%
15	5.89%	5.70%	5.79%	15	6.71%	6.58%	6.88%
16	6.01%	5.68%	5.78%	16	6.54%	6.54%	6.68%
17	5.68%	5.52%	5.52%	17	5.89%	5.98%	5.86%
18	5.26%	5.18%	5.13%	18	5.02%	5.08%	4.86%
19	4.74%	4.70%	4.61%	19	4.00%	4.15%	3.78%
20	4.03%	4.16%	4.07%	20	3.04%	3.37%	2.89%
21	3.55%	3.73%	3.62%	21	2.50%	2.73%	2.33%
22	3.18%	3.46%	3.31%	22	2.13%	2.41%	1.93%
23	2.74%	3.06%	2.97%	23	1.74%	2.00%	1.57%
24	2.32%	2.65%	2.55%	24	1.40%	1.73%	1.29%
TOTAL	100.00%	100.00%	100.00%	TOTAL	100.00%	100.00%	100.00%

Table 360
Hourly Percentages Compiled for Truck Traffic (Continued)

TPG 5, 6 & 7				TPG 8 & 9			
MAINTENANCE FUNCTIONAL CLASS C (MINOR ARTERIALS)				MAINTENANCE FUNCTIONAL CLASS D, E & F (RURAL COLLECTORS)			
HOUR	DIR 1	DIR 2	TOTAL	HOUR	DIR 1	DIR 2	TOTAL
1	0.91%	0.98%	0.78%	1	1.27%	1.76%	0.88%
2	0.85%	0.91%	0.72%	2	1.06%	1.62%	0.79%
3	0.93%	1.05%	0.79%	3	1.19%	1.76%	0.86%
4	1.18%	1.34%	1.02%	4	1.41%	1.99%	1.09%
5	1.78%	1.93%	1.57%	5	2.01%	2.60%	1.65%
6	3.29%	3.14%	2.92%	6	3.07%	3.73%	2.97%
7	5.70%	5.07%	5.31%	7	5.28%	4.86%	5.28%
8	7.00%	6.12%	6.98%	8	6.26%	5.70%	6.89%
9	7.34%	6.61%	7.18%	9	6.44%	5.93%	7.06%
10	6.77%	6.41%	6.74%	10	6.49%	5.87%	6.70%
11	6.74%	6.34%	6.68%	11	6.40%	5.73%	6.67%
12	6.57%	6.45%	6.77%	12	6.49%	5.83%	6.75%
13	6.76%	6.49%	6.73%	13	6.34%	6.00%	6.74%
14	6.65%	6.66%	6.81%	14	6.43%	5.59%	6.75%
15	6.74%	7.02%	7.17%	15	6.42%	5.88%	7.09%
16	6.88%	7.14%	7.30%	16	6.33%	6.07%	7.31%
17	5.97%	6.66%	6.38%	17	6.00%	5.97%	6.34%
18	4.96%	5.49%	5.21%	18	5.03%	5.18%	5.11%
19	3.84%	4.19%	3.84%	19	4.26%	4.40%	3.77%
20	2.79%	3.06%	2.84%	20	3.27%	3.42%	2.81%
21	2.17%	2.42%	2.22%	21	2.71%	3.00%	2.25%
22	1.77%	1.83%	1.72%	22	2.34%	2.72%	1.78%
23	1.35%	1.55%	1.31%	23	1.89%	2.22%	1.37%
24	1.06%	1.15%	1.01%	24	1.62%	2.17%	1.09%
TOTAL	100.00%	100.00%	100.00%	TOTAL	100.00%	100.00%	100.00%

Hourly Percentages Charts

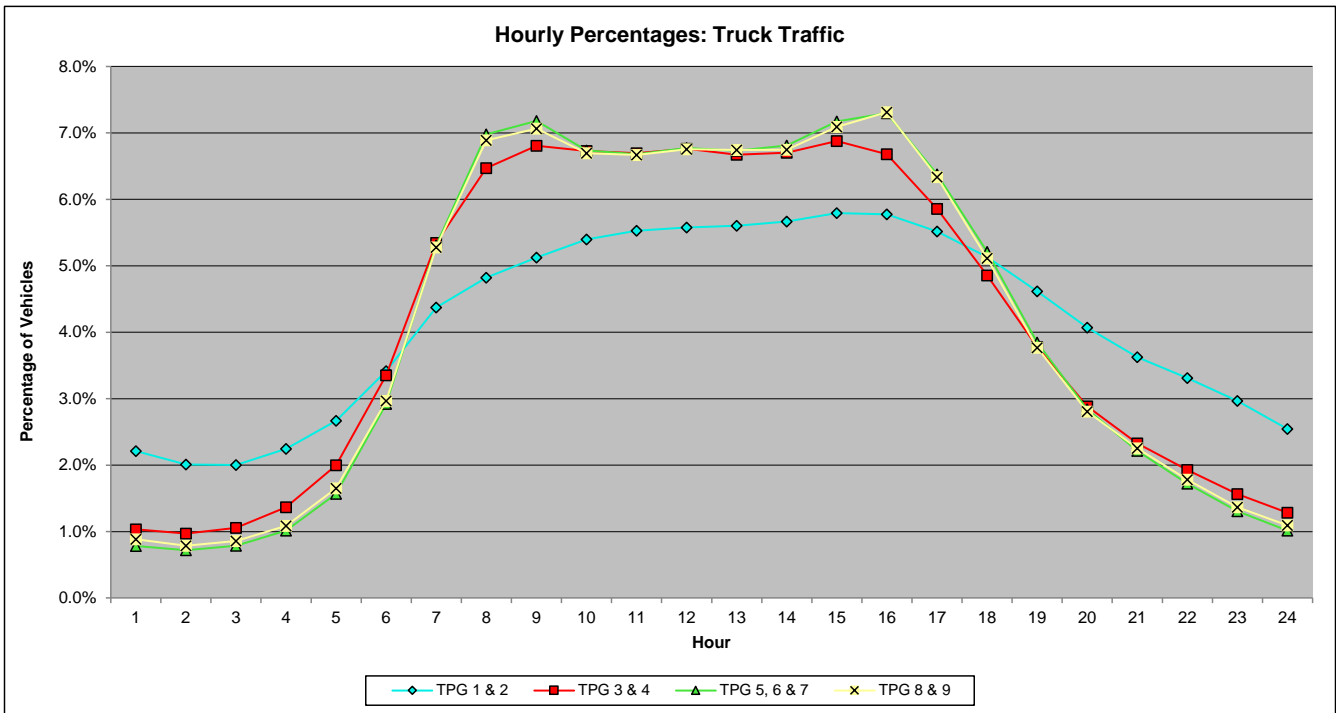
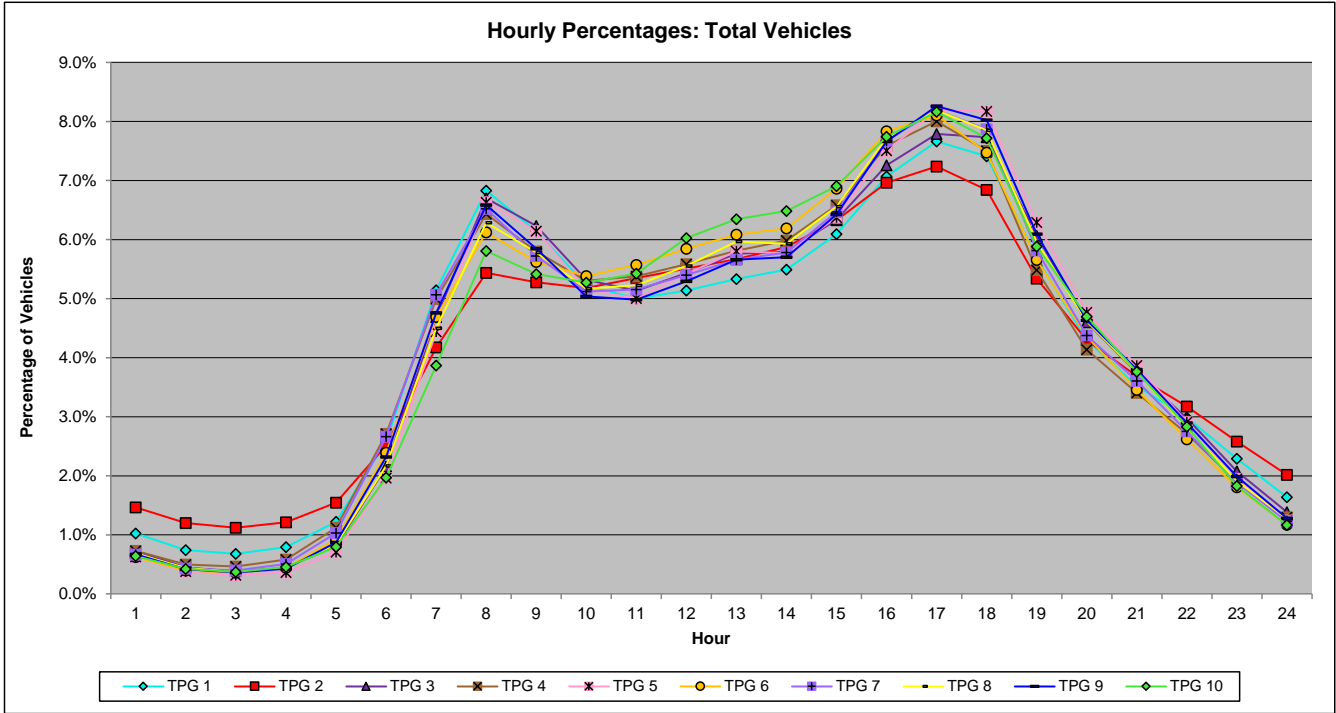


Table 355
Average Day of Week by Month Factors Compiled for Total Vehicles

The following 12 tables show average day of week factors by month compiled for total vehicles for the year 2015. Current year permanent site traffic data is assembled and the data is placed in the respective TPG. Annual Average Daily Traffic (AADT) is tabulated individually for each of the 79 permanent site stations. A factor is calculated for each day from each station and a list is tabulated by month and day of the week. This data is assembled by day and TPG for each station. The result is a group factor, which can be applied to a 24-hour raw traffic count taken during any day of the year to develop an AADT volume.

January 2015										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	1.109	1.258	1.084	1.121	1.168	1.283	1.018	1.674	1.160	1.605
Tuesday	1.060	1.275	1.006	1.108	1.073	1.210	0.993	1.279	1.063	1.384
Wednesday	0.996	1.258	0.945	1.057	1.059	1.203	0.931	1.210	1.037	1.136
Thursday	1.030	1.215	1.111	1.102	1.171	1.162	0.968	1.118	0.988	1.323
Friday	0.898	1.088	0.933	0.995	0.993	1.122	0.863	1.265	1.022	1.263
Saturday	1.177	1.337	1.254	1.275	1.274	1.403	1.074	1.113	1.288	1.086
Sunday	1.307	1.368	1.479	1.439	1.480	1.657	1.390	1.505	1.402	1.500
DAY OF MONTH	1.082	1.257	1.116	1.157	1.174	1.291	1.034	1.309	1.137	1.328

February 2015										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	1.084	1.397	1.051	1.153	1.206	1.369	1.046	1.503	1.231	1.582
Tuesday	1.013	1.434	0.970	1.054	1.060	1.158	0.951	1.203	1.045	1.250
Wednesday	0.947	1.228	0.914	1.012	1.031	1.127	0.872	1.125	0.978	1.259
Thursday	0.948	1.178	0.929	1.028	1.068	1.183	0.896	1.167	1.041	1.351
Friday	0.861	0.987	0.887	0.933	1.007	1.053	0.824	1.092	0.970	0.953
Saturday	1.184	1.412	1.222	1.301	1.289	1.481	1.058	1.436	1.323	1.162
Sunday	1.381	1.529	1.616	1.622	1.772	1.751	1.188	1.728	1.487	1.305
DAY OF MONTH	1.060	1.309	1.084	1.158	1.205	1.303	0.976	1.322	1.154	1.266

Table 355
Average Day of Week by Month Factors Compiled for Total Vehicles
(Continued)

March 2015										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	0.954	1.147	0.946	0.993	1.017	1.113	0.903	1.119	0.983	1.068
Tuesday	0.948	1.156	0.935	0.997	1.022	1.107	0.878	1.119	0.966	1.102
Wednesday	0.950	1.133	0.911	1.005	1.013	1.093	0.854	1.148	0.963	1.112
Thursday	0.912	1.097	0.935	0.982	0.993	1.061	0.862	1.103	0.904	1.280
Friday	0.924	0.987	0.922	0.919	0.960	1.002	0.816	1.090	0.933	1.206
Saturday	1.031	1.136	1.114	1.144	1.126	1.287	0.959	1.314	1.126	1.015
Sunday	1.177	1.212	1.406	1.293	1.344	1.400	1.148	1.490	1.251	1.524
DAY OF MONTH	0.985	1.124	1.024	1.048	1.068	1.152	0.917	1.198	1.018	1.187

April 2015										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	0.854	0.987	0.905	0.944	0.927	0.968	0.876	1.037	0.866	0.930
Tuesday	0.881	1.037	0.860	0.944	0.914	0.971	0.869	1.026	0.839	0.943
Wednesday	0.862	1.014	0.852	0.926	0.912	0.973	0.841	1.007	0.834	0.940
Thursday	0.818	0.938	0.841	0.895	0.902	0.951	0.825	0.971	0.828	0.864
Friday	0.795	0.857	0.844	0.874	0.878	0.895	0.784	0.990	0.831	0.824
Saturday	0.973	1.020	1.052	1.083	0.991	1.096	0.931	1.161	0.973	0.744
Sunday	0.978	1.012	1.281	1.128	1.112	1.121	1.029	1.259	1.076	0.894
DAY OF MONTH	0.880	0.981	0.948	0.971	0.948	0.996	0.879	1.064	0.892	0.877

May 2015										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	0.944	0.904	0.943	0.901	0.940	0.900	0.862	0.947	0.905	0.698
Tuesday	0.904	0.919	0.859	0.899	0.884	0.905	0.835	0.909	0.808	0.783
Wednesday	0.899	0.908	0.848	0.896	0.877	0.900	0.809	0.884	0.804	0.787
Thursday	1.047	0.832	0.841	0.867	0.852	0.864	0.803	0.858	0.784	0.718
Friday	0.817	0.778	0.822	0.813	0.813	0.802	0.729	0.826	0.762	0.658
Saturday	0.989	0.949	1.027	0.998	0.943	0.950	0.861	0.982	0.937	0.504
Sunday	1.051	0.984	1.179	1.041	1.003	1.042	1.022	1.070	1.051	0.628
DAY OF MONTH	0.950	0.896	0.931	0.916	0.902	0.909	0.846	0.925	0.864	0.682

Table 355
Average Day of Week by Month Factors Compiled for Total Vehicles
(Continued)

June 2015										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	0.894	0.861	0.910	0.912	0.913	0.918	0.869	0.885	0.843	0.767
Tuesday	0.903	0.889	0.879	0.923	0.907	0.925	0.870	0.885	0.842	0.781
Wednesday	0.877	0.880	0.855	0.893	0.875	0.893	0.811	0.851	0.799	0.721
Thursday	0.843	0.809	0.850	0.868	0.867	0.860	0.816	0.823	0.797	0.709
Friday	0.799	0.710	0.838	0.837	0.836	0.822	0.757	0.779	0.779	0.588
Saturday	1.000	0.885	1.074	1.038	1.008	0.980	0.891	0.940	1.031	0.542
Sunday	1.039	0.871	1.219	1.061	1.117	0.994	0.988	0.995	1.031	0.636
DAY OF MONTH	0.908	0.844	0.946	0.933	0.932	0.913	0.857	0.880	0.875	0.678

July 2015										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	0.834	0.786	0.927	0.874	0.929	0.889	0.942	0.849	0.836	0.645
Tuesday	0.871	0.856	0.886	1.032	0.914	0.889	1.383	0.859	0.818	0.719
Wednesday	0.835	0.822	0.890	0.861	0.896	0.866	0.897	0.832	0.805	0.702
Thursday	0.801	0.742	0.852	0.819	0.877	0.830	0.875	0.808	0.794	0.639
Friday	0.773	0.661	0.892	0.785	0.859	0.803	0.820	0.762	0.789	0.540
Saturday	0.920	0.881	1.142	0.899	0.995	0.932	0.928	0.866	0.868	0.425
Sunday	0.940	0.776	1.244	1.023	1.042	0.910	1.049	0.895	1.061	0.472
DAY OF MONTH	0.853	0.789	0.976	0.899	0.930	0.874	0.985	0.839	0.853	0.592

August 2015										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	0.827	0.818	0.912	0.871	0.932	0.896	0.940	0.865	0.907	0.917
Tuesday	0.855	0.852	0.914	0.868	0.919	0.898	0.921	0.878	0.876	1.063
Wednesday	0.824	0.832	0.875	0.842	0.919	0.887	0.897	0.858	0.855	0.988
Thursday	0.791	0.773	0.857	0.815	0.913	0.844	0.889	0.843	1.179	0.906
Friday	0.751	0.710	0.846	0.806	0.865	0.816	0.824	0.790	0.822	0.692
Saturday	0.882	0.803	1.077	0.942	0.989	0.945	0.938	0.918	1.030	0.511
Sunday	0.939	0.807	1.263	1.027	1.123	0.953	1.070	1.001	1.069	0.557
DAY OF MONTH	0.838	0.799	0.963	0.882	0.951	0.891	0.926	0.879	0.963	0.805

Table 355
Average Day of Week by Month Factors Compiled for Total Vehicles
(Continued)

September 2015										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	0.948	0.911	1.043	0.945	1.004	0.944	1.028	0.933	1.032	1.183
Tuesday	0.916	0.945	0.891	0.911	0.923	0.926	0.959	0.894	0.905	1.168
Wednesday	0.891	0.932	0.875	0.898	0.901	0.916	0.937	0.885	0.885	1.163
Thursday	0.867	0.868	0.866	0.878	0.894	0.883	0.930	0.861	0.875	1.047
Friday	0.799	0.762	0.834	0.790	0.851	0.799	0.824	0.797	0.842	0.814
Saturday	0.964	0.923	1.082	0.982	1.036	0.953	0.991	0.988	1.088	0.709
Sunday	1.041	0.945	1.264	1.075	1.202	1.005	1.154	1.113	1.206	0.842
DAY OF MONTH	0.918	0.898	0.979	0.926	0.973	0.918	0.975	0.924	0.976	0.989

October 2015										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	0.886	0.911	0.932	0.870	0.965	0.928	0.877	0.941	0.907	1.209
Tuesday	0.898	0.959	0.884	0.872	0.934	0.928	0.882	0.944	0.885	1.303
Wednesday	0.899	0.949	0.894	0.868	0.941	0.918	0.847	0.917	0.878	1.324
Thursday	0.857	0.870	0.862	0.833	0.918	0.883	0.822	0.907	0.863	1.259
Friday	0.790	0.773	0.837	0.804	0.874	0.832	0.716	0.857	0.841	1.030
Saturday	0.969	0.997	1.084	0.997	1.063	1.031	0.845	1.099	1.061	0.972
Sunday	1.042	0.915	1.242	0.957	1.269	1.007	0.894	1.114	1.162	1.121
DAY OF MONTH	0.906	0.911	0.962	0.886	0.995	0.932	0.840	0.968	0.942	1.174

Table 355
Average Day of Week by Month Factors Compiled for Total Vehicles
(Continued)

November 2015										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	0.900	0.957	0.921	0.935	0.987	0.987	0.913	1.036	0.956	1.455
Tuesday	0.903	0.894	0.879	0.907	0.940	0.962	0.865	0.994	0.898	1.446
Wednesday	0.858	0.929	0.941	0.895	0.936	0.955	0.837	0.987	0.892	1.403
Thursday	0.879	0.967	1.042	0.951	0.968	0.959	0.949	1.009	1.007	1.415
Friday	0.837	0.869	0.874	0.872	0.924	0.922	0.846	0.954	0.909	1.252
Saturday	0.915	1.009	1.120	1.068	1.090	1.087	0.904	1.203	1.124	1.251
Sunday	0.914	1.059	1.316	1.125	1.208	1.185	0.985	1.323	1.262	1.359
DAY OF MONTH	0.887	0.955	1.013	0.965	1.008	1.008	0.900	1.072	1.007	1.369

December 2015										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	0.884	0.952	0.913	0.959	0.993	1.045	0.866	1.077	0.972	1.622
Tuesday	0.906	0.909	0.895	0.942	0.991	1.029	0.882	1.109	1.014	1.455
Wednesday	0.911	0.912	0.864	0.920	0.953	0.989	0.847	1.054	0.976	1.495
Thursday	0.910	0.936	0.904	0.946	0.982	1.056	0.867	1.078	1.004	1.409
Friday	0.915	1.100	1.011	0.885	0.968	0.940	0.750	0.961	1.112	1.269
Saturday	1.005	1.052	1.083	1.118	1.087	1.210	0.941	1.270	1.180	1.364
Sunday	1.065	1.075	1.262	1.216	1.278	1.295	0.969	1.350	1.304	1.308
DAY OF MONTH	0.942	0.991	0.990	0.998	1.036	1.081	0.875	1.128	1.080	1.417

Monthly Variation Charts by Traffic Pattern Group (TPG)

The chart below shows the different variations between months and traffic pattern groups (TPG). The seasonal factors, which are the data this chart is derived from, show the percentage difference between the raw data count and the annual average daily traffic (AADT). The seasonal factors data can be found in Table 355.

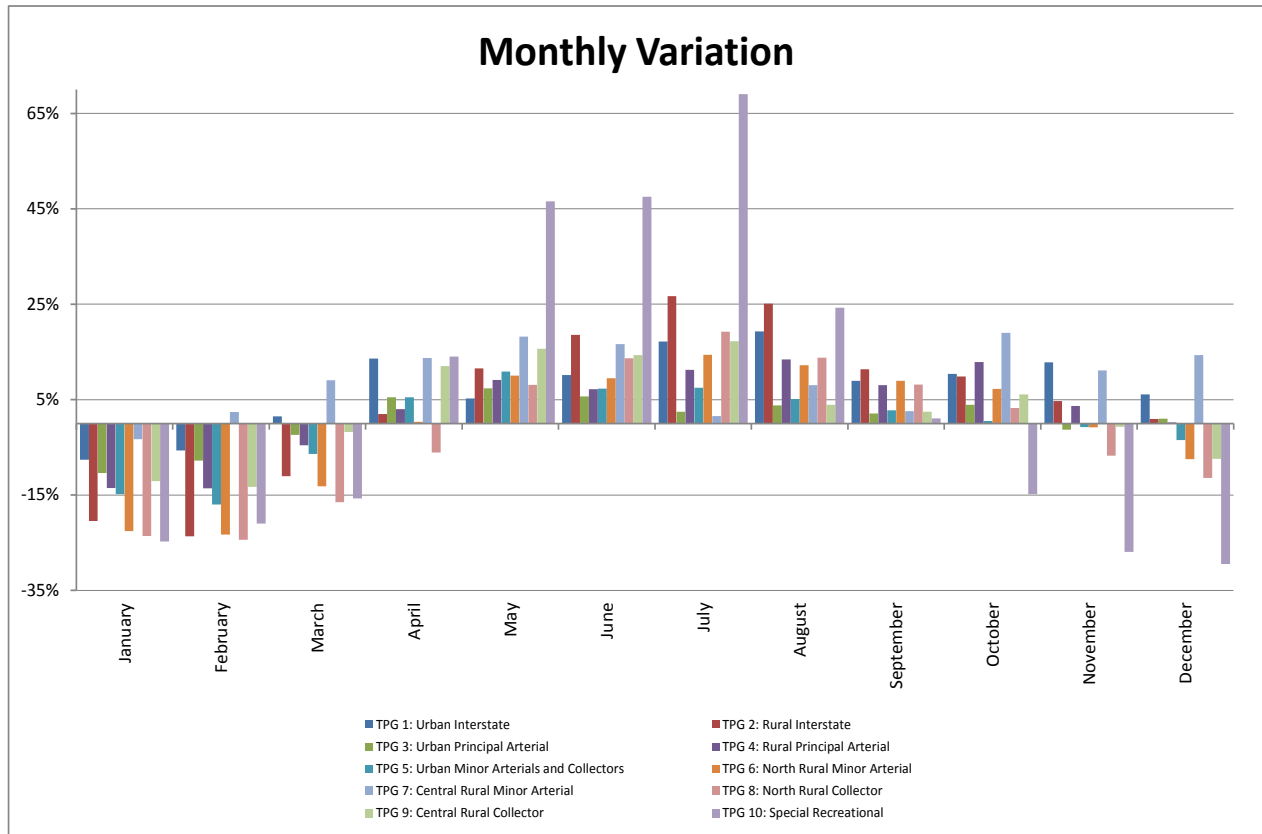


Table 365
Average Day of Week by Month Factors Compiled for Truck Traffic

The following table shows average day of week factors by month compiled for truck traffic. This data is used to convert 24-hour truck data to Average Daily Truck Traffic (ADTT). The ADTT is determined by applying the appropriate factor for the day of week and month to the truck traffic. Truck seasonal variation charts, which are based on truck traffic studies, indicate that truck traffic varies little for both the Interstate and Non-Interstate systems. On the other hand, day of week distribution does indicate a variation between weekdays (Monday through Friday) versus weekend (Saturday through Sunday) truck flow.

AVERAGE DAY OF WEEK BY MONTH FOR TRUCK TRAFFIC							
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
JANUARY	1.58	1.41	0.90	1.32	0.94	1.84	2.63
FEBRUARY	1.68	1.02	0.91	0.97	0.99	1.91	3.18
MARCH	1.56	1.16	0.88	0.92	0.93	1.84	2.93
APRIL	1.26	0.91	0.84	0.80	0.85	1.58	2.62
MAY	1.27	0.99	0.83	0.75	0.80	1.41	2.27
JUNE	0.98	0.90	0.76	0.74	0.74	1.53	2.13
JULY	1.00	1.03	0.77	0.74	0.81	1.61	1.91
AUGUST	0.97	0.95	0.76	0.74	0.75	1.38	1.93
SEPTEMBER	1.14	0.85	0.75	0.71	0.75	1.48	2.07
OCTOBER	0.89	0.85	0.76	0.74	0.75	1.64	2.43
NOVEMBER	0.99	0.92	0.76	1.29	0.93	1.93	2.82
DECEMBER	1.11	0.99	0.89	1.11	1.70	2.30	2.99

Table 370
Yearly Growth Factors

The yearly growth factors (shown in the following tables) are used to compute the current estimated average daily traffic for count data that is older than the current year. The factor application is applied by Traffic Pattern Group (TPG) and is used to calculate total vehicles and truck estimates. A limited amount of count data is processed through the Yearly Growth Factor table, since most traffic counts are for the current year.

To use this table, select the base year of the count from the "YEAR" column and multiply it by the percentage under the corresponding "TPG" row.

For example, to determine the current year estimate (2015) of a 2006 base year count having a TPG 5, multiply 0.984 (-1.6%) by the AADT of the 2006 count.

Yearly Growth Factors: 2006-2015										
TPG	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15
TPG 1	2.9%	3.0%	2.4%	1.0%	0.0%	-0.7%	-0.9%	-1.1%	0.1%	0.5%
TPG 2	3.0%	3.0%	2.4%	2.2%	1.6%	1.7%	2.2%	2.2%	1.2%	1.3%
TPG 3	0.7%	1.1%	0.2%	0.3%	0.2%	-0.6%	-1.0%	-1.0%	-0.7%	-0.8%
TPG 4	1.2%	1.3%	0.8%	0.5%	0.3%	-0.3%	-0.4%	-0.5%	-0.5%	-0.5%
TPG 5	0.7%	1.1%	0.2%	0.3%	0.2%	-0.6%	-1.0%	-1.0%	-0.7%	-0.8%
TPG 6	1.2%	1.3%	0.8%	0.5%	0.3%	-0.3%	-0.4%	-0.5%	-0.5%	-0.5%
TPG 7	1.2%	1.3%	0.8%	0.5%	0.3%	-0.3%	-0.4%	-0.5%	-0.5%	-0.5%
TPG 8	1.2%	1.3%	0.8%	0.5%	0.3%	-0.3%	-0.4%	-0.5%	-0.5%	-0.5%
TPG 9	1.2%	1.3%	0.8%	0.5%	0.3%	-0.3%	-0.4%	-0.5%	-0.5%	-0.5%
TPG 10	1.2%	1.3%	0.8%	0.5%	0.3%	-0.3%	-0.4%	-0.5%	-0.5%	-0.5%

The table below shows yearly growth percentages by TPG for 2006 through 2015.

Percent Growth: 2006-2015										
TPG	05-15	06-15	07-15	08-15	09-15	10-15	11-15	12-15	13-15	14-15
TPG 1	7.3%	4.3%	1.3%	-1.1%	-2.1%	-2.1%	-1.4%	-0.5%	0.6%	0.5%
TPG 2	22.8%	19.3%	15.8%	13.1%	10.6%	8.9%	7.1%	4.8%	2.5%	1.3%
TPG 3	-1.6%	-2.3%	-3.4%	-3.6%	-3.8%	-4.0%	-3.5%	-2.5%	-1.5%	-0.8%
TPG 4	1.9%	0.7%	-0.6%	-1.4%	-1.9%	-2.2%	-1.9%	-1.5%	-1.0%	-0.5%
TPG 5	-1.6%	-2.3%	-3.4%	-3.6%	-3.8%	-4.0%	-3.5%	-2.5%	-1.5%	-0.8%
TPG 6	1.9%	0.7%	-0.6%	-1.4%	-1.9%	-2.2%	-1.9%	-1.5%	-1.0%	-0.5%
TPG 7	1.9%	0.7%	-0.6%	-1.4%	-1.9%	-2.2%	-1.9%	-1.5%	-1.0%	-0.5%
TPG 8	1.9%	0.7%	-0.6%	-1.4%	-1.9%	-2.2%	-1.9%	-1.5%	-1.0%	-0.5%
TPG 9	1.9%	0.7%	-0.6%	-1.4%	-1.9%	-2.2%	-1.9%	-1.5%	-1.0%	-0.5%
TPG 10	1.9%	0.7%	-0.6%	-1.4%	-1.9%	-2.2%	-1.9%	-1.5%	-1.0%	-0.5%

Functional Class Groups

Traffic volume data displayed in PennDOT's Roadway Management System (RMS) is projected to a current estimate year (2015) based on County/Functional Class Group (FCG). This provides the user with trends relative to a specific county. The factors are applied annually to the Department's Roadway Management System (RMS) to produce the current year traffic volume estimate values.

The first table shows the PennDOT FCG's with a description and corresponding Functional Class Codes (FCCs). The second table shows the FHWA revision of highway functional classifications. FHWA finalized the functional class guidelines in 2013. RMS will be updated to reflect these changes in late summer 2016.

FCG	DESCRIPTIVE NAME	FCC
FCG 1	URBAN INTERSTATE	FCC 11
FCG 2	RURAL INTERSTATE	FCC 01
FCG 3	URBAN - OTHER FREEWAYS/EXPRESSWAYS	FCC 12
	URBAN - OTHER PRINCIPAL ARTERIALS	FCC 14
	URBAN - MINOR ARTERIALS	FCC 16
	RAMPS	FCC 99
FCG 4	RURAL - OTHER PRINCIPAL ARTERIALS	FCC 02
	RURAL - MINOR ARTERIAL	FCC 06
FCG 5	URBAN COLLECTORS	FCC 17
	URBAN - LOCAL	FCC 19
FCG 6	RURAL - MAJOR COLLECTOR	FCC 07
	RURAL - MINOR COLLECTOR	FCC 08
	RURAL - LOCAL	FCC 09

FCC	DESCRIPTIVE NAME	OLD FCC
01	INTERSTATE	01-11
02	OTHER FREEWAY / EXPRESSWAY	12
03	OTHER PRINCIPAL ARTERIAL	02-14
04	MINOR ARTERIAL	06-16
05	MAJOR COLLECTOR	07-17
06	MINOR COLLECTOR	08
07	LOCAL	09-19

** The Federal Functional Classification of a ramp reflects the highest order of Federal Functional Classification of the roadways to which the ramp connects. As an example, Adams County, SR 8001 is the interchange at US 15, a principal arterial, and SR 3001, a minor arterial; therefore, the segments associated with SR 8001 are assigned a Federal Functional Classification of principal arterial.

Table 380 Axle Correction Factors

Axle volume count data is collected by counting vehicle axles (two axle strikes equals one vehicle).

Since these counts may include a number of trucks with more than two axles, they must be corrected to represent the actual volume of total vehicles. The axle correction factors are applied to raw axle volume count data, adjusting it to a correct representative volume.

2015 Axle Correction Factors are shown in the table below.

TPG	Axle Correction Factor
1	85.64%
2	70.32%
3	95.06%
4	88.53%
5	97.05%
6	92.23%
7	94.51%
8	94.82%
9	96.03%
10	95.84%

Table 385 Design Hour Factor Default Values

The design hour factor (K-factor) represents the percent of Annual Average Daily Traffic (AADT) occurring in the peak hour. This value is important in the design of roadways and capacity analysis studies.

Count data less than 24-hours and/or data not having directional volumes will not have the necessary raw data required to compute actual K-factor values. The K-factor default values were produced to complete unknown values not generated through the raw count factoring process, and to satisfy Highway Performance Monitoring System (HPMS) reporting requirements. They were developed by processing the actual hourly data from the 79 permanent site stations to identify the 30th highest hour; this hourly volume was divided by the AADT for each station, producing a K-factor. The factors were then averaged by Traffic Pattern Group (TPG).

During the raw count factoring process, the K-factor value is programmatically inserted into the Roadway Management System (RMS) database if the raw count data is insufficient to calculate an actual K-factor.

2015 K-Factors and corresponding TPGs are shown in the table below.

TPG	K factor default value
1	9%
2	10%
3	10%
4	11%
5	10%
6	11%
7	11%
8	13%
9	11%
10	16%

Tables 390 and 395 Equivalent Single Axle Load Factors

Equivalent Single Axle Load (ESAL) tables are used to calculate pavement loadings (rigid and flexible types) to produce a common parameter for design and planning purposes.

ESAL factors used in RMS were derived through a composite of data obtained from AASHTO guidelines and test data collected from historical Loadometer Surveys. Data obtained through WIM equipment is under review at this time and will be considered in development of future ESAL factors. The AASHTO Mechanistic Empirical Design Guide (MEPDG) has incorporated improved methods of determining loading effects of traffic. In the future, these new methods will supersede the use of ESAL factors.

2015 ESAL factors for rigid pavements are shown by Traffic Pattern Group (TPG) and vehicle classification in **Table 390**, below.

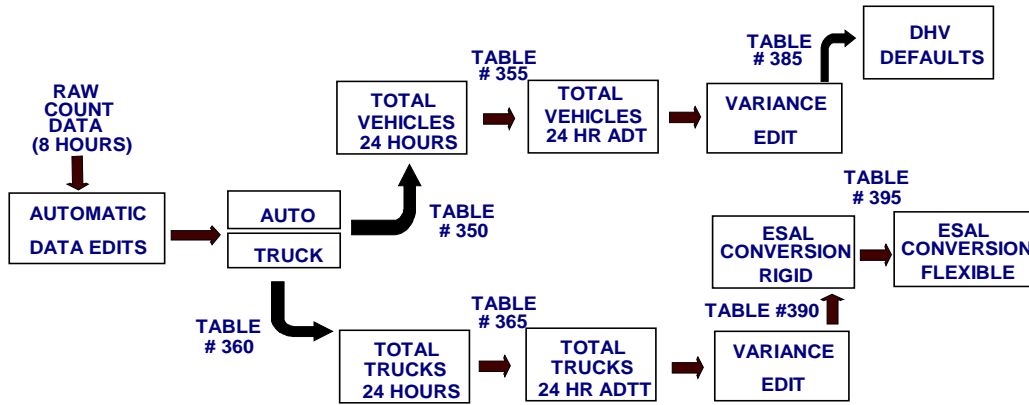
RIGID ESAL FACTORS										
CLASS	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
BUS	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240
2 AXLE SIX TIRE	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240
3 AXLE SINGLE UNIT	1.150	1.150	1.150	1.150	1.150	1.150	1.150	1.150	1.150	1.150
4 AXLE SINGLE UNIT	7.000	7.000	7.000	7.000	7.000	7.000	7.000	7.000	7.000	7.000
3 AXLE WITH TRAILER	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600
3 AXLE MULTI-AXLE TRAILER	1.590	1.590	1.590	1.590	1.590	1.590	1.590	1.590	1.590	1.590
6 AXLE SINGLE TRAILER	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421
5 AXLE MULTI TRAILER	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400
6 AXLE MULTI TRAILER	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421
7 AXLE MULTI TRAILER	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421

2015 ESAL factors for flexible pavements are shown by Traffic Pattern Group (TPG) and vehicle classification in **Table 395**, below.

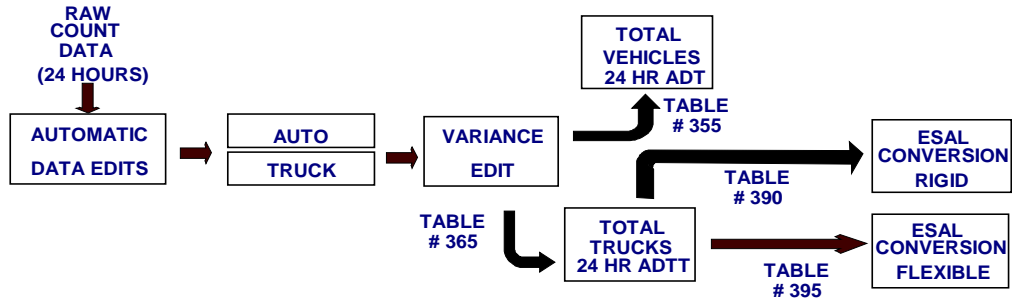
FLEXIBLE ESAL FACTORS										
CLASS	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
BUS	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240
2 AXLE SIX TIRE	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240
3 AXLE SINGLE UNIT	0.820	0.820	0.820	0.820	0.820	0.820	0.820	0.820	0.820	0.820
4 AXLE SINGLE UNIT	4.500	4.500	4.500	4.500	4.500	4.500	4.500	4.500	4.500	4.500
3 AXLE WITH TRAILER	0.440	0.440	0.440	0.440	0.440	0.440	0.440	0.440	0.440	0.440
3 AXLE MULTI-AXLE TRAILER	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6 AXLE SINGLE TRAILER	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750
5 AXLE MULTI TRAILER	2.330	2.330	2.330	2.330	2.330	2.330	2.330	2.330	2.330	2.330
6 AXLE MULTI TRAILER	1.276	1.276	1.276	1.276	1.276	1.276	1.276	1.276	1.276	1.276
7 AXLE MULTI TRAILER	1.276	1.276	1.276	1.276	1.276	1.276	1.276	1.276	1.276	1.276

Roadway Management System Factor Table Application Flow Chart

I. MANUAL COUNT (LESS THAN 24 HOURS)

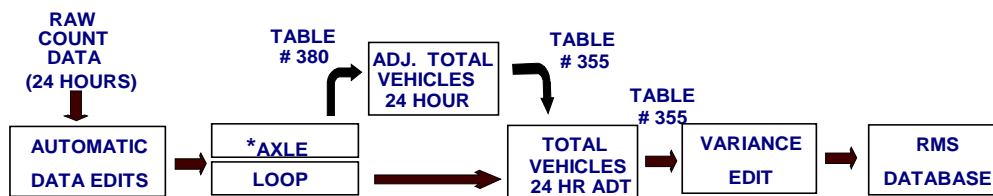


II. AUTOMATIC VEHICLE CLASSIFICATION COUNT



Note: DHV is computed from the raw count data.

III. AXLE AND LOOP VOLUME COUNTS



* Total Vehicles are computed by counting axles (2 axles equals 1 Vehicle)

Acronyms

AADT	Annual Average Daily Traffic
AASHTO	American Association of State Highway & Transportation Officials
ADT	Average Daily Traffic
ADTT	Average Daily Truck Traffic
ATR	Automatic Traffic Recorder
AVC	Automatic Vehicle Classification
BPR	Bureau of Planning and Research
CAVC	Continuous Automatic Vehicle Classification
DHV	Design Hour Volume
DOW	Day of Week
DRJTBC	Delaware River Joint Toll Bridge Commission
DVMT	Daily Vehicle Miles of Travel
ESAL	Equivalent Single Axle Load
FCC	Functional Classification Code
FCG	Functional Classification Group
FHWA	Federal Highway Administration
GIS	Geographic Information System
HPMS	Highway Performance Monitoring System
ITDUS	Internet Traffic Data Upload System
LTPP	Long Term Pavement Performance
MEPDG	Mechanistic Empirical Design Guide
MFC	Maintenance Functional Classification
MPO	Metropolitan Planning Organization
RPO	Rural Planning Organization
RMS	Roadway Management System
SHRP	Strategic Highway Research Program
SR	State Route
STIP	Short-Term In-Pavement
TDS	Traffic Data System
TMAS	Traffic Monitoring Analysis System
TMG	Traffic Monitoring Guide
TPG	Traffic Pattern Group
WIM	Weigh-in-Motion
VWIM	Virtual Weigh-in-Motion

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